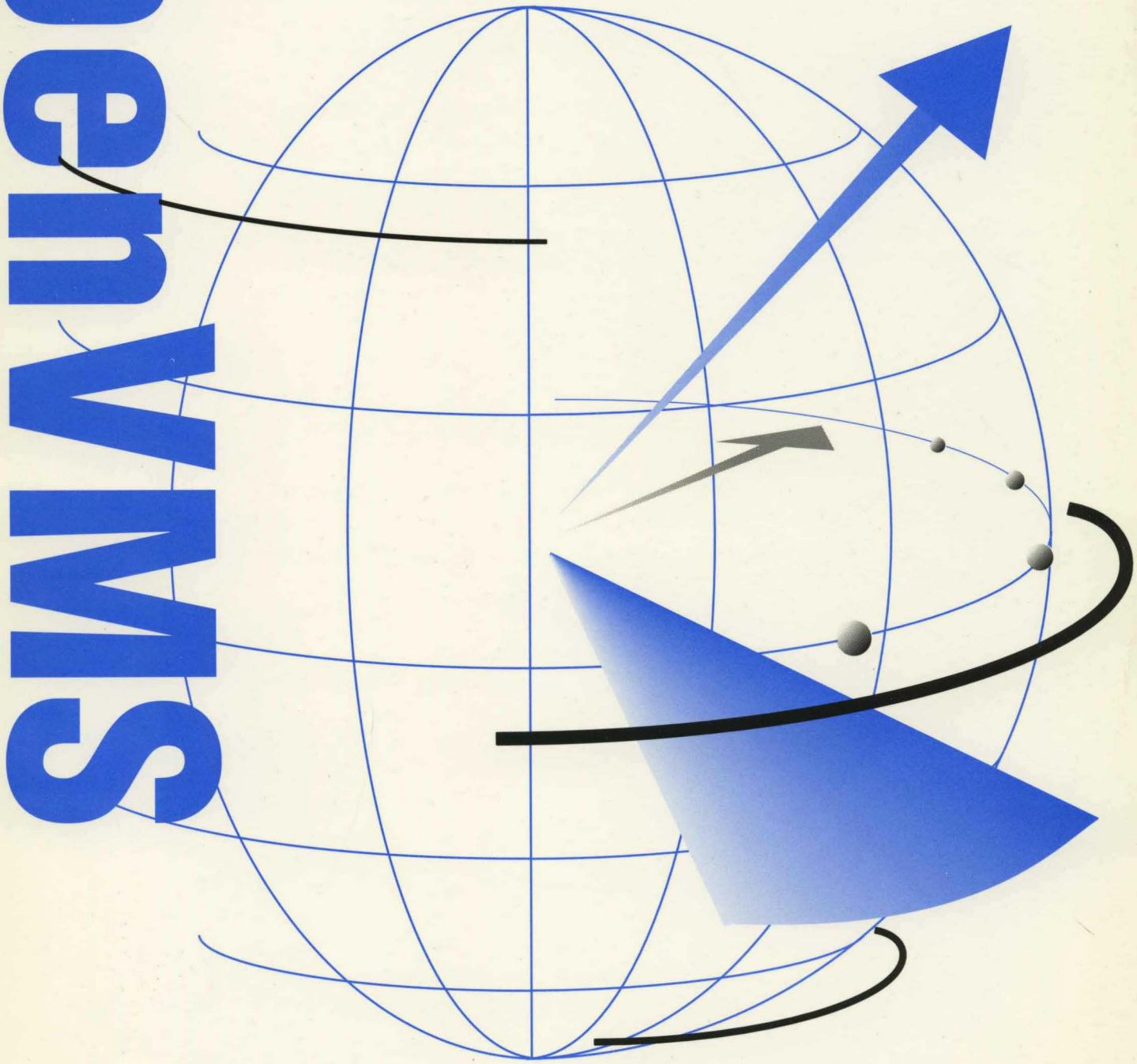
digital

OpenVMS Master Index

OpenVMS



OpenVMS Master Index

Order Number: AA–QSBSA–TE

December 1995

This Master Index includes index entries for the most commonly used manuals shipped in the full documentation set for the software versions cited below.

Revision/Update Information:	This manual supersedes the master index for OpenVMS Version 6.2.
Software Versions:	OpenVMS Alpha Version 7.0 OpenVMS VAX Version 7.0

Digital Equipment Corporation
Maynard, Massachusetts

December 1995

Digital Equipment Corporation makes no representations that the use of its products in the manner described in this publication will not infringe on existing or future patent rights, nor do the descriptions contained in this publication imply the granting of licenses to make, use, or sell equipment or software in accordance with the description.

Possession, use, or copying of the software described in this publication is authorized only pursuant to a valid written license from Digital or an authorized sublicensor.

Digital conducts its business in a manner that conserves the environment and protects the safety and health of its employees, customers, and the community.

© Digital Equipment Corporation 1995. All rights reserved.

The following are trademarks of Digital Equipment Corporation: ACMS, ALL–IN–1, BASIC, Bookreader, CDA, CDD/Repository, CI, COHESION, DATATRIEVE, DBMS, DDCMP, DDIF, DEC, DEC Ada, DECalert, DEC ACCESSWORKS, DECADMIRE, DEC BASIC, DECdecision, DECdtm, DECevent, DECforms, DEC Fortran, DEC GKS, DEClinks, DEC MAILworks, DECmcc, DECmigrate, DECnet, DECnet–DOS, DEC OPS5, DEC PHIGS, DECplan, DECquery, DEC RALLY, DEC Rdb, DEC RTR, DECSA, DECscheduler, DECservers, DECset, DECstart, DECtalk, DECterm, DECthreads, DECtp, DECtrace, DEC VTX, DEC VUIT, DEC WANrouter, DECwindows, DELNI, DELUA, DEQNA, DEUNA, Digital, Digital UNIX, DNA, DSSI, DTIF, EDT, eXcursion, GIGAswitch, HSC, HSC40, HSC50, HSC70, HSJ, HSZ, IAS, InfoServer, KDA, LASTport, LAT, MailWorks, MASSBUS, MicroVAX, MSCP, NAS, ObjectBroker, OpenVMS, PATHWORKS, PIXELVISION, POLYCENTER, RA, RALLY, RB, RC, RC25, RD, RK, RL, RM, RMS–11, RP, RQDX3, RSTS/E, RSX, RSX–11S, RT–11, rtVAX, RX, RX01, RX02, RX33, RX50, StorageWorks, TA, ThinWire, TMSCP, TOPS–10, TOPS–20, TU, TURBOchannel, UDA, UETP, ULTRIX, UNIBUS, VAX, VAX Ada, VAX APL, VAX BASIC, VAX BLISS–32, VAX C, VAXcluster, VAX COBOL, VAX DATATRIEVE, VAX DOCUMENT, VAX FMS, VAX FORTRAN, VAXft, VAX GKS, VAX MACRO, VAX OPS5, VAX Pascal, VAX RALLY, VAX SCAN, VAXsimPLUS, VAXstation, VMS, VMScluster, VT100, VT300, and the DIGITAL logo.

The following are third-party trademarks:

AppleShare, AppleTalk, and Macintosh are registered trademarks of Apple Computer, Inc.

IBM is a registered trademark of International Business Machines Corporation.

IEEE and POSIX are registered trademarks of The Institute of Electrical and Electronics Engineers, Inc.

Microsoft, MS, and MS–DOS are registered trademarks of Microsoft Corporation.

NetWare is a registered trademark of Novell, Inc.

Motif, OSF, OSF/1, OSF/Motif, and Open Software Foundation are registered trademarks of the Open Software Foundation, Inc.

OSI is a registered trademark of CA Management, Inc.

PostScript is a registered trademark of Adobe Systems, Inc.

UNIX is a registered trademark of Unix System Laboratories, Inc. a wholly-owned subsidiary of Novell, Inc.

X/Open is a trademark of X/Open Company, Limited.

X Window System is a trademark of Massachusetts Institute of Technology.

All other trademarks and registered trademarks are the property of their respective holders.

ZK4516

This document is available on CD–ROM.

Preface

Document Structure

The *OpenVMS Master Index* merges index entries from the most commonly used manuals in the full documentation set for OpenVMS Version 7.0. Manuals included in the *OpenVMS Master Index* are listed in Table 1.

Each entry in the *OpenVMS Master Index* is followed by an abbreviated manual title and a reference to the page where the topic appears in that manual. The manual abbreviation is preceded by a letter designator in parentheses to indicate the primary audience for that manual. Table 1 in this section maps the abbreviated titles to the full manual names.

The following example shows how an entry in this index might refer to several manuals for one topic:

XAB$L_ALQ field, *(P) RMS Ref*, 7–3; *(P) File Appl*, 4–34
  using to specify additional file space, *(P) RMS Ref*, RMS–37

This entry indicates that you can find information about the XAB$L_ALQ field in the following places:

- Page 7–3 in the *OpenVMS Record Management Services Reference Manual.*
- Page 4–34 in the *Guide to OpenVMS File Applications.*
- Page RMS–37 in the *OpenVMS Record Management Services Reference Manual.* The index subentry indicates that this page describes how to use the XAB$L_ALQ field to specify additional file space.

The (P) prefix preceding the title abbreviations in the sample index entry indicates that the manuals are likely of most interest to programmers.

System services, RMS services, and run-time library routines are indexed by facility prefix. For example, the Assign system service is indexed under SYS$ASSIGN. Run-time library routines are indexed under their corresponding facility prefixes:

General purpose (OTS$)
Library (LIB$)
Mathematics (MTH$)
Screen management (SMG$)
String manipulation (STR$)

Table 1 Title Abbreviations Mapped to Manual Names

Title Abbreviation in Index Entries	Audience [1]	Manual Title
64-Bit Addr	P	*OpenVMS Alpha Guide to 64-Bit Addressing*
Alpha Perform	S	*Guide to OpenVMS AXP Performance Management*
Alpha SDA	P	*OpenVMS Alpha System Dump Analyzer Utility Manual*
Calling Std	P	*OpenVMS Calling Standard*
CDU, LBR, & MU	P	*OpenVMS Command Definition, Librarian, and Message Utilities Manual*
Concepts	P	*OpenVMS Programming Concepts Manual*
DCL A-M	G	*OpenVMS DCL Dictionary: A–M*
DCL N-Z	G	*OpenVMS DCL Dictionary: N–Z*
Debugger	P	*OpenVMS Debugger Manual*
DECamds	S	*DECamds User's Guide*
DECnet Intro	S	*DECnet for OpenVMS Guide to Networking*
DECnet Mgmt	S	*DECnet for OpenVMS Networking Manual*
DECnet Mgmt Util	S	*DECnet for OpenVMS Network Management Utilities*
DECthreads	P	*Guide to DECthreads*
Dependable	S	*Building Dependable Systems: The OpenVMS Approach*
Environment	P	*OpenVMS Programming Environment Manual*
File Appl	P	*Guide to OpenVMS File Applications*
Help Msg	G	*OpenVMS System Messages: Companion Guide for Help Message Users*
I/O User	P	*OpenVMS I/O User's Reference Manual*
Interfaces	P	*OpenVMS Programming Interfaces: Calling a System Routine*
LIB$	P	*OpenVMS RTL Library (LIB$) Manual*
Linker	P	*OpenVMS Linker Utility Manual*
Modular Proc	P	*Guide to Creating OpenVMS Modular Procedures*
MTH$	P	*OpenVMS VAX RTL Mathematics (MTH$) Manual*
OTS$	P	*OpenVMS RTL General Purpose (OTS$) Manual*
Portable Math	P	*Digital Portable Mathematics Library*
Rec Mgmt Util	P	*OpenVMS Record Management Utilities Reference Manual*
RMS Ref	P	*OpenVMS Record Management Services Reference Manual*
Security	S	*OpenVMS Guide to System Security*
SMG$	P	*OpenVMS RTL Screen Management (SMG$) Manual*
STR$	P	*OpenVMS RTL String Manipulation (STR$) Manual*
SW Overview	G	*OpenVMS Software Overview*
Sys Mgmt Util A-L	S	*OpenVMS System Management Utilities Reference Manual: A–L*
Sys Mgmt Util M-Z	S	*OpenVMS System Management Utilities Reference Manual: M–Z*

[1] G = General User, S = System Manager, P = Programmer

(continued on next page)

Table 1 (Cont.) Title Abbreviations Mapped to Manual Names

Title Abbreviation in Index Entries	Audience [1]	Manual Title
Sys Mgr Essentials	S	*OpenVMS System Manager's Manual: Essentials*
Sys Mgr Tuning	S	*OpenVMS System Manager's Manual: Tuning, Monitoring, and Complex Systems*
Sys Svc I	P	*OpenVMS System Services Reference Manual: A–GETMSG*
Sys Svc II	P	*OpenVMS System Services Reference Manual: GETQUI–Z*
TCP/IP	S	*TCP/IP Networking on OpenVMS Systems*
User	G	*OpenVMS User's Manual*
Util Routines	P	*OpenVMS Utility Routines Manual*
V7.0 New Feat	G	*OpenVMS Version 7.0 New Features Manual*
VAX Perform	S	*Guide to OpenVMS Performance Management*
VAX SDA	P	*OpenVMS VAX System Dump Analyzer Utility Manual*
VMScluster Sys	S	*VMScluster Systems for OpenVMS*

[1] G = General User, S = System Manager, P = Programmer

Related Documents

For a list of additional documents that are available in support of this version of the OpenVMS operating system, refer to the *Overview of OpenVMS Documentation*.

For additional information about OpenVMS products and services, access the Digital OpenVMS World Wide Web site using the following URL:

```
http://www.openvms.digital.com
```

Conventions

The name of the OpenVMS AXP operating system has been changed to OpenVMS Alpha. Any references to OpenVMS AXP or AXP are synonymous with OpenVMS Alpha or Alpha.

In this manual, every use of DECwindows and DECwindows Motif refers to DECwindows Motif for OpenVMS software.

Reader's Comments

Digital welcomes your comments on this manual.

Print or edit the online form SYS$HELP:OPENVMSDOC_COMMENTS.TXT and send us your comments by:

Internet	**openvmsdoc@zko.mts.dec.com**
Fax	603 881-0120, Attention: OpenVMS Documentation, ZK03-4/U08
Mail	OpenVMS Documentation Group, ZKO3-4/U08 110 Spit Brook Rd. Nashua, NH 03062-2698

How To Order Additional Documentation

Use the following table to order additional documentation or information. If you need help deciding which documentation best meets your needs, call 800-DIGITAL (800-344-4825).

Telephone and Direct Mail Orders

Location	Call	Fax	Write
U.S.A.	DECdirect 800–DIGITAL 800–344–4825	Fax: 800–234–2298	Digital Equipment Corporation P.O. Box CS2008 Nashua, NH 03061
Puerto Rico	809–781–0505	Fax: 809–749–8300	Digital Equipment Caribbean, Inc. 3 Digital Plaza, 1st Street, Suite 200 P.O. Box 11038 Metro Office Park San Juan, Puerto Rico 00910–2138
Canada	800–267–6215	Fax: 613–592–1946	Digital Equipment of Canada, Ltd. Box 13000 100 Herzberg Road Kanata, Ontario, Canada K2K 2A6 Attn: DECdirect Sales
International	—	—	Local Digital subsidiary or approved distributor
Internal Orders	DTN: 264–4446 603–884–4446	Fax: 603–884–3960	U.S. Software Supply Business Digital Equipment Corporation 10 Cotton Road Nashua, NH 03063–1260

ZK–7654A–GE

Index

A

Abbreviating NCP commands, *(S) DECnet Mgmt Util*, 1–2
Abort, *(S) DECnet Mgmt Util*, 4–7, 4–8, 4–9, 4–12
Abort function, *(P) Debugger*, 2–6, 5–12, 14–10, CD–47, CD–155, CD–242
Aborting a remote session, *(S) DECnet Intro*, 3–3
Aborting a transaction, *(P) Sys Svc I*, SYS1–3
Aborting job status, *(S) Sys Mgr Essentials*, 13–69
/ABORT qualifier, *(P) Debugger*, CD–215
ABS program section name
  definition, *(P) Linker*, B–16
Absolute time, *(P) Concepts*, 5–1
  as input to $BINTIM, *(P) Sys Svc I*, SYS1–62
  as input to $BINUTC, *(P) Sys Svc I*, SYS1–65
  combined with delta time, *(G) User*, 3–13
  converting to numeric, *(P) Sys Svc II*, SYS2–194
  default values, *(G) User*, 3–11
  in system format, *(P) Concepts*, 5–6
  rules for entering, *(G) User*, 3–11
  specifying keywords, *(G) User*, 3–12
  syntax, *(G) User*, 3–11
Absolute value of complex number, *(P) MTH$*, MTH–23
Access
  See also Random access and Record access
  auditing of processes, *(S) Security*, 9–7
  BYPASS privilege, *(S) Security*, 4–11
  checking, *(P) Sys Svc I*, SYS1–84
  database, *(G) SW Overview*, 6–22, 7–18
  denying, *(S) Security*, 4–26
  direct, *(P) File Appl*, 1–2
  how the system determines, *(S) Security*, 4–11
  modes, *(P) RMS Ref*, 1–3
  network, *(S) DECnet Intro*, 1–1, 2–2; *(S) DECnet Mgmt*, 1–20
  network object, *(S) DECnet Intro*, 3–36
  OpenVMS systems, *(G) SW Overview*, 5–1
  performance impact of auditing, *(S) Security*, 9–12
  physical I/O, *(P) Concepts*, 9–6
  privileges bypassing ACLs, *(S) Security*, 4–28
  privileges bypassing protection codes, *(S) Security*, 4–28
  protecting network against unauthorized, *(S) DECnet Intro*, 3–34
Access (cont'd)
  proxy, *(S) DECnet Intro*, 2–3
  remote file, *(S) DECnet Intro*, 2–2; *(S) DECnet Mgmt*, 1–17, 8–1
  remote file access through command procedures, *(S) DECnet Intro*, 2–12
  remote task, *(S) DECnet Intro*, 2–14; *(S) DECnet Mgmt*, 1–19
  run-time options, *(P) RMS Ref*, 1–4
  sequential, *(P) File Appl*, 1–2, 3–17
  shared, *(P) File Appl*, 10–28
    in a VMScluster, *(P) File Appl*, 3–32
  shared resources, *(P) DECthreads*, 4–2
  through ACLs, *(S) Security*, 4–17
  through GRPPRV privilege, *(S) Security*, 4–11
  through protection codes, *(S) Security*, 4–7
  through READALL privilege, *(S) Security*, 4–11
  through SYSPRV privilege, *(S) Security*, 4–11
  to deleted file data, *(S) Security*, 5–13
  to existing node, *(S) DECnet Intro*, 3–1
  to files, *(P) File Appl*, 1–29
  to process-permanent files, *(P) File Appl*, 6–19
ACCESS attributes, *(P) File Appl*, 7–3
Access categories, *(S) Security*, 4–24; *(P) File Appl*, 4–26
  See also Protection codes
Access control, *(S) DECnet Mgmt*, 8–11, 8–12
  See also Access types
  ACE order, importance of, *(S) Security*, 4–18
  assigning file defaults, *(S) Security*, 4–19
  bypassing ACLs, *(S) Security*, 4–28
  bypassing protection codes, *(S) Security*, 4–28
  commands, *(S) DECnet Mgmt*, 3–67
  comparing security profiles, *(S) Security*, 4–1
  controlling in network environment, *(S) Security*, 12–5
  default, *(S) Security*, 12–3; *(S) DECnet Mgmt*, 2–30
  default application account, *(S) Security*, 12–3
  default for inbound connection, *(S) Security*, 12–4; *(S) DECnet Mgmt*, 2–33
  default nonprivileged, *(S) DECnet Mgmt*, 1–22
  default nonprivileged DECnet account, *(S) DECnet Mgmt*, 2–33
  default privileged, *(S) DECnet Mgmt*, 1–22
  denying access through an ACL, *(S) Security*, 4–17
  denying a class of users, *(S) Security*, 8–4

Access control (cont'd)
evaluating a user's access request, *(S) Security*, 4–11, 4–12
explicit, *(S) Security*, 12–3
for a network, *(S) Security*, 12–3; *(S) DECnet Mgmt*, 2–29
for an object, *(S) DECnet Mgmt*, 2–26
for applications, *(S) Security*, 12–4
for circuits, *(S) DECnet Intro*, 3–37
for connections, *(S) Security*, 12–3
for inbound connections, *(S) DECnet Mgmt*, 2–32
for logical links, *(S) DECnet Mgmt*, 2–30
for network applications, *(S) DECnet Mgmt*, 1–21
for nodes, *(S) DECnet Intro*, 3–36
for outbound connections, *(S) DECnet Mgmt*, 2–30
for protected objects, *(S) Security*, 4–1
for remote command execution, *(S) DECnet Mgmt*, 2–33, 3–69
for remote file access, *(S) DECnet Mgmt*, 1–20
for system, *(S) DECnet Intro*, 3–36
for task-to-task communication, *(S) DECnet Mgmt*, 1–20
in a network environment, *(S) Security*, 12–1
limited-access accounts, *(S) Security*, 7–4
limiting access to an environment, *(S) Security*, 4–3, 4–18
limiting device access, *(S) Security*, 4–18
limiting logins, *(S) Security*, 7–1
LOGINOUT image, *(S) DECnet Mgmt*, 2–31, 8–12
node level, *(S) DECnet Mgmt*, 2–33, 3–70
nonprivileged string, *(S) DECnet Mgmt*, 2–31
object security profiles, *(G) User*, 19–3; *(S) Security*, 4–6
object-specific considerations, *(S) Security*, 4–29
on remote files, *(S) DECnet Intro*, 2–3
privileged string, *(S) DECnet Mgmt*, 2–31
protection code processing rules, *(S) Security*, 4–11
protection code user categories, *(S) Security*, 4–8
proxy, *(S) Security*, 12–3, 12–4
proxy login, *(S) DECnet Mgmt*, 1–22, 2–29, 2–34, 3–71
required by ACL editor, *(S) Sys Mgmt Util A-L*, 1–4
routing initialization, *(S) DECnet Mgmt*, 2–29
routing initialization passwords, *(S) Security*, 12–14
setting default information, *(S) DECnet Mgmt*, 3–68
system level, *(S) DECnet Mgmt*, 2–30, 3–68
through ACLs, *(S) Security*, 4–16, 4–18
Access control (cont'd)
user authorization file (UAF), *(S) DECnet Mgmt*, 8–12
using the NCP, *(S) Security*, 12–4
with Identifier ACEs, *(S) Security*, 4–16, 4–20; *(S) Sys Mgmt Util A-L*, 1–13
with protection codes, *(S) Sys Mgmt Util A-L*, 1–12
Access control entries
See ACEs
Access control list editor
See ACL editor
Access control list editor routines
See ACL editor routines
Access control lists
See ACLs
Access control strings, *(G) User*, 4–6, 19–7; *(S) Security*, 3–14, 12–3
command procedures and, *(S) Security*, 3–15
copying files between nodes with, *(G) User*, 4–13
exposing password in, *(S) Security*, 3–13
format, *(G) User*, 19–7
format in node names, *(G) User*, 4–8
in equivalence name, *(S) DECnet Intro*, 2–4
invalid, *(S) DECnet Intro*, 4–10
null, *(S) DECnet Intro*, 2–3
overriding, *(G) User*, 13–5
protecting information in, *(G) User*, 19–7; *(S) Security*, 3–15
rules for entering, *(G) User*, 4–8
secondary passwords with, *(S) Security*, 7–16
using to protect file, *(S) DECnet Intro*, 3–35
within command procedures, *(G) User*, 19–7
/ACCESSED qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–8
Access entry
in argument descriptions, *(P) Interfaces*, 1–8
Accessibility field, *(P) File Appl*, 1–25, 1–29
tape file system checks, *(S) Sys Mgr Essentials*, 9–17
Access list, *(G) User*, 19–5
Access mask, *(P) Concepts*, 23–22
Access methods
to argument data, *(P) Interfaces*, 1–8
Access modes, *(G) User*, 13–9, 13–10; *(P) Interfaces*, 4–2
See also Record access modes
changing to executive, *(P) Sys Svc I*, SYS1–110, SYS1–112
changing to kernel, *(P) Sys Svc I*, SYS1–114, SYS1–116
displaying, *(G) User*, 13–21
effect on AST delivery, *(P) Concepts*, 4–8
executive, *(G) User*, 13–10
processor, *(P) Interfaces*, B–2
specifying, *(P) Interfaces*, 4–3
user, *(G) User*, 13–10

Access modes (cont'd)
with AST, *(P) Concepts*, 4–5
with logical names, *(P) Concepts*, 10–10
Access name table, *(P) Concepts*, 23–22
ACCESS parameter
for SET NODE command, *(S) DECnet Mgmt*, 2–34
Access protection
checking, *(P) Sys Svc I*, SYS1–99
Access requirements
allocating devices, *(S) Security*, 5–4
capability object, *(S) Security*, 5–1
common event flag clusters, *(S) Security*, 5–2
directories, *(S) Security*, 5–9
file-oriented devices, *(S) Security*, 5–4
files, *(S) Security*, 5–9
global sections, *(S) Security*, 5–14
I/O channel, *(S) Security*, 5–4
logical name tables, *(S) Security*, 5–16
non-file-oriented devices, *(S) Security*, 5–5
queues, *(S) Security*, 5–17
resource domains, *(S) Security*, 5–19
security class objects, *(S) Security*, 5–20
shareable devices, *(S) Security*, 5–5
shared devices, *(S) Security*, 5–4
spooled devices, *(S) Security*, 5–5
unshareable devices, *(S) Security*, 5–5
volumes, *(S) Security*, 5–5
Access rights block, *(P) Alpha SDA*, SDA–16
Access specification
list of mask values, *(P) RMS Ref*, 13–5
Access type
delete, *(P) Rec Mgmt Util*, 4–23
execute, *(P) Rec Mgmt Util*, 4–23
read, *(P) Rec Mgmt Util*, 4–23
write, *(P) Rec Mgmt Util*, 4–23
Access types
See also Control access, Create access, Delete access, Read access, and Write access
abbreviations of, *(S) Security*, 4–25; *(S) Sys Mgr Essentials*, 11–8
ACLs and, *(S) Security*, 4–20
and security audit, *(G) User*, 19–11
associate, *(S) Security*, 5–2
capability class, *(S) Security*, 5–1
checking when writing files to tape volumes, *(S) Sys Mgr Essentials*, 9–18
class-dependency of, *(S) Security*, 4–25
common event flag clusters, *(S) Security*, 5–2
directories, *(S) Security*, 5–8
files, *(S) Security*, 5–8
global sections, *(S) Security*, 5–14
lock, *(S) Security*, 5–19
logical I/O, *(S) Security*, 5–4
logical name tables, *(S) Security*, 5–16
manage, *(S) Security*, 5–17
physical I/O, *(S) Security*, 5–4
Access types (cont'd)
protecting disk directory files, *(S) Sys Mgr Essentials*, 9–10
protecting disk files, *(S) Sys Mgr Essentials*, 9–6
protection codes and, *(S) Security*, 4–25; *(S) Sys Mgr Essentials*, 11–8
queues, *(S) Security*, 5–17
read, *(S) Sys Mgr Essentials*, 9–13
files, *(S) Security*, 5–8
resource domains, *(S) Security*, 5–19
security audit and, *(S) Security*, 3–19
security class, *(S) Security*, 5–20
shared devices, *(S) Security*, 5–4
submit, *(S) Security*, 5–17
unshared devices, *(S) Security*, 5–4
volumes, *(S) Security*, 5–21
Access violations, *(P) Alpha SDA*, SDA–21, SDA–22; *(P) VAX SDA*, SDA–21, SDA–23
ACCESSWORKS, *(G) SW Overview*, 6–22; *(P) Environment*, 1–4
access_bit_names data type, *(P) Interfaces*, B–2
access_mode data type, *(P) Interfaces*, B–2
Accounting
enabling image-level accounting, *(S) Sys Mgmt Util A-L*, 11–5, 11–8, 11–19
of detached processes, *(G) DCL N-Z*, DCLII–60
of terminal session, *(G) DCL N-Z*, DCLII–311
ACCOUNTING command, *(G) DCL A-M*, DCLI–14; *(S) Sys Mgr Tuning*, 19–4; *(S) Sys Mgmt Util A-L*, 2–4
Accounting files
copying records between, *(S) Sys Mgmt Util A-L*, 2–8, 2–19
processing to produce reports, *(S) Sys Mgmt Util A-L*, 2–9, 2–11, 2–25
record format of, *(S) Sys Mgmt Util A-L*, C–1
types of record in, *(S) Sys Mgmt Util A-L*, 2–29
Accounting information
obtaining during logout, *(G) User*, 2–24
Accounting logs
as security tool, *(S) Security*, 10–3
Accounting messages
format of, *(P) Sys Svc I*, SYS1–177
Accounting reports
brief reports, *(S) Sys Mgmt Util A-L*, 2–9
evaluating resource utilization, *(S) VAX Perform*, 3–3
full reports, *(S) Sys Mgmt Util A-L*, 2–11
interpreting image-level data, *(S) VAX Perform*, 3–4
sample image-level data, *(S) VAX Perform*, 3–3
summary reports, *(S) Sys Mgmt Util A-L*, 2–25

Accounting utility (ACCOUNTING), *(G) SW Overview*, 3–11; *(S) Sys Mgr Tuning*, 19–4; *(S) Sys Mgmt Util A-L*, 2–4; *(S) Alpha Perform*, 7–1
as network troubleshooting aid, *(S) DECnet Intro*, 4–15
collecting data, *(S) Alpha Perform*, 7–4
image-level, *(S) Alpha Perform*, 7–3
disabling, *(S) Alpha Perform*, 7–3
enabling, *(S) Alpha Perform*, 7–3
interpreting data, *(S) Alpha Perform*, 7–5
report generation, *(S) Alpha Perform*, 7–4
ACCOUNTNG.DAT file, *(S) Sys Mgr Tuning*, 19–3
ACCOUNTNG logical name, *(S) Sys Mgr Tuning*, 19–4
Accounts, *(G) SW Overview*, 5–1
See also Captive accounts, DECnet accounts, Open accounts, Proxy accounts, Restricted accounts, and User accounts
access, *(S) Sys Mgr Essentials*, 6–16
accessing after password expires, *(S) Security*, 3–12
adding, *(S) Sys Mgr Essentials*, 6–17, 6–18
with ADDUSER.COM, *(S) Sys Mgr Essentials*, 6–18
adding proxy logins, *(S) Sys Mgr Essentials*, 6–35
application, *(S) Security*, 12–3
auditing access, *(G) User*, 19–10; *(S) Security*, 3–17
automatic login, *(S) Sys Mgr Essentials*, 6–32
default DECnet, *(S) DECnet Intro*, 3–37
default nonprivileged DECnet, *(S) DECnet Mgmt*, 1–22, 1–23, 2–33
deleting, *(S) Sys Mgr Essentials*, 6–25
designing secure accounts, *(S) Security*, 6–6, 7–4
directory, *(S) Sys Mgr Essentials*, 6–15
disabling, *(S) Sys Mgr Essentials*, 6–27
disabling with DISUSER flag, *(S) Security*, 7–3
disguising identity, *(S) Security*, 10–4
expiration, *(S) Security*, 3–12, 3–13; *(S) Sys Mgr Essentials*, 6–42
expiration of, *(G) User*, 2–16
first login, *(G) User*, 2–4; *(S) Security*, 3–2
group, *(S) Security*, C–7
guest, *(S) Security*, 7–12, C–7
initial password, *(G) User*, 2–4; *(S) Security*, 3–1
interactive, *(S) Security*, 7–4
limited-access, *(S) Security*, 7–4
MAIL, *(S) Sys Mgr Essentials*, 6–38
maintaining, *(S) Sys Mgr Essentials*, 6–24
network objects, *(S) Security*, 12–11
open, *(G) User*, 2–7
password expiration and, *(S) Security*, 3–12
password requirements for, *(S) Security*, 3–4
passwords for multiple, *(S) Security*, 3–13
Accounts (cont'd)
privileged, *(S) Security*, 7–6
project, *(S) Security*, 8–20, 8–21; *(S) Sys Mgr Essentials*, 6–32
proxies for groups, *(S) Security*, C–7
proxy, *(S) Security*, 7–13
renewing expired, *(G) User*, 2–17; *(S) Security*, 3–13
restricted, *(G) User*, 2–7
restricting use, *(S) Sys Mgr Essentials*, 6–27
secondary password, *(G) User*, 2–5; *(S) Security*, 3–3
security, *(S) Sys Mgr Essentials*, 6–16
setting duration, *(S) Security*, 7–3
setting up to use project identifiers, *(S) Security*, 8–21
types of, *(G) User*, 2–6; *(S) Security*, 3–4, 7–4
user passwords, *(S) Security*, 3–2
using ADDUSER.COM, *(S) Sys Mgr Essentials*, 6–18
ACE attributes
Default, *(S) Security*, 4–20
Hidden, *(S) Security*, 4–21
None, *(S) Security*, 4–18
Nopropagate, *(S) Security*, 4–23, 4–28
Protected, *(S) Security*, 4–22, 4–23, 4–28
ACEs (access control entries), *(G) User*, 19–12; *(S) Sys Mgmt Util A-L*, 1–3, 1–6
See also Default Protection ACEs and Identifier ACEs
adding, *(S) Security*, 4–21
adding to ACL after file is created, *(S) Sys Mgr Essentials*, 9–7
Alarm ACEs, *(S) Security*, 4–30, 9–5
application-specific, *(S) Sys Mgmt Util A-L*, 1–6
Audit ACEs, *(S) Security*, 4–30, 9–5
creating, *(S) Security*, 4–17; *(P) Concepts*, 23–21, 23–22
Creator ACEs, *(S) Security*, 5–11, 8–10, 8–21; *(S) Sys Mgr Essentials*, 11–9; *(S) Sys Mgmt Util A-L*, 1–9
Default Protection ACEs, *(S) Security*, 4–27, 8–16, 8–20; *(S) Sys Mgr Essentials*, 11–9; *(S) Sys Mgmt Util A-L*, 1–11
examples, *(S) Security*, 12–22
deleting, *(S) Security*, 4–22
deleting protected ACEs, *(S) Security*, 4–22
generating audit event messages, *(S) Security*, 9–2
inserting in a list, *(S) Security*, 4–21
maintaining, *(P) Concepts*, 23–21, 23–22
none for subdirectories, *(S) Sys Mgr Essentials*, 9–12
ordering entries in an ACL, *(S) Sys Mgmt Util A-L*, 1–3
order of, *(S) Security*, 4–11, 4–18, 4–21
relationship to ACLs, *(S) Sys Mgmt Util A-L*, 1–3

ACEs (access control entries) (cont'd)
replacing, *(S) Security*, 4–22
RMS limitation, *(P) RMS Ref*, 13–2
security Alarm, *(S) Sys Mgmt Util A-L*, 1–6
Security Alarm, *(S) Sys Mgr Essentials*, 11–9
security Audit, *(S) Sys Mgmt Util A-L*, 1–8
Security Audit, *(S) Sys Mgr Essentials*, 11–10
security auditing, *(S) Security*, 4–22
sensitive files and, *(S) Security*, 3–17
Subsystem ACEs, *(S) Security*, 8–8, 13–3 to 13–5; *(S) Sys Mgr Essentials*, 11–10; *(S) Sys Mgmt Util A-L*, 1–15
translating, *(P) Concepts*, 23–21, 23–22
types, *(S) Security*, 4–16; *(S) Sys Mgr Essentials*, 11–9
using to override default UIC protection, *(S) Sys Mgr Essentials*, 9–12
ACII character set
converting strings to binary, *(P) Sys Svc I*, SYS1–62
ACLEDIT$EDIT routine, *(P) Util Routines*, ACL–3
ACL editor, *(G) DCL A-M*, DCLI–196; *(G) DCL N-Z*, DCLII–200; *(S) Sys Mgmt Util A-L*, 1–3
customizing, *(S) Sys Mgmt Util A-L*, B–1
DCL qualifiers, *(S) Sys Mgmt Util A-L*, 1–17 to 1–19
displaying ACLs, *(S) Security*, 4–8
exiting from, *(S) Sys Mgmt Util A-L*, 1–5
how to use, *(S) Sys Mgmt Util A-L*, 1–3
invoking, *(S) Sys Mgr Essentials*, 11–11; *(S) Sys Mgmt Util A-L*, 1–4
keypad editing, *(S) Sys Mgmt Util A-L*, A–1
modifying ACLs, *(S) Security*, 4–21
specifying object class, *(S) Sys Mgmt Util A-L*, 1–5
ACL editor routines, *(P) Util Routines*, ACL–1
ACL (access control list), *(P) Util Routines*, ACL–1
editing, *(P) Util Routines*, ACL–3
example of use in BLISS program, *(P) Util Routines*, ACL–1
manipulating, *(P) Util Routines*, ACL–1
options available, *(P) Util Routines*, ACL–3
ACLEDT$SECTION logical name, *(P) Util Routines*, ACL–5
ACLs (access control lists), *(G) SW Overview*, 3–15; *(S) Security*, 4–8, 4–16, 8–20; *(S) Sys Mgr Essentials*, 6–16, 6–32; *(P) Concepts*, 23–2
ACE order, *(S) Security*, 4–11, 4–18, 4–21
alarms generated by, *(S) Security*, D–2
as protection basis, *(P) File Appl*, 4–26
assigning by default to new files, *(S) Security*, 4–19
auditing in C2 systems, *(S) Security*, C–8
building a common file, *(S) VMScluster Sys*, 5–11
ACLs (access control lists) (cont'd)
bypassing with special rights, *(S) Security*, 4–28
compared with UIC protection, *(P) File Appl*, 1–33
conversion methods, *(P) RMS Ref*, 13–2
copying, *(S) Security*, 4–23
creating, *(S) Security*, 4–17
default protection, *(G) User*, 19–6; *(S) Sys Mgr Essentials*, 9–12
deleting, *(S) Security*, 4–22
deleting ACEs, *(S) Security*, 4–22
deleting obsolete identifiers, *(S) Security*, 8–7
designing, *(S) Security*, 8–4
displaying, *(S) Security*, 4–8, 4–20
effect of privileges, *(S) Security*, 4–11
effect on performance, *(S) Security*, 8–4
formatting, *(P) Sys Svc I*, SYS1–389
granting access, *(S) Security*, 4–17
impact of length on performance, *(S) Sys Mgmt Util A-L*, 1–3
interaction with protection codes, *(S) Security*, 4–26
list of supported object classes, *(S) Sys Mgmt Util A-L*, 1–3
management overview, *(S) Security*, 8–3
modifying, *(S) Security*, 4–21
network file sharing, *(S) Security*, 12–20
on public volumes, *(S) Sys Mgr Essentials*, 8–14
on queues, *(S) Sys Mgr Essentials*, 13–24
on vector capability object, *(S) Sys Mgr Tuning*, 26–8
priority in access evaluation, *(S) Security*, 4–11
protecting files, *(G) User*, 4–16
protection codes and, *(S) Security*, 4–17
protection mechanism, *(G) SW Overview*, 5–1
queue access rights, *(S) Security*, 5–17
relationship to ACEs, *(S) Sys Mgmt Util A-L*, 1–3
reordering entries, *(S) Security*, 4–21
replacing ACEs, *(S) Security*, 4–22
restoring default ACL, *(S) Security*, 4–23
restoring file default, *(S) Security*, 4–27
rules for ordering entries, *(S) Sys Mgmt Util A-L*, 1–3
security element of an object, *(S) Security*, 4–7
setting file protection, *(S) Security*, 8–16, 8–21
SHOW ACL command, *(S) Sys Mgr Essentials*, 9–5
system program files, *(S) Security*, 8–27
use with RMS control block, *(P) RMS Ref*, 13–2
ACL section files, *(S) Sys Mgmt Util A-L*, B–1
ACMS, *(G) SW Overview*, 7–5; *(S) Dependable*, 8–52 to 8–57; *(P) Environment*, 1–4
See also Desktop ACMS
dependability, *(G) SW Overview*, 2–13, 7–12
failure resistance, *(G) SW Overview*, 7–12

ACMS (cont'd)
fault management, *(G) SW Overview*, 7–12
programming technology, *(S) Dependable*, 3–9
software, *(G) SW Overview*, 7–12
use with DECtp Desktop for ACMS, *(G) SW Overview*, 6–22
ACNT privilege, *(S) Security*, A–1; *(S) DECnet Mgmt*, 5–1
acosd routine, *(P) Portable Math*, DPML–4, B–1
acosh routine, *(P) Portable Math*, DPML–5, B–1
acos routine, *(P) Portable Math*, DPML–4, B–1
ACP (ancillary control process), *(S) DECnet Mgmt*, 5–1, 6–2; *(P) Alpha SDA*, SDA–94; *(P) VAX SDA*, SDA–105; *(P) I/O User*, 1–1
establishing values for, *(S) VAX Perform*, 5–4; *(S) Alpha Perform*, 17–3
for ODS-1 disks, *(S) VAX Perform*, 5–4; *(S) Alpha Perform*, 17–3
parameters, *(S) Alpha Perform*, 14–3
ACP_DIRCACHE parameter, *(S) Alpha Perform*, 14–3
ACP_HDRCACHE parameter, *(S) Alpha Perform*, 14–3
ACP_MAPCACHE parameter, *(S) Alpha Perform*, 14–3
removing blockage, *(S) VAX Perform*, 5–12; *(S) Alpha Perform*, 18–4
volume mount, *(S) Sys Mgmt Util M-Z*, 2–30
ACP controls function
miscellaneous disk, *(P) I/O User*, 1–34
ACP functions, *(P) I/O User*, 1–2, 1–32
attributes, *(P) I/O User*, 1–15 to 1–18
disk quotas, *(P) I/O User*, 1–35
IO$_ACCESS, *(P) I/O User*, 1–7, 1–9, 1–14, 1–25
IO$_ACPCONTROL, *(P) I/O User*, 1–7
IO$_CREATE, *(P) I/O User*, 1–9, 1–11, 1–14, 1–23
IO$_DEACCESS, *(P) I/O User*, 1–13, 1–14, 1–27
IO$_DELETE, *(P) I/O User*, 1–7, 1–28
IO$_MODIFY, *(P) I/O User*, 1–7, 1–11, 1–13, 1–14, 1–27
IO$_MOUNT, *(P) I/O User*, 1–32
magnetic tape positioning, *(P) I/O User*, 1–33
quota file transfer block, *(P) I/O User*, 1–35
ACP-QIO interface, *(P) I/O User*, 1–1
See also FIBs
access file function, *(P) I/O User*, 1–25
access subfunction, *(P) I/O User*, 1–9
ACP control function, *(P) I/O User*, 1–32
ANSI standard, *(P) I/O User*, 1–2, 1–34
arguments, *(P) I/O User*, 1–2
disk quota, *(P) I/O User*, 1–35
attribute control block, *(P) I/O User*, 1–14
attributes, *(P) I/O User*, 1–15 to 1–18
attributes statistics block, *(P) I/O User*, 1–20
BLISS-32 programming, *(P) I/O User*, 1–2
ACP-QIO interface (cont'd)
create file function, *(P) I/O User*, 1–23
disk, *(P) I/O User*, 1–24
magnetic tape, *(P) I/O User*, 1–25
deaccess file function, *(P) I/O User*, 1–27
delete file function, *(P) I/O User*, 1–28
description, *(P) I/O User*, 1–1
directory entries, *(P) I/O User*, 1–9, 1–25
FIB (file information block), *(P) I/O User*, 1–3
file characteristics, *(P) I/O User*, 1–18
function codes, *(P) I/O User*, A–1
function modifiers, *(P) I/O User*, 1–2
IO$M_ACCESS, *(P) I/O User*, 1–9, 1–23, 1–25
IO$M_CREATE, *(P) I/O User*, 1–23, 1–24, 1–25
IO$M_DELETE, *(P) I/O User*, 1–23, 1–24, 1–29
IO$M_DMOUNT, *(P) I/O User*, 1–32, 1–34
I/O operations, *(P) I/O User*, 1–1
I/O status block, *(P) I/O User*, 1–36
MACRO programming, *(P) I/O User*, 1–1
movefile subfunction, *(S) Dependable*, 9–17; *(P) I/O User*, 1–29
record attributes area, *(P) I/O User*, 1–18
values, *(P) I/O User*, 1–19
serious exception (EOT), *(P) I/O User*, 1–23, 1–26, 1–34
status returns, *(P) I/O User*, A–1
XQP (extended QIO processor), *(P) I/O User*, 1–1
ACP queue blocks
See AQBs
ACP subfunctions, *(P) I/O User*, 1–7
access, *(P) I/O User*, 1–9
directory lookup, *(P) I/O User*, 1–7
extend, *(P) I/O User*, 1–11, 1–36
movefile, *(P) I/O User*, 1–27
read/write attributes, *(P) I/O User*, 1–14
truncate, *(P) I/O User*, 1–13
ACP system parameters
See System parameters, ACP
ACP truncation
determining factors, *(P) File Appl*, 3–9
error, *(P) File Appl*, 3–9
using the FAB$V_TEF bit, *(P) File Appl*, 3–9
ACP_REBLDSYSD system parameter
rebuilding system disks, *(S) VMScluster Sys*, 6–21
Acquiring software packages, *(S) Dependable*, 3–10
ACTIVATE BREAK command, *(P) Debugger*, 7–11, CD–9
ACTIVATE TRACE command, *(P) Debugger*, 7–11, CD–12

ACTIVATE WATCH command, *(P) Debugger*, 7–13, CD–14
Activating an autostart queue, *(G) DCL A-M*, DCLI–207, DCLI–266; *(G) DCL N-Z*, DCLII–372; *(S) Sys Mgr Essentials*, 13–15, 13–16, 13–49
  on LAT queues, *(S) Sys Mgr Essentials*, 13–4
  relationship to starting an autostart queue, *(S) Sys Mgr Essentials*, 13–4
/ACTIVATING qualifier, *(P) Debugger*, 14–13, CD–9, CD–12, CD–23, CD–37, CD–54, CD–56, CD–159, CD–221
Activation
  breakpoint, *(P) Debugger*, 2–5, 3–11, 7–11
  tracepoint, *(P) Debugger*, 2–5, 7–11, 14–13
  watchpoint, *(P) Debugger*, 2–5, 7–13
Active disks
  backing up, *(S) Sys Mgr Essentials*, 10–63
Active procedure, *(P) Calling Std*, 3–29
/ACTIVE qualifier, *(P) Debugger*, 16–11, 16–24, CD–215
ACTIVE reserved word
  plural form of component name, *(S) DECnet Intro*, 4–2
Active sets, *(S) Sys Mgr Tuning*, 26–2
  displaying, *(S) Sys Mgr Tuning*, 26–3
Active-standby system kernels, *(S) Dependable*, 4–5
Active Streams field
  interpretations of zero reading, *(P) File Appl*, 3–29
Active system parameters, *(S) Sys Mgr Tuning*, 14–3
%ACTIVE_TASK built-in symbol, *(P) Debugger*, 16–11, 16–14
Actual node name, *(S) Sys Mgmt Util A-L*, 13–55
Actual offset value
  avoiding use of, *(P) RMS Ref*, 2–3
Actual port name, *(S) Sys Mgmt Util A-L*, 13–55
Actual service name, *(S) Sys Mgmt Util A-L*, 13–55
Ada, *(G) SW Overview*, 4–5; *(P) Environment*, 7–2, 7–3
  data type declarations, *(P) Interfaces*, B–16
  implementation table, *(P) Interfaces*, B–16
Ada compiler
  generating reentrant code, *(P) DECthreads*, 4–1
%ADAEXC_NAME built-in symbol, *(P) Debugger*, 13–24, B–10
Adapters
  See also Bus adapters
  add on SCSI, *(G) V7.0 New Feat*, C–9
  booting from multiple LAN, *(S) VMScluster Sys*, 9–7
  Ethernet, *(S) VMScluster Sys*, 3–15
  integral SCSI, *(G) V7.0 New Feat*, C–18
  multiple CI, *(S) VMScluster Sys*, 3–3
Adapters (cont'd)
  multiple DSSI, *(S) VMScluster Sys*, 3–5
  multiple LAN, *(S) VMScluster Sys*, 3–15, 3–17
Adaptive routing, *(S) DECnet Intro*, 1–3
  network, *(S) Sys Mgr Tuning*, 21–5
ADD (Field) command
  CIRCUITS class, *(S) Sys Mgmt Util M-Z*, 4–19
  CLUSTER class, *(S) Sys Mgmt Util M-Z*, 4–20
  CONNECTIONS class, *(S) Sys Mgmt Util M-Z*, 4–21
  COUNTERS class, *(S) Sys Mgmt Util M-Z*, 4–22
  CREDITS class, *(S) Sys Mgmt Util M-Z*, 4–23
  ERRORS class, *(S) Sys Mgmt Util M-Z*, 4–23
  in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–19
  LOCAL_PORTS class, *(S) Sys Mgmt Util M-Z*, 4–23
  MEMBERS class, *(S) Sys Mgmt Util M-Z*, 4–25
  SYSTEMS class, *(S) Sys Mgmt Util M-Z*, 4–27
ADD CIRCUITS command
  in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–11
ADD CLUSTER command
  in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–13
ADD command, *(P) File Appl*, 10–26
  in Install utility, *(S) Sys Mgmt Util A-L*, 11–5
ADD CONNECTIONS command
  in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–14
ADD COUNTERS command
  in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–15
ADD CREDITS command
  in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–17
ADD ERRORS command
  in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–18
Adding a computer, *(S) VMScluster Sys*, 8–9, 8–33, 8–43
  adjusting EXPECTED_VOTES, *(S) VMScluster Sys*, 8–36
Adding files to the system disk, *(S) Sys Mgr Essentials*, 5–1
Adding holder records to rights database, *(P) Sys Svc I*, SYS1–8
Adding identifiers to rights database, *(P) Sys Svc I*, SYS1–11
Addition
  of decimal strings, *(P) STR$*, STR–4
  quadword times, *(P) LIB$*, LIB–8
  two's complement, *(P) LIB$*, LIB–5
Addition operator (+), *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–16

ADD LOCAL_PORTS command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–28
ADD MEMBERS command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–30
%ADDR built-in symbol, *(P) Debugger*, CD–16
address data type, *(P) Interfaces*, B–2
.ADDRESS directive
count in image map file, *(P) Linker*, 5–4
image activator's processing of, *(P) Linker*, 3–24
linker's processing of, *(P) Linker*, 3–24
Addresses
See also Node addresses
area number, *(S) DECnet Mgmt*, 2–1, 3–7, 3–50
broadcast, *(S) DECnet Mgmt*, 1–6
depositing into, *(P) Debugger*, 8–25
examining, *(P) Debugger*, 8–13; *(P) Alpha SDA*, SDA–48; *(P) VAX SDA*, SDA–55
for OpenVMS Alpha, *(P) Calling Std*, 1–4
for OpenVMS VAX, *(P) Calling Std*, 1–4
hardware, *(S) DECnet Mgmt*, 2–2, 2–14
multicast, *(S) DECnet Mgmt*, 1–4, 1–6
obtaining, *(P) Debugger*, 7–8, 8–12
passing 64-bit values, *(P) 64-Bit Addr*, 9–2, C–1
physical, *(S) DECnet Mgmt*, 1–6, 2–2, 2–14; *(S) DECnet Mgmt Util*, 1–9, 1–10
specifying 64-bit computing, *(P) 64-Bit Addr*, 9–5
specifying breakpoint on, *(P) Debugger*, 7–7
symbolizing, *(P) Debugger*, 8–13
virtual memory, *(P) Concepts*, 17–3
Address expressions
code, *(P) Debugger*, 7–6, 8–19, 10–4
compared to language expressions, *(P) Debugger*, 8–7
composite, *(P) Debugger*, 7–7
vector, *(P) Debugger*, 15–16
current entity, *(P) Debugger*, 8–8, 8–13, B–6
DEPOSIT command, *(P) Debugger*, 8–3, CD–76
EVALUATE/ADDRESS command, *(P) Debugger*, 7–8, 8–12, CD–101
EXAMINE command, *(P) Debugger*, 8–2, CD–103
EXAMINE/SOURCE command, *(P) Debugger*, 10–4
logical predecessor, *(P) Debugger*, 8–8, 8–13, B–6
logical successor, *(P) Debugger*, 8–8, 8–13, B–6
SET BREAK command, *(P) Debugger*, 7–4, CD–158
SET TRACE command, *(P) Debugger*, 7–5, CD–220
SET WATCH command, *(P) Debugger*, 7–11, CD–234
Address expressions (cont'd)
symbolic, *(P) Debugger*, 8–4
SYMBOLIZE command, *(P) Debugger*, 8–13, CD–306
type of, *(P) Debugger*, 8–4
Addressing, *(S) TCP/IP*, 2–5
Internet, *(S) TCP/IP*, 2–6, 2–7
subnets, *(S) TCP/IP*, 2–6
Addressing data
recovery from errors, *(S) Dependable*, 8–21
Addressing guidelines
64-bit, *(P) 64-Bit Addr*, 9–1
/ADDRESS qualifier, *(P) Debugger*, 12–6, CD–62, CD–101, CD–284; *(P) Alpha SDA*, SDA–84, SDA–93, SDA–124; *(P) VAX SDA*, SDA–91, SDA–104, SDA–141
in SET PROCESS command, *(P) Alpha SDA*, SDA–72
in SHOW PROCESS command, *(P) Alpha SDA*, SDA–127
Address ranges
aligning on page boundaries, *(P) Linker*, 3–23
Address-related commands
Alpha object language, *(P) Linker*, B–35
Address representation, *(P) Calling Std*, 3–3
Address Resolution Protocol
See ARP
Address space
allocating by page, *(P) Concepts*, 19–8, 20–6
allocating in zones, *(P) Concepts*, 21–6
creating virtual, *(P) Sys Svc I*, SYS1–188
deallocating by page, *(P) Concepts*, 19–8, 20–6, 21–2
zones, *(P) Concepts*, 21–6
Address space number (ASN), *(P) Alpha SDA*, SDA–15
address_range data type, *(P) Interfaces*, B–2
ADD SYSTEMS command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–31
ADDUSER.COM command procedure, *(S) Sys Mgr Essentials*, 6–18
ADD_DUMPFILE symbol, *(S) Sys Mgr Tuning*, 15–24
ADD_PAGEFILE*n*_SIZE symbol, *(S) Sys Mgr Tuning*, 15–24
ADD_PAGEFILE symbol, *(S) Sys Mgr Tuning*, 15–24
ADD_ prefix for AUTOGEN, *(S) Sys Mgr Tuning*, 14–19
ADD_SWAPFILE*n*_SIZE symbol, *(S) Sys Mgr Tuning*, 15–24
ADD_SWAPFILE symbol, *(S) Sys Mgr Tuning*, 15–24
ADJACENT reserved word
plural form of component name, *(S) DECnet Intro*, 4–2

Adjustment period
definition, *(S) Alpha Perform*, 6–1
Adjust Working Set fix, *(S) DECamds*, 4–3
Affinity
explicit, *(G) V7.0 New Feat*, 4–27
implicit, *(G) V7.0 New Feat*, 4–28
/AFTER qualifier, *(P) Debugger*, CD–159, CD–221, CD–234
AGAIN command, *(P) File Appl*, 10–11
AGEN$FEEDBACK.DAT file, *(S) Sys Mgmt Util A-L*, 6–5, 6–6
description, *(S) Sys Mgr Tuning*, 14–11
AGEN$FEEDBACK.EXE file, *(S) Sys Mgmt Util A-L*, 6–5
AGEN$FEEDBACK_REQ_TIME logical name, *(S) Sys Mgr Tuning*, 14–21
AGEN$ files
updating, *(S) VMScluster Sys*, 8–36
AGEN$INCLUDE_PARAMS file, *(S) VMScluster Sys*, 8–11, 8–36
AGEN$NEW_NODE_DEFAULTS.DAT file, *(S) VMScluster Sys*, 8–11
AGEN$NEW_NODE_DEFAULTS.DAT include file, *(S) VMScluster Sys*, 8–36
AGEN$NEW_SATELLITE_DEFAULTS.DAT file, *(S) VMScluster Sys*, 8–11
AGEN$NEW_SATELLITE_DEFAULTS.DAT include file, *(S) VMScluster Sys*, 8–36
AGEN$PARAMS.REPORT file, *(S) Sys Mgr Tuning*, 14–11; *(S) Sys Mgmt Util A-L*, 6–7
sample, *(S) Sys Mgr Tuning*, 14–12
Aggregates
changing value of, *(P) Debugger*, 3–21, CD–76
DEPOSIT command, *(P) Debugger*, 8–16, 8–17, 15–6, 15–7, CD–76
displaying value of, *(P) Debugger*, 3–15, CD–103
EXAMINE command, *(P) Debugger*, 8–16, 8–17, 15–6, 15–7, CD–103
monitoring, *(P) Debugger*, 3–18
SET WATCH command, *(P) Debugger*, 7–13, 15–3, CD–236
AI (argument information)
format, *(P) Interfaces*, 2–9; *(P) Calling Std*, 3–38
register, *(P) Calling Std*, 3–38
AI (artificial intelligence), *(G) SW Overview*, 4–6
performance-tuning techniques, *(G) SW Overview*, 7–9
AIDs (area identification numbers)
program example, *(P) RMS Ref*, A–19
Air conditioning
environmental factor of dependable computing, *(S) Dependable*, 5–3
Alarm ACEs, *(S) Security*, 4–30; *(S) Sys Mgmt Util A-L*, 1–6
how to use, *(S) Security*, 9–5
keywords, *(S) Sys Mgmt Util A-L*, 1–7
Alarm ACEs (cont'd)
specifying access, *(S) Sys Mgmt Util A-L*, 1–7
Alarm messages, *(S) Security*, D–1
ACL event, *(S) Security*, D–2
authorization database modification, *(S) Security*, D–2
break-in event, *(S) Security*, D–3
INSTALL event, *(S) Security*, D–5
login, *(S) Security*, D–5
login failure, *(S) Security*, D–5
logout, *(S) Security*, D–6
network connection, *(S) Security*, D–6
object access event, *(S) Security*, D–1
object creation, *(S) Security*, D–4
object deaccess, *(S) Security*, D–4
object deletion, *(S) Security*, D–4
privilege use, *(S) Security*, D–7
process control event, *(S) Security*, D–7
security, *(S) Sys Mgr Tuning*, 18–21
SET AUDIT use, *(S) Security*, D–8
system parameter modification, *(S) Security*, D–8
time modification, *(S) Security*, D–8
volume mount/dismount, *(S) Security*, D–6
Alarms
See also Security alarms
enabling for security, *(G) User*, 19–10
events triggering, *(G) User*, 19–10
Alert
asynchronous delivery and exception handlers, *(P) DECthreads*, E–13
delivery, *(P) DECthreads*, E–67
disabling asynchronous delivery of, *(P) DECthreads*, E–11
disabling delivery of, *(P) DECthreads*, E–12
enabling asynchronous delivery of, *(P) DECthreads*, E–13
enabling delivery of, *(P) DECthreads*, E–15
requesting delivery of, *(P) DECthreads*, E–17
sending to a thread, *(P) DECthreads*, E–67
using asynchronous delivery with external routines, *(P) DECthreads*, E–11
Alertable
ensuring for matrix multiplication, *(P) DECthreads*, E–13
Alert delivery state
restoring, *(P) DECthreads*, E–16
ALF
See Automatic Login Facility
ALF ADD command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–10
ALF REMOVE command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–11
ALF SHOW command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–13
Algorithm, *(P) MTH$*, 1–3

Algorithms
for memory allocation, *(P) Concepts*, 21–7
Aliases
See DECnet, cluster aliases and Cluster aliases
Alias file name
assigning, *(S) Sys Mgr Essentials*, 9–10
Alias names
specifying for universal symbols, *(P) Linker*, 4–11, LINK–65
Alias node addresses, *(S) DECnet Mgmt*, 1–11, 2–5, 2–26, 3–9, 8–8
Alias node identifiers, *(G) SW Overview*, 3–18; *(S) DECnet Intro*, 3–8; *(S) DECnet Mgmt*, 1–11, 2–5, 3–9 to 3–11, 8–8
cluster, *(S) DECnet Intro*, 3–18
restrictions, *(S) DECnet Mgmt*, 2–6, 8–8
specifying maximum logical links, *(S) DECnet Mgmt*, 3–56
use with objects, *(S) DECnet Mgmt*, 2–26, 3–60
Alias node names, *(S) DECnet Intro*, 3–8; *(S) DECnet Mgmt*, 1–11, 2–5, 2–26, 3–9
for cluster, *(S) DECnet Intro*, 2–4, 2–11
/ALIAS qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–14
Alias VMScluster name, *(S) Sys Mgr Essentials*, 2–15
Aligned record layout, *(P) Calling Std*, 3–58
Aligning data, *(P) Concepts*, 8–4
Aligning preprinted forms, *(S) Sys Mgr Essentials*, 13–75, 13–77
Aligning queue status, *(S) Sys Mgr Essentials*, 13–51
Alignment, *(P) Concepts*, 22–1
See also Data alignment
natural, *(P) Concepts*, 22–2
on OpenVMS Alpha systems, *(P) Concepts*, 14–3
on OpenVMS VAX systems, *(P) Concepts*, 14–3
OpenVMS Alpha systems, *(P) Concepts*, 22–3
OpenVMS VAX, *(P) Concepts*, 22–3
system services, *(P) Concepts*, 22–10
with Bliss compiler, *(P) Concepts*, 22–5
with compilers, *(P) Concepts*, 22–4
with DEC C compiler, *(P) Concepts*, 22–4
with DEC Fortran compiler, *(P) Concepts*, 22–6
with MACRO-32 compiler, *(P) Concepts*, 22–7
with OpenVMS Debugger, *(P) Concepts*, 22–9
with PCA, *(P) Concepts*, 22–10
with tools, *(P) Concepts*, 22–9
with VEST translator, *(P) Concepts*, 22–8
Alignment attribute, *(P) Concepts*, 21–11
Alignment data, *(S) Sys Mgr Essentials*, 13–77
Alignment fault data
getting for system process, *(P) Sys Svc II*, SYS2–97
getting for user image, *(P) Sys Svc II*, SYS2–85
Alignment fault reporting
disabling for user image, *(P) Sys Svc II*, SYS2–440
disabling for user process, *(P) Sys Svc II*, SYS2–201
enabling for user process, *(P) Sys Svc II*, SYS2–202
initializing for system process, *(P) Sys Svc II*, SYS2–115
starting for user image, *(P) Sys Svc II*, SYS2–432
ALL–IN–1
accessing the environment, *(G) SW Overview*, 5–2
user environments, *(G) SW Overview*, 5–8
ALLOCATE command, *(G) User*, 12–9; *(G) DCL A-M*, DCLI–15 to DCLI–17
allocating a particular type of device, *(S) Sys Mgr Essentials*, 8–9
debugging with two terminals, *(P) Debugger*, 13–14
format, *(G) User*, 12–3
/GENERIC qualifier, *(G) User*, 12–4
See also DEASSIGN command, *(G) DCL A-M*, DCLI–111
tape drive, *(S) Sys Mgr Essentials*, 9–21, 9–22
to allocate device, *(S) Sys Mgr Essentials*, 8–9
Allocating
a device by logical name, *(G) User*, 12–4
a specific device type, *(G) User*, 12–4
class fields, *(G) User*, 12–10
devices, *(G) DCL A-M*, DCLI–15
disk drives, *(G) User*, 12–3; *(S) Sys Mgr Essentials*, 8–9
allocating a particular type of device, *(S) Sys Mgr Essentials*, 8–9
first available device, *(G) User*, 12–3
generic devices, *(G) User*, 12–4
physical device, *(G) User*, 12–3
space on disk volume, *(S) Sys Mgr Essentials*, 8–52
tape drives, *(G) User*, 12–3; *(S) Sys Mgr Essentials*, 8–9
virtual memory for images, *(P) Linker*, 3–17
Allocating devices, *(P) Sys Svc I*, SYS1–22
Allocation, *(P) File Appl*, 3–24, 4–34, A–1
ALLOCATION attribute, *(P) Rec Mgmt Util*, 4–6, 4–17; *(P) File Appl*, 3–25, 4–34
Allocation classes, *(P) Sys Svc I*, SYS1–410
assigning value to computers, *(S) VMScluster Sys*, 6–9
assigning value to HSC subsystems, *(S) VMScluster Sys*, 6–9
assigning value to HSD subsystems, *(S) VMScluster Sys*, 6–10
assigning value to HSJ subsystems, *(S) VMScluster Sys*, 6–10
purpose of, *(S) VMScluster Sys*, 6–6

Allocation classes (cont'd)
rules for specifying, *(S) VMScluster Sys*, 6–8
sample configurations, *(S) VMScluster Sys*, 6–7
setting for SCSI configurations, *(G) V7.0 New Feat*, C–4, C–20, C–22
using in a distributed environment, *(S) VMScluster Sys*, 6–24
Allocation-quantity option, *(P) File Appl*, 4–34
ALLOCLASS system parameter, *(S) VMScluster Sys*, 6–9
ALL parameter
with NCP SET command, *(S) DECnet Intro*, 3–33
/ALL qualifier, *(P) Alpha SDA*, SDA–48, SDA–107, SDA–112, SDA–127, SDA–139, SDA–151, SDA–157; *(P) VAX SDA*, SDA–55, SDA–122, SDA–127, SDA–131, SDA–148, SDA–160, SDA–177, SDA–181
ACTIVATE BREAK command, *(P) Debugger*, CD–9
ACTIVATE TRACE command, *(P) Debugger*, CD–12
ACTIVATE WATCH command, *(P) Debugger*, CD–14
CANCEL BREAK command, *(P) Debugger*, CD–23
CANCEL DISPLAY command, *(P) Debugger*, CD–26
CANCEL IMAGE command, *(P) Debugger*, CD–28
CANCEL MODULE command, *(P) Debugger*, CD–30
CANCEL TRACE command, *(P) Debugger*, CD–37
CANCEL WATCH command, *(P) Debugger*, CD–41
CANCEL WINDOW command, *(P) Debugger*, CD–42
DEACTIVATE BREAK command, *(P) Debugger*, CD–54
DEACTIVATE TRACE command, *(P) Debugger*, CD–56
DEACTIVATE WATCH command, *(P) Debugger*, CD–58
DELETE command, *(P) Debugger*, CD–72
DELETE/KEY command, *(P) Debugger*, CD–74
EXTRACT command, *(P) Debugger*, CD–121
SEARCH command, *(P) Debugger*, CD–149
SET IMAGE command, *(P) Debugger*, CD–172
SET MODULE command, *(P) Debugger*, CD–187
SET PROCESS command, *(P) Debugger*, CD–193
SET TASK command, *(P) Debugger*, CD–216
SHOW DISPLAY command, *(P) Debugger*, CD–250
SHOW KEY command, *(P) Debugger*, CD–256
/ALL qualifier (cont'd)
SHOW PROCESS command, *(P) Debugger*, CD–268
SHOW TASK command, *(P) Debugger*, CD–287
SHOW WINDOW command, *(P) Debugger*, CD–296
ALLSPOOL privilege, *(S) Security*, A–2
ALPHA$LIBRARY logical name, *(G) V7.0 New Feat*, 4–11; *(P) Linker*, 1–9
ALPHA$LOADABLE_IMAGES logical name, *(G) V7.0 New Feat*, 4–11; *(P) Linker*, 2–18, LINK–34
Alpha assembly language, *(P) Environment*, 7–8
Alpha installation, *(S) DECamds*, A–4 to A–6
Alphanumeric UICs, *(S) Security*, 4–2
Alpha object language, *(P) Linker*, B–1
address-related commands, *(P) Linker*, B–35
conditional store commands, *(P) Linker*, B–35, B–40
control commands, *(P) Linker*, B–34
data structures, *(P) Linker*, B–2
debugger information record format, *(P) Linker*, B–45
end-of-module record format, *(P) Linker*, B–42
instruction-related commands, *(P) Linker*, B–37
operator commands, *(P) Linker*, B–32
stack commands, *(P) Linker*, B–28
store commands, *(P) Linker*, B–29
text information and relocation records, *(P) Linker*, B–27
traceback information record format, *(P) Linker*, B–45
Alpha primary bootstrap (APB), *(S) VMScluster Sys*, 9–6
/ALPHA qualifier, *(G) V7.0 New Feat*, 4–12
Alpha Resource Centers (ARCs)
See Business Partner Development Assistance centers
Alpha systems
See also Systems and OpenVMS systems
ALPHAVMSSYS.OLD file, *(S) Sys Mgmt Util A-L*, 6–7
ALPHAVMSSYS.PAR file, *(S) Sys Mgr Essentials*, 4–2; *(S) Sys Mgr Tuning*, 14–3; *(S) Sys Mgmt Util A-L*, 6–7
created by CLUSTER_CONFIG.COM, *(S) VMScluster Sys*, 8–1
initializing parameters at boot time, *(S) Sys Mgr Tuning*, 14–36
Alternate adapter booting for satellite nodes, *(S) Dependable*, 7–9
Alternate indexes, *(P) Rec Mgmt Util*, 4–28; *(P) File Appl*, 3–22
structure, *(P) Rec Mgmt Util*, 1–3

Alternate Root
VMSINSTAL.COM option, *(S) Sys Mgr Essentials*, 3–18
restriction, *(S) Sys Mgr Essentials*, 3–18
specifying for software installations, *(S) Sys Mgr Essentials*, 3–12
Alternate root directory
adding to an existing system disk, *(S) Sys Mgr Essentials*, 2–31
Alternate startup command procedure
specifying, *(S) Sys Mgr Essentials*, 4–12
as the default, *(S) Sys Mgr Essentials*, 4–13
Alternate Working Device
VMSINSTAL.COM option, *(S) Sys Mgr Essentials*, 3–14
ALTMODE key, *(P) I/O User*, 5–21
ALTPRI privilege, *(S) Security*, A–2; *(S) Alpha Perform*, 15–1
AMB symbol, *(P) VAX SDA*, SDA–17
AMDS$*_DEFS.DAT files, *(S) DECamds*, B–1
AMDS$APPLIC_CUSTOMIZE.DAT file, *(S) DECamds*, 5–1
AMDS$COMM.EXE file, *(S) DECamds*, B–1
AMDS$COMMBUFOVF logical name, *(S) DECamds*, 5–17
AMDS$COMM process quotas, *(S) DECamds*, 5–2
AMDS$COMM_BUFFER_SIZE logical name, *(S) DECamds*, 5–16, B–2
AMDS$COMM_READS logical name, *(S) DECamds*, 5–16, B–2
AMDS$CONFIG logical name, *(S) DECamds*, B–2, B–3
AMDS$CONSOLE.EXE file, *(S) DECamds*, B–1
AMDS$CONSOLE.UID file, *(S) DECamds*, B–1
AMDS$CONSOLE_ACCESS.DAT file, *(S) DECamds*, 1–4, A–14, B–1
AMDS$DEVICE logical name, *(S) DECamds*, B–3
AMDS$DRIVER_ACCESS.DAT file, *(S) DECamds*, 1–4, A–13, B–3
example, *(S) DECamds*, 1–8
AMDS$EVENT_LOG.LOG file, *(S) DECamds*, 2–6, B–4
AMDS$GROUP_NAME logical name, *(S) DECamds*, 1–8, B–3
AMDS$IVP.COM file, *(S) DECamds*, B–2, B–3
AMDS$LOCK_LOG.LOG file, *(S) DECamds*, B–4
AMDS$LOGICALS.COM command procedure, *(S) DECamds*, 1–8
AMDS$LOGICALS.COM file, *(S) DECamds*, B–1, B–3
AMDS$LOG logical name, *(S) DECamds*, B–2
AMDS$NUM_DL_READS logical name, *(S) DECamds*, B–3
AMDS$RM_DEFAULT_INTERVAL logical name, *(S) DECamds*, B–4
AMDS$RM_OPCOM_READ logical name, *(S) DECamds*, B–4
AMDS$RM_OPCOM_WRITE logical name, *(S) DECamds*, B–4
AMDS$RM_SECONDARY_INTERVAL logical name, *(S) DECamds*, B–4
AMDS$STARTUP.COM command procedure, *(S) DECamds*, A–14
AMDS$STARTUP.COM file, *(S) DECamds*, B–2
AMDS$THRESHOLD_DEFS.DAT file, *(S) DECamds*, 5–9
AMDS$VMS*-*.LIB files, *(S) DECamds*, B–2
AMDS062.RELEASE_NOTES, *(S) DECamds*, B–1, B–3
American National Standards Institute
See ANSI
Ampersand (&)
in symbol definitions, *(G) User*, 14–32 to 14–33
Analysis section, *(P) File Appl*, 4–4, 10–1, 10–26
ANALYSIS_OF_AREA section, *(P) File Appl*, 10–1, 10–22
ANALYSIS_OF_KEY section, *(P) File Appl*, 10–1, 10–22
ANALYZE/AUDIT
See Audit Analysis utility
ANALYZE/AUDIT command, *(G) DCL A-M*, DCLI–18; *(S) Security*, 9–18
generating security reports, *(S) Sys Mgr Tuning*, 18–29
qualifier summary, *(S) Security*, 9–19
ANALYZE command, *(P) Alpha SDA*, SDA–30 to SDA–36; *(P) VAX SDA*, SDA–35 to SDA–41
/CRASH_DUMP qualifier, *(G) DCL A-M*, DCLI–19
ANALYZE/CRASH_DUMP command, *(P) VAX SDA*, SDA–9
Analyze/Disk_Structure utility, *(G) DCL A-M*, DCLI–20
Analyze/Disk_Structure utility (ANALYZE/DISK_STRUCTURE)
builds BITMAP.SYS file, *(S) Sys Mgr Tuning*, A–8
checks validity of files, *(S) Sys Mgr Tuning*, A–8
commands, *(S) Sys Mgr Essentials*, 8–56
creates version of quota file, *(S) Sys Mgr Tuning*, A–9
creating disk usage file, *(S) Sys Mgr Essentials*, 8–56
detecting errors, *(S) Sys Mgmt Util A-L*, 3–3
directing output, *(S) Sys Mgr Essentials*, 8–56
file recovery, *(S) Sys Mgmt Util A-L*, 3–4
files used by, *(S) Sys Mgr Tuning*, A–4
identification record, *(S) Sys Mgr Essentials*, 8–56
invoking, *(S) Sys Mgmt Util A-L*, 3–6
listing file information, *(S) Sys Mgr Essentials*, 8–56

Analyze/Disk_Structure utility (ANALYZE/DISK_ STRUCTURE) (cont'd)
qualifiers, *(S) Sys Mgmt Util A-L*, 3–7 to 3–11
recovering lost files, *(S) Sys Mgr Essentials*, 8–57
repairing disk errors, *(S) Sys Mgr Essentials*, 8–57
reporting disk errors, *(S) Sys Mgr Essentials*, 8–56
uses of, *(S) Sys Mgr Essentials*, 8–55
uses VOLSET.SYS to locate volumes in set, *(S) Sys Mgr Tuning*, A–9
verifies files in directory structure, *(S) Sys Mgr Tuning*, A–9
ANALYZE/ERROR_LOG command, *(G) DCL A-M*, DCLI–21; *(S) Sys Mgr Tuning*, 18–5; *(S) Sys Mgmt Util A-L*, 10–4
error logging, *(S) VMScluster Sys*, C–27
Error Log utility, *(S) Sys Mgr Tuning*, 18–6
excluding unknown entries, *(S) Sys Mgr Tuning*, 18–8
specifying output, *(S) Sys Mgr Tuning*, 18–7
ANALYZE/IMAGE command, *(G) DCL A-M*, DCLI–22 to DCLI–24
examining image files, *(P) Linker*, 1–12
listing the image sections in an image, *(P) Linker*, 3–20
ANALYZE/MEDIA command, *(G) DCL A-M*, DCLI–25
to invoke Bad Block Locator utility, *(S) Sys Mgr Essentials*, 8–64
ANALYZE/OBJECT command, *(G) DCL A-M*, DCLI–26 to DCLI–29
examining object modules, *(P) Linker*, 1–6
ANALYZE/PROCESS_DUMP command, *(G) DCL A-M*, DCLI–30 to DCLI–33
ANALYZE/RMS_FILE command, *(G) DCL A-M*, DCLI–34; *(P) Rec Mgmt Util*, 1–9
/CHECK qualifier, *(P) Rec Mgmt Util*, 1–11
comparing /SUMMARY qualifier with /CHECK qualifier, *(P) Rec Mgmt Util*, 1–15
default output file name, *(P) Rec Mgmt Util*, 1–13
example of using /STATISTICS qualifier with wildcard characters, *(P) Rec Mgmt Util*, 1–13
/FDL qualifier, *(P) Rec Mgmt Util*, 1–11
in network operations, *(S) DECnet Intro*, 2–8
/INTERACTIVE qualifier, *(P) Rec Mgmt Util*, 1–1, 1–12
output file default name, *(P) Rec Mgmt Util*, 1–13
/OUTPUT qualifier, *(P) Rec Mgmt Util*, 1–12
/RU_JOURNAL qualifier, *(P) Rec Mgmt Util*, 1–13
/STATISTICS qualifier, *(P) Rec Mgmt Util*, 1–14
/SUMMARY qualifier, *(P) Rec Mgmt Util*, 1–15
ANALYZE/RMS_FILE command (cont'd)
user response to errors, *(P) Rec Mgmt Util*, 1–7
using /INTERACTIVE qualifier with /OUTPUT qualifier, *(P) Rec Mgmt Util*, 1–13
using /RU_JOURNAL qualifier with /OUTPUT qualifier, *(P) Rec Mgmt Util*, 1–13
using /STATISTICS qualifier with /OUTPUT qualifier, *(P) Rec Mgmt Util*, 1–13
using /SUMMARY qualifier with /OUTPUT qualifier, *(P) Rec Mgmt Util*, 1–13
using to obtain information about RMS Journaling, *(P) Rec Mgmt Util*, 1–1
Analyze/RMS_File utility (ANALYZE/RMS_FILE), *(P) Environment*, 10–18; *(P) Rec Mgmt Util*, 4–37; *(P) File Appl*, 1–35, 10–1, 10–26
AGAIN command, *(P) Rec Mgmt Util*, 1–16
ANALYSIS_OF_AREA section, *(P) Rec Mgmt Util*, 4–3
ANALYSIS_OF_KEY section, *(P) Rec Mgmt Util*, 4–4
analyzing file structure interactively, *(P) Rec Mgmt Util*, 1–1
BACK command, *(P) Rec Mgmt Util*, 1–16
commands, *(P) File Appl*, 10–11
creating FDL files, *(P) Rec Mgmt Util*, 1–1, 6–1
default file type, *(P) File Appl*, 10–5
directing output, *(P) Rec Mgmt Util*, 1–9
DOWN command, *(P) Rec Mgmt Util*, 1–17
DUMP command, *(P) Rec Mgmt Util*, 1–18
duplicate key values, *(P) Rec Mgmt Util*, 4–5
error conditions, *(P) Rec Mgmt Util*, 1–7
examining prologs, *(P) File Appl*, 3–19
examples, *(P) Rec Mgmt Util*, 1–25
analyzing a remote file, *(P) Rec Mgmt Util*, 1–25
EXIT command, *(P) Rec Mgmt Util*, 1–18
exiting from, *(P) Rec Mgmt Util*, 1–9, 1–18
file optimizing, *(P) File Appl*, 4–4
FIRST command, *(P) Rec Mgmt Util*, 1–19
HELP command, *(P) Rec Mgmt Util*, 1–19
invoking, *(P) Rec Mgmt Util*, 1–9
list of functions, *(P) Rec Mgmt Util*, 1–9
NEXT command, *(P) Rec Mgmt Util*, 1–20
POSITION/BUCKET command, *(P) Rec Mgmt Util*, 1–20
POSITION/RECORD command, *(P) Rec Mgmt Util*, 1–22
REST command, *(P) Rec Mgmt Util*, 1–23
restrictions, *(P) Rec Mgmt Util*, 1–10
TOP command, *(P) Rec Mgmt Util*, 1–23
UP command, *(P) Rec Mgmt Util*, 1–23
using with DECnet, *(P) Rec Mgmt Util*, 1–6
with FDL files, *(P) File Appl*, 4–2
ANALYZE/SYSTEM command, *(G) DCL A-M*, DCLI–35; *(P) VAX SDA*, SDA–4, SDA–35
Analyzing
communications options, *(S) Dependable*, 3–5 to 3–7

Analyzing (cont'd)
dependability constraints, *(S) Dependable*, 4–1
dependability requirements, *(S) Dependable*, 2–1 to 2–9
dump files, *(G) DCL A-M*, DCLI–30
environmental options, *(S) Dependable*, 3–2 to 3–3
global symbol tables, *(G) DCL A-M*, DCLI–23
hardware options, *(S) Dependable*, 3–3 to 3–5
image file, *(G) DCL A-M*, DCLI–22
image file fixup section, *(G) DCL A-M*, DCLI–23
image file patch text records, *(G) DCL A-M*, DCLI–24
object files, *(G) DCL A-M*, DCLI–26 to DCLI–29
object module, *(G) DCL A-M*, DCLI–26
operational procedures options, *(S) Dependable*, 3–12 to 3–14
output converter, *(G) DCL A-M*, DCLI–67
processing options, *(G) DCL A-M*, DCLI–71
patch text record, *(G) DCL A-M*, DCLI–24
personnel options, *(S) Dependable*, 3–15 to 3–16
restrictions, *(G) DCL A-M*, DCLI–30
shareable image file, *(G) DCL A-M*, DCLI–22
software options, *(S) Dependable*, 3–7 to 3–12
Analyzing a crash dump, *(S) Sys Mgr Tuning*, 15–11
See also Crash dumps and System failures
in system startup, *(S) Sys Mgr Essentials*, 5–13; *(S) Sys Mgr Tuning*, 15–15
privileges required, *(P) VAX SDA*, SDA–35
requirements, *(P) VAX SDA*, SDA–8
Analyzing a running system, *(P) VAX SDA*, SDA–41
See also Systems
privileges required, *(P) VAX SDA*, SDA–11, SDA–35
Ancillary control process
See ACP
AND operator (&), *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–16
.ANL file type, *(P) Rec Mgmt Util*, 1–13; *(P) File Appl*, 10–5
Announcements
displaying system, *(S) Sys Mgr Essentials*, 5–15
Anonymous, *(S) TCP/IP*, 5–7
FTP service, *(S) TCP/IP*, 3–3
qualifier, *(S) TCP/IP*, 5–7, 5–9
Anonymous account, *(S) Sys Mgr Tuning*, 21–14
ANSI (American National Standards Institute), *(G) SW Overview*, 2–2, 6–10, A–1
ANSI escape sequence, *(P) I/O User*, B–9
ANSI-labeled magnetic tape
See Tapes
ANSI magnetic tape
data, *(P) File Appl*, 1–17
Answer file (for software installation), *(S) Sys Mgr Essentials*, 3–14
ANY_CYLINDER option, *(P) File Appl*, 4–35
AP (argument pointer), *(P) VAX SDA*, SDA–17
APB.EXE file, *(S) Sys Mgr Essentials*, 4–18
role in boot process, *(S) Sys Mgr Essentials*, 4–2
%AP built-in symbol, *(P) Debugger*, 8–22, B–4
API errors, reporting, *(P) DECthreads*, 3–9
APL, *(G) SW Overview*, 4–5; *(P) Environment*, 7–4
data type declarations, *(P) Interfaces*, B–19
implementation table, *(P) Interfaces*, B–19
Apostrophe (')
in symbol definitions, *(G) User*, 14–31, 14–32
Append access
use of RAB$V_EOF option, *(P) RMS Ref*, 6–12
APPEND command, *(G) DCL A-M*, DCLI–36 to DCLI–40
in network operations, *(S) DECnet Intro*, 2–6
using with DECwindows compound documents, *(G) DCL A-M*, DCLI–36
/APPEND qualifier, *(P) Debugger*, CD–121
AppleShare, *(G) SW Overview*, 6–25
AppleTalk, *(G) SW Overview*, 1–9, 6–18
protocols, *(G) SW Overview*, 6–25
Application code sharing, *(S) Alpha Perform*, 1–5
Application Control and Management System
See ACMS
Application design, *(P) File Appl*, 2–1, 3–1 to 3–3
Application layers, *(S) TCP/IP*, 2–3
Application port, *(S) Sys Mgmt Util A-L*, 13–10, 13–35, 13–37
displaying, *(S) Sys Mgmt Util A-L*, 13–52
mapping, *(S) Sys Mgmt Util A-L*, 13–37
Applications
characterization consulting from Digital, *(S) Dependable*, 10–1
components, *(G) SW Overview*, 4–2
connecting to LAT ports, *(P) I/O User*, 5–49
DECwindows Motif, *(G) SW Overview*, 5–6
dependability characteristics, *(S) Dependable*, 8–1
dependability features of application software, *(S) Dependable*, 8–35 to 8–58
developing, *(G) SW Overview*, 4–1
distributed, *(G) SW Overview*, 2–6; *(P) Environment*, 1–3, 3–1, 3–5, 7–1
graphical user interface, *(G) SW Overview*, 4–17
managing shared information, *(S) Dependable*, 8–58 to 8–61
object-oriented, *(G) SW Overview*, 6–15
OpenVMS, *(G) SW Overview*, 1–2

Applications (cont'd)
portable, *(G) SW Overview*, 2–3, 4–3, 5–1; *(P) Environment*, 2–1
POSIX, *(G) SW Overview*, 2–4, 3–3, 4–3
POSIX for OpenVMS Alpha, *(P) Environment*, 2–2
POSIX for OpenVMS VAX, *(P) Environment*, 2–2
prototyping, *(S) Dependable*, 8–31 to 8–33
real-time, *(G) SW Overview*, 4–18
running locally, *(G) DCL N-Z*, DCLII–119
running remotely, *(G) DCL N-Z*, DCLII–119
scaling considerations, *(S) Dependable*, 8–13
software performance, *(S) Dependable*, 4–13
synchronization techniques, *(S) Dependable*, 8–17
TCP/IP, *(S) Sys Mgr Tuning*, 21–13; *(S) TCP/IP*, 1–1, 3–1
testing with DEC Test Manager, *(S) Dependable*, 8–59
testing with PCA, *(S) Dependable*, 8–59
three-dimensional graphics support, *(G) SW Overview*, 6–16
transaction-processing, *(G) SW Overview*, 2–13
Application service, *(S) Sys Mgmt Util A-L*, 13–10, 13–14, 13–36, 13–39
defined, *(S) Sys Mgmt Util A-L*, 13–16
setting up, *(S) Sys Mgmt Util A-L*, 13–36
AP symbol, *(P) VAX SDA*, SDA–17
AQBs (ACP queue blocks), *(P) Alpha SDA*, SDA–95; *(P) VAX SDA*, SDA–106
Arbitration rules, for control of SCSI bus, *(G) V7.0 New Feat*, C–36
modifying the effect of, *(G) V7.0 New Feat*, C–36
ARB symbol, *(P) Alpha SDA*, SDA–16
Arc cosine
in degrees, *(P) MTH$*, MTH–6, MTH–70
in radians, *(P) MTH$*, MTH–3, MTH–68
Architectures
Alpha, *(G) SW Overview*, 1–11
CISC, *(G) SW Overview*, 1–11
linker options, *(G) V7.0 New Feat*, 4–11
RISC, *(G) SW Overview*, 1–11
VAX, *(G) SW Overview*, 1–11
VMScluster, *(S) VMScluster Sys*, 2–1
Archive files
analyzing security-relevant events, *(S) Security*, 9–16
enabling remote, *(S) Security*, 9–16
for security event messages, *(S) Security*, 9–15
Archiving backup data, *(S) Dependable*, 9–16
Arc sine
in degrees, *(P) MTH$*, MTH–11, MTH–74
in radians, *(P) MTH$*, MTH–9, MTH–72
Arc tangent
hyperbolic, *(P) MTH$*, MTH–21, MTH–84
Arc tangent (cont'd)
in degrees, *(P) MTH$*, MTH–15, MTH–19, MTH–78, MTH–82
in radians, *(P) MTH$*, MTH–13, MTH–17, MTH–76, MTH–80
AREA attributes, *(P) Rec Mgmt Util*, 4–26, 4–27
Area descriptors
how affected by extending index file, *(P) RMS Ref*, RMS–37
AREA DESCRIPTOR structure, *(P) File Appl*, 10–16
Area extension size, *(P) Concepts*, 21–9
Area identification numbers
See AIDs
Area options, *(P) File Appl*, 4–34
AREA primary sections
ordering requirement, *(P) Rec Mgmt Util*, 6–1
Area routers
See Routers, Level 2
Area routing, *(S) DECnet Intro*, 1–3
Areas, *(S) DECnet Intro*, 1–3; *(S) DECnet Mgmt*, 1–2; *(P) File Appl*, 3–24
default number, *(S) DECnet Mgmt*, 2–1, 3–7
defining multiple in an FDL file, *(P) File Appl*, 3–25
definition, *(S) DECnet Mgmt*, 2–18
multiple on a volume set, *(P) File Appl*, 3–24
number, *(S) DECnet Intro*, 3–12, 3–33; *(S) DECnet Mgmt*, 2–1, 2–17, 2–18, 3–7, 3–50
path control parameters, *(S) DECnet Mgmt*, 3–54
Argument blocks, *(P) Modular Proc*, 6–3
Argument data types, *(P) Calling Std*, 4–1
Argument descriptors
See DSCs
Argument home area, *(P) Calling Std*, 3–12
Argument information
See AI
Argument items
for Alpha, *(P) Calling Std*, 3–48
Argument keywords
delimiting for RMS, *(P) RMS Ref*, A–9
Argument lists, *(P) Interfaces*, 1–7, 2–9; *(P) Calling Std*, 3–12, 3–37
count field, *(P) RMS Ref*, 2–4
creating, *(P) Interfaces*, A–4
definition, *(P) Calling Std*, 1–4
description, *(P) RMS Ref*, 2–4
error routine address field, *(P) RMS Ref*, 2–4
evaluation, *(P) Calling Std*, 2–5
fixed-size, *(P) 64-Bit Addr*, 9–2
for AST service routine, *(P) Concepts*, 4–6
for condition handler, *(P) Concepts*, 13–27
format, *(P) Calling Std*, 2–4
for VAX, *(P) Calling Std*, 2–3
generic macro generated, *(P) Interfaces*, A–1
interpretating, *(P) Calling Std*, 2–4

Argument lists (cont'd)
new FAB address field, *(P) RMS Ref*, 2–5
passing to record management services, *(P) RMS Ref*, A–9
passing to service, *(P) RMS Ref*, A–9
success routine address field, *(P) RMS Ref*, 2–4
suppressing homing, *(P) 64-Bit Addr*, 9–4
using macros, *(P) Interfaces*, A–2
variable-size, *(P) 64-Bit Addr*, 9–4
Argument mechanisms, *(P) Calling Std*, 6–13
Argument order
Alpha evaluation, *(P) Calling Std*, 3–53
Argument passing
for RTL routines, *(P) Interfaces*, 3–4
for system services, *(P) Interfaces*, 4–4
mechanisms, *(P) Interfaces*, 2–11
by descriptor, *(P) Interfaces*, 2–15
by reference, *(P) Interfaces*, 2–14
by value, *(P) Interfaces*, 2–13
Argument pointer
See AP
Arguments, *(P) Interfaces*, 1–7; *(P) Calling Std*, 3–12, 3–49
adding new, *(P) Modular Proc*, 6–2
declaring quadword, *(P) 64-Bit Addr*, 9–4
delimiters for RMS, *(P) RMS Ref*, A–9
device- or function-dependent, *(P) I/O User*, 1–2
explicit, *(P) Modular Proc*, 2–4
for initialization and control block store macros, *(P) RMS Ref*, A–7
implicit, *(P) Modular Proc*, 2–4
list, *(P) I/O User*, A–1
mechanism vector, *(P) Concepts*, 13–35
optional, *(P) Modular Proc*, 2–10, A–2
order, *(P) Modular Proc*, 2–10, A–2
passed in memory, *(P) Calling Std*, 3–9, 3–12
passing, *(P) RMS Ref*, 1–3
program, *(P) Debugger*, 2–2, CD–140, CD–142
separator in RMS coding, *(P) RMS Ref*, A–6
specifying, *(P) Interfaces*, A–4
specifying as run-time values, *(P) RMS Ref*, A–8
to FABs, *(P) RMS Ref*, 1–4
to RABs, *(P) RMS Ref*, 1–5
Arguments heading
in routine documentation, *(P) Interfaces*, 1–6
/ARGUMENTS qualifier, *(P) Debugger*, 5–9, CD–140, CD–142
Argument substitutions, *(P) SMG$*, 5–14
Argument values
passed to AST-level completion routine, *(P) RMS Ref*, 2–4
Argument vectors
mechanism, *(P) Calling Std*, 6–15
arg_list data type, *(P) Interfaces*, B–2
Arithmetic
See also Condition handlers
using system routines, *(P) Environment*, 10–2
Arithmetic exceptions
getting information about, *(P) Sys Svc II*, SYS2–87
on Alpha systems, *(P) Concepts*, 13–13
Arithmetic operations, *(P) SMG$*, 5–15
Arithmetic operators, *(P) Alpha SDA*, SDA–12; *(P) VAX SDA*, SDA–16
shifting (@), *(P) VAX SDA*, SDA–17
Arithmetic shifting operator (@), *(P) Alpha SDA*, SDA–13
ARP (Address Resolution Protocol), *(S) TCP/IP*, 2–7
Array descriptors, *(P) Calling Std*, 5–7
Arrays
conversion of, *(P) MTH$*, MTH–63
mechanism, *(P) Concepts*, 13–35
virtual address, *(P) Concepts*, 19–10, 20–8
Array types, *(P) Debugger*, 3–15, 3–18, 8–16
vector register, *(P) Debugger*, 15–6
Arrow keys
definition for, *(S) Sys Mgmt Util M-Z*, 4–53
functions of, *(S) Sys Mgr Tuning*, 20–7; *(S) Sys Mgmt Util M-Z*, B–3
moving cursor within DCL command line, *(G) User*, 3–19
recalling commands with, *(G) User*, 3–14, 3–19
Artificial intelligence
See also AI
VAX OPS5, *(S) Dependable*, 3–9
ASBs (asynchronous save blocks), *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
/ASCIC qualifier, *(P) Debugger*, CD–76, CD–103, CD–129
/ASCID qualifier, *(P) Debugger*, CD–76, CD–103, CD–129
ASCII (American Standard Code for Information Interchange)
"a" character set, *(G) User*, 4–11, B–1; *(P) File Appl*, 1–20
character set, *(G) User*, B–1
full character set, *(G) User*, B–2
ASCII "a" character set
percent sign, *(S) Sys Mgr Essentials*, 9–17
ASCII characters
delimiting in control block fields, *(P) RMS Ref*, A–5, A–6
ASCII character set
See also DEC Multinational character set
converting strings to UTC, *(P) Sys Svc I*, SYS1–65
EBCDIC translation from, *(P) LIB$*, LIB–358, LIB–588
EBCDIC translation to, *(P) LIB$*, LIB–360, LIB–592

ASCII character set (cont'd)
string types, *(P) Debugger*, 8–16, 8–27
ASCII output
formatting character string, *(P) Sys Svc I*, SYS1–351
ASCII pad character, *(P) Rec Mgmt Util*, 2–13
/ASCII qualifier, *(P) Debugger*, CD–77, CD–104, CD–129
ASCII space character
conversion function, *(P) Rec Mgmt Util*, 2–4
ASCII string type, *(P) Debugger*, CD–76, CD–103, CD–228
ASCII time, *(P) Concepts*, 5–7
/ASCIW qualifier, *(P) Debugger*, CD–77, CD–104, CD–129
/ASCIZ qualifier, *(P) Debugger*, CD–77, CD–104, CD–130
asind routine, *(P) Portable Math*, DPML–6, B–2
asinh routine, *(P) Portable Math*, DPML–7, B–2
asin routine, *(P) Portable Math*, DPML–6, B–2
ASN register
displaying, *(P) Alpha SDA*, SDA–87
ASN symbol, *(P) Alpha SDA*, SDA–15
Assemblers, *(G) SW Overview*, 4–5
Assembly language instructions
Alpha built-ins, *(P) 64-Bit Addr*, 9–7
Assembly languages
See MACRO, MACRO-64
ASSIGN command, *(G) User*, 13–3; *(G) DCL A-M*, DCLI–41 to DCLI–46; *(P) Concepts*, 10–2
access modes, *(G) User*, 13–9
defining the LNK$LIBRARY logical name, *(P) Linker*, LINK–40
/TRANSLATION_ATTRIBUTES qualifier, *(P) File Appl*, 5–7
Assigning
a default form to a queue, *(S) Sys Mgr Essentials*, 13–63
a logical queue, *(S) Sys Mgr Essentials*, 13–56
characteristics to a queue, *(S) Sys Mgr Essentials*, 13–59
libraries to queues, *(S) Sys Mgr Essentials*, 13–66
logical queue to an execution queue, *(G) DCL A-M*, DCLI–48
queue name, *(G) DCL A-M*, DCLI–263
queue options, *(G) DCL A-M*, DCLI–263; *(G) DCL N-Z*, DCLII–372
reset modules to a queues, *(S) Sys Mgr Essentials*, 13–67
symbols interactively, *(G) DCL A-M*, DCLI–278
Assigning an I/O channel, *(P) Sys Svc I*, SYS1–38
Assigning a node to a group, *(S) DECamds*, 1–8
Assignment statement
creating symbols, *(G) User*, 14–3
= (Assignment statement) command, *(G) DCL A-M*, DCLI–1 to DCLI–4
ASSIGN/MERGE command, *(G) DCL A-M*, DCLI–47; *(S) Sys Mgr Essentials*, 13–57
ASSIGN/QUEUE command, *(G) DCL A-M*, DCLI–48, DCLI–49
Assisted merge and volume shadowing, *(S) Sys Mgr Essentials*, 10–42
/ASSIST qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–15
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–8
Associate access, *(S) Security*, 5–2
AST
system services, *(P) Environment*, 10–7
AST (asynchronous system trap)
CALL command, *(P) Debugger*, CD–16
disabling, *(P) Debugger*, CD–83
displaying AST handling conditions, *(P) Debugger*, CD–243
enabling, *(P) Debugger*, CD–97
AST completion routines
arguments passed to, *(P) RMS Ref*, 2–4
AST-driven programs
debugging, *(P) Debugger*, 13–25
ASTEN register
displaying, *(P) Alpha SDA*, SDA–87
Asterisk (*)
See also Percent sign (%)
as EDT prompt, *(G) User*, 9–3
as wildcard character, *(S) Sys Mgr Essentials*, 9–16; *(S) Sys Mgmt Util A-L*, 7–8
in directory specifications, *(G) User*, 4–9
in START/QUEUE/MANAGER command, *(S) VMScluster Sys*, 7–3
in UIC format directory specifications, *(G) User*, 5–10
rules for using, *(G) User*, 4–9
in symbol definitions, *(G) User*, 14–4
multiplication operator, *(P) Debugger*, B–8
ASTLM (AST limit) quota
effect of canceling wakeup on, *(P) Sys Svc I*, SYS1–82
ASTLM process limit, *(S) Sys Mgr Essentials*, 6–41
value for efficient backups, *(S) Sys Mgr Essentials*, 10–10
ASTLVL register
displaying, *(P) VAX SDA*, SDA–96
/AST qualifier, *(P) Debugger*, 13–26, CD–17
AST queue process limit, *(S) Sys Mgr Essentials*, 6–41
AST reentrant, *(P) SMG$*, 4–1
AST routines
global symbols, *(P) VAX SDA*, SDA–64
overview, *(P) Concepts*, 4–3

ASTs, *(P) DECthreads*, G–39
ASTs (asynchronous system traps), *(G) SW Overview*, 4–11; *(P) Concepts*, 4–1, 6–22; *(P) Debugger*, 13–25; *(P) Alpha SDA*, SDA–15
See also Synchronization
access mode, *(P) Concepts*, 4–5
argument lists, *(P) RMS Ref*, A–10
arguments passed to completion routines, *(P) RMS Ref*, A–10
argument values, *(P) RMS Ref*, A–10
blocking, *(P) Concepts*, 15–12, 15–18
CALL command, *(P) Debugger*, 13–26
condition handling at AST level, *(P) Modular Proc*, 3–21
Ctrl/C service routine, *(P) Debugger*, 5–12
declaring, *(P) Concepts*, 4–6; *(P) Sys Svc I*, SYS1–242
definition, *(P) Modular Proc*, 3–15
delivery, *(P) Concepts*, 4–5, 4–8
disabling, *(P) Sys Svc II*, SYS2–281
disabling interrupts, *(P) Modular Proc*, 3–19
enabling, *(P) Sys Svc II*, SYS2–281
example, *(P) Concepts*, 4–8
execution, *(P) Concepts*, 4–1
handler, *(P) Modular Proc*, 3–15, 3–16
I/O at AST-level, *(P) Modular Proc*, 3–20, A–4
in target process, *(P) Concepts*, 3–25
interrupt, *(P) Modular Proc*, 3–15
parameter, *(P) Concepts*, 4–7
process wait state, *(P) Concepts*, 4–5
progress check, *(P) LIB$*, LIB–17
quota, *(P) Concepts*, 9–3; *(P) I/O User*, 2–27, 3–10, 4–5, 5–44
reentrancy, *(P) Modular Proc*, 3–15, A–3
restrictions on use, *(P) DECthreads*, B–3
routine, *(P) Modular Proc*, 3–15
service routine, *(P) Concepts*, 4–6
setting for power recovery, *(P) Sys Svc II*, SYS2–301
setting timer for, *(P) Sys Svc II*, SYS2–294
specifying quota, *(G) DCL N-Z*, DCLII–61
system service, *(P) Concepts*, 4–1
system services, *(P) Environment*, 10–5
thread, *(P) Modular Proc*, 3–15
writing, *(P) Concepts*, 4–4
writing AST-reentrant procedures, *(P) Modular Proc*, 3–16
ASTs and static watchpoints, *(P) Debugger*, CD–237
ASTSR register
displaying, *(P) Alpha SDA*, SDA–87
AST symbols, *(P) Alpha SDA*, SDA–15
ast_procedure data type, *(P) Interfaces*, B–2
Asymmetric vector processing configuration, *(S) Sys Mgr Tuning*, 26–4
ASYNCHRONOUS attribute, *(P) Rec Mgmt Util*, 4–6, 4–9, 4–17
Asynchronous cancelability, *(P) DECthreads*, 2–14
Asynchronous circuits, *(S) DECnet Mgmt*, 1–3
See also Circuits
Asynchronous connections, *(S) DECnet Intro*, 3–4
configuration, *(S) DECnet Intro*, 3–19
correcting insufficient receive buffers, *(S) DECnet Mgmt*, 3–42
DDCMP, *(S) DECnet Intro*, 3–9; *(S) DECnet Mgmt*, 1–9
dynamic, *(S) DECnet Intro*, 1–12, 3–19, 3–29; *(S) DECnet Mgmt*, 1–3, 1–7, 1–9
dynamic DDCMP, *(S) DECnet Intro*, 3–19
dynamic line installation, *(S) DECnet Mgmt*, 2–14, 5–14
line installation, *(S) DECnet Mgmt*, 5–12
line parameters, *(S) DECnet Mgmt*, 3–45
static, *(S) DECnet Intro*, 1–12, 3–19, 3–23; *(S) DECnet Mgmt*, 1–3, 1–7, 1–9
static DDCMP, *(S) DECnet Intro*, 3–19
static line installation, *(S) DECnet Mgmt*, 2–13, 5–12
terminating dynamic, *(S) DECnet Intro*, 3–28
troubleshooting problems, *(S) DECnet Intro*, 4–15
Asynchronous DDCMP
driver, *(S) DECnet Intro*, 3–19, 3–25
Asynchronous DECnet
using virtual terminals, *(S) Sys Mgr Essentials*, 7–11, 7–12
Asynchronous device
LAT application ports for, *(S) Sys Mgmt Util A-L*, 13–10, 13–35
Asynchronous events, *(P) SMG$*, 4–1
Asynchronous execution
designing code for, *(P) DECthreads*, 3–1
Asynchronous input/output, *(P) Concepts*, 9–20
Asynchronous lines, *(S) DECnet Mgmt*, 1–3
See also Lines
for point-to-point connections, *(S) DECnet Intro*, 3–4
Asynchronous operations, *(P) File Appl*, 8–18, 8–19
contrasted with synchronous operation, *(P) RMS Ref*, 2–8
performance, *(P) File Appl*, 9–8
using R0, *(P) RMS Ref*, 2–5
Asynchronous programming techniques
using in a multithreaded program, *(P) DECthreads*, A–5
Asynchronous save blocks
See ASBs
Asynchronous SCSI data transfer mode
enabling, *(P) I/O User*, 8–6, 8–12

Asynchronous signals, *(P) DECthreads*, A–4
Asynchronous software interrupts
definition, *(P) Calling Std*, 1–4
Asynchronous system services, *(P) Interfaces*, 4–5
Asynchronous system traps
See ASTs
Asynchronous system traps limit
See ASTLM
Asynchronous system traps limit (ASTLM), *(S) DECamds*, 3–24
ASY option, *(P) Rec Mgmt Util*, 4–9, 4–17
atan2 routine, *(P) Portable Math*, DPML–9, B–2
atand2 routine, *(P) Portable Math*, DPML–9, B–3
atand routine, *(P) Portable Math*, DPML–8, B–2
atanh routine, *(P) Portable Math*, DPML–10, B–3
atan routine, *(P) Portable Math*, DPML–8, B–2
ATM communications service, *(G) V7.0 New Feat*, D–5
system management, *(G) V7.0 New Feat*, D–12
ATM Intersite Link Specifications, *(G) V7.0 New Feat*, D–10
Atomic data types, *(P) Calling Std*, 4–1
Atomic instructions
effect on synchronization, *(P) Concepts*, 14–5
Atomicity
definition, *(P) Concepts*, 14–3
Atomic memory reference, *(P) Concepts*, 14–3
Atomic queue, *(P) DECthreads*, E–4
At sign (@)
See also Execute procedure (@) command
as execute procedure command, *(G) User*, 15–21
as shifting operator, *(P) Alpha SDA*, SDA–37
contents-of operator, *(P) Debugger*, B–8
execute-procedure command, *(P) Debugger*, 12–1, CD–7
SET ATSIGN command, *(P) Debugger*, CD–157
SHOW ATSIGN command, *(P) Debugger*, CD–244
using with a distribution list in Mail, *(G) User*, 6–7, 6–8
ATTACH command, *(G) DCL A-M*, DCLI–50, DCLI–51; *(P) Debugger*, 5–12, CD–15; *(P) Alpha SDA*, SDA–38; *(P) VAX SDA*, SDA–46
in LATCP, *(S) Sys Mgmt Util A-L*, 13–6
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–13
Attached processors, *(S) Sys Mgr Tuning*, 26–2
Attacks, types of system, *(S) Security*, 10–1
Attention AST, *(P) I/O User*, 5–76
LAN drivers, *(P) I/O User*, 9–42
mailbox, *(P) I/O User*, 4–12
terminal, *(P) I/O User*, 5–44
Attributes
See also ACE attributes and Identifier attributes
condition variable, *(P) DECthreads*, 2–6
Attributes (cont'd)
creation by the Edit/FDL utility, *(P) File Appl*, 4–3
detachstate, *(P) DECthreads*, pthread–6, pthread–20, G–8, G–14
display, *(P) Debugger*, 11–3, 11–6, 11–9, 11–19, CD–151, CD–276
Dynamic, *(S) Sys Mgmt Util A-L*, 5–21, 5–29, 5–37; *(P) Concepts*, 23–5
guard size, *(P) DECthreads*, 2–6, pthread–8, pthread–22, E–21, E–27, G–9, G–16
Holder Hidden, *(S) Sys Mgmt Util A-L*, 5–21, 5–29, 5–37; *(P) Concepts*, 23–5
inherit scheduling, *(P) DECthreads*, 2–4
mutex kind, *(P) DECthreads*, E–23, E–30
mutex type, *(P) DECthreads*, 2–6
Name Hidden, *(S) Sys Mgmt Util A-L*, 5–21, 5–29, 5–37; *(P) Concepts*, 23–5
No Access, *(S) Sys Mgmt Util A-L*, 5–21, 5–29, 5–37; *(P) Concepts*, 23–5
primary, *(P) File Appl*, 4–9
priority, *(P) DECthreads*, E–24, E–31, G–11, G–19
queue size, *(P) DECthreads*, F–4, F–5
Resource, *(S) Sys Mgmt Util A-L*, 5–21, 5–29, 5–37; *(P) Concepts*, 23–5
scheduling, *(P) DECthreads*, pthread–10, pthread–24, E–22, E–28, G–10, G–17
scheduling parameters, *(P) DECthreads*, pthread–12
scheduling policy, *(P) DECthreads*, 2–4, pthread–14, pthread–28, E–25, E–33, G–12, G–21
scheduling policy attribute parameters, *(P) DECthreads*, pthread–26
scheduling priority, *(P) DECthreads*, 2–5
specifying identifier characteristics, *(S) Sys Mgmt Util A-L*, 1–16
stack size, *(P) DECthreads*, 2–6, pthread–16, pthread–30, E–26, E–35, G–13, G–23
Subsystem, *(S) Sys Mgmt Util A-L*, 5–21, 5–29, 5–37; *(P) Concepts*, 23–5
thread, *(P) DECthreads*, 2–4
types of value, *(P) Rec Mgmt Util*, 4–2
Attributes object
creating, *(P) DECthreads*, 2–3, E–18, G–5
creating and initializing, *(P) DECthreads*, pthread–18
definition of, *(P) DECthreads*, 2–3
deleting, *(P) DECthreads*, 2–3, E–20
/ATTRIBUTES qualifier, *(P) Linker*, LINK–48
AUCBs (audio control blocks)
defining, *(P) I/O User*, 2–20
Audio
error handling in applications, *(P) I/O User*, 2–23
extensions to SCSI disk class driver, *(P) I/O User*, 2–18

Audio (cont'd)
$QIO interface to disk class driver, *(P) I/O User*, 2–19
storing with data on CD–ROM, *(P) I/O User*, 2–24
Audio applications
programming, *(P) I/O User*, 2–25
programming example, *(P) I/O User*, 2–25
Audio control blocks
See AUCBs
Audit ACEs, *(S) Security*, 4–30; *(S) Sys Mgmt Util A-L*, 1–8
how to use, *(S) Security*, 9–5
specifying access, *(S) Sys Mgmt Util A-L*, 1–9
specifying attributes, *(S) Sys Mgmt Util A-L*, 1–8
Audit Analysis utility (ANALYZE/AUDIT), *(G) SW Overview*, 3–16; *(S) Security*, 9–1, 9–16 to 9–22; *(S) Sys Mgr Essentials*, 11–14; *(S) Sys Mgmt Util A-L*, 4–3 to 5–1
exiting from, *(S) Sys Mgmt Util A-L*, 4–27
generating security reports, *(S) Sys Mgr Tuning*, 18–29
invoking, *(S) Sys Mgmt Util A-L*, 4–4
Audit data packets
See Security audit data packets
Audit event flags
See Security audit event flags
Audit event messages
converting, *(P) Sys Svc I*, SYS1–402
Audit events
See Security-auditing events
Audit header packets
See Security audit header packets
Auditing
See also Security auditing
applications, *(S) Security*, 10–4
as security feature, *(S) Security*, 10–4
of security events, *(S) Security*, 9–1
security, *(S) Sys Mgr Essentials*, 11–2
Auditing events, *(P) Sys Svc I*, SYS1–43, SYS1–61
Auditing subystem, *(G) SW Overview*, 3–14
Audit log files
See Security audit log files
Audit messages
See Security audit event messages
AUDIT privilege, *(S) Security*, A–2
Audit reports
See Security audit reports
Audit server databases, *(S) Security*, 9–24; *(S) VMScluster Sys*, 5–13
Audit server processes, *(S) Security*, 9–23 to 9–29
Audit trails, *(G) SW Overview*, 3–15
See also Security auditing
protecting, *(S) Security*, C–8
Audit trails (cont'd)
role in security, *(S) Security*, 2–5
Authentication
Kerberos, *(S) TCP/IP*, 5–2
Authentication cards, *(S) Security*, 7–17
C2 system requirements, *(S) Security*, C–6
Authentication of user identity, *(S) Sys Mgr Tuning*, 21–14
Authorization databases, *(S) Security*, 2–4, 2–6
adding users, *(S) Security*, 7–4
auditing, *(S) Security*, 9–3
auditing modifications to, *(S) Security*, 9–7
contents, *(S) Security*, 2–2
synchronizing authorization on clustered systems, *(S) Security*, 11–4
Authorization files, *(S) Sys Mgr Essentials*, 6–5
Authorize utility (AUTHORIZE), *(G) SW Overview*, 3–9, 3–16; *(S) Sys Mgmt Util A-L*, 5–5; *(S) Alpha Perform*, 3–3; *(S) VMScluster Sys*, 1–11, B–1
ADD command, *(S) Sys Mgr Essentials*, 6–17
ADD/IDENTIFIER command, *(S) Sys Mgr Essentials*, 6–33
adding a user account, *(S) Sys Mgr Essentials*, 6–17
checking UAF quotas for software installation, *(S) Sys Mgr Essentials*, 3–7
commands summary (table), *(S) Sys Mgmt Util A-L*, 5–7
controlling access with identifiers, *(S) Sys Mgmt Util A-L*, 1–13
default password, *(S) Sys Mgmt Util A-L*, 5–8
DEFAULT record, *(S) Sys Mgmt Util A-L*, 5–8
exiting from, *(S) Sys Mgmt Util A-L*, 5–5
for network proxy database management, *(S) DECnet Intro*, 3–35
GRANT/IDENTIFIER command, *(S) Sys Mgr Essentials*, 6–33
invoking, *(S) Sys Mgmt Util A-L*, 5–5
limiting page file usage, *(S) Sys Mgr Tuning*, 15–9
listing user records, *(S) Sys Mgr Essentials*, 6–23
login flags, *(S) Sys Mgmt Util A-L*, 5–11
modifying a user account, *(S) Sys Mgr Essentials*, 6–23
modifying process limits for SYSTEM account, *(S) Sys Mgr Essentials*, 3–7
priorities
adjusting, *(S) Alpha Perform*, 19–1
privileges required, *(S) Sys Mgmt Util A-L*, 5–3
quotas
modifying, *(S) Alpha Perform*, 17–3
reducing process paging, *(S) Sys Mgr Tuning*, 26–7
restricting login hours with, *(S) Sys Mgr Tuning*, 16–4

Authorize utility (AUTHORIZE) (cont'd)
restricting system use with, *(S) Sys Mgr Tuning*, 16–4
restrictions, *(S) Sys Mgmt Util A-L*, 5–3
setting process quotas for efficient backups, *(S) Sys Mgr Essentials*, 10–9
Autoconfiguration
benefits, *(S) Sys Mgr Essentials*, 7–6
definition, *(S) Sys Mgr Essentials*, 5–8, 7–6
in system startup, *(S) Sys Mgr Essentials*, 5–4
suppressing, *(S) Sys Mgr Essentials*, 5–8, 7–8
of SCSI device, *(P) I/O User*, 8–8
VAXstation 2000 (table), *(S) Sys Mgmt Util M-Z*, D–7
VAXstation 2000 and MicroVAX 2000 devices, *(S) Sys Mgmt Util M-Z*, D–6
AUTOCONFIGURE command
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–5
in SYSGEN (VAX), *(S) Sys Mgr Essentials*, 7–6
in system startup, *(S) Sys Mgr Essentials*, 5–4, 5–7
suppressing, *(S) Sys Mgr Essentials*, 5–8, 7–8
Autoconfiguring devices
on Alpha systems, *(S) Sys Mgmt Util M-Z*, 6–33
Autodial protocol, *(S) Security*, 12–17; *(S) DECnet Intro*, 3–26
Auto extends, *(P) File Appl*, 3–5 to 3–6
Auto extend size selections, *(P) File Appl*, 3–5
AUTOGEN.COM command procedure, *(G) SW Overview*, 3–7, 3–11; *(S) Sys Mgr Tuning*, 14–8; *(S) Sys Mgmt Util A-L*, 6–3; *(S) VMScluster Sys*, 1–10
See also MODPARAMS.DAT file
ADD_ prefix, *(S) Sys Mgr Tuning*, 14–19
AGEN$PARAMS.REPORT file, *(S) Sys Mgr Tuning*, 14–11
as recommended method for changing system parameters, *(S) Sys Mgr Tuning*, 14–5
automatic management of page, swap, and dump files, *(S) Sys Mgr Tuning*, 15–22
calculation of page file size, *(S) Sys Mgr Tuning*, 15–4, 15–22, 15–23, 15–26
calculation of parameter values, *(S) Sys Mgmt Util A-L*, 6–7
calculation of swap file size, *(S) Sys Mgr Tuning*, 15–5, 15–22, 15–23, 15–26
calculation of system dump file size, *(S) Sys Mgr Tuning*, 15–2, 15–22, 15–23, 15–26
changing page, swap, and dump file sizes, *(S) Sys Mgr Tuning*, 15–22
changing system parameters, *(S) Sys Mgr Tuning*, 14–3, 14–4; *(S) VAX Perform*, 5–1; *(S) Alpha Perform*, 16–2
collection of data, *(S) Sys Mgmt Util A-L*, 6–6
AUTOGEN.COM command procedure (cont'd)
controlling operations performed by, *(S) Sys Mgr Tuning*, 14–10
controlling system parameter values set by, *(S) Sys Mgr Tuning*, 14–18
converting system parameter values for use with, *(S) Sys Mgr Tuning*, 14–5
creating page, swap, and dump files, *(S) Sys Mgr Tuning*, 15–17, 15–24
defining the number of VAXcluster nodes for, *(S) Sys Mgr Tuning*, 14–21
displaying page, swap, and dump file size calculations, *(S) Sys Mgr Tuning*, 15–17, 15–22
display of page, swap, and dump file size calculations, *(S) Sys Mgmt Util A-L*, 6–7
enabling or disabling disk server, *(S) VMScluster Sys*, 8–21
end phase
default, *(S) Sys Mgmt Util A-L*, 6–10
specifying when invoking, *(S) Sys Mgr Tuning*, 14–9; *(S) Sys Mgmt Util A-L*, 6–10
examining calculations of, *(S) Sys Mgmt Util A-L*, 6–4
executed by CLUSTER_CONFIG.COM procedure, *(S) VMScluster Sys*, 8–1
executing
in batch, *(S) Sys Mgr Tuning*, 14–22
interactively, *(S) Sys Mgr Tuning*, 14–18
execution mode
specifying when invoking, *(S) Sys Mgr Tuning*, 14–9; *(S) Sys Mgmt Util A-L*, 6–10
failure executing SYCONFIG.COM, *(S) Sys Mgr Essentials*, 7–9
feedback, *(S) Sys Mgmt Util A-L*, 6–3, 6–4
collection of, *(S) Sys Mgmt Util A-L*, 6–5
data file, *(S) Sys Mgmt Util A-L*, 6–5
parameters affected by, *(S) Sys Mgmt Util A-L*, 6–5
files used by, *(S) Sys Mgmt Util A-L*, 6–9
functions of, *(S) Sys Mgr Tuning*, 14–9
generation of known image file list (VMSIMAGES.DAT), *(S) Sys Mgmt Util A-L*, 6–7
GENFILES phase, *(S) Sys Mgmt Util A-L*, 6–7
GENPARAMS phase, *(S) Sys Mgmt Util A-L*, 6–7
GETDATA phase, *(S) Sys Mgmt Util A-L*, 6–6
HELP phase, *(S) Sys Mgmt Util A-L*, 6–8
input files, *(S) Sys Mgmt Util A-L*, 6–9
installing page, swap, and dump files, *(S) Sys Mgr Tuning*, 15–18, 15–22
instructions for using, *(S) Sys Mgr Tuning*, 14–18
invoking, *(S) Sys Mgr Tuning*, 14–9; *(S) Sys Mgmt Util A-L*, 6–10

AUTOGEN.COM command procedure (cont'd)
operations performed by, *(S) Sys Mgmt Util A-L*, 6–5
output files, *(S) Sys Mgmt Util A-L*, 6–9
parameters to, *(S) Sys Mgr Tuning*, 14–9; *(S) Sys Mgmt Util A-L*, 6–10
performance tuning, *(S) Sys Mgr Tuning*, 16–5
phases, *(S) Sys Mgmt Util A-L*, 6–5
order of, *(S) Sys Mgr Tuning*, 14–16
specifying when invoking, *(S) Sys Mgr Tuning*, 14–9; *(S) Sys Mgmt Util A-L*, 6–10
REBOOT phase, *(S) Sys Mgmt Util A-L*, 6–8
recommendation
for using to size page, swap, and dump files, *(S) Sys Mgr Tuning*, 15–22
restrictions
for changing file sizes, *(S) Sys Mgr Tuning*, 15–23
for specifying page and swap file sizes, *(S) Sys Mgr Tuning*, 15–23
restriction with changing system files sizes, *(S) Sys Mgmt Util A-L*, 6–7
reviewing calculations of, *(S) Sys Mgr Tuning*, 14–10, 14–18
running with feedback option, *(S) VMScluster Sys*, 8–42, 8–43
SAVPARAMS phase, *(S) Sys Mgmt Util A-L*, 6–6
SETPARAMS.DAT file, *(S) Sys Mgr Tuning*, 14–18
SETPARAMS phase, *(S) Sys Mgmt Util A-L*, 6–7
SHUTDOWN phase, *(S) Sys Mgmt Util A-L*, 6–8
specifying an alternate default startup command procedure, *(S) Sys Mgr Essentials*, 4–13
specifying dump file, *(S) VMScluster Sys*, 10–13
specifying location of page and swap files, *(S) Sys Mgr Tuning*, 15–24
specifying number of Ethernet adapters in, *(S) Sys Mgr Tuning*, 14–21
specifying size of page and swap files
of individual files, *(S) Sys Mgr Tuning*, 15–22, 15–24
of total file space, *(S) Sys Mgr Tuning*, 15–22, 15–23
specifying values for parameters not calculated by, *(S) Sys Mgr Tuning*, 14–20
start phase
default, *(S) Sys Mgmt Util A-L*, 6–10
specifying when invoking, *(S) Sys Mgr Tuning*, 14–9; *(S) Sys Mgmt Util A-L*, 6–10
system parameters affected by, *(S) Sys Mgr Tuning*, 14–10; *(S) Sys Mgmt Util A-L*, 6–4
AUTOGEN.COM command procedure (cont'd)
system parameters affected by feedback, *(S) Sys Mgmt Util A-L*, 6–5
TESTFILES phase, *(S) Sys Mgmt Util A-L*, 6–7
timing of file size calculations, *(S) Sys Mgr Tuning*, 15–23
types of data collected by, *(S) Sys Mgr Tuning*, 14–9
using with MODPARAMS.DAT, *(S) VMScluster Sys*, 6–9
when to run, *(S) Sys Mgr Tuning*, 14–8; *(S) Sys Mgmt Util A-L*, 6–3
AUTOGEN.PAR, *(S) Sys Mgmt Util A-L*, 6–6, 6–7
AUTOGEN command procedure, *(S) Alpha Perform*, 3–3
feedback mode, *(S) Alpha Perform*, 3–3, 7–1
feedback report, *(S) Alpha Perform*, 9–5
swapper trimming, *(S) Alpha Perform*, 6–13
AUTOGEN feedback, *(S) Sys Mgr Tuning*, 14–8 to 14–22
saving during system shutdown, *(S) Sys Mgr Essentials*, 4–29
AUTOGEN utility, *(S) DECnet Mgmt*, 5–31
Automatic
data collection, *(S) DECamds*, 5–2, Glossary–1
event collection, *(S) DECamds*, Glossary–1
event investigation, *(S) DECamds*, 5–2
fix, *(S) DECamds*, 4–6
investigation for events, *(S) DECamds*, 5–3
investigation for locks, *(S) DECamds*, 5–3
Automatic configurations
of DECnet for OpenVMS network, *(S) DECnet Intro*, 3–11
of DECnet network, *(S) DECnet Intro*, 3–10
of DECnet node, *(S) Sys Mgr Tuning*, 21–12
of devices, *(S) Sys Mgr Essentials*, 7–6
Automatic disconnection
of network link, *(S) DECnet Intro*, 3–3
Automatic login facility (ALF), *(S) Security*, 7–25
adding records, *(S) Sys Mgmt Util M-Z*, 6–10
Autologin account as security problem, *(S) Security*, 7–11
AUTOLOGIN flag, *(S) Security*, 7–11
C2 systems and, *(S) Security*, C–7
cluster requirements for ALF files, *(S) Security*, 11–4
displaying records, *(S) Sys Mgmt Util M-Z*, 6–13
removing records, *(S) Sys Mgmt Util M-Z*, 6–11
setting up an automatic login account, *(S) Sys Mgr Essentials*, 6–32
/AUTOMATIC qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–9
Automatic start
of queue manager, *(S) Sys Mgr Essentials*, 12–3, 12–7, 12–9

Automatic switching
of terminal line, *(S) DECnet Intro*, 3–27
Automatic unshelving
controlling, *(G) DCL N-Z*, DCLII–177; *(P) Sys Svc II*, SYS2–321
determining, *(G) DCL A-M*, DCLI–346; *(G) DCL N-Z*, DCLII–313; *(P) Sys Svc I*, SYS1–442
Automatic volume switching, *(S) Sys Mgr Essentials*, 8–39
Automatic working set adjustment
See AWSA
AUTO prefix, *(S) DECnet Mgmt Util*, C–1
Autostart feature
description, *(S) Sys Mgr Essentials*, 13–4
disabling, *(S) Sys Mgr Essentials*, 12–9, 13–54
before shutting down a node, *(S) Sys Mgr Essentials*, 13–55
enabling, *(S) Sys Mgr Essentials*, 13–4, 13–18, 13–48
on LAT queues, *(S) Sys Mgr Essentials*, 13–4, 13–10
recommended use, *(S) Sys Mgr Essentials*, 13–10
with LAT queues, *(S) Sys Mgr Essentials*, 13–4, 13–10
Autostart queues, *(G) DCL A-M*, DCLI–266; *(G) DCL N-Z*, DCLII–372 to DCLII–373
activating, *(G) DCL A-M*, DCLI–207, DCLI–266; *(S) Sys Mgr Essentials*, 13–4, 13–15, 13–16, 13–49
activating inactive queue status, *(S) Sys Mgr Essentials*, 13–51
creating, *(G) DCL A-M*, DCLI–266; *(S) Sys Mgr Essentials*, 13–15, 13–16
deactivating, *(G) DCL N-Z*, DCLII–400, DCLII–404
designating, *(G) DCL A-M*, DCLI–265
disabling, *(G) DCL A-M*, DCLI–180; *(G) DCL N-Z*, DCLII–406
enabling on a node, *(G) DCL A-M*, DCLI–207
failover, *(G) DCL A-M*, DCLI–180, DCLI–207; *(S) Dependable*, 9–18
preparing for a shutdown, *(G) DCL N-Z*, DCLII–407
preventing failover, *(G) DCL A-M*, DCLI–180
preventing from starting, *(S) Sys Mgr Essentials*, 13–54
recommended use, *(S) Sys Mgr Essentials*, 13–10
relationship between activating and starting, *(S) Sys Mgr Essentials*, 13–4
restarting after deactivating, *(G) DCL N-Z*, DCLII–400, DCLII–404
starting, *(G) DCL A-M*, DCLI–266; *(S) Sys Mgr Essentials*, 13–48
Autostart queues
starting (cont'd)
in startup command procedure, *(S) Sys Mgr Essentials*, 13–18
stopping before shutdown, *(G) DCL A-M*, DCLI–180
troubleshooting, *(S) Sys Mgr Essentials*, 13–81
with LAT printers, *(S) Sys Mgr Essentials*, 13–4, 13–10
AUTO_POSITIONING command
SHOW CLUSTER, *(S) Sys Mgr Tuning*, 20–12
Availability, *(G) SW Overview*, 7–2
Refer also to the *Guidelines for VMScluster Configurations*
achieved by shadow set configurations, *(S) Dependable*, 8–19
after LAN component failures, *(S) VMScluster Sys*, 3–17, D–3
as a function of dependable computing, *(S) Dependable*, 8–58
booting from multiple LAN adapters, *(S) VMScluster Sys*, 9–7
CI, *(S) VMScluster Sys*, 3–2
data center, *(S) VMScluster Sys*, 3–12
DSSI, *(S) VMScluster Sys*, 3–4
levels, *(S) Dependable*, 8–20f
of data, *(S) VMScluster Sys*, 2–5, 6–22
of network, *(S) VMScluster Sys*, D–3
of queue manager, *(S) Sys Mgr Essentials*, 12–9, 12–17; *(S) VMScluster Sys*, 7–3
of queues, *(S) Sys Mgr Essentials*, 13–4, 13–15
recovery from failures, *(S) Dependable*, 8–21
software tools, *(G) SW Overview*, 2–12
through selection of MOP servers, *(S) VMScluster Sys*, 3–17
Availability manager
See DECamds
Availability messages
setting broadcast intervals, *(S) DECamds*, 1–10
Availability of devices
OPCOM message, *(S) Sys Mgr Essentials*, 8–59
Availability of queues, *(G) DCL A-M*, DCLI–266; *(G) DCL N-Z*, DCLII–373
Available queue status, *(S) Sys Mgr Essentials*, 13–51
Available sets, *(S) Sys Mgr Tuning*, 26–2
AVAIL command, *(S) DECamds*, 2–1
Avoiding user errors
to support dependable computing, *(S) Dependable*, 3–12
AWSA (automatic working set adjustment), *(S) Alpha Perform*, 6–3
AUTOGEN, *(S) Alpha Perform*, 17–6
enabling, *(S) Alpha Perform*, 17–6
investigating status, *(S) Alpha Perform*, 13–6
page faulting, *(S) Alpha Perform*, 6–3

AWSA (automatic working set adjustment) (cont'd)
parameters, *(S) Alpha Perform*, 6–4
adjusting, *(S) Alpha Perform*, 6–10
swapper trimming, *(S) Alpha Perform*, 6–13
tuning, *(S) Alpha Perform*, 6–10
tuning to respond to increased demand, *(S) Alpha Perform*, 17–5
voluntary decrementing, *(S) Alpha Perform*, 6–9, 6–13

B

Backbone networks, *(S) TCP/IP*, 1–6
Background scheduling, *(P) DECthreads*, 2–4
Backing store
paging files, *(S) Alpha Perform*, 11–7
section files, *(S) Alpha Perform*, 11–7
Backing up the system disk, *(S) Sys Mgr Essentials*, 5–49
after installation, *(S) Sys Mgr Essentials*, 3–13
Backlinks
definition, *(S) Sys Mgr Essentials*, 8–56; *(S) Sys Mgmt Util A-L*, 3–3
Backslash (\ )
current value, *(P) Debugger*, 8–5
global-symbol specifier, *(P) Debugger*, 9–10, CD–201, B–8
path name delimiter, *(P) Debugger*, 9–8, 10–4, B–8
Backspace key, *(G) User*, 3–17, 3–19
Backup
compare operation for, *(S) Sys Mgmt Util A-L*, 7–23
list operation, *(S) Sys Mgmt Util A-L*, 7–18, 7–32, 7–44
selective, *(S) Sys Mgmt Util A-L*, 7–16, 7–17, 7–30, 7–31, 7–47
BACKUP.SYS file
See Backup log file
BACKUP.SYS log file, *(P) File Appl*, 1–8
BACKUP attribute, *(P) Rec Mgmt Util*, 4–15
BACKUP command, *(G) DCL A-M*, DCLI–52; *(S) Sys Mgmt Util A-L*, 7–5 to 7–69
and save sets, *(S) Sys Mgr Essentials*, 10–23
/EXACT_ORDER qualifier, *(S) Sys Mgr Essentials*, 10–22
for backing up directories, *(S) Sys Mgr Essentials*, 10–24
for copying directories, *(S) Sys Mgr Essentials*, 10–23
for copying files, *(S) Sys Mgr Essentials*, 10–23
for image backups, *(S) Sys Mgr Essentials*, 10–31, 10–32
for incremental backups, *(S) Sys Mgr Essentials*, 10–34, 10–35
format, *(S) Sys Mgr Essentials*, 10–4
/GROUP_SIZE qualifier, *(S) Sys Mgr Essentials*, 10–62
BACKUP command (cont'd)
/IGNORE=LABEL_PROCESSING qualifier, *(S) Sys Mgr Essentials*, 10–22, 10–65
/IGNORE qualifier, *(S) Sys Mgr Essentials*, 10–30, 10–63
/IMAGE qualifier, *(S) Sys Mgr Essentials*, 10–31, 10–32, 10–55
/INITIALIZE qualifier, *(S) Sys Mgr Essentials*, 10–14
in network operations, *(S) DECnet Intro*, 2–9
in VMSINSTAL.COM command procedure, *(S) Sys Mgr Essentials*, 3–13
/JOURNAL qualifier, *(S) Sys Mgr Essentials*, 10–26
/LABEL qualifier, *(S) Sys Mgr Essentials*, 10–13, 10–23, 10–34
/LOG qualifier, *(S) Sys Mgr Essentials*, 10–63
/PHYSICAL qualifier, *(S) Sys Mgr Essentials*, 10–55
qualifiers, *(S) Sys Mgr Essentials*, 10–5
/RECORD qualifier, *(S) Sys Mgr Essentials*, 10–31, 10–32, 10–34, 10–35
/REWIND qualifier, *(S) Sys Mgr Essentials*, 10–13, 10–34
/SAVE_SET qualifier, *(S) Sys Mgr Essentials*, 10–32, 10–35
/SINCE qualifier, *(S) Sys Mgr Essentials*, 10–34, 10–35
/VERIFY qualifier, *(S) Sys Mgr Essentials*, 10–63
with multiple output devices, *(S) Sys Mgr Essentials*, 10–24, 10–32, 10–33
Backup log file, *(P) File Appl*, 1–8
BACKUP.SYS, *(S) Sys Mgr Tuning*, A–9
reserved file, *(S) Sys Mgr Tuning*, A–9
Backup Manager, *(S) Sys Mgr Essentials*, 10–5
features, *(S) Sys Mgr Essentials*, 10–5
getting started, *(S) Sys Mgr Essentials*, 10–6
types of help available, *(S) Sys Mgr Essentials*, 10–5
BACKUP media
Files–11 disk save set, *(S) Sys Mgr Essentials*, 10–7
magnetic tape save set, *(S) Sys Mgr Essentials*, 10–6
network save set, *(S) Sys Mgr Essentials*, 10–7
sequential-disk save set, *(S) Sys Mgr Essentials*, 10–7
Backup operations, *(P) File Appl*, 1–32
/BACKUP qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–16
Backups
See also Image backup, Incremental backup, and Standalone backup
archiving data, *(S) Dependable*, 9–16
DEC Rdb, online, *(S) Dependable*, 8–40
general recommendations, *(S) Security*, 8–29

Backups (cont'd)
improving the speed of, *(S) Sys Mgmt Util A-L*, 7–31
of PC disks, *(G) SW Overview*, 6–23
on Alpha systems, *(G) SW Overview*, 3–10
on VAX systems, *(G) SW Overview*, 3–10
performed from captive privileged account, *(S) Security*, 7–7
performing in command procedures, *(S) Sys Mgr Essentials*, 8–46
procedures, *(S) Dependable*, 9–14
using SLS, *(G) SW Overview*, 7–8
Backup utility (BACKUP), *(G) SW Overview*, 3–10; *(S) VMScluster Sys*, 1–11; *(P) File Appl*, 10–2
backing up active disks, *(S) Sys Mgr Essentials*, 10–63
backing up shadow sets, *(S) Sys Mgr Essentials*, 10–40
Backup Manager, *(S) Sys Mgr Essentials*, 10–4
command format, *(S) Sys Mgr Essentials*, 10–4
command line qualifiers, *(S) Sys Mgmt Util A-L*, 7–7
command line syntax, *(S) Sys Mgmt Util A-L*, 7–5
command procedures, *(S) Sys Mgr Essentials*, 10–36
command qualifiers, *(S) Sys Mgr Essentials*, 10–5
copying dump file, *(S) Sys Mgr Tuning*, 15–4, 15–14
copying system dump file, *(P) Alpha SDA*, SDA–5; *(P) VAX SDA*, SDA–7
copying the queue database, *(S) Sys Mgr Essentials*, 12–12
data integrity mechanisms, *(S) Sys Mgr Essentials*, 10–62
/DELETE qualifier, *(S) Sys Mgmt Util A-L*, 7–26
directing output from, *(S) Sys Mgmt Util A-L*, 7–11
eliminating extents, *(P) File Appl*, 9–8
exiting from, *(S) Sys Mgmt Util A-L*, 7–11
interfaces to it, *(S) Sys Mgr Essentials*, 10–4
invoking, *(S) Sys Mgmt Util A-L*, 7–11
making archive copies, *(P) File Appl*, 10–29
open files during a backup, *(S) Sys Mgr Essentials*, 10–30, 10–63
restoring contiguity on fragmented disks, *(S) VAX Perform*, 3–36; *(S) Alpha Perform*, 11–8
restoring shadow sets, *(S) Sys Mgr Essentials*, 10–47
save set, *(S) Sys Mgr Essentials*, 10–23
stores save-set file in MFD, *(S) Sys Mgr Tuning*, A–8
transferring information, *(S) Sys Mgr Essentials*, 9–19
Backup utility (BACKUP) (cont'd)
use by VMSINSTAL.COM command procedure, *(S) Sys Mgr Essentials*, 3–13
using on workstations, *(S) Sys Mgr Essentials*, 10–36
using to back up directories, *(S) Sys Mgr Essentials*, 10–24
using to compare files, *(S) Sys Mgmt Util A-L*, 7–23
using to copy directories, *(S) Sys Mgr Essentials*, 10–23
using to copy files, *(S) Sys Mgr Essentials*, 10–23
BACKUSER.COM command procedure, *(S) Sys Mgr Essentials*, 10–36
Backward indexing, *(P) MTH$*, 2–6
BAD (Bad Block Locator utility)
See Bad Block Locator utility
BADBLK.SYS file
See Bad block file
Bad block data
on disks, *(G) DCL A-M*, DCLI–261
Bad block file, *(P) File Appl*, 1–7
BADBLK.SYS, *(S) Sys Mgr Tuning*, A–8
definition, *(S) Sys Mgr Tuning*, A–8
reserved file, *(S) Sys Mgr Tuning*, A–8
Bad Block Locator utility (BAD)
Refer also to the *OpenVMS Bad Block Locator Utility Manual*
analyzing media for bad blocks, *(S) Sys Mgr Essentials*, 8–65
detecting media errors, *(S) Sys Mgr Essentials*, 8–64
invoking with ANALYZE/MEDIA, *(S) Sys Mgr Essentials*, 8–65
BADLOG.SYS file
See Pending bad block log file
Bad page list
displaying, *(P) VAX SDA*, SDA–131
/BAD qualifier, *(P) VAX SDA*, SDA–131
Balance as a function of dependability, *(S) Dependable*, 1–17
Balance set
definition, *(S) Alpha Perform*, 5–1
Balance sets
swapping, *(P) Concepts*, 19–12, 20–12
Balance slots, *(S) Alpha Perform*, 13–9
real, *(S) VAX Perform*, 2–18
virtual, *(S) VAX Perform*, 2–18
disabling, *(S) VAX Perform*, 2–18
enabling, *(S) VAX Perform*, 2–18
BALSETCNT system parameter, *(S) Alpha Perform*, 17–7
adjusting, *(S) VAX Perform*, 5–8; *(S) Alpha Perform*, 13–3
artificially induced swapping, *(S) VAX Perform*, 3–25; *(S) Alpha Perform*, 10–6

BALSETCNT system parameter (cont'd)
increasing, *(S) VAX Perform*, 5–8
reducing, *(S) VAX Perform*, 5–8
Banner pages
commands used with, *(S) Sys Mgr Essentials*, 13–60
definition, *(S) Sys Mgr Essentials*, 13–33
file, *(S) Sys Mgr Essentials*, 13–42, 13–60
job, *(S) Sys Mgr Essentials*, 13–42, 13–60
Barrier synchronization
See also Parallel processing
BASE= option, *(P) Linker*, LINK–43
Base addresses
defaults for images, *(P) Linker*, LINK–43
specifying using the CLUSTER= option, *(P) Linker*, LINK–47
system image, *(P) Linker*, LINK–38
Based images
creation of, *(P) Linker*, LINK–43
memory allocation for, *(P) Linker*, LINK–43
processing of, *(P) Linker*, 3–9
Based shareable images
creating, *(P) Linker*, 4–7
BASEENVIRON phase of system startup, *(S) Sys Mgr Essentials*, 5–4, 5–18
Base priority
See also Priority, base
establishing for batch jobs, *(G) DCL A-M*, DCLI–266; *(G) DCL N-Z*, DCLII–183
of circuit, *(S) DECnet Mgmt*, 3–32
Base register architecture, *(P) Calling Std*, 3–39
BASIC, *(P) Environment*, 7–2, 7–4
data type declarations, *(P) Interfaces*, B–21
DEC BASIC, *(G) SW Overview*, 4–5
file array descriptors, *(P) Calling Std*, 5–33
implementation table, *(P) Interfaces*, B–21
USEROPEN routine, *(P) File Appl*, 5–10, 9–5
VAX BASIC, *(G) SW Overview*, 4–5
Basic concepts of dependability, *(S) Dependable*, 1–8
BATCH$RESTART symbol
using in command procedures, *(G) User*, 15–25
BATCH.COM command procedure, *(G) User*, C–27
sample execution, *(G) User*, C–31
Batch and print queuing system, *(S) Sys Mgr Essentials*, 12–2
See also Queue configurations
components, *(S) Sys Mgr Essentials*, 12–1
in VMScluster environments
with multiple system disk, *(S) Sys Mgr Essentials*, 12–6
queue database
location of files, *(S) Sys Mgr Essentials*, 12–5
mounting disk for, *(S) Sys Mgr Essentials*, 12–6
queuing process, *(S) Sys Mgr Essentials*, 13–2
Batch and print queuing system (cont'd)
sample configurations, *(S) Sys Mgr Essentials*, 13–4 to 13–14
starting in system startup, *(S) Sys Mgr Essentials*, 5–12
steps for setting up, *(S) Sys Mgr Essentials*, 13–14
Batch and print recovery techniques, *(S) Dependable*, 9–18 to 9–19
Batch execution queues
See also Execution queues
description, *(S) Sys Mgr Essentials*, 13–3
Batch executions on remote nodes, *(S) Sys Mgmt Util M-Z*, 6–6; *(S) DECnet Intro*, 2–12, 2–13
Batch identifiers, *(S) Security*, 4–3; *(S) Sys Mgr Essentials*, 11–11
Batch jobs
See also Job status
accessing devices, *(S) Sys Mgr Essentials*, 8–46
affected by shift restrictions, *(G) User*, 2–12; *(S) Security*, 3–8
allowing to complete before stopping a queue, *(S) Sys Mgr Essentials*, 13–55
authorization, *(G) User*, 2–10; *(S) Security*, 3–7
changing characteristics, *(G) User*, 18–16
changing entries, *(G) User*, 18–16
changing scheduling priority, *(S) Sys Mgr Essentials*, 13–72
completing before using VMSINSTAL.COM command procedure, *(S) Sys Mgr Essentials*, 3–7
controlling, *(S) Sys Mgr Essentials*, 13–68
defining default working sets, *(G) DCL A-M*, DCLI–285
defining maximum CPU time limit, *(G) DCL A-M*, DCLI–283
defining working set extent, *(G) DCL A-M*, DCLI–285
defining working set quotas, *(G) DCL N-Z*, DCLII–189
definition, *(G) User*, 11–9
deleting, *(G) User*, 18–18, 18–19; *(S) Sys Mgr Essentials*, 13–74
deleting files
after processing, *(G) DCL N-Z*, DCLII–413
deleting log files, *(G) DCL A-M*, DCLI–283; *(G) DCL N-Z*, DCLII–414
displaying status, *(G) User*, 18–18
distributing system work load, *(S) Sys Mgr Tuning*, 16–4
end of job on cards, *(G) DCL A-M*, DCLI–213
establishing values for, *(S) VAX Perform*, 5–5; *(S) Alpha Perform*, 17–4
executing, *(S) Sys Mgr Essentials*, 13–3
flushing output buffers, *(G) DCL N-Z*, DCLII–168

Batch jobs (cont'd)
holding, *(G) DCL A-M*, DCLI–283; *(G) DCL N-Z*, DCLII–414
holding and releasing, *(S) Sys Mgr Essentials*, 13–71
job card, *(S) Sys Mgr Essentials*, 7–17
job entries, *(G) User*, 18–10
keeping log files, *(G) DCL N-Z*, DCLII–414
limiting CPU time of, *(G) DCL A-M*, DCLI–283; *(G) DCL N-Z*, DCLII–414
log files, *(G) User*, 18–14; *(G) DCL N-Z*, DCLII–410
modifying, *(S) Sys Mgr Essentials*, 13–70
monitoring, *(S) Sys Mgr Essentials*, 13–68
on remote network node, *(G) DCL N-Z*, DCLII–416
output, *(G) User*, 18–14
passing parameters to, *(G) DCL N-Z*, DCLII–415
password, *(G) DCL N-Z*, DCLII–10
password protection and cardreaders, *(S) Security*, 3–13
priority, *(G) DCL N-Z*, DCLII–416
providing input to, *(G) User*, 18–13
requeuing
executing, *(S) Sys Mgr Essentials*, 13–73
pending, *(S) Sys Mgr Essentials*, 13–73
restarting, *(G) User*, 18–19
retaining in a queue, *(S) Sys Mgr Essentials*, 13–74
saving log file, *(G) DCL A-M*, DCLI–283
scheduling, *(S) Sys Mgr Essentials*, 13–72
specifying multiple command procedures, *(G) User*, 18–12
specifying start time, *(G) User*, 18–11
stopping, *(G) User*, 18–18
stopping process, *(G) DCL N-Z*, DCLII–389
SUBMIT command
qualifiers, *(G) User*, 18–17
submitting, *(G) User*, 18–10
command procedures, *(G) User*, 15–24, 18–10
submitting at startup, *(S) Sys Mgr Essentials*, 5–14
submitting through cards, *(G) DCL A-M*, DCLI–282
synchronizing multiple procedures, *(G) User*, 18–19, 18–20, 18–21
synchronizing with process, *(G) DCL N-Z*, DCLII–422
uses of, *(G) User*, 18–10
working set
defining default, *(G) DCL A-M*, DCLI–275, DCLI–285; *(G) DCL N-Z*, DCLII–188, DCLII–381, DCLII–418
defining extent for, *(G) DCL A-M*, DCLI–275, DCLI–285; *(G) DCL N-Z*, DCLII–188, DCLII–381, DCLII–419
Batch jobs
working set (cont'd)
defining quotas for, *(G) DCL A-M*, DCLI–285; *(G) DCL N-Z*, DCLII–189, DCLII–381, DCLII–419
Batch logins, *(S) Security*, 3–7
Batch mode, *(G) SW Overview*, 1–3
as execution mode for a startup procedure, *(S) Sys Mgr Essentials*, 5–19
Batch operations, *(G) SW Overview*, 3–11
Batch-oriented editor, *(G) DCL A-M*, DCLI–202
Batch processing
working set limits, *(S) Alpha Perform*, 6–2
Batch processing environment
generic queues in a VMScluster, *(S) Sys Mgr Essentials*, 13–7
on a standalone workstation, *(S) Sys Mgr Essentials*, 13–5
sample configurations, *(S) Sys Mgr Essentials*, 13–4 to 13–7
steps for setting up, *(S) Sys Mgr Essentials*, 13–14
with specialized queues, *(S) Sys Mgr Essentials*, 13–6
Batch queues, *(S) VMScluster Sys*, 7–10
See also Queue managers
allowing jobs to complete before stopping, *(S) Sys Mgr Essentials*, 13–55
assigning unique name to, *(S) VMScluster Sys*, 7–11
changing job entries, *(G) DCL N-Z*, DCLII–121
clusterwide generic, *(S) VMScluster Sys*, 7–12
commands for managing, *(S) Sys Mgr Essentials*, 13–46
creating, *(S) Sys Mgr Essentials*, 13–15; *(S) Alpha Perform*, 6–21
default, *(P) Rec Mgmt Util*, 4–24
deleting, *(S) Sys Mgr Essentials*, 13–57
entering command procedures in, *(G) DCL N-Z*, DCLII–410
for memory constrained systems, *(S) Sys Mgr Essentials*, 13–31
initializing, *(S) VMScluster Sys*, 7–12
jobs
base priority, *(S) Alpha Perform*, 6–21
on standalone workstations, *(S) Sys Mgr Essentials*, 13–5
optimizing for Sort/Merge utility, *(S) Sys Mgr Essentials*, 13–31
options, *(S) Sys Mgr Essentials*, 13–18
characteristics, *(S) Sys Mgr Essentials*, 13–28
controlling job performance and resources, *(S) Sys Mgr Essentials*, 13–28
qualifiers for specifying, *(S) Sys Mgr Essentials*, 13–19 to 13–20
restricting access, *(S) Sys Mgr Essentials*, 13–22

Batch queues
options (cont'd)
retaining jobs, *(S) Sys Mgr Essentials*, 13–26
pausing, *(S) Sys Mgr Essentials*, 13–53
setting up, *(S) VMScluster Sys*, 7–10
setting up for vector processing, *(S) Sys Mgr Tuning*, 26–7
starting, *(S) Sys Mgr Essentials*, 13–15; *(S) VMScluster Sys*, 7–12
status, *(S) Sys Mgr Essentials*, 13–50
stopping, *(S) Sys Mgr Essentials*, 13–54, 13–55
before shutting down a node, *(S) Sys Mgr Essentials*, 13–55
SYS$BATCH, *(S) VMScluster Sys*, 7–12
working set characteristics, *(S) Alpha Perform*, 6–2
Baud rate
of terminal, *(P) I/O User*, 5–42
BDBs (buffer descriptor blocks), *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
BDB summary page (BDBSUM), *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
/BEFORE qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–17
/BEGINNING qualifier, *(S) Sys Mgmt Util M-Z*, 4–6
Bell character, *(G) User*, 2–5
Bell filter, *(S) DECamds*, 2–7
BEST_TRY_CONTIGUOUS attribute, *(P) Rec Mgmt Util*, 4–6, 4–17; *(P) File Appl*, 3–24, 4–35
Bibliography
publications from Digital, *(S) Dependable*, B–1
publications from other sources, *(S) Dependable*, B–4
Binary data, *(P) File Appl*, 1–18
compression of, *(P) Util Routines*, DCX–1
Binary numbers, multiple precision, *(P) LIB$*, LIB–5
Binary operators, *(P) CDU, LBR, & MU*, MSG–9; *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–16 to SDA–17
Binary output from Audit Analysis utility, *(S) Sys Mgmt Util A-L*, 4–6
/BINARY qualifier, *(P) Debugger*, 8–11, CD–98, CD–101, CD–104, CD–130
Binary semaphores, *(P) Concepts*, 14–28
Binary subtraction, *(P) LIB$*, LIB–508
Binary time
converting to ASCII string, *(P) Sys Svc I*, SYS1–29
converting to numeric time, *(P) Sys Svc II*, SYS2–194, SYS2–196
Binary tree, balanced, *(P) LIB$*, LIB–299, LIB–308
Binary values
converting to ASCII string, *(P) Sys Svc I*, SYS1–351
%BIN built-in symbol, *(P) Debugger*, 8–12, B–6
Binding resource, *(S) VAX Perform*, 3–8
Binding volumes into a volume set, *(S) Sys Mgr Essentials*, 8–22
/BIND qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–10
BIN key types, *(P) Rec Mgmt Util*, 4–29
BIO (buffered I/O), *(S) DECamds*, 3–24
byte limit (BYTLM), *(S) DECamds*, 3–25
limit (BIOLM), *(S) DECamds*, 3–24
rate, *(S) DECamds*, 3–17
rate display, *(S) DECamds*, 2–3
BIOLM process limit, *(S) Sys Mgr Essentials*, 6–41; *(P) Concepts*, 9–3
value for efficient backups, *(S) Sys Mgr Essentials*, 10–10
BIO option, *(P) Rec Mgmt Util*, 4–3, 4–9
Bit field operator (<p,s,e>), *(P) Debugger*, B–8
Bit fields
replace field, *(P) LIB$*, LIB–329
return sign extended to longword, *(P) LIB$*, LIB–170
BITLM quota
for efficient backups, *(S) Sys Mgr Essentials*, 10–10
BITMAP.SYS file, *(P) File Appl*, 1–7
See Storage bit map file
Bit maps
index file, *(P) File Appl*, 1–7
storage, *(P) File Appl*, 1–7
Bits
unused in passed data, *(P) Calling Std*, 3–50
Bits per inch (bits/inch), *(P) File Appl*, 1–16
64-bit virtual addressing, *(G) V7.0 New Feat*, 4–1; *(P) DECthreads*, B–4
system services support, *(P) Sys Svc I*, vii; *(P) Sys Svc II*, vii
Black box testing, *(P) Modular Proc*, 4–2
BLAS
definition, *(P) MTH$*, 2–1
BLAS1$VIxAMAX routine, *(P) MTH$*, MTH–149
BLAS1$VxASUM routine, *(P) MTH$*, MTH–152
BLAS1$VxAXPY routine, *(P) MTH$*, MTH–155
BLAS1$VxCOPY routine, *(P) MTH$*, MTH–160
BLAS1$VxDOT routine, *(P) MTH$*, MTH–165
BLAS1$VxNRM2 routine, *(P) MTH$*, MTH–170
BLAS1$VxROTG routine, *(P) MTH$*, MTH–178
BLAS1$VxROT routine, *(P) MTH$*, MTH–173
BLAS1$VxSCAL routine, *(P) MTH$*, MTH–182
BLAS1$VxSWAP routine, *(P) MTH$*, MTH–186
BLBs (buffer lock blocks), *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80

BLB summary page (BLBSUM), *(P) Alpha SDA*, SDA–75
BLISS
  data type declarations, *(P) Interfaces*, B–24
  implementation table, *(P) Interfaces*, B–24
BLISS-32, *(G) SW Overview*, 4–5; *(P) Environment*, 7–2, 7–4
BLISS compiler
  alignment, *(P) Concepts*, 22–5
  generating reentrant code, *(P) DECthreads*, 4–1
BLK option, *(P) Rec Mgmt Util*, 4–31
Block cache allocation, *(S) Sys Mgmt Util M-Z*, 2–30
Blocked record, *(P) File Appl*, 1–29
Block I/O, *(P) RMS Ref*, A–33; *(P) File Appl*, 8–15
  execution contrasted with record I/O execution, *(P) RMS Ref*, A–34
  how implemented by record management services, *(P) RMS Ref*, A–33
  how to specify for relative and indexed files, *(P) RMS Ref*, A–35
  program example, *(P) RMS Ref*, A–35
  requirements for mixing with record I/O, *(P) RMS Ref*, A–34
  services, *(P) RMS Ref*, 1–2
  use of NBP for sequential files, *(P) RMS Ref*, A–35
  using record management services, *(P) RMS Ref*, A–4
  with multiple record streams, *(P) RMS Ref*, A–35
  with record I/O processing, *(P) RMS Ref*, A–35
Block length field, *(P) File Appl*, 1–30
Blocks, *(S) DECamds*, 3–8; *(P) File Appl*, 1–4, 3–10
  disk
    definition, *(S) Sys Mgr Essentials*, 8–2
  erasing, *(S) Sys Mgr Essentials*, 8–58; *(S) Sys Mgmt Util A-L*, 3–5
  Files–11
    definition, *(S) Sys Mgr Tuning*, A–1
  tape
    definition, *(S) Sys Mgr Essentials*, 8–6
Block size options, *(P) File Appl*, 4–32
  for files, *(G) DCL A-M*, DCLI–176
  specifying cluster size on disk, *(G) DCL A-M*, DCLI–255
/BLOCKSIZE qualifier
  in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–11
Block sizes, *(P) Concepts*, 21–10
Block span options, *(P) File Appl*, 3–14
  effect on maximum record size, *(P) File Appl*, 2–9
  FDL RECORD section, *(P) File Appl*, 4–33
BLOCK_COUNT attribute, *(P) Rec Mgmt Util*, 4–31
BLOCK_IO attribute, *(P) Rec Mgmt Util*, 4–3, 4–9; *(P) File Appl*, 7–3
/BLOCK_SIZE qualifier
  in Backup utility, *(S) Sys Mgmt Util A-L*, 7–18
BLOCK_SPAN attribute, *(P) Rec Mgmt Util*, 4–31; *(P) File Appl*, 3–14, 4–34
Bookreader, *(G) SW Overview*, 5–6
boolean data type, *(P) Interfaces*, B–2
Boolean value flag, *(P) Interfaces*, B–2
Boot block
  definition, *(S) Sys Mgr Essentials*, 4–17
  in index file, *(S) Sys Mgr Tuning*, A–6
  processors using, *(S) Sys Mgr Essentials*, 4–17
  role in boot process, *(S) Sys Mgr Essentials*, 4–2
  writing with Writeboot utility, *(S) Sys Mgr Essentials*, 4–17
Boot events, *(S) VMScluster Sys*, C–2
  computer fails to boot, *(S) VMScluster Sys*, C–4
  computer fails to join cluster, *(S) VMScluster Sys*, C–13
Booting, *(G) SW Overview*, 3–8
  See also Conversational boot
  automatically after shutting down, *(S) Sys Mgr Essentials*, 4–29
  avoiding system disk rebuilds, *(S) VMScluster Sys*, 9–14
  bootstrap image
    Alpha, *(S) Sys Mgr Essentials*, 4–18
    in index file, *(S) Sys Mgr Tuning*, A–6
    VAX, *(S) Sys Mgr Essentials*, 4–18
  controlling for satellites, *(S) VMScluster Sys*, 9–10
  cross-architecture, *(S) Sys Mgr Tuning*, 22–23; *(S) VMScluster Sys*, 10–5
  definition, *(S) Sys Mgr Essentials*, 4–2
  displaying startup commands, *(S) Sys Mgr Essentials*, 4–14
  from an alternate system disk, *(S) Sys Mgr Essentials*, 4–3
  in a multiprocessing system, *(S) Sys Mgr Tuning*, 26–2
  in an emergency
    with default system parameters, *(S) Sys Mgr Essentials*, 4–8
    without startup and login procedures, *(S) Sys Mgr Essentials*, 4–8
    without the user authorization file, *(S) Sys Mgr Essentials*, 4–10
  installation of page and swap files, *(S) Sys Mgr Tuning*, 15–5
  in VMScluster configurations
    Refer to the *Guidelines for VMScluster Configurations*
  loading VVIEF code, *(S) Sys Mgr Tuning*, 26–5

Booting (cont'd)
location of computer-specific instructions, *(S) Sys Mgr Essentials*, 4–2
minimizing in a large cluster, *(S) VMScluster Sys*, 9–4
nodes into an existing VMScluster, *(S) VMScluster Sys*, 8–36, 8–43
nonstop, *(S) Sys Mgr Essentials*, 4–3
problems
fixing by booting with default parameter values, *(S) Sys Mgr Essentials*, 4–8
fixing by booting with minimum startup, *(S) Sys Mgr Essentials*, 4–14
hardware, *(S) Sys Mgr Essentials*, 4–16
invalid boot block, *(S) Sys Mgr Essentials*, 4–17
solving, *(S) Sys Mgr Essentials*, 4–16
remote services, *(G) SW Overview*, 6–24
satellites, *(S) VMScluster Sys*, 3–7
preparation, *(S) VMScluster Sys*, 9–4
use of boot block, *(S) Sys Mgr Essentials*, 4–17
with an alternate system parameter file, *(S) Sys Mgr Essentials*, 4–7
with controlled system startup, *(S) Sys Mgr Essentials*, 4–12
Boot messages
indicating execution of STARTUP.COM procedure, *(S) Sys Mgr Essentials*, 4–5
indicating execution of STARTUP_VMS.COM procedure, *(S) Sys Mgr Essentials*, 4–5
indicating success, *(S) Sys Mgr Essentials*, 4–5
indicating that login is possible, *(S) Sys Mgr Essentials*, 4–5
question mark (?), *(S) Sys Mgr Essentials*, 4–16
BOOTP, protocol for network booting, *(S) TCP/IP*, 2–5
Boot servers
after configuration change, *(S) VMScluster Sys*, 8–33
defining maximum DECnet address value, *(S) VMScluster Sys*, 4–7
functions, *(S) VMScluster Sys*, 3–7
rebooting a satellite, *(S) VMScluster Sys*, 8–41
Bootstrap block, *(P) File Appl*, 1–6
Bootstrapping
See Booting
Bootstraps
primary, *(S) DECnet Mgmt*, 4–4, 4–11
ROM, *(S) DECnet Mgmt*, 4–4
Borders
virtual display, *(P) Concepts*, 7–11
Borrowing
analyzing problems, *(S) Alpha Perform*, 13–5
deciding when too generous, *(S) Alpha Perform*, 13–11
tuning to make more effective, *(S) Alpha Perform*, 17–4
BORROWLIM system parameter
page faulting, *(S) VAX Perform*, 2–7
Boss/worker model, *(P) DECthreads*, 1–5
work queue variation, *(P) DECthreads*, 1–5
BOT (beginning-of-tape)
See BOT markers and Magnetic tapes
BOT markers, *(S) Sys Mgr Essentials*, 8–6; *(P) File Appl*, 1–19
Bottlenecks, *(S) VAX Perform*, 3–8
/BOTTOM qualifier, *(P) Debugger*, CD–146
Boundary tags, *(P) Concepts*, 21–8
Bound procedure descriptors, *(P) Calling Std*, 3–42
Bound procedures, *(P) Calling Std*, 3–42
definition, *(P) Calling Std*, 1–4
environment value, *(P) Calling Std*, 3–45
Bound procedure values, *(P) Modular Proc*, 3–8; *(P) Calling Std*, 3–3, 3–44
/BPAGE qualifier, *(P) Linker*, LINK–5
BPDA centers
See Business Partner Development Assistance centers
Branching
using DOWN command, *(P) Rec Mgmt Util*, 1–17
/BRANCH qualifier, *(P) Debugger*, CD–9, CD–12, CD–23, CD–37, CD–54, CD–56, CD–159, CD–221, CD–299
Break-in alarms, *(S) Security*, D–3
Break-in attempts, *(G) User*, 2–12; *(S) Security*, 1–2, 3–9
auditing, *(G) User*, 19–10; *(S) Security*, 9–3, 9–7; *(S) Sys Mgr Tuning*, 18–25
counteraction through dual passwords, *(S) Security*, 7–15
detecting, *(S) Security*, 7–26, 7–29
evasion, *(G) User*, 2–12
evasive procedures, *(S) Security*, 3–9
security audit report and, *(S) Security*, 9–22
Break key and secure servers, *(S) Security*, 7–26
Breakpoints
action, *(P) Debugger*, 3–13, 7–9
activating, *(P) Debugger*, 2–5, 3–11, 7–11, CD–9
canceling, *(P) Debugger*, 3–11, 7–11, CD–23
conditional, *(P) Debugger*, 3–11, 7–9
customizing display of Set/Show Breakpoint dialog box, *(P) Debugger*, 3–37
deactivating, *(P) Debugger*, 3–11, 7–11, CD–54
defined, *(P) Debugger*, 3–8, 7–4
delayed triggering of, *(P) Debugger*, 7–9, CD–159
displaying, *(P) Debugger*, 3–10, 7–5, CD–245
DO clause, *(P) Debugger*, 7–9
exception, *(P) Debugger*, 3–10, 13–19, CD–158
in tasking (multithread) program, *(P) Debugger*, 16–25

Breakpoints (cont'd)
on activation (multiprocess program), *(P) Debugger*, 14–13
on label, *(P) Debugger*, 7–6
on routine, *(P) Debugger*, 3–9, 7–6
on source line, *(P) Debugger*, 3–8, 7–6
on task event, *(P) Debugger*, 16–29
on termination (image exit), *(P) Debugger*, 14–13
on unaligned data, *(P) Debugger*, CD–163
on vector instruction, *(P) Debugger*, 15–3
predefined, tasking (multithread) program, *(P) Debugger*, 16–31
saving when rerunning program, *(P) Debugger*, 2–5, 5–11
saving with RERUN command, *(P) Debugger*, 5–11, CD–10, CD–55, CD–140
setting, *(P) Debugger*, 3–8, 7–4, CD–158
source display at, *(P) Debugger*, 10–7
WHEN clause, *(P) Debugger*, 7–9
Breakpoint view, *(P) Debugger*, 1–10, 3–10
Bridges, *(S) DECnet Intro*, 1–7
failover, *(S) VMScluster Sys*, 3–20
network, *(S) Sys Mgr Tuning*, 21–7
Brief format listings, *(S) Sys Mgmt Util A-L*, 4–7
Brief image map files, *(P) Linker*, LINK–6
BRIEF prompt, *(P) Rec Mgmt Util*, 6–9
/BRIEF qualifier, *(P) Linker*, LINK–6; *(P) Debugger*, CD–257, CD–268
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–18
Brief report
example, *(S) Sys Mgmt Util A-L*, 9–22
Broadcast addresses, *(S) DECnet Mgmt*, 1–6
BROADCAST device setting, *(S) Sys Mgr Tuning*, 18–23
Broadcasting a wakeup, *(P) DECthreads*, pthread–37, tis–3, E–36, G–32
Broadcast intervals, *(S) DECamds*, B–4
setting for node availability messages, *(S) DECamds*, 1–10
Broadcast messages, *(S) VMScluster Sys*, 10–10; *(P) Concepts*, 7–42; *(P) I/O User*, 5–19, 5–22, 5–24, 5–49
See also Messages
alternate handler, *(P) Concepts*, 7–42
default handler, *(P) Concepts*, 7–42
Broadcast routing timer, *(S) DECnet Mgmt*, 2–24
BRO option, *(P) Rec Mgmt Util*, 4–3
Browsers
Lynx, *(S) TCP/IP*, 3–5
Mosaic, *(S) TCP/IP*, 3–5
BRS (Business Recovery Server), *(G) SW Overview*, 2–12, 7–10
configuring an FDDI VAXcluster
overview of product, *(S) Dependable*, 5–12
configuring an FDDI VMScluster
overview of product, *(S) Dependable*, 6–18, 7–14
BRS (Business Recovery Server) (cont'd)
managing, *(G) SW Overview*, 2–14
BSD (Berkeley Software Distribution), *(S) TCP/IP*, 1–6
BSR instruction
substituting for the JSR instruction, *(P) Linker*, 1–15, LINK–25
BSS program section name
definition, *(P) Linker*, B–16
Bucket boundary
file organization considerations, *(P) RMS Ref*, 4–4
Bucket reclamation statistics, *(P) Util Routines*, CONV–17
Buckets, *(P) Rec Mgmt Util*, 1–2, 4–5, 4–26; *(P) File Appl*, 3–10, 3–20
boundary, *(P) Rec Mgmt Util*, 4–34; *(P) File Appl*, 3–22
definition, *(P) File Appl*, 2–1
examining, *(P) Rec Mgmt Util*, 1–3
fill, *(P) Rec Mgmt Util*, 4–27
fill percentage, *(P) Rec Mgmt Util*, 2–11
list of free, *(P) Rec Mgmt Util*, 3–1
reclaiming, *(P) Rec Mgmt Util*, 3–1; *(P) File Appl*, 3–20, 10–28
reclaiming with CONV$RECLAIM routine, *(P) Util Routines*, CONV–16
split, *(P) Rec Mgmt Util*, 1–3
Bucket size option, *(P) File Appl*, 4–32
Bucket sizes, *(P) File Appl*, 3–24 to 3–26, A–1
for indexed files, *(P) File Appl*, 7–18
for relative files, *(P) File Appl*, 7–18
Bucket splits, *(P) File Appl*, 3–10, 3–23, 9–12
cleaning up, *(P) File Appl*, 10–28
minimizing, *(P) RMS Ref*, 12–4; *(P) File Appl*, 3–26
BUCKET_IO attribute, *(P) Rec Mgmt Util*, 4–9
BUCKET_SIZE attribute, *(P) Rec Mgmt Util*, 4–7, 4–17; *(P) File Appl*, 4–32, 7–18
Buffer areas
requirement for Get service, *(P) File Appl*, 8–2
Buffer caches, *(P) File Appl*, 7–4, 7–17
for storing index levels, *(P) File Appl*, 7–18
types, *(P) File Appl*, 7–19
using with multistreaming, *(P) File Appl*, 7–4
Buffer description blocks
See BDBs
Buffer descriptor table entries, *(S) VMScluster Sys*, 9–20
Buffered I/O
See also BIO
byte count limit, *(S) Sys Mgr Essentials*, 6–42
count limit, *(S) Sys Mgr Essentials*, 6–41
definition, *(S) Alpha Perform*, 14–1
in relation to terminal operation problems, *(S) VAX Perform*, 4–29; *(S) Alpha Perform*, 14–4

Buffered I/O byte count quota, *(P) File Appl*, 9–8
Buffered I/O count, *(P) Rec Mgmt Util*, 2–17
Buffered I/O operations, *(P) Concepts*, 5–18
Buffered I/O quota, *(P) I/O User*, 2–27, 3–10, 4–5
Buffering modes, *(P) SMG$*, 2–16
Buffering techniques, *(P) File Appl*, 7–15 to 7–21
Buffer objects
  creating, *(P) Sys Svc I*, SYS1–122
  deleting, *(P) Sys Svc I*, SYS1–249
Buffer-offset length field, *(P) File Appl*, 1–31
Buffers
  See also Global buffers
  I/O, *(P) File Appl*, 3–2, 7–15
  key, *(P) File Appl*, 9–12, 9–14, 9–16
  local, *(P) File Appl*, 3–12, 3–28, 7–19
  multiple, *(P) File Appl*, 3–11
  number of, *(P) File Appl*, 3–14, 3–27
  recall DCL command, *(G) User*, 3–14
  record header, *(P) File Appl*, 9–15, 9–17, 9–18
  selecting for optimum performance, *(P) File Appl*, 7–16 to 7–17
  space allocation, *(P) File Appl*, 7–16
  user, *(P) File Appl*, 9–15, 9–16
  using in a LAT environment, *(G) V7.0 New Feat*, 3–9
Buffer sizes
  changing for executor, *(S) DECnet Mgmt*, 3–15
  decreasing, *(S) DECnet Mgmt*, 3–15
  for executor, *(S) DECnet Mgmt*, 2–4
  for line, *(S) DECnet Mgmt*, 3–14, 3–41
  increasing, *(S) DECnet Mgmt*, 3–15
  requirements, *(S) DECnet Mgmt*, 3–15
  setting for executor, *(S) DECnet Mgmt*, 3–14
/BUFFER_COUNT qualifier, *(P) File Appl*, 7–17, 7–18, 7–19
  in Backup utility, *(S) Sys Mgmt Util A-L*, 7–19
/BUFFER_OBJECTS qualifier, *(P) Alpha SDA*, SDA–127
Bugcheck code, *(P) VAX SDA*, SDA–19
BUGCHECKFATAL parameter, *(S) Alpha Perform*, 10–10
Bugcheck handling routines
  global symbols, *(P) VAX SDA*, SDA–64
Bugcheck message
  during UETP, *(S) Sys Mgr Tuning*, 17–30
Bugchecks
  code, *(P) Alpha SDA*, SDA–18
  fatal conditions, *(P) Alpha SDA*, SDA–19 to SDA–27; *(P) VAX SDA*, SDA–20 to SDA–24
  halt/restart, *(P) Alpha SDA*, SDA–8; *(P) VAX SDA*, SDA–9
  handling routines
    global symbols, *(P) Alpha SDA*, SDA–61
  identifying, *(P) VAX SDA*, SDA–25
  reason for taking, *(P) VAX SDA*, SDA–100
  reasons, *(P) Alpha SDA*, SDA–90
BUGCHK privilege, *(S) Security*, A–3
Building blocks, *(S) Dependable*, 1–1, 1–14
  communications, *(S) Dependable*, 1–15, 7–1
    allowing for LAN bridge failover, *(S) Dependable*, 7–9
    alternate adapter booting for satellite nodes, *(S) Dependable*, 7–9
    applying dependability strategies, *(S) Dependable*, 1–16
    degrees of protection from faults, *(S) Dependable*, 7–2
    Ethernet and FDDI options, *(S) Dependable*, 7–8
    options, *(S) Dependable*, 3–5 to 3–7
    providing multiple paths to Ethernet and FDDI, *(S) Dependable*, 7–4
    providing multiple WAN connections for VAXft systems, *(S) Dependable*, 7–15
    recommendations for VMScluster environments, *(S) Dependable*, 7–5
    sample multiadapter connections to LAN segments, *(S) Dependable*, 7–6
    sample VMScluster failure analysis program, *(S) Dependable*, 7–9, 7–10
    using DECnet cluster aliases, *(S) Dependable*, 7–15
    using FDDI as VMScluster interconnect, *(S) Dependable*, 7–12
    VMScluster satellite synonym, *(S) Dependable*, 7–9
  dependability considerations, *(S) Dependable*, 3–1
  environmental factors, *(S) Dependable*, 1–15 to 1–16
    options, *(S) Dependable*, 3–2 to 3–3
  hardware, *(S) Dependable*, 1–15 to 1–16
    conventional Alpha and VAX systems, *(S) Dependable*, 6–5
    dependability characteristics summary, *(S) Dependable*, 6–20
    eliminating single points of failure, *(S) Dependable*, 6–1
    fault tolerant VAXft systems, *(S) Dependable*, 6–8
    options, *(S) Dependable*, 3–3 to 3–5
    VMScluster topologies, *(S) Dependable*, 6–10
  operational procedures, *(S) Dependable*, 1–15 to 1–16
    options, *(S) Dependable*, 3–12 to 3–14
  personnel, *(S) Dependable*, 1–15 to 1–16
    help from Digital consulting, *(S) Dependable*, 10–1
    options, *(S) Dependable*, 3–15 to 3–16
  software, *(S) Dependable*, 1–15 to 1–16, 8–1
    application software dependability features, *(S) Dependable*, 8–35 to 8–58

Building blocks
software (cont'd)
managing shared information, *(S) Dependable*, 8–58 to 8–61
OpenVMS features, *(S) Dependable*, 8–10 to 8–28
options, *(S) Dependable*, 3–7 to 3–12
Building dependable systems, *(S) Dependable*, 1–1 to 1–5
achieving balance, *(S) Dependable*, 1–17
analyzing system requirements, *(S) Dependable*, 2–1
application software features, *(S) Dependable*, 8–35 to 8–58
building blocks, *(S) Dependable*, 1–14
characteristics, *(S) Dependable*, 1–9
communications, *(S) Dependable*, 1–15 to 1–16
options, *(S) Dependable*, 3–5 to 3–7
considerations for applications, *(S) Dependable*, 8–1
construction phase, *(S) Dependable*, 1–12
consulting from Digital, *(S) Dependable*, 10–1
environmental factors, *(S) Dependable*, 1–15 to 1–16
options, *(S) Dependable*, 3–2 to 3–3
hardware, *(S) Dependable*, 1–15 to 1–16
options, *(S) Dependable*, 3–3 to 3–5
maintaining dependable environment, *(S) Dependable*, 5–1
managing shared information, *(S) Dependable*, 8–58 to 8–61
networks, *(S) Dependable*, 7–1
allowing for LAN bridge failover, *(S) Dependable*, 7–9
alternate adapter booting for satellite nodes, *(S) Dependable*, 7–9
degrees of protection from faults, *(S) Dependable*, 7–2
Ethernet and FDDI options, *(S) Dependable*, 7–8
proactive network monitoring and analysis products, *(S) Dependable*, 7–17
providing multiple paths to Ethernet and FDDI, *(S) Dependable*, 7–4
providing multiple WAN connections for VAXft systems, *(S) Dependable*, 7–15
recommendations for VMScluster environments, *(S) Dependable*, 7–5
sample multiadapter connections to LAN segments, *(S) Dependable*, 7–6
sample VMScluster failure analysis program, *(S) Dependable*, 7–9, 7–10
using DECnet cluster aliases, *(S) Dependable*, 7–15
using FDDI as VMScluster interconnect, *(S) Dependable*, 7–12
VMScluster satellite synonym, *(S) Dependable*, 7–9
Building dependable systems (cont'd)
OpenVMS features, *(S) Dependable*, 8–10 to 8–28
operational phase, *(S) Dependable*, 1–12
operational procedures, *(S) Dependable*, 1–15 to 1–16
options, *(S) Dependable*, 3–12 to 3–14
personnel, *(S) Dependable*, 1–15 to 1–16
options, *(S) Dependable*, 3–15 to 3–16
primary strategies, *(S) Dependable*, 1–9 to 1–12
prototyping applications, *(S) Dependable*, 8–31 to 8–33
redundant functional units, *(S) Dependable*, 1–13 to 1–14
requirements levels, *(S) Dependable*, 1–1
software, *(S) Dependable*, 1–15 to 1–16
options, *(S) Dependable*, 3–7 to 3–12
testing applications, *(S) Dependable*, 8–33 to 8–34
understanding your options, *(S) Dependable*, 3–1
writing dependable code, *(S) Dependable*, 8–29 to 8–31
Built-ins
Alpha assembly language instructions, *(P) 64-Bit Addr*, 9–7
Built-in symbols, *(P) Debugger*, 6–2, B–3
Built-in value types, *(P) CDU, LBR, & MU*, CDU–8, CDU–25
Burst bars, *(S) Sys Mgr Essentials*, 13–33
Burst pages, *(S) Sys Mgr Essentials*, 13–33
file, *(S) Sys Mgr Essentials*, 13–35
job, *(S) Sys Mgr Essentials*, 13–33
Bus adapters
generic names, *(S) Sys Mgmt Util M-Z*, 5–23
listing, *(S) Sys Mgmt Util M-Z*, 5–23
nexus numbers, *(S) Sys Mgmt Util M-Z*, 5–23
specifying, *(S) Sys Mgmt Util M-Z*, 5–5, 5–9
Buses, *(G) SW Overview*, 1–5
display on Alpha systems, *(S) Sys Mgmt Util M-Z*, 6–39
Business considerations
coping with disasters, *(S) Dependable*, 5–12
Business Recovery Server
See BRS
/BUS qualifier, *(P) Alpha SDA*, SDA–124; *(P) VAX SDA*, SDA–141
Busy queue status, *(S) Sys Mgr Essentials*, 13–51
Busy wait option, *(P) Modular Proc*, 3–16
Buttons
debugger push button view, *(P) Debugger*, 1–9
customizing, *(P) Debugger*, 3–29
BYE datagram, *(S) VMScluster Sys*, F–24

BYPASS privilege, *(S) DECnet Mgmt*, 5–1; *(P) Concepts*, 9–5
description, *(S) Security*, A–3
effect on control access, *(S) Security*, 4–28
overriding access controls, *(S) Security*, 4–11, 4–28
Byte dumps, *(G) DCL A-M*, DCLI–189
Byte limit remaining for process I/O, *(S) DECamds*, 3–17
BYTELM (buffered I/O byte count) quota, *(P) Concepts*, 9–3
/BYTE qualifier, *(P) Debugger*, CD–77, CD–104, CD–130
Bytes, *(P) File Appl*, 1–1
byte_signed data type, *(P) Interfaces*, B–2
BYTLM process limit, *(S) Sys Mgr Essentials*, 6–42
value for efficient backups/nomaster, *(S) Sys Mgr Essentials*, 10–10
BYTLM quota
limiting size of user's ACL buffer, *(P) RMS Ref*, 13–3
using with $GETJPI buffers, *(P) Sys Svc II*, SYS2–217

C

C, *(P) Environment*, 7–2, 7–5
data type declarations, *(P) Interfaces*, B–27
DEC C for OpenVMS Alpha, *(G) SW Overview*, 4–5
implementation table, *(P) Interfaces*, B–27
programming examples implementing RMS, *(P) RMS Ref*, 3–1
VAX C, *(G) SW Overview*, 4–5
C++, *(G) SW Overview*, 4–5; *(P) Environment*, 1–4, 7–2, 7–5
C2-class system
installing OpenVMS to use, *(S) Sys Mgr Essentials*, 3–2
C2 environments, *(S) Security*, C–1
C2 security
DEC Rdb compliance with, *(S) Dependable*, 8–48
C2 security, systems, *(S) Security*, C–1 to C–10
Cables, *(S) DECnet Intro*, 1–2, 1–7
configurations, *(S) VMScluster Sys*, C–23
Ethernet, *(S) DECnet Intro*, 1–6
null modem, *(S) DECnet Intro*, 3–19
cabs routine, *(P) Portable Math*, DPML–12, B–3
/CACHED qualifier, *(P) VAX SDA*, SDA–122
/CACHE qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–12
Caches
buffer, *(P) File Appl*, 7–4
for file sharing, *(P) File Appl*, 9–6
global, *(P) File Appl*, 7–20
specifying as read-only, *(P) File Appl*, 7–21
Caches
buffer (cont'd)
with multiple buffers, *(P) File Appl*, 9–9
file system
adjusting, *(S) VAX Perform*, 5–14; *(S) Alpha Perform*, 18–6
memory, *(P) File Appl*, 3–15, 3–17, 3–18, 3–27
for file sharing, *(P) File Appl*, 3–18
for random processing, *(P) File Appl*, 3–17
for storing index, *(P) File Appl*, 3–26
relative to bucket size, *(P) File Appl*, 3–26
primary page, *(S) Alpha Perform*, 5–1
process local, *(P) File Appl*, 3–12
secondary page, *(S) VAX Perform*, 3–24; *(S) Alpha Perform*, 10–5
tape, *(P) I/O User*, 3–5
write-back volatile, *(P) I/O User*, 3–5
virtual I/O, *(S) VAX Perform*, 3–37; *(S) Alpha Perform*, 18–1
CACHE_SERVER process
creation during system startup, *(S) Sys Mgr Essentials*, 5–5
Caching, *(P) Concepts*, 15–18
ACP system parameters, *(S) Sys Mgr Essentials*, 8–43
CALC.COM command procedure, *(G) User*, C–25
sample execution, *(G) User*, C–27
$CALL64 macro, *(P) 64-Bit Addr*, 9–1, C–3
passing 64-bit values, *(P) 64-Bit Addr*, 9–2
Callable interface of DECTPU routines, *(P) Util Routines*, DECTPU–1
Callable system routines, *(G) SW Overview*, 4–9
/CALLABLE_EDT qualifier, *(P) Debugger*, CD–168
/CALLABLE_LSEDIT qualifier, *(P) Debugger*, CD–168
/CALLABLE_TPU qualifier, *(P) Debugger*, CD–168
Call chain, *(P) Concepts*, 13–49; *(P) Calling Std*, 3–29
how to walk, *(P) Calling Std*, 3–33
transfer of control, *(P) Calling Std*, 3–37
CALL command, *(G) DCL A-M*, DCLI–53 to DCLI–56; *(P) Debugger*, 12–11, CD–16
and ASTs, *(P) Debugger*, 13–26, CD–16
multiprocess program, *(P) Debugger*, 14–6
vectorized program, *(P) Debugger*, 15–22
CALL command and floating-point parameters, *(P) Debugger*, CD–18
Call conventions
invocation and return, *(P) Calling Std*, 3–37
Call entry
for RTL, *(P) Interfaces*, 3–4
for system service, *(P) Interfaces*, 4–3
Caller access mode, *(P) RMS Ref*, 4–6

%CALLER_TASK built-in symbol, *(P) Debugger*, 16–14
Call-frame condition handlers, *(P) Concepts*, 13–24
Call-frame handlers, *(P) Debugger*, 13–22
Call frames, *(P) Interfaces*, 2–3
  definition, *(P) Calling Std*, 1–4
  displaying in SDA, *(P) Alpha SDA*, SDA–78; *(P) VAX SDA*, SDA–83
  following a chain, *(P) Alpha SDA*, SDA–78; *(P) VAX SDA*, SDA–83
  removing from stack, *(P) Sys Svc II*, SYS2–468
Calling convention, *(P) MTH$*, 1–2
Calling FDL$PARSE and FDL$RELEASE from a Pascal program, *(P) File Appl*, 4–13
Calling sequence, *(P) Calling Std*, 2–3; *(P) RMS Ref*, 2–4
  argument list, *(P) Calling Std*, 2–3
  system routine, *(P) Interfaces*, 2–5
Calling standard, *(G) SW Overview*, 4–2; *(P) Environment*, 10–3; *(P) Interfaces*, 3–1
  architectural level, *(P) Calling Std*, 1–2
  conventions, *(P) Interfaces*, 2–1
  for calling services, *(P) RMS Ref*, A–3
  goals, *(P) Calling Std*, 1–2, 1–3
  programming, *(P) Environment*, 7–1
  terms, *(P) Calling Std*, 1–4
Calling Standard, *(P) 64-Bit Addr*, 1–9
Call-in-progress count, *(P) Modular Proc*, 3–19
/CALL qualifier, *(P) Debugger*, CD–9, CD–12, CD–23, CD–37, CD–54, CD–56, CD–159, CD–221, CD–299
Calls
  with computed addresses, *(P) Calling Std*, 3–41
/CALLS qualifier, *(P) Debugger*, 16–28, CD–187, CD–287
Call stacks
  See also Scopes
  and instruction display, *(P) Debugger*, 3–23, 11–9, CD–201
  and register display, *(P) Debugger*, 3–23, 11–11, CD–201
  and source display, *(P) Debugger*, 3–23, 11–6, CD–201
  and symbol search, *(P) Debugger*, 3–23, 9–9, CD–201
  displaying, *(P) Debugger*, 3–6, 3–23, 6–7, 13–21, CD–247, CD–280
  unwinding, *(P) Concepts*, 13–46; *(P) Sys Svc II*, SYS2–99
Call tracing, *(P) Calling Std*, 3–30
.CALL_ENTRY directive
  QUAD_ARGS parameter
    declaring 64-bit values, *(P) 64-Bit Addr*, 9–1, 9–4
Cancel
  asynchronous delivery and exception handlers, *(P) DECthreads*, pthread–104, G–73
  delivery, *(P) DECthreads*, pthread–32, G–26
  enabling and disabling asynchronous delivery of, *(P) DECthreads*, pthread–104, G–73
  enabling and disabling delivery of, *(P) DECthreads*, pthread–102, tis–33, G–75
  possible dangers of disabling, *(P) DECthreads*, pthread–102, tis–33, G–75
  requesting delivery of, *(P) DECthreads*, pthread–113, tis–37, G–82
  sending to a thread, *(P) DECthreads*, pthread–32, G–26
  setting current thread state, *(P) DECthreads*, pthread–102
  setting current thread type, *(P) DECthreads*, pthread–104
Cancelability
  asynchronous, *(P) DECthreads*, 2–14, pthread–104, G–73
  general, *(P) DECthreads*, tis–33, G–75
  state, *(P) DECthreads*, 2–14
  type, *(P) DECthreads*, 2–14
Cancelability state
  thread, *(P) DECthreads*, pthread–102
Cancelability type
  thread, *(P) DECthreads*, pthread–104
CANCEL ALL command, *(P) Debugger*, CD–21
CANCEL BREAK command, *(P) Debugger*, 7–11, CD–23
CANCEL command, *(G) DCL A-M*, DCLI–57 to DCLI–58
CANCEL DISPLAY command, *(P) Debugger*, 11–12, CD–26
Cancel I/O routine, *(P) Alpha SDA*, SDA–94; *(P) VAX SDA*, SDA–105
CANCEL IMAGE command, *(P) Debugger*, 9–13, CD–28
Canceling
  characteristics on a queue, *(S) Sys Mgr Essentials*, 13–59
  exit handlers, *(P) Sys Svc I*, SYS1–79
  I/O requests, *(P) Sys Svc I*, SYS1–77
  logical name assignments, *(G) DCL A-M*, DCLI–111
  of detached process wakeup request, *(G) DCL N-Z*, DCLII–60
  of subprocess wakeup requests, *(G) DCL N-Z*, DCLII–60
  timer requests, *(P) Sys Svc I*, SYS1–80
  wakeup requests, *(P) Sys Svc I*, SYS1–82
Canceling a thread, *(P) DECthreads*, 2–14
  See Thread, canceling
CANCEL MODE command, *(P) Debugger*, CD–29

CANCEL MODULE command, *(P) Debugger*, 9–6, CD–30
CANCEL RADIX command, *(P) Debugger*, 8–11, CD–32
CANCEL SCOPE command, *(P) Debugger*, 9–11, CD–33
CANCEL SOURCE command, *(P) Debugger*, 10–3, CD–34
CANCEL TRACE command, *(P) Debugger*, 7–11, CD–37
CANCEL TYPE/OVERRIDE command, *(P) Debugger*, 8–26, CD–40
CANCEL WATCH command, *(P) Debugger*, 7–13, CD–41
CANCEL WINDOW command, *(P) Debugger*, 11–15, CD–42
Capabilities
  system, *(G) V7.0 New Feat*, 4–24
  user, *(G) V7.0 New Feat*, 4–25
Capability fields, *(P) SMG$*, 5–3
  Boolean, *(P) SMG$*, 5–4
  characters with normal ASCII value, *(P) SMG$*, 5–13
  creating, *(P) SMG$*, 5–16
  nonprinting characters, *(P) SMG$*, 5–13
  numeric, *(P) SMG$*, 5–5
  padding, *(P) SMG$*, 5–14
  string, *(P) SMG$*, 5–6
  used by SMG, *(P) SMG$*, 5–21
  user-defined renditions, *(P) SMG$*, 5–12
Capability objects
  as protected objects, *(S) Security*, 4–10
  elements of, *(S) Security*, 5–1
  reestablishing profile, *(S) Security*, 5–2
  template profile, *(S) Security*, 5–2
  types of access, *(S) Security*, 5–1
Capacity diagrams
  system kernel, *(S) Dependable*, 4–8
Capacity planning
  service from Digital, *(S) Dependable*, 10–2
Captive accounts, *(G) SW Overview*, 5–2; *(S) Security*, 3–4, 7–7; *(S) Sys Mgr Essentials*, 6–13, 6–29
  See also Accounts
  command procedures, *(S) Security*, 7–9
  disabling mail and notification of delivery, *(S) Security*, 7–24
  example of production account, *(S) Security*, 7–5
  locked passwords and, *(S) Security*, 7–8
  when to use, *(S) Security*, 7–4
Capturing data for troubleshooting, *(S) VMScluster Sys*, F–28
Card readers
  Refer also to the *OpenVMS VAX Card Reader, Line Printer, and LPA11–K I/O User's Reference Manual*
  end of batch job, *(G) DCL A-M*, DCLI–213
Card readers (cont'd)
  operating, *(S) Sys Mgr Essentials*, 7–17
  translation modes, *(S) Sys Mgr Essentials*, 7–18
Cards
  decks, *(S) Sys Mgr Essentials*, 7–17
  submitting batch job on, *(G) DCL A-M*, DCLI–282
Carriage control, *(P) Rec Mgmt Util*, 2–3, 4–32; *(P) I/O User*, 5–38
CARRIAGE_CONTROL attribute, *(P) Rec Mgmt Util*, 4–32; *(P) File Appl*, 4–34
CARRIAGE_RETURN keyword, *(P) Rec Mgmt Util*, 4–32
Carrier sense on Ethernet, *(S) DECnet Mgmt*, 1–5
CASE, *(S) Dependable*, 3–8
  See also COHESION and DECset
Case sensitivity, *(S) TCP/IP*, 5–2; *(P) Modular Proc*, A–4; *(P) Debugger*, 13–17
  in DCL command lines, *(G) User*, 3–2
  of argument to linker options, *(P) Linker*, LINK–45
  using SET FIND CASE EXACT command, *(G) User*, 8–32
  with REPLACE command in EVE, *(G) User*, 8–32
Case-specific language and DEPOSIT/TYPE, *(P) Debugger*, CD–80
Case studies
  DEC Reliable Transaction Router, *(S) Dependable*, 8–2 to 8–10
  lights out data center, *(S) Dependable*, 11–1 to 11–19
CASE_SENSITIVE= option, *(P) Linker*, LINK–45
Catastrophic failures
  in hardware components, *(S) Dependable*, 9–12
Catchall handlers, *(P) Concepts*, 13–25, 13–43; *(P) Debugger*, 13–22
CATCH exception, *(P) DECthreads*, 5–4
CATCH_ALL exception, *(P) DECthreads*, 5–8
cbrt routine, *(P) Portable Math*, DPML–13, B–3
CBT option, *(P) Rec Mgmt Util*, 4–7, 4–17
CCBs (channel control blocks)
  displaying in SDA, *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
CCITT (International Telegraph and Telephone Consultative Committee), *(G) SW Overview*, 6–3, A–1
C compiler
  generating reentrant code, *(P) DECthreads*, 4–1
CCO option, *(P) Rec Mgmt Util*, 4–13
ccos routine, *(P) Portable Math*, DPML–14, B–3
CC protocol
  CC header, *(S) VMScluster Sys*, F–23
  part of NISCA transport protocol, *(S) VMScluster Sys*, F–3

CC protocol (cont'd)
setting the TR/CC flag, *(S) VMScluster Sys*, F–25
CCSTART datagram, *(S) VMScluster Sys*, F–17, F–24
CDA compound document architecture, *(G) SW Overview*, 7–17
CDA Viewer, *(G) SW Overview*, 5–6, 5–7
CDD/Repository, *(G) SW Overview*, 6–15, 7–17; *(S) Dependable*, 8–59; *(P) Environment*, 7–4, 7–6, 7–7, 7–9, 7–10
CDDBs (class driver data blocks), *(P) Alpha SDA*, SDA–95; *(P) VAX SDA*, SDA–106
CDDB symbol, *(P) VAX SDA*, SDA–17
cdiv routine, *(P) Portable Math*, DPML–15, B–4
CD–ROM (compact disc read-only memory), *(G) SW Overview*, 1–6, 6–8; *(S) Sys Mgr Essentials*, 8–4 to 8–5; *(P) File Appl*, 1–3, 1–4
accessing ISO 9660-formatted, *(S) Sys Mgr Essentials*, 8–34
accessing with the InfoServer Client for OpenVMS, *(S) Sys Mgr Tuning*, 23–10
concepts, *(P) File Appl*, 1–11
formats, *(P) File Appl*, 1–12
formats for automatic serving, *(S) Sys Mgr Tuning*, 23–2
storing data and audio information, *(P) I/O User*, 2–5
using Digital System Identifiers, *(P) File Appl*, 1–13
volume structure, *(P) File Appl*, 1–12
CDRP (class driver request packet), *(P) Alpha SDA*, SDA–84, SDA–144; *(P) VAX SDA*, SDA–91, SDA–166
CDS (Cell Directory Server), *(G) SW Overview*, 2–10, 6–13; *(P) Environment*, 3–6
CDT (connection descriptor table), *(P) Alpha SDA*, SDA–84, SDA–144; *(P) VAX SDA*, SDA–166
CDU
See Command Definition utility
ceil routine, *(P) Portable Math*, DPML–16, B–4
Cell Directory Server
See CDS
Cells, *(P) Rec Mgmt Util*, 1–2, 4–34
fixed-length, *(P) File Appl*, 3–15
record structure and, *(P) File Appl*, 10–15
Central processing units
See CPUs
cexp routine, *(P) Portable Math*, DPML–17, B–4
Chaining, *(P) Concepts*, 6–5
Change-mode handlers, *(P) Concepts*, 13–12
declaring, *(P) Sys Svc I*, SYS1–244
Change process priority fix, *(S) DECamds*, 4–4
CHANGES attribute, *(P) Rec Mgmt Util*, 4–25
Changing formats (of software kits), *(S) Sys Mgmt Util M-Z*, 3–7
Changing queue options, *(G) DCL N-Z*, DCLII–372
Changing scheduling priority for a batch or print job, *(S) Sys Mgr Essentials*, 13–72
Changing size of page, swap, and dump files
recommended method, *(S) Sys Mgr Tuning*, 15–22
Changing system parameters
with conversational boot, *(S) Sys Mgr Tuning*, 14–36
with SYSGEN, *(S) Sys Mgr Tuning*, 14–33
Changing the DEFAULT form, *(S) Sys Mgr Essentials*, 13–63
Changing the system parameter file
with SYSGEN, *(S) Sys Mgr Tuning*, 14–33
with SYSMAN, *(S) Sys Mgr Tuning*, 14–28
Channel access mode protection option, *(P) RMS Ref*, 4–6
Channel control blocks
See CCBs
Channel Control protocol
See CC protocol
channel data type, *(P) Interfaces*, B–2
Channel formation
acknowledging with VERF datagram, *(S) VMScluster Sys*, F–17, F–24
BYE datagram, *(S) VMScluster Sys*, F–24
completing with VACK datagram, *(S) VMScluster Sys*, F–17, F–24
handshake, *(S) VMScluster Sys*, F–17
HELLO datagrams, *(S) VMScluster Sys*, F–17, F–24
multiple, *(S) VMScluster Sys*, F–20
opening with CCSTART datagram, *(S) VMScluster Sys*, F–17
problems, *(S) VMScluster Sys*, F–17
/CHANNEL qualifier, *(P) Alpha SDA*, SDA–124, SDA–132; *(P) VAX SDA*, SDA–141, SDA–153
Channel request blocks
See CRBs
Channels, *(S) DECnet Mgmt*, 1–4, 1–7, 8–11; *(P) Concepts*, 2–10
assigning for logical link, *(S) DECnet Mgmt*, 8–11, 8–20, 8–32
assigning I/O, *(P) Concepts*, 9–11
canceling I/O, *(P) Sys Svc I*, SYS1–77
deassigning, *(P) Concepts*, 9–24
deassignment of, *(S) DECnet Mgmt*, 8–14, 8–19
definition, *(S) VMScluster Sys*, F–4
established and implemented by PEDRIVER, *(S) VMScluster Sys*, F–4
_NET:, *(S) DECnet Mgmt*, 8–25
network, *(S) Sys Mgr Tuning*, 21–5

Character case, *(P) CDU, LBR, & MU*, LIB–4
Characteristics of created condition variable
specifying, *(P) DECthreads*, pthread–52, G–30
Characteristics of created mutex
specifying, *(P) DECthreads*, G–60
Characteristics of created object
specifying, *(P) DECthreads*, pthread–18, E–18, G–5
Character-oriented output, *(P) SMG$*, 2–8
Characters
alphanumeric, *(G) User*, 14–8
nonprintable, *(G) User*, 14–8
special, *(G) User*, 14–8
terminator set for, *(P) I/O User*, 5–30
Character set description (charmap) file
components, *(G) V7.0 New Feat*, B–45
descriptions of, *(G) V7.0 New Feat*, B–42 to B–47
Character sets
See also ASCII character set and DEC Multinational character set
ASCII, *(G) User*, B–1
DEC Multinational, *(G) User*, B–3
terminal lowercase, *(P) I/O User*, 5–21
translation of, *(P) LIB$*, LIB–356
Character string routines, *(P) Concepts*, 6–14
Character strings, *(P) Interfaces*, B–3
See also Strings
and symbols, *(G) User*, 14–8
as literal text, *(G) User*, 16–9
comparing, *(G) User*, 14–11
converting to integer values, *(G) User*, 14–25, 14–26
converting using lexical functions, *(G) User*, 17–17
defining, *(G) User*, 14–9
evaluation of, *(G) User*, 14–24
examining with lexical functions, *(G) User*, 17–13
expressions
in symbols, *(G) User*, 14–9
operands, *(G) User*, 14–10
extracting with lexical functions, *(G) User*, 17–13, 17–14
finding in files, *(G) DCL N-Z*, DCLII–69
forcing symbol substitutions in, *(G) User*, 16–10
operations, *(G) User*, 14–10
quotation marks (" ") in, *(G) User*, 16–10
replacing, *(G) User*, 14–12, 14–13
specifying case for search, *(G) DCL N-Z*, DCLII–69
symbol assignment, *(G) DCL A-M*, DCLI–5
with lexical functions, *(G) User*, 17–12
Character string translation routines, *(P) Concepts*, 6–14
char_string data type, *(P) Interfaces*, B–3
Checkpointing RSX–11S tasks, *(S) DECnet Mgmt*, 4–18
/CHECK qualifier, *(P) File Appl*, 10–1
Check report, *(P) File Appl*, 10–1, 10–5
CHECK_FEEDBACK mode, *(S) Sys Mgmt Util A-L*, 6–8
CHF
See Condition Handling Facility
$CHFDEF2 macro, *(P) Concepts*, 13–27
$CHFDEF macro, *(P) Concepts*, 13–27
$CHKPRO system service
role in access control, *(S) Security*, 4–11
Choosing data categories, *(S) DECamds*, 2–5
CI (computer interconnect), *(G) SW Overview*, 1–6; *(S) DECnet Intro*, 1–8
as DECnet line, *(S) DECnet Mgmt*, 5–11
as VAXcluster connector, *(S) DECnet Mgmt*, 1–10
as VAXcluster data link, *(S) DECnet Mgmt*, 1–10, 2–21
cable, *(S) DECnet Mgmt*, 1–10
cable repair, *(S) VMScluster Sys*, C–26
changing to a mixed-interconnect, *(S) VMScluster Sys*, 8–23
circuit, *(S) DECnet Mgmt*, 2–6
circuit device, *(S) DECnet Mgmt*, 2–10
communication path, *(S) VMScluster Sys*, C–20
computers
adding, *(S) VMScluster Sys*, 8–9
failure to boot, *(S) VMScluster Sys*, C–4
failure to join the cluster, *(S) VMScluster Sys*, C–13
configurations, *(S) Dependable*, 6–15; *(S) VMScluster Sys*, 3–1; *(S) DECnet Mgmt*, 1–3
configuring multiple adapters, *(S) VMScluster Sys*, 3–3
connection, *(S) DECnet Intro*, 3–9
controller, *(S) DECnet Mgmt*, 2–10
data link between cluster nodes, *(S) Sys Mgr Tuning*, 21–8
device-attention entry, *(S) VMScluster Sys*, C–28
driver, *(S) DECnet Mgmt*, 2–10
end node, *(S) DECnet Mgmt*, 2–21
end node backup circuit, *(S) DECnet Mgmt*, 2–21, 3–55
error log entry
formats, *(S) VMScluster Sys*, C–27
error-log entry, *(S) VMScluster Sys*, C–33
analyzing, *(S) VMScluster Sys*, C–27
error recovery, *(S) VMScluster Sys*, C–29, C–44
line, *(S) DECnet Mgmt*, 2–11
line device, *(S) DECnet Mgmt*, 2–14

CI (computer interconnect) (cont'd)
logged-message entry, *(S) VMScluster Sys*, C–31
MSCP server accesses shadow sets, *(S) VMScluster Sys*, 6–24
node addressing, *(S) DECnet Mgmt*, 3–26
port
loopback datagram facility, *(S) VMScluster Sys*, C–22
polling, *(S) VMScluster Sys*, C–19
verifying function, *(S) VMScluster Sys*, C–21
router, *(S) DECnet Mgmt*, 2–21
troubleshooting, *(S) VMScluster Sys*, C–1
CI-750 device, *(S) DECnet Mgmt*, 2–10
CI-780 device, *(S) DECnet Mgmt*, 2–10
CIBCA device, *(S) DECnet Mgmt*, 2–10
CIBCI device, *(S) DECnet Mgmt*, 2–10
CIF option, *(P) Rec Mgmt Util*, 4–18
Circuit-level loopback tests, *(S) DECnet Mgmt*, 7–1
LAN (local area network), *(S) DECnet Mgmt*, 7–9
Circuit level redundancy, *(S) Dependable*, 4–4
Circuits, *(S) DECnet Intro*, 1–2; *(S) DECnet Mgmt*, 1–1, 1–17
access control, *(S) DECnet Intro*, 3–37
asynchronous DDCMP devices, *(S) DECnet Mgmt*, 2–12, 5–12
CI, *(S) DECnet Mgmt*, 2–6
clearing counters, *(S) DECnet Mgmt Util*, 3–159
commands, *(S) DECnet Mgmt*, 3–24
cost, *(S) DECnet Intro*, 1–3; *(S) DECnet Mgmt*, 2–22, 3–51
counters, *(S) DECnet Mgmt*, 3–35; *(S) DECnet Mgmt Util*, 3–159, B–1, B–4
database, *(S) DECnet Mgmt*, 3–1
DDCMP, *(S) DECnet Mgmt*, 1–8, 2–6, 3–26
definition, *(S) DECnet Mgmt*, 2–6
detecting failure, *(S) DECnet Intro*, 4–2
determining cost, *(S) DECnet Mgmt*, 3–51
determining status, *(S) DECnet Intro*, 4–2
device name, *(S) DECnet Mgmt*, 3–24
devices, *(S) DECnet Mgmt Util*, A–1
displaying counter information with NCP, *(S) DECnet Intro*, 4–1
dynamic asynchronous, *(S) DECnet Mgmt*, 2–8
Ethernet, *(S) DECnet Mgmt*, 1–4, 3–26
FDDI, *(S) DECnet Mgmt*, 3–26
identification, *(S) DECnet Mgmt*, 3–24, 3–26
identifier, *(S) DECnet Intro*, 3–33
information, *(S) DECnet Mgmt Util*, 3–120
LAN, *(S) DECnet Mgmt*, 2–6, 3–26
logging failures, *(S) DECnet Intro*, 4–4
loopback test, *(S) DECnet Intro*, 4–7; *(S) DECnet Mgmt*, 7–6
multiaccess, *(S) DECnet Mgmt*, 2–7
Circuits (cont'd)
multipoint control, *(S) DECnet Mgmt*, 2–6
multipoint tributary, *(S) DECnet Mgmt*, 2–6
name, *(S) DECnet Mgmt*, 2–7
network, *(S) Sys Mgr Tuning*, 21–5
definition, *(S) Sys Mgr Tuning*, 21–4
parameters, *(S) DECnet Mgmt*, 3–26
point-to-point, *(S) DECnet Mgmt*, 2–6
polling, *(S) DECnet Mgmt*, 3–31
service, *(S) DECnet Mgmt*, 4–2
service operations, *(S) DECnet Mgmt*, 3–29
setting base priority, *(S) DECnet Mgmt*, 3–32
states, *(S) DECnet Mgmt*, 2–7, 3–28; *(S) DECnet Mgmt Util*, C–1 to C–4
static asynchronous, *(S) DECnet Mgmt*, 1–9
synchronous DDCMP, *(S) DECnet Mgmt*, 1–3, 2–7, 2–12
testing, *(S) DECnet Mgmt Util*, 3–31, 3–49, 3–111
timers, *(S) DECnet Mgmt*, 3–29
transitions, *(S) DECnet Mgmt Util*, C–1 to C–4
types, *(S) DECnet Mgmt*, 3–26
verification, *(S) DECnet Mgmt*, 3–30
virtual, *(S) DECnet Mgmt*, 1–4, 1–8
Circuits and line devices, *(S) DECnet Mgmt Util*, A–1
DMB, *(S) DECnet Mgmt Util*, A–2
DMF, *(S) DECnet Mgmt Util*, A–2
DPV, *(S) DECnet Mgmt Util*, A–2
DSB, *(S) DECnet Mgmt Util*, A–2
DSV, *(S) DECnet Mgmt Util*, A–2
DSW, *(S) DECnet Mgmt Util*, A–2
DUP, *(S) DECnet Mgmt Util*, A–2
FZA, *(S) DECnet Mgmt*, 2–11; *(S) DECnet Mgmt Util*, A–2
KMV, *(S) DECnet Mgmt Util*, A–2
KMX, *(S) DECnet Mgmt Util*, A–2
KMY, *(S) DECnet Mgmt Util*, A–2
MFA, *(S) DECnet Mgmt*, 2–11; *(S) DECnet Mgmt Util*, A–2
CIRCUITS class
adding, *(S) Sys Mgmt Util M-Z*, 4–12
fields belonging to, *(S) Sys Mgmt Util M-Z*, 4–19
removing, *(S) Sys Mgmt Util M-Z*, 4–40
Circuit timer, *(S) Sys Mgmt Util A-L*, 13–27
Circumflex (^), *(P) Debugger*, 8–8, 8–13, B–6
C language
See C
Class driver data blocks
See CDDBs
Classes, *(S) DECamds*, 5–9 to 5–10
enabling and disabling, *(S) Sys Mgr Tuning*, 18–23
SHOW CLUSTER, *(S) Sys Mgmt Util M-Z*, 4–3
Class of data
in SHOW CLUSTER, *(S) Sys Mgr Tuning*, 20–4

Class of data (cont'd)
removing, *(S) Sys Mgr Tuning*, 20–11
Class scheduler processes, *(P) Sys Svc II*, SYS2–279
Clauses, *(P) CDU, LBR, & MU*, CDU–20 to CDU–23
CLEANUP.COM command procedure, *(G) User*, 15–19
Clean-up operations, *(G) User*, 15–18
Cleanup routine
establishing, *(P) DECthreads*, pthread–35, G–29
executing, *(P) DECthreads*, pthread–34, G–28
Clean-up tasks
in command procedures, *(G) User*, 15–16
CLEAR CIRCUIT command, *(S) DECnet Mgmt Util*, 3–2
CLEAR command, *(S) DECnet Intro*, 3–10
NCP, *(S) Sys Mgr Tuning*, 21–11
to delete configuration database entries, *(S) DECnet Intro*, 3–34
CLEAR DEVICE command
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–8
CLEAR EXECUTOR command, *(S) DECnet Mgmt*, 3–14; *(S) DECnet Mgmt Util*, 3–6
CLEAR EXECUTOR NODE command, *(S) DECnet Mgmt Util*, 3–11
Clearing an event flag, *(P) Sys Svc I*, SYS1–109
CLEAR LINE command, *(S) DECnet Mgmt Util*, 3–12
CLEAR LOGGING command, *(S) DECnet Mgmt Util*, 3–16
CLEAR LOGGING EVENTS command, *(S) DECnet Mgmt Util*, 3–17
CLEAR LOGGING NAME command, *(S) DECnet Mgmt Util*, 3–19
CLEAR MODULE X25-ACCESS command, *(S) DECnet Mgmt Util*, 3–21
CLEAR MODULE X25-PROTOCOL command, *(S) DECnet Mgmt Util*, 3–22
CLEAR MODULE X25-SERVER command, *(S) DECnet Mgmt Util*, 3–25
CLEAR MODULE X29-SERVER command, *(S) DECnet Mgmt Util*, 3–25
CLEAR MOPDLL command
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–9
CLEAR NODE CIRCUIT command, *(S) DECnet Mgmt Util*, 3–31
CLEAR NODE command, *(S) DECnet Mgmt*, 3–14, 7–4; *(S) DECnet Mgmt Util*, 3–27
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–9
CLEAR OBJECT command, *(S) DECnet Mgmt Util*, 3–32
/CLEAR qualifier, *(P) Debugger*, CD–88
CLI$DCL_PARSE routine, *(P) Util Routines*, CLI–5
CLI$DISPATCH routine, *(P) Util Routines*, CLI–8
CLI$GET_VALUE routine, *(P) Util Routines*, CLI–9
CLI$PRESENT routine, *(P) Util Routines*, CLI–12
CLI (command language interpreter), *(P) Concepts*, 6–2; *(P) CDU, LBR, & MU*, CDU–3
CLI access routine, *(P) Concepts*, 6–2
Client, *(S) TCP/IP*, 1–2; *(P) DECthreads*, 1–1
Clients, *(G) SW Overview*, 2–7, 6–17; *(P) Environment*, 3–2
PATHWORKS, *(G) SW Overview*, 6–18
to OpenVMS distributed servers, *(G) SW Overview*, 7–2
Client/server
paradigm, *(S) Dependable*, 8–16
Client/server computing, *(G) SW Overview*, 1–5, 2–7; *(S) TCP/IP*, 1–2, 3–1; *(P) Environment*, 3–2
development environment support, *(P) Environment*, 1–5
graphics and windowing, *(P) Environment*, 2–6
in multivendor environments, *(G) SW Overview*, 6–17
in production systems environments, *(G) SW Overview*, 7–2
NAS support for, *(G) SW Overview*, 6–9
CLI routines, *(P) Util Routines*, CLI–1
example in a Fortran program, *(P) Util Routines*, CLI–2
list of, *(P) Util Routines*, CLI–1
when to use, *(P) Util Routines*, CLI–1
CLI symbols
deleting, *(P) LIB$*, LIB–138
getting value of, *(P) LIB$*, LIB–277
RTL routines, *(P) LIB$*, LIB–138, LIB–277, LIB–444
setting value of, *(P) LIB$*, LIB–444
/CLITABLES qualifier, *(S) Security*, 7–9, 8–27
Clocks
setting system, *(P) Concepts*, 5–11
clog routine, *(P) Portable Math*, DPML–18, B–4
CLOSE command, *(G) DCL A-M*, DCLI–59, DCLI–60
for remote file, *(S) DECnet Intro*, 2–13
in network operations, *(S) DECnet Intro*, 2–13
Closed queue status, *(S) Sys Mgr Essentials*, 13–51
CLOSE LOG command
in LMCP, *(S) Sys Mgmt Util A-L*, 14–5
Close service, *(P) RMS Ref*, 3–1, A–12, A–15
condition values, *(P) RMS Ref*, RMS–5
See also Completion status codes
contrasted with Disconnect service, *(P) RMS Ref*, 3–5
control block input fields, *(P) RMS Ref*, RMS–4
control block output fields, *(P) RMS Ref*, RMS–5
limitations with XABs, *(P) RMS Ref*, RMS–4

Close service (cont'd)
use restrictions, *(P) RMS Ref*, RMS–4
Closing a queue, *(S) Sys Mgr Essentials*, 13–53
CLUBs (cluster blocks), *(P) Alpha SDA*, SDA–81; *(P) VAX SDA*, SDA–87
CLUDCBs (cluster quorum disk control blocks), *(P) Alpha SDA*, SDA–81; *(P) VAX SDA*, SDA–87
CLUE
See Crash Log Utility Extractor
CLUE$SITE_PROC logical name, *(P) Alpha SDA*, SDA–171
CLUE CLEANUP command, *(P) Alpha SDA*, SDA–163
CLUE commands
archiving information, *(P) Alpha SDA*, SDA–6
CLUE CONFIG command, *(P) Alpha SDA*, SDA–164
CLUE CRASH command, *(P) Alpha SDA*, SDA–19, SDA–166
CLUE ERRLOG command, *(P) Alpha SDA*, SDA–169
CLUE HISTORY command, *(P) Alpha SDA*, SDA–170
CLUE MCHK command, *(P) Alpha SDA*, SDA–172
CLUE MEMORY command, *(P) Alpha SDA*, SDA–173
CLUE PROCESS command, *(P) Alpha SDA*, SDA–180
CLUE STACK command, *(P) Alpha SDA*, SDA–182
CLUE VCC command, *(P) Alpha SDA*, SDA–186
CLUEXIT bugcheck
diagnosing, *(S) VMScluster Sys*, C–18
CLUE XQP command, *(P) Alpha SDA*, SDA–188
CLUFCBs (cluster failover control blocks), *(P) Alpha SDA*, SDA–81; *(P) VAX SDA*, SDA–87
CLUSTER= option, *(P) Linker*, LINK–47
basing images, *(P) Linker*, LINK–43
controlling image section creation, *(P) Linker*, 3–22
controlling the order of input file processing, *(P) Linker*, 2–17
fixing position of transfer vector in image, *(P) Linker*, 4–7
Cluster-accessible disks, *(G) SW Overview*, 3–18
served by MSCP, *(S) VMScluster Sys*, 6–15
Cluster-accessible tapes, *(G) SW Overview*, 3–18
served by TMSCP, *(S) VMScluster Sys*, 6–15
Cluster aliases
See also DECnet, cluster aliases
defining, *(S) VMScluster Sys*, 4–9, 4–10
enabling operations, *(S) VMScluster Sys*, 4–11
limits, *(S) VMScluster Sys*, 9–21
CLUSTER class
adding, *(S) Sys Mgmt Util M-Z*, 4–13
CLUSTER class (cont'd)
fields belonging to, *(S) Sys Mgmt Util M-Z*, 4–20
removing, *(S) Sys Mgmt Util M-Z*, 4–41
CLUSTER class record
in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–11
Cluster event notification
system services, *(P) Environment*, 10–5, 10–7
Cluster events
clearing request for notification of, *(P) Sys Svc I*, SYS1–107
requesting notification of, *(P) Sys Svc II*, SYS2–282
Cluster failover control blocks
See CFCBs
Cluster hung, *(S) DECamds*, 4–2
CLUSTER information
SHOW CLUSTER class of data, *(S) Sys Mgmt Util M-Z*, 4–3
Clustering of input files
controlling image section creation, *(P) Linker*, 3–22
effect on image creation, *(P) Linker*, 3–9
in a based image, *(P) Linker*, LINK–43
processing based images, *(P) Linker*, 3–9
using the COLLECT= option, *(P) Linker*, LINK–48
Cluster management code
global symbols, *(P) VAX SDA*, SDA–64
/CLUSTER qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–14
Clusters, *(P) File Appl*, 1–5
See also Clustering of input files, VAXcluster environments, and VMScluster systems
Cluster system blocks
See CSBs
Cluster system identification number
See CSID
Clusterwide process services, *(S) VMScluster Sys*, 1–9
CLUSTER_AUTHORIZE.DAT files, *(S) Security*, 11–7; *(S) Sys Mgmt Util M-Z*, 6–15, 6–18; *(S) VMScluster Sys*, 2–14
setting group number and password, *(S) VMScluster Sys*, 10–16
CLUSTER_CONFIG.COM command procedure, *(S) Sys Mgr Essentials*, 5–6; *(S) Sys Mgr Tuning*, 20–2; *(S) Sys Mgmt Util M-Z*, 6–15
adding a quorum disk, *(S) VMScluster Sys*, 8–18
change options, *(S) VMScluster Sys*, 8–21
compared to VMSKITBLD.COM command procedure, *(S) Sys Mgr Essentials*, 2–31
converting standalone computer to cluster computer, *(S) VMScluster Sys*, 8–25

CLUSTER_CONFIG.COM command procedure (cont'd)
creating a duplicate system disk, *(S) VMScluster Sys*, 8–31
creating SATELLITE_PAGE.COM command procedure, *(S) Sys Mgr Tuning*, 15–20
disabling a quorum disk, *(S) VMScluster Sys*, 8–21
enabling disk server, *(S) VMScluster Sys*, 6–15, 8–26
enabling tape server, *(S) VMScluster Sys*, 8–29
functions, *(S) VMScluster Sys*, 8–1
modifying satellite LAN hardware address, *(S) VMScluster Sys*, 8–22
preparing to execute, *(S) VMScluster Sys*, 8–4
removing computers, *(S) VMScluster Sys*, 8–18
required information, *(S) VMScluster Sys*, 8–5
setting up LAN MOP, *(S) Sys Mgr Tuning*, 22–21
system files created for satellites, *(S) VMScluster Sys*, 8–1
use in adding a system to a VMScluster, *(S) Sys Mgr Essentials*, 2–31
CLUSTER_SERVER process
creation during system startup, *(S) Sys Mgr Essentials*, 5–5
CLUSTER_SIZE attribute, *(S) Sys Mgr Essentials*, 10–57; *(P) Rec Mgmt Util*, 4–18
CLUSTRLOA.STB file, *(P) VAX SDA*, SDA–64
CLUSTRLOA symbol, *(P) VAX SDA*, SDA–17
cma.h, *(P) DECthreads*, A–2, B–2
cma_debug, *(P) DECthreads*, E–46
cma_t_once data structure, *(P) DECthreads*, E–62
CMEXEC privilege, *(S) Security*, A–4
CMKRNL privilege, *(S) Security*, A–4; *(S) DECnet Mgmt*, 5–1
CMS, *(G) SW Overview*, 4–9, 6–15; *(P) Environment*, 6–1
tracking source code changes, *(S) Dependable*, 8–58
cmul routine, *(P) Portable Math*, DPML–19, B–4
CNDRIVER DECnet driver
using over a CI, *(S) DECnet Mgmt*, 5–3, 5–11
COBOL, *(P) Environment*, 7–2, 7–6
calling CONVERT routines from, *(P) File Appl*, 4–29
calling FDL$CREATE from, *(P) File Appl*, 4–17
data type declarations, *(P) Interfaces*, B–30
DEC COBOL, *(G) SW Overview*, 4–6
implementation table, *(P) Interfaces*, B–30
VAX COBOL, *(G) SW Overview*, 4–5
COBOL compiler
generating nonreentrant code, *(P) DECthreads*, 4–1
Code
See also Address expressions and Instructions
AST-reentrant, *(P) Modular Proc*, 3–15
fully-reentrant, *(P) Modular Proc*, 3–15
Code (cont'd)
writing AST-reentrant procedures, *(P) Modular Proc*, 3–16
$CODE$ program section name
definition, *(P) Linker*, B–16
Code Management System
See CMS
Code sharing
overview, *(S) VAX Perform*, 1–4
Coding guidelines, *(P) Modular Proc*, 3–1
COHESION, *(S) Dependable*, 8–58
support services from Digital, *(S) Dependable*, 10–2
writing custom applications, *(S) Dependable*, 3–8
COLLATE key type, *(P) Rec Mgmt Util*, 4–29
Collating key
stored order versus lookup value, *(P) RMS Ref*, 6–3, 6–4
Collating key data type, *(P) RMS Ref*, 12–6
Collating sequences
potential problem with, *(P) Rec Mgmt Util*, 2–1
COLLATING_SEQUENCE attribute, *(P) Rec Mgmt Util*, 4–26
COLLECT= option, *(P) Linker*, LINK–48
controlling image section creation, *(P) Linker*, 3–22
controlling the order of input file processing, *(P) Linker*, 2–18
Collecting data, *(S) DECamds*, 2–5, 5–2
recommendations to handle heavy workloads, *(S) DECamds*, 5–15
Collection
See Data collection
Collection intervals, *(S) DECamds*, 5–2 to 5–17, Glossary–1
Collection points
for network events, *(S) DECnet Intro*, 4–4
Collect menu, *(S) DECamds*, 2–5
Collided page (COLPG) wait state, *(S) Alpha Perform*, 9–4
Collision detects
Ethernet, *(S) DECnet Mgmt*, 1–5
Colon (:)
range delimiter, *(P) Debugger*, 8–17, 15–4, 15–6, 15–7, CD–103
Combination model, *(P) DECthreads*, 1–6
Combination time
rules for entering, *(G) User*, 3–13
syntax, *(G) User*, 3–13
Command definition files, *(P) CDU, LBR, & MU*, CDU–6
changing syntax, *(P) CDU, LBR, & MU*, CDU–7
creating, *(P) CDU, LBR, & MU*, CDU–6 to CDU–15
defining verbs, *(P) CDU, LBR, & MU*, CDU–9 to CDU–10

Command definition files (cont'd)
for sample program, *(P) CDU, LBR, & MU*, CDU–48, CDU–49
processing, *(P) CDU, LBR, & MU*, CDU–15 to CDU–17
statements in, *(P) CDU, LBR, & MU*, CDU–20 to CDU–38
TYPE clause
defining value types, *(P) CDU, LBR, & MU*, CDU–8
VALUE clause
for defining parameters, qualifiers, keywords, *(P) CDU, LBR, & MU*, CDU–8
Command Definition Language statements, *(P) CDU, LBR, & MU*, CDU–6
Command Definition utility (CDU), *(G) SW Overview*, 4–8, 4–17; *(P) Environment*, 4–1; *(P) CDU, LBR, & MU*, CDU–3
See also SET COMMAND command
changing syntax, *(P) CDU, LBR, & MU*, CDU–7
defining values, *(P) CDU, LBR, & MU*, CDU–8
defining verbs, *(P) CDU, LBR, & MU*, CDU–9
directing output, *(P) CDU, LBR, & MU*, CDU–19
examples, *(P) CDU, LBR, & MU*, CDU–48 to CDU–51
exiting, *(P) CDU, LBR, & MU*, CDU–19
invoking, *(G) DCL N-Z*, DCLII–101; *(P) CDU, LBR, & MU*, CDU–19
overview, *(P) CDU, LBR, & MU*, CDU–19
Command files
LAN Control Program (LANCP) utility, *(S) Sys Mgr Tuning*, 22–9
Command formats
debugger, *(P) Debugger*, 6–1, CD–3
for backups, *(S) Sys Mgr Essentials*, 10–4
for image backups, *(S) Sys Mgr Essentials*, 10–31, 10–32
for incremental backups, *(S) Sys Mgr Essentials*, 10–34, 10–35
for multiple backup output devices, *(S) Sys Mgr Essentials*, 10–24, 10–32, 10–33
Command interface
debugger, *(P) Debugger*, 5–1
with DECwindows Motif, *(P) Debugger*, 1–2, 1–15, 2–9, 5–15
Command interpreters
commands performed in, *(G) User*, 16–11
controlling error checking of, *(G) DCL N-Z*, DCLII–167
specifying alternate, *(G) DCL A-M*, DCLI–415
symbol table, *(S) Sys Mgmt Util M-Z*, C–11
Command language interpreter
See CLI
Command language routines, *(P) CDU, LBR, & MU*, CDU–3, CDU–18
See also CLI routines
CLI$DCL_PARSE, *(P) CDU, LBR, & MU*, CDU–18, CDU–49
CLI$DISPATCH, *(P) CDU, LBR, & MU*, CDU–18, CDU–49
CLI$GET_VALUE, *(P) CDU, LBR, & MU*, CDU–18, CDU–48, CDU–49
CLI$PRESENT, *(P) CDU, LBR, & MU*, CDU–18, CDU–48, CDU–49
sample programs, *(P) CDU, LBR, & MU*, CDU–48
Command levels
definition, *(G) User*, 15–29
with SET [NO]ON command, *(G) User*, 15–34
Command line editing keys, *(P) Debugger*, CD–4
Command lines
deleting characters, *(G) User*, 3–17
editing, *(G) User*, 3–16
including in command procedures, *(G) User*, 15–3
in Mail, *(G) User*, 6–3
in Phone, *(G) User*, 7–3
recalling, *(G) User*, 3–14
wrapping, *(G) User*, 3–17
Command mode for Audit Analysis utility
manipulating the display interactively, *(S) Sys Mgmt Util A-L*, 4–10, 4–25
Command procedures, *(G) SW Overview*, 5–4; *(S) DECnet Mgmt*, 8–4, 8–39; *(P) File Appl*, 1–32
See also Login command procedures, Network command procedures, and System command procedures
access control strings, *(G) User*, 19–7
assigning variables, *(G) User*, 15–9
BATCH.COM, *(G) User*, C–27
building, *(S) Sys Mgmt Util M-Z*, 4–48
CALC.COM, *(G) User*, C–25
canceling with Ctrl/Y, *(G) User*, 15–34
changing verification settings, *(G) User*, 17–4
CLEANUP.COM, *(G) User*, 15–19
clean-up tasks, *(G) User*, 15–16, 15–18
closing files, *(G) User*, 15–17
comments, *(G) User*, 15–5
COMPILE_FILE.COM, *(G) User*, C–31
completing, *(G) User*, 15–18
continuing execution of, *(G) DCL A-M*, DCLI–64
control for SHOW CLUSTER output, *(S) Sys Mgmt Util M-Z*, 4–4
controlling error checking in, *(G) DCL N-Z*, DCLII–167
CONVERT.COM, *(G) User*, C–1
coordinating, *(S) VMScluster Sys*, 5–7
correcting system time, *(S) Sys Mgmt Util M-Z*, 6–17

Command procedures (cont'd)
creating, *(G) User*, 15–3; *(S) VMScluster Sys*, 5–8
DCL commands to access remote files, *(S) DECnet Intro*, 2–13
debugger, *(P) Debugger*, 12–1
debugging, *(G) User*, 15–14
SET PREFIX command, *(G) User*, 15–15
SET VERIFY command, *(G) User*, 15–15
SHOW SYMBOL command, *(G) User*, 15–15
default directory for, *(P) Debugger*, 12–2, CD–157, CD–244
default file type of, *(G) User*, 15–3
definition, *(G) User*, 15–1
delaying process of, *(G) DCL N-Z*, DCLII–433
deleting files, *(G) User*, 15–17
designing, *(G) User*, 15–8
detecting errors, *(G) User*, 15–41
determining conditionals, *(G) User*, 15–8
determining variables, *(G) User*, 15–8
DIR.COM, *(G) User*, C–9
disabling verification settings, *(G) User*, 17–4
displaying command lines of, *(G) DCL N-Z*, DCLII–228
displaying commands in, *(P) Debugger*, 12–2, CD–190
displaying prompts of, *(G) DCL A-M*, DCLI–278
dollar signs ($), *(G) User*, 15–4
duplicate labels, *(G) User*, 15–5
EDITALL.COM, *(G) User*, C–15
enabling verification during execution, *(G) User*, 15–16
ending, *(G) User*, 15–13
error handling, *(G) User*, 15–30
SET NOON command, *(G) User*, 15–33
example for task-to-task operations, *(S) DECnet Mgmt*, 8–39
executing, *(G) User*, 15–21; *(G) DCL A-M*, DCLI–9; *(S) Sys Mgmt Util A-L*, 12–7; *(S) Sys Mgmt Util M-Z*, 4–11; *(S) VMScluster Sys*, 5–8; *(P) Debugger*, 12–1, CD–7
as batch jobs, *(G) User*, 15–24
as remote batch jobs, *(G) User*, 15–25
from within other command procedures, *(G) User*, 15–21
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–9
interactively, *(G) User*, 15–23
on private disks, *(G) User*, 15–27
on remote nodes, *(G) User*, 15–21
on tape volumes, *(G) User*, 15–27
redirecting interactive output, *(G) User*, 15–24
restarting batch jobs, *(G) User*, 15–25
with automatic foreign commands, *(G) User*, 14–38
without using symbols, *(G) User*, 14–38

Command procedures (cont'd)
executing at system startup, *(S) Sys Mgmt Util M-Z*, 6–66
executing DCL commands with DO, *(S) Sys Mgmt Util M-Z*, 6–30
executing in SYSMAN, *(S) Sys Mgr Essentials*, 2–18
executing with SYSMAN DO command, *(S) Sys Mgr Essentials*, 2–18
EXIT command, *(G) User*, 15–13, 15–29
exiting, *(G) User*, 15–29; *(P) Debugger*, CD–7, CD–114, CD–135
for backups, *(S) Sys Mgr Essentials*, 10–36
for image backups, *(S) Sys Mgr Essentials*, 10–36
for incremental backups, *(S) Sys Mgr Essentials*, 10–38
for installing products, *(S) Sys Mgr Essentials*, 3–32
for interactive backups, *(S) Sys Mgr Essentials*, 10–39
for MONITOR
archiving recording and summary files, *(S) Sys Mgr Tuning*, 18–39
creating cluster summaries, *(S) Sys Mgr Tuning*, 18–40
creating summary file, *(S) Sys Mgr Tuning*, 18–39
generating clusterwide multifile summary reports, *(S) Sys Mgr Tuning*, 18–39
initiating continuous recording, *(S) Sys Mgr Tuning*, 18–41
invoking SUBMON.COM from startup, *(S) Sys Mgr Tuning*, 18–39
MONITOR.COM, *(S) Sys Mgr Tuning*, 18–39
MONSUM.COM, *(S) Sys Mgr Tuning*, 18–39
rerecording monitoring, *(S) Sys Mgr Tuning*, 18–39
starting MONITOR.COM as a detached process, *(S) Sys Mgr Tuning*, 18–39
SUBMON.COM, *(S) Sys Mgr Tuning*, 18–39
for object, *(S) DECnet Mgmt*, 3–61
for POLYCENTER Software Installation utility, *(S) Sys Mgr Essentials*, 3–18
for remote batch execution, *(S) DECnet Intro*, 2–12, 2–13
for remote file access, *(S) DECnet Intro*, 2–12
for running remote task, *(S) DECnet Intro*, 2–12, 2–14
for SHOW CLUSTER, *(S) Sys Mgr Tuning*, 20–15
controlling output, *(S) Sys Mgr Tuning*, 20–5
default file type, *(S) Sys Mgr Tuning*, 20–16

Command procedures
for SHOW CLUSTER (cont'd)
description, *(S) Sys Mgr Tuning*, 20–16
formatting reports, *(S) Sys Mgr Tuning*, 20–10
initialization, *(S) Sys Mgr Tuning*, 20–14
SHOW_CLUSTER$INIT.COM, *(S) Sys Mgr Tuning*, 20–14
for starting object, *(S) DECnet Mgmt*, 8–39
for system management (overview), *(S) Sys Mgr Essentials*, 2–5
for system startup, *(S) Sys Mgr Essentials*, 2–11
FORTUSER.COM, *(G) User*, C–19
GETPARMS.COM, *(G) User*, C–13
handling label errors, *(G) User*, 15–30
identification, *(S) DECnet Mgmt*, 3–61
IF command, *(G) User*, 15–10
including command lines, *(G) User*, 15–3
including DCL commands, *(G) User*, 15–3
including literal characters, *(G) User*, 15–10
input, *(G) User*, 16–2
interrupting with Ctrl/Y, *(G) User*, 15–34
labels, *(G) User*, 15–4; *(G) DCL A-M*, DCLI–53, DCLI–232, DCLI–234
LISTER.COM, *(G) User*, C–23
log file as, *(P) Debugger*, 12–5
login, *(G) User*, 15–45
LOGIN.COM, *(G) User*, 18–14
MAILEDIT.COM, *(G) User*, C–17
nested
passing data to with parameters, *(G) User*, 16–5
NETCONFIG.COM, *(S) DECnet Intro*, 2–16, 3–10, 3–11, 3–15, 3–32, 3–37, 4–5
dialog, *(S) DECnet Mgmt*, 5–7
on cluster-accessible disks, *(S) VMScluster Sys*, 5–8
order of DCL commands, *(G) User*, 15–9
output, *(G) User*, 16–9
parameters for, *(G) DCL A-M*, DCLI–9; *(S) Sys Mgmt Util A-L*, 12–7
passing data to with parameters, *(G) User*, 16–3
passing parameters to, *(P) Debugger*, 12–2, CD–59
passing symbols to interactively, *(G) DCL A-M*, DCLI–278
personal login, *(G) User*, 15–45
in captive accounts, *(G) User*, 15–46
program stubs, *(G) User*, 15–10
prompting for user input in, *(G) User*, 16–6
recreating displays with, *(P) Debugger*, 11–22, CD–121
redefining SYS$INPUT for, *(G) User*, 16–5
REMINDER.COM, *(G) User*, C–5
replacing program stubs, *(G) User*, 15–19
restoring defaults, *(G) User*, 15–17
Command procedures (cont'd)
resuming execution of, *(G) DCL A-M*, DCLI–64
saving defaults, *(G) User*, 15–17
setting up storage media, *(S) Sys Mgr Essentials*, 8–46
disk volumes, *(S) Sys Mgr Essentials*, 8–46
tape volumes, *(S) Sys Mgr Essentials*, 8–46
specifying in batch job, *(G) User*, 18–12
STARTNET.COM, *(S) Security*, 12–16
steps for writing, *(G) User*, 15–7
STOP command, *(G) User*, 15–14
stopping and returning to command level 0, *(G) DCL N-Z*, DCLII–389
submitting as batch jobs, *(G) DCL N-Z*, DCLII–410
SYLOGIN.COM, *(G) User*, 18–10
SYS.COM, *(G) User*, C–11
terminating, *(G) DCL A-M*, DCLI–227
testing, *(G) User*, 15–14
testing a spooled printer, *(S) Sys Mgr Essentials*, 7–16
testing conditionals, *(G) User*, 15–9
testing expressions, *(G) DCL A-M*, DCLI–250
THEN command, *(G) User*, 15–10
to configure a DECnet network node, *(S) Sys Mgr Tuning*, 21–11
to install software products
See VMSINSTAL.COM command procedure
to run AUTOGEN regularly, *(S) Sys Mgr Tuning*, 14–22
to specify default state of operator log files, *(S) Sys Mgr Tuning*, 18–23
transferring control within, *(G) DCL A-M*, DCLI–53, DCLI–232, DCLI–234
types, *(G) User*, 15–1
using over the network, *(S) DECnet Intro*, 2–12
using variables, *(G) User*, 17–12
VVIEF$INSTAL.COM procedure, *(S) Sys Mgr Tuning*, 26–5
writing, *(G) User*, 15–7
Command prompting
See Prompts
/COMMAND qualifier, *(P) Debugger*, 5–9, 12–6, CD–62, CD–142
Command qualifiers, *(S) DECamds*, 2–1
Commands
See also DCL commands
abbreviating, *(G) User*, 3–7
abbreviating in command procedures, *(G) User*, 3–7
binding to keys, customizing, *(P) Debugger*, 3–37
canceling, *(G) User*, 3–5
date formats, *(G) User*, 3–11
entering in Mail, *(G) User*, 6–2
executing on multiple nodes, *(S) Sys Mgr Essentials*, 2–18

Commands (cont'd)
executing on remote nodes, *(S) Sys Mgr Essentials*, 2–12
executing with SYSMAN DO command, *(S) Sys Mgr Essentials*, 2–18
for Analyze/RMS_File utility, *(P) File Appl*, 10–11
for the Edit/FDL utility, *(P) File Appl*, 4–3
recalling, *(S) Sys Mgmt Util A-L*, 13–23
SDA, *(P) VAX SDA*, SDA–15 to SDA–19
time formats, *(G) User*, 3–11
Command strings, *(P) CDU, LBR, & MU*, CDU–3 to CDU–4
See also CLI routines
checking for presence of, *(P) Util Routines*, CLI–12
dispatching to action routine, *(P) Util Routines*, CLI–8
obtaining values, *(P) Util Routines*, CLI–9
parsing a DCL command string, *(P) Util Routines*, CLI–5
positional qualifiers, *(P) Util Routines*, CLI–13
processing with CLI routines, *(P) Util Routines*, CLI–1
prompting for input, *(P) Util Routines*, CLI–6
Command syntax
See Syntax
Command tables
adding commands to, *(P) CDU, LBR, & MU*, CDU–16, CDU–45
creating, *(P) CDU, LBR, & MU*, CDU–17
creating object modules for, *(P) CDU, LBR, & MU*, CDU–5
deleting commands from, *(P) CDU, LBR, & MU*, CDU–16, CDU–41
input files, *(P) CDU, LBR, & MU*, CDU–46
listing files, *(P) CDU, LBR, & MU*, CDU–42
object modules, *(P) CDU, LBR, & MU*, CDU–16, CDU–43
output files, *(P) CDU, LBR, & MU*, CDU–44
process, *(P) CDU, LBR, & MU*, CDU–4
system, *(P) CDU, LBR, & MU*, CDU–4
Command tables, using with CLI routines, *(P) Util Routines*, CLI–1, CLI–6
Command terminals, *(S) DECnet Mgmt*, 8–1
Command verbs
See DEFINE VERB statement
Command verification
using SET PREFIX, *(G) DCL N-Z*, DCLII–172
Command view, *(P) Debugger*, 1–9, 1–15
Comment delimiters, *(G) DCL A-M*, DCLI–160; *(P) RMS Ref*, A–5
/COMMENT qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–22
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–15
Comments
format, *(P) Debugger*, CD–4
in command procedures, *(G) User*, 15–5
in distribution lists, *(G) User*, 6–7
in FDL files, *(P) Rec Mgmt Util*, 6–1
in help files, *(P) CDU, LBR, & MU*, LIB–7
use of exclamation point (!), *(G) User*, 6–7
Common areas, *(P) Concepts*, 2–6
per-process, *(P) Concepts*, 2–6
Common blocks
aligning, *(P) Concepts*, 8–4
installing as a shared image, *(P) Concepts*, 17–6
interprocess, *(P) Concepts*, 17–6
modifying, *(P) Concepts*, 2–6
Common Data Dictionary
See CDD/Repository
Common-environment VMScluster systems
building startup procedures, *(S) VMScluster Sys*, 5–8
coordinating system files, *(S) VMScluster Sys*, 5–17
functions that must remain specific, *(S) VMScluster Sys*, 5–8
setting up, *(S) VMScluster Sys*, 5–2
Common event flag (CEF) wait state, *(S) Alpha Perform*, 9–4
Common event flag clusters, *(P) Concepts*, 14–18
as protected objects, *(S) Security*, 4–10
disassociating, *(P) Sys Svc I*, SYS1–236
events audited, *(S) Security*, 5–3
permanent, *(P) Concepts*, 14–20
privilege requirements, *(S) Security*, 5–3
reestablishing security profile, *(S) Security*, 5–3
security elements of, *(S) Security*, 5–2
system modifications of templates, *(S) Security*, 5–3
template profile, *(S) Security*, 5–3
temporary, *(P) Concepts*, 14–20
types of access, *(S) Security*, 5–2
Common files
coordinating for multiple boot servers, *(S) VMScluster Sys*, 5–18
coordinating for multiple system disks, *(S) VMScluster Sys*, 5–18
moving off system disk, *(S) VMScluster Sys*, 9–15
NET$PROXY.DAT, *(S) VMScluster Sys*, 5–13
NETNODE_REMOTE.DAT, *(S) VMScluster Sys*, 5–19
NETNODE_UPDATE.DAT, *(S) VMScluster Sys*, 5–19
NETOBJECT.DAT, *(S) VMScluster Sys*, 5–13
NETPROXY.DAT, *(S) VMScluster Sys*, 5–13, 5–17
QMAN$MASTER.DAT, *(S) VMScluster Sys*, 5–13

Common files (cont'd)
RIGHTSLIST.DAT, *(S) VMScluster Sys*, 5–13, B–3
SYSALF.DAT, *(S) VMScluster Sys*, 5–13
system, *(S) VMScluster Sys*, 5–17
SYSUAF.DAT, *(S) VMScluster Sys*, 5–14, 5–17, B–1
SYSUAFALF.DAT, *(S) VMScluster Sys*, 5–16
VMS$AUDIT_SERVER.DAT, *(S) VMScluster Sys*, 5–12
VMS$OBJECTS.DAT, *(S) VMScluster Sys*, 5–16
VMS$PASSWORD_DICTIONARY.DATA, *(S) VMScluster Sys*, 5–16
VMS$PASSWORD_HISTORY.DAT, *(S) VMScluster Sys*, 5–16
VMS$PASSWORD_POLICY.EXE, *(S) VMScluster Sys*, 5–17
VMSMAIL_PROFILE.DATA, *(S) VMScluster Sys*, 5–16
Common language environment, *(P) Environment*, 7–1
Common Object Request Broker Architecture
See CORBA
Common source files, *(P) Modular Proc*, 3–6, A–4
declarations, *(P) Modular Proc*, 3–6
Common system disks
directory structure, *(S) VMScluster Sys*, 5–4
Communicating
with operators, *(S) Sys Mgr Essentials*, 8–18
with users, *(S) Sys Mgr Essentials*, 8–18
creating systemwide announcements, *(S) Sys Mgr Essentials*, 5–14
Communication mechanisms, *(S) VMScluster Sys*, 1–4
Communications
analyzing options, *(S) Dependable*, 3–5 to 3–7
building block, *(S) Dependable*, 1–15 to 1–16
channel-formation problems, *(S) VMScluster Sys*, F–17
controller device, *(S) DECnet Intro*, 3–4
dependability characteristics, *(S) Dependable*, 7–1 to 7–12, 7–15 to 7–19
hardware, *(S) DECnet Intro*, 3–4
PEDRIVER, *(S) VMScluster Sys*, F–4
port, *(S) DECnet Intro*, 3–4
retransmission problems, *(S) VMScluster Sys*, F–18
SCS interprocessor, *(S) VMScluster Sys*, 1–4
system network considerations, *(S) Dependable*, 3–7
task-to-task, *(S) DECnet Intro*, 2–12; *(S) DECnet Mgmt*, 1–2, 1–17, 8–1
troubleshooting NISCA, *(S) VMScluster Sys*, F–16
Communications buffer, *(S) DECamds*, 5–16
Communications devices
C2 system requirements, *(S) Security*, C–6
default security elements, *(S) Security*, 5–6
Communications line
definition, *(S) Sys Mgr Tuning*, 21–12
network
definition, *(S) Sys Mgr Tuning*, 21–4
Communications services
ATM, *(G) V7.0 New Feat*, D–5
DS3, *(G) V7.0 New Feat*, D–5
Compact disc drives
supported by UETP, *(S) Sys Mgr Tuning*, 17–7
Compact discs
See CD–ROMs
Compaction of data
See Data record compaction
Compare operations, *(S) Sys Mgmt Util A-L*, 7–23
with BACKUP, *(S) Sys Mgr Essentials*, 10–25
/COMPARE qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–23
Comparing
characters in records, *(G) DCL A-M*, DCLI–158
files, *(G) DCL A-M*, DCLI–158
Comparing two handles, *(P) DECthreads*, E–50
Compatibility mode handlers, *(P) Concepts*, 13–12
declaring, *(P) Sys Svc I*, SYS1–244
Compilers, *(G) SW Overview*, 4–5
alignment, *(P) Concepts*, 22–4
compiler generated type, *(P) Debugger*, 8–4
compiling for debugging, *(P) Debugger*, 5–5, 9–2
/DEBUG qualifier, *(P) Debugger*, 5–5, 9–2, 10–1
generating nonreentrant code, *(P) DECthreads*, 4–1
generating reentrant code, *(P) DECthreads*, 4–1
IDL, *(G) SW Overview*, 6–14
/LIST qualifier, *(P) Debugger*, 10–1
/NOOPTIMIZE qualifier, *(P) Debugger*, 5–5, 13–1
COMPILE_FILE.COM command procedure, *(G) User*, C–31
sample execution, *(G) User*, C–34
Compiling for OpenVMS images, *(P) DECthreads*, B–2
Completion routines
conditions for AST execution, *(P) RMS Ref*, A–10
service macro arguments, *(P) RMS Ref*, A–10
Completion status
showing for batch and print jobs, *(S) Sys Mgr Essentials*, 13–26
Completion status code field, *(P) File Appl*, 5–12
as alternative to use of R0, *(P) RMS Ref*, 2–4
for signaling errors, *(P) RMS Ref*, 2–6
use with debugger, *(P) RMS Ref*, 2–8

Completion status codes
description, *(P) RMS Ref*, 2–5
errors for inaccessible control block condition, *(P) RMS Ref*, 2–6
handling, *(P) RMS Ref*, A–11
listing conditions when not returned, *(P) RMS Ref*, 2–7
severity codes, *(P) RMS Ref*, 2–5
testing, *(P) RMS Ref*, 2–5
Completion status value field
as alternative to use of R0, *(P) RMS Ref*, 2–4
for signaling errors, *(P) RMS Ref*, 2–6
use with debugger, *(P) RMS Ref*, 2–8
Complex instruction set computers
See Architectures
Complex numbers, *(P) MTH$*, 1–3, MTH–56, MTH–58, MTH–111, MTH–121
absolute value of, *(P) MTH$*, MTH–23
complex exponential of, *(P) MTH$*, MTH–30, MTH–32
conjugate of, *(P) MTH$*, MTH–43, MTH–44
cosine of, *(P) MTH$*, MTH–26, MTH–28
division of, *(P) OTS$*, OTS–39
made from floating-point, *(P) MTH$*, MTH–39, MTH–41
multiplication of, *(P) OTS$*, OTS–52
natural logarithm of, *(P) MTH$*, MTH–34, MTH–36
sine of, *(P) MTH$*, MTH–52, MTH–53
complex_number data type, *(P) Interfaces*, B–3
Component failures, *(S) Dependable*, 9–10
Component names
plural forms, *(S) DECnet Mgmt*, 3–74
using wildcards with, *(S) DECnet Mgmt Util*, 1–3
Components, *(S) DECnet Mgmt*, 3–1
in network configuration database, *(S) DECnet Intro*, 3–33
of item lists, *(P) Interfaces*, B–11
Composed input
See also Key tables
terminating, *(P) Concepts*, 7–28
Composition operations, *(P) SMG$*, 2–1
Compound document architecture
See CDA
Compound documents, *(P) File Appl*, 4–19
Comprehensive training, *(S) Dependable*, 5–6
Compressed data section, *(P) Alpha SDA*, SDA–58
Compression, *(P) Rec Mgmt Util*, 4–5, 4–27
negative values, *(P) Rec Mgmt Util*, 4–4
of data record, *(P) Rec Mgmt Util*, 4–26
within data record, *(P) Rec Mgmt Util*, 4–4
within primary key, *(P) Rec Mgmt Util*, 4–4, 4–26
Compression text descriptors, *(P) Calling Std*, 5–33
Compute-bound processes, *(S) Alpha Perform*, 17–8
controlling growth, *(S) VAX Perform*, 5–9; *(S) Alpha Perform*, 17–8
curtailing, *(S) VAX Perform*, 5–9
suspending, *(S) VAX Perform*, 5–9
Computed calls, *(P) Calling Std*, 3–41
Compute queue, *(S) Alpha Perform*, 9–1
measure of CPU responsiveness, *(S) VAX Perform*, 3–9
optimal length, *(S) Alpha Perform*, 9–2
Computer-aided software engineering
See CASE, COHESION, and DECset
Computer interconnect
See CI
Computing components
managing resources, *(S) Dependable*, 9–1
options of dependable system building blocks, *(S) Dependable*, 3–1
Computing styles, *(G) SW Overview*, 1–3
Concatenating files, *(G) DCL A-M*, DCLI–36, DCLI–79
Concatenating input files, *(P) Rec Mgmt Util*, 2–5
Concealed logical names, *(P) File Appl*, 5–7
Concealed rooted-directory logical names, *(P) Debugger*, CD–208
Concepts of dependability, *(S) Dependable*, 1–8
Conditionals
definition, *(G) User*, 15–7
determining in command procedures, *(G) User*, 15–8
testing in command procedures, *(G) User*, 15–9
Conditional store commands
Alpha object language, *(P) Linker*, B–35, B–40
Condition codes
chaining, *(P) Concepts*, 13–53
definition, *(G) User*, 15–41; *(G) Help Msg*, 1–3
displaying, *(G) User*, 15–41
severity levels of, *(G) User*, 15–43
signaling, *(P) Concepts*, 13–32
SS$_EXQUOTA, *(P) Concepts*, 13–21
SS$_NOPRIV, *(P) Concepts*, 13–21
with EXIT command, *(G) User*, 15–42
Condition handlers, *(P) Interfaces*, 1–11; *(P) Calling Std*, 6–6; *(P) Debugger*, 13–22
argument list, *(P) Concepts*, 13–27
arithmetic, *(P) Concepts*, 13–17
call frame, *(P) Concepts*, 13–24
catchall, *(P) Concepts*, 13–25, 13–43
condition code, *(P) Concepts*, 13–65
continuing execution of, *(P) Concepts*, 13–64
coordinating with establisher, *(P) Calling Std*, 6–20
debugging, *(P) Concepts*, 13–70; *(P) Debugger*, 13–19

Condition handlers (cont'd)
declaring, *(P) DECthreads*, B–4
default, *(P) Concepts*, 13–42; *(P) Calling Std*, 6–20
definition, *(P) Calling Std*, 1–4
deleting, *(P) Calling Std*, 6–8
establishing, *(P) Concepts*, 13–5; *(P) Calling Std*, 6–8
example, *(P) Concepts*, 13–69
exceptions, *(P) Calling Std*, 6–6
exit, *(P) Interfaces*, B–7
exiting, *(P) Concepts*, 13–66
last-chance, *(P) Concepts*, 13–43
last-chance exception vector, *(P) Concepts*, 13–25
mechanism argument vectors, *(P) Concepts*, 13–35
memory use, *(P) Calling Std*, 6–20
multiple active signals, *(P) Calling Std*, 6–28
operations, *(P) Calling Std*, 6–7
options, *(P) Calling Std*, 6–7
parameters and invocation, *(P) Calling Std*, 6–12
primary exception vector, *(P) Concepts*, 13–24
properties, *(P) Calling Std*, 6–12
register values, *(P) Calling Std*, 6–24
reinvokable, *(P) Calling Std*, 6–28
request to unwind, *(P) Calling Std*, 6–23
resignaling, *(P) Concepts*, 13–64
returning from, *(P) Calling Std*, 6–22
search, *(P) Calling Std*, 6–11
searching for, *(P) Concepts*, 13–24
secondary exception vectors, *(P) Concepts*, 13–24
signal argument array, *(P) Concepts*, 13–32
software supplied, *(P) Concepts*, 13–42
specifying, *(P) Concepts*, 13–4
stack usage, *(P) Calling Std*, 6–7
traceback, *(P) Concepts*, 13–25, 13–42
types, *(P) Concepts*, 13–41
types of action, *(P) Concepts*, 13–45
unwinding, *(P) Concepts*, 13–64
use of, *(P) Concepts*, 13–27
user-supplied, *(P) Concepts*, 13–42
writing, *(P) Concepts*, 13–63
Condition handling, *(P) Concepts*, 13–3; *(P) MTH$*, 1–3
See also Exceptions, Exception conditions, and Message utility
alignment fault reporting, *(P) Concepts*, 13–15
arithmetic exceptions, *(P) Concepts*, 13–13
at AST level, *(P) Modular Proc*, 3–21
continuing, *(P) Concepts*, 13–45
displaying messages, *(P) Concepts*, 13–49
GOTO unwind, *(P) Concepts*, 13–45
hardware exception conditions, *(P) Concepts*, 13–12
logging error messages, *(P) Concepts*, 13–6
Condition handling (cont'd)
logging error messages to a file, *(P) Concepts*, 13–55
mechanism argument vectors, *(P) Concepts*, 13–35, 13–37
mechanism array format, *(P) Concepts*, 13–37
procedure exceptions, *(P) Calling Std*, 6–1
resignaling, *(P) Concepts*, 13–45, 13–67
return status, *(P) Concepts*, 13–21
run-time library support routines, *(P) Concepts*, 13–18
signal argument vectors, *(P) Concepts*, 13–32
signaling a condition, *(P) Concepts*, 13–45
stack traceback, *(P) Concepts*, 13–6
stack unwind, *(P) Concepts*, 13–6, 13–45
standards, *(P) Calling Std*, 6–1
system services, *(P) Environment*, 10–5, 10–7
unwinding, *(P) Concepts*, 13–67
user-defined messages, *(P) Concepts*, 13–6
VAX hardware exceptions, *(P) Concepts*, 13–12
vector processor, *(P) Calling Std*, 6–16
Condition Handling Facility (CHF), *(P) Concepts*, 13–41; *(P) Calling Std*, 6–6, 6–7
definition, *(P) Concepts*, 13–1
function, *(P) Concepts*, 13–4
Condition-handling routines
global symbols, *(P) Alpha SDA*, SDA–61; *(P) VAX SDA*, SDA–64
Conditions
for exception, *(P) Concepts*, 13–6
from called procedures, *(P) Calling Std*, 6–1
Condition values, *(P) Modular Proc*, 3–3; *(P) Concepts*, 13–19 to 13–20, 13–31; *(P) Interfaces*, 2–22, 4–7, B–6; *(P) LIB$*, LIB–349
See also Completion status codes
condition identification, *(P) Calling Std*, 6–3
control, *(P) Calling Std*, 6–3
definition, *(P) Concepts*, 13–63; *(P) Calling Std*, 1–4
description, *(P) Calling Std*, 6–1
evaluating, *(P) Alpha SDA*, SDA–45; *(P) VAX SDA*, SDA–53
examining, *(P) Alpha SDA*, SDA–48; *(P) VAX SDA*, SDA–55
facility, *(P) Calling Std*, 6–3
format, *(P) Calling Std*, 6–1
information provided by, *(P) Interfaces*, 4–8
interpreting severity codes, *(P) Calling Std*, 6–4
message number, *(P) Calling Std*, 6–3
registers use, *(P) Calling Std*, 2–1
returned, *(P) Interfaces*, 1–12
in I/O status block, *(P) Interfaces*, 1–12
in mailbox, *(P) Interfaces*, 1–12
in R0, *(P) Interfaces*, 1–4
signaled in register, *(P) Interfaces*, 1–6, 1–12
RTL symbols, *(P) Interfaces*, 3–6

Condition values (cont'd)
severity, *(P) Concepts*, 13–19
severity codes, *(P) Calling Std*, 6–3
signaled, *(P) Interfaces*, 1–6, 1–12
symbolic codes, *(P) Interfaces*, 4–8
symbols, *(P) Calling Std*, 6–3
testing, *(P) Interfaces*, 4–8, 4–9
use, *(P) Calling Std*, 6–5
Condition Values Returned heading, *(P) Interfaces*, 1–11
Condition variable, *(P) DECthreads*, 2–9
comparing to mutex, *(P) DECthreads*, 3–7
creating, *(P) DECthreads*, pthread–41, tis–6, E–37, G–34
definition of, *(P) DECthreads*, pthread–41, tis–6, G–34
deleting, *(P) DECthreads*, pthread–39, tis–4, E–39, G–33
signaling, *(P) DECthreads*, 3–9
waiting for, *(P) DECthreads*, pthread–49, tis–9, E–44, G–43
waiting for a specified time, *(P) DECthreads*, pthread–47, E–42, G–41
Condition variable attributes, *(P) DECthreads*, 2–6
Condition variable attributes object
creating, *(P) DECthreads*, G–30
deleting, *(P) DECthreads*, pthread–51, G–31
initializing, *(P) DECthreads*, pthread–52
Condition variables
thread-safe, *(P) DECthreads*, 4–2
/CONDITION_VALUE qualifier, *(P) Debugger*, CD–98, CD–104; *(P) Alpha SDA*, SDA–45; *(P) VAX SDA*, SDA–53
cond_value data type, *(P) Interfaces*, B–6
Configuration databases, *(S) DECnet Intro*, 4–11; *(S) DECnet Mgmt*, 2–1, 3–1, 5–20
building manually using NCP, *(S) Sys Mgr Tuning*, 21–11
changing location of file, *(S) Sys Mgr Tuning*, 21–10
circuit entry, *(S) DECnet Mgmt*, 2–7
contents of, *(S) Sys Mgr Tuning*, 21–10
DECnet, *(S) DECnet Intro*, 2–16, 3–10, 3–34; *(S) DECnet Mgmt*, 1–14, 3–1
for local node, *(S) DECnet Intro*, 2–16
line entry, *(S) DECnet Mgmt*, 2–11
logging entry, *(S) DECnet Mgmt*, 2–28
modifying using NCP, *(S) Sys Mgr Tuning*, 21–11
node entry, *(S) DECnet Mgmt*, 2–1, 3–5
permanent, *(S) DECnet Intro*, 3–32
permanent database, *(S) Sys Mgr Tuning*, 21–11
stored in SYS$SYSTEM:NETNODE_REMOTE.DAT file, *(S) Sys Mgr Tuning*, 21–10
tailoring with NCP, *(S) DECnet Intro*, 3–32
Configuration databases (cont'd)
volatile, *(S) DECnet Intro*, 3–32
volatile database, *(S) Sys Mgr Tuning*, 21–11
Configurations, *(S) Dependable*, 4–4 to 4–6
building SCSI VMScluster systems with DWZZA converters, *(G) V7.0 New Feat*, C–11
building with add on SCSI adapters, *(G) V7.0 New Feat*, C–9
building with an HSZ40 controller, *(G) V7.0 New Feat*, C–12
building with BA350/BA353 StorageWorks enclosures, *(G) V7.0 New Feat*, C–9
building with internal SCSI adapters, *(G) V7.0 New Feat*, C–18
changing from CI or DSSI to a mixed-interconnect, *(S) VMScluster Sys*, 8–23
changing from local area to mixed-interconnect, *(S) VMScluster Sys*, 8–23
cross-architecture booting, *(S) VMScluster Sys*, 10–5
DECnet, *(S) VMScluster Sys*, 4–8
displaying LAN, *(S) Sys Mgr Tuning*, 22–9
DSSI, *(S) VMScluster Sys*, 3–3
FDDI, *(S) VMScluster Sys*, 3–10
FDDI network, *(S) VMScluster Sys*, 3–11
for software product options, *(S) Sys Mgr Essentials*, 3–22
guidelines for growing your VMScluster, *(S) VMScluster Sys*, 9–1
guidelines for system, *(S) DECnet Mgmt*, 5–31 to 5–35
hardware, *(G) SW Overview*, 1–7
installing SCSI VMScluster systems, *(G) V7.0 New Feat*, C–19
LAN, *(S) Sys Mgr Tuning*, 22–1
LAN firmware updates, *(S) Sys Mgr Tuning*, 22–14
LAN segments in a VMScluster, *(S) Dependable*, 7–6 to 7–7
mixed-interconnect, *(S) VMScluster Sys*, 3–13
multiple adapters in VMSclusters, *(S) Dependable*, 7–5
multiple CI adapters, *(S) VMScluster Sys*, 3–3
multiple DSSI adapters, *(S) VMScluster Sys*, 3–5
multiple-host SCSI access on VMScluster system, *(G) V7.0 New Feat*, C–3
multiple LAN adapters, *(S) VMScluster Sys*, 3–15, 3–17
network
DECnet support, *(S) Sys Mgr Tuning*, 21–6
local area LAN, *(S) Sys Mgr Tuning*, 21–6
multiple-area, *(S) Sys Mgr Tuning*, 21–6
single-area, *(S) Sys Mgr Tuning*, 21–6
of shadow sets, *(S) VMScluster Sys*, 6–23
queue

Configurations
queue (cont'd)
sample batch queuing system, *(S) Sys Mgr Essentials*, 13–4 to 13–7
sample print queuing system, *(S) Sys Mgr Essentials*, 13–8 to 13–14
recording data, *(S) VMScluster Sys*, 10–4
SCSI concepts, *(G) V7.0 New Feat*, C–6
SCSI hardware, *(G) V7.0 New Feat*, C–9
SCSI interconnect requirements, *(G) V7.0 New Feat*, C–4
SCSI VMScluster systems, *(G) V7.0 New Feat*, C–1
shadow set
effect on availability, *(S) Dependable*, 8–19
examples, *(S) Dependable*, 8–23
high-availability local area VAXcluster, *(S) Dependable*, 8–23
VAXcluster with multiple HSCs and star couplers, *(S) Dependable*, 8–25
single-ended and differential SCSI signaling, *(G) V7.0 New Feat*, C–7
single-host SCSI access on VMScluster system, *(G) V7.0 New Feat*, C–2
software integration, *(S) Dependable*, 8–31
standalone, *(G) SW Overview*, 1–7
three LAN segments in a VMScluster, *(S) VMScluster Sys*, 3–19
troubleshooting SCSI VMScluster systems, *(G) V7.0 New Feat*, C–33
two LAN segments, *(S) VMScluster Sys*, 3–18
types, *(S) VMScluster Sys*, 3–1
unique SCSI device IDs, *(G) V7.0 New Feat*, C–6
using CLUSTER_CONFIG for SCSI VMScluster systems, *(G) V7.0 New Feat*, C–26
VAXcluster, *(G) SW Overview*, 1–7
VMScluster, *(G) SW Overview*, 1–7
WANs, *(G) V7.0 New Feat*, D–2
with multiple LAN adapters and multiple LAN segments, *(S) VMScluster Sys*, 3–17
CONFIGURATION SET CLUSTER_ AUTHORIZATION command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–15
CONFIGURATION SET command
in SYSMAN, *(S) Sys Mgr Tuning*, 20–16
CONFIGURATION SET TIME command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–16
CONFIGURATION SHOW CLUSTER_ AUTHORIZATION command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–17
CONFIGURATION SHOW command
in SYSMAN, *(S) Sys Mgr Tuning*, 20–16
CONFIGURATION SHOW TIME command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–18
Configurator module
disabling surveillance, *(S) DECnet Mgmt*, 3–35
enabling surveillance, *(S) DECnet Mgmt*, 3–34
Configurator module (cont'd)
Ethernet, *(S) DECnet Intro*, 4–6; *(S) DECnet Mgmt*, 1–17, 2–11, 3–34
NICONFIG, *(S) DECnet Mgmt*, 1–12
CONFIGURE command
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–7
CONFIGURE phase of system startup, *(S) Sys Mgr Essentials*, 5–4, 5–18, 7–8
definition, *(S) Sys Mgr Essentials*, 7–6
CONFIGURE process
starting, *(S) Sys Mgr Essentials*, 5–5
/CONFIGURE qualifier, *(S) DECamds*, 2–1
Configuring
a DDCMP dynamic asynchronous network, *(S) DECnet Mgmt*, 5–29
a DDCMP multipoint network, *(S) DECnet Mgmt*, 5–25
a DDCMP point-to-point network, *(S) DECnet Mgmt*, 5–23
a DDCMP static asynchronous network, *(S) DECnet Mgmt*, 5–27
a DECnet node, *(S) DECnet Mgmt*, 1–14
a multiple-area network, *(S) DECnet Mgmt*, 1–2
an Ethernet network, *(S) DECnet Mgmt*, 5–20
an FDDI network, *(S) DECnet Mgmt*, 5–21
a single-area network, *(S) DECnet Mgmt*, 1–2
automatic network, *(S) DECnet Intro*, 2–16, 3–10, 3–11
a VMScluster environment
Refer to the *Guidelines for VMScluster Configurations*
changes for network, *(S) DECnet Intro*, 4–2
CI, *(S) DECnet Mgmt*, 1–3
command procedure NETCONFIG.COM, *(S) DECnet Intro*, 2–16
DECnet nodes, *(S) DECnet Intro*, 2–16, 3–8, 3–10
end nodes, *(S) DECnet Mgmt*, 2–18
Ethernet, *(S) DECnet Mgmt*, 1–4
FDDI, *(S) DECnet Mgmt*, 1–3, 1–6
introduction to NETCONFIG.COM, *(S) DECnet Mgmt*, 1–14
introduction to NETCONFIG_UPDATE.COM, *(S) DECnet Mgmt*, 1–14
LAN (local area network), *(S) DECnet Mgmt*, 1–3
manual network, *(S) DECnet Intro*, 3–11
multipoint, *(S) DECnet Mgmt*, 1–3, 1–8
network, *(S) DECnet Mgmt*, 1–3, 5–1
overview of procedures, *(S) DECnet Mgmt*, 5–3
point-to-point, *(S) DECnet Mgmt*, 1–3, 1–8
prerequisites, *(S) DECnet Mgmt*, 5–1
procedure examples, *(S) DECnet Mgmt*, 5–19 to 5–35
procedure for automatic, *(S) DECnet Mgmt*, 5–5 to 5–11
required privileges, *(S) DECnet Mgmt*, 5–1

Configuring (cont'd)
routing considerations, *(S) DECnet Mgmt*, 2–15
sample Phase IV DECnet, *(S) DECnet Mgmt*, 1–4
typical VMScluster, *(S) DECnet Mgmt*, 1–10
using NETCONFIG.COM, *(S) DECnet Mgmt*, 5–5 to 5–11
Configuring DECnet, *(S) Sys Mgr Tuning*, 21–7
Configuring devices
HSC
in system startup, *(S) Sys Mgr Essentials*, 7–6
in system startup, *(S) Sys Mgr Essentials*, 7–6
/CONFIRM qualifier
in Analyze/Disk_Structure utility, *(S) Sys Mgmt Util A-L*, 3–7
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–24
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–16
Congestion control
in PEDRIVER, *(S) VMScluster Sys*, G–1
retransmissions, *(S) VMScluster Sys*, G–1
CONINTERR.EXE driver, *(S) Sys Mgr Essentials*, 7–7
Conjugate of complex number, *(P) MTH$*, MTH–43, MTH–44
CONNECT/ADAPTER command
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–9
CONNECT command, *(G) DCL A-M*, DCLI–61 to DCLI–63; *(P) Debugger*, 14–4, 14–14, CD–43; *(P) I/O User*, 5–18
/CONTINUE qualifier, *(G) User*, 18–8
in SYSGEN (VAX), *(S) Sys Mgr Essentials*, 7–7
for connecting the console device, *(S) Sys Mgr Essentials*, 7–7
in system startup, *(S) Sys Mgr Essentials*, 5–7
CONNECT command, not for subprocess of process under debugger control, *(P) Debugger*, CD–45
Connecting devices, *(S) Sys Mgmt Util M-Z*, 5–5, 5–9
automatically, *(S) Sys Mgr Essentials*, 7–6, 7–7
in system startup, *(S) Sys Mgr Essentials*, 5–4
manually, *(S) Sys Mgr Essentials*, 7–7, 7–8
in system startup, *(S) Sys Mgr Essentials*, 5–7
on VAX, *(S) Sys Mgr Essentials*, 7–7
network communications device, *(S) Sys Mgr Essentials*, 7–7, 7–8
on Alpha systems, *(S) Sys Mgmt Util M-Z*, 6–34
virtual terminals, *(S) Sys Mgr Essentials*, 7–11
Connection descriptor table entries, *(S) VMScluster Sys*, 9–18
Connection manager, *(S) VMScluster Sys*, 1–4
displaying SDA information, *(P) Alpha SDA*, SDA–80; *(P) VAX SDA*, SDA–86
overview, *(S) VMScluster Sys*, 2–5
Connection manager (cont'd)
state transitions, *(S) VMScluster Sys*, 2–10
/CONNECTION qualifier, *(P) Alpha SDA*, SDA–144; *(P) VAX SDA*, SDA–166
Connections
asynchronous, *(S) DECnet Intro*, 3–4
asynchronous DDCMP, *(S) DECnet Intro*, 3–9
auditing, *(S) Security*, 9–7
CI, *(S) DECnet Intro*, 3–9
count of requests for, *(S) DECnet Intro*, 4–3
displaying SDA information, *(P) Alpha SDA*, SDA–84, SDA–124, SDA–144
displaying SDA information about, *(P) VAX SDA*, SDA–91, SDA–141, SDA–166
endpoints, *(S) TCP/IP*, 2–5
in LAT environment, *(S) Sys Mgmt Util A-L*, 13–32, 13–57
LAN (local area network), *(S) DECnet Intro*, 3–9
multipoint, *(S) DECnet Intro*, 1–12
of communications hardware, *(S) DECnet Intro*, 3–4
point-to-point, *(S) DECnet Intro*, 1–12
remote, *(S) TCP/IP*, 3–2
specifying type with LATCP, *(S) Sys Mgmt Util A-L*, 13–27
synchronous, *(S) DECnet Intro*, 3–4
synchronous DDCMP, *(S) DECnet Intro*, 3–9
TELNET, *(S) TCP/IP*, 3–2
verification of network, *(S) DECnet Intro*, 3–29, 3–31
CONNECTIONS class
adding or restoring, *(S) Sys Mgmt Util M-Z*, 4–14
fields belonging to, *(S) Sys Mgmt Util M-Z*, 4–21
removing, *(S) Sys Mgmt Util M-Z*, 4–42
Connectivity, *(S) TCP/IP*, 1–7
CONNECT NODE command, *(S) DECnet Mgmt*, 4–19; *(S) DECnet Mgmt Util*, 3–34
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–10
Connect service, *(P) RMS Ref*, RMS–6, A–15; *(P) File Appl*, 8–5
asynchronous operations and, *(P) File Appl*, 8–19
comparing positioning for various file organizations, *(P) RMS Ref*, RMS–7
condition values, *(P) RMS Ref*, RMS–9
connecting record stream, *(P) RMS Ref*, 3–5
control block input fields, *(P) RMS Ref*, RMS–7
control block output fields, *(P) RMS Ref*, RMS–8
effect on next-record position, *(P) File Appl*, 8–17
program example, *(P) RMS Ref*, A–23
use with multiple keys, *(P) RMS Ref*, A–23

CONNECT VIA command, *(S) DECnet Mgmt*, 4–19; *(S) DECnet Mgmt Util*, 3–35
CONSCOPY.COM command procedure, *(S) Sys Mgr Essentials*, 5–49
Consistency
  ensuring during failures, *(S) Dependable*, 8–22
Console disks
  See RX01 console disk
Console report during UETP, *(S) Sys Mgr Tuning*, 17–15
Consoles
  connecting to host node, *(S) DECnet Mgmt Util*, 3–34
  connecting to host node on a specified circuit, *(S) DECnet Mgmt Util*, 3–35
  connection, *(S) DECnet Intro*, 2–16
Console storage device
  connecting (VAX), *(S) Sys Mgr Essentials*, 7–7
  copying, *(S) Sys Mgr Essentials*, 5–49
  use in booting, *(S) Sys Mgr Essentials*, 4–2
Console terminals, *(S) Sys Mgr Essentials*, 2–21, 2–23; *(P) I/O User*, 5–1
  C2 system requirements, *(S) Security*, C–6
  C2 systems and, *(S) Security*, C–10
  HSC and C2 system requirements, *(S) Security*, C–6
  message
    indicating lack of installed page file, *(S) Sys Mgr Essentials*, 5–6
    indicating site-independent startup, *(S) Sys Mgr Essentials*, 4–5
    indicating site-specific startup, *(S) Sys Mgr Essentials*, 4–5
    login welcome, *(S) Sys Mgr Essentials*, 2–10
Constraints
  putting into perspective, *(S) Dependable*, 4–3
  to achieve dependability, *(S) Dependable*, 4–1
Construction phase
  applying dependability strategies, *(S) Dependable*, 1–16
  building dependable systems, *(S) Dependable*, 1–12
Consulting
  See Digital consulting
Container files, *(S) Sys Mgr Essentials*, 3–20
Contents-of operator, *(P) Debugger*, 8–6, 8–19, B–8
Contents of stored machine check frames
  displaying in SDA, *(P) Alpha SDA*, SDA–110
Context
  generating key value for, *(P) DECthreads*, pthread–74, tis–12, E–52, G–57
  obtaining, *(P) DECthreads*, pthread–71, tis–11, E–54, G–54
  per-thread, *(P) DECthreads*, 2–13
Context (cont'd)
  SDA CPU, *(P) Alpha SDA*, SDA–10; *(P) VAX SDA*, SDA–14
  SDA process, *(P) Alpha SDA*, SDA–10; *(P) VAX SDA*, SDA–12
  setting, *(P) DECthreads*, pthread–109, tis–35, E–55, G–81
  uses, *(P) DECthreads*, pthread–74
  uses for, *(P) DECthreads*, tis–12, E–52, G–57
CONTEXT attribute, *(P) Rec Mgmt Util*, 4–9, 4–18
context data type, *(P) Interfaces*, B–6
Context switching
  definition, *(S) Alpha Perform*, 6–1
Context variables, with DCX routines, *(P) Util Routines*, DCX–17
Contiguity, *(P) File Appl*, 10–27
  FAB and XAB fields, *(P) File Appl*, 3–8
CONTIGUOUS attribute, *(P) Rec Mgmt Util*, 4–7, 4–18; *(P) File Appl*, 3–24, 4–34
Contiguous-best-try option, *(P) File Appl*, 4–34
  See also FAB$V_CBT option
Contiguous-best-try request, *(P) File Appl*, 3–8
Contiguous option, *(P) File Appl*, 4–34
  See also FAB$V_CTG option
/CONTIGUOUS qualifier, *(P) Linker*, LINK–7
Contiguous request, *(P) File Appl*, 3–8
CONTIN.SYS file, *(P) File Appl*, 1–8
Contingency planning
  service from Digital, *(S) Dependable*, 10–3
Continuation character (-)
  use in RMS coding, *(P) RMS Ref*, A–5
Continuation files, *(P) File Appl*, 1–8
  CONTIN.SYS, *(S) Sys Mgr Tuning*, A–9
  reserved file, *(S) Sys Mgr Tuning*, A–9
  used as extension file identifier, *(S) Sys Mgr Tuning*, A–9
Continuation volumes
  in volume set, *(S) Sys Mgr Essentials*, 8–40
  mounting in tape volume sets, *(S) Sys Mgr Essentials*, 8–38
CONTINUE command, *(G) User*, 18–4; *(G) DCL A-M*, DCLI–64
  in conversational boot, *(S) Sys Mgr Essentials*, 4–6
Continuous improvement process
  for dependability, *(S) Dependable*, 2–1 to 2–3
Continuous processing
  multiple system kernels, *(S) Dependable*, 4–5
/CONTINUOUS qualifier, *(S) Sys Mgmt Util M-Z*, 4–7
Control
  regions
    examining, *(P) Alpha SDA*, SDA–49
Control access
  acquiring, *(S) Security*, 4–11, 4–25, 4–28
  common event flag clusters, *(S) Security*, 5–3
  devices, *(S) Security*, 5–4

Control access (cont'd)
files, *(S) Security*, 5–8
for disk directory files, *(S) Sys Mgr Essentials*, 9–11
for disk files, *(S) Sys Mgr Essentials*, 9–6
global sections, *(S) Security*, 5–14
limitations, *(S) Security*, 4–29
logical name tables, *(S) Security*, 5–16
queues, *(S) Security*, 5–17
resource domains, *(S) Security*, 5–19
security class, *(S) Security*, 5–20
volumes, *(S) Security*, 5–21
Control actions
inhibiting, *(P) Concepts*, 7–41
Control and Status Register
See CSR
Control block options
specifying by symbolic bit offset, *(P) RMS Ref*, 2–3
Control blocks
See also Data structures and RMS
dual purpose, *(P) RMS Ref*, 1–5
field naming conventions, *(P) RMS Ref*, 2–2
for extended attributes, *(P) RMS Ref*, 1–6
for file name operations, *(P) RMS Ref*, 1–6
for file services, *(P) RMS Ref*, 1–3
formatting, *(P) Alpha SDA*, SDA–53; *(P) VAX SDA*, SDA–60
for record services, *(P) RMS Ref*, 1–5
macro names, *(P) RMS Ref*, A–2
network, *(S) DECnet Intro*, 2–16
requirements for valid default values, *(P) RMS Ref*, 1–5
symbolic bit offset, *(P) RMS Ref*, 2–3
symbolic constant (keyword) value, *(P) RMS Ref*, 2–3
symbolic naming exceptions, *(P) RMS Ref*, 2–3
symbolic offsets, *(P) RMS Ref*, 2–2
types of macros, *(P) RMS Ref*, A–1
use restrictions, *(P) RMS Ref*, 2–1
use with OpenVMS languages, *(P) RMS Ref*, 2–1
Control block store macros
description, *(P) RMS Ref*, A–1
example, *(P) RMS Ref*, A–8
placement guidelines, *(P) RMS Ref*, A–7
requirement for number sign, *(P) RMS Ref*, A–8
use of R0, *(P) RMS Ref*, A–7
Control characters
ASCII values, *(G) User*, D–3
list, *(P) I/O User*, B–1
terminal, *(P) I/O User*, 5–4 to 5–7, 5–9
Control commands
Alpha object language, *(P) Linker*, B–34
VAX object language, *(P) Linker*, A–30
Control connection routines, *(P) I/O User*, C–1 to C–14
Control key sequences, *(P) I/O User*, 5–8
Controller designation field
default value, *(G) User*, 12–9
definition, *(G) User*, 12–10
Controller errors
recovery from, *(S) Dependable*, 8–22t
Controller loopback tests, *(S) DECnet Intro*, 4–9; *(S) DECnet Mgmt*, 7–6, 7–8
Controllers
dual-pathed devices, *(S) VMScluster Sys*, 6–3
dual-ported devices, *(S) VMScluster Sys*, 6–2
HSC storage subsystem, *(S) VMScluster Sys*, 1–3
HSD storage subsystem, *(S) VMScluster Sys*, 1–3
HSJ storage subsystem, *(S) VMScluster Sys*, 1–3
HSZ40 controllers, *(G) V7.0 New Feat*, C–12
HSZ storage subsystem, *(S) VMScluster Sys*, 1–3
Controlling
line traffic, *(S) DECnet Mgmt*, 3–41
logical link activity, *(S) DECnet Mgmt*, 2–24, 3–56
tributaries, *(S) DECnet Mgmt*, 3–31
Control region, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18
adding page to, *(P) Sys Svc I*, SYS1–345
deleting page from, *(P) Sys Svc I*, SYS1–265
examining, *(P) VAX SDA*, SDA–56
operator (H), *(P) VAX SDA*, SDA–16
page table
displaying, *(P) VAX SDA*, SDA–149
Control region operator (H), *(P) Alpha SDA*, SDA–13
Control stations, *(S) DECnet Mgmt*, 1–8, 2–8
CONTROL_C_INTERCEPTION package, *(P) Debugger*, 16–34
CONTROL_FIELD_SIZE attribute, *(P) Rec Mgmt Util*, 4–33, 4–34; *(P) File Appl*, 4–33
CONV$CONVERT routine, *(P) Util Routines*, CONV–6
CONV$PASS_FILES routine, *(P) Util Routines*, CONV–9
CONV$PASS_OPTIONS routine, *(P) Util Routines*, CONV–12
CONV$RECLAIM routine, *(P) Rec Mgmt Util*, 3–1; *(P) Util Routines*, CONV–16
Conventional computing, *(S) Dependable*, 1–1
Conventions, *(S) DECamds*, x
OpenVMS Alpha, *(P) Calling Std*, 3–1
OpenVMS VAX, *(P) Calling Std*, 2–1
Conversational boot
changing system parameters, *(S) Sys Mgr Essentials*, 4–6; *(S) Sys Mgr Tuning*, 14–36

Conversational boot (cont'd)
CONTINUE command, *(S) Sys Mgr Essentials*, 4–6
controlling, *(S) VMScluster Sys*, 8–10
location of computer-specific instructions, *(S) Sys Mgr Essentials*, 4–4
performing, *(S) Sys Mgr Essentials*, 4–3
SET command, *(S) Sys Mgr Essentials*, 4–6
SET/STARTUP command, *(S) Sys Mgr Essentials*, 4–12
SHOW command, *(S) Sys Mgr Essentials*, 4–6
showing system parameters, *(S) Sys Mgr Essentials*, 4–6; *(S) Sys Mgr Tuning*, 14–36
SHOW/STARTUP command, *(S) Sys Mgr Essentials*, 4–12
specifying an alternate startup command procedure, *(S) Sys Mgr Essentials*, 4–12
SYSBOOT prompt, *(S) Sys Mgr Essentials*, 4–3
tasks allowed in, *(S) Sys Mgr Essentials*, 4–3
USE command, *(S) Sys Mgr Essentials*, 4–7
uses of, *(S) Sys Mgr Essentials*, 4–3
with alternate system parameter file, *(S) Sys Mgr Essentials*, 4–7
with minimum startup, *(S) Sys Mgr Essentials*, 4–14
Conversations
over the network, *(S) DECnet Intro*, 2–11
Conversation text
in Phone, *(G) User*, 7–3
Conversions
binary text to unsigned integer, *(P) OTS$*, OTS–18
floating-point to character string, *(P) OTS$*, OTS–4
general
descriptor to descriptor, *(P) LIB$*, LIB–84
hexadecimal text to unsigned integer, *(P) OTS$*, OTS–36
integer to binary text, *(P) OTS$*, OTS–6
integer to FORTRAN L format, *(P) OTS$*, OTS–9
integer to hexadecimal, *(P) OTS$*, OTS–16
numeric text to floating-point, *(P) OTS$*, OTS–30, OTS–34
unsigned decimal to integer, *(P) OTS$*, OTS–27
unsigned octal to signed integer, *(P) OTS$*, OTS–25
Conversions, numeric text to binary, *(P) LIB$*, LIB–97 to LIB–99
CONVERT (Convert utility)
See Convert utility
CONVERT.COM command procedure, *(G) User*, C–1
sample execution, *(G) User*, C–5
CONVERT command, *(G) DCL A-M*, DCLI–65; *(P) RMS Ref*, A–20
/APPEND qualifier, *(P) Rec Mgmt Util*, 2–2
/CREATE qualifier, *(P) Rec Mgmt Util*, 2–6
CONVERT command (cont'd)
/EXCEPTIONS_FILE qualifier, *(P) Rec Mgmt Util*, 2–4, 2–7
/EXIT qualifier,' *(P) Rec Mgmt Util*, 2–7
/FAST_LOAD qualifier, *(P) Rec Mgmt Util*, 2–8
/FDL qualifier, *(P) Rec Mgmt Util*, 2–10
/FILL_BUCKETS qualifier, *(P) Rec Mgmt Util*, 2–10, 4–26, 4–27
/FIXED_CONTROL qualifier, *(P) Rec Mgmt Util*, 2–11
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–5
in network operations, *(S) DECnet Intro*, 2–9
/KEY qualifier, *(P) Rec Mgmt Util*, 2–12
list of qualifiers, *(P) Util Routines*, CONV–13
/MERGE qualifier, *(P) Rec Mgmt Util*, 2–12
/PAD qualifier, *(P) Rec Mgmt Util*, 2–4, 2–13
passing options, *(P) Util Routines*, CONV–12, CONV–14
/PROLOG qualifier, *(P) Rec Mgmt Util*, 2–14
/READ_CHECK qualifier, *(P) Rec Mgmt Util*, 2–15
setting qualifiers, *(P) Util Routines*, CONV–12
/SHARE qualifier, *(P) Rec Mgmt Util*, 2–15
/SORT qualifier, *(P) Rec Mgmt Util*, 2–15
/STATISTICS qualifier, *(P) Rec Mgmt Util*, 2–16
/TRUNCATE qualifier, *(P) Rec Mgmt Util*, 2–4, 2–17
using /APPEND qualifier on sequential files, *(P) Rec Mgmt Util*, 2–2
using /MERGE qualifier on indexed files, *(P) Rec Mgmt Util*, 2–2
using /NOSORT qualifier to save sort order on indexed files, *(P) Rec Mgmt Util*, 2–2, 2–9
using /PAD qualifier to fill in output records, *(P) Rec Mgmt Util*, 2–4
/WORK_FILES qualifier, *(P) Rec Mgmt Util*, 2–18
/WRITE_CHECK qualifier, *(P) Rec Mgmt Util*, 2–18
CONVERT conversion statistics, *(P) Util Routines*, CONV–6
CONVERT/DOCUMENT command, *(G) DCL A-M*, DCLI–66 to DCLI–77
creating an options file, *(G) DCL A-M*, DCLI–71
Converters
using DWZZA in SCSI VMScluster systems, *(G) V7.0 New Feat*, C–11
Converting
ASCII string to binary time, *(P) Sys Svc I*, SYS1–62
ASCII string to UTC format, *(P) Sys Svc I*, SYS1–65
audit event message, *(P) Sys Svc I*, SYS1–402
binary time to ASCII string, *(P) Sys Svc I*, SYS1–29

Converting (cont'd)
binary time to numeric time, *(P) Sys Svc II*, SYS2–194
64-bit system time to UTC time, *(P) Sys Svc II*, SYS2–449
UTC format to ASCII, *(P) Sys Svc I*, SYS1–35
UTC time to numeric time, *(P) Sys Svc II*, SYS2–196
Converting floating-point data types, *(P) LIB$*, CVT–3, CVT–9
CONVERT LOG command
in LMCP, *(S) Sys Mgmt Util A-L*, 14–5
CONVERT/RECLAIM command, *(G) DCL A-M*, DCLI–78
/KEY qualifier, *(P) Rec Mgmt Util*, 3–3
/STATISTICS qualifier, *(P) Rec Mgmt Util*, 3–2, 3–3
Convert/Reclaim utility (CONVERT/RECLAIM), *(P) Environment*, 10–18; *(P) Rec Mgmt Util*, 3–1; *(P) File Appl*, 1–36, 3–19
DCL qualifier, *(P) Rec Mgmt Util*, 3–3
exiting, *(P) Rec Mgmt Util*, 3–2
invoking, *(P) Rec Mgmt Util*, 3–2
restrictions, *(P) Rec Mgmt Util*, 3–2
using with Prolog 3 files, *(P) File Appl*, 3–20
with Prolog 3 files, *(P) File Appl*, 10–28
CONVERT/RELAIM (Convert/Reclaim utility)
See Convert/Reclaim utility
CONVERT routines, *(P) Util Routines*, CONV–1 to CONV–5
wildcard characters in, *(P) Util Routines*, CONV–10
Convert utility (CONVERT), *(P) Environment*, 10–18; *(P) Rec Mgmt Util*, 2–1, 2–5, 4–4; *(P) File Appl*, 1–35, 9–8
appending a remote file, *(P) Rec Mgmt Util*, 2–20
comparing FAST_LOAD and NOFAST_LOAD options, *(P) Rec Mgmt Util*, 2–8
converting a carriage control to stream, *(P) Rec Mgmt Util*, 2–21
converting a remote file, *(P) Rec Mgmt Util*, 2–20
converting carriage control formats, *(P) Rec Mgmt Util*, 2–3
creating data files, *(P) Rec Mgmt Util*, 5–2; *(P) File Appl*, 4–15, 4–16
DCL qualifiers, *(P) Rec Mgmt Util*, 2–6 to 2–20
establishing RFAs, *(P) Rec Mgmt Util*, 3–1
examples, *(P) Rec Mgmt Util*, 2–20 to 2–21
converting a carriage control file to variable-length, *(P) Rec Mgmt Util*, 2–21
converting fixed format to variable-length, *(P) Rec Mgmt Util*, 2–21
converting record formats, *(P) Rec Mgmt Util*, 2–20
Convert utility (CONVERT)
examples (cont'd)
improving a file's performance, *(P) Rec Mgmt Util*, 2–20
reorganizing a remote file, *(P) Rec Mgmt Util*, 2–20
exception conditions, *(P) Rec Mgmt Util*, 2–4
FDL output data file, *(P) Rec Mgmt Util*, 5–2
making a file contiguous, *(P) File Appl*, 10–28
populating a file, *(P) File Appl*, 4–27
reorganizing files, *(P) File Appl*, 10–28
reorganizing noncontiguous files, *(P) File Appl*, 3–27, 10–28
restoring contiguity on fragmented disks, *(S) VAX Perform*, 3–36; *(S) Alpha Perform*, 11–8
saving disk space, *(P) Rec Mgmt Util*, 2–10
saving the queue database, *(S) Sys Mgr Essentials*, 12–11
syntax, *(S) VMScluster Sys*, B–3
using over the network, *(S) DECnet Intro*, 2–9
using to change organization of file, *(S) Sys Mgr Essentials*, 9–19
using to merge SYSUAF.DAT files, *(S) VMScluster Sys*, B–2
using with DECnet, *(P) Rec Mgmt Util*, 2–4
using with Prolog 3 files, *(P) File Appl*, 3–20
with corrupted files, *(P) File Appl*, 10–1, 10–2
with FDL files, *(P) File Appl*, 4–2
with Prolog 1 and Prolog 2 files, *(P) File Appl*, 3–19
Cooling equipment
controlling temperature and humidity, *(S) Dependable*, 5–3
Coordinated Universal Time
See UTC
COPY command, *(G) V7.0 New Feat*, 4–22; *(G) User*, 4–12; *(G) DCL A-M*, DCLI–79 to DCLI–88; *(S) Sys Mgr Essentials*, 10–23; *(S) Sys Mgr Tuning*, 21–14; *(P) Alpha SDA*, SDA–5, SDA–39; *(P) VAX SDA*, SDA–5, SDA–7, SDA–47
comparison with COPY command in System Dump Analyzer utility, *(S) Sys Mgr Tuning*, 15–15
/CONTIGUOUS qualifier, *(P) File Appl*, 9–8, 10–27
disk volumes, *(S) Sys Mgr Essentials*, 9–19
in Mail, *(G) User*, 6–12
in network operations, *(S) DECnet Intro*, 2–5
in System Dump Analyzer utility, *(S) Sys Mgr Tuning*, 15–4, 15–15
printing from a private volume, *(G) User*, 12–2
restriction for copying dump files, *(S) Sys Mgr Tuning*, 15–15
security profile assigned, *(S) Security*, 5–11
sending message after file is copied, *(S) Sys Mgr Essentials*, 9–22

COPY command (cont'd)
/SINCE qualifier, *(G) User*, 4–12
standard-labeled volumes
copying from, *(S) Sys Mgr Essentials*, 9–20
tape volumes
copying files from, *(S) Sys Mgr Essentials*, 9–21
copying files to, *(S) Sys Mgr Essentials*, 9–20, 9–21
transferring information, *(S) Sys Mgr Essentials*, 9–19
using for remote files, *(S) DECnet Intro*, 2–5
using with DECwindows compound documents, *(G) DCL A-M*, DCLI–80
COPY/FTP command, *(G) DCL A-M*, DCLI–89 to DCLI–90; *(S) TCP/IP*, 3–4, 5–6
qualifiers, *(G) DCL A-M*, DCLI–89
Copying a handle, *(P) DECthreads*, E–49
Copying a software kit, *(S) Sys Mgmt Util M-Z*, 3–7
Copying directories
with BACKUP, *(S) Sys Mgr Essentials*, 10–23
Copying directory files, *(G) DCL A-M*, DCLI–81
Copying files, *(G) User*, 4–12
between nodes, *(G) User*, 4–12
dump files, *(S) Sys Mgr Tuning*, 15–14
methods for, *(S) Sys Mgr Essentials*, 9–19
over the network, *(S) DECnet Intro*, 2–5, 3–30
restrictions when using Mail, *(G) User*, 4–13
to and from a remote host, *(S) Sys Mgr Tuning*, 21–14
using COPY command, *(S) Sys Mgr Essentials*, 9–19
using Exchange utility, *(S) Sys Mgr Essentials*, 9–24
using Mail, *(G) User*, 4–13
with BACKUP, *(S) Sys Mgr Essentials*, 10–23
Copying node database, *(S) DECnet Mgmt*, 1–14, 2–5, 3–17, 3–21
Copying software product release notes, *(S) Sys Mgr Essentials*, 3–29
COPY KNOWN NODES command, *(S) DECnet Mgmt*, 3–17; *(S) DECnet Mgmt Util*, 3–36
/COPY qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–17
COPY/RCP command, *(G) DCL A-M*, DCLI–91 to DCLI–92; *(S) TCP/IP*, 3–4, 5–7
qualifiers, *(G) DCL A-M*, DCLI–91
copysign routine, *(P) Portable Math*, DPML–20, B–4
Copy strings, *(P) OTS$*, OTS–87
CORBA (Common Object Request Broker Architecture), *(G) SW Overview*, 6–15
ObjectBroker compliance, *(P) Environment*, 3–6
Core image file, *(P) File Appl*, 1–8
CORIMG.SYS, *(S) Sys Mgr Tuning*, A–9
not supported by OpenVMS, *(S) Sys Mgr Tuning*, A–9
CORIMG.SYS file, *(P) File Appl*, 1–8
See also Core image file
Corrective action, *(S) DECamds*, 2–8
cosd routine, *(P) Portable Math*, DPML–21, B–5
cosh routine, *(P) Portable Math*, DPML–22, B–5
Cosine
hyperbolic, *(P) MTH$*, MTH–50, MTH–88
in degrees, *(P) MTH$*, MTH–48, MTH–87, MTH–128
in radians, *(P) MTH$*, MTH–46, MTH–86
of complex number, *(P) MTH$*, MTH–26, MTH–28
cos routine, *(P) Portable Math*, DPML–21, B–5
Costs
circuit, *(S) DECnet Intro*, 1–3; *(S) DECnet Mgmt*, 3–51
control for circuit, *(S) DECnet Mgmt*, 2–22
definition, *(S) DECnet Mgmt*, 2–21
determining for circuit, *(S) DECnet Mgmt*, 3–51
equal cost path splitting, *(S) DECnet Mgmt*, 2–22, 3–53
Cost tradeoffs, *(S) Dependable*, 4–16
cotd routine, *(P) Portable Math*, DPML–23, B–5
cot routine, *(P) Portable Math*, DPML–23, B–5
Counters, *(S) Sys Mgmt Util A-L*, 13–3
circuit, *(S) DECnet Mgmt*, 3–35; *(S) DECnet Mgmt Util*, 3–120, B–1, B–4
displaying
for links, *(S) Sys Mgmt Util A-L*, 13–42
for nodes, *(S) Sys Mgmt Util A-L*, 13–47
for ports, *(S) Sys Mgmt Util A-L*, 13–52
for services, *(S) Sys Mgmt Util A-L*, 13–57
frequency of logging, *(S) DECnet Intro*, 4–4
line, *(S) DECnet Mgmt*, 3–48; *(S) DECnet Mgmt Util*, 3–161, B–7
logging, *(S) DECnet Mgmt*, 3–21
network use of, *(S) DECnet Intro*, 4–3
node, *(S) DECnet Mgmt*, 3–21; *(S) DECnet Mgmt Util*, 3–160, 3–162, 3–164, B–11
resetting, *(S) Sys Mgmt Util A-L*, 13–60
resetting to zero, *(S) DECnet Intro*, 4–3
status of LAT node, *(S) Sys Mgr Tuning*, 24–9
summary of network, *(S) DECnet Mgmt Util*, B–1
X.25 protocol module, *(S) DECnet Mgmt Util*, B–13
X.25 server module, *(S) DECnet Mgmt Util*, B–14
zeroing, *(S) DECnet Mgmt*, 3–21
COUNTERS class
adding, *(S) Sys Mgmt Util M-Z*, 4–15
fields belonging to, *(S) Sys Mgmt Util M-Z*, 4–22
removing, *(S) Sys Mgmt Util M-Z*, 4–43

Counter timers, *(S) DECnet Mgmt*, 3–21
  expiration of, *(S) DECnet Intro*, 4–4
Count field
  for variable-length records, *(P) File Appl*, 2–9
Counting semaphores, *(P) Concepts*, 14–28
cpow routine, *(P) Portable Math*, DPML–24, B–6
CPU affinity set
  modifying, *(P) Sys Svc II*, SYS2–204
CPU context
  changing, *(P) Alpha SDA*, SDA–73; *(P) VAX SDA*, SDA–95
    SDA current, *(P) VAX SDA*, SDA–72
    using the SET PROCESS command, *(P) VAX SDA*, SDA–78
    using the SHOW CPU command, *(P) VAX SDA*, SDA–95
    using the SHOW CRASH command, *(P) VAX SDA*, SDA–99
    using the SHOW PROCESS command, *(P) VAX SDA*, SDA–148
  displaying, *(P) Alpha SDA*, SDA–86; *(P) VAX SDA*, SDA–95
  using SET CPU to change, *(P) Alpha SDA*, SDA–68
  using SHOW CPU to change, *(P) Alpha SDA*, SDA–86
  using SHOW CRASH to change, *(P) Alpha SDA*, SDA–89
  using SHOW PROCESS to change, *(P) Alpha SDA*, SDA–127
CPUDEFAULT process limit
  choosing a value for batch queues, *(S) Sys Mgr Essentials*, 13–31
  specifying a value for batch queues, *(S) Sys Mgr Essentials*, 13–19, 13–29
CPU identification number, *(S) Sys Mgr Tuning*, 26–2; *(P) Alpha SDA*, SDA–86; *(P) VAX SDA*, SDA–95
  See CPU ID
CPULOA.EXE file
  global symbols, *(P) VAX SDA*, SDA–64
CPUMAXIMUM process limit
  choosing a value for batch queues, *(S) Sys Mgr Essentials*, 13–31
  specifying a value for batch queues, *(S) Sys Mgr Essentials*, 13–19, 13–29
CPU Modes Summary window, *(S) DECamds*, 3–2 to 3–4
CPU process limit, *(S) Sys Mgr Essentials*, 6–42
CPUs (central processing units), *(G) SW Overview*, 1–4, 1–7
  adding capacity, *(S) VAX Perform*, 4–36; *(S) Alpha Perform*, 15–3, 19–2
  affected by swapping, *(S) VAX Perform*, 3–25; *(S) Alpha Perform*, 10–6
  assessing relative load, *(S) Alpha Perform*, 9–11
  capability, *(S) DECamds*, 3–3
CPUs (central processing units) (cont'd)
  classes, *(S) DECamds*, 5–9
  compensating for limitations, *(S) VAX Perform*, 5–16
  CPU identifier (ID), *(S) DECamds*, 3–3
  default data collection, *(S) DECamds*, 5–2
  defining maximum time limit for batch jobs, *(G) DCL A-M*, DCLI–268, DCLI–283; *(G) DCL N-Z*, DCLII–184, DCLII–375
  determining when capacity is reached, *(S) VAX Perform*, 4–36; *(S) Alpha Perform*, 15–3
  displaying error count for, *(G) DCL N-Z*, DCLII–275
  equitable sharing, *(S) VAX Perform*, 3–13; *(S) Alpha Perform*, 9–6
  error messages, *(S) DECamds*, 3–5
  estimating available capacity, *(S) VAX Perform*, 3–11
  evaluating responsiveness, *(S) VAX Perform*, 3–9
  filter categories, *(S) DECamds*, 5–6
  filtering data, *(S) DECamds*, 5–6
  function, *(S) VAX Perform*, 3–9
  identification for downline load, *(S) DECnet Mgmt*, 4–10
  improving
    performance by suspending, *(S) DECamds*, 4–6
    response, *(S) DECamds*, 5–11
  improving responsiveness, *(S) VAX Perform*, 3–13
  inequitable sharing, *(S) Alpha Perform*, 9–6
  isolating limitations, *(S) VAX Perform*, 4–32
  limitations
    isolating, *(S) Alpha Perform*, 15–1
  limiting time for batch jobs, *(G) DCL A-M*, DCLI–268; *(G) DCL N-Z*, DCLII–123, DCLII–184, DCLII–375, DCLII–413
  load balancing in a VMScluster, *(S) Alpha Perform*, 9–11
  load balancing in VAXcluster, *(S) VAX Perform*, 3–19
  load in gathering data, *(S) DECamds*, 2–4
  modes, *(S) DECamds*, 3–3, 3–14
  multiple, *(S) Dependable*, 4–5
  number active on a node, *(S) DECamds*, 3–14
  offloading, *(S) VAX Perform*, 3–18; *(S) Alpha Perform*, 9–10
    on a network, *(S) Alpha Perform*, 9–10
  peak usage, *(S) DECamds*, 3–4
  percentage used, *(S) DECamds*, 3–3
  power in LAT environment, *(S) Sys Mgmt Util A-L*, 13–28
  process
    identifier (PID), *(S) DECamds*, 3–3, 3–5
    name in, *(S) DECamds*, 3–3
    priority, *(S) DECamds*, 3–5
    state queues, *(S) DECamds*, 3–14

CPUs (central processing units)
process (cont'd)
time, *(S) DECamds*, 3–5
processor modes, *(S) Alpha Perform*, 9–7
program counter, *(S) DECamds*, 3–21
reducing consumption, *(S) Alpha Perform*, 9–7
reducing resource consumption, *(S) VAX Perform*, 3–14
setting process priorities, *(S) DECamds*, 4–4
single process mode rate, *(S) DECamds*, 3–23
SMP configurations, *(S) Dependable*, 4–4
state, *(S) DECamds*, 3–3, 3–5
time
limit (CPULM) for single process modes, *(S) DECamds*, 3–24
rate, *(S) DECamds*, 3–4, 3–5
time requirements, *(S) DECnet Mgmt*, 5–32
time spent in compatibility mode, *(S) VAX Perform*, 4–36
time spent in supervisor mode, *(S) VAX Perform*, 4–36; *(S) Alpha Perform*, 15–3
time used by current process, *(G) DCL N-Z*, DCLII–339
use, *(S) DECamds*, 3–2, 3–4
display of, *(S) DECamds*, 2–3
wait state, *(S) DECamds*, 3–5
CPU scheduling, *(G) V7.0 New Feat*, 4–24
CPU-specific pages, *(P) Concepts*, 20–1
See also Pages
CPU Summary window, *(S) DECamds*, 3–4 to 3–5
CPU time, *(P) Rec Mgmt Util*, 2–17
CPU user capability set
modifying, *(P) Sys Svc I*, SYS1–118
$CPU_CAPABILITIES service, *(G) V7.0 New Feat*, 4–26
CRASH console command, *(S) Sys Mgr Essentials*, 4–27
Crash dump files
headers, *(P) VAX SDA*, SDA–113
Crash dumps, *(S) Sys Mgr Tuning*, 15–2
See also System dump files and System failures
comparison of physical and selective, *(S) Sys Mgr Tuning*, 15–3
file headers, *(P) Alpha SDA*, SDA–99; *(P) VAX SDA*, SDA–113
freeing page file of, *(S) Sys Mgr Tuning*, 15–16
headers, *(P) Alpha SDA*, SDA–99
incomplete, *(P) Alpha SDA*, SDA–8; *(P) VAX SDA*, SDA–9
physical, *(S) Sys Mgr Tuning*, 15–3
releasing, *(S) Sys Mgr Tuning*, 15–16
requirements for saving, *(S) Sys Mgr Tuning*, 15–3
saving contents of page file on reboot, *(S) Sys Mgr Tuning*, 15–2
saving contents of system dump file on reboot, *(S) Sys Mgr Essentials*, 5–13
selective, *(S) Sys Mgr Tuning*, 15–3
Crash dumps (cont'd)
short, *(P) Alpha SDA*, SDA–8; *(P) VAX SDA*, SDA–9
Crash Log Utility Extractor (CLUE), *(S) Sys Mgmt Util A-L*, 8–4; *(P) Environment*, 9–10
commands, *(S) Sys Mgmt Util A-L*, 8–5
DELETE command in, *(S) Sys Mgmt Util A-L*, 8–5
description, *(S) Sys Mgr Tuning*, 15–12
DIRECTORY command in, *(S) Sys Mgmt Util A-L*, 8–6
EXIT command in, *(S) Sys Mgmt Util A-L*, 8–7
exiting from, *(S) Sys Mgmt Util A-L*, 8–4
EXTRACT command in, *(S) Sys Mgmt Util A-L*, 8–7
HELP command in, *(S) Sys Mgmt Util A-L*, 8–8
invoking, *(S) Sys Mgmt Util A-L*, 8–4
SHOW command in, *(S) Sys Mgmt Util A-L*, 8–8
Crash Node fix, *(S) DECamds*, 4–4
/CRASH_DUMP qualifier, *(P) Alpha SDA*, SDA–7; *(P) VAX SDA*, SDA–9
CRBs (channel request blocks), *(P) Alpha SDA*, SDA–94; *(P) VAX SDA*, SDA–105
CRB symbol, *(P) VAX SDA*, SDA–17
CR character, *(P) Rec Mgmt Util*, 4–33
/CRC qualifier
as Backup utility input save-set qualifier, *(S) Sys Mgmt Util A-L*, 7–25
as Backup utility output save-set qualifier, *(S) Sys Mgmt Util A-L*, 7–25
Create access
logical name tables, *(S) Security*, 5–16
volumes, *(S) Security*, 5–21
CREATE command, *(G) V7.0 New Feat*, 4–21; *(G) User*, 4–11; *(G) DCL A-M*, DCLI–93 to DCLI–95; *(P) Rec Mgmt Util*, 5–3, 6–1; *(P) Alpha SDA*, SDA–4; *(P) VAX SDA*, SDA–4
creating directories, *(S) Sys Mgr Essentials*, 9–20
limiting number of file versions, *(S) Sys Mgr Essentials*, 8–53
/DIRECTORY qualifier, *(G) User*, 5–3, 5–7
in Install utility, *(S) Sys Mgmt Util A-L*, 11–8
in network operations, *(S) DECnet Intro*, 2–7
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–11
changing page, swap, and dump file sizes, *(S) Sys Mgr Tuning*, 15–26
creating page, swap, and dump files, *(S) Sys Mgr Tuning*, 15–18
writing new file to tape volume, *(S) Sys Mgr Essentials*, 9–18
CREATE/DIRECTORY command, *(G) DCL A-M*, DCLI–96 to DCLI–98
/ALLOCATION qualifier, *(G) V7.0 New Feat*, 2–1

CREATE/DIRECTORY command (cont'd)
to specify UIC-based directory protection, *(S) Sys Mgr Essentials*, 9–12
/CREATED qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–26
CREATE/FDL (Create/FDL utility)
See Create/FDL utility
CREATE/FDL command, *(G) DCL A-M*, DCLI–99; *(P) RMS Ref*, A–20
/LOG qualifier, *(P) Rec Mgmt Util*, 5–4
Create/FDL utility (CREATE/FDL), *(P) Environment*, 10–19; *(P) Rec Mgmt Util*, 5–2, 5–3, 6–3; *(P) File Appl*, 1–37, 4–2, 4–16
maintaining files, *(P) File Appl*, 10–1
Create file function, *(P) I/O User*, 1–23
directory entry creation, *(P) I/O User*, 1–25
Create-if option, *(P) RMS Ref*, 3–1, A–12; *(P) File Appl*, 4–15, 4–31, 5–9
See also FAB$V_CIF option
CREATE LINK command
in LATCP, *(S) Sys Mgmt Util A-L*, 13–7
illegal SCSSYSTEMID system parameter, *(S) Sys Mgmt Util A-L*, 13–7
CREATE LOG command
in LMCP, *(S) Sys Mgmt Util A-L*, 14–7
$CREATE macro, *(P) RMS Ref*, A–9
Create Mailbox and Assign Channel system service
See SYS$CREMBX system service
CREATE/NAME_TABLE command, *(G) DCL A-M*, DCLI–100 to DCLI–103
CREATE PORT command
in LATCP, *(S) Sys Mgmt Util A-L*, 13–9
/CREATE qualifier, *(P) File Appl*, 4–10
Create service, *(P) RMS Ref*, 3–1, RMS–10, A–12; *(P) File Appl*, 4–15, 5–9
condition values, *(P) RMS Ref*, RMS–20
contrasted with Open service, *(P) RMS Ref*, 3–1
control block input fields, *(P) RMS Ref*, RMS–11
control block output fields, *(P) RMS Ref*, RMS–15
for process-permanent files, *(P) File Appl*, 6–19
handling search list, *(P) RMS Ref*, RMS–11
program example, *(P) RMS Ref*, 3–2, A–12
specifying prolog level, *(P) RMS Ref*, RMS–19
using the create-if option, *(P) RMS Ref*, RMS–19
using the NAM block, *(P) RMS Ref*, RMS–16
using to create indexed files, *(P) RMS Ref*, RMS–19
XAB override in various fields, *(P) RMS Ref*, RMS–11
CREATE SERVICE command
in LATCP, *(S) Sys Mgmt Util A-L*, 13–14
CREATE/TERMINAL command, *(G) DCL A-M*, DCLI–104 to DCLI–109
Create-time attribute
establishing value, *(P) Rec Mgmt Util*, 4–2
$CREATE_BUFOBJ_64 system service
description, *(P) Sys Svc I*, SYS1–124
$CREATE_GFILE system service
description, *(P) Sys Svc I*, SYS1–129
$CREATE_GPFILE system service
description, *(P) Sys Svc I*, SYS1–133
$CREATE_GPFN system service
description, *(P) Sys Svc I*, SYS1–137
CREATE_IF attribute, *(P) Rec Mgmt Util*, 4–18; *(P) File Appl*, 4–31
$CREATE_REGION_64 system service
description, *(P) Sys Svc I*, SYS1–143
Creating
attributes object, *(P) DECthreads*, E–18
condition variable attributes object, *(P) DECthreads*, pthread–52, G–30
disk file sections, *(P) Sys Svc I*, SYS1–192
logical names, *(P) Sys Svc I*, SYS1–149
logical name tables, *(P) Sys Svc I*, SYS1–155
mailboxes, *(P) Sys Svc I*, SYS1–161
mutex attributes object, *(P) DECthreads*, pthread–95, G–60
processes, *(P) Sys Svc I*, SYS1–168
rights databases, *(P) Sys Svc I*, SYS1–139
thread attributes object, *(P) DECthreads*, pthread–18, G–5
user profiles, *(P) Sys Svc I*, SYS1–145
virtual address space, *(P) Sys Svc I*, SYS1–185
Creating a condition variable, *(P) DECthreads*, pthread–41, tis–6, E–37, G–34
Creating a disk usage accounting file, *(S) Sys Mgmt Util A-L*, 3–11
Creating a mutex, *(P) DECthreads*, pthread–84, tis–18, E–57, G–65
Creating an additional queue manager, *(S) Sys Mgr Essentials*, 12–10
Creating a new system parameter file with SYSGEN, *(S) Sys Mgr Tuning*, 14–34
Creating a PCF
before installation, *(S) Sys Mgr Essentials*, 3–22
during installation, *(S) Sys Mgr Essentials*, 3–30
Creating a queue database, *(S) Sys Mgr Essentials*, 12–7
Creating a thread, *(P) DECthreads*, pthread–54, E–69, G–45
detached creation attribute, *(P) DECthreads*, pthread–6, pthread–20, G–8, G–14
guardsize attribute, *(P) DECthreads*, pthread–8, pthread–22, E–21, E–27, G–9, G–16

Creating a thread (cont'd)
inherit scheduling attribute, *(P) DECthreads*, pthread–10, pthread–24, E–22, E–28, G–10, G–17
priority attribute, *(P) DECthreads*, E–24, E–31, G–11, G–19
scheduling parameters attribute, *(P) DECthreads*, pthread–12
scheduling policy attribute, *(P) DECthreads*, pthread–14, pthread–28, E–25, E–33, G–12, G–21
scheduling policy attribute parameters, *(P) DECthreads*, pthread–26
stacksize attribute, *(P) DECthreads*, pthread–16, pthread–30, E–26, E–35, G–13, G–23
Creating detached threads, *(P) DECthreads*, pthread–6, pthread–20, G–8, G–14
Creating execution queues, *(S) Sys Mgr Essentials*, 13–15
autostart, *(S) Sys Mgr Essentials*, 13–15, 13–16
nonautostart, *(S) Sys Mgr Essentials*, 13–16
Creating generic queues, *(S) Sys Mgr Essentials*, 13–17
Creating groups, *(S) DECamds*, 1–7
Creating log files
operator log file, *(S) Sys Mgr Tuning*, 18–22
Creating page, swap, and dump files
with AUTOGEN, *(S) Sys Mgr Tuning*, 15–24
with SYSGEN, *(S) Sys Mgr Tuning*, 15–18
Creating per-thread context key value, *(P) DECthreads*, pthread–74, tis–12, E–52, G–57
Creating queues, *(G) DCL A-M*, DCLI–263
CREATION attribute, *(P) Rec Mgmt Util*, 4–15
Creation date field, *(P) File Appl*, 1–28
zero creation date, *(P) File Appl*, 1–29
Creation of a network, *(S) DECnet Intro*, 3–1
Creation-time options
contiguous space allocation, *(P) File Appl*, 3–12
defining file characteristics, *(P) File Appl*, 4–32
using RMS, *(P) File Appl*, 4–31
using the Edit/FDL utility, *(P) File Appl*, 4–2
Creator ACEs, *(S) Security*, 5–11; *(S) Sys Mgmt Util A-L*, 1–9
example, *(S) Security*, 8–21
specifying access, *(S) Sys Mgmt Util A-L*, 1–10
specifying attributes, *(S) Sys Mgmt Util A-L*, 1–10
with resource identifiers, *(S) Security*, 8–10
CREDITS class
adding, *(S) Sys Mgmt Util M-Z*, 4–17
fields belonging to, *(S) Sys Mgmt Util M-Z*, 4–23
removing, *(S) Sys Mgmt Util M-Z*, 4–43
$CREPRC system service
new node argument, *(G) V7.0 New Feat*, 4–23
$CRETVA_64 system service
description, *(P) Sys Svc I*, SYS1–190
$CRMPSC_FILE_64 system service
description, *(P) Sys Svc I*, SYS1–207
$CRMPSC_GFILE_64 system service
description, *(P) Sys Svc I*, SYS1–215
$CRMPSC_GPFILE_64 system service
description, *(P) Sys Svc I*, SYS1–222
$CRMPSC_GPFN_64 system service
description, *(P) Sys Svc I*, SYS1–229
$CRMPSC_PFN_64 system service
description, *(P) Sys Svc I*, SYS1–234
Cross-architecture
booting, *(S) Sys Mgr Tuning*, 22–23
linking, *(G) V7.0 New Feat*, 4–11, 4–12
logical names, *(G) V7.0 New Feat*, 4–11
Crossed cables, *(S) VMScluster Sys*, C–23
Cross-reference section of image map files, *(P) Linker*, LINK–8
format, *(P) Linker*, 5–8
Cross training personnel, *(S) Dependable*, 1–4
See also Comprehensive training
at CSC data center, *(S) Dependable*, 11–6
relationship to role boundaries, *(S) Dependable*, 5–7
/CROSS_REFERENCE qualifier, *(P) Linker*, LINK–8
CSBs (cluster system blocks), *(P) Alpha SDA*, SDA–80, SDA–84; *(P) VAX SDA*, SDA–86, SDA–91
CSID (cluster system identification number), *(P) Alpha SDA*, SDA–80, SDA–140; *(P) VAX SDA*, SDA–86, SDA–161
/CSID qualifier, *(P) Alpha SDA*, SDA–80; *(P) VAX SDA*, SDA–86
csin routine, *(P) Portable Math*, DPML–25, B–6
CSLIP (compressed serial line Internet protocol), *(S) TCP/IP*, 2–7
CSMA/CD (Carrier Sense Multiple Access with Collision Detect), *(S) DECnet Mgmt*, 1–5
access control, *(S) DECnet Mgmt*, 1–4
csqrt routine, *(P) Portable Math*, DPML–26, B–6
CSR (Control and Status Register)
addresses, *(S) Sys Mgmt Util M-Z*, 5–7, 5–9
fixed space, *(S) Sys Mgmt Util M-Z*, D–1
floating space, *(S) Sys Mgmt Util M-Z*, D–1
vector addresses, *(S) Sys Mgmt Util M-Z*, 5–9
CSR addresses
display on Alpha systems, *(S) Sys Mgmt Util M-Z*, 6–39
CTDRIVER driver, *(P) I/O User*, 5–11, 5–37
CTG option, *(P) Rec Mgmt Util*, 4–7, 4–18
Ctrl/A key sequence, *(G) User*, 3–19
Ctrl/B key sequence, *(G) User*, 3–14, 19–7; *(S) Security*, 3–15
recalling commands with, *(G) User*, 3–14, 3–19

Ctrl/C key sequence, *(G) User*, 3–18; *(P) Concepts*, 7–32; *(P) Debugger*, 5–12, 14–5, 14–10, CD–47
canceling Mail messages, *(G) User*, 6–5, 6–10
enabling or disabling, *(G) DCL N-Z*, DCLII–104
Ctrl/E key sequence, *(G) User*, 3–19
Ctrl keys, *(G) User*, 3–18
CTRLNAME logical name, *(S) Sys Mgr Tuning*, 17–32
Ctrl/O key sequence, *(G) DCL N-Z*, DCLII–424
Ctrl/Q key sequence, *(G) DCL N-Z*, DCLII–424
Ctrl/S key sequence, *(G) DCL N-Z*, DCLII–424
Ctrl/T key sequence
checking the status of processes, *(G) User*, 2–21
enabling or disabling, *(G) DCL N-Z*, DCLII–104
interrupting DCL commands with, *(G) User*, 3–18
Ctrl/U key sequence, *(G) User*, 3–17
Ctrl/W key sequence, *(P) Debugger*, CD–49, CD–90
refreshing screen displays with, *(G) User*, 18–4
Ctrl/x key sequence
See Terminals, control characters
Ctrl/Y–DEBUG
not supported for Kept Debugger, *(P) Debugger*, CD–50
not supported in DECwindows Motif interface, *(P) Debugger*, CD–50
Ctrl/Y key sequence, *(P) Concepts*, 7–32; *(P) Debugger*, 2–7, 5–12, 5–14, 14–13, CD–50
aborting remote sessions with, *(G) User*, 2–24
and EXIT command, *(G) DCL A-M*, DCLI–227
and login procedure, *(G) DCL A-M*, DCLI–415
and ON command, *(G) DCL N-Z*, DCLII–2
canceling command procedures, *(G) User*, 15–34
canceling DCL commands, *(G) User*, 3–18
disabling, *(G) User*, 15–40
effects of entering, *(G) User*, 15–37
enabling, *(G) User*, 15–40
enabling or disabling, *(G) DCL N-Z*, DCLII–104
exiting, *(G) User*, 15–36
exiting from loops when disabled, *(G) User*, 15–40
interrupting command procedures, *(G) User*, 15–34
interrupting DCL commands, *(G) User*, 3–18
interrupting images with, *(G) User*, 18–4
interrupting tasks in debugger, *(P) Debugger*, 16–34
resuming an EDT editing session, *(G) User*, 9–9
setting action routines, *(G) User*, 15–36
Ctrl/Y key sequence (cont'd)
using to abort remote session, *(S) DECnet Intro*, 3–3
Ctrl/Z key sequence, *(P) Concepts*, 7–5, 9–31; *(P) File Appl*, 4–3; *(P) Debugger*, 5–11, CD–53
as end-of-file terminator, *(G) User*, 3–18, 4–11
sending files in Mail, *(G) User*, 6–10
sending Mail messages, *(G) User*, 6–5
using as end-of-file marker, *(P) RMS Ref*, RMS–51
using to terminate Get service, *(P) RMS Ref*, RMS–51
%CURDISP built-in symbol, *(P) Debugger*, 11–24
%CURLOC built-in symbol, *(P) Debugger*, 8–8, 8–13, B–6
Current context, *(P) File Appl*, 8–15 to 8–18
Current location symbol (.), *(P) VAX SDA*, SDA–17
Current procedure, *(P) Concepts*, 13–48; *(P) Calling Std*, 3–29
/CURRENT qualifier, *(P) Debugger*, 9–11, 11–6, 11–9, 11–11, CD–201
Current-record position, *(P) File Appl*, 8–3, 8–4
Current stack pointer, *(P) Alpha SDA*, SDA–15
Current system parameters, *(S) Sys Mgr Tuning*, 14–3
%CURRENT_SCOPE_ENTRY built-in symbol, *(P) Debugger*, B–11
%CURSCROLL built-in symbol, *(P) Debugger*, 11–24
Cursors
moving, *(P) Concepts*, 7–20; *(P) SMG$*, 4–3
turning on and off, *(P) SMG$*, SMG–355
%CURVAL built-in symbol, *(P) Debugger*, 8–5, B–6
Customization
debugger, *(P) Debugger*, 11–12, 11–13, 11–14, 11–19, 12–1, 12–4, 12–6, 12–8, 12–9
DECwindows Motif interface, *(P) Debugger*, 3–28
debugger resource file, *(P) Debugger*, 3–33
key bindings on keypad, *(P) Debugger*, 3–37
Customizing
effect on performance, *(S) DECamds*, 5–17
security files, *(S) DECamds*, 1–7
template customization files, *(S) DECamds*, 5–2
Customizing DECamds, *(S) DECamds*, 5–1 to 5–2
Customizing DECwindows Motif interface, *(S) Sys Mgr Essentials*, 3–39
Customizing the system
adding optional system files that have been removed from the system disk, *(S) Sys Mgr Essentials*, 5–1
building standalone BACKUP, *(S) Sys Mgr Essentials*, 5–49
creating site-specific startup command procedures, *(S) Sys Mgr Essentials*, 5–2

Customizing the system (cont'd)
creating systemwide announcements, *(S) Sys Mgr Essentials*, 5–14
duplicating the system disk, *(S) Sys Mgr Essentials*, 2–26
enabling autostart, *(S) Sys Mgr Essentials*, 5–12
installing known images, *(S) Sys Mgr Essentials*, 5–12
installing resident images (Alpha), *(S) Sys Mgr Essentials*, 5–13
limiting the number of interactive users, *(S) Sys Mgr Essentials*, 5–16
making remote InfoServer devices available, *(S) Sys Mgr Tuning*, 23–14
making remote InfoServer disks available, *(S) Sys Mgr Essentials*, 5–13
modifying login procedures, *(S) Sys Mgr Essentials*, 5–16
modifying site-specific startup command procedures, *(S) Sys Mgr Essentials*, 5–2
rules, *(S) Sys Mgr Essentials*, 5–4
removing optional system files from the system disk, *(S) Sys Mgr Essentials*, 5–1
setting up a LAT network, *(S) Sys Mgr Essentials*, 5–15
starting InfoServer Client for OpenVMS, *(S) Sys Mgr Essentials*, 5–13; *(S) Sys Mgr Tuning*, 23–10
starting queues, *(S) Sys Mgr Essentials*, 5–12
starting the DECnet network, *(S) Sys Mgr Essentials*, 5–15
submitting batch jobs at system startup, *(S) Sys Mgr Essentials*, 5–14
CVT$CONVERT_FLOAT routine, *(P) LIB$*, CVT–3
CVT$FTOF routine, *(P) LIB$*, CVT–9
CVT option, *(P) Rec Mgmt Util*, 4–14
cvt_ftof routine, *(P) Portable Math*, DPML–27, B–6
CWCREPRC_ENABLE system parameter, *(G) V7.0 New Feat*, 3–1
CXY08 device, *(S) DECnet Mgmt*, 2–7
Cylinders, *(P) File Appl*, 1–10, 3–10
boundary, *(P) File Appl*, 3–16
definition, *(S) Sys Mgr Tuning*, A–2
options for, *(P) File Appl*, 4–35

D

DAD virtual disk unit, *(S) Sys Mgr Tuning*, 23–12
DANs (data bucket area numbers)
program example, *(P) RMS Ref*, A–19
Data
aligning, *(P) Concepts*, 8–4
capturing, *(S) VMScluster Sys*, F–28
display, *(S) DECamds*, 2–4, 2–8
Data (cont'd)
including in command procedures, *(G) User*, 16–2
interprocess, *(P) Concepts*, 17–6
link, *(S) DECamds*, 5–16
logical, *(G) User*, 14–18, 14–19, 14–20
sharing, *(P) Concepts*, 17–6
storing with audio information on CD–ROM, *(P) I/O User*, 2–24
thread-specific, *(P) DECthreads*, 2–13, 4–2
transfer security, *(S) DECamds*, 1–4
writing to terminals, *(G) User*, 16–9
writing using the WRITE command, *(G) User*, 16–9
$DATA$ program section name
definition, *(P) Linker*, B–16
Data alignment, *(P) Concepts*, 22–1; *(P) Calling Std*, 3–56
exception reporting, *(P) Concepts*, 13–15
specifying alignment of program sections, *(P) Linker*, 3–4
Data Analyzer, *(S) DECamds*, 1–1, Glossary–1
access for Data Providers, *(S) DECamds*, 1–4
AMDS$CONSOLE_ACCESS.DAT file, *(S) DECamds*, 1–4
data exchange with Data Provider, *(S) DECamds*, 1–8
files used for, *(S) DECamds*, B–1
log files, *(S) DECamds*, B–4
security file, *(S) DECamds*, A–14
setting up after installing, *(S) DECamds*, A–14
starting, *(S) DECamds*, 2–1, A–15
system directory definition, *(S) DECamds*, A–14
typical setup, *(S) DECamds*, 1–2
user account privileges and quotas, *(S) DECamds*, A–14
Data availability
See Availability
Databases
See also Configuration databases and Queue database
accessing when public, *(S) DECnet Intro*, 2–5
authorization, *(S) Security*, 2–4, 2–6
circuit, *(S) DECnet Mgmt*, 3–1
clearing permanent values, *(S) DECnet Mgmt Util*, 3–2
creating volatile or permanent parameters, *(S) DECnet Mgmt Util*, 3–57
loading volatile area with all permanent parameters, *(S) DECnet Mgmt Util*, 3–56
resetting volatile parameters to default, *(S) DECnet Mgmt Util*, 3–2
setting volatile or permanent parameters, *(S) DECnet Mgmt Util*, 3–57
clearing or purging before copying node entries, *(S) DECnet Mgmt*, 3–18

Databases (cont'd)
clearing selected permanent parameters, *(S) DECnet Mgmt Util*, 3–6
compressing, *(P) Util Routines*, DCX–1
copying node, *(S) DECnet Mgmt*, 1–14, 2–5, 3–17, 3–21
copying remote node data, *(S) DECnet Mgmt Util*, 3–36
creating (volatile node), *(S) DECnet Intro*, 3–18
creating volatile or permanent parameters, *(S) DECnet Mgmt Util*, 3–64
data integrity, *(G) SW Overview*, 2–13
DECnet, *(S) DECnet Mgmt*, 1–14
DECnet configuration, *(S) DECnet Intro*, 3–10
default object, *(S) DECnet Intro*, 3–10
dependability features, *(S) Dependable*, 8–35 to 8–50
distributed tools, *(G) SW Overview*, 7–17
Ethernet configurator module
clearing permanent values of a specified circuit, *(S) DECnet Mgmt Util*, 3–20
creating volatile or permanent parameters, *(S) DECnet Mgmt Util*, 3–90
executor node
clearing volatile or permanent loop node and circuit values, *(S) DECnet Mgmt Util*, 3–111
creating volatile or permanent network control parameters, *(S) DECnet Mgmt Util*, 3–64
loading volatile area with all permanent parameters, *(S) DECnet Mgmt Util*, 3–63, 3–85
setting volatile or permanent network control values, *(S) DECnet Mgmt Util*, 3–64
expanding, *(P) Util Routines*, DCX–8
host node
accessing X.25 target node parameters, *(S) DECnet Mgmt Util*, 3–21
interoperability, *(G) SW Overview*, 7–18
LAT database, *(S) Sys Mgr Tuning*, 24–8
line, *(S) DECnet Mgmt*, 3–1
clear and load volatile parameters with permanent data, *(S) DECnet Mgmt Util*, 3–76
clearing all values, *(S) DECnet Mgmt Util*, 3–12
creating parameters, *(S) DECnet Mgmt Util*, 3–77
resetting volatile parameters to default, *(S) DECnet Mgmt Util*, 3–12
setting parameters, *(S) DECnet Mgmt Util*, 3–77
LMF
use in system startup, *(S) Sys Mgr Essentials*, 5–5
logging, *(S) DECnet Mgmt*, 3–1

Databases
logging (cont'd)
clearing event-source values, *(S) DECnet Mgmt Util*, 3–17
clearing sink-name, *(S) DECnet Mgmt Util*, 3–19
clearing volatile data, *(S) DECnet Mgmt Util*, 3–16
creating event-sink parameters, *(S) DECnet Mgmt Util*, 3–88
creating event-source parameters, *(S) DECnet Mgmt Util*, 3–86
resetting event-source values, *(S) DECnet Mgmt Util*, 3–17
resetting volatile data, *(S) DECnet Mgmt Util*, 3–16
setting event-sink parameters, *(S) DECnet Mgmt Util*, 3–88
setting event-source parameters, *(S) DECnet Mgmt Util*, 3–86
loop node
clearing volatile or permanent values on executor node, *(S) DECnet Mgmt Util*, 3–31
creating volatile or permanent parameters, *(S) DECnet Mgmt Util*, 3–111
setting volatile or permanent values, *(S) DECnet Mgmt Util*, 3–111
management systems, *(G) SW Overview*, 7–15
memory-resident (volatile), *(S) DECnet Intro*, 3–34
module, *(S) DECnet Mgmt*, 3–1
network
permanent, *(S) Sys Mgr Tuning*, 21–11
volatile, *(S) Sys Mgr Tuning*, 21–11
node, *(S) DECnet Intro*, 3–8; *(S) DECnet Mgmt*, 3–1
clearing volatile or permanent values, *(S) DECnet Mgmt Util*, 3–27
creating volatile or permanent parameters, *(S) DECnet Mgmt Util*, 3–106
setting volatile or permanent values, *(S) DECnet Mgmt Util*, 3–106
object, *(S) DECnet Mgmt*, 3–2
creating volatile or permanent parameters, *(S) DECnet Mgmt Util*, 3–113
loading volatile area with all permanent parameters, *(S) DECnet Mgmt Util*, 3–112
setting volatile or permanent values, *(S) DECnet Mgmt Util*, 3–113
of software products, *(S) Sys Mgr Essentials*, 3–20
permanent, *(S) DECnet Intro*, 3–10, 3–11, 3–35; *(S) DECnet Mgmt*, 1–13, 3–2, 5–34
products, *(G) SW Overview*, 4–19
protected objects, *(S) Security*, 11–6
proxy

Databases
proxy (cont'd)
clear and load volatile area with all permanent parameters, *(S) DECnet Mgmt Util*, 3–75
RDO utility as prototyping tool, *(S) Dependable*, 8–33
record, *(P) Concepts*, 8–12
relational, *(G) SW Overview*, 7–15
replication across wide area networks, *(S) Dependable*, 3–6
resetting selected volatile parameters to default, *(S) DECnet Mgmt Util*, 3–6
setting volatile or permanent parameters, *(S) DECnet Mgmt Util*, 3–64
standards, *(G) SW Overview*, A–2
startup
definition, *(S) Sys Mgr Essentials*, 5–18
layered product, *(S) Sys Mgr Essentials*, 5–18, 5–19
OpenVMS, *(S) Sys Mgr Essentials*, 5–18
order of startup events, *(S) Sys Mgr Essentials*, 5–4
updating all volatile or permanent data, *(S) DECnet Mgmt Util*, 3–36
volatile, *(S) DECnet Intro*, 3–10, 3–26; *(S) DECnet Mgmt*, 1–13, 3–2
volatile network, *(S) Security*, 12–16
X.25 network connector-node access
clearing volatile or permanent names and parameters, *(S) DECnet Mgmt Util*, 3–21
for host node, *(S) DECnet Mgmt Util*, 3–21, 3–92
X.25 or X.29 server module
clearing volatile or permanent call handler values, *(S) DECnet Mgmt Util*, 3–25
creating volatile or permanent call handler parameters, *(S) DECnet Mgmt Util*, 3–100
resetting volatile or permanent call handler values, *(S) DECnet Mgmt Util*, 3–25
setting volatile or permanent call handler values, *(S) DECnet Mgmt Util*, 3–100
X.25 protocol module
clearing volatile or permanent values, *(S) DECnet Mgmt Util*, 3–22
creating volatile or permanent parameters, *(S) DECnet Mgmt Util*, 3–94
resetting volatile parameters to default, *(S) DECnet Mgmt Util*, 3–22
setting volatile or permanent values, *(S) DECnet Mgmt Util*, 3–94
Database support, *(P) Environment*, 3–3
distributed applications, *(P) Environment*, 3–5
SQL, *(P) Environment*, 2–5
Data blocks
partially recorded
ISO 9660 standard, *(S) Sys Mgr Essentials*, 8–5
Data bucket, *(P) Rec Mgmt Util*, 4–26
Data bucket area numbers
See DANs
Data bucket fill size
See DFL
DATA BUCKET structure, *(P) File Appl*, 10–15, 10–18
Data card deck, *(S) Sys Mgr Essentials*, 7–18
Data Center Monitor
See DCM
Data centers
backup procedures, *(S) Dependable*, 9–14
Business Recovery Server, *(G) SW Overview*, 2–14, 7–10
evaluation checklists, *(S) Dependable*, A–3 to A–20
locking the computer, *(S) Dependable*, 3–5
management techniques, *(S) Dependable*, 9–1
managing, *(G) SW Overview*, 2–14, 7–4
operations overview, *(S) Dependable*, 9–8
security policies, *(S) Dependable*, 9–19
software environment, *(S) Dependable*, 9–14
Data checks
changing default, *(G) DCL N-Z*, DCLII–231
disk, *(P) I/O User*, 2–12, 2–32, 2–33
magnetic tape, *(P) I/O User*, 3–6, 3–14, 3–15
Data collection
by AUTOGEN, *(S) Sys Mgmt Util A-L*, 6–6
DATA command, *(S) DECnet Mgmt Util*, 4–6
Data compaction
TA90E support, *(S) Sys Mgmt Util A-L*, 7–46
volume mount, *(S) Sys Mgmt Util M-Z*, 2–24
Data compression, *(P) File Appl*, 3–19
See also DCX routines
algorithm for submitting all data records, *(P) Util Routines*, DCX–16
analysis preceding compression, *(P) Util Routines*, DCX–14
size of data after compression, *(P) Util Routines*, DCX–1
Data Compression facility routines
See DCX routines
Data Distributor, *(G) SW Overview*, 7–18
use in wide area networks, *(S) Dependable*, 3–6
Data errors
recovery from, *(S) Dependable*, 8–22t
Data expansion, *(P) Util Routines*, DCX–23
initializing, *(P) Util Routines*, DCX–26
Data Expansion facility routines
See DCX routines

Data field, *(S) Sys Mgmt Util M-Z*, 4–3
Data files
  creating, *(P) Rec Mgmt Util*, 2–1, 6–1; *(P) File Appl*, 4–15
  creating with FDL$CREATE routine, *(P) File Appl*, 4–13, 4–16
  including programs in, *(G) User*, 16–8
  reducing and expanding, *(P) CDU, LBR, & MU*, LIB–11
  reorganizing, *(P) File Appl*, 10–27
Data filtering
  See Filtering
Datagram Exchange protocol
  See DX protocol
Datagrams, *(S) VMScluster Sys*, F–17 to F–26; *(S) TCP/IP*, 1–2
  CCSTART, *(S) VMScluster Sys*, F–17
  Ethernet, *(S) DECnet Mgmt*, 1–4
  Ethernet headers, *(S) VMScluster Sys*, F–21
  retransmission problems, *(S) VMScluster Sys*, F–18
  VACK, *(S) VMScluster Sys*, F–17
Data integrity
  checking, *(S) DECnet Mgmt Util*, 4–7
  DECdtm, *(G) SW Overview*, 7–13
  production systems, *(G) SW Overview*, 7–4
  software tools, *(G) SW Overview*, 2–13, 7–4
Data interleaving
  ISO 9660, *(S) Sys Mgr Essentials*, 8–6
Data levels
  comparing for primary and alternate keys, *(P) RMS Ref*, 12–4
Data link
  creating with LATCP, *(S) Sys Mgmt Util A-L*, 13–7
  modifying LAT characteristics of, *(S) Sys Mgmt Util A-L*, 13–26
  number supported by LAT software, *(S) Sys Mgmt Util A-L*, 13–9
Data Link layer
  control, *(S) DECnet Mgmt*, 2–4
  events, *(S) DECnet Mgmt Util*, D–9
  problems, *(S) DECnet Intro*, 4–13
Data loss
  avoiding by dismounting volume, *(S) Sys Mgr Essentials*, 8–44
Data management, *(G) SW Overview*, 4–18
Data message length, *(S) DECnet Mgmt Util*, 4–6, 4–11
Data packet transmissions
  and circuit counters, *(S) DECnet Intro*, 4–3
Data parity
  dependability features, *(S) Dependable*, 8–26
Data passing
  for Alpha systems, *(P) Calling Std*, 3–48
  unused bits, *(P) Calling Std*, 3–50
Data Provider, *(S) DECamds*, 1–1, Glossary–1
  access for Data Analyzers, *(S) DECamds*, 1–4
  AMDS$DRIVER_ACCESS.DAT file, *(S) DECamds*, 1–4
  data exchange with Data Analyzer, *(S) DECamds*, 1–8
  files, *(S) DECamds*, B–3
  restarting, *(S) DECamds*, 1–8
  restrictions, *(S) DECamds*, 1–2
  security file, *(S) DECamds*, A–13
  setting up after installation, *(S) DECamds*, A–13
  starting, *(S) DECamds*, A–14
/DATA qualifier
  using to save disk space, *(P) CDU, LBR, & MU*, LIB–11
Data record compaction, *(G) DCL A-M*, DCLI–259
  TA90E support, *(G) DCL N-Z*, DCLII–163
Data records, *(P) Rec Mgmt Util*, 1–3, 4–5
  analysis, *(P) Util Routines*, DCX–12
  compression, *(P) Util Routines*, DCX–1
  conversion, *(P) Util Routines*, CONV–1
  expansion, *(P) Util Routines*, DCX–1
Data reliability, *(P) File Appl*, 9–10
Data storage
  file organization and, *(P) File Appl*, 3–2
Data streams
  marking beginning of, *(G) DCL A-M*, DCLI–117
  marking end of, *(G) DCL A-M*, DCLI–211
Data structures, *(P) Rec Mgmt Util*, 1–1
  cma_t_once, *(P) DECthreads*, E–62
  displaying at next higher level, *(P) Rec Mgmt Util*, 1–23
  FABs (file access blocks), *(P) Environment*, 10–16
  formatting, *(P) Alpha SDA*, SDA–53; *(P) VAX SDA*, SDA–60
  global symbols, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–64
  NAMs (name blocks), *(P) Environment*, 10–16
  pthread_once_t, *(P) DECthreads*, pthread–99, tis–23, G–70
  RABs (record access blocks), *(P) Environment*, 10–16
  stepping through a linked list, *(P) Alpha SDA*, SDA–64; *(P) VAX SDA*, SDA–68
  XABs (extended attribute blocks), *(P) Environment*, 10–16
Data terminal equipment
  See DTE
Data tests, *(S) DECnet Mgmt Util*, 4–6
Data throughput
  enhanced with multiple adapters, *(S) VMScluster Sys*, 3–5
Data transfer mode
  as controlled by the generic SCSI class driver, *(P) I/O User*, 8–6, 8–12

Data transfer mode (cont'd)
asynchronous, *(P) I/O User*, 8–6, 8–12
synchronous, *(P) I/O User*, 8–6, 8–12
Data transmission media, *(S) DECnet Intro*, 1–6
DATATRIEVE, *(G) SW Overview*, 7–17
prototyping tool, *(S) Dependable*, 8–32
Data types, *(P) Interfaces*, 1–7, B–1; *(P) File Appl*, 3–19
See also Types
Ada declarations, *(P) Interfaces*, B–16
APL declarations, *(P) Interfaces*, B–19
atomic, *(P) Calling Std*, 4–1 to 4–3
BASIC declarations, *(P) Interfaces*, B–21
BLISS declarations, *(P) Interfaces*, B–24
C declarations, *(P) Interfaces*, B–27
COBOL declarations, *(P) Interfaces*, B–30
facility-specific codes, *(P) Calling Std*, 4–6
Fortran declarations, *(P) Interfaces*, B–33
MACRO declarations, *(P) Interfaces*, B–37
miscellaneous, *(P) Calling Std*, 4–4 to 4–5
OpenVMS, *(P) Interfaces*, B–1, B–2
OpenVMS standard, *(P) Interfaces*, 1–7
OpenVMS usage, *(P) Interfaces*, 1–6
Pascal declarations, *(P) Interfaces*, B–40
PL/I declarations, *(P) Interfaces*, B–43
reserved codes, *(P) Calling Std*, 4–5
RPG II declarations, *(P) Interfaces*, B–49
SCAN declarations, *(P) Interfaces*, B–51
string, *(P) Calling Std*, 4–4
symbolic code, *(P) Interfaces*, 1–7
using lexical functions with, *(G) User*, 17–16
varying character string, *(P) Calling Std*, 4–6
Data windows, *(S) DECamds*, Glossary–1
See also specific window names
CPU Modes Summary, *(S) DECamds*, 3–2
CPU Summary, *(S) DECamds*, 3–4
Disk Status Summary, *(S) DECamds*, 3–5
Disk Volume Summary, *(S) DECamds*, 3–7
hierarchy, *(S) DECamds*, 3–2
Lock Contention Summary, *(S) DECamds*, 3–8
Memory Summary, *(S) DECamds*, 3–10
Node Summary, *(S) DECamds*, 3–12
overview, *(S) DECamds*, 3–1
Page/Swap File Summary, *(S) DECamds*, 3–15
Process I/O Summary, *(S) DECamds*, 3–16
Single Lock Summary, *(S) DECamds*, 3–18
Single Process Summary, *(S) DECamds*, 3–20
DATA_AREA attribute, *(P) Rec Mgmt Util*, 4–26, 4–27; *(P) File Appl*, 3–25
/DATA_CHECK qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–18
DATA_FILL attribute, *(P) Rec Mgmt Util*, 4–4, 4–26
DATA_KEY_COMPRESSION attribute, *(P) Rec Mgmt Util*, 4–4, 4–26
DATA_RECORD_COMPRESSION attribute, *(P) Rec Mgmt Util*, 4–4, 4–26
DATA_RECORD_COUNT attribute, *(P) Rec Mgmt Util*, 4–5
DATA_SPACE_OCCUPIED attribute, *(P) Rec Mgmt Util*, 4–5
DATE attribute, *(P) Rec Mgmt Util*, 4–15
Date formats, *(S) Sys Mgr Essentials*, 5–42
predefined, *(S) Sys Mgr Essentials*, 5–47
specifying, *(S) Sys Mgr Essentials*, 5–45
Date-information option, *(P) File Appl*, 4–32
DATE primary, *(P) File Appl*, 4–32
Dates
See also Time
64-bit system format, *(P) Concepts*, 5–1
128-bit system format, *(P) Concepts*, 5–34
changing system, *(G) DCL N-Z*, DCLII–226
displaying, *(G) DCL N-Z*, DCLII–353
displaying in a VMScluster, *(S) Sys Mgmt Util M-Z*, 6–18
getting current system, *(P) Concepts*, 5–10
Smithsonian base, *(P) Concepts*, 5–1
specifying absolute and delta date and time combinations, *(G) User*, 3–13
specifying absolute date and time, *(G) User*, 3–11
specifying delta date and time, *(G) User*, 3–12
Date/time manipulation
converting, *(P) Concepts*, 5–7
Date/Time routines
LIB$DATE_TIME, *(P) LIB$*, LIB–101
LIB$DAY, *(P) LIB$*, LIB–103
LIB$DAY_OF_WEEK, *(P) LIB$*, LIB–105
date_time data type, *(P) Interfaces*, B–6
/DATE_TIME qualifier, *(P) Debugger*, CD–77, CD–104, CD–130
DAT_NCMPR option, *(P) Rec Mgmt Util*, 4–26
Daylight saving time
changing your time differential factor (TDF) for, *(S) Sys Mgr Essentials*, 5–35
DAYLIGHT_SAVINGS.COM command procedure, *(S) Sys Mgr Essentials*, 5–35
Days
setting primary, *(G) DCL N-Z*, DCLII–106
setting secondary, *(G) DCL N-Z*, DCLII–106
DBBFs (detected bad block files), *(S) Sys Mgr Essentials*, 8–65
DBG$DECW$DISPLAY logical name, *(P) Debugger*, 2–8, 2–9, 2–10, 5–15, B–1
DBG$INIT logical name, *(P) Debugger*, 12–4, B–1
DBG$INPUT logical name, *(P) Debugger*, 2–9, 13–14, B–1
DBG$OUTPUT logical name, *(P) Debugger*, 2–9, 13–14, B–1
DBG$PROCESS logical name, *(P) Debugger*, 5–15, 14–2, 14–10, B–1

DBG$SMGSHR logical name, *(P) Debugger*, 11–25
DBGTK_SCRATCH system parameter, *(G) V7.0 New Feat*, 3–1
DBIN key types, *(P) Rec Mgmt Util*, 4–29
DB Integrator, *(G) SW Overview*, 7–18
DB Integrator Gateway, *(G) SW Overview*, 7–6
DBMS, *(G) SW Overview*, 2–13, 7–6, 7–17
DBQ prototyping tool, *(S) Dependable*, 8–33
DCE (Distributed Computing Environment), *(G) SW Overview*, 2–6; *(P) Environment*, 3–5
  heterogeneous networks, *(G) SW Overview*, 6–2
  product family, *(G) SW Overview*, 2–9
  software, *(G) SW Overview*, 6–13
  standards, *(G) SW Overview*, 2–2
  support for network transports, *(G) SW Overview*, 6–14
DCE Application Development Kit for OpenVMS, *(G) SW Overview*, 2–10, 6–13; *(P) Environment*, 3–6
DCE CDS
  See CDS
DCE DTS
  See DTS
DCE Remote Procedure Call
  See RPC
DCE Run-Time Services for OpenVMS, *(G) SW Overview*, 2–10, 6–13; *(P) Environment*, 3–6
DCE Security Server, *(G) SW Overview*, 2–10, 6–13; *(P) Environment*, 3–6
DCE Threads Service, *(G) SW Overview*, 2–10, 6–14
DCL (DIGITAL Command Language), *(G) SW Overview*, 3–4, 5–2; *(S) TCP/IP*, 3–1, 5–1
  alternate login command procedure, *(G) DCL A-M*, DCLI–415
  command language routines, *(P) CDU, LBR, & MU*, CDU–18
  command processing, *(P) CDU, LBR, & MU*, CDU–3 to CDU–4
  definition, *(G) User*, 3–1
  interpreter, global symbols, *(P) VAX SDA*, SDA–64
  login command procedure, *(G) DCL A-M*, DCLI–415
  remote file handling commands, *(S) DECnet Intro*, 2–1
  SHOW command, *(G) SW Overview*, 3–10
DCL commands, *(S) DECnet Mgmt*, 1–18
  abbreviating, *(G) User*, 3–7
    in command procedures, *(G) User*, 3–7
  abbreviating qualifiers, *(G) User*, 3–9
  accessing disk and tape files, *(S) Sys Mgr Essentials*, 9–13
  automatic foreign commands, *(G) User*, 14–39
  canceling, *(G) User*, 3–18
  case sensitivity, *(G) User*, 3–2
  command qualifiers, *(G) User*, 3–9
DCL commands (cont'd)
  conflicting qualifiers, *(G) User*, 3–10
  constructing, *(G) User*, 3–3
  continuing execution of, *(G) DCL A-M*, DCLI–64
  default qualifiers, *(G) User*, 3–9
  defaults, *(G) User*, 3–5
  editing command line, *(G) User*, 3–16
  entering, *(G) User*, 3–2
  executing with SYSMAN DO command, *(S) Sys Mgr Essentials*, 2–18
  file manipulation, *(S) Sys Mgr Essentials*, 9–1
  for remote directory listings, *(S) Sys Mgr Tuning*, 21–14
  for remote file access, *(S) Sys Mgr Tuning*, 21–14
  for remote terminal service, *(S) Sys Mgr Tuning*, 21–13
  for system management, *(S) Sys Mgr Essentials*, 2–5
  including in command procedures, *(G) User*, 15–3
  in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–30
  interrupting, *(G) User*, 3–18
  lowercase letters, *(G) User*, 3–6
  marking beginning of input stream, *(G) DCL A-M*, DCLI–117
  marking end of input stream, *(G) DCL A-M*, DCLI–211
  maximum number of elements, *(G) User*, 3–7
  MONITOR DECNET in network operations, *(S) DECnet Intro*, 4–7
  multiple line command, *(G) User*, 3–6
  order of in command procedures, *(G) User*, 15–9
  parameter qualifiers, *(G) User*, 3–9
  parameters, *(G) User*, 3–5
  performed in the command interpreter, *(G) User*, 16–11
  positional qualifiers, *(G) User*, 3–9
  prompt, *(G) User*, 3–3
  recalling, *(G) User*, 3–19
  redirecting output from, *(G) User*, 16–10
  required punctuation, *(G) User*, 3–7
  required spaces, *(G) User*, 3–6
  resuming execution of, *(G) DCL A-M*, DCLI–64
  retrieving file information, *(S) Sys Mgr Essentials*, 9–2
  rules for entering, *(G) User*, 3–6
  RUN [process] command
    /ON qualifier, *(G) V7.0 New Feat*, 2–1
  SET HOST and network security, *(S) DECnet Intro*, 3–34
  SET HOST/DTE in network operations, *(S) Security*, 12–17
  SET HOST in network operations, *(S) DECnet Intro*, 3–3

DCL commands (cont'd)
SET PROTECTION for network file security, *(S) DECnet Intro*, 3–35
SET SECURITY, *(G) DCL N-Z*, DCLII–200
SET TERMINAL in network operations, *(S) Security*, 12–15
SHOW AUDIT, *(G) DCL N-Z*, DCLII–242
SHOW NETWORK in network operations, *(S) DECnet Intro*, 3–4
SHOW SECURITY, *(G) DCL N-Z*, DCLII–335
specifying parameters, *(G) User*, 3–8
support for TCP/IP, *(S) Sys Mgr Tuning*, 21–13
syntax, *(G) User*, 3–3, 3–4
TYPE in network operations, *(S) DECnet Intro*, 2–14
uppercase letters, *(G) User*, 3–6
verbs, *(G) User*, 3–3
with DO command in SYSMAN, *(S) Sys Mgr Tuning*, 20–20
DCL command strings
See Command strings
DCLDEF.STB file, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–64
DCL foreign command, *(P) Debugger*, 5–8
DCL Help
See HELP command
DCL interface, *(S) Sys Mgr Essentials*, 3–18
DCL interpreter
global symbols, *(P) Alpha SDA*, SDA–15
DCM
use at CSC lights out data center, *(S) Dependable*, 11–17
DCOLLATED key type, *(P) Rec Mgmt Util*, 4–29
DCX$ANALYZE_DATA routine, *(P) Util Routines*, DCX–12
DCX$ANALYZE_DONE routine, *(P) Util Routines*, DCX–14
DCX$ANALYZE_INIT routine, *(P) Util Routines*, DCX–15
DCX$COMPRESS_DATA routine, *(P) Util Routines*, DCX–18
DCX$COMPRESS_DONE routine, *(P) Util Routines*, DCX–20
DCX$COMPRESS_INIT routine, *(P) Util Routines*, DCX–21
DCX$EXPAND_DATA routine, *(P) Util Routines*, DCX–23
DCX$EXPAND_DONE routine, *(P) Util Routines*, DCX–25
DCX$EXPAND_INIT routine, *(P) Util Routines*, DCX–26
DCX$MAKE_MAP routine, *(P) Util Routines*, DCX–28
DCX routines, *(P) Util Routines*, DCX–1
examples, *(P) Util Routines*, DCX–11 to DCX–29
DDBs (device data blocks), *(P) Alpha SDA*, SDA–94; *(P) VAX SDA*, SDA–105
DDB symbol, *(P) VAX SDA*, SDA–17
DDCMP (Digital Data Communications Message Protocol)
asynchronous, *(S) DECnet Mgmt*, 1–3, 1–7, 2–12, 3–25, 5–12
asynchronous communication, *(S) DECnet Intro*, 3–4, 3–19
asynchronous connection, *(S) DECnet Intro*, 1–12
asynchronous driver, *(S) Security*, 12–15; *(S) DECnet Intro*, 3–19, 3–25
asynchronous line, *(S) DECnet Mgmt*, 1–4, 3–37
circuit, *(S) DECnet Mgmt*, 2–6, 3–24, 3–26
configuration, *(S) DECnet Mgmt*, 1–7
CONTROL line, *(S) DECnet Mgmt*, 3–37
DMC line, *(S) DECnet Mgmt*, 3–37
dynamic asynchronous network configuration, *(S) DECnet Mgmt*, 5–29
dynamic connection, *(S) DECnet Intro*, 3–19
formula for determining maximum number of messages, *(S) DECnet Mgmt*, 3–44
for multipoint connections, *(S) Sys Mgr Tuning*, 21–9
for point-to-point connections, *(S) Sys Mgr Tuning*, 21–8
lines, *(S) DECnet Mgmt*, 2–11, 3–38
receive buffers, *(S) DECnet Mgmt*, 3–42
MOP, *(S) DECnet Mgmt*, 4–11
multipoint, *(S) DECnet Mgmt*, 1–8
multipoint network configuration, *(S) DECnet Mgmt*, 5–25
multipoint tributary addressing, *(S) DECnet Mgmt*, 3–25
POINT line, *(S) DECnet Mgmt*, 3–37
point-to-point, *(S) DECnet Mgmt*, 1–8
point-to-point addressing, *(S) DECnet Mgmt*, 3–25
protocol, *(S) DECnet Mgmt*, 1–8
static asynchronous network configuration, *(S) DECnet Mgmt*, 5–27
static connection, *(S) DECnet Intro*, 3–19
synchronous, *(S) DECnet Mgmt*, 1–3, 1–7, 2–7, 2–12
synchronous connection, *(S) DECnet Intro*, 1–12
synchronous devices, *(S) DECnet Mgmt*, 1–8
synchronous line, *(S) DECnet Mgmt*, 1–4
synchronous point-to-point network configuration, *(S) DECnet Mgmt*, 5–23
TRIBUTARY line, *(S) DECnet Mgmt*, 3–37
ddcu format
for device names, *(S) Sys Mgr Essentials*, 7–1
DDE (Dynamic Data Exchange) protocol
ObjectBroker, *(P) Environment*, 3–6

DDECIMAL key type, *(P) Rec Mgmt Util*, 4–29
DDIF$RMS_EXTENSION.EXE file, *(P) Alpha SDA*, SDA–61
DDIF converters, *(G) DCL A-M*, DCLI–67, DCLI–68
.DDIF files
  in Mail, *(G) User*, 6–9
DDT (driver dispatch table), *(P) Alpha SDA*, SDA–94; *(P) VAX SDA*, SDA–105
DDT symbol, *(P) VAX SDA*, SDA–17
Deaccess file function, *(P) I/O User*, 1–27
DEACTIVATE BREAK command, *(P) Debugger*, 7–11, CD–54
DEACTIVATE TRACE command, *(P) Debugger*, 7–11, CD–56
DEACTIVATE WATCH command, *(P) Debugger*, 7–13, CD–58
Deadlocks, *(P) Modular Proc*, 3–17
  debugging, *(P) Debugger*, 16–32
  detecting, *(P) Concepts*, 15–8
  how to avoid, *(P) DECthreads*, 3–8
Dead timer, *(S) DECnet Mgmt*, 3–43
DEALLOCATE command, *(G) User*, 12–3; *(G) DCL A-M*, DCLI–110; *(S) Sys Mgr Essentials*, 8–10
  tape, *(S) Sys Mgr Essentials*, 9–23
Deallocating devices, *(G) DCL A-M*, DCLI–110; *(S) Sys Mgr Essentials*, 8–10; *(P) Sys Svc I*, SYS1–238
Deallocating drives, *(S) Sys Mgr Essentials*, 8–10
DEASSIGN command, *(G) User*, 13–22; *(G) DCL A-M*, DCLI–111 to DCLI–114
Deassigning an I/O channel, *(P) Sys Svc I*, SYS1–240
DEASSIGN/QUEUE command, *(G) DCL A-M*, DCLI–115
DEBNA Ethernet device, *(S) DECnet Mgmt*, 2–10
DEBNI Ethernet device, *(S) DECnet Mgmt*, 2–10
DEBUG command, *(G) DCL A-M*, DCLI–116; *(P) Debugger*, 2–7, 5–14, 14–13, CD–50
Debugger
  See also Delta/XDelta Debugger utility
  analyzing in object files, *(G) DCL A-M*, DCLI–27
  CALL command and floating-point parameters, *(G) V7.0 New Feat*, 4–4
  Close File menu item, *(G) V7.0 New Feat*, 4–6
  command interface, *(P) Debugger*, 5–1
    with DECwindows Motif, *(P) Debugger*, 1–2, 1–15, 2–9, 5–15
  customization features, *(G) V7.0 New Feat*, 4–4
  customizing, *(P) Debugger*, 3–28, 11–12, 11–13, 11–14, 11–19, 12–1, 12–4, 12–6, 12–8, 12–9
  customizing fonts, *(G) V7.0 New Feat*, 4–6
  DECwindows Motif interface, *(P) Debugger*, 1–1
  displaying command interface on other terminal, *(P) Debugger*, 2–9, 13–13
Debugger (cont'd)
  displaying DECwindows Motif interface on other workstation, *(P) Debugger*, 2–8
  Editor File menu, *(G) V7.0 New Feat*, 4–6
  EXAMINE/DEFINITIONS command, *(G) V7.0 New Feat*, 4–2
  information record analysis, *(G) DCL A-M*, DCLI–27
  initialization file, *(P) Debugger*, 12–4
  internationalization, *(G) V7.0 New Feat*, 4–3
    customizing fonts, *(G) V7.0 New Feat*, 4–6
  invoking, *(G) DCL A-M*, DCLI–30, DCLI–116
  Kept Debugger, *(G) DCL A-M*, DCLI–116
  messages, *(P) Debugger*, 1–18, 6–2
  null frame procedures, *(G) V7.0 New Feat*, 4–4
  online help, *(P) Debugger*, 1–17, 6–1, CD–127
  quadwords, *(P) 64-Bit Addr*, 7–1
  Refresh File menu item, *(G) V7.0 New Feat*, 4–6
  resource file, *(P) Debugger*, 3–32
  RUN command, *(G) DCL N-Z*, DCLII–56
  SHOW CALLS command, *(G) V7.0 New Feat*, 4–4
  SHOW STACK command, *(G) V7.0 New Feat*, 4–4
  starting, *(P) Debugger*, 2–1, 2–6, 5–7, 5–13, 14–2, 14–13
  terminating, *(P) Debugger*, 2–6, 5–11
  tutorial, command interface, *(P) Debugger*, 6–1
  use with completion status codes, *(P) RMS Ref*, 2–8
  using with DEPOSIT command, *(G) DCL A-M*, DCLI–153
  using with EXAMINE command, *(G) DCL A-M*, DCLI–214
  with optimized programs, *(G) V7.0 New Feat*, 4–1
    semantic events, *(G) V7.0 New Feat*, 4–2
    SET STEP SEMANTIC_EVENT command, *(G) V7.0 New Feat*, 4–3
    split-lifetime variables, *(G) V7.0 New Feat*, 4–2
    STEP/SEMANTIC_EVENT command, *(G) V7.0 New Feat*, 4–3
Debugger commands
  dictionary, *(P) Debugger*, CD–3
  disabled in DECwindows Motif, *(P) Debugger*, 1–17
  format, *(P) Debugger*, 6–1, CD–3
  online help, *(P) Debugger*, 1–18, 6–1, CD–127
  repeating, *(P) Debugger*, 12–9, CD–123, CD–138, CD–139, CD–312
  summary, *(P) Debugger*, 5–16
  with DECwindows Motif, *(P) Debugger*, 1–2, 1–15, 5–15
Debugger information records
  Alpha object language, *(P) Linker*, B–45
  VAX object language, *(P) Linker*, A–33

Debugger resource file
customizing, *(P) Debugger*, 3–33
Debuggers, *(P) Environment*, 9–1 to 9–9
Debugging
Alpha object language records, *(P) Linker*, B–45
command procedures, *(G) User*, 15–14
SET PREFIX command, *(G) User*, 15–15
SET VERIFY command, *(G) User*, 15–15
SHOW SYMBOL command, *(G) User*, 15–15
condition handler, *(P) Concepts*, 13–70
enabling at link time, *(P) Linker*, LINK–9
exit handler, *(P) Concepts*, 13–70
including debugger information in an image, *(P) Linker*, 3–24
including global symbols in a symbol table file, *(P) Linker*, LINK–64
including traceback information, *(P) Linker*, LINK–39
multithreaded program, *(P) DECthreads*, pthread–57, pthread–58, E–46, E–47
object language record format, *(P) Linker*, B–45
programs that use VM zones, *(P) Concepts*, 21–19
satellite booting, *(S) VMScluster Sys*, C–5
specifying a user-written debugger, *(P) Linker*, LINK–9
threads
on systems based on Windows NT software, *(P) DECthreads*, D–10
VAX object language records, *(P) Linker*, A–33
Debugging configurations
default, *(P) Debugger*, 5–15, 14–10
multiprocess, *(P) Debugger*, 14–2, 14–10
/DEBUG qualifier, *(P) Linker*, LINK–9; *(P) Debugger*, 5–5, 9–2, 9–4, 10–1
shareable image, *(P) Debugger*, 9–11
/DEBUG qualifier and private image copies
performance, *(P) Debugger*, 5–7
Debug symbol files
See also /DSF qualifier
creating, *(P) Linker*, 1–15, LINK–12
Debug symbol tables
See DSTs
DEC ACCESSWORKS, *(G) SW Overview*, 7–18
See ACCESSWORKS
DEC Ada
See Ada
DECADMIRE, *(G) SW Overview*, 6–16, 7–5; *(P) Environment*, 1–5
applications development tool, *(S) Dependable*, 3–9
DECalert, *(S) Dependable*, 11–12, 11–14 to 11–15
introduction, *(S) Dependable*, 7–17
DECamds, *(G) SW Overview*, 2–13, 7–3, 7–7; *(S) Dependable*, 8–17 to 8–18
New Cluster Windows, *(G) V7.0 New Feat*, 6–5
operations management, *(S) VMScluster Sys*, 1–9
overview, *(S) DECamds*, 1–1
processing model, *(S) DECamds*, 1–2
security features, *(S) DECamds*, 1–3
Single Disk Summary Window, *(G) V7.0 New Feat*, 6–3
starting, *(S) DECamds*, 2–1, A–14
summary of features, *(G) V7.0 New Feat*, 6–1
System Overview Window, *(G) V7.0 New Feat*, 6–2
DECamds software
not in C2 evaluation, *(S) Security*, C–3
DEC BASIC
See BASIC
%DEC built-in symbol, *(P) Debugger*, 8–12, B–6
DEC C
See C
DEC C++
See C++
DEC C compiler
alignment, *(P) Concepts*, 22–4
DEC COBOL
See COBOL
DEC Code Management System
See CMS
DEC Data Distributor
See Data Distributor
DEC DB Integrator
See DB Integrator
DEC DB Integrator Gateway
See DB Integrator Gateway
DEC DBMS
See also DBMS
DBQ utility as prototyping tool, *(S) Dependable*, 8–33
DECdecision, *(G) SW Overview*, 7–5, 7–17
4GL technology, *(S) Dependable*, 3–9
DECdfs, *(G) SW Overview*, 2–11; *(P) Environment*, 3–2
DECdns, *(G) SW Overview*, 2–10, 6–3; *(P) Environment*, 3–2
call time out, *(P) Concepts*, 11–4
clerk, *(S) DECnet Mgmt*, 3–23
creating objects, *(P) Concepts*, 11–4
DECnet use of, *(S) DECnet Mgmt*, 3–22
development product, *(S) Dependable*, 8–60
event messages, *(S) DECnet Mgmt Util*, D–12
events, *(S) DECnet Mgmt Util*, D–12
IDP, *(S) DECnet Mgmt Util*, 3–7
interface, *(S) DECnet Mgmt Util*, 3–7, 3–66
namespace, *(S) DECnet Mgmt Util*, 3–7, 3–66
naming conventions, *(P) Concepts*, 11–16

DECdns (cont'd)
object attributes, *(P) Concepts*, 11–10
startup, *(S) DECnet Mgmt*, 3–23
storing full names in, *(S) Sys Mgr Tuning*, 21–2
supporting network dependability, *(S) Dependable*, 7–16
DECdns distributed name service
not in C2 evaluation, *(S) Security*, C–3
DECdns names
converting, *(P) Sys Svc I*, SYS1–303, SYS1–304, SYS1–305, SYS1–307
converting full name, *(P) Sys Svc I*, SYS1–303
DECdns objects
creating, *(P) Sys Svc I*, SYS1–298
deleting, *(P) Sys Svc I*, SYS1–299
enumerating, *(P) Sys Svc I*, SYS1–301
DECdtm
system services, *(P) Environment*, 10–5
DECDTMDEF.STB file, *(P) Alpha SDA*, SDA–15
DECdtm services
aborted, *(P) Concepts*, 12–1
and managing transaction logs, *(S) Sys Mgr Tuning*, 25–1
atomic, *(P) Concepts*, 12–1
committed, *(P) Concepts*, 12–1
creating a transaction log, *(S) VMScluster Sys*, 8–25
data integrity, *(G) SW Overview*, 7–4
determining computer use of, *(S) VMScluster Sys*, 8–3
disabling, *(S) Sys Mgr Tuning*, 25–20
distributed transaction, *(P) Concepts*, 12–1
enabling, *(S) Sys Mgr Tuning*, 25–21
introduction to programming, *(P) Concepts*, 12–1
log manager, *(G) SW Overview*, 7–13
software components, *(G) SW Overview*, 3–6
support for transaction processing, *(G) SW Overview*, 2–13, 4–12, 7–13
transaction manager (TM), *(G) SW Overview*, 7–13
DECdtm transaction manager, *(S) Sys Mgmt Util M-Z*, A–41
DECdts, *(G) SW Overview*, 2–10, 6–4; *(P) Environment*, 3–2
DECelms software
introduction, *(S) Dependable*, 7–18
monitoring LAN traffic, *(S) VMScluster Sys*, 10–26
DECevent Event Management utility, *(G) SW Overview*, 7–5
DECevent utility, *(S) Sys Mgmt Util A-L*, 9–4
additional commands, *(S) Sys Mgr Tuning*, 18–11
brief report example, *(S) Sys Mgmt Util A-L*, 9–22
description, *(S) Sys Mgr Tuning*, 18–2
DECevent utility (cont'd)
device classes
excluding, *(S) Sys Mgmt Util A-L*, 9–9
including, *(S) Sys Mgmt Util A-L*, 9–13
device name, *(S) Sys Mgmt Util A-L*, 9–10
DIAGNOSE command, *(S) Sys Mgr Tuning*, 18–2
entry type, *(S) Sys Mgmt Util A-L*, 9–10, 9–13
error log file, *(S) Sys Mgmt Util A-L*, 9–17
exiting, *(S) Sys Mgr Tuning*, 18–9
fast error report example, *(S) Sys Mgmt Util A-L*, 9–24
full report example, *(S) Sys Mgmt Util A-L*, 9–21
informational messages, *(S) Sys Mgmt Util A-L*, 9–16
introduction, *(S) Sys Mgr Tuning*, 18–8
invoking, *(S) Sys Mgr Tuning*, 18–9
output
directing, *(S) Sys Mgmt Util A-L*, 9–16, 9–17
file specification, *(S) Sys Mgmt Util A-L*, 9–17
privileges required, *(S) Sys Mgr Tuning*, 18–11
producing reports, *(S) Sys Mgr Tuning*, 18–11
qualifiers, *(S) Sys Mgr Tuning*, 18–10; *(S) Sys Mgmt Util A-L*, 9–5 to 9–20
report examples, *(S) Sys Mgmt Util A-L*, 9–21 to 9–25
report format
binary, *(S) Sys Mgmt Util A-L*, 9–6, 9–13, 9–17
brief, *(S) Sys Mgmt Util A-L*, 9–7
fast error, *(S) Sys Mgmt Util A-L*, 9–12
full, *(S) Sys Mgmt Util A-L*, 9–12
rejected entries, *(S) Sys Mgmt Util A-L*, 9–17
summary, *(S) Sys Mgmt Util A-L*, 9–19
terse, *(S) Sys Mgmt Util A-L*, 9–19
report formats, *(S) Sys Mgr Tuning*, 18–9
brief, *(S) Sys Mgr Tuning*, 18–12
fast error (FSTERR), *(S) Sys Mgr Tuning*, 18–15
full, *(S) Sys Mgr Tuning*, 18–11
summary, *(S) Sys Mgr Tuning*, 18–14
terse, *(S) Sys Mgr Tuning*, 18–13
summary report example, *(S) Sys Mgmt Util A-L*, 9–24
terse report example, *(S) Sys Mgmt Util A-L*, 9–23
using to report on error log file, *(S) Sys Mgr Tuning*, 18–8
DEC File Optimizer for OpenVMS, *(S) Dependable*, 8–27; *(S) VMScluster Sys*, 1–11
See File Optimizer
defragmenting disks, *(S) Dependable*, 9–5, 9–17

DEC File Optimizer for OpenVMS (cont'd)
restoring contiguity on fragmented disks, *(S) VAX Perform*, 3–36; *(S) Alpha Perform*, 11–8
DECforms, *(G) SW Overview*, 2–13, 7–6; *(P) Concepts*, 7–2
forms interface, *(S) Dependable*, 8–51
prototyping tool, *(S) Dependable*, 8–32
user interfaces, *(G) SW Overview*, 5–8
using in transaction processing applications, *(G) SW Overview*, 7–13
DECforms/Rdb applications, *(P) Environment*, 1–5
DEC Fortran
See Fortran
DEC Fortran compiler
alignment, *(P) Concepts*, 22–6
DEC GKS
See GKS
Decimal dump, *(G) DCL A-M*, DCLI–189
DECIMAL key type, *(P) Rec Mgmt Util*, 4–30
Decimal overflow detection, *(P) LIB$*, LIB–126
/DECIMAL qualifier, *(P) Debugger*, 8–11, CD–98, CD–101, CD–104, CD–130
Decimal string descriptors, *(P) Calling Std*, 5–13
Decimal value of an expression, *(P) Alpha SDA*, SDA–45; *(P) VAX SDA*, SDA–53
DEC InfoServer
See InfoServer
DECK command, *(G) DCL A-M*, DCLI–117 to DCLI–119
DEC language implementation tables
See Implementation tables
DEC Language-Sensitive Editor
See LSE
DEC Language-Sensitive Editor/Source Code Analyzer
See LSE/SCA
DECLARE command, *(P) Debugger*, 12–2, CD–59
Declaring a condition handler, *(P) DECthreads*, B–4
Declaring an AST (asynchronous system trap), *(P) Sys Svc I*, SYS1–242
DEClinks, *(G) SW Overview*, 4–17, 5–7; *(P) Environment*, 2–4
DEC MAILworks
See MailWorks
DEC Management Control Center
See DECmcc
DECmcc, *(S) VMScluster Sys*, 1–10
monitoring LAN traffic, *(S) VMScluster Sys*, 10–26
monitoring networks, *(S) Dependable*, 7–19
use at CSC lights out data center, *(S) Dependable*, 11–18
DECmigrate for OpenVMS AXP, *(G) SW Overview*, 1–13, 4–6; *(P) Environment*, 1–5
DEC Module Management System
See MMS
DEC Multinational character set, *(G) User*, B–1, B–3; *(P) I/O User*, B–1
string comparison, *(P) STR$*, STR–11, STR–18
string conversion, *(P) STR$*, STR–85
using, *(P) RMS Ref*, 2–9
DECnet, *(G) V7.0 New Feat*, 3–12
See also DECnet for OpenVMS, DECnet/OSI for OpenVMS, Networks
adaptive routing, *(S) Sys Mgr Tuning*, 21–5; *(S) DECnet Intro*, 1–3
advantages, *(S) Sys Mgr Tuning*, 21–1
asynchronous
using virtual terminals, *(S) Sys Mgr Essentials*, 7–11, 7–12
automatic configuration, *(S) DECnet Intro*, 3–11
C2 system restrictions, *(S) Security*, C–10
circuit
definition, *(S) Sys Mgr Tuning*, 21–4
circuit and line devices, *(S) DECnet Mgmt Util*, A–1
cluster aliases
using to promote network application availability, *(S) Dependable*, 7–15
cluster nodes and, *(S) Security*, 11–8
communications line
definition, *(S) Sys Mgr Tuning*, 21–4
compatibility, *(G) SW Overview*, 2–10, 2–16, 6–3
configuration, *(S) DECnet Intro*, 1–5, 1–7; *(S) DECnet Mgmt*, 1–2
automatic, *(S) Sys Mgr Tuning*, 21–12
manual, *(S) Sys Mgr Tuning*, 21–12
on an OpenVMS system, *(S) Sys Mgr Tuning*, 21–7
with bridge, *(S) Sys Mgr Tuning*, 21–7
configuration database, *(S) Sys Mgr Tuning*, 21–10; *(S) DECnet Intro*, 2–16, 3–10, 3–32; *(S) DECnet Mgmt*, 1–12
configuration on an OpenVMS system, *(S) DECnet Intro*, 1–5
configuration prerequisites, *(S) DECnet Mgmt*, 5–1
connecting with communications line, *(S) Sys Mgr Tuning*, 21–12
connection, *(S) DECnet Intro*, 1–5
console connection, *(S) DECnet Intro*, 2–16
debugging over, *(P) Debugger*, 2–4, 5–10
defining node names, *(S) DECnet Intro*, 3–18
definition, *(S) Sys Mgr Tuning*, 21–4
detecting common problems, *(S) DECnet Intro*, 4–10 to 4–17
device names, *(S) DECnet Intro*, 3–33

DECnet (cont'd)
devices supported by, *(S) DECnet Mgmt Util*, A–1
downline loading, *(S) DECnet Intro*, 2–16
dynamic asynchronous connection, *(S) Security*, 12–17; *(S) DECnet Intro*, 3–19, 3–25, 3–27, 3–29, 4–16
end node, *(S) Sys Mgr Tuning*, 21–6
end node PAK, *(S) DECnet Intro*, 3–10
error message during UETP, *(S) Sys Mgr Tuning*, 17–28
error messages, *(S) DECnet Intro*, 3–31
error messages and meanings, *(S) DECnet Intro*, 4–10
establishing node in network, *(S) Sys Mgr Tuning*, 21–11
Ethernet, *(S) Sys Mgr Tuning*, 21–5
event class, *(S) DECnet Intro*, 4–5
event class and type summary, *(S) DECnet Mgmt Util*, D–1 to D–13
event logger, *(S) DECnet Intro*, 3–32, 4–4
Event Logging facility
to monitor network events, *(S) Sys Mgr Tuning*, 21–17
event type, *(S) DECnet Intro*, 4–5
full function PAK, *(S) DECnet Intro*, 3–10
functions, *(S) DECnet Mgmt*, 1–2
general user, *(S) DECnet Intro*, 2–1 to 2–11
growth, *(S) DECnet Intro*, 1–5
hardware, *(S) DECnet Intro*, 1–5
host services, *(S) DECnet Intro*, 2–16; *(S) DECnet Mgmt*, 1–2, 1–12
INBOUND parameter, *(S) DECnet Intro*, 3–26
installation procedure, *(S) DECnet Intro*, 3–1, 3–9
installation verification, *(S) DECnet Intro*, 3–31
installing dynamic asynchronous connection, *(S) Security*, 12–15; *(S) DECnet Intro*, 3–24
installing static asynchronous connection, *(S) DECnet Intro*, 3–19
key, *(S) DECnet Intro*, 3–8
LAT software
effect of SCSSYSTEMID system parameter, *(S) Sys Mgmt Util A-L*, 13–7
license, *(S) Sys Mgr Tuning*, 21–12; *(S) DECnet Intro*, 1–5, 3–8, 3–9; *(S) DECnet Mgmt*, 2–17
local area network (LAN) connections, *(S) Sys Mgr Tuning*, 21–8
logging in to a node, *(S) DECnet Intro*, 3–1
logical link
definition, *(S) Sys Mgr Tuning*, 21–4
losing connection to remote system, *(G) User*, 2–25
managing a network node, *(S) Sys Mgr Tuning*, 21–14
providing host services, *(S) Sys Mgr Tuning*, 21–15

DECnet (cont'd)
managing remote nodes with, *(S) Sys Mgr Essentials*, 2–12
manipulating files with, *(G) User*, 4–12
manual configuration, *(S) DECnet Intro*, 3–11
multiple-area network, *(S) Sys Mgr Tuning*, 21–6
network configurations, *(S) Sys Mgr Tuning*, 21–6
network connections, *(S) Sys Mgr Tuning*, 21–8
networking interface, *(S) DECnet Intro*, 1–1
networking products, *(G) SW Overview*, 1–9
network interface for OpenVMS, *(S) Sys Mgr Tuning*, 21–7
network monitoring, *(S) Sys Mgr Tuning*, 21–14
tools, *(S) Sys Mgr Tuning*, 21–15
networks, *(G) SW Overview*, 6–2
network transport, *(G) SW Overview*, 6–24
node, *(S) DECnet Intro*, 1–3, 1–5, 1–6, 3–1; *(S) DECnet Mgmt*, 2–1
node address, *(S) DECnet Intro*, 3–12
node configuration, *(S) DECnet Intro*, 2–16
node configuration planning, *(S) DECnet Intro*, 3–8
node name, *(S) DECnet Intro*, 3–12
nonprivileged user name, *(S) Security*, 12–10
object, *(S) DECnet Intro*, 1–2, 3–32
object definition, *(S) Sys Mgr Tuning*, 21–4
OpenVMS networking interface, *(S) DECnet Intro*, 1–5
overriding AUTOGEN observations, *(S) Sys Mgr Tuning*, 14–21
over terminal lines, *(S) DECnet Mgmt*, 5–11
over the CI, *(S) DECnet Mgmt*, 5–11
overview, *(S) DECnet Intro*, 1–1
PAK, *(S) Sys Mgr Tuning*, 21–12; *(S) DECnet Intro*, 3–9
Phase IV and Phase V compared, *(S) Sys Mgr Tuning*, 21–1
planning configuration, *(S) Sys Mgr Tuning*, 21–12
preparing for UETP, *(S) Sys Mgr Tuning*, 17–12
preparing system, *(S) Sys Mgr Tuning*, 21–12
programmer, *(S) DECnet Intro*, 2–12
protocol, *(S) DECnet Intro*, 1–3
receive password, *(S) Security*, 12–16; *(S) DECnet Intro*, 3–21, 3–25, 3–26, 3–34
registering the key, *(S) DECnet Intro*, 1–5, 3–14
restarting, *(S) DECnet Intro*, 3–32, 3–34
router node, *(S) Sys Mgr Tuning*, 21–5
routing
definition, *(S) Sys Mgr Tuning*, 21–5
levels of, *(S) Sys Mgr Tuning*, 21–5
security, *(G) SW Overview*, 6–7; *(S) Sys Mgr Tuning*, 21–12

DECnet
security (cont'd)
controlling access to node, *(S) Sys Mgr Tuning*, 21–12
protecting files, *(S) Sys Mgr Tuning*, 21–12
using proxy accounts, *(S) Sys Mgr Tuning*, 21–12
security for node, *(S) DECnet Intro*, 3–34 to 3–38
shutting down, *(S) DECnet Intro*, 3–32
shutting down for software installation, *(S) Sys Mgr Essentials*, 3–7
software, *(G) SW Overview*, 6–3; *(S) DECnet Intro*, 1–5; *(S) DECnet Mgmt*, 1–12
software in network operations, *(S) DECnet Intro*, 1–6
specifying full node names, *(G) User*, 4–6
specifying MAIL addresses, *(S) Sys Mgr Essentials*, 5–33
specifying maximum record size for remote file access, *(P) RMS Ref*, 4–23
starting, *(S) DECnet Intro*, 3–14
startup, *(S) DECnet Mgmt*, 3–23
static asynchronous connection, *(S) DECnet Intro*, 3–19, 3–23
structure, *(S) DECnet Intro*, 1–3
system and network manager responsibilities, *(S) DECnet Intro*, 2–16 to 2–17
terminology, *(S) Sys Mgr Tuning*, 21–4
testing hardware and software with UETP, *(S) DECnet Intro*, 3–29
testing network, *(S) Sys Mgr Tuning*, 21–17
transmit password, *(S) Security*, 12–16; *(S) DECnet Intro*, 3–21, 3–25
turning on, *(S) DECnet Intro*, 3–14
UETP defaults for installation, *(S) Sys Mgr Tuning*, 17–30
UETP test phase, *(S) Sys Mgr Tuning*, 17–35, 17–36
upline dumping, *(S) DECnet Intro*, 2–16
user applications, *(G) SW Overview*, 6–6
using the Analyze/RMS_File utility with, *(P) Rec Mgmt Util*, 1–6
using the Convert/Reclaim utility with, *(P) Rec Mgmt Util*, 3–1
using the Convert utility with, *(P) Rec Mgmt Util*, 2–4
using the Network Control Program to control, *(S) DECnet Mgmt Util*, 1–1, 2–1
using with EXCHANGE/NETWORK, *(S) Sys Mgr Essentials*, 9–24
verifying connection, *(S) DECnet Intro*, 3–29, 3–31
verifying connection to the network, *(S) Sys Mgr Tuning*, 21–12
VMScluster satellite synonym, *(S) Dependable*, 7–9
DECnet (cont'd)
WAN (wide area network) connections, *(S) Sys Mgr Tuning*, 21–8
with VMScluster systems, *(S) Sys Mgr Tuning*, 21–6
worldwide connections, *(S) Sys Mgr Tuning*, 21–9
DECnet/OSI, *(G) V7.0 New Feat*, 3–12
DECnet/OSI for OpenVMS, *(G) SW Overview*, 1–10; *(S) Sys Mgr Tuning*, 21–1; *(S) TCP/IP*, 1–4, 2–2; *(P) Environment*, 3–1, 3–2
See also DECnet, Networks
features, *(G) SW Overview*, 6–3
full name routines
LIB$BUILD_NODESPEC routine, *(P) LIB$*, LIB–25
LIB$COMPARE_NODENAME routine, *(P) LIB$*, LIB–33
LIB$COMPRESS_NODENAME routine, *(P) LIB$*, LIB–35
LIB$EXPAND_NODENAME routine, *(P) LIB$*, LIB–167
LIB$FIT_NODENAME routine, *(P) LIB$*, LIB–196
LIB$GET_FULLNAME_OFFSET routine, *(P) LIB$*, LIB–260
LIB$GET_HOSTNAME routine, *(P) LIB$*, LIB–262
LIB$TRIM_FULLNAME routine, *(P) LIB$*, LIB–598
full names, *(S) Sys Mgr Tuning*, 21–2
NCL command language, *(G) SW Overview*, 6–5
network management, *(G) SW Overview*, 2–16, 6–4, 6–5
open networking, *(G) SW Overview*, 2–10
OSI model, *(G) SW Overview*, 2–6
setting up a node, *(G) SW Overview*, 3–12
standards supported, *(G) SW Overview*, 6–3
starting, *(S) Sys Mgr Essentials*, 5–16
DECnet accounts
default, *(S) DECnet Intro*, 2–3, 3–11, 4–10
default nonprivileged, *(S) DECnet Intro*, 3–13, 3–37; *(S) DECnet Mgmt*, 5–3, 5–6
DECnet, *(S) DECnet Mgmt*, 2–25, 2–26
example, *(S) DECnet Mgmt*, 5–7
FAL$SERVER, *(S) DECnet Mgmt*, 2–25, 5–3, 5–6
MAIL$SERVER, *(S) DECnet Mgmt*, 2–25, 5–3, 5–6
MIRRO$SERVER, *(S) DECnet Mgmt*, 2–25, 5–3, 5–6
NML$SERVER, *(S) DECnet Mgmt*, 2–25, 5–3, 5–6
PHONE$SERVER, *(S) DECnet Mgmt*, 5–3, 5–6
using NETCONFIG_UPDATE.COM, *(S) DECnet Mgmt*, 5–10

DECnet accounts
default nonprivileged (cont'd)
VPM$SERVER, *(S) DECnet Mgmt*, 2–26, 5–3, 5–6
enabling default access, *(S) DECnet Mgmt*, 2–25, 2–26, 5–3, 5–6
network objects, *(S) Security*, 12–11
nonprivileged, *(S) DECnet Mgmt Util*, 4–8
removing, *(S) Security*, 12–13
DECNET class record
in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–13
DECnet data structures
global symbols, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–64
DECnet directories
default, *(S) DECnet Intro*, 3–11
default nonprivileged, *(S) DECnet Intro*, 3–11
DECnet–DOS software
in network operations, *(S) DECnet Intro*, 1–6
DECnet event logging facility
displaying information with NCP, *(S) DECnet Intro*, 4–1
DECnet for OpenVMS, *(G) DCL N-Z*, DCLII–138, DCLII–148; *(G) SW Overview*, 1–10, 2–10; *(P) Environment*, 3–2
See also DECnet, Networks
activity statistics, *(S) DECnet Intro*, 4–7
network management, *(G) SW Overview*, 2–16
network management tasks, *(G) SW Overview*, 6–5
node names, *(S) Sys Mgr Tuning*, 21–2
Phase IV, *(G) SW Overview*, 6–3
Phase IV protocols, *(G) SW Overview*, 1–10
running DECwindows applications across, *(G) DCL N-Z*, DCLII–119
setting up a node, *(G) SW Overview*, 3–12
starting, *(S) Sys Mgr Essentials*, 5–15
DECnet for OpenVMS licenses, *(S) DECnet Intro*, 1–5, 3–8, 3–9; *(S) DECnet Mgmt*, 1–12
end node kit, *(S) DECnet Mgmt*, 1–12, 6–1
full function kit, *(S) DECnet Mgmt*, 1–12, 6–1
registering the key, *(S) DECnet Mgmt*, 1–12, 5–7, 6–1
DECnet Monitor
introduction, *(S) Dependable*, 7–18
use at CSC lights out data center, *(S) Dependable*, 11–17
DECnet over TCP/IP, *(S) TCP/IP*, B–1
DECnet-RSX software, *(S) DECnet Intro*, 1–6
DECnet/SNA gateways, *(S) DECnet Intro*, 1–6, 1–13
DECnet software
cluster alias, *(S) VMScluster Sys*, 4–9, 4–10, 4–11
limits, *(S) VMScluster Sys*, 9–21
cluster satellite pseudoname, *(S) VMScluster Sys*, 9–8
DECnet software (cont'd)
configuring, *(S) VMScluster Sys*, 4–8
disabling LAN device, *(S) VMScluster Sys*, 4–8
downline loading, *(S) VMScluster Sys*, 9–9
enabling circuit service for cluster MOP server, *(S) VMScluster Sys*, 4–7
installing network license, *(S) VMScluster Sys*, 4–5
LAN network troubleshooting, *(S) VMScluster Sys*, D–3
LAN segments provide service, *(S) VMScluster Sys*, 3–17
making databases available clusterwide, *(S) VMScluster Sys*, 4–8
making remote node data available clusterwide, *(S) VMScluster Sys*, 4–8
maximum address value
defining for cluster boot server, *(S) VMScluster Sys*, 4–7
modifying satellite LAN hardware address, *(S) VMScluster Sys*, 8–22
monitoring LAN activity, *(S) VMScluster Sys*, 10–26
NETNODE_REMOTE.DAT file
renaming to SYS$COMMON directory, *(S) VMScluster Sys*, 4–8
network cluster functions, *(S) VMScluster Sys*, 1–6
Network Control Program utility (NCP), *(S) VMScluster Sys*, 4–9
restoring satellite configuration data, *(S) VMScluster Sys*, 10–5
starting, *(S) VMScluster Sys*, 4–10
tailoring, *(S) VMScluster Sys*, 4–7
DECnet Test Sender/DECnet Test Receiver utility (DTS/DTR), *(S) DECnet Mgmt Util*, 4–1
abort, *(S) DECnet Mgmt Util*, 4–7, 4–8, 4–9, 4–12
as a network exerciser, *(S) DECnet Intro*, 4–6
as a network monitoring tool, *(S) DECnet Intro*, 4–1
commands, *(S) DECnet Mgmt Util*, 4–3 to 4–12
abbreviating, *(S) DECnet Mgmt Util*, 4–1
qualifiers, *(S) DECnet Mgmt Util*, 4–1
syntax, *(S) DECnet Mgmt Util*, 4–1
using in a batch job, *(S) DECnet Mgmt Util*, 4–1
command syntax, *(S) DECnet Mgmt Util*, 4–1
directing output, *(S) DECnet Mgmt Util*, 4–3
invoking, *(S) DECnet Mgmt Util*, 4–2
network monitoring tool, *(S) Sys Mgr Tuning*, 21–17
printing, *(S) DECnet Mgmt Util*, 4–3
testing network, *(S) DECnet Mgmt Util*, 4–4 to 4–12
tests
connection, *(S) DECnet Mgmt Util*, 4–4
data, *(S) DECnet Mgmt Util*, 4–6

DECnet Test Sender/DECnet Test Receiver utility (DTS/DTR)
tests (cont'd)
disconnection, *(S) DECnet Mgmt Util*, 4–8
exiting, *(S) DECnet Mgmt Util*, 4–3
interrupt, *(S) DECnet Mgmt Util*, 4–11
subtests, *(S) DECnet Mgmt Util*, 4–2
terminating, *(S) DECnet Mgmt Util*, 4–3
using, *(S) DECnet Mgmt Util*, 4–3
DECnet–ULTRIX software, *(S) DECnet Intro*, 1–6
DECnet–VAX
dynamic asynchronous connection, *(S) Security*, 12–19
DECNIS network integration server, *(G) SW Overview*, 6–8
DEC Notes
See Notes
DEC Open3D for OpenVMS Alpha
See Open3D
DEC OPS5
See OPS5
DEC/OSI full names
not in C2 evaluation, *(S) Security*, C–3
DEC Pascal
See Pascal
DEC PCA
See PCA performance testing
DEC PHIGS
See PHIGS
DEC PL/I
See PL/I
DECplan, *(G) SW Overview*, 6–16
DECquery, *(G) SW Overview*, 7–17
for MS–DOS, *(P) Environment*, 1–4
DEC RALLY
See RALLY
DECram, *(G) SW Overview*, 2–15, 7–7
device drivers, *(G) SW Overview*, 7–8
DEC Rdb
automatic cleanup of databases, *(S) Dependable*, 8–46
database security, *(S) Dependable*, 8–48
dependability features, *(S) Dependable*, 8–35 to 8–50
failover of databases in VMSclusters, *(S) Dependable*, 8–35
online backup, *(S) Dependable*, 8–40
online restructuring of database characteristics, *(S) Dependable*, 8–47
replication in wide area networks, *(S) Dependable*, 3–6
use of transaction sequence numbers in online backup, *(S) Dependable*, 8–41
using DECtrace with, *(S) Dependable*, 8–50
using RdbExpert with, *(S) Dependable*, 8–50
DEC Rdb for OpenVMS
See Rdb
DEC Reliable Transaction Router
See RTR
DECrpc, *(G) SW Overview*, 2–11; *(P) Environment*, 3–2
DEC RTR (Reliable Transaction Router), *(G) SW Overview*, 2–14, 7–11, 7–14
providing software fault tolerance, *(S) Dependable*, 8–2 to 8–10
Decryption, *(S) Security*, 8–27
DECSA (Digital Ethernet Communications Server)
connection to remote console, *(S) DECnet Mgmt*, 4–18
DECscheduler
production scheduler, *(S) Dependable*, 9–9
DECservers, *(G) SW Overview*, 6–8
changing device characteristics, *(S) Sys Mgmt Util A-L*, 13–10, 13–35
DECset, *(G) SW Overview*, 4–18, 6–15; *(P) Environment*, 6–1, 9–1
See also CASE
product set, *(S) Dependable*, 3–8
software development tools, *(S) Dependable*, 8–58
testing software, *(S) Dependable*, 3–10
DECsound, *(G) SW Overview*, 5–6
DECstart
services from Digital, *(S) Dependable*, 10–4
DECtalk
Refer to the *OpenVMS RTL DECtalk (DTK$) Manual*
DEC TCP/IP Services for OpenVMS
See TCP/IP
DECterm, *(G) SW Overview*, 5–6, 5–7
DECterm window
setting application keypad, *(G) DCL A-M*, DCLI–105
DEC Test Manager
See Test Manager
DEC Text Processing Utility
See DECTPU
DEC Text Processing Utility (DECTPU), *(G) User*, 8–1; *(G) SW Overview*, 4–4; *(P) Environment*, 5–1; *(P) Concepts*, 7–1
EVE, *(G) SW Overview*, 5–12
EVE editor, *(P) Environment*, 5–2
DECthreads, *(G) V7.0 New Feat*, 4–11; *(G) SW Overview*, 2–10, 4–9
See also Tasking (multithread) programs and *Guide to DECthreads*
POSIX 1003.1c standard, *(G) V7.0 New Feat*, 4–7
Thread Independent Services (TIS), *(G) V7.0 New Feat*, 4–7

DECthreads Library routines, *(P) DECthreads*, F–1
DECtp, *(G) SW Overview*, 7–11; *(P) Environment*, 1–4
DECtp Desktop for ACMS, *(G) SW Overview*, 6–22, 7–5, 7–11
  See Desktop ACMS
DECTPU
  invoking, *(G) DCL A-M*, DCLI–206
DECTPU editor
  See EVE
DECTPU routines, *(P) Util Routines*, DECTPU–1 to DECTPU–77
  bound procedure parameter value, *(P) Util Routines*, DECTPU–3
  callable DECTPU, *(P) Util Routines*, DECTPU–1 to DECTPU–5
  condition handler, *(P) Util Routines*, DECTPU–3 to DECTPU–4
  examples, *(P) Util Routines*, DECTPU–4, DECTPU–7 to DECTPU–27
  shareable image, *(P) Util Routines*, DECTPU–1, DECTPU–3
  user-written, *(P) Util Routines*, DECTPU–68 to DECTPU–77
    INITIALIZE, *(P) Util Routines*, DECTPU–76
    requirements, *(P) Util Routines*, DECTPU–7
DECtrace, *(G) SW Overview*, 7–9
  using with database applications, *(S) Dependable*, 8–50
DEC Visual User Interface Tool
  See VUIT
DEC VTX
  See VTX
DECW$DISPLAY logical name, *(G) DCL N-Z*, DCLII–115, DCLII–268
DEC WANrouter
  See WANrouter
DECwindows
  use of Snapshot facility with, *(S) Sys Mgr Essentials*, 4–21
%DECWINDOWS built-in symbol, *(P) Debugger*, B–6
DECwindows Motif interface, *(G) SW Overview*, 5–4
  MONITOR command, *(P) Debugger*, CD–129
DECwindows Motif software, *(G) SW Overview*, 5–2 to 5–6; *(P) Concepts*, 7–7
  client/server software, *(G) SW Overview*, 2–11, 6–17; *(P) Environment*, 3–3
  debugger, *(P) Debugger*, 1–1
    displaying on other workstation, *(P) Debugger*, 2–8
  DEClinks, *(P) Environment*, 2–4
DECwindows Motif software (cont'd)
  disabled debugger commands, *(P) Debugger*, 1–17
  distributed features, *(G) SW Overview*, 2–11; *(P) Environment*, 3–3
  FileView, *(G) SW Overview*, 5–5, 5–9
  for POLYCENTER Software Installation utility, *(S) Sys Mgr Essentials*, 3–18
  graphical user interface, *(G) SW Overview*, 1–3
  portable user interfaces, *(G) SW Overview*, 2–4
  programming libraries and tools, *(G) SW Overview*, 4–17; *(P) Environment*, 2–3
  used with DEC Open3D, *(P) Environment*, 2–6
DECwindows screens, clearing, *(S) Security*, 3–11, 3–15, 3–20
DECwindows software
  not in C2 evaluation, *(S) Security*, C–3
Dedicated port, *(S) Sys Mgmt Util A-L*, 13–10, 13–36
  displaying, *(S) Sys Mgmt Util A-L*, 13–52
Deductible resource, *(S) Sys Mgr Essentials*, 6–3
Default access, *(S) DECnet Intro*, 3–8; *(S) DECnet Mgmt*, 5–3
  DECnet nonprivileged accounts, *(S) DECnet Intro*, 3–11
DEFAULT ACCESS parameter, *(S) DECnet Mgmt*, 2–34
  for NCP commands, *(S) DECnet Intro*, 3–36
DEFAULT account
  in UAF, *(S) Sys Mgr Essentials*, 6–6
Default boot procedure, *(S) Sys Mgr Essentials*, 4–2
Default characteristics
  modifying terminal, *(G) DCL N-Z*, DCLII–213 to DCLII–225
  setting for magnetic tape devices, *(G) DCL N-Z*, DCLII–163
Default condition handlers, *(P) Calling Std*, 6–20
Default directories
  setting, *(P) Sys Svc II*, SYS2–285
Default error checking
  controlling, *(G) DCL N-Z*, DCLII–167
Default extension option, *(P) File Appl*, 4–35
Default extension quantity, *(P) Rec Mgmt Util*, 4–19; *(P) File Appl*, 3–5 to 3–7
Default file protection
  setting, *(P) Sys Svc II*, SYS2–287
Default file specifications, *(P) File Appl*, 9–6
Default form, *(S) Sys Mgr Essentials*, 13–63; *(P) Sys Svc II*, SYS2–382
Default nonprivileged DECnet accounts
  use in access control, *(S) DECnet Mgmt*, 2–33, 3–68
Default ownership
  for directories, *(S) Security*, 8–22
  for files, *(S) Security*, 8–19
  for protected objects, *(S) Security*, 8–15, 8–22

Default parameter file, *(S) Sys Mgmt Util A-L*, 6–7
Default procedure signature, *(P) Calling Std*, 3–28
Default protection, *(P) Rec Mgmt Util*, 4–23
  Alpha system files, *(S) Security*, 8–26
  for directories, *(S) Security*, 5–11
  for files, *(S) Security*, 5–10
  for NET$PROXY.DAT, *(S) Sys Mgmt Util A-L*, 5–3
  for NETPROXY.DAT, *(S) Sys Mgmt Util A-L*, 5–3
  for processes, *(S) Security*, 8–16, 8–19
  for RIGHTSLIST.DAT, *(S) Sys Mgmt Util A-L*, 5–3
  for SYSUAF.DAT, *(S) Sys Mgmt Util A-L*, 5–3
  for VAX system files, *(S) Security*, B–1
  management, *(S) Security*, 8–15
Default Protection ACEs, *(S) Security*, 4–27, 8–20; *(S) Sys Mgmt Util A-L*, 1–11
  generating default file protection, *(S) Security*, 5–10
/DEFAULT qualifier, *(P) Debugger*, CD–104, CD–130
Defaults, *(S) DECamds*, 5–1 to 5–2
  collection intervals, *(S) DECamds*, 5–14
  data display, *(S) DECamds*, 2–4
  definition, *(G) User*, 2–19
  file protection, *(G) User*, 19–5
  for DCL commands, *(G) User*, 3–5
  options, *(S) DECamds*, 2–4
  restoring from within command procedures, *(G) User*, 15–17
  saving from within command procedures, *(G) User*, 15–17
  setting data collection, *(S) DECamds*, 5–3
  values provided by system, *(G) User*, 3–5
Default user authorization records
  modifying, *(S) Sys Mgmt Util A-L*, 5–27
Default value for revision date and time, *(P) RMS Ref*, 8–3
Default values
  AREA, *(P) Rec Mgmt Util*, 4–6
  DATE, *(P) Rec Mgmt Util*, 4–15
  FILE, *(P) Rec Mgmt Util*, 4–16
  key, *(P) Rec Mgmt Util*, 4–25
  RECORD, *(P) Rec Mgmt Util*, 4–31
  SYSTEM, *(P) Rec Mgmt Util*, 4–36
Default working set
  for batch jobs, *(G) DCL A-M*, DCLI–285; *(G) DCL N-Z*, DCLII–381, DCLII–418
  modifying size, *(G) DCL N-Z*, DCLII–235
DEFAULT_NAME attribute, *(P) Rec Mgmt Util*, 4–18
Deferred-write processing, *(P) File Appl*, 9–8
DEFERRED_WRITE attribute, *(P) Rec Mgmt Util*, 4–19; *(P) File Appl*, 7–18, 7–19
DEFINE/CHARACTERISTIC command, *(G) DCL A-M*, DCLI–126 to DCLI–127; *(S) Sys Mgr Essentials*, 13–58
DEFINE CIRCUIT command, *(S) DECnet Mgmt Util*, 3–57
DEFINE command, *(G) User*, 13–3, 13–4; *(G) DCL A-M*, DCLI–120 to DCLI–125; *(P) Concepts*, 10–2; *(P) File Appl*, 6–13; *(P) Debugger*, 12–6, CD–62; *(P) Alpha SDA*, SDA–40, SDA–42; *(P) VAX SDA*, SDA–48
  access modes, *(G) User*, 13–9, 13–10
  defining the LNK$LIBRARY logical name, *(P) Linker*, LINK–40
  displaying default qualifiers for, *(P) Debugger*, CD–249
  establishing permanent network database, *(S) DECnet Intro*, 3–10, 3–33
  in network operations, *(S) DECnet Intro*, 2–5
  in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–19
  /KEY qualifier in Mail, *(G) User*, 6–20
    in initialization file, *(G) User*, 6–21
  NCP, *(S) Sys Mgr Tuning*, 21–11
  setting default qualifiers for, *(P) Debugger*, CD–167
  /TRANSLATION_ATTRIBUTES qualifier, *(P) File Appl*, 5–7
  using with public directories, *(S) DECnet Intro*, 2–5
DEFINE DEVICE command
  in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–11
/DEFINED qualifier, *(P) Debugger*, CD–284
DEFINE EXECUTOR command, *(S) DECnet Mgmt Util*, 3–64
DEFINE/FORM command, *(G) DCL A-M*, DCLI–128 to DCLI–131; *(S) Sys Mgr Essentials*, 13–61
  for controlling line overflow, *(S) Sys Mgr Essentials*, 13–44
DEFINE/KEY command, *(G) DCL A-M*, DCLI–132 to DCLI–135; *(S) Sys Mgmt Util M-Z*, B–3; *(P) Debugger*, 12–8, CD–65
  in LATCP, *(S) Sys Mgmt Util A-L*, 13–17
  in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–33
DEFINE LINE command, *(S) DECnet Mgmt Util*, 3–77
DEFINE LOGGING command, *(S) DECnet Intro*, 4–5
DEFINE LOGGING EVENTS command, *(S) DECnet Mgmt Util*, 3–86
DEFINE LOGGING STATE command, *(S) DECnet Mgmt Util*, 3–88

DEFINE MODULE CONFIGURATOR command, *(S) DECnet Mgmt Util*, 3–90
DEFINE MODULE X25-ACCESS command, *(S) DECnet Mgmt Util*, 3–92
DEFINE MODULE X25-PROTOCOL command, *(S) DECnet Mgmt Util*, 3–94
DEFINE MODULE X25-SERVER command, *(S) DECnet Mgmt Util*, 3–100
DEFINE MODULE X29-SERVER command, *(S) DECnet Mgmt Util*, 3–100
DEFINE NODE CIRCUIT command, *(S) DECnet Mgmt Util*, 3–111
DEFINE NODE command, *(S) DECnet Intro*, 3–18; *(S) DECnet Mgmt Util*, 3–106
  in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–13
DEFINE OBJECT command, *(S) DECnet Mgmt Util*, 3–113
DEFINE/PROCESS_GROUP command, *(P) Debugger*, 14–13, CD–69
DEFINE SYNTAX statement, *(P) CDU, LBR, & MU*, CDU–21
  changing syntax, *(P) CDU, LBR, & MU*, CDU–7
  DISALLOW clause, *(P) CDU, LBR, & MU*, CDU–23
  examples, *(P) CDU, LBR, & MU*, CDU–7, CDU–28
  format, *(P) CDU, LBR, & MU*, CDU–7, CDU–23
  IMAGE clause, *(P) CDU, LBR, & MU*, CDU–24
  PARAMETER clauses, *(P) CDU, LBR, & MU*, CDU–22, CDU–24 to CDU–25
  QUALIFIER clauses, *(P) CDU, LBR, & MU*, CDU–25 to CDU–27
  ROUTINE clauses, *(P) CDU, LBR, & MU*, CDU–27
  SYNTAX keywords, *(P) CDU, LBR, & MU*, CDU–29
  table of syntax changes, *(P) CDU, LBR, & MU*, CDU–21 to CDU–23
DEFINE/TRANSLATION_ATTR=CONCEALED command, *(P) Debugger*, CD–208
DEFINE TYPE statement, *(P) CDU, LBR, & MU*, CDU–9, CDU–29
  acceptable keyword clauses, *(P) CDU, LBR, & MU*, CDU–29
  acceptable type clauses, *(P) CDU, LBR, & MU*, CDU–29
  DEFAULT clauses, *(P) CDU, LBR, & MU*, CDU–29
  defining qualifier keywords, *(P) CDU, LBR, & MU*, CDU–31
  examples, *(P) CDU, LBR, & MU*, CDU–9
  format, *(P) CDU, LBR, & MU*, CDU–9, CDU–29
  keywords referenced by VALUE, *(P) CDU, LBR, & MU*, CDU–29
DEFINE TYPE statement (cont'd)
  LABEL clauses, *(P) CDU, LBR, & MU*, CDU–29
  NEGATABLE clauses, *(P) CDU, LBR, & MU*, CDU–29
  SYNTAX clauses, *(P) CDU, LBR, & MU*, CDU–29
  VALUE clauses, *(P) CDU, LBR, & MU*, CDU–29 to CDU–30
  with DEFINE VERB statement, *(P) CDU, LBR, & MU*, CDU–9
  with VALUE clause, *(P) CDU, LBR, & MU*, CDU–9
DEFINE VERB statement, *(P) CDU, LBR, & MU*, CDU–32
  DISALLOW clause, *(P) CDU, LBR, & MU*, CDU–10
  DISALLOW clauses, *(P) CDU, LBR, & MU*, CDU–32
  examples, *(P) CDU, LBR, & MU*, CDU–9, CDU–10, CDU–36
  format, *(P) CDU, LBR, & MU*, CDU–9, CDU–32
  IMAGE clauses, *(P) CDU, LBR, & MU*, CDU–32
  PARAMETER clauses, *(P) CDU, LBR, & MU*, CDU–33 to CDU–34
  QUALIFIER clauses, *(P) CDU, LBR, & MU*, CDU–34 to CDU–36
  ROUTINE clauses, *(P) CDU, LBR, & MU*, CDU–36
  SYNONYM clauses, *(P) CDU, LBR, & MU*, CDU–36
  with DEFAULT clause, *(P) CDU, LBR, & MU*, CDU–31
  with DEFINE SYNTAX statement, *(P) CDU, LBR, & MU*, CDU–7
Defining a form, *(S) Sys Mgr Essentials*, 13–61
Defining symbols to USEROPEN routine, *(P) File Appl*, 5–10
Definition paths
  for DISALLOW clause, *(P) CDU, LBR, & MU*, CDU–13 to CDU–14
/DEFINITIONS qualifier, *(P) Debugger*, CD–104
Defragmenting disks, *(S) Sys Mgr Essentials*, 10–48
DEFZA Ethernet device, *(S) DECnet Mgmt*, 2–10
DEFZA FDDI device, *(S) DECnet Mgmt*, 2–11
DEINSTALL command
  in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–11
Deinstalling layered software products, *(S) Sys Mgr Essentials*, 3–34
Delaying command processing, *(G) DCL N-Z*, DCLII–433
Delaying execution of a thread, *(P) DECthreads*, pthread–60, E–48, G–47

Delay timer, *(S) DECnet Mgmt*, 3–43
Delete access, *(P) Rec Mgmt Util*, 4–23
common event flag clusters, *(S) Security*, 5–3
explicitly assigning, *(S) Sys Mgr Essentials*, 9–11
files, *(S) Security*, 5–8
for disk directory files, *(S) Sys Mgr Essentials*, 9–11
for disk files, *(S) Sys Mgr Essentials*, 9–6
granting through protection codes, *(S) Security*, 4–25; *(S) Sys Mgr Essentials*, 11–8
logical name tables, *(S) Security*, 5–16
queues
through ACLs, *(S) Security*, 5–17
through protection codes, *(S) Security*, 5–17
volumes, *(S) Security*, 5–21
DELETE attribute, *(P) Rec Mgmt Util*, 4–3, 4–35; *(P) File Appl*, 7–3
DELETE/CHARACTERISTIC command, *(G) DCL A-M*, DCLI–140; *(S) Sys Mgr Essentials*, 13–59
DELETE command, *(G) User*, 4–15; *(G) DCL A-M*, DCLI–136 to DCLI–139; *(P) File Appl*, 10–26; *(P) Debugger*, 12–6, CD–72
/ENTRY qualifier, *(G) User*, 18–18, 18–19
in CLUE, *(S) Sys Mgmt Util A-L*, 8–5
in Install utility, *(S) Sys Mgmt Util A-L*, 11–10
in Mail, *(G) User*, 6–15
in network operations, *(S) DECnet Intro*, 2–7
using with F$SEARCH lexical function, *(G) User*, 17–11
DELETE/ENTRY command, *(G) DCL A-M*, DCLI–141 to DCLI–143; *(S) Sys Mgr Essentials*, 13–81
Delete file function, *(P) I/O User*, 1–28
DELETE/FORM command, *(G) DCL A-M*, DCLI–144; *(S) Sys Mgr Essentials*, 13–64
DELETE/INTRUSION_RECORD command, *(G) DCL A-M*, DCLI–145
Delete key, *(G) User*, 3–17, 3–19; *(P) I/O User*, 5–5
DELETE/KEY command, *(G) DCL A-M*, DCLI–146 to DCLI–147; *(P) Debugger*, 12–9, CD–74
DELETE LINK command
in LATCP, *(S) Sys Mgmt Util A-L*, 13–19
DELETE PORT command
in LATCP, *(S) Sys Mgmt Util A-L*, 13–20
/DELETE qualifier
LIBRARY command, *(P) Concepts*, 17–2
DELETE/QUEUE command, *(G) DCL A-M*, DCLI–148 to DCLI–149; *(S) Sys Mgr Essentials*, 13–57
DELETE/QUEUE/MANAGER command, *(G) DCL A-M*, DCLI–150
DELETE QUEUE_ENTRY command
in LATCP, *(S) Sys Mgmt Util A-L*, 13–21
Delete service, *(P) RMS Ref*, RMS–22; *(P) File Appl*, 8–2, 8–4
condition values, *(P) RMS Ref*, RMS–23
control block input fields, *(P) RMS Ref*, RMS–23
control block output fields, *(P) RMS Ref*, RMS–23
high-level language equivalents, *(P) File Appl*, 8–2
program example, *(P) RMS Ref*, A–30
requirements, *(P) RMS Ref*, RMS–23
run-time options, *(P) File Appl*, 9–18
use restrictions, *(P) RMS Ref*, RMS–22
DELETE SERVICE command
in LATCP, *(S) Sys Mgmt Util A-L*, 13–21
DELETE/SYMBOL command, *(G) DCL A-M*, DCLI–151 to DCLI–152
$DELETE_BUFOBJ system service
description, *(P) Sys Svc I*, SYS1–249
DELETE_ON_CLOSE attribute, *(P) Rec Mgmt Util*, 4–19, 4–24
$DELETE_REGION_64 system service
description, *(P) Sys Svc I*, SYS1–256
Deleting
attributes object, *(P) DECthreads*, E–20
batch job file after processing, *(G) DCL N-Z*, DCLII–413
characters in command line, *(G) User*, 3–17
condition variable attributes object, *(P) DECthreads*, pthread–51, G–31
DECdns objects, *(P) Sys Svc I*, SYS1–299
event flag clusters, *(P) Sys Svc I*, SYS1–292
files from the system disk, *(S) Sys Mgr Essentials*, 5–1
forms, *(S) Sys Mgr Essentials*, 13–64
problems with, *(S) Sys Mgr Essentials*, 13–82
global sections, *(P) Sys Svc I*, SYS1–279
intrusion records, *(P) Sys Svc I*, SYS1–250
jobs, *(S) Sys Mgr Essentials*, 13–74
logical names, *(G) DCL A-M*, DCLI–111; *(P) Sys Svc I*, SYS1–258
logical name tables, *(G) DCL A-M*, DCLI–111
mailboxes, *(P) Sys Svc I*, SYS1–261
multiple files, *(G) DCL A-M*, DCLI–136
mutex attributes object, *(P) DECthreads*, pthread–92, G–61
page, swap, and dump files
after creating new version, *(S) Sys Mgr Tuning*, 15–28
caution, *(S) Sys Mgr Tuning*, 15–21
processes, *(P) Sys Svc I*, SYS1–263
proxies, *(P) Sys Svc I*, SYS1–252
queue characteristics, *(S) Sys Mgr Essentials*, 13–59

Deleting
queue characteristics (cont'd)
problems with, *(S) Sys Mgr Essentials*, 13–82
queues, *(S) Sys Mgr Essentials*, 13–57
problems with, *(S) Sys Mgr Essentials*, 13–82
thread attributes object, *(P) DECthreads*, G–7
virtual address space, *(P) Sys Svc I*, SYS1–265
wakeup request, *(G) DCL N-Z*, DCLII–60
Deleting a condition variable, *(P) DECthreads*, pthread–39, tis–4, E–39, G–33
Deleting a mutex, *(P) DECthreads*, tis–16, E–58, G–64
Deleting an event, *(S) DECamds*, 2–8
Deleting a thread, *(P) DECthreads*, pthread–61, E–71, G–48
Deleting key
pthread, *(P) DECthreads*, pthread–76, tis–14
Deletion operations, *(P) SMG$*, 2–7
Delimiters
using in control block arguments, *(P) RMS Ref*, A–5, A–6, A–7
Delimiting characters
in FDL source code, *(P) Rec Mgmt Util*, 6–1
Delivery of alerts
disabling, *(P) DECthreads*, E–12
disabling asynchronous delivery of, *(P) DECthreads*, E–11
enabling, *(P) DECthreads*, E–15
enabling asynchronous delivery of, *(P) DECthreads*, E–13
requesting, *(P) DECthreads*, E–17
Delivery of cancels
enabling and disabling, *(P) DECthreads*, tis–33, G–75
enabling and disabling asynchronous delivery of, *(P) DECthreads*, G–73
requesting, *(P) DECthreads*, pthread–113, tis–37, G–82
DELNI
Ethernet device, *(S) DECnet Intro*, 1–7
DEL option, *(P) Rec Mgmt Util*, 4–35
DELQA Ethernet device, *(S) DECnet Mgmt*, 2–10
Delta time, *(P) Concepts*, 5–1
as input to $BINTIM, *(P) Sys Svc I*, SYS1–62
combined with absolute time, *(G) User*, 3–13
converting to numeric, *(P) Sys Svc II*, SYS2–194
default values, *(G) User*, 3–12
example, *(P) Concepts*, 5–6
in system format, *(P) Concepts*, 5–6
rules for entering, *(G) User*, 3–12
syntax, *(G) User*, 3–12
Delta/XDelta Debugger (DELTA/XDELTA), *(G) SW Overview*, 4–7; *(P) Environment*, 9–8
Refer also to the *OpenVMS Delta/XDelta Debugger Manual*
Delta/XDelta Debugger (DELTA/XDELTA) (cont'd)
and translated images, *(P) Debugger*, 13–26, 14–1
debugging multithreaded applications, *(G) V7.0 New Feat*, 4–8
$DELTVA_64 system service
description, *(P) Sys Svc I*, SYS1–268
DELUA Ethernet device, *(S) DECnet Mgmt*, 2–10
Demand-zero compression, *(P) Linker*, 3–25
controlling, *(P) Linker*, 3–25, LINK–50
Demand Zero Fault Rate, *(S) Alpha Perform*, 10–4
Demand-zero image sections
creating, *(P) Linker*, 3–25, LINK–10, LINK–50
definition, *(P) Linker*, LINK–50
disabling creation of, *(P) Linker*, LINK–10
maximum number of, *(P) Linker*, LINK–57
/DEMAND_ZERO qualifier, *(P) Linker*, LINK–10
DEMFA Ethernet device, *(S) DECnet Mgmt*, 2–10
DEMFA FDDI device, *(S) DECnet Mgmt*, 2–11
DEMNA Ethernet device, *(S) DECnet Mgmt*, 2–10
/DENSITY qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–27
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–19
Dependability, *(G) SW Overview*, 7–2
analyzing system requirements, *(S) Dependable*, 2–1
application software features, *(S) Dependable*, 8–35 to 8–58
balance, *(S) Dependable*, 1–17
building blocks, *(S) Dependable*, 1–14 to 1–15
business needs analysis, *(S) Dependable*, 2–5
characteristics summary, *(S) Dependable*, 6–20
communications
options, *(S) Dependable*, 3–5 to 3–7
concepts, *(S) Dependable*, 1–8
constraints, *(S) Dependable*, 4–1
continuous improvement, *(S) Dependable*, 2–1 to 2–3
cost tradeoffs, *(S) Dependable*, 4–16
determining adequacy, *(S) Dependable*, 2–1
Digital consulting support packages, *(S) Dependable*, 10–1
enhancements to a sample configuration, *(S) Dependable*, 6–5
environmental factors
options, *(S) Dependable*, 3–2 to 3–3
hardware
options, *(S) Dependable*, 3–3 to 3–5
identifying constraints, *(S) Dependable*, 4–1
maintaining dependable environment, *(S) Dependable*, 5–1
managing shared information, *(S) Dependable*, 8–58 to 8–61
meeting changing requirements, *(S) Dependable*, 1–4
network design, *(S) Dependable*, 7–1, 7–17 to 7–19

Dependability (cont'd)
OpenVMS features, *(S) Dependable*, 8–10 to 8–28
OpenVMS systems, *(G) SW Overview*, 2–12
operational procedures
options, *(S) Dependable*, 3–12 to 3–14
personnel
options, *(S) Dependable*, 3–15 to 3–16
primary strategies
concepts, *(S) Dependable*, 1–10
principles, *(S) Dependable*, 2–1
prioritizing requirements, *(S) Dependable*, 2–8
prototyping applications, *(S) Dependable*, 8–31 to 8–33
publications related to
See Bibliography
quality process phases, *(S) Dependable*, 2–1
requirements and responses, *(S) Dependable*, 2–4
requirements for a sample company, *(S) Dependable*, 2–9
software
options, *(S) Dependable*, 3–7 to 3–12
software applications, *(S) Dependable*, 8–1
taking action, *(S) Dependable*, 2–11
terms, *(S) Dependable*, 1–5
testing applications, *(S) Dependable*, 8–33 to 8–34
testing software, *(S) Dependable*, 3–10
TP monitors, *(S) Dependable*, 8–53
understanding your options, *(S) Dependable*, 3–1
with CDD/Repository, *(S) Dependable*, 8–59
writing dependable code, *(S) Dependable*, 8–29 to 8–31
Dependability constraints
in wide area networks, *(S) Dependable*, 3–6
Dependability terms, *(S) Dependable*, 1–5 to 1–7
Dependable computing, *(S) Dependable*, 1–1
analyzing system requirements, *(S) Dependable*, 2–1
application software features, *(S) Dependable*, 8–35 to 8–58
building blocks, *(S) Dependable*, 1–14
business examples, *(S) Dependable*, 1–2
communications, *(S) Dependable*, 1–15 to 1–16
options, *(S) Dependable*, 3–5 to 3–7
Digital consulting support packages, *(S) Dependable*, 10–1
disaster tolerant level, *(S) Dependable*, 1–2
environmental factors, *(S) Dependable*, 1–15 to 1–16
options, *(S) Dependable*, 3–2 to 3–3
hardware, *(S) Dependable*, 1–15 to 1–16
options, *(S) Dependable*, 3–3 to 3–5
highly available level, *(S) Dependable*, 1–1
maintaining dependable environment, *(S) Dependable*, 5–1
Dependable computing (cont'd)
managing shared information, *(S) Dependable*, 8–58 to 8–61
OpenVMS features, *(S) Dependable*, 8–10 to 8–28
operational procedures, *(S) Dependable*, 1–15 to 1–16
options, *(S) Dependable*, 3–12 to 3–14
personnel, *(S) Dependable*, 1–15 to 1–16
options, *(S) Dependable*, 3–15 to 3–16
prototyping applications, *(S) Dependable*, 8–31 to 8–33
redundant functional units, *(S) Dependable*, 1–13 to 1–14
software, *(S) Dependable*, 1–15 to 1–16
options, *(S) Dependable*, 3–7 to 3–12
testing applications, *(S) Dependable*, 8–33 to 8–34
understanding your options, *(S) Dependable*, 3–1
writing dependable code, *(S) Dependable*, 8–29 to 8–31
Dependable computing systems
balancing with other business considerations, *(S) Dependable*, 4–1
Dependent software products, *(S) Sys Mgr Essentials*, 3–27
DEPOSIT command, *(G) DCL A-M*, DCLI–153 to DCLI–156; *(P) Debugger*, 8–3, CD–76
length qualifiers, *(G) DCL A-M*, DCLI–154
radix qualifiers, *(G) DCL A-M*, DCLI–154
Depositing
DEPOSIT command, *(P) Debugger*, 8–3, CD–76
instruction, *(P) Debugger*, 8–21, 15–12
into address, *(P) Debugger*, 8–25
into register, *(P) Debugger*, 3–25, 8–22, 15–4
into variable, *(P) Debugger*, 3–21, 8–3, 8–14
into vector register, *(P) Debugger*, 15–4
vector instruction, *(P) Debugger*, 15–12
DEPOSIT/TYPE command and case-specific language, *(P) Debugger*, CD–80
DEPTH attribute, *(P) Rec Mgmt Util*, 4–5
DEQNA Ethernet device, *(S) DECnet Mgmt*, 1–4, 2–10
Dequeue, *(P) DECthreads*, E–4
Dequeuing lock requests, *(P) Sys Svc I*, SYS1–270
%DESCR built-in symbol, *(P) Debugger*, CD–16
Descriptor
format
checking with $IS_DESC macro, *(P) 64-Bit Addr*, C–5
Descriptor dump, *(G) DCL A-M*, DCLI–189
Descriptors, *(P) STR$*, 2–7
Alpha argument item, *(P) Calling Std*, 3–48
analysis of, *(P) LIB$*, LIB–10; *(P) STR$*, 2–4
arrays, *(P) Calling Std*, 5–7
BASIC file array, *(P) Calling Std*, 5–33
class, *(P) Interfaces*, 2–19

Descriptors (cont'd)
class codes, *(P) Interfaces*, 1–10; *(P) Calling Std*, 5–33
compression text, *(P) Calling Std*, 5–33
data type, *(P) Interfaces*, 2–19
decimal strings, *(P) Calling Std*, 5–13
definition, *(P) Calling Std*, 1–4
dynamic strings, *(P) Calling Std*, 5–6
fields, *(P) Interfaces*, 2–15
fixed length, *(P) Calling Std*, 5–5
label, *(P) Calling Std*, 5–33
noncontiguous arrays, *(P) Calling Std*, 5–15
procedure argument, *(P) Calling Std*, 5–12
strings with bounds, *(P) Calling Std*, 5–29
unaligned bit arrays, *(P) Calling Std*, 5–25
unaligned bit strings, *(P) Calling Std*, 5–24
unaligned bit strings with bounds, *(P) Calling Std*, 5–31
variable buffer, *(P) Calling Std*, 5–33
varying string arrays, *(P) Calling Std*, 5–21
varying strings, *(P) Calling Std*, 5–19
DESELECT command
in SHOW CLUSTER, *(S) Sys Mgr Tuning*, 20–13
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–35
Design graphics mode, *(P) File Appl*, 4–11
Designing dependable systems, *(S) Dependable*, 8–29 to 8–30
Designing emergency drills, *(S) Dependable*, 1–4
Designing procedures, *(P) Modular Proc*, 2–1
Design mnemonic, *(P) File Appl*, 4–13
Desktop ACMS
features, *(S) Dependable*, 8–58
Desktop environments, *(S) Dependable*, 5–5
DESNC (Digital Ethernet Secure Network Controller), *(G) SW Overview*, 6–7
Despooling a spooled printer, *(S) Sys Mgr Essentials*, 7–15
DESQA Ethernet device, *(S) DECnet Mgmt*, 2–10
Destination for installing software
copying files, *(S) Sys Mgr Essentials*, 3–33
PCSI$DESTINATION location, *(S) Sys Mgr Essentials*, 3–28
specifying location, *(S) Sys Mgr Essentials*, 3–28
Destination parameter
in VMSINSTAL.COM, *(S) Sys Mgr Essentials*, 3–12
DESVA Ethernet device, *(S) DECnet Mgmt*, 2–10
Detached processes, *(P) Concepts*, 1–1
See also Processes
See also Processes and Subprocesses
accounting, *(G) DCL N-Z*, DCLII–60
assigning resource quotas to, *(G) DCL N-Z*, DCLII–59
base priority, *(S) Alpha Perform*, 6–21
Detached processes (cont'd)
creating, *(G) DCL N-Z*, DCLII–66; *(P) Concepts*, 1–10; *(P) Sys Svc I*, SYS1–180
creating with RUN command, *(G) DCL N-Z*, DCLII–58
defining attributes, *(G) DCL N-Z*, DCLII–59
defining equivalence names for process-permanent logical names, *(G) DCL N-Z*, DCLII–58
establishing values for, *(S) VAX Perform*, 5–5; *(S) Alpha Perform*, 17–4
image hibernation, *(G) DCL N-Z*, DCLII–60
names, *(G) DCL N-Z*, DCLII–64
naming, *(G) DCL N-Z*, DCLII–60
scheduling wakeup, *(G) DCL N-Z*, DCLII–62
specifying quotas, *(G) DCL N-Z*, DCLII–62
specifying working set, *(G) DCL N-Z*, DCLII–66
working set characteristics, *(S) Alpha Perform*, 6–2
Detached processes, not for DECwindows Motif interface, *(P) Debugger*, 3–37
Detaching thread attribute, *(P) DECthreads*, pthread–20
DETACH privilege, *(S) Security*, A–5; *(S) DECnet Mgmt*, 5–1
Detected bad block files
See DBDFs
DEUNA Ethernet device, *(S) DECnet Intro*, 3–34; *(S) DECnet Mgmt*, 1–4, 2–10
$DEVDEF macro
source of DEV field bit definitions, *(P) RMS Ref*, 4–7
Development environments for dependable systems, *(S) Dependable*, 8–58 to 8–60
Device access, controlling through access control lists, *(P) Util Routines*, ACL–1
Device addresses
See LAN addresses
DEVICE attribute, *(P) Rec Mgmt Util*, 4–36
Device characteristics
disk, *(P) I/O User*, 2–25
LAN drivers, *(P) I/O User*, 9–22
magnetic tape, *(P) I/O User*, 3–8
mailbox, *(P) I/O User*, 4–4
pseudoterminal, *(P) I/O User*, 6–3
terminal, *(P) I/O User*, 5–20
Device control libraries, *(S) Sys Mgr Essentials*, 13–44 to 13–45
assigning to a queue, *(S) Sys Mgr Essentials*, 13–66
order of module output, *(S) Sys Mgr Essentials*, 13–45
procedure for using, *(S) Sys Mgr Essentials*, 13–65
sample commands, *(S) Sys Mgr Essentials*, 13–68
setting up, *(S) Sys Mgr Essentials*, 13–44

Device control modules, *(S) Sys Mgr Essentials*, 13–44 to 13–83
Device data blocks
See DDBs
Device driver images
patching, *(G) DCL N-Z*, DCLII–12
Device driver routines
address, *(P) Alpha SDA*, SDA–94; *(P) VAX SDA*, SDA–105
Device drivers, *(G) SW Overview*, 1–7
addresses, *(S) Sys Mgmt Util M-Z*, 5–28
asynchronous DDCMP driver, *(S) DECnet Intro*, 3–19, 3–25
base address of driver prologue table (DPT), *(P) VAX SDA*, SDA–18
configuring, *(S) Sys Mgmt Util M-Z*, 5–5, 5–27
CONINTERR.EXE file, *(S) Sys Mgr Essentials*, 7–7
connecting, *(S) Sys Mgmt Util M-Z*, 5–9
disks, *(P) I/O User*, 2–1
displaying on Alpha systems, *(S) Sys Mgmt Util M-Z*, 6–40
DSDRIVER, *(S) VMScluster Sys*, 1–4, 2–17
DUDRIVER, *(S) VMScluster Sys*, 1–4, 2–17
for event handling, *(S) Sys Mgr Essentials*, 7–7
LAN, *(P) I/O User*, 9–2
LAT port, *(P) I/O User*, 5–1
load balancing, *(S) VMScluster Sys*, 6–17
loading, *(S) Sys Mgmt Util M-Z*, 5–5, 5–9, 5–14; *(S) VMScluster Sys*, 5–9
automatically, *(S) Sys Mgr Essentials*, 7–6
in system startup, *(S) Sys Mgr Essentials*, 5–4, 5–7
manually (Alpha), *(S) Sys Mgr Essentials*, 7–8
manually (VAX), *(S) Sys Mgr Essentials*, 7–7
loading on Alpha systems, *(S) Sys Mgmt Util M-Z*, 6–37
locating, *(P) VAX SDA*, SDA–18
locating a failing instruction, *(P) VAX SDA*, SDA–27
magnetic tape, *(P) I/O User*, 3–1
mailbox, *(P) I/O User*, 4–1
not associated with a specific device, *(S) Sys Mgr Essentials*, 7–7
OpenVMS, *(G) SW Overview*, 3–3
PADRIVER, *(S) VMScluster Sys*, 1–6
PEDRIVER, *(S) VMScluster Sys*, 1–6, G–3
PIDRIVER, *(S) VMScluster Sys*, 1–6
PNDRIVER, *(S) VMScluster Sys*, 1–6
port, *(S) VMScluster Sys*, 1–5
pseudoterminal, *(P) I/O User*, 6–1
replacing with new version of, *(S) Sys Mgmt Util M-Z*, 5–15
SCSI, *(P) I/O User*, 2–17
SCSI disk class, *(P) I/O User*, 2–18
shadow set virtual unit, *(P) I/O User*, 7–1
Device drivers (cont'd)
showing configuration of, *(S) Sys Mgmt Util M-Z*, 5–24
showing information, *(S) Sys Mgmt Util M-Z*, 5–27, 5–28
terminal, *(P) I/O User*, 5–1
TTDRIVER, *(S) Sys Mgr Essentials*, 7–11
TUDRIVER, *(S) VMScluster Sys*, 1–4, 2–18
user-written, *(G) SW Overview*, 3–3
VAXstation 2000 and MicroVAX 2000 disk, *(P) I/O User*, 2–17
Device field, *(G) User*, 4–2
Device IDs
configuring for SCSI, *(G) V7.0 New Feat*, C–21
Device names, *(S) Sys Mgr Essentials*, 7–1
assigning logical names to, *(G) DCL A-M*, DCLI–41, DCLI–120
DECnet, *(S) DECnet Intro*, 3–33
for virtual terminals, *(S) Sys Mgr Essentials*, 7–11
generic, *(G) User*, 12–9; *(G) DCL A-M*, DCLI–15
in a VMScluster environment, *(S) Sys Mgr Essentials*, 7–1
logical, *(G) User*, 12–9
physical, *(G) User*, 12–8; *(P) Interfaces*, B–6
specifying, *(S) Sys Mgmt Util M-Z*, 5–7, 5–9
specifying in a command, *(G) User*, 12–9
VMScluster, *(G) User*, 12–10
DEVICE phase of system startup, *(S) Sys Mgr Essentials*, 5–4, 5–18
/DEVICE qualifier, *(P) Alpha SDA*, SDA–124; *(P) VAX SDA*, SDA–141
Devices, *(G) User*, 12–1
Refer also to the *OpenVMS VAX Device Support Manual* and the *OpenVMS VAX Device Support Reference Manual*
See also Disks, Printers, and Terminals
access, *(G) DCL A-M*, DCLI–15
accessing, *(G) User*, 12–1
accessing files, *(G) User*, 12–8
accessing in batch job, *(S) Sys Mgr Essentials*, 8–46
accessing volume sets, *(G) User*, 12–8
access requirements, *(S) Security*, 5–4
allocating, *(G) User*, 12–3; *(G) DCL A-M*, DCLI–15; *(S) Sys Mgr Essentials*, 8–9, 9–22; *(P) Concepts*, 9–31; *(P) Sys Svc I*, SYS1–22
by device type, *(G) User*, 12–4
by logical name, *(G) User*, 12–4
command format, *(G) User*, 12–3
first available, *(G) User*, 12–3
generic devices, *(G) User*, 12–4
physical device, *(G) User*, 12–3
as protected objects, *(S) Security*, 4–10
assigning logical queue name to, *(G) DCL A-M*, DCLI–48

Devices (cont'd)
availability
OPCOM message, *(S) Sys Mgr Essentials*, 8–59
CI circuit, *(S) DECnet Mgmt*, 2–10
configuring
in system startup, *(S) Sys Mgr Essentials*, 5–7, 7–6
manually, *(S) Sys Mgr Essentials*, 5–7, 7–7
special devices, *(S) Sys Mgr Essentials*, 7–7, 7–8
configuring VAXstation 2000 and MicroVAX 2000 devices, *(S) Sys Mgmt Util M-Z*, D–6
connecting, *(S) Sys Mgr Essentials*, 7–6
connecting on Alpha systems, *(S) Sys Mgmt Util M-Z*, 6–33, 6–34
controlling access through ACLs, *(S) Security*, 4–18
creating, *(G) DCL N-Z*, DCLII–115
DDCMP circuit, *(S) DECnet Mgmt*, 2–7
deallocating, *(G) DCL A-M*, DCLI–110; *(P) Concepts*, 9–33; *(P) Sys Svc I*, SYS1–238
default name, *(P) Concepts*, 9–27
default security elements, *(S) Security*, 5–6
determining available, *(S) Sys Mgr Essentials*, 7–2
DEUNA, *(S) DECnet Intro*, 3–34
Digital supplied, *(S) Sys Mgmt Util M-Z*, D–1
dismounting, *(G) DCL A-M*, DCLI–184
dismounting allocated, *(G) User*, 12–11
displaying
default, *(G) DCL N-Z*, DCLII–254
information on, *(G) DCL N-Z*, DCLII–237
mounted volumes, *(G) DCL N-Z*, DCLII–258
queue entries, *(G) DCL N-Z*, DCLII–270, DCLII–319
status of, *(G) DCL N-Z*, DCLII–256
displaying error count for, *(G) DCL N-Z*, DCLII–275
displaying information, *(G) User*, 12–2
displaying SDA information, *(P) Alpha SDA*, SDA–93; *(P) VAX SDA*, SDA–104
displaying the default, *(S) Sys Mgmt Util M-Z*, 6–58
DMC11, *(S) DECnet Mgmt*, 1–9
DMF32, *(S) DECnet Mgmt*, 1–9
DMP11, *(S) DECnet Mgmt*, 1–9
DMR11, *(S) DECnet Mgmt*, 1–9
dual-pathed, *(S) VMScluster Sys*, 6–3; *(P) Sys Svc I*, SYS1–410
dual-ported, *(S) VMScluster Sys*, 6–2
DZ11, *(S) DECnet Mgmt*, 1–9
establishing as spooled, *(G) DCL N-Z*, DCLII–109
establishing operational status for, *(G) DCL N-Z*, DCLII–109
Ethernet adapter

Devices
Ethernet adapter (cont'd)
specifying number for AUTOGEN, *(S) Sys Mgr Tuning*, 14–21
Ethernet circuit, *(S) DECnet Mgmt*, 2–10
Ethernet UNA, *(S) DECnet Intro*, 3–34
events audited, *(S) Security*, 5–7
excluding, *(S) Sys Mgmt Util M-Z*, 6–38
FDDI circuit, *(S) DECnet Mgmt*, 2–11
FDDI line, *(S) DECnet Mgmt*, 2–14
getting information about, *(S) Sys Mgr Essentials*, 7–2, 7–16; *(P) Concepts*, 9–28
getting information asynchronously, *(P) Sys Svc I*, SYS1–406
getting information synchronously, *(P) Sys Svc I*, SYS1–426
identifying, *(G) User*, 12–8
implicit allocation, *(P) Concepts*, 9–33
ISO-9660
getting information about, *(S) Sys Mgr Essentials*, 7–5
LAN, *(S) DECnet Mgmt*, 2–14
lock name, *(P) Sys Svc I*, SYS1–414
logical name assignment, *(G) DCL A-M*, DCLI–15
logical name translation, *(S) Sys Mgmt Util M-Z*, 6–22
LTA*n*, *(S) Sys Mgr Essentials*, 7–11
magnetic tapes
setting default characteristics for, *(G) DCL N-Z*, DCLII–163
managing, *(G) SW Overview*, 3–9; *(S) Sys Mgr Essentials*, 7–1
managing with LAN Control Program (LANCP) utility, *(S) Sys Mgr Tuning*, 22–9
manually configuring non-standard devices, *(S) Sys Mgr Essentials*, 5–7, 7–7
modifying, *(G) DCL N-Z*, DCLII–115
modifying security profiles of, *(S) Security*, 5–6
mounting volumes, *(S) Sys Mgr Essentials*, 8–18
names, *(P) Concepts*, 9–26
network communications
connecting, *(S) Sys Mgr Essentials*, 7–7, 7–8
obtaining information about using F$DEVI lexical function, *(G) User*, 17–10
OPA0:, *(S) Sys Mgr Essentials*, 2–23
port error-log entries, *(S) VMScluster Sys*, C–27
private, *(G) User*, 12–8
privilege requirements, *(S) Security*, 5–7
profile storage, *(S) Security*, 5–8
protecting, *(S) Sys Mgr Essentials*, 7–5
protecting BACKUP save sets, *(S) Security*, 8–29
protection, *(P) Concepts*, 9–5
QNA, *(S) DECnet Intro*, 3–33

Devices (cont'd)
requiring manual connecting, *(S) Sys Mgr Essentials*, 7–8
resetting default in SYSMAN, *(S) Sys Mgr Essentials*, 2–17
reusing in C2 systems, *(S) Security*, C–9
RTA*n*, *(S) Sys Mgr Essentials*, 7–11
scanning of across the cluster, *(P) Sys Svc I*, SYS1–275
SCSI support, *(S) VMScluster Sys*, 6–23; *(P) I/O User*, 7–2
security, *(G) User*, 12–2
security elements of, *(S) Security*, 5–3
served, *(P) Sys Svc I*, SYS1–418
setting characteristics, *(S) Sys Mgr Essentials*, 13–14
in system startup, *(S) Sys Mgr Essentials*, 13–14
setting default, *(G) DCL N-Z*, DCLII–107
setting defaults for file specifications, *(S) Sys Mgmt Util M-Z*, 6–54
shared disks, *(S) VMScluster Sys*, 6–19
special
connecting, *(S) Sys Mgr Essentials*, 7–8
specifying physical device name, *(G) User*, 12–8
specifying quotas for, *(S) Sys Mgmt Util M-Z*, 6–21
spooled, *(S) Sys Mgr Essentials*, 13–14
spooled, access requirements, *(S) Security*, 5–5
status report on, *(S) Sys Mgr Tuning*, 18–17
supported, *(P) I/O User*, 7–2
suppressing autoconfiguration during system startup, *(S) Sys Mgr Essentials*, 5–8, 7–8
template security profiles, *(S) Security*, 5–6
terminal configuration, *(S) Security*, 8–31
types of interconnect, *(S) VMScluster Sys*, 1–3
unloading with DISMOUNT command, *(G) DCL A-M*, DCLI–186
virtual, *(G) DCL A-M*, DCLI–217, DCLI–339
volumes, *(G) User*, 12–2
Volumes
private, *(G) User*, 12–2
Device seed, *(S) Sys Mgmt Util A-L*, 13–28
Device support
debugging device drivers, *(P) Environment*, 9–8
Device table, *(S) Sys Mgmt Util M-Z*, D–1
Device tests
running individually with UETP, *(S) Sys Mgr Tuning*, 17–32
Device types, *(P) Concepts*, 9–28
codes, *(S) Sys Mgmt Util M-Z*, 5–6
descriptions, *(S) Sys Mgmt Util M-Z*, 5–6
Device unavailable queue status, *(S) Sys Mgr Essentials*, 13–51
device_name data type, *(P) Interfaces*, B–6
DFL (data bucket fill size)
program example, *(P) RMS Ref*, A–19
DFM32
choosing appropriate environment, *(S) VAX Perform*, 5–15
DFS
See also DNS
supporting network dependability, *(S) Dependable*, 7–17
DFW option, *(P) Rec Mgmt Util*, 4–19
2D graphics option, *(P) Environment*, 2–6
3D graphics option, *(P) Environment*, 2–6
DHB32 device, *(S) DECnet Mgmt*, 2–7
DHT32 device, *(S) DECnet Mgmt*, 2–7
DHU11 device, *(P) I/O User*, 5–1
DHV11 device, *(P) I/O User*, 5–1
DIAGNOSE command, *(G) DCL A-M*, DCLI–157; *(S) Sys Mgr Tuning*, 18–2
DIAGNOSE privilege, *(S) Security*, A–6; *(S) DECnet Mgmt*, 5–2
Diagnostics
relationship to UETP, *(S) Sys Mgr Tuning*, 17–16
Dialup identifiers, *(S) Security*, 4–3; *(S) Sys Mgr Essentials*, 11–11
Dialup lines, *(S) DECnet Mgmt*, 5–12; *(P) I/O User*, 5–13
connection security, *(S) Security*, 12–16; *(S) DECnet Intro*, 3–21, 3–25, 3–37
controlling access, *(S) Security*, 3–2
controlling access to, *(G) User*, 2–5
using for dynamic asynchronous connection, *(S) Security*, 12–15; *(S) DECnet Intro*, 3–24
using for static asynchronous connection, *(S) DECnet Intro*, 3–4, 3–19, 3–20, 3–22, 3–24
using in a public area, *(S) Security*, 3–21
Dialup logins, *(S) Security*, 3–5
breaking connections, *(S) Security*, 3–20
controlling retries, *(S) Security*, 7–24
failures, *(S) Security*, 3–9
retries, *(S) Security*, 3–9
Dialups
breaking connections, *(G) User*, 2–26
login failures, *(G) User*, 2–12
DIBOL, *(G) SW Overview*, 4–6; *(P) Environment*, 7–2, 7–6
starting the message manager, *(S) Sys Mgr Essentials*, 5–16
DIFFERENCES command, *(G) DCL A-M*, DCLI–158 to DCLI–167
in network operations, *(S) DECnet Intro*, 2–8
output formats, *(G) DCL A-M*, DCLI–163
Differential signaling
for SCSI, *(G) V7.0 New Feat*, C–7
DIGITAL Command Language
See DCL
Digital consulting, *(S) Dependable*, 10–1 to 10–10

Digital Distributed Name Service
See DECdns
Digital Ethernet Communications Server
See DECSA
DIGITAL Extended LAN Management Software
See DECelms
Digital Extended Math Library for OpenVMS, *(G) SW Overview*, 4–10
Digital Network Architecture
See DNA
Digital private escape sequence, *(P) I/O User*, B–9
Digital Proprietary Interfaces: cma routines, *(P) DECthreads*, E–1
Digital Proprietary Interfaces: tis routines, *(P) DECthreads*, tis–3
Digital publications
See Bibliography
Digital Standard MUMPS
See DSM
DIGITAL Standard Runoff
See DSR
Digital Storage Architecture
See DSA
Digital System Identifier
See DSI
Digital TCP/IP, *(G) V7.0 New Feat*, 3–12
Digital UNIX, *(P) DECthreads*, A–2
DINT key types, *(P) Rec Mgmt Util*, 4–30
DIO (direct I/O), *(S) DECamds*, 3–17, 3–24
limit (DIOLM), *(S) DECamds*, 3–24
use display, *(S) DECamds*, 2–3
DIOLM (direct I/O limit) quota, *(P) Concepts*, 9–3
DIOLM process limit, *(S) Sys Mgr Essentials*, 6–42; *(P) I/O User*, 2–27
value for efficient backups, *(S) Sys Mgr Essentials*, 10–10
DIR.COM command procedure, *(G) User*, C–9
sample execution, *(G) User*, C–11
Direct access mode, *(P) File Appl*, 1–2
Direct I/O, *(S) Alpha Perform*, 7–5, 11–5; *(P) Concepts*, 5–18
count, *(P) Rec Mgmt Util*, 2–17
count process limit, *(S) Sys Mgr Essentials*, 6–42
definition, *(S) Alpha Perform*, 14–1
map, *(S) VAX Perform*, 2–18
Direct I/O count process limit, *(P) I/O User*, 2–27, 3–10
Direct I/O usage
See DIO
Directing ANALYZE/DISK_STRUCTURE output, *(S) Sys Mgmt Util A-L*, 3–6, 3–9
Directing output, *(S) DECnet Mgmt Util*, 2–1
Directing SYSGEN output, *(S) Sys Mgmt Util M-Z*, 5–4, 5–7, 5–16
Directives
See also Message utility
.END, *(P) Concepts*, 13–59
.FACILITY, *(P) Concepts*, 13–58
.SEVERITY, *(P) Concepts*, 13–59
.TITLE, *(P) Concepts*, 13–60
Direct mode
as execution mode for a startup procedure, *(S) Sys Mgr Essentials*, 5–19
Directories, *(P) File Appl*, 6–11
See also Subdirectories
access, *(G) User*, 5–8
access control through ACLs, *(S) Security*, 4–19
accessing when public, *(S) DECnet Intro*, 2–5
access requirements, *(S) Security*, 5–8, 5–9
access to files created in, *(S) Sys Mgmt Util A-L*, 1–9
and Default Protection ACEs, *(S) Sys Mgmt Util A-L*, 1–11
assigning a Creator ACE to, *(S) Sys Mgmt Util A-L*, 1–9
assigning a security profile, *(S) Security*, 5–11
backing up, *(S) Sys Mgr Essentials*, 10–24
backlink, *(S) Sys Mgr Essentials*, 8–56
changing specification, *(G) DCL N-Z*, DCLII–39
controlling access to files, *(S) Security*, 4–20, 8–16
copying, *(G) DCL A-M*, DCLI–81
copying with BACKUP, *(S) Sys Mgr Essentials*, 10–23
creating, *(G) DCL A-M*, DCLI–96; *(S) Security*, 5–9; *(S) Sys Mgr Essentials*, 9–20
creating for a new account, *(S) Sys Mgmt Util A-L*, 5–19
DECnet default nonprivileged, *(S) DECnet Intro*, 3–11
definition, *(G) User*, 5–1
deleting, *(G) User*, 5–4
destination
specifying in VMSINSTAL.COM command procedure, *(S) Sys Mgr Essentials*, 3–13
determining access to files created in, *(S) Sys Mgmt Util A-L*, 1–11
displaying contents of, *(G) User*, 5–3; *(G) DCL A-M*, DCLI–168
displaying default, *(G) DCL N-Z*, DCLII–254
displaying remote, *(S) DECnet Intro*, 2–5
events audited, *(S) Security*, 5–11
file version limit
defining at creation, *(G) DCL A-M*, DCLI–97
for an interactive account, *(S) Sys Mgr Essentials*, 6–15
listing remote, *(S) TCP/IP*, 3–4

Directories (cont'd)
modifying, *(G) DCL N-Z*, DCLII–112
modifying number in system space
for Files–11 volume, *(G) DCL N-Z*, DCLII–231
OpenVMS, *(G) SW Overview*, 5–9
ownership
by resource identifier, *(S) Security*, 8–21
changing access to files, *(S) Security*, 8–16; *(S) Sys Mgmt Util A-L*, 1–9
setting default, *(S) Security*, 8–16
protecting, *(S) Sys Mgr Essentials*, 9–12
protection, *(S) Sys Mgr Essentials*, 9–11
defining at creation, *(G) DCL A-M*, DCLI–97
ready access, *(G) DCL A-M*, DCLI–254
resetting default in SYSMAN, *(S) Sys Mgr Essentials*, 2–17
restoring, *(S) Sys Mgr Essentials*, 10–29
setting default, *(G) DCL N-Z*, DCLII–107
setting default file protection, *(S) Security*, 4–19
setting file protection, *(S) Security*, 8–16
shelved files, *(G) DCL A-M*, DCLI–175
space preallocation on disk, *(G) DCL A-M*, DCLI–256
temporary working
in VMSINSTAL.COM command procedure, *(S) Sys Mgr Essentials*, 3–14
transactions involving remote, *(S) TCP/IP*, 5–8
user, *(G) SW Overview*, 5–9
Directory backlinks
definition, *(S) Sys Mgmt Util A-L*, 3–3
Directory blocks
controlling read/write checking of, *(G) V7.0 New Feat*, 3–2
DIRECTORY command, *(G) User*, 5–3; *(G) DCL A-M*, DCLI–168 to DCLI–179; *(S) Sys Mgr Essentials*, 9–5
checking number of user's disk blocks, *(S) Sys Mgr Essentials*, 8–49
/FULL qualifier for checking RMS statistics status, *(P) File Appl*, 3–30
in CLUE, *(S) Sys Mgmt Util A-L*, 8–6
in Mail, *(G) User*, 6–4, 6–13
in network operations, *(S) DECnet Intro*, 2–5
retrieving file information, *(S) Sys Mgr Essentials*, 9–2
/SECURITY qualifier, *(S) Security*, 5–13
showing full information, *(S) Sys Mgr Essentials*, 9–17
to obtain product list, *(S) Sys Mgr Essentials*, 3–10
with tapes, *(S) Sys Mgr Essentials*, 9–16, 9–20
Directory default
displaying, *(S) Sys Mgmt Util M-Z*, 6–58
modifying, *(S) Sys Mgmt Util M-Z*, 6–54
Directory entry
creation, *(P) I/O User*, 1–25
protection, *(P) I/O User*, 1–9
Directory field
definition, *(G) User*, 4–2
using an asterisk (*) wildcard character in, *(G) User*, 4–9
using a percent sign (%) wildcard character in, *(G) User*, 4–10
Directory files
creating, *(G) User*, 5–3
default, *(G) User*, 5–5
format, *(G) User*, 5–3
protection, *(G) User*, 5–7
setting default to another, *(G) User*, 5–5
top-level, *(G) User*, 5–1
DIRECTORY/FULL command for checking RMS statistics status, *(P) File Appl*, 3–30
Directory logical name tables
process, *(P) Concepts*, 10–3
system, *(P) Concepts*, 10–3
Directory lookup subfunction, *(P) I/O User*, 1–7
directory entry protection, *(P) I/O User*, 1–9
Directory names
format in file specifications, *(G) User*, 5–3
replacing
with ellipsis (...) wildcard character, *(G) User*, 5–8
with hyphen (-) wildcard character, *(G) User*, 5–9
translating UIC format to named format, *(G) User*, 5–10
/DIRECTORY qualifier, *(P) Debugger*, CD–257
Directory specifications
definition, *(G) User*, 5–3
format, *(G) User*, 5–3
normal, *(P) File Appl*, 6–11 to 6–13
rooted, *(P) File Appl*, 6–13 to 6–18
rules for entering, *(G) User*, 5–3
Directory structures
on common system disk, *(S) VMScluster Sys*, 5–4
sample, *(G) User*, 5–1
Directory trees, *(P) File Appl*, 6–11
copying, *(S) Sys Mgr Essentials*, 10–23
propagating UIC-based protection, *(S) Sys Mgmt Util A-L*, 1–11
restoring, *(S) Sys Mgmt Util A-L*, 7–9
DIRECTORY_ENTRY attribute, *(P) Rec Mgmt Util*, 4–19; *(P) File Appl*, 4–32
/DIRECT qualifier, *(P) Debugger*, CD–285
DIR/FTP command, *(S) Sys Mgr Tuning*, 21–14; *(S) TCP/IP*, 3–4, 5–8
DISABLE AST command, *(P) Debugger*, 13–25, CD–83

DISABLE AUTOSTART command, *(G) DCL A-M*, DCLI–180 to DCLI–181
DISABLE AUTOSTART/QUEUES command, *(S) Sys Mgr Essentials*, 13–54, 13–55
DISABLE command
  in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–12
.DISABLE directive
  QUADWORD option, *(P) 64-Bit Addr*, 9–1
Disabled queues, *(S) Sys Mgr Essentials*, 13–84
Disabling
  network event logging, *(S) DECnet Intro*, 4–6
Disabling asynchronous delivery
  of alerts, *(P) DECthreads*, E–11
  of cancels, *(P) DECthreads*, G–73
Disabling autostart, *(S) Sys Mgr Essentials*, 12–9, 13–54
  before shutting down a node, *(S) Sys Mgr Essentials*, 13–55
  on a node, *(G) DCL A-M*, DCLI–180; *(G) DCL N-Z*, DCLII–406
Disabling error checking, *(G) User*, 15–33
Disabling logins, *(S) VMScluster Sys*, 4–7
Disabling operator terminals, *(S) Sys Mgr Essentials*, 2–24
Disabling spooling, *(S) Sys Mgr Essentials*, 7–15
Disabling user accounts, *(S) Sys Mgr Essentials*, 6–27
Disaster tolerant computing, *(G) SW Overview*, 2–12, 7–10; *(S) Dependable*, 1–2 to 1–3, 5–11
DISCONNECT command, *(G) DCL A-M*, DCLI–182 to DCLI–183; *(S) DECnet Mgmt Util*, 4–8; *(P) Debugger*, CD–84; *(P) I/O User*, 5–18
  multiprocess program, *(P) Debugger*, 14–9
Disconnected job messages, *(S) Security*, 3–6
Disconnected processes
  See Virtual terminals
Disconnect features
  enabling, *(P) I/O User*, 8–12
Disconnecting a logical link, *(S) DECnet Mgmt*, 8–14
  abort, *(S) DECnet Mgmt*, 8–14, 8–30
  synchronous, *(S) DECnet Mgmt*, 8–14
Disconnection tests, *(S) DECnet Mgmt Util*, 4–8
  types of, *(S) DECnet Mgmt Util*, 4–9
DISCONNECT LINK command, *(S) DECnet Mgmt*, 3–56; *(S) DECnet Mgmt Util*, 3–40
Disconnect service, *(P) RMS Ref*, RMS–24; *(P) File Appl*, 8–5
  condition values, *(P) RMS Ref*, RMS–25
    See also Completion status codes
  control block input fields, *(P) RMS Ref*, RMS–25
  control block output fields, *(P) RMS Ref*, RMS–25
  program example, *(P) RMS Ref*, A–23
Disconnect service (cont'd)
  using with multiple RABs, *(P) RMS Ref*, RMS–25
.DIS file type
  with distribution lists, *(G) User*, 6–8
Disk
  activity
    due to paging or swapping, *(S) Alpha Perform*, 14–4
  average response time, *(S) Alpha Perform*, 11–3
  direct access, *(S) Alpha Perform*, 11–5
  error messages, *(S) DECamds*, 3–6, 3–8
  fragmentation
    correcting, *(S) Alpha Perform*, 11–8
    effect on system performance, *(S) Alpha Perform*, 11–8
  MSCP served, *(S) Alpha Perform*, 11–5
  remote access, *(S) Alpha Perform*, 11–5
  thrashing
    investigating, *(S) Alpha Perform*, 13–12
  transfer
    components, *(S) Alpha Perform*, 11–1
Disk activity
  due to paging or swapping, *(S) VAX Perform*, 4–29
Disk class drivers, *(S) VMScluster Sys*, 1–4, 2–17
  audio extensions, *(P) I/O User*, 2–18
  disabling the loading of, *(P) I/O User*, 8–9
  $QIO interface to audio functions, *(P) I/O User*, 2–19
DISK class record
  in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–14
Disk cluster boundary
  determining allocation quantity, *(P) RMS Ref*, 4–3
Disk controllers, *(S) VMScluster Sys*, 1–3
Disk drives
  compatibility for volume shadowing, *(P) I/O User*, 7–2
Disk file sections
  creating, *(P) Sys Svc I*, SYS1–192
  mapping, *(P) Sys Svc I*, SYS1–192
Disk I/O resource, *(S) Alpha Perform*, 11–1 to 11–3
  disk capacity and demand, *(S) VAX Perform*, 3–30
    data transfer capacity, *(S) VAX Perform*, 3–30
    demand by users and the system, *(S) VAX Perform*, 3–31
    seek capacity, *(S) VAX Perform*, 3–30
  equitable sharing, *(S) VAX Perform*, 3–34; *(S) Alpha Perform*, 11–5
  evaluating responsiveness, *(S) VAX Perform*, 3–31

Disk I/O resource (cont'd)
factors limiting performance, *(S) VAX Perform*, 3–31
function, *(S) VAX Perform*, 3–29
improving responsiveness, *(S) VAX Perform*, 3–33; *(S) Alpha Perform*, 11–5
load balancing, *(S) VAX Perform*, 3–41; *(S) Alpha Perform*, 11–10
offloading, *(S) VAX Perform*, 3–37; *(S) Alpha Perform*, 11–9
RAM disks, *(S) VAX Perform*, 3–39; *(S) Alpha Perform*, 18–4
virtual I/O cache, *(S) VAX Perform*, 3–37; *(S) Alpha Perform*, 18–1
reducing consumption, *(S) VAX Perform*, 3–34; *(S) Alpha Perform*, 11–6
solid-state disks, *(S) VAX Perform*, 3–33
Disk model, *(P) Rec Mgmt Util*, 4–36
DISKQUOTA (Disk Quota utility)
See Disk Quota utility
DISKQUOTA commands, *(S) Sys Mgmt Util M-Z*, 6–21 to 6–29
DISKQUOTA commands in SYSMAN, *(S) Sys Mgr Essentials*, 2–11, 8–52
Disk quotas, *(S) Sys Mgr Essentials*, 6–15; *(P) I/O User*, 1–35 to 1–36, 2–27
as restriction for users, *(S) Security*, 7–3
charging to identifiers, *(S) Security*, 8–10
creating, *(S) Sys Mgr Essentials*, 8–51; *(S) Sys Mgmt Util M-Z*, 6–22
definition, *(S) Sys Mgr Essentials*, 8–48
disabling, *(S) Sys Mgr Essentials*, 8–53; *(S) Sys Mgmt Util M-Z*, 6–23
displaying, *(G) DCL N-Z*, DCLII–333; *(S) Sys Mgr Essentials*, 8–49; *(S) Sys Mgmt Util M-Z*, 6–29
ensuring accuracy with rebuild operation, *(S) Sys Mgr Essentials*, 8–50
example, *(S) Sys Mgr Essentials*, 6–33
file, *(S) Sys Mgr Essentials*, 8–49
adding entry, *(S) Sys Mgmt Util M-Z*, 6–21
initializing usage count, *(S) Sys Mgmt Util M-Z*, 6–21
maintaining, *(S) Sys Mgr Essentials*, 8–50
modifying an entry, *(S) Sys Mgmt Util M-Z*, 6–25
rebuilding, *(S) Sys Mgmt Util M-Z*, 6–26
removing an entry, *(S) Sys Mgmt Util M-Z*, 6–23, 6–27
retrieving information, *(S) Sys Mgr Essentials*, 8–52
suspending operations, *(S) Sys Mgr Essentials*, 8–52
Disk Quota utility (DISKQUOTA), *(S) Sys Mgr Essentials*, 8–50
Disks
See also CD–ROM, DSA disks, and System disks
Disks (cont'd)
accessible across the VMScluster, *(S) VMScluster Sys*, 1–3
accessing deleted data, *(S) Security*, 5–13
accessing SCSI, *(G) V7.0 New Feat*, C–2
ACP operation
control function, *(P) I/O User*, 1–34
creating file, *(P) I/O User*, 1–24
deaccessing file, *(P) I/O User*, 1–27
allocating drives, *(S) Sys Mgr Essentials*, 8–9
allocating mapping pointers, *(G) DCL A-M*, DCLI–261
allocating space on, *(S) Sys Mgr Essentials*, 8–52
allocation class, *(S) VMScluster Sys*, 6–7
altering label, *(S) VMScluster Sys*, 8–40
audio functions
See SCSI, class driver
available function, *(P) I/O User*, 2–35
backing up active, *(S) Sys Mgr Essentials*, 10–63
Backup utility, *(P) I/O User*, 2–16
basic concepts, *(P) File Appl*, 1–3
block
definition, *(S) Sys Mgr Essentials*, 8–2
grouped into cluster, *(S) Sys Mgr Tuning*, A–1
changing message transfer rate, *(S) Security*, 9–28
cluster, *(S) Sys Mgr Tuning*, A–1
definition, *(S) Sys Mgr Essentials*, 8–2
cluster-accessible, *(S) VMScluster Sys*, 6–1
storing common procedures on, *(S) VMScluster Sys*, 5–8
clusterwide access to local, *(S) VMScluster Sys*, 6–15
concepts, *(S) Sys Mgr Tuning*, A–1
configuring, *(S) VMScluster Sys*, 6–20
configuring system, *(S) VMScluster Sys*, 9–14
creating sequential files, *(G) DCL A-M*, DCLI–93
cylinder
definition, *(S) Sys Mgr Tuning*, A–2
data check, *(P) I/O User*, 2–12, 2–32, 2–33
deallocating drives, *(G) User*, 12–3; *(S) Sys Mgr Essentials*, 8–10
default format, *(S) Sys Mgr Essentials*, 9–19
default security elements, *(S) Security*, 5–6
defining shareable volume, *(G) DCL A-M*, DCLI–260
defining structure level, *(G) DCL A-M*, DCLI–261
definition, *(S) Sys Mgr Essentials*, 8–2
defragmenting, *(G) SW Overview*, 7–6
device characteristics, *(P) I/O User*, 2–25
device descriptions, *(P) I/O User*, 2–3 to 2–7
directory space allocation, *(G) DCL A-M*, DCLI–256

Disks (cont'd)
directory structure on common system disk, *(S) VMScluster Sys*, 5–4
disabling operator status, *(G) DCL N-Z*, DCLII–45
dismounting, *(G) DCL A-M*, DCLI–184; *(S) Sys Mgr Essentials*, 10–16
dismounting volume set, *(G) DCL A-M*, DCLI–186
displaying quota, *(G) DCL N-Z*, DCLII–333
driver, *(P) I/O User*, 2–1, 2–18
SCSI, *(P) I/O User*, 2–17
VAXstation 2000 and MicroVAX 2000, *(P) I/O User*, 2–17
dual-pathed, *(S) VMScluster Sys*, 5–9, 6–3; *(P) I/O User*, 2–8
DSA disks, *(P) I/O User*, 2–11
dual-pathed, served by MSCP, *(S) VMScluster Sys*, 6–1
dual-pathed HSC, *(S) VMScluster Sys*, 6–12
dual-ported, *(S) VMScluster Sys*, 6–2; *(P) I/O User*, 2–9
dual porting, *(P) I/O User*, 2–9
restrictions for use, *(P) I/O User*, 2–10
dual-porting
DSA disks, *(P) I/O User*, 2–11
HSC disks, *(P) I/O User*, 2–11
enabling operator status, *(G) DCL N-Z*, DCLII–45
erase-on-allocate, *(S) Security*, 5–12, 5–13
erasing, *(S) Security*, 5–13, 8–28
erasure patterns, *(S) Security*, 5–12
error recovery, *(P) I/O User*, 2–13
establishing operational status for, *(G) DCL N-Z*, DCLII–109
extents, *(S) Sys Mgr Tuning*, A–1
definition, *(S) Sys Mgr Essentials*, 8–2
features, *(P) I/O User*, 2–8
file attributes, *(P) I/O User*, 2–12
file identification, *(S) Sys Mgr Tuning*, A–4
Files–11
directory hierarchy, *(S) Sys Mgr Tuning*, A–4
fragmentation of, *(S) Sys Mgr Essentials*, 10–48; *(S) Sys Mgr Tuning*, 15–27
correcting, *(S) VAX Perform*, 3–36
effect on system performance, *(S) VAX Perform*, 3–36
function codes, *(P) I/O User*, 2–27, 2–28, A–2
function modifiers
IO$M_DATACHECK, *(P) I/O User*, 2–12, 2–33
IO$M_INHRETRY, *(P) I/O User*, 2–13
highwater marking, *(S) Security*, 5–12
HSC controllers, *(P) I/O User*, 2–2
I/O functions, *(P) I/O User*, 2–27, 2–32 to 2–38
See also ACP-QIO interface
arguments, *(P) I/O User*, 2–29 to 2–32
Disks (cont'd)
I/O performance, *(S) Sys Mgr Tuning*, 16–8
I/O status block, *(P) I/O User*, 2–38
index file placement, *(G) DCL A-M*, DCLI–258
indicating bad block data, *(G) DCL A-M*, DCLI–261
initializing, *(S) Sys Mgr Essentials*, 10–14
initializing from within a program, *(P) Sys Svc II*, SYS2–118
example, *(P) Concepts*, 9–36
initializing within program, *(P) Concepts*, 9–36
KDA50 controller, *(P) I/O User*, 2–2
KDB50 controller, *(P) I/O User*, 2–2
KFQSA adapter, *(P) I/O User*, 2–3
making a group available
volume, *(S) Sys Mgmt Util M-Z*, 2–21
making a public volume, *(S) Sys Mgmt Util M-Z*, 2–36
managing security profiles, *(S) Security*, 5–6
modifying RMS defaults for file operations, *(G) DCL N-Z*, DCLII–196
mounting, *(G) User*, 12–7; *(S) Sys Mgr Essentials*, 8–28, 10–15; *(S) Sys Mgmt Util M-Z*, 2–4
clusterwide, *(S) Sys Mgmt Util M-Z*, 2–4, 2–14
for volume shadowing, *(S) Sys Mgmt Util M-Z*, 2–16, 2–17, 2–34
mounting in host-based shadow set, *(S) Sys Mgr Essentials*, 10–42
offset recovery, *(P) I/O User*, 2–12
organization
logical, *(S) Sys Mgr Tuning*, A–1
physical, *(S) Sys Mgr Tuning*, A–2
pack acknowledge function, *(P) I/O User*, 2–35
port access mode, *(P) I/O User*, 2–9
port selection, *(P) I/O User*, 2–9
programming example, *(P) I/O User*, 2–39
protecting, *(S) Sys Mgr Essentials*, 8–14, 8–16
protecting after file deletion, *(S) Security*, 5–12
quorum, *(S) VMScluster Sys*, 2–8
RCT (replacement and caching table), *(P) I/O User*, 2–16
read function, *(P) I/O User*, 2–32
rebuilding, *(S) VMScluster Sys*, 6–20
renaming directory, *(G) DCL N-Z*, DCLII–39
renaming file, *(G) DCL N-Z*, DCLII–39
restricted access, *(S) VMScluster Sys*, 6–1
RF31
failover, *(P) I/O User*, 2–12
RF70
failover, *(P) I/O User*, 2–12
SCSI, *(G) V7.0 New Feat*, C–1
SCSI concepts, *(G) V7.0 New Feat*, C–6
SCSI configuration requirements, *(G) V7.0 New Feat*, C–4
SDI (Standard Disk Interface), *(P) I/O User*, 2–3

Disks (cont'd)
search function, *(P) I/O User*, 2–34
sector translation, *(P) I/O User*, 2–14
seek operations, *(P) I/O User*, 2–13, 2–35
selecting server, *(S) VMScluster Sys*, 8–4
sense mode function, *(P) I/O User*, 2–34
set density function, *(P) I/O User*, 2–34
set preferred path function, *(P) I/O User*, 2–36
setting allocation class, *(S) VMScluster Sys*, 6–9
shareable volume
specifying, *(S) Sys Mgmt Util M-Z*, 2–35
shared, *(S) VMScluster Sys*, 6–19
SII integral adapter, *(P) I/O User*, 2–3
skip sectoring, *(P) I/O User*, 2–14
specifying cluster size, *(G) DCL A-M*, DCLI–255
specifying default file extension size, *(G) DCL A-M*, DCLI–256
specifying density, *(G) DCL A-M*, DCLI–255
specifying faulty areas, *(G) DCL A-M*, DCLI–254
specifying maximum file number, *(G) DCL A-M*, DCLI–258
specifying size for DECram disk, *(G) DCL A-M*, DCLI–260
status returns, *(P) I/O User*, A–3
supported devices, *(P) I/O User*, 2–1 to 2–8
SYS$GETDVI returns, *(P) I/O User*, 2–25
terminology, *(S) Sys Mgr Essentials*, 8–2
track
definition, *(S) Sys Mgr Tuning*, A–2
TU58 magnetic tape
data checks, *(P) I/O User*, 2–12
read function, *(P) I/O User*, 2–32
search function, *(P) I/O User*, 2–34
write check function, *(P) I/O User*, 2–36
write function, *(P) I/O User*, 2–33
UDA50 disk adapter, *(P) I/O User*, 2–1
unload function, *(P) I/O User*, 2–35
usage, *(S) Sys Mgr Essentials*, 8–49
accounting file, *(S) Sys Mgmt Util A-L*, E–1
creating file, *(S) Sys Mgr Essentials*, 8–58
UICs kept in quota file, *(S) Sys Mgr Tuning*, A–9
use with Verify utility, *(P) I/O User*, 2–15, 2–17
VAXstation 2000 and MicroVAX 2000 driver, *(P) I/O User*, 2–17
volume protection, *(S) Security*, 5–20
volumes and volume sets
definitions, *(S) Sys Mgr Essentials*, 8–2
write check function, *(P) I/O User*, 2–35
write function, *(P) I/O User*, 2–33
Disk scavenging
discouraging, *(S) Security*, 8–27
preventing, *(S) Security*, 5–12
Disk servers, *(G) SW Overview*, 6–17
configuring LAN adapter, *(S) VMScluster Sys*, 9–5
configuring memory, *(S) VMScluster Sys*, 9–5
functions, *(S) VMScluster Sys*, 3–6
MSCP on LAN configurations, *(S) VMScluster Sys*, 3–6
selecting, *(S) VMScluster Sys*, 8–4
VMScluster, *(P) Environment*, 3–3
Disk space
allocation by cluster, *(S) Sys Mgr Tuning*, A–1
charging to identifier, *(S) Security*, 8–21
managing, *(S) Sys Mgr Essentials*, 8–48 to 8–55
purging files, *(S) Sys Mgr Essentials*, 8–53
requirements for security audit log file, *(S) Security*, 9–28
saving, *(S) Sys Mgr Essentials*, 8–53; *(P) CDU, LBR, & MU*, LIB–11
by moving page and swap files off the system disk, *(S) Sys Mgr Tuning*, 15–5
by purging the operator log file, *(S) Sys Mgr Essentials*, 5–14
by removing optional system files, *(S) Sys Mgr Essentials*, 5–1
by storing minimal dump information, *(S) Sys Mgr Tuning*, 15–10
by using a selective dump, *(S) Sys Mgr Tuning*, 15–3, 15–4
tracking use of, *(S) Sys Mgr Tuning*, 19–6
usage and charging, *(S) Security*, 8–10
Disk space required for installation, *(S) DECamds*, A–3
Disk Status Summary window, *(S) DECamds*, 3–5 to 3–6
Disk storage server, *(S) Sys Mgr Tuning*, 23–10
Disk striping, *(G) SW Overview*, 2–15, 7–8
dependability features, *(S) Dependable*, 8–26
Disk Striping Driver for OpenVMS, *(G) SW Overview*, 2–15, 7–6, 7–8
Disk structure
analyzing errors, *(S) Sys Mgr Essentials*, 8–55
Files–11, *(S) Sys Mgr Tuning*, A–3; *(P) File Appl*, 1–6
reporting and repairing errors, *(S) Sys Mgr Essentials*, 8–56
Disk thrashing
investigating, *(S) VAX Perform*, 4–22
Disk transfer
components, *(S) VAX Perform*, 3–30
Disk volumes
See also Disks
accessing files on, *(S) Sys Mgr Essentials*, 9–13
access to public, *(S) Sys Mgr Essentials*, 8–8
adding to an existing set, *(S) Sys Mgr Essentials*, 8–34
adding volumes to volume sets, *(S) Sys Mgr Essentials*, 8–34

Disk volumes (cont'd)
analyzing disk structure errors, *(S) Sys Mgr Essentials*, 8–55
analyzing media errors, *(S) Sys Mgr Essentials*, 8–64
assigning logical name, *(S) Sys Mgr Essentials*, 5–11
assigning volume label, *(S) Sys Mgr Essentials*, 5–11
binding into volume sets, *(S) Sys Mgr Essentials*, 8–30
characteristics
modifying, *(S) Sys Mgr Essentials*, 8–29
console, *(S) Sys Mgr Essentials*, 9–24
controlling access, *(S) Security*, 5–20
copying files from, *(S) Sys Mgr Essentials*, 9–20
copying files to and from foreign volumes, *(S) Sys Mgr Essentials*, 9–24
copying files to tape volumes, *(S) Sys Mgr Essentials*, 9–22
creating Files–11 structure, *(S) Sys Mgr Essentials*, 8–10
creating volume sets from, *(S) Sys Mgr Essentials*, 8–32
definition, *(S) Sys Mgr Essentials*, 8–2; *(S) Sys Mgr Tuning*, A–1
disabling automatic rebuild, *(S) Sys Mgmt Util M-Z*, 2–32
disk quota operations, *(S) Sys Mgr Essentials*, 8–50
dismounting, *(S) Sys Mgr Essentials*, 8–43
file expiration dates
setting, *(S) Sys Mgr Essentials*, 8–54
file-structured, *(S) Sys Mgr Essentials*, 8–20
foreign, *(S) Sys Mgr Essentials*, 8–20
handling error conditions, *(S) Sys Mgr Essentials*, 8–55
initializing, *(G) DCL A-M*, DCLI–253; *(S) Sys Mgr Essentials*, 8–10; *(S) Sys Mgr Tuning*, A–1
guidelines, *(S) Sys Mgr Essentials*, 8–13
load balancing, *(S) Sys Mgr Essentials*, 8–9
modifying characteristics, *(S) Sys Mgr Essentials*, 8–29
mounting, *(S) Sys Mgr Essentials*, 8–20, 8–21, 8–27; *(P) Concepts*, 9–33
for page and swap files, *(S) Sys Mgr Tuning*, 15–20
for queue database files, *(S) Sys Mgr Essentials*, 12–6
in system startup
early, *(S) Sys Mgr Essentials*, 5–12
for page and swap files, *(S) Sys Mgr Essentials*, 5–6
InfoServer, *(S) Sys Mgr Tuning*, 23–14
MOUNT/ASSIST command, *(S) Sys Mgr Essentials*, 5–11

Disk volumes
mounting
in system startup (cont'd)
special consideration about operator assistance, *(S) Sys Mgr Essentials*, 5–11
mount verification, *(S) Sys Mgr Essentials*, 8–58
overriding protection checks, *(S) Sys Mgmt Util M-Z*, 2–27
performance, *(S) Sys Mgr Essentials*, 8–28
physical loading, *(S) Sys Mgr Essentials*, 8–21; *(S) Sys Mgmt Util M-Z*, 2–3, 2–38
private, *(S) Sys Mgr Essentials*, 8–9
protecting, *(S) Sys Mgr Essentials*, 8–14
reading files from, *(S) Sys Mgr Essentials*, 9–13
rebuilding, *(S) Sys Mgr Essentials*, 8–50; *(S) Sys Mgmt Util M-Z*, 2–32
removing before dismounting, *(S) Sys Mgr Essentials*, 8–43
repairing errors, *(S) Sys Mgmt Util A-L*, 3–11
restrictions, *(S) Security*, 7–3
space
conserving, *(S) Sys Mgr Essentials*, 8–48
verification, *(S) Sys Mgr Essentials*, 8–58; *(S) Sys Mgmt Util A-L*, 3–3
write-locked
dismounting, *(S) Sys Mgr Essentials*, 8–43
write-locking, *(S) Sys Mgr Essentials*, 8–60
writing files to, *(S) Sys Mgr Essentials*, 9–20
Disk Volume Summary window, *(S) DECamds*, 3–7 to 3–8
Disk volume transfer, *(P) Rec Mgmt Util*, 4–23
DISK_QUORUM system parameter, *(S) VMScluster Sys*, 2–9, A–1
DISMOUNT command, *(G) User*, 12–10; *(G) DCL A-M*, DCLI–184 to DCLI–187; *(P) I/O User*, 1–34
canceling mount verification, *(S) Sys Mgr Essentials*, 8–62
dismounting single volume in volume set, *(S) Sys Mgr Essentials*, 8–44
for a single tape volume, *(S) Sys Mgr Essentials*, 8–44
for foreign volumes, *(S) Sys Mgr Essentials*, 8–45
for single volume or volume set, *(S) Sys Mgr Essentials*, 8–42
/NOUNLOAD qualifier, *(G) User*, 12–11
overriding automatic unloading of volume, *(S) Sys Mgr Essentials*, 8–45
tape, *(S) Sys Mgr Essentials*, 9–23
Dismounting
a backup volume, *(S) Sys Mgr Essentials*, 10–16
a disk with DECdtm transaction logs, *(S) Sys Mgr Tuning*, 25–14
clusterwide volumes, *(G) DCL A-M*, DCLI–185

Dismounting (cont'd)
disks, *(G) DCL A-M*, DCLI–184
tapes, *(G) DCL A-M*, DCLI–184
volumes, *(G) User*, 12–10
allocated devices, *(G) User*, 12–11
volumes and volume sets, *(S) Sys Mgr Essentials*, 8–42
Dismounting a volume, *(P) Sys Svc I*, SYS1–282
Dispatcher
exception, *(P) Concepts*, 13–24
Display
startup configuration, *(P) Debugger*, 3–29
Display, debugger, screen mode
attribute, *(P) Debugger*, 11–3, 11–19, CD–151, CD–276
built-in symbol, *(P) Debugger*, 11–23, 11–24
canceling, *(P) Debugger*, 11–12, CD–26
contracting, *(P) Debugger*, 11–13, CD–118
creating, *(P) Debugger*, 11–13, CD–86
current, *(P) Debugger*, 11–3, 11–19, CD–151
default configuration, *(P) Debugger*, 11–2, 11–4
defined, *(P) Debugger*, 11–2
DO display, *(P) Debugger*, 11–16, 15–22
expanding, *(P) Debugger*, 11–13, CD–118
extracting, *(P) Debugger*, 11–22, CD–121
hiding, *(P) Debugger*, 11–12, CD–88
identifying, *(P) Debugger*, 11–12, CD–250
instruction display (INST), *(P) Debugger*, 11–7, 11–16
kind, *(P) Debugger*, 11–3, 11–15
list, *(P) Debugger*, 11–3, 11–23, CD–250
moving, *(P) Debugger*, 11–12, CD–133
output display (OUT), *(P) Debugger*, 11–7, 11–17
pasteboard, *(P) Debugger*, 11–3, CD–91
predefined, *(P) Debugger*, 11–4
process specific, *(P) Debugger*, 14–15
prompt display (PROMPT), *(P) Debugger*, 11–7
register display (REG), *(P) Debugger*, 11–10, 11–18, 15–22
removing, *(P) Debugger*, 11–12, CD–90
saving, *(P) Debugger*, 11–22, CD–144
scrolling, *(P) Debugger*, 11–11, CD–146
selecting, *(P) Debugger*, 11–19, CD–151
showing, *(P) Debugger*, 11–12, CD–86
window, *(P) Debugger*, 11–2, 11–14, 11–24
Display changes, *(G) V7.0 New Feat*, 3–28
DISPLAY command, *(P) Debugger*, 11–12, 11–13, CD–86
Displaying
See also Displaying network parameters
characteristics assigned to a queue, *(S) Sys Mgr Essentials*, 13–59
default data, *(S) DECamds*, 2–4
defined characteristics, *(S) Sys Mgr Essentials*, 13–59
defined forms, *(S) Sys Mgr Essentials*, 13–63
event data, *(S) DECamds*, 2–8
Displaying (cont'd)
forms assigned to queues, *(S) Sys Mgr Essentials*, 13–64
information about queues, *(S) Sys Mgr Essentials*, 13–49
information about the queue manager, *(S) Sys Mgr Essentials*, 12–11
options, *(S) DECamds*, 2–4
Displaying network parameters
circuit information, *(S) DECnet Mgmt Util*, 3–120
Ethernet configurator data, *(S) DECnet Mgmt Util*, 3–136
line information, *(S) DECnet Mgmt Util*, 3–128
local node information, *(S) DECnet Mgmt Util*, 3–125
logging information, *(S) DECnet Mgmt Util*, 3–133
network names and parameters from the X.25 access module, *(S) DECnet Mgmt Util*, 3–139
node information, *(S) DECnet Mgmt Util*, 3–147
object information, *(S) DECnet Mgmt Util*, 3–152
volatile database information, *(S) DECnet Mgmt Util*, 3–118
volatile link information, *(S) DECnet Mgmt Util*, 3–131
X.25 and X.29 server parameters for call handler, *(S) DECnet Mgmt Util*, 3–145
X.25 protocol module parameters, *(S) DECnet Mgmt Util*, 3–141
Displays
command procedure, *(G) DCL N-Z*, DCLII–228
current process status, *(G) DCL N-Z*, DCLII–339
date, *(G) DCL N-Z*, DCLII–353
device status, *(G) DCL N-Z*, DCLII–237, DCLII–256
files on current output device, *(G) DCL N-Z*, DCLII–424
format SHOW CLUSTER, *(S) Sys Mgmt Util M-Z*, 4–4
names of installed files, *(G) DCL N-Z*, DCLII–257, DCLII–260
names of open files, *(G) DCL N-Z*, DCLII–257
process status, *(G) DCL N-Z*, DCLII–237
refreshing screen with LATCP, *(S) Sys Mgmt Util A-L*, 13–24
SHOW CLUSTER, *(S) Sys Mgmt Util M-Z*, 4–4
system status, *(G) DCL N-Z*, DCLII–237
time, *(G) DCL N-Z*, DCLII–353
working set limit or quota, *(G) DCL N-Z*, DCLII–361
Display service, *(P) RMS Ref*, RMS–26 to RMS–29

Display software installation requirements, *(S) DECamds*, A–2
Distributed arbitration paradigm, *(S) Dependable*, 8–15
Distributed combination trigger
  LAN protocol analysis feature, *(S) VMScluster Sys*, F–27
Distributed computing, *(P) Environment*, 1–3, 3–1
Distributed Computing Environment
  See DCE
Distributed enable
  filter, *(S) VMScluster Sys*, F–34
  LAN protocol analysis feature, *(S) VMScluster Sys*, F–27
  message, *(S) VMScluster Sys*, F–35
  partner program waits for, *(S) VMScluster Sys*, F–37
  scribe program waits for, *(S) VMScluster Sys*, F–38
Distributed environments, *(G) SW Overview*, 2–6
Distributed file system, *(G) SW Overview*, 3–18; *(S) VMScluster Sys*, 1–4, 2–17
Distributed job controller, *(S) VMScluster Sys*, 1–4, 2–19
  separation from queue manager, *(S) VMScluster Sys*, 7–1
  specifying queue database file location, *(S) VMScluster Sys*, 7–5
Distributed lock management statistics
  in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–23
Distributed lock manager
  See Lock manager
Distributed processing, *(G) SW Overview*, 1–5, 2–1; *(S) VMScluster Sys*, 7–1
  in VMScluster environments, *(S) VMScluster Sys*, 5–1
  transactions, *(G) SW Overview*, 7–11
Distributed production systems, *(G) SW Overview*, 7–1
Distributed Queuing System
  See DQS
Distributed system
  using threads in, *(P) DECthreads*, 1–1
Distributed Time Service
  See DTS
Distributed transactions, *(G) SW Overview*, 2–14, 3–6, 7–13
Distributed trigger filter, *(S) VMScluster Sys*, F–34
Distributed trigger message, *(S) VMScluster Sys*, F–35
Distributing shadow sets, *(S) VMScluster Sys*, 6–23, 6–24
Distributing system work load, *(S) Sys Mgr Tuning*, 16–4
Distribution kit
  startup files included on, *(S) Sys Mgr Essentials*, 5–2
Distribution lists
  creating with an editor, *(G) User*, 6–7
  sending mail to from DCL level, *(G) User*, 6–8
  using in Mail, *(G) User*, 6–8
Distrib_Enable filter
  HP 4972 LAN Protocol Analyzer, *(S) VMScluster Sys*, F–34
Distrib_Trigger filter
  HP 4972 LAN Protocol Analyzer, *(S) VMScluster Sys*, F–34
DIV32 device, *(S) DECnet Mgmt*, 2–7
Division
  complex number, *(P) OTS$*, OTS–39
  packed decimal, *(P) OTS$*, OTS–43, OTS–46
Division operator (/), *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–17
DLOCK class record
  in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–16
DLT option, *(P) Rec Mgmt Util*, 4–19
DMB32 device, *(P) I/O User*, 5–1
DMC11 device, *(S) DECnet Mgmt*, 1–9, 2–7
DME, *(G) SW Overview*, 2–2, A–1
DMF32 device, *(S) DECnet Mgmt*, 1–9, 2–7; *(P) I/O User*, 5–1
DMP11 device, *(S) DECnet Mgmt*, 1–9, 2–7
DMR11 device, *(S) DECnet Mgmt*, 1–9, 2–7
DMV11 device, *(S) DECnet Mgmt*, 2–7
DMZ32 device, *(P) I/O User*, 5–1
DNA (Digital Network Architecture), *(G) SW Overview*, 6–3; *(S) DECnet Intro*, 1–3
  layered design and troubleshooting, *(S) DECnet Intro*, 4–12
  layers, *(S) DECnet Intro*, 1–4; *(S) DECnet Mgmt*, 1–3
  protocols, *(G) SW Overview*, 1–10; *(S) DECnet Intro*, 1–4; *(S) DECnet Mgmt*, 1–3
  specification, *(S) DECnet Intro*, 1–4
DNA protocol, *(P) Environment*, 3–1
DNM field, *(P) RMS Ref*, 3–4, A–14
DNS, *(S) TCP/IP*, 2–7
  See also DECdns
DO clause
  example, *(P) Debugger*, 7–9
  exiting, *(P) Debugger*, CD–114, CD–135
  format, *(P) Debugger*, CD–4
DO command, *(P) Debugger*, 14–6, 14–7, CD–93
  for managing a VMScluster system, *(S) Sys Mgr Tuning*, 20–20
  in SYSMAN, *(S) Sys Mgr Essentials*, 2–18; *(S) Sys Mgmt Util M-Z*, 6–30

DOCUMENT, *(G) SW Overview*, 5–12
Document conversion
  output formats, *(G) DCL A-M*, DCLI–66
Documenting
  data center coding standards, *(S) Dependable*, 11–8
  failures, *(S) Dependable*, 9–13
Documenting modules
  module description, *(P) Modular Proc*, 2–17, A–4
  procedure description, *(P) Modular Proc*, 2–18, A–4
DO display, *(P) Debugger*, 11–16
Dollar sign ($)
  and DECK command, *(G) DCL A-M*, DCLI–117
  and EOD command, *(G) DCL A-M*, DCLI–211
  and EOJ command, *(G) DCL A-M*, DCLI–213
  as DCL prompt, *(G) User*, 2–2, 3–2
  in command procedures, *(G) User*, 15–4
  in file names, *(G) User*, 4–2
  in VMScluster device specifications, *(G) User*, 12–10
Domain converter
  processing options, *(G) DCL A-M*, DCLI–75
Dormant processes, *(S) VAX Perform*, 2–17; *(S) Alpha Perform*, 6–12
DORMANTWAIT parameter, *(S) VAX Perform*, 5–9; *(S) Alpha Perform*, 17–8
DOS–11 tape volumes
  file transfers with, *(S) Sys Mgr Essentials*, 9–24
  format conversions for, *(S) Sys Mgr Essentials*, 9–24
Double-precision value
  converting an array of, *(P) MTH$*, MTH–63
  converting one, *(P) MTH$*, MTH–61
Double-width characters
  specifying, *(P) Concepts*, 7–20
DOWN command, *(P) File Appl*, 10–11, 10–12
DOWNGRADE privilege, *(S) Security*, A–6
Downline loading, *(S) Sys Mgr Tuning*, 23–2
Downline system loads, *(S) DECnet Intro*, 2–16
  definition, *(S) DECnet Mgmt*, 4–1
  load requirements, *(S) DECnet Mgmt*, 4–4
  network example, *(S) DECnet Mgmt*, 5–23
  operator-initiated, *(S) DECnet Mgmt*, 4–1, 4–5
  over a LAN, *(S) DECnet Mgmt*, 4–5
  over DDCMP circuit, *(S) DECnet Mgmt*, 4–5
  target-initiated, *(S) DECnet Mgmt*, 4–2
  unattended systems, *(S) DECnet Mgmt*, 4–1
Downline task loads, *(S) DECnet Mgmt*, 4–14
/DOWN qualifier, *(P) Debugger*, CD–118, CD–133, CD–146
Down times, *(S) Dependable*, 3–4
  avoiding in lights out environment, *(S) Dependable*, 11–1
  avoiding through consolidated system management, *(S) Dependable*, 9–21
Down times (cont'd)
  avoiding user errors, *(S) Dependable*, 3–12
  avoiding with DECalert and related products, *(S) Dependable*, 11–12
  caveat about distributed applications, *(S) Dependable*, 3–7
  determining permissible levels of, *(S) Dependable*, 5–9
  impact of personnel, *(S) Dependable*, 5–5
  minimizing with forms interface, *(S) Dependable*, 8–51
  minimizing with online database backup, *(S) Dependable*, 8–40
  minimizing with transaction processing monitors, *(S) Dependable*, 8–52
  minimizing with VAXft systems, *(S) Dependable*, 5–2
  minimizing with VMScluster systems, *(S) Dependable*, 8–17
  overall consequences, *(S) Dependable*, 1–1
DPML (Digital Portable Mathematics Library), *(P) Environment*, 10–2
  Refer also to the *Digital Portable Mathematics Library*
DPT (driver prologue table), *(P) Alpha SDA*, SDA–94; *(P) VAX SDA*, SDA–105
DPT base address, *(P) VAX SDA*, SDA–27
DQS (Distributed Queuing System)
  distributed printing, *(S) Sys Mgr Essentials*, 13–13
Drawing characters, *(P) SMG$*, 2–10
Drawing lines, *(P) SMG$*, 2–10
drem routine, *(P) Portable Math*, DPML–29, B–6
Drive errors
  recovery from, *(S) Dependable*, 8–22t
Driver dispatch table
  See DDT
Drivers
  See also Device drivers
  debugging, *(P) Environment*, 9–8
DRIVER symbol
  See nnDRIVER symbol
DS3 communications service, *(G) V7.0 New Feat*, D–5
  system management, *(G) V7.0 New Feat*, D–12
DS3 connection, *(S) Sys Mgr Tuning*, 21–9
DS3 Intersite Link Specifications, *(G) V7.0 New Feat*, D–10
DSA (Digital Storage Architecture)
  device naming, *(S) Sys Mgr Essentials*, 7–1
  disks
    bad block replacement, *(P) I/O User*, 2–16, 2–17
    forced error, *(P) I/O User*, 2–16
    use with Verify utility, *(P) I/O User*, 2–15, 2–17

DSA (Digital Storage Architecture) (cont'd)
disks, *(G) SW Overview*, 3–19; *(P) I/O User*, 2–1
disks and tapes in VMScluster, *(S) VMScluster Sys*, 1–3
served devices, *(S) VMScluster Sys*, 6–15
served tapes, *(S) VMScluster Sys*, 6–15
support for compliant hardware, *(S) VMScluster Sys*, 6–23
tapes, *(G) SW Overview*, 3–19
DSA32 device, *(P) I/O User*, 5–1
DSB32 device, *(S) DECnet Mgmt*, 2–7
DSCs
argument descriptors, *(P) Calling Std*, 5–1 to 5–33
procedure descriptors, *(P) Calling Std*, 5–12
DSDRIVER, *(S) VMScluster Sys*, 1–4, 2–17
load balancing, *(S) VMScluster Sys*, 6–17
DSE (data security erase)
magnetic tape, *(P) I/O User*, 3–22
tailoring, *(S) Security*, 8–28
DSF32 device, *(S) DECnet Mgmt*, 2–7
DSF files
See Debug symbol files
/DSF qualifier, *(P) Linker*, LINK–12
DSH32 device, *(S) DECnet Mgmt*, 2–7
DSI (Digital System Identifier)
ISO 9660 media protection, *(S) Sys Mgr Essentials*, 8–18
mount option, *(S) Sys Mgr Essentials*, 8–17
DSI keyword
with MOUNT/PROTECTION command, *(S) Sys Mgr Essentials*, 8–23
DSM, *(G) SW Overview*, 7–14
DSR (DIGITAL Standard Runoff), *(G) DCL N-Z*, DCLII–68; *(G) SW Overview*, 5–12
Refer also to the *OpenVMS DIGITAL Standard Runoff Reference Manual*
commands
for flag recognition, *(G) User*, 10–20
summary, *(G) User*, 10–11 to 10–22
creating a file, *(G) User*, 10–2
creating an index, *(G) User*, 10–8
defaults, *(G) User*, 10–8
qualifiers, *(G) User*, 10–9
tailoring, *(G) User*, 10–9
creating a table of contents, *(G) User*, 10–5
defaults, *(G) User*, 10–5
qualifiers, *(G) User*, 10–6
tailoring, *(G) User*, 10–6, 10–7
description, *(G) User*, 10–1
disabling defaults, *(G) User*, 10–5
formatting
appendix, *(G) User*, 10–17
chapter, *(G) User*, 10–17
emphasizing text, *(G) User*, 10–15
figures, *(G) User*, 10–16
filling text, *(G) User*, 10–13
DSR (DIGITAL Standard Runoff)
formatting (cont'd)
footnotes, *(G) User*, 10–17
horizontal spacing, *(G) User*, 10–14
index, *(G) User*, 10–19
justifying text, *(G) User*, 10–13
lists, *(G) User*, 10–16
margins, *(G) User*, 10–13
notes, *(G) User*, 10–17
page size, *(G) User*, 10–11
paging, *(G) User*, 10–12 to 10–13
paragraphs, *(G) User*, 10–15
running heads, *(G) User*, 10–11
section, *(G) User*, 10–18
table of contents, *(G) User*, 10–19
vertical spacing, *(G) User*, 10–14
formatting a file, *(G) User*, 10–2
invoking, *(G) DCL N-Z*, DCLII–68
processing a file, *(G) User*, 10–2
RUNOFF command, *(G) User*, 10–2
overriding, *(G) User*, 10–3
qualifiers, *(G) User*, 10–3
text file formatting, *(G) DCL N-Z*, DCLII–68
using defaults, *(G) User*, 10–4
DSSI (DIGITAL Storage Systems Interconnect), *(G) SW Overview*, 1–6
changing allocation class values on DSSI subsystems, *(S) VMScluster Sys*, 6–10, 8–40
changing to a mixed-interconnect, *(S) VMScluster Sys*, 8–23
configurations, *(S) VMScluster Sys*, 3–3, 3–5
configuring multiple adapters, *(S) VMScluster Sys*, 3–5
ISE peripherals, *(S) VMScluster Sys*, 3–3
MSCP server accesses shadow sets, *(S) VMScluster Sys*, 6–24
DSSI hardware configurations, *(S) Dependable*, 6–13
DST32 device, *(S) DECnet Mgmt*, 2–7
DSTRING key type, *(P) Rec Mgmt Util*, 4–30
DSTs (debug symbol tables)
creating, *(P) Debugger*, 9–4
shareable image, *(P) Debugger*, 9–13
source line correlation, *(P) Debugger*, 10–1
DSV11 device, *(S) DECnet Mgmt*, 2–7
DTE (data terminal equipment)
database parameters
See also Displaying network parameters
states and transitions, *(S) DECnet Mgmt Util*, C–5
state transitions, *(S) DECnet Mgmt Util*, C–6
DTIF converters, *(G) DCL A-M*, DCLI–68, DCLI–69

DTRECV (DECnet Test Receiver image), *(S) DECnet Mgmt Util*, 4–1
DTR utility
See DECnet Test Sender/DECnet Test Receiver utility
DTS (Distributed Time Service), *(G) SW Overview*, 6–14
DTS/DTR utility
See DECnet Test Sender/DECnet Test Receiver utility (DTS/DTR)
DTSEND (DECnet Test Sender image), *(S) DECnet Mgmt Util*, 4–1
DTSEND command, *(S) DECnet Mgmt Util*, 4–2
Dual-architecture VMScluster systems, *(G) SW Overview*, 1–7
installing images, *(S) Sys Mgr Tuning*, 20–20; *(S) Sys Mgmt Util M-Z*, 6–30
example, *(S) Sys Mgmt Util M-Z*, 6–31
Dual host
definition, *(P) I/O User*, 2–3
Dual path
definition, *(P) I/O User*, 2–8
Dual-pathed disks, *(S) VMScluster Sys*, 6–3; *(P) I/O User*, 2–8
DSA disk, *(P) I/O User*, 2–11
HSC, *(S) VMScluster Sys*, 6–12
served by MSCP, *(S) VMScluster Sys*, 6–1
setting up, *(S) VMScluster Sys*, 5–9
Dual-pathed tapes, *(S) VMScluster Sys*, 6–14
served by TMSCP, *(S) VMScluster Sys*, 6–1
Dual-ported disks, *(S) VMScluster Sys*, 6–2; *(P) I/O User*, 2–9
DSA disk, *(P) I/O User*, 2–11
HSC disk, *(P) I/O User*, 2–11
restrictions for use, *(P) I/O User*, 2–10
Dual-ported tapes, *(S) VMScluster Sys*, 6–2
DUDRIVER, *(S) VMScluster Sys*, 1–4, 2–17
load balancing, *(S) VMScluster Sys*, 6–17
Dump
hexadecimal, *(P) Rec Mgmt Util*, 1–18
Dump assistance multicast address, *(S) DECnet Mgmt*, 4–13
DUMPBUG system parameter, *(S) Sys Mgr Tuning*, 15–3; *(P) Alpha SDA*, SDA–2, SDA–28; *(P) VAX SDA*, SDA–4, SDA–32
DUMP command, *(G) DCL A-M*, DCLI–188 to DCLI–195; *(P) File Appl*, 10–11
in LMCP, *(S) Sys Mgmt Util A-L*, 14–8
DUMPFILE AUTOGEN symbol, *(S) VMScluster Sys*, 10–13
Dump file compression, *(G) V7.0 New Feat*, 4–18
Dump file information
saving automatically, *(S) Sys Mgr Tuning*, 15–11
Dump file off system disk, *(S) Sys Mgr Tuning*, 15–14
Dump files
changing size, *(S) Sys Mgmt Util A-L*, 6–3
displaying the size calculated by AUTOGEN, *(S) Sys Mgmt Util A-L*, 6–7
generating a new file sized by AUTOGEN, *(S) Sys Mgmt Util A-L*, 6–7
DUMPFILE symbol, *(S) Sys Mgr Tuning*, 15–24
Dump formats, *(G) DCL A-M*, DCLI–189 to DCLI–193
Dumping
of files, *(G) DCL A-M*, DCLI–188
of volumes, *(G) DCL A-M*, DCLI–188
unattended system memory, *(S) DECnet Mgmt*, 4–11
upline, *(S) DECnet Intro*, 2–16
DUMP/RECORDS command
in network operations, *(S) DECnet Intro*, 2–9
DUMPSTYLE AUTOGEN symbol, *(S) VMScluster Sys*, 10–13
DUMPSTYLE system parameter, *(G) V7.0 New Feat*, 4–19; *(S) Sys Mgr Tuning*, 15–3, 15–7, 15–10; *(P) Alpha SDA*, SDA–3; *(P) VAX SDA*, SDA–6
DUMP subset, *(G) V7.0 New Feat*, 4–19; *(P) Alpha SDA*, SDA–3; *(P) VAX SDA*, SDA–6
Duplex mode, *(S) DECnet Mgmt*, 3–42, 3–43
See also Half-duplex mode
terminal, *(P) I/O User*, 5–10
Duplicate computing facilities, *(S) Dependable*, 5–11
Duplicate keys, *(P) Rec Mgmt Util*, 4–26
examples, *(P) RMS Ref*, 6–9
incompatibility between RMS and RMS–11, *(P) RMS Ref*, 12–9
insertion order, *(P) RMS Ref*, RMS–76
null key processing, *(P) File Appl*, 3–22
retrieving records, *(P) RMS Ref*, 6–8
secondary retrieval order, *(P) Rec Mgmt Util*, 2–2
values, *(P) Rec Mgmt Util*, 4–5
Duplicate labels
command interpreter rules for, *(G) DCL A-M*, DCLI–53, DCLI–232, DCLI–234
DUPLICATES attribute, *(P) Rec Mgmt Util*, 4–26
Duplicate system disks
creating, *(S) VMScluster Sys*, 8–31
DUPLICATES_PER_SIDR attribute, *(P) Rec Mgmt Util*, 4–5
Duration tests, *(S) DECnet Mgmt Util*, 4–7, 4–12
DX header, *(S) VMScluster Sys*, F–22
DX protocol
DX header, *(S) VMScluster Sys*, F–22
part of NISCA transport protocol, *(S) VMScluster Sys*, F–3

Dynamic asynchronous circuits, *(S) DECnet Mgmt*, 2–8
Dynamic asynchronous connections, *(S) DECnet Mgmt*, 1–3
  automatic switching of terminal line, *(S) Security*, 12–17; *(S) DECnet Intro*, 3–27
  connection example, *(S) Security*, 12–19; *(S) DECnet Intro*, 3–29
  manual switching of terminal line, *(S) Security*, 12–17; *(S) DECnet Intro*, 3–27
  network configuration, *(S) DECnet Mgmt*, 5–29
  password, *(S) DECnet Mgmt*, 2–29
  passwords for, *(S) Security*, 12–16
  procedure for establishing, *(S) Security*, 12–15; *(S) DECnet Intro*, 3–24
  reasons for failure, *(S) DECnet Intro*, 4–16; *(S) DECnet Mgmt*, 5–18
  receive password, *(S) DECnet Intro*, 3–25
  security, *(S) Security*, 12–16; *(S) DECnet Intro*, 3–25
  switching of terminal line, *(S) Security*, 12–15; *(S) DECnet Intro*, 3–24
  terminating the link, *(S) Security*, 12–18; *(S) DECnet Intro*, 3–28
  transmit password, *(S) DECnet Intro*, 3–25
  verifier, *(S) Security*, 12–14
Dynamic asynchronous lines, *(S) DECnet Mgmt*, 1–9, 2–14, 5–12
  installing, *(S) DECnet Mgmt*, 5–14
  shutting down, *(S) DECnet Mgmt*, 5–19
Dynamic attributes, *(S) Sys Mgmt Util A-L*, 5–21, 5–29, 5–37; *(P) Concepts*, 23–5
  for identifiers, *(S) Security*, 8–8
Dynamic length strings, *(P) STR$*, 2–1, 2–2, 2–3, STR–64
  allocating, *(P) LIB$*, LIB–450 to LIB–452
  allocation of, *(P) STR$*, STR–43
  deallocating, *(P) LIB$*, LIB–447, LIB–448
  deallocation of, *(P) STR$*, STR–42
Dynamic load balancing, *(S) Sys Mgr Tuning*, 26–2
Dynamic memory, *(P) DECthreads*, 3–5
Dynamic mode, *(P) Debugger*, CD–181
  image setting, *(P) Debugger*, 9–13
  module setting, *(P) Debugger*, 9–6
Dynamic parameters
  modifying, *(S) Sys Mgmt Util M-Z*, 5–33, 6–51
Dynamic process setting, *(P) Debugger*, 14–8, CD–193
Dynamic prompt setting, *(P) Debugger*, 14–2, CD–196
/DYNAMIC qualifier, *(P) Debugger*, CD–88, CD–193, CD–268
Dynamic service rating, *(S) Sys Mgmt Util A-L*, 13–15, 13–40
  displaying, *(S) Sys Mgmt Util A-L*, 13–51, 13–58
Dynamic string descriptor, *(P) Calling Std*, 5–6
Dynamic strings, *(P) OTS$*, OTS–92
Dynamic switching
  manual switching of line, *(S) DECnet Mgmt*, 5–17
  procedure for line, *(S) DECnet Mgmt*, 2–14
  setting up lines, *(S) DECnet Mgmt*, 5–15
Dynamic system parameters, *(S) Sys Mgr Tuning*, 14–2, 14–3
DYNSWITCH image, *(S) DECnet Intro*, 3–25; *(S) DECnet Mgmt*, 5–17
  installing, *(S) DECnet Mgmt*, 5–15
DZ11 device, *(S) DECnet Mgmt*, 1–9; *(P) I/O User*, 5–1
DZ32 device, *(P) I/O User*, 5–1
DZRO_MIN= option, *(P) Linker*, LINK–50
  controlling demand-zero compression, *(P) Linker*, 3–25
DZV11 device, *(P) I/O User*, 5–1
/D_FLOAT qualifier, *(P) Debugger*, CD–77, CD–104, CD–130

E

E/ac button, *(P) Debugger*, 1–9
E/az button, *(P) Debugger*, 1–9
EBCDIC character set
  ASCII translation from, *(P) LIB$*, LIB–360, LIB–592
  ASCII translation to, *(P) LIB$*, LIB–358, LIB–588
Echo
  terminal, *(P) Concepts*, 7–39
  terminators, *(P) Concepts*, 7–24
/ECHO qualifier, *(P) Debugger*, CD–66; *(P) VAX SDA*, SDA–49
Echo tests, *(S) DECnet Mgmt Util*, 4–7, 4–12
EDF logical name
  restricted use, *(P) Rec Mgmt Util*, 6–3
Edit/FDL utility (EDIT/FDL), *(P) Environment*, 10–19; *(P) Rec Mgmt Util*, 4–37, 6–1, 6–3; *(P) File Appl*, 1–37
  ADD command, *(P) Rec Mgmt Util*, 6–13
  as alternative to multiple XABs, *(P) RMS Ref*, A–20
  calculating bucket size, *(P) File Appl*, 3–16, 3–26
  calculating extension size, *(P) File Appl*, 9–7
  commands, *(P) File Appl*, 4–3
  contiguous files, *(P) File Appl*, 3–4
  creating areas for index structures, *(P) File Appl*, 3–24
  creating FDL files, *(P) Rec Mgmt Util*, 5–1; *(P) File Appl*, 4–2, 4–5
  default value, *(P) File Appl*, 4–11
  DELETE command, *(P) Rec Mgmt Util*, 6–14
  EXIT command, *(P) Rec Mgmt Util*, 6–14
  HELP command, *(P) Rec Mgmt Util*, 6–15

Edit/FDL utility (EDIT/FDL) (cont'd)
INVOKE command, *(P) Rec Mgmt Util*, 6–15
invoking a script, *(P) File Appl*, 4–4
optimization algorithms, *(P) File Appl*, A–1
Optimize script, *(P) Rec Mgmt Util*, 6–1; *(P) File Appl*, 10–22
prompt, *(P) File Appl*, 4–10
QUIT command, *(P) Rec Mgmt Util*, 6–17
scripts, *(P) Rec Mgmt Util*, 6–15
SET command, *(P) Rec Mgmt Util*, 6–17
specifying output file name, *(P) Rec Mgmt Util*, 6–8
specifying run-time options, *(P) File Appl*, 9–1 to 9–5
VIEW command, *(P) Rec Mgmt Util*, 6–18
EDIT/ACL command, *(G) DCL A-M*, DCLI–196; *(P) File Appl*, 4–27
EDITALL.COM command procedure, *(G) User*, C–15
sample execution, *(G) User*, C–17
EDIT command, *(G) User*, 9–2; *(P) Environment*, 9–5; *(P) Debugger*, 5–4, CD–95
/EDT qualifier
/READ_ONLY qualifier, *(G) User*, 4–14
for remote file, *(S) DECnet Intro*, 2–7
in network operations, *(S) DECnet Intro*, 2–7
/TPU qualifier
/READ_ONLY qualifier, *(G) User*, 4–14
EDIT/EDT command, *(G) DCL A-M*, DCLI–197 to DCLI–200
EDIT/FDL command, *(G) DCL A-M*, DCLI–201
/ANALYSIS qualifier, *(P) Rec Mgmt Util*, 6–4
/CREATE qualifier, *(P) Rec Mgmt Util*, 6–4
/DISPLAY qualifier, *(P) Rec Mgmt Util*, 6–5
/EMPHASIS qualifier, *(P) Rec Mgmt Util*, 6–5
/GRANULARITY qualifier, *(P) Rec Mgmt Util*, 6–6
/NOINTERACTIVE qualifier, *(P) Rec Mgmt Util*, 6–7
/NUMBER_KEYS qualifier, *(P) Rec Mgmt Util*, 6–8
/OUTPUT qualifier, *(P) Rec Mgmt Util*, 6–8
/PROMPTING qualifier, *(P) Rec Mgmt Util*, 6–9
/RESPONSES qualifier, *(P) Rec Mgmt Util*, 6–9
/SCRIPT qualifier, *(P) Rec Mgmt Util*, 6–10
Editing ACLs, *(S) Security*, 4–21 to 4–23
See also ACL editor
Editing command lines, *(G) User*, 3–16
deleting characters, *(G) User*, 3–17
enabling line editing, *(G) User*, 3–16
insert mode, *(G) User*, 3–16
overstrike mode, *(G) User*, 3–16
Editing files
using EDT, *(G) User*, 9–1
Editing sessions
keypad for ACL editing, *(S) Sys Mgmt Util A-L*, A–1
EDIT keypad function, *(S) Sys Mgr Tuning*, 20–7; *(S) Sys Mgmt Util M-Z*, 4–33, B–3
Editors
See also ACL editor, EDIT command, EDT editor, EVE, FDL editor, SUMSLP editor, and TECO editor
text file, *(G) SW Overview*, 5–12
/EDIT qualifier, *(P) Debugger*, CD–34, CD–207, CD–278
EDIT/SUM command, *(G) DCL A-M*, DCLI–202
EDIT/TECO command, *(G) DCL A-M*, DCLI–203 to DCLI–205
EDIT/TPU command, *(G) DCL A-M*, DCLI–206
to invoke EVE, *(G) User*, 8–4
EDT$EDIT routine, *(P) Util Routines*, EDT–3
EDT editor, *(G) DCL A-M*, DCLI–197; *(G) SW Overview*, 4–4, 5–12
Refer also to the *OpenVMS EDT Reference Manual*
buffer definition, *(G) User*, 9–2
canceling commands, *(G) User*, 9–5
changing case of text
summary of commands and keys, *(G) User*, 9–16
changing modes, *(G) User*, 9–2, 9–7, 9–8
summary of commands and keys, *(G) User*, 9–9
commands
summary of processing commands and keys, *(G) User*, 9–19
creating files, *(G) User*, 4–11, 9–2
defining keys
summary of commands and keys, *(G) User*, 9–17
definition, *(G) User*, 9–1
deleting text
summary of commands and keys, *(G) User*, 9–12
displaying files with, *(G) User*, 9–3
editing existing files, *(G) User*, 9–2
help
keypad editing, *(G) User*, 9–6
line mode, *(G) User*, 9–6
nokeypad mode, *(G) User*, 9–7
indenting text
summary of commands and keys, *(G) User*, 9–15
inserting text
summary of commands and keys, *(G) User*, 9–11
invoking, *(G) User*, 9–2
journal files, *(G) User*, 9–9
keypad commands, *(G) User*, 9–5
keypad editing, *(G) User*, 9–1, 9–5
help, *(G) User*, 9–6
keypad mode, *(G) User*, 9–7, 9–8
entering line-editing commands, *(G) User*, 9–8

EDT editor (cont'd)
line editing, *(G) User*, 9–1
line-editing commands, *(G) User*, 9–3
line mode, *(G) User*, 9–7, 9–8
help, *(G) User*, 9–6
locating text
summary of commands and keys, *(G) User*, 9–13
modifying files, *(G) User*, 4–11
moving text
summary of commands and keys, *(G) User*, 9–15
moving the cursor
summary of commands and keys, *(G) User*, 9–10
multiple buffers
summary of commands and keys, *(G) User*, 9–17
nokeypad editing, *(G) User*, 9–2
nokeypad mode
help, *(G) User*, 9–7
recovering from Ctrl/Y, *(G) User*, 9–9
restoring text
summary of commands and keys, *(G) User*, 9–12
restoring the display, *(G) User*, 9–9
saving edits, *(G) User*, 9–7
screen settings
summary of commands and keys, *(G) User*, 9–18
specifying a range, *(G) User*, 9–3
substituting text
summary of commands and keys, *(G) User*, 9–14
summaries of commands and keys, *(G) User*, 9–9 to 9–21
terminal settings
summary of commands and keys, *(G) User*, 9–18
terminating a session, *(G) User*, 9–7
using line numbers, *(G) User*, 9–3
EDT routines, *(P) Util Routines*, EDT–1
examples, *(P) Util Routines*, EDT–1, EDT–2
user-written
FILEIO, *(P) Util Routines*, EDT–7
WORKIO, *(P) Util Routines*, EDT–11
XLATE, *(P) Util Routines*, EDT–13
EFN$C_ENF event flag, *(G) V7.0 New Feat*, 4–30
EFN 128, *(G) V7.0 New Feat*, 4–30
ef_cluster_name data type, *(P) Interfaces*, B–6
ef_number data type, *(P) Interfaces*, B–6
Elapsed time, *(P) Rec Mgmt Util*, 2–17
Electrical power, *(S) Dependable*, 5–1
Electronic conferencing
See Notes
Electronic mail
See Mail utility
Eliminating single points of failure, *(S) Dependable*, 6–1
Ellipsis (...)
wildcard character in directory names, *(G) User*, 5–8, 5–9
ELSE keyword
and IF command, *(G) DCL A-M*, DCLI–250
Emergency system shutdown
with console commands, *(S) Sys Mgr Essentials*, 4–27
Emergency system startup
with default system parameters, *(S) Sys Mgr Essentials*, 4–8
without startup and login procedures, *(S) Sys Mgr Essentials*, 4–8
without the UAF, *(S) Sys Mgr Essentials*, 4–10
Emulator products, *(S) DECnet Intro*, 1–6
ENABLE AST command, *(P) Debugger*, 13–25, CD–97
Enable attention AST function
LAN drivers, *(P) I/O User*, 9–42
ENABLE AUTOSTART command, *(G) DCL A-M*, DCLI–207 to DCLI–209
ENABLE AUTOSTART/QUEUES command, *(S) Sys Mgr Essentials*, 13–18, 13–48
in startup command procedure, *(S) Sys Mgr Essentials*, 13–16
recommended use, *(S) Sys Mgr Essentials*, 13–18
ENABLE command
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–13
.ENABLE directive
QUADWORD option, *(P) 64-Bit Addr*, 9–1
/ENABLE qualifier
QUADWORD option, *(P) 64-Bit Addr*, 9–1
Enabling asynchronous delivery of alerts, *(P) DECthreads*, E–13
Enabling asynchronous delivery of cancels, *(P) DECthreads*, G–73
Enabling autostart, *(S) Sys Mgr Essentials*, 13–4, 13–18, 13–48
in startup command procedure, *(S) Sys Mgr Essentials*, 13–16
Enabling autostart on a node, *(G) DCL A-M*, DCLI–207
Encryption, *(G) SW Overview*, 2–15, 3–14, 6–7; *(S) Security*, 8–27
End Communications layer events, *(S) DECnet Mgmt Util*, D–4
.END directive, *(P) Concepts*, 13–59
/ENDING qualifier, *(S) Sys Mgmt Util M-Z*, 4–7
End nodes, *(S) DECnet Intro*, 1–2, 3–8, 3–12; *(S) DECnet Mgmt*, 1–1, 1–12
caching on Ethernet, *(S) DECnet Mgmt*, 2–20
configuration, *(S) DECnet Mgmt*, 2–18
DECnet for OpenVMS license kit, *(S) DECnet Mgmt*, 1–12, 6–1
definition, *(S) DECnet Mgmt*, 2–15

End nodes (cont'd)
LAN, *(S) DECnet Mgmt*, 1–7, 2–19
network, *(S) Sys Mgr Tuning*, 21–6
non-LAN, *(S) DECnet Mgmt*, 1–7
on VMScluster, *(S) DECnet Mgmt*, 1–10
Phase IV, *(S) DECnet Mgmt*, 2–17
reverse path caching, *(S) DECnet Mgmt*, 2–20
End of batch job on cards, *(G) DCL A-M*, DCLI–213
End of data stream, *(G) DCL A-M*, DCLI–211
End-of-file
See EOF
End-of-module record analysis, *(G) DCL A-M*, DCLI–27
End-of-module record format
Alpha object language, *(P) Linker*, B–42
VAX object language, *(P) Linker*, A–31
End-of-tape markers
See EOT markers
End-of-volume
See EOV
END phase, *(S) Sys Mgmt Util M-Z*, 6–71
of system startup, *(S) Sys Mgr Essentials*, 5–19
End phase of AUTOGEN
default, *(S) Sys Mgmt Util A-L*, 6–10
Endpoints, *(S) TCP/IP*, 2–5
ENDSUBROUTINE command, *(G) DCL A-M*, DCLI–54, DCLI–55, DCLI–210
End-to-end verification, *(S) TCP/IP*, 2–4
END_OF_FILE attribute, *(P) Rec Mgmt Util*, 4–9
ENQLM process limit, *(S) Sys Mgr Essentials*, 6–42
Enqueue, *(P) DECthreads*, E–4
Entering NCP commands, *(S) DECnet Mgmt Util*, 1–2
Enter service, *(P) RMS Ref*, RMS–30
condition values, *(P) RMS Ref*, RMS–32
control block input fields, *(P) RMS Ref*, RMS–31
control block output fields, *(P) RMS Ref*, RMS–31
requirement for NAM block fields, *(P) RMS Ref*, RMS–31
Entry code sequences, *(P) Calling Std*, 3–45
example for register frame procedures, *(P) Calling Std*, 3–47
example for stack frame procedures, *(P) Calling Std*, 3–46
Entry masks, *(P) Interfaces*, B–14
Entry point name, *(P) MTH$*, 1–1
Entry points
CALL entry points, *(P) Interfaces*, 3–4, 4–3; *(P) STR$*, 2–8
JSB entry points, *(P) Interfaces*, 3–6; *(P) STR$*, 2–8
RTL names, *(P) Interfaces*, 3–3
Environment
defining
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–53
Environmental factors of dependable computing, *(S) Dependable*, 1–15 to 1–16, 3–2 to 3–3, 5–5 to 5–8, 5–11
multiple-site data center VMScluster system, *(S) Dependable*, 6–17, 7–12
Environmental identifiers, *(S) Security*, 8–4
example, *(G) User*, 19–3; *(S) Security*, 4–3, 4–5, 4–19
Environments
ALL–IN–1, *(G) SW Overview*, 5–2, 5–8
client/server, *(G) SW Overview*, 2–7, 6–17; *(P) Environment*, 3–2
common code, *(G) SW Overview*, 4–2
common language, *(G) SW Overview*, 4–2; *(P) Environment*, 7–1
common programming, *(G) SW Overview*, 4–1
computing, *(G) SW Overview*, 2–1
DECwindows Motif user, *(G) SW Overview*, 5–5
development, *(P) Environment*, 1–5
distributed, *(G) SW Overview*, 2–6, 6–1, 6–2; *(P) Environment*, 1–3
hyperinformation, *(G) SW Overview*, 4–17
multivendor, *(G) SW Overview*, 2–5, 6–2
open system, *(G) SW Overview*, 2–1
OpenVMS, *(G) SW Overview*, 5–2, 6–1
PATHWORKS, *(G) SW Overview*, 6–18
POSIX, *(G) SW Overview*, 5–2
production systems, *(G) SW Overview*, 2–1, 7–1
security, *(G) SW Overview*, 3–14
software development, *(G) SW Overview*, 6–14
standalone, *(G) SW Overview*, 6–1
VMScluster, *(G) SW Overview*, 1–7
Environment task
definition of, *(P) Debugger*, 16–7
Environment value, *(P) Calling Std*, 3–45
EOD command, *(G) DCL A-M*, DCLI–211, DCLI–212
and DECK command, *(G) DCL A-M*, DCLI–117
EOF (end-of-file), *(P) Concepts*, 7–5
status
magnetic tape, *(P) I/O User*, 3–14
write mailbox message, *(P) I/O User*, 4–11
EOF condition, *(G) DCL A-M*, DCLI–211
EOF indicator, *(G) DCL A-M*, DCLI–117
EOF label, *(P) File Appl*, 1–20, 1–32
EOF mark
positioning for user file open option, *(P) RMS Ref*, 4–16
EOF option, *(P) Rec Mgmt Util*, 4–10
See also RAB$V_EOF option
EOF positioning, *(P) RMS Ref*, RMS–7
EOJ command, *(G) DCL A-M*, DCLI–213

EOT markers, *(S) Sys Mgr Essentials*, 8–6; *(P) File Appl*, 1–19
  continuing to copy after, *(S) Sys Mgr Essentials*, 9–24
  status
    magnetic tape, *(P) I/O User*, 3–14, 3–15, 3–17
EOV (end-of-volume)
  detection on magnetic tape, *(P) I/O User*, 3–17
  label, *(P) File Appl*, 1–20, 1–32
Equal cost path splitting, *(S) DECnet Mgmt*, 2–22, 3–53
Equal-or-next key option, *(P) File Appl*, 8–8, 8–9
  See also RAB$V_EQNXT option
Equitable sharing
  of CPU resource, *(S) VAX Perform*, 3–13; *(S) Alpha Perform*, 9–6
  of disk I/O resource, *(S) VAX Perform*, 3–34; *(S) Alpha Perform*, 11–5
  of memory resource, *(S) Alpha Perform*, 10–7
Equivalence names
  assigning to logical names, *(G) DCL A-M*, DCLI–41, DCLI–120
  defining, *(P) Concepts*, 10–2
  displaying for logical names, *(G) DCL N-Z*, DCLII–354
  format convention, *(P) Concepts*, 10–13
  specifying, *(P) Sys Svc I*, SYS1–149
  specifying access control string in, *(S) DECnet Intro*, 2–4
Equivalence strings, *(G) User*, 13–1; *(P) File Appl*, 6–4
  defining multiple logical names for, *(G) User*, 13–7
Erase-on-allocate, *(S) Security*, 5–12, 5–13
Erase-on-delete, *(S) Security*, 5–12, 8–28
  C2 systems and, *(S) Security*, C–9
Erase service, *(P) RMS Ref*, RMS–33 to RMS–35; *(P) File Appl*, 5–9
  condition values
    See also Completion status codes
Erasing blocks, *(S) Sys Mgr Essentials*, 8–58; *(S) Sys Mgmt Util A-L*, 3–5
Erasing disks, *(S) Security*, 8–28
Erasing home blocks, *(S) Sys Mgmt Util A-L*, 3–8
Erasure operations, *(P) SMG$*, 2–7
Erasure patterns, *(S) Security*, 5–12, 8–28
erfc routine, *(P) Portable Math*, DPML–30, B–7
erf routine, *(P) Portable Math*, DPML–30, B–6
ERLBUFFERPAGES system parameter, *(S) Sys Mgr Tuning*, 15–6
ERRFMT
  See Error Formatter
ERRFMT process, *(S) Sys Mgr Tuning*, 18–2
  creation during system startup, *(S) Sys Mgr Essentials*, 5–5
  restarting, *(S) Sys Mgr Tuning*, 18–3
ERRFMT process (cont'd)
  sending mail when it is deleted, *(S) Sys Mgr Tuning*, 18–4
  writes to ERRLOG.SYS file, *(S) Sys Mgr Tuning*, 18–2
Error checking, *(P) Interfaces*, 4–9; *(P) File Appl*, 10–1
  in FOLR routines, *(P) MTH$*, 2–6
  in SYSTARTUP_VMS.COM, *(S) Sys Mgr Essentials*, 5–10
  in system parameter files, *(S) Sys Mgr Tuning*, 14–19
Errorcheck mutex, *(P) DECthreads*, 2–8
Error completion routine, *(P) RMS Ref*, 2–4
Error correction strategies, *(S) Dependable*, 1–10 to 1–12, 1–16
Error Formatter
  changing mail username, *(S) Sys Mgr Tuning*, 18–5
  description, *(S) Sys Mgr Tuning*, 18–2
  disabling mail, *(S) Sys Mgr Tuning*, 18–4, 18–5
  enabling mail, *(S) Sys Mgr Tuning*, 18–5
  notifying user with mail message, *(S) Sys Mgr Tuning*, 18–4
  using to send mail, *(S) Sys Mgr Tuning*, 18–4
Error handling
  See also Condition handling
  ANALYZE/RMS_FILE journaling errors, *(P) Rec Mgmt Util*, 1–7
  ANALYZE/RMS_FILE nonjournaling errors, *(P) Rec Mgmt Util*, 1–7
  SET NOON command, *(G) User*, 15–33
Error-handling requirements, *(G) V7.0 New Feat*, D–10
ERROR LOG (Error Log utility)
  See Error Log utility
ERRORLOG.EXE file, *(P) VAX SDA*, SDA–64
ERRORLOG.STB file, *(P) Alpha SDA*, SDA–61
ERRORLOGBUFFERS system parameter, *(G) V7.0 New Feat*, 4–21; *(S) Sys Mgr Tuning*, 15–6; *(P) Alpha SDA*, SDA–4; *(P) VAX SDA*, SDA–5
Error log files, *(S) Alpha Perform*, 2–2
  created by ERRFMT process, *(S) Sys Mgr Tuning*, 18–2
  events reported in, *(S) Sys Mgr Tuning*, 18–5
  logical name defining location, *(S) Sys Mgr Essentials*, 5–8
  maintaining, *(S) Sys Mgr Tuning*, 18–3
  moving to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
  producing full report, *(S) Sys Mgr Tuning*, 18–6
  reporting on using DECevent, *(S) Sys Mgr Tuning*, 18–8
  SYSPRV privilege to access, *(S) Sys Mgr Tuning*, 18–6

Error logger
sending message to, *(P) Sys Svc II*, SYS2–358
Error logging
description, *(S) Sys Mgr Tuning*, 18–2
facility, *(S) Sys Mgr Tuning*, 18–2
reports produced, *(S) Sys Mgr Tuning*, 18–3
using the Error Log utility, *(S) Sys Mgr Tuning*, 18–2
Error logging routines
global symbols, *(P) Alpha SDA*, SDA–61; *(P) VAX SDA*, SDA–64
Error log messages, *(P) Alpha SDA*, SDA–169
Error Log Report Formatter (ERF), *(S) Sys Mgr Tuning*, 18–2
Error Log utility (ERROR LOG), *(G) SW Overview*, 7–5
ANALYZE/ERROR_LOG command, *(S) Sys Mgr Tuning*, 18–6
buffered I/O count reporting, *(S) Sys Mgmt Util A-L*, 10–18
definition, *(S) Sys Mgr Tuning*, 18–5
device classes, *(S) Sys Mgmt Util A-L*, 10–8, 10–11
including, *(S) Sys Mgmt Util A-L*, 10–11
device name
excluding, *(S) Sys Mgmt Util A-L*, 10–8
including, *(S) Sys Mgmt Util A-L*, 10–12
direct I/O count reporting, *(S) Sys Mgmt Util A-L*, 10–18
directing output, *(S) Sys Mgmt Util A-L*, 10–4
entry type
excluding, *(S) Sys Mgmt Util A-L*, 10–9
including, *(S) Sys Mgmt Util A-L*, 10–12
error log file
input file, *(S) Sys Mgmt Util A-L*, 10–4
specifying output, *(S) Sys Mgmt Util A-L*, 10–15
events reported, *(S) Sys Mgmt Util A-L*, 10–3
selecting date, *(S) Sys Mgmt Util A-L*, 10–6, 10–17
selecting time, *(S) Sys Mgmt Util A-L*, 10–6, 10–17
examples, *(S) Sys Mgmt Util A-L*, 10–19 to 10–32
execution time event reporting, *(S) Sys Mgmt Util A-L*, 10–18
exiting from, *(S) Sys Mgmt Util A-L*, 10–4
I/O events, *(S) Sys Mgmt Util A-L*, 10–18
invoking, *(S) Sys Mgmt Util A-L*, 10–4; *(S) VMScluster Sys*, C–27
messages
informational, *(S) Sys Mgmt Util A-L*, 10–14
output
ASCII format, *(S) Sys Mgmt Util A-L*, 10–6
binary format, *(S) Sys Mgmt Util A-L*, 10–6
Error Log utility (ERROR LOG)
output (cont'd)
directing, *(S) Sys Mgmt Util A-L*, 10–6, 10–14, 10–15, 10–16
file specification, *(S) Sys Mgmt Util A-L*, 10–6, 10–15
page faults reported, *(S) Sys Mgmt Util A-L*, 10–18
qualifiers, *(S) Sys Mgmt Util A-L*, 10–5 to 10–18
relationship to UETP, *(S) Sys Mgr Tuning*, 17–3, 17–17, 17–29
report format
ASCII, *(S) Sys Mgmt Util A-L*, 10–6, 10–7
binary, *(S) Sys Mgmt Util A-L*, 10–6, 10–11, 10–16
brief, *(S) Sys Mgmt Util A-L*, 10–7
hexadecimal longword, *(S) Sys Mgmt Util A-L*, 10–16
register dump, *(S) Sys Mgmt Util A-L*, 10–16
rejected entries, *(S) Sys Mgmt Util A-L*, 10–16
run-time statistics, *(S) Sys Mgmt Util A-L*, 10–17, 10–18
reporting on error log file, *(S) Sys Mgr Tuning*, 18–5
report types, *(S) Sys Mgr Tuning*, 18–5
restrictions, *(S) Sys Mgmt Util A-L*, 10–4
Error messages
See Messages
warning, *(P) Rec Mgmt Util*, 2–4
Error options
for fatal BACKUP errors, *(S) Sys Mgr Essentials*, 10–64
/ERROR qualifier, *(P) Debugger*, 11–20, CD–151
Error recovery, *(P) Concepts*, 9–11
disk, *(P) I/O User*, 2–13
magnetic tape, *(P) I/O User*, 3–6
shadow set virtual unit driver, *(P) I/O User*, 7–8
Error reporting, *(S) DECnet Mgmt*, 8–31
system service status, *(S) DECnet Mgmt*, 8–31
Error returns, *(P) Interfaces*, 2–22
Errors
analyzing disk structure, *(S) Sys Mgr Essentials*, 8–55
analyzing error reports, *(S) Sys Mgr Tuning*, 18–2
analyzing media, *(S) Sys Mgr Essentials*, 8–64
avoiding, *(S) Dependable*, 8–29 to 8–30
CI port recovery, *(S) VMScluster Sys*, C–44
controlling error checking, *(G) DCL N-Z*, DCLII–167
detecting in command procedures, *(G) User*, 15–41
disk read

Errors
disk read (cont'd)
if returned when booting, *(S) Sys Mgr Essentials*, 4–16
disk structure
repairing, *(S) Sys Mgr Essentials*, 8–57
reporting, *(S) Sys Mgr Essentials*, 8–57
during login, *(G) User*, 2–3
error log file, *(S) Sys Mgr Tuning*, 18–2
error logging facility, *(S) Sys Mgr Tuning*, 18–2
fatal errors detected by data link, *(S) VMScluster Sys*, D–2, E–4
fatal errors detected by datalink, *(S) VMScluster Sys*, C–39
handling in command procedures, *(G) User*, 15–30
handling on disk volumes, *(S) Sys Mgr Essentials*, 8–55
label, *(G) User*, 15–30
machine check
if returned when booting, *(S) Sys Mgr Essentials*, 4–16
mounting disk, *(S) Sys Mgr Essentials*, 8–22
recommended method for signaling, *(P) RMS Ref*, 2–6
recovering from CI port, *(S) VMScluster Sys*, C–29
recovery from, *(S) Dependable*, 8–21
repair, *(S) Sys Mgmt Util A-L*, 3–3, 3–7, 3–10, 3–11
reporting, *(S) Sys Mgmt Util A-L*, 3–3; *(P) DECthreads*, 3–9
for image files, *(G) DCL A-M*, DCLI–22
for object files, *(G) DCL A-M*, DCLI–26
system service status, *(S) DECnet Mgmt*, 8–19
retransmission, *(S) VMScluster Sys*, F–36
returned by SYS$LAVC_DEFINE_NET_COMPONENT subroutine, *(S) VMScluster Sys*, E–6
returned by SYS$LAVC_DEFINE_NET_PATH subroutine, *(S) VMScluster Sys*, E–9
returned by SYS$LAVC_DISABLE_ANALYSIS subroutine, *(S) VMScluster Sys*, E–11
returned by SYS$LAVC_ENABLE_ANALYSIS subroutine, *(S) VMScluster Sys*, E–10
returned by SYS$LAVC_START_BUS subroutine, *(S) VMScluster Sys*, E–2
returned by SYS$LAVC_STOP_BUS subroutine, *(S) VMScluster Sys*, E–5
returning condition value, *(P) Interfaces*, 2–22
signaling, *(P) Concepts*, 13–5
signaling condition value, *(P) Interfaces*, 2–22
stopping the LAN on all LAN adapters, *(S) VMScluster Sys*, C–39, E–5
when stopping the NISCA protocol, *(S) VMScluster Sys*, D–2
ERRORS class
adding, *(S) Sys Mgmt Util M-Z*, 4–18
fields belonging to, *(S) Sys Mgmt Util M-Z*, 4–23
removing, *(S) Sys Mgmt Util M-Z*, 4–44
Errors during UETP, *(S) Sys Mgr Tuning*, 17–21
diagnosing, *(S) Sys Mgr Tuning*, 17–16
sources of, *(S) Sys Mgr Tuning*, 17–17
Error statistics
displaying with NCP commands, *(S) DECnet Intro*, 4–3
Error status code, *(P) RMS Ref*, 2–6
from invalid control blocks, *(P) RMS Ref*, 2–6
Error streams
defining for created process, *(G) DCL N-Z*, DCLII–58
Error termination of a thread, *(P) DECthreads*, pthread–54, E–69, E–72, G–45
ESA (expanded string area address)
program example, *(P) RMS Ref*, A–23
Escalation
severity filter, *(S) DECamds*, 2–7
time filter, *(S) DECamds*, 2–7
Escape sequences
ANSI, *(P) I/O User*, B–9
Digital-private, *(P) I/O User*, B–9
read, *(P) Concepts*, 9–31
terminal, *(P) I/O User*, 5–7, 5–21
using from terminal devices, *(P) RMS Ref*, RMS–51
ESP symbol, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18
ESS$LASTDRIVER device driver, *(S) Sys Mgr Tuning*, 23–9, 23–13
controlling and diagnosing, *(S) Sys Mgr Tuning*, 23–9, 23–10
ESS$STARTUP.COM command procedure, *(S) Sys Mgr Tuning*, 23–10, 23–13
invoking in system startup, *(S) Sys Mgr Tuning*, 23–10
Ethernet, *(S) DECnet Mgmt*, 1–4
See also LANs
adapters
specifying number of in MODPARAMS.DAT file, *(S) Sys Mgr Tuning*, 14–21
broadcast address, *(S) DECnet Mgmt*, 1–6
cable, *(S) DECnet Intro*, 1–6, 1–7, 3–5; *(S) DECnet Mgmt*, 1–4
carrier sense, *(S) DECnet Mgmt*, 1–5
characteristics, *(S) DECnet Mgmt*, 1–4
circuit, *(S) DECnet Mgmt*, 1–4
circuit device, *(S) DECnet Mgmt*, 2–10
communications interconnects, *(G) SW Overview*, 1–8
configurations, *(S) VMScluster Sys*, 3–5, 3–15; *(S) DECnet Mgmt*, 1–4
configurator module, *(S) DECnet Intro*, 4–6; *(S) DECnet Mgmt*, 1–12, 1–17, 2–11, 3–34

Ethernet (cont'd)
configuring adapter, *(S) VMScluster Sys*, 9–5
connecting, *(S) Sys Mgr Tuning*, 21–7
datagrams, *(S) DECnet Mgmt*, 1–4
data rate, *(S) DECnet Mgmt*, 1–4
data transmission rate, *(S) DECnet Intro*, 1–7
defining a remote node for UETP, *(S) Sys Mgr Tuning*, 17–19
definition, *(S) Sys Mgr Tuning*, 21–5
device drivers, *(S) Sys Mgr Tuning*, 22–2; *(P) I/O User*, 9–2
devices, *(S) DECnet Intro*, 3–5, 3–34
error-log entry, *(S) VMScluster Sys*, C–33
hardware address, *(S) VMScluster Sys*, 8–5
hardware addresses, *(S) DECnet Mgmt*, 3–46
header for datagrams, *(S) VMScluster Sys*, F–21
implementation options, *(S) Dependable*, 7–8
in local area network, *(S) Sys Mgr Tuning*, 21–8
interconnect (IEEE 802.3), *(S) Dependable*, 6–11
LAN adapter, *(G) SW Overview*, 1–6
LAN technology, *(G) SW Overview*, 6–18
line parameters, *(S) DECnet Mgmt*, 3–46
line protocol, *(S) DECnet Mgmt*, 3–37
linking with bridge, *(S) Sys Mgr Tuning*, 21–7
maximum distances, *(S) Dependable*, 7–8
monitoring activity, *(S) VMScluster Sys*, 10–25
MSCP server accesses shadow sets, *(S) VMScluster Sys*, 6–24
multiaccess, *(S) DECnet Mgmt*, 1–4
multicast address, *(S) DECnet Mgmt*, 1–6
multiple adapters, *(S) VMScluster Sys*, 3–15
network configuration, *(S) DECnet Mgmt*, 5–20
networks, *(G) SW Overview*, 1–11
node, *(S) DECnet Mgmt*, 1–4
packets, *(S) DECnet Mgmt*, 1–5
physical address, *(S) DECnet Mgmt*, 1–6
port, *(S) VMScluster Sys*, C–19
preparing for UETP, *(S) Sys Mgr Tuning*, 17–8
protocol, *(S) DECnet Mgmt*, 1–4
providing multiple paths to, *(S) Dependable*, 7–4
service operations, *(S) DECnet Mgmt*, 3–29
setting up LAN analyzer, *(S) VMScluster Sys*, F–30
specification, *(S) DECnet Mgmt*, 1–4
T–connector, *(S) DECnet Intro*, 3–5
topology, *(S) DECnet Mgmt*, 1–4
Ethernet address
See LAN addresses
Ethernet configurator
network monitoring tool, *(S) Sys Mgr Tuning*, 21–17; *(S) DECnet Intro*, 4–1
Ethernet controllers
See LAN controllers
Ethernet link
See Data link
Ethernet Network Integrity Monitor
See ETHERnim
ETHERnim
introduction, *(S) Dependable*, 7–18
use at CSC lights out data center, *(S) Dependable*, 11–16
ETO option, *(P) RMS Ref*, RMS–51
See also RAB$V_ETO option
Euclidean norm of a vector, *(P) MTH$*, MTH–170
EVAL button, *(P) Debugger*, 1–9
EVALUATE/ADDRESS command, *(P) Debugger*, 7–8, 7–14, 8–12, CD–101
EVALUATE command, *(P) Debugger*, 8–5, CD–98; *(P) Alpha SDA*, SDA–45; *(P) VAX SDA*, SDA–53
EVALUATE/PSL command, *(P) VAX SDA*, SDA–26
Evaluating
%CURVAL built-in symbol, *(P) Debugger*, 8–5, CD–99, B–6
expression, *(P) Debugger*, 8–3, 8–5, CD–98
memory address, *(P) Debugger*, 8–12, CD–101
task, *(P) Debugger*, 16–13
EVAX_CALLG_64 built-in
64-bit address support, *(P) 64-Bit Addr*, 9–4
64-bit address support., *(P) 64-Bit Addr*, 9–2
EVAX_SEXTL built-in
sign extension for 64-bit address support, *(P) 64-Bit Addr*, 9–6
sign extension for 64-bit address support., *(P) 64-Bit Addr*, 9–2
EVE, *(G) SW Overview*, 4–4, 5–12
Refer also to the *Extensible Versatile Editor Reference Manual*
as default editor, *(G) User*, 8–2
Mail, *(G) User*, 6–18
attributes
disabling prompting, *(G) User*, A–17
saving, *(G) User*, A–10 to A–19, A–20, A–34, A–36, A–39
a section file, *(G) User*, A–38 to A–39
in a command file, *(G) User*, A–19, A–20, A–40
setting, *(G) User*, A–10, A–13
box editing, *(G) User*, 8–23
commands, *(G) User*, 8–24, 8–25
cutting text, *(G) User*, 8–24
effects of pending delete, *(G) User*, 8–26
insert mode, *(G) User*, 8–26
overstrike mode, *(G) User*, 8–26
pasting text, *(G) User*, 8–24
restoring text, *(G) User*, 8–26
selecting text, *(G) User*, 8–23
tutorial, *(G) User*, 8–25
buffer-change journaling, *(G) User*, 8–37

EVE
buffer-change journaling (cont'd)
commands, *(G) User*, 8–38
definition, *(G) User*, 8–37
disabling, *(G) User*, 8–37, 8–40
enabling, *(G) User*, 8–41
file names, *(G) User*, 8–38, 8–39
files, *(G) User*, 8–38
RECOVER BUFFER command, *(G) User*, 8–39
recovering edits, *(G) User*, 8–39, 8–40
/RECOVER qualifier, *(G) User*, 8–39
buffers, *(G) User*, 8–43
BUFFER command, *(G) User*, 8–48
changing status, *(G) User*, 8–46 to 8–47
creating, *(G) User*, 8–44
definition, *(G) User*, 8–43
deleting, *(G) User*, 8–44, 8–46
displaying information, *(G) User*, 8–45
displaying messages, *(G) User*, 8–47
editing two buffers, *(G) User*, 8–51
GET FILE command, *(G) User*, 8–48
manipulating, *(G) User*, 8–44
multiple, *(G) User*, 8–47
OPEN SELECTED command, *(G) User*, 8–48
SET BUFFER command, *(G) User*, 8–46 to 8–47
splitting windows, *(G) User*, 8–50
viewing two sections, *(G) User*, 8–50
changing modes, *(G) User*, 8–14
character-cell terminals, *(G) User*, 8–2
command files, *(G) User*, A–26, A–34
adding functions to EVE, *(G) User*, A–27
converting to section files, *(G) User*, A–27
rules for writing, *(G) User*, A–28, A–29, A–30
setting default, *(G) User*, A–40
setting editing defaults, *(G) User*, A–27
startup, *(G) User*, A–41
commands
DEFINE KEY, *(G) User*, A–3
EXIT, *(G) User*, 8–8
FIND, *(G) User*, 8–28
formatting, *(G) User*, 8–41
HELP, *(G) User*, 8–3
LEARN, *(G) User*, A–9
QUIT, *(G) User*, 8–8
REPLACE, *(G) User*, 8–31, 8–32
RESTORE BOX SELECTION, *(G) User*, 8–26
RESTORE SELECTION, *(G) User*, 8–26
SET FIND CASE EXACT, *(G) User*, 8–29, 8–32
SET PENDING DELETE, *(G) User*, 8–26
SPAWN, *(G) User*, 8–51, 8–52
text formatting, *(G) User*, 8–41
WRITE FILE, *(G) User*, 8–8

EVE (cont'd)
copying text, *(G) User*, 8–22
tutorial, *(G) User*, 8–23
creating a subprocess, *(G) User*, 8–51
creating files, *(G) User*, 4–11
default settings, *(G) User*, A–10
buffer-specific, *(G) User*, A–12
direction, *(G) User*, A–13
defining keys, *(G) User*, A–2, A–3
abbreviations, *(G) User*, A–4
for EVE commands, *(G) User*, A–3
definition, *(G) User*, 8–1
editing keys, *(G) User*, 8–41
EDIT/TPU command line qualifiers, *(G) User*, 8–33
for modifying buffers, *(G) User*, 8–35
for overriding /READ_ONLY or /NOWRITE, *(G) User*, 8–35
for start position, *(G) User*, 8–33 to 8–34
for work files, *(G) User*, 8–34 to 8–35
EDT keypad emulation, *(P) Environment*, 5–2
emulating EDT, *(G) User*, A–41
defining keys, *(G) User*, A–41, A–42
replacing EDT macros with DECTPU procedures, *(G) User*, A–43
replacing EDT nokeypad statements with DECTPU procedures, *(G) User*, A–44
setting case sensitivity, *(G) User*, A–43
setting cursor, *(G) User*, A–42
setting right margin, *(G) User*, A–42
setting scroll margins, *(G) User*, A–42
using SET KEYPAD EDT command, *(G) User*, A–41
using the WPS keypad ruler key, *(G) User*, A–44, A–45
entering commands, *(G) User*, 8–5
with defined keys, *(G) User*, 8–6
entering text, *(G) User*, 8–13
commands, *(G) User*, 8–14
editing keys, *(G) User*, 8–13
including files, *(G) User*, 8–13
insert mode, *(G) User*, 8–14
overstrike mode, *(G) User*, 8–14
special characters, *(G) User*, 8–13
tutorial, *(G) User*, 8–15
erasing text, *(G) User*, 8–16
commands, *(G) User*, 8–17
editing keys, *(G) User*, 8–16
tutorial, *(G) User*, 8–18
with pending delete, *(G) User*, 8–26
exiting, *(G) User*, 8–7, 8–8
file backups, *(G) User*, 8–37
help, *(G) User*, 8–3
accessing with keypad, *(G) User*, 8–3
HELP command, *(G) User*, 8–3
initialization files, *(G) User*, A–14, A–32, A–34
assigning EVE commands, *(G) User*, A–3, A–4

EVE
initialization files (cont'd)
commands that define the environment, *(G) User*, A–33
creating, *(G) User*, A–32, A–33
default, *(G) User*, A–33
defining the GOLD key, *(G) User*, A–9
specifying, *(G) User*, A–33
insert mode, *(G) User*, 8–14
box editing, *(G) User*, 8–26
invoking, *(G) User*, 8–4; *(G) DCL A-M*, DCLI–206
from search lists, *(G) User*, 8–35
with multiple input files, *(G) User*, 8–35, 8–37
with wildcard directory names, *(G) User*, 8–35, 8–36
with wildcards, *(G) User*, 8–35, 8–36
key name conventions, *(G) User*, 8–1
keys
defined
VT100 series terminals, *(G) User*, 8–7
VT200 series terminals, *(G) User*, 8–6
VT300 series terminals, *(G) User*, 8–6
VT400 series terminals, *(G) User*, 8–6
defining
control keys, *(G) User*, A–4
GOLD key, *(G) User*, A–8, A–9
differences between EVE and DECTPU, *(G) User*, A–5
GOLD key, *(G) User*, A–7
names and labels, *(G) User*, A–5
removing GOLD key definitions, *(G) User*, A–9
undefinable, *(G) User*, A–6
learn sequences, *(G) User*, A–2, A–9
defining, *(G) User*, A–9
tutorial, *(G) User*, A–10
locating text, *(G) User*, 8–27
commands, *(G) User*, 8–27
exact case, *(G) User*, 8–29
marking locations, *(G) User*, 8–31
search direction, *(G) User*, 8–28
using wildcards, *(G) User*, 8–30
with FIND command, *(G) User*, 8–28
Mail, *(G) User*, 6–17
modifying files, *(G) User*, 4–11
moving text, *(G) User*, 8–19
commands, *(G) User*, 8–21
editing keys, *(G) User*, 8–20
tutorial, *(G) User*, 8–22
moving the cursor, *(G) User*, 8–8
commands, *(G) User*, 8–10
keys, *(G) User*, 8–9
tutorial, *(G) User*, 8–12
overstrike mode, *(G) User*, 8–14
box editing, *(G) User*, 8–26
quitting a session, *(G) User*, 8–8
EVE (cont'd)
reading batch job log files with, *(G) User*, 18–14
reading files, *(G) User*, 8–48
replacing text, *(G) User*, 8–31
restoring text, *(G) User*, 8–16
after a pending delete operation, *(G) User*, 8–26
box editing, *(G) User*, 8–26
commands, *(G) User*, 8–17
editing keys, *(G) User*, 8–16
tutorial, *(G) User*, 8–18
saving edits, *(G) User*, 8–7
with EXIT command, *(G) User*, 8–8
with WRITE FILE command, *(G) User*, 8–8
section file, *(G) User*, A–10, A–13, A–17, A–18, A–25, A–26, A–34
default, *(G) User*, A–26
modifying, *(G) User*, A–25
specifying, *(G) User*, A–18
startup, *(G) User*, A–25
spawning a subprocess, *(G) User*, 8–51, 8–52
startup files, *(G) User*, A–1, A–34
summary of features, *(G) User*, 8–2
switching between EVE and DCL, *(G) User*, 8–51, 8–52
tailoring the standard editor, *(G) User*, A–2
using DECTPU, *(G) User*, A–20
compiling procedures, *(G) User*, A–24
creating command files, *(G) User*, A–21
debugging package, *(G) User*, A–21
entering commands, *(G) User*, A–22
entering statements, *(G) User*, A–22
specifying debug file, *(G) User*, A–21
writing command procedures, *(G) User*, A–22, A–23
windows, *(G) User*, 8–49
commands, *(G) User*, 8–49
keys, *(G) User*, 8–49
workstations, *(G) User*, 8–2
writing files, *(G) User*, 8–49
EVE command files
See Command files
EVE initialization files
See Initialization files
Event class and type summary, *(S) DECnet Mgmt Util*, D–1 to D–13
Event classes
See Security-auditing events
displaying those being audited, *(S) Sys Mgr Tuning*, 18–27
extracting audit records by, *(S) Sys Mgmt Util A-L*, 4–7
Event facility, *(P) Debugger*, 7–10, 16–29, CD–170, CD–253

Event flag 128, *(G) V7.0 New Feat*, 4–30
Event flag clusters
  associating with a process, *(P) Sys Svc I*, SYS1–25
  deleting, *(P) Concepts*, 14–20; *(P) Sys Svc I*, SYS1–292
  disassociating, *(P) Sys Svc I*, SYS1–236
  dissociating, *(P) Concepts*, 14–20
  getting current status, *(P) Sys Svc II*, SYS2–246
  specifying name for, *(P) Concepts*, 14–19
Event flag numbers, *(P) Concepts*, 14–15
Event flag routines
  global symbols, *(P) VAX SDA*, SDA–64
Event flags, *(G) SW Overview*, 3–3, 4–11; *(P) Modular Proc*, 2–14; *(P) Concepts*, 14–14; *(P) Sys Svc I*, SYS1–294
  See also Synchronization
  allocation of, *(P) Concepts*, 6–17
  clearing, *(P) Concepts*, 14–23; *(P) Sys Svc I*, SYS1–109
  cluster, *(P) Concepts*, 14–15; *(P) Interfaces*, B–6
  common, *(P) Concepts*, 14–15
  for interprocess communication, *(P) Concepts*, 2–8
  for synchronous operations, *(P) RMS Ref*, 2–8
  getting current status, *(P) Sys Svc II*, SYS2–246
  local, *(P) Concepts*, 2–2, 14–15
  number, *(P) Interfaces*, B–6
  reserve, *(P) LIB$*, LIB–423
  RTL routine to free, *(P) LIB$*, LIB–210
  setting, *(P) Concepts*, 14–23; *(P) Sys Svc II*, SYS2–289
  specifying, *(P) Concepts*, 14–15
  status, *(P) LIB$*, LIB–254
  system services, *(P) Environment*, 10–5, 10–8
  wait, *(P) Concepts*, 14–22
  waiting for entire set of, *(P) Sys Svc II*, SYS2–490
  waiting for one of set, *(P) Sys Svc II*, SYS2–492
  waiting for setting of, *(P) Sys Svc II*, SYS2–487
Event flag service
  example using, *(P) Concepts*, 14–26
Event handling
  device driver used in, *(S) Sys Mgr Essentials*, 7–7
Event lists, *(S) DECnet Mgmt Util*, 1–9
Event logger
  See EVL
Event logging
  DECnet, *(S) DECnet Intro*, 4–1, 4–4
  disabling, *(S) DECnet Intro*, 4–6
  enabling, *(S) DECnet Intro*, 3–32
  example, *(S) DECnet Mgmt*, 3–65
  network, *(S) DECnet Intro*, 3–11
Event Log window, *(S) DECamds*, 2–5, Glossary–2
Event notification
  pseudoterminal, *(P) I/O User*, 6–6
Eventpoints
  See Breakpoints, Tracepoints, and Watchpoints
/EVENT qualifier, *(P) Debugger*, 7–10, 16–29, 16–30, CD–9, CD–12, CD–23, CD–37, CD–54, CD–56, CD–159, CD–221
Event records
  See Security audit reports
Events, *(G) SW Overview*, 3–2; *(S) DECamds*, 2–5 to 2–9, Glossary–2
  See also Event Log window
  auditing, *(P) Sys Svc I*, SYS1–43, SYS1–61
  automatic collection, *(S) DECamds*, Glossary–1
  automatic investigation, *(S) DECamds*, 5–3
  breakpoint or tracepoint on, *(P) Debugger*, 7–10
  changing
    default highlighting, *(S) DECamds*, 5–2
    severity filter, *(S) DECamds*, 5–5, 5–8
  class, *(S) DECnet Intro*, 4–5; *(S) DECnet Mgmt*, 3–63
  creating thresholds for different computer classes, *(S) DECamds*, 5–9
  customizing based on frequency of occurrence, *(S) DECamds*, 5–9
  Data Link layer, *(S) DECnet Mgmt Util*, D–9
  definition, *(S) DECnet Mgmt*, 2–28
  DNS (Distributed Name Service), *(S) DECnet Mgmt Util*, D–12
  End Communications layer, *(S) DECnet Mgmt Util*, D–4
  highlighting color, *(S) DECamds*, 5–2
  identification of, *(S) DECnet Mgmt*, 3–63
  identifying location of, *(S) DECnet Mgmt*, 3–65
  identifying source for, *(S) DECnet Mgmt*, 3–64
  list, *(S) DECnet Mgmt*, 2–28
  log
    file, *(S) DECamds*, B–4
    window, *(S) DECamds*, Glossary–2
  message format, *(S) DECnet Intro*, 4–6
  Network Management layer, *(S) DECnet Mgmt Util*, D–2
  OpenVMS specific, *(S) DECnet Mgmt Util*, D–12
  Routing layer, *(S) DECnet Mgmt Util*, D–4
  Session Control layer, *(S) DECnet Mgmt Util*, D–4
  sink-related, *(S) DECnet Mgmt*, 2–28
  source-related, *(S) DECnet Mgmt*, 2–28
  tasking (multithread) program, *(P) Debugger*, 16–29
  type, *(S) DECnet Intro*, 4–5; *(S) DECnet Mgmt*, 3–63
  X.25 Packet level, *(S) DECnet Mgmt Util*, D–11

Event synchronization, *(P) Environment*, 10–3
Event tolerance, and security levels, *(S) Security*, 1–2
Event types, *(S) Sys Mgmt Util A-L*, 4–7
EVENT_FLAGS_AND_ASTS.EXE file
  global symbols, *(P) VAX SDA*, SDA–64
EVE section files
  See also Section files
EVL (event logger), *(S) DECnet Mgmt*, 1–12, 2–25, 2–28
Exact key match, *(P) File Appl*, 8–12
/EXACT qualifier, *(P) Debugger*, CD–34, CD–207
/EXACT_ORDER qualifier
  in Backup utility, *(S) Sys Mgmt Util A-L*, 7–27
EXACT_POSITIONING attribute, *(P) Rec Mgmt Util*, 4–7; *(P) File Appl*, 4–35
EXAMINE command, *(G) DCL A-M*, DCLI–214 to DCLI–216; *(P) Debugger*, 8–2, CD–103; *(P) Alpha SDA*, SDA–48; *(P) VAX SDA*, SDA–20, SDA–28, SDA–55
  and DEPOSIT command, *(G) DCL A-M*, DCLI–153
  length qualifier, *(G) DCL A-M*, DCLI–215
EXAMINE/DEFINITIONS command, *(P) Debugger*, 13–12
EXAMINE/INSTRUCTION command, *(P) Debugger*, 8–19, 11–8, 11–9; *(P) VAX SDA*, SDA–26
EXAMINE/OPERANDS command, *(P) Debugger*, 8–19, 15–9
EXAMINE/SOURCE command, *(P) Debugger*, 10–4, 11–6
Examining
  address, *(P) Debugger*, 8–25
  EXAMINE command, *(P) Debugger*, 8–2, CD–103
  instruction, *(P) Debugger*, 8–19, 15–9
  register, *(P) Debugger*, 3–25, 8–22, 15–4
  task, *(P) Debugger*, 16–13, 16–28
  using vector mask, *(P) Debugger*, 15–13
  variable, *(P) Debugger*, 3–15, 8–2, 8–14
  vector address expression, *(P) Debugger*, 15–16
  vector instruction, *(P) Debugger*, 15–9
  vector register, *(P) Debugger*, 15–4
Example programs
  prime number search, *(P) DECthreads*, 6–1
EX button, *(P) Debugger*, 1–9, 3–15
Exception, causing resource exhaustion or stack corruption, *(P) Debugger*, 13–19
EXCEPTION.EXE file
  global symbols, *(P) VAX SDA*, SDA–64
EXCEPTION.STB file
  global symbols, *(P) Alpha SDA*, SDA–61
Exception breakpoints or tracepoints
  activating, *(P) Debugger*, CD–9, CD–12
  canceling, *(P) Debugger*, 13–20, CD–23, CD–37
  deactivating, *(P) Debugger*, CD–54, CD–56
  qualifying, *(P) Debugger*, 13–24, B–10
Exception breakpoints or tracepoints (cont'd)
  resuming execution at, *(P) Debugger*, 13–20
  setting, *(P) Debugger*, 3–10, 13–20, CD–160, CD–221
Exception conditions, *(P) Concepts*, 13–2, 13–6; *(P) Interfaces*, 1–11; *(P) Calling Std*, 6–1; *(P) Rec Mgmt Util*, 2–4
  See also Condition handlers
  definition, *(P) Calling Std*, 1–4
  handler, *(P) Calling Std*, 6–6
  indicating, *(P) Calling Std*, 6–9
  returning condition value, *(P) Concepts*, 13–7
  signaling, *(P) Calling Std*, 6–9
  signaling of, *(P) Concepts*, 13–6, 13–7, 13–16, 13–28, 13–49
  system messages for, *(G) Help Msg*, 1–4
Exception handlers
  debugging, *(P) Debugger*, 13–19
Exception-handling routines
  global symbols, *(P) Alpha SDA*, SDA–61; *(P) VAX SDA*, SDA–64
/EXCEPTION qualifier, *(P) Debugger*, 13–19, CD–9, CD–12, CD–23, CD–37, CD–54, CD–56, CD–160, CD–221, CD–299
Exceptions
  CATCH, *(P) DECthreads*, 5–4
  catching, *(P) DECthreads*, 5–4
  CATCH_ALL, *(P) DECthreads*, 5–8
  condition handler causing to fail, *(P) DECthreads*, B–4
  continuation from, *(P) Calling Std*, 6–21
  declaring and initializing, *(P) DECthreads*, 5–3
  defining a region of code to catch, *(P) DECthreads*, 5–4
  defining epilogue actions, *(P) DECthreads*, 5–6
  definition, *(P) Concepts*, 13–2; *(P) DECthreads*, 5–1
  determining current, *(P) DECthreads*, 5–6
  dispatcher, *(P) Concepts*, 13–24
  ENDTRY, *(P) DECthreads*, 5–4
  exporting error status, *(P) DECthreads*, 5–7
  fatal, *(P) VAX SDA*, SDA–21
  FINALLY, *(P) DECthreads*, 5–6, 5–10
  floating-point underflow, *(P) Concepts*, 13–17
  handling by run-time library, *(P) Concepts*, 13–16
  identifying causes of, *(P) VAX SDA*, SDA–25
  importing error status, *(P) DECthreads*, 5–6
  introduction to, *(P) DECthreads*, 5–1
  matching, *(P) DECthreads*, 5–7
  naming convention for, *(P) DECthreads*, 5–10
  pthread_exc_get_status_np, *(P) DECthreads*, 5–7
  pthread_exc_matches_np, *(P) DECthreads*, 5–7
  pthread_exc_report_np, *(P) DECthreads*, 5–7
  pthread_exc_set_status_np, *(P) DECthreads*, 5–6
  raising, *(P) DECthreads*, 5–3

Exceptions (cont'd)
recovering from, *(P) MTH$*, 2–7
reporting, *(P) DECthreads*, 5–7
RERAISE, *(P) DECthreads*, 5–5, 5–8, 5–11
reraising, *(P) DECthreads*, 5–5
rules for modular use of, *(P) DECthreads*, 5–10
signals reported as, *(P) DECthreads*, A–6
synchronization, *(P) Calling Std*, 6–20
table listing pthread exceptions and meanings, *(P) DECthreads*, 5–11
THIS_CATCH, *(P) DECthreads*, 5–6
TRY, *(P) DECthreads*, 5–4
type, *(P) Concepts*, 13–6
Exception vectors
setting, *(P) Sys Svc II*, SYS2–290
EXCHANGE (Exchange utility)
See Exchange utility
EXCHANGE command, *(G) DCL A-M*, DCLI–217
EXCHANGE/NETWORK command, *(G) DCL A-M*, DCLI–218 to DCLI–226; *(G) SW Overview*, 5–11
creating files, *(G) DCL A-M*, DCLI–221
protecting files, *(G) DCL A-M*, DCLI–221
qualifiers, *(G) DCL A-M*, DCLI–222
transferring files, *(G) DCL A-M*, DCLI–220
using to transfer files, *(S) Sys Mgr Essentials*, 9–19, 9–24
wildcard character, *(G) DCL A-M*, DCLI–221
Exchange utility (EXCHANGE)
Refer also to the *OpenVMS Exchange Utility Manual*
using to copy files, *(S) Sys Mgr Essentials*, 9–19
using to transfer information, *(S) Sys Mgr Essentials*, 9–24
Exclamation point (!)
as comment delimiter, *(P) Rec Mgmt Util*, 6–1; *(P) Debugger*, CD–4
in distribution lists, *(G) User*, 6–7
log file, *(P) Debugger*, 12–5
/EXCLUDE qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–30
Excluding devices, *(S) Sys Mgmt Util M-Z*, 6–38
Exclusion list
displaying, *(S) Sys Mgmt Util M-Z*, 6–41
eXcursion for Windows, *(G) SW Overview*, 6–23
%EXC_FACILITY built-in symbol, *(P) Debugger*, 13–24, B–10
%EXC_NAME built-in symbol, *(P) Debugger*, 13–24, B–10
%EXC_NUMBER built-in symbol, *(P) Debugger*, 13–24, B–10
%EXC_SEVERITY built-in symbol, *(P) Debugger*, 13–24, B–10
Executable images, *(S) Sys Mgr Tuning*, 16–9, 16–14, 16–15
See also Images and Programs
creating, *(P) Linker*, 1–13
definition, *(P) Linker*, 1–1
patching, *(G) DCL N-Z*, DCLII–12
specifying a base address, *(P) Linker*, LINK–43
/EXECUTABLE qualifier, *(P) Linker*, LINK–13
Execute access, *(P) Rec Mgmt Util*, 4–23
files, *(S) Security*, 5–8
for disk directory files, *(S) Sys Mgr Essentials*, 9–11
for disk files, *(S) Sys Mgr Essentials*, 9–6
global sections, *(S) Security*, 5–14
granting through protection codes, *(S) Security*, 4–25; *(S) Sys Mgr Essentials*, 11–8
EXECUTE command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–6
Execute procedure (@) command, *(G) User*, 15–21; *(G) DCL A-M*, DCLI–9 to DCLI–13; *(S) Sys Mgr Tuning*, 20–16; *(P) VAX SDA*, SDA–45
See also At sign (@)
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–7
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–11
to set up SHOW CLUSTER format, *(S) Sys Mgmt Util M-Z*, 4–11
Executing
continuing interrupted DCL commands, *(G) DCL A-M*, DCLI–64
Executing command procedures, *(G) User*, 15–21
as batch jobs, *(G) User*, 15–24
as remote batch jobs, *(G) User*, 15–25
from within other command procedures, *(G) User*, 15–21
interactively, *(G) User*, 15–23
on private disks, *(G) User*, 15–27
on remote nodes, *(G) User*, 15–21
on tape volumes, *(G) User*, 15–27
redirecting interactive output, *(G) User*, 15–24
restarting batch jobs, *(G) User*, 15–25
with automatic foreign commands, *(G) User*, 14–38
without using symbols, *(G) User*, 14–38
Executing job status, *(S) Sys Mgr Essentials*, 13–69, 13–74
Execution
interrupting
with Ctrl/C, *(P) Debugger*, 5–12
with Ctrl/Y, *(P) Debugger*, 2–7, 5–14, 14–13
with Stop button, *(P) Debugger*, 2–6
monitoring
with SHOW CALLS command, *(P) Debugger*, 6–7, CD–247
with tracepoint, *(P) Debugger*, 7–5, CD–220

Execution (cont'd)
multiprocess program, *(P) Debugger*, 14–6, CD–182
resuming after exception break, *(P) Debugger*, 13–20
starting or resuming
with CALL command, *(P) Debugger*, 12–11, 15–22, CD–16
with Go button, *(P) Debugger*, 3–6
with GO command, *(P) Debugger*, 6–6, CD–125
with S/call button, *(P) Debugger*, 3–8
with S/in button, *(P) Debugger*, 3–8
with S/ret button, *(P) Debugger*, 3–8
with STEP button, *(P) Debugger*, 3–7
with STEP command, *(P) Debugger*, 7–2, CD–299
suspending
with breakpoint, *(P) Debugger*, 3–8, 7–4, CD–158
with exception breakpoint, *(P) Debugger*, 3–10, 13–20, CD–160
with watchpoint, *(P) Debugger*, 3–20, 7–11, 14–16, CD–234
vectorized program, *(P) Debugger*, 15–2
Execution context, *(P) Concepts*, 1–2
Execution modes, *(S) Sys Mgmt Util A-L*, 6–8
for SYSMAN Startup files, *(S) Sys Mgmt Util M-Z*, 6–66
startup procedures, *(S) Sys Mgr Essentials*, 5–19
Execution queues, *(G) DCL A-M*, DCLI–264; *(G) SW Overview*, 3–11
activating autostart, *(S) Sys Mgr Essentials*, 13–4, 13–15, 13–49
creating, *(S) Sys Mgr Essentials*, 13–15
designating autostart or nonautostart, *(G) DCL A-M*, DCLI–265
failover, *(S) Dependable*, 9–18
relationship to generic queues, *(S) Sys Mgr Essentials*, 13–2
specifying node or node and device, *(G) DCL A-M*, DCLI–266
starting
autostart, *(S) Sys Mgr Essentials*, 13–4, 13–18, 13–48
in system startup, *(S) Sys Mgr Essentials*, 5–12
nonautostart, *(S) Sys Mgr Essentials*, 13–16, 13–18, 13–48
Executive images
contents, *(P) Alpha SDA*, SDA–61, SDA–97; *(P) VAX SDA*, SDA–64, SDA–111
global symbols, *(P) Alpha SDA*, SDA–59; *(P) VAX SDA*, SDA–63
linking against, *(P) Linker*, LINK–34
Executive mode, *(S) Alpha Perform*, 9–7
calling images running in, *(S) Sys Mgr Tuning*, 16–11, 16–14
changing to, *(P) Sys Svc I*, SYS1–110, SYS1–112
logical names, *(S) Sys Mgr Tuning*, 16–15
recommended use for logical names, *(S) Sys Mgr Essentials*, 5–9
RMS, *(S) Alpha Perform*, 9–9
Executive-mode (PSL$C_EXEC) constant
for FAB$V_CHAN_MODE, *(P) RMS Ref*, 4–6
/EXECUTIVE qualifier, *(P) Alpha SDA*, SDA–59, SDA–151; *(P) VAX SDA*, SDA–63, SDA–177
Executive stack pointer, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18
/EXECUTIVE_MODE qualifier
ASSIGN command, *(G) DCL A-M*, DCLI–42
Executor nodes, *(S) DECnet Mgmt*, 2–1, 4–1
See also Local nodes
clearing counters, *(S) DECnet Mgmt Util*, 3–160
commands, *(S) DECnet Mgmt*, 3–5
prefix identifier, *(S) DECnet Mgmt Util*, 3–154
management listener (NML), *(S) DECnet Mgmt Util*, 3–73
setting as the default command point, *(S) DECnet Mgmt Util*, 3–73
testing, *(S) DECnet Mgmt Util*, 3–51
EXEC_INIT.STB file, *(P) Alpha SDA*, SDA–61
Exit code sequences, *(P) Calling Std*, 3–47
example for register frame procedures, *(P) Calling Std*, 3–48
example for stack frame procedures, *(P) Calling Std*, 3–48
EXIT command, *(G) DCL A-M*, DCLI–227 to DCLI–230; *(S) Sys Mgmt Util M-Z*, 6–32; *(P) File Appl*, 10–11; *(P) Debugger*, 5–11, CD–114; *(P) Alpha SDA*, SDA–52; *(P) VAX SDA*, SDA–59
debugging exit handler, *(P) Debugger*, 13–25
in CLUE, *(S) Sys Mgmt Util A-L*, 8–7
in command procedures, *(G) User*, 15–13
in Install utility, *(S) Sys Mgmt Util A-L*, 11–11
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–16
in LATCP, *(S) Sys Mgmt Util A-L*, 13–22
in Mail, *(G) User*, 6–3
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–7
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–35
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–32
multiprocess program, *(P) Debugger*, 14–10
using with command procedures, *(G) User*, 15–29
when to use, *(G) User*, 15–14
with condition codes, *(G) User*, 15–42

Exit handlers, *(P) Concepts*, 3–43, 9–31, 13–73; *(P) SMG$*, 4–3
canceling, *(P) Sys Svc I*, SYS1–79
control block, *(P) Sys Svc I*, SYS1–247
deleting, *(P) Sys Svc I*, SYS1–79
debugging, *(P) Concepts*, 13–76; *(P) Debugger*, 13–25, CD–114
declaring, *(P) Sys Svc I*, SYS1–247
establishing, *(P) Concepts*, 13–74
executing, *(P) Debugger*, 5–11, CD–114
execution sequence of, *(P) Debugger*, 13–25
identifying, *(P) Debugger*, 13–25, CD–254
writing, *(P) Concepts*, 13–75
Exiting
debugger, *(P) Debugger*, 2–6, 5–11
from command procedures, *(G) User*, 15–29
Exiting Image and Deleting Process fix, *(S) DECamds*, 4–5
EXITLOOP command, *(P) Debugger*, 12–10, CD–117
/EXIT qualifier, *(P) Debugger*, CD–95
Exits
forced, *(P) Concepts*, 3–43
forcing, *(P) Sys Svc I*, SYS1–386
image, *(P) Concepts*, 3–41, 13–73
exit_handler_block data type, *(P) Interfaces*, B–7
EXPAND command, *(P) Debugger*, 11–13, CD–118
Expanded string, *(P) File Appl*, 6–4
requesting, *(P) RMS Ref*, 5–2
Expanded string area address
See ESA
Expanding program/control region, *(P) Sys Svc I*, SYS1–345
EXPECTED_VOTES system parameter, *(S) VMScluster Sys*, 2–6, 8–12, 8–33, 8–36, 10–22, A–1
Expiration
of account, *(S) Security*, 3–13
of password, *(S) Security*, 3–12, 7–13
of secondary password, *(S) Security*, 3–12
password system messages, *(S) Security*, 3–12
EXPIRATION attribute, *(P) Rec Mgmt Util*, 4–15
Expiration date
field, *(S) Sys Mgr Essentials*, 9–14; *(P) File Appl*, 1–28
checking, *(S) Sys Mgr Essentials*, 9–18
file, *(S) Sys Mgr Essentials*, 8–54
tape file system checks, *(S) Sys Mgr Essentials*, 9–17
/EXPIRATION qualifier, *(S) Security*, 7–3
Expiration time
obtaining, *(P) DECthreads*, pthread–66, E–83, G–51
Expired date suppression, *(P) RMS Ref*, 10–11
/EXPIRED qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–31
Explanatory text
in argument documentation, *(P) Interfaces*, 1–10
in routine documentation, *(P) Interfaces*, 1–4
expm1 routine, *(P) Portable Math*, DPML–31, B–7
Exponential, *(P) MTH$*, MTH–65, MTH–90
of complex number, *(P) MTH$*, MTH–30, MTH–32
Exponentiation
complex base to complex exponent, *(P) OTS$*, OTS–55
complex base to signed integer exponent, *(P) OTS$*, OTS–58
D-floating base, *(P) OTS$*, OTS–59, OTS–61, OTS–63
F-floating base, *(P) OTS$*, OTS–79, OTS–82, OTS–84
G-floating base, *(P) OTS$*, OTS–65, OTS–68
H-floating base, *(P) OTS$*, OTS–70, OTS–72
signed longword base, *(P) OTS$*, OTS–75
word base to word exponent, *(P) OTS$*, OTS–74
$EXPREG_64 system service
description, *(P) Sys Svc I*, SYS1–349
Expressions, *(P) Alpha SDA*, SDA–12; *(P) VAX SDA*, SDA–15, SDA–19
See Address expressions and Language expressions
and symbols, *(G) User*, 14–8
converting value data types in, *(G) User*, 14–25
DCL evaluations of, *(G) User*, 14–24
evaluating, *(P) Alpha SDA*, SDA–45; *(P) VAX SDA*, SDA–53
logical, *(G) User*, 14–19, 14–20
precedence of operators, *(G) User*, 14–23
value tests, *(G) DCL A-M*, DCLI–250
exp routine, *(P) Portable Math*, DPML–31, B–7
EXQUOTA privilege, *(S) Security*, A–6
Extend contiguity options and controls, *(P) File Appl*, 3–8
Extended address space, *(P) Concepts*, 19–3, 19–4
physical address space, *(P) Concepts*, 19–3
virtual address space, *(P) Concepts*, 19–4
Extended attribute blocks
See XABs
Extended attribute records
See XARs
Extended hours of operator coverage, *(S) Dependable*, 3–13
Extended message acknowledgment, *(S) VMScluster Sys*, F–26
Extended QIO processor
See XQP
Extended sequence numbers
for datagram flags, *(S) VMScluster Sys*, F–26

/EXTENDED_FLOAT qualifier, *(P) Debugger*, CD–77, CD–105, CD–130
Extending a file, *(P) File Appl*, 3–4 to 3–8
Extend operations, *(P) File Appl*, 3–4 to 3–8
Extend placement controls for various file organizations, *(P) File Appl*, 3–8
Extends
  placement and contiguity options, *(P) File Appl*, 3–8
Extend service, *(P) RMS Ref*, RMS–36
  condition values, *(P) RMS Ref*, RMS–38
  control block input fields, *(P) RMS Ref*, RMS–37
  control block output fields, *(P) RMS Ref*, RMS–37
  invoking, *(P) RMS Ref*, 4–11
  use restriction, *(P) RMS Ref*, RMS–37
  XAB option overrides, *(P) RMS Ref*, RMS–37
Extend subfunction, *(P) I/O User*, 1–11
/EXTEND_QUANTITY qualifier, *(P) File Appl*, 9–7
Extensible Versatile Editor
  See EVE
EXTENSION attribute, *(P) Rec Mgmt Util*, 4–7, 4–19; *(P) File Appl*, 4–35
/EXTENSION qualifier
  in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–19
Extensions
  See File extensions
Extents, *(P) File Appl*, 1–3, 1–5, 9–7
  defining section, *(P) Concepts*, 19–15, 20–15
  definition, *(S) Sys Mgr Tuning*, A–1
  disk
    definition, *(S) Sys Mgr Essentials*, 8–2
  index file
    definition, *(S) Sys Mgr Tuning*, A–7
External clock, *(S) DECnet Mgmt Util*, 3–77
EXTRACT command, *(P) Debugger*, 11–22, CD–121
  in CLUE, *(S) Sys Mgmt Util A-L*, 8–7
  in Mail, *(G) User*, 6–10
Extracting software product release notes, *(S) Sys Mgr Essentials*, 3–29
/EXTRACT qualifier
  LIBRARY command, *(P) Concepts*, 17–2

F

F$CONTEXT lexical function, *(G) User*, 17–8, 17–9; *(G) DCL A-M*, DCLI–288, DCLI–291 to DCLI–296
F$CSID lexical function, *(G) DCL A-M*, DCLI–288, DCLI–297, DCLI–298
F$CVSI lexical function, *(G) DCL A-M*, DCLI–289, DCLI–299, DCLI–300
F$CVTIME lexical function, *(G) User*, 17–13, 17–14; *(G) DCL A-M*, DCLI–289, DCLI–301, DCLI–302
F$CVUI lexical function, *(G) DCL A-M*, DCLI–289, DCLI–303
F$DEVICE lexical function, *(G) DCL A-M*, DCLI–289, DCLI–304, DCLI–305
F$DIRECTORY lexical function, *(G) User*, 14–23; *(G) DCL A-M*, DCLI–289, DCLI–306
F$EDIT lexical function, *(G) DCL A-M*, DCLI–289, DCLI–307, DCLI–308
F$ELEMENT lexical function, *(G) User*, 17–13, 17–14; *(G) DCL A-M*, DCLI–289, DCLI–309, DCLI–310
F$ENVIRONMENT lexical function, *(G) DCL A-M*, DCLI–289, DCLI–311 to DCLI–313
  changing default file protections with, *(G) User*, 17–5
F$EXTRACT lexical function, *(G) User*, 17–13, 17–14; *(G) DCL A-M*, DCLI–289, DCLI–314, DCLI–315
F$FAO lexical function, *(G) User*, 17–15; *(G) DCL A-M*, DCLI–289, DCLI–316 to DCLI–322
F$FILE_ATTRIBUTES lexical function, *(G) DCL A-M*, DCLI–289, DCLI–323 to DCLI–325
F$GETDVI lexical function, *(G) DCL A-M*, DCLI–289, DCLI–326 to DCLI–341
F$GETJPI lexical function, *(G) DCL A-M*, DCLI–289, DCLI–342 to DCLI–347
  getting information about vector processing, *(S) Sys Mgr Tuning*, 26–9
F$GETQUI lexical function, *(G) DCL A-M*, DCLI–289, DCLI–348 to DCLI–370; *(S) Sys Mgr Essentials*, 13–51
  obtaining queue information, *(G) User*, 17–7
F$GETSYI lexical function, *(G) DCL A-M*, DCLI–289, DCLI–371 to DCLI–376
  getting information about vector processing, *(S) Sys Mgr Tuning*, 26–9
  obtaining information
    system, *(G) User*, 17–6, 17–7
    VMScluster system, *(G) User*, 17–6, 17–7
F$IDENTIFIER lexical function, *(G) DCL A-M*, DCLI–289, DCLI–377, DCLI–378
F$INTEGER lexical function, *(G) User*, 17–17; *(G) DCL A-M*, DCLI–289, DCLI–379
  converting data types, *(G) User*, 17–17
F$LENGTH lexical function, *(G) DCL A-M*, DCLI–290, DCLI–380
  with F$LOCATE, *(G) User*, 17–13
F$LOCATE lexical function, *(G) DCL A-M*, DCLI–290, DCLI–381, DCLI–382
  with F$LENGTH, *(G) User*, 17–13
F$LOGICAL lexical function, *(G) User*, 17–11
  See also F$TRNLNM lexical function

F$MESSAGE lexical function, *(G) DCL A-M*, DCLI–290, DCLI–383, DCLI–384; *(G) Help Msg*, 1–3
F$MODE lexical function, *(G) DCL A-M*, DCLI–290, DCLI–385, DCLI–386; *(S) Security*, 3–4
in login procedures, *(G) User*, 18–11
F$PARSE lexical function, *(G) User*, 17–13, 17–14; *(G) DCL A-M*, DCLI–290, DCLI–387 to DCLI–389
F$PID lexical function, *(G) User*, 17–7; *(G) DCL A-M*, DCLI–290, DCLI–390, DCLI–391
obtaining process information, *(G) User*, 17–7
F$PRIVILEGE lexical function, *(G) DCL A-M*, DCLI–290, DCLI–392
F$PROCESS lexical function, *(G) DCL A-M*, DCLI–290, DCLI–393
F$SEARCH lexical function, *(G) DCL A-M*, DCLI–290, DCLI–394 to DCLI–396
searching for files, *(G) User*, 17–10
using with DELETE command, *(G) User*, 17–11
F$SETPRV lexical function, *(G) DCL A-M*, DCLI–290, DCLI–397 to DCLI–400
F$STRING lexical function, *(G) DCL A-M*, DCLI–290, DCLI–401
converting data types, *(G) User*, 17–17
F$TIME lexical function, *(G) DCL A-M*, DCLI–290, DCLI–402
F$TRNLNM lexical function, *(G) User*, 17–11; *(G) DCL A-M*, DCLI–290, DCLI–403 to DCLI–406
translating logical names, *(G) User*, 17–11
F$TYPE lexical function, *(G) DCL A-M*, DCLI–407, DCLI–408
identifying symbols, *(G) User*, 17–18
F$USER lexical function, *(G) DCL A-M*, DCLI–290, DCLI–409
F$VERIFY lexical function, *(G) User*, 17–4; *(G) DCL A-M*, DCLI–290, DCLI–410, DCLI–411
F11BXQP.STB file, *(P) Alpha SDA*, SDA–61
FAB$B_ACMODES field, *(P) RMS Ref*, 4–3
See also FAB$V_CHAN_MODE subfield and FAB$V_LNM_MODE subfield
FAB$B_BID field, *(P) RMS Ref*, 4–3
FAB$B_BKS field, *(P) RMS Ref*, 4–3 to 4–5; *(P) File Appl*, 3–25, 4–32, 7–18
FAB$B_BLN field, *(P) RMS Ref*, 4–4
FAB$B_BLS field, *(P) File Appl*, 4–32
FAB$B_DEQ field, *(P) File Appl*, 9–7
FAB$B_DNS field, *(P) RMS Ref*, 4–9; *(P) File Appl*, 9–7
default file specification, *(P) RMS Ref*, 4–2
FAB$B_FAC field, *(P) RMS Ref*, 4–9, 4–10; *(P) File Appl*, 9–6
comparing with FAB$B_SHR field, *(P) RMS Ref*, 4–10
for specifying sharing options, *(P) RMS Ref*, 3–1, A–12
FAB$B_FAC field (cont'd)
interdependency with FAB$B_SHR field, *(P) RMS Ref*, 4–28
list of options, *(P) File Appl*, 7–3
options, *(P) RMS Ref*, 4–10
requirement for invoking Extend service, *(P) RMS Ref*, RMS–37
FAB$B_FNS field, *(P) RMS Ref*, 4–12; *(P) File Appl*, 6–5, 9–6
specifying primary file specification, *(P) RMS Ref*, 4–2
to specify file name size, *(P) RMS Ref*, A–20
FAB$B_FSZ field, *(P) RMS Ref*, 4–18; *(P) File Appl*, 4–33
FAB$B_JOURNAL field, *(P) RMS Ref*, 4–20
FAB$B_ORG field, *(P) RMS Ref*, 4–23; *(P) File Appl*, 4–32
FAB$B_PUT field
requirement for invoking Extend service, *(P) RMS Ref*, RMS–37
FAB$B_RAT field, *(P) RMS Ref*, 4–24; *(P) File Appl*, 4–34
FAB$B_RFM field, *(P) RMS Ref*, 4–26; *(P) File Appl*, 4–34
FAB$B_RTV field, *(P) RMS Ref*, 4–27; *(P) File Appl*, 9–8, 9–9
FAB$B_SHR field, *(P) RMS Ref*, 4–27 to 4–28; *(P) File Appl*, 9–6
FAB$V_MSE option, *(P) File Appl*, 7–21
FAB$V_SHRGET option, *(P) File Appl*, 7–21
FAB$V_UPI option, *(P) File Appl*, 7–6
for specifying sharing options, *(P) RMS Ref*, 3–1, A–12
list of options, *(P) File Appl*, 7–4
FAB$B_UPD field
requirement for invoking Extend service, *(P) RMS Ref*, RMS–37
FAB$C options, *(P) RMS Ref*, 4–26
FAB$L_ALQ field, *(P) RMS Ref*, 4–3; *(P) File Appl*, 4–34
setting at run time, *(P) RMS Ref*, A–5
using to specify additional file space, *(P) RMS Ref*, RMS–37
FAB$L_CTX field, *(P) RMS Ref*, 4–6
FAB$L_DEV field, *(P) RMS Ref*, 4–7
FAB$L_DNA field, *(P) RMS Ref*, 4–9; *(P) File Appl*, 6–3, 9–7
specifying default file specification, *(P) RMS Ref*, 4–2
FAB$L_FNA field, *(P) RMS Ref*, 4–11; *(P) File Appl*, 6–3, 6–5, 9–6
specifying primary file specification, *(P) RMS Ref*, 4–2
to specify file name string, *(P) RMS Ref*, A–20
FAB$L_FOP field, *(P) RMS Ref*, 4–12; *(P) File Appl*, 4–31
FAB$V_CBT option, *(P) File Appl*, 4–35
FAB$V_CTG option, *(P) File Appl*, 4–34

FAB$L_FOP field (cont'd)
FAB$V_DFW option, *(P) File Appl*, 3–17, 3–18, 3–27, 3–28, 7–18, 7–19, 9–8
FAB$V_MXV option, *(P) File Appl*, 4–31
FAB$V_NAM option, *(P) File Appl*, 6–4
FAB$V_NEF option, *(P) File Appl*, 8–16, 8–17
FAB$V_OFP option, *(P) File Appl*, 6–8, 6–9
FAB$V_PPF option, *(P) File Appl*, 6–19
FAB$V_RCK option, *(P) File Appl*, 9–10
FAB$V_SQO option, *(P) File Appl*, 9–9
FAB$V_TMP option, *(P) File Appl*, 4–32
FAB$V_UFO option, *(P) File Appl*, 7–4, 9–13
FAB$V_WCK option, *(P) File Appl*, 9–10
options, *(P) RMS Ref*, 4–13
FAB$L_MRN field, *(P) RMS Ref*, 4–21; *(P) File Appl*, 4–33
FAB$L_MRS field, *(P) File Appl*, 4–33
FAB$L_NAM field, *(P) RMS Ref*, 4–23; *(P) File Appl*, 6–8, 9–7
FAB$L_SDC field, *(P) RMS Ref*, 4–27
FAB$L_STS field, *(P) RMS Ref*, 4–29
handling for ACL error status, *(P) RMS Ref*, 13–3
FAB$L_STV field, *(P) RMS Ref*, 4–29; *(P) File Appl*, 9–13
examples of using, *(P) RMS Ref*, A–11
for invoking $QIO, *(P) RMS Ref*, 4–16
for total number of blocks allocated, *(P) RMS Ref*, RMS–38
with I/O channel, *(P) RMS Ref*, RMS–16
FAB$L_XAB field, *(P) RMS Ref*, 4–29
FAB$V_AI flag, *(P) RMS Ref*, 4–20
FAB$V_ASY option, *(P) RMS Ref*, 4–17
FAB$V_BI flag, *(P) RMS Ref*, 4–20
FAB$V_BIO option, *(P) RMS Ref*, 4–10
how used to specify I/O type, *(P) RMS Ref*, A–35
FAB$V_BLK option, *(P) RMS Ref*, 4–24
FAB$V_BRO option, *(P) RMS Ref*, 4–29
FAB$V_CBT option, *(P) RMS Ref*, 4–13
FAB$V_CHAN_MODE subfield, *(P) RMS Ref*, 4–6
FAB$V_CIF option, *(P) RMS Ref*, 4–14
FAB$V_CR option, *(P) RMS Ref*, 4–24
FAB$V_CTG option, *(P) RMS Ref*, 4–14
problem with fragmented disk, *(P) File Appl*, 3–8
FAB$V_DEL option, *(P) RMS Ref*, 4–10
for enabling Delete service, *(P) RMS Ref*, A–31
FAB$V_DFW option, *(P) RMS Ref*, 4–17 to 4–18
FAB$V_DLT option, *(P) RMS Ref*, 4–15
qualified use by Close service, *(P) RMS Ref*, RMS–4
FAB$V_FTN option, *(P) RMS Ref*, 4–24
FAB$V_GET option, *(P) RMS Ref*, 4–10, 4–11
FAB$V_LNM_MODE option, *(P) RMS Ref*, 4–21
FAB$V_LNM_MODE subfield, *(P) RMS Ref*, 4–21
FAB$V_MSB option, *(P) RMS Ref*, 4–25
FAB$V_MSE option, *(P) RMS Ref*, 4–28 to 4–29
enabling multiple RABs, *(P) RMS Ref*, RMS–7
requirement for read-only buffer cache, *(P) RMS Ref*, 4–19
FAB$V_MXV option, *(P) RMS Ref*, 4–14
FAB$V_NAM option, *(P) RMS Ref*, 4–14
FAB$V_NEF option, *(P) RMS Ref*, 4–16
FAB$V_NFS option, *(P) RMS Ref*, 4–16
relationship to FAB$V_CHAN_MODE subfield, *(P) RMS Ref*, 4–5
FAB$V_NIL option, *(P) RMS Ref*, 4–28
effect on specifying user file open option, *(P) RMS Ref*, 4–16
requirement for block I/O, *(P) RMS Ref*, A–34
FAB$V_OFP option, *(P) RMS Ref*, 4–14
FAB$V_POS option, *(P) RMS Ref*, 4–16
FAB$V_PRN option, *(P) RMS Ref*, 4–25
FAB$V_PUT option, *(P) RMS Ref*, 4–10, 4–11, 4–28
FAB$V_RCK option, *(P) RMS Ref*, 4–17
FAB$V_RU flag, *(P) RMS Ref*, 4–20
FAB$V_RWC option, *(P) RMS Ref*, 4–16
FAB$V_RWO option, *(P) RMS Ref*, 4–16
FAB$V_SCF option, *(P) RMS Ref*, 4–15
qualified use by Close service, *(P) RMS Ref*, RMS–4
FAB$V_SHRDEL option, *(P) RMS Ref*, 4–29
FAB$V_SHRGET option, *(P) RMS Ref*, 4–28
requirement for read-only buffer cache, *(P) RMS Ref*, 4–19
FAB$V_SPL option, *(P) RMS Ref*, 4–15
qualified use by Close service, *(P) RMS Ref*, RMS–4
FAB$V_SQO option, *(P) RMS Ref*, 4–17
prohibiting random access, *(P) RMS Ref*, RMS–50
FAB$V_SUP option, *(P) RMS Ref*, 4–14, 4–15
FAB$V_SYNCSTS option, *(P) RMS Ref*, 4–17
FAB$V_TEF option, *(P) RMS Ref*, 4–14
FAB$V_TMD option, *(P) RMS Ref*, 4–15
inhibiting automatic Create, *(P) RMS Ref*, RMS–30
FAB$V_TMP option, *(P) RMS Ref*, 4–15
inhibiting automatic Create, *(P) RMS Ref*, RMS–30
FAB$V_TRN option
in file access field, *(P) RMS Ref*, 4–11
requirement for truncate-on-put operation, *(P) RMS Ref*, 6–18
FAB$V_UFO option, *(P) RMS Ref*, 4–16
effect on internal structures, *(P) RMS Ref*, 4–20
relationship to FAB$V_CHAN_MODE subfield, *(P) RMS Ref*, 4–5
FAB$V_UPD option, *(P) RMS Ref*, 4–11, 4–29
requirement for implementing update-if option, *(P) RMS Ref*, 6–18

FAB$V_UPD option (cont'd)
requirement for Update service, *(P) RMS Ref*, A–33
FAB$V_UPI option, *(P) RMS Ref*, 4–29
requirement for block I/O, *(P) RMS Ref*, A–34
requirement for user file open option, *(P) RMS Ref*, 4–16
FAB$V_WCK option, *(P) RMS Ref*, 4–18
FAB$W_BLS field, *(P) RMS Ref*, 4–5
FAB$W_DEQ field, *(P) RMS Ref*, 4–4, 4–6, 4–7; *(P) File Appl*, 4–35, 9–8
FAB$W_GBC field, *(P) RMS Ref*, 4–18, 4–19; *(P) File Appl*, 7–16, 7–20, 9–8
FAB$W_IFI field, *(P) RMS Ref*, 4–20
requirement for invoking Extend service, *(P) RMS Ref*, RMS–37
FAB$W_MRS field, *(P) RMS Ref*, 4–21
program example, *(P) RMS Ref*, A–15
fab data type, *(P) Interfaces*, B–7
$FABDEF macro, *(P) File Appl*, 5–10
FABs (file access blocks), *(P) Environment*, 10–16; *(P) Concepts*, 8–15; *(P) Interfaces*, B–7; *(P) RMS Ref*, 4–1; *(P) File Appl*, 1–30, 1–34, 4–1; *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
argument categories, *(P) RMS Ref*, 1–4
description, *(P) RMS Ref*, 1–3
requirements for, *(P) RMS Ref*, 4–2
fabs routine, *(P) Portable Math*, DPML–32, B–7
Facilities
creation, *(P) Modular Proc*, 5–1
library, *(P) Modular Proc*, 3–2
naming, *(P) Modular Proc*, 5–1
naming conventions, *(P) Modular Proc*, 3–1
number, *(P) Modular Proc*, 3–3
prefix, *(P) Modular Proc*, 3–1, 5–1
.FACILITY directive, *(P) Concepts*, 13–58
Facility identifiers, *(S) Security*, 4–4; *(P) Concepts*, 23–4
Facility object modules, *(P) CDU, LBR, & MU*, MSG–6
Facility-specific data type codes, *(P) Calling Std*, 4–6
Facility-specific descriptor class codes, *(P) Calling Std*, 5–33
Failover list
for an autostart queue
specifying, *(S) Sys Mgr Essentials*, 13–15
for queue manager, *(S) Sys Mgr Essentials*, 12–3, 12–9
insufficient, *(S) Sys Mgr Essentials*, 12–17
specifying, *(S) Sys Mgr Essentials*, 12–9
Failovers
application, *(S) Dependable*, 8–54
autostart, *(G) DCL A-M*, DCLI–276
autostart queues, *(G) DCL A-M*, DCLI–180, DCLI–207, DCLI–266; *(G) DCL N-Z*, DCLII–373
Failovers (cont'd)
batch and print queue, *(S) Dependable*, 9–18
between LAN bridges, *(S) VMScluster Sys*, 3–20
capturing user requests, *(S) Dependable*, 8–57
database in VMSclusters, *(S) Dependable*, 8–35
dual-host VMScluster configuration, *(S) VMScluster Sys*, 3–4
dual-ported disks, *(S) VMScluster Sys*, 6–3
dual-ported DSA tape, *(S) VMScluster Sys*, 6–14
LAN bridge, *(S) VMScluster Sys*, 3–20
of queue manager, *(G) DCL N-Z*, DCLII–385; *(S) Sys Mgr Essentials*, 12–3, 12–17; *(S) VMScluster Sys*, 7–3
forcing, *(S) Sys Mgr Essentials*, 12–9
of queues, *(S) Sys Mgr Essentials*, 13–4, 13–15
preventing, *(G) DCL A-M*, DCLI–180
queue manager's capabilities, *(S) Dependable*, 8–28
strategy, *(S) Dependable*, 8–22
terminal, *(S) Dependable*, 8–52, 8–55
Failure recovery strategies, *(S) Dependable*, 1–10 to 1–12, 1–16
Failures, *(S) Dependable*, 9–12 to 9–13
See also Login failures
areas where they occur, *(S) Dependable*, 3–1
causes, *(S) Dependable*, 9–10
eliminating single points of, *(S) Dependable*, 6–1
in software applications, *(S) Dependable*, 8–1
lack of software scalability, *(S) Dependable*, 8–30
of a network node, *(S) Dependable*, 4–11
of an interconnect path, *(S) Dependable*, 4–11
FAL$SERVER account
enabling default access, *(S) DECnet Mgmt*, 2–25, 2–26, 5–3, 5–6
FAL (file access listener), *(S) DECnet Mgmt*, 1–12, 2–25
accessing remote files, *(S) DECnet Intro*, 2–2
default access account, *(S) DECnet Intro*, 3–13
FAL$SERVER account
default access, *(S) DECnet Mgmt*, 2–25, 5–3, 5–6
False expression
and IF command, *(G) DCL A-M*, DCLI–250
False failures
in hardware components, *(S) Dependable*, 9–13
FAO argument, *(P) CDU, LBR, & MU*, MSG–3, MSG–26, MSG–27
signaling, *(P) Concepts*, 13–62
FAO lexical directives, *(G) DCL A-M*, DCLI–316 to DCLI–322
FAO parameter
specifying, *(P) Concepts*, 13–62

$FAO system service directives
format of, *(P) Sys Svc I*, SYS1–353
table of, *(P) Sys Svc I*, SYS1–355
/FAO_COUNT qualifier
Message utility (MESSAGE), *(P) Concepts*, 13–60
Fast-delete option, *(P) File Appl*, 8–4, 9–8
See also RAB$V_FDL option
Fast IO system services, *(G) V7.0 New Feat*, 4–22
Fast mutex, *(P) DECthreads*, 2–7, E–30, G–63
Fast Path, *(G) V7.0 New Feat*, 5–7
/FAST qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–31
FAST_DELETE attribute, *(P) Rec Mgmt Util*, 4–10
FAST_PATH system parameter, *(G) V7.0 New Feat*, 3–2
Fatal exceptions, *(P) Alpha SDA*, SDA–19; *(P) VAX SDA*, SDA–21
FATALEXCPT bugcheck, *(P) Alpha SDA*, SDA–19; *(P) VAX SDA*, SDA–21
Fault prevention
strategies, *(S) Dependable*, 1–10 to 1–12
Fault rate for pages, *(S) DECamds*, 3–12
Faults
See Pages
hard
rate, *(S) Alpha Perform*, 11–6
Fault tolerance, *(G) SW Overview*, 2–12
business example, *(S) Dependable*, 1–3
example, *(S) Dependable*, 1–9
software
provided by DEC Reliable Transaction Router, *(S) Dependable*, 8–2 to 8–10
VAXft systems, *(S) Dependable*, 6–8
Fault-tolerant systems, *(G) SW Overview*, 1–14, 2–12
FCBs (file control blocks), *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
FCP class record
in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–17
FDDI (Fiber Distributed Data Interface), *(G) SW Overview*, 1–6; *(S) DECnet Intro*, 1–9; *(S) DECnet Mgmt*, 1–6; *(S) DECnet Mgmt Util*, 3–81
See also LANs
asynchronous data transmission in, *(S) DECnet Mgmt*, 1–7
business use of, *(S) Dependable*, 1–2
circuit, *(S) DECnet Mgmt*, 1–3
circuit device, *(S) DECnet Mgmt*, 2–11
circuit identification, *(S) DECnet Mgmt*, 3–26
circuit parameters, *(S) DECnet Mgmt*, 3–33
communications interconnects, *(G) SW Overview*, 1–8, 1–11
FDDI (Fiber Distributed Data Interface) (cont'd)
configurations, *(S) Dependable*, 6–17; *(S) VMScluster Sys*, 3–5, 3–15; *(S) DECnet Intro*, 1–9; *(S) DECnet Mgmt*, 1–3, 1–6
configuring adapter, *(S) VMScluster Sys*, 9–5
Data Link layer, *(S) DECnet Mgmt*, 1–6
device drivers, *(S) Sys Mgr Tuning*, 22–2; *(P) I/O User*, 9–2
ECHO DATA, *(S) DECnet Mgmt Util*, 3–12, 3–78
ECHO LENGTH, *(S) DECnet Mgmt Util*, 3–12, 3–78
ECHO TARGET, *(S) DECnet Mgmt Util*, 3–13, 3–78
error-log entry, *(S) VMScluster Sys*, C–33
hardware address, *(S) VMScluster Sys*, 8–5
header for datagrams, *(S) VMScluster Sys*, F–22
implementation options, *(S) Dependable*, 7–8
influence of LRPSIZE on, *(S) VMScluster Sys*, 10–17
large-packet support, *(S) VMScluster Sys*, 10–17
line device, *(S) DECnet Mgmt*, 2–14
line protocol, *(S) DECnet Mgmt*, 3–37
Logical Link Control sublayer, *(S) DECnet Mgmt*, 1–6
massively distributed shadowing, *(S) VMScluster Sys*, 6–24
Media Access Control sublayer, *(S) DECnet Mgmt*, 1–6, 1–7
monitoring activity, *(S) VMScluster Sys*, 10–25
multiaccess communications channel, *(S) Sys Mgr Tuning*, 21–8
multiple adapters, *(S) VMScluster Sys*, 3–15
multiple-site VMSclusters, *(G) V7.0 New Feat*, D–4
network configuration, *(S) DECnet Mgmt*, 5–21
NIF TARGET, *(S) DECnet Mgmt Util*, 3–13, 3–80
port, *(S) VMScluster Sys*, C–19
providing multiple paths to, *(S) Dependable*, 7–4
REQUESTED TRT, *(S) DECnet Mgmt Util*, 3–13, 3–81
RESTRICTED TOKEN TIMEOUT, *(S) DECnet Mgmt Util*, 3–13, 3–81
ring operation, *(S) DECnet Mgmt*, 1–7
RING PURGER ENABLE, *(S) DECnet Mgmt Util*, 3–13, 3–82
SIF CONFIGURATION TARGET, *(S) DECnet Mgmt Util*, 3–14, 3–82
SIF OPERATION TARGET, *(S) DECnet Mgmt Util*, 3–14, 3–82
specification, *(S) DECnet Mgmt*, 1–6
supports VAXcluster technology, *(S) Sys Mgr Tuning*, 21–8
token passing, *(S) DECnet Mgmt*, 1–7

FDDI (Fiber Distributed Data Interface) (cont'd)
used in VMSclusters, *(S) Dependable*, 6–17
use of priority field, *(S) VMScluster Sys*, 10–17
using as VMScluster interconnect, *(S) Dependable*, 7–12
VALID TRANSMISSION TIME, *(S) DECnet Mgmt Util*, 3–14, 3–83
FDL$CREATE routine, *(P) Rec Mgmt Util*, 5–2; *(P) Util Routines*, FDL–7
FDL$GENERATE routine, *(P) Rec Mgmt Util*, 5–2; *(P) Util Routines*, FDL–13
FDL$PARSE routine, *(P) RMS Ref*, A–20; *(P) Rec Mgmt Util*, 5–2; *(P) Util Routines*, FDL–16
FDL$RELEASE routine, *(P) RMS Ref*, A–20; *(P) Util Routines*, FDL–19
FDL (File Definition Language), *(S) TCP/IP*, 5–5; *(P) Environment*, 10–19; *(P) Rec Mgmt Util*, 4–1; *(P) File Appl*, 1–33, 3–16, 4–2; *(P) Util Routines*, FDL–1
ACCESS section, *(P) Rec Mgmt Util*, 4–2
ANALYSIS_OF_AREA section, *(P) Rec Mgmt Util*, 4–3
ANALYSIS_OF_KEY section, *(P) Rec Mgmt Util*, 4–4
AREA section, *(P) Rec Mgmt Util*, 4–6
attributes, *(P) File Appl*, 4–2
CONNECT section, *(P) Rec Mgmt Util*, 4–8
DATE section, *(P) Rec Mgmt Util*, 4–15
editor, *(P) Rec Mgmt Util*, 6–3
file, *(P) Environment*, 10–19
FILE section, *(P) Rec Mgmt Util*, 4–16
generation of file over the network, *(S) DECnet Intro*, 2–8
IDENT section, *(P) Rec Mgmt Util*, 4–37
KEY section, *(P) Rec Mgmt Util*, 4–25
NETWORK section, *(P) Rec Mgmt Util*, 4–30
ordering of AREA sections, *(P) Rec Mgmt Util*, 6–1
predefined attributes using FDL$PARSE routine, *(P) File Appl*, 9–1
processing files with comment lines containing semicolons, *(P) Rec Mgmt Util*, 6–1
RECORD section, *(P) Rec Mgmt Util*, 4–31
routine for creating data files, *(P) Rec Mgmt Util*, 5–2
scripts, *(P) File Appl*, 4–2
SHARING section, *(P) Rec Mgmt Util*, 4–35
syntax, *(P) Rec Mgmt Util*, 5–1; *(P) File Appl*, 4–2
SYSTEM section, *(P) Rec Mgmt Util*, 4–36
TITLE section, *(P) Rec Mgmt Util*, 4–37
FDL ANALYSIS_OF_AREA attributes, *(P) Rec Mgmt Util*, 1–25
FDL ANALYSIS_OF_KEY attributes, *(P) Rec Mgmt Util*, 1–25, 4–4
FDL ANALYSIS_OF_KEY section
using in Edit/FDL optimize script, *(P) Rec Mgmt Util*, 4–4
FDL AREA section, *(P) File Appl*, 3–24
BEST_TRY_CONTIGUOUS attribute, *(P) File Appl*, 4–35
EXACT_POSITIONING attribute, *(P) File Appl*, 4–35
POSITION attribute, *(P) File Appl*, 4–35
VOLUME attribute, *(P) File Appl*, 4–36
FDL CONNECT attributes, *(P) Rec Mgmt Util*, 4–8
FDL CONNECT section
ASYNCHRONOUS attribute, *(P) File Appl*, 9–8, 9–13, 9–16, 9–18
DELETE_ON_CLOSE attribute, *(P) File Appl*, 9–11
END_OF_FILE attribute, *(P) File Appl*, 9–10
FAST_DELETE attribute, *(P) File Appl*, 9–8, 9–11, 9–18
FILL_BUCKETS attribute, *(P) File Appl*, 9–12, 9–16
GLOBAL_BUFFER_COUNT attribute, *(P) File Appl*, 9–8
KEY_GREATER_EQUAL attribute, *(P) File Appl*, 8–8, 8–9, 9–11, 9–14
KEY_GREATER_THAN attribute, *(P) File Appl*, 8–8, 8–9, 9–12, 9–14
KEY_LIMIT attribute, *(P) File Appl*, 9–12, 9–14
KEY_OF_REFERENCE attribute, *(P) File Appl*, 9–12, 9–14
LOCATE_MODE attribute, *(P) File Appl*, 9–9, 9–14
LOCK_ON_READ attribute, *(P) File Appl*, 7–11, 9–14
LOCK_ON_WRITE attribute, *(P) File Appl*, 7–11, 9–15, 9–16
MANUAL_LOCKING attribute, *(P) File Appl*, 9–15
MANUAL_UNLOCKING attribute, *(P) File Appl*, 7–14
MULTIBLOCK_COUNT attribute, *(P) File Appl*, 3–14, 7–17, 9–9
MULTIBUFFER_COUNT attribute, *(P) File Appl*, 3–14, 3–16, 3–27, 7–16 to 7–19, 9–9
NOLOCK attribute, *(P) File Appl*, 7–11, 9–14
NONEXISTENT_RECORD attribute, *(P) File Appl*, 7–14, 8–8, 9–14
READ_AHEAD attribute, *(P) File Appl*, 9–9, 9–15
READ_REGARDLESS attribute, *(P) File Appl*, 7–12, 9–15
TIMEOUT_PERIOD attribute, *(P) File Appl*, 7–12, 9–15, 9–17
TRUNCATE_ON_PUT attribute, *(P) File Appl*, 9–10, 9–17
UPDATE_IF attribute, *(P) File Appl*, 8–7, 9–10, 9–17
WAIT_FOR_RECORD attribute, *(P) File Appl*, 7–12, 9–16

FDL CONNECT section (cont'd)
WRITE_BEHIND attribute, *(P) File Appl*, 9–9, 9–17
FDL editor, *(P) Rec Mgmt Util*, 6–3; *(P) File Appl*, 1–37
FDL files, *(P) Rec Mgmt Util*, 5–2, 5–3
creating, *(P) Rec Mgmt Util*, 5–1; *(P) File Appl*, 4–2
creating data files, *(P) File Appl*, 4–15
creating interactively, *(P) Rec Mgmt Util*, 6–13
creating with ANALYZE/RMS_FILE command, *(P) Rec Mgmt Util*, 1–9, 1–11, 6–1
creating with Edit/FDL utility, *(P) Rec Mgmt Util*, 6–4
creating with FDL$GENERATE routine, *(P) File Appl*, 4–13
designing, *(P) File Appl*, 4–10
displaying specification, *(P) Rec Mgmt Util*, 5–4
examining with ANALYZE/RMS_FILE, *(P) File Appl*, 10–1
file type, *(P) Rec Mgmt Util*, 6–8
generating from a data file, *(P) File Appl*, 10–22
how to comment, *(P) Rec Mgmt Util*, 6–1
manipulating with Edit/FDL utility, *(P) Rec Mgmt Util*, 6–3
specifying output file name, *(P) Rec Mgmt Util*, 6–8
using analysis output, *(P) Rec Mgmt Util*, 6–4
using with the Convert utility, *(P) Rec Mgmt Util*, 2–1
FDL FILE section
ALLOCATION attribute, *(P) File Appl*, 3–4, 3–25, 4–34
BEST_TRY_CONTIGUOUS attribute, *(P) File Appl*, 3–4, 4–35
BUCKET_SIZE attribute, *(P) File Appl*, 3–16, 3–25, 4–32, 7–18
CONTIGUOUS attribute, *(P) File Appl*, 3–4, 3–25, 4–34
CONTROL_FIELD_SIZE attribute, *(P) File Appl*, 4–33
CREATE_IF attribute, *(P) File Appl*, 4–31
DEFAULT_NAME attribute, *(P) File Appl*, 6–3, 9–7
DEFERRED_WRITE attribute, *(P) File Appl*, 3–17, 3–27, 7–18, 7–19, 9–8
DIRECTORY_ENTRY attribute, *(P) File Appl*, 4–32
EXTENSION attribute, *(P) File Appl*, 4–35, 9–7, 9–8
GLOBAL_BUFFER_COUNT attribute, *(P) File Appl*, 3–12, 7–16, 7–20
MAXIMIZE_VERSION attribute, *(P) File Appl*, 4–31
MAX_RECORD_NUMBER attribute, *(P) File Appl*, 4–33
FDL FILE section (cont'd)
MT_BLOCK_SIZE attribute, *(P) File Appl*, 4–32
MT_CLOSE_REWIND attribute, *(P) File Appl*, 9–13
MT_CURRENT_POSITION attribute, *(P) File Appl*, 9–12
MT_NOT_EOF attribute, *(P) File Appl*, 9–12
MT_OPEN_REWIND attribute, *(P) File Appl*, 9–13
MT_PROTECTION attribute, *(P) File Appl*, 4–32
NAME attribute, *(P) File Appl*, 6–3, 9–6
NON_FILE_STRUCTURED attribute, *(P) File Appl*, 9–13
ORGANIZATION attribute, *(P) File Appl*, 4–32
OWNER attribute, *(P) File Appl*, 4–32
PRINT_ON_CLOSE attribute, *(P) File Appl*, 9–11
PROTECTION attribute, *(P) File Appl*, 4–32
READ_CHECK attribute, *(P) File Appl*, 9–10
REVISION attribute, *(P) File Appl*, 4–32
SEQUENTIAL_ONLY attribute, *(P) File Appl*, 9–9
SUBMIT_ON_CLOSE attribute, *(P) File Appl*, 9–11
SUPERSEDE attribute, *(P) File Appl*, 4–31
TEMPORARY attribute, *(P) File Appl*, 4–31
USER_FILE_OPEN attribute, *(P) File Appl*, 7–4, 9–13
WINDOW_SIZE attribute, *(P) File Appl*, 9–8, 9–9
WRITE_CHECK attribute, *(P) File Appl*, 9–10
.FDL file type, *(P) Rec Mgmt Util*, 1–13
FDL KEY section, *(P) File Appl*, 4–33
DATA_AREA attribute, *(P) File Appl*, 3–25
DATA_FILL attribute, *(P) File Appl*, 3–26
INDEX_AREA attribute, *(P) File Appl*, 3–25
INDEX_FILL attribute, *(P) File Appl*, 3–26
LEVEL1_INDEX_AREA attribute, *(P) File Appl*, 3–25
TYPE attribute, *(P) File Appl*, 3–23
FDL option, *(P) Rec Mgmt Util*, 4–10
/FDL qualifier, *(P) File Appl*, 10–22
FDL RECORD section
BLOCK_SPAN attribute, *(P) File Appl*, 3–14, 4–33, 4–34
CARRIAGE_CONTROL attribute, *(P) File Appl*, 4–34
CARRIAGE_RETURN attribute, *(P) File Appl*, 4–33
count field format attribute, *(P) File Appl*, 4–33
FORMAT attribute, *(P) File Appl*, 4–34
Fortran attribute, *(P) File Appl*, 4–33
Fortran carriage control attribute, *(P) File Appl*, 4–33
MSB_RECORD_LENGTH attribute, *(P) File Appl*, 4–33

FDL RECORD section (cont'd)
PRINT attribute, *(P) File Appl*, 4–33
PRINT carriage control attribute, *(P) File Appl*, 4–33
SIZE attribute, *(P) File Appl*, 4–33
FDL routines, *(P) Util Routines*, FDL–1
examples, *(P) Util Routines*, FDL–3 to FDL–6
FDL$CREATE routine, *(P) File Appl*, 4–13, 4–16, 6–3
FDL$GENERATE routine, *(P) File Appl*, 4–13
FDL$PARSE routine, *(P) File Appl*, 4–13, 6–3, 9–1
example, *(P) File Appl*, 9–18 to 9–20
FDL$RELEASE routine, *(P) File Appl*, 4–13, 6–3, 9–1
example, *(P) File Appl*, 9–18 to 9–20
FDL SHARING attributes, *(P) File Appl*, 7–4, 7–6, 7–21
FDL specifications
creating, *(P) Util Routines*, FDL–7
default attributes, *(P) Util Routines*, FDL–10, FDL–17
generating, *(P) Util Routines*, FDL–13
in character string, *(P) Util Routines*, FDL–2, FDL–9
parsing, *(P) Util Routines*, FDL–16
semicolons as delimiters, *(P) Util Routines*, FDL–2
with CONVERT routines, *(P) Util Routines*, CONV–13
Federal Information Processing Standards
See FIPS
FEEDBACK mode, *(S) Sys Mgmt Util A-L*, 6–3, 6–8
Feedback option, *(S) VMScluster Sys*, 8–42
FEN symbol, *(P) Alpha SDA*, SDA–15
FHM (file high-water mark), *(G) DCL A-M*, DCLI–258
Fiber Distributed Data Interface
See FDDI
Fiber-optic cables
See FDDI
Fiber optic links, *(S) DECnet Intro*, 1–7
FIBs (file information blocks), *(P) I/O User*, 1–3
See also ACP functions
access control, *(P) I/O User*, 1–10
contents, *(P) I/O User*, 1–5 to 1–7
descriptor, *(P) I/O User*, 1–2, 1–3
directory lookup, *(P) I/O User*, 1–8
disk quota, *(P) I/O User*, 1–35 to 1–36
extend control, *(P) I/O User*, 1–11
format, *(P) I/O User*, 1–4
IO$_ACCESS, *(P) I/O User*, 1–26
IO$_ACPCONTROL, *(P) I/O User*, 1–33 to 1–36
IO$_CREATE, *(P) I/O User*, 1–23
IO$_DEACCESS, *(P) I/O User*, 1–27
FIBs (file information blocks) (cont'd)
IO$_DELETE, *(P) I/O User*, 1–29
IO$_MODIFY, *(P) I/O User*, 1–28
truncate control, *(P) I/O User*, 1–13
FIELD account
initial modification, *(S) Sys Mgr Essentials*, 6–9
in UAF, *(S) Sys Mgr Essentials*, 6–7
Field length
identifier in symbolic name, *(P) RMS Ref*, 2–2
Field of data
definition, *(S) Sys Mgmt Util M-Z*, 4–19
definition of each, *(S) Sys Mgmt Util M-Z*, 4–28
in SHOW CLUSTER, *(S) Sys Mgr Tuning*, 20–4
removing, *(S) Sys Mgr Tuning*, 20–11; *(S) Sys Mgmt Util M-Z*, 4–44
Fields, *(G) User*, 11–1; *(P) File Appl*, 1–1
See also Sort/Merge utility (SORT/MERGE)
SHOW CLUSTER, *(S) Sys Mgmt Util M-Z*, 4–3
sorting, *(G) User*, 11–2
Field Service accounts
in UAF, *(S) Sys Mgr Essentials*, 6–7
FIFO (first-in/first-out) scheduling, *(P) DECthreads*, 2–4
File access
See also File protection
category summary, *(P) File Appl*, 4–26
controlling, *(P) Util Routines*, ACL–1
defaults, *(P) File Appl*, 7–5
disk, *(S) Sys Mgr Essentials*, 9–13
from remote notes, *(G) User*, 4–7
in a VMScluster, *(P) File Appl*, 3–33
listing number of concurrent, *(S) Sys Mgr Tuning*, 16–8
of a remote host, *(S) Sys Mgr Tuning*, 21–14
options, *(P) File Appl*, 4–26
over network, *(S) DECnet Mgmt*, 1–2
protection, *(P) Interfaces*, B–7
remote, *(S) DECnet Intro*, 2–2; *(S) DECnet Mgmt*, 1–17
sensing tags, *(P) File Appl*, 4–23
strategies, *(P) Concepts*, 8–2
tape, *(S) Sys Mgr Essentials*, 9–13, 9–14
using control strings, *(G) User*, 4–8
File access blocks
See FABs
File access listener
See FAL
FILE ATTRIBUTES structure, *(P) File Appl*, 10–12, 10–15, 10–16
File banner pages, *(S) Sys Mgr Essentials*, 13–42, 13–60
File browsers, *(G) User*, 19–12; *(S) Security*, 3–18, 10–5, 10–6

File characteristics, *(P) File Appl*, 4–31, 4–32
  ACP-QIO attributes, *(P) I/O User*, 1–18
FILE command
  in Mail, *(G) User*, 6–12
File component descriptors, *(P) RMS Ref*, 5–2 to 5–3
File compression
  of dump files, *(G) V7.0 New Feat*, 4–18
File conversions
  exception conditions, *(P) Rec Mgmt Util*, 2–4
  of VFC records, *(P) Rec Mgmt Util*, 2–11
File corruption, *(P) File Appl*, 10–2
File default extension quantity, *(P) File Appl*, 3–5
  with multiple areas, *(P) File Appl*, 3–7
File Definition Language
  See FDL
File design attributes, *(P) File Appl*, 3–4
File disposition, *(P) File Appl*, 9–11
File expiration date
  specifying retention time values, *(G) DCL N-Z*, DCLII–233
File Expiration Date and Time
  evaluation criteria, *(P) RMS Ref*, 10–11
  how used, *(P) RMS Ref*, 10–12
File-extend parameters
  setting, *(S) Alpha Perform*, 4–2
File extensions, *(G) DCL A-M*, DCLI–38; *(P) RMS Ref*, RMS–37; *(P) File Appl*, 3–24
  automatic, *(P) File Appl*, 3–5, 3–6
  calculating size, *(P) File Appl*, 9–7
  changing default size, *(G) DCL N-Z*, DCLII–231
  effect on system performance, *(S) Sys Mgr Tuning*, 16–7
  invoking by way of $EXTEND service, *(P) File Appl*, 3–5
  methods, *(P) File Appl*, 3–5
  size, *(P) File Appl*, A–1
  size and performance, *(P) File Appl*, 9–7
  specifying size, *(S) Sys Mgr Essentials*, 8–22; *(S) Sys Mgr Tuning*, 16–7
  system parameter controlling, *(S) Sys Mgr Tuning*, 16–7
File formats
  use with BACKUP, *(S) Sys Mgr Essentials*, 10–9
File fragmentation
  of page and swap files, *(S) Sys Mgr Tuning*, 15–27
File handling
  network operations, *(S) DECnet Intro*, 2–4
File header label
  See Header labels
File headers, *(P) Rec Mgmt Util*, 1–1; *(P) File Appl*, 1–7, 3–13, 3–15, 3–18
  Files–11 structure, *(P) File Appl*, 1–7
  index file, *(S) Sys Mgr Tuning*, A–7
File headers
  index file (cont'd)
    contents, *(S) Sys Mgr Tuning*, A–7
    extension, *(S) Sys Mgr Tuning*, A–8
    primary, *(S) Sys Mgr Tuning*, A–8
FILE HEADER structure, *(P) File Appl*, 10–12, 10–15, 10–16
File identification, *(S) Sys Mgr Tuning*, A–4
File identifier field, *(P) File Appl*, 1–26
File images
  analyzing, *(G) DCL A-M*, DCLI–22
  fixup section analyzing, *(G) DCL A-M*, DCLI–23
File Log
  VMSINSTAL.COM option, *(S) Sys Mgr Essentials*, 3–17
File management, *(P) Environment*, 6–1, 6–2, 10–2
  system services, *(P) Environment*, 10–5
File names, *(G) User*, 4–2
  See also File specifications
  changing, *(G) DCL N-Z*, DCLII–39
  on Files–11 volume, *(S) Sys Mgr Tuning*, A–7
  OpenVMS extended, *(S) Sys Mgr Essentials*, 9–16
  rules for entering, *(G) User*, 4–2
  specifying a list of, *(G) User*, 5–6
  standard, *(S) Sys Mgr Essentials*, 9–16
  using an asterisk (*) wildcard character in, *(G) User*, 4–9
  using a percent sign (%) wildcard character in, *(G) User*, 4–10
  valid characters in, *(G) User*, 4–2
  with null values, *(G) User*, 4–10
File name strings
  component parts, *(P) RMS Ref*, A–20
File objects, *(G) DCL A-M*, DCLI–26 to DCLI–29
File-opening options, *(P) File Appl*, 9–6 to 9–13
  See also Creation-time options
File Optimizer
  defragmenting disks, *(G) SW Overview*, 7–6
  reducing file fragmentation, *(G) SW Overview*, 7–7
File organization, *(P) RMS Ref*, 1–3; *(P) Rec Mgmt Util*, 1–1; *(P) File Appl*, 1–2, 2–13, 2–14
  See also Indexed files, Relative files, and Sequential files
  changing over the network, *(S) DECnet Intro*, 2–9
  changing with CONVERT routines, *(P) Util Routines*, CONV–1
  selecting, *(P) File Appl*, 2–1
File organization option, *(P) File Appl*, 4–32
File positioning, *(P) File Appl*, 4–34
  effect on shared files, *(P) RMS Ref*, RMS–7

File processing
many files, *(P) File Appl*, 5–15 to 5–16
naming convention options, *(P) RMS Ref*, 4–12
nonstandard file, *(P) File Appl*, 9–13
option categories listed, *(P) RMS Ref*, 4–12
RMS services listed, *(P) RMS Ref*, 1–1
service output options, *(P) RMS Ref*, 4–12
services listed, *(P) RMS Ref*, 1–1
single file, *(P) File Appl*, 5–14 to 5–15
using record management services, *(P) RMS Ref*, A–3
File protection, *(G) User*, 4–16, 6–16; *(G) SW Overview*, 3–14; *(S) Security*, 4–7, 5–8, 8–16; *(S) Sys Mgr Essentials*, 9–4; *(P) Rec Mgmt Util*, 4–22; *(P) File Appl*, 4–32
See also Protection
auditing, *(S) Security*, 10–5
C2 systems, *(S) Security*, C–5
changing default for volume, *(G) DCL N-Z*, DCLII–231
changing default with F$ENVIRONMENT lexical function, *(G) User*, 17–5
confidential files, *(G) User*, 19–12
DCL commands for, *(S) Security*, 8–25
default, *(S) Sys Mgr Essentials*, 9–6, 9–7
defining at file creation, *(G) DCL A-M*, DCLI–94
defining default, *(G) DCL A-M*, DCLI–256
directory file, *(S) Sys Mgr Essentials*, 9–10
establishing default, *(G) DCL N-Z*, DCLII–182
ISO 9660-formatted media, *(S) Sys Mgr Essentials*, 8–17
required for proxy access, *(G) User*, 19–9
setting default ACLs, *(S) Security*, 4–19
SYSDUMP.DMP file, *(S) Sys Mgr Tuning*, 15–4
tape, *(S) Sys Mgr Essentials*, 9–12
tape file, *(S) Sys Mgr Essentials*, 9–4
tape files, *(S) Sys Mgr Essentials*, 9–6
with EXCHANGE/NETWORK command, *(G) DCL A-M*, DCLI–221
File protection for security, *(S) DECamds*, 1–4
Files, *(S) DECamds*, B–1 to B–6; *(P) File Appl*, 1–1
See also Files–11 On-Disk Structure, Directory files, Initialization files, Log files, Parameter files, and Source files
access control through ACLs, *(S) Security*, 4–19
accessing
on a private device, *(G) User*, 12–8
on volume sets, *(G) User*, 12–8
accessing allocated disk blocks, *(S) Security*, 5–13
accessing at file level, *(S) Sys Mgr Essentials*, 9–13
accessing by file identifier, *(S) Security*, 5–9
access requirements, *(S) Security*, 5–8, 5–9
adding ACEs for security auditing, *(G) User*, 19–12; *(S) Security*, 3–17, 4–30
Files (cont'd)
AGEN$FEEDBACK.DAT, *(S) Sys Mgmt Util A-L*, 6–5
AGEN$FEEDBACK.EXE, *(S) Sys Mgmt Util A-L*, 6–5
AGEN$INCLUDE_PARAMS files, *(S) VMScluster Sys*, 8–11, 8–36
AGEN$PARAMS.REPORT, *(S) Sys Mgmt Util A-L*, 6–7
aligning, *(P) File Appl*, 3–16
allocating headers, *(G) DCL A-M*, DCLI–257
ALPHAVMSSYS.OLD, *(S) Sys Mgmt Util A-L*, 6–7
ALPHAVMSSYS.PAR, *(S) Sys Mgmt Util A-L*, 6–7
analysis, *(P) Rec Mgmt Util*, 1–9
analyzing remote file structure, *(S) DECnet Intro*, 2–8
analyzing structure interactively, *(P) Rec Mgmt Util*, 1–1
appending, *(G) DCL A-M*, DCLI–36
applying an alarm to, *(G) User*, 19–12; *(S) Security*, 3–17
as protected objects, *(S) Security*, 4–10
assigning an alias, *(S) Sys Mgr Essentials*, 9–10
assigning protection codes, *(S) Security*, 5–10
assigning security profiles, *(S) Security*, 5–9, 5–10, 8–16
attributes, *(P) Concepts*, 8–1
accessing, *(S) Sys Mgr Essentials*, 9–17
altering over the network, *(S) DECnet Intro*, 2–9
auditing access, *(G) User*, 19–10, 19–12; *(S) Security*, 3–17, 4–29
AUTOGEN.PAR, *(S) Sys Mgmt Util A-L*, 6–6, 6–7; *(S) Sys Mgmt Util M-Z*, 5–32, 5–33
backing up, *(S) Sys Mgr Essentials*, 10–23
backing up to remote node, *(S) DECnet Intro*, 2–9
batch jobs
deleting after processing, *(G) DCL N-Z*, DCLII–413
changing security profiles, *(S) Security*, 5–11
characteristics argument for FAB, *(P) RMS Ref*, 1–4
closing, *(G) DCL A-M*, DCLI–59
closing from command procedures, *(G) User*, 15–17
closing of queue database, *(G) DCL N-Z*, DCLII–399
cluster-accessible, *(S) VMScluster Sys*, 6–1
comparing, *(G) DCL A-M*, DCLI–158
comparing remote files, *(S) DECnet Intro*, 2–7
comparing with BACKUP, *(S) Sys Mgr Essentials*, 10–25
complete access, *(P) Concepts*, 8–2
compressed, *(S) TCP/IP*, 3–4

Files (cont'd)
compressing, *(P) Util Routines*, DCX–1
concatenating, *(G) User*, 4–12; *(G) DCL A-M*, DCLI–79
confidential, protecting, *(S) Security*, 3–18
container systems, *(G) SW Overview*, 5–10
containing AUTOGEN feedback, *(S) Sys Mgmt Util A-L*, 6–5
containing list of known images, *(S) Sys Mgmt Util A-L*, 6–7
contiguity, *(P) File Appl*, 3–4, 3–25
controlling access over the network, *(S) DECnet Intro*, 2–6
controlling access to, *(S) Sys Mgmt Util A-L*, 1–11, 1–13
controlling access with Identifier ACEs, *(S) Security*, 4–17
controlling the number of versions, *(G) User*, 4–5
copying, *(G) User*, 4–12; *(G) DCL A-M*, DCLI–79, DCLI–218; *(S) Sys Mgr Essentials*, 9–18, 9–19
between nodes, *(G) User*, 4–12
from disk to standard-labeled volumes, *(S) Sys Mgr Essentials*, 9–20
from local to remote node, *(S) DECnet Intro*, 3–30
from remote account, *(G) User*, 19–9; *(S) Security*, 3–16
remote, *(S) DECnet Intro*, 2–5
remotely, *(S) Sys Mgr Tuning*, 21–14
to tape, *(S) Sys Mgr Essentials*, 9–21
to tape volumes, *(S) Sys Mgr Essentials*, 9–21
using Mail, *(G) User*, 4–13
copying remote, *(S) TCP/IP*, 3–4
copying with BACKUP, *(S) Sys Mgr Essentials*, 10–23
creating, *(G) User*, 4–11; *(G) DCL A-M*, DCLI–79, DCLI–93, DCLI–218; *(S) Sys Mgr Essentials*, 8–3; *(P) Rec Mgmt Util*, 6–1
at a remote node, *(S) DECnet Intro*, 2–7
dependency on directory ownership, *(S) Security*, 8–16; *(S) Sys Mgmt Util A-L*, 1–9
FDL, *(P) Rec Mgmt Util*, 1–9
from Mail messages, *(G) User*, 6–10
in a directory with a Default Protection ACE, *(S) Sys Mgmt Util A-L*, 1–11
requirements for, *(S) Security*, 5–9
with COPY command, *(G) User*, 4–12
with CREATE command, *(G) User*, 4–11
with EDT editor, *(G) DCL A-M*, DCLI–197
with TECO editor, *(G) DCL A-M*, DCLI–203
creating owner UIC, *(G) DCL A-M*, DCLI–94

Files (cont'd)
DCL commands for, *(G) SW Overview*, 5–9, 5–10
deassigning logical names, *(G) DCL A-M*, DCLI–59
deciding when to use security auditing, *(G) User*, 19–12
default access control, *(S) DECnet Mgmt*, 1–20
default extension size on disk, *(G) DCL A-M*, DCLI–256
default parameter, *(S) Sys Mgmt Util A-L*, 6–7
default protection, *(S) Security*, 4–27
definition, *(G) User*, 4–1
defragmenting, *(G) SW Overview*, 7–7
deleting, *(G) User*, 4–15; *(G) DCL A-M*, DCLI–136
deleting from within command procedures, *(G) User*, 15–17
deleting remote, *(S) DECnet Intro*, 2–7
detected bad block (DBBF), *(S) Sys Mgr Essentials*, 8–65
device driver, *(S) Sys Mgmt Util M-Z*, 5–15
discrete records access, *(P) Concepts*, 8–2
displaying
allocated blocks, *(G) DCL A-M*, DCLI–176
at terminal, *(G) DCL N-Z*, DCLII–424
backup date, *(G) DCL A-M*, DCLI–170
backup time, *(G) DCL A-M*, DCLI–176
blocks used, *(G) DCL A-M*, DCLI–176
contents, *(G) User*, 4–14, 4–15
contents over the network, *(S) DECnet Intro*, 2–6
creation date, *(G) DCL A-M*, DCLI–170
creation time, *(G) DCL A-M*, DCLI–176
expiration date, *(G) DCL A-M*, DCLI–170
expiration time, *(G) DCL A-M*, DCLI–176
files opened by the system, *(G) DCL N-Z*, DCLII–260
help, *(G) DCL A-M*, DCLI–236
latest version, *(G) DCL A-M*, DCLI–177
list of remote files, *(S) DECnet Intro*, 2–5
modification date, *(G) DCL A-M*, DCLI–170
modification time, *(G) DCL A-M*, DCLI–176
names of installed files, *(G) DCL N-Z*, DCLII–257, DCLII–260
names of open files, *(G) DCL N-Z*, DCLII–257
on current output device, *(G) DCL N-Z*, DCLII–424
ownership, *(S) Sys Mgr Essentials*, 9–7
owner UIC, *(G) DCL A-M*, DCLI–172
protection, *(G) DCL A-M*, DCLI–173
structures, *(P) Rec Mgmt Util*, 1–16 to 1–23
using wildcard characters, *(G) User*, 4–14
downloading, *(S) TCP/IP*, 3–3, 3–4

Files (cont'd)
dumping, *(G) DCL A-M*, DCLI–188
dumping remote, *(S) DECnet Intro*, 2–9
editing
with EDT editor, *(G) DCL A-M*, DCLI–197
with SUMSLP editor, *(G) DCL A-M*, DCLI–202
with TECO editor, *(G) DCL A-M*, DCLI–203
editing at a remote node, *(S) DECnet Intro*, 2–7
encrypting, *(S) Security*, 8–27
erasing data from disks, *(S) Security*, 5–12
events audited, *(S) Security*, 5–11
examining remote, *(S) DECnet Intro*, 2–8
exceptions to ownership rules, *(S) Security*, 4–7
expanding, *(P) Util Routines*, DCX–8
expiration dates on, *(S) Sys Mgr Essentials*, 8–54
FDL, *(P) Rec Mgmt Util*, 5–3, 6–3; *(P) File Appl*, 4–2, 4–15, 10–1, 10–22
for AUTOGEN feedback, *(S) Sys Mgr Tuning*, 14–11
format, *(S) TCP/IP*, 5–5
format required by ACL editor, *(S) Sys Mgmt Util A-L*, 1–4
formatting text
See DSR
for paging, *(S) Sys Mgmt Util A-L*, 6–7
for swapping, *(S) Sys Mgmt Util A-L*, 6–7
for system crash dumps, *(S) Sys Mgmt Util A-L*, 6–7
fragmentation, *(S) Sys Mgr Essentials*, 10–48
getting information asynchronously, *(P) Sys Svc II*, SYS2–3
getting information synchronously, *(P) Sys Svc II*, SYS2–46
how Convert utility processes, *(P) Rec Mgmt Util*, 2–9
I/O driver, *(S) Sys Mgmt Util M-Z*, 5–14
ignoring characters, strings, or records in comparisons, *(G) DCL A-M*, DCLI–161
initial allocation, *(P) File Appl*, 3–4
initialization, *(G) User*, 6–21
input of device list, *(S) Sys Mgmt Util M-Z*, 5–7
internal structure, *(P) Rec Mgmt Util*, 1–1; *(P) File Appl*, 10–1
length, *(S) TCP/IP*, 5–5
limiting number of versions, *(S) Sys Mgr Essentials*, 8–53
list in directory, *(G) DCL A-M*, DCLI–168
locking in a VMScluster, *(P) File Appl*, 3–33
logging activity during installation, *(S) Sys Mgr Essentials*, 3–17
logical name in specification, *(S) DECnet Mgmt*, 1–24
MAIL.MAI, *(G) User*, 6–12

Files (cont'd)
mailing
from DCL level, *(G) User*, 6–9
using Mail utility, *(G) User*, 6–8
managing directory defaults, *(S) Security*, 8–22
manipulation over the network, *(S) DECnet Mgmt*, 1–17
mapping, *(P) Concepts*, 8–4
maximum number on disk, *(G) DCL A-M*, DCLI–258
merging remote, *(S) DECnet Intro*, 2–7
modifying, *(G) User*, 4–11
modifying characteristics, *(G) DCL N-Z*, DCLII–131; *(S) Sys Mgr Essentials*, 9–8, 9–10
modifying queue entries for, *(G) DCL N-Z*, DCLII–121
modifying RMS defaults for file operations, *(G) DCL N-Z*, DCLII–196
naming rules, *(S) Security*, 5–8
NETPROXY.DAT, *(S) DECnet Intro*, 3–35
NETSERVER.LOG, *(S) DECnet Intro*, 4–11, 4–15
nonstandard format
DCL commands with, *(S) Sys Mgr Essentials*, 9–2, 9–13
on public volumes, *(S) Sys Mgr Essentials*, 8–8
open during backup, *(S) Sys Mgr Essentials*, 10–30, 10–63
opening, *(G) User*, 13–2; *(G) DCL N-Z*, DCLII–6; *(P) Concepts*, 19–14, 20–14
OpenVMS, *(G) SW Overview*, 5–9
optimizing, *(G) SW Overview*, 7–6
optimizing security, *(S) Security*, 5–13
output cluster report, *(S) Sys Mgmt Util M-Z*, 4–8, 4–55
overwriting, *(S) Sys Mgr Essentials*, 9–14
owned by resource identifier, *(S) Security*, 5–10, 5–11, 8–21
ownership rules, *(S) Security*, 5–10
parameter, *(S) Sys Mgmt Util A-L*, 6–5, 6–7; *(S) Sys Mgmt Util M-Z*, 5–33
PARAMS.DAT, *(S) Sys Mgmt Util A-L*, 6–6
PCF, *(S) Sys Mgr Essentials*, 3–22
POSIX, *(G) SW Overview*, 5–9, 5–10
POSIX commands for, *(G) SW Overview*, 5–11
POSIX utilities for, *(G) SW Overview*, 5–11
printing, *(G) User*, 4–16; *(G) DCL N-Z*, DCLII–14
printing from a private volume, *(G) User*, 12–2
printing remote, *(S) DECnet Intro*, 2–6
private volumes, *(S) Sys Mgr Essentials*, 8–9
privileges, *(S) Sys Mgr Essentials*, 9–4
Prolog 3 indexed files, *(P) Util Routines*, CONV–1, CONV–16
protecting, *(G) User*, 4–16
protecting data after deletion, *(S) Security*, 5–12

Files (cont'd)
protecting mail, *(S) Security*, 5–13
protection required for proxy access, *(S) Security*, 3–16
public, *(S) Sys Mgr Essentials*, 8–8
purging, *(G) User*, 4–15; *(G) DCL N-Z*, DCLII–28
purging remote, *(S) DECnet Intro*, 2–7
purging to save disk space, *(S) Sys Mgr Essentials*, 8–53
queue and journal, *(G) DCL N-Z*, DCLII–384
queuing for printing at remote node, *(S) DECnet Intro*, 2–6
reading records from, *(G) DCL N-Z*, DCLII–32
record-by-record access, *(P) Concepts*, 8–2
recovering lost, *(S) Sys Mgr Essentials*, 8–57; *(S) Sys Mgmt Util A-L*, 3–4
remote access, *(S) Sys Mgr Tuning*, 21–14; *(S) TCP/IP*, 3–3
renaming, *(G) User*, 4–13; *(G) DCL N-Z*, DCLII–39
reorganizing, *(P) Rec Mgmt Util*, 3–1
reserved, *(S) Sys Mgr Tuning*, A–4
list of, *(S) Sys Mgr Essentials*, 8–4; *(P) File Appl*, 1–6
restoring default security elements, *(S) Security*, 4–23
restoring default security profiles, *(S) Security*, 4–27
restoring from image backup, *(S) Sys Mgr Essentials*, 10–42
restoring from incremental backup, *(S) Sys Mgr Essentials*, 10–44
restoring from remote node, *(S) DECnet Intro*, 2–9
restoring to original directories, *(S) Sys Mgmt Util A-L*, 7–9
restoring with BACKUP, *(S) Sys Mgr Essentials*, 10–28
retrieving information from, *(S) Sys Mgr Essentials*, 9–2
RMS, *(G) SW Overview*, 4–18; *(S) TCP/IP*, 5–5
searching for character string, *(G) DCL N-Z*, DCLII–69
searching remote, *(S) DECnet Intro*, 2–7
security
using protection codes, *(S) Sys Mgr Essentials*, 9–6
security auditing and, *(S) Security*, 3–17, 5–11
security elements of, *(S) Security*, 5–8
sequential, *(P) Concepts*, 8–12
sequential and indexed access, *(P) Concepts*, 8–2
SETPARAMS.DAT, *(S) Sys Mgmt Util A-L*, 6–7
setting default protection and ownership, *(S) Security*, 8–16
sharing, *(G) SW Overview*, 1–7

Files (cont'd)
sharing and exchanging in network environment, *(S) Security*, 12–19, 12–23
sharing for a cluster system, *(S) Security*, 11–5
SHOW_CLUSTER.LIS, *(S) Sys Mgmt Util M-Z*, 4–8, 4–55
sorting remote, *(S) DECnet Intro*, 2–7
specification argument for FAB, *(P) RMS Ref*, 1–4
specifying one or many, *(P) File Appl*, 5–16
specifying on non OpenVMS systems, *(S) TCP/IP*, 5–6
specifying OpenVMS, *(G) SW Overview*, 5–9
specifying paths using file specification string, *(P) RMS Ref*, A–20
specifying POSIX, *(G) SW Overview*, 5–10
specifying remote, *(S) TCP/IP*, 5–6
specifying remote VMScluster, *(S) DECnet Intro*, 2–2
specifying wildcard characters, *(G) User*, 4–9
startup, *(S) Sys Mgmt Util M-Z*, 6–65
disabling, *(S) Sys Mgmt Util M-Z*, 6–67
displaying, *(S) Sys Mgmt Util M-Z*, 6–73
startup command procedure, *(S) Sys Mgmt Util M-Z*, 5–17, 5–29, 5–33
structures, *(P) Rec Mgmt Util*, 1–9
SYSGEN session output, *(S) Sys Mgmt Util M-Z*, 5–4, 5–16
SYSGTTSTR.MSG, *(S) Sys Mgmt Util M-Z*, 5–31
SYSMAN.LIS, *(S) Sys Mgmt Util M-Z*, 6–13, 6–17, 6–18, 6–29, 6–30, 6–31, 6–48, 6–74
system parameter, *(S) Sys Mgmt Util M-Z*, 5–32, 5–33
tape volumes, *(S) Sys Mgr Essentials*, 9–5
writing to files on, *(S) Sys Mgr Essentials*, 9–18
temporary, *(P) Rec Mgmt Util*, 2–18, 4–19
text editor, *(G) SW Overview*, 5–12
transactions with remote, *(S) TCP/IP*, 5–5
transferring, *(G) DCL A-M*, DCLI–218; *(G) SW Overview*, 5–11, 6–4
transferring across network, *(S) Sys Mgr Essentials*, 9–24
using COPY, *(S) Sys Mgr Tuning*, 21–14
transferring remote, *(S) TCP/IP*, 3–3
transferring to and from remote node, *(P) Rec Mgmt Util*, 2–4
transfers over the network, *(S) DECnet Intro*, 2–5
transfers with MAIL, *(S) Security*, 12–19
truncating, *(P) File Appl*, 3–9
UIC-based protection
propagating in a directory tree, *(S) Sys Mgmt Util A-L*, 1–11
UNIX, *(S) TCP/IP*, 5–5, 5–6
unlocking, *(G) DCL N-Z*, DCLII–431

Files (cont'd)
updating with SUMSLP editor, *(G) DCL A-M*, DCLI–202
used by AUTOGEN command procedure, *(S) Sys Mgmt Util A-L*, 6–9
using F$SEARCH lexical function to locate, *(G) User*, 17–10
using the /VERSION_LIMIT qualifier, *(G) User*, 4–5
utilities for, *(G) SW Overview*, 5–10
VAXVMSSYS.OLD, *(S) Sys Mgmt Util A-L*, 6–7
VAXVMSSYS.PAR, *(S) Sys Mgmt Util A-L*, 6–7; *(S) Sys Mgmt Util M-Z*, 5–33
version limit
defining at directory creation, *(G) DCL A-M*, DCLI–97
version numbers, *(G) User*, 4–2, 4–5
versions
limiting number of, *(S) Sys Mgr Essentials*, 8–53, 9–12
VMSIMAGES.DAT, *(S) Sys Mgmt Util A-L*, 6–7
VMSMAIL_PROFILE.DATA, *(S) Sys Mgr Essentials*, 6–38
volume configurations, *(P) File Appl*, 1–22
writing alarm messages to audit logs, *(S) Sys Mgmt Util A-L*, 1–8
writing records to, *(G) DCL N-Z*, DCLII–435
Files–11
initializing disks, *(G) DCL A-M*, DCLI–253
On-Disk Structure Level 1 format, *(G) DCL A-M*, DCLI–253
Files–11 C disk structures
volume and file structure for ISO 9660 CD–ROMs, *(P) File Appl*, 1–3
Files–11 D disk structures
volume and file structure for High Sierra CD–ROMs, *(P) File Appl*, 1–3
Files–11 disk structures, *(P) File Appl*, 1–6
file headers, *(P) File Appl*, 1–7
home block, *(P) File Appl*, 1–6
levels compared, *(P) File Appl*, 1–8
reserved files, *(P) File Appl*, 1–6
Files–11 On-Disk Structure, *(G) User*, 12–5
block
definition, *(S) Sys Mgr Tuning*, A–1
CD on OpenVMS, *(S) Sys Mgr Essentials*, 8–5
comparison of ODS Level 1 and Level 2, *(S) Sys Mgr Tuning*, A–10
creating structure, *(S) Sys Mgr Essentials*, 8–10
disk save set, *(S) Sys Mgr Essentials*, 10–7
file identification, *(S) Sys Mgr Tuning*, A–4
master file directory (MFD), *(S) Sys Mgr Tuning*, A–4
ODS Level 1, *(S) Sys Mgr Essentials*, 8–3
directory hierarchy, *(S) Sys Mgr Tuning*, A–4
Files–11 On-Disk Structure (cont'd)
ODS Level 2, *(S) Sys Mgr Essentials*, 8–3
assigning disk quotas, *(S) Sys Mgr Essentials*, 8–50
definition, *(S) Sys Mgr Essentials*, 8–4
directory hierarchy, *(S) Sys Mgr Tuning*, A–4
sector, *(S) Sys Mgr Tuning*, A–2
structure, *(S) Sys Mgr Essentials*, 8–3; *(S) Sys Mgr Tuning*, A–3
Level 1, *(S) Sys Mgr Essentials*, 9–19; *(S) Sys Mgr Tuning*, A–4
Level 2, *(S) Sys Mgr Essentials*, 9–19; *(S) Sys Mgr Tuning*, A–4
reserved files, *(S) Sys Mgr Essentials*, 8–4
terminology, *(S) Sys Mgr Tuning*, A–2
UIC, *(S) Sys Mgr Tuning*, A–4
using with Exchange utility (EXCHANGE) to transfer data, *(S) Sys Mgr Essentials*, 9–24
Files–11 volumes
modifying characteristics of, *(G) DCL N-Z*, DCLII–231
File section number field, *(P) File Appl*, 1–28
File sections
defining in context of multiple volumes, *(P) RMS Ref*, RMS–58
File sequence number field, *(P) File Appl*, 1–28
File-set identifier field, *(P) File Appl*, 1–28
File shareable images
analyzing, *(G) DCL A-M*, DCLI–22
File sharing, *(P) File Appl*, 3–12, 9–6
by RMS, *(P) Concepts*, 17–12
compatibility with subsequent record access, *(P) File Appl*, 7–5 to 7–6
defaults, *(P) File Appl*, 7–5
features provided by RMS, *(P) RMS Ref*, 1–3
interlocked interprocess, *(P) File Appl*, 7–2, 7–5 to 7–6
multistreaming, *(P) File Appl*, 7–2, 7–4
no-access function, *(P) File Appl*, 7–4
options, *(P) File Appl*, 7–3 to 7–4
user-interlocked interprocess, *(P) File Appl*, 7–2, 7–4, 7–6, 7–7
File shelving, *(G) SW Overview*, 2–14, 7–8
File specifications, *(S) DECnet Intro*, 2–12; *(S) DECnet Mgmt*, 1–19; *(P) Rec Mgmt Util*, 2–5, 4–18; *(P) File Appl*, 1–26, 5–1 to 5–4
access control string, *(S) DECnet Mgmt*, 1–20
alternate form for magnetic tapes, *(G) User*, 4–11
ANSI, *(S) Sys Mgr Essentials*, 9–16
applicable services and routines, *(P) File Appl*, 5–8 to 5–14
component descriptors, *(P) RMS Ref*, 5–2
default, *(P) File Appl*, 6–1 to 6–3, 9–6
default requirements, *(P) RMS Ref*, A–20
directory, *(P) File Appl*, 6–11 to 6–18

File specifications (cont'd)
for installing images, *(S) Sys Mgr Tuning*, 16–16
for remote files, *(S) TCP/IP*, 5–6; *(S) DECnet Intro*, 2–2
how handled by Search service, *(P) RMS Ref*, A–20
in cluster, *(S) DECnet Intro*, 2–4
list of included fields, *(G) User*, 4–2
network information, *(S) DECnet Mgmt*, 1–20
networks, *(G) User*, 4–7
node names, *(G) User*, 4–6, 4–12
parsing, *(P) RMS Ref*, RMS–69; *(P) File Appl*, 5–7, 5–8, 6–4 to 6–11
parsing components of, *(P) Sys Svc I*, SYS1–372
preprocessing, *(P) File Appl*, 5–8
primary, *(P) File Appl*, 9–6
program supplied, *(P) File Appl*, 6–1 to 6–3
related, *(P) File Appl*, 6–1 to 6–3, 9–7
searching string for, *(P) Sys Svc I*, SYS1–372
string addresses, *(P) RMS Ref*, A–20
string sizes, *(P) RMS Ref*, A–20
using name block, *(P) File Appl*, 5–8
using search lists, *(P) File Appl*, 5–8 to 5–16
using SYS$DISK, *(P) File Appl*, 6–2
using wildcard characters, *(P) File Appl*, 5–8 to 5–16
using with CONVERT routines, *(P) Util Routines*, CONV–10
File structures, *(S) Sys Mgr Essentials*, 8–3; *(P) Rec Mgmt Util*, 1–1; *(P) File Appl*, 10–11
File system
ACP parameters, *(S) Alpha Perform*, 18–6
cache
ACP/XQP parameters, *(S) Alpha Perform*, 11–8
adjusting, *(S) Alpha Perform*, 18–6
hit rate, *(S) Alpha Perform*, 11–7
miss rate, *(S) Alpha Perform*, 11–7
caching, *(S) Alpha Perform*, 14–3
high-water marking, *(S) Alpha Perform*, 4–2
I/O activity, *(S) Alpha Perform*, 11–7
File system (XQP) I/O activity, *(S) VAX Perform*, 3–35
File system ACP, *(P) I/O User*, 1–1
File system cache
adjusting, *(S) VAX Perform*, 5–14
monitoring statistics, *(S) Sys Mgmt Util M-Z*, 1–26
relationship of (ACP/XQP)to MONITOR FILE_SYSTEM_CACHE statistics, *(S) VAX Perform*, 3–36
File system requests
responding to, *(G) DCL N-Z*, DCLII–44
File systems
coordinating, *(S) VMScluster Sys*, 5–17
global symbols, *(P) Alpha SDA*, SDA–61
File systems (cont'd)
Spiralog, *(G) V7.0 New Feat*, 4–18
File tags, *(P) File Appl*, 4–19 to 4–20
creating, *(P) RMS Ref*, 10–10
requirement for, *(P) RMS Ref*, 10–10
using, *(P) RMS Ref*, 10–10
File terminators, *(P) Concepts*, 9–31
File Transfer, Access, and Management Services
See FTAM
File transfer protocol
See FTP
File tuning
See Tuning
File type field, *(G) User*, 4–2; *(P) File Appl*, 1–26
asterisk (*) wildcard character in, *(G) User*, 4–9
using a percent sign (%) wildcard character in, *(G) User*, 4–10
with null values, *(G) User*, 4–10
File types, *(G) User*, 4–2
changing, *(G) DCL N-Z*, DCLII–39
default for command definition files, *(P) CDU, LBR, & MU*, CDU–6
default for libraries, *(P) CDU, LBR, & MU*, LIB–12
changing, *(P) CDU, LBR, & MU*, LIB–12
default for object libraries, *(P) CDU, LBR, & MU*, LIB–3
list of defaults, *(G) User*, 4–3, 4–4
rules for entering, *(G) User*, 4–2
specifying for ACL editor, *(S) Sys Mgmt Util A-L*, 1–4
File version numbers
changing, *(G) DCL N-Z*, DCLII–39
using an asterisk (*) wildcard character in, *(G) User*, 4–9
FileView
graphical interface, *(G) SW Overview*, 5–9
File window mapping pointers
allocating, *(S) Sys Mgmt Util M-Z*, 2–39
File windows
mapping pointer allocation, *(G) DCL A-M*, DCLI–261
mapping pointers for, *(S) Sys Mgr Essentials*, 8–24
specifying mapping pointers, *(G) DCL N-Z*, DCLII–233
File work areas
See FWAs
FILE_ID option, *(P) File Appl*, 4–35
FILE_MONITORING attribute, *(P) Rec Mgmt Util*, 4–19; *(P) File Appl*, 3–29
FILE_NAME option, *(P) File Appl*, 4–35
file_protection data type, *(P) Interfaces*, B–7
FILE_SYSTEM_CACHE class record
in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–19

Fill factor, *(P) Rec Mgmt Util*, 4–5, 4–27; *(P) File Appl*, 3–26
Fill level
  comparing primary key and alternate keys, *(P) RMS Ref*, 12–10
FILLM process limit, *(S) Sys Mgr Essentials*, 6–43
  value for efficient backups, *(S) Sys Mgr Essentials*, 10–10
FILL_BUCKETS attribute, *(P) Rec Mgmt Util*, 4–10
Filtering data, *(S) DECamds*, 5–5
  at window level, *(S) DECamds*, 5–17
  changing a filter category, *(S) DECamds*, 5–6
Filters, *(S) VMScluster Sys*, F–33 to F–34; *(S) DECamds*, 2–7
  changing severity values for events, *(S) DECamds*, 5–5, 5–8
  HP 4972 LAN Protocol Analyzer, *(S) VMScluster Sys*, F–33
FIMS (Forms Interface Management System), *(G) SW Overview*, 5–8, A–1
Final handler, *(P) Debugger*, 13–22
FINALLY exception, *(P) DECthreads*, 5–6, 5–10
Find service, *(P) RMS Ref*, RMS–39; *(P) File Appl*, 8–1 to 8–3
  capabilities, *(P) RMS Ref*, RMS–40
  condition values, *(P) RMS Ref*, RMS–42
  control block input fields, *(P) RMS Ref*, RMS–40
  control block output fields, *(P) RMS Ref*, RMS–42
  effect on next-record position, *(P) File Appl*, 8–17
  key matches and, *(P) File Appl*, 8–11
  run-time options, *(P) File Appl*, 9–13 to 9–16
finite routine, *(P) Portable Math*, DPML–33, B–7
FIPS (Federal Information Processing Standards), *(G) SW Overview*, 2–2, A–1
Fire protection, *(S) Dependable*, 5–5
Firmware
  LAN updates, *(S) Sys Mgr Tuning*, 22–14
FIRST command, *(P) File Appl*, 10–11
First-level trimming, *(S) Alpha Perform*, 6–12
  See also Memory management
First-time flags
  testing and setting, *(P) Modular Proc*, 3–10
Fixed control, *(P) Rec Mgmt Util*, 4–32, 4–33, 4–34
FIXED format, *(P) Rec Mgmt Util*, 4–33
Fixed length
  returned to stack, *(P) Calling Std*, 2–8
Fixed-length cells, *(P) File Appl*, 3–15
Fixed-length control fields, *(P) File Appl*, 3–16
  size option, *(P) File Appl*, 4–32
Fixed-length descriptor, *(P) Calling Std*, 5–5
Fixed-length records, *(P) Rec Mgmt Util*, 2–13, 2–17, 4–34; *(P) File Appl*, 1–29
Fixed length strings, *(P) STR$*, 2–1
Fixed-size stack frames, *(P) Interfaces*, 2–5; *(P) Calling Std*, 3–9
Fixed temporary locations, *(P) Calling Std*, 3–12
Fixes, *(S) DECamds*, 4–1 to 4–6, Glossary–2
  Fix menu, *(S) DECamds*, 2–8
  options, *(S) DECamds*, 2–8
Fix-ups
  creation of, *(P) Linker*, 3–24
  definition, *(P) Linker*, 1–3
Flag pages, *(S) Sys Mgr Essentials*, 13–33
  file, *(S) Sys Mgr Essentials*, 13–35
  job, *(S) Sys Mgr Essentials*, 13–33
Flags
  See also Event flags
  ACK transport datagram, *(S) VMScluster Sys*, F–26
  AUTHORIZE datagram flag in CC header, *(S) VMScluster Sys*, F–25
  datagram flags field, *(S) VMScluster Sys*, F–25
  DATA transport datagram, *(S) VMScluster Sys*, F–26
  in the CC datagram, *(S) VMScluster Sys*, F–25
  login, *(S) Sys Mgmt Util A-L*, 5–11
  reserved, *(S) VMScluster Sys*, F–25, F–26
  REXMT datagram, *(S) VMScluster Sys*, F–26
  RSVP datagram, *(S) VMScluster Sys*, F–26
  SEQ datagram, *(S) VMScluster Sys*, F–26
  TR/CC datagram, *(S) VMScluster Sys*, F–25
Flag words
  bit mask, *(P) Interfaces*, B–13
FLG=CHG option, *(P) Rec Mgmt Util*, 4–25
FLG=DUP option, *(P) Rec Mgmt Util*, 4–26
FLG=NUL option, *(P) Rec Mgmt Util*, 4–28
Floating address, *(S) Sys Mgmt Util M-Z*, D–1
Floating point, *(P) MTH$*, 1–4 to 1–8
  checking, *(P) Sys Svc I*, SYS1–92
Floating-point
  overflow, *(P) Concepts*, 13–16
  underflow, *(P) Concepts*, 13–17
Floating-point control register, *(P) Alpha SDA*, SDA–15
Floating-point emulation code
  base address, *(P) VAX SDA*, SDA–18
Floating-point enable, *(P) Alpha SDA*, SDA–15
Floating-point number conversions, *(P) LIB$*, CVT–3
Floating-point numbers
  complex, *(P) Interfaces*, B–3 to B–5
  standard, *(P) Interfaces*, B–8 to B–10
Floating-point registers, *(P) Alpha SDA*, SDA–15
  usage, *(P) Interfaces*, 2–3; *(P) Calling Std*, 3–2

floating_point data type, *(P) Interfaces*, B–8
/FLOAT qualifier, *(P) Debugger*, CD–77, CD–105
floor routine, *(P) Portable Math*, DPML–34, B–8
Flow control, *(P) Calling Std*, 3–3
Flushing messages to disk, *(S) Security*, 9–28
Flush interval, *(S) Security*, 9–28
Flush service, *(P) RMS Ref*, RMS–44 to RMS–45; *(P) File Appl*, 7–6, 8–5
  condition values
    See also Completion status codes
/FMASK qualifier, *(P) Debugger*, 15–13, CD–108
fmod routine, *(P) Portable Math*, DPML–35, B–8
FMS, *(P) SMG$*, 1–3, 4–1
FOLR (First Order Linear Recurrence)
  definition, *(P) MTH$*, 2–6
FOLR routines, *(P) MTH$*, MTH–190, MTH–194, MTH–198, MTH–202
  error checking, *(P) MTH$*, 2–6
  naming conventions, *(P) MTH$*, 2–6
FONT command, *(G) DCL A-M*, DCLI–231
Fonts
  for displayed text, customizing, *(P) Debugger*, 3–37
/FORCE qualifier, *(P) Alpha SDA*, SDA–59
Forcing an exit, *(P) Sys Svc I*, SYS1–386
FOR command, *(P) Debugger*, 12–10, CD–123
Foreign commands, *(P) Concepts*, 6–3; *(P) Debugger*, 2–2, 5–8, 5–9, CD–142
  character limit, *(G) User*, 14–3, 14–5
  use of dollar sign, *(P) Concepts*, 6–4
Foreign devices, *(P) Concepts*, 9–5
Foreign file specifications
  on networks, *(G) User*, 4–8
/FOREIGN qualifier
  in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–20
Foreign terminals
  definition, *(P) SMG$*, 5–1
Foreign volumes, *(P) Concepts*, 9–4, 9–6
  See Volumes, foreign
  mounting, *(S) Sys Mgmt Util M-Z*, 2–20
Fork handling, *(P) DECthreads*, pthread–3
FORMAT attribute, *(P) Rec Mgmt Util*, 4–33; *(P) File Appl*, 4–34
FORMAT command, *(P) Alpha SDA*, SDA–53; *(P) VAX SDA*, SDA–29, SDA–60, SDA–68
Format for SHOW CLUSTER
  specifying processor types, *(S) Sys Mgmt Util M-Z*, 4–31
Formats
  CD–ROM on disc, *(S) Sys Mgr Essentials*, 8–4
  converting software kits, *(S) Sys Mgr Essentials*, 3–33
  for ANSI magnetic tape volumes, *(P) File Appl*, 1–18
  High Sierra, *(S) Sys Mgr Essentials*, 8–4
  Identifier ACE, *(S) Security*, 4–17
  of hexadecimal dump, *(P) Rec Mgmt Util*, 1–18
Formats (cont'd)
  protection code, *(S) Security*, 4–24
  rights identifiers, *(S) Security*, 4–3
  security-auditing ACE, *(S) Security*, 9–6
  UIC (user identification code), *(S) Security*, 4–2
Formatting
  ACL entry, *(P) Sys Svc I*, SYS1–389
  of DIFFERENCES output, *(G) DCL A-M*, DCLI–162
  security audit messages, *(P) Sys Svc I*, SYS1–402
Formatting volumes, *(S) Sys Mgr Essentials*, 8–11
Form feeds
  controlling page overflow with, *(S) Sys Mgr Essentials*, 13–44
  inserting automatically in output jobs, *(S) Sys Mgr Essentials*, 13–19
  terminal, *(P) I/O User*, 5–22
Forms
  assigning default for a queue, *(S) Sys Mgr Essentials*, 13–63
  associating with jobs and queues, *(S) Sys Mgr Essentials*, 13–42
  changing DEFAULT, *(S) Sys Mgr Essentials*, 13–63
  commands used with, *(S) Sys Mgr Essentials*, 13–61
  controlling line overflow with, *(S) Sys Mgr Essentials*, 13–42, 13–43
  controlling page width, length and margin size with, *(S) Sys Mgr Essentials*, 13–42
  controlling paper stock with, *(S) Sys Mgr Essentials*, 13–42
  default, *(S) Sys Mgr Essentials*, 13–63
  DEFAULT, *(S) Sys Mgr Essentials*, 13–63
  defining, *(S) Sys Mgr Essentials*, 13–61
  deleting, *(S) Sys Mgr Essentials*, 13–64
    problems, *(S) Sys Mgr Essentials*, 13–82
  description, *(S) Sys Mgr Essentials*, 13–42
  displaying
    defined forms, *(S) Sys Mgr Essentials*, 13–63
    forms assigned to queues, *(S) Sys Mgr Essentials*, 13–64
  formatting jobs with, *(S) Sys Mgr Essentials*, 13–42
  getting information asynchronously, *(P) Sys Svc II*, SYS2–3
  getting information synchronously, *(P) Sys Svc II*, SYS2–46
  mounting, *(S) Sys Mgr Essentials*, 13–64
  preprinted
    aligning, *(S) Sys Mgr Essentials*, 13–75, 13–77
  procedure for using, *(S) Sys Mgr Essentials*, 13–43, 13–60
  specifying setup modules with, *(S) Sys Mgr Essentials*, 13–42

Forms (cont'd)
specifying sheet-feed paper with, *(S) Sys Mgr Essentials*, 13–42
standards, *(G) SW Overview*, A–3
Forms Interface Management System
See FIMS
Forté, *(G) SW Overview*, 6–16; *(P) Environment*, 1–4, 1–5
Fortran, *(P) Environment*, 7–2, 7–6
data type declarations, *(P) Interfaces*, B–33
DEC Fortran for OpenVMS Alpha, *(G) SW Overview*, 4–6
DEC Fortran for OpenVMS VAX, *(G) SW Overview*, 4–6
implementation table, *(P) Interfaces*, B–33
FORTRAN
/BLAS qualifier, *(P) MTH$*, 2–2
FORTRAN carriage control, *(P) Rec Mgmt Util*, 2–3, 4–32
See also FAB$V_FTN option
FORTRAN carriage control option
list, *(P) RMS Ref*, 4–24
Fortran I/O operations, *(P) Debugger*, 13–18
Fortran RTL routines and stepping, *(P) Debugger*, 13–18
FORTUSER.COM command procedure, *(G) User*, C–19
FORWARD command
in Mail, *(G) User*, 6–11
Forward indexing, *(P) MTH$*, 2–6
FORWARDING_DELAY system parameter, *(S) VMScluster Sys*, 3–20
%FP built-in symbol, *(P) Debugger*, 8–22, B–4
/FPCR qualifier, *(P) Debugger*, CD–105
FPCR symbol, *(P) Alpha SDA*, SDA–15
FPEMUL symbol, *(P) VAX SDA*, SDA–18
FP symbol, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18
fp_class routine, *(P) Portable Math*, DPML–36, B–8
Fragmentation, *(S) TCP/IP*, 2–5
Fragmented files, *(P) File Appl*, 3–4 to 3–8
Frame pointers, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18
Free bucket list, *(P) Rec Mgmt Util*, 3–1
FREEGOAL system parameter, *(S) Alpha Perform*, 13–3
page faulting, *(S) VAX Perform*, 3–24; *(S) Alpha Perform*, 10–6
setting, *(S) Alpha Perform*, 6–14
FREELIM system parameter, *(S) Alpha Perform*, 13–3
page faulting, *(S) VAX Perform*, 3–24; *(S) Alpha Perform*, 10–6
Free List Fault Rate, *(S) Alpha Perform*, 10–4
Free page (FPG) wait state, *(S) Alpha Perform*, 9–4
Free page list, *(S) Alpha Perform*, 5–2
displaying, *(P) VAX SDA*, SDA–131
evaluating, *(S) VAX Perform*, 3–24; *(S) Alpha Perform*, 10–5
limited free memory
analyzing, *(S) VAX Perform*, 4–23; *(S) Alpha Perform*, 13–14
/FREE qualifier, *(P) Alpha SDA*, SDA–120; *(P) VAX SDA*, SDA–131, SDA–134
Free service, *(P) RMS Ref*, RMS–47; *(P) File Appl*, 8–5
condition values, *(P) RMS Ref*, RMS–48
control block input and output fields, *(P) RMS Ref*, RMS–48
frexp routine, *(P) Portable Math*, DPML–37, B–8
Front-end
processor failover, *(S) Dependable*, 8–52, 8–55
FSTERR report
example, *(S) Sys Mgmt Util A-L*, 9–25
FTAM (File Transfer, Access, and Management Services), *(G) SW Overview*, 6–4
FTP (File Transfer Protocol), *(S) Sys Mgr Tuning*, 21–14; *(S) TCP/IP*, 2–5, 5–5
anonymous, *(S) TCP/IP*, 3–3
directory services, *(S) TCP/IP*, 5–8
file services, *(S) TCP/IP*, 3–3
servers, *(S) TCP/IP*, 3–4
ftp command, *(S) TCP/IP*, 3–3, 3–4
Full backup
See Image backup
Full callable interface of DECTPU routines, *(P) Util Routines*, DECTPU–2, DECTPU–5
Full-duplex mode, *(P) I/O User*, 5–10
Full function, *(P) Calling Std*, 3–4
Full image map files
creating, *(P) Linker*, LINK–14
Full names, *(G) User*, 4–6
converting to string, *(P) Sys Svc I*, SYS1–303
definition, *(S) Sys Mgr Tuning*, 21–2
FULL prompt, *(P) Rec Mgmt Util*, 6–9
/FULL qualifier, *(P) Linker*, LINK–14; *(P) Debugger*, CD–268, CD–287
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–32
Full-reentrancy, *(P) Modular Proc*, 3–15
Full report
example, *(S) Sys Mgmt Util A-L*, 9–21
Function codes, *(P) Concepts*, 9–10
See also I/O functions
IO$_ACCESS, *(P) I/O User*, 1–25
IO$_ACPCONTROL, *(P) I/O User*, 1–32, 3–12
IO$_ADDSHAD, *(P) I/O User*, 7–4
IO$_AVAILABLE, *(P) I/O User*, 2–35, 3–22, 7–6
IO$_COPYSHAD, *(P) I/O User*, 7–5
IO$_CREATE, *(P) I/O User*, 1–23

Function codes (cont'd)
IO$_CRESHAD, *(P) I/O User*, 7–3
IO$_DEACCESS, *(P) I/O User*, 1–27
IO$_DELETE, *(P) I/O User*, 1–28
IO$_DSE, *(P) I/O User*, 3–22
IO$_FORMAT, *(P) I/O User*, 2–34
IO$_MODIFY, *(P) I/O User*, 1–27
IO$_PACKACK, *(P) I/O User*, 2–35
IO$_READLBLK, *(P) I/O User*, 2–32, 3–13, 4–5, 5–28, 9–25
IO$_READPBLK, *(P) I/O User*, 2–32, 3–13, 4–5, 9–25
IO$_READPROMPT, *(P) I/O User*, 5–28
IO$_READVBLK, *(P) I/O User*, 2–32, 3–13, 4–5, 5–28, 9–25
IO$_REMSHAD, *(P) I/O User*, 7–5
IO$_REWIND, *(P) I/O User*, 3–16
IO$_REWINDOFF, *(P) I/O User*, 3–18
IO$_SEARCH, *(P) I/O User*, 2–34
IO$_SEEK, *(P) I/O User*, 2–35
IO$_SENSECHAR, *(P) I/O User*, 2–34, 5–77, 7–6
IO$_SENSEMODE, *(P) I/O User*, 2–34, 3–18, 5–77, 9–47
IO$_SETCHAR, *(P) I/O User*, 3–19, 5–40, 9–30
IO$_SETMODE, *(P) I/O User*, 3–19, 5–40, 9–30
IO$_SETPRFPATH, *(P) I/O User*, 2–36
IO$_SKIPFILE, *(P) I/O User*, 3–16
IO$_SKIPRECORD, *(P) I/O User*, 3–16
IO$_UNLOAD, *(P) I/O User*, 2–35, 3–18
IO$_WRITECHECK, *(P) I/O User*, 2–35
IO$_WRITELBLK, *(P) I/O User*, 2–33, 3–15, 4–9, 5–37, 9–27
IO$_WRITEOF, *(P) I/O User*, 3–17
IO$_WRITEPBLK, *(P) I/O User*, 2–33, 3–15, 4–9, 5–37, 9–27
IO$_WRITEVBLK, *(P) I/O User*, 2–33, 3–15, 4–9, 5–37, 9–27
list of, *(P) I/O User*, A–1
Function keys, *(G) User*, 3–18; *(S) Sys Mgmt Util A-L*, 13–17
VT200 series terminals, *(G) User*, D–1
VT300 series terminals, *(G) User*, D–1
Function modifiers, *(P) Concepts*, 9–11
for LAN driver, *(P) I/O User*, 9–27
IO$M_ACCESS, *(P) I/O User*, 1–23, 1–25, 3–10
IO$M_ATTNAST, *(P) I/O User*, 9–42
IO$M_BRDCST, *(P) I/O User*, 5–49, 5–80
IO$M_BREAKTHRU, *(P) I/O User*, 5–11, 5–38
IO$M_CANCTRLO, *(P) I/O User*, 5–5, 5–38
IO$M_CREATE, *(P) I/O User*, 1–23, 1–25, 3–10
IO$M_CTRL, *(P) I/O User*, 9–42, 9–47
IO$M_CTRLCAST, *(P) I/O User*, 5–44
IO$M_CTRLYAST, *(P) I/O User*, 5–5, 5–44
Function modifiers (cont'd)
IO$M_CVTLOW, *(P) I/O User*, 5–29
IO$M_DATACHECK, *(P) I/O User*, 2–12, 2–32, 2–33, 3–6, 3–14, 3–15
IO$M_DELDATA, *(P) I/O User*, 2–33
IO$M_DELETE, *(P) I/O User*, 1–23, 1–29
IO$M_DMOUNT, *(P) I/O User*, 1–32
IO$M_DSABLMBX, *(P) I/O User*, 5–29
IO$M_ENABLMBX, *(P) I/O User*, 5–38
IO$M_ERASE, *(P) I/O User*, 2–30, 2–33, 3–15
IO$M_ESCAPE, *(P) I/O User*, 5–7, 5–29
IO$M_EXTEND, *(P) I/O User*, 5–29, 5–31
IO$M_HANGUP, *(P) I/O User*, 5–44
IO$M_INCLUDE, *(P) I/O User*, 5–45, 5–48
IO$M_INHERLOG, *(P) Concepts*, 9–5
IO$M_INHEXTGAP, *(P) I/O User*, 3–7
IO$M_INHRETRY, *(P) I/O User*, 2–32, 3–7
IO$M_MAINT, *(P) I/O User*, 5–45, 5–47
IO$M_NOECHO, *(P) I/O User*, 5–11, 5–26, 5–29
IO$M_NOFILTR, *(P) I/O User*, 5–29
IO$M_NOFORMAT, *(P) I/O User*, 5–11, 5–38
IO$M_NORSWAIT, *(P) I/O User*, 4–9, 4–11
IO$M_NOW, *(P) I/O User*, 4–5, 4–9, 4–11, 9–27
IO$M_NOWAIT, *(P) I/O User*, 3–16, 3–18
IO$M_OUTBAND, *(P) I/O User*, 5–48
IO$M_PURGE, *(P) I/O User*, 5–29
IO$M_RD_MODEM, *(P) I/O User*, 5–79
IO$M_READATTN, *(P) I/O User*, 4–11
IO$M_READERCHECK, *(P) I/O User*, 4–9, 4–11, 4–15
IO$M_REFRESH, *(P) I/O User*, 5–38
IO$M_RESPONSE, *(P) I/O User*, 9–29
IO$M_REVERSE, *(P) I/O User*, 3–14
IO$M_SETPROT, *(P) I/O User*, 4–14
IO$M_SET_MODEM, *(P) I/O User*, 5–45
IO$M_SHUTDOWN, *(P) I/O User*, 9–42
IO$M_STREAM, *(P) I/O User*, 4–5
IO$M_TIMED, *(P) I/O User*, 5–29
IO$M_TRMNOECHO, *(P) I/O User*, 5–30
IO$M_TT_ABORT, *(P) I/O User*, 5–48
IO$M_TYPEAHDCNT, *(P) I/O User*, 5–78
IO$M_UNLOOP, *(P) I/O User*, 5–48
IO$M_WRITERCHECK, *(P) I/O User*, 4–5, 4–15
list of, *(P) I/O User*, A–1
types of
IO$M_DATACHECK, *(P) Concepts*, 9–11
IO$M_INHRETRY, *(P) Concepts*, 9–11
Function result, *(P) Calling Std*, 3–38
Functions
definition, *(P) Environment*, 10–1
Function value returns, *(P) Calling Std*, 2–6 to 2–8, 3–54 to 3–56
for RTL routines, *(P) Interfaces*, 3–6
returned in output argument, *(P) STR$*, 2–6
returned in R0/R1, *(P) STR$*, 2–6

function_code data type, *(P) Interfaces*, B–10
FWAs (file work areas), *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
/F_FLOAT qualifier, *(P) Debugger*, CD–130

G

Gateways, *(S) TCP/IP*, 1–3, 1–7, 2–6; *(S) DECnet Intro*, 1–5, 1–6, 1–13
  DECnet/SNA, *(S) DECnet Intro*, 1–6, 1–13
GBDs (global buffer descriptors)
  summary page, *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
GBHs (global buffer headers), *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
GBLPAGES system parameter, *(S) Sys Mgr Tuning*, 16–12; *(S) Alpha Perform*, 6–18; *(P) File Appl*, 1–38
GBLPAGFIL system parameter, *(P) File Appl*, 1–38
GBL program section attribute
  effect on image creation, *(P) Linker*, 3–9
  implicit setting by linker, *(P) Linker*, 2–18
GBLSECTIONS system parameter, *(S) Sys Mgr Tuning*, 16–12; *(S) Alpha Perform*, 6–18; *(P) File Appl*, 1–38
GBSBs (global buffer synchronization blocks), *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
GENCAT command, *(G) V7.0 New Feat*, B–2
General identifiers, *(S) Security*, 4–17
  design considerations, *(S) Security*, 8–3
  example, *(G) User*, 19–3; *(S) Security*, 4–5, 4–19
  format, *(S) Security*, 4–3
General users
  of network, *(S) DECnet Intro*, 2–1 to 2–11
/GENERATE qualifier, *(P) Debugger*, CD–88
Generation version number, *(P) File Appl*, 1–28
Generic device names, *(G) User*, 12–9
Generic key match, *(P) File Appl*, 8–12
Generic names
  showing, *(S) Sys Mgmt Util M-Z*, 5–23, 5–24
Generic queues, *(G) DCL A-M*, DCLI–264; *(G) SW Overview*, 3–11, 7–6; *(P) Util Routines*, PSM–3
  batch, *(S) Sys Mgr Essentials*, 13–3
    recommended use, *(S) Sys Mgr Essentials*, 13–7
  clusterwide batch, *(S) VMScluster Sys*, 7–12
  clusterwide printer, *(S) VMScluster Sys*, 7–8
  creating, *(S) Sys Mgr Essentials*, 13–17
  description, *(S) Sys Mgr Essentials*, 13–2, 13–3
  establishing, *(S) VMScluster Sys*, 7–8
  in a VMScluster environment, *(S) Sys Mgr Essentials*, 13–2
  initializing, *(G) DCL A-M*, DCLI–271; *(G) DCL N-Z*, DCLII–377
Generic queues (cont'd)
  output, *(S) Sys Mgr Essentials*, 13–3, 13–11, 13–12
    recommended use, *(S) Sys Mgr Essentials*, 13–11
  relationship to execution queues, *(S) Sys Mgr Essentials*, 13–2
  specifying target execution queues, *(S) Sys Mgr Essentials*, 13–17
  starting, *(G) DCL A-M*, DCLI–265
  stopping, *(G) DCL A-M*, DCLI–265
Generic SCSI class driver, *(P) I/O User*, 8–1 to 8–15
  assigning a channel to, *(P) I/O User*, 8–10
  flow of, *(P) I/O User*, 8–4
  I/O status block returned by, *(P) I/O User*, 8–10
  loading, *(P) I/O User*, 8–8
  obtaining device information from, *(P) I/O User*, 8–13
  programming example, *(P) I/O User*, 8–14 to 8–15
  $QIO system service format for, *(P) I/O User*, 8–10 to 8–13
  security considerations, *(P) I/O User*, 8–4
Generic SCSI descriptor
  format of, *(P) I/O User*, 8–11 to 8–13
GENFILES phase of AUTOGEN, *(S) Sys Mgmt Util A-L*, 6–7
GENTRAP instruction, *(P) Calling Std*, 6–9
GET attribute, *(P) Rec Mgmt Util*, 4–3, 4–35; *(P) File Appl*, 7–4, 7–21
GETDATA phase of AUTOGEN, *(S) Sys Mgmt Util A-L*, 6–6
$GETDVI lexical function, *(G) User*, 17–10
$GETJPI service, *(G) V7.0 New Feat*, 4–30
$GET macro
  program example, *(P) RMS Ref*, A–27
Get option, *(P) Rec Mgmt Util*, 4–3, 4–35
  See also FAB$V_GET option
GETPARMS.COM command procedure, *(G) User*, C–13
  sample execution, *(G) User*, C–15
Get Save Set
  VMSINSTAL.COM option, *(S) Sys Mgr Essentials*, 3–15, 3–16
Get service, *(P) RMS Ref*, RMS–49; *(P) File Appl*, 8–1, 8–2
  applicable access modes, *(P) RMS Ref*, RMS–50
  condition values, *(P) RMS Ref*, RMS–55
    See also Completion status codes
  control block input fields, *(P) RMS Ref*, RMS–52
  control block output fields, *(P) RMS Ref*, RMS–55
  current-record and, *(P) File Appl*, 8–16
  effect on next-record position, *(P) File Appl*, 8–17

Get service (cont'd)
requirement for user record area, *(P) RMS Ref*, RMS–52
returning terminator character for terminal input, *(P) RMS Ref*, RMS–51
return status for various file access methods, *(P) RMS Ref*, RMS–7
run-time options, *(P) File Appl*, 9–13 to 9–16
using input from mailbox devices, *(P) RMS Ref*, RMS–51
using stream input, *(P) RMS Ref*, RMS–50
using terminal input, *(P) RMS Ref*, RMS–50
using the RAB$L_STV field for additional status information, *(P) RMS Ref*, RMS–52
$GETSYI service, *(G) V7.0 New Feat*, 4–29
Getting help, *(S) Sys Mgr Essentials*, 3–30
$GET_REGION_INFO system service
description, *(P) Sys Svc II*, SYS2–50
GHRs (granularity hint regions)
improving the performance of shareable images, *(P) Linker*, 1–16
slicing shareable images, *(S) Sys Mgr Tuning*, 16–12
GID (group identification), *(S) TCP/IP*, 4–1
GIGAswitch device, *(G) SW Overview*, 6–8
Givens plane rotation
applying to a vector, *(P) MTH$*, MTH–173
generating the elements for, *(P) MTH$*, MTH–178
GKS, *(G) SW Overview*, 6–16; *(P) Environment*, 2–5, 2–7; *(P) SMG$*, 1–3, 4–1
Global buffer counts
example of run-time specification, *(P) File Appl*, 5–10 to 5–12
Global buffer descriptors
See GBDs
Global buffer headers
See GBHs
Global buffers, *(P) RMS Ref*, 4–18; *(P) Rec Mgmt Util*, 4–19; *(P) File Appl*, 1–38, 3–12, 3–28, 7–19 to 7–21
See also Buffers
determining number of, *(P) RMS Ref*, 4–19
number, *(P) File Appl*, 7–16
performance, *(P) File Appl*, 9–8
with deferred-write option, *(P) File Appl*, 3–12
with shared sequential file, *(P) File Appl*, 3–15
Global buffer sizes
establishing in shared sequential file operations, *(P) File Appl*, 3–15
for shared sequential file operations, *(P) RMS Ref*, 4–19, 6–7; *(P) File Appl*, 3–15, 7–21
Global disk file section
creating, *(P) Sys Svc I*, SYS1–126
creating and mapping, *(P) Sys Svc I*, SYS1–210
mapping, *(P) Sys Svc II*, SYS2–157
Global lock, *(P) DECthreads*, 3–4
using to avoid nonreentrant software, *(P) DECthreads*, 3–4
Global mutex
locking, *(P) DECthreads*, pthread–80, tis–15, E–56, G–59
unlocking, *(P) DECthreads*, pthread–114, tis–38, E–84, G–83
Global page file
Create, *(P) Sys Svc I*, SYS1–131
Global page file section
creating and mapping, *(P) Sys Svc I*, SYS1–218
mapping, *(P) Sys Svc II*, SYS2–157
Global page frame section
creating and mapping, *(P) Sys Svc I*, SYS1–225
mapping, *(P) Sys Svc II*, SYS2–163
Global pages, *(S) Sys Mgr Tuning*, 16–12; *(S) Alpha Perform*, 6–15
table entry, *(S) Alpha Perform*, 6–18
Global page tables, *(P) File Appl*, 1–38
displaying, *(P) Alpha SDA*, SDA–112; *(P) VAX SDA*, SDA–127
/GLOBAL qualifier, *(P) Alpha SDA*, SDA–112; *(P) VAX SDA*, SDA–127
Global section file
updating on disk (asynchronously), *(P) Sys Svc II*, SYS2–475
updating on disk (synchronously), *(P) Sys Svc II*, SYS2–481
Global sections, *(S) Sys Mgr Tuning*, 16–12; *(P) Concepts*, 17–8, 19–16, 20–16; *(P) Interfaces*, B–15; *(P) File Appl*, 1–38
characteristics, *(P) Concepts*, 19–16, 20–16
controlling access through access control lists, *(P) Util Routines*, ACL–1
creating, *(P) Sys Svc I*, SYS1–192
default protection, *(S) Security*, C–4
definition, *(P) Concepts*, 19–13, 20–13
deleting, *(P) Sys Svc I*, SYS1–279
descriptor, *(S) Alpha Perform*, 6–18
events audited, *(S) Security*, 5–15
for interprocess communication, *(P) Concepts*, 2–8
group, *(S) Security*, 4–10
linker-assigned names of, *(P) Linker*, 5–6
mapping, *(P) Concepts*, 19–19, 20–20; *(P) Sys Svc I*, SYS1–192; *(P) Sys Svc II*, SYS2–151
multiprocessing, *(P) Concepts*, 14–13
name, *(P) Concepts*, 19–17, 20–17
paging file, *(P) Concepts*, 19–20, 20–21
permanent, *(P) Concepts*, 17–12
privilege requirements, *(S) Security*, 5–15
reestablishing security profile, *(S) Security*, 5–16
restricting access, *(S) Security*, 5–15
security elements of, *(S) Security*, 5–14
system, *(S) Security*, 4–10
table entry, *(S) Alpha Perform*, 6–18

Global sections (cont'd)
template profiles, *(S) Security*, 5–15
temporary, *(P) Concepts*, 17–12
types of access, *(S) Security*, 5–14
watchpoints, *(P) Debugger*, 14–16
writable, *(P) Concepts*, 14–13
Global symbol directories
See GSDs
Global symbols, *(G) DCL A-M*, DCLI–1, DCLI–5; *(P) Concepts*, 17–4; *(P) Debugger*, 9–3, 9–10
See also Message symbols
declaring as universal symbols, *(P) Linker*, 4–1
defining with the SYMBOL= option, *(P) Linker*, LINK–63
definition, *(P) Linker*, 2–1
determining the address of, *(P) Linker*, 3–18
implemented as overlaid program sections, *(P) Linker*, 2–1
including in a symbol table file, *(P) Linker*, LINK–64
object module reference specification record, *(P) Linker*, A–11
object module specification format, *(P) Linker*, B–23
version mask, *(P) Linker*, B–27
object module specification subrecord, *(P) Linker*, B–16
version mask, *(P) Linker*, B–27
resolving, *(P) Concepts*, 17–4
signaling with, *(P) Concepts*, 13–61
strong reference to, *(P) Linker*, 2–19
weak reference to, *(P) Linker*, 2–20
Global symbol tables
See GSTs
Global symbol tables (GST), *(P) CDU, LBR, & MU*, LIB–4
Global Valid Fault Rate, *(S) Alpha Perform*, 10–4
/GLOBAL_BUFFERS qualifier, *(P) File Appl*, 7–20
GLOBAL_BUFFER_COUNT attribute, *(P) Rec Mgmt Util*, 4–19; *(P) File Appl*, 7–16, 7–20
Go button, *(P) Debugger*, 1–9, 3–6
GO command, *(P) Debugger*, 6–6, CD–125
multiprocess program, *(P) Debugger*, 14–6
G operator, *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–16
Gopher service, *(S) TCP/IP*, 3–5
GOSUB command, *(G) DCL A-M*, DCLI–232, DCLI–233
GOTO command, *(G) DCL A-M*, DCLI–234, DCLI–235
GOTO unwind operations, *(P) Concepts*, 13–49
nonlocal, *(P) Calling Std*, 6–25
Granularity
of resources, *(P) Concepts*, 15–3
on Alpha systems, *(P) Concepts*, 14–3
on VAX systems, *(P) Concepts*, 14–3
Granularity hint regions
See GHRs
Granularity hint regions (GHR), *(G) DCL N-Z*, DCLII–298
Graphics
applications support for, *(G) SW Overview*, 6–16
standards, *(G) SW Overview*, A–3
Graphics options, *(P) Environment*, 2–6
Greenwich Mean Time (GMT), *(P) Concepts*, 5–34
Grounding
SCSI requirements, *(G) V7.0 New Feat*, C–20
troubleshooting, *(G) V7.0 New Feat*, C–36
Group logical name tables, *(P) Concepts*, 10–6
See also Logical name tables
canceling entries, *(G) DCL A-M*, DCLI–112
including logical name, *(G) DCL A-M*, DCLI–42, DCLI–121
Group numbers, *(P) Rec Mgmt Util*, 4–22
in UICs, *(S) Security*, 4–2
local area VMScluster, *(S) Sys Mgmt Util M-Z*, 6–15
modifying, *(S) Sys Mgr Tuning*, 20–16
reserved UICs, *(S) Security*, 4–2
uniqueness requirement for clustered systems, *(S) Security*, 11–5
VMScluster
displaying, *(S) Sys Mgmt Util M-Z*, 6–17
Group numbers and passwords, *(S) Security*, 11–7; *(S) VMScluster Sys*, 10–16
See also Security management
asked for in CLUSTER_CONFIG.COM, *(S) VMScluster Sys*, 8–7
error example, *(S) VMScluster Sys*, 2–14
for LANs, *(S) VMScluster Sys*, 3–6
in DX header, *(S) VMScluster Sys*, F–23
purpose, *(S) VMScluster Sys*, 10–16
setting up, *(S) VMScluster Sys*, 2–14
use on a LAN, *(S) VMScluster Sys*, 2–14
GROUP privilege, *(S) Security*, A–6
Group protection code, *(P) Rec Mgmt Util*, 4–22
/GROUP qualifier, *(S) DECamds*, 2–1
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–21
Groups, *(S) DECamds*, 1–7, 2–3, Glossary–2
access to service nodes, *(S) Sys Mgmt Util A-L*, 13–33, 13–51
access to services in LAT environment, *(S) Sys Mgmt Util A-L*, 13–29
collapsing information, *(S) DECamds*, 2–4
collecting data, *(S) DECamds*, 2–5
expanding information, *(S) DECamds*, 2–4
how to assign a node, *(S) DECamds*, 1–8
Group users (security category), *(S) Security*, 4–8, 4–24; *(S) Sys Mgr Essentials*, 11–8
Group volumes
definition, *(S) Sys Mgr Essentials*, 8–8

/GROUP_SIZE qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–33
GROWLIM system parameter
page faulting, *(S) VAX Perform*, 2–8
GRPNAM privilege, *(S) Security*, 5–16, A–7, C–5
GRPPRV privilege, *(S) Security*, A–7
effect on protection mechanisms, *(S) Security*, 4–28
giving rights of system user, *(S) Security*, 4–11, 4–24; *(S) Sys Mgr Essentials*, 11–8
granting control access, *(S) Security*, 4–28
trusted users and, *(S) Security*, C–5
GSDs (global symbol directories), *(P) Linker*, A–6 to A–21, B–10 to B–27
analyzing in object files, *(G) DCL A-M*, DCLI–28
in object modules, *(P) Linker*, 2–1
GSMATCH= option, *(P) Linker*, LINK–52
/GST qualifier, *(P) Linker*, LINK–15
creating run-time kits with, *(P) Linker*, 4–10
GSTs (global symbol tables)
analyzing, *(G) DCL A-M*, DCLI–23
controlling contents of, *(P) Linker*, 4–10, LINK–15, LINK–66
creating, *(P) Linker*, 4–8; *(P) Debugger*, 9–4
definition, *(P) Linker*, 2–1
deleting entries in, *(P) Linker*, 4–10
deleting symbols from, *(G) DCL A-M*, DCLI–151
entering symbol in, *(G) DCL A-M*, DCLI–279
shareable image, *(P) Debugger*, 9–12
G symbol, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18
Guard pages, *(P) Calling Std*, 3–60
Guard regions, *(P) Calling Std*, 3–60
Guardsize attribute, *(P) DECthreads*, 2–6, pthread–22, E–21, E–27, G–16
obtaining, *(P) DECthreads*, pthread–8, G–9
/G_FLOAT qualifier, *(P) Debugger*, CD–78, CD–105, CD–130

H

H4000 transceiver, *(S) DECnet Intro*, 3–5
h-addresses
See Physical addresses
Half-duplex mode, *(P) I/O User*, 5–10, 5–21
See also Duplex mode
Halting system
waiting until after system dump file is written, *(S) Sys Mgr Tuning*, 15–2
Handlers, *(P) Debugger*, 13–22
change and compatibility modes, *(P) Concepts*, 13–12
declaring a condition handler, *(P) DECthreads*, B–4
invoking during unwind, *(P) Calling Std*, 6–27
Handles, *(P) DECthreads*, E–1
assigning to an object, *(P) DECthreads*, E–49
comparing, *(P) DECthreads*, E–50
copying, *(P) DECthreads*, E–49
obtaining for thread, *(P) DECthreads*, E–76
Hang conditions
diagnosing, *(S) VMScluster Sys*, C–16
Hanging cluster fix, *(S) DECamds*, 4–2
HANGUP characteristic
application LAT devices, *(S) Sys Mgmt Util A-L*, 13–10
Hangup function modifier
terminal
disconnecting a, *(P) I/O User*, 5–44
interaction with, *(P) I/O User*, 5–18, 5–25
Hardcopy output
disposal of, *(S) Security*, 3–20
security measures, *(G) User*, 2–26
Hardcopy terminal
logout considerations, *(G) User*, 2–26
output, *(P) Rec Mgmt Util*, 6–9
Hard fault rate, *(S) Alpha Perform*, 11–6
Hard faults
characterizing, *(S) VAX Perform*, 4–6
Hard-positioning option, *(P) File Appl*, 4–35
Hardware
add on SCSI adapters, *(G) V7.0 New Feat*, C–9
analyzing options, *(S) Dependable*, 3–3 to 3–5
BA350/BA353 StorageWorks enclosures, *(G) V7.0 New Feat*, C–9
booting problem, *(S) Sys Mgr Essentials*, 4–16
building block, *(S) Dependable*, 1–15 to 1–16
connecting for communications, *(S) DECnet Intro*, 3–4
conventional Alpha and VAX systems, *(S) Dependable*, 6–5
DWZZA converters, *(G) V7.0 New Feat*, C–11
eliminating single points of failure, *(S) Dependable*, 6–1
failures in, *(S) Dependable*, 9–10 to 9–13
fault tolerant VAXft systems, *(S) Dependable*, 6–8
HSZ40 controllers, *(G) V7.0 New Feat*, C–12
importance of sufficient capacity for system performance, *(S) Sys Mgr Tuning*, 16–6
in SCSI VMScluster systems, *(G) V7.0 New Feat*, C–9
installation requirements, *(S) DECamds*, A–2
integral SCSI adapters, *(G) V7.0 New Feat*, C–18
security triplet address, *(S) DECamds*, 1–5
selecting new, *(S) Dependable*, 3–4
supported, *(P) I/O User*, 7–2
VMScluster topologies, *(S) Dependable*, 6–10
dependability characteristics summary, *(S) Dependable*, 6–20
when to enlarge capacity, *(S) VAX Perform*, 5–13; *(S) Alpha Perform*, 18–5

Hardware addresses
See Physical addresses
Hardware configurations
standalone, *(G) SW Overview*, 1–7
VMScluster, *(G) SW Overview*, 1–8
Hardware errors, *(P) File Appl*, 10–2
DECnet messages, *(S) DECnet Intro*, 3–31
Hardware exceptions, *(P) Calling Std*, 6–1
definition, *(P) Calling Std*, 1–5
Hardware loopback device, *(S) DECnet Mgmt*, 7–6
Hardware registers
for Alpha systems, *(P) Interfaces*, 2–2
for VAX, *(P) Interfaces*, 2–1
HDR1 labels
accessing from XAB$B_MTACC field, *(P) RMS Ref*, 13–4
/HDR3 qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–21
Header allocation
on disk volumes, *(G) DCL A-M*, DCLI–257
Header files, *(P) DECthreads*, A–2, B–2
Header labels, *(P) File Appl*, 1–20
HDR1 label, *(P) File Appl*, 1–26, 1–28, 1–29
HDR2 label, *(P) File Appl*, 1–26, 1–29 to 1–31
HDR3 label, *(P) File Appl*, 1–26, 1–32
HDR4 label, *(P) File Appl*, 1–26, 1–32
on tape files, *(S) Sys Mgr Essentials*, 8–7, 9–15
reading attributes of, *(S) Sys Mgr Essentials*, 9–17
/HEADER qualifier, *(P) Linker*, LINK–16; *(P) Alpha SDA*, SDA–120; *(P) VAX SDA*, SDA–134
Header resident images, *(S) Sys Mgr Tuning*, 16–10, 16–12
Headers
CC, *(S) VMScluster Sys*, F–23
crash dump, *(P) Alpha SDA*, SDA–99
DX, *(S) VMScluster Sys*, F–22
Ethernet, *(S) VMScluster Sys*, F–21
FDDI, *(S) VMScluster Sys*, F–22
library, *(P) Util Routines*, LBR–23
library module, *(P) Util Routines*, LBR–22
TR, *(S) VMScluster Sys*, F–25
Heap Analyzer, *(G) V7.0 New Feat*, 4–6; *(P) Debugger*, 4–1 to 4–26
Heap Analyzer and private image copies
performance, *(P) Debugger*, 4–8, 5–7
Heap storage, *(P) STR$*, 2–2
/HEAP_ANALYZER qualifier, *(P) Debugger*, CD–140, CD–142
HELLO datagram, *(S) VMScluster Sys*, F–17, F–24
congestion, *(S) VMScluster Sys*, G–2
Hello timer, *(S) DECnet Mgmt*, 3–29
HELLO_INTERVAL system parameter, *(S) VMScluster Sys*, 3–20
Help, *(S) DECamds*, 2–1
for commands, *(G) User*, 2–23
for system messages, *(G) User*, 2–23
online, debugger, *(P) Debugger*, 1–17, 6–1, CD–127
online for Analyze Audit, *(S) Sys Mgmt Util A-L*, 4–27
POLYCENTER Software Installation utility, *(S) Sys Mgr Essentials*, 3–30, 3–35
HELP command, *(G) User*, 2–21; *(G) DCL A-M*, DCLI–236 to DCLI–243; *(S) DECnet Intro*, 3–33; *(S) DECnet Mgmt Util*, 3–42; *(P) File Appl*, 10–11; *(P) Debugger*, 6–1, CD–127; *(P) Alpha SDA*, SDA–55; *(P) VAX SDA*, SDA–62
in CLUE, *(S) Sys Mgmt Util A-L*, 8–8
in Install utility, *(S) Sys Mgmt Util A-L*, 11–11
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–16
in LATCP, *(S) Sys Mgmt Util A-L*, 13–22
in Mail, *(G) User*, 6–2
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–7
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–36
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–32
recording output, *(P) Alpha SDA*, SDA–70; *(P) VAX SDA*, SDA–75
Help desk
consulting service from Digital, *(S) Dependable*, 10–7
Help display
of default libraries, *(G) DCL A-M*, DCLI–237
Help facility, *(S) DECnet Mgmt Util*, 1–12
Help files, *(G) DCL A-M*, DCLI–236
comment lines in, *(P) CDU, LBR, & MU*, LIB–7
creating, *(P) CDU, LBR, & MU*, LIB–6, LIB–7
formatting, *(P) CDU, LBR, & MU*, LIB–7
qualifier lines in, *(P) CDU, LBR, & MU*, LIB–8
restrictions in, *(P) CDU, LBR, & MU*, LIB–6
Help libraries, *(P) Environment*, 8–4; *(P) CDU, LBR, & MU*, LIB–3, LIB–6
character case in, *(P) CDU, LBR, & MU*, LIB–4
creating, *(G) DCL A-M*, DCLI–236
decompressing, *(S) Alpha Perform*, 4–1
displaying text, *(P) Util Routines*, LBR–25
index keywords in, *(P) CDU, LBR, & MU*, LIB–6
key names in, *(P) CDU, LBR, & MU*, LIB–6, LIB–7
user, *(G) DCL A-M*, DCLI–240
HELP LIBRARY command
display, *(P) CDU, LBR, & MU*, LIB–9
HELP/MESSAGE command, *(G) User*, 2–23; *(G) DCL A-M*, DCLI–244 to DCLI–249; *(G) Help Msg*, 2–4
in a command procedure, *(G) Help Msg*, 2–1
qualifiers, *(G) Help Msg*, 2–4

Help Message utility (MSGHLP), *(G) Help Msg*, 2–1; *(G) SW Overview*, 5–4; *(S) Sys Mgr Essentials*, 5–25; *(P) Environment*, 4–2
accessing $STATUS values for uninstalled messages, *(S) Sys Mgr Essentials*, 5–26
adding .MSGHLP$DATA files to the database, *(S) Sys Mgr Essentials*, 5–28
at the user level, *(G) Help Msg*, 2–9
adding comments to the database, *(S) Sys Mgr Essentials*, 5–30
adding messages to the database
in user .MSGHLP$DATA files, *(G) Help Msg*, 2–10
changing Digital-supplied data
general users, *(G) Help Msg*, 2–13
changing user-supplied text in the database, *(G) Help Msg*, 2–12
compressing the database after deletions, *(G) Help Msg*, 2–11
creating a .MSGHLP$DATA file, *(G) Help Msg*, 2–10
creating a .MSGHLP file, *(G) Help Msg*, 2–8
customizing the database, *(G) Help Msg*, 2–8
using a process-level search path, *(G) Help Msg*, 2–9
default database, *(G) Help Msg*, 2–9
default operation, *(G) Help Msg*, 2–1
deleting messages from the database
Digital-supplied messages, *(S) Sys Mgr Essentials*, 5–29
user-supplied messages, *(G) Help Msg*, 2–11
facilities in the database, *(G) Help Msg*, 2–2
/FACILITY qualifier, *(G) Help Msg*, 2–7
features, *(G) Help Msg*, 2–1
HELP/MESSAGE command, *(G) Help Msg*, 2–4
invoking, *(G) User*, 2–23
/LIBRARY qualifier, *(G) Help Msg*, 2–9
matching exact words only, *(G) Help Msg*, 2–2
message section files
order searched, *(S) Sys Mgr Essentials*, 5–26
modifying the database
user-supplied data, *(G) Help Msg*, 2–10
search path of database files
as system default, *(S) Sys Mgr Essentials*, 5–28
in login file, *(G) Help Msg*, 2–9
specifying database files with /LIBRARY, *(G) Help Msg*, 2–9
system management tasks, *(S) Sys Mgr Essentials*, 5–25
Help modules
naming, *(P) CDU, LBR, & MU*, LIB–6
HELP parameter
use with LOOP CIRCUIT command, *(S) DECnet Mgmt*, 7–11
HELP phase of AUTOGEN, *(S) Sys Mgmt Util A-L*, 6–8
Help system, *(G) SW Overview*, 5–4
Help text
example of, *(P) CDU, LBR, & MU*, LIB–8
retrieving, *(P) CDU, LBR, & MU*, LIB–9
Hexadecimal dump, *(G) DCL A-M*, DCLI–190; *(P) Rec Mgmt Util*, 1–18
/HEXADECIMAL qualifier, *(P) Debugger*, 8–11, CD–98, CD–101, CD–105, CD–130
Hexadecimal value of an expression, *(P) Alpha SDA*, SDA–45; *(P) VAX SDA*, SDA–53
%HEX built-in symbol, *(P) Debugger*, 8–12, B–6
Hex password, *(S) DECnet Mgmt Util*, 1–9
Hibernation, *(P) Concepts*, 3–36
alternate method, *(P) Concepts*, 3–39
and AST, *(P) Concepts*, 4–6
compared with suspension, *(P) Concepts*, 3–37
LIB$WAIT, *(P) LIB$*, LIB–603
Hidden attribute, *(S) Security*, 4–21
Hide Nodes, *(S) DECamds*, 2–4
changing default behavior, *(S) DECamds*, 5–2
/HIDE qualifier, *(P) Debugger*, CD–88
Hierarchical Shelving Manager
See HSM
Hierarchical Storage Controller devices
See HSC devices
Hierarchical Storage Controller subsystems
See HSC subsystems
Higher-level language statements, *(S) DECnet Mgmt*, 1–18
High-level languages
argument evaluation, *(P) Calling Std*, 2–5
argument transmission, *(P) Calling Std*, 2–5
mapped into argument lists, *(P) Calling Std*, 2–5
Highlighting
changing default behavior, *(S) DECamds*, 5–2
customizing color, *(S) DECamds*, 5–2
filter, *(S) DECamds*, 2–7
Highly available computing, *(S) Dependable*, 1–1 to 1–3
High Sierra format
definition, *(S) Sys Mgr Essentials*, 8–4
on CD–ROM, *(S) Sys Mgr Essentials*, 8–4
High-speed terminal output, *(P) Rec Mgmt Util*, 6–9
Highwater marking, *(S) Security*, 5–12, 8–28
C2 systems and, *(S) Security*, C–9
disabling, *(S) Alpha Perform*, 4–2
disabling for system performance, *(S) Sys Mgr Tuning*, 16–7
disabling to improve system performance, *(S) VAX Perform*, 1–10
performance and, *(S) Security*, 8–29

Hints
calculating JSR hints, *(P) Linker*, B–41
History of installed software, *(S) Sys Mgmt Util M-Z*, 3–20
HLD (host loader), *(S) DECnet Mgmt*, 1–13, 2–25, 4–14
mapping table, *(S) DECnet Mgmt*, 4–16
HLDTB$ macro
mapping table, *(S) DECnet Mgmt*, 4–16
HNODE$ macro
target node, *(S) DECnet Mgmt*, 4–16
Holder Hidden attribute, *(S) Security*, 8–9; *(S) Sys Mgmt Util A-L*, 5–21, 5–29, 5–37; *(P) Concepts*, 23–5
Holder records, *(P) Concepts*, 23–8
adding, *(P) Concepts*, 23–12
adding to rights database, *(P) Sys Svc I*, SYS1–8
format, *(P) Concepts*, 23–9
modifying, *(P) Concepts*, 23–14
modifying in rights database, *(P) Sys Svc II*, SYS2–169
removing, *(P) Concepts*, 23–16
removing from rights database, *(P) Sys Svc II*, SYS2–249
Holders of an identifier
finding, *(P) Sys Svc I*, SYS1–381
Holders of a rights identifier
associating with identifier, *(S) Security*, 8–7
displaying records, *(S) Security*, 8–6
granting access to, *(S) Security*, 4–17
removing from rights database, *(S) Security*, 8–7
Holding a job, *(S) Sys Mgr Essentials*, 13–71
Holding job status, *(S) Sys Mgr Essentials*, 13–69, 13–79
/HOLD qualifier, *(P) Debugger*, 14–3, 14–7, 16–16, 16–20, 16–24, CD–193, CD–216, CD–268, CD–287
Home blocks, *(S) Sys Mgr Essentials*, 8–58; *(S) Sys Mgmt Util A-L*, 3–5; *(P) File Appl*, 1–6
in index file, *(S) Sys Mgr Tuning*, A–6
/HOMEBLOCKS qualifier
in Analyze/Disk_Structure utility, *(S) Sys Mgmt Util A-L*, 3–8
H operator, *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–16
Hops, *(S) DECnet Intro*, 1–3
routing term, *(S) DECnet Mgmt*, 2–21
Host
checking availability of, *(P) Sys Svc I*, SYS1–410
Host-based RAID
support for, *(G) V7.0 New Feat*, C–4
Host-based shadowing
support for, *(G) V7.0 New Feat*, C–4
Host-based shadow set
mounting disks, *(S) Sys Mgr Essentials*, 10–42
Host IDs
configuring for SCSI, *(G) V7.0 New Feat*, C–20
Host loader
See HLD
Hosts, *(S) TCP/IP*, 1–2, 2–3
addresses, *(S) TCP/IP*, 2–6
in a VMScluster system, *(G) V7.0 New Feat*, C–1
names, *(S) TCP/IP*, 2–6
Host services
DECnet, *(S) DECnet Mgmt*, 1–2, 1–12, 4–1
Hot plugging (SCSI devices), *(G) V7.0 New Feat*, C–38
Hot standby
in disaster tolerant configurations, *(S) Dependable*, 5–11
HP 4972 LAN Protocol Analyzer
distributed enable messages, *(S) VMScluster Sys*, F–35
distributed trigger messages, *(S) VMScluster Sys*, F–35
Distrib_Enable filter, *(S) VMScluster Sys*, F–34
Distrib_Trigger filter, *(S) VMScluster Sys*, F–34
filters, *(S) VMScluster Sys*, F–33
LAVc_all filter, *(S) VMScluster Sys*, F–33
LAVc_TR_ReXMT filter, *(S) VMScluster Sys*, F–33
partner program, *(S) VMScluster Sys*, F–37
programming, *(S) VMScluster Sys*, F–36
scribe program, *(S) VMScluster Sys*, F–38
starter program, *(S) VMScluster Sys*, F–36
HRD option, *(P) Rec Mgmt Util*, 4–7
HSC console terminals
C2 system requirements, *(S) Security*, C–6
C2 system restrictions, *(S) Security*, C–7
HSC devices
configuring during system startup, *(S) Sys Mgr Essentials*, 7–6
disabling configuration during system startup, *(S) Sys Mgr Essentials*, 7–8
dual-ported, *(S) VMScluster Sys*, 6–2, 6–4
HSC disk controllers, *(P) I/O User*, 2–2
HSC disks, *(S) VMScluster Sys*, 3–13; *(P) I/O User*, 2–11
and tapes, *(S) VMScluster Sys*, 1–3
dual-pathed, *(S) VMScluster Sys*, 6–12
HSC subsystems, *(G) SW Overview*, 1–8, 3–19; *(S) VMScluster Sys*, 1–3
changing allocation class values, *(S) VMScluster Sys*, 6–9, 8–40
served devices, *(S) VMScluster Sys*, 6–15
HSD subsystems, *(S) VMScluster Sys*, 1–3
assigning allocation classes on, *(S) VMScluster Sys*, 6–10

HSJ subsystems, *(S) VMScluster Sys*, 1–3
  assigning allocation classes on, *(S) VMScluster Sys*, 6–10
  changing allocation class values, *(S) VMScluster Sys*, 6–10, 8–40
  dual-ported devices, *(S) VMScluster Sys*, 6–4
HSM (Hierarchical Shelving Manager)
  not in C2 evaluation, *(S) Security*, C–3
H symbol, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18
HSZ subsystems, *(S) VMScluster Sys*, 1–3
HTASK$ macro, *(S) DECnet Mgmt*, 4–16
Human factors
  See also Personnel
  minimizing errors, *(S) Dependable*, 9–9
Humidity
  environmental factor of dependable computing, *(S) Dependable*, 5–3
HX+, *(P) Environment*, 2–6
Hyperapplications, *(G) SW Overview*, 5–7
Hyperbolic arc tangent, *(P) MTH$*, MTH–21, MTH–84
Hyperbolic cosine, *(P) MTH$*, MTH–50, MTH–88
Hyperbolic sine, *(P) MTH$*, MTH–101, MTH–133
Hyperbolic tangent, *(P) MTH$*, MTH–109, MTH–142
Hyperinformation environment, *(G) SW Overview*, 4–17, 5–7; *(P) Environment*, 2–4
Hypertext documents, *(S) TCP/IP*, 3–5
Hyphen (-)
  in a directory name, *(G) User*, 5–9
  line-continuation character, *(P) Debugger*, CD–4
  subtraction operator, *(P) Debugger*, B–8
hypot routine, *(P) Portable Math*, DPML–38, B–8
/H_FLOAT qualifier, *(P) Debugger*, CD–78, CD–105, CD–130

I

I/O (input/output), *(P) Modular Proc*, 2–15, A–3
  asynchronous, *(P) Modular Proc*, 3–21; *(P) Concepts*, 9–20
  at AST-level, *(P) Modular Proc*, 3–20
  average number of operations pending for a volume, *(S) DECamds*, 3–8
  BIO, *(S) DECamds*, 3–17, 3–24
    limit (BIOLM), *(S) DECamds*, 3–24
    limit remaining, *(S) DECamds*, 3–17
    wait state, *(S) DECamds*, 3–24
  byte limit remaining, *(S) DECamds*, 3–17
  checking device type, *(P) Concepts*, 9–28
  classes, *(S) DECamds*, 5–10
  complex, *(P) Concepts*, 7–2
  default data collection, *(S) DECamds*, 5–2
  DIO, *(S) DECamds*, 3–17, 3–24
    limit (DIOLM), *(S) DECamds*, 3–24
    limit remaining, *(S) DECamds*, 3–17
I/O (input/output)
  DIO (cont'd)
    wait state, *(S) DECamds*, 3–24
  echo, *(P) Concepts*, 7–39
  error messages, *(S) DECamds*, 3–17
  exit handler, *(P) Concepts*, 9–31
  Fault rate for pages, *(S) DECamds*, 3–12
  file, *(P) Modular Proc*, 2–16
  lowercase, *(P) Concepts*, 7–41
  open files, *(S) DECamds*, 3–17
  PIO, *(S) DECamds*, 3–17, 3–24
  process
    identifier (PID), *(S) DECamds*, 3–17
    summary, *(S) DECamds*, 3–16
  reading a single line, *(P) Concepts*, 7–4
  reading several lines, *(P) Concepts*, 7–5
  reducing on system disk, *(S) Sys Mgr Tuning*, 16–8
  screen updates, *(P) Concepts*, 7–30
  simple, *(P) Concepts*, 7–2
  status, *(P) Concepts*, 9–22
  summary for node, *(S) DECamds*, 3–14
  synchronous, *(P) Modular Proc*, 3–21; *(P) Concepts*, 9–18
  terminator, *(P) Concepts*, 7–4
    end of file, *(P) Concepts*, 9–31
    record, *(P) Concepts*, 9–31
  timeout, *(P) Concepts*, 7–40
  unsolicited input, *(P) Concepts*, 7–35
  uppercase, *(P) Concepts*, 7–41
  using SYS$QIO system service, *(P) Concepts*, 9–22
  using SYS$QIOW system service, *(P) Concepts*, 9–22
  writing simple character data, *(P) Concepts*, 7–6
I/O addresses, *(S) Sys Mgmt Util M-Z*, 5–30
I/O and performance, *(P) File Appl*, 3–1
I/O-bound processes, *(S) VAX Perform*, 3–30; *(S) Alpha Perform*, 11–2
I/O buffers
  pseudoterminal, *(P) I/O User*, 6–3
I/O channel indexes, *(P) Interfaces*, B–2
I/O channels, *(P) Concepts*, 9–11
  assigning, *(P) Sys Svc I*, SYS1–38
  deassigning, *(P) Concepts*, 9–24; *(P) Sys Svc I*, SYS1–240
I/O completion
  recommended test, *(P) Concepts*, 9–16
  status, *(P) Concepts*, 9–23
  synchronizing, *(P) Concepts*, 9–13
I/O counts, *(P) Rec Mgmt Util*, 2–17
I/O databases, *(S) Sys Mgmt Util M-Z*, 5–27
  displaying on Alpha systems, *(S) Sys Mgmt Util M-Z*, 6–40
  displaying SDA information, *(P) Alpha SDA*, SDA–93; *(P) VAX SDA*, SDA–104

I/O databases (cont'd)
global symbols, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–64
I/O devices
getting information asynchronously, *(P) Sys Svc I*, SYS1–406
getting information synchronously, *(P) Sys Svc I*, SYS1–426
I/O drivers
disk, *(P) I/O User*, 2–1
LAN drivers, *(P) I/O User*, 9–2
loading, *(S) Sys Mgmt Util M-Z*, 5–14
magnetic tape, *(P) I/O User*, 3–1
mailbox, *(P) I/O User*, 4–1
replacing with new version of, *(S) Sys Mgmt Util M-Z*, 5–15
I/O functions
See also Function codes
ACP-QIO interface, *(P) I/O User*, 1–2
codes, *(P) Concepts*, 9–10, 9–12; *(P) I/O User*, A–1
disk, *(P) I/O User*, 1–2, 2–27
for LAN driver, *(P) I/O User*, 9–24
list of, *(P) I/O User*, A–1
magnetic tape, *(P) I/O User*, 1–2, 3–9
mailbox, *(P) I/O User*, 4–5
modifier, *(P) Concepts*, 9–11
terminal, *(P) I/O User*, 5–27
I/O limitations, *(S) Alpha Perform*, 14–1 to 14–4
adding capacity, *(S) VAX Perform*, 4–29
compensating for, *(S) VAX Perform*, 5–12
device I/O rate below capacity, *(S) VAX Perform*, 4–25
direct I/O rate abnormally high, *(S) VAX Perform*, 4–27
for disk and tape operations, *(S) VAX Perform*, 4–24
isolating, *(S) VAX Perform*, 4–24
reducing demand, *(S) VAX Perform*, 4–29
I/O mode
how to switch for sequential files, *(P) RMS Ref*, A–34
procedure for delaying decision until stream connection, *(P) RMS Ref*, A–35
when mode switching allowed, *(P) RMS Ref*, A–34
I/O operations
device, *(P) Environment*, 10–1
file, *(P) Environment*, 10–1
logical, *(P) Concepts*, 9–6
over network, *(S) DECnet Intro*, 2–1
overview, *(P) Concepts*, 9–2
physical, *(P) Concepts*, 9–5
quotas, privileges, and protection, *(P) Concepts*, 9–2
remote, *(S) DECnet Intro*, 1–5
system services, *(P) Environment*, 10–6, 10–8
virtual, *(P) Concepts*, 9–6
I/O performance
using DECram, *(G) SW Overview*, 7–8
virtual I/O cache, *(G) SW Overview*, 3–11
I/O rates
determining, *(S) VAX Perform*, 4–25; *(S) Alpha Perform*, 14–2
I/O requests
canceling, *(P) Concepts*, 9–26; *(P) Sys Svc I*, SYS1–77
queuing, *(P) Concepts*, 9–12
queuing asynchronously, *(P) Sys Svc II*, SYS2–239
queuing synchronously, *(P) Sys Svc II*, SYS2–245
I/O services
asynchronous version, *(P) Concepts*, 9–18
synchronous version, *(P) Concepts*, 9–18
I/O statements
to access remote task, *(S) DECnet Intro*, 2–15
using to access remote files, *(S) DECnet Intro*, 2–12
I/O statistics
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–30
I/O status blocks
See IOSBs
I/O subsystem, *(G) SW Overview*, 3–1
connections, *(G) SW Overview*, 1–5
I/O system services, *(G) SW Overview*, 4–11
I/O unit, *(P) File Appl*, 3–9 to 3–14
IAB (Internet Architecture Board), *(S) TCP/IP*, 1–6, 3–1
IANs (index bucket area numbers)
program example, *(P) RMS Ref*, A–19
IAS nodes, *(S) DECnet Mgmt*, 9–2
IBM TN3270 terminal emulation, *(S) TCP/IP*, 3–2
ICBM
See IOGEN Configuration Building Module
ICBs (invocation context blocks), *(P) Interfaces*, B–10; *(P) Calling Std*, 3–31
ICCS register
displaying, *(P) VAX SDA*, SDA–96
ICMP (Internet Control Messaging Protocol), *(S) TCP/IP*, 2–7
ICONV commands
COMPILE, *(G) V7.0 New Feat*, B–6
CONVERT, *(G) V7.0 New Feat*, B–10
IDBs (interrupt dispatch blocks), *(P) Alpha SDA*, SDA–94; *(P) VAX SDA*, SDA–105
IDENT attribute, *(P) Rec Mgmt Util*, 4–37
IDENTIFICATION= option, *(P) Linker*, LINK–55
Identification record
ANALYZE/DISK_STRUCTURE, *(S) Sys Mgr Essentials*, 8–56

Identifier ACEs, *(S) Security*, 4–16 to 4–21, 13–4; *(S) Sys Mgmt Util A-L*, 1–13
types of identifiers, *(S) Sys Mgmt Util A-L*, 1–13
Identifier attributes, *(S) Security*, 8–8 to 8–11; *(P) Concepts*, 23–5
identifier data type, *(P) Interfaces*, B–10
Identifier fields
file, *(S) Sys Mgr Essentials*, 9–15; *(P) File Appl*, 1–26
file-set, *(P) File Appl*, 1–28
implementation, *(P) File Appl*, 1–25
owner, *(P) File Appl*, 1–25
volume, *(S) Sys Mgr Essentials*, 8–39; *(P) File Appl*, 1–25
Identifier names
translating, *(P) Concepts*, 23–11
translating to identifier, *(P) Sys Svc I*, SYS1–32
/IDENTIFIER qualifier, *(P) Debugger*, 10–6, CD–149
Identifier records, *(P) Concepts*, 23–8
adding to rights database, *(P) Concepts*, 23–12
format, *(P) Concepts*, 23–8
modifying, *(P) Concepts*, 23–13
removing from rights database, *(P) Concepts*, 23–16
Identifiers, *(P) Concepts*, 23–1, 23–2
adding record to rights list, *(P) Sys Svc II*, SYS2–101
adding to rights database, *(S) Security*, 8–6; *(P) Concepts*, 23–12
alias node, *(S) DECnet Intro*, 3–8
as directory owners, *(S) Security*, 8–21
as file owners, *(S) Security*, 5–9, 5–10
assigning to users, *(S) Security*, 8–7
attributes, *(P) Concepts*, 23–4, 23–5
auditing use of, *(S) Security*, 9–7
circuit, *(S) DECnet Intro*, 3–33
comparing, *(P) DECthreads*, pthread–63, G–49
creating, *(S) Security*, 4–17
customizing, *(S) Security*, 8–4
default, *(S) Sys Mgmt Util A-L*, 5–8
defining, *(P) Concepts*, 23–1
determining holders of, *(P) Concepts*, 23–13
displaying process, *(G) User*, 19–2; *(S) Security*, 4–4
downline load, *(S) DECnet Mgmt Util*, 3–45, 3–48
environmental, *(G) User*, 19–2; *(S) Security*, 4–3, 4–4, 8–4; *(S) Sys Mgr Essentials*, 11–10; *(S) Sys Mgmt Util A-L*, 1–13
facility, *(S) Security*, 4–4; *(P) Concepts*, 23–4
facility-specific, *(P) Concepts*, 23–4
finding, *(P) Sys Svc I*, SYS1–378
format, *(S) Security*, 4–3; *(P) Concepts*, 23–2
Identifiers (cont'd)
general, *(G) User*, 19–2; *(S) Security*, 4–3, 4–4, 4–17; *(S) Sys Mgr Essentials*, 11–10; *(S) Sys Mgmt Util A-L*, 1–13, 1–16; *(P) Concepts*, 23–2
global sections, *(P) Interfaces*, B–15
granting, *(S) Sys Mgmt Util A-L*, 1–13, 5–28
granting to a process, *(S) Sys Mgmt Util A-L*, 1–15
in ACEs, *(S) Security*, 4–16
line, *(S) DECnet Intro*, 3–33
modifying in rights database, *(P) Sys Svc II*, SYS2–172
node, *(S) DECnet Intro*, 3–33
of a process, *(S) Security*, 4–1
protected subsystems and, *(S) Security*, 13–6
removing, *(S) Security*, 8–7
removing from rights database, *(P) Concepts*, 23–16; *(P) Sys Svc II*, SYS2–251
renaming, *(S) Sys Mgmt Util A-L*, 5–45
reserved, *(S) Security*, 13–3
resource
and directory ownership, *(S) Sys Mgmt Util A-L*, 1–9
resource, directory ownership and, *(S) Security*, 8–16
revoking, *(S) Sys Mgmt Util A-L*, 5–45
revoking from process, *(P) Sys Svc II*, SYS2–260
rights, *(P) Interfaces*, B–15
rights database, *(P) Interfaces*, B–15
search string, *(P) Debugger*, 10–6
security audit reports and, *(S) Security*, 4–5
specifying characteristics of, *(S) Sys Mgmt Util A-L*, 1–16
specifying multiple pairs of, *(S) Sys Mgmt Util A-L*, 1–16
system-defined, *(S) Sys Mgr Essentials*, 11–10; *(P) Concepts*, 23–3
translating value to identifier name, *(P) Sys Svc II*, SYS2–110
types, *(S) Security*, 4–3; *(S) Sys Mgr Essentials*, 11–10; *(S) Sys Mgmt Util A-L*, 1–13
UIC, *(G) User*, 19–2; *(S) Security*, 4–3, 4–4; *(S) Sys Mgr Essentials*, 11–10
uniqueness requirement, *(S) Security*, 11–5
user, *(P) Interfaces*, B–15, B–16
Identifiers rights, *(S) Sys Mgmt Util M-Z*, 6–25
for disk quota file, *(S) Sys Mgmt Util M-Z*, 6–21
Identifier values
translating, *(P) Concepts*, 23–11
Identifying
business requirements, *(S) Dependable*, 1–4, 4–1
circuits, *(S) DECnet Mgmt*, 3–24
constraints, *(S) Dependable*, 1–5

Identifying (cont'd)
events, *(S) DECnet Mgmt*, 3–63
lines, *(S) DECnet Mgmt*, 3–36
node address, *(S) DECnet Mgmt*, 2–2, 3–7
node name, *(S) DECnet Mgmt*, 2–2, 3–7
objects, *(S) DECnet Mgmt*, 3–59
IDENT keyword, *(P) Rec Mgmt Util*, 4–37
IDENT statements, *(P) CDU, LBR, & MU*, CDU–15, CDU–37
IDL (Interface Definition Language), *(G) SW Overview*, 6–13; *(P) Environment*, 3–6
compiler, *(G) SW Overview*, 6–14
Idle mode, *(S) Alpha Perform*, 9–7
Idle processes, *(S) Alpha Perform*, 6–13
Idle queue status, *(S) Sys Mgr Essentials*, 13–51
/ID qualifier, *(P) VAX SDA*, SDA–148
IDXs (index descriptors), *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
IDX_NCMPR option, *(P) Rec Mgmt Util*, 4–27
IEEE (Institute of Electrical and Electronics Engineers), *(G) SW Overview*, 6–3, 6–10, A–1
definition of open system, *(G) SW Overview*, 2–1
POSIX standards, *(G) SW Overview*, 2–2
IEEE floating-point control register
setting, *(P) Sys Svc II*, SYS2–113
IETF (Internet Engineering Task Force), *(G) SW Overview*, 6–10
IFABs (internal file access blocks), *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
IF command, *(G) DCL A-M*, DCLI–250 to DCLI–252; *(P) Debugger*, 12–10, CD–128
using in command procedures, *(G) User*, 15–10
IFIs (internal file identifiers), *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
removing, *(P) Concepts*, 10–13
IFL
program example, *(P) RMS Ref*, A–19
If states, *(P) SMG$*, 3–3
composed input, *(P) Concepts*, 7–28
/IF_STATE qualifier, *(P) Debugger*, 12–9, CD–66; *(P) VAX SDA*, SDA–49
/IGNORE qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–34
Image
applying an ACE to, *(S) Sys Mgmt Util A-L*, 1–15
Image activation, *(P) File Appl*, 5–5
reducing, *(S) Alpha Perform*, 17–1
Image activator
description, *(P) Linker*, 1–4
global symbols, *(P) Alpha SDA*, SDA–15, SDA–61; *(P) VAX SDA*, SDA–64
GSMATCH processing, *(P) Linker*, LINK–53
performing image optimizations, *(P) Linker*, 4–11
shareable image ID processing, *(P) Linker*, LINK–53
Image backup
command format for disks, *(S) Sys Mgr Essentials*, 10–32
command format for tapes, *(S) Sys Mgr Essentials*, 10–31
definition, *(S) Sys Mgr Essentials*, 10–2; *(S) Sys Mgmt Util A-L*, 7–4
restoring files from, *(S) Sys Mgr Essentials*, 10–42
to disk, *(S) Sys Mgr Essentials*, 10–32
to tape, *(S) Sys Mgr Essentials*, 10–31, 10–32
Image exit, *(P) Sys Svc I*, SYS1–344
Image files, *(G) DCL A-M*, DCLI–22 to DCLI–24
invoking, *(G) DCL N-Z*, DCLII–12
Image I/O segments, *(P) Linker*, LINK–56
Image I/O structures, *(P) VAX SDA*, SDA–81
Image-level accounting, *(S) VAX Perform*, 3–3; *(S) Alpha Perform*, 7–3 to 7–5
collecting data, *(S) VAX Perform*, 3–4
IMAGELIB.OLB file, *(P) Concepts*, 17–5; *(P) Linker*, 2–13, LINK–14
included in image map files, *(P) Linker*, LINK–8
order of processing, *(P) Linker*, 2–18
processing by linker, *(P) Linker*, LINK–36, LINK–37
Image map files
brief, *(P) Linker*, 5–2, LINK–6
components of, *(P) Linker*, 5–2
creating, *(P) Linker*, 1–14, 5–1, LINK–20
default, *(P) Linker*, 5–2
full, *(P) Linker*, 5–2, LINK–14
image section synopsis, *(P) Linker*, 3–20, 5–4
image synopsis, *(P) Linker*, 5–10
linker's writing of, *(P) Linker*, 3–24
link run statistics, *(P) Linker*, 5–11
listing symbols by name, *(P) Linker*, 5–8
listing symbols by value, *(P) Linker*, 5–9
naming, *(P) Linker*, LINK–20
object module synopsis, *(P) Linker*, 5–3
verifying order of processing, *(P) Linker*, 2–17
program section synopsis, *(P) Linker*, 5–6
symbol characterization codes, *(P) Linker*, 5–9
symbols cross-reference section,. *(P) Linker*, 5–8, LINK–8
Image mode, *(S) Sys Mgmt Util A-L*, 7–35
/IMAGE qualifier, *(P) Alpha SDA*, SDA–59, SDA–155; *(P) VAX SDA*, SDA–179
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–35
Image Registry facility, *(S) Sys Mgr Essentials*, 5–22
Image rundown, *(P) Concepts*, 13–73
effect on logical names, *(P) Concepts*, 10–5
forcing, *(P) Sys Svc I*, SYS1–386
Images, *(G) SW Overview*, 3–1, 5–2
See also Executable images, Known images, Shareable images, and System images

Images (cont'd)
accounting, *(S) Sys Mgmt Util A-L*, 11–5, 11–8, 11–19
activation of, *(P) Linker*, LINK–52
activation of, analyzing, *(S) VAX Perform*, 4–5
activation of, reducing, *(S) VAX Perform*, 5–2
allocating memory for, *(P) Linker*, 3–17
base address of, in map, *(P) Linker*, 5–10
building for Alpha and VAX architectures, *(G) V7.0 New Feat*, 4–12
compiling for OpenVMS, *(P) DECthreads*, B–2
compression of, *(P) Util Routines*, DCX–1
concurrent access by multiple users, *(S) Sys Mgr Tuning*, 16–11
continuing execution of, *(G) DCL A-M*, DCLI–64
creating an image map file, *(P) Linker*, LINK–14, LINK–20
creating resident images, *(P) Linker*, LINK–26
default page size, *(P) Linker*, LINK–5
definition, *(S) Sys Mgr Tuning*, 16–9; *(S) Alpha Perform*, 5–1
determining frequency of use, *(S) Sys Mgr Tuning*, 16–15, 16–16
enhancing performance of installed images, *(P) Linker*, 1–16
executable, *(S) Sys Mgr Tuning*, 16–9, 16–14, 16–15
execute-only, *(S) Sys Mgr Tuning*, 16–15
executing in detached process, *(G) DCL N-Z*, DCLII–58
executing in subprocess, *(G) DCL N-Z*, DCLII–58
exiting, *(P) Concepts*, 3–41, 13–73
for subprocess, *(P) Concepts*, 1–9
header resident, *(S) Sys Mgr Tuning*, 16–10, 16–12; *(S) Sys Mgmt Util A-L*, 11–6, 11–8, 11–19
hibernation
See RUN command
I/O segment, *(P) Linker*, LINK–56
initialization of by linker, *(P) Linker*, 1–2
initializing, *(P) Linker*, 3–23
installing, *(S) Alpha Perform*, 4–2, 6–18
effect on RUN command, *(S) Sys Mgr Tuning*, 16–10
in system startup, *(S) Sys Mgr Essentials*, 5–4, 5–12, 5–13; *(S) Sys Mgr Tuning*, 16–10
reasons for, *(S) Sys Mgr Tuning*, 16–9
security ramifications, *(S) Security*, 8–14
subsystem images, *(S) Security*, 13–1, 13–3
to improve system performance, *(S) Sys Mgr Tuning*, 16–7
invoking with automatic foreign commands, *(G) User*, 14–38
invoking without using symbols, *(G) User*, 14–38

Images (cont'd)
known, *(S) Sys Mgr Tuning*, 16–10
installing, *(S) Alpha Perform*, 1–5
length of, in map, *(P) Linker*, 5–10
linkable, *(S) Sys Mgr Tuning*, 16–9
linking to OpenVMS, *(P) DECthreads*, B–3
loading site-specific, *(P) Concepts*, 23–26
naming, *(P) Linker*, LINK–13
operating with translated VAX images, *(P) Linker*, LINK–21
optimizing performance, *(P) Linker*, 1–3, 1–15, LINK–25
Alpha object language commands, *(P) Linker*, B–37
calculating JSR hints, *(P) Linker*, B–41
permanently open, *(S) Sys Mgr Tuning*, 16–10, 16–12
privileged, *(S) Sys Mgr Tuning*, 16–10, 16–13, 16–14; *(S) Sys Mgmt Util A-L*, 11–6, 11–9, 11–19
security caution, *(S) Sys Mgr Tuning*, 16–13
privileged, securing, *(P) Debugger*, 9–5
privileged shareable, *(S) Sys Mgr Tuning*, 16–14
protected, *(S) Sys Mgr Tuning*, 16–11, 16–14
protecting installed, *(S) Sys Mgr Tuning*, 16–15; *(S) Sys Mgmt Util A-L*, 11–7, 11–9, 11–19
redirecting output from, *(G) User*, 16–10
reducing the size of, *(P) Linker*, 3–25, LINK–10
relinking to improve system performance, *(S) Sys Mgr Tuning*, 16–7
resident, *(P) Linker*, 1–16
resident (Alpha), *(S) Sys Mgr Tuning*, 16–11
resuming execution of, *(G) DCL A-M*, DCLI–64
running, *(G) DCL N-Z*, DCLII–56
running in protected modes, *(S) Sys Mgr Tuning*, 16–11, 16–14
slicing on Alpha systems, *(S) Sys Mgr Tuning*, 16–12
specifying identification character string, *(P) Linker*, LINK–55
specifying size with the RUN command, *(G) DCL N-Z*, DCLII–62
specifying stack size, *(P) Linker*, LINK–62
specifying value of name field in image header, *(P) Linker*, LINK–58
specifying VAX in link operations, *(G) V7.0 New Feat*, 4–13
storing in contiguous disk blocks, *(P) Linker*, LINK–7
synopsis of in image map file, *(P) Linker*, 5–10
system version dependent
registering, *(S) Sys Mgr Essentials*, 5–22
terminating with EXIT command, *(G) DCL A-M*, DCLI–227
user-level

Images
user-level (cont'd)
calling of protected code, *(S) Sys Mgr Tuning*, 16–11, 16–14
using ANALYZE/IMAGE command to examine, *(P) Linker*, 1–12
writable, *(S) Sys Mgr Tuning*, 16–11
Image sections, *(P) Concepts*, 19–23, 20–25
attributes, *(P) Linker*, 3–18
demand-zero attribute, *(P) Linker*, 3–18
determined by program section attributes, *(P) Linker*, 3–12
binding address to, *(P) Linker*, LINK–27
controlling creation of, *(P) Linker*, 3–21
creating, *(P) Linker*, 3–9
creating from program sections, *(P) Linker*, 3–10
demand-zero, *(P) Linker*, LINK–10, LINK–50
determining the address of, *(P) Linker*, 3–18
determining the program sections in, *(P) Linker*, 3–16
examining with the ANALZYE/IMAGE utility, *(P) Linker*, 3–20
filling with binary information, *(P) Linker*, 3–23
fix-up, *(P) Linker*, 3–24
listed in map file, *(P) Linker*, 3–15, 3–20, 5–4
maximum number of, *(P) Linker*, LINK–57
order, in cluster, *(P) Linker*, 3–13
protection of, *(P) Linker*, LINK–59
specifying the base address of, *(P) Linker*, LINK–47
type designations, *(P) Linker*, 3–19
using CLUSTER= option to control, *(P) Linker*, 3–22
Image specification
effect of version number delimiter on overhead, *(P) File Appl*, 5–5
/IMAGES qualifier, *(P) Alpha SDA*, SDA–127; *(P) VAX SDA*, SDA–148
Images rundown, *(P) Concepts*, 3–42
IMAGE_MANAGEMENT.EXE file
global symbols, *(P) VAX SDA*, SDA–64
IMAGE_MANAGEMENT.STB file
global symbols, *(P) Alpha SDA*, SDA–61
IMGDEF.STB file, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–64
IMGIOCNT system parameter
overriding at link time, *(P) Linker*, LINK–56
Immediate value
Alpha argument item, *(P) Calling Std*, 3–48
definition, *(P) Calling Std*, 1–5
large, *(P) Calling Std*, 3–52
Implementation tables
Ada, *(P) Interfaces*, B–16
APL, *(P) Interfaces*, B–19
BASIC, *(P) Interfaces*, B–21
BLISS, *(P) Interfaces*, B–24
Implementation tables (cont'd)
C, *(P) Interfaces*, B–27
COBOL, *(P) Interfaces*, B–30
Fortran, *(P) Interfaces*, B–33
MACRO, *(P) Interfaces*, B–37
OpenVMS usage, *(P) Interfaces*, B–1
Pascal, *(P) Interfaces*, B–40
PL/I, *(P) Interfaces*, B–43
RPG II, *(P) Interfaces*, B–49
SCAN, *(P) Interfaces*, B–51
IMPORT privilege, *(S) Security*, A–8
Inbound logical link connections, *(S) DECnet Mgmt*, 1–21
INBOUND parameter
for node type specification, *(S) DECnet Intro*, 3–26
/INCLUDE qualifier, *(P) Linker*, LINK–17
effect on symbol resolution processing, *(P) Linker*, 2–13
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–22
specified with the /LIBRARY qualifier, *(P) Linker*, 2–13
specifying libraries as linker input, *(P) Linker*, 1–9
Incoming LAT connections, *(S) Sys Mgmt Util A-L*, 13–27
INCOMING PROXY parameter, *(S) DECnet Mgmt*, 2–35
Incremental backup
command format for disks, *(S) Sys Mgr Essentials*, 10–35
command format for tapes, *(S) Sys Mgr Essentials*, 10–34
definition, *(S) Sys Mgr Essentials*, 10–2; *(S) Sys Mgmt Util A-L*, 7–4
restoring files from, *(S) Sys Mgr Essentials*, 10–44
to disk, *(S) Sys Mgr Essentials*, 10–34
to tape, *(S) Sys Mgr Essentials*, 10–33
Incremental mode
restoring files, *(S) Sys Mgmt Util A-L*, 7–37
/INCREMENTAL qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–37
Independently recoverable system kernels, *(S) Dependable*, 4–6
Independently recoverable units
See IRUs
Independent processes paradigm, *(S) Dependable*, 8–14
Index bucket area numbers
See IANs
INDEX BUCKET structure, *(P) File Appl*, 10–18
Index compression
prohibition against using, *(P) File Appl*, 4–8
restrictions, *(P) File Appl*, 3–2, 3–19, 3–26

Index depth, *(P) File Appl*, A–2
INDEXED attribute, *(P) Rec Mgmt Util*, 4–21
Indexed files, *(P) File Appl*, 2–19, 3–18
  advantages of using, *(P) File Appl*, 2–25
  allocating, *(P) File Appl*, A–1
  alternate key, *(P) File Appl*, 2–20
  bit map, *(P) File Appl*, 1–7
  block allocation, *(P) RMS Ref*, 7–3
  bucket size, *(P) File Appl*, 3–10, 3–25, 7–18, A–1
  bucket size for multiple areas, *(P) RMS Ref*, RMS–15
  buffering, *(P) File Appl*, 7–18, 7–19
  composition, *(P) RMS Ref*, RMS–19
  compression, *(P) Rec Mgmt Util*, 4–27; *(P) File Appl*, 3–2, 3–19, 3–26
  creating, *(P) RMS Ref*, RMS–19
  creating with multiple keys, *(P) RMS Ref*, A–16
  default bucket size, *(P) RMS Ref*, 4–4
  deferred-write option with, *(P) File Appl*, 3–11
  designing, *(P) File Appl*, 3–18 to 3–28
  determining keys and areas, *(P) RMS Ref*, 16–1
  determining key size, *(P) RMS Ref*, 6–4
  determining key value, *(P) RMS Ref*, RMS–50
  determining maximum record size, *(P) RMS Ref*, 4–22
  determining number of buffers, *(P) RMS Ref*, 6–7
  disadvantages of using, *(P) File Appl*, 2–25
  duplicate keys, *(P) Rec Mgmt Util*, 4–26
  establishing index, *(P) RMS Ref*, RMS–7
  examining, *(P) File Appl*, 10–16
  example of processing duplicate keys, *(P) RMS Ref*, 6–9
  example of specifying, *(P) RMS Ref*, A–5
  extend size, *(P) File Appl*, 3–6
  fast delete option, *(P) RMS Ref*, 6–16
  fill factor, *(P) File Appl*, 3–10
  global buffers, *(P) File Appl*, 7–19
  identifying data area, *(P) RMS Ref*, 12–3
  INDEXF.SYS, *(P) File Appl*, 1–6
  inhibiting index update, *(P) RMS Ref*, 12–12
  initial extent quantity, *(P) RMS Ref*, 4–3
  inserting records with Put service, *(P) RMS Ref*, RMS–75
  invoking Get and Find services for, *(P) RMS Ref*, 6–3
  key of reference, *(P) RMS Ref*, 6–3
  key type, *(P) File Appl*, 2–20
  level 1 index, *(P) Rec Mgmt Util*, 4–27
  loading, *(P) Rec Mgmt Util*, 2–8
  making contiguous, *(P) File Appl*, 10–28
  methods of accessing records, *(P) RMS Ref*, 6–5
  optimizing performance, *(P) File Appl*, 3–18 to 3–28
  options, *(P) RMS Ref*, 6–11
Indexed files (cont'd)
  organization, *(P) File Appl*, 1–2
  positioning area, *(P) RMS Ref*, 7–6
  primary key, *(P) File Appl*, 2–20
  Prolog 1 files and Prolog 2 files, *(P) File Appl*, 3–19
  prolog selection, *(P) RMS Ref*, RMS–20
  reclaiming buckets in, *(P) File Appl*, 10–28
  record access, *(P) File Appl*, 8–9 to 8–14
  redesigning, *(P) File Appl*, 10–26
  reformatting, *(P) Rec Mgmt Util*, 2–1
  reorganizing, *(P) File Appl*, 10–28
  restriction against VFC format, *(P) RMS Ref*, 4–18
  restriction to changing primary key, *(P) RMS Ref*, RMS–105
  run-time options, *(P) File Appl*, 9–11, 9–12
  selection of default extension quantity, *(P) File Appl*, 3–6
  separating index levels, *(P) RMS Ref*, 12–11
  size of data bucket, *(P) RMS Ref*, 12–4
  specifying bucket size, *(P) RMS Ref*, 4–4, 7–4
  specifying index area, *(P) RMS Ref*, 12–9
  specifying index bucket size, *(P) RMS Ref*, 12–10
  string key options, *(P) RMS Ref*, 12–8
  structure, *(P) Rec Mgmt Util*, 1–1, 1–3, 4–28
  tuning, *(P) File Appl*, 3–18 to 3–28
  update-if option, *(P) RMS Ref*, 6–18
  use of areas in, *(P) RMS Ref*, A–19
  use of end-of-file option, *(P) RMS Ref*, RMS–7
  verifying sort order, *(P) RMS Ref*, RMS–7
  with allocation options, *(P) RMS Ref*, 4–14
  with collating sequences, *(P) RMS Ref*, 12–3
  with deferred-write option, *(P) RMS Ref*, RMS–12
  with Get service, *(P) RMS Ref*, RMS–50
  with global buffers, *(P) File Appl*, 3–28
  with XABKEY, *(P) RMS Ref*, 12–1
/INDEXED qualifier, *(P) File Appl*, 7–19
Index entries
  ordering, *(P) File Appl*, 2–5
Indexes
  creating source file with DSR, *(G) DCL N-Z*, DCLII–68
Index files, *(S) Sys Mgr Tuning*, A–4 to A–8
  in volume sets, *(S) Sys Mgr Essentials*, 8–32
  placing on disk, *(G) DCL A-M*, DCLI–258
Indexing
  backward, *(P) MTH$*, 2–6
  forward, *(P) MTH$*, 2–6
Index keywords
  in help libraries, *(P) CDU, LBR, & MU*, LIB–6
Index levels, *(P) Rec Mgmt Util*, 4–5
  comparing primary key and alternate keys, *(P) RMS Ref*, 12–10
  number of, *(P) File Appl*, A–2

/INDEX qualifier, *(P) Alpha SDA*, SDA–72, SDA–127; *(P) VAX SDA*, SDA–77, SDA–148
Index records, *(P) Rec Mgmt Util*, 4–5
Index structures, *(P) File Appl*, 3–18, 3–25
  Level 0, *(P) File Appl*, 3–20
  Level 1, *(P) File Appl*, 3–20
  primary, *(P) File Appl*, 3–20
INDEX_AREA attribute, *(P) Rec Mgmt Util*, 4–26, 4–27; *(P) File Appl*, 3–25
INDEX_COMPRESSION attribute, *(P) Rec Mgmt Util*, 4–5, 4–27
INDEX_FILL attribute, *(P) Rec Mgmt Util*, 4–5, 4–27
INDEX_SPACE_OCCUPIED attribute, *(P) Rec Mgmt Util*, 4–5
Indirection operator
  See Contents-of operator
Industry standards
  OpenVMS support, *(P) Environment*, 2–2
/INFORMATIONALS qualifier, *(P) Linker*, LINK–18
Information management, *(G) SW Overview*, 7–15
Infoserver, *(G) SW Overview*, 1–6, 3–13, 6–8
InfoServer
  automatic service, *(S) Sys Mgr Tuning*, 23–4
  availability, *(S) Sys Mgr Tuning*, 23–4
  backing up system disks, *(S) Sys Mgr Essentials*, 10–60
  commands, *(S) Sys Mgr Tuning*, 23–7
  console terminal, *(S) Sys Mgr Tuning*, 23–6
  determining default server name, *(S) Sys Mgr Tuning*, 23–6
  downline loading with, *(S) Sys Mgr Tuning*, 23–2
  fail over, *(S) Sys Mgr Tuning*, 23–4
  functions, *(S) Sys Mgr Tuning*, 23–1
  Help facility, *(S) Sys Mgr Tuning*, 23–8
  load balancing, *(S) Sys Mgr Tuning*, 23–6
  local connections, *(S) Sys Mgr Tuning*, 23–6
  management session, ending, *(S) Sys Mgr Tuning*, 23–7
  mounting devices
    in system startup, *(S) Sys Mgr Tuning*, 23–14
  multicast address feature, *(S) Sys Mgr Tuning*, 23–5
  protocols, *(S) Sys Mgr Tuning*, 23–5
  quick access to duplicate services for clients, *(S) Sys Mgr Tuning*, 23–4
  relationship to client systems, *(S) Sys Mgr Tuning*, 23–2
  remote connections, *(S) Sys Mgr Tuning*, 23–6
  removing media, *(S) Sys Mgr Tuning*, 23–4
  server name, *(S) Sys Mgr Tuning*, 23–6
  service disconnection, *(S) Sys Mgr Tuning*, 23–4
InfoServer (cont'd)
  setting up in system startup, *(S) Sys Mgr Tuning*, 23–10
  starting a session, *(S) Sys Mgr Tuning*, 23–6
  support for X terminals, *(S) Sys Mgr Tuning*, 23–4
  system overview, *(S) Sys Mgr Tuning*, 23–1
  virtual device server, *(S) Sys Mgr Tuning*, 23–1
  virtual device units, *(S) Sys Mgr Tuning*, 23–13
  X terminal client, *(S) Sys Mgr Tuning*, 23–4
InfoServer Client for OpenVMS
  components, *(S) Sys Mgr Tuning*, 23–8
  functions, *(S) Sys Mgr Tuning*, 23–8
  mounting devices
    in system startup, *(S) Sys Mgr Essentials*, 5–13
  setting up in system startup, *(S) Sys Mgr Essentials*, 5–13
  software, *(S) Sys Mgr Tuning*, 23–9
    starting automatically, *(S) Sys Mgr Tuning*, 23–10
    startup restrictions, *(S) Sys Mgr Tuning*, 23–12
InfoServer password, *(S) Sys Mgr Tuning*, 23–6
Inherit scheduling attribute, *(P) DECthreads*, 2–4, E–22
  obtaining, *(P) DECthreads*, pthread–10, G–10
  usefulness, *(P) DECthreads*, pthread–24, E–28, G–17
Initialization
  argument list, *(P) Concepts*, 16–5
  at run time, *(P) Modular Proc*, 3–13
  debugging session, *(P) Debugger*, 2–4, 5–7, 13–15
  erasing home blocks, *(S) Sys Mgmt Util A-L*, 3–8
  one-time, *(P) DECthreads*, pthread–99, tis–23, E–62, G–70
  using LIB$INITIALIZE, *(P) Modular Proc*, 3–13
  volume from within a program, *(P) Concepts*, 9–36
    example, *(P) Concepts*, 9–36
Initialization code, *(P) Debugger*, 2–4, 13–18
  global symbols, *(P) Alpha SDA*, SDA–61
Initialization files, *(G) User*, 6–21
  creating, *(S) Sys Mgr Tuning*, 20–15; *(S) Sys Mgmt Util M-Z*, 4–48
  debugger, *(P) Debugger*, 12–4, B–1
  default specification, *(S) Sys Mgmt Util M-Z*, 6–4
  establishing SHOW CLUSTER reports, *(S) Sys Mgr Tuning*, 20–5
  establish SHOW CLUSTER report, *(S) Sys Mgmt Util M-Z*, 4–4
  SHOW CLUSTER
    creating, *(S) Sys Mgr Tuning*, 20–14

Initialization files (cont'd)
SHOW_CLUSTER$INIT, *(S) Sys Mgr Tuning*, 20–14, 20–15
use with SYSMAN, *(S) Sys Mgr Essentials*, 2–19; *(S) Sys Mgmt Util M-Z*, 6–4
Initialization macros
example, *(P) RMS Ref*, A–5
functions, *(P) RMS Ref*, A–1
multiple bit field, *(P) RMS Ref*, A–5
placement guidelines, *(P) RMS Ref*, A–7
using, *(P) RMS Ref*, A–6
Initialization of system
in a multiprocessing system, *(S) Sys Mgr Tuning*, 26–2
Initialization procedures, *(S) Sys Mgmt Util A-L*, D–1
Initialization routines
declaring, *(P) Concepts*, 16–6
dispatching, *(P) Concepts*, 16–6
one-time, *(P) DECthreads*, 2–13
options, *(P) Concepts*, 16–7
/INITIALIZE=CONTINUATION qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–23
INITIALIZE command, *(G) User*, 12–4; *(G) DCL A-M*, DCLI–253 to DCLI–262; *(P) I/O User*, 3–22
creating volume identifiers for continuation volumes, *(S) Sys Mgr Essentials*, 8–39
disk volumes, *(S) Sys Mgr Essentials*, 8–11
/ERASE qualifier, *(S) Security*, 5–12
Files–11 On-Disk Structure, *(G) User*, 12–5
for formatting page and swap file disks during system startup, *(S) Sys Mgr Essentials*, 5–6
format, *(G) User*, 12–5
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–8
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–37
mounting volume sets, *(S) Sys Mgr Essentials*, 8–39
qualifiers, *(S) Sys Mgr Essentials*, 8–12
setting device protection, *(S) Sys Mgr Essentials*, 8–16
tape volumes, *(S) Sys Mgr Essentials*, 9–12, 9–22
tape volumes, *(S) Sys Mgr Essentials*, 9–21, 9–22
to format and write label to volume, *(S) Sys Mgr Essentials*, 8–11
window size and, *(P) File Appl*, 9–8
/INITIALIZE qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–39
INITIALIZE/QUEUE command, *(G) DCL A-M*, DCLI–263 to DCLI–277; *(S) Sys Mgr Essentials*, 13–16, 13–48
activating autostart queues, *(S) Sys Mgr Essentials*, 13–15, 13–49
INITIALIZE/QUEUE command (cont'd)
assigning a default form, *(S) Sys Mgr Essentials*, 13–63
assigning characteristics, *(S) Sys Mgr Essentials*, 13–59
canceling characteristics, *(S) Sys Mgr Essentials*, 13–59
controlling page overflow, *(S) Sys Mgr Essentials*, 13–44
creating a generic queue, *(S) Sys Mgr Essentials*, 13–17
mounting a form, *(S) Sys Mgr Essentials*, 13–64
setting block limits, *(S) Sys Mgr Essentials*, 13–32
setting scheduling policy, *(S) Sys Mgr Essentials*, 13–32
setting UIC-based protection on queues, *(S) Sys Mgr Essentials*, 13–23
specifying autostart information, *(S) Sys Mgr Essentials*, 13–15
specifying banner pages, *(S) Sys Mgr Essentials*, 13–60
specifying job processing options, *(S) Sys Mgr Essentials*, 13–31
specifying queue options, *(S) Sys Mgr Essentials*, 13–19
specifying reset modules, *(S) Sys Mgr Essentials*, 13–65
starting a nonautostart queue, *(S) Sys Mgr Essentials*, 13–16
Initializing, *(P) Modular Proc*, 3–8, A–3
condition variable, *(P) DECthreads*, pthread–41, tis–6, E–37, G–34
DDCMP node, *(S) DECnet Mgmt*, 1–8
disk volumes, *(G) User*, 12–5
Ethernet node, *(S) DECnet Mgmt*, 1–4
images, *(P) Linker*, 1–2, 3–23
magnetic tape volumes, *(G) User*, 12–5
modular procedures, *(P) Modular Proc*, 3–8
Phase III node, *(S) DECnet Mgmt*, 2–29
queues, *(G) DCL A-M*, DCLI–263; *(S) Sys Mgr Essentials*, 13–15
readers/writer lock, *(P) DECthreads*, tis–31
storage, *(P) Modular Proc*, 3–9
tapes
using REPLY/BLANK_TAPE, *(G) DCL N-Z*, DCLII–44
using REPLY/INITIALIZE_TAPE, *(G) DCL N-Z*, DCLII–44
thread attributes object, *(P) DECthreads*, pthread–18
threads routines, *(P) DECthreads*, E–51
using LIB$INITIALIZE, *(P) Modular Proc*, A–3
volumes, *(G) User*, 12–4; *(G) DCL A-M*, DCLI–253
assisting users, *(S) Sys Mgr Essentials*, 8–14

Initializing
volumes (cont'd)
disk volumes, *(S) Sys Mgr Essentials*, 8–10, 8–13
results of, *(S) Sys Mgr Essentials*, 10–13
tape volumes, *(S) Sys Mgr Essentials*, 9–5
Initializing a volume
from within a program, *(P) Sys Svc II*, SYS2–118
INITIAL mode, *(S) Sys Mgmt Util A-L*, 6–8
INITIAL phase of system startup, *(S) Sys Mgr Essentials*, 5–4, 5–18
Inline code, *(P) Calling Std*, 3–62
Input
debugger, DBG$DECW$DISPLAY, *(P) Debugger*, 2–8, B–1
debugger, DBG$INPUT, *(P) Debugger*, 2–9, 13–14, B–1
prompting for from command procedures, *(G) User*, 16–6
to batch jobs, *(G) User*, 18–13
Input address arrays, *(P) Concepts*, 19–9, 20–8
Input an existing PCF, *(S) Sys Mgr Essentials*, 3–30
Input converter
DDIF, *(G) DCL A-M*, DCLI–67
DTIF, *(G) DCL A-M*, DCLI–68
Text, *(G) DCL A-M*, DCLI–69
Input data stream
marking beginning of, *(G) DCL A-M*, DCLI–117
marking end of, *(G) DCL A-M*, DCLI–211
Input files
concatenating, *(P) Rec Mgmt Util*, 2–5
security audit log files, *(S) Sys Mgmt Util A-L*, 4–4
temporary defaults in a parameter list, *(G) User*, 5–6
Input file specifications
default file types, *(P) CDU, LBR, & MU*, LIB–13
Input/output
See I/O, I/O operations
/INPUT qualifier, *(P) Debugger*, 11–20, CD–152, CD–199, CD–297; *(P) Alpha SDA*, SDA–158; *(P) VAX SDA*, SDA–183
Input specifier
to the BACKUP command, *(S) Sys Mgr Essentials*, 10–4
Input streams
defining for created process, *(G) DCL N-Z*, DCLII–58
switching control to other processes, *(G) DCL A-M*, DCLI–50; *(S) Sys Mgmt Util M-Z*, 6–13
Input symbiont for card reader
running interactively, *(S) Sys Mgr Essentials*, 7–18
INQUIRE command, *(G) DCL A-M*, DCLI–278 to DCLI–280
compared to READ command, *(G) User*, 16–6
using in command procedures, *(G) User*, 15–9
with symbols and batch jobs, *(G) User*, 16–7
Insertion operations, *(P) SMG$*, 2–8
Insert mode
definition, *(G) User*, 3–16
INSTALL (Install utility)
See Install utility
Installation
configuring SCSI node IDs, *(G) V7.0 New Feat*, C–20
SCSI VMScluster systems, *(G) V7.0 New Feat*, C–19
Installation procedures
See also VMSINSTAL.COM command procedure
asynchronous connection, *(S) DECnet Intro*, 3–19
completing, *(S) Sys Mgr Essentials*, 3–13
definition, *(S) Sys Mgr Essentials*, 3–4
for DECnet network, *(S) DECnet Intro*, 3–1, 3–9
on Alpha systems, *(S) Sys Mgr Essentials*, 3–2
to run VAX system as a C2 system, *(S) Sys Mgr Essentials*, 3–5
verification of successful network, *(S) DECnet Intro*, 3–31
Installation requirements, *(S) DECamds*, A–2 to A–4
Installation Verification Procedure
See IVP
INSTALL command, *(G) DCL A-M*, DCLI–281
in SYSGEN, *(S) Sys Mgr Tuning*, 15–19; *(S) Sys Mgmt Util M-Z*, 5–13
in system startup, *(S) Sys Mgr Essentials*, 5–7
Installed files
See Known images
Installing DECamds
Alpha, *(S) DECamds*, A–4 to A–6
kit location, *(S) DECamds*, A–1
post-installation tasks, *(S) DECamds*, A–13
preparation, *(S) DECamds*, A–1
requirements, *(S) DECamds*, A–2
VAX, *(S) DECamds*, A–6 to A–15
Installing images, *(S) Sys Mgr Tuning*, 16–16
See also Known images
effect on RUN command, *(S) Sys Mgr Tuning*, 16–10
enhancing performance of, *(P) Linker*, 1–16
in SYSTARTUP_VMS.COM, *(S) Sys Mgr Essentials*, 5–13
link-time considerations, *(P) Linker*, 1–16
resident images, *(P) Linker*, LINK–26

Installing page and swap files
in system startup, *(S) Sys Mgr Essentials*, 5–6; *(S) Sys Mgr Tuning*, 15–5, 15–19, 15–21
with AUTOGEN, *(S) Sys Mgr Tuning*, 15–18, 15–22
with SYPAGSWPFILES.COM command procedure, *(S) Sys Mgr Tuning*, 15–19
with SYSGEN, *(S) Sys Mgr Tuning*, 15–19
Installing shareable images, *(P) Linker*, 1–8
creating resident shareable images, *(P) Linker*, 1–16
enhancing performance of, *(P) Linker*, 4–11
Installing software
See also POLYCENTER Software Installation utility
See also VMSINSTAL.COM command procedure
as a batch job, *(S) Sys Mgr Essentials*, 3–32
completing procedure, *(S) Sys Mgr Essentials*, 3–13
creating a new PCF during, *(S) Sys Mgr Essentials*, 3–30
DECnet for OpenVMS license, *(S) DECnet Mgmt*, 6–1
deinstalling software, *(S) Sys Mgr Essentials*, 3–34
getting product information, *(S) Sys Mgmt Util M-Z*, 3–20
identifying kit location, *(S) Sys Mgr Essentials*, 3–28
layered products, *(S) VMScluster Sys*, 4–6
logging file activity, *(S) Sys Mgr Essentials*, 3–17
managing installed software, *(S) Sys Mgr Essentials*, 3–34
multiple products at once, *(S) Sys Mgr Essentials*, 3–29
network, *(S) DECnet Mgmt*, 6–1
noncompliant products, *(S) Sys Mgr Essentials*, 3–27
on alternate disk, *(S) Sys Mgr Essentials*, 3–12
OpenVMS Alpha systems, *(G) SW Overview*, 3–7
OpenVMS VAX systems, *(G) SW Overview*, 3–7
POLYCENTER Software Installation utility, *(S) Sys Mgmt Util M-Z*, 3–11
preparing for installation, *(S) Sys Mgr Essentials*, 3–6
reconfiguring product options, *(S) Sys Mgr Essentials*, 3–32
removing installed software, *(S) Sys Mgr Essentials*, 3–34
responding to questions during installation, *(S) Sys Mgr Essentials*, 3–30
shutting down DECnet, *(S) Sys Mgr Essentials*, 3–7
specifying source and destination locations, *(S) Sys Mgr Essentials*, 3–28
Installing software (cont'd)
supplying answers from a PCF, *(S) Sys Mgr Essentials*, 3–30
tracking dependencies, *(S) Sys Mgr Essentials*, 3–27
using a PCF for consistency, *(S) Sys Mgr Essentials*, 3–22
Install utility (INSTALL), *(S) Sys Mgmt Util A-L*, 11–4; *(S) Alpha Perform*, 6–18
alarms, *(S) Security*, D–5
and version checking, *(S) Sys Mgr Essentials*, 5–23
auditing changes made through, *(S) Security*, 9–7
commands, *(S) Sys Mgmt Util A-L*, 11–5 to 11–20
ADD, *(S) Sys Mgmt Util A-L*, 11–5
CREATE, *(S) Sys Mgmt Util A-L*, 11–8
DELETE, *(S) Sys Mgmt Util A-L*, 11–10
EXIT, *(S) Sys Mgmt Util A-L*, 11–11
HELP, *(S) Sys Mgmt Util A-L*, 11–11
LIST, *(S) Sys Mgmt Util A-L*, 11–12
PURGE, *(S) Sys Mgmt Util A-L*, 11–17
REMOVE, *(S) Sys Mgmt Util A-L*, 11–18
REPLACE, *(S) Sys Mgmt Util A-L*, 11–18
determining number frequency of image use, *(S) Sys Mgr Tuning*, 16–15, 16–16
exiting, *(S) Sys Mgmt Util A-L*, 11–4
improving system performance, *(S) Sys Mgr Tuning*, 16–7, 16–9, 16–10
installing images, *(S) VAX Perform*, 1–11
invoking, *(S) Sys Mgmt Util A-L*, 11–4
listing number of concurrent file accesses, *(S) Sys Mgr Tuning*, 16–8
making images header resident, *(S) Sys Mgr Tuning*, 16–10, 16–12
making images privileged, *(S) Sys Mgr Tuning*, 16–10, 16–14
permanently open images, *(S) Sys Mgr Tuning*, 16–10, 16–12
reasons for using, *(S) Sys Mgr Tuning*, 16–9
/RESIDENT qualifier on Alpha, *(S) Sys Mgr Tuning*, 16–13
security ramifications, *(S) Security*, 8–14, 13–1
slicing feature on Alpha, *(S) Sys Mgr Tuning*, 16–13
Institute of Electrical and Electronics Engineers
See IEEE
Instruction memory barriers, *(P) Concepts*, 14–10
/INSTRUCTION qualifier, *(P) Debugger*, 11–9, 11–20; *(P) Alpha SDA*, SDA–48; *(P) VAX SDA*, SDA–55
on ACTIVATE BREAK command, *(P) Debugger*, CD–9
on ACTIVATE TRACE command, *(P) Debugger*, CD–12
on CANCEL BREAK command, *(P) Debugger*, CD–23

/INSTRUCTION qualifier (cont'd)
on CANCEL TRACE command, *(P) Debugger*, CD–37
on DEACTIVATE BREAK command, *(P) Debugger*, CD–54
on DEACTIVATE TRACE command, *(P) Debugger*, CD–56
on DEPOSIT command, *(P) Debugger*, CD–78
on EXAMINE command, *(P) Debugger*, CD–105
on MONITOR command, *(P) Debugger*, CD–131
on SELECT command, *(P) Debugger*, CD–152
on SET BREAK command, *(P) Debugger*, CD–160
on SET TRACE command, *(P) Debugger*, CD–222
on STEP command, *(P) Debugger*, CD–299
Instruction-related commands
Alpha object language, *(P) Linker*, B–37
Instructions
See also Vector instructions
compiler built-ins for Alpha assembly language, *(P) 64-Bit Addr*, 9–7
depositing, *(P) Debugger*, 8–19, 8–21
display, *(P) Debugger*, 3–26, 8–19, 11–7, 14–15
for routine on call stack, *(P) Debugger*, 3–23, 11–9, CD–201
display kind, *(P) Debugger*, 11–16
EXAMINE/INSTRUCTION command, *(P) Debugger*, 8–19, 11–8, 11–9
EXAMINE/OPERANDS command, *(P) Debugger*, 8–19
examining, *(P) Debugger*, 8–19, 11–7
operand, *(P) Debugger*, 8–19, CD–106, CD–183
optimized code, *(P) Debugger*, 3–26, 11–7, 13–1
queue, *(P) Concepts*, 14–14
SET SCOPE/CURRENT command, *(P) Debugger*, 11–9, CD–201
window, *(P) Debugger*, 3–26
Instruction view, *(P) Debugger*, 1–10
%INST_SCOPE, *(P) Debugger*, 11–8
Inswapping
reducing rate, *(S) VAX Perform*, 5–10; *(S) Alpha Perform*, 17–9
Integer and floating-point routines, *(P) Concepts*, 6–12
Integer overflow, *(P) LIB$*, LIB–331
Integer register usage, *(P) Interfaces*, 2–2; *(P) Calling Std*, 3–1
Integers
See Numbers
Integer types, *(P) Debugger*, 3–15, 8–15, 8–25, 8–27
Integrated storage elements
See ISEs
Integrating procedures, *(P) Modular Proc*, 5–1
Integration
data, *(G) SW Overview*, 7–18
multivendor, *(G) SW Overview*, 1–2, 6–8; *(P) Environment*, 3–2
Integration testing, *(P) Modular Proc*, 4–1, 4–5
Interactive accounts, *(S) Security*, 7–4
Interactive help, *(G) DCL A-M*, DCLI–239
Interactive identifiers, *(S) Security*, 4–3; *(S) Sys Mgr Essentials*, 11–11
Interactive logins, *(S) Security*, 3–4
Interactive mode, *(G) SW Overview*, 1–3; *(P) Rec Mgmt Util*, 1–1, 1–9, 1–16
Interactive mode processes, *(G) User*, 2–9; *(S) Security*, 3–4
Interactive processing
working set limits, *(S) Alpha Perform*, 6–2
/INTERACTIVE qualifier, *(P) File Appl*, 10–11
Interactive users
limiting for performance management, *(S) Sys Mgr Tuning*, 16–4
limiting in system startup, *(S) Sys Mgr Essentials*, 5–16
Interchange environment
protection, *(S) Sys Mgr Essentials*, 8–20
/INTERCHANGE qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–40
Interconnect devices, *(S) VMScluster Sys*, 1–3
Interconnect path failures, *(S) Dependable*, 4–11
Refer also to the *Guidelines for VMScluster Configurations*
Interconnects
accessing SCSI storage over, *(G) V7.0 New Feat*, C–2
ATM, *(G) V7.0 New Feat*, D–5
DS3, *(G) V7.0 New Feat*, D–5
FDDI, *(G) V7.0 New Feat*, D–4
in VMScluster configurations
Refer to the *Guidelines for VMScluster Configurations*
SCSI, *(G) V7.0 New Feat*, C–1
troubleshooting SCSI, *(G) V7.0 New Feat*, C–33
Interface Definition Language
See IDL
Interfaces to POLYCENTER Software Installation utility
DCL, *(S) Sys Mgr Essentials*, 3–18
DECwindows Motif, *(S) Sys Mgr Essentials*, 3–18
Interfaces to the Backup utility, *(S) Sys Mgr Essentials*, 10–4
Interfacing with application users, *(S) Dependable*, 8–50
Interlocked instructions, *(P) Concepts*, 14–6, 14–9, 14–13

Interlocked queues
validating, *(P) Alpha SDA*, SDA–160; *(P) VAX SDA*, SDA–185
Intermittent failures
in hardware components, *(S) Dependable*, 9–12
Internal buffers, *(P) File Appl*, 8–3
Internal clock, *(S) DECnet Mgmt Util*, 3–77
Internal errors, reporting, *(P) DECthreads*, 3–9
Internal file access blocks
See IFABs
Internal file identifiers
See IFIs
Internal record access blocks
See IRABs
Internationalization
screen mode, *(P) Debugger*, 11–25
Internationalization of debugger, *(G) V7.0 New Feat*, 4–3
International Organization for Standardization
See ISO
International standards
OpenVMS support, *(P) Environment*, 2–2
International Telegraph and Telephone Consultative Committee
See CCITT
Internet, *(G) SW Overview*, 1–11, 6–7; *(S) Sys Mgr Tuning*, 21–13
accessing, *(G) V7.0 New Feat*, 2–9
addressing, *(S) TCP/IP*, 2–6, 2–7
backbone, *(S) TCP/IP*, 1–6
connectivity, *(S) TCP/IP*, 1–7
definition, *(S) TCP/IP*, 1–1
gateways, *(S) TCP/IP*, 1–3
global, *(S) TCP/IP*, 1–4
Gopher service, *(S) TCP/IP*, 3–5
information retrieval tools, *(S) TCP/IP*, 3–4
layers, *(S) TCP/IP*, 2–2, 2–3, 2–5
mailing lists, *(S) TCP/IP*, 3–6
mail messages, *(S) TCP/IP*, 3–6
newsgroups, *(S) TCP/IP*, 3–6
scope, *(S) TCP/IP*, 1–6
UseNet protocol, *(S) TCP/IP*, 3–6
World Wide Web, *(S) TCP/IP*, 3–5
Internet Engineering Task Force
See IETF
Internetworking, *(S) TCP/IP*, 1–4
Interoperability
applications, *(S) TCP/IP*, 1–2
database, *(G) SW Overview*, 7–18
multivendor, *(G) SW Overview*, 2–5
TCP/IP, *(S) TCP/IP*, 1–2
Interpreters, *(G) SW Overview*, 4–5
Interprocess communication, *(G) SW Overview*, 3–3; *(S) VMScluster Sys*, 6–24; *(P) Concepts*, 2–1, 2–7
event flags, *(P) Concepts*, 2–8
global sections, *(P) Concepts*, 2–8
lock management services, *(P) Concepts*, 2–8
logical names, *(P) Concepts*, 2–8
mailboxes, *(P) Concepts*, 2–8
using, *(P) Concepts*, 2–8
Interprocess control, *(P) Concepts*, 2–1
Interrecord gap
See IRG
Interrupt, *(P) DECthreads*, E–41
program execution, *(P) Debugger*, CD–43
INTERRUPT command, *(S) DECnet Mgmt Util*, 4–11
Interrupt dispatch blocks
See IDBs
Interrupt handler
inserting a queue element from, *(P) DECthreads*, F–13
waking a thread, *(P) DECthreads*, pthread–45
Interruption
command execution, *(P) Debugger*, 2–6, 5–12, CD–47
debugging session, *(P) Debugger*, 5–12
program execution, *(P) Debugger*, 2–6, 2–7, 5–12, 5–14, 14–6, 14–10, 14–13, CD–47, CD–50, CD–182
Interrupt priority level, *(P) Concepts*, 14–7
/INTERRUPT qualifier, *(P) Alpha SDA*, SDA–151; *(P) VAX SDA*, SDA–177
Interrupts, *(P) DECthreads*, G–37, G–39
reducing, *(S) VAX Perform*, 5–15, 5–17
Interrupt stack
displaying contents, *(P) VAX SDA*, SDA–177
excessive activity, *(S) VAX Perform*, 4–33
excessive time, *(S) VAX Perform*, 4–31
Interrupt state, *(S) Alpha Perform*, 9–7, 9–8
excessive activity, *(S) Alpha Perform*, 15–2
VMScluster systems, *(S) Alpha Perform*, 9–8
remote nodes, *(S) Alpha Perform*, 9–7
Interrupt tests, *(S) DECnet Mgmt Util*, 4–11
types of, *(S) DECnet Mgmt Util*, 4–12
/INTERVAL qualifier, *(S) Sys Mgmt Util M-Z*, 4–8
INT key types, *(P) Rec Mgmt Util*, 4–30
/INTO qualifier, *(P) Debugger*, CD–160, CD–222, CD–234, CD–299
Intraprocess communication, *(P) Concepts*, 2–1
common area, *(P) Concepts*, 2–6
global symbols, *(P) Concepts*, 2–5
Intruder fix, *(S) DECamds*, 4–2
Intrusion attempts, *(S) Security*, 3–9
Intrusion databases, *(S) Security*, 7–27; *(S) Sys Mgr Essentials*, 11–7

Intrusion detection, *(S) Security*, 7–26
  counteraction through dual passwords, *(S) Security*, 7–15
  database, *(S) Security*, 7–27
  evasive procedures, *(S) Security*, 3–9
  reporting events, *(S) Security*, 3–19
  system parameters for, *(S) Security*, 7–28
Intrusion records
  deleting, *(P) Sys Svc I*, SYS1–250
Intrusions
  detection and evasion, *(S) Sys Mgr Essentials*, 11–6
  returning information about, *(P) Sys Svc II*, SYS2–351
  scanning for, *(P) Sys Svc II*, SYS2–268
Intrusion services
  managed by security server, *(S) Sys Mgr Essentials*, 5–5
INT suffix on DECthreads routines, *(P) DECthreads*, B–3
Investigating low memory cause, *(S) DECamds*, 4–7
Investing
  in system planning, *(S) Dependable*, 3–5
INVEXCEPTN bugcheck, *(P) Alpha SDA*, SDA–19; *(P) VAX SDA*, SDA–21
Invocation context
  access routines, *(P) Calling Std*, 3–34; *(P) LIB$*, LIB–251, LIB–268, LIB–270, LIB–275, LIB–276, LIB–396
  functions, *(P) Calling Std*, 3–34; *(P) LIB$*, LIB–251, LIB–268, LIB–270, LIB–275, LIB–276, LIB–396
  obtaining handle, *(P) Calling Std*, 3–35; *(P) LIB$*, LIB–270
  updating, *(P) Calling Std*, 3–36; *(P) LIB$*, LIB–396
Invocation context blocks
  See ICBs
Invocation handles, *(P) Interfaces*, B–10; *(P) Calling Std*, 3–30
  creating, *(P) Calling Std*, 3–33
  encoding, *(P) Calling Std*, 3–30
  format for procedure, *(P) Calling Std*, 3–30
Invoking ANALYZE/DISK_STRUCTURE, *(S) Sys Mgmt Util A-L*, 3–6
Invoking AUTOGEN, *(S) Sys Mgr Tuning*, 14–9
Invoking debugger, *(P) Debugger*, 2–6, 5–7, 14–2, 14–13
Invoking kept debugger, *(P) Debugger*, 2–1
Invoking NCP, *(S) DECnet Mgmt Util*, 1–1
Invoking SDA automatically, *(S) Sys Mgr Tuning*, 15–11
Invoking SDA by default, *(P) Alpha SDA*, SDA–6
Invoking SYSMAN
  privilege requirements, *(S) Sys Mgmt Util M-Z*, 6–5
invo_context_blk data type, *(P) Interfaces*, B–10
invo_handle data type, *(P) Interfaces*, B–10
IO$M_LT_QUE_CHG_NOTIF
  LAT $QIO Function Modifier, *(P) I/O User*, 5–76
IO$M_NOW modifier
  for Get and Put services, *(P) RMS Ref*, 6–16
IO$M_ROUTE functional modifier, *(P) I/O User*, 9–46
IO$M_SENSE_MAC
  Used with IO$_SENSEMODE, *(P) I/O User*, 9–49
IO$M_SENSE_MAC functional modifier, *(P) I/O User*, 9–49
IO$M_SHOW_MAP
  Used with IO$_SENSEMODE, *(P) I/O User*, 9–51
IO$M_SHOW_MAP functional modifier, *(P) I/O User*, 9–51
IO$M_SHOW_ROUTE
  Used with IO$_SENSEMODE, *(P) I/O User*, 9–51
IO$M_SHOW_ROUTE functional modifier, *(P) I/O User*, 9–51
IO$M_UPDATE_MAP functional modifier, *(P) I/O User*, 9–44
IO$_M_SET_MAC functional modifier, *(P) I/O User*, 9–43
IO$_SETMODE
  IO$M_UPDATE_MAP, *(P) I/O User*, 9–44
IO AUTOCONFIGURE command
  in SYSMAN, *(S) Sys Mgr Essentials*, 7–6, 7–8; *(S) Sys Mgmt Util M-Z*, 6–33
    in system startup, *(S) Sys Mgr Essentials*, 5–4, 5–7, 7–6
IO CONNECT command
  in SYSMAN, *(S) Sys Mgr Essentials*, 7–8; *(S) Sys Mgmt Util M-Z*, 6–34
    in system startup, *(S) Sys Mgr Essentials*, 5–7
IODEF.STB file, *(P) Alpha SDA*, SDA–15
IOGEN Configuration Building Module, *(S) Sys Mgmt Util M-Z*, 6–38, 6–39, 6–42
IO LOAD command
  in SYSMAN, *(S) Sys Mgr Essentials*, 7–8; *(S) Sys Mgmt Util M-Z*, 6–37
IOSBs (I/O status blocks), *(P) Interfaces*, B–10
  disk, *(P) I/O User*, 2–38
  in synchronization, *(P) Concepts*, 9–13
  LAN drivers, *(P) I/O User*, 9–53
  LAT port driver, *(P) I/O User*, 5–80
  magnetic tape, *(P) I/O User*, 3–23
  mailbox, *(P) I/O User*, 4–15
  return condition value field, *(P) Concepts*, 9–23
  returned by generic SCSI class driver, *(P) I/O User*, 8–10
  terminal, *(P) I/O User*, 5–80

IOSBs (I/O status blocks)
ACP-QIO interface, *(P) I/O User*, 1–36
IOSEGMENT= option, *(P) Linker*, LINK–56
IO SET commands
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–38
IO SHOW commands
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–39
$IO_CLEANUP system service
description, *(P) Sys Svc II*, SYS2–131
$IO_PERFORM system service
description, *(P) Sys Svc II*, SYS2–133
IO_PREFER_CPUS system parameter, *(G) V7.0 New Feat*, 3–1
IO_ROUTINES.EXE file
global symbols, *(P) VAX SDA*, SDA–64
IO_ROUTINES.STB file
global symbols, *(P) Alpha SDA*, SDA–61
$IO_SETUP system service
description, *(P) Sys Svc II*, SYS2–137
io_status_block data type, *(P) Interfaces*, B–10
IP (Internet Protocol), *(S) TCP/IP*, 2–3, 2–5
routing, *(S) TCP/IP*, 2–6
IPC (Interrupt Priority C)
using to cancel mount verification, *(S) Sys Mgr Essentials*, 8–63
IPL$_ASTDEL file
PGFIPLHI bugcheck, *(P) Alpha SDA*, SDA–27
IPL$_ASTDEL value
PGFIPLHI bugcheck, *(P) VAX SDA*, SDA–23
IPL (interrupt priority level), *(S) DECamds*, 1–2
IPL register
displaying, *(P) Alpha SDA*, SDA–87
IPL symbol, *(P) Alpha SDA*, SDA–16
IPX protocols, *(G) SW Overview*, 6–25
IRABs (internal record access blocks), *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
IRG (interrecord gap), *(S) Sys Mgr Essentials*, 8–6; *(P) File Appl*, 1–16
IRP (I/O request packet), *(P) Alpha SDA*, SDA–94; *(P) VAX SDA*, SDA–105
IRP symbol, *(P) VAX SDA*, SDA–18
IRUs (independently recoverable units)
performance characteristics, *(S) Dependable*, 4–3 to 4–12
ISD_MAX= option, *(P) Linker*, LINK–57
controlling demand-zero compression, *(P) Linker*, 3–25
ISEs
peripherals, *(S) VMScluster Sys*, 3–3
use in VMScluster, *(S) VMScluster Sys*, 1–3
ISL (Initial System Load), *(S) Sys Mgr Tuning*, 23–2
isnan routine, *(P) Portable Math*, DPML–39, B–8
ISO (International Organization for Standardization), *(G) SW Overview*, 6–3, 6–10, A–1; *(S) TCP/IP*, 2–1
standards, *(G) SW Overview*, 2–2
ISO 9660 standard
data interleaving, *(S) Sys Mgr Essentials*, 8–6
establishing default file attributes, *(S) Sys Mgr Essentials*, 8–24
format
definition, *(S) Sys Mgr Essentials*, 8–4
groups
mounting, *(S) Sys Mgr Essentials*, 8–34
media
showing device information, *(S) Sys Mgr Essentials*, 7–5
media protection, *(S) Sys Mgr Essentials*, 8–17
mounting a volume for, *(S) Sys Mgr Essentials*, 8–23
resolution of incompatibilities with OpenVMS, *(P) File Appl*, 1–12
restrictions, *(S) Sys Mgr Essentials*, 8–36
standard on OpenVMS, *(S) Sys Mgr Essentials*, 8–5
UNDEFINED record format errors, *(S) Sys Mgr Essentials*, 8–36
volume label and volume set label duplication, *(S) Sys Mgr Essentials*, 8–36
volume labels, *(S) Sys Mgr Essentials*, 8–36
volume set labels, *(S) Sys Mgr Essentials*, 8–36
volume sets
mounting, *(S) Sys Mgr Essentials*, 8–34
partially mounted, *(S) Sys Mgr Essentials*, 8–35
volume structure, *(S) Sys Mgr Essentials*, 8–3
Isolating VMScluster traffic data, *(S) VMScluster Sys*, F–28
$IS_32BITS macro
checking sign extension, *(P) 64-Bit Addr*, 9–1, 9–6, C–4
$IS_DESC64 macro
checking if format descriptor is 64-bit, *(P) 64-Bit Addr*, 9–1
$IS_DESC macro
checking if format descriptor is 64-bit, *(P) 64-Bit Addr*, C–5
Item codes, *(G) V7.0 New Feat*, 4–15, 4–29, 4–30
user context, *(G) V7.0 New Feat*, 4–15
Itemlist read operations, *(P) I/O User*, 5–31
Item lists, *(P) RMS Ref*, 17–1
with ACL editor routine, *(P) Util Routines*, ACL–3
with DECTPU routines, *(P) Util Routines*, DECTPU–62
item_list_2 data type, *(P) Interfaces*, B–11
item_list_3 data type, *(P) Interfaces*, B–11
item_list_pair data type, *(P) Interfaces*, B–12
item_quota_list data type, *(P) Interfaces*, B–12
Iterations
definition, *(G) User*, 15–7
Iterative translations
See Logical names and translations

J

j0 routine, *(P) Portable Math*, DPML–11, B–9
j1 routine, *(P) Portable Math*, DPML–11, B–9
Jacket routines, *(P) Concepts*, 6–1
  link-time considerations, *(P) Linker*, LINK–21
Japanese Industrial Standards Committee
  See JISC
JFBs (journaling file blocks), *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
JIBs (job information blocks), *(P) Alpha SDA*, SDA–16, SDA–129; *(P) VAX SDA*, SDA–151
JIB symbol, *(P) Alpha SDA*, SDA–16; *(P) VAX SDA*, SDA–18
JISC (Japanese Industrial Standards Committee), *(G) SW Overview*, 7–16, A–1
JMP instruction
  in transfer vectors, *(P) Linker*, 4–6
jn routine, *(P) Portable Math*, DPML–11, B–9
Job banner pages, *(S) Sys Mgr Essentials*, 13–42, 13–60
Job batch cards
  end of, *(G) DCL A-M*, DCLI–213
$JOB card, *(S) Sys Mgr Essentials*, 7–17
JOB card password, *(G) DCL N-Z*, DCLII–10
JOB command, *(G) DCL A-M*, DCLI–282 to DCLI–287
Job controllers
  See also Distributed job controller and Queue managers
  affected by shift restrictions, *(G) User*, 2–12; *(S) Security*, 3–8
  and batch jobs, *(S) Sys Mgr Essentials*, 12–3, 13–2
  asynchronous, *(P) Sys Svc II*, SYS2–359
  communication with queue manager, *(S) Sys Mgr Essentials*, 12–3
  enforcing work time restrictions, *(S) Security*, 7–2
  function, *(P) Util Routines*, PSM–4
  relationship to queue manager, *(S) Sys Mgr Essentials*, 12–3, 12–7
  request to symbiont, *(P) Util Routines*, SMB–5
  starting queue manager, *(S) Sys Mgr Essentials*, 12–6, 12–7
  synchronous, *(P) Sys Svc II*, SYS2–417
  tasks performed by, *(S) Sys Mgr Essentials*, 12–3
JOBCTL process
  creation during system startup, *(S) Sys Mgr Essentials*, 5–5
Job information blocks
  See JIBs
Job logical name tables, *(P) Concepts*, 10–5
  canceling entries, *(G) DCL A-M*, DCLI–112
Job logical name tables (cont'd)
  including logical name, *(G) DCL A-M*, DCLI–43, DCLI–122
Job quotas in use, *(S) DECamds*, 3–25
Job retention
  changing for a job, *(S) Sys Mgr Essentials*, 13–74
  determining, *(G) DCL N-Z*, DCLII–22, DCLII–127, DCLII–417
  specifying for a job, *(S) Sys Mgr Essentials*, 13–26
  specifying for a queue, *(S) Sys Mgr Essentials*, 13–26
Jobs
  See also Batch jobs and Output jobs
  changing scheduling priority, *(S) Sys Mgr Essentials*, 13–72
  controlling print position and alignment, *(S) Sys Mgr Essentials*, 13–75, 13–77
  defining CPU time limit, *(G) DCL A-M*, DCLI–268; *(G) DCL N-Z*, DCLII–184, DCLII–375
  deleting, *(S) Sys Mgr Essentials*, 13–74
  deleting from queue, *(G) DCL A-M*, DCLI–141, DCLI–148
  executing in batch mode on remote nodes, *(S) DECnet Intro*, 2–12
  getting information asynchronously, *(P) Sys Svc I*, SYS1–427; *(P) Sys Svc II*, SYS2–3
  getting information synchronously, *(P) Sys Svc I*, SYS1–448; *(P) Sys Svc II*, SYS2–46
  holding, *(S) Sys Mgr Essentials*, 13–71, 13–79
  merging, *(S) Sys Mgr Essentials*, 13–56
  modifying, *(S) Sys Mgr Essentials*, 13–70
  moving from one queue to another, *(S) Sys Mgr Essentials*, 13–57
  redirecting to another queue, *(G) DCL A-M*, DCLI–47
  releasing, *(S) Sys Mgr Essentials*, 13–71
  removing from queue
    with ASSIGN/MERGE command, *(G) DCL A-M*, DCLI–47
  requeuing
    executing, *(S) Sys Mgr Essentials*, 13–73
    pending, *(S) Sys Mgr Essentials*, 13–73
  retaining in a queue, *(S) Sys Mgr Essentials*, 13–74
  suspending, *(S) Sys Mgr Essentials*, 13–75
Job scheduling, *(G) SW Overview*, 3–2; *(S) Sys Mgr Essentials*, 13–32, 13–72
  for output jobs, *(S) Sys Mgr Essentials*, 13–32
  priority
    See Priority job scheduling
Job status
  definitions, *(S) Sys Mgr Essentials*, 13–69
  error, *(S) Sys Mgr Essentials*, 13–26, 13–31, 13–54, 13–74
  holding, *(S) Sys Mgr Essentials*, 13–71, 13–79

Job status (cont'd)
pending, *(S) Sys Mgr Essentials*, 13–73, 13–74, 13–79
retained, *(S) Sys Mgr Essentials*, 13–71, 13–74
showing, *(S) Sys Mgr Essentials*, 13–26, 13–68
use in job retention, *(S) Sys Mgr Essentials*, 13–26
Job table quota, *(S) Sys Mgr Essentials*, 6–43
Job terminations
imposed by shift restrictions, *(G) User*, 2–12; *(S) Security*, 3–8
Job trees
definition, *(G) User*, 18–4
JOB_CONTROL process, *(S) DECamds*, 4–6
Journal file of queue database, *(S) Sys Mgr Essentials*, 12–4
location, *(S) Sys Mgr Essentials*, 12–6, 12–7
changing, *(S) Sys Mgr Essentials*, 12–6
Journaling
not supported error message, *(P) Rec Mgmt Util*, 1–7
Journaling file blocks
See JFBs
Journaling flags
FAB symbolic offsets, *(P) RMS Ref*, 4–20
/JOURNAL qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–40
JSB call format, *(P) Interfaces*, 1–4
JSB entry points, *(P) Modular Proc*, 2–10, A–1; *(P) MTH$*, 1–2
/JSB qualifier, *(P) Debugger*, 7–9, CD–161, CD–222, CD–300
JSR instruction
calculating hints for, *(P) Linker*, 1–16, LINK–25, B–41
replacing with the BSR instruction, *(P) Linker*, 1–15, LINK–25
JTQUOTA process quota, *(S) Sys Mgr Essentials*, 6–43

K

KDA50 disk controller, *(P) I/O User*, 2–2
KDB50 disk controller, *(P) I/O User*, 2–2
KDC (Key Distribution Center), *(G) SW Overview*, 6–7
Kept debugger
starting, *(P) Debugger*, 2–1
Kept Debugger, *(G) DCL A-M*, DCLI–116; *(P) Debugger*, 1–4
Kept Debugger and SPAWN/NOWAIT, *(P) Debugger*, CD–298
Kerberos authentication, *(S) TCP/IP*, 3–2, 3–3, 5–2
Kernel mode, *(S) Alpha Perform*, 9–7, 9–8
calling images running in, *(S) Sys Mgr Tuning*, 16–11, 16–14
Kernel mode (cont'd)
changing to, *(P) Sys Svc I*, SYS1–114, SYS1–116
excessive time, *(S) VAX Perform*, 4–31; *(S) Alpha Perform*, 14–5
logical names, *(S) Sys Mgr Tuning*, 16–15
/KERNEL qualifier, *(P) Alpha SDA*, SDA–151; *(P) VAX SDA*, SDA–177
Kernel stacks
displaying contents, *(P) Alpha SDA*, SDA–151; *(P) VAX SDA*, SDA–177
pointer, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18
Kernel threads
effects of context switching, *(P) DECthreads*, 3–1
Kernel Threads, *(G) V7.0 New Feat*, 4–10
Key 0, *(P) File Appl*, 3–20
KEY attribute, *(P) Rec Mgmt Util*, 6–1
Key bindings
customizing, *(P) Debugger*, 3–37
Keyboard control character, *(P) I/O User*, 5–4 to 5–7, 5–9
Key buffers, *(P) File Appl*, 8–3, 9–12, 9–16
Key-characteristics option, *(P) File Appl*, 4–33
Key compression
front, *(P) File Appl*, 3–19
prohibition against using, *(P) File Appl*, 4–8
rear, *(P) File Appl*, 3–19
restrictions, *(P) File Appl*, 3–2, 3–19, 3–26
Key definitions
assigning, *(G) User*, 3–17
creating, *(P) Debugger*, CD–65
deleting, *(P) Debugger*, CD–74
displaying, *(P) Debugger*, CD–256
KEY DESCRIPTOR structure, *(P) File Appl*, 10–16
how updated by Convert utility, *(P) Rec Mgmt Util*, 2–9
Key Distribution Center
See KDC
Key matches, *(P) File Appl*, 8–12 to 8–14
determining method, *(P) RMS Ref*, 6–5
types, *(P) RMS Ref*, 6–5
Key names
character restrictions in, *(P) CDU, LBR, & MU*, LIB–6
in help libraries, *(P) CDU, LBR, & MU*, LIB–6, LIB–7, LIB–9
KEY NULL_VALUE attribute, *(P) Rec Mgmt Util*, 4–28
Key numbers, *(P) CDU, LBR, & MU*, LIB–7
Key options
comparing primary and alternate keys, *(P) RMS Ref*, 12–7

Keypad applications
setting for DECterm, *(G) DCL A-M*, DCLI–105
Keypad definitions, *(S) Sys Mgr Tuning*, 20–5, 20–7; *(S) Sys Mgmt Util M-Z*, 4–4, 4–53
SHOW CLUSTER, *(S) Sys Mgmt Util M-Z*, B–1
Keypad editing
editing commands, *(S) Sys Mgmt Util A-L*, A–1
for ACL editor, *(S) Sys Mgmt Util A-L*, A–1
LK201-specific editing commands, *(S) Sys Mgmt Util A-L*, A–5
Keypad mode, *(P) Debugger*, 12–8, CD–65, CD–182, CD–256, A–1
Keypads
default in Mail, *(G) User*, 6–20
defining in Mail, *(G) User*, 6–21
reading from, *(P) Concepts*, 7–25
KEY primary sections
ordering requirement, *(P) Rec Mgmt Util*, 6–1
KEY PROLOG attribute, *(P) Rec Mgmt Util*, 2–14, 4–26, 4–27
/KEY qualifier, *(P) Rec Mgmt Util*, 3–3; *(P) Alpha SDA*, SDA–42; *(P) VAX SDA*, SDA–49
Keys
arrow
recalling commands, *(G) User*, 3–19
defining as simple or segmented, *(P) RMS Ref*, 12–12
defining for SDA, *(P) VAX SDA*, SDA–48
length, *(P) Rec Mgmt Util*, 4–27
Keys (in records), *(P) CDU, LBR, & MU*, LIB–6
alternate, *(P) Rec Mgmt Util*, 1–6, 4–5, 4–28; *(P) File Appl*, 3–18, 3–19, 3–23
duplicate values, *(P) File Appl*, 2–20
example of updating a record, *(P) RMS Ref*, A–31
example of use in finding and deleting record, *(P) RMS Ref*, A–31
for Prolog 1 files and Prolog 2 files, *(P) File Appl*, 3–19
multiple, *(P) Rec Mgmt Util*, 2–18
multiple, example with Close service, *(P) RMS Ref*, A–23
multiple, performance cost, *(P) RMS Ref*, 12–13
multiple, recommmended number, *(P) RMS Ref*, 12–13
null, *(P) Rec Mgmt Util*, 4–28
null value, *(P) File Appl*, 2–20
number of, *(P) File Appl*, 3–23
primary, *(P) File Appl*, 3–20, 3–23
segmented, *(P) File Appl*, 3–20
segment length, *(P) Rec Mgmt Util*, 4–29
selecting path, *(P) RMS Ref*, A–23
size, *(P) File Appl*, 9–12, 9–14, 9–16
storing indexed records sequentially, *(P) File Appl*, 2–5
types, *(P) Rec Mgmt Util*, 4–29
Keys (keyboard)
arrow
recalling commands, *(G) User*, 3–14
commonly used Ctrl keys, *(G) User*, 3–3
controlling cursor position, *(G) User*, 3–19
controlling screen display, *(G) User*, 3–20
Ctrl key sequences, *(G) User*, 3–2
debugger predefined, *(P) Debugger*, 14–16
defining, *(G) User*, 3–17; *(S) Sys Mgmt Util M-Z*, 6–19; *(P) Debugger*, 12–8
defining for SDA, *(P) Alpha SDA*, SDA–42
defining in LATCP, *(S) Sys Mgmt Util A-L*, 13–17
defining in Mail, *(G) User*, 6–20
defining in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–3
deleting definitions, *(P) Debugger*, 12–9
displaying definitions, *(S) Sys Mgmt Util M-Z*, 6–57; *(P) Debugger*, 12–8
entering DCL commands, *(G) User*, 3–18
interrupting DCL commands, *(G) User*, 3–18
predefined debugger, *(P) Debugger*, 6–2, A–1
recalling DCL commands, *(G) User*, 3–19
Keys (product authorization)
See PAKs
Keys in record
size restriction for string type, *(P) RMS Ref*, 12–14
Keys of reference, *(P) Rec Mgmt Util*, 2–12; *(P) File Appl*, 2–5
establishing, *(P) RMS Ref*, RMS–50
Key state, *(P) Debugger*, 12–8, CD–65, CD–256, A–1
Key string buffers
program example, *(P) RMS Ref*, A–27
Key string descriptors
program example, *(P) RMS Ref*, A–27
Key string lengths
program example, *(P) RMS Ref*, A–27
Key tables
reading from, *(P) Concepts*, 7–28
Key value
deleting, *(P) DECthreads*, pthread–76, tis–14
generating for per-thread context, *(P) DECthreads*, pthread–74, tis–12, E–52, G–57
obtaining per-thread context for, *(P) DECthreads*, pthread–71, tis–11, E–54, G–54
setting per-thread context for, *(P) DECthreads*, pthread–109, tis–35, E–55, G–81
Keyword paths
for DISALLOW clause, *(P) CDU, LBR, & MU*, CDU–12 to CDU–13
obtaining values of command string keywords, *(P) Util Routines*, CLI–9

Keyword paths (cont'd)
referencing command string keywords, *(P) Util Routines*, CLI–12
Keywords, *(P) CDU, LBR, & MU*, LIB–6
See also DEFINE TYPE statement
abbreviating, *(P) Rec Mgmt Util*, 6–2
defining, *(P) CDU, LBR, & MU*, CDU–9, CDU–31
in DCL command lines, *(G) User*, 3–4
SOURCE attribute, *(P) Rec Mgmt Util*, 4–36
TARGET attribute, *(P) Rec Mgmt Util*, 4–37
KEY_GREATER_EQUAL attribute, *(P) Rec Mgmt Util*, 4–10; *(P) File Appl*, 8–8, 8–9
KEY_GREATER_THAN attribute, *(P) Rec Mgmt Util*, 4–10; *(P) File Appl*, 8–8, 8–9
KEY_LIMIT attribute, *(P) Rec Mgmt Util*, 4–11
KEY_NCMPR option, *(P) Rec Mgmt Util*, 4–26
KEY_OF_REFERENCE attribute, *(P) Rec Mgmt Util*, 4–11
KFE52 Ethernet device, *(S) DECnet Mgmt*, 2–10
KFQSA adapter, *(P) I/O User*, 2–3
KGE option, *(P) Rec Mgmt Util*, 4–10
Kit location, *(S) DECamds*, A–1
Kits
See Software products
Kitting shareable images, *(P) Linker*, LINK–15
controlling universal symbol declarations, *(P) Linker*, 4–10
Known file lists, *(S) Sys Mgmt Util A-L*, 11–3
definition, *(S) Sys Mgr Tuning*, 16–10
image look up, *(P) File Appl*, 5–5
in system startup, *(S) Sys Mgr Essentials*, 5–12
Known images, *(S) Sys Mgmt Util A-L*, 11–3
adding, *(S) Sys Mgmt Util A-L*, 11–5
attributes of, *(S) Sys Mgmt Util A-L*, 11–14
creating, *(S) Sys Mgmt Util A-L*, 11–8
definition, *(S) Sys Mgr Tuning*, 16–10
deleting, *(S) Sys Mgr Tuning*, 16–18; *(S) Sys Mgmt Util A-L*, 11–10
dismounting volume, *(S) Sys Mgr Tuning*, 16–18
displaying, *(S) Sys Mgr Tuning*, 16–16
evaluating merits of installing, *(S) Sys Mgr Tuning*, 16–15, 16–16; *(S) Sys Mgmt Util A-L*, 11–13
file specification for, *(S) Sys Mgr Tuning*, 16–16
installing, *(S) Sys Mgr Tuning*, 16–16; *(S) Alpha Perform*, 1–5
in system startup, *(S) Sys Mgr Essentials*, 5–12; *(S) Sys Mgr Tuning*, 16–10
privilege enhancement, *(S) Sys Mgr Tuning*, 16–13
removing, *(S) Sys Mgr Tuning*, 16–18; *(S) Sys Mgmt Util A-L*, 11–7, 11–18
replacing, *(S) Sys Mgmt Util A-L*, 11–18
resident, *(S) Sys Mgr Tuning*, 16–12
updating, *(S) Sys Mgmt Util A-L*, 11–18
KNOWN reserved word
plural form of component name, *(S) DECnet Intro*, 3–33, 4–2
KSP symbol, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18

L

/L1 qualifier, *(P) Alpha SDA*, SDA–112
/L2 qualifier, *(P) Alpha SDA*, SDA–112
/L3 qualifier, *(P) Alpha SDA*, SDA–112
%LABEL built-in symbol, *(P) Debugger*, 7–6, B–7
Label descriptors, *(P) Calling Std*, 5–33
/LABEL qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–42
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–23
Labels
ANSI magnetic tape, *(P) File Appl*, 1–17, 1–20
backup tape, *(S) Sys Mgr Essentials*, 10–21
changing volume, *(S) Sys Mgr Essentials*, 3–33
command interpreter rules for, *(G) DCL A-M*, DCLI–53, DCLI–232, DCLI–234
disk, *(S) Sys Mgmt Util M-Z*, 2–4
disk volume set, *(S) Sys Mgmt Util M-Z*, 2–5
duplicate in command procedures, *(G) User*, 15–5
EOF (end-of-file), *(P) File Appl*, 1–32
EOV (end-of-volume), *(P) File Appl*, 1–32
HDR1, *(P) File Appl*, 1–26
HDR2, *(P) File Appl*, 1–29
HDR3, *(P) File Appl*, 1–32
HDR4, *(P) File Appl*, 1–32
header, *(S) Sys Mgr Essentials*, 8–24; *(P) File Appl*, 1–25
in command procedures, *(G) User*, 3–4, 15–4; *(G) DCL A-M*, DCLI–53, DCLI–232, DCLI–234
initializing volume to write, *(S) Sys Mgr Essentials*, 8–11
in local symbol tables, *(G) User*, 15–4
ISO, *(P) File Appl*, 1–17
magnetic tape, *(S) Sys Mgmt Util M-Z*, 2–4
magnetic tape volume set, *(S) Sys Mgmt Util M-Z*, 2–5
specifying for volumes, *(G) DCL N-Z*, DCLII–232
trailer, *(S) Sys Mgr Essentials*, 8–7; *(P) File Appl*, 1–32
VOL1, *(P) File Appl*, 1–22
volume header, *(G) DCL A-M*, DCLI–253
writing on volume, *(G) DCL A-M*, DCLI–253
LAD (local area disk), *(G) SW Overview*, 1–6
protocols, *(G) SW Overview*, 6–8
LAD Control Program (LADCP) utility, *(G) SW Overview*, 3–13; *(S) Sys Mgr Tuning*, 23–13 to 23–14

LAN
polling, *(S) DECamds*, 5–15
setting load, *(S) DECamds*, 5–16
LANACP (Local Area Network Auxiliary Control Program)
See LANACP LAN Server process
LANACP LAN Server process, *(S) Sys Mgmt Util A-L*, 12–3
SET ACP command, *(S) Sys Mgmt Util A-L*, 12–21
LANACP utility
See LAN Auxiliary Control Program utility
LAN adapters
BYE datagram, *(S) VMScluster Sys*, F–24
capturing traffic data on, *(S) VMScluster Sys*, F–29
datagram flags, *(S) VMScluster Sys*, F–25
overloaded, *(S) VMScluster Sys*, F–12
selecting, *(S) VMScluster Sys*, 4–8
sending CCSTART datagram, *(S) VMScluster Sys*, F–17, F–24
sending HELLO datagrams, *(S) VMScluster Sys*, F–17, F–24
stopping, *(S) VMScluster Sys*, C–39, E–3
stopping NISCA protocol, *(S) VMScluster Sys*, D–2
using multiple, *(S) VMScluster Sys*, 3–17
VACK datagram, *(S) VMScluster Sys*, F–17, F–24
VERF datagram, *(S) VMScluster Sys*, F–17, F–24
LAN addresses, *(S) Sys Mgmt Util A-L*, 13–7
displaying, *(S) Sys Mgmt Util A-L*, 13–51
LAN analyzers, *(S) VMScluster Sys*, F–20
analyzing retransmission errors, *(S) VMScluster Sys*, F–36
distributed enable filter, *(S) VMScluster Sys*, F–34
distributed enable messages, *(S) VMScluster Sys*, F–35
distributed trigger filter, *(S) VMScluster Sys*, F–34
distributed trigger messages, *(S) VMScluster Sys*, F–35
filtering retransmissions, *(S) VMScluster Sys*, F–33
filters, *(S) VMScluster Sys*, F–33
packet filter, *(S) VMScluster Sys*, F–33
partner program, *(S) VMScluster Sys*, F–37
scribe program, *(S) VMScluster Sys*, F–38
starter program, *(S) VMScluster Sys*, F–36
LAN Auxiliary Control Program (LANACP) utility
OPCOM messages displayed, *(S) Sys Mgr Tuning*, 22–22
running, *(S) Sys Mgr Tuning*, 22–6
servers, *(S) Sys Mgr Tuning*, 22–5
stopping, *(S) Sys Mgr Tuning*, 22–6
LAN bridges
use of FDDI priority field, *(S) VMScluster Sys*, 10–17
VMScluster, *(S) VMScluster Sys*, 3–20
LAN controllers
address, *(S) Sys Mgmt Util A-L*, 13–51
device name, *(S) Sys Mgmt Util A-L*, 13–8
physical address, *(S) Sys Mgmt Util A-L*, 13–7
LAN Control Program (LANCP) utility, *(S) Sys Mgr Tuning*, 22–6
clearing counters, *(S) Sys Mgr Tuning*, 22–25; *(S) Sys Mgmt Util A-L*, 12–9
commands, *(S) Sys Mgmt Util A-L*, 12–7 to 12–41
CLEAR DEVICE, *(S) Sys Mgmt Util A-L*, 12–8
CLEAR MOPDLL, *(S) Sys Mgmt Util A-L*, 12–9
CLEAR NODE, *(S) Sys Mgmt Util A-L*, 12–9
CONNECT NODE, *(S) Sys Mgmt Util A-L*, 12–10
DEFINE DEVICE, *(S) Sys Mgmt Util A-L*, 12–11
DEFINE NODE, *(S) Sys Mgmt Util A-L*, 12–13
@ (Execute Procedure), *(S) Sys Mgmt Util A-L*, 12–7
EXIT, *(S) Sys Mgmt Util A-L*, 12–16
HELP, *(S) Sys Mgmt Util A-L*, 12–16
LIST DEVICE, *(S) Sys Mgmt Util A-L*, 12–17
LIST NODE, *(S) Sys Mgmt Util A-L*, 12–18
PURGE DEVICE, *(S) Sys Mgmt Util A-L*, 12–20
PURGE NODE, *(S) Sys Mgmt Util A-L*, 12–20
SET ACP, *(S) Sys Mgmt Util A-L*, 12–21
SET DEVICE, *(S) Sys Mgmt Util A-L*, 12–22, 12–26
SET NODE, *(S) Sys Mgmt Util A-L*, 12–28
SHOW CONFIGURATION, *(S) Sys Mgmt Util A-L*, 12–31
SHOW DEVICE, *(S) Sys Mgmt Util A-L*, 12–32
SHOW LOG, *(S) Sys Mgmt Util A-L*, 12–35
SHOW MOPDLL, *(S) Sys Mgmt Util A-L*, 12–37
SHOW NODE, *(S) Sys Mgmt Util A-L*, 12–37
SPAWN, *(S) Sys Mgmt Util A-L*, 12–39
TRIGGER NODE, *(S) Sys Mgmt Util A-L*, 12–40
UPDATE DEVICE, *(S) Sys Mgmt Util A-L*, 12–41

LAN Control Program (LANCP) utility (cont'd)
deleting device information, *(S) Sys Mgr Tuning*, 22–17; *(S) Sys Mgmt Util A-L*, 12–8, 12–20
deleting node information, *(S) Sys Mgr Tuning*, 22–20; *(S) Sys Mgmt Util A-L*, 12–9, 12–20
device database management, *(S) Sys Mgr Tuning*, 22–14
device management, *(S) Sys Mgr Tuning*, 22–9
disabling MOP downline load service, *(S) Sys Mgr Tuning*, 22–23
displaying device information, *(S) Sys Mgr Tuning*, 22–15
displaying node information, *(S) Sys Mgr Tuning*, 22–18; *(S) Sys Mgmt Util A-L*, 12–18, 12–37
displaying OPCOM messages, *(S) Sys Mgr Tuning*, 22–25; *(S) Sys Mgmt Util A-L*, 12–21
displaying status and counters, *(S) Sys Mgr Tuning*, 22–23, 22–24; *(S) Sys Mgmt Util A-L*, 12–18, 12–37
enabling MOP downline load service, *(S) Sys Mgr Tuning*, 22–23
exiting, *(S) Sys Mgmt Util A-L*, 12–5
invoking, *(S) Sys Mgmt Util A-L*, 12–4
load trace facility, *(S) Sys Mgr Tuning*, 22–25
MOP console carrier, *(S) Sys Mgr Tuning*, 22–26; *(S) Sys Mgmt Util A-L*, 12–10
MOP downline load service management, *(S) Sys Mgr Tuning*, 22–23
MOP trigger boot, *(S) Sys Mgr Tuning*, 22–27; *(S) Sys Mgmt Util A-L*, 12–40
node database management, *(S) Sys Mgr Tuning*, 22–17
running, *(S) Sys Mgr Tuning*, 22–7
setting device information, *(S) Sys Mgr Tuning*, 22–15; *(S) Sys Mgmt Util A-L*, 12–11
setting node information, *(S) Sys Mgr Tuning*, 22–18
setting up LAN MOP, *(S) Sys Mgr Tuning*, 22–22
SPAWN function, *(S) Sys Mgr Tuning*, 22–9
using command files, *(S) Sys Mgr Tuning*, 22–9
LANCP (Local Area Network Control Program)
See LAN Control Program (LANCP) utility
LANCP utility (LANCP), *(S) Sys Mgmt Util A-L*, 12–4
LAN drivers
address
destination, *(P) I/O User*, 9–25, 9–28
Ethernet, *(P) I/O User*, 9–5 to 9–6
hardware, *(P) I/O User*, 9–48
loopback assistance, *(P) I/O User*, 9–6
multicast, *(S) Sys Mgr Tuning*, 22–3; *(P) I/O User*, 9–5, 9–6, 9–25, 9–35, 9–36
node, *(S) Sys Mgr Tuning*, 22–3; *(P) I/O User*, 9–5
LAN drivers
address (cont'd)
physical, *(S) Sys Mgr Tuning*, 22–3; *(P) I/O User*, 9–5, 9–6, 9–25, 9–36, 9–48
port, *(P) I/O User*, 9–36
shared protocol destination, *(P) I/O User*, 9–33
source, *(P) I/O User*, 9–25
Token Ring, *(P) I/O User*, 9–7
addresses, *(S) Sys Mgr Tuning*, 22–3
AST access mode, *(P) I/O User*, 9–42
AST service routine address, *(P) I/O User*, 9–42
attention AST, *(P) I/O User*, 9–42
buffer
receive, *(P) I/O User*, 9–25, 9–32
channel assignment, *(P) I/O User*, 9–4
characteristics
device, *(P) I/O User*, 9–22, 9–47
extended, *(P) I/O User*, 9–31 to 9–40, 9–48
controller mode, *(P) I/O User*, 9–32
CRC generation, *(P) I/O User*, 9–33
device characteristics, *(P) I/O User*, 9–22, 9–47
drivers
initializing, *(P) I/O User*, 9–4
operating, *(P) I/O User*, 9–4
driver service (802 format), *(P) I/O User*, 9–40
echo mode (DEUNA only), *(P) I/O User*, 9–33
error summary bits, *(P) I/O User*, 9–24
Ethernet, *(S) Sys Mgr Tuning*, 22–2; *(P) I/O User*, 9–2, 9–3, 9–5, 9–16
Ethernet addresses, *(P) I/O User*, 9–5
Ethernet packet format, *(P) I/O User*, 9–16
Ethernet packet padding, *(P) I/O User*, 9–17
exclusive mode on Alpha systems, *(P) I/O User*, 9–21
exclusive mode on VAX systems, *(P) I/O User*, 9–17
extended characteristics, *(P) I/O User*, 9–31 to 9–40, 9–47
FDDI, *(S) Sys Mgr Tuning*, 22–2; *(P) I/O User*, 9–2
function codes, *(P) I/O User*, 9–24, A–8
function modifiers, *(P) I/O User*, 9–27, 9–29, 9–42 to 9–47
hardware interface, *(P) I/O User*, 9–3
I/O functions, *(P) I/O User*, 9–25, 9–27, 9–30, 9–47
I/O status block, *(P) I/O User*, 9–53
IEEE 802 packet format
Class I service packet format, *(P) I/O User*, 9–18, 9–34
driver service parameter, *(P) I/O User*, 9–40
extended packet format, *(P) I/O User*, 9–21, 9–34
802 format SAP parameter, *(P) I/O User*, 9–39

LAN drivers
IEEE 802 packet format (cont'd)
group SAP parameter, *(P) I/O User*, 9–35
read function, *(P) I/O User*, 9–25
SAP use and restrictions, *(P) I/O User*, 9–20
support for, *(P) I/O User*, 9–8
user-supplied service packet format, *(P) I/O User*, 9–20, 9–34
write function, *(P) I/O User*, 9–27
IEEE 802 programming example, *(P) I/O User*, 9–55
in PI protocol, *(S) VMScluster Sys*, F–3
internal loopback mode (DELUA only), *(P) I/O User*, 9–35
loopback mode, *(P) I/O User*, 9–32
message size, *(P) I/O User*, 9–23, 9–26, 9–27, 9–29, 9–32
modify characteristics, *(P) I/O User*, 9–30
multicast address state, *(P) I/O User*, 9–36
packet format, *(P) I/O User*, 9–15
Class I service, *(P) I/O User*, 9–18
Ethernet, *(P) I/O User*, 9–16
extended 802, *(P) I/O User*, 9–21
IEEE 802, *(P) I/O User*, 9–18
set mode parameters, *(P) I/O User*, 9–40
SNAP SAP value, *(P) I/O User*, 9–21
user-supplied service, *(P) I/O User*, 9–20
padding
message size, *(P) I/O User*, 9–23, 9–27
transmit messages, *(P) I/O User*, 9–36
parameter ID, *(P) I/O User*, 9–30
packet format, *(P) I/O User*, 9–40
parameter validation, *(P) I/O User*, 9–41
port, *(S) Sys Mgr Tuning*, 22–2; *(P) I/O User*, 9–2
address, *(P) I/O User*, 9–31
start, *(P) I/O User*, 9–30
privilege, *(P) I/O User*, 9–25
programming example, *(P) I/O User*, 9–55
programming notes, *(P) I/O User*, 9–54
promiscuous mode, *(P) I/O User*, 9–37, 9–54
rules for, *(P) I/O User*, 9–54
protocol type, *(S) Sys Mgr Tuning*, 22–2; *(P) I/O User*, 9–2, 9–25, 9–28, 9–38
access mode, *(P) I/O User*, 9–31
cross-company, *(P) I/O User*, 9–16
Digital, *(P) I/O User*, 9–16
Ethernet, *(P) I/O User*, 9–16
protocol type on Alpha systems
sharing, *(P) I/O User*, 9–21
protocol type on VAX systems
sharing, *(P) I/O User*, 9–17
protocol type sharing on Alpha systems, *(P) I/O User*, 9–21
protocol type sharing on VAX systems, *(P) I/O User*, 9–17
read function, *(P) I/O User*, 9–25
LAN drivers (cont'd)
restart, *(P) I/O User*, 9–38
sense mode function, *(P) I/O User*, 9–47
Service Access Point (SAP), *(P) I/O User*, 9–20
set controller mode
extended characteristics, *(P) I/O User*, 9–31 to 9–40
P2 buffer, *(P) I/O User*, 9–30
parameter ID, *(P) I/O User*, 9–30
set controller mode on Alpha systems
protocol type sharing, *(P) I/O User*, 9–21
set controller mode on VAX systems
protocol type sharing, *(P) I/O User*, 9–17
set mode function, *(P) I/O User*, 9–30
shared default mode on Alpha systems, *(P) I/O User*, 9–21
shared default mode on VAX systems, *(P) I/O User*, 9–17
shared with destination mode on Alpha systems, *(P) I/O User*, 9–21
shared with destination mode on VAX systems, *(P) I/O User*, 9–17
shutdown controller mode, *(P) I/O User*, 9–42
shutdown port, *(P) I/O User*, 9–42
software interface, *(P) I/O User*, 9–3
status returns, *(P) I/O User*, A–8
supported devices, *(P) I/O User*, 9–2
SYS$ASSIGN routine, *(P) I/O User*, 9–4
SYS$DASSGN routine, *(P) I/O User*, 9–4
SYS$GETDVI routine, *(P) I/O User*, 9–22
Token Ring, *(S) Sys Mgr Tuning*, 22–2; *(P) I/O User*, 9–2
transmit/receive buffer size, *(P) I/O User*, 9–31
unit and line status, *(P) I/O User*, 9–23
write function, *(P) I/O User*, 9–27
Language, user's choice of natural, *(P) LIB$*, LIB–280
Language expressions
compared to address expressions, *(P) Debugger*, 8–7
DEPOSIT command, *(P) Debugger*, 8–3, CD–76
EVALUATE command, *(P) Debugger*, 8–5, CD–98
evaluating, *(P) Debugger*, 8–5
FOR command, *(P) Debugger*, 12–10, CD–123
IF command, *(P) Debugger*, 12–10, CD–128
MONITOR command, *(P) Debugger*, CD–129
REPEAT command, *(P) Debugger*, 12–10, CD–138, CD–139
WHEN clause, *(P) Debugger*, 7–9
WHILE command, *(P) Debugger*, 12–10, CD–312
Language extensions, *(P) Calling Std*, 2–5
Language formats, *(S) Sys Mgr Essentials*, 5–42
Language independence
testing for, *(P) Modular Proc*, 4–1, 4–4

Languages
ANSI/ISO, *(G) SW Overview*, 2–4, A–2
compilers, *(G) SW Overview*, 4–5
current, *(P) Debugger*, 8–10, CD–175
identifying, *(P) Debugger*, CD–259
multilanguage program, *(P) Debugger*, 13–15
setting, *(P) Debugger*, 8–10, CD–175
specifying, *(S) Sys Mgr Essentials*, 5–43, 5–44, 5–48
support by debugger, *(P) Debugger*, 1–2, 6–2
Language-Sensitive Editor/Source Code Analyzer
See LSE/SCA
Language-support procedure, *(P) Calling Std*, 1–5
LAN Manager, *(G) SW Overview*, 6–18
LAN protocol analysis program
distributed combination trigger, *(S) VMScluster Sys*, F–27
distributed enable, *(S) VMScluster Sys*, F–27
multiple user-defined patterns, *(S) VMScluster Sys*, F–27
packet transmission, *(S) VMScluster Sys*, F–27
required features, *(S) VMScluster Sys*, F–26
retransmission, *(S) VMScluster Sys*, F–20
troubleshooting NISCA, *(S) VMScluster Sys*, F–26
LANs (local area networks), *(S) TCP/IP*, 1–3; *(S) DECnet Intro*, 1–5, 1–7, 3–4; *(S) DECnet Mgmt*, 1–3
See also Ethernet and FDDI
adjacent node, *(S) DECnet Mgmt*, 2–7
alternate adapter booting, *(S) VMScluster Sys*, 9–6
analyzing retransmission errors, *(S) VMScluster Sys*, F–36
bridge, *(S) DECnet Intro*, 1–7
bridge failover, *(S) VMScluster Sys*, 3–20
broadcast routing timer, *(S) DECnet Mgmt*, 3–55
capturing packets, *(S) VMScluster Sys*, F–33
capturing retransmissions, *(S) VMScluster Sys*, F–33
capturing retransmitted packets, *(S) VMScluster Sys*, F–36
changing to a mixed-interconnect, *(S) VMScluster Sys*, 8–23
channel, *(S) DECnet Intro*, 1–7
circuit, *(S) DECnet Mgmt*, 1–3, 2–6, 2–7, 3–26
circuit identification, *(S) DECnet Mgmt*, 3–26
circuit parameters, *(S) DECnet Mgmt*, 3–33
clearing counters, *(S) Sys Mgr Tuning*, 22–25; *(S) Sys Mgmt Util A-L*, 12–9
configurations, *(S) VMScluster Sys*, 3–5, 3–15, 3–18, 3–19; *(S) DECnet Intro*, 1–7, 1–8; *(S) DECnet Mgmt*, 1–3
configuring adapter, *(S) VMScluster Sys*, 4–8, 9–5
connections, *(S) Sys Mgr Tuning*, 21–8
LANs (local area networks) (cont'd)
controlling with sample programs, *(S) VMScluster Sys*, D–1
creating a network component list, *(S) VMScluster Sys*, E–7
creating a network component representation, *(S) VMScluster Sys*, E–5
data capture on, *(S) VMScluster Sys*, F–28
data link for VMScluster, *(S) DECnet Mgmt*, 1–10
debugging satellite booting, *(S) VMScluster Sys*, C–6
deleting device information, *(S) Sys Mgr Tuning*, 22–17; *(S) Sys Mgmt Util A-L*, 12–8, 12–20
deleting node information, *(S) Sys Mgr Tuning*, 22–20; *(S) Sys Mgmt Util A-L*, 12–9, 12–20
designated router, *(S) DECnet Mgmt*, 1–7, 2–15, 2–19, 3–33
device-attention entry, *(S) VMScluster Sys*, C–30
device management, *(S) Sys Mgr Tuning*, 22–9
disabling MOP downline load service, *(S) Sys Mgr Tuning*, 22–23
displaying device information, *(S) Sys Mgr Tuning*, 22–15
displaying LAN device configurations, *(S) Sys Mgr Tuning*, 22–9
displaying LAN device parameters, *(S) Sys Mgr Tuning*, 22–10; *(S) Sys Mgmt Util A-L*, 12–17, 12–32
displaying node information, *(S) Sys Mgr Tuning*, 22–18; *(S) Sys Mgmt Util A-L*, 12–18, 12–37
displaying OPCOM messages, *(S) Sys Mgr Tuning*, 22–25; *(S) Sys Mgmt Util A-L*, 12–21
displaying status and counters, *(S) Sys Mgr Tuning*, 22–23, 22–24; *(S) Sys Mgmt Util A-L*, 12–18, 12–37
distributed enable messages, *(S) VMScluster Sys*, F–35
distributed trigger messages, *(S) VMScluster Sys*, F–35
downline loading, *(S) VMScluster Sys*, 9–9
downline system load, *(S) DECnet Mgmt*, 4–5
dump assistance multicast address, *(S) DECnet Mgmt*, 4–13
enabling data capture, *(S) VMScluster Sys*, F–34
enabling MOP downline load service, *(S) Sys Mgr Tuning*, 22–23
end node, *(S) DECnet Mgmt*, 1–7, 2–19, 3–33
end node caching, *(S) DECnet Mgmt*, 2–20
error-log entry, *(S) VMScluster Sys*, C–33
Ethernet, *(G) SW Overview*, 1–11, 6–18
Ethernet adapter, *(G) SW Overview*, 1–6

LANs (local area networks) (cont'd)
Ethernet troubleshooting, *(S) VMScluster Sys*, F–30
extended, *(G) SW Overview*, 1–11
FDDI, *(G) SW Overview*, 1–11
FDDI adapter, *(G) SW Overview*, 1–6
hardware address, *(S) VMScluster Sys*, 8–5; *(S) DECnet Mgmt*, 7–9
LANACP device database management, *(S) Sys Mgr Tuning*, 22–14
LANACP related OPCOM messages, *(S) Sys Mgr Tuning*, 22–22
LAN address for satellite, *(S) VMScluster Sys*, 9–8
LAN Auxiliary Control Program (LANACP) utility, *(S) Sys Mgr Tuning*, 22–5
LAN bridge failover, *(S) VMScluster Sys*, 3–20
LAN Control Program (LANCP) utility, *(S) Sys Mgr Tuning*, 22–6
LAN control subroutines, *(S) VMScluster Sys*, E–1
LANCP command files, *(S) Sys Mgr Tuning*, 22–9
LANCP SPAWN command, *(S) Sys Mgmt Util A-L*, 12–39
LANCP SPAWN function, *(S) Sys Mgr Tuning*, 22–9
LAN firmware updates, *(S) Sys Mgr Tuning*, 22–14
LAN MOP and DECnet MOP, *(S) Sys Mgr Tuning*, 22–20
large-packet support for FDDI, *(S) VMScluster Sys*, 10–17
limiting end nodes, *(S) DECnet Mgmt*, 3–51
limiting routers, *(S) DECnet Mgmt*, 3–50
line, *(S) DECnet Mgmt*, 2–11
line device, *(S) DECnet Mgmt*, 2–14
Load Trace facility, *(S) Sys Mgr Tuning*, 22–25
loopback tests, *(S) DECnet Mgmt*, 7–9
LRPSIZE system parameter, *(S) VMScluster Sys*, 10–17
maximum packet size, *(S) VMScluster Sys*, 10–17
migrating DECnet MOP to LAN MOP, *(S) Sys Mgr Tuning*, 22–20
monitoring LAN activity, *(S) VMScluster Sys*, 10–25
MOP console carrier, *(S) Sys Mgr Tuning*, 22–26; *(S) Sys Mgmt Util A-L*, 12–10
MOP downline load service, *(S) Sys Mgr Tuning*, 22–20
MOP downline load service management, *(S) Sys Mgr Tuning*, 22–23
MOP trigger boot, *(S) Sys Mgr Tuning*, 22–27; *(S) Sys Mgmt Util A-L*, 12–40
multiadapter configuration requirements, *(S) VMScluster Sys*, 3–16
LANs (local area networks) (cont'd)
multicast address definition, *(S) DECnet Mgmt*, 2–3
multiple adapters, *(S) VMScluster Sys*, 3–15
multiple-site VMScluster, *(G) V7.0 New Feat*, D–3
network failure analysis, *(S) VMScluster Sys*, C–16, D–3
NISCA protocol, *(S) VMScluster Sys*, F–20
NISCA troubleshooting, *(S) VMScluster Sys*, F–1
NISCS_CONV_BOOT system parameter, *(S) VMScluster Sys*, C–6
node database management, *(S) Sys Mgr Tuning*, 22–17
OPCOM messages, *(S) VMScluster Sys*, D–11
physical address, *(S) DECnet Mgmt*, 4–5, 7–9
port, *(S) VMScluster Sys*, C–19
required tools for troubleshooting, *(S) VMScluster Sys*, F–26
router, *(S) DECnet Mgmt*, 1–7, 2–19, 3–33
running the LANACP utility, *(S) Sys Mgr Tuning*, 22–6
sample LAN MOP set up, *(S) Sys Mgr Tuning*, 22–22
sample programs, *(S) VMScluster Sys*, D–2, D–3
satellite booting, *(S) VMScluster Sys*, 9–5, 9–6, 9–8
setting device information, *(S) Sys Mgr Tuning*, 22–15; *(S) Sys Mgmt Util A-L*, 12–11
setting LAN device parameters, *(S) Sys Mgr Tuning*, 22–12
setting node information, *(S) Sys Mgr Tuning*, 22–18
setting up LAN MOP with CLUSTER_CONFIG, *(S) Sys Mgr Tuning*, 22–21
single-adapter booting, *(S) VMScluster Sys*, 9–5
starting and stopping the NISCA protocol, *(S) VMScluster Sys*, D–1
starting network failure analysis, *(S) VMScluster Sys*, E–10
starting NISCA protocol, *(S) VMScluster Sys*, D–1
on LAN adapters, *(S) VMScluster Sys*, E–2
stopping network failure analysis, *(S) VMScluster Sys*, E–10
stopping NISCA protocol, *(S) VMScluster Sys*, D–2
on LAN adapters, *(S) VMScluster Sys*, C–39, E–3
stopping on all LAN adapters, *(S) VMScluster Sys*, E–3
stopping the LANACP utility, *(S) Sys Mgr Tuning*, 22–6
subroutine package, *(S) VMScluster Sys*, E–1, E–3, E–5, E–7, E–10

LANs (local area networks) (cont'd)
system management enhancements, *(S) Sys Mgr Tuning*, 22–1
token ring, *(G) SW Overview*, 1–11, 6–18
token ring LAN adapter, *(G) SW Overview*, 1–6
troubleshooting NISCA communications, *(S) VMScluster Sys*, F–16
upline memory dump, *(S) DECnet Mgmt*, 4–13
using multiple LAN adapters for LAT node, *(G) V7.0 New Feat*, 3–5
LAN segments
bridge failover, *(S) Dependable*, 7–9
in VMScluster configurations, *(S) Dependable*, 7–6 to 7–7
three in VMScluster configuration, *(S) VMScluster Sys*, 3–19
two in VMScluster configuration, *(S) VMScluster Sys*, 3–18
using multiple, *(S) VMScluster Sys*, 3–17
LAN Traffic Monitor
See LTM
Large immediate value
Alpha, *(P) Calling Std*, 3–52
LAST (local area systems transport) protocols, *(G) SW Overview*, 6–8
Last-chance exception vectors, *(P) Concepts*, 13–25
Last-chance handler, *(P) Debugger*, 13–22
Last login messages, *(S) Security*, 3–17
disabling, *(S) Security*, 7–24
LASTport and LASTport/DISK protocols
not in C2 evaluation, *(S) Security*, C–3
LASTport Control Program (LASTCP), *(S) Sys Mgr Tuning*, 23–5 to 23–13
command summary, *(S) Sys Mgr Tuning*, 23–10
LASTport/Disk protocol, *(S) Sys Mgr Tuning*, 23–5
LASTport/Disk service, *(S) Sys Mgr Tuning*, 23–12
ESS$DADDRIVER, *(S) Sys Mgr Tuning*, 23–13
LASTport protocol, *(S) Sys Mgr Tuning*, 23–5
LASTport/Tape protocol, *(S) Sys Mgr Tuning*, 23–5
LASTport/Tape service, *(S) Sys Mgr Tuning*, 23–12
ESS$MADDRIVER, *(S) Sys Mgr Tuning*, 23–13
LAT$CONFIG.COM command procedure, *(S) Sys Mgr Tuning*, 24–10
invoking during system startup, *(S) Sys Mgr Essentials*, 5–15
LAT $QIO, *(P) I/O User*, 5–76
LAT$STARTUP.COM command procedure, *(S) Sys Mgr Tuning*, 24–10, 24–11; *(S) Sys Mgmt Util A-L*, 13–34
invoking during system startup, *(S) Sys Mgr Essentials*, 5–15
LAT$SYSTARTUP.COM command procedure, *(S) Sys Mgr Tuning*, 24–10, 24–11, 24–12, 24–17
example, *(S) Sys Mgr Tuning*, 24–17
invoking during system startup, *(S) Sys Mgr Essentials*, 5–15
LAT Ancillary Control Process (LATACP), *(S) Sys Mgr Tuning*, 24–19
LAT Control Program (LATCP) utility, *(G) SW Overview*, 3–9, 3–13; *(S) Sys Mgr Tuning*, 24–3, 24–8
See also LAT software
DELETE QUEUE_ENTRY command, *(S) Sys Mgr Tuning*, 24–16
exiting, *(S) Sys Mgr Tuning*, 24–9; *(S) Sys Mgmt Util A-L*, 13–22
features, *(S) Sys Mgr Tuning*, 24–9
help, *(S) Sys Mgmt Util A-L*, 13–22
invoking, *(S) Sys Mgr Tuning*, 24–9; *(S) Sys Mgmt Util A-L*, 13–4
/[NO]ANNOUNCEMENTS qualifier, *(G) V7.0 New Feat*, 3–11
/[NO]LARGE_BUFFER qualifier, *(G) V7.0 New Feat*, 3–10
queuing incoming requests, *(S) Sys Mgr Tuning*, 24–15
SET NODE command, *(S) Sys Mgr Tuning*, 24–16
SET SERVICE command, *(S) Sys Mgr Tuning*, 24–16
setting SCSSYSTEMID system parameter, *(S) Sys Mgmt Util A-L*, 13–7
setting up limited services, *(S) Sys Mgr Tuning*, 24–15
SHOW QUEUE_ENTRY command, *(S) Sys Mgr Tuning*, 24–16
SHOW SERVICE command, *(S) Sys Mgr Tuning*, 24–16
summary of commands, *(S) Sys Mgr Tuning*, 24–9
/LATEST qualifier, *(P) Debugger*, CD–34, CD–207
LAT item codes, *(G) V7.0 New Feat*, 4–14
LAT protocol
not in C2 evaluation, *(S) Security*, C–3
LATs (local area transports)
ACMS terminal failover, *(S) Dependable*, 8–52, 8–55
protocol, *(S) DECnet Intro*, 1–7
LAT SENSEMODE $QIO Function, *(P) I/O User*, 5–59
LAT server, *(S) Sys Mgr Tuning*, 23–6
LAT SETMODE $QIO Function, *(P) I/O User*, 5–51
LAT software, *(G) SW Overview*, 1–6, 3–13
See also LAT Control Program (LATCP) utility
advantages and uses, *(S) Sys Mgr Tuning*, 24–2
application programs, *(S) Sys Mgr Tuning*, 24–2

LAT software (cont'd)
changing DECserver characteristics, *(S) Sys Mgmt Util A-L*, 13–10, 13–35
characteristics
added or changed, *(S) Sys Mgmt Util A-L*, 13–4
storing, *(S) Sys Mgmt Util A-L*, 13–4
connections, *(S) Sys Mgmt Util A-L*, 13–32, 13–57
incoming, *(S) Sys Mgmt Util A-L*, 13–27
outgoing, *(S) Sys Mgmt Util A-L*, 13–27
specifying type of, *(S) Sys Mgmt Util A-L*, 13–27
creating a service, *(S) Sys Mgr Tuning*, 24–13
customizing, *(S) Sys Mgr Tuning*, 24–12
devices
changing HANGUP characteristic, *(S) Sys Mgmt Util A-L*, 13–10
device unit number, *(S) Sys Mgmt Util A-L*, 13–33
disabling service announcements, *(G) V7.0 New Feat*, 3–11
enabling outgoing connections, *(S) Sys Mgr Tuning*, 24–16
load balancing, *(S) Sys Mgr Tuning*, 24–3
managing the database size, *(S) Sys Mgr Tuning*, 24–19
modems, *(S) Sys Mgr Tuning*, 24–2
outgoing connections, *(S) Sys Mgr Tuning*, 24–2, 24–3, 24–8
printers, *(S) Sys Mgr Tuning*, 24–2
autostart queues on, *(S) Sys Mgr Essentials*, 13–4, 13–10
increasing availability of, *(S) Sys Mgr Essentials*, 13–4, 13–10
LATSYM symbiont, *(S) Sys Mgr Essentials*, 13–3, 13–78
PRTSMB symbiont, *(S) Sys Mgr Essentials*, 13–78
sample configuration, *(S) Sys Mgr Essentials*, 13–10
setting up, *(S) Sys Mgr Essentials*, 13–14
spooling, *(S) Sys Mgr Essentials*, 7–14
troubleshooting, *(S) Sys Mgr Essentials*, 13–78
queuing incoming requests, *(S) Sys Mgr Tuning*, 24–15
rating algorithm, *(G) V7.0 New Feat*, 3–11
service
announcements, *(S) Sys Mgr Tuning*, 24–4, 24–8
creating, *(S) Sys Mgmt Util A-L*, 13–14
database, *(S) Sys Mgr Tuning*, 24–8; *(S) Sys Mgmt Util A-L*, 13–30, 13–33
dedicated applications, *(S) Sys Mgr Tuning*, 24–2
defined, *(S) Sys Mgr Tuning*, 24–2
deleting, *(S) Sys Mgmt Util A-L*, 13–21

LAT software
service (cont'd)
displaying characteristics of, *(S) Sys Mgmt Util A-L*, 13–58
displaying counters, *(S) Sys Mgmt Util A-L*, 13–57
displaying information, *(S) Sys Mgmt Util A-L*, 13–57
identifier, *(S) Sys Mgmt Util A-L*, 13–14, 13–30, 13–39
limiting size of node database, *(S) Sys Mgmt Util A-L*, 13–30, 13–33
modifying characteristics of, *(S) Sys Mgmt Util A-L*, 13–39
naming, *(S) Sys Mgmt Util A-L*, 13–14, 13–26
node, *(S) Sys Mgr Tuning*, 24–3, 24–4, 24–9
rating, *(S) Sys Mgmt Util A-L*, 13–15, 13–40, 13–51, 13–58
remote printing, *(S) Sys Mgr Tuning*, 24–2
session limit, *(S) Sys Mgmt Util A-L*, 13–29, 13–31
SET HOST/LAT command
/FRAME qualifier, *(G) V7.0 New Feat*, 3–12
setting up limited services, *(S) Sys Mgr Tuning*, 24–15
setting up ports, *(S) Sys Mgr Tuning*, 24–14
starting network in command procedure, *(S) Sys Mgr Essentials*, 5–15; *(S) Sys Mgr Tuning*, 24–11
starting with LAT$STARTUP.COM, *(S) Sys Mgr Essentials*, 5–15; *(S) Sys Mgr Tuning*, 24–10, 24–11
starting with SET NODE/STATE=ON, *(S) Sys Mgmt Util A-L*, 13–32
stopping with SET NODE/STATE=OFF, *(S) Sys Mgmt Util A-L*, 13–32
terminals, *(S) Sys Mgr Essentials*, 7–12; *(S) Sys Mgr Tuning*, 24–2
determining characteristics of, *(S) Sys Mgr Essentials*, 7–12
disconnecting, *(S) Sys Mgr Essentials*, 7–11
terminal speed, *(G) V7.0 New Feat*, 3–5
using large buffers, *(G) V7.0 New Feat*, 3–9
using multiple LAN adapters, *(G) V7.0 New Feat*, 3–5
LATSYM symbiont, *(S) Sys Mgr Essentials*, 13–3, 13–78
LAT terminals
debugging using two, *(P) Debugger*, 13–14
LAVC$FAILURE_ANALYSIS.MAR program, *(S) Dependable*, 7–9 to 7–11
distributed enable filter, *(S) VMScluster Sys*, F–34
distributed enable messages, *(S) VMScluster Sys*, F–35

LAVC$FAILURE_ANALYSIS.MAR program (cont'd)
distributed trigger filter, *(S) VMScluster Sys*, F–34
distributed trigger messages, *(S) VMScluster Sys*, F–35
filtering LAN packets, *(S) VMScluster Sys*, F–33
filtering LAN retransmissions, *(S) VMScluster Sys*, F–33
filters, *(S) VMScluster Sys*, F–33
partner program, *(S) VMScluster Sys*, F–37
retransmission errors, *(S) VMScluster Sys*, F–36
sample program, *(S) VMScluster Sys*, D–3
scribe program, *(S) VMScluster Sys*, F–38
starter program, *(S) VMScluster Sys*, F–36
LAVC$START_BUS.MAR sample program, *(S) VMScluster Sys*, D–1
LAVC$STOP_BUS.MAR sample program, *(S) VMScluster Sys*, D–2
%LAVC-I-ASUSPECT OPCOM message, *(S) VMScluster Sys*, D–11
%LAVC-S-WORKING OPCOM message, *(S) VMScluster Sys*, D–11
%LAVC-W-PSUSPECT OPCOM message, *(S) VMScluster Sys*, D–11
LAVc_all filter
HP 4972 LAN Protocol Analyzer, *(S) VMScluster Sys*, F–33
LAVc_TR_ReXMT filter
HP 4972 LAN Protocol Analyzer, *(S) VMScluster Sys*, F–33
Layered products
startup database, *(S) Sys Mgr Essentials*, 5–18, 5–19
startup phases, *(S) Sys Mgr Essentials*, 5–18
Layered software installation, *(S) Sys Mgr Essentials*, 3–18
Layers in networking architecture, *(S) TCP/IP*, 2–1
LBR$CLOSE routine, *(P) Util Routines*, LBR–7, LBR–8, LBR–28
LBR$DELETE_DATA routine, *(P) Util Routines*, LBR–16, LBR–29
LBR$DELETE_KEY routine, *(P) Util Routines*, LBR–16, LBR–31
LBR$FIND routine, *(P) Util Routines*, LBR–33
LBR$FLUSH routine, *(P) Util Routines*, LBR–35
LBR$GET_HEADER routine, *(P) Util Routines*, LBR–23, LBR–37
LBR$GET_HELP routine, *(P) Util Routines*, LBR–39
LBR$GET_HISTORY routine, *(P) Util Routines*, LBR–42
LBR$GET_INDEX routine, *(P) Util Routines*, LBR–26, LBR–44
LBR$GET_RECORD routine, *(P) Util Routines*, LBR–14, LBR–46
LBR$INI_CONTROL routine, *(P) Util Routines*, LBR–8, LBR–48
LBR$INSERT_KEY routine, *(P) Util Routines*, LBR–10, LBR–50
LBR$LOOKUP_KEY routine, *(P) Util Routines*, LBR–10, LBR–14, LBR–16, LBR–22, LBR–52
LBR$OPEN routine, *(P) Util Routines*, LBR–7, LBR–8, LBR–54
LBR$OUTPUT_HELP routine, *(P) Util Routines*, LBR–25, LBR–58
LBR$PUT_END routine, *(P) Util Routines*, LBR–10, LBR–62
LBR$PUT_HISTORY routine, *(P) Util Routines*, LBR–63
LBR$PUT_RECORD routine, *(P) Util Routines*, LBR–10, LBR–65
LBR$REPLACE_KEY routine, *(P) Util Routines*, LBR–10, LBR–67
LBR$RET_RMSSTV routine, *(P) Util Routines*, LBR–69
LBR$SEARCH routine, *(P) Util Routines*, LBR–70
LBR$SET_INDEX routine, *(P) Util Routines*, LBR–72
LBR$SET_LOCATE routine, *(P) Util Routines*, LBR–74
LBR$SET_MODULE routine, *(P) Util Routines*, LBR–22, LBR–75
LBR$SET_MOVE routine, *(P) Util Routines*, LBR–77
LBR$_KEYNOTFND routine, *(P) Util Routines*, LBR–10
LBR routines, *(P) Util Routines*, LBR–1 to LBR–18; *(P) CDU, LBR, & MU*, LIB–11
control index, *(P) Util Routines*, LBR–6
data records
reading, *(P) Util Routines*, LBR–46
writing, *(P) Util Routines*, LBR–65
end-of-module record, writing, *(P) Util Routines*, LBR–62
examples, *(P) Util Routines*, LBR–6 to LBR–18
creating a new library, *(P) Util Routines*, LBR–8
deleting a module from a library, *(P) Util Routines*, LBR–16 to LBR–18
inserting a module into a library, *(P) Util Routines*, LBR–10 to LBR–13
header, *(P) Util Routines*, LBR–2
help text
outputting, *(P) Util Routines*, LBR–58
retrieving, *(P) Util Routines*, LBR–39
index, *(P) Util Routines*, LBR–2
index searching, *(P) Util Routines*, LBR–70
library
closing, *(P) Util Routines*, LBR–28

LBR routines
library (cont'd)
creating, *(P) Util Routines*, LBR–54
opening, *(P) Util Routines*, LBR–54
structure, *(P) Util Routines*, LBR–2 to LBR–5
types, *(P) Util Routines*, LBR–1
library file, flushing, *(P) Util Routines*, LBR–35
library header information, *(P) Util Routines*, LBR–37
library index
getting contents, *(P) Util Routines*, LBR–44
initializing, *(P) Util Routines*, LBR–48
searching for key, *(P) Util Routines*, LBR–44
library key, *(P) Util Routines*, LBR–2
creating ASCII or binary, *(P) Util Routines*, LBR–55
deleting, *(P) Util Routines*, LBR–31
finding, *(P) Util Routines*, LBR–33
inserting, *(P) Util Routines*, LBR–50
looking up, *(P) Util Routines*, LBR–52
replacing, *(P) Util Routines*, LBR–67
library update history record, retrieving, *(P) Util Routines*, LBR–42
locate mode, setting record access mode to, *(P) Util Routines*, LBR–74
module, *(P) Util Routines*, LBR–2
accessing with RFA, *(P) Util Routines*, LBR–33
deleting data records, *(P) Util Routines*, LBR–29
deleting header, *(P) Util Routines*, LBR–29
module headers, *(P) Util Routines*, LBR–75
move mode, setting record access to, *(P) Util Routines*, LBR–77
RMS status value, returning, *(P) Util Routines*, LBR–69
setting current index number, *(P) Util Routines*, LBR–72
summary, *(P) Util Routines*, LBR–6
update history records, writing, *(P) Util Routines*, LBR–63
virtual memory, recovering, *(P) Util Routines*, LBR–35
$LCKPAG_64 system service
description, *(P) Sys Svc II*, SYS2–143
LC_COLLATE locale category, *(G) V7.0 New Feat*, B–23
LC_CTYPE locale category, *(G) V7.0 New Feat*, B–27
LC_MESSAGES locale category, *(G) V7.0 New Feat*, B–30
LC_MONETARY locale category, *(G) V7.0 New Feat*, B–31
LC_NUMERIC locale category, *(G) V7.0 New Feat*, B–35
LC_TIME locale category, *(G) V7.0 New Feat*, B–36
ldexp routine, *(P) Portable Math*, DPML–40, B–9
LEF (local event flag) state, *(S) DECnet Mgmt*, 8–18
/LEFT qualifier, *(P) Debugger*, CD–118, CD–133, CD–146
LENGTH attribute, *(P) Rec Mgmt Util*, 4–27, 4–28
Length field
using to indicate constant (keyword) value, *(P) RMS Ref*, 2–3
using to indicate mask or bit offset, *(P) RMS Ref*, 2–3
Length of key segment, *(P) Rec Mgmt Util*, 4–29
LES$ACP (LES ancillary control process), *(S) DECnet Mgmt*, 1–13
LEVEL1_INDEX_AREA attribute, *(P) Rec Mgmt Util*, 4–26, 4–27; *(P) File Appl*, 3–25
LEVEL1_RECORD_COUNT attribute, *(P) Rec Mgmt Util*, 4–5
Level of prompting, *(P) Rec Mgmt Util*, 6–9
Levels of abstraction, *(P) Modular Proc*, 2–2
Levels of dependability, *(S) Dependable*, 1–1, 2–4
Lexical functions, *(G) DCL A-M*, DCLI–290; *(G) SW Overview*, 5–4
and remote files, *(S) DECnet Intro*, 2–12, 2–13
changing process characteristics with, *(G) User*, 17–3
converting data types, *(G) User*, 17–17
definition, *(G) User*, 17–1
evaluating data, *(G) User*, 17–17
examining character strings, *(G) User*, 17–13
extracting parts of character strings, *(G) User*, 17–13, 17–14
F$DIRECTORY, *(G) User*, 14–23
F$GETJPI, *(S) Sys Mgr Tuning*, 26–9
F$GETQUI, *(S) Sys Mgr Essentials*, 13–51
F$GETSYI, *(S) Sys Mgr Tuning*, 26–9
formatting output strings, *(G) User*, 17–15
getting information about queues, *(S) Sys Mgr Essentials*, 13–51
getting information about vector processing, *(S) Sys Mgr Tuning*, 26–9
identifying symbols, *(G) User*, 17–18
manipulating character strings with, *(G) User*, 17–12
manipulating data types with, *(G) User*, 17–16
obtaining information
about files and devices, *(G) User*, 17–9
from VMScluster nodes, *(G) User*, 17–8, 17–9
process, *(G) User*, 17–2, 17–7
queues, *(G) User*, 17–7
system, *(G) User*, 17–6, 17–7
VMScluster system, *(G) User*, 17–6, 17–7

Lexical functions (cont'd)
overview, *(G) DCL A-M*, DCLI–288
saving process characteristics, *(G) User*, 17–4
searching for devices, *(G) User*, 17–10
searching for files, *(G) User*, 17–10
syntax, *(G) User*, 14–21
translating logical names with, *(G) User*, 17–11
usage, *(G) User*, 14–22
using in command procedures, *(G) User*, 14–21
LF character, *(P) Rec Mgmt Util*, 4–33
lgamma routine, *(P) Portable Math*, DPML–41, B–9
lgamma_max_float boundary value, *(P) Portable Math*, A–4
LGI$ICB_ACCTEXPIRED callback routine, *(P) Util Routines*, LGI–33
LGI$ICB_AUTOLOGIN callback routine, *(P) Util Routines*, LGI–34
LGI$ICB_CHECK_PASS callback routine, *(P) Util Routines*, LGI–35
LGI$ICB_DISUSER callback routine, *(P) Util Routines*, LGI–36
LGI$ICB_GET_INPUT callback routine, *(P) Util Routines*, LGI–37
LGI$ICB_GET_SYSPWD callback routine, *(P) Util Routines*, LGI–38
LGI$ICB_MODALHOURS callback routine, *(P) Util Routines*, LGI–39
LGI$ICB_PASSWORD callback routine, *(P) Util Routines*, LGI–40
LGI$ICB_PWDEXPIRED callback routine, *(P) Util Routines*, LGI–42
LGI$ICB_USERPARSE callback routine, *(P) Util Routines*, LGI–43
LGI$ICB_USERPROMPT callback routine, *(P) Util Routines*, LGI–44
LGI$ICB_VALIDATE callback routine, *(P) Util Routines*, LGI–45
LGI$ICR_AUTHENTICATE callout routine, *(P) Util Routines*, LGI–14
LGI$ICR_CHKRESTRICT callout routine, *(P) Util Routines*, LGI–17
LGI$ICR_DECWINIT callout routine, *(P) Util Routines*, LGI–19
LGI$ICR_FINISH callout routine, *(P) Util Routines*, LGI–21
LGI$ICR_IACT_START callout routine, *(P) Util Routines*, LGI–23
LGI$ICR_IDENTIFY callout routine, *(P) Util Routines*, LGI–25
LGI$ICR_INIT routine, *(P) Util Routines*, LGI–27
LGI$ICR_JOBSTEP callout routine, *(P) Util Routines*, LGI–29
LGI$ICR_LOGOUT callout routine, *(P) Util Routines*, LGI–31
LGI callouts, *(P) Util Routines*, LGI–2
/LGICMD qualifier and captive accounts, *(S) Security*, 7–8
LGI system parameters, *(S) Security*, 7–30
controlling login attempts, *(S) Security*, 7–29
LGI_CALLOUTS, *(S) Security*, C–10
LIB$ADAWI routine, *(P) LIB$*, LIB–3
LIB$ADDX routine, *(P) Concepts*, 5–7; *(P) LIB$*, LIB–5
LIB$ADD_TIME routine, *(P) Concepts*, 5–7
LIB$ADD_TIMES routine, *(P) LIB$*, LIB–8
LIB$ANALYZE_SDESC routine, *(P) LIB$*, LIB–10; *(P) STR$*, 2–4
LIB$ANALYZE_SDESC_64 routine, *(P) LIB$*, LIB–12
LIB$ASN_WTH_MBX routine, *(S) DECnet Mgmt*, 8–13, 8–25; *(P) Concepts*, 2–10; *(P) LIB$*, LIB–14
LIB$AST_IN_PROG routine, *(P) Concepts*, 6–22; *(P) LIB$*, LIB–17
LIB$ATTACH routine, *(P) Concepts*, 6–9; *(P) LIB$*, LIB–19
LIB$BBCCI routine, *(P) LIB$*, LIB–21
LIB$BBSSI routine, *(P) LIB$*, LIB–23
LIB$BUILD_NODESPEC routine, *(P) LIB$*, LIB–25
LIB$CALLG routine, *(P) Concepts*, 6–15; *(P) LIB$*, LIB–28
LIB$CALLG_64 routine, *(P) LIB$*, LIB–30
LIB$CHAR routine, *(P) LIB$*, LIB–31
LIB$COMPARE_NODENAME routine, *(P) LIB$*, LIB–33
LIB$COMPRESS_NODENAME routine, *(P) LIB$*, LIB–35
LIB$CONVERT_DATE_STRING routine, *(P) LIB$*, LIB–38
LIB$CRC routine, *(P) Concepts*, 6–16; *(P) LIB$*, LIB–42
LIB$CRC_TABLE routine, *(P) Concepts*, 6–16; *(P) LIB$*, LIB–44
LIB$CREATE_DIR routine, *(P) Concepts*, 6–22; *(P) LIB$*, LIB–46
LIB$CREATE_USER_VM_ZONE routine, *(P) Concepts*, 21–12, 21–16; *(P) LIB$*, LIB–50
LIB$CREATE_USER_VM_ZONE_64 routine, *(P) LIB$*, LIB–54
LIB$CREATE_VM_ZONE routine, *(P) Concepts*, 21–7, 21–16; *(P) LIB$*, LIB–57
LIB$CREATE_VM_ZONE_64 routine, *(P) LIB$*, LIB–63
LIB$CRF_INS_KEY routine, *(P) LIB$*, LIB–69
LIB$CRF_INS_REF routine, *(P) LIB$*, LIB–71
LIB$CRF_OUTPUT routine, *(P) LIB$*, LIB–74
LIB$CURRENCY routine, *(P) LIB$*, LIB–78
LIB$CVTF_FROM_INTERNAL_TIME routine, *(P) LIB$*, LIB–80

LIB$CVTF_TO_INTERNAL_TIME routine, *(P) LIB$*, LIB–82
LIB$CVT_DTB routine, *(P) LIB$*, LIB–97, LIB–99
LIB$CVT_DX_DX routine, *(P) LIB$*, LIB–84
LIB$CVT_FROM_INTERNAL_TIME routine, *(P) LIB$*, LIB–90
LIB$CVT_HTB routine, *(P) LIB$*, LIB–97, LIB–99
LIB$CVT_OTB routine, *(P) LIB$*, LIB–97, LIB–99
LIB$CVT_TO_INTERNAL_TIME routine, *(P) LIB$*, LIB–93
LIB$CVT_VECTIM routine, *(P) LIB$*, LIB–95
LIB$DATE_TIME routine, *(P) Concepts*, 5–9; *(P) LIB$*, LIB–101
LIB$DAY routine, *(P) Concepts*, 5–5; *(P) LIB$*, LIB–103
LIB$DAY_OF_WEEK routine, *(P) LIB$*, LIB–105
LIB$DECODE_FAULT routine, *(P) Concepts*, 13–73; *(P) LIB$*, LIB–107
LIB$DEC_OVER routine, *(P) Concepts*, 13–17; *(P) LIB$*, LIB–126
LIB$DELETE_FILE routine, *(P) LIB$*, LIB–128
LIB$DELETE_LOGICAL routine, *(P) Concepts*, 6–8; *(P) LIB$*, LIB–136
LIB$DELETE_SYMBOL routine, *(P) Concepts*, 6–8; *(P) LIB$*, LIB–138
LIB$DELETE_VM_ZONE routine, *(P) Concepts*, 21–7, 21–13; *(P) LIB$*, LIB–140
LIB$DELETE_VM_ZONE_64 routine, *(P) LIB$*, LIB–142
LIB$DIGIT_SEP routine, *(P) LIB$*, LIB–144
LIB$DISABLE_CTRL routine, *(P) Concepts*, 6–9; *(P) LIB$*, LIB–146
LIB$DO_COMMAND routine, *(P) Concepts*, 6–7; *(P) LIB$*, LIB–148
LIB$EDIV routine, *(P) LIB$*, LIB–150
LIB$EMODD routine, *(P) LIB$*, LIB–152
LIB$EMODF routine, *(P) LIB$*, LIB–154
LIB$EMODG routine, *(P) LIB$*, LIB–156
LIB$EMODH routine, *(P) LIB$*, LIB–158
LIB$EMUL routine, *(P) LIB$*, LIB–160
LIB$ENABLE_CTRL routine, *(P) Concepts*, 6–9; *(P) LIB$*, LIB–162
LIB$ESTABLISH routine, *(P) Concepts*, 13–4, 13–42; *(P) LIB$*, LIB–164
LIB$EXPAND_NODENAME routine, *(P) LIB$*, LIB–167
LIB$EXTV routine, *(P) LIB$*, LIB–170
LIB$EXTZV routine, *(P) LIB$*, LIB–173
LIB$FFC routine, *(P) LIB$*, LIB–175
LIB$FFS routine, *(P) LIB$*, LIB–175
LIB$FID_TO_NAME routine, *(P) LIB$*, LIB–177
LIB$FILE_SCAN routine, *(P) LIB$*, LIB–180
LIB$FILE_SCAN_END routine, *(P) LIB$*, LIB–182
LIB$FIND_FILE routine, *(P) LIB$*, LIB–184; *(P) File Appl*, 5–8 to 5–12
LIB$FIND_FILE_END routine, *(P) LIB$*, LIB–188
LIB$FIND_IMAGE_SYMBOL routine, *(P) LIB$*, LIB–189
LIB$FIND_VM_ZONE routine, *(P) Concepts*, 21–7; *(P) LIB$*, LIB–192
LIB$FIND_VM_ZONE_64 routine, *(P) LIB$*, LIB–194
LIB$FIT_NODENAME routine, *(P) LIB$*, LIB–196
LIB$FIXUP_FLT routine, *(P) Concepts*, 13–72; *(P) LIB$*, LIB–199
LIB$FLT_UNDER procedure call, *(P) Interfaces*, 2–14
LIB$FLT_UNDER routine, *(P) Concepts*, 13–17; *(P) LIB$*, LIB–201
LIB$FORMAT_DATE_TIME routine, *(P) LIB$*, LIB–203
LIB$FORMAT_SOGW_PROT routine, *(P) LIB$*, LIB–206
LIB$FREE_DATE_TIME_CONTEXT routine, *(P) LIB$*, LIB–209
LIB$FREE_EF routine, *(P) LIB$*, LIB–210
LIB$FREE_LUN routine, *(P) LIB$*, LIB–211
LIB$FREE_TIMER routine, *(P) Concepts*, 5–19; *(P) LIB$*, LIB–212
LIB$FREE_VM routine, *(P) Concepts*, 19–6, 20–4; *(P) LIB$*, LIB–213
LIB$FREE_VM_64 routine, *(P) LIB$*, LIB–216
LIB$FREE_VM_PAGE routine, *(P) Concepts*, 19–6, 20–4; *(P) LIB$*, LIB–219
LIB$FREE_VM_PAGE_64 routine, *(P) LIB$*, LIB–221
LIB$GETDVI routine, *(P) LIB$*, LIB–223
LIB$GETJPI routine, *(P) LIB$*, LIB–228
LIB$GETQUI routine, *(P) Concepts*, 5–21; *(P) LIB$*, LIB–233
LIB$GETSYI routine, *(P) LIB$*, LIB–238
LIB$GET_ACCNAM routine, *(P) LIB$*, LIB–242
LIB$GET_ACCNAM_BY_CONTEXT routine, *(P) LIB$*, LIB–244
LIB$GET_COMMAND routine, *(P) LIB$*, LIB–246
LIB$GET_COMMON routine, *(P) Concepts*, 2–6, 6–5; *(P) LIB$*, LIB–249
LIB$GET_CURR_INVO_CONTEXT routine, *(P) Calling Std*, 3–34; *(P) LIB$*, LIB–251
LIB$GET_DATE_FORMAT routine, *(P) LIB$*, LIB–252
LIB$GET_EF routine, *(P) LIB$*, LIB–254
LIB$GET_FOREIGN routine, *(P) Concepts*, 6–3; *(P) LIB$*, LIB–256
LIB$GET_FULLNAME_OFFSET routine, *(P) LIB$*, LIB–260

LIB$GET_HOSTNAME routine, *(P) LIB$*, LIB–262
LIB$GET_INPUT procedure call, *(P) Interfaces*, 3–4
LIB$GET_INPUT routine, *(P) Concepts*, 7–4 to 7–6; *(P) LIB$*, LIB–265; *(P) STR$*, 2–8
  example, *(P) Concepts*, 7–4
  example of use in RMS program, *(P) RMS Ref*, A–23
  obtaining several lines of input, *(P) Concepts*, 7–5
  obtaining single line of input, *(P) Concepts*, 7–4
  prompt, *(P) Concepts*, 7–4
LIB$GET_INVO_CONTEXT routine, *(P) Calling Std*, 3–34; *(P) LIB$*, LIB–268
LIB$GET_INVO_HANDLE routine, *(P) Calling Std*, 3–35; *(P) LIB$*, LIB–270
LIB$GET_LUN routine, *(P) LIB$*, LIB–271
LIB$GET_MAXIMUM_DATE_LENGTH routine, *(P) LIB$*, LIB–273
LIB$GET_PREV_INVO_CONTEXT routine, *(P) Calling Std*, 3–35; *(P) LIB$*, LIB–275
LIB$GET_PREV_INVO_HANDLE routine, *(P) Calling Std*, 3–36; *(P) LIB$*, LIB–276
LIB$GET_SYMBOL routine, *(P) Concepts*, 6–8; *(P) LIB$*, LIB–277
LIB$GET_USERS_LANGUAGE routine, *(P) LIB$*, LIB–280
LIB$GET_VM routine, *(P) Concepts*, 19–6, 20–4; *(P) LIB$*, LIB–281; *(P) STR$*, 2–3
LIB$GET_VM_64 routine, *(P) LIB$*, LIB–283
LIB$GET_VM_PAGE routine, *(P) Concepts*, 19–6, 20–4; *(P) LIB$*, LIB–285
LIB$GET_VM_PAGE_64 routine, *(P) LIB$*, LIB–287
LIB$ICHAR routine, *(P) LIB$*, LIB–289
LIB$INDEX routine, *(P) LIB$*, LIB–291
LIB$INITIALIZE logical name, *(P) Debugger*, 13–18
LIB$INITIALIZE routine, *(P) Concepts*, 16–1
LIB$INITIALIZE RTL procedure, *(P) Modular Proc*, 3–13
LIB$INIT_DATE_TIME_CONTEXT routine, *(P) LIB$*, LIB–293
LIB$INIT_TIMER routine, *(P) Concepts*, 5–18; *(P) LIB$*, LIB–297
LIB$INSERT_KEY routine, *(P) Util Routines*, LBR–19
LIB$INSERT_TREE routine, *(P) Concepts*, 6–29; *(P) LIB$*, LIB–299
LIB$INSERT_TREE_64 routine, *(P) LIB$*, LIB–308
LIB$INSQHIQ routine, *(P) LIB$*, LIB–320
LIB$INSQHI routine, *(P) LIB$*, LIB–317
LIB$INSQTIQ routine, *(P) LIB$*, LIB–326
LIB$INSQTI routine, *(P) LIB$*, LIB–323
LIB$INSV routine, *(P) LIB$*, LIB–329
LIB$INT_OVER routine, *(P) Concepts*, 13–17; *(P) LIB$*, LIB–331
LIB$LEN routine, *(P) LIB$*, LIB–333
LIB$LOCC routine, *(P) LIB$*, LIB–334
LIB$LOOKUP_KEY routine, *(P) LIB$*, LIB–337
LIB$LOOKUP_TREE routine, *(P) Concepts*, 6–29; *(P) LIB$*, LIB–341
LIB$LOOKUP_TREE_64 routine, *(P) LIB$*, LIB–343
LIB$LP_LINES routine, *(P) LIB$*, LIB–345
LIB$MATCHC routine, *(P) LIB$*, LIB–347
LIB$MATCH_COND routine, *(P) Concepts*, 13–33, 13–65, 13–72; *(P) LIB$*, LIB–349
LIB$MOVC3 routine, *(P) 64-Bit Addr*, 9–7; *(P) LIB$*, LIB–352
LIB$MOVC5 routine, *(P) 64-Bit Addr*, 9–7; *(P) LIB$*, LIB–354
LIB$MOVTC routine, *(P) LIB$*, LIB–356
LIB$MOVTUC routine, *(P) LIB$*, LIB–373
LIB$MULTF_DELTA_TIME routine, *(P) Concepts*, 5–7; *(P) LIB$*, LIB–376
LIB$MULT_DELTA_TIME routine, *(P) Concepts*, 5–7; *(P) LIB$*, LIB–377
LIB$PARSE_ACCESS_CODE routine, *(P) LIB$*, LIB–378
LIB$PARSE_SOGW_PROT routine, *(P) LIB$*, LIB–381
LIB$PAUSE routine, *(P) LIB$*, LIB–384
LIB$POLYD routine, *(P) LIB$*, LIB–385
LIB$POLYF routine, *(P) LIB$*, LIB–387
LIB$POLYG routine, *(P) LIB$*, LIB–390
LIB$POLYH routine, *(P) LIB$*, LIB–392
LIB$PUT_COMMON routine, *(P) Concepts*, 2–6, 6–5; *(P) LIB$*, LIB–394
LIB$PUT_INVO_REGISTERS routine, *(P) Calling Std*, 3–36; *(P) LIB$*, LIB–396
LIB$PUT_OUTPUT routine, *(P) Concepts*, 7–4; *(P) LIB$*, LIB–398
  example, *(P) Concepts*, 7–7
  example of use in RMS program, *(P) RMS Ref*, A–23
  writing simple output, *(P) Concepts*, 7–6
LIB$RADIX_POINT routine, *(P) LIB$*, LIB–400
LIB$REMQHIQ routine, *(P) LIB$*, LIB–405
LIB$REMQHI routine, *(P) LIB$*, LIB–402
LIB$REMQTIQ routine, *(P) LIB$*, LIB–411
LIB$REMQTI routine, *(P) LIB$*, LIB–408
LIB$RENAME_FILE routine, *(P) LIB$*, LIB–414
LIB$RESERVE_EF routine, *(P) LIB$*, LIB–423
LIB$RESET_VM_ZONE routine, *(P) Concepts*, 21–6, 21–13; *(P) LIB$*, LIB–425
LIB$RESET_VM_ZONE_64 routine, *(P) LIB$*, LIB–427
LIB$REVERT routine, *(P) Concepts*, 13–4, 13–5; *(P) LIB$*, LIB–429

LIB$RUN_PROGRAM routine, *(P) Concepts*, 6–5; *(P) LIB$*, LIB–430
LIB$SCANC routine, *(P) LIB$*, LIB–432
LIB$SCOPY_DXDX routine, *(P) LIB$*, LIB–434; *(P) STR$*, 2–6
LIB$SCOPY_R_DX routine, *(P) LIB$*, LIB–436
LIB$SCOPY_R_DX_64 routine, *(P) LIB$*, LIB–438
LIB$SET_INDEX routine, *(P) Util Routines*, LBR–19
LIB$SET_LOGICAL routine, *(P) Concepts*, 6–8; *(P) LIB$*, LIB–440
LIB$SET_SYMBOL routine, *(P) Concepts*, 6–8; *(P) LIB$*, LIB–444
LIB$SFREE1_DD routine, *(P) LIB$*, LIB–447
LIB$SFREEN_DD routine, *(P) LIB$*, LIB–448
LIB$SGET1_DD routine, *(P) LIB$*, LIB–450
LIB$SGET1_DD_64 routine, *(P) LIB$*, LIB–452
LIB$SHOW_TIMER procedure call, *(P) Interfaces*, 3–2
LIB$SHOW_TIMER routine, *(P) Concepts*, 5–19; *(P) LIB$*, LIB–454
LIB$SHOW_VM routine, *(P) LIB$*, LIB–458
LIB$SHOW_VM_64 routine, *(P) LIB$*, LIB–461
LIB$SHOW_VM_ZONE routine, *(P) Concepts*, 21–7; *(P) LIB$*, LIB–464
LIB$SHOW_VM_ZONE_64 routine, *(P) LIB$*, LIB–470
LIB$SIGNAL procedure call, *(P) Interfaces*, 3–2
LIB$SIGNAL routine, *(P) Concepts*, 13–3, 13–5, 13–16, 13–28, 13–34, 13–35, 13–50, 13–57, 13–65; *(P) LIB$*, LIB–476
  generating signals, *(P) Concepts*, 13–30
  invoking, *(P) Concepts*, 13–30
  signaling, *(P) Calling Std*, 6–9, 6–13
  using to signal RMS errors, *(P) RMS Ref*, 2–6
LIB$SIG_TO_RET routine, *(P) Concepts*, 13–71; *(P) LIB$*, LIB–480
LIB$SIG_TO_STOP routine, *(P) Concepts*, 13–71; *(P) LIB$*, LIB–482
LIB$SIM_TRAP routine, *(P) Concepts*, 13–64, 13–70; *(P) LIB$*, LIB–484
LIB$SKPC routine, *(P) LIB$*, LIB–486
LIB$SPANC routine, *(P) LIB$*, LIB–488
LIB$SPAWN routine, *(P) Concepts*, 6–9; *(P) LIB$*, LIB–492
LIB$STAT_TIMER routine, *(P) Concepts*, 5–19; *(P) LIB$*, LIB–498
LIB$STAT_VM routine, *(P) LIB$*, LIB–502
LIB$STAT_VM_64 routine, *(P) LIB$*, LIB–504
LIB$STOP routine, *(P) Concepts*, 13–3, 13–5, 13–7, 13–28, 13–34, 13–35, 13–45, 13–50, 13–57, 13–64, 13–65; *(P) LIB$*, LIB–506; *(P) File Appl*, 5–12
  generating signals, *(P) Concepts*, 13–30
  using, *(P) Calling Std*, 6–9, 6–11, 6–13
LIB$SUBX routine, *(P) Concepts*, 5–7; *(P) LIB$*, LIB–508
LIB$SUB_TIME routine, *(P) Concepts*, 5–7
LIB$SUB_TIMES routine, *(P) LIB$*, LIB–510
LIB$SYS_ASCTIM routine, *(P) LIB$*, LIB–512
LIB$SYS_FAOL routine, *(P) LIB$*, LIB–516
LIB$SYS_FAOL_64 routine, *(P) LIB$*, LIB–518
LIB$SYS_FAO routine, *(P) LIB$*, LIB–514
LIB$SYS_GETMSG routine, *(P) LIB$*, LIB–520
LIB$TABLEPARSE routine, *(P) LIB$*, LIB–523
LIB$TPARSE routine, *(P) LIB$*, LIB–523
LIB$TRAVERSE_TREE routine, *(P) Concepts*, 6–29; *(P) LIB$*, LIB–584
LIB$TRAVERSE_TREE_64 routine, *(P) LIB$*, LIB–586
LIB$TRA_ASC_EBC routine, *(P) LIB$*, LIB–588
LIB$TRA_EBC_ASC routine, *(P) LIB$*, LIB–592
LIB$TRIM_FILESPEC routine, *(P) LIB$*, LIB–595
LIB$TRIM_FULLNAME routine, *(P) LIB$*, LIB–598
LIB$VERIFY_VM_ZONE routine, *(P) Concepts*, 21–7; *(P) LIB$*, LIB–601
LIB$VERIFY_VM_ZONE_64 routine, *(P) LIB$*, LIB–602
LIB$WAIT routine, *(P) LIB$*, LIB–603
LIBDECOMP.COM command procedure, *(S) Sys Mgr Tuning*, 16–6; *(S) Alpha Perform*, 4–2
LIB files, *(S) DECamds*, B–2
LIBOTS routines, *(P) 64-Bit Addr*, 9–7
Libraian Utility (LBR) Routines, *(P) CDU, LBR, & MU*, LIB–11
Librarian utility (LIBRARIAN), *(G) SW Overview*, 4–7
  character case of library keys, *(P) CDU, LBR, & MU*, LIB–4
  command qualifiers, *(P) CDU, LBR, & MU*, LIB–14
  compressing macro libraries, *(P) CDU, LBR, & MU*, LIB–43
  creating libraries, *(P) Environment*, 8–3
  creating new libraries, *(P) CDU, LBR, & MU*, LIB–19
  cross-reference listings, *(P) CDU, LBR, & MU*, LIB–21
  DCL command LIBRARY, *(P) CDU, LBR, & MU*, LIB–12
  deleting modules from libraries, *(P) CDU, LBR, & MU*, LIB–23
  directing output, *(P) CDU, LBR, & MU*, LIB–13, LIB–30
    history record headers, *(P) CDU, LBR, & MU*, LIB–28
    library list, *(P) CDU, LBR, & MU*, LIB–30
  exiting, *(P) CDU, LBR, & MU*, LIB–13
  extracting files, *(P) CDU, LBR, & MU*, LIB–24
  global symbols, *(P) CDU, LBR, & MU*, LIB–26, LIB–34, LIB–38, LIB–46

Librarian utility (LIBRARIAN) (cont'd)
global symbol tables (GST), *(P) CDU, LBR, & MU*, LIB–4
help files, *(P) CDU, LBR, & MU*, LIB–6, LIB–7
help libraries, *(P) CDU, LBR, & MU*, LIB–3, LIB–6, LIB–7
HELP LIBRARY command display, *(P) CDU, LBR, & MU*, LIB–9
help text example, *(P) CDU, LBR, & MU*, LIB–8
inserting modules, *(P) CDU, LBR, & MU*, LIB–29, LIB–33
invoking, *(P) CDU, LBR, & MU*, LIB–13
key lines in help files, *(P) CDU, LBR, & MU*, LIB–7
LIBRARY command, *(P) Environment*, 8–4
LIBRARY command format, *(P) CDU, LBR, & MU*, LIB–12
library file specifications, *(P) CDU, LBR, & MU*, LIB–12
library headers, *(P) CDU, LBR, & MU*, LIB–4
library indexes, *(P) CDU, LBR, & MU*, LIB–4
linking modules, *(P) CDU, LBR, & MU*, LIB–40
macro libraries, *(P) CDU, LBR, & MU*, LIB–3, LIB–32
module headers, *(P) CDU, LBR, & MU*, LIB–4
module name tables (MNT), *(P) CDU, LBR, & MU*, LIB–4
object libraries, *(P) CDU, LBR, & MU*, LIB–3
object module libraries, *(P) CDU, LBR, & MU*, LIB–35
overview, *(P) CDU, LBR, & MU*, LIB–11
recovering storage space, *(P) CDU, LBR, & MU*, LIB–17
replacing modules, *(P) CDU, LBR, & MU*, LIB–39
restrictions, *(P) CDU, LBR, & MU*, LIB–13
retrieving help text, *(P) CDU, LBR, & MU*, LIB–9
selecting entries after date/time, *(P) CDU, LBR, & MU*, LIB–42
shareable image libraries, *(P) CDU, LBR, & MU*, LIB–3, LIB–5
sharing image libraries, *(P) CDU, LBR, & MU*, LIB–41
specifying date/time, *(P) CDU, LBR, & MU*, LIB–16
specifying input files, *(P) CDU, LBR, & MU*, LIB–12, LIB–13
specifying library files, *(P) CDU, LBR, & MU*, LIB–12
text libraries, *(P) CDU, LBR, & MU*, LIB–3, LIB–44
types of libraries, *(P) Environment*, 8–4; *(P) CDU, LBR, & MU*, LIB–3
using to save disk space, *(P) CDU, LBR, & MU*, LIB–11
Librarian utility routines
See LBR routines
Libraries
See also Device control libraries
character case in, *(P) CDU, LBR, & MU*, LIB–19
closing, *(P) Util Routines*, LBR–7, LBR–8
default, displaying help, *(G) DCL A-M*, DCLI–237
default object, *(P) Concepts*, 17–2
deleting module, *(P) Util Routines*, LBR–16
initializing, *(P) Util Routines*, LBR–8
inserting module, *(P) Util Routines*, LBR–10
listing index entries, *(P) Util Routines*, LBR–26
macro, *(P) Concepts*, 17–3, 17–5; *(P) CDU, LBR, & MU*, LIB–32
message object module, *(P) Concepts*, 13–60
module header, *(P) Util Routines*, LBR–22
multiple indexes, *(P) Util Routines*, LBR–19
multiple keys, *(P) Util Routines*, LBR–19
object, *(P) Concepts*, 17–2, 17–5
adding modules, *(P) Concepts*, 17–2
creating, *(P) Concepts*, 17–2
deleting a module, *(P) Concepts*, 17–2
extracting a module, *(P) Concepts*, 17–2
listing modules, *(P) Concepts*, 17–2
replacing modules, *(P) Concepts*, 17–2
system default, *(P) Concepts*, 17–2
user default, *(P) Concepts*, 17–2
object module, *(G) DCL A-M*, DCLI–28; *(P) CDU, LBR, & MU*, LIB–3, LIB–35
opening, *(P) Util Routines*, LBR–7, LBR–8
processing index entry, *(P) Util Routines*, LBR–26
reformatting, *(P) CDU, LBR, & MU*, LIB–17, LIB–22
replacing module, *(P) Util Routines*, LBR–10
sizes of, *(P) CDU, LBR, & MU*, LIB–17, LIB–19, LIB–29
structure of, *(P) CDU, LBR, & MU*, LIB–4
system default, *(P) Concepts*, 17–5
text, *(P) Concepts*, 17–3; *(P) CDU, LBR, & MU*, LIB–44
types of, *(P) CDU, LBR, & MU*, LIB–3
updating, *(P) Modular Proc*, 6–4
user default, *(P) Concepts*, 17–5
LIBRARY command, *(G) DCL A-M*, DCLI–412; *(P) Environment*, 8–4; *(P) CDU, LBR, & MU*, LIB–12
/ALPHA qualifier, *(P) CDU, LBR, & MU*, LIB–15
/BEFORE qualifier, *(P) CDU, LBR, & MU*, LIB–16
/COMPRESS qualifier, *(P) CDU, LBR, & MU*, LIB–17 to LIB–18
/CREATE qualifier, *(P) Concepts*, 17–2; *(P) CDU, LBR, & MU*, LIB–12, LIB–19 to LIB–20

LIBRARY command (cont'd)
/CROSS_REFERENCE qualifier, *(P) CDU, LBR, & MU*, LIB–21
/DATA qualifier, *(P) CDU, LBR, & MU*, LIB–22
/DELETE qualifier, *(P) CDU, LBR, & MU*, LIB–23
/EXTRACT qualifier, *(P) Concepts*, 17–3; *(P) CDU, LBR, & MU*, LIB–12, LIB–24
/FULL qualifier, *(P) CDU, LBR, & MU*, LIB–25
using with /HISTORY, *(P) CDU, LBR, & MU*, LIB–28
/GLOBALS qualifier, *(P) CDU, LBR, & MU*, LIB–26
/HELP qualifier, *(P) CDU, LBR, & MU*, LIB–27
/HISTORY qualifier, *(P) CDU, LBR, & MU*, LIB–28
/INSERT qualifier, *(P) CDU, LBR, & MU*, LIB–12, LIB–29
maximum record size, *(P) CDU, LBR, & MU*, LIB–29
/LIST qualifier, *(P) Concepts*, 17–2; *(P) CDU, LBR, & MU*, LIB–30
using with /BEFORE, *(P) CDU, LBR, & MU*, LIB–16
using with /FULL, *(P) CDU, LBR, & MU*, LIB–25
using with /HISTORY, *(P) CDU, LBR, & MU*, LIB–28
/LOG qualifier, *(P) CDU, LBR, & MU*, LIB–31
/MACRO qualifier, *(P) CDU, LBR, & MU*, LIB–32
/MODULE qualifier, *(P) CDU, LBR, & MU*, LIB–33
/NAMES qualifier, *(P) CDU, LBR, & MU*, LIB–34
/OBJECT qualifier, *(P) CDU, LBR, & MU*, LIB–35
/ONLY qualifier, *(P) CDU, LBR, & MU*, LIB–36
/OUTPUT qualifier, *(P) CDU, LBR, & MU*, LIB–37
using with /COMPRESS, *(P) CDU, LBR, & MU*, LIB–17
using with /CROSS_REFERENCE, *(P) CDU, LBR, & MU*, LIB–21
using with /EXTRACT, *(P) CDU, LBR, & MU*, LIB–24
/REMOVE qualifier, *(P) CDU, LBR, & MU*, LIB–38
/REPLACE qualifier, *(P) Concepts*, 17–2; *(P) CDU, LBR, & MU*, LIB–12, LIB–39
/SELECTIVE_SEARCH qualifier, *(P) CDU, LBR, & MU*, LIB–40
/SHARE qualifier, *(P) CDU, LBR, & MU*, LIB–41
/SINCE qualifier, *(P) CDU, LBR, & MU*, LIB–42
LIBRARY command (cont'd)
/SQUEEZE qualifier, *(P) CDU, LBR, & MU*, LIB–43
/TEXT qualifier, *(P) CDU, LBR, & MU*, LIB–44
/VAX qualifier, *(P) CDU, LBR, & MU*, LIB–45
/WIDTH qualifier, *(P) CDU, LBR, & MU*, LIB–46
Library facility, *(P) Modular Proc*, 3–2
Library files
containing object modules, *(P) Linker*, 1–8
containing shareable images, *(P) Linker*, 1–8
default system libraries
order of processing, *(P) Linker*, 2–18
processing, *(P) Linker*, 2–13, LINK–36, LINK–37
name table, *(P) Linker*, 2–20
processing during symbol resolution, *(P) Linker*, 2–11
selective processing of, *(P) Linker*, 2–15
specifying as linker input, *(P) Linker*, 1–9, LINK–17, LINK–19
specifying default user libraries, *(P) Linker*, 2–13, LINK–40
types of libraries accepted as linker input, *(P) Linker*, 1–8
Library file specifications, *(P) CDU, LBR, & MU*, LIB–12
default file types, *(P) CDU, LBR, & MU*, LIB–12
Library keys, *(P) CDU, LBR, & MU*, LIB–4
Library procedures, *(P) Calling Std*, 1–5
/LIBRARY qualifier, *(P) Linker*, LINK–19
effect on symbol resolution processing, *(P) Linker*, 2–12
specified with the /INCLUDE qualifier, *(P) Linker*, 2–13
specifying libraries as linker input, *(P) Linker*, 1–9
LICENSE command, *(G) DCL A-M*, DCLI–413
License database, *(S) Sys Mgr Essentials*, 3–8
logical name defining location, *(S) Sys Mgr Essentials*, 5–8
LICENSE LOAD command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–43
License Management Facility
See LMF
License Management Facility (LMF), *(S) Sys Mgr Essentials*, 3–8, 5–5
License Management utility (LICENSE), *(G) DCL N-Z*, DCLII–283
LICENSE MODIFY command, *(S) Sys Mgr Essentials*, 3–8
Licenses
See also PAKs
deactivating, *(S) Sys Mgmt Util M-Z*, 6–43
displaying active, *(G) DCL N-Z*, DCLII–283
loading, *(S) Sys Mgr Essentials*, 3–8

Licenses
loading (cont'd)
in system startup, *(S) Sys Mgr Essentials*, 5–5
VMScluster client software, *(G) V7.0 New Feat*, E–1
Licenses required for installation, *(S) DECamds*, A–3
LICENSE UNLOAD command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–43
Lifetime
definition of, *(P) DECthreads*, 3–4
Lights out computing, *(S) Dependable*, 3–14, 5–7
case study, *(S) Dependable*, 11–1
CSC operations management, *(S) Dependable*, 11–12
Lightweight procedures
Alpha requirements, *(P) Calling Std*, 3–14
Limited-access accounts, *(S) Security*, 7–4
Limited free memory
analyzing, *(S) Alpha Perform*, 13–14
Limited port, *(S) Sys Mgmt Util A-L*, 13–11, 13–36
LIM option, *(P) Rec Mgmt Util*, 4–11
Linear recurrence
definition, *(P) MTH$*, 2–6
%LINE built-in symbol, *(P) Debugger*, B–8
EXAMINE command, *(P) Debugger*, 8–19
EXAMINE/SOURCE command, *(P) Debugger*, 10–4
GO command, *(P) Debugger*, CD–125
SET BREAK command, *(P) Debugger*, 7–6
SET TRACE command, *(P) Debugger*, 7–6
STEP command, *(P) Debugger*, 7–2
Line compositions, *(P) SMG$*, 3–2
Line counters summary, *(S) DECnet Mgmt Util*, B–7
Line devices
See Communications, controller device
Line editing, *(G) User*, 3–16
inhibiting, *(P) Concepts*, 7–41
Line feed, *(P) Rec Mgmt Util*, 4–32
Linefeed key, *(G) User*, 3–19
Line mode, *(P) Debugger*, CD–183
Line numbers
displaying or hiding at startup, *(P) Debugger*, 3–29
in source display, *(P) Debugger*, 3–1, 10–1, 10–3, 10–4
traceback information, *(P) Debugger*, 6–7, 9–3
treated as symbol, *(P) Debugger*, 9–9
Line-oriented output, *(P) SMG$*, 2–8
Line printers
Refer also to the *OpenVMS VAX Card Reader, Line Printer, and LPA11-K I/O User's Reference Manual*
preparing for UETP, *(S) Sys Mgr Tuning*, 17–3, 17–5, 17–8
Line printers (cont'd)
testing with UETP, *(S) Sys Mgr Tuning*, 17–31
UETP output, *(S) Sys Mgr Tuning*, 17–33
UETP test image, *(S) Sys Mgr Tuning*, 17–34
/LINE qualifier, *(P) Debugger*, 7–9, CD–9, CD–12, CD–23, CD–37, CD–54, CD–56, CD–105, CD–161, CD–223
Lines, *(S) TCP/IP*, 1–2; *(S) DECnet Intro*, 1–2; *(S) DECnet Mgmt*, 1–1
buffers for DDCMP line, *(S) DECnet Mgmt*, 3–42
buffer size, *(S) DECnet Mgmt*, 3–41
CI, *(S) DECnet Mgmt*, 2–11
clearing counters, *(S) DECnet Mgmt Util*, 3–161
commands, *(S) DECnet Mgmt*, 3–36
communications
definition, *(S) Sys Mgr Tuning*, 21–4
connections to port, *(S) DECnet Intro*, 3–4
counters, *(S) DECnet Mgmt*, 3–48; *(S) DECnet Mgmt Util*, 3–161, B–7
database, *(S) DECnet Mgmt*, 3–1
DDCMP, *(S) DECnet Mgmt*, 2–11
dedicated, *(S) DECnet Intro*, 1–7, 1–12
definition, *(S) DECnet Mgmt*, 2–11
device name, *(S) DECnet Mgmt*, 3–36
devices, *(S) DECnet Mgmt Util*, A–1
dialup, *(S) DECnet Intro*, 1–7, 1–12; *(S) DECnet Mgmt*, 5–12
displaying counter information with NCP, *(S) DECnet Intro*, 4–1
dynamic asynchronous, *(S) DECnet Mgmt*, 1–9, 2–14, 5–12
dynamic switching, *(S) DECnet Mgmt*, 2–14
Ethernet, *(S) DECnet Mgmt*, 3–46
identification, *(S) DECnet Mgmt*, 3–36
identifier, *(S) DECnet Intro*, 3–33
installing dynamic asynchronous, *(S) DECnet Mgmt*, 5–14
installing static asynchronous, *(S) DECnet Mgmt*, 5–12
LAN, *(S) DECnet Mgmt*, 2–11
LAPB, *(S) DECnet Mgmt*, 3–37
LAPBE, *(S) DECnet Mgmt*, 3–37
multipoint, *(S) DECnet Mgmt*, 2–12
name, *(S) DECnet Mgmt*, 2–12
network, *(S) Sys Mgr Tuning*, 21–5
definition, *(S) Sys Mgr Tuning*, 21–4
operational state, *(S) DECnet Mgmt*, 3–41
overflow
controlling, *(S) Sys Mgr Essentials*, 13–43
parameters, *(S) DECnet Mgmt*, 3–38
point-to-point, *(S) DECnet Intro*, 3–4; *(S) DECnet Mgmt*, 2–12
protocol, *(S) DECnet Mgmt*, 3–37
states, *(S) DECnet Mgmt*, 2–12; *(S) DECnet Mgmt Util*, C–1 to C–4

Lines (cont'd)
static asynchronous, *(S) DECnet Mgmt*, 1–9, 2–13, 5–12
synchronous DDCMP, *(S) DECnet Intro*, 3–4; *(S) DECnet Mgmt*, 1–3
terminal, *(S) DECnet Intro*, 1–12; *(S) DECnet Mgmt*, 1–9
timers, *(S) DECnet Mgmt*, 3–43
transitions, *(S) DECnet Mgmt Util*, C–1 to C–4
types, *(S) DECnet Mgmt*, 3–38
X.25 testing, *(S) DECnet Mgmt Util*, 3–52
Line speeds
setting, *(S) DECnet Mgmt Util*, 4–6, 4–11
Line terminator
terminal, *(P) I/O User*, 5–9
Line_Plot graph, *(P) File Appl*, 4–11, A–2
$LINK$ program section name
definition, *(P) Linker*, B–16
Linkable images, *(S) Sys Mgr Tuning*, 16–9
Linkage pair blocks
See LKPs
Linkage pointers, *(P) Calling Std*, 3–39
Linkage sections, *(S) Alpha Perform*, 6–15; *(P) Concepts*, 20–11; *(P) Calling Std*, 3–39
LINK command, *(G) DCL A-M*, DCLI–414; *(P) Debugger*, 5–5, 9–4, 10–1
clustering of input files, *(P) Linker*, 2–16, 2–17, LINK–47
in command procedure, *(P) Linker*, 1–12
invoking, *(P) Linker*, LINK–3
qualifiers, *(P) Linker*, 1–17
/SELECTIVE_SEARCH qualifier, *(S) Sys Mgr Essentials*, 5–23
shareable image, *(P) Debugger*, 9–11
specifying input files, *(P) Linker*, LINK–3
specifying library files, *(P) Linker*, LINK–19
suppressing information messages, *(P) Linker*, LINK–18
Linker map
use in crash dump analysis, *(P) Alpha SDA*, SDA–19; *(P) VAX SDA*, SDA–20
Linker utility, *(G) SW Overview*, 4–7; *(P) Environment*, 8–1
Alpha object language, *(P) Linker*, B–1
clustering of input files, *(P) Linker*, 2–16, 2–17
command qualifier summary, *(P) Environment*, 8–2
functional overview, *(P) Linker*, 1–2
how to invoke, *(P) Linker*, 1–3
image map, *(P) Linker*, 5–1
image maps, *(P) Environment*, 8–3
input, *(P) Environment*, 8–1
linking against SYS.STB, *(S) Sys Mgr Essentials*, 5–23
object language, *(P) Environment*, 8–3
options file, *(P) Environment*, 8–3
options summary, *(P) Linker*, 1–19
output, *(P) Environment*, 8–1
Linker utility (cont'd)
qualifiers, *(P) Linker*, 1–17
searching object libraries, *(P) Concepts*, 17–2
specifying input files, *(P) Linker*, LINK–3
symbol resolution processing, *(P) Linker*, 2–1
types of input files, *(P) Linker*, 1–1, 1–4
types of output files, *(P) Linker*, 1–1, 1–12
VAX object language, *(P) Linker*, A–1
Linker utility (LINK), *(P) CDU, LBR, & MU*, LIB–3, LIB–5
Linker utility (linker)
architectures, *(G) V7.0 New Feat*, 4–11
Linking services, *(P) Environment*, 2–4
Linking to OpenVMS images, *(P) DECthreads*, B–3
Link operations
obtaining statistical information about, *(P) Linker*, 5–11
Link option specification records
analyzing in object files, *(G) DCL A-M*, DCLI–28
Links
See also Logical links
automatic disconnection, *(S) DECnet Intro*, 3–3
creating with LATCP, *(S) Sys Mgmt Util A-L*, 13–7
deleting with LATCP, *(S) Sys Mgmt Util A-L*, 13–19
disconnecting, *(S) DECnet Mgmt Util*, 3–40
disconnecting logical from local node, *(S) DECnet Mgmt Util*, 3–40
displaying characteristics using LATCP, *(S) Sys Mgmt Util A-L*, 13–45
displaying counters using LATCP, *(S) Sys Mgmt Util A-L*, 13–42
displaying information using LATCP, *(S) Sys Mgmt Util A-L*, 13–41
fiber optic, *(S) DECnet Intro*, 1–7
microwave, *(S) DECnet Intro*, 1–2, 1–7
modifying characteristics using LATCP, *(S) Sys Mgmt Util A-L*, 13–26
name options in LATCP, *(S) Sys Mgmt Util A-L*, 13–7
satellite, *(S) DECnet Intro*, 1–2, 1–7
state of in LAT environment, *(S) Sys Mgmt Util A-L*, 13–9
states, *(S) DECnet Mgmt Util*, C–5
terminating dynamic asynchronous, *(S) Security*, 12–18; *(S) DECnet Intro*, 3–28
LINK/SHAREABLE command, *(P) Concepts*, 17–7
LINK_CACHE_ENABLE attribute, *(P) Rec Mgmt Util*, 4–31
LINK_TIMEOUT attribute, *(P) Rec Mgmt Util*, 4–31
LIST CIRCUIT command, *(S) DECnet Mgmt Util*, 3–120

LIST command, *(S) DECnet Intro*, 4–1; *(S) DECnet Mgmt*, 3–72
in Install utility, *(S) Sys Mgmt Util A-L*, 11–12
to display network configuration database, *(S) DECnet Intro*, 3–34
LIST DEVICE command
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–17
Listener devices
capturing audit event messages, *(S) Security*, 9–16
disabling, *(S) Security*, 9–16
example of programs for, *(S) Security*, 9–17
LISTEN_TIME system parameter, *(S) VMScluster Sys*, 3–20
LISTER.COM command procedure, *(G) User*, C–23
sample execution, *(G) User*, C–25
LIST EXECUTOR command, *(S) DECnet Mgmt Util*, 3–125
Listing
network proxy database, *(S) Sys Mgmt Util A-L*, 5–34
rights database, *(S) Sys Mgmt Util A-L*, 5–33, 5–35
system user authorization file (SYSUAF), *(S) Sys Mgmt Util A-L*, 5–31
Listing directives, *(P) CDU, LBR, & MU*, MSG–29, MSG–31
Listing files in directories, *(G) DCL A-M*, DCLI–168
Listing save-set information, *(S) Sys Mgmt Util A-L*, 7–18, 7–32, 7–44
LIST LINE command, *(S) DECnet Mgmt Util*, 3–128
LIST LOGGING command, *(S) DECnet Mgmt Util*, 3–133
LIST MODULE CONFIGURATOR command, *(S) DECnet Mgmt Util*, 3–136
LIST MODULE X25-ACCESS command, *(S) DECnet Mgmt Util*, 3–139
LIST MODULE X25-PROTOCOL command, *(S) DECnet Mgmt Util*, 3–141
LIST MODULE X25-SERVER command, *(S) DECnet Mgmt Util*, 3–145
LIST MODULE X29-SERVER command, *(S) DECnet Mgmt Util*, 3–145
LIST NODE command, *(S) DECnet Intro*, 3–34; *(S) DECnet Mgmt Util*, 3–147
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–18
LIST OBJECT command, *(S) DECnet Mgmt Util*, 3–152
List operations
with BACKUP, *(S) Sys Mgr Essentials*, 10–19
/LIST qualifier, *(S) Sys Mgmt Util A-L*, 3–5; *(P) Debugger*, 10–1
in Analyze/Disk_Structure utility, *(S) Sys Mgmt Util A-L*, 3–8
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–44
LIBRARY command, *(P) Concepts*, 17–2
$LITERAL$ program section name
definition, *(P) Linker*, B–16
Literal characters
including in command procedures, *(G) User*, 15–10
Literal text
character strings, *(G) User*, 16–9
Live mode, *(S) Alpha Perform*, 11–6
See Monitor utility
LK201-specific editing commands, *(S) Sys Mgmt Util A-L*, A–5
LKBs (lock blocks), *(P) Alpha SDA*, SDA–108
displaying only cached, *(P) VAX SDA*, SDA–122
LKPs (linkage pair blocks), *(P) Calling Std*, 3–40
$LKWSET_64 system service
description, *(P) Sys Svc II*, SYS2–149
LM$JOURNAL file type, *(S) Sys Mgr Tuning*, 25–3
LMF$GROUP_TABLE.EXE file
global symbols, *(P) VAX SDA*, SDA–64
LMF$LICENSE logical name
defining during system startup, *(S) Sys Mgr Essentials*, 5–8
LMF (License Management Facility), *(G) SW Overview*, 3–9, 7–7; *(S) VMScluster Sys*, 1–8
installing DECnet for OpenVMS license, *(S) DECnet Intro*, 3–10; *(S) DECnet Mgmt*, 6–1
LNK$LIBRARY logical name, *(P) Linker*, LINK–41
processing of, *(P) Linker*, 2–13
LNK$LIBRARY routine, *(P) Concepts*, 17–2
LNK$OPEN_LIB logical name
open systems library processing, *(P) Linker*, 2–14
LNM symbol, *(P) VAX SDA*, SDA–18
ln routine, *(P) Portable Math*, DPML–42, B–10
Load assist agent, *(S) DECnet Mgmt*, 4–10
Load balancing, *(S) Sys Mgmt Util A-L*, 13–15, 13–40; *(S) Alpha Perform*, 8–3; *(S) VMScluster Sys*, 7–1
and CPU power, *(S) Sys Mgmt Util A-L*, 13–28
devices served by MSCP, *(S) VMScluster Sys*, 6–17
in VMScluster environments, *(S) VMScluster Sys*, 5–1
of CPU resource in a network, *(S) VAX Perform*, 3–19
of CPU resource in a VAXcluster, *(S) VAX Perform*, 3–19
of CPU resource in a VMScluster, *(S) Alpha Perform*, 9–11

Load balancing (cont'd)
of disk I/O resource, *(S) VAX Perform*, 3–41; *(S) Alpha Perform*, 11–10
of memory resource, *(S) VAX Perform*, 3–23, 3–26, 3–29; *(S) Alpha Perform*, 10–4, 10–7, 10–11
using LAT software, *(S) Sys Mgr Tuning*, 24–3
LOAD command
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–14
in SYSGEN (VAX), *(S) Sys Mgr Essentials*, 7–7
Loading device drivers
automatically, *(S) Sys Mgr Essentials*, 7–6, 7–7
manually, *(S) Sys Mgr Essentials*, 7–8
on VAX, *(S) Sys Mgr Essentials*, 7–7
on Alpha systems, *(S) Sys Mgmt Util M-Z*, 6–33, 6–34, 6–37
Loading downline
See Downline system loads
Loading I/O driver, *(S) Sys Mgmt Util M-Z*, 5–14
Load leveling
dynamic, *(S) Sys Mgr Tuning*, 26–2
Load-locked instructions, *(P) Concepts*, 14–8, 14–13
LOAD NODE command, *(S) DECnet Mgmt*, 4–2, 4–6; *(S) DECnet Mgmt Util*, 3–44
overriding default parameters, *(S) DECnet Mgmt*, 4–8
LOADS logical name, *(S) Sys Mgr Tuning*, 17–34
Load/start MSCP server, *(S) Sys Mgmt Util M-Z*, 5–14
Load tests
defining user load for UETP, *(S) Sys Mgr Tuning*, 17–14
description, *(S) Sys Mgr Tuning*, 17–34
error during UETP, *(S) Sys Mgr Tuning*, 17–27
running individually, *(S) Sys Mgr Tuning*, 17–13
Load Trace facility, *(S) Sys Mgr Tuning*, 22–25
LOAD VIA command, *(S) DECnet Mgmt*, 4–6; *(S) DECnet Mgmt Util*, 3–47
LOAD_PWD_POLICY system parameter, *(S) Security*, C–10
LOA option, *(P) Rec Mgmt Util*, 4–10, 4–11
Local area disk
See LAD
Local Area Disk Control Program
See LAD Control Program (LADCP) utility
Local Area Network Auxiliary Control Program
See LAN Auxiliary Control Program utility
Local area networks
See LANs
Local area systems transport
See LAST
Local Area Transport Control Program
See LAT Control Program (LATCP) utility
Local area transports
See LATs and LAT software
Local area VMScluster environments, *(G) SW Overview*, 1–8
See also VMScluster systems
capturing distributed trigger event, *(S) VMScluster Sys*, F–34
debugging satellite booting, *(S) VMScluster Sys*, C–2, C–5
highly available, *(S) VMScluster Sys*, 3–17
network failure analysis, *(S) VMScluster Sys*, C–26
setting system date and time, *(S) Sys Mgmt Util M-Z*, 6–16
Local buffer caching
with lock management service, *(P) Concepts*, 15–18
Local circuits
defining at network startup, *(S) DECnet Intro*, 3–32
LOCALE commands
COMPILE, *(G) V7.0 New Feat*, B–11
LOAD, *(G) V7.0 New Feat*, B–14
SHOW CHARACTER_DEFINITIONS, *(G) V7.0 New Feat*, B–15
SHOW CURRENT, *(G) V7.0 New Feat*, B–16
SHOW PUBLIC, *(G) V7.0 New Feat*, B–18
SHOW VALUE, *(G) V7.0 New Feat*, B–18
UNLOAD, *(G) V7.0 New Feat*, B–15
Locale file format
descriptions of, *(G) V7.0 New Feat*, B–22 to B–42
locale categories, *(G) V7.0 New Feat*, B–22, B–23
Local event flag state
See LEF (local event flag) state
Local identifiers, *(S) Security*, 4–3; *(S) Sys Mgr Essentials*, 11–11
Locality of reference, *(S) Alpha Perform*, 10–2
definition, *(S) Alpha Perform*, 10–1
Local loopback tests, *(S) DECnet Mgmt*, 7–6
Local nodes, *(G) User*, 4–7; *(S) DECnet Intro*, 3–1, 3–10; *(S) DECnet Mgmt*, 1–17, 2–1, 3–5
defining at network startup, *(S) DECnet Intro*, 3–32
definition, *(S) Sys Mgr Essentials*, 2–13
displaying counter with NCP, *(S) DECnet Intro*, 4–1
displaying name and address, *(S) DECnet Intro*, 3–2
operational state, *(S) DECnet Mgmt*, 3–16
restrictions, *(S) DECnet Mgmt*, 6–3
setting address, *(S) DECnet Mgmt*, 3–8
states, *(S) DECnet Mgmt*, 6–3
Local page and swap files

Local page and swap files (cont'd)
installing with SATELLITE_PAGE.COM procedure, *(S) Sys Mgr Essentials*, 5–6; *(S) Sys Mgr Tuning*, 15–20
/LOCAL qualifier, *(P) Debugger*, 12–6, CD–62, CD–72, CD–285
Local symbols, *(G) DCL A-M*, DCLI–1, DCLI–5; *(P) Concepts*, 17–4; *(P) Debugger*, 9–3
signaling with, *(P) Concepts*, 13–61
Local symbol tables
See also GSTs and Global symbols
deleting symbols from, *(G) DCL A-M*, DCLI–151
entering symbol in, *(G) DCL A-M*, DCLI–279
labels in, *(G) User*, 15–4
Local-to-local loopback tests, *(S) DECnet Mgmt*, 7–5
Local-to-remote loopback tests, *(S) DECnet Mgmt*, 7–4
LOCAL_PORTS class
adding, *(S) Sys Mgmt Util M-Z*, 4–28
fields belonging to, *(S) Sys Mgmt Util M-Z*, 4–23
removing, *(S) Sys Mgmt Util M-Z*, 4–45
Locate mode
See also RAB$V_LOC option
comparing with move mode for buffer handling, *(P) RMS Ref*, 6–16
record retrieval and, *(P) File Appl*, 8–2
LOCATE_MODE attribute, *(P) Rec Mgmt Util*, 4–11
Location
of page file, *(S) Sys Mgr Tuning*, 15–3, 15–5
specifying alternate, *(S) Sys Mgr Tuning*, 15–24
of queue database, *(S) Sys Mgr Essentials*, 12–5, 12–7
master file, *(S) Sys Mgr Essentials*, 12–6
queue and journal files, *(S) Sys Mgr Essentials*, 12–6
changing, *(S) Sys Mgr Essentials*, 12–6
of swap file, *(S) Sys Mgr Tuning*, 15–5
specifying alternate, *(S) Sys Mgr Tuning*, 15–24
of system dump file, *(S) Sys Mgr Tuning*, 15–2
Location in memory, *(P) VAX SDA*, SDA–55
examining, *(P) Alpha SDA*, SDA–48
SDA default, *(P) Alpha SDA*, SDA–48
translating to instruction, *(P) Alpha SDA*, SDA–48
Location of software products, *(S) Sys Mgr Essentials*, 3–28
Locators
obtaining data from, *(P) SMG$*, 3–1
Lock
global, *(P) DECthreads*, 3–4
Lock access, *(S) Security*, 5–19
Lock blocks
See LKBs
LOCK class record
in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–22
Lock contention
error messages, *(S) DECamds*, 3–10
Lock Contention Summary window, *(S) DECamds*, 3–8 to 3–10
default data collection, *(S) DECamds*, 5–2
detailed data, *(S) DECamds*, 3–18
recording information, *(S) DECamds*, B–4
Lock database
in a VMScluster, *(P) Sys Svc I*, SYS1–458
LOCKDIRWT system parameter, *(S) VMScluster Sys*, A–2
used to control lock resource trees, *(S) VMScluster Sys*, 2–16
/LOCKID qualifier, *(P) Alpha SDA*, SDA–139; *(P) VAX SDA*, SDA–160
Locking
global mutex, *(P) DECthreads*, pthread–80, tis–15, E–56, G–59
readers locks, *(P) DECthreads*, tis–26, tis–27
writer lock, *(P) DECthreads*, tis–39, tis–40
LOCKING.EXE file, *(P) VAX SDA*, SDA–64
LOCKING.STB file, *(P) Alpha SDA*, SDA–61
Locking a mutex, *(P) DECthreads*, pthread–86, pthread–88, tis–20, tis–21, E–59, E–60, G–67, G–68
Lock limits
specifying for detached processes, *(G) DCL N-Z*, DCLII–62
specifying for subprocesses, *(G) DCL N-Z*, DCLII–62
Lock management
system services, *(P) Environment*, 10–6, 10–10
Lock management routines
global symbols, *(P) Alpha SDA*, SDA–61; *(P) VAX SDA*, SDA–64
Lock management system services
for interprocess communication, *(P) Concepts*, 2–8
Lock manager, *(G) SW Overview*, 3–3, 3–18; *(S) VMScluster Sys*, 1–4, 2–15; *(P) Modular Proc*, 3–16; *(P) Concepts*, 15–1; *(P) Interfaces*, B–12
See also Synchronization
displaying SDA information, *(P) Alpha SDA*, SDA–107; *(P) VAX SDA*, SDA–122
Lock-mastering nodes, *(P) File Appl*, 3–33
Lock mode, *(P) Alpha SDA*, SDA–140; *(P) VAX SDA*, SDA–161
LOCKPWD flag, *(G) User*, 2–7; *(S) Security*, 3–4

Lock-requesting nodes, *(P) File Appl*, 3–33
Lock requests
  dequeuing, *(P) Sys Svc I*, SYS1–270
  queuing, *(P) Concepts*, 15–6
  queuing a lock request, *(P) Concepts*, 15–8
  queuing asynchronously, *(P) Sys Svc I*, SYS1–328
  queuing synchronously, *(P) Sys Svc I*, SYS1–340
  synchronizing, *(P) Concepts*, 15–10
Lock root, *(P) File Appl*, 3–33
Locks
  See also Spin locks
  automatic investigation, *(S) DECamds*, 5–3
  choice of mode, *(P) Concepts*, 15–5
  concept of, *(P) Concepts*, 15–2
  conversion, *(P) Concepts*, 15–7, 15–12, 15–13
  deadlock detection, *(P) Concepts*, 15–8
  dequeuing, *(P) Concepts*, 15–16
  displaying SDA information, *(P) Alpha SDA*, SDA–139; *(P) VAX SDA*, SDA–160
  error messages, *(S) DECamds*, 3–19
  getting information asynchronously, *(P) Sys Svc I*, SYS1–449
  getting information synchronously, *(P) Sys Svc I*, SYS1–461
  level, *(P) Concepts*, 15–5
  mode, *(P) Concepts*, 15–5
  readers/writer, *(P) DECthreads*, 4–2
Locks, types of, *(S) DECamds*, 3–19
/LOCKS qualifier, *(P) Alpha SDA*, SDA–128; *(P) VAX SDA*, SDA–149
Lock status blocks, *(P) Concepts*, 15–11
Lock value blocks
  description, *(P) Concepts*, 15–15
  using, *(P) Concepts*, 15–18
Lock values, *(P) Interfaces*, B–12
lock_id data type, *(P) Interfaces*, B–12
LOCK_ON_READ attribute, *(P) Rec Mgmt Util*, 4–11; *(P) File Appl*, 7–11
LOCK_ON_WRITE attribute, *(P) Rec Mgmt Util*, 4–11; *(P) File Appl*, 7–11
/LOCK_STATE qualifier, *(P) Debugger*, CD–66
lock_status_block data type, *(P) Interfaces*, B–12
lock_value_block data type, *(P) Interfaces*, B–13
log10 routine, *(P) Portable Math*, DPML–42, B–10
log1p routine, *(P) Portable Math*, DPML–42, B–10
log2 routine, *(P) Portable Math*, DPML–42, B–10
Logarithm
  base 2, *(P) MTH$*, MTH–94, MTH–115
  common, *(P) MTH$*, MTH–96, MTH–117
  logb, convert to double-precision floating-point, *(P) Portable Math*, DPML–43
  natural, *(P) MTH$*, MTH–92, MTH–113
  natural complex, *(P) MTH$*, MTH–34, MTH–36
logb routine, *(P) Portable Math*, DPML–43, B–10
Log files, *(G) SW Overview*, 3–11; *(S) Alpha Perform*, 2–2; *(S) DECamds*, B–4
  as command procedure, *(P) Debugger*, 12–5
  contents of, *(G) User*, 18–14
  debugger, *(P) Debugger*, 12–5, CD–190
  examining during execution of batch jobs, *(G) User*, 18–15
  for batch jobs, *(G) User*, 18–14
  generated by UETP
    OLDUETP.LOG, *(S) Sys Mgr Tuning*, 17–20
  including command output, *(G) User*, 18–15, 18–16
  lock contention, *(S) DECamds*, B–5
  moving to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
  name of, *(P) Debugger*, 12–5, CD–177, CD–260
  network, *(S) DECnet Mgmt*, 2–28, 3–62
  of network events, *(S) DECnet Intro*, 4–4
  operator
    maintaining, *(S) Sys Mgr Tuning*, 18–24
    security alarm messages, *(S) Sys Mgr Tuning*, 18–21
    setting up, *(S) Sys Mgr Tuning*, 18–22
    troubleshooting the queue manager, *(S) Sys Mgr Essentials*, 12–14
  saving, *(G) User*, 18–15
  security audit, *(S) Sys Mgr Tuning*, 18–2
    creating new version, *(S) Sys Mgr Tuning*, 18–30
    reviewing, *(S) Sys Mgr Tuning*, 18–26
Log files generated by UETP
  during the load test, *(S) Sys Mgr Tuning*, 17–27
  NETSERVER.LOG, *(S) Sys Mgr Tuning*, 17–26
  OLDUETP.LOG, *(S) Sys Mgr Tuning*, 17–21
Logging, *(S) DECnet Mgmt*, 1–17, 2–28
  access to protected objects, *(S) Security*, 4–29
  commands, *(S) DECnet Mgmt*, 3–62
  console, *(S) DECnet Mgmt*, 2–28, 3–62
  consoles
    default, *(S) DECnet Intro*, 4–4
  database, *(S) DECnet Mgmt*, 3–1
  monitor, *(S) DECnet Mgmt*, 2–28, 3–62, 3–66 to 3–67
  parameters, *(S) DECnet Mgmt*, 3–63
  security audit events, *(S) Security*, 9–2, 9–13
  sink, *(S) DECnet Mgmt*, 2–28, 3–62
  sinks, *(S) DECnet Intro*, 4–4
  state, *(S) DECnet Mgmt*, 3–65
  terminal sessions, *(S) Security*, 6–6
Logging event messages, *(S) DECamds*, B–4
Logging in, *(G) DCL A-M*, DCLI–415 to DCLI–418; *(S) Sys Mgr Essentials*, 2–9
  to a remote host, *(S) Sys Mgr Tuning*, 21–13
  to operating system, *(G) User*, 2–2; *(G) SW Overview*, 5–1

Logging in
to operating system (cont'd)
errors, *(G) User*, 2–3
example, *(G) User*, 2–2
to remote system, *(G) User*, 2–9; *(G) SW Overview*, 5–2
when errors prevent, *(S) Sys Mgr Essentials*, 4–8
Logging out, *(G) DCL A-M*, DCLI–419
and device accesses, *(G) DCL A-M*, DCLI–15
breaking dialup connection, *(G) User*, 2–26; *(S) Security*, 3–20
deciding when it is necessary, *(S) Security*, 3–19
from disconnected processes, *(G) User*, 18–9; *(S) Security*, 3–20
from remote sessions, *(G) User*, 2–24
of remote session, *(S) DECnet Intro*, 3–3
of the operating system, *(G) User*, 2–24
reasons for, *(S) Security*, 3–19
security considerations, *(G) User*, 2–25; *(S) Security*, 3–19
using command procedure, *(S) Sys Mgr Essentials*, 6–22
while using VMSINSTAL.COM command procedure, *(S) Sys Mgr Essentials*, 3–7
Logging startup
with SYSMAN, *(S) Sys Mgr Essentials*, 4–15
Logical-block-position option, *(P) File Appl*, 4–35
Logical device names, *(G) User*, 12–9
Logical expressions, *(G) User*, 14–19, 14–20
Logical I/O access, *(S) Security*, 5–4
Logical I/Os
operations, *(P) Concepts*, 9–6
privilege, *(P) Concepts*, 9–4, 9–5, 9–6
Logical links, *(S) DECnet Intro*, 1–2; *(S) DECnet Mgmt*, 1–1, 1–17, 8–8, 8–10, 8–11, 8–14, 8–18
aborting, *(S) DECnet Mgmt*, 8–10, 8–30, 8–31
access control information, *(S) DECnet Mgmt*, 1–21
assigning channel for, *(S) DECnet Mgmt*, 8–18, 8–32
commands, *(S) DECnet Mgmt*, 3–56
completing connection of, *(S) DECnet Mgmt*, 8–11, 8–18, 8–28, 8–33
control, *(S) DECnet Mgmt*, 2–24, 3–14
controlling activity, *(S) DECnet Mgmt*, 3–56
default access control information, *(S) DECnet Mgmt*, 1–22
definition, *(S) DECnet Mgmt*, 2–24
disconnecting, *(S) DECnet Mgmt*, 2–24, 3–56, 8–10, 8–14, 8–30, 8–36
handshaking sequence, *(S) DECnet Mgmt*, 8–11
inactivity timer, *(S) DECnet Mgmt*, 2–24
inbound, *(S) DECnet Mgmt*, 1–21, 3–56
incoming timer, *(S) DECnet Mgmt*, 2–24
Logical links (cont'd)
maximum number, *(S) DECnet Mgmt*, 2–24, 3–56
network, *(S) Sys Mgr Tuning*, 21–5
definition, *(S) Sys Mgr Tuning*, 21–4
outbound, *(S) DECnet Mgmt*, 1–21, 3–56
outgoing timer, *(S) DECnet Mgmt*, 2–24
parameters, *(S) DECnet Mgmt*, 2–24
protocol operation, *(S) DECnet Mgmt*, 2–24
protocol parameters, *(S) DECnet Mgmt*, 3–56
rejecting a request, *(S) DECnet Mgmt*, 8–34
requests, *(S) DECnet Mgmt*, 8–8, 8–11, 8–12, 8–18, 8–27, 8–28, 8–32
retransmission delay, *(S) DECnet Mgmt*, 2–24
retransmission time, *(S) DECnet Mgmt*, 2–24
SYS$NET, *(S) DECnet Mgmt*, 8–12
terminating, *(S) DECnet Mgmt*, 8–10, 8–14, 8–19, 8–23, 8–31
timers, *(S) DECnet Mgmt*, 3–57
troubleshooting problems, *(S) DECnet Intro*, 4–14
Logical names, *(G) User*, 12–1; *(G) SW Overview*, 5–3; *(S) DECamds*, B–1 to B–4; *(P) Concepts*, 9–26, 11–16; *(P) LIB$*, LIB–440; *(P) File Appl*, 5–4 to 5–7
See also Symbols
access modes, *(G) User*, 13–9, 13–10
executive, *(G) User*, 13–10
user, *(G) User*, 13–10
ACCOUNTNG, *(S) Sys Mgr Tuning*, 19–4
adding to logical name directory, *(G) User*, 13–13
adding to logical name tables, *(G) User*, 13–12
AGEN$FEEDBACK_REQ_TIME, *(S) Sys Mgr Tuning*, 14–21
as device names, *(S) DECnet Mgmt*, 1–24
as node name, *(S) DECnet Mgmt*, 1–24
assigning, *(G) DCL A-M*, DCLI–41, DCLI–120
assigning for shareable images, *(S) Sys Mgr Tuning*, 16–17
assigning systemwide in system startup, *(S) Sys Mgr Essentials*, 5–8
assigning to customize the SHUTDOWN.COM procedure, *(S) Sys Mgr Essentials*, 4–32
assigning to devices, *(G) DCL A-M*, DCLI–15; *(S) Sys Mgr Essentials*, 5–11
attributes of, *(P) Concepts*, 10–10
behavior
during batch jobs, *(G) User*, 13–23
during interactive system operation, *(G) User*, 13–23
in nested command procedures, *(G) User*, 13–24
when executing a command procedure, *(G) User*, 13–23
when opening files, *(G) User*, 13–24
canceling, *(G) DCL A-M*, DCLI–111
compared to symbols, *(G) User*, 14–2

Logical names (cont'd)
concealed, *(G) User*, 13–6, 13–7
concealed-device, *(P) File Appl*, 6–14
creating, *(G) User*, 13–3; *(G) DCL A-M*, DCLI–41, DCLI–120; *(P) Concepts*, 10–15; *(P) Sys Svc I*, SYS1–149
ASSIGN command, *(G) User*, 13–3
DEFINE command, *(G) User*, 13–3, 13–4
for nodes, *(G) User*, 13–4 to 13–5
with concealed attribute, *(G) User*, 13–6, 13–7
with terminal attribute, *(G) User*, 13–6
with translation attributes, *(G) User*, 13–6, 13–7
creating a search list, *(G) User*, 13–7
using a semicolon, *(G) User*, 13–8
with wildcards, *(G) User*, 13–8
creating a table, *(G) DCL A-M*, DCLI–100
DCL$PATH, *(G) User*, 14–39
deassigning using CLOSE command, *(G) DCL A-M*, DCLI–59
debugger, *(P) Debugger*, 6–2, B–1
defining, *(P) Concepts*, 10–2
defining multiple for one equivalence string, *(G) User*, 13–7
defining shared information, *(S) Dependable*, 8–60
definition, *(G) User*, 13–1
deleting, *(G) User*, 13–22; *(P) Concepts*, 10–17; *(P) Sys Svc I*, SYS1–258; *(P) LIB$*, LIB–136
displaying, *(G) User*, 13–20
equivalence name for, *(G) DCL N-Z*, DCLII–291, DCLII–354
translation of, *(G) DCL N-Z*, DCLII–291, DCLII–354
displaying access mode, *(G) User*, 13–21
displaying directory table structure, *(G) User*, 13–22
displaying logical name tables, *(G) User*, 13–21
displaying process permanent files, *(G) User*, 13–21
duplicating, *(P) Concepts*, 10–7
equivalence strings, *(G) User*, 13–1
file input, *(G) User*, 13–2
file output, *(G) User*, 13–2
for interprocess communication, *(P) Concepts*, 2–8
format convention, *(P) Concepts*, 10–13
for nodes
overriding the access control string, *(G) User*, 13–5
using in file specification, *(G) User*, 13–5
for software product installations, *(S) Sys Mgr Essentials*, 3–28
for source and destination locations, *(S) Sys Mgr Essentials*, 3–28
for system components

Logical names
for system components (cont'd)
recommended privilege mode, *(S) Sys Mgr Essentials*, 5–9
getting information about, *(P) Sys Svc II*, SYS2–451
image rundown, *(P) Concepts*, 10–5
including in logical name tables, *(G) DCL A-M*, DCLI–41, DCLI–121
in multiple tables, *(G) User*, 13–31
in Phone, *(G) User*, 7–3
in process logical name table, *(S) DECnet Mgmt*, 1–24
in remote file specification, *(S) DECnet Intro*, 2–4
LMF$LICENSE, *(S) Sys Mgr Essentials*, 5–8
multivalued, *(P) Concepts*, 10–2
NETNODE_REMOTE, *(S) Sys Mgr Essentials*, 5–8
NETPROXY, *(S) Sys Mgr Essentials*, 5–8
overriding source and destination locations, *(S) Sys Mgr Essentials*, 3–28
privilege modes, *(S) Sys Mgr Essentials*, 5–9; *(S) Sys Mgr Tuning*, 16–15
process-permanent, *(G) DCL N-Z*, DCLII–58
as file specifications, *(G) User*, 13–24
available names, *(G) User*, 13–23
redefining, *(G) User*, 13–23
SYS$COMMAND, *(G) User*, 13–26
SYS$ERROR, *(G) User*, 13–26
SYS$INPUT, *(G) User*, 13–24
SYS$OUTPUT, *(G) User*, 13–25
QMAN$MASTER, *(S) Sys Mgr Essentials*, 12–6
redefining location of system files, *(S) Sys Mgr Tuning*, 16–8
RIGHTSLIST, *(S) Sys Mgr Essentials*, 5–8
rooted-device, *(P) File Appl*, 6–14
rooted directory, *(P) File Appl*, 6–16
RTL routines, *(P) LIB$*, LIB–136
search lists, *(P) File Appl*, 6–6, 6–8
search order, *(G) User*, 13–30
with RUN command, *(G) User*, 13–30
with wildcards, *(G) User*, 13–29, 13–30
sending messages to OPCOM, *(S) DECamds*, 1–9
showing assignments, *(G) DCL N-Z*, DCLII–238
SHOW_CLUSTER$INIT, *(S) Sys Mgr Tuning*, 20–14
SHUTDOWN$DECNET_MINUTES, *(S) Sys Mgr Essentials*, 4–33
SHUTDOWN$DISABLE_AUTOSTART, *(S) Sys Mgr Essentials*, 4–33, 13–56
SHUTDOWN$INFORM_NODES, *(S) Sys Mgr Essentials*, 4–33
SHUTDOWN$MINIMUM_MINUTES, *(S) Sys Mgr Essentials*, 4–33

Logical names (cont'd)
SHUTDOWN$QUEUE_MINUTES, *(S) Sys Mgr Essentials*, 4–33
SHUTDOWN$TIME, *(S) Sys Mgr Essentials*, 4–33
SHUTDOWN$VERBOSE, *(S) Sys Mgr Essentials*, 4–33
specifying as mail addresses, *(S) Sys Mgr Essentials*, 5–33
STARTUP$STARTUP_LAYERED, *(S) Sys Mgr Essentials*, 5–18
STARTUP$STARTUP_VMS, *(S) Sys Mgr Essentials*, 5–18
superseding, *(P) Concepts*, 10–9
SYS$ANNOUNCE, *(S) Sys Mgr Essentials*, 5–14
SYS$AUDIT_SERVER_INHIBIT, *(S) Sys Mgr Essentials*, 5–9; *(S) Sys Mgr Tuning*, 18–27
SYS$DECDTM_INHIBIT, *(S) Sys Mgr Tuning*, 25–21
SYS$ERRORLOG, *(S) Sys Mgr Essentials*, 5–8
SYS$JOURNAL, *(S) Sys Mgr Tuning*, 25–3
SYS$MONITOR, *(S) Sys Mgr Essentials*, 5–8
SYS$STARTUP, *(S) Sys Mgr Essentials*, 5–2
SYS$SYLOGIN, *(S) Sys Mgr Essentials*, 5–17
SYS$TIMEZONE_DIFFERENTIAL, *(S) Sys Mgr Essentials*, 5–35
SYS$WELCOME, *(S) Sys Mgr Essentials*, 5–15
system, *(S) VMScluster Sys*, 5–5
system services, *(P) Concepts*, 10–1
systemwide, *(G) User*, 13–2
SYSUAF, *(S) Sys Mgr Essentials*, 5–8
terminal, *(G) User*, 13–6
translating, *(S) DECnet Mgmt*, 1–24; *(P) Concepts*, 10–17; *(P) Sys Svc II*, SYS2–451
translation, *(G) User*, 13–26, 13–27
iterative, *(G) User*, 13–27, 13–28
modifying, *(G) User*, 13–27
search lists, *(G) User*, 13–28, 13–29
system defaults, *(G) User*, 13–28
translation of, *(S) Sys Mgr Essentials*, 5–33; *(P) File Appl*, 6–5, 6–6
translations
requirements for parsing, *(P) RMS Ref*, A–20
trusted, *(S) Sys Mgr Tuning*, 16–15
UAFALTERNATE, *(S) Sys Mgr Essentials*, 4–10
use in network application, *(S) DECnet Mgmt*, 1–24
using in SYSMAN, *(S) Sys Mgr Essentials*, 2–14
using with public directories, *(S) DECnet Intro*, 2–5
VMSMAIL_PROFILE, *(S) Sys Mgr Essentials*, 5–8
with MOUNT, *(S) Sys Mgmt Util M-Z*, 2–5
Logical names (cont'd)
with translation attributes, *(G) User*, 13–6, 13–7
Logical names used by UETP
CTRLNAME, *(S) Sys Mgr Tuning*, 17–32
LOADS, *(S) Sys Mgr Tuning*, 17–34
SYS$INPUT, *(S) Sys Mgr Tuning*, 17–31
SYS$OUTPUT, *(S) Sys Mgr Tuning*, 17–33
Logical name system service calls
SYS$CRELNM system service, *(P) Concepts*, 10–15
SYS$CRELNT system service, *(P) Concepts*, 10–16
SYS$DELLNM system service, *(P) Concepts*, 10–17
SYS$TRNLNM system service, *(P) Concepts*, 10–18
Logical name tables, *(G) User*, 13–9, 13–10
adding logical names, *(G) User*, 13–12
adding to logical name directory, *(G) User*, 13–13
as protected objects, *(S) Security*, 4–10
canceling entries, *(G) DCL A-M*, DCLI–113
canceling system entries, *(G) DCL A-M*, DCLI–113
contents of process directory table, *(G) User*, 13–15 to 13–17
contents of system directory table, *(G) User*, 13–17 to 13–20
controlling access through access control lists, *(P) Util Routines*, ACL–1
creating, *(G) User*, 13–11; *(G) DCL A-M*, DCLI–100; *(P) Concepts*, 10–16; *(P) Sys Svc I*, SYS1–155
default, *(P) Concepts*, 10–3
defining protection, *(G) User*, 13–13
definition, *(S) Sys Mgr Essentials*, 5–8
deleting, *(G) User*, 13–22; *(G) DCL A-M*, DCLI–111; *(P) Sys Svc I*, SYS1–258
directories, *(G) User*, 13–14
directory, *(P) Concepts*, 10–3
displaying, *(G) User*, 13–21; *(G) DCL N-Z*, DCLII–291
displaying directory table structure, *(G) User*, 13–22
events audited, *(S) Security*, 5–17
group, *(G) User*, 13–10, 13–11; *(P) Concepts*, 10–6
including logical names, *(G) DCL A-M*, DCLI–43, DCLI–122
including system logical name, *(G) DCL A-M*, DCLI–43, DCLI–122
job, *(G) User*, 13–10, 13–11; *(P) Concepts*, 10–5
specifying quotas, *(G) User*, 13–14
predefined logical names, *(P) Concepts*, 10–2
privilege requirements, *(S) Security*, 5–16
process, *(G) User*, 13–10, 13–11; *(P) Concepts*, 10–4

Logical name tables (cont'd)
process-private, *(G) User*, 13–10, 13–11, 13–12; *(P) Concepts*, 10–6
quotas, *(P) Concepts*, 10–11
reestablishing security profile, *(S) Security*, 5–17
search list, *(P) Concepts*, 10–14
modifying, *(P) Concepts*, 10–14
security elements of, *(S) Security*, 5–16
shareable, *(G) User*, 13–10, 13–12; *(P) Concepts*, 10–6, 10–17
specifying different tables, *(G) User*, 13–9
specifying quotas, *(G) User*, 13–14
for job table, *(G) User*, 13–14
system, *(G) User*, 13–10, 13–11; *(P) Concepts*, 10–6
template profiles, *(S) Security*, 5–16
types, *(P) Concepts*, 10–2
types of access, *(S) Security*, 5–16
user-defined, *(P) Concepts*, 10–6
Logical operators, *(P) Alpha SDA*, SDA–12, SDA–13; *(P) VAX SDA*, SDA–16
See also Operators (mathematical)
LOGICAL option, *(P) File Appl*, 4–35
Logical predecessor, *(P) Debugger*, 8–8, 8–13, 8–19, B–6
Logical queues, *(G) DCL A-M*, DCLI–265
assigning, *(S) Sys Mgr Essentials*, 13–56
deassigning, *(G) DCL A-M*, DCLI–115
description, *(S) Sys Mgr Essentials*, 13–4
recommended use, *(S) Sys Mgr Essentials*, 13–4, 13–56
Logical successor, *(P) Debugger*, 8–8, 8–13, 8–19, B–6
Logical unit number allocator, *(P) LIB$*, LIB–271
Logical unit numbers, *(P) Modular Proc*, 2–14
allocating, *(P) Concepts*, 6–16
logical_name data type, *(P) Interfaces*, B–13
LOGICAL_NAMES.EXE file
global symbols, *(P) VAX SDA*, SDA–65
LOGICAL_NAMES.STB file
global symbols, *(P) Alpha SDA*, SDA–61
Login
remote, *(S) TCP/IP*, 3–3
Login alarms, *(S) Security*, D–5
enabling, *(S) Security*, 9–7
Login classes, *(G) User*, 2–9; *(S) Security*, 3–5
batch, *(G) User*, 2–10; *(S) Security*, 3–7
dialup, *(G) User*, 2–9; *(S) Security*, 3–5
interactive, *(G) User*, 2–9; *(S) Security*, 3–5
local, *(G) User*, 2–9; *(S) Security*, 3–5
network, *(G) User*, 2–10; *(S) Security*, 3–7
noninteractive, *(G) User*, 2–10; *(S) Security*, 3–7
remote, *(G) User*, 2–9; *(S) Security*, 3–5
restrictions on, *(G) User*, 2–11; *(S) Security*, 3–8
Login command procedures, *(S) Sys Mgmt Util A-L*, 5–27
See also Command procedures
booting without, *(S) Sys Mgr Essentials*, 4–8
defining announcements in, *(S) Sys Mgr Essentials*, 5–14
defining location of during system startup, *(S) Sys Mgr Essentials*, 5–17
definition, *(G) User*, 15–45; *(S) Sys Mgr Essentials*, 5–16, 5–17
executing, *(G) DCL A-M*, DCLI–415
execution of for batch jobs, *(G) User*, 18–11, 18–12
for captive account, *(S) Sys Mgr Essentials*, 6–29
sample, *(S) Sys Mgr Essentials*, 6–30
for restricted accounts, *(S) Security*, 7–7, 7–9
for SYSTEM account, *(S) Sys Mgr Essentials*, 5–16
in captive accounts, *(G) User*, 15–46
individual, *(S) Sys Mgr Essentials*, 6–19, 6–20
sample, *(S) Sys Mgr Essentials*, 6–21
in SYSMAN, *(S) Sys Mgr Essentials*, 2–16
LOGIN.COM, *(S) Sys Mgr Essentials*, 5–16
personal, *(G) User*, 15–45
executed as batch jobs, *(G) User*, 18–14
proper protection for, *(S) Security*, 8–25
setting protection in, *(S) Sys Mgr Essentials*, 9–7
specifying alternate, *(G) DCL A-M*, DCLI–415
SYLOGIN.COM, *(S) Sys Mgr Essentials*, 5–16
systemwide, *(S) Sys Mgr Essentials*, 5–16, 6–20
sample, *(S) Sys Mgr Essentials*, 6–20
to a remote host, *(S) Sys Mgr Tuning*, 21–13
user-specified, *(S) Sys Mgr Essentials*, 6–20
when errors prevent you from logging in, *(S) Sys Mgr Essentials*, 4–8
Login failures
alarms, *(S) Security*, D–5
and retries, *(G) User*, 2–12
auditing, *(S) Security*, 9–7
break-in evasion and, *(S) Security*, 3–9
causes of, *(G) User*, 2–3, 2–10 to 2–13; *(S) Security*, 3–7
dialup logins, *(S) Security*, 3–9
expired accounts, *(S) Security*, 3–13
login class restrictions and, *(S) Security*, 3–8
messages, *(G) User*, 2–8, 19–10; *(S) Security*, 3–6, 3–17
password grabber programs, *(S) Security*, 3–14
retries and, *(S) Security*, 3–9
security audit report and, *(S) Security*, 9–22
shift restrictions, *(S) Security*, 3–8
system passwords and, *(S) Security*, 3–8
Login messages, *(G) User*, 2–7; *(S) Security*, 3–5
announcement, *(G) User*, 2–7
controlling, *(S) Security*, 7–23, 7–24
disconnected job, *(S) Security*, 3–6

Login messages (cont'd)
expired password, *(G) User*, 2–3; *(S) Security*, 3–12
last successful interactive login, *(S) Security*, 3–6
last successful noninteractive login, *(S) Security*, 3–6
new mail, *(S) Security*, 3–6
number of login failures, *(S) Security*, 3–6
suppressing, *(G) User*, 2–8; *(S) Security*, 3–6, 3–17
welcome, *(S) Security*, 3–6
LOGINOUT
determining process quota values, *(S) VMScluster Sys*, 10–18
LOGINOUT.EXE file, *(S) DECnet Mgmt*, 2–31, 2–33, 8–12, 8–29
and detached processes, *(G) DCL N-Z*, DCLII–61
LOGINOUT callback routines, *(P) Util Routines*, LGI–32 to LGI–46
LOGINOUT callout routines, *(P) Util Routines*, LGI–13 to LGI–32
LOGINOUT sample program, *(P) Util Routines*, LGI–9
Logins
See also Proxy logins
auditing, *(S) Security*, 9–7
batch, *(G) User*, 2–10; *(S) Security*, 3–7
changing password, *(S) Security*, 3–2
changing password during, *(G) User*, 2–16; *(S) Security*, 3–11
controlling, *(G) User*, 2–5; *(S) Security*, 3–3
controlling number of dialup attempts, *(S) Sys Mgr Essentials*, 11–6
default process protection and, *(S) Security*, 5–11
dialup, *(G) User*, 2–9; *(S) Security*, 3–5
chances to supply password, *(G) User*, 2–12
supplying password, *(S) Security*, 3–9
disabled
by break-in evasion, *(G) User*, 2–12; *(S) Security*, 3–9
by shift restriction, *(S) Security*, 3–8
expired accounts, *(S) Security*, 3–13
flags, *(S) Security*, 7–18
for expired accounts, *(G) User*, 2–17
interactive, *(G) User*, 2–9; *(S) Security*, 3–4
classes of, *(S) Security*, 3–5
most recent, *(S) Security*, 3–6
local, *(G) User*, 2–9; *(S) Security*, 3–5
monitoring last, *(G) User*, 19–10; *(S) Security*, 3–17
network, *(G) User*, 2–10; *(S) Security*, 3–7
noninteractive, *(G) User*, 2–9, 2–10; *(S) Security*, 3–4
classes of, *(S) Security*, 3–7
Logins
noninteractive (cont'd)
most recent, *(S) Security*, 3–6
permitted time periods, *(G) User*, 2–12; *(S) Security*, 3–8
proxy, *(G) User*, 2–10
remote, *(G) User*, 2–9; *(S) Security*, 3–5
logging out, *(S) Security*, 3–19
system passwords and, *(S) Security*, 7–14
restricting by function, *(S) Sys Mgr Essentials*, 6–28
restricting by time, *(S) Sys Mgr Essentials*, 6–27, 6–28
restricting with system passwords, *(S) Security*, 7–14
secure terminal server, *(S) Security*, 3–14, 7–25
security implications, *(S) Security*, 3–2
sequence of events, *(S) Sys Mgr Essentials*, 6–5
simplifying for user with Automatic login facility (ALF), *(S) Security*, 7–11
time out, *(S) Security*, 3–4
Log in to a remote host, *(S) Sys Mgr Tuning*, 21–13
Log Manager Control Program (LMCP) utility, *(G) SW Overview*, 3–13; *(S) Sys Mgmt Util A-L*, 14–1
CLOSE LOG command, *(S) Sys Mgmt Util A-L*, 14–5
CONVERT LOG command, *(S) Sys Mgmt Util A-L*, 14–5
CREATE LOG command, *(S) Sys Mgmt Util A-L*, 14–7
DUMP command, *(S) Sys Mgmt Util A-L*, 14–8
HELP command, *(S) Sys Mgmt Util A-L*, 14–12
REPAIR commands, *(S) Sys Mgmt Util A-L*, 14–13, 14–15
SHOW LOG command, *(S) Sys Mgmt Util A-L*, 14–16
Logout alarms, *(S) Security*, D–6
Logout auditing, *(S) Security*, 9–7
LOGOUT command, *(G) User*, 2–24; *(G) DCL A-M*, DCLI–419; *(S) Security*, 3–20; *(S) Sys Mgr Essentials*, 6–23; *(S) Sys Mgr Tuning*, 26–9
entering after clearing screen, *(G) User*, 2–26
/FULL qualifier, *(G) User*, 2–24
/HANGUP qualifier, *(G) User*, 2–26
message, *(G) DCL A-M*, DCLI–419
multiple, *(G) DCL A-M*, DCLI–419
Logout command procedures
SYLOGOUT.COM, *(S) Sys Mgr Essentials*, 6–22
/LOG qualifier, *(P) Debugger*, CD–66, CD–75
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–45
log routine, *(P) Portable Math*, DPML–42, B–10
/LOG_DIRECTORY qualifier, *(S) DECamds*, 2–1

LOG_IO privilege, *(S) Security*, 5–7, A–8
/LONG qualifier, *(P) Alpha SDA*, SDA–151
Long-waiting processes, *(S) Alpha Perform*, 6–13
Longword dump, *(G) DCL A-M*, DCLI–190
/LONGWORD qualifier, *(P) Debugger*, CD–78, CD–106, CD–131
longword_signed data type, *(P) Interfaces*, B–13
longword_unsigned data type, *(P) Interfaces*, B–13
/LONG_FLOAT qualifier, *(P) Debugger*, CD–78, CD–106
/LONG_LONG_FLOAT qualifier, *(P) Debugger*, CD–78, CD–106
Lookaside lists
  displaying contents, *(P) Alpha SDA*, SDA–120
Loopback assistance, *(S) DECnet Mgmt*, 7–11
Loopback connector, *(S) DECnet Mgmt*, 7–6
Loopback mirrors
  See MIRRORs
Loopback tests, *(S) DECnet Intro*, 4–7
  circuit, *(S) DECnet Mgmt*, 7–6
  circuit-level, *(S) DECnet Intro*, 4–7, 4–9; *(S) DECnet Mgmt*, 7–1
  controller, *(S) DECnet Intro*, 4–9; *(S) DECnet Mgmt*, 7–6, 7–8
  local node, *(S) DECnet Mgmt*, 7–6
  local-to-local, *(S) DECnet Intro*, 4–8; *(S) DECnet Mgmt*, 7–5
  local-to-remote, *(S) DECnet Mgmt*, 7–4
  network
    definition, *(S) Sys Mgr Tuning*, 21–17
  node-level, *(S) DECnet Intro*, 4–7; *(S) DECnet Mgmt*, 7–1
  over Ethernet circuit, *(S) DECnet Mgmt*, 7–9
  software, *(S) DECnet Intro*, 4–9; *(S) DECnet Mgmt*, 7–6, 7–7
  to a remote node, *(S) DECnet Mgmt*, 7–2
  to remote system, *(S) DECnet Mgmt*, 7–9
  using a loop node name, *(S) DECnet Mgmt*, 7–3
LOOP CIRCUIT command, *(S) DECnet Mgmt*, 7–6; *(S) DECnet Mgmt Util*, 3–49
Loop circuit for testing, *(S) DECnet Mgmt Util*, 3–49
LOOP EXECUTOR command, *(S) DECnet Mgmt*, 7–6; *(S) DECnet Mgmt Util*, 3–51
Looping process fix, *(S) DECamds*, 4–2
LOOP LINE command, *(S) DECnet Mgmt Util*, 3–52
LOOP NODE command, *(S) DECnet Intro*, 4–7; *(S) DECnet Mgmt*, 7–2; *(S) DECnet Mgmt Util*, 3–54
Loop node name, *(S) DECnet Mgmt*, 7–3
Loop nodes, *(S) DECnet Mgmt Util*, 3–54
Loops
  definition, *(G) User*, 15–12
  writing, *(G) User*, 15–12
Loosely coupled system kernels, *(S) Dependable*, 4–5
Lost files
  recovering, *(S) Sys Mgr Essentials*, 8–56 to 8–58
Lost paths
  causes, *(S) DECnet Intro*, 3–4
LPA11–K
  Refer to the *OpenVMS VAX Card Reader, Line Printer, and LPA11–K I/O User's Reference Manual*
LPBEGIN phase of system startup, *(S) Sys Mgr Essentials*, 5–19; *(S) Sys Mgmt Util M-Z*, 6–71
LPBETA phase of system startup, *(S) Sys Mgr Essentials*, 5–19; *(S) Sys Mgmt Util M-Z*, 6–71
LPMAIN phase of system startup, *(S) Sys Mgr Essentials*, 5–19; *(S) Sys Mgmt Util M-Z*, 6–71
LRPSIZE system parameter, *(S) VMScluster Sys*, 10–17, A–2
LSE, *(P) Debugger*, 5–4, CD–95
LSE/SCA, *(G) SW Overview*, 4–5, 6–15; *(P) Environment*, 5–2, 5–3, 9–5
  COHESION development tool, *(S) Dependable*, 8–58
LTA device, *(S) Sys Mgmt Util A-L*, 13–28
LTA*n* devices, *(S) Sys Mgr Essentials*, 7–11
LTDRIVER (LAT port driver), *(P) I/O User*, 5–1
  turning on and off, *(S) Sys Mgr Tuning*, 24–9; *(S) Sys Mgmt Util A-L*, 13–3
LTM (LAN Traffic Monitor), *(S) VMScluster Sys*, 10–26
  planning network growth, *(S) Dependable*, 7–18
  use at CSC lights out data center, *(S) Dependable*, 11–17
Lynx, *(S) TCP/IP*, 3–5

M

MA780 multiport memory
  configuring a dump file for, *(P) VAX SDA*, SDA–5
Machine check code
  base address, *(P) VAX SDA*, SDA–18
Machine check errors
  if returned when booting, *(S) Sys Mgr Essentials*, 4–16
Machine check frames
  displaying in SDA, *(P) Alpha SDA*, SDA–110
MACRO
  Refer also to the *VAX MACRO and Instruction Set Reference Manual*
  data type declarations, *(P) Interfaces*, B–37
  generating argument lists, *(P) Interfaces*, A–1
  implementation table, *(P) Interfaces*, B–37

MACRO (cont'd)
MACRO-32 Compiler, *(G) SW Overview*, 4–6
MACRO-64, *(P) Environment*, 7–3, 7–8
MACRO-64 Assembler, *(G) SW Overview*, 4–6
programming information, *(P) RMS Ref*, A–1
programming rules, *(P) RMS Ref*, A–5
VAX MACRO, *(G) SW Overview*, 4–6; *(P) Environment*, 7–3, 7–7
VAX MACRO-32 compiler, *(P) Environment*, 1–5, 7–3, 7–8
VAX MACRO 64-bit addressing support, *(P) 64-Bit Addr*, 9–1, C–1
MACRO–32 compiler, *(G) DCL A-M*, DCLI–420, DCLI–427
alignment, *(P) Concepts*, 22–7
MACRO command, *(G) DCL A-M*, DCLI–420 to DCLI–426
Macro fields
example of initializing, *(P) RMS Ref*, A–5
setting at run time, *(P) RMS Ref*, A–5
MACRO instruction
formatting memory with SDA, *(P) VAX SDA*, SDA–55
MACRO language, *(P) File Appl*, 3–15, 3–18, 3–28, 4–2
RMS and, *(P) File Appl*, 9–5
Macro libraries, *(P) Environment*, 8–4; *(P) Concepts*, 17–5; *(P) CDU, LBR, & MU*, LIB–3, LIB–32
character case in, *(P) CDU, LBR, & MU*, LIB–4
MACRO/MIGRATION command, *(G) DCL A-M*, DCLI–427
MACRO programs
in network application, *(S) DECnet Mgmt*, 1–18
Macros
applicable VAX MACRO syntax rules, *(P) RMS Ref*, A–5
block I/O processing, *(P) RMS Ref*, 1–2
calling system services, *(P) Interfaces*, A–5
control block initialization, *(P) RMS Ref*, A–1
expansion, *(P) Interfaces*, A–4
file naming, *(P) RMS Ref*, 1–1
file processing, *(P) RMS Ref*, 1–1
for defining RMS symbols, *(P) RMS Ref*, A–1
for initializing RMS control blocks, *(P) RMS Ref*, A–1
for invoking RMS at run time, *(P) RMS Ref*, A–1
for RMS control block store, *(P) RMS Ref*, A–1
generating argument list
CALLG instruction, *(P) Interfaces*, A–6
CALLS instruction, *(P) Interfaces*, A–6
library location, *(P) RMS Ref*, A–2
names and control blocks, *(P) RMS Ref*, A–2
naming conventions, *(P) RMS Ref*, A–2
NISCA, *(S) VMScluster Sys*, F–20
Macros (cont'd)
record processing, *(P) RMS Ref*, 1–2
RMS types, *(P) RMS Ref*, A–1
rules applicable to programming, *(P) RMS Ref*, A–5
service, *(P) RMS Ref*, A–1
syntax applicable to RMS, *(P) RMS Ref*, A–1
system services, *(P) Interfaces*, 4–1, A–1
using, *(P) RMS Ref*, A–6
MAD virtual tape unit, *(S) Sys Mgr Tuning*, 23–12
Magnetic tape ancillary control process
See MTACP
Magnetic tape devices
serving within a cluster, *(S) Sys Mgmt Util M-Z*, C–42
Magnetic tapes
See also Tapes
function codes, *(P) I/O User*, A–3
initializing from within a program, *(P) Sys Svc II*, SYS2–118
mounting ANSI-labeled, *(S) Sys Mgmt Util M-Z*, 2–21, 2–23
mounting multiple foreign volumes, *(S) Sys Mgmt Util M-Z*, 2–26
overriding protection checks, *(S) Sys Mgmt Util M-Z*, 2–27
specifying block size for, *(S) Sys Mgmt Util M-Z*, 2–11
specifying density for, *(S) Sys Mgmt Util M-Z*, 2–19
specifying record size for, *(S) Sys Mgmt Util M-Z*, 2–33
status returns, *(P) I/O User*, A–4
TU58 magnetic tape
See Disk, TU58
Mail
electronic, *(S) TCP/IP*, 2–5, 3–6
MAIL
managing, *(S) Sys Mgr Essentials*, 6–38
MAIL$INIT file, *(G) User*, 6–21
MAIL$KEYDEF.INI file, *(G) User*, 6–21
sample, *(G) User*, 6–21
MAIL$MAILFILE_BEGIN routine, *(P) Util Routines*, MAIL–32
MAIL$MAILFILE_CLOSE routine, *(P) Util Routines*, MAIL–34
MAIL$MAILFILE_COMPRESS routine, *(P) Util Routines*, MAIL–36
MAIL$MAILFILE_END routine, *(P) Util Routines*, MAIL–39
MAIL$MAILFILE_INFO_FILE routine, *(P) Util Routines*, MAIL–41
MAIL$MAILFILE_MODIFY routine, *(P) Util Routines*, MAIL–44

MAIL$MAILFILE_OPEN routine, *(P) Util Routines*, MAIL–47
MAIL$MAILFILE_PURGE_WASTE routine, *(P) Util Routines*, MAIL–50
MAIL$MESSAGE_BEGIN routine, *(P) Util Routines*, MAIL–53
MAIL$MESSAGE_COPY routine, *(P) Util Routines*, MAIL–55
MAIL$MESSAGE_DELETE routine, *(P) Util Routines*, MAIL–59
MAIL$MESSAGE_END routine, *(P) Util Routines*, MAIL–61
MAIL$MESSAGE_GET routine, *(P) Util Routines*, MAIL–63
MAIL$MESSAGE_INFO routine, *(P) Util Routines*, MAIL–68
MAIL$MESSAGE_MODIFY routine, *(P) Util Routines*, MAIL–72
MAIL$MESSAGE_SELECT routine, *(P) Util Routines*, MAIL–75
MAIL$SEND_ABORT routine, *(P) Util Routines*, MAIL–78
MAIL$SEND_ADD_ADDRESS routine, *(P) Util Routines*, MAIL–80
MAIL$SEND_ADD_ATTRIBUTE routine, *(P) Util Routines*, MAIL–82
MAIL$SEND_ADD_BODYPART routine, *(P) Util Routines*, MAIL–85
MAIL$SEND_BEGIN routine, *(G) V7.0 New Feat*, 4–15; *(P) Util Routines*, MAIL–88
MAIL$SEND_END routine, *(P) Util Routines*, MAIL–91
MAIL$SEND_MESSAGE routine, *(P) Util Routines*, MAIL–93
MAIL$SERVER account
  enabling default access, *(S) DECnet Mgmt*, 2–25, 5–3, 5–6
MAIL$USER_BEGIN routine, *(G) V7.0 New Feat*, 4–15; *(P) Util Routines*, MAIL–95
MAIL$USER_DELETE_INFO routine, *(P) Util Routines*, MAIL–98
MAIL$USER_END routine, *(P) Util Routines*, MAIL–100
MAIL$USER_GET_INFO routine, *(G) V7.0 New Feat*, 4–15; *(P) Util Routines*, MAIL–102
MAIL$USER_SET_INFO routine, *(G) V7.0 New Feat*, 4–16; *(P) Util Routines*, MAIL–106
MAIL$_SEND_NO_SIGFILE item code, *(G) V7.0 New Feat*, 4–15
MAIL$_SEND_SIGFILE item code, *(G) V7.0 New Feat*, 4–15
MAIL$_USER_SET_NO_SIGFILE item code, *(G) V7.0 New Feat*, 4–15
MAIL$_USER_SET_SIGFILE item code, *(G) V7.0 New Feat*, 4–15
MAIL$_USER_SIGFILE item code, *(G) V7.0 New Feat*, 4–15
MAIL (Mail utility)
  See Mail utility
Mailboxes, *(S) DECnet Mgmt*, 8–8, 8–25, 8–26; *(P) Concepts*, 2–8, 2–10, 9–39; *(P) Interfaces*, 4–2; *(P) LIB$*, LIB–14
  See also Terminals
  assigning channel to, *(P) Sys Svc I*, SYS1–161
  controlling access through access control lists, *(P) Util Routines*, ACL–1
  creating, *(P) Concepts*, 2–9; *(P) Sys Svc I*, SYS1–161; *(P) I/O User*, 4–1
  creation of using SYS$CREMBX, *(S) DECnet Mgmt*, 8–25
  default protection, *(S) Security*, C–4
  default security elements, *(S) Security*, 5–6
  deleting, *(P) I/O User*, 4–3
  deleting permanent, *(P) Sys Svc I*, SYS1–164, SYS1–261
  deleting temporary, *(P) Sys Svc I*, SYS1–164
  device characteristics, *(P) I/O User*, 4–4
  disable terminal, *(P) I/O User*, 5–22
  driver, *(P) I/O User*, 4–1
  for audit event messages, *(S) Security*, 9–13
  for interprocess communication, *(P) Concepts*, 2–8
  function codes, *(P) I/O User*, 4–5, A–5
  function modifiers
    IO$M_NORSWAIT, *(P) I/O User*, 4–9, 4–11
    IO$M_NOW, *(P) I/O User*, 4–3, 4–5, 4–9, 4–11, 4–13
    IO$M_READATTN, *(P) I/O User*, 4–11
    IO$M_READERCHECK, *(P) I/O User*, 4–9, 4–11, 4–15
    IO$M_SETPROT, *(P) I/O User*, 4–14
    IO$M_STREAM, *(P) I/O User*, 4–5
    IO$M_WRITERCHECK, *(P) I/O User*, 4–5, 4–15
  get mailbox information function, *(P) I/O User*, 4–15
  I/O functions
    IO$_READLBLK, *(P) I/O User*, 4–5
    IO$_READPBLK, *(P) I/O User*, 4–5
    IO$_READVBLK, *(P) I/O User*, 4–5
    IO$_WRITELBLK, *(P) I/O User*, 4–9
    IO$_WRITEOF, *(P) I/O User*, 4–11
    IO$_WRITEPBLK, *(P) I/O User*, 4–9
    IO$_WRITEVBLK, *(P) I/O User*, 4–9
  I/O status block, *(P) I/O User*, 4–15
  input/output
    asynchronous, *(P) Concepts*, 2–11
    immediate, *(P) Concepts*, 2–11
    synchronous, *(P) Concepts*, 2–11
    using SYS$QIO, *(P) Concepts*, 2–11
    using SYS$QIOW, *(P) Concepts*, 2–11

Mailboxes (cont'd)
list of operations, *(P) I/O User*, 4–1
message format, *(S) DECnet Mgmt*, 8–26; *(P) I/O User*, 4–4
terminal, *(P) I/O User*, 5–19
message size, *(P) I/O User*, 4–1
modifying security profiles, *(S) Security*, 5–7
multiport memory, *(P) I/O User*, 4–1
name, *(P) Concepts*, 9–42
permanent, *(P) Concepts*, 2–9; *(P) I/O User*, 4–1, 4–3, 4–4
privilege requirements, *(S) Security*, 5–7
process termination, *(G) DCL N-Z*, DCLII–63
programming examples, *(P) I/O User*, 4–17
protection, *(P) Concepts*, 9–4; *(P) I/O User*, 4–1, 4–4, 4–14
read attention AST function, *(P) I/O User*, 4–11
read function, *(P) I/O User*, 4–5
reading data from, *(P) Concepts*, 2–11
set attention AST function, *(P) I/O User*, 4–11
set protection function, *(P) I/O User*, 4–14
status returns, *(P) I/O User*, A–5
SYS$GETDVI returns, *(P) I/O User*, 4–4
system, *(P) Concepts*, 9–42
messages, *(P) Concepts*, 9–43
system mailbox messages, *(S) DECnet Mgmt*, 8–26
temporary, *(P) Concepts*, 2–9; *(P) I/O User*, 4–1, 4–4
terminal/mailbox interaction, *(P) I/O User*, 5–18
termination, *(P) Concepts*, 3–47
volume protection, *(P) I/O User*, 4–14, 4–15
wait for writer/reader function, *(P) I/O User*, 4–14
write attention AST function, *(P) I/O User*, 4–11
write end-of-file message function, *(P) I/O User*, 4–11
write function, *(P) I/O User*, 4–9
writing data to, *(P) Concepts*, 2–11
MAIL command, *(G) User*, 6–2; *(G) DCL A-M*, DCLI–428
/EDIT qualifier, *(G) User*, 6–17
in network operations, *(S) DECnet Intro*, 2–10
/SUBJECT qualifier, *(G) User*, 6–9
using /SIGNATURE_FILE qualifier, *(G) V7.0 New Feat*, 2–7
MAILEDIT.COM command procedure, *(G) User*, 6–19, C–17
example, *(G) User*, C–18
Mail folders
creating, *(G) User*, 6–12
deleting, *(G) User*, 6–14
displaying list of, *(G) User*, 6–13
MAIL, *(G) User*, 6–4
NEWMAIL, *(G) User*, 6–3
Mail folders (cont'd)
selecting, *(G) User*, 6–13
WASTEBASKET, *(G) User*, 6–15
Mailing lists, *(S) TCP/IP*, 3–6
Mail subdirectories
creating, *(G) User*, 6–12
Mail utility (MAIL), *(G) DCL A-M*, DCLI–428; *(G) SW Overview*, 5–12, 6–21; *(P) Util Routines*, MAIL–1
action routine, *(P) Util Routines*, MAIL–7
calling sequence, *(P) Util Routines*, MAIL–8
folder, *(P) Util Routines*, MAIL–11, MAIL–14
mail file, *(P) Util Routines*, MAIL–14
send, *(P) Util Routines*, MAIL–16
address list, *(P) Util Routines*, MAIL–16
creating, *(P) Util Routines*, MAIL–16
username type, *(P) Util Routines*, MAIL–16
bodypart, creating, *(P) Util Routines*, MAIL–15
condition handling, *(P) Util Routines*, MAIL–6
context, *(P) Util Routines*, MAIL–3
initiating, *(P) Util Routines*, MAIL–4
mail file, *(P) Util Routines*, MAIL–9
message, *(P) Util Routines*, MAIL–11
send, *(P) Util Routines*, MAIL–14
terminating, *(P) Util Routines*, MAIL–4
user profile, *(P) Util Routines*, MAIL–17
controlling notification messages, *(S) Security*, 7–24
default access account, *(S) DECnet Intro*, 3–13
default access account requirement, *(S) DECnet Intro*, 2–10
deleted bytes threshold, *(P) Util Routines*, MAIL–11
deleting messages in, *(G) User*, 6–15
disk space, reclaiming, *(P) Util Routines*, MAIL–11
distribution lists, *(G) User*, 6–7
extracting messages to files, *(G) User*, 6–10
folder, *(P) Util Routines*, MAIL–2
creating, *(P) Util Routines*, MAIL–14
deleting, *(P) Util Routines*, MAIL–14
folder names, displaying, *(P) Util Routines*, MAIL–11
initialization files, *(G) User*, 6–21
invoking, *(G) User*, 6–2
item code, *(P) Util Routines*, MAIL–7
input, *(P) Util Routines*, MAIL–18
output, *(P) Util Routines*, MAIL–21
item descriptor
declaring, *(P) Util Routines*, MAIL–7
null, *(P) Util Routines*, MAIL–7
item list, *(P) Util Routines*, MAIL–6
declaring, *(P) Util Routines*, MAIL–7
terminating, *(P) Util Routines*, MAIL–7
keypad commands, *(G) User*, 6–20

Mail utility (MAIL) (cont'd)
logical name for, *(S) Sys Mgr Essentials*, 5–8
MAIL$SERVER account, default access, *(S) DECnet Mgmt*, 2–25, 5–3, 5–6
MAIL$SYSTEM_FLAGS logical name, *(S) Sys Mgr Essentials*, 5–32
mail file, *(P) Util Routines*, MAIL–3
alternate, *(P) Util Routines*, MAIL–10
closing, *(P) Util Routines*, MAIL–9
compressing, *(P) Util Routines*, MAIL–11
creating, *(P) Util Routines*, MAIL–14
default, *(P) Util Routines*, MAIL–9
opening, *(P) Util Routines*, MAIL–9
purging, *(P) Util Routines*, MAIL–11
specifying, *(P) Util Routines*, MAIL–9 to MAIL–10
wastebasket, *(P) Util Routines*, MAIL–11
mail file context
initiating, *(P) Util Routines*, MAIL–9
terminating, *(P) Util Routines*, MAIL–9
managing accounts, *(S) Sys Mgr Essentials*, 6–38
message attributes, creating, *(P) Util Routines*, MAIL–15
message context
initiating, *(P) Util Routines*, MAIL–12
terminating, *(P) Util Routines*, MAIL–12
message format, standard, *(P) Util Routines*, MAIL–1
message header, creating, *(P) Util Routines*, MAIL–15
message ID, external, *(P) Util Routines*, MAIL–2
messages, *(P) Util Routines*, MAIL–1
attribute, *(P) Util Routines*, MAIL–15
copying, *(P) Util Routines*, MAIL–13
creating, *(P) Util Routines*, MAIL–15
deleting, *(P) Util Routines*, MAIL–14
displaying, *(P) Util Routines*, MAIL–13
marking, *(P) Util Routines*, MAIL–13
modifying, *(P) Util Routines*, MAIL–13
moving, *(P) Util Routines*, MAIL–13
printing, *(P) Util Routines*, MAIL–13
reading, *(P) Util Routines*, MAIL–13
selecting, *(P) Util Routines*, MAIL–12
sending, *(P) Util Routines*, MAIL–15, MAIL–16
network operations, *(S) DECnet Intro*, 2–2, 2–10, 3–31
null item list, *(P) Util Routines*, MAIL–7
object, *(S) DECnet Mgmt*, 2–5, 2–25, 2–26, 3–60, 5–3, 5–6
programming examples, *(P) Util Routines*, MAIL–23
reading messages in, *(G) User*, 6–3, 6–22
READ/NEW command, *(S) Sys Mgr Essentials*, 5–33
SEARCH command, *(G) V7.0 New Feat*, 2–9
Mail utility (MAIL) (cont'd)
security measures, *(G) User*, 6–17
send context, *(P) Util Routines*, MAIL–14 to MAIL–15
sending AUTOGEN report with, *(S) Sys Mgr Tuning*, 14–22
sending files, *(G) User*, 6–8
from DCL level, *(G) User*, 4–13, 6–9
sending messages over the network, *(G) User*, 6–6
setting default editor in, *(G) User*, 6–18
signaling error, *(P) Util Routines*, MAIL–6
specifying clusterwide node name, *(S) DECnet Intro*, 2–11
summary of commands, *(G) User*, 6–21
thread, *(P) Util Routines*, MAIL–5
transferring text files, *(S) Security*, 12–19
user profile database, *(P) Util Routines*, MAIL–3, MAIL–17
user profile entry, *(P) Util Routines*, MAIL–3, MAIL–17
adding, *(P) Util Routines*, MAIL–18
deleting, *(P) Util Routines*, MAIL–18
modifying, *(S) Sys Mgr Essentials*, 6–38; *(P) Util Routines*, MAIL–18
using EVE in, *(G) User*, 6–17, 6–18
using /PAGE qualifier, *(G) V7.0 New Feat*, 2–8
using signature files, *(G) V7.0 New Feat*, 2–6
using text editors in, *(G) User*, 6–17
MailWorks, *(G) SW Overview*, 5–13, 6–21
Maintenance
for a dependable environment, *(S) Dependable*, 5–1
preventative
scheduling, *(S) Dependable*, 9–9
Maintenance operation module process
See MOM
Maintenance operation protocol
See MOP
Maintenance operations
over the network, *(S) DECnet Mgmt*, 4–1
Maintenance tasks for secure systems, *(S) Security*, 6–8
Main window, *(P) Debugger*, 1–5
Major ID
specifying value of, *(P) Linker*, LINK–52
Manage access, *(S) Security*, 5–17
Management
data, *(G) SW Overview*, 4–18
network, *(G) SW Overview*, 3–12
OpenVMS servers for PCs, *(G) SW Overview*, 6–23
PATHWORKS network, *(G) SW Overview*, 6–24
Managing a multiprocessing environment, *(S) Sys Mgr Tuning*, 26–3

Managing computing resources, *(S) Dependable*, 9–1
Managing devices
  magnetic tape
    tasks for, *(S) Sys Mgr Essentials*, 7–16
  printers
    setting characteristics, *(S) Sys Mgr Essentials*, 7–13
    tasks for, *(S) Sys Mgr Essentials*, 7–13
  tasks for, *(S) Sys Mgr Essentials*, 7–1
  terminals
    setting characteristics, *(S) Sys Mgr Essentials*, 7–9
    tasks for, *(S) Sys Mgr Essentials*, 7–9
Managing installed software, *(S) Sys Mgr Essentials*, 3–34
Managing multiple sites, *(G) V7.0 New Feat*, D–13
Managing page, swap, and dump files
  tasks for, *(S) Sys Mgr Tuning*, 15–1
Managing performance
  See Performance management
Managing system parameters
  tasks for, *(S) Sys Mgr Tuning*, 14–1
Managing the LAT database size, *(S) Sys Mgr Tuning*, 24–19
Managing the queue manager and queue database, *(S) Sys Mgr Essentials*, 12–1
Mandatory updates
  definition, *(S) Sys Mgr Essentials*, 3–5
Manual fix, *(S) DECamds*, 4–7
Manual network configuration, *(S) DECnet Intro*, 3–11
Manual switching of terminal line, *(S) DECnet Intro*, 3–27
MANUAL_UNLOCKING attribute, *(P) Rec Mgmt Util*, 4–11; *(P) File Appl*, 7–14
MAP command, *(P) Alpha SDA*, SDA–56
Map files
  See Image map files
Mapped files, *(P) Concepts*, 8–4
  closing, *(P) Concepts*, 8–11
  saving, *(P) Concepts*, 8–11
Mapping disk file sections, *(P) Sys Svc I*, SYS1–192
Mapping options for a sample company, *(S) Dependable*, 2–13
Mapping pointers
  allocating, *(G) DCL A-M*, DCLI–261
  resetting for windows, *(S) Sys Mgr Essentials*, 8–24
Mapping virtual memory
  using SOLITARY program section attribute, *(P) Linker*, 3–23
/MAP qualifier, *(P) Linker*, LINK–20
Marginal vector consumer
  detection of, *(S) Sys Mgr Tuning*, 26–8
Margins
  source display, *(P) Debugger*, 10–8, CD–178, CD–261
Margin size
  specifying in forms, *(S) Sys Mgr Essentials*, 13–42
/MARK_CHANGE qualifier, *(P) Debugger*, CD–88
Masks
  EXAMINE/FMASK command, *(P) Debugger*, 15–13
  EXAMINE/TMASK command, *(P) Debugger*, 15–13
  masked vector operation, *(P) Debugger*, 15–5, 15–9, 15–13
  register, VMR, *(P) Debugger*, 15–5, 15–9, 15–13
mask_byte data type, *(P) Interfaces*, B–13
mask_longword data type, *(P) Interfaces*, B–13
mask_quadword data type, *(P) Interfaces*, B–13
mask_word data type, *(P) Interfaces*, B–13
MASSBUS disks
  dual-ported, *(S) VMScluster Sys*, 6–2
Mass storage control protocol servers
  See MSCP servers
Mass storage devices
  See also Devices, Disks, and Tapes
Master file directories
  See MFDs
Master file of queue database, *(S) Sys Mgr Essentials*, 12–4
  location
    specifying, *(S) Sys Mgr Essentials*, 12–6
  mounting of disk holding, *(S) Sys Mgr Essentials*, 12–6
  QMAN$MASTER logical name, *(S) Sys Mgr Essentials*, 12–6
  saving, *(S) Sys Mgr Essentials*, 12–12
Matching vendor products with requirements, *(S) Dependable*, 1–4
Match operations, *(P) CDU, LBR, & MU*, LIB–4
Match size
  specifying with DIFFERENCES command, *(G) DCL A-M*, DCLI–162
Mathematical functions, *(G) SW Overview*, 4–10
  using system routines, *(P) Environment*, 10–2
Mathematics routines
  additional routines, *(P) MTH$*, A–1 to A–18
MAXACCTJOBS process limit, *(S) Sys Mgr Essentials*, 6–43
MAXBOBMEM system parameter, *(G) V7.0 New Feat*, 3–2
MAXBUF system parameter
  limiting size of user's ACL buffer, *(P) RMS Ref*, 13–3

MAXDETACH process limit, *(S) Sys Mgr Essentials*, 6–43
MAXIMIZE_VERSION attribute, *(P) Rec Mgmt Util*, 4–20; *(P) File Appl*, 4–31
Maximum account jobs process limit, *(S) Sys Mgr Essentials*, 6–43
Maximum buffers
  for executor, *(S) DECnet Mgmt*, 3–16
Maximum detached process limit, *(S) Sys Mgr Essentials*, 6–43
Maximum record number option, *(P) File Appl*, 4–33
Maximum record size
  indexed file, *(P) File Appl*, 3–23
Maximum record size field
  See also FAB$W_MRS field
  default value for remote file access, *(P) RMS Ref*, 4–23
Maximum record size option, *(P) File Appl*, 4–33
Maximum visits
  definition, *(S) DECnet Mgmt*, 2–22
MAXJOBS process limit, *(S) Sys Mgr Essentials*, 6–43
MAXPROCESSCNT parameter, *(S) Alpha Perform*, 1–5
MAXSYSGROUP system parameter, *(S) Security*, 4–24, C–10; *(S) Sys Mgr Essentials*, 11–8
MAX_DUMPFILE symbol, *(S) Sys Mgr Tuning*, 15–24
max_float boundary value, *(P) Portable Math*, A–1
MAX_PAGEFILE*n*_SIZE symbol, *(S) Sys Mgr Tuning*, 15–24
MAX_PAGEFILE symbol, *(S) Sys Mgr Tuning*, 15–24
MAX_ prefix for AUTOGEN, *(S) Sys Mgr Tuning*, 14–20
MAX_RECORD_NUMBER attribute, *(P) Rec Mgmt Util*, 4–19; *(P) File Appl*, 4–33
MAX_SWAPFILE*n*_SIZE symbol, *(S) Sys Mgr Tuning*, 15–24
MAX_SWAPFILE symbol, *(S) Sys Mgr Tuning*, 15–24
MCHK symbol, *(P) VAX SDA*, SDA–18
MCR command
  in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–5, 6–30
MEAN_DATA_LENGTH attribute, *(P) Rec Mgmt Util*, 4–5
MEAN_INDEX_LENGTH attribute, *(P) Rec Mgmt Util*, 4–5
Mechanism argument vectors, *(P) Concepts*, 13–28, 13–35, 13–63; *(P) Interfaces*, B–13
  on Alpha systems, *(P) Concepts*, 13–37
  on VAX systems, *(P) Concepts*, 13–35
Mechanism arrays, *(P) Alpha SDA*, SDA–19; *(P) VAX SDA*, SDA–21, SDA–25
  format, *(P) Concepts*, 13–37
Mechanism entry
  in argument descriptions, *(P) Interfaces*, 1–9
mechanism_args data type, *(P) Interfaces*, B–13
Media errors
  analyzing, *(S) Sys Mgr Essentials*, 8–64
Media initialization
  access requirements, *(S) Security*, 5–20
  restricting with ACLs, *(S) Security*, 8–26
Media Management Extension
  See MME
/MEDIA_FORMAT=CD–ROM qualifier
  in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–24
/MEDIA_FORMAT=[NO]COMPACTION qualifier
  in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–24
/MEDIA_FORMAT qualifier
  for INITIALIZE command, *(G) DCL A-M*, DCLI–259; *(G) DCL N-Z*, DCLII–163
  in Backup utility, *(S) Sys Mgmt Util A-L*, 7–46
Member numbers in UICs, *(S) Security*, 4–2
Members
  definition, *(S) VMScluster Sys*, 1–3
  managing
    cluster group numbers and passwords, *(S) VMScluster Sys*, 2–14
    cluster security, *(S) VMScluster Sys*, 5–10
    state transitions, *(S) VMScluster Sys*, 1–4
  shadow set, *(S) VMScluster Sys*, 6–22
MEMBERS class
  adding, *(S) Sys Mgmt Util M-Z*, 4–30
  fields belonging to, *(S) Sys Mgmt Util M-Z*, 4–25
  removing, *(S) Sys Mgmt Util M-Z*, 4–46
Memory
  See also Virtual memory
  adding, *(S) VAX Perform*, 5–11; *(S) Alpha Perform*, 17–10
  allocating strings, *(P) STR$*, STR–43
  allocation algorithms, *(P) Concepts*, 21–7
  allotted to vector consumer processes, *(S) Sys Mgr Tuning*, 26–7
  availability, *(S) VAX Perform*, 4–20, 4–23
  classes, *(S) DECamds*, 5–10
  conserving with shareable images, *(S) Sys Mgr Tuning*, 16–11
  consumption patterns, *(S) VAX Perform*, 4–16, 4–19
  contents of a block
    formatting, *(P) VAX SDA*, SDA–60
  deallocating strings, *(P) STR$*, STR–42
  default data collection, *(S) DECamds*, 5–2
  displaying availability and use of
    process balance slots, *(G) DCL N-Z*, DCLII–297
    process entry slots, *(G) DCL N-Z*, DCLII–297
  displaying error count for, *(G) DCL N-Z*, DCLII–275

Memory (cont'd)
distribution on a node, *(S) DECamds*, 3–14
dynamic, *(P) DECthreads*, 3–5
displaying availability and use of, *(G) DCL N-Z*, DCLII–297
dynamic pool
displaying contents, *(P) Alpha SDA*, SDA–120
error messages, *(S) DECamds*, 3–12
examining, *(P) Alpha SDA*, SDA–48
examining contents, *(G) DCL A-M*, DCLI–214
example fix for low, *(S) DECamds*, 4–6
fixes, *(S) DECamds*, 4–1
fix for low, *(S) DECamds*, 4–2
formatting, *(P) Alpha SDA*, SDA–53
fragmentation, *(P) Concepts*, 21–2
function, *(S) VAX Perform*, 3–20
images in, *(S) Sys Mgr Tuning*, 16–11
information captured in crash dump, *(S) Sys Mgr Tuning*, 15–2
physical dump, *(S) Sys Mgr Tuning*, 15–3, 15–10
selective dump, *(S) Sys Mgr Tuning*, 15–3, 15–10
investigating low memory cause, *(S) DECamds*, 4–7
limitations, analyzing, *(S) VAX Perform*, 4–23
limitations, compensating for, *(S) VAX Perform*, 5–2
limitations, disguised, *(S) VAX Perform*, 4–35
limitations, isolating, *(S) VAX Perform*, 4–4
limitations, reducing image activations, *(S) VAX Perform*, 5–2
load balancing, *(S) VAX Perform*, 3–29
locking, *(P) DECthreads*, tis–26, tis–27, tis–30, tis–31, tis–39, tis–40, tis–42
locking page into, *(P) Concepts*, 19–13, 20–12; *(P) Sys Svc II*, SYS2–139
making efficient use of by installing images, *(S) Sys Mgr Tuning*, 16–8
modifying, *(G) DCL A-M*, DCLI–153
multiport, *(S) Sys Mgmt Util M-Z*, 5–17
network requirements, *(S) DECnet Mgmt*, 5–31, 5–32
nonpaged system dynamic, *(P) File Appl*, 9–8
offloading, *(S) VAX Perform*, 3–28
paging, *(S) Sys Mgr Tuning*, 15–4
physical, *(S) Alpha Perform*, 5–2
presetting parameters, *(S) VAX Perform*, 5–11
process identifier (PID), *(S) DECamds*, 3–11
rate display, *(S) DECamds*, 2–3
reclaiming, *(S) VAX Perform*, 3–25, 3–26
reducing consumption, *(S) VAX Perform*, 3–27
releasing with the FDL$RELEASE routine, *(P) File Appl*, 4–13
replacing contents, *(G) DCL A-M*, DCLI–153
requirements, *(S) DECamds*, 5–15
Memory (cont'd)
responsiveness, evaluating, *(S) VAX Perform*, 3–23
responsiveness, improving, *(S) VAX Perform*, 3–26
secondary storage, *(S) Alpha Perform*, 5–2
sections in, *(S) Sys Mgr Tuning*, 16–12
setting for a thread's stack, *(P) DECthreads*, 2–6
sorting data, *(S) DECamds*, 5–12
stack, *(P) DECthreads*, 3–5
static, *(P) DECthreads*, 3–5
swapping, *(S) Sys Mgr Tuning*, 15–4
total for a node, *(S) DECamds*, 3–14
types of, *(P) DECthreads*, 3–5
unlocking, *(P) DECthreads*, tis–29
unlocking page from, *(P) Sys Svc II*, SYS2–458
virtual, *(S) Alpha Perform*, 5–2
when large sizes prevent storing a complete system dump, *(S) Sys Mgr Tuning*, 15–10
Memory allocation
absolute program section, *(P) Linker*, 3–4
dynamic, *(P) Concepts*, 19–7, 20–5
for based images, *(P) Linker*, LINK–43
for dynamic length strings, *(P) LIB$*, LIB–450 to LIB–452
for images, *(P) Linker*, 1–2
freeing blocks and, *(P) Concepts*, 21–1
freeing dynamic length strings, *(P) LIB$*, LIB–447, LIB–448
freeing pages and, *(P) Concepts*, 21–1
information about, in map, *(P) Linker*, 5–10
performed by linker, *(P) Linker*, 1–2
relocatable program section, *(P) Linker*, 3–4
Memory availability
analyzing limits, *(S) Alpha Perform*, 13–14
competition for, *(S) Alpha Perform*, 13–11
recognizing when demand exceeds, *(S) Alpha Perform*, 13–14
Memory barriers
instructions, *(P) Concepts*, 14–10
Memory cache, *(P) File Appl*, 3–15, 3–17, 3–18
Memory consumption
by large compute-bound processes, *(S) Alpha Perform*, 13–10
investigating, *(S) Alpha Perform*, 13–9
Memory limitations
compensating for, *(S) Alpha Perform*, 17–1
disguised, *(S) Alpha Perform*, 15–3
free memory
analyzing, *(S) Alpha Perform*, 13–14
reducing image activations, *(S) Alpha Perform*, 17–1
Memory locations
decoding, *(P) Alpha SDA*, SDA–50; *(P) VAX SDA*, SDA–57
examining, *(P) Alpha SDA*, SDA–49, SDA–50; *(P) VAX SDA*, SDA–55, SDA–56

Memory management
See also Pool management
advanced concepts, *(S) VAX Perform*, 2–6
basic concepts, *(S) VAX Perform*, 2–1
first-level trimming, *(S) Alpha Perform*, 6–12
long waiting processes, *(S) VAX Perform*, 2–20
mechanisms, *(S) VAX Perform*, 2–6
virtual balance slots, *(S) VAX Perform*, 2–18
memory sharing, *(S) Alpha Perform*, 6–15
paging, *(S) Alpha Perform*, 5–4
periodically waking processes, *(S) VAX Perform*, 2–21
physical memory, *(S) Alpha Perform*, 5–2
policy, *(S) VAX Perform*, 2–6
proactive reclamation, *(S) VAX Perform*, 2–6, 2–16, 2–19, 3–25, 3–35; *(S) Alpha Perform*, 10–6, 11–7
reactive reclamation, *(S) VAX Perform*, 3–25; *(S) Alpha Perform*, 10–6
primary page cache, *(S) Alpha Perform*, 5–2
proactive reclamation, *(S) Alpha Perform*, 6–13 to 6–15
secondary page cache, *(S) Alpha Perform*, 5–2
swapper trimming, *(S) Alpha Perform*, 6–11
swapping, *(S) Alpha Perform*, 5–5, 6–12
types of, *(S) Alpha Perform*, 5–5
system services, *(P) Environment*, 10–6, 10–10; *(P) Concepts*, 19–5, 20–3
using system routines, *(P) Environment*, 10–2
virtual memory, *(S) Alpha Perform*, 5–2; *(P) Environment*, 10–2
Memory management subsystem, *(G) SW Overview*, 3–1
Memory modules, *(G) SW Overview*, 1–7
Memory reads and writes on Alpha systems, *(P) Concepts*, 14–5
Memory reads and writes on VAX systems, *(P) Concepts*, 14–4
Memory regions
examining, *(P) VAX SDA*, SDA–57
Memory resident databases
implementing as shareable image, *(P) Linker*, 1–7
Memory resource
equitable sharing, *(S) Alpha Perform*, 10–7
evaluating responsiveness, *(S) Alpha Perform*, 10–4
function, *(S) Alpha Perform*, 10–1
improving responsiveness, *(S) Alpha Perform*, 10–7
load balancing, *(S) Alpha Perform*, 10–11
offloading, *(S) Alpha Perform*, 10–10
proactive reclamation, *(S) Alpha Perform*, 10–6, 10–7
reducing consumption, *(S) Alpha Perform*, 10–8
Memory resources, *(P) Debugger*, 13–19
Memory sharing, *(S) VAX Perform*, 3–26; *(S) Alpha Perform*, 6–15, 6–18
overview, *(S) VAX Perform*, 2–21
Memory Summary window, *(S) DECamds*, 3–10 to 3–12
Memory use
Heap Analyzer, *(P) Debugger*, 4–1
Menus, *(P) SMG$*, 2–13
creating, *(P) SMG$*, 2–13
creating with SMG$ routines, *(P) Concepts*, 7–22
deleting, *(P) SMG$*, 2–14
reading, *(P) Concepts*, 7–24
selecting, *(P) SMG$*, 2–14
MERGE (Merge utility)
See Merge utility
MERGE command, *(G) User*, 11–10; *(G) DCL A-M*, DCLI–429
See also Sort/Merge utility (SORT/MERGE)
high-performance Sort/Merge utility, *(G) V7.0 New Feat*, 2–4
in network operations, *(S) DECnet Intro*, 2–8
/KEY qualifier, *(G) User*, 11–2, 11–11
Merge utility (MERGE), *(G) SW Overview*, 5–11
Merging
of DIFFERENCES, *(G) DCL A-M*, DCLI–163
queues, *(G) DCL A-M*, DCLI–47
MESSAGE (Message utility)
See Message utility
Message code, *(P) CDU, LBR, & MU*, MSG–4
MESSAGE command, *(G) DCL A-M*, DCLI–430; *(P) CDU, LBR, & MU*, MSG–10
See also Message utility
/ALPHA qualifier, *(P) CDU, LBR, & MU*, MSG–12
examples, *(P) CDU, LBR, & MU*, MSG–32
/FILE_NAME qualifier, *(P) CDU, LBR, & MU*, MSG–13
/LIST qualifier, *(P) CDU, LBR, & MU*, MSG–14
/OBJECT qualifier, *(P) CDU, LBR, & MU*, MSG–15
/SYMBOLS qualifier, *(P) CDU, LBR, & MU*, MSG–16
/TEXT qualifier, *(P) CDU, LBR, & MU*, MSG–17
using, *(P) CDU, LBR, & MU*, MSG–5
/VAX qualifier, *(P) CDU, LBR, & MU*, MSG–18
Message count
correcting in Mail with READ/NEW, *(G) User*, 6–15
Message database, *(P) Environment*, 4–2
Message definitions
in message source files, *(P) CDU, LBR, & MU*, MSG–26
qualifiers, *(P) CDU, LBR, & MU*, MSG–26

Message definitions (cont'd)
statements, *(P) CDU, LBR, & MU*, MSG–4
Message directive commands, *(P) CDU, LBR, & MU*, MSG–19
Message files
See also Message object modules and Message source files
listing, *(P) CDU, LBR, & MU*, MSG–14
nonexecutable, *(P) CDU, LBR, & MU*, MSG–6
creating, *(P) CDU, LBR, & MU*, MSG–6
specifying, *(P) CDU, LBR, & MU*, MSG–13
setting format, *(G) DCL N-Z*, DCLII–165
Message format
See Mailboxes
Message libraries, *(P) CDU, LBR, & MU*, MSG–6
Message logging
CONVERT/DOCUMENT command, *(G) DCL A-M*, DCLI–70
Message object modules
creating, *(P) CDU, LBR, & MU*, MSG–5, MSG–15, MSG–24, MSG–31
file specifications, *(P) CDU, LBR, & MU*, MSG–15
formatting, *(P) CDU, LBR, & MU*, MSG–31
global symbols, *(P) CDU, LBR, & MU*, MSG–16
linking, *(P) CDU, LBR, & MU*, MSG–6
pointers, *(P) CDU, LBR, & MU*, MSG–6, MSG–13
text, *(P) CDU, LBR, & MU*, MSG–17
Message pointers
creating, *(P) CDU, LBR, & MU*, MSG–7
example, *(P) CDU, LBR, & MU*, MSG–32
using, *(P) CDU, LBR, & MU*, MSG–6, MSG–7
/MESSAGE qualifier, *(P) Alpha SDA*, SDA–124; *(P) VAX SDA*, SDA–141
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–25
Messages, *(S) DECnet Mgmt*, 8–8, 8–13, 8–21, 8–22
Refer also to *OpenVMS System Messages: Companion Guide for Help Message Users*
See also Broadcast messages, Help Message utility, and OPCOM messages
accessing online documentation using HELP /MESSAGE command, *(G) Help Msg*, 2–4
accessing system message data without Help Message, *(G) Help Msg*, 1–3
accessing system messages, *(G) Help Msg*, 1–1
acknowledgment, *(S) VMScluster Sys*, F–26
announcement, *(G) User*, 2–7
creating systemwide, *(S) Sys Mgr Essentials*, 5–14
security disadvantages, *(S) Security*, 7–23
auditing, *(S) Security*, 9–2
auditing security-relevant events, *(S) Security*, 3–18
broadcast
Messages
broadcast (cont'd)
removing, *(S) Sys Mgr Tuning*, 20–10
chaining, *(P) Concepts*, 13–53
constructing, *(P) CDU, LBR, & MU*, MSG–4
conventions used in system display, *(G) User*, 2–20
converting security message from binary to ASCII, *(P) Sys Svc I*, SYS1–402
copying in Mail, *(G) User*, 6–12
data, *(S) DECnet Mgmt*, 8–13
debugger, *(P) Debugger*, 1–18, 6–2, CD–5
DECnet hardware and software errors, *(S) DECnet Intro*, 3–31
defining welcome, *(S) Sys Mgr Essentials*, 5–14
DIBOL
starting the DIBOL message manager, *(S) Sys Mgr Essentials*, 5–16
disabling last login, *(S) Security*, 7–24
displaying, *(P) Concepts*, 13–50
distributed enable, *(S) VMScluster Sys*, F–35
distributed trigger, *(S) VMScluster Sys*, F–35
during login, *(G) User*, 2–7
during remote file operations, *(S) DECnet Intro*, 2–9
enabling and disabling, *(S) Sys Mgr Tuning*, 18–17
error, *(S) Sys Mgr Essentials*, 2–5
removing, *(S) Sys Mgr Tuning*, 20–10
error log, *(S) Sys Mgr Tuning*, 18–6
example, *(P) CDU, LBR, & MU*, MSG–3
exchanging, *(S) DECnet Mgmt*, 8–13, 8–19, 8–30
filtering sensitive information, *(P) Sys Svc I*, SYS1–402
format, *(P) CDU, LBR, & MU*, MSG–3
format of system, *(G) Help Msg*, 1–1
formatting and outputting, *(P) Sys Svc II*, SYS2–231
HLD errors, *(S) DECnet Mgmt*, 4–17
indicating command line error, *(G) User*, 2–20
indicating execution of startup command procedures
site-independent, *(S) Sys Mgr Essentials*, 4–5
site-specific, *(S) Sys Mgr Essentials*, 4–5
indicating high page or swap file fragmentation, *(S) Sys Mgr Tuning*, 15–27
indicating insufficient page file size, *(S) Sys Mgr Tuning*, 15–9
indicating lack of installed page file, *(S) Sys Mgr Essentials*, 5–6
indicating successful boot, *(S) Sys Mgr Essentials*, 4–5
indicating that a vector processor is not available, *(S) Sys Mgr Tuning*, 26–6
indicating that login is possible, *(S) Sys Mgr Essentials*, 4–5

Messages (cont'd)
informational, *(G) User*, 2–20
interrupt, *(S) DECnet Mgmt*, 8–8, 8–30
last successful interactive login, *(S) Security*, 3–6
logging, *(P) Concepts*, 13–56
login, *(S) Security*, 3–5
login failures, *(G) User*, 2–8; *(S) Security*, 3–17
login welcome, *(S) Sys Mgr Essentials*, 2–10
loopback testing errors, *(S) DECnet Mgmt*, 7–7
mailbox, *(S) DECnet Mgmt*, 8–8, 8–13
network-related (explanations), *(S) DECnet Intro*, 4–10
network status, *(S) DECnet Mgmt*, 8–8
new in this release, *(G) V7.0 New Feat*, A–1
obtaining text of, *(P) Sys Svc I*, SYS1–462
online documentation, *(G) DCL A-M*, DCLI–244
OPCOM, *(S) VMScluster Sys*, D–11
operator replies, *(S) Sys Mgr Essentials*, 2–25; *(S) Sys Mgr Tuning*, 18–19
operator requests, *(S) Sys Mgr Essentials*, 2–25
optional user data, *(S) DECnet Mgmt*, 8–8, 8–11, 8–24
question mark (?), *(S) Sys Mgr Essentials*, 4–16
routing over network, *(S) DECnet Intro*, 1–2
security alarm, *(S) Sys Mgr Tuning*, 18–21
sending to error logger, *(P) Sys Svc II*, SYS2–358
sending to one or more terminals, *(P) Sys Svc I*, SYS1–68, SYS1–76
sending to operator, *(P) Sys Svc II*, SYS2–418
sending to terminals, *(G) DCL N-Z*, DCLII–43
sending to users with OPCOM, *(S) Sys Mgr Essentials*, 2–22
suppressing, *(G) User*, 2–8; *(S) Security*, 3–6, 7–23
suppressing last login, *(S) Security*, 3–17
suppressing the display, *(S) Sys Mgr Tuning*, 14–12
system, *(P) Interfaces*, 4–9
routines for global symbols, *(P) Alpha SDA*, SDA–61
system, condition codes, *(G) Help Msg*, 1–3
system, exception conditions, *(G) Help Msg*, 1–4
system, recovery procedures, *(G) Help Msg*, 1–4
system responses to commands, *(G) User*, 2–19
user requests, *(S) Sys Mgr Tuning*, 18–19
using when managing a system, *(S) Sys Mgr Essentials*, 2–5
welcome, *(S) Security*, 3–6
WRITEBOOT, *(S) Sys Mgr Essentials*, 4–19
writing to terminal, *(P) Sys Svc I*, SYS1–68, SYS1–76
Messages, sending to OPCOM, *(S) DECamds*, 1–9
Message source files, *(P) CDU, LBR, & MU*, MSG–4
coding, *(P) CDU, LBR, & MU*, MSG–19
comments in, *(P) CDU, LBR, & MU*, MSG–8
compiling, *(P) CDU, LBR, & MU*, MSG–5
elements of, *(P) CDU, LBR, & MU*, MSG–4
expressions in, *(P) CDU, LBR, & MU*, MSG–9
format, *(P) CDU, LBR, & MU*, MSG–5, MSG–21, MSG–29
programming example, *(P) CDU, LBR, & MU*, MSG–5
sample, *(P) CDU, LBR, & MU*, MSG–22
symbols in, *(P) CDU, LBR, & MU*, MSG–9, MSG–25, MSG–26
Message source file statements, *(P) CDU, LBR, & MU*, MSG–8, MSG–19
.BASE directive, *(P) CDU, LBR, & MU*, MSG–20
.END directive, *(P) CDU, LBR, & MU*, MSG–21
.FACILITY directive, *(P) CDU, LBR, & MU*, MSG–22
format, *(P) CDU, LBR, & MU*, MSG–5
.IDENT directive, *(P) CDU, LBR, & MU*, MSG–24
listing directives, *(P) CDU, LBR, & MU*, MSG–29, MSG–31
.LITERAL directive, *(P) CDU, LBR, & MU*, MSG–25
message definitions, *(P) CDU, LBR, & MU*, MSG–26
.PAGE directive, *(P) CDU, LBR, & MU*, MSG–29
.SEVERITY directive, *(P) CDU, LBR, & MU*, MSG–30
.TITLE directive, *(P) CDU, LBR, & MU*, MSG–9, MSG–31
Message symbols, *(P) Sys Svc II*, SYS2–236; *(P) CDU, LBR, & MU*, MSG–4, MSG–8, MSG–26
Message text
specifying variables in, *(P) Concepts*, 13–60
Message utility (MESSAGE), *(G) SW Overview*, 4–8, 4–17; *(P) Environment*, 4–2; *(P) Concepts*, 13–56 to 13–63
See also MESSAGE command
accessing message object module, *(P) Concepts*, 13–60
associating messages with exception conditions, *(P) Concepts*, 13–57
command qualifiers, *(P) CDU, LBR, & MU*, MSG–11
compiling message file, *(P) Concepts*, 13–60
compiling message source files, *(P) CDU, LBR, & MU*, MSG–5
constructing messages, *(P) CDU, LBR, & MU*, MSG–4

Message utility (MESSAGE) (cont'd)
controlling output, *(P) CDU, LBR, & MU*, MSG–11
creating a message object library, *(P) Concepts*, 13–60
.END directive, *(P) Concepts*, 13–59
examples, *(P) CDU, LBR, & MU*, MSG–31, MSG–32
creating pointer files, *(P) CDU, LBR, & MU*, MSG–32
image containing message data, *(P) CDU, LBR, & MU*, MSG–32
exiting, *(P) CDU, LBR, & MU*, MSG–10
.FACILITY directive, *(P) Concepts*, 13–58
facility name, *(P) Concepts*, 13–58
facility number, *(P) Concepts*, 13–59
FAO parameters, *(P) Concepts*, 13–62
/FAO_COUNT, *(P) Concepts*, 13–60
invoking, *(P) CDU, LBR, & MU*, MSG–10
linking message object modules, *(P) CDU, LBR, & MU*, MSG–6
logging messages, *(P) Concepts*, 13–56
message object module, *(P) Concepts*, 13–60
message source files, *(P) CDU, LBR, & MU*, MSG–4
message text, *(P) Concepts*, 13–59
message text variables, *(P) Concepts*, 13–60
modifying a message source file, *(P) Concepts*, 13–61
SET MESSAGE command, *(P) CDU, LBR, & MU*, MSG–8
.SEVERITY directive, *(P) Concepts*, 13–59
source module, *(P) Concepts*, 13–58
.TITLE directive, *(P) Concepts*, 13–60
using message pointers, *(P) CDU, LBR, & MU*, MSG–6
MESSAGE_ROUTINES.EXE file
global symbols, *(P) VAX SDA*, SDA–65
MESSAGE_ROUTINES.STB file
global symbols, *(P) Alpha SDA*, SDA–61
Metrics, quality, *(S) Dependable*, 3–10
MFDs (master file directories), *(G) User*, 5–1; *(S) Sys Mgr Tuning*, A–4; *(P) File Appl*, 1–7, 6–11
See also Directory structures
BACKUP stores save-set file in, *(S) Sys Mgr Tuning*, A–8
contains directory structure for volume set, *(S) Sys Mgr Essentials*, 8–33
definition, *(S) Sys Mgr Tuning*, A–8
on root volume in volume set, *(S) Sys Mgr Essentials*, 8–31
reserved file, *(S) Sys Mgr Tuning*, A–8
reserved files listed in, *(S) Sys Mgr Essentials*, 8–4
$MGBLSC_64 system service
description, *(P) Sys Svc II*, SYS2–161
$MGBLSC_GPFN_64 system service
description, *(P) Sys Svc II*, SYS2–166
MIA (Multivendor Integration Architecture)
DEC Rdb support for, *(G) SW Overview*, 7–15
NAS support for, *(G) SW Overview*, 6–10
Microcode, *(S) DECnet Mgmt*, 1–9
MicroVAX
See Workstations
Microwave links, *(S) DECnet Intro*, 1–2, 1–7
Migration
compiler options, *(P) Environment*, 1–5
documentation, *(P) Environment*, 1–5
tools, *(P) Environment*, 1–5
VEST, *(P) Environment*, 1–5
Minimerge and volume shadowing, *(S) Sys Mgr Essentials*, 10–42
Minimum startup
booting with, *(S) Sys Mgr Essentials*, 4–14
Minor ID
specifying value of, *(P) Linker*, LINK–52
MIN_DUMPFILE symbol, *(S) Sys Mgr Tuning*, 15–24
min_float boundary value, *(P) Portable Math*, A–1
MIN_PAGEFILE*n*_SIZE symbol, *(S) Sys Mgr Tuning*, 15–24
MIN_PAGEFILE symbol, *(S) Sys Mgr Tuning*, 15–24
MIN_ prefix for AUTOGEN, *(S) Sys Mgr Tuning*, 14–20
MIN_SWAPFILE*n*_SIZE symbol, *(S) Sys Mgr Tuning*, 15–24
MIN_SWAPFILE symbol, *(S) Sys Mgr Tuning*, 15–24
MIRRO$SERVER account
enabling default access, *(S) DECnet Mgmt*, 2–25, 5–3, 5–6
Mirrored disks
See Volume shadowing
MIRRORs (loopback mirrors), *(S) DECnet Intro*, 4–7; *(S) DECnet Mgmt*, 1–13, 2–25, 7–2; *(S) DECnet Mgmt Util*, 3–54
default access account, *(S) DECnet Intro*, 3–13
MIRRO$SERVER account
default access, *(S) DECnet Mgmt*, 2–25, 5–3, 5–6
Miscellaneous (MWAIT) resource wait state, *(S) Alpha Perform*, 9–4
Miscellaneous data types, *(P) Calling Std*, 4–4
Mixed I/O, *(P) RMS Ref*, A–34
Mixed-interconnect VMScluster systems
changing allocation class values on HSC subsystems, *(S) VMScluster Sys*, 6–9, 8–40
changing allocation class values on HSJ subsystems, *(S) VMScluster Sys*, 6–10
HSC disks served by MSCP, *(S) VMScluster Sys*, 3–13

Mixed-interconnect VMScluster systems (cont'd)
MSCP server accesses shadow sets, *(S) VMScluster Sys*, 6–24
Mixed-language programming
calling conventions, *(P) Interfaces*, 2–1
MME (Media Management Extension)
not in C2 evaluation, *(S) Security*, C–3
MMG_CTLFLAGS parameter, *(S) VAX Perform*, 2–19; *(S) Alpha Perform*, 6–15
MMS, *(G) SW Overview*, 4–9, 6–15; *(P) Environment*, 6–2
MMS, building systems, *(S) Dependable*, 8–59
MODE logical name, *(S) Sys Mgr Tuning*, 17–18, 17–38
Mode menu, *(S) Sys Mgr Essentials*, 3–37
Modems, *(S) Security*, 12–15; *(S) DECnet Intro*, 1–7, 1–12, 3–4, 3–20, 3–24; *(S) DECnet Mgmt*, 5–13, 7–6
autodial, *(S) DECnet Intro*, 3–26
null cable, *(S) DECnet Intro*, 3–19
Modes
See also Execution modes, Executive mode, and Privilege mode
CANCEL MODE command, *(P) Debugger*, CD–29
interactive, *(P) File Appl*, 10–11
locate performance, *(P) File Appl*, 9–9
SET MODE [NO]DYNAMIC command, *(P) Debugger*, 9–6, 9–13, CD–181
SET MODE [NO]G_FLOAT command, *(P) Debugger*, CD–181
SET MODE [NO]INTERRUPT command, *(P) Debugger*, 14–6, CD–182
SET MODE [NO]KEYPAD command, *(P) Debugger*, 12–8, CD–182
SET MODE [NO]LINE command, *(P) Debugger*, CD–183
SET MODE [NO]OPERANDS command, *(P) Debugger*, 8–19, CD–183
SET MODE [NO]SCREEN command, *(P) Debugger*, 11–1, CD–184
SET MODE [NO]SCROLL command, *(P) Debugger*, CD–184
SET MODE [NO]SEPARATE command, *(P) Debugger*, 2–9, 13–13, CD–185
SET MODE [NO]SYMBOLIC command, *(P) Debugger*, 8–13, CD–185
SHOW MODE, *(P) Debugger*, CD–262
MODES class record
in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–23
Modes of operation, *(S) Sys Mgmt Util A-L*, 3–3
image, *(S) Sys Mgmt Util A-L*, 7–35
physical, *(S) Sys Mgmt Util A-L*, 7–49
Mode switching
when permitted, *(P) RMS Ref*, A–34
modf routine, *(P) Portable Math*, DPML–44, B–10
Modified List Fault Rate, *(S) Alpha Perform*, 10–4
Modified page list, *(S) Alpha Perform*, 5–2
displaying, *(P) VAX SDA*, SDA–131
evaluating, *(S) VAX Perform*, 3–24; *(S) Alpha Perform*, 10–5
/MODIFIED qualifier, *(P) VAX SDA*, SDA–131
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–47
MODIFY command, *(P) Rec Mgmt Util*, 6–16; *(P) File Appl*, 10–26
Edit/FDL utility, *(P) File Appl*, A–1
Modify file function, *(P) I/O User*, 1–27
/MODIFY qualifier, *(P) Debugger*, CD–161, CD–223
MODPARAMS.DAT file, *(S) Sys Mgr Tuning*, 14–17, 14–18
ADD_ prefix, *(S) Sys Mgr Tuning*, 14–19
controlling page, swap, and dump files, *(S) Sys Mgr Tuning*, 15–18, 15–22
specifying location, *(S) Sys Mgr Tuning*, 15–24
specifying size of individual files, *(S) Sys Mgr Tuning*, 15–24
specifying size of total file space, *(S) Sys Mgr Tuning*, 15–23
controlling parameter values set by AUTOGEN, *(S) Sys Mgr Tuning*, 14–4, 14–18
created by CLUSTER_CONFIG.COM, *(S) VMScluster Sys*, 8–1
creating page, swap, and dump files, *(S) Sys Mgr Tuning*, 15–17, 15–24
example, *(S) VMScluster Sys*, 6–9
including external parameter files in, *(S) Sys Mgr Tuning*, 14–22
increasing parameter values, *(S) Sys Mgr Tuning*, 14–19
MAX_ prefix, *(S) Sys Mgr Tuning*, 14–20
MIN_ prefix, *(S) Sys Mgr Tuning*, 14–20
sample, *(S) Sys Mgr Tuning*, 14–17
specifying an alternate default startup command, *(S) Sys Mgr Essentials*, 4–13
specifying dump file, *(S) VMScluster Sys*, 10–13
specifying MSCP disk-serving parameters, *(S) VMScluster Sys*, 6–15
specifying parameter values
absolute, *(S) Sys Mgr Tuning*, 14–20
maximum, *(S) Sys Mgr Tuning*, 14–20
minimum, *(S) Sys Mgr Tuning*, 14–20
specifying TMSCP tape-serving parameters, *(S) VMScluster Sys*, 6–15
storing your system parameter changes in, *(S) Sys Mgr Tuning*, 14–5
updating, *(S) VMScluster Sys*, 8–36
Modularity
virtual displays, *(P) Concepts*, 7–30

Module header records
analyzing in object files, *(G) DCL A-M*, DCLI–28
Module headers, *(P) CDU, LBR, & MU*, LIB–4
Module Management System
See MMS
Module name tables (MNT), *(P) CDU, LBR, & MU*, LIB–4
Module objects
analyzing, *(G) DCL A-M*, DCLI–26
analyzing end-of-file records, *(G) DCL A-M*, DCLI–27
/MODULE qualifier, *(P) Debugger*, CD–34, CD–202, CD–207
Modules, *(S) DECnet Mgmt*, 1–17; *(P) Debugger*, 3–2, 5–5
See also Shareable images
canceling, *(P) Debugger*, 9–6, CD–30
creating, *(P) CDU, LBR, & MU*, LIB–6
database, *(S) DECnet Mgmt*, 3–1
Ethernet configurator, *(S) DECnet Mgmt*, 1–17, 2–11, 3–34
finding failing, *(P) VAX SDA*, SDA–27
information about, *(P) Debugger*, 9–6, CD–263
setting, *(P) Debugger*, 9–5, CD–187
traceback information, *(P) Debugger*, 9–3
MODULE statements, *(P) CDU, LBR, & MU*, CDU–15, CDU–38
Module traceback records
analyzing in object files, *(G) DCL A-M*, DCLI–28
MOM (maintenance operation module), *(S) DECnet Mgmt*, 4–1, 4–2
MON button, *(P) Debugger*, 1–9, 3–18
MONITOR (Monitor utility)
See Monitor utility
MONITOR.COM command procedure, *(S) Sys Mgr Tuning*, 18–40; *(S) Alpha Perform*, 7–7
used with Monitor utility, *(S) Sys Mgr Tuning*, 18–39
MONITOR ALL_CLASSES command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–14
MONITOR CLUSTER command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–15
MONITOR command, *(G) DCL A-M*, DCLI–431; *(P) Debugger*, CD–129
controlling amount of time between displays of screen images, *(S) Sys Mgr Tuning*, 18–37
for displaying all RMS statistics screens, *(P) File Appl*, 3–32
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–8
recording data on time spent, *(S) Sys Mgr Tuning*, 18–36
recording file system and process data, *(S) Sys Mgr Tuning*, 18–36
MONITOR command (cont'd)
routing display output, *(S) Sys Mgr Tuning*, 18–35
specifying how log request is to run, *(S) Sys Mgr Tuning*, 18–34
specifying input file, *(S) Sys Mgr Tuning*, 18–36
specifying node, *(S) Sys Mgr Tuning*, 18–35
specifying time of display, *(S) Sys Mgr Tuning*, 18–36
storing display output, *(S) Sys Mgr Tuning*, 18–37
MONITOR data
summary of most important items, *(S) VAX Perform*, 3–42
MONITOR DECNET command, *(S) DECnet Intro*, 4–7
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–19
MONITOR DECNET data
kernel mode, *(S) VAX Perform*, 3–16
MONITOR DISK command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–20
MONITOR DISK data
responsiveness of disk I/O subsystem, *(S) VAX Perform*, 3–31
using to evaluate MSCP-served disk, *(S) VAX Perform*, 3–33
MONITOR DLOCK command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–23
MONITOR DLOCK data
interrupt stack, *(S) VAX Perform*, 3–15
MONITOR FCP command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–25
MONITOR FCP data
file system I/O activity, *(S) VAX Perform*, 3–35
MONITOR FILE_SYSTEM_CACHE command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–26
MONITOR FILE_SYSTEM_CACHE data
file system I/O activity, *(S) VAX Perform*, 3–35
relationship to ACP/XQP system parameters, *(S) VAX Perform*, 3–36
Monitoring procedures, *(P) Modular Proc*, A–4
Monitoring RMS performance
using RMS statistics, *(P) File Appl*, 3–29
MONITOR IO command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–30
MONITOR IO data
kernel mode, *(S) VAX Perform*, 3–16
swapping and swapper trimming, *(S) VAX Perform*, 3–25

MONITOR LOCK command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–32
MONITOR LOCK data
kernel mode, *(S) VAX Perform*, 3–16
voluntary wait states, *(S) VAX Perform*, 3–11
MONITOR MODES command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–33
MONITOR MODES data
compatibility mode, *(S) VAX Perform*, 3–15
CPU consumption, *(S) VAX Perform*, 3–14
CPU load balancing in a VAXcluster, *(S) VAX Perform*, 3–19
executive mode, *(S) VAX Perform*, 3–14, 3–18
idle time, *(S) VAX Perform*, 3–15
available CPU capacity, *(S) VAX Perform*, 3–11
interpreting, *(S) VAX Perform*, 3–15
interrupt stack, *(S) VAX Perform*, 3–14, 3–15
kernel mode, *(S) VAX Perform*, 3–14, 3–16
MP synchronization, *(S) VAX Perform*, 3–14, 3–16
supervisor mode, *(S) VAX Perform*, 3–15
user mode, *(S) VAX Perform*, 3–15
MONITOR MSCP_SERVER command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–36
MONITOR PAGE command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–38
MONITOR PAGE data
disk I/O consumption, *(S) VAX Perform*, 3–34
kernel mode, *(S) VAX Perform*, 3–16
memory consumption, *(S) VAX Perform*, 3–27
page faulting, *(S) VAX Perform*, 3–23
MONITOR PROCESSES command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–40
MONITOR PROCESSES data
involuntary wait states, *(S) VAX Perform*, 3–12
MONITOR RMS command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–43
MONITOR SCS command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–46
MONITOR SCS data
interrupt stack, *(S) VAX Perform*, 3–15
MONITOR STATES command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–49
MONITOR STATES data
available CPU capacity, *(S) VAX Perform*, 3–11
compute queue, *(S) VAX Perform*, 3–9
involuntary wait states, *(S) VAX Perform*, 3–12
secondary page cache, *(S) VAX Perform*, 3–24
MONITOR STATES data (cont'd)
swapping and swapper trimming, *(S) VAX Perform*, 3–25
voluntary wait states, *(S) VAX Perform*, 3–11
MONITOR SYSTEM command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–52
MONITOR TRANSACTION command
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–55
Monitor utility (MONITOR), *(G) SW Overview*, 3–10; *(S) Sys Mgmt Util M-Z*, 1–3; *(S) Alpha Perform*, 7–1; *(S) VMScluster Sys*, 1–10
analyzing disk use with, *(S) Sys Mgr Essentials*, 8–8
analyzing RMS cache statistics display, *(P) File Appl*, 3–31
class-name qualifiers
/ALL, *(S) Sys Mgmt Util M-Z*, 1–14
/AVERAGE, *(S) Sys Mgmt Util M-Z*, 1–14
/CPU, *(S) Sys Mgmt Util M-Z*, 1–34
/CURRENT, *(S) Sys Mgmt Util M-Z*, 1–14
/ITEM, *(S) Sys Mgmt Util M-Z*, 1–21, 1–47
/MAXIMUM, *(S) Sys Mgmt Util M-Z*, 1–14
/MINIMUM, *(S) Sys Mgmt Util M-Z*, 1–14
/PERCENT, *(S) Sys Mgmt Util M-Z*, 1–21
/TOPBIO, *(S) Sys Mgmt Util M-Z*, 1–40
/TOPCPU, *(S) Sys Mgmt Util M-Z*, 1–40
/TOPDIO, *(S) Sys Mgmt Util M-Z*, 1–40
/TOPFAULT, *(S) Sys Mgmt Util M-Z*, 1–40
/TOPRBS, *(S) Sys Mgmt Util M-Z*, 1–41
class types, *(S) Sys Mgr Tuning*, 18–31
collection interval, *(S) Sys Mgmt Util M-Z*, 1–11
command procedures, *(S) Sys Mgr Tuning*, 18–39
for cluster summaries, *(S) Sys Mgr Tuning*, 18–40
to initiate continuous recording, *(S) Sys Mgr Tuning*, 18–41
to produce cluster summaries, *(S) Sys Mgr Tuning*, 18–42
command qualifiers, *(S) Sys Mgmt Util M-Z*, 1–9 to 1–14
commands, *(S) Sys Mgmt Util M-Z*, 1–5 to 1–61
CONVERT, *(S) Sys Mgmt Util M-Z*, 1–5
EXECUTE, *(S) Sys Mgmt Util M-Z*, 1–6
EXIT, *(S) Sys Mgmt Util M-Z*, 1–7
HELP, *(S) Sys Mgmt Util M-Z*, 1–7
INITIALIZE, *(S) Sys Mgmt Util M-Z*, 1–8
MONITOR, *(S) Sys Mgmt Util M-Z*, 1–8
MONITOR ALL_CLASSES, *(S) Sys Mgmt Util M-Z*, 1–14
MONITOR CLUSTER, *(S) Sys Mgmt Util M-Z*, 1–15
MONITOR DECNET, *(S) Sys Mgmt Util M-Z*, 1–19

Monitor utility (MONITOR)
commands (cont'd)
MONITOR DISK, *(S) Sys Mgmt Util M-Z*, 1–20
MONITOR DLOCK, *(S) Sys Mgmt Util M-Z*, 1–23
MONITOR FCP, *(S) Sys Mgmt Util M-Z*, 1–25
MONITOR FILE_SYSTEM_CACHE, *(S) Sys Mgmt Util M-Z*, 1–26
MONITOR IO, *(S) Sys Mgmt Util M-Z*, 1–30
MONITOR LOCK, *(S) Sys Mgmt Util M-Z*, 1–32
MONITOR MODES, *(S) Sys Mgmt Util M-Z*, 1–33
MONITOR MSCP_SERVER, *(S) Sys Mgmt Util M-Z*, 1–36
MONITOR PAGE, *(S) Sys Mgmt Util M-Z*, 1–38
MONITOR PROCESSES, *(S) Sys Mgmt Util M-Z*, 1–40
MONITOR RMS, *(S) Sys Mgmt Util M-Z*, 1–43
MONITOR SCS, *(S) Sys Mgmt Util M-Z*, 1–46
MONITOR STATES, *(S) Sys Mgmt Util M-Z*, 1–49
MONITOR SYSTEM, *(S) Sys Mgmt Util M-Z*, 1–52
MONITOR TRANSACTION, *(S) Sys Mgmt Util M-Z*, 1–55
SET DEFAULT, *(S) Sys Mgmt Util M-Z*, 1–60
SHOW DEFAULT, *(S) Sys Mgmt Util M-Z*, 1–61
data items
summary, *(S) Alpha Perform*, B–1
description, *(S) Sys Mgr Tuning*, 18–31
direct I/O, *(S) Alpha Perform*, 11–5
directing display, *(S) Sys Mgr Tuning*, 18–33
directing output, *(S) Sys Mgmt Util M-Z*, 1–4
displaying and recording concurrently, *(S) Sys Mgr Tuning*, 18–36
displaying live monitoring, *(S) Sys Mgr Tuning*, 18–34
displaying network information, *(S) Sys Mgr Tuning*, 21–17
entering commands, *(S) Sys Mgr Tuning*, 18–34
exiting, *(S) Sys Mgmt Util M-Z*, 1–4
exiting from, *(S) Sys Mgr Tuning*, 18–34
for sampling RMS statistics, *(P) File Appl*, 3–30
invoking, *(S) Sys Mgr Tuning*, 18–33; *(S) Sys Mgmt Util M-Z*, 1–4
live mode, *(S) Alpha Perform*, 7–8, 11–6
logical name for, *(S) Sys Mgr Essentials*, 5–8
Monitor utility (MONITOR) (cont'd)
modes, *(S) Alpha Perform*, 7–7
MONITOR.COM command procedure
using to create summary file, *(S) Sys Mgr Tuning*, 18–39
MONITOR DECNET data
kernel mode, *(S) Alpha Perform*, 9–8
MONITOR DISK data
evaluating MSCP served disk, *(S) Alpha Perform*, 11–5
responsiveness of disk I/O subsystem, *(S) Alpha Perform*, 11–3
MONITOR DLOCK data
interrupt state, *(S) Alpha Perform*, 9–8
MONITOR FCP data
file system I/O activity, *(S) Alpha Perform*, 11–7
MONITOR FILE_SYSTEM_CACHE data, *(S) Alpha Perform*, 11–8
file system I/O activity, *(S) Alpha Perform*, 11–7
MONITOR IO data
kernel mode, *(S) Alpha Perform*, 9–8
swapping and swapper trimming, *(S) Alpha Perform*, 10–6
MONITOR LOCK data
kernel mode, *(S) Alpha Perform*, 9–8
MONITOR MODES data, *(S) Alpha Perform*, 9–7 to 9–9
CPU load balancing in a VMScluster, *(S) Alpha Perform*, 9–11
MONITOR PAGE data
disk I/O consumption, *(S) Alpha Perform*, 11–6
kernel mode, *(S) Alpha Perform*, 9–8
memory consumption, *(S) Alpha Perform*, 10–8
page fault, *(S) Alpha Perform*, 10–4
MONITOR POOL data
memory consumption, *(S) Alpha Perform*, 10–8
MONITOR SCS data
interrupt state, *(S) Alpha Perform*, 9–8
MONITOR STATES data
secondary page cache, *(S) Alpha Perform*, 10–5
swapping and swapper trimming, *(S) Alpha Perform*, 10–6
MONSUM.COM command procedure
using to generate clusterwide multifile summary reports, *(S) Sys Mgr Tuning*, 18–39
moving log file to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
multifile reports, *(S) Alpha Perform*, 7–7
output
types of, *(S) Alpha Perform*, 7–7
parameters, *(S) Sys Mgr Tuning*, 18–31

Monitor utility (MONITOR) (cont'd)
playback mode, *(S) Alpha Perform*, 9–6, 11–5
playing back monitoring, *(S) Sys Mgr Tuning*, 18–37
playing back remote monitoring, *(S) Sys Mgr Tuning*, 18–38
producing reports, *(S) Sys Mgr Tuning*, 18–39
qualifiers, *(S) Sys Mgr Tuning*, 18–33
recording file record formats, *(S) Sys Mgmt Util M-Z*, A–1 to A–13
recording live monitoring, *(S) Sys Mgr Tuning*, 18–35
record types, *(S) Sys Mgmt Util M-Z*, A–2
relationship of qualifier and event, *(S) Sys Mgmt Util M-Z*, 1–12
reports, *(S) Sys Mgr Tuning*, 18–40
rerecording monitoring, *(S) Sys Mgr Tuning*, 18–39
running continuously, *(S) Sys Mgr Tuning*, 18–39
SUBMON.COM procedure
using to start MONITOR.COM as a detached process, *(S) Sys Mgr Tuning*, 18–39
summary reports, *(S) VAX Perform*, 3–6; *(S) Alpha Perform*, 7–7
use in network analysis, *(S) DECnet Intro*, 4–7
use of VPM object in VMSclusters, *(S) DECnet Mgmt*, 5–5
version compatibility, *(S) Sys Mgr Tuning*, 18–43
MONITOR VECTOR command, *(S) Sys Mgmt Util M-Z*, 1–58
Monitor view, *(P) Debugger*, 1–10, 3–18
MONITOR_SERVER process
log file, *(S) Sys Mgmt Util M-Z*, 1–17
network startup, *(S) Sys Mgmt Util M-Z*, 1–17
startup time, *(S) Sys Mgmt Util M-Z*, 1–18
MONSUM.COM command procedure, *(S) Sys Mgr Tuning*, 18–42; *(S) Alpha Perform*, 7–7
used with Monitor utility, *(S) Sys Mgr Tuning*, 18–39
using to generate clusterwide multifile summary reports, *(S) Sys Mgr Tuning*, 18–39
MOP (maintenance operation protocol), *(S) DECnet Mgmt*, 4–1, 4–11
downline loading, *(S) Sys Mgr Tuning*, 23–2
error recovery, *(S) DECnet Mgmt*, 4–5
request memory dump message, *(S) DECnet Mgmt*, 4–11
MOP downline load service
clearing counters, *(S) Sys Mgr Tuning*, 22–25; *(S) Sys Mgmt Util A-L*, 12–9
console carrier, *(S) Sys Mgr Tuning*, 22–26; *(S) Sys Mgmt Util A-L*, 12–10
disabling, *(S) Sys Mgr Tuning*, 22–23
MOP downline load service (cont'd)
displaying status and counters, *(S) Sys Mgr Tuning*, 22–23, 22–24; *(S) Sys Mgmt Util A-L*, 12–18, 12–37
enabling, *(S) Sys Mgr Tuning*, 22–23
LANACP server, *(S) Sys Mgr Tuning*, 22–23
LAN MOP, *(S) Sys Mgr Tuning*, 22–20
coexisting with DECnet MOP, *(S) Sys Mgr Tuning*, 22–20
migrating DECnet MOP to LAN MOP, *(S) Sys Mgr Tuning*, 22–20
sample setup, *(S) Sys Mgr Tuning*, 22–22
setup with CLUSTER_CONFIG.COM, *(S) Sys Mgr Tuning*, 22–21
trigger boot, *(S) Sys Mgr Tuning*, 22–27; *(S) Sys Mgmt Util A-L*, 12–40
MOP servers
and satellite booting, *(S) VMScluster Sys*, 3–7
enabling, *(S) VMScluster Sys*, 9–9
functions, *(S) VMScluster Sys*, 3–6
selecting, *(S) VMScluster Sys*, 8–4
for availability, *(S) VMScluster Sys*, 3–17
Mosaic, *(S) TCP/IP*, 3–5
Motif
See DECwindows Motif software
MOUNT (Mount utility)
See Mount utility
MOUNT command, *(G) User*, 12–6, 12–9; *(G) DCL A-M*, DCLI–432; *(P) I/O User*, 3–22
adding to volume sets, *(S) Sys Mgr Essentials*, 8–22
assigning a volume set name, *(S) Sys Mgr Essentials*, 8–31
avoiding use of /CLUSTER with SYSMAN DO command, *(S) Sys Mgr Tuning*, 20–21; *(S) Sys Mgmt Util M-Z*, 6–31
/BLOCKSIZE qualifier, *(P) File Appl*, 1–30
creating a public volume, *(S) Sys Mgr Essentials*, 8–24
creating disk volume sets, *(S) Sys Mgr Essentials*, 8–30
creating volume sets, *(S) Sys Mgr Essentials*, 8–22
disabling automatic volume switching, *(S) Sys Mgr Essentials*, 8–40
disk and tape volumes, *(S) Sys Mgr Essentials*, 8–20
enabling and disabling, *(S) Sys Mgr Essentials*, 8–23, 8–24
enabling the processing of subsystem ACEs, *(S) Sys Mgr Essentials*, 8–23
foreign volumes, *(S) Sys Mgr Essentials*, 8–22
for foreign volumes, *(S) Sys Mgr Essentials*, 8–24, 9–13
format, *(G) User*, 12–6
inhibiting access checks, *(S) Sys Mgr Essentials*, 8–25
in system startup

MOUNT command
in system startup (cont'd)
for remote InfoServer devices, *(S) Sys Mgr Tuning*, 23–14
mounting page and swap file disks, *(S) Sys Mgr Essentials*, 5–6
special consideration about operator assistance, *(S) Sys Mgr Essentials*, 5–11
ISO 9660 media, *(S) Sys Mgr Essentials*, 8–23
overriding expiration date, *(S) Sys Mgr Essentials*, 9–14
overriding protection, *(S) Sys Mgr Essentials*, 8–25
overriding protection checks, *(S) Sys Mgr Essentials*, 8–23
parameters, *(S) Sys Mgr Essentials*, 8–21
protection codes, *(S) Sys Mgr Essentials*, 9–12
public volumes, *(S) Sys Mgr Essentials*, 8–21
qualifiers, *(S) Sys Mgr Essentials*, 8–22, 8–24
/RECORDSIZE qualifier, *(P) File Appl*, 1–31
specifying UIC, *(S) Sys Mgr Essentials*, 8–25
suspending quota operation on a volume, *(S) Sys Mgr Essentials*, 8–52
tape, *(S) Sys Mgr Essentials*, 9–21
to mount disk holding page and swap files, *(S) Sys Mgr Tuning*, 15–20
window size and, *(P) File Appl*, 9–8
Mounted forms
matching stock, *(S) Sys Mgr Essentials*, 13–42
Mount error message, *(S) Sys Mgmt Util A-L*, 7–56
Mount function, *(P) I/O User*, 1–32
Mounting disks, *(S) VMScluster Sys*, 6–19, 6–20
Mounting forms, *(S) Sys Mgr Essentials*, 13–64
Mounting of queue database disk, *(S) Sys Mgr Essentials*, 12–6
Mounting tapes, *(G) User*, 12–7, 12–8
Mounting volumes
access requirements, *(S) Security*, 5–20
and security audit, *(G) User*, 19–11
disks
for queue database files, *(S) Sys Mgr Essentials*, 12–6
in system startup
InfoServer, *(S) Sys Mgr Tuning*, 23–14
virtual device unit, *(S) Sys Mgr Tuning*, 23–14
foreign, *(G) User*, 12–7
magnetic tape, *(G) User*, 12–7, 12–8
operator assistance, *(S) Sys Mgr Essentials*, 8–18
security audits and, *(S) Security*, 3–19
with protected subsystems, *(S) Security*, 13–5
Mounting volume sets
tape
with automatic volume switching disabled, *(S) Sys Mgr Essentials*, 8–40
Mount messages
disabling with SUBSYSTEM qualifier, *(S) Sys Mgr Essentials*, 8–23
MOUNT/NOREBUILD command, *(S) VMScluster Sys*, 6–20
MOUNT privilege, *(S) Security*, A–9; *(P) Concepts*, 9–4
Mount requests, *(G) User*, 12–6
Mount utility (MOUNT), *(G) SW Overview*, 3–19; *(S) VMScluster Sys*, 1–11
directing output, *(S) Sys Mgmt Util M-Z*, 2–6
examples, *(S) Sys Mgmt Util M-Z*, 2–41 to 2–44
allocating file window mapping pointers, *(S) Sys Mgmt Util M-Z*, 2–39
creating a volume set, *(S) Sys Mgmt Util M-Z*, 2–11
disabling automatic rebuild, *(S) Sys Mgmt Util M-Z*, 2–33
enabling access to subsystems, *(S) Sys Mgmt Util M-Z*, 2–35
making a volume public, *(S) Sys Mgmt Util M-Z*, 2–36
mounting an ANSI-labeled magnetic tape, *(S) Sys Mgmt Util M-Z*, 2–21, 2–23
mounting a volume clusterwide, *(S) Sys Mgmt Util M-Z*, 2–14
overriding volume protection checks, *(S) Sys Mgmt Util M-Z*, 2–29
rebuilding a disk volume, *(S) Sys Mgmt Util M-Z*, 2–33
requesting operator assistance, *(S) Sys Mgmt Util M-Z*, 2–9, 2–41
specifying a protection code, *(S) Sys Mgmt Util M-Z*, 2–31
specifying a shareable volume, *(S) Sys Mgmt Util M-Z*, 2–35
specifying block size for magnetic tape, *(S) Sys Mgmt Util M-Z*, 2–12
specifying default block extent, *(S) Sys Mgmt Util M-Z*, 2–20
specifying magnetic tape density, *(S) Sys Mgmt Util M-Z*, 2–19
specifying magnetic tape record size, *(S) Sys Mgmt Util M-Z*, 2–34
specifying number of directories, *(S) Sys Mgmt Util M-Z*, 2–8
exiting, *(S) Sys Mgmt Util M-Z*, 2–6
invoking, *(S) Sys Mgmt Util M-Z*, 2–6
multiple foreign tape volumes, *(S) Sys Mgmt Util M-Z*, 2–26
overriding volume protection checks, *(S) Sys Mgmt Util M-Z*, 2–27
parameters, *(S) Sys Mgmt Util M-Z*, 2–4
qualifiers, *(S) Sys Mgmt Util M-Z*, 2–8 to 2–40
/ACCESSED, *(S) Sys Mgmt Util M-Z*, 2–8
/ASSIST, *(S) Sys Mgmt Util M-Z*, 2–8

Mount utility (MOUNT)
qualifiers (cont'd)
/AUTOMATIC, *(S) Sys Mgmt Util M-Z*, 2–9
/BIND, *(S) Sys Mgmt Util M-Z*, 2–10
/BLOCKSIZE, *(S) Sys Mgmt Util M-Z*, 2–11
/CACHE, *(S) Sys Mgmt Util M-Z*, 2–12
/CLUSTER, *(S) Sys Mgmt Util M-Z*, 2–14
/COMMENT, *(S) Sys Mgmt Util M-Z*, 2–15
/CONFIRM, *(S) Sys Mgmt Util M-Z*, 2–16
/COPY, *(S) Sys Mgmt Util M-Z*, 2–17
/DATA_CHECK, *(S) Sys Mgmt Util M-Z*, 2–18
/DENSITY, *(S) Sys Mgmt Util M-Z*, 2–19
/EXTENSION, *(S) Sys Mgmt Util M-Z*, 2–19
/FOREIGN, *(S) Sys Mgmt Util M-Z*, 2–20
/GROUP, *(S) Sys Mgmt Util M-Z*, 2–21
/HDR3, *(S) Sys Mgmt Util M-Z*, 2–21
/INCLUDE, *(S) Sys Mgmt Util M-Z*, 2–22
/INITIALIZE=CONTINUATION, *(S) Sys Mgmt Util M-Z*, 2–23
/LABEL, *(S) Sys Mgmt Util M-Z*, 2–23
/MEDIA_FORMAT=CD–ROM, *(S) Sys Mgmt Util M-Z*, 2–24
/MEDIA_FORMAT=[NO]COMPACTION, *(S) Sys Mgmt Util M-Z*, 2–24
/MESSAGE, *(S) Sys Mgmt Util M-Z*, 2–25
/MOUNT_VERIFICATION, *(S) Sys Mgmt Util M-Z*, 2–26
/MULTI_VOLUME, *(S) Sys Mgmt Util M-Z*, 2–26
/OVERRIDE, *(S) Sys Mgmt Util M-Z*, 2–27
/OWNER_UIC, *(S) Sys Mgmt Util M-Z*, 2–29
/PROCESSOR, *(S) Sys Mgmt Util M-Z*, 2–30
/PROTECTION, *(S) Sys Mgmt Util M-Z*, 2–31
/QUOTA, *(S) Sys Mgmt Util M-Z*, 2–32
/REBUILD, *(S) Sys Mgmt Util M-Z*, 2–32
/RECORDSIZE, *(S) Sys Mgmt Util M-Z*, 2–33
/SHADOW, *(S) Sys Mgmt Util M-Z*, 2–34
/SHARE, *(S) Sys Mgmt Util M-Z*, 2–35
/SUBSYSTEM, *(S) Sys Mgmt Util M-Z*, 2–35
/SYSTEM, *(S) Sys Mgmt Util M-Z*, 2–36
/UCS_SEQUENCE=(ESCAPE_SEQUENCE), *(S) Sys Mgmt Util M-Z*, 2–36
/UNDEFINED_FAT, *(S) Sys Mgmt Util M-Z*, 2–37
/UNLOAD, *(S) Sys Mgmt Util M-Z*, 2–38
/WINDOWS, *(S) Sys Mgmt Util M-Z*, 2–39
/WRITE, *(S) Sys Mgmt Util M-Z*, 2–39
Mount utility (MOUNT) (cont'd)
requesting an ancillary control process (ACP), *(S) Sys Mgmt Util M-Z*, 2–30
restrictions, *(S) Sys Mgmt Util M-Z*, 2–6
specifying a user identification code (UIC), *(S) Sys Mgmt Util M-Z*, 2–29
specifying write protection, *(S) Sys Mgmt Util M-Z*, 2–39
using to mount ISO 9660 volume sets, *(S) Sys Mgr Essentials*, 8–34
Mount verification, *(S) Sys Mgr Essentials*, 8–58
aborted
OPCOM message, *(S) Sys Mgr Essentials*, 8–63
aborting by dismounting, *(S) Sys Mgr Essentials*, 8–62
canceling, *(S) Sys Mgr Essentials*, 8–62, 8–63
definition, *(S) Sys Mgr Essentials*, 8–58
device off line, *(S) Sys Mgr Essentials*, 8–59, 8–61
device write-locked, *(S) Sys Mgr Essentials*, 8–61
enabling, *(S) Sys Mgr Essentials*, 8–60
enabling and disabling, *(S) Sys Mgr Essentials*, 8–23
for tapes, *(S) Sys Mgr Essentials*, 8–24
messages, *(S) Sys Mgr Essentials*, 8–60
monitoring failed devices, *(S) Dependable*, 9–11
operation of, *(S) Sys Mgr Essentials*, 8–59
timeout, *(S) Sys Mgr Essentials*, 8–60
OPCOM message, *(S) Sys Mgr Essentials*, 8–60
/MOUNT_VERIFICATION qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–26
Mouse, *(G) SW Overview*, 5–5
obtaining data with, *(P) SMG$*, 3–1
Mouse buttons
See MB1 and MB3
MOVC3 instruction, *(P) 64-Bit Addr*, 9–7
MOVC5 instruction, *(P) 64-Bit Addr*, 9–7
MOVE command, *(P) Debugger*, 11–12, CD–133
in Mail, *(G) User*, 6–12
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–37
Movefile
controlling whether movefile operations are enabled, *(G) DCL N-Z*, DCLII–134
determining if movefile operations are enabled, *(G) DCL A-M*, DCLI–324
Movefile subfunction, *(S) Dependable*, 9–17
calling, *(P) I/O User*, 1–18, 1–29
description, *(P) I/O User*, 1–29
MOVE keypad function, *(S) Sys Mgr Tuning*, 20–7; *(S) Sys Mgmt Util M-Z*, B–3
Moving jobs from one queue to another, *(S) Sys Mgr Essentials*, 13–57

MP synchronization mode, *(S) Alpha Perform*, 9–7, 9–8
MPW_LOLIMIT parameter, *(S) Alpha Perform*, 13–3
MPW_THRESH parameter, *(S) Alpha Perform*, 13–3
MSCP (mass storage control protocol)
  supported devices, *(P) I/O User*, 7–2
MSCP command
  in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–14
MSCP-served disks
  using MONITOR DISK data to evaluate, *(S) VAX Perform*, 3–33
MSCP servers, *(S) Sys Mgr Tuning*, 20–2; *(S) Alpha Perform*, 9–7; *(S) VMScluster Sys*, 1–4, 2–17
  access to shadow sets, *(S) VMScluster Sys*, 6–24
  base address, *(P) VAX SDA*, SDA–18
  boot server, *(S) VMScluster Sys*, 3–7
  cluster-accessible disks, *(S) VMScluster Sys*, 6–15
  cluster-accessible files, *(S) VMScluster Sys*, 6–1
  definition, *(S) Alpha Perform*, 11–5
  functions, *(S) VMScluster Sys*, 6–15
  LAN disk server, *(S) VMScluster Sys*, 3–6
  load balancing, *(S) VMScluster Sys*, 6–17
  loading, *(S) Sys Mgmt Util M-Z*, 5–14
  served disks, *(S) Alpha Perform*, 11–5
  serving a shadow set, *(S) VMScluster Sys*, 6–24
  shared disks, *(S) VMScluster Sys*, 6–1
  starting, *(S) Sys Mgmt Util M-Z*, 5–14
MSCP symbol, *(P) VAX SDA*, SDA–18
MSCP_LOAD system parameter, *(S) VMScluster Sys*, 6–15, A–2
MSCP_SERVER class record
  in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–25
MSCP_SERVE_ALL system parameter, *(S) VMScluster Sys*, 6–15, A–2
MS–DOS nodes, *(S) DECnet Mgmt*, 9–20
MSE option, *(P) Rec Mgmt Util*, 4–35
MSGHLP
  See Help Message utility
.MSGHLP$DATA files
  adding to the Help Message database, *(S) Sys Mgr Essentials*, 5–28
  creating, *(G) Help Msg*, 2–10
  using to customize the Help Message database, *(G) Help Msg*, 2–8
.MSGHLP files
  creating, *(G) Help Msg*, 2–8
  format of, *(G) Help Msg*, 2–9
  using to create a .MSGHLP$DATA file, *(G) Help Msg*, 2–11
  using to delete messages from the HELP /MESSAGE database, *(G) Help Msg*, 2–11
.MSGHLP files (cont'd)
  using to modify a .MSGHLP$DATA file, *(G) Help Msg*, 2–8
MTACP (magnetic tape ancillary control process), *(P) File Appl*, 1–18
  definition, *(S) Sys Mgr Essentials*, 8–6
MTH$ACOSD routine, *(P) MTH$*, MTH–6
MTH$ACOS routine, *(P) MTH$*, MTH–3
MTH$AIMAG routine, *(P) MTH$*, MTH–111
MTH$ALOG10 routine, *(P) MTH$*, MTH–117
MTH$ALOG2 routine, *(P) MTH$*, MTH–115
MTH$ALOG routine, *(P) MTH$*, MTH–113
MTH$ASIND routine, *(P) MTH$*, MTH–11
MTH$ASIN routine, *(P) MTH$*, MTH–9
MTH$ATAN2 routine, *(P) MTH$*, MTH–17
MTH$ATAND2 routine, *(P) MTH$*, MTH–19
MTH$ATAND routine, *(P) MTH$*, MTH–15
MTH$ATANH routine, *(P) MTH$*, MTH–21
MTH$ATAN routine, *(P) MTH$*, MTH–13
MTH$CABS routine, *(P) MTH$*, MTH–23
MTH$CCOS routine, *(P) MTH$*, MTH–26
MTH$CDABS routine, *(P) MTH$*, MTH–23
MTH$CDCOS routine, *(P) MTH$*, MTH–28
MTH$CDEXP routine, *(P) MTH$*, MTH–32
MTH$CDLOG routine, *(P) MTH$*, MTH–36
MTH$CDSIN routine, *(P) MTH$*, MTH–53
MTH$CDSQRT routine, *(P) MTH$*, MTH–58
MTH$CEXP routine, *(P) MTH$*, MTH–30
MTH$CGABS routine, *(P) MTH$*, MTH–23
MTH$CGCOS routine, *(P) MTH$*, MTH–28
MTH$CGEXP routine, *(P) MTH$*, MTH–32
MTH$CGLOG routine, *(P) MTH$*, MTH–36
MTH$CGSIN routine, *(P) MTH$*, MTH–53
MTH$CGSQRT routine, *(P) MTH$*, MTH–58
MTH$CLOG routine, *(P) MTH$*, MTH–34
MTH$CMPLX routine, *(P) MTH$*, MTH–39
MTH$CONJG routine, *(P) MTH$*, MTH–43
MTH$COSD routine, *(P) MTH$*, MTH–48
MTH$COSH routine, *(P) MTH$*, MTH–50
MTH$COS routine, *(P) MTH$*, MTH–46
MTH$CSIN routine, *(P) MTH$*, MTH–52
MTH$CSQRT routine, *(P) MTH$*, MTH–56
MTH$CVT_DA_GA routine, *(P) MTH$*, MTH–63
MTH$CVT_D_G routine, *(P) MTH$*, MTH–61
MTH$CVT_GA_DA routine, *(P) MTH$*, MTH–63
MTH$CVT_G_D routine, *(P) MTH$*, MTH–61
MTH$DACOSD routine, *(P) MTH$*, MTH–6
MTH$DACOS routine, *(P) MTH$*, MTH–3
MTH$DASIND routine, *(P) MTH$*, MTH–11
MTH$DASIN routine, *(P) MTH$*, MTH–9
MTH$DATAN2 routine, *(P) MTH$*, MTH–17
MTH$DATAND2 routine, *(P) MTH$*, MTH–19
MTH$DATAND routine, *(P) MTH$*, MTH–15
MTH$DATANH routine, *(P) MTH$*, MTH–21
MTH$DATAN routine, *(P) MTH$*, MTH–13
MTH$DCMPLX routine, *(P) MTH$*, MTH–41

MTH$DCONJG routine, *(P) MTH$*, MTH–44
MTH$DCOSD routine, *(P) MTH$*, MTH–48
MTH$DCOSH routine, *(P) MTH$*, MTH–50
MTH$DCOS routine, *(P) MTH$*, MTH–46
MTH$DEXP routine, *(P) MTH$*, MTH–65
MTH$DIMAG routine, *(P) MTH$*, MTH–111
MTH$DLOG10 routine, *(P) MTH$*, MTH–117
MTH$DLOG2 routine, *(P) MTH$*, MTH–115
MTH$DLOG routine, *(P) MTH$*, MTH–113
MTH$DREAL routine, *(P) MTH$*, MTH–121
MTH$DSINCOSD routine, *(P) MTH$*, MTH–128
MTH$DSINCOS routine, *(P) MTH$*, MTH–125
MTH$DSIND routine, *(P) MTH$*, MTH–131
MTH$DSINH routine, *(P) MTH$*, MTH–133
MTH$DSIN routine, *(P) MTH$*, MTH–123
MTH$DSQRT routine, *(P) MTH$*, MTH–136
MTH$DTAND routine, *(P) MTH$*, MTH–140
MTH$DTANH routine, *(P) MTH$*, MTH–142
MTH$DTAN routine, *(P) MTH$*, MTH–138
MTH$EXP routine, *(P) MTH$*, MTH–65
MTH$GACOSD routine, *(P) MTH$*, MTH–6
MTH$GACOS routine, *(P) MTH$*, MTH–3
MTH$GASIND routine, *(P) MTH$*, MTH–11
MTH$GASIN routine, *(P) MTH$*, MTH–9
MTH$GATAN2 routine, *(P) MTH$*, MTH–17
MTH$GATAND2 routine, *(P) MTH$*, MTH–19
MTH$GATAND routine, *(P) MTH$*, MTH–15
MTH$GATANH routine, *(P) MTH$*, MTH–21
MTH$GATAN routine, *(P) MTH$*, MTH–13
MTH$GCMPLX routine, *(P) MTH$*, MTH–41
MTH$GCONJG routine, *(P) MTH$*, MTH–44
MTH$GCOSD routine, *(P) MTH$*, MTH–48
MTH$GCOSH routine, *(P) MTH$*, MTH–50
MTH$GCOS routine, *(P) MTH$*, MTH–46
MTH$GEXP routine, *(P) MTH$*, MTH–65
MTH$GIMAG routine, *(P) MTH$*, MTH–111
MTH$GLOG10 routine, *(P) MTH$*, MTH–117
MTH$GLOG2 routine, *(P) MTH$*, MTH–115
MTH$GLOG routine, *(P) MTH$*, MTH–113
MTH$GREAL routine, *(P) MTH$*, MTH–121
MTH$GSINCOSD routine, *(P) MTH$*, MTH–128
MTH$GSINCOS routine, *(P) MTH$*, MTH–125
MTH$GSIND routine, *(P) MTH$*, MTH–131
MTH$GSINH routine, *(P) MTH$*, MTH–133
MTH$GSIN routine, *(P) MTH$*, MTH–123
MTH$GSQRT routine, *(P) MTH$*, MTH–136
MTH$GTAND routine, *(P) MTH$*, MTH–140
MTH$GTANH routine, *(P) MTH$*, MTH–142
MTH$GTAN routine, *(P) MTH$*, MTH–138
MTH$HACOSD routine, *(P) MTH$*, MTH–70
MTH$HACOS routine, *(P) MTH$*, MTH–68
MTH$HASIND routine, *(P) MTH$*, MTH–74
MTH$HASIN routine, *(P) MTH$*, MTH–72
MTH$HATAN2 routine, *(P) MTH$*, MTH–80
MTH$HATAND2 routine, *(P) MTH$*, MTH–82
MTH$HATAND routine, *(P) MTH$*, MTH–78
MTH$HATANH routine, *(P) MTH$*, MTH–84
MTH$HATAN routine, *(P) MTH$*, MTH–76
MTH$HCOSD routine, *(P) MTH$*, MTH–87
MTH$HCOSH routine, *(P) MTH$*, MTH–88
MTH$HCOS routine, *(P) MTH$*, MTH–86
MTH$HEXP routine, *(P) MTH$*, MTH–90
MTH$HLOG10 routine, *(P) MTH$*, MTH–96
MTH$HLOG2 routine, *(P) MTH$*, MTH–94
MTH$HLOG routine, *(P) MTH$*, MTH–92
MTH$HSINCOSD routine, *(P) MTH$*, MTH–128
MTH$HSINCOS routine, *(P) MTH$*, MTH–125
MTH$HSIND routine, *(P) MTH$*, MTH–99
MTH$HSINH routine, *(P) MTH$*, MTH–101
MTH$HSIN routine, *(P) MTH$*, MTH–98
MTH$HSQRT routine, *(P) MTH$*, MTH–103
MTH$HTAND routine, *(P) MTH$*, MTH–107
MTH$HTANH routine, *(P) MTH$*, MTH–109
MTH$HTAN routine, *(P) MTH$*, MTH–105
MTH$RANDOM routine, *(P) MTH$*, MTH–119
MTH$REAL routine, *(P) MTH$*, MTH–121
MTH$SINCOSD routine, *(P) MTH$*, MTH–128
MTH$SINCOS routine, *(P) MTH$*, MTH–125
MTH$SIND routine, *(P) MTH$*, MTH–131
MTH$SINH routine, *(P) MTH$*, MTH–133
MTH$SIN routine, *(P) MTH$*, MTH–123
MTH$SIN_R4 routine, *(P) Interfaces*, 3–6
MTH$SQRT routine, *(P) MTH$*, MTH–136
MTH$TAND routine, *(P) MTH$*, MTH–140
MTH$TANH routine, *(P) MTH$*, MTH–142
MTH$TAN routine, *(P) MTH$*, MTH–138
MTH$UMAX routine, *(P) MTH$*, MTH–144
MTH$UMIN routine, *(P) MTH$*, MTH–145
MTH$VxFOLRLy_MA_V5 routine, *(P) MTH$*, MTH–198
MTH$VxFOLRLy_z_V2 routine, *(P) MTH$*, MTH–202
MTH$VxFOLRy_MA_V15 routine, *(P) MTH$*, MTH–190
MTH$VxFOLRy_z_V8 routine, *(P) MTH$*, MTH–194
MT_BLOCK_SIZE attribute, *(P) Rec Mgmt Util*, 4–20; *(P) File Appl*, 4–32
MT_CLOSE_REWIND attribute, *(P) Rec Mgmt Util*, 4–20
MT_CURRENT_POSITION attribute, *(P) Rec Mgmt Util*, 4–20
MT_NOT_EOF attribute, *(P) Rec Mgmt Util*, 4–20
MT_OPEN_REWIND attribute, *(P) Rec Mgmt Util*, 4–20
MT_PROTECTION attribute, *(P) Rec Mgmt Util*, 4–21; *(P) File Appl*, 4–32
Multiaccess circuits, *(S) DECnet Intro*, 3–2; *(S) DECnet Mgmt*, 1–4, 2–7
Multiaccess devices, *(S) DECnet Intro*, 1–7
Multiblock count, *(S) Alpha Perform*, 4–1
Multiblocks, *(P) File Appl*, 3–14
  count for calculating auto extend, *(P) File Appl*, 3–5

Multiblocks (cont'd)
count to establish global buffer size in shared sequential file operations, *(P) File Appl*, 7–21
definition, *(P) File Appl*, 3–10
option, *(P) File Appl*, 2–1
restriction for use, *(P) File Appl*, 3–10
MULTIBLOCK_COUNT attribute, *(P) Rec Mgmt Util*, 4–11; *(P) File Appl*, 7–17
Multibuffer count, *(S) Alpha Perform*, 4–1; *(P) File Appl*, 3–14, 3–27
MULTIBUFFER_COUNT attribute, *(P) Rec Mgmt Util*, 4–12; *(P) File Appl*, 7–16 to 7–19
Multicast addresses, *(S) DECnet Mgmt*, 1–4, 1–6, 2–3
dump assistance, *(S) DECnet Mgmt*, 4–13
VMScluster
displaying, *(S) Sys Mgmt Util M-Z*, 6–17
Multicast datagram, *(S) VMScluster Sys*, F–24
Multicast messages, *(S) Sys Mgmt Util A-L*, 13–22, 13–42
customizing interval, *(S) DECamds*, B–4
timer for, *(S) Sys Mgmt Util A-L*, 13–30
Multifile/multivolume configuration, *(P) File Appl*, 1–22
Multilanguage programs
debugging, *(P) Debugger*, 13–15
Multimedia documents, *(S) TCP/IP*, 3–5
linking data, *(G) SW Overview*, 5–7
preparation and control, *(G) SW Overview*, 5–12
Multinational character set
See DEC Multinational character set
Multiple active signals, *(P) Calling Std*, 6–28
Multiple-area networks, *(S) DECnet Intro*, 1–3; *(S) DECnet Mgmt*, 1–2
Multiple areas, *(P) Rec Mgmt Util*, 4–6, 4–27
Multiple areas, advantages, *(P) File Appl*, 3–24
Multiple arguments
delimiting in control block fields, *(P) RMS Ref*, A–5, A–6
Multiple buffering, *(S) DECnet Mgmt Util*, 4–1
Multiple-cause failures
in hardware components, *(S) Dependable*, 9–12
Multiple-environment VMScluster systems, *(S) VMScluster Sys*, 5–3
building startup procedures, *(S) VMScluster Sys*, 5–10
functions that must remain specific, *(S) VMScluster Sys*, 5–8
Multiple execution contexts, *(G) V7.0 New Feat*, 4–10
Multiple file specifications
in a parameter list, *(G) User*, 5–6
Multiple inbound connects, *(S) DECnet Mgmt*, 8–8, 8–29, 8–38
Multiple input files, *(P) Rec Mgmt Util*, 2–5
Multiple-key indexed files, *(P) RMS Ref*, A–16
Multiple OpenVMS versions (rolling upgrade), *(S) Dependable*, 9–23
Multiple processes, *(P) SMG$*, 4–1
Multiple queue managers, *(S) Sys Mgr Essentials*, 12–3, 12–10
commands affected by, *(S) Sys Mgr Essentials*, 12–4
managing queues with, *(S) Sys Mgr Essentials*, 12–10
moving queues, *(S) Sys Mgr Essentials*, 12–10
restriction, *(S) Sys Mgr Essentials*, 12–3
specifying names of, *(S) Sys Mgr Essentials*, 12–4
specifying queue manager name, *(S) Sys Mgr Essentials*, 12–4, 12–10
use of queue database, *(S) Sys Mgr Essentials*, 12–4
Multiple services
for retrieving records, *(P) File Appl*, 8–3
Multiple-site data center
VMScluster systems, *(S) Dependable*, 5–11, 6–17, 7–12
Multiple-site network, *(S) Sys Mgr Tuning*, 21–9
Multiplexers, *(P) I/O User*, 5–1
Multiplication
of complex numbers, *(P) OTS$*, OTS–52
of decimal strings, *(P) STR$*, STR–55
Multiplication operator (*), *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–16
Multiplying
vector, *(P) MTH$*, MTH–155
Multipoint circuits, *(S) DECnet Mgmt*, 2–8
polling, *(S) DECnet Mgmt*, 2–8
tributary, *(S) DECnet Mgmt*, 2–8
tributary address, *(S) DECnet Mgmt*, 2–8
Multipoint configurations, *(S) DECnet Mgmt*, 1–3, 1–8, 5–25
Multipoint control circuits, *(S) DECnet Mgmt*, 2–6
Multipoint control stations, *(S) DECnet Mgmt*, 2–8
Multipoint lines, *(S) DECnet Mgmt*, 2–12
Multipoint tributary addresses, *(S) DECnet Mgmt*, 3–25
Multipoint tributary circuits, *(S) DECnet Mgmt*, 2–6
Multiprocess applications
synchronizing, *(P) Concepts*, 14–12
Multiprocessing, *(S) Sys Mgr Tuning*, 26–2
definition, *(S) Sys Mgr Tuning*, 26–2
displaying information, *(S) Sys Mgr Tuning*, 26–3
global symbols, *(P) Alpha SDA*, SDA–62; *(P) VAX SDA*, SDA–65
monitoring, *(S) Sys Mgr Tuning*, 26–3
symmetric, *(G) SW Overview*, 1–4, 3–5
system parameters, *(S) Sys Mgr Tuning*, 26–3

MULTIPROCESSING system parameter, *(S) Sys Mgr Tuning*, 26–3; *(S) Alpha Perform*, 10–10
Multiprocessing systems
  showing attached processor state, *(G) DCL N-Z*, DCLII–249
  starting attached processor, *(G) DCL N-Z*, DCLII–370
  stopping attached processors, *(G) DCL N-Z*, DCLII–392
Multiprocessor environment, *(P) Concepts*, 14–12
  scheduling, *(P) Concepts*, 14–11
Multiprocessors
  analyzing crash dumps, *(P) Alpha SDA*, SDA–10; *(P) VAX SDA*, SDA–12
  displaying synchronization structures, *(P) Alpha SDA*, SDA–146; *(P) VAX SDA*, SDA–170
Multiprocess programs
  CALL command, *(P) Debugger*, CD–16
  CONNECT command, *(P) Debugger*, 14–4, 14–14, CD–43
  controlling execution, *(P) Debugger*, 14–6
  DBG$PROCESS logical name, *(P) Debugger*, 14–10
  debugging, *(P) Debugger*, 14–1
  DEFINE/PROCESS_GROUP command, *(P) Debugger*, 14–13, CD–69
  DISCONNECT command, *(P) Debugger*, 14–9, CD–84
  DO command, *(P) Debugger*, 14–5, CD–93
  EXIT command, *(P) Debugger*, 14–10, CD–114
  global section watchpoint, *(P) Debugger*, 14–16
  GO command, *(P) Debugger*, 14–6, CD–125
  process built-in symbols, *(P) Debugger*, 14–12
  prompt, process-specific, *(P) Debugger*, 14–2, 14–8
  QUIT command, *(P) Debugger*, 14–10, CD–135
  screen mode features, *(P) Debugger*, 14–15
  SET MODE [NO]INTERRUPT command, *(P) Debugger*, 14–7, CD–182
  SET PROCESS command, *(P) Debugger*, 14–7, 14–8, CD–192
  SET PROMPT command, *(P) Debugger*, 14–2
  SHOW PROCESS command, *(P) Debugger*, 14–3, CD–267
  specifying processes, *(P) Debugger*, 14–12
  STEP command, *(P) Debugger*, 14–6, CD–299
  system requirements, *(P) Debugger*, 14–17
MULTISTREAM attribute, *(P) Rec Mgmt Util*, 4–35; *(P) File Appl*, 7–4
Multistreamed work load, *(P) Concepts*, 14–13
Multithreaded applications
  debugging with DELTA/XDELTA, *(G) V7.0 New Feat*, 4–8
Multithreaded execution environments, *(P) Calling Std*, 3–59
Multithreaded programming
  See also Tasking (multithread) programs
  introduction, *(P) DECthreads*, 1–1
  potential problems, *(P) DECthreads*, 1–7
    complexity, *(P) DECthreads*, 1–7
    deadlocks, *(P) DECthreads*, 3–8
    nonreentrant routines, *(P) DECthreads*, 1–7
    priority inversion, *(P) DECthreads*, 3–7
    race conditions, *(P) DECthreads*, 3–8
  software models, *(P) DECthreads*, 1–5
    boss/worker, *(P) DECthreads*, 1–5
    combination, *(P) DECthreads*, 1–6
    pipelining, *(P) DECthreads*, 1–6
    work crew, *(P) DECthreads*, 1–5
MULTITHREAD system parameter, *(G) V7.0 New Feat*, 3–2
Multivendor environments, *(G) SW Overview*, 6–2
Multivendor Integration Architecture
  See MIA
Multivendor interoperability, *(G) SW Overview*, 2–5
/MULTI_VOLUME qualifier
  in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–26
Mutex, *(P) DECthreads*, 2–7
  comparing to condition variable, *(P) DECthreads*, 3–7
  creating, *(P) DECthreads*, tis–18, E–57, G–65
  definition of, *(P) DECthreads*, pthread–84, tis–18, G–65
  deleting, *(P) DECthreads*, tis–16, E–58, G–64
  destroying, *(P) DECthreads*, pthread–82
  errorcheck, *(P) DECthreads*, 2–8
  fast, *(P) DECthreads*, E–30, G–63
  global lock, *(P) DECthreads*, pthread–80
  global unlock, *(P) DECthreads*, pthread–114
  initializing, *(P) DECthreads*, pthread–84
  locking, *(P) DECthreads*, pthread–86, pthread–88, tis–20, tis–21, E–59, E–60, G–67, G–68
  locking before signaling condition variable, *(P) DECthreads*, 3–9
  nonrecursive, *(P) DECthreads*, pthread–97, G–63
  normal, *(P) DECthreads*, 2–7, pthread–97
  obtaining kind, *(P) DECthreads*, E–23
  recursive, *(P) DECthreads*, 2–7, pthread–97, E–30, G–63
  setting kind, *(P) DECthreads*, E–30
  types of, *(P) DECthreads*, 2–7
  unlocking, *(P) DECthreads*, pthread–90, tis–22, E–61, G–69
Mutex attributes, *(P) DECthreads*, 2–6
  obtaining, *(P) DECthreads*, pthread–93
Mutex attributes object
  creating, *(P) DECthreads*, pthread–95, G–60
  deleting, *(P) DECthreads*, pthread–92, G–61

Mutex attributes object (cont'd)
initializing, *(P) DECthreads*, pthread–95
Mutexes
thread-safe, *(P) DECthreads*, 4–2
Mutexes held, *(S) DECamds*, 3–23
Mutual backup processing agreements, *(S) Dependable*, 5–11
MVS nodes, *(S) DECnet Mgmt*, 9–26
MVTIMEOUT system parameter, *(S) Sys Mgr Essentials*, 8–60, 8–62
MXV option, *(P) Rec Mgmt Util*, 4–20

N

NAM$B_BID field, *(P) RMS Ref*, 5–3
NAM$B_BLN field, *(P) RMS Ref*, 5–4
NAM$B_DEV field, *(P) RMS Ref*, 5–3, 5–4
NAM$B_DIR field, *(P) RMS Ref*, 5–3, 5–4
NAM$B_ESL field, *(P) RMS Ref*, 5–5
NAM$B_ESS field, *(P) RMS Ref*, 5–5
NAM$B_NAME field, *(P) RMS Ref*, 5–3, 5–6
NAM$B_NODE field, *(P) RMS Ref*, 5–3, 5–6
NAM$B_NOP field, *(P) RMS Ref*, 5–7
NAM$B_RSL field, *(P) RMS Ref*, 5–8, RMS–66
NAM$B_RSS field, *(P) RMS Ref*, 5–8; *(P) File Appl*, 6–8
NAM$B_TYPE field, *(P) RMS Ref*, 5–3, 5–8
NAM$B_VER field, *(P) RMS Ref*, 5–3, 5–8
NAM$L_DEV field, *(P) RMS Ref*, 5–3, 5–4
NAM$L_DIR field, *(P) RMS Ref*, 5–3, 5–4
NAM$L_ESA field, *(P) RMS Ref*, 5–4; *(P) File Appl*, 6–4
NAM$L_FNB field, *(P) RMS Ref*, 5–5, RMS–66, RMS–91
NAM$L_FNB status bits, *(P) RMS Ref*, 5–5
NAM$L_NAME field, *(P) RMS Ref*, 5–3, 5–6
NAM$L_NODE field, *(P) RMS Ref*, 5–3, 5–6
NAM$L_RLF field, *(P) RMS Ref*, 5–7; *(P) File Appl*, 6–3, 6–8, 9–7
NAM$L_RSA field, *(P) RMS Ref*, 5–8, RMS–66; *(P) File Appl*, 6–3, 6–8
NAM$L_TYPE field, *(P) RMS Ref*, 5–3, 5–8
NAM$L_VER field, *(P) RMS Ref*, 5–3, 5–8
NAM$L_WCC field, *(P) RMS Ref*, 5–9
returned by Remove service, *(P) RMS Ref*, RMS–86
NAM$T_DVI field, *(P) RMS Ref*, 5–4; *(P) File Appl*, 6–4
NAM$V bits, *(P) RMS Ref*, 5–5 to 5–6
NAM$V_CONCEAL field, *(P) RMS Ref*, RMS–27, RMS–66
NAM$V_NOCONCEAL option, *(P) RMS Ref*, 5–7, RMS–17, RMS–71
NAM$V_PWD field, *(P) RMS Ref*, RMS–27, RMS–66, RMS–71
NAM$V_PWD option, *(P) RMS Ref*, 5–7, RMS–17
NAM$V_SRCHXABS option, *(P) RMS Ref*, 5–7
NAM$V_SYNCHK option, *(P) RMS Ref*, 5–7, RMS–71
use with Parse service, *(P) RMS Ref*, 4–7
using for Parse service without I/O, *(P) RMS Ref*, RMS–70
NAM$W_DID field, *(P) RMS Ref*, 5–4; *(P) File Appl*, 6–4
NAM$W_FID field, *(P) RMS Ref*, 5–5; *(P) File Appl*, 6–4
$NAMDEF macro, *(P) File Appl*, 5–10
NAME= option, *(P) Linker*, LINK–58
NAME attribute, *(P) Rec Mgmt Util*, 4–18, 4–21, 4–27
Name blocks
See NAMs
%NAME built-in symbol, *(P) Debugger*, B–5
Name Hidden attribute, *(S) Security*, 8–9; *(S) Sys Mgmt Util A-L*, 5–21, 5–29, 5–37; *(P) Concepts*, 23–5
/NAME qualifier, *(P) Alpha SDA*, SDA–107, SDA–139
Names
See Device names, Handles, Logical names, Node names, Process names, and Symbolic names
detached processes, *(G) DCL N-Z*, DCLII–60
domain, *(S) TCP/IP*, 2–7
subdomain, *(S) TCP/IP*, 2–7
Name services, *(P) Concepts*, 10–1, 11–1
Namespaces
DECnet use of, *(S) DECnet Mgmt*, 3–22
example of, *(S) Dependable*, 7–16
in DECnet/OSI full name, *(S) Sys Mgr Tuning*, 21–3
listing information, *(P) Concepts*, 11–13
$*name*_G macro, *(P) Interfaces*, A–6
$*name*_G macro call, *(P) Interfaces*, A–7
$*name*_S macro, *(P) Interfaces*, A–6
$*name*_S macro call, *(P) Interfaces*, A–6
Naming
DCE Cell Directory Server, *(P) Environment*, 3–6
system services, *(P) Environment*, 10–6, 10–10
Naming conventions, *(P) Modular Proc*, 3–1, A–4
capability objects, *(S) Security*, 5–1
common event flag clusters, *(S) Security*, 5–2
devices, *(S) Security*, 5–4
files, *(S) Security*, 5–8
for facilities, *(P) Modular Proc*, 3–1
for files, *(P) Modular Proc*, 3–4
for modules, *(P) Modular Proc*, 3–4
for procedures, *(P) Modular Proc*, 3–3
for program sections, *(P) Modular Proc*, 3–4
for queue and journal files for additional queue managers, *(S) Sys Mgr Essentials*, 12–5
global sections, *(S) Security*, 5–14
logical name tables, *(S) Security*, 5–16

Naming conventions (cont'd)
macros, *(P) RMS Ref*, A–2
of devices, *(S) Sys Mgr Essentials*, 7–1
in a VMScluster environment, *(S) Sys Mgr Essentials*, 7–1
virtual terminals, *(S) Sys Mgr Essentials*, 7–11
queues, *(S) Security*, 5–17
resource domains, *(S) Security*, 5–18
security class, *(S) Security*, 5–20
services, *(P) RMS Ref*, 1–1, A–3
Naming help modules, *(P) CDU, LBR, & MU*, LIB–6
Naming images, *(P) Linker*, LINK–13
Naming shareable images, *(P) Linker*, LINK–30
NAMs (name blocks), *(P) Environment*, 10–16; *(P) File Appl*, 5–8 to 5–10, 5–12; *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
summary of fields, *(P) RMS Ref*, 5–1
using from higher-level language, *(P) RMS Ref*, 5–2
NARGS keyword, *(P) Interfaces*, A–4
NAS (Network Application Support)
client/server software, *(G) SW Overview*, 2–7, 6–9
multivendor integration, *(G) SW Overview*, 1–2, 6–8; *(P) Environment*, 3–2
open systems library processing, *(P) Linker*, 2–14
product implementations, *(G) SW Overview*, 6–11
services and related products, *(G) SW Overview*, 6–10
services for distributed applications, *(G) SW Overview*, 2–8
software products, *(G) SW Overview*, 1–2, 2–6, 6–8; *(P) Environment*, 3–2
support for standards, *(G) SW Overview*, 2–6, 6–10
use on other vendor systems, *(G) SW Overview*, 2–8
National Character Set (NCS) utility, *(G) DCL N-Z*, DCLII–1; *(G) SW Overview*, 4–9; *(P) Environment*, 11–2
Refer also to the *OpenVMS National Character Set Utility Manual*
National character set routines
See NCS routines
National Institute of Standards and Technology
See NIST
/NATIVE_ONLY qualifier, *(P) Linker*, LINK–21
Natural alignment, *(P) Concepts*, 22–2
definition, *(P) Calling Std*, 1–5
performance, *(P) Concepts*, 22–2
NBDS (numeric byte data string), *(P) LIB$*, LIB–85
NBP (next block pointer)
default for block transfer, *(P) RMS Ref*, 6–2
for block I/O, *(P) RMS Ref*, A–35
NCB (network connect block), *(S) DECnet Intro*, 2–16; *(S) DECnet Mgmt*, 8–11, 8–27
NCP (Network Control Program), *(S) DECnet Intro*, 2–16; *(S) DECnet Mgmt*, 1–13
See also DECnet
accessing message descriptions using Help Message, *(G) Help Msg*, 2–7
as a network monitoring tool, *(S) DECnet Intro*, 4–1
auditing database modifications, *(S) Security*, 9–7
command functions, *(S) DECnet Mgmt*, 3–2
command prompting, *(S) DECnet Mgmt Util*, 1–4
commands, *(S) Sys Mgr Tuning*, 21–11 to 21–15; *(S) DECnet Mgmt*, 1–12
command syntax, *(S) DECnet Mgmt*, 3–3; *(S) DECnet Mgmt Util*, 1–2
command words, *(S) DECnet Mgmt*, 3–2
component syntax rules, *(S) DECnet Mgmt Util*, 1–7
controlling proxy access, *(S) Sys Mgr Essentials*, 6–37
counters, *(S) DECnet Intro*, 4–4
Data Link layer events, *(S) DECnet Mgmt Util*, D–9
DECnet circuit and line devices, *(S) DECnet Mgmt Util*, A–1
defining cluster alias, *(S) VMScluster Sys*, 4–9
definition, *(S) DECnet Mgmt*, 3–2
disabling LAN adapter, *(S) VMScluster Sys*, 4–8
display commands, *(S) Sys Mgr Tuning*, 21–15
display types, *(S) DECnet Intro*, 4–2
DNS (Distributed Name Service) events, *(S) DECnet Mgmt Util*, D–12
enabling MOP service, *(S) VMScluster Sys*, 9–10, C–9
End Communications layer events, *(S) DECnet Mgmt Util*, D–4
Ethernet configurator, *(S) Sys Mgr Tuning*, 21–17
exiting, *(S) DECnet Mgmt Util*, 2–1
exiting the prompting sequence, *(S) DECnet Mgmt Util*, 1–5
HELP facility, *(S) DECnet Mgmt Util*, 1–12
issuing commands, *(S) DECnet Mgmt Util*, 1–2
LIST command, *(S) DECnet Mgmt*, 3–73
logging events, *(S) VMScluster Sys*, C–5
logging line counters, *(S) VMScluster Sys*, 10–26
Network Management layer events, *(S) DECnet Mgmt Util*, D–2

NCP (Network Control Program) (cont'd)
OpenVMS system specific events, *(S) DECnet Mgmt Util*, D–12
parameter syntax rules, *(S) DECnet Mgmt Util*, 1–7
plural forms of component names, *(S) DECnet Intro*, 3–33
prompt, *(S) DECnet Intro*, 3–33
prompting examples, *(S) DECnet Mgmt Util*, 1–6
prompt syntax, *(S) DECnet Mgmt Util*, 1–4
Routing layer events, *(S) DECnet Mgmt Util*, D–4
Session Control layer events, *(S) DECnet Mgmt Util*, D–4
SHOW command, *(S) DECnet Mgmt*, 3–73
specifying plural components, *(S) DECnet Mgmt*, 3–3, 3–74
tailoring the configuration database, *(S) DECnet Intro*, 3–32; *(S) DECnet Mgmt*, 5–11
TELL prefix, *(S) DECnet Mgmt*, 3–6
testing network, *(S) Sys Mgr Tuning*, 21–17
usage summary, *(S) DECnet Mgmt Util*, 2–1
users, *(S) DECnet Mgmt*, 1–11
using commands, *(S) DECnet Mgmt*, 3–1
using to build or modify configuration database, *(S) Sys Mgr Tuning*, 21–11
using to control proxy login, *(S) DECnet Intro*, 3–36
using to define nodes, *(S) DECnet Intro*, 3–18
using to display network information, *(S) DECnet Intro*, 4–1
using to test network, *(S) DECnet Intro*, 4–7
X.25 packet level events, *(S) DECnet Mgmt Util*, D–11
NCP commands, *(S) DECnet Mgmt*, 3–2
ALL parameter with SET command, *(S) DECnet Intro*, 3–33
CLEAR, *(S) DECnet Intro*, 3–10, 3–34
continuing, *(S) DECnet Mgmt Util*, 1–2
DEFINE, *(S) DECnet Intro*, 3–10, 3–33
DEFINE LOGGING, *(S) DECnet Intro*, 4–5
DEFINE NODE, *(S) DECnet Intro*, 3–18
effect of invalid parameter value, *(S) DECnet Intro*, 4–10
entering, *(S) DECnet Mgmt Util*, 1–2
functions, *(S) DECnet Mgmt*, 3–2
HELP, *(S) DECnet Intro*, 3–33
LIST, *(S) DECnet Intro*, 3–34, 4–1
LIST NODE, *(S) DECnet Intro*, 3–34
PURGE, *(S) DECnet Intro*, 3–10, 3–34
PURGE LOGGING, *(S) DECnet Intro*, 4–6
PURGE NODE, *(S) DECnet Intro*, 3–34
recalling, *(S) DECnet Mgmt Util*, 1–2
remote execution of, *(S) DECnet Mgmt*, 3–6
SET, *(S) DECnet Intro*, 3–10, 3–33
SET EXECUTOR, *(S) DECnet Intro*, 3–36
NCP commands (cont'd)
SET KNOWN NODES, *(S) DECnet Intro*, 3–18
SET LOGGING, *(S) DECnet Intro*, 4–5
SET MODULE CONFIGURATOR, *(S) DECnet Intro*, 4–6
SET OBJECT, *(S) DECnet Intro*, 3–36
SHOW, *(S) DECnet Intro*, 3–34, 4–1
SHOW COUNTER, *(S) DECnet Intro*, 4–3
SHOW LOGGING, *(S) DECnet Intro*, 4–6
SHOW MODULE CONFIGURATOR, *(S) DECnet Intro*, 4–6
SHOW NODE, *(S) DECnet Intro*, 3–34
syntax, *(S) DECnet Mgmt*, 3–3
to enable logging, *(S) DECnet Intro*, 4–5
ZERO COUNTERS, *(S) DECnet Intro*, 4–3
NCS$COMPARE routine, *(P) Util Routines*, NCS–7
NCS$CONVERT routine, *(P) Util Routines*, NCS–9
NCS$END_CF routine, *(P) Util Routines*, NCS–11
NCS$END_CS routine, *(P) Util Routines*, NCS–12
NCS$GET_CF routine, *(P) Util Routines*, NCS–13
NCS$GET_CS routine, *(P) Util Routines*, NCS–15
NCS$RESTORE_CF routine, *(P) Util Routines*, NCS–17
NCS$RESTORE_CS routine, *(P) Util Routines*, NCS–19
NCS$SAVE_CF routine, *(P) Util Routines*, NCS–21
NCS$SAVE_CS routine, *(P) Util Routines*, NCS–23
NCS command, *(G) DCL N-Z*, DCLII–1
NCS routines, *(P) Util Routines*, NCS–1
C program sample, *(P) Util Routines*, NCS–2
Fortran program sample, *(P) Util Routines*, NCS–2
list of, *(P) Util Routines*, NCS–1
typical application of, *(P) Util Routines*, NCS–2
NCS utility
See National Character Set (NCS) utility
NEF option, *(P) Rec Mgmt Util*, 4–20
Negative compression, *(P) Rec Mgmt Util*, 4–4
Negative operator (–), *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–16
Nested unwind, *(P) Calling Std*, 6–29
NET$NODE_COUNTER_BLOCKS logical names, *(S) DECnet Mgmt*, 5–34
NET$PROXY.DAT file, *(S) Sys Mgr Essentials*, 11–7
description of, *(S) Sys Mgmt Util A-L*, 5–3
NET$PROXY.DAT files, *(S) Security*, 12–6; *(S) Sys Mgr Essentials*, 6–4, 6–34
auditing, *(S) Security*, 9–3
DECnet/OSI authorization elements, *(S) VMScluster Sys*, 5–13
moving to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8

NET$PROXY logical name
defining to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
NETACP$BUFFER_LIMIT logical name, *(S) DECnet Mgmt*, 5–33
NETACP (network ancillary control program), *(S) DECnet Mgmt*, 1–13, 4–2, 5–33
NetBEUI, *(G) SW Overview*, 6–18
NETCONFIG.COM command procedure, *(S) DECnet Intro*, 2–16, 3–32; *(S) DECnet Mgmt*, 3–2
See also DECnet
automatic establishment of logging, *(S) DECnet Intro*, 4–5
configuring a node automatically, *(S) Sys Mgr Tuning*, 21–11, 21–12
defining logging events, *(S) DECnet Intro*, 4–5
dialog, *(S) DECnet Intro*, 3–15; *(S) DECnet Mgmt*, 5–7
introduction, *(S) DECnet Mgmt*, 1–14
network configuration, *(S) DECnet Intro*, 3–10, 3–11
supplying node address, *(S) DECnet Mgmt*, 5–5
to establish default nonprivileged DECnet account and directory, *(S) DECnet Intro*, 3–37
using, *(S) DECnet Mgmt*, 5–5
NETCONFIG_UPDATE.COM command procedure
introduction, *(S) DECnet Mgmt*, 1–14
using, *(S) DECnet Mgmt*, 5–10
NETDEF.STB file, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–64
NETDRIVER (network driver), *(S) DECnet Mgmt*, 1–13, 5–32
connecting, *(S) Sys Mgr Essentials*, 7–7, 7–8
NETMBX privilege, *(S) Security*, A–9; *(S) DECnet Mgmt*, 2–31, 5–1
for network operations, *(S) DECnet Intro*, 2–2, 3–1
NETNODE_REMOTE.DAT file
authorization elements, *(S) VMScluster Sys*, 5–19
renaming to SYS$COMMON directory, *(S) VMScluster Sys*, 4–8
updating, *(S) VMScluster Sys*, 8–39
NETNODE_REMOTE logical name
defining during system startup, *(S) Sys Mgr Essentials*, 5–8
NETNODE_UPDATE.COM command procedure, *(S) VMScluster Sys*, 10–5
NETNODE_UPDATE.DAT file
authorization elements, *(S) VMScluster Sys*, 5–19
NETOBJECT.DAT file
authorization elements, *(S) VMScluster Sys*, 5–13
NETPROXY.DAT files, *(G) SW Overview*, 3–15; *(S) Security*, 12–6; *(S) Sys Mgr Essentials*, 6–4, 6–34; *(S) DECnet Mgmt*, 2–35
auditing, *(S) Security*, 9–3
authorization elements, *(S) VMScluster Sys*, 5–13
creating, *(S) Sys Mgmt Util A-L*, 5–25
description of, *(S) Sys Mgmt Util A-L*, 5–3
displaying proxy access, *(S) Sys Mgmt Util A-L*, 5–52
intracluster security, *(S) VMScluster Sys*, 5–17
modifying, *(S) Sys Mgmt Util A-L*, 5–3
moving to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
normal protection, *(S) Security*, 7–23
permanent proxy database, *(S) DECnet Intro*, 3–35
setting up, *(S) VMScluster Sys*, 5–17
NETPROXY logical name
defining during system startup, *(S) Sys Mgr Essentials*, 5–8
defining to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
NETSERVER$TIMEOUT value, *(S) DECnet Mgmt*, 2–27, 8–11
NETSERVER (network server process), *(S) DECnet Mgmt*, 2–26, 2–27, 8–11
timeouts, *(S) DECnet Mgmt*, 2–26, 8–11
NETSERVER.LOG file, *(S) DECnet Intro*, 4–11; *(S) DECnet Mgmt*, 4–17
as troubleshooting aid, *(S) DECnet Intro*, 4–15
NETUAF.DAT file, *(S) DECnet Mgmt*, 2–31
NetWare, *(G) SW Overview*, 6–18
protocols, *(G) SW Overview*, 6–25
Network access control strings, *(G) User*, 19–7; *(S) Security*, 3–13, 3–14, 7–16, 12–3
Network accounts
See DECnet accounts
Network address
security triplet, *(S) DECamds*, 1–5
Network application examples
in C language, *(S) DECnet Intro*, 2–15
Network Application Support
See NAS
Network byte data string
See NBDs
Network command procedures
See STARTNET.COM and NETCONFIG.COM
Network command terminal facility, *(S) DECnet Intro*, 3–3
Network control block
See NCB
Network Control Program
See NCP

Network counters, *(S) DECnet Intro*, 4–1
resetting to zero, *(S) DECnet Intro*, 4–3
summary, *(S) DECnet Mgmt Util*, B–1 to B–15
Network databases, *(S) Security*, 12–16
Network default access
for VMScluster members, *(S) DECnet Mgmt*, 5–10
Network driver
See NETDRIVER
Network file specifications
conventional format, *(G) User*, 4–8
foreign file format, *(G) User*, 4–8
task specification strings, *(G) User*, 4–8
ULTRIX restrictions, *(G) User*, 4–8
Network file system
See NFS
Network identifiers, *(S) Security*, 4–3; *(S) Sys Mgr Essentials*, 11–11
Network Information and Control Exchange
See NICE
Networking
See also Communications, Network management tasks
models, *(S) TCP/IP*, 2–1
Network interface
to OpenVMS, *(S) DECnet Intro*, 1–5; *(S) DECnet Mgmt*, 1–2
Network Interface layer, *(S) TCP/IP*, 2–3
Network logins, *(S) Security*, 3–7
Network management, *(G) SW Overview*, 2–16, 3–12, 6–5, 6–16
Network management listener
See NML
Network managers
assigning node names, *(S) DECnet Intro*, 3–18
coordinating with other networks, *(S) DECnet Intro*, 3–38
privilege requirements, *(S) DECnet Intro*, 3–6
responsibilities, *(S) DECnet Intro*, 2–16 to 2–17
Network names
declaring, *(S) DECnet Mgmt*, 8–29, 8–38
Network nodes
See Nodes
Network operating system
See NOS
Network operations
bringing up a system as a new node, *(S) DECnet Intro*, 3–4
for the advanced user, *(S) DECnet Intro*, 2–12
for the general user, *(S) DECnet Intro*, 2–1 to 2–11
monitoring, *(S) DECnet Intro*, 4–6
using Mail utility, *(S) DECnet Intro*, 2–2
using Phone utility, *(S) DECnet Intro*, 2–2
Network operators
designated by OPCOM, *(S) DECnet Intro*, 4–4
enabling terminal as, *(S) DECnet Intro*, 4–4
Network process failures
potential causes, *(S) DECnet Mgmt*, 2–27
Network proxy accounts, *(S) Sys Mgr Essentials*, 6–34
Network proxy authorization files
creating, *(S) Sys Mgmt Util A-L*, 5–25
for Alpha and VAX, *(S) Sys Mgmt Util A-L*, 5–3
modifying, *(S) Sys Mgmt Util A-L*, 5–3
Networks, *(G) SW Overview*, 1–4, 1–9; *(S) TCP/IP*, 1–1; *(S) DECnet Intro*, 1–1
See also Communications, DECnet, and Nodes
access, *(S) DECnet Intro*, 1–1, 2–2; *(S) DECnet Mgmt*, 1–18
access control, *(S) Security*, 12–3; *(S) DECnet Mgmt*, 2–29
allowing for LAN bridge failover, *(S) Dependable*, 7–9
alternate adapter booting for satellite nodes, *(S) Dependable*, 7–9
and program I/O statements, *(S) DECnet Intro*, 2–12
application program, *(S) DECnet Intro*, 1–5, 2–12, 2–15
area routing, *(S) Sys Mgr Tuning*, 21–6
bridge, *(S) Sys Mgr Tuning*, 21–7; *(S) DECnet Intro*, 1–7
bringing up, *(S) DECnet Mgmt*, 6–2
bringing up nodes, *(S) DECnet Intro*, 3–1
channel, *(S) Sys Mgr Tuning*, 21–5
circuit
definition, *(S) Sys Mgr Tuning*, 21–4
circuit devices, *(S) DECnet Mgmt Util*, A–1
communication, *(S) DECnet Intro*, 1–2
communications device, *(S) Sys Mgr Essentials*, 7–7, 7–8
communications line, *(S) Sys Mgr Tuning*, 21–12
component, *(S) DECnet Intro*, 3–33
displaying information, *(S) DECnet Intro*, 4–3
component name, *(S) DECnet Intro*, 3–33, 4–2
concepts, *(S) DECnet Intro*, 1–1
configuration command procedure
See NETCONFIG.COM
configuration procedure, *(S) DECnet Mgmt*, 5–19 to 5–35
configurations, *(S) Sys Mgr Tuning*, 21–6; *(S) DECnet Intro*, 1–3, 2–16, 3–8, 3–10; *(S) DECnet Mgmt*, 1–3, 5–1
See also Configurations, network
congestion causes of packet loss, *(S) VMScluster Sys*, F–12
connecting to existing, *(S) Sys Mgr Tuning*, 21–12

Networks (cont'd)
connections, *(S) Sys Mgr Tuning*, 21–8; *(S) VMScluster Sys*, 6–24; *(S) DECnet Intro*, 1–7, 3–4
local area, *(S) Sys Mgr Tuning*, 21–8
multipoint, *(S) Sys Mgr Tuning*, 21–9
point-to-point, *(S) Sys Mgr Tuning*, 21–8
wide area, *(S) Sys Mgr Tuning*, 21–8
worldwide, *(S) Sys Mgr Tuning*, 21–9
connection verification, *(S) DECnet Intro*, 3–29, 3–31
CPU time requirements, *(S) DECnet Mgmt*, 5–32
creating a new network, *(S) DECnet Intro*, 2–16, 3–1
database, *(S) DECnet Intro*, 3–8, 3–18, 3–26
data flow, *(S) DECnet Intro*, 1–1
debugging over, *(P) Debugger*, 2–4, 5–10
decentralized, *(S) DECnet Mgmt*, 1–2
DECnet, *(G) SW Overview*, 6–2; *(S) DECnet Intro*, 1–1, 1–5
default access for existing systems, *(S) DECnet Mgmt*, 5–10
definition, *(S) Sys Mgr Tuning*, 21–4
deleting nodes, *(S) DECnet Intro*, 3–34
dependability characteristics, *(S) Dependable*, 7–1
determining configuration changes, *(S) DECnet Intro*, 4–2
displaying, *(S) DECnet Mgmt*, 8–1
displaying information about, *(S) DECnet Intro*, 4–1
displaying logging activities, *(S) DECnet Intro*, 4–6
displaying nodes, *(S) DECnet Intro*, 3–34
distributed, *(P) Environment*, 3–1
distributed processing capability, *(G) SW Overview*, 2–10
emulator product, *(S) DECnet Intro*, 1–6
end node, *(S) Sys Mgr Tuning*, 21–6
environment, *(S) DECnet Intro*, 1–7
error message explanations, *(S) DECnet Intro*, 4–10
error messages, *(S) DECnet Intro*, 2–9
Ethernet
definition, *(S) Sys Mgr Tuning*, 21–5
Ethernet and FDDI options, *(S) Dependable*, 7–8
event logging, *(S) DECnet Intro*, 3–11
example, *(S) DECnet Mgmt*, 1–14
file operations, *(S) DECnet Intro*, 2–4
gateway, *(S) DECnet Intro*, 1–5, 1–6, 1–13
getting information about nodes, *(S) Sys Mgr Tuning*, 21–10
getting started, *(S) DECnet Intro*, 3–1
HELLO datagram congestion, *(S) VMScluster Sys*, G–2
heterogeneous, *(G) SW Overview*, 6–2

Networks (cont'd)
INBOUND parameter, *(S) Security*, 12–16; *(S) DECnet Intro*, 3–26
installation, *(S) DECnet Intro*, 3–1
installation procedure, *(S) DECnet Intro*, 3–9
installation verification, *(S) DECnet Intro*, 3–31
integrated, *(G) SW Overview*, 6–2; *(S) DECnet Intro*, 1–1, 1–5, 1–7, 1–14
interconnect products, *(S) DECnet Intro*, 1–6
interface
OpenVMS, *(S) Sys Mgr Tuning*, 21–7
Internet, *(S) Sys Mgr Tuning*, 21–13
LAN enhancements, *(S) Sys Mgr Tuning*, 22–1
large, *(S) DECnet Intro*, 1–3
limiting number of areas, *(S) DECnet Mgmt*, 3–51
line
definition, *(S) Sys Mgr Tuning*, 21–4
line devices, *(S) DECnet Mgmt Util*, A–1
local area network, *(S) DECnet Intro*, 1–5, 1–7
logical link
definition, *(S) Sys Mgr Tuning*, 21–4
logout, *(G) User*, 2–24
loopback tests, *(S) Sys Mgr Tuning*, 21–17
losing connection to remote system, *(G) User*, 2–25
maintenance, *(S) DECnet Intro*, 2–16
management, *(S) DECnet Intro*, 2–16
functions, *(S) DECnet Mgmt*, 1–2
layer events, *(S) DECnet Mgmt Util*, D–2
responsibilities, *(S) DECnet Mgmt*, 1–12
managing, *(G) SW Overview*, 2–1
managing a node, *(S) Sys Mgr Tuning*, 21–14
monitoring, *(S) DECnet Intro*, 2–16; *(S) DECnet Mgmt*, 3–72
monitoring and testing, *(S) DECnet Intro*, 4–1 to 4–17
monitoring tools, *(S) Sys Mgr Tuning*, 21–15; *(S) DECnet Intro*, 4–1, 4–6
DTS/DTR, *(S) Sys Mgr Tuning*, 21–17
Monitor utility, *(S) Sys Mgr Tuning*, 21–17
NCP display commands, *(S) Sys Mgr Tuning*, 21–15
NCP Ethernet configurator, *(S) Sys Mgr Tuning*, 21–17
multinode, *(S) Sys Mgr Tuning*, 21–5; *(S) DECnet Mgmt*, 1–2
multiple-area, *(S) Sys Mgr Tuning*, 21–6; *(S) DECnet Intro*, 1–3; *(S) DECnet Mgmt*, 1–2
multiple-site, *(S) Sys Mgr Tuning*, 21–9
node failures, *(S) Dependable*, 4–11
normal memory requirements, *(S) DECnet Mgmt*, 5–31
object
definition, *(S) Sys Mgr Tuning*, 21–4
open, *(G) SW Overview*, 2–6
OSI, *(G) SW Overview*, 6–2

Networks (cont'd)
packet switching, *(S) DECnet Intro*, 1–5, 1–6, 1–13
parameters
See Displaying network parameters
passwords, *(S) DECnet Mgmt*, 2–33
PATHWORKS connectivity, *(G) SW Overview*, 6–24
PATHWORKS transports, *(G) SW Overview*, 6–18
PEDRIVER implementation, *(S) VMScluster Sys*, F–4
performance consulting from Digital, *(S) Dependable*, 10–7
planning configuration, *(S) Sys Mgr Tuning*, 21–12
proactive network monitoring and analysis products, *(S) Dependable*, 7–17
problem isolation, *(S) DECnet Intro*, 4–12
problems and solutions, *(S) DECnet Intro*, 4–10 to 4–17
providing multiple paths to Ethernet and FDDI, *(S) Dependable*, 7–4
proxy database
creating, *(S) Sys Mgr Essentials*, 6–35
logical name defining location, *(S) Sys Mgr Essentials*, 5–8
proxy login for applications, *(S) Security*, 12–4
purging nodes, *(S) DECnet Intro*, 3–34
recommendations for VMScluster environments, *(S) Dependable*, 7–5
remote file operations, *(G) SW Overview*, 5–11
remote node database
logical name defining location, *(S) Sys Mgr Essentials*, 5–8
restarting, *(S) DECnet Intro*, 3–32
restrictions on mixed, *(S) DECnet Mgmt*, 2–16
retransmission problems, *(S) VMScluster Sys*, F–18
router, *(S) Sys Mgr Tuning*, 21–5
routing, *(G) SW Overview*, 1–11; *(S) DECnet Intro*, 1–1
adaptive, *(S) Sys Mgr Tuning*, 21–5
definition, *(S) Sys Mgr Tuning*, 21–5
routing message, *(S) DECnet Intro*, 1–2
sample VMScluster failure analysis program, *(S) Dependable*, 7–9
save sets, *(S) Sys Mgr Essentials*, 10–7
security, *(G) SW Overview*, 3–14, 6–7; *(S) VMScluster Sys*, 5–17; *(S) DECnet Intro*, 3–21, 3–38; *(S) DECnet Mgmt*, 2–33
providing for, *(S) Sys Mgr Tuning*, 21–12
sending mail over, *(G) User*, 6–6
shutting down, *(S) DECnet Intro*, 3–32; *(S) DECnet Mgmt*, 6–3
size, *(S) DECnet Intro*, 1–3
small, *(S) DECnet Intro*, 1–3
software, *(G) SW Overview*, 1–2
Networks (cont'd)
standards, *(G) SW Overview*, A–2
starting, *(S) DECnet Intro*, 3–14
starting automatically from system boot, *(S) DECnet Intro*, 3–32
starting in system startup, *(S) Sys Mgr Essentials*, 5–15
starting manually, *(S) DECnet Intro*, 3–32
startup values, *(S) DECnet Intro*, 4–1
statistics in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–19
task-to-task applications, *(S) DECnet Intro*, 2–14
TCP/IP, *(G) SW Overview*, 6–2, 6–6
terminal, *(S) DECnet Mgmt*, 3–62
testing, *(S) DECnet Intro*, 4–7; *(S) DECnet Mgmt*, 7–1; *(S) DECnet Mgmt Util*, 3–49, 3–51, 3–52, 3–54, 4–1
using NCP (Network Control Program), *(S) Sys Mgr Tuning*, 21–17
topology, *(S) DECnet Mgmt*, 1–14
transient problems, *(S) DECnet Intro*, 3–31
troubleshooting, *(S) DECnet Intro*, 2–16, 4–1 to 4–17
turning on, *(S) DECnet Intro*, 3–14
turning on manually, *(S) DECnet Intro*, 3–32
updating satellite data in NETNODE_REMOTE.DAT, *(S) VMScluster Sys*, 8–39
user applications, *(G) SW Overview*, 6–6
user interface to, *(S) DECnet Mgmt*, 1–17
user operations, *(S) DECnet Mgmt*, 1–17, 8–1
verifying connection to, *(S) Sys Mgr Tuning*, 21–12
VMScluster satellite synonym, *(S) Dependable*, 7–9
wide area network, *(S) DECnet Intro*, 1–5, 1–11
worst-case memory requirements, *(S) DECnet Mgmt*, 5–32
Network security, *(S) Security*, 3–14, 12–1 to 12–19
C2 systems and, *(S) Security*, C–7
events audited, *(S) Security*, 12–2
network object configuration, *(S) Security*, 12–11
Network server process
See NETSERVER
Network Services Protocol
See NSP
Network tasks
declaring, *(S) DECnet Mgmt*, 8–8, 8–13, 8–29
Network transports
supported by DCE, *(P) Environment*, 3–6
Network troubleshooting
See LAVC$FAILURE_ANALYSIS.MAR program

Network user authorization file
See NETPROXY.DAT
Network work areas
See NWAs
/NETWORK_BLOCK_COUNT qualifier
for specifying maximum record size, *(P) RMS Ref*, 4–23
NETWORK_DATA_CHECKING attribute, *(P) Rec Mgmt Util*, 4–31
Newsgroups, *(S) TCP/IP*, 3–6
New stack region, *(P) Calling Std*, 3–60
/NEW_VERSION qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–47
nextafter routine, *(P) Portable Math*, DPML–45, B–11
NEXT command, *(P) File Appl*, 10–11 to 10–15
%NEXTDISP built-in symbol, *(P) Debugger*, 11–24
%NEXTINST built-in symbol, *(P) Debugger*, 11–24
Next key option
See also RAB$V_NXT option
Next-key option, *(P) File Appl*, 8–8, 8–9
%NEXTLOC built-in symbol, *(P) Debugger*, 8–8, 8–13, B–6
%NEXTOUTPUT built-in symbol, *(P) Debugger*, 11–24
/NEXT qualifier, *(P) Debugger*, 10–6, CD–149
with SEARCH command (Mail), *(G) V7.0 New Feat*, 2–9
Next-record position, *(P) File Appl*, 8–17, 8–18
%NEXTSCROLL built-in symbol, *(P) Debugger*, 11–24
%NEXTSOURCE built-in symbol, *(P) Debugger*, 11–24
Next Volume service, *(P) RMS Ref*, RMS–57; *(P) File Appl*, 8–5
condition values, *(P) RMS Ref*, RMS–59
control block input and output fields, *(P) RMS Ref*, RMS–58
flush logic, *(P) RMS Ref*, RMS–58
input and output logic sequences, *(P) RMS Ref*, RMS–58
requirements for using, *(P) RMS Ref*, RMS–58
%NEXT_PROCESS built-in symbol, *(P) Debugger*, 14–12
%NEXT_SCOPE_ENTRY built-in symbol, *(P) Debugger*, B–11
%NEXT_TASK built-in symbol, *(P) Debugger*, 16–14
Nexus numbers
showing, *(S) Sys Mgmt Util M-Z*, 5–23, 5–24, 5–29
NFS (network file system), *(G) SW Overview*, 6–7; *(S) TCP/IP*, 2–5, 4–1; *(P) Environment*, 3–2
option, *(P) Rec Mgmt Util*, 4–21
protocols, *(G) SW Overview*, 1–10
server software, *(G) SW Overview*, 2–6
support for file access, *(G) SW Overview*, 2–11
NICE (Network Information and Control Exchange), *(S) DECnet Mgmt*, 3–2
NICONFIG (Ethernet configurator), *(S) DECnet Mgmt*, 1–12
NIL option, *(P) Rec Mgmt Util*, 4–36
nint routine, *(P) Portable Math*, DPML–46, B–11
NISCA transport protocol, *(S) VMScluster Sys*, F–1
capturing data, *(S) VMScluster Sys*, F–29
CC header, *(S) VMScluster Sys*, F–23
CC protocol, *(S) VMScluster Sys*, F–3
channel formation problems, *(S) VMScluster Sys*, F–17
datagram flags, *(S) VMScluster Sys*, F–25
datagrams, *(S) VMScluster Sys*, F–21
definition, *(S) VMScluster Sys*, F–1
diagnosing with a LAN analyzer, *(S) VMScluster Sys*, F–20
DX header, *(S) VMScluster Sys*, F–22
DX protocol, *(S) VMScluster Sys*, F–3
function, *(S) VMScluster Sys*, F–3
LAN Ethernet header, *(S) VMScluster Sys*, F–21
LAN FDDI header, *(S) VMScluster Sys*, F–22
packet format, *(S) VMScluster Sys*, F–20
packet loss, *(S) VMScluster Sys*, F–12
PEDRIVER implementation, *(S) VMScluster Sys*, F–4
PI protocol, *(S) VMScluster Sys*, F–3
PPC protocol, *(S) VMScluster Sys*, F–3
PPD protocol, *(S) VMScluster Sys*, F–3
retransmission problems, *(S) VMScluster Sys*, F–18
TR header, *(S) VMScluster Sys*, F–25
troubleshooting, *(S) VMScluster Sys*, F–1
TR protocol, *(S) VMScluster Sys*, F–3
NISCS_CONV_BOOT system parameter, *(S) Security*, C–10; *(S) VMScluster Sys*, 8–10, A–2, C–6
NISCS_LAN_OVRHD system parameter, *(S) VMScluster Sys*, A–2
NISCS_LOAD_PEA0 system parameter, *(S) VMScluster Sys*, A–2, C–13
caution when setting to 1, *(S) VMScluster Sys*, 8–22, A–3
NISCS_MAX_PKTSZ system parameter, *(S) VMScluster Sys*, 10–17, A–3
NISCS_PORT_SERV system parameter, *(S) VMScluster Sys*, A–6
NIST (National Institute of Standards and Technology), *(G) SW Overview*, 2–2, A–1
NLK option, *(P) Rec Mgmt Util*, 4–12
NMCC/VAX ETHERnim
See ETHERnim
NMCC/Ethernet Network Integrity Monitor
See ETHERnim

NML$SERVER account
enabling default access, *(S) DECnet Mgmt*, 2–25, 5–3, 5–6
NML (network management listener), *(S) DECnet Mgmt*, 1–13, 2–25, 4–2, 6–2
access control, *(S) DECnet Mgmt*, 3–68
default access account, *(S) DECnet Intro*, 3–13
NML$SERVER account
default access, *(S) DECnet Mgmt*, 2–25, 5–3, 5–6
nnDRIVER symbol, *(P) VAX SDA*, SDA–18
No Access attribute, *(S) Security*, 8–9; *(S) Sys Mgmt Util A-L*, 5–21, 5–29, 5–37; *(P) Concepts*, 23–5
Node
error messages, *(S) DECamds*, 3–14
Node addresses, *(S) DECnet Intro*, 1–2, 3–8, 3–12; *(S) DECnet Mgmt*, 2–1, 2–18, 3–7; *(S) DECnet Mgmt Util*, 4–8, 4–11
changing local, *(S) DECnet Mgmt*, 3–9
conversion, *(S) DECnet Mgmt*, 2–18, 3–50
removing remote names and, *(S) DECnet Mgmt*, 3–9
Node counters, *(S) DECnet Mgmt Util*, 3–160, 3–164, B–11
summary, *(S) DECnet Mgmt Util*, B–11
Node databases
copying, *(S) DECnet Mgmt*, 1–14, 2–5, 3–21
permanent, *(S) DECnet Intro*, 3–18
volatile, *(S) DECnet Intro*, 3–18
Node-level access control, *(S) DECnet Mgmt*, 2–33
Node-level loopback tests, *(S) DECnet Mgmt*, 7–1
logical link operation, *(S) DECnet Mgmt*, 7–1
over specific circuit, *(S) DECnet Mgmt*, 7–1
Node names, *(S) Sys Mgmt Util A-L*, 13–27; *(S) DECnet Intro*, 1–2, 3–8, 3–11, 3–12; *(S) DECnet Mgmt*, 2–1, 3–7; *(S) DECnet Mgmt Util*, 4–8, 4–11
assigning, *(S) Sys Mgr Tuning*, 21–3
cluster alias, *(S) DECnet Intro*, 2–4, 3–8
cluster alias used with Mail utility, *(S) DECnet Intro*, 2–11
clusterwide, *(S) DECnet Intro*, 2–4
creating logical names for, *(G) User*, 13–4 to 13–5
overriding the access control string, *(G) User*, 13–5
creating logical names for in file specification, *(G) User*, 13–5
DECnet/OSI full names, *(S) Sys Mgr Tuning*, 21–2
DECnet for OpenVMS, *(S) Sys Mgr Tuning*, 21–2
definition, *(G) User*, 4–2
displaying, *(G) DCL N-Z*, DCLII–356
format in file specifications, *(G) User*, 4–6
full, *(G) User*, 4–6
Node names (cont'd)
removing remote addresses and, *(S) DECnet Mgmt*, 3–9
required for OpenVMS InfoServer Client startup, *(S) Sys Mgr Tuning*, 23–10
rules for entering, *(G) User*, 4–6
specifying in MAIL, *(S) Sys Mgr Essentials*, 5–33
Node numbers, *(S) DECnet Intro*, 3–12, 3–33; *(S) DECnet Mgmt*, 2–1, 2–18, 3–7
display on Alpha systems, *(S) Sys Mgmt Util M-Z*, 6–39
/NODE qualifier, *(P) Alpha SDA*, SDA–124; *(P) VAX SDA*, SDA–86, SDA–91
Nodes, *(S) DECnet Intro*, 1–2; *(S) DECnet Mgmt*, 1–1, 1–17, 3–6
See also Alias node identifiers, End nodes, Local nodes, Remote nodes, Routers, and Satellite nodes
access control, *(S) DECnet Intro*, 3–36
accessing remote node interactively, *(S) DECnet Intro*, 3–3
addressing CI, *(S) DECnet Mgmt*, 3–26
adjacent, *(S) Sys Mgr Tuning*, 21–4; *(S) DECnet Intro*, 3–29; *(S) DECnet Mgmt*, 1–1, 2–16
adjacent on Ethernet, *(S) DECnet Mgmt*, 2–7
and batch jobs, *(G) DCL N-Z*, DCLII–416
area number, *(S) DECnet Mgmt*, 2–1
assigning to a group, *(S) DECamds*, 1–8
availability messages
setting broadcast intervals, *(S) DECamds*, 1–10
bringing up, *(S) DECnet Mgmt*, 6–2
bringing up on the network, *(S) DECnet Intro*, 3–1
checking type, *(S) DECnet Mgmt*, 1–10, 2–36, 3–70
clearing all counters, *(S) DECnet Mgmt Util*, 3–160, 3–164
clearing or purging database before copying, *(S) DECnet Mgmt*, 3–18
commands, *(S) DECnet Mgmt*, 3–5
configuring for DECnet, *(S) DECnet Intro*, 2–16, 3–10; *(S) DECnet Mgmt*, 1–14
configuring in a network, *(S) Sys Mgr Tuning*, 21–12
connecting, *(G) DCL N-Z*, DCLII–138
connecting to a HSC, *(G) DCL N-Z*, DCLII–150
connecting to a storage controller, *(G) DCL N-Z*, DCLII–148
connecting to network, *(S) Sys Mgr Tuning*, 21–8
conversion of Phase IV address, *(S) DECnet Mgmt*, 2–18
copying database, *(S) DECnet Mgmt*, 1–14, 2–5, 3–17

Nodes (cont'd)
copying database using DCL COPY command, *(S) DECnet Mgmt*, 3–21
counters, *(S) DECnet Mgmt*, 3–21
crash fix, *(S) DECamds*, 4–4
database, *(S) Sys Mgmt Util A-L*, 13–30, 13–33; *(S) DECnet Intro*, 3–8, 3–18; *(S) DECnet Mgmt*, 3–1
DECnet, *(S) DECnet Intro*, 1–5, 3–1
default access account, *(S) DECnet Mgmt*, 1–22
default data collection, *(S) DECamds*, 5–2
definition, *(S) Sys Mgr Tuning*, 21–4; *(S) DECnet Mgmt*, 2–1
deleting node information, *(S) Sys Mgr Tuning*, 22–20; *(S) Sys Mgmt Util A-L*, 12–9, 12–20
determining status, *(S) DECnet Intro*, 4–2
displaying characteristics of, *(S) Sys Mgmt Util A-L*, 13–50
displaying counters, *(S) Sys Mgmt Util A-L*, 13–47
displaying information using LATCP, *(S) Sys Mgmt Util A-L*, 13–46
displaying name and address of local, *(S) DECnet Intro*, 3–2
displaying network, *(S) DECnet Mgmt*, 8–1
display of type, *(S) DECnet Mgmt*, 3–49
establishing in network, *(S) Sys Mgr Tuning*, 21–11
executor, *(S) DECnet Intro*, 3–10; *(S) DECnet Mgmt*, 2–1, 3–5
getting information about other nodes in network, *(S) Sys Mgr Tuning*, 21–10
identification, *(S) DECnet Mgmt*, 2–1, 2–2, 2–18, 3–7
identifier, *(S) DECnet Intro*, 3–33
in a VMScluster system, *(G) V7.0 New Feat*, C–1
initialization request, *(S) DECnet Mgmt*, 3–30
in LAT database, *(S) Sys Mgr Tuning*, 24–8
limit, *(S) Sys Mgmt Util A-L*, 13–30
listing each accessible, *(S) DECnet Intro*, 3–2
lock-mastering, *(P) File Appl*, 3–33
lock-requesting, *(P) File Appl*, 3–33
logging in to, *(S) DECnet Intro*, 3–1
logical name in file specification, *(S) DECnet Mgmt*, 1–24
loopback test, *(S) DECnet Intro*, 4–7
modifying characteristics of, *(S) Sys Mgmt Util A-L*, 13–27
monitoring, *(S) Sys Mgr Tuning*, 21–14
multiple network, *(S) Sys Mgr Tuning*, 21–5
non-LAN, *(S) DECnet Mgmt*, 1–7
nonrouting, *(S) Sys Mgr Tuning*, 21–6; *(S) DECnet Mgmt*, 2–16
parameters, *(S) DECnet Mgmt*, 2–4, 3–11
phases, *(S) DECnet Mgmt*, 2–16
preparing system to become network node, *(S) Sys Mgr Tuning*, 21–12
Nodes (cont'd)
preparing to bring up, *(S) DECnet Intro*, 3–4
providing security for, *(S) Sys Mgr Tuning*, 21–12
reachable
definition, *(S) DECnet Mgmt*, 2–21
reconfiguration, *(S) DECnet Intro*, 3–10, 3–11
relocating, *(S) DECnet Intro*, 1–5
remote node, *(S) DECnet Mgmt*, 3–30
removing remote name and address, *(S) DECnet Mgmt*, 3–9
router, *(S) DECnet Intro*, 1–2
router definition, *(S) Sys Mgr Tuning*, 21–5
routing, *(S) Sys Mgr Tuning*, 21–6; *(S) DECnet Mgmt*, 1–1, 2–15, 2–16
security, *(S) DECnet Intro*, 3–34 to 3–38
setting node information, *(S) Sys Mgr Tuning*, 22–18
setting up, *(G) SW Overview*, 3–12
shutdown procedure, *(S) DECamds*, A–13
shutting down, *(S) DECnet Mgmt*, 6–3
specification access control string, *(S) DECnet Mgmt*, 1–20
specification string for, *(S) DECnet Mgmt*, 1–20
state, *(S) Sys Mgmt Util A-L*, 13–32; *(S) DECnet Mgmt*, 2–4, 3–16
target, *(S) Sys Mgmt Util A-L*, 13–54
tools to monitor network, *(S) Sys Mgr Tuning*, 21–15
transferring files between, *(S) Sys Mgr Essentials*, 9–24
type, *(S) DECnet Intro*, 3–26; *(S) DECnet Mgmt*, 2–16, 3–49
unreachable, *(S) DECnet Intro*, 4–12
VMS, *(S) DECnet Intro*, 3–1
Nodes Summary window, *(S) DECamds*, 3–12 to 3–14
NODRIVER asynchronous driver, *(S) DECnet Mgmt*, 2–13, 2–14, 5–3, 5–11, 5–12, 5–15, 5–18
NOFEEDBACK mode, *(S) Sys Mgmt Util A-L*, 6–8
NOLOCK attribute, *(P) Rec Mgmt Util*, 4–12; *(P) File Appl*, 7–11
/NOLOGICAL_NAMES qualifier, *(P) Alpha SDA*, SDA–158; *(P) VAX SDA*, SDA–183
NOMOD program section attribute
resolving conflicts, *(P) Linker*, 3–25
Noncontiguous array descriptors, *(P) Calling Std*, 5–15
Nondeductible resource, *(S) Sys Mgr Essentials*, 6–3
None attribute (ACEs), *(S) Security*, 4–18
NONE carriage control, *(P) Rec Mgmt Util*, 4–32
NONEXISTENT_RECORD attribute, *(P) Rec Mgmt Util*, 4–12; *(P) File Appl*, 7–14, 8–8
Noninteractive logins, *(S) Security*, 3–7

Non OpenVMS systems
specifying remote files on, *(G) DCL A-M*, DCLI–91; *(S) TCP/IP*, 5–6
Nonpaged dynamic storage pool
displaying contents, *(P) VAX SDA*, SDA–134
Nonpaged pool
See Pool management
/NONPAGED qualifier, *(P) Alpha SDA*, SDA–120; *(P) VAX SDA*, SDA–134
Nonprivileged access control strings, *(S) DECnet Mgmt*, 2–31
Nonrecursive mutex, *(P) DECthreads*, 2–8, pthread–97, E–30, G–63
Nonreentrant code
compilers that generate, *(P) DECthreads*, 4–1
Nonreentrant library packages
calling, *(P) DECthreads*, pthread–80, E–56, E–84, G–59
Nonreentrant software
using global lock to avoid, *(P) DECthreads*, 3–4
Nonstandard file processing
run-time options, *(P) File Appl*, 9–13
Nonstatic variables, *(P) Debugger*, 3–22, 7–14, 8–1
Nonterminating signals, *(P) DECthreads*, A–4
Nontransparent communications, *(S) DECnet Mgmt*, 1–20
application in C language, *(S) DECnet Intro*, 2–15
Nontransparent task-to-task communications, *(S) DECnet Intro*, 2–14
Nontransparent user network operations, *(S) DECnet Mgmt*, 1–17
Nonzero objects, *(S) DECnet Mgmt*, 2–25
/NOOPTIMIZE qualifier, *(P) Debugger*, 5–5, 13–1
/NOPD qualifier, *(P) Alpha SDA*, SDA–48
NOP instruction, *(P) Debugger*, 8–22
Nopropagate attribute, *(S) Security*, 4–23, 4–28, 5–11
Normal mutex, *(P) DECthreads*, 2–7, pthread–97
Normal termination of a thread, *(P) DECthreads*, pthread–54, E–69, E–73, G–45, G–50
/NOSKIP qualifier, *(P) VAX SDA*, SDA–56
/NOSUPPRESS qualifier, *(P) Alpha SDA*, SDA–48; *(P) VAX SDA*, SDA–56
/NOSYMBOLS qualifier, *(P) Alpha SDA*, SDA–158; *(P) VAX SDA*, SDA–183
Notes, *(G) SW Overview*, 5–13
Notification ASTs
testing functionality of, *(P) Sys Svc II*, SYS2–456
/NOTIFY qualifier, *(P) Alpha SDA*, SDA–158; *(P) VAX SDA*, SDA–183
NOT operator (#), *(P) Alpha SDA*, SDA–13
/NOWAIT qualifier, *(P) Alpha SDA*, SDA–158; *(P) VAX SDA*, SDA–183
/[NO]CONFIRM qualifier
in Analyze/Disk_Structure utility, *(S) Sys Mgmt Util A-L*, 3–7
/[NO]LIST qualifier
in Analyze/Disk_Structure utility, *(S) Sys Mgmt Util A-L*, 3–8
/[NO]OUTPUT qualifier
in Analyze/Disk_Structure utility, *(S) Sys Mgmt Util A-L*, 3–9
/[NO]READ_CHECK qualifier
in Analyze/Disk_Structure utility, *(S) Sys Mgmt Util A-L*, 3–9
/[NO]REPAIR qualifier
in Analyze/Disk_Structure utility, *(S) Sys Mgmt Util A-L*, 3–11
/NO_INITIAL_FF qualifier, *(G) V7.0 New Feat*, 3–30
NPAGEDYN parameter, *(S) Alpha Perform*, 10–9
NPAGEDYN system parameter, *(S) Sys Mgr Tuning*, 26–7; *(S) DECnet Mgmt*, 5–31
NPAGEVIR parameter, *(S) Alpha Perform*, 10–9
NSP (Network Services Protocol), *(S) DECnet Mgmt*, 2–23, 2–24
message retransmission, *(S) DECnet Mgmt*, 2–24, 3–57
receive buffers, *(S) DECnet Mgmt*, 3–14
Null access control strings, *(S) DECnet Intro*, 2–3
Null devices, *(P) Concepts*, 9–28
Null frame procedures, *(P) Calling Std*, 3–20
descriptors, *(P) Calling Std*, 3–20
Null frame procedures and SHOW CALLS, *(P) Debugger*, CD–247, CD–248, CD–281
Null keys
for improving performance, *(P) File Appl*, 3–22
Null modem cable, *(S) DECnet Intro*, 3–19
NULL pad character, *(P) Rec Mgmt Util*, 2–13
Null values
for file names, *(G) User*, 4–10
for file types, *(G) User*, 4–10
null_arg data type, *(P) Interfaces*, B–13
NULL_KEY attribute, *(P) Rec Mgmt Util*, 4–28
NULL_VALUE attribute, *(P) Rec Mgmt Util*, 4–28
Number of files processed, *(P) Rec Mgmt Util*, 2–17
Numbers
comparing, *(G) User*, 14–16, 14–17
converting to string values, *(G) User*, 14–26
converting using lexical functions, *(G) User*, 17–17
evaluation of, *(G) User*, 14–24
integer values recognized by DCL, *(G) User*, 14–14
internal storage, *(G) User*, 14–15
network area, *(S) DECnet Intro*, 3–33
node, *(S) DECnet Intro*, 3–12, 3–33

Number sign (#)
requirement for in control store macros, *(P) RMS Ref*, A–8
Numeric expressions, *(G) User*, 14–15
and integer operands, *(G) User*, 14–15
Numeric keys
interpretation of size value, *(P) RMS Ref*, 6–4
Numeric overlays, *(G) User*, 14–18
Numeric time, *(P) Concepts*, 5–7
Numeric UICs, *(S) Security*, 4–2
$NUMUTC system service, *(P) Sys Svc II*, SYS2–196
NUM_ETHERADAPT symbol, *(S) Sys Mgr Tuning*, 14–21
NUM_NODES symbol, *(S) Sys Mgr Tuning*, 14–21
NWAs (network work areas), *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
NXR option, *(P) Rec Mgmt Util*, 4–12

O

ObjectBroker, *(G) SW Overview*, 6–15; *(P) Environment*, 1–4, 3–6
Object classes
descriptions of, *(S) Security*, 5–1
security attributes of, *(S) Security*, 4–9
security class object, *(S) Sys Mgmt Util A-L*, 1–4
Object code values, *(S) DECnet Mgmt Util*, 3–116
Object files, *(G) SW Overview*, 4–5
analyzing, *(G) DCL A-M*, DCLI–26
identifying
errors, *(G) DCL A-M*, DCLI–26
Object languages
Alpha object language, *(P) Linker*, B–1
VAX object language, *(P) Linker*, A–1
Object libraries, *(P) Environment*, 8–4; *(P) Concepts*, 17–2, 17–5
adding a module, *(P) Concepts*, 17–2
creating, *(P) Concepts*, 17–2
deleting a module, *(P) Concepts*, 17–2
extracting a module, *(P) Concepts*, 17–2
including message object module, *(P) Concepts*, 13–60
listing modules, *(P) Concepts*, 17–2
replacing a module, *(P) Concepts*, 17–2
Object Management Group
See OMG
Object module libraries, *(G) DCL A-M*, DCLI–28; *(P) CDU, LBR, & MU*, LIB–3, LIB–35
character case in, *(P) CDU, LBR, & MU*, LIB–4
creating, *(P) Modular Proc*, 5–2
updating, *(P) Modular Proc*, 6–4
Object modules, *(P) Debugger*, 5–5, 10–1
See also Message object modules
analyzing, *(G) DCL A-M*, DCLI–26
Object modules
analyzing (cont'd)
end-of-file records, *(G) DCL A-M*, DCLI–27
as linker input file, *(P) Linker*, 1–5
creating, *(P) CDU, LBR, & MU*, CDU–49
end-of-module records, *(P) Linker*, A–31
end-of-module-with-psect record, *(P) Linker*, A–32
entity-ident-consistency-check subrecord, *(P) Linker*, A–16, B–24
entry-point-definition-with-version-mask subrecord, *(P) Linker*, A–21
entry-point-definition-with-word-psect subrecord, *(P) Linker*, A–16
entry-point-symbol-and-mask-definition subrecord, *(P) Linker*, A–12
environment-definition/reference subrecord, *(P) Linker*, A–18
for command tables, *(P) CDU, LBR, & MU*, CDU–5, CDU–16, CDU–43
global symbol definition subrecord, *(P) Linker*, B–17
global symbol directory records, *(P) Linker*, A–6, B–10
global symbol reference subrecord, *(P) Linker*, B–23
global symbol specification subrecord, *(P) Linker*, A–10, B–16
including in a link operation from a library, *(P) Linker*, LINK–17, LINK–19
in libraries, *(P) Linker*, 1–8
in symbol resolution processing, *(P) Linker*, 2–6
language processor name header record, *(P) Linker*, A–5, B–8
listed in map file, *(P) Linker*, 5–3
main module header record, *(P) Linker*, A–4, B–6
module header records, *(P) Linker*, A–3, B–5
module-local entry-point definition subrecord, *(P) Linker*, A–19
module-local procedure definition subrecord, *(P) Linker*, A–20
module-local symbol definition subrecord, *(P) Linker*, A–19
module-local symbol reference subrecord, *(P) Linker*, A–19
normal program section definition subrecord format, *(P) Linker*, B–11
order of records in, *(P) Linker*, A–1, B–2
procedure-definition-with-version-mask subrecord, *(P) Linker*, A–21
procedure-definition-with-word-psect subrecord, *(P) Linker*, A–16
procedure-with-formal-argument-definition subrecord, *(P) Linker*, A–13
program-section-definition-in-shareable-image subrecord, *(P) Linker*, A–20, B–14

Object modules (cont'd)
program section definition record format, *(P) Linker*, A–8, B–11
in shareable image, *(P) Linker*, B–14
source files header record, *(P) Linker*, A–5, B–8
statements for, *(P) CDU, LBR, & MU*, CDU–15
symbol definition subrecord format, *(P) Linker*, A–10
symbol-definition-with-version-mask subrecord, *(P) Linker*, A–21, B–27
symbol-definition-with-word-psect subrecord, *(P) Linker*, A–16
symbol reference GSD subrecord, *(P) Linker*, A–11
text information and relocation records, *(P) Linker*, A–21
title text header record, *(P) Linker*, A–6, B–9
universal symbol definition subrecord, *(P) Linker*, B–20
using ANALYZE/OBJECT utility to examine, *(P) Linker*, 1–6
vectored-entry-point-definition subrecord, *(P) Linker*, A–20
vectored-procedure-definition subrecord, *(P) Linker*, A–21
vectored-symbol-definition subrecord, *(P) Linker*, A–20, B–26
vectored symbol specification subrecords, *(P) Linker*, B–26
Object-oriented designs
OpenVMS support, *(P) Environment*, 1–4
Object ownership
assigning during file creation, *(S) Security*, 8–16
by resource identifiers, *(S) Security*, 5–9
changing, *(G) User*, 19–3; *(S) Security*, 4–9
exceptions to the rule, *(S) Security*, 4–7
exceptions to the rules, *(S) Security*, 4–7
files, *(S) Security*, 5–10
managing defaults, *(S) Security*, 8–15, 8–19
managing directory defaults, *(S) Security*, 8–22
qualifying for, *(S) Security*, 4–7
reassigning, *(S) Security*, 4–7
restoring file defaults, *(S) Security*, 4–27
zero UICs in protection checks, *(S) Security*, 4–11
Object permanence
capability object, *(S) Security*, 5–2
common event flag cluster, *(S) Security*, 5–3
devices, *(S) Security*, 5–8
global sections, *(S) Security*, 5–16
logical name tables, *(S) Security*, 5–17
queues, *(S) Security*, 5–18
resource domains, *(S) Security*, 5–19
security class object, *(S) Security*, 5–20
volumes, *(S) Security*, 5–21
Object rights block, *(P) Alpha SDA*, SDA–16
Objects, *(S) Security*, 4–1; *(S) DECnet Intro*, 1–2; *(S) DECnet Mgmt*, 1–17, 2–25
See also Files and Protection
access control, *(S) DECnet Mgmt*, 2–26
access to, comparing security profiles, *(S) Security*, 4–1
ACLs and, *(S) Security*, 4–8
adding ACEs for security auditing, *(S) Security*, 4–30
addressing, *(S) DECnet Mgmt*, 2–25
alarms for creation, *(S) Security*, D–4
alarms for deaccess, *(S) Security*, D–4
alarms for deletion, *(S) Security*, D–4
auditing access, *(S) Security*, 4–29, 9–7
C2 systems and, *(S) Security*, C–4
capability class, *(S) Security*, 5–1
changing security profile, *(G) User*, 19–3; *(S) Security*, 4–9
characteristics of protected objects, *(S) Security*, 4–6
class descriptions, *(S) Security*, 5–1
classes of, *(S) Security*, 4–10
classes protected by operating system, *(S) Security*, 4–10, 5–1
class-specific access overrides, *(S) Security*, 4–29
class specification, *(S) Security*, 4–9
code values, *(S) DECnet Mgmt Util*, 3–115
command procedure for, *(S) DECnet Mgmt*, 2–26, 3–61
commands, *(S) DECnet Mgmt*, 3–59
controlling access to, *(S) Sys Mgmt Util A-L*, 1–13
controlling access with Identifier ACEs, *(S) Security*, 4–17, 4–18
database, *(S) DECnet Mgmt*, 3–2
DECdns, *(P) Concepts*, 11–4, 11–10
DECnet, *(S) DECnet Intro*, 2–15; *(S) DECnet Mgmt*, 2–25
default access accounts for, *(S) DECnet Intro*, 3–37
defining at network startup, *(S) DECnet Intro*, 3–32
definition, *(S) DECnet Mgmt*, 2–25
displaying default protection and ownership, *(S) Security*, 8–22
displaying security profile, *(G) User*, 19–3
displaying security profiles, *(S) Security*, 4–9
file names, *(S) DECnet Mgmt*, 3–61
global sections, *(S) Security*, 5–14
granting access through protection codes, *(S) Security*, 4–24
identification, *(S) DECnet Mgmt*, 3–59
kinds of events audited, *(S) Security*, 4–29
logical name tables, *(S) Security*, 5–16
managing default protection and ownership, *(S) Security*, 8–15

Objects (cont'd)
modifying, *(P) Concepts*, 11–6
modifying class templates, *(S) Security*, 8–24
modifying proxy access, *(S) DECnet Intro*, 3–36
name, *(S) DECnet Mgmt*, 3–59
network
definition, *(S) Sys Mgr Tuning*, 21–4
nonzero, *(S) DECnet Mgmt*, 2–25, 3–59
number, *(S) DECnet Intro*, 2–15; *(S) DECnet Mgmt*, 8–29, 8–38
object-oriented programming, *(G) SW Overview*, 4–5, 6–15
parameters, *(S) DECnet Mgmt*, 3–59; *(S) DECnet Mgmt Util*, 3–112, 3–113, 3–152
privileges, *(S) DECnet Mgmt*, 3–68
protected, *(P) Concepts*, 23–19
protecting volume, *(S) Sys Mgr Essentials*, 8–14
protection codes, *(S) Security*, 4–7, 4–24
proxy login access, *(S) DECnet Mgmt*, 2–36
queues, *(S) Security*, 5–17
reassigning ownership, *(S) Security*, 4–7
resource domains, *(S) Security*, 5–18
rules for determining access, *(S) Security*, 4–11
security class, *(S) Security*, 5–19
security elements source, *(S) Security*, 4–7
security management overview, *(S) Security*, 5–1
security profiles, *(G) User*, 19–3; *(S) Security*, 4–6, 4–11
specifying privileges, *(S) DECnet Mgmt*, 3–68
TASK, *(S) DECnet Mgmt*, 2–25, 3–59
type, *(S) DECnet Mgmt*, 2–25, 8–11
type number, *(S) DECnet Mgmt*, 2–25, 3–59
user-defined, *(S) DECnet Mgmt*, 2–25
use with alias node identifier, *(S) DECnet Mgmt*, 2–26, 3–60
volumes, *(S) Security*, 5–20
zero-numbered, *(S) DECnet Mgmt*, 2–25, 3–59
Obsolete descriptor class codes, *(P) Calling Std*, 5–33
Obsolete features
Refer to the *OpenVMS Obsolete Features Manual*
Obsolete system services, *(P) Sys Svc II*, A–1
Occlusion, *(P) SMG$*, 2–5
Occurrences, *(S) DECamds*, 5–9
Octal dump, *(G) DCL A-M*, DCLI–191
Octal numbers
in a UIC directory specification, *(G) User*, 5–10
/OCTAL qualifier, *(P) Debugger*, 8–11, CD–98, CD–101, CD–106, CD–131
/OCTAWORD qualifier, *(P) Debugger*, CD–78, CD–106, CD–131
octaword_signed data type, *(P) Interfaces*, B–13
octaword_unsigned data type, *(P) Interfaces*, B–13
%OCT built-in symbol, *(P) Debugger*, 8–12, B–6
ODS-1 disks, *(P) File Appl*, 3–29
ODS-2 ACP, *(P) RMS Ref*, 10–12
Offloading, *(S) Alpha Perform*, 8–3
of CPU resource, *(S) VAX Perform*, 3–18; *(S) Alpha Perform*, 9–10
of disk I/O resource, *(S) VAX Perform*, 3–37; *(S) Alpha Perform*, 11–9
of memory resource, *(S) Alpha Perform*, 10–10
OFP option, *(P) Rec Mgmt Util*, 4–22
OLDUETP.LOG file, *(S) Sys Mgr Tuning*, 17–20
OLTP (online transaction processing) applications, *(G) SW Overview*, 2–13
OMG (Object Management Group), *(G) SW Overview*, 6–10, 6–15, A–1
ON command, *(G) DCL N-Z*, DCLII–2 to DCLII–5
setting Ctrl/Y action routines, *(G) User*, 15–36
ON CONTROL_Y command
enabling Ctrl/Y, *(G) User*, 15–40
One-time initialization routines, *(P) DECthreads*, 2–13
Online backups
databases, *(S) Dependable*, 8–40
Online help, *(G) DCL A-M*, DCLI–236
Online release notes, *(S) DECamds*, A–1
Online transaction processing
See OLTP applications
OPA0: device, *(S) Sys Mgr Essentials*, 2–23
Opaque names
converting to string, *(P) Sys Svc I*, SYS1–303
OPC$OPA0_ENABL logical name, *(S) Sys Mgr Tuning*, 18–23
OPCCRASH.EXE program, *(S) Sys Mgr Essentials*, 4–27
OPCOM
filtered event messages sent to, *(S) DECamds*, 2–7
logging issues, *(S) DECamds*, 1–4
messages
displayed during LANACP start, *(S) Sys Mgr Tuning*, 22–22
generated by LANACP, *(S) Sys Mgr Tuning*, 22–25; *(S) Sys Mgmt Util A-L*, 12–21
sending events to, *(S) DECamds*, 2–8
sending messages, *(S) DECamds*, 1–9
OPCOM (Operator Communication Manager), *(S) Sys Mgr Essentials*, 10–17; *(S) VMScluster Sys*, 10–10, D–11; *(S) DECnet Mgmt*, 2–28, 3–62, 6–3
See also Operator log file
automatic restart, *(S) Sys Mgr Essentials*, 2–22
classes
enabling, *(S) Sys Mgr Essentials*, 2–23
enabling and disabling for log file, *(S) Sys Mgr Tuning*, 18–23

OPCOM (Operator Communication Manager) (cont'd)
communicating with operators, *(S) Sys Mgr Essentials*, 8–18
communicating with users, *(S) Sys Mgr Essentials*, 8–18
components of, *(S) Sys Mgr Essentials*, 2–19
default behavior, *(S) Sys Mgr Essentials*, 2–21
defining network operator, *(S) DECnet Intro*, 4–4
disabling operator terminals, *(S) Sys Mgr Essentials*, 2–24
enabling operator classes, *(S) Sys Mgr Essentials*, 2–23
enabling operator terminals, *(S) Sys Mgr Essentials*, 2–23
enabling terminal to receive messages from, *(G) DCL N-Z*, DCLII–45
event message format, *(S) DECnet Intro*, 4–6
failure, *(S) Sys Mgr Essentials*, 2–22
illustration, *(S) Sys Mgr Essentials*, 2–19
log file, *(S) Sys Mgr Essentials*, 2–21; *(S) Sys Mgr Tuning*, 18–17
messages to users from, *(G) DCL N-Z*, DCLII–52
monitoring systems and devices, *(S) Dependable*, 9–11
mount verification, *(S) Sys Mgr Essentials*, 8–60
OPC$ALLOW_INBOUND logical name, *(G) V7.0 New Feat*, 3–12
OPC$ALLOW_OUTBOUND logical name, *(G) V7.0 New Feat*, 3–12
operator terminals, *(S) Sys Mgr Essentials*, 2–21
printing operator log file, *(S) Sys Mgr Tuning*, 18–24
process, *(S) Sys Mgr Essentials*, 2–21
creation during system startup, *(S) Sys Mgr Essentials*, 5–5
process dump file, *(S) Sys Mgr Essentials*, 2–22
replying to operator requests, *(S) Sys Mgr Essentials*, 2–25
requirements, *(S) Sys Mgr Essentials*, 2–21
restarting operator log file, *(S) Sys Mgr Tuning*, 18–24
sending requests to an operator, *(S) Sys Mgr Essentials*, 2–25
setting up operator log file, *(S) Sys Mgr Tuning*, 18–22
specifying default state of operator log file, *(S) Sys Mgr Tuning*, 18–23
startup of, *(S) Sys Mgr Essentials*, 2–22
uses of, *(S) Sys Mgr Essentials*, 2–19
using to request assistance, *(S) Sys Mgr Essentials*, 10–17
OPCOM.DMP process dump file, *(S) Sys Mgr Essentials*, 2–22
OPCOM messages, *(S) Sys Mgr Essentials*, 2–21
continuation volume request, *(S) Sys Mgr Essentials*, 8–40, 9–24
controlling, *(S) Sys Mgr Essentials*, 2–22
mount request message, *(S) Sys Mgr Essentials*, 8–26
mount verification, *(S) Sys Mgr Essentials*, 8–60
aborted message, *(S) Sys Mgr Essentials*, 8–63
timeout message, *(S) Sys Mgr Essentials*, 8–60
operator reply, *(S) Sys Mgr Tuning*, 18–19
routing, *(G) SW Overview*, 7–5
security alarm, *(S) Sys Mgr Tuning*, 18–21
sending, *(S) Sys Mgr Essentials*, 2–22
SYSGEN, *(S) Sys Mgr Tuning*, 18–20
user request, *(S) Sys Mgr Tuning*, 18–19
Open3D, *(G) SW Overview*, 6–16; *(P) Environment*, 2–6
Open accounts, *(S) Security*, 3–4
C2 systems and, *(S) Security*, C–7
captive accounts and, *(S) Security*, 7–8
captive recommendation, *(S) Security*, 7–23
Open-by-name-block option, *(P) File Appl*, 5–9, 6–4
performance and, *(P) File Appl*, 6–6
OPEN command, *(G) DCL N-Z*, DCLII–6 to DCLII–9
for remote file, *(S) DECnet Intro*, 2–13
in network operations, *(S) DECnet Intro*, 2–13
Open file limit, *(S) Sys Mgr Essentials*, 6–43
Open files, *(G) DCL N-Z*, DCLII–6
displaying names, *(G) DCL N-Z*, DCLII–257
for process I/O, *(S) DECamds*, 3–17
limit remaining, *(S) DECamds*, 3–17
Open images, *(S) Sys Mgr Tuning*, 16–10, 16–12
Opening of queue and journal files, *(G) DCL N-Z*, DCLII–384
$OPEN macro
expansion of, *(P) RMS Ref*, A–9
for invoking the Open service, *(P) RMS Ref*, 3–1, A–12
using in example, *(P) RMS Ref*, A–9, A–10
Openness
specifications, *(S) TCP/IP*, 1–1
TCP/IP, *(S) TCP/IP*, 1–1
Open service, *(P) RMS Ref*, 3–1, RMS–60, A–12, A–15, A–21; *(P) File Appl*, 5–9
condition values, *(P) RMS Ref*, RMS–67
control block input fields, *(P) RMS Ref*, RMS–61
control block output fields, *(P) RMS Ref*, RMS–64
for process-permanent files, *(P) File Appl*, 6–19
invoking, *(P) RMS Ref*, 3–4

Open service (cont'd)
NAM input fields, *(P) RMS Ref*, RMS–65
NAM output fields, *(P) RMS Ref*, RMS–66
program example, *(P) RMS Ref*, 3–2, A–12
requirements for using, *(P) RMS Ref*, RMS–61
Open Software Foundation
See OSF
Open specifications, *(G) SW Overview*, 2–2
Open systems, *(G) SW Overview*, 2–1; *(S) TCP/IP*, 1–1
Open Systems Interconnection
See OSI
Open systems library
support for NAS in linker, *(P) Linker*, 2–14
OpenVMS Alpha
See Alpha systems and OpenVMS systems
OpenVMS Alpha operating systems, *(G) SW Overview*, 1–11
migrating to, *(G) SW Overview*, 1–3
OpenVMS Alpha System-Code Debugger, *(G) SW Overview*, 3–3, 4–8
CONNECT command, *(P) Debugger*, CD–43
creating debug symbol file for, *(P) Linker*, LINK–12
REBOOT command, *(P) Debugger*, CD–138
OpenVMS AXP System-Code Debugger, *(P) Environment*, 9–8
OpenVMS cluster client software, *(G) V7.0 New Feat*, E–1
OpenVMS Debugger (debugger), *(G) SW Overview*, 4–7
OpenVMS Debugger utility, *(P) Concepts*, 22–3
See also Debugger
alignment, *(P) Concepts*, 22–9
OpenVMS Management Station
description, *(S) Sys Mgr Essentials*, 2–2
documentation, *(S) Sys Mgr Essentials*, 2–3
features, *(S) Sys Mgr Essentials*, 2–4
not in C2 evaluation, *(S) Security*, C–3
OpenVMS RMS
See RMS
OpenVMS screen management software
command recall, *(G) User*, 3–15
OpenVMS systems
See also Alpha systems, Systems, and VAX systems
access control, *(S) DECnet Intro*, 3–36
asynchronous connections, *(S) DECnet Intro*, 3–19
availability, *(G) SW Overview*, 7–2
client/server capabilities, *(P) Environment*, 3–2
commercial-strength software, *(G) SW Overview*, 7–1
communication
with other systems, *(S) DECnet Intro*, 1–1
OpenVMS systems (cont'd)
communication with foreign vendor systems, *(S) DECnet Intro*, 1–5, 1–6
communication with other OpenVMS systems, *(S) DECnet Intro*, 1–6; *(S) DECnet Mgmt*, 9–28
communication with other systems, *(S) DECnet Intro*, 1–6, 1–14; *(S) DECnet Mgmt*, 9–1 to 9–28
compatibility, *(G) SW Overview*, 1–3
compliance with open standards, *(G) SW Overview*, 1–1
components, *(G) SW Overview*, 3–1
configurations, *(G) SW Overview*, 1–1, 1–5
core services, *(G) SW Overview*, 3–1
dependability, *(G) SW Overview*, 2–12, 7–2
description, *(G) SW Overview*, 1–1, 3–1
device drivers, *(G) SW Overview*, 3–3
disk servers, *(G) SW Overview*, 6–21
distributed production servers, *(G) SW Overview*, 7–2
events specific to, *(S) DECnet Mgmt Util*, D–12
file servers, *(G) SW Overview*, 6–21
growth potential, *(G) SW Overview*, 1–14
I/O connections, *(G) SW Overview*, 1–5
in distributed environments, *(G) SW Overview*, 6–2
in multivendor environments, *(G) SW Overview*, 6–2, 7–2
in open environments, *(G) SW Overview*, 6–2
installation and configuration, *(G) SW Overview*, 3–7
kernel, *(G) SW Overview*, 3–1
layered products, *(S) TCP/IP*, 1–4
login access, *(G) SW Overview*, 5–1
networking interface, *(S) DECnet Intro*, 1–1, 1–5
network interface, *(S) DECnet Mgmt*, 1–2
nonpaged dynamic memory pool, *(S) DECnet Mgmt*, 5–31
open systems capability, *(G) SW Overview*, 2–1
portable applications, *(G) SW Overview*, 4–3
POSIX interfaces, *(G) SW Overview*, 3–4
print servers, *(G) SW Overview*, 6–21
production systems, *(G) SW Overview*, 2–11, 7–1
protection against obsolescence, *(G) SW Overview*, 1–15
RMS files, *(S) TCP/IP*, 5–5
scalability, *(G) SW Overview*, 1–14
security, *(G) SW Overview*, 3–14, 3–15
servers, *(G) SW Overview*, 1–2, 2–8, 6–20; *(P) Environment*, 3–3
software, *(G) SW Overview*, 1–1
standalone, *(G) SW Overview*, 1–7
support for standards, *(G) SW Overview*, 2–2, A–1; *(P) Environment*, 1–3, 2–2

OpenVMS systems (cont'd)
system management, *(G) SW Overview*, 2–15, 3–6
system services, *(G) SW Overview*, 3–3, 4–10
TCP/IP layered products, *(S) TCP/IP*, A–1
tuning, *(G) SW Overview*, 3–11
UIC, *(S) TCP/IP*, 4–1
user environments, *(G) SW Overview*, 5–2
user interfaces, *(G) SW Overview*, 5–1
utility programs, *(G) SW Overview*, 3–4
OpenVMS Systems, *(P) DECthreads*, B–1
OpenVMS to MS–DOS network operations, *(S) DECnet Mgmt*, 9–20
OpenVMS to RT–11 network operations, *(S) DECnet Mgmt*, 9–11
OpenVMS to TOPS–10 network operations, *(S) DECnet Mgmt*, 9–14
OpenVMS to TOPS–20 network operations, *(S) DECnet Mgmt*, 9–17
OpenVMS to IAS network operations, *(S) DECnet Mgmt*, 9–2
OpenVMS to IBM network operations, *(S) DECnet Mgmt*, 9–26
OpenVMS to RSTS/E network operations, *(S) DECnet Mgmt*, 9–5
OpenVMS to RSX (using FCS-based FAL) network operations, *(S) DECnet Mgmt*, 9–9
OpenVMS to RSX (using RMS-based FAL) network operations, *(S) DECnet Mgmt*, 9–7
OpenVMS to ULTRIX network operations, *(S) DECnet Mgmt*, 9–23
OpenVMS to VMS network operation
Version 5.4 to pre-V5.0 version, *(S) DECnet Mgmt*, 9–28
OpenVMS usage entry, *(P) Interfaces*, B–1
in argument descriptions, *(P) Interfaces*, 1–6
Operands
in character string expressions, *(G) User*, 14–10
instruction, *(P) Debugger*, 8–19, CD–106, CD–183
integer, *(G) User*, 14–15
vector instruction, *(P) Debugger*, 15–5, 15–9
/OPERANDS qualifier, *(P) Debugger*, 8–19, 15–9, CD–106, CD–183
Operating system debugging
CONNECT command, *(P) Debugger*, CD–43
Operating systems
application environment topologies, *(S) Dependable*, 8–13 to 8–16
building on another disk, *(S) Sys Mgr Essentials*, 2–27
coordinating files, *(S) VMScluster Sys*, 5–17
copying to another system disk, *(S) Sys Mgr Essentials*, 2–29
dependability features, *(S) Dependable*, 8–10 to 8–28
Operating systems (cont'd)
disk defragmentation applications, *(S) Dependable*, 8–27, 9–17
failover of queue manager, *(S) Dependable*, 9–18
installing, *(S) Sys Mgr Essentials*, 3–4; *(S) VMScluster Sys*, 4–1
installing license, *(S) VMScluster Sys*, 4–5
on common system disk, *(S) VMScluster Sys*, 5–4
preparing the environment, *(S) VMScluster Sys*, 4–1
processes
ACMS load balancing, *(S) Dependable*, 8–53
programmer productivity tools, *(S) Dependable*, 8–58
queue manager failover, *(S) Dependable*, 8–28, 9–18
RMS Journaling, *(S) Dependable*, 8–28
updating, *(S) Sys Mgr Essentials*, 3–5
upgrading, *(S) Sys Mgr Essentials*, 3–5; *(S) VMScluster Sys*, 4–1
using multiple versions, *(S) Dependable*, 9–23
version requirements for installation, *(S) DECamds*, A–2
Operational controls, *(P) SMG$*, 2–16
Operational phase
applying dependability strategies, *(S) Dependable*, 1–16
building dependable systems, *(S) Dependable*, 1–12
Operational procedures
analyzing options, *(S) Dependable*, 3–12 to 3–14
Operation button on POLYCENTER Software Installation utility, *(S) Sys Mgr Essentials*, 3–37, 3–39
Operations
compare, *(S) Sys Mgmt Util A-L*, 7–23
data center techniques, *(S) Dependable*, 9–1
list, *(S) Sys Mgmt Util A-L*, 7–18, 7–32, 7–44
performed by BACKUP, *(S) Sys Mgmt Util A-L*, 7–3
Operations count rate, *(S) DECamds*, 3–8
Operator assistance
with BACKUP, *(S) Sys Mgmt Util A-L*, 7–15
Operator commands
Alpha object language, *(P) Linker*, B–32
VAX object language, *(P) Linker*, A–28
Operator Communication Manager
See OPCOM
Operator consoles
as OPCOM terminal, *(S) DECnet Intro*, 4–4
enabling in system startup, *(S) Sys Mgr Essentials*, 5–5

Operator-initiated downline load, *(S) DECnet Mgmt*, 4–1, 4–5
Operator log file, *(S) Alpha Perform*, 2–2
  closing current and opening new, *(S) Sys Mgr Tuning*, 18–17
  creating new, *(S) Sys Mgr Tuning*, 18–22
  definition, *(S) Sys Mgr Essentials*, 2–21
  enabling and disabling classes, *(S) Sys Mgr Tuning*, 18–23
  enabling in system startup, *(S) Sys Mgr Essentials*, 5–5
  logging user requests in, *(S) Sys Mgr Tuning*, 18–19
  maintaining, *(S) Sys Mgr Tuning*, 18–24
  printing, *(S) Sys Mgr Tuning*, 18–22, 18–24
  purging
    during system startup, *(S) Sys Mgr Essentials*, 5–14
  recording changes to system parameters, *(S) Sys Mgr Tuning*, 18–20
  restarting, *(S) Sys Mgr Tuning*, 18–24
  security alarm messages in, *(S) Sys Mgr Tuning*, 18–21
  setting up, *(S) Sys Mgr Tuning*, 18–16, 18–22
  troubleshooting the queue manager, *(S) Sys Mgr Essentials*, 12–14
Operators (computer)
  assistance with MOUNT command in system startup, *(S) Sys Mgr Essentials*, 5–11
  classes of, *(S) Sys Mgr Essentials*, 2–23
  disabling status, *(G) DCL N-Z*, DCLII–45
  enabling status, *(G) DCL N-Z*, DCLII–45
  log file closing, *(G) DCL N-Z*, DCLII–46
  log file opening, *(G) DCL N-Z*, DCLII–46
  replying to requests, *(S) Sys Mgr Essentials*, 2–25
  requesting assistance from, *(S) Sys Mgr Essentials*, 8–18
  requesting replies from, *(G) DCL N-Z*, DCLII–52
  security terminal, *(S) Sys Mgr Tuning*, 18–21
  sending messages to, *(P) Sys Svc II*, SYS2–418
  sending requests to, *(G) DCL N-Z*, DCLII–52; *(S) Sys Mgr Essentials*, 2–25
Operators (mathematical), *(P) Alpha SDA*, SDA–12
  address expression, *(P) Debugger*, B–7
  order of evaluation, *(G) User*, 14–23
  precedence of, *(P) Alpha SDA*, SDA–12, SDA–13; *(P) VAX SDA*, SDA–16, SDA–17
Operator terminals, *(S) Sys Mgr Essentials*, 2–21
  designating, *(S) Sys Mgr Essentials*, 2–23
    in batch or SYSTARTUP, *(S) Sys Mgr Essentials*, 2–21
  enabling and disabling, *(S) Sys Mgr Essentials*, 2–23, 2–24; *(S) Sys Mgr Tuning*, 18–17
    security alarms, *(S) Sys Mgr Tuning*, 18–29
Operator terminals (cont'd)
  setting up, *(S) Sys Mgr Essentials*, 8–18
  user request, *(S) Sys Mgr Essentials*, 8–18
OPER privilege, *(S) Security*, A–9; *(S) DECnet Mgmt*, 5–1
  as requirement for ZERO COUNTERS command, *(S) DECnet Intro*, 4–3
  as requirement to change volatile database, *(S) DECnet Intro*, 3–33
  overriding access controls, *(S) Security*, 4–12
  queue access, *(S) Security*, 4–29
  queue management, *(S) Security*, 5–18
  using NETCONFIG.COM, *(S) DECnet Mgmt*, 5–5
  using NETCONFIG_UPDATE.COM, *(S) DECnet Mgmt*, 5–10
  using SYSMAN utility, *(S) DECnet Mgmt*, 5–11
OPS5, *(G) SW Overview*, 4–6; *(P) Environment*, 7–3, 7–8
OPS5 programming technology, *(S) Dependable*, 3–9
Optimization
  Edit/FDL utility, *(P) File Appl*, A–1
  effect on debugging, *(P) Debugger*, 5–5, 11–7, 13–1
  of indexed files, *(P) File Appl*, 10–26
Optimization and debugging, *(G) V7.0 New Feat*, 4–1
/OPTIMIZE qualifier, *(P) Debugger*, 5–5, 13–1
Optimize script, *(P) Rec Mgmt Util*, 6–1, 6–4
Optimizing files
  using DEC File Optimizer for OpenVMS, *(S) Dependable*, 9–5
Optimizing images
  Alpha object language commands, *(P) Linker*, B–37
  calcuating JSR hints, *(P) Linker*, B–41
Optimizing performance, *(S) DECamds*, 5–1; *(P) Linker*, 1–3, 1–15
  by customizing data collection, *(S) DECamds*, 5–14
  with hardware, *(S) DECamds*, 5–17
Optional arguments
  to record management services, *(P) RMS Ref*, A–10
Optional files
  adding and removing, *(S) Sys Mgr Essentials*, 5–1
Optional user data, *(S) DECnet Mgmt Util*, 4–4, 4–8
Option list
  parameter for VMSINSTAL.COM command procedure, *(S) Sys Mgr Essentials*, 3–12
Options
  case sensitivity of option arguments, *(P) Linker*, LINK–45
  creating with LBR$OPEN routine, *(P) Util Routines*, LBR–8

Options (cont'd)
for software product installations, *(S) Sys Mgr Essentials*, 3–30
summary of linker options, *(P) Linker*, 1–19
use of radix operators, *(P) Linker*, LINK–42
Options files
as linker input, *(P) Linker*, 1–10
case sensitivity of linker option arguments, *(P) Linker*, LINK–45
CONVERT/DOCUMENT command, *(G) DCL A-M*, DCLI–71
creating, *(G) DCL A-M*, DCLI–71; *(P) Linker*, 1–11
specifying in a link operation, *(P) Linker*, 1–11, LINK–22
specifying on the command line, *(P) Linker*, 1–11
Options for dependable computing
communications, *(S) Dependable*, 3–5 to 3–7
environmental factors, *(S) Dependable*, 3–2 to 3–3
hardware, *(S) Dependable*, 3–3 to 3–5
operational procedures, *(S) Dependable*, 3–12 to 3–14
personnel, *(S) Dependable*, 3–15 to 3–16
software, *(S) Dependable*, 3–7 to 3–12
/OPTIONS qualifier, *(P) Linker*, LINK–22; *(P) Debugger*, 9–11
Orange Book
of U.S. Department of Defense C2 security, *(S) Dependable*, 8–48
ORB symbol, *(P) Alpha SDA*, SDA–16; *(P) VAX SDA*, SDA–18
Order and neatness
factors in supporting dependable computing, *(S) Dependable*, 5–6
Ordering requirement
AREA for primary sections, *(P) Rec Mgmt Util*, 6–1
ORGANIZATION attribute, *(P) Rec Mgmt Util*, 4–21; *(P) File Appl*, 4–32
Organizing
files and modules, *(P) Modular Proc*, 2–1
procedures, *(P) Modular Proc*, 2–1
/ORIGINAL qualifier, *(P) Debugger*, CD–34, CD–207
OR operator (|), *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–16
OSF, *(G) SW Overview*, 2–2, A–1
OSF DME
See DME
OSF Motif standards, *(G) SW Overview*, 2–4, 5–4
OSI (Open Systems Interconnection), *(G) SW Overview*, 1–10; *(S) TCP/IP*, 2–1
model, *(G) SW Overview*, 2–2, 2–6, 6–3
protocol, *(P) Environment*, 3–1
OSI Applications Kernel (OSAK), *(G) SW Overview*, 6–4
Other command changes, *(G) V7.0 New Feat*, 3–29
OTS$CNVOUT routine, *(P) OTS$*, OTS–3
OTS$CNVOUT_G routine, *(P) OTS$*, OTS–3
OTS$CNVOUT_H routine, *(P) OTS$*, OTS–3
OTS$CVT_L_TB routine, *(P) OTS$*, OTS–5
OTS$CVT_L_TI routine, *(P) OTS$*, OTS–7
OTS$CVT_L_TL routine, *(P) OTS$*, OTS–9
OTS$CVT_L_TO routine, *(P) OTS$*, OTS–11
OTS$CVT_L_TU routine, *(P) OTS$*, OTS–13
OTS$CVT_L_TZ routine, *(P) OTS$*, OTS–15
OTS$CVT_TB_L routine, *(P) OTS$*, OTS–17
OTS$CVT_TI_L routine, *(P) OTS$*, OTS–20
OTS$CVT_TL_L routine, *(P) OTS$*, OTS–22
OTS$CVT_TO_L routine, *(P) OTS$*, OTS–24
OTS$CVT_TU_L routine, *(P) OTS$*, OTS–26
OTS$CVT_TZ_L routine, *(P) OTS$*, OTS–35
OTS$CVT_T_z routine, *(P) OTS$*, OTS–28, OTS–32
OTS$DIVCD_R3 routine, *(P) OTS$*, OTS–38
OTS$DIVCG_R3 routine, *(P) OTS$*, OTS–38
OTS$DIVC routine, *(P) OTS$*, OTS–38
OTS$DIV_PK_LONG routine, *(P) OTS$*, OTS–41
OTS$DIV_PK_SHORT routine, *(P) OTS$*, OTS–45
OTS$MOVE3 routine, *(P) 64-Bit Addr*, 9–7; *(P) OTS$*, OTS–48
OTS$MOVE5 routine, *(P) 64-Bit Addr*, 9–7; *(P) OTS$*, OTS–50
OTS$MULCD_R3 routine, *(P) OTS$*, OTS–52
OTS$MULCG_R3 routine, *(P) OTS$*, OTS–52
OTS$POWCxCx routine, *(P) OTS$*, OTS–54
OTS$POWCxJ routine, *(P) OTS$*, OTS–57
OTS$POWDD routine, *(P) OTS$*, OTS–59
OTS$POWDJ routine, *(P) OTS$*, OTS–63
OTS$POWDLU routine, *(P) OTS$*, OTS–77
OTS$POWDR routine, *(P) OTS$*, OTS–61
OTS$POWGG routine, *(P) OTS$*, OTS–65
OTS$POWGJ routine, *(P) OTS$*, OTS–68
OTS$POWGLU routine, *(P) OTS$*, OTS–77
OTS$POWHH_R3 routine, *(P) OTS$*, OTS–70
OTS$POWHJ_R3 routine, *(P) OTS$*, OTS–72
OTS$POWHLU_R3 routine, *(P) OTS$*, OTS–77
OTS$POWII routine, *(P) OTS$*, OTS–74
OTS$POWJJ routine, *(P) OTS$*, OTS–75
OTS$POWLULU routine, *(P) OTS$*, OTS–76
OTS$POWRD routine, *(P) OTS$*, OTS–79
OTS$POWRJ routine, *(P) OTS$*, OTS–82
OTS$POWRLU routine, *(P) OTS$*, OTS–77
OTS$POWRR routine, *(P) OTS$*, OTS–84
OTS$SCOPY_DXDX routine, *(P) OTS$*, OTS–86; *(P) STR$*, 2–6
OTS$SCOPY_R_DX routine, *(P) OTS$*, OTS–88
OTS$SFREE1_DD routine, *(P) OTS$*, OTS–91
OTS$SFREEN_DD routine, *(P) OTS$*, OTS–92

OTS$SGET1_DD routine, *(P) OTS$*, OTS–93
Outbound logical link connections, *(S) DECnet Mgmt*, 1–21
Outgoing LAT connections, *(S) Sys Mgr Tuning*, 24–3, 24–8; *(S) Sys Mgmt Util A-L*, 13–27
  enabling with LAT software, *(S) Sys Mgr Tuning*, 24–16
Outgoing port
  displaying, *(S) Sys Mgmt Util A-L*, 13–53
OUTGOING PROXY parameter, *(S) DECnet Mgmt*, 2–35
Out-of-band AST, *(P) I/O User*, 5–13, 5–48
Output, *(S) Sys Mgmt Util A-L*, 3–6
  configuration, displaying, *(P) Debugger*, 12–2, 12–6, CD–266
  configuration, setting, *(P) Debugger*, 12–2, 12–6, CD–190
  debugger, DBG$DECW$DISPLAY, *(P) Debugger*, 2–8, B–1
  debugger, DBG$OUTPUT, *(P) Debugger*, 2–9, 13–14, B–1
  directing, *(S) Sys Mgmt Util A-L*, 3–5; *(S) Sys Mgmt Util M-Z*, 4–55; *(P) Rec Mgmt Util*, 1–9
  directing Show Cluster, *(S) Sys Mgmt Util M-Z*, 4–5, 4–8
  directing SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–3, 5–7, 5–16, 5–24
  display (OUT), *(P) Debugger*, 11–7
  display kind, *(P) Debugger*, 11–17
  from command procedures, *(G) User*, 16–9
  redirecting from commands and images, *(G) User*, 16–10
  specifying file, *(S) Sys Mgmt Util M-Z*, 4–5, 4–8, 4–55, 5–7, 5–16
Output a newly created PCF, *(S) Sys Mgr Essentials*, 3–30
Output converter
  analysis, *(G) DCL A-M*, DCLI–67
  DDIF, *(G) DCL A-M*, DCLI–68
  DTIF, *(G) DCL A-M*, DCLI–69
  PostScript, *(G) DCL A-M*, DCLI–70
  Text, *(G) DCL A-M*, DCLI–70
Output devices
  See Printers and Terminals
Output during UETP
  terminal and line printer, *(S) Sys Mgr Tuning*, 17–33
Output execution queues
  See also Execution queues
  definition, *(S) Sys Mgr Essentials*, 13–3
Output files
  how affected by Convert utility, *(P) Rec Mgmt Util*, 2–4
Output formatting control routine, *(P) Concepts*, 6–20
Output jobs
  aligning forms, *(S) Sys Mgr Essentials*, 13–77
  allowing to complete before stopping a queue, *(S) Sys Mgr Essentials*, 13–55
  changing scheduling priority, *(S) Sys Mgr Essentials*, 13–72
  controlling, *(S) Sys Mgr Essentials*, 13–68
  controlling print position and alignment, *(S) Sys Mgr Essentials*, 13–75, 13–76, 13–77
  deleting, *(S) Sys Mgr Essentials*, 13–74
  holding and releasing, *(S) Sys Mgr Essentials*, 13–71
  modifying, *(S) Sys Mgr Essentials*, 13–70
  monitoring, *(S) Sys Mgr Essentials*, 13–68
  requeuing
    executing, *(S) Sys Mgr Essentials*, 13–73
    pending, *(S) Sys Mgr Essentials*, 13–73
  resuming printing, *(S) Sys Mgr Essentials*, 13–75, 13–76, 13–77
  retaining in a queue, *(S) Sys Mgr Essentials*, 13–74
  scheduling, *(S) Sys Mgr Essentials*, 13–32, 13–72
  status
    See Job status
  suspending, *(S) Sys Mgr Essentials*, 13–75
Output messages
  volume mount, *(S) Sys Mgmt Util M-Z*, 2–3, 2–25
Output operations
  batching of, *(P) SMG$*, 2–17
/OUTPUT qualifier, *(S) Sys Mgmt Util M-Z*, 4–8; *(P) Debugger*, 11–20, CD–152, CD–199, CD–297; *(P) Alpha SDA*, SDA–158; *(P) VAX SDA*, SDA–183
  in Analyze/Disk_Structure utility, *(S) Sys Mgmt Util A-L*, 3–9
Output queues
  allowing jobs to complete before stopping, *(S) Sys Mgr Essentials*, 13–55
  assigning a default form, *(S) Sys Mgr Essentials*, 13–63
  canceling characteristics, *(S) Sys Mgr Essentials*, 13–59
  changing DEFAULT form, *(S) Sys Mgr Essentials*, 13–63
  commands for managing, *(S) Sys Mgr Essentials*, 13–46
  controlling line overflow in forms, *(S) Sys Mgr Essentials*, 13–42
  creating, *(S) Sys Mgr Essentials*, 13–15
  defining a form, *(S) Sys Mgr Essentials*, 13–61
  deleting, *(S) Sys Mgr Essentials*, 13–57
  execution
    description, *(S) Sys Mgr Essentials*, 13–3
    printer, *(S) Sys Mgr Essentials*, 13–3

Output queues
execution (cont'd)
server, *(S) Sys Mgr Essentials*, 13–3
terminal, *(S) Sys Mgr Essentials*, 13–3
mounting a form on, *(S) Sys Mgr Essentials*, 13–64
on standalone workstations, *(S) Sys Mgr Essentials*, 13–8
options, *(S) Sys Mgr Essentials*, 13–18
banner pages, *(S) Sys Mgr Essentials*, 13–33
characteristics, *(S) Sys Mgr Essentials*, 13–28
controlling page and line overflow, *(S) Sys Mgr Essentials*, 13–43
device control libraries, *(S) Sys Mgr Essentials*, 13–44
forms, *(S) Sys Mgr Essentials*, 13–42
qualifiers for specifying, *(S) Sys Mgr Essentials*, 13–20 to 13–21
restricting access, *(S) Sys Mgr Essentials*, 13–22
retaining jobs, *(S) Sys Mgr Essentials*, 13–26
order of device control module output, *(S) Sys Mgr Essentials*, 13–45
pausing, *(S) Sys Mgr Essentials*, 13–53, 13–75
to align position of print for preprinted forms, *(S) Sys Mgr Essentials*, 13–75, 13–77
to change position of print, *(S) Sys Mgr Essentials*, 13–75
rerouting jobs in, *(S) Sys Mgr Essentials*, 13–56
specifying page and margin size in forms, *(S) Sys Mgr Essentials*, 13–42
starting, *(S) Sys Mgr Essentials*, 13–15
status, *(S) Sys Mgr Essentials*, 13–50
stopping, *(S) Sys Mgr Essentials*, 13–54, 13–55
before shutting down a node, *(S) Sys Mgr Essentials*, 13–55
Output queuing environment
for LAT printers, *(S) Sys Mgr Essentials*, 13–10
for mixed printers, *(S) Sys Mgr Essentials*, 13–9
for multiple printers of the same kind, *(S) Sys Mgr Essentials*, 13–11
in VMScluster environments, *(S) Sys Mgr Essentials*, 13–12
on a standalone workstation, *(S) Sys Mgr Essentials*, 13–8
sample configurations, *(S) Sys Mgr Essentials*, 13–8 to 13–14
single printer, *(S) Sys Mgr Essentials*, 13–8
spooled printers, *(S) Sys Mgr Essentials*, 13–13
steps for setting up, *(S) Sys Mgr Essentials*, 13–14
Output specifier
to the BACKUP command, *(S) Sys Mgr Essentials*, 10–4
Output streams
defining for created process, *(G) DCL N-Z*, DCLII–58
Output strings
formatting with F$FAO lexical function, *(G) User*, 17–15
OUTPUT_FILE_PARSE attribute, *(P) Rec Mgmt Util*, 4–22
Overdraft limit
user exceeding quota, *(S) Sys Mgr Essentials*, 8–49
Overflow detection, *(P) MTH$*, 2–8
Overflow detection, integer, *(P) LIB$*, LIB–331
Overlapping unwind, *(P) Calling Std*, 6–30
Overlaying RSX–11S tasks, *(S) DECnet Mgmt*, 4–18
Overlaying files using the COPY command, *(G) DCL A-M*, DCLI–84
/OVERLAY qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–48
/OVER qualifier, *(P) Debugger*, CD–161, CD–223, CD–235, CD–300
/OVERRIDE qualifier, *(P) Debugger*, 8–26, CD–32, CD–40, CD–199, CD–230, CD–272, CD–293
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–27
Overriding
default command interpreter, *(G) DCL A-M*, DCLI–415
magnetic tape overwrite protection, *(G) DCL A-M*, DCLI–259
owner identification field, *(G) DCL A-M*, DCLI–259
Overriding DECnet parameters, *(S) Sys Mgr Tuning*, 14–21
Overstrike mode, *(G) User*, 3–16
Owner
See also Object ownership
category of user access, *(S) Security*, 4–24; *(S) Sys Mgr Essentials*, 11–8
changing object ownership, *(S) Security*, 4–7
security element of an object, *(S) Security*, 4–7
OWNER attribute, *(P) Rec Mgmt Util*, 4–22; *(P) File Appl*, 4–32
Owner identifier field
writing characters to, *(G) DCL A-M*, DCLI–258
Owner protection code, *(P) Rec Mgmt Util*, 4–22
Ownership
specifying for volumes, *(G) DCL A-M*, DCLI–260
/OWNER_UIC qualifier
as Backup utility input file qualifier, *(S) Sys Mgmt Util A-L*, 7–49
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–29

P

P.S.I. DTEs
  See also X.25 server modules
  states and substates, *(S) DECnet Mgmt Util*, C–5
  state transitions, *(S) DECnet Mgmt Util*, C–6
P.S.I. server modules
  states, *(S) DECnet Mgmt Util*, C–8
  state transitions, *(S) DECnet Mgmt Util*, C–8
P0BR register
  displaying, *(P) VAX SDA*, SDA–96
P0BR symbol, *(P) VAX SDA*, SDA–18
/P0IMAGE qualifier, *(P) Linker*, LINK–23
P0LR register
  displaying, *(P) VAX SDA*, SDA–96
P0LR symbol, *(P) VAX SDA*, SDA–18
P0 page table
  displaying, *(P) VAX SDA*, SDA–149
/P0 qualifier, *(P) VAX SDA*, SDA–149
P0 region
  examining, *(P) Alpha SDA*, SDA–49; *(P) VAX SDA*, SDA–56
  used for RMS buffers, *(P) File Appl*, 7–16
P0 space
  definition, *(P) 64-Bit Addr*, 1–2
P1BR register
  displaying, *(P) VAX SDA*, SDA–96
P1BR symbol, *(P) VAX SDA*, SDA–18
P1LR register
  displaying, *(P) VAX SDA*, SDA–96
P1LR symbol, *(P) VAX SDA*, SDA–18
P1 page table
  displaying, *(P) VAX SDA*, SDA–149
/P1 qualifier, *(P) Alpha SDA*, SDA–49; *(P) VAX SDA*, SDA–56, SDA–149
P1 region
  examining, *(P) Alpha SDA*, SDA–49; *(P) VAX SDA*, SDA–56
P1 space
  definition, *(P) 64-Bit Addr*, 1–2
Packed decimal byte
  structure for key type, *(P) RMS Ref*, 12–6
Packed decimal string
  as key type, *(P) RMS Ref*, 12–6
/PACKED qualifier, *(P) Debugger*, CD–78, CD–106
Packets, *(S) TCP/IP*, 1–2
  capturing data, *(S) VMScluster Sys*, F–28
  lost, *(S) VMScluster Sys*, F–12, G–1, G–2
  maximum size on FDDI, *(S) VMScluster Sys*, 10–17
  monitoring for lost, *(S) DECnet Intro*, 4–4
  transmission, LAN protocol analysis feature, *(S) VMScluster Sys*, F–27
  transmission window size, *(S) VMScluster Sys*, G–1
Packet-switching data networks
  See PSDNs
Packet-switching networks, *(S) DECnet Intro*, 1–5, 1–6, 1–13
p-addresses
  See Physical addresses
PADRIVER port driver
  communications for CI, *(S) VMScluster Sys*, 1–6
/PAGE=SAVE qualifier navigation keys, *(S) Sys Mgmt Util A-L*, 5–47
Page access, *(P) Interfaces*, B–14
Page breaks
  See Form feeds
%PAGE built-in symbol, *(P) Debugger*, 11–23
Page caches, *(S) Alpha Perform*, 5–2
  size
    adjusting related SYSGEN parameters, *(S) Alpha Perform*, 17–2
    decreasing, *(S) Alpha Perform*, 17–2, 17–7
    increasing, *(S) Alpha Perform*, 17–2
Page cache sizes
  adjusting related SYSGEN parameters, *(S) VAX Perform*, 5–3
  decreasing, *(S) VAX Perform*, 5–3, 5–8
  increasing, *(S) VAX Perform*, 5–3
PAGE class record
  in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–27
Paged dynamic pool
  See Pool management
Paged dynamic storage pool
  displaying contents, *(P) VAX SDA*, SDA–134
/PAGED qualifier, *(P) Alpha SDA*, SDA–120; *(P) VAX SDA*, SDA–134
Page fault (PFW) wait state, *(S) Alpha Perform*, 9–4
Page faulting, *(S) Alpha Perform*, 11–6
Page faults, *(S) DECamds*, 3–24; *(P) Concepts*, 5–18; *(P) Rec Mgmt Util*, 2–17
  acceptable rates, *(S) VAX Perform*, 3–24
  adjust working set, *(S) DECamds*, 4–3
  analyzing, *(S) VAX Perform*, 4–4
  function of secondary page cache, *(S) VAX Perform*, 3–34
  hard and soft, *(S) VAX Perform*, 3–23, 3–34
  illegal, *(P) Alpha SDA*, SDA–27; *(P) VAX SDA*, SDA–23
  purging working sets, *(S) DECamds*, 4–5
  specifying page fault clusters, *(P) Linker*, LINK–47
Page file
  default data collection, *(S) DECamds*, 5–2
PAGEFILE.SYS file, *(S) Sys Mgr Tuning*, 15–2, 15–4
  See also Page files

PAGEFILE.SYS file (cont'd)
as system dump file, *(S) Sys Mgr Tuning*, 15–2, 15–7
required location, *(S) Sys Mgr Tuning*, 15–3
requirement
location, *(S) Sys Mgr Tuning*, 16–8
PAGEFILE*n*_NAME symbol, *(S) Sys Mgr Tuning*, 15–17, 15–24
PAGEFILE*n*_SIZE symbol, *(S) Sys Mgr Tuning*, 15–18, 15–24
Page files
See also SYS$SYSTEM:PAGEFILE.SYS file
adding, *(S) VAX Perform*, 5–10
as system dump file, *(S) Sys Mgr Tuning*, 15–2, 15–7, 15–17
releasing dump from, *(S) Sys Mgr Tuning*, 15–16
size required for, *(S) Sys Mgr Tuning*, 15–4
changing size, *(S) Sys Mgmt Util A-L*, 6–3
changing sizes
with SWAPFILES.COM, *(S) Sys Mgr Tuning*, 15–25
created by CLUSTER_CONFIG.COM procedure, *(S) VMScluster Sys*, 8–1, 8–6
creating
with AUTOGEN, *(S) Sys Mgr Tuning*, 15–17, 15–24
with SYSGEN, *(S) Sys Mgr Tuning*, 15–18
definition, *(S) Sys Mgr Tuning*, 15–4
deleting after creating a new version, *(S) Sys Mgr Tuning*, 15–28
displaying, *(S) Sys Mgr Tuning*, 15–6
size calculated by AUTOGEN, *(S) Sys Mgr Tuning*, 15–17, 15–22
displaying the size calculated by AUTOGEN, *(S) Sys Mgmt Util A-L*, 6–7
fragmentation of, *(S) Sys Mgr Tuning*, 15–27
freeing dump information from, *(S) Sys Mgr Tuning*, 15–4, 15–16
generating a new file sized by AUTOGEN, *(S) Sys Mgmt Util A-L*, 6–7
installing
in system startup, *(S) Sys Mgr Essentials*, 5–6; *(S) Sys Mgr Tuning*, 15–5, 15–19, 15–21
when resized with AUTOGEN, *(S) Sys Mgr Tuning*, 15–18, 15–22
with SYPAGSWPFILES.COM procedure, *(S) Sys Mgr Tuning*, 15–20
with SYSGEN, *(S) Sys Mgr Tuning*, 15–19
limiting usage of, *(S) Sys Mgr Tuning*, 15–9
location
specifying for individual files, *(S) Sys Mgr Tuning*, 15–24
message
indicating high fragmentation, *(S) Sys Mgr Tuning*, 15–27
Page files
message (cont'd)
indicating insufficient size, *(S) Sys Mgr Tuning*, 15–9
indicating lack of installed, *(S) Sys Mgr Essentials*, 5–6
monitoring usage of, *(S) Sys Mgr Tuning*, 15–6
mounting disk during system startup, *(S) Sys Mgr Essentials*, 5–6; *(S) Sys Mgr Tuning*, 15–20
moving to improve performance, *(S) Sys Mgr Tuning*, 16–8
on a satellite, *(S) Sys Mgr Tuning*, 15–20
primary, *(S) Sys Mgr Tuning*, 15–5
purging, *(S) Sys Mgr Tuning*, 15–28
releasing dump from, *(S) Sys Mgr Tuning*, 15–16
requirements
location, *(S) Sys Mgr Tuning*, 15–3, 15–5, 16–8
size for saving dumps, *(S) Sys Mgr Tuning*, 15–4
saving dump contents on reboot, *(S) Sys Mgr Tuning*, 15–2
secondary, *(S) Sys Mgr Tuning*, 15–5, 15–20
tasks for managing, *(S) Sys Mgr Tuning*, 15–1
using as system dump file, *(P) VAX SDA*, SDA–8
VMScluster satellite node, *(S) Sys Mgr Essentials*, 5–6
writing crash dumps to, *(S) Sys Mgr Tuning*, 15–2
Page file sizes
calculating
for paging, *(S) Sys Mgr Tuning*, 15–8
for saving dumps, *(S) Sys Mgr Tuning*, 15–7
manually, *(S) Sys Mgr Tuning*, 15–7, 15–8
with AUTOGEN, *(S) Sys Mgr Tuning*, 15–5
changing
recommended method, *(S) Sys Mgr Tuning*, 15–22
when to increase size, *(S) Sys Mgr Tuning*, 15–9
with AUTOGEN, *(S) Sys Mgr Tuning*, 15–22
with SYSGEN, *(S) Sys Mgr Tuning*, 15–26
determining current, *(S) Sys Mgr Tuning*, 15–23
displaying AUTOGEN's calculations, *(S) Sys Mgr Tuning*, 15–17, 15–22
message indicating insufficient, *(S) Sys Mgr Tuning*, 15–9
required
for paging, *(S) Sys Mgr Tuning*, 15–8
for saving dumps, *(S) Sys Mgr Tuning*, 15–4, 15–7

Page file sizes (cont'd)
specifying
for individual files, *(S) Sys Mgr Tuning*, 15–22, 15–24
total for multiple files, *(S) Sys Mgr Tuning*, 15–22, 15–23
when to increase, *(S) Sys Mgr Tuning*, 15–9
Page frame number
See PFN
Page frame sections, *(P) Concepts*, 19–24, 20–26
creating, *(P) Sys Svc I*, SYS1–135
Pagelets, *(S) DECamds*, 3–15, Glossary–2; *(P) Concepts*, 20–1
definition, *(S) Alpha Perform*, 5–1
size, *(S) Sys Mgr Essentials*, 6–39
size of, *(S) Sys Mgr Essentials*, 6–39
Page management statistics
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–38
Page overflow
controlling, *(S) Sys Mgr Essentials*, 13–44
Page protection
setting, *(P) Sys Svc II*, SYS2–311
/PAGE qualifier, *(P) Debugger*, 11–22, CD–218
using with Mail utility, *(G) V7.0 New Feat*, 2–8
Pages, *(G) SW Overview*, 3–2; *(S) DECamds*, 3–15, Glossary–2; *(P) Concepts*, 19–3, 20–2
copy-on-reference, *(P) Concepts*, 19–16, 20–16
definition, *(S) Alpha Perform*, 5–1
demand-zero, *(P) Concepts*, 19–16, 20–16
faults, *(S) Alpha Perform*, 6–3
acceptable hard fault rate, *(S) Alpha Perform*, 10–5
acceptable soft fault rate, *(S) Alpha Perform*, 10–5
hard, *(S) Alpha Perform*, 5–4, 10–4
soft, *(S) Alpha Perform*, 5–4, 10–4
system, *(S) Alpha Perform*, 13–3
locking into memory, *(P) Concepts*, 19–13, 20–12; *(P) Sys Svc II*, SYS2–139
locking into working set, *(P) Sys Svc II*, SYS2–145
owner, *(P) Concepts*, 19–10, 20–10
ownership and protection, *(P) Concepts*, 19–10, 20–10
pagelets, *(S) Alpha Perform*, 5–1
removing from working set, *(P) Sys Svc II*, SYS2–227
setting protection, *(P) Sys Svc II*, SYS2–308
size, *(S) Sys Mgr Essentials*, 6–39
unlocking from memory, *(P) Sys Svc II*, SYS2–458
unlocking from working set, *(P) Sys Svc II*, SYS2–463
Page setup modules, *(S) Sys Mgr Essentials*, 13–44
See also Device control modules
specifying forms, *(S) Sys Mgr Essentials*, 13–42
Page sizes
calculations based on, *(P) 64-Bit Addr*, 9–1, 9–7
macro parameter for 64-bit addressing, *(P) 64-Bit Addr*, 9–1, 9–7
specifying in link operations, *(P) Linker*, LINK–5
Page/Swap file
error messages, *(S) DECamds*, 3–16
Page/Swap File Summary window, *(S) DECamds*, 3–15 to 3–16
Page table base register, *(P) Alpha SDA*, SDA–15
Page table entries
See PTEs
evaluating, *(P) Alpha SDA*, SDA–45; *(P) VAX SDA*, SDA–53
examining, *(P) Alpha SDA*, SDA–49; *(P) VAX SDA*, SDA–56
Page tables
displaying, *(P) Alpha SDA*, SDA–112, SDA–128; *(P) VAX SDA*, SDA–127, SDA–149
Page width and length
specifying in forms, *(S) Sys Mgr Essentials*, 13–42
PAGE_MANAGEMENT.EXE file
global symbols, *(P) VAX SDA*, SDA–65
page_protection data type, *(P) Interfaces*, B–14
/PAGE_TABLES qualifier, *(P) Alpha SDA*, SDA–128; *(P) VAX SDA*, SDA–149
Paging, *(S) Sys Mgr Tuning*, 15–4; *(S) Alpha Perform*, 5–4
average transfer size, *(S) Alpha Perform*, 11–6
backing store
paging files, *(S) Alpha Perform*, 11–7
section files, *(S) Alpha Perform*, 11–7
files, *(S) Alpha Perform*, 5–2, 6–15
adding, *(S) Alpha Perform*, 17–9
I/O
read, *(S) Alpha Perform*, 11–6
write, *(S) Alpha Perform*, 11–7
increased with vector processing, *(S) Sys Mgr Tuning*, 26–7
rates
Demand Zero Fault, *(S) Alpha Perform*, 10–4
Free List Fault, *(S) Alpha Perform*, 10–4
Global Valid Fault, *(S) Alpha Perform*, 10–4
Modified List Fault, *(S) Alpha Perform*, 10–4
System Fault, *(S) Alpha Perform*, 10–5
Write in Progress, *(S) Alpha Perform*, 10–4
symptoms
for disks, *(S) Alpha Perform*, 14–4
symptoms for disks, *(S) VAX Perform*, 4–29

Paging file process limit, *(S) Sys Mgr Essentials*, 6–43
Paging file sections, *(P) Concepts*, 19–20, 20–22
  global, *(P) Concepts*, 19–20, 20–21
Paging I/O
  See I/O
PAKs (Product Authorization Keys)
  DECnet for OpenVMS, *(S) DECnet Intro*, 1–5, 3–8; *(S) DECnet Mgmt*, 1–12, 2–17
  end node, *(S) DECnet Intro*, 3–10
  installing before using VMSINSTAL.COM command procedure, *(S) Sys Mgr Essentials*, 3–8
  installing DECnet for OpenVMS license, *(S) DECnet Mgmt*, 6–1
  loading in system startup, *(S) Sys Mgr Essentials*, 5–5
  preventing nodes from sharing, *(S) Sys Mgr Essentials*, 3–8
  registering DECnet for OpenVMS, *(S) DECnet Intro*, 3–1, 3–10
  registering for DECnet, *(S) Sys Mgr Tuning*, 21–12
  registering the DECnet for OpenVMS, *(S) DECnet Intro*, 3–14
  routing node, *(S) DECnet Intro*, 3–10
PALcode (privileged architecture library) code, *(P) Concepts*, 14–10, 22–3
PAN command, *(S) Sys Mgr Tuning*, 20–6
  in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–39
PAN keypad function, *(S) Sys Mgr Tuning*, 20–7; *(S) Sys Mgmt Util M-Z*, B–3
Paper
  See Printer paper and Stock
Paper jam
  pausing printer to fix, *(S) Sys Mgr Essentials*, 13–75
Paper shredders, *(S) Security*, 3–20
Parallel processing, *(P) Concepts*, 14–27
  initializing, *(P) Concepts*, 14–27
  subprocess
    creating, *(P) Concepts*, 14–27
    deleting, *(P) Concepts*, 14–27
  terminating, *(P) Concepts*, 14–27
  using semaphores, *(P) Concepts*, 14–28
  using spin locks, *(P) Concepts*, 14–27
Parameter (system) settings required for installation, *(S) DECamds*, A–3
Parameter files
  See also System parameters
  ALPHAVMSSYS.OLD, *(S) Sys Mgmt Util A-L*, 6–7
  ALPHAVMSSYS.PAR, *(S) Sys Mgmt Util A-L*, 6–7
  ALPHAVMSSYS.PAR (Alpha), *(S) Sys Mgr Tuning*, 14–3
Parameter files
  ALPHAVMSSYS.PAR (Alpha) (cont'd)
    initializing parameters at boot time, *(S) Sys Mgr Tuning*, 14–36
    role in the boot process, *(S) Sys Mgr Essentials*, 4–2
  AUTOGEN.PAR, *(S) Sys Mgmt Util A-L*, 6–7
  booting with alternate, *(S) Sys Mgr Essentials*, 4–7
  changing
    effects of, *(S) Sys Mgr Tuning*, 14–33
    with SYSGEN, *(S) Sys Mgr Tuning*, 14–33
    with SYSMAN, *(S) Sys Mgr Tuning*, 14–28
  common in a VMScluster environment, *(S) Sys Mgr Tuning*, 14–22
  creating new
    with SYSGEN, *(S) Sys Mgr Tuning*, 14–34
  default, *(S) Sys Mgr Essentials*, 4–6; *(S) Sys Mgr Tuning*, 14–3; *(S) Sys Mgmt Util A-L*, 6–7
  including in MODPARAMS.DAT file, *(S) Sys Mgr Tuning*, 14–22
  limitation on error checking in, *(S) Sys Mgr Tuning*, 14–19
  MODPARAMS.DAT, *(S) Sys Mgr Tuning*, 14–17
    sample, *(S) Sys Mgr Tuning*, 14–17
  multiple, with AUTOGEN, *(S) Sys Mgr Tuning*, 14–22
  VAXVMSSYS.OLD, *(S) Sys Mgmt Util A-L*, 6–7
  VAXVMSSYS.PAR, *(S) Sys Mgmt Util A-L*, 6–7
  VAXVMSSYS.PAR (VAX), *(S) Sys Mgr Tuning*, 14–3
    initializing active parameters at boot time, *(S) Sys Mgr Tuning*, 14–36
    role in the boot process, *(S) Sys Mgr Essentials*, 4–2
  writing, *(S) Sys Mgmt Util M-Z*, 5–33, 6–51
Parameter lists
  defaults for multiple file specifications, *(G) User*, 5–6
  multiple file specifications, *(G) User*, 5–6
Parameters, *(S) Sys Mgmt Util M-Z*, 2–4
  changing, *(S) Sys Mgmt Util M-Z*, 6–46
  debugger command procedure, *(P) Debugger*, 12–2, CD–59
  in DCL command lines, *(G) User*, 3–3, 3–4
  passing data to batch jobs with, *(G) User*, 16–5
  passing data to nested command procedures with, *(G) User*, 16–5
  passing to a startup command procedure, *(S) Sys Mgr Essentials*, 5–19
  passing to batch jobs, *(G) DCL N-Z*, DCLII–415
  passing to command procedures, *(G) DCL A-M*, DCLI–9, DCLI–53; *(S) Sys Mgmt Util A-L*, 12–7
  setting SCSI, *(G) V7.0 New Feat*, C–24
  specifying

Parameters
specifying (cont'd)
as character strings, *(G) User*, 16–3
as integers, *(G) User*, 16–3
as null values, *(G) User*, 16–4
as symbols, *(G) User*, 16–4
specifying for command procedures, *(G) DCL A-M*, DCLI–9
system parameters, *(S) Sys Mgmt Util M-Z*, C–1
using to pass data to command procedures, *(G) User*, 16–3
PARAMETERS command, *(S) Sys Mgr Essentials*, 2–11
in SYSMAN, *(S) Sys Mgr Tuning*, 14–25
summary, *(S) Sys Mgr Tuning*, 14–30
PARAMETERS DISABLE CHECKS command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–44
PARAMETERS ENABLE CHECKS command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–45
PARAMETERS SET command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–46
PARAMETERS SHOW command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–47
PARAMETERS USE command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–50
PARAMETERS WRITE command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–51
PARAMS.DAT file, *(S) Sys Mgmt Util A-L*, 6–6, 6–7
%PARCNT built-in symbol, *(P) Debugger*, 12–2, B–5
Parentheses ( )
as precedence operators, *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–17
Parent lock, *(P) Concepts*, 15–14
/PARENT qualifier, *(P) Alpha SDA*, SDA–38; *(P) VAX SDA*, SDA–46
Parity bit, *(P) File Appl*, 1–16
Parity data
dependability features, *(S) Dependable*, 8–26
Parity flag, *(P) I/O User*, 5–42
$PARSE macros
for processing wildcard characters, *(P) RMS Ref*, A–21
Parse service, *(P) RMS Ref*, RMS–69; *(P) File Appl*, 5–8 to 5–12
condition values, *(P) RMS Ref*, RMS–72
control block input fields, *(P) RMS Ref*, RMS–70
control block output fields, *(P) RMS Ref*, RMS–71
preparing for file search, *(P) RMS Ref*, A–20
preparing for wildcard character processing, *(P) RMS Ref*, RMS–70
program example, *(P) RMS Ref*, A–20
requirements for using, *(P) RMS Ref*, RMS–70
Partial sections, *(P) Concepts*, 20–26
/PARTICIPANTS qualifier, *(P) VAX SDA*, SDA–149
Partition, *(S) Sys Mgr Tuning*, 23–2
Partitioning groups, *(S) DECamds*, 1–7
Partitioning of cluster, *(S) VMScluster Sys*, 2–5, C–18
Partner programs
capturing retransmitted packets, *(S) VMScluster Sys*, F–37
Pascal, *(G) SW Overview*, 4–6; *(P) Environment*, 7–3, 7–9
data type declarations, *(P) Interfaces*, B–40
implementation table, *(P) Interfaces*, B–40
PASCAL compiler
generating reentrant code, *(P) DECthreads*, 4–1
Pascal program example
calling FDL$PARSE and FDL$RELEASE routines, *(P) File Appl*, 4–13
Passing mechanisms, *(P) Interfaces*, 1–9
by descriptor, *(P) Interfaces*, 2–15
code, *(P) Interfaces*, 1–10
by reference, *(P) Interfaces*, 2–14
by value, *(P) Interfaces*, 2–13
descriptor
definition, *(P) Calling Std*, 1–4
for arrays, *(P) Interfaces*, 2–18
for scalars, *(P) Interfaces*, 2–18
for strings, *(P) Interfaces*, 2–18
immediate value
definition, *(P) Calling Std*, 1–5
language extensions, *(P) Calling Std*, 2–5
reference
definition, *(P) Calling Std*, 1–5
$PASSWORD card, *(S) Sys Mgr Essentials*, 7–17
PASSWORD command, *(G) DCL N-Z*, DCLII–10 to DCLII–11
Password generators
obtaining initial password, *(S) Security*, 7–13
using to obtain initial password, *(S) Sys Mgr Essentials*, 11–2
when to require, *(S) Security*, 7–19
Password grabber programs, *(S) Security*, 3–14, 7–25
catching with auditing ACEs, *(S) Security*, 9–6
Password management
eliminating for networks, *(S) Security*, 12–5
encryption algorithms, *(S) Security*, 7–19
forced change, *(S) Security*, 7–18; *(S) Sys Mgr Essentials*, 11–4
guidelines for protecting, *(S) Sys Mgr Essentials*, 11–5
how to preexpire, *(S) Sys Mgr Essentials*, 11–3
length of passwords, *(S) Sys Mgr Essentials*, 11–4
password length, *(S) Security*, 7–19
password restrictions, *(S) Security*, 7–17

Password management (cont'd)
pre-expiring passwords, *(S) Security*, 7–13
reasons to assign system passwords, *(S) Sys Mgr Essentials*, 11–3
requiring generated passwords, *(S) Security*, 7–13
screening
against dictionary, *(S) Security*, 7–20
against history list, *(S) Security*, 7–21
setting the expiration for, *(S) Sys Mgr Essentials*, 11–4
setting up
console passwords, *(S) Security*, 7–16
expiration time, *(S) Security*, 7–17
primary passwords, *(S) Security*, 7–13
secondary passwords, *(S) Security*, 7–15
system passwords, *(S) Security*, 7–14
setting up initial passwords, *(S) Sys Mgr Essentials*, 11–2
when to use dual passwords, *(S) Sys Mgr Essentials*, 11–2
Password protection, *(G) User*, 2–17; *(S) Security*, 3–13, 7–22
avoiding detection, *(S) Security*, 3–11, 10–6
dialup retries, *(G) User*, 2–12; *(S) Security*, 3–9
proxy logins, *(S) Security*, 3–15
Passwords, *(G) SW Overview*, 3–14; *(S) Sys Mgmt Util M-Z*, 6–53
See also Security management
acceptable, *(G) User*, 2–4; *(S) Security*, 3–2
automatically generated, *(S) Security*, 3–10
avoiding password theft programs, *(G) User*, 2–18
avoiding use in file specification, *(S) DECnet Intro*, 2–3
chances to supply during dialups, *(S) Security*, 3–9
changing, *(G) User*, 2–3, 2–13; *(G) DCL N-Z*, DCLII–169; *(S) Security*, 3–9, 3–10
at login, *(G) User*, 2–4; *(S) Security*, 3–11
during login, *(G) User*, 2–16
expired, *(G) User*, 2–16; *(S) Security*, 3–12
frequency guidelines, *(G) User*, 2–4, 2–18; *(S) Security*, 3–14
/NEW_PASSWORD qualifier, *(S) Security*, 3–11
secondary, *(G) User*, 2–15; *(S) Security*, 3–11
using /NEW_PASSWORD qualifier, *(G) User*, 2–16
cluster membership management, *(S) Security*, 11–7
conditions required for SYSMAN, *(S) Sys Mgr Essentials*, 2–13
console, C2 system requirements, *(S) Security*, C–6
dialup retries, *(S) Security*, 3–9
Passwords (cont'd)
dual, *(G) User*, 2–5; *(S) Security*, 3–2, 7–13
encoding, *(S) Security*, 2–3
entering when logging in, *(S) Sys Mgr Essentials*, 2–10
expiration, *(G) User*, 2–3, 2–16; *(S) Security*, 3–12
failure to change, *(G) User*, 2–17; *(S) Security*, 3–12
first, *(G) User*, 2–4; *(S) Security*, 3–1
forced change, *(S) Security*, 3–12
for dynamic connection, *(S) DECnet Mgmt*, 2–29, 2–36
forgotten by user, *(S) Sys Mgr Essentials*, 6–23
for local area VMScluster, *(S) Sys Mgmt Util M-Z*, 6–15
format, *(S) Security*, 3–1
for VMScluster access
modifying, *(S) Sys Mgr Tuning*, 20–16
for VMScluster integrity, *(S) VMScluster Sys*, F–17, F–25
generated, *(G) User*, 2–13, 2–14, 2–15; *(S) Security*, 3–10
guessing, *(G) User*, 2–4; *(S) Security*, 3–1
guidelines for choosing, *(G) User*, 2–3
high-risk, *(G) User*, 2–3
history list, *(S) Security*, 3–2; *(S) Sys Mgr Essentials*, 11–2
incorrect, *(G) User*, 2–8; *(S) Security*, 3–6
InfoServer system, *(S) Sys Mgr Tuning*, 23–6
initial, *(G) User*, 2–4; *(S) Security*, 3–1, 7–13
length, *(G) User*, 2–3, 2–4, 2–13; *(S) Security*, 3–1
lifetime of, *(S) Security*, 3–9, 3–11
locked, *(G) User*, 2–7; *(S) Security*, 3–4, 7–8, 7–19
minimum length, *(S) Security*, 3–2, 7–19
modifying system, *(S) Sys Mgr Essentials*, 6–9
modifying user, *(S) Sys Mgr Essentials*, 6–13
multiple LAN configurations, *(S) VMScluster Sys*, 3–6
multiple systems and, *(S) Security*, 3–13
new, *(G) User*, 2–16; *(S) Security*, 3–11
null as choice for captive account, *(S) Security*, 7–8
omission in proxy login, *(G) User*, 19–7
open accounts and, *(G) User*, 2–7; *(S) Security*, 3–4
password grabber programs, *(S) Security*, 3–14
pre-expiring, *(S) Security*, 7–13
primary, *(G) User*, 2–5, 2–6; *(S) Security*, 3–2, 3–4, 7–13
protecting, *(G) User*, 2–17
reason for changing, *(G) User*, 19–10; *(S) Security*, 3–17, 3–19
receive, *(S) Security*, 12–16; *(S) DECnet Intro*, 3–21, 3–25, 3–34; *(S) DECnet Mgmt*, 2–29, 3–67

Passwords (cont'd)
restrictions, *(G) User*, 2–4; *(S) Security*, 3–2
retries, *(G) User*, 2–12
returning hash value, *(P) Sys Svc II*, SYS2–105
reuse, *(G) User*, 2–3, 2–4; *(S) Security*, 3–1
risky, *(S) Security*, 3–1
routing initialization, *(S) Security*, 12–14; *(S) DECnet Mgmt*, 1–10, 2–16, 2–29, 3–67
screening with site-specific filter, *(S) Security*, 7–22
secondary, *(G) User*, 2–5, 2–17; *(S) Security*, 3–2, 7–15; *(S) Sys Mgr Essentials*, 11–4
advantages, *(S) Security*, 7–15
changing, *(S) Security*, 3–11
changing expired, *(S) Security*, 3–12
entering, *(G) User*, 2–6; *(S) Security*, 3–4
managing, *(S) Security*, 7–15
secure, *(G) User*, 2–3
secure choices for, *(S) Security*, 3–1
secure terminal servers and, *(S) Security*, 3–14
setting, *(G) DCL N-Z*, DCLII–169
setting a new one, *(G) User*, 2–13
setting at login, *(G) DCL A-M*, DCLI–415
setting up VMScluster, *(S) VMScluster Sys*, 2–14
sharing, *(S) Security*, 3–13, 12–20
supplying during dialups, *(G) User*, 2–12
system, *(G) User*, 2–5; *(S) Security*, 3–2, 3–3; *(S) Sys Mgr Essentials*; 11–3
causing login failures, *(G) User*, 2–11; *(S) Security*, 3–8
dictionary, *(S) Sys Mgr Essentials*, 11–2
disadvantages, *(S) Security*, 7–15
entering, *(G) User*, 2–5
guidelines, *(S) Security*, 7–14
minimum length requirement, *(S) Security*, 7–19
modifying, *(S) Security*, 7–15
recommended change frequency, *(S) Security*, 7–18
setting up, *(S) Security*, 7–14
system dictionary of, *(S) Security*, 3–2
transmit, *(S) Security*, 12–16; *(S) DECnet Intro*, 3–21, 3–25; *(S) DECnet Mgmt*, 2–29, 3–67
types, *(S) Security*, 3–2
uniqueness for each account, *(S) Security*, 3–13
user, *(G) User*, 2–4; *(G) SW Overview*, 5–1; *(S) Security*, 2–3, 3–2
user guidelines, *(S) Security*, 3–1
verifying change of, *(G) User*, 2–13; *(S) Security*, 3–10
VMScluster membership management, *(S) VMScluster Sys*, 2–14
when account is created, *(S) Security*, 3–2
when forgotten prevents you from logging in, *(S) Sys Mgr Essentials*, 4–10
when to change, *(S) Security*, 3–2
Passwords (cont'd)
with SYSMAN, *(S) Sys Mgr Essentials*, 2–16
Pasteboards, *(P) Concepts*, 7–9; *(P) SMG$*, 1–4; *(P) Debugger*, 11–3
creating, *(P) Concepts*, 7–9
deleting, *(P) Concepts*, 7–9, 7–10
ID, *(P) Concepts*, 7–31
sharing, *(P) Concepts*, 7–31
Paste buffers, *(S) Sys Mgmt Util A-L*, A–5
PASTHRU mode, *(P) I/O User*, 5–9, 5–11, 5–26, 5–28
PATCH command, *(G) DCL N-Z*, DCLII–12
Patch text records
analyzing, *(G) DCL A-M*, DCLI–24
Patch utility (PATCH), *(G) SW Overview*, 4–8; *(P) Environment*, 11–1
Refer also to the *OpenVMS VAX Patch Utility Manual*
changing code in, *(G) DCL N-Z*, DCLII–12
invoking, *(G) DCL N-Z*, DCLII–12
Path blocks
See PBs
Path control parameters, *(S) DECnet Mgmt*, 3–52
for areas, *(S) DECnet Mgmt*, 3–54
Path names
abbreviating, *(P) Debugger*, 9–9
numeric, *(P) Debugger*, 9–9
relation to symbol, *(P) Debugger*, 9–8
syntax, *(P) Debugger*, 9–8
to specify scope, *(P) Debugger*, 3–23, 7–7, 9–7, 9–8
Paths
cost, *(S) DECnet Mgmt*, 2–21
definition, *(S) DECnet Mgmt*, 2–21
length, *(S) DECnet Mgmt*, 2–21
lost connection, *(S) DECnet Intro*, 3–4, 4–11
low-cost, *(S) DECnet Intro*, 1–3
routing, *(S) DECnet Intro*, 1–2
PATHWORKS, *(S) TCP/IP*, 1–4; *(P) Environment*, 1–4
backup, *(G) SW Overview*, 6–23
client/server environment, *(G) SW Overview*, 2–7; *(P) Environment*, 3–2
clients, *(G) SW Overview*, 6–18
environments, *(G) SW Overview*, 6–18
eXcursion for Windows product, *(G) SW Overview*, 6–23
Macintosh clients, *(G) SW Overview*, 2–8; *(P) Environment*, 3–3
network connectivity, *(G) SW Overview*, 1–6
networking connections to Macintosh clients, *(G) SW Overview*, 6–24
networking connections to PC clients, *(G) SW Overview*, 6–24
network management, *(G) SW Overview*, 6–24
network transports, *(G) SW Overview*, 1–9, 6–18, 6–24

PATHWORKS (cont'd)
OpenVMS management servers, *(G) SW Overview*, 6–23
OpenVMS servers, *(G) SW Overview*, 1–11, 2–8, 6–20; *(P) Environment*, 3–3
PC clients, *(G) SW Overview*, 1–11, 2–8, 6–18; *(P) Environment*, 3–3
products, *(G) SW Overview*, 6–18
servers, *(G) SW Overview*, 6–18
startup restrictions, *(S) Sys Mgr Tuning*, 23–12
terminal emulation, *(G) SW Overview*, 6–23
windowing services, *(G) SW Overview*, 6–23
PATHWORKS V5 for OpenVMS (LAN Manager), *(G) SW Overview*, 6–18
Pattern tests, *(S) DECnet Mgmt Util*, 4–7, 4–12
Paused queue status, *(S) Sys Mgr Essentials*, 13–51
Pause program execution, *(P) LIB$*, LIB–384
Pausing an output queue, *(S) Sys Mgr Essentials*, 13–75
to align position of print for preprinted form, *(S) Sys Mgr Essentials*, 13–75, 13–77
to change position of print, *(S) Sys Mgr Essentials*, 13–75
Pausing queues, *(G) DCL N-Z*, DCLII–394
Pausing queue status, *(S) Sys Mgr Essentials*, 13–51
PBs (path blocks), *(P) Alpha SDA*, SDA–94; *(P) VAX SDA*, SDA–105
PC (program counter)
SHOW CALLS display, *(P) Debugger*, CD–247
PCA, *(G) SW Overview*, 6–15, 7–5; *(P) Environment*, 9–11
See also Performance and Coverage Analyzer
PCA performance testing, *(S) Dependable*, 8–59
PCBB register, *(P) Alpha SDA*, SDA–16
displaying, *(P) Alpha SDA*, SDA–87; *(P) VAX SDA*, SDA–96
PCBB symbol, *(P) Alpha SDA*, SDA–16
/PCB qualifier, *(P) Alpha SDA*, SDA–128; *(P) VAX SDA*, SDA–149
PCBs (process control blocks), *(P) Alpha SDA*, SDA–16, SDA–156; *(P) VAX SDA*, SDA–180
displaying, *(P) Alpha SDA*, SDA–128; *(P) VAX SDA*, SDA–149, SDA–150
hardware, *(P) Alpha SDA*, SDA–130; *(P) VAX SDA*, SDA–152
specifying the address of, *(P) Alpha SDA*, SDA–72, SDA–127
PCB symbol, *(P) Alpha SDA*, SDA–16; *(P) VAX SDA*, SDA–18
%PC built-in symbol
See PC symbol
PCF (product configuration file), *(S) Sys Mgr Essentials*, 3–20
command to create, *(S) Sys Mgr Essentials*, 3–23
PCF (product configuration file) (cont'd)
command to input, *(S) Sys Mgr Essentials*, 3–30
command to output, *(S) Sys Mgr Essentials*, 3–30
creating before installation, *(S) Sys Mgr Essentials*, 3–22
creating during installation, *(S) Sys Mgr Essentials*, 3–30
naming, *(S) Sys Mgr Essentials*, 3–23
use existing, *(S) Sys Mgr Essentials*, 3–30
PCs
See Personal computers
PCs (program counters), *(S) DECamds*, 3–21; *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18
built-in symbol (%PC), *(P) Debugger*, 8–22, B–4
content of, *(P) Debugger*, 6–5, 8–19
EXAMINE/INSTRUCTION command, *(P) Debugger*, 11–9, 11–17
EXAMINE/OPERANDS command, *(P) Debugger*, 8–19, 15–9
EXAMINE/SOURCE command, *(P) Debugger*, 10–4, 11–6, 11–18, 11–21
examining, *(P) Debugger*, 8–19, 15–9
in a crash dump, *(P) Alpha SDA*, SDA–18; *(P) VAX SDA*, SDA–19
scope, *(P) Debugger*, 3–23, 9–7
SHOW CALLS display, *(P) Debugger*, 6–7
PCSI$CONFIGURATION, *(S) Sys Mgr Essentials*, 3–23
PC symbol, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18
PDFs (product description files), *(S) Sys Mgr Essentials*, 3–20
/PD qualifier, *(P) Alpha SDA*, SDA–49
PDSCs (procedure descriptors), *(P) Calling Std*, 3–3
for bound procedures, *(P) Calling Std*, 3–42
for null frame procedures, *(P) Calling Std*, 3–20
for register frame procedures, *(P) Calling Std*, 3–15
for stack frame procedures, *(P) Calling Std*, 3–5
PDT (port descriptor table), *(P) Alpha SDA*, SDA–124; *(P) VAX SDA*, SDA–141
PDT symbol, *(P) VAX SDA*, SDA–18
PEDRIVER port driver
communications for LANs, *(S) VMScluster Sys*, 1–6
congestion control, *(S) VMScluster Sys*, G–1
HELLO multicasts, *(S) VMScluster Sys*, G–2
implementing the NISCA protocol, *(S) VMScluster Sys*, F–4
preferred channel, *(S) VMScluster Sys*, G–3
retransmission, *(S) VMScluster Sys*, F–20
SDA monitoring, *(S) VMScluster Sys*, F–13

Pending bad block log file, *(P) File Appl*, 1–8
BADLOG.SYS, *(S) Sys Mgr Tuning*, A–9
reserved file, *(S) Sys Mgr Tuning*, A–9
Pending jobs
requeuing, *(S) Sys Mgr Essentials*, 13–73
troubleshooting, *(S) Sys Mgr Essentials*, 13–79
Pending job status
definition, *(S) Sys Mgr Essentials*, 13–69
deleting a job in, *(S) Sys Mgr Essentials*, 13–74
determining whether a job is in, *(S) Sys Mgr Essentials*, 13–79
inducing with STOP/QUEUE/REQUEUE command, *(S) Sys Mgr Essentials*, 13–73
requeuing a job in, *(S) Sys Mgr Essentials*, 13–73
People-proof covers, *(S) Dependable*, 5–7
Percent sign (%)
See also Asterisk (*)
as switchhook character in Phone, *(G) User*, 7–3
as wildcard character, *(G) User*, 4–10
using with tape volumes, *(S) Sys Mgr Essentials*, 9–16
Performance, *(P) File Appl*, 3–1, 9–7 to 9–9
See also Tuning
ACL length and, *(S) Security*, 8–4
application software and dependable computing, *(S) Dependable*, 4–13
data transfer rates, *(G) V7.0 New Feat*, C–7
deferred-write option, *(P) File Appl*, 3–28
diagnostic strategy, *(S) VAX Perform*, 4–1
overview, *(S) Alpha Perform*, 12–1
disk, *(S) Sys Mgr Essentials*, 8–28
displaying availability and use of resources, *(G) DCL N-Z*, DCLII–297
effect of compression, *(P) File Appl*, 3–20
effect of file extension on, *(S) Sys Mgr Tuning*, 16–7
highwater marking and, *(S) Security*, 8–29
I/O in VMScluster, *(P) File Appl*, 3–33
importance of correct page file size, *(S) Sys Mgr Tuning*, 15–8
importance of correct swap file size, *(S) Sys Mgr Tuning*, 15–9
importance of sufficient hardware capacity, *(S) Sys Mgr Tuning*, 16–6
improving
decompressing system libraries, *(S) Sys Mgr Tuning*, 16–6
designing efficient applications, *(S) Sys Mgr Tuning*, 16–4
disabling high-water marking, *(S) Sys Mgr Tuning*, 16–7
encouraging batch processing, *(S) Sys Mgr Tuning*, 16–4
for vector processing with batch queues, *(S) Sys Mgr Tuning*, 26–7
Performance
improving (cont'd)
installing frequently used images, *(S) Sys Mgr Tuning*, 16–7, 16–9
moving page and swap files off system disk, *(S) Sys Mgr Tuning*, 15–5
options for, *(S) Sys Mgr Tuning*, 16–6
reducing system disk I/O, *(S) Sys Mgr Tuning*, 16–8
relinking images, *(S) Sys Mgr Tuning*, 16–7
restricting the number of interactive users, *(S) Sys Mgr Tuning*, 16–4
restricting user login hours, *(S) Sys Mgr Tuning*, 16–4
setting RMS file extend parameters, *(S) Sys Mgr Tuning*, 16–7
slicing shareable images, *(S) Sys Mgr Tuning*, 16–12
tuning the system, *(S) Sys Mgr Tuning*, 16–4
with AUTOGEN feedback, *(S) Sys Mgr Tuning*, 14–10
improving I/O with DECram, *(G) SW Overview*, 7–8
improving with null keys, *(P) File Appl*, 3–22
improving with SHR argument, *(P) RMS Ref*, A–25
in a VMScluster, *(P) File Appl*, 3–32
information database, *(S) Alpha Perform*, 7–7
linker image optimizations, *(P) Linker*, 1–3
load balancing on public volumes, *(S) Sys Mgr Essentials*, 8–9
maintaining system, *(G) SW Overview*, 3–11
management
definition, *(S) Alpha Perform*, 1–1
information database, *(S) Alpha Perform*, 7–7
strategy, *(S) Alpha Perform*, 1–4
utilities, *(S) Alpha Perform*, 1–3
work load, *(S) Alpha Perform*, 1–3
management tools, *(G) SW Overview*, 7–9
monitoring, *(S) Sys Mgr Tuning*, 16–2
tools used for, *(S) Sys Mgr Tuning*, 16–2
monitoring and tuning, *(G) SW Overview*, 2–15, 3–10
network consulting from Digital, *(S) Dependable*, 10–7
of system and personnel, *(S) Dependable*, 4–13 to 4–14
of vector processing, *(S) Sys Mgr Tuning*, 26–4
operating systems and dependable computing environments, *(S) Dependable*, 4–12
optimizing, *(P) Linker*, 1–3, 1–15
optimizing by customizing data collection, *(S) DECamds*, 5–14
recommendations for a VMScluster environment, *(P) File Appl*, 3–33

Performance (cont'd)
SCSI storage, *(G) V7.0 New Feat*, C–6
security-auditing impact, *(S) Security*, 9–12
testing for disks, *(S) Sys Mgr Essentials*, 8–8
tradeoffs
in dependable computing environments, *(S) Dependable*, 4–3 to 4–5
network level, *(S) Dependable*, 4–11
using Prolog 3, *(P) File Appl*, 3–20
virtual I/O cache, *(G) SW Overview*, 3–11
Performance analysis, *(P) Modular Proc*, 4–8
Performance and Coverage Analyzer (PCA)
alignment, *(P) Concepts*, 22–3
Performance complaints
evaluating, *(S) VAX Perform*, 1–5
traced to hardware problems, *(S) VAX Perform*, 1–6
traced to MWAIT state, *(S) VAX Perform*, 1–6
traced to unrealistic expectations, *(S) VAX Perform*, 1–7
Performance management, *(S) Sys Mgr Tuning*, 16–1
approaching as management of resources, *(S) VAX Perform*, 3–1
choosing a workload management strategy, *(S) Sys Mgr Tuning*, 16–3
considering hardware capacity, *(S) Sys Mgr Tuning*, 16–6
definition, *(S) VAX Perform*, 1–1
distributing work load, *(S) Sys Mgr Tuning*, 16–4
evaluating tuning success, *(S) Sys Mgr Tuning*, 16–6
installing images, *(S) Sys Mgr Tuning*, 16–9
knowing your work load, *(S) Sys Mgr Tuning*, 16–2
options for, *(S) Sys Mgr Tuning*, 16–6
system tuning, *(S) Sys Mgr Tuning*, 16–4
tasks, *(S) Sys Mgr Tuning*, 16–1
using MONITOR, *(S) Sys Mgr Tuning*, 18–39
with vector processing, *(S) Sys Mgr Tuning*, 26–7
Performance measurement routine, *(P) Concepts*, 6–17
Performance requirements, *(G) V7.0 New Feat*, D–10
Period (.)
contents-of operator, *(P) Debugger*, 8–6, 8–19, B–8
current entity, *(P) Debugger*, 8–8, 8–13, B–6
Periodically waking processes, *(S) Alpha Perform*, 6–14
watchdog, *(S) Alpha Perform*, 6–14
Permanent databases, *(S) DECnet Mgmt*, 1–13, 3–2, 5–34
considerations, *(S) DECnet Mgmt*, 5–34
copying node entries, *(S) DECnet Mgmt*, 3–18
Permanent databases (cont'd)
copying using DCL COPY command, *(S) DECnet Mgmt*, 3–21
network, *(S) Sys Mgr Tuning*, 21–11; *(S) DECnet Intro*, 3–10, 3–11, 3–18
proxy, *(S) DECnet Intro*, 3–35
Permanent mailboxes
See Mailboxes
Per-process common areas, *(P) Concepts*, 2–6
Personal computers
connection to network, *(S) DECnet Intro*, 1–6, 3–27
serving corporate data to PCs, *(S) Dependable*, 3–5
Personal login command procedures, *(G) User*, 15–45
in captive accounts, *(G) User*, 15–46
Personnel
analyzing options, *(S) Dependable*, 3–15 to 3–16
building block, *(S) Dependable*, 1–15 to 1–16
cross training, *(S) Dependable*, 1–4, 5–7
at CSC data center, *(S) Dependable*, 11–6
Digital consulting support packages, *(S) Dependable*, 10–1
environment, *(S) Dependable*, 5–5
role boundaries, *(S) Dependable*, 5–7
sensitive treatment of, *(S) Dependable*, 3–16, 11–6, 11–9
staffing tradeoffs, *(S) Dependable*, 4–14
training and testing, *(S) Dependable*, 3–12
training programmers, *(S) Dependable*, 3–10
Personnel productivity, *(S) Dependable*, 4–13 to 4–14
Per-thread context, *(P) DECthreads*, 2–13
deleting key, *(P) DECthreads*, pthread–76
generating key value, *(P) DECthreads*, pthread–74
generating key value for, *(P) DECthreads*, tis–12, E–52, G–57
obtaining, *(P) DECthreads*, pthread–71, tis–11, E–54, G–54
setting, *(P) DECthreads*, pthread–109, tis–35, E–55, G–81
uses for, *(P) DECthreads*, pthread–74, tis–12, E–52, G–57
PEXlib, *(P) Environment*, 2–6
PEX protocol, *(P) Environment*, 2–6
PFCDEFAULT system parameter
overriding default value, *(P) Linker*, LINK–47
PFMGBL privilege, *(S) Security*, 5–15
PFN (page frame number), *(P) Concepts*, 19–5
PFN database, *(P) Alpha SDA*, SDA–114, SDA–116; *(P) VAX SDA*, SDA–127
displaying, *(P) Alpha SDA*, SDA–116; *(P) VAX SDA*, SDA–131

PFNMAP privilege, *(S) Security*, 5–15, A–12
PFRATH system parameter
  page faulting, *(S) VAX Perform*, 2–7, 3–5
PFRATL system parameter
  page faulting, *(S) VAX Perform*, 2–7
PGFIPLHI bugcheck, *(P) Alpha SDA*, SDA–27; *(P) VAX SDA*, SDA–23
PGFLQUOTA process limit, *(S) Sys Mgr Essentials*, 6–43
  limiting page file usage with, *(S) Sys Mgr Tuning*, 15–9
  minimum recommended value, *(S) Sys Mgr Tuning*, 15–9
  value for efficient backups, *(S) Sys Mgr Essentials*, 10–10
Phase III nodes, *(S) DECnet Mgmt*, 2–16
Phase II nodes, *(S) DECnet Mgmt*, 2–16
Phase IV nodes, *(S) DECnet Mgmt*, 2–16
  end node, *(S) DECnet Mgmt*, 2–17
  node address, *(S) DECnet Mgmt*, 2–18
  router, *(S) DECnet Mgmt*, 2–17
/PHD qualifier, *(P) Alpha SDA*, SDA–128; *(P) VAX SDA*, SDA–149
PHDs (process headers), *(P) Alpha SDA*, SDA–156; *(P) VAX SDA*, SDA–180
  displaying, *(P) Alpha SDA*, SDA–128; *(P) VAX SDA*, SDA–149
PHD symbol, *(P) Alpha SDA*, SDA–16; *(P) VAX SDA*, SDA–18
PHIGS, *(G) SW Overview*, 6–16; *(P) Environment*, 2–6
PHONE$SERVER account
  enabling default access, *(S) DECnet Mgmt*, 2–26, 5–3, 5–6
PHONE (Phone utility)
  See Phone utility
PHONE command, *(G) DCL N-Z*, DCLII–13
  in network operations, *(S) DECnet Intro*, 2–11
  using over the network, *(S) DECnet Intro*, 2–10
PHONE objects, *(S) DECnet Mgmt*, 2–6, 2–26, 3–60
  PHONE$SERVER account
    default access, *(S) DECnet Mgmt*, 5–3, 5–6
Phone utility (PHONE)
  commands, *(G) User*, 7–4
  default access account, *(S) DECnet Intro*, 3–13
  network operations, *(S) DECnet Intro*, 2–2, 2–10, 2–11, 4–11
  qualifiers, *(G) User*, 7–3
  switchhook character (%) in, *(G) User*, 7–3
Physical addresses, *(S) DECnet Mgmt*, 1–6; *(S) DECnet Mgmt Util*, 1–9, 1–10
PHYSICAL ADDRESS parameter
  for LOOP CIRCUIT command, *(S) DECnet Mgmt*, 7–9
  for TRIGGER command, *(S) DECnet Mgmt*, 4–5
Physical dump, *(S) Sys Mgr Tuning*, 15–3
  compared to selective dump, *(S) Sys Mgr Tuning*, 15–3, 15–10
Physical I/O access, *(S) Security*, 5–4
Physical I/Os
  access checks, *(P) Concepts*, 9–6
  operations, *(P) Concepts*, 9–5
  privilege, *(P) Concepts*, 9–3, 9–5, 9–6
Physical Interconnect protocol
  See PI protocol
Physical memory, *(S) Alpha Perform*, 5–2
Physical mode, *(S) Sys Mgmt Util A-L*, 7–49
Physical names, *(P) Concepts*, 9–26
Physical Network, *(S) TCP/IP*, 2–3
/PHYSICAL qualifier, *(P) Alpha SDA*, SDA–49
  in Backup utility, *(S) Sys Mgmt Util A-L*, 7–49
Physical security, *(S) Security*, 1–3
  C2 systems and, *(S) Security*, C–6
  encrypting files, *(S) Security*, 8–27
  restricting system access, *(S) Security*, 8–1
  violation indicators, *(S) Security*, 10–2
  when logging out, *(S) Security*, 3–19
PHY_IO privilege, *(S) Security*, 5–7, A–12
PID (process identifier), *(S) DECamds*, 3–5
  CPU, *(S) DECamds*, 3–3
  I/O, *(S) DECamds*, 3–17
  memory, *(S) DECamds*, 3–11
  single process, *(S) DECamds*, 3–21
PID numbers, *(G) User*, C–12; *(P) Concepts*, 3–3, 3–5; *(P) Alpha SDA*, SDA–128
  and process context, *(G) User*, 18–2
  definition, *(P) Concepts*, 3–5, 3–8
  obtaining using F$PID lexical function, *(G) User*, 17–7
  referencing remote processes, *(P) Concepts*, 3–8
  SDA uses to extract correct index, *(P) VAX SDA*, SDA–148
  using with $GETJPI to return information about a process, *(P) Sys Svc I*, SYS1–427
PIDRIVER port driver
  communications for DSSI, *(S) VMScluster Sys*, 1–6
PIO (paging I/O), *(S) DECamds*, 3–24
  rate, *(S) DECamds*, 3–17
Pipeline quotas, *(S) DECnet Mgmt*, 2–24, 3–58; *(S) DECnet Mgmt Util*, 3–69
Pipelining model, *(P) DECthreads*, 1–6
PI protocol
  part of the SCA architecture, *(S) VMScluster Sys*, F–3
PIXELVISION, *(P) Environment*, 2–6
PL/I, *(P) Environment*, 7–3, 7–10
  data type declarations, *(P) Interfaces*, B–43
  DEC PL/I for OpenVMS Alpha, *(G) SW Overview*, 4–6
  implementation table, *(P) Interfaces*, B–43
  VAX PL/I, *(G) SW Overview*, 4–6

Placement of extends, *(P) File Appl*, 3–8
Planning system requirements for dependability, *(S) Dependable*, 2–1
Platforms
  Alpha, *(G) SW Overview*, 1–3
  VAX, *(G) SW Overview*, 1–3
Playback mode
  See Monitor utility
PLV (privileged library vector), *(P) Linker*, 4–11
PMAD Ethernet device, *(S) DECnet Mgmt*, 2–10
PMT option, *(P) Rec Mgmt Util*, 4–13
PNDRIVER port driver
  communications for CI, *(S) VMScluster Sys*, 1–6
Pointer retrieval, *(P) File Appl*, 9–7
Pointers
  64-bit support, *(P) 64-Bit Addr*, 1–8, 8–1
Pointer-type declarations, *(P) 64-Bit Addr*, 9–5
Pointer types, *(P) Debugger*, 3–20, 8–18
Point-to-point circuits, *(S) DECnet Mgmt*, 2–6
Point-to-point configurations, *(S) DECnet Mgmt*, 1–3, 1–8, 5–23
Point-to-point connections
  security, *(S) DECnet Mgmt*, 2–36, 3–67
Point-to-point DDCMP addressing, *(S) DECnet Mgmt*, 3–25
Point-to-point lines, *(S) DECnet Mgmt*, 2–12
Policies regarding system privileges, *(S) Dependable*, 3–14
Polling, *(S) DECnet Mgmt*, 1–8, 2–8
  LAN, *(S) DECamds*, 5–15
POLYCENTER Accounting Chargeback, *(G) SW Overview*, 7–5
POLYCENTER Capacity Planner, *(G) SW Overview*, 7–5, 7–9
POLYCENTER Framework, *(G) SW Overview*, 2–16, 6–17
POLYCENTER HSM for OpenVMS, *(G) SW Overview*, 7–5
  file shelving, *(G) SW Overview*, 2–14, 7–8
POLYCENTER management products, *(G) SW Overview*, 2–16, 6–16
POLYCENTER Performance Advisor, *(G) SW Overview*, 7–6, 7–9
POLYCENTER Performance Data Collector, *(G) SW Overview*, 7–9
POLYCENTER Performance Solution, *(G) SW Overview*, 2–15, 7–9
  capacity planner, *(S) VMScluster Sys*, 1–8
  chargeback accounting, *(S) VMScluster Sys*, 1–8
  data collector, *(S) VMScluster Sys*, 1–9
  performance advisor, *(S) VMScluster Sys*, 1–10
POLYCENTER Scheduler, *(G) SW Overview*, 7–6, 7–10
POLYCENTER Software Distribution Manager, *(G) SW Overview*, 2–16, 7–7
POLYCENTER Software Installation utility, *(G) SW Overview*, 3–7, 7–7; *(S) Sys Mgr Essentials*, 3–18
  commands and operations, *(S) Sys Mgr Essentials*, 3–19
  creating a PCF, *(S) Sys Mgr Essentials*, 3–22
  databases, *(S) Sys Mgr Essentials*, 3–20
  DCL interface, *(S) Sys Mgr Essentials*, 3–18
  DECwindows Motif interface, *(S) Sys Mgr Essentials*, 3–18
  exiting from DECwindows Motif, *(S) Sys Mgr Essentials*, 3–35
  getting help, *(S) Sys Mgr Essentials*, 3–35
  installing layered products, *(S) Sys Mgr Essentials*, 3–6
  installing software, *(S) Sys Mgr Essentials*, 3–27
  installing the OpenVMS Alpha operating system, *(S) Sys Mgr Essentials*, 3–2
  interfaces to use, *(S) Sys Mgr Essentials*, 3–18
  managing installed software, *(S) Sys Mgr Essentials*, 3–34
  preliminary steps, *(S) Sys Mgr Essentials*, 3–28
  PRODUCT command to run, *(S) Sys Mgr Essentials*, 3–18
  product configuration files, *(S) Sys Mgr Essentials*, 3–20
  registering products, *(S) Sys Mgr Essentials*, 3–27
  registering volume labels, *(S) Sys Mgr Essentials*, 3–33
  removing installed products, *(S) Sys Mgr Essentials*, 3–34
  starting the utility, *(S) Sys Mgr Essentials*, 3–18
  upgrading the OpenVMS Alpha operating system, *(S) Sys Mgr Essentials*, 3–2
  using a product database, *(S) Sys Mgr Essentials*, 3–26
  using to add or delete optional system files, *(S) Sys Mgr Essentials*, 5–2
POLYCENTER Software Installation utility (PRODUCT), *(S) Sys Mgmt Util M-Z*, 3–3
  See also PRODUCT command
  commands, *(S) Sys Mgmt Util M-Z*, 3–5
  invoking, *(S) Sys Mgmt Util M-Z*, 3–4
POLYCENTER System Watchdog, *(G) SW Overview*, 7–6, 7–10
POOLCHECK system parameter, *(S) VAX Perform*, 3–28; *(S) Alpha Perform*, 10–9
Pooled resource, *(S) Sys Mgr Essentials*, 6–3
Pool lists
  displaying contents, *(P) VAX SDA*, SDA–134
  statistics about, *(P) VAX SDA*, SDA–135

Pool management, *(S) Alpha Perform*, 10–9 to 10–10
  paged dynamic, *(S) Alpha Perform*, 6–18
/POP qualifier, *(P) Debugger*, CD–89, CD–197
Portability
  application, *(G) SW Overview*, 2–3; *(P) Environment*, 2–1
  developing programs, *(G) SW Overview*, 4–3
  POSIX applications, *(G) SW Overview*, 2–4, 4–3, 4–12; *(P) Environment*, 2–2, 2–4
  user, *(G) SW Overview*, 2–5, 5–1
  using SQL in applications, *(G) SW Overview*, 2–4; *(P) Environment*, 2–5
Portable applications, *(G) SW Overview*, 3–4
  on VAX and Alpha platforms, *(G) SW Overview*, 1–13, 4–3
Portable Character Set, *(G) V7.0 New Feat*, B–42
Port access mode, *(P) I/O User*, 2–9
Port communications, *(S) VMScluster Sys*, 1–5, C–19
Port descriptor tables
  See PDTs
Port drivers, *(S) VMScluster Sys*, 1–5, C–19
  displaying SDA information, *(P) Alpha SDA*, SDA–80; *(P) VAX SDA*, SDA–86
  error-log entries, *(S) VMScluster Sys*, C–27
Ports, *(S) TCP/IP*, 2–5
  application, *(S) Sys Mgmt Util A-L*, 13–10, 13–35, 13–37, 13–52
  characteristics, *(S) Sys Mgmt Util A-L*, 13–52
  counters, *(S) Sys Mgmt Util A-L*, 13–52
  creating with LATCP, *(S) Sys Mgmt Util A-L*, 13–9
  dedicated, *(S) Sys Mgmt Util A-L*, 13–10, 13–36, 13–52
  deleting with LATCP, *(S) Sys Mgmt Util A-L*, 13–20
  displaying characteristics of, *(S) Sys Mgmt Util A-L*, 13–53
  displaying information, *(G) DCL N-Z*, DCLII–356
  displaying information using LATCP, *(S) Sys Mgmt Util A-L*, 13–52
  displaying SDA information, *(P) Alpha SDA*, SDA–124; *(P) VAX SDA*, SDA–141
  failures, *(S) VMScluster Sys*, C–20
  limited, *(S) Sys Mgmt Util A-L*, 13–11, 13–36
  logical name of, *(S) Sys Mgmt Util A-L*, 13–11
  making connections from lines, *(S) DECnet Intro*, 3–4
  modifying characteristics of with LATCP, *(S) Sys Mgmt Util A-L*, 13–35
  name, *(S) Sys Mgmt Util A-L*, 13–35
  outgoing connection, *(S) Sys Mgmt Util A-L*, 13–53
  setting type of, *(S) Sys Mgmt Util A-L*, 13–10
  setting up LAT, *(S) Sys Mgr Essentials*, 13–14
Ports (cont'd)
  software controllable selection, *(S) VMScluster Sys*, 6–5
  target, *(S) Sys Mgmt Util A-L*, 13–54
  terminal, *(S) DECnet Intro*, 3–26
Port selection, *(P) I/O User*, 2–9
POSITION attribute, *(P) Rec Mgmt Util*, 4–7, 4–27, 4–28; *(P) File Appl*, 4–35
Position of print
  aligning for preprinted forms, *(S) Sys Mgr Essentials*, 13–75, 13–77
  changing, *(S) Sys Mgr Essentials*, 13–75, 13–76
Positive operator (+), *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–16
POSIX
  accessing the environment, *(G) SW Overview*, 5–2
  application development utilities, *(G) SW Overview*, 4–15
  callable interfaces, *(G) SW Overview*, 4–15
  commands, *(G) SW Overview*, 5–7
  complex utilities, *(G) SW Overview*, 4–14
  container file systems, *(G) SW Overview*, 5–10
  ed utility, *(G) SW Overview*, 5–12
  file commands and utilities, *(G) SW Overview*, 5–11
  files, *(G) SW Overview*, 5–10
  file specifications, *(G) SW Overview*, 5–10
  in DCL environment, *(G) SW Overview*, 4–14
  installation and management, *(G) SW Overview*, 3–12
  interactive interface, *(G) SW Overview*, 4–14
  internationalization tools, *(G) SW Overview*, 4–16
  OpenVMS environment, *(G) SW Overview*, 2–4, 3–4, 5–2
  pipes, *(G) SW Overview*, 4–14
  portable applications, *(G) SW Overview*, 2–4, 3–4, 4–3; *(P) Environment*, 2–2
  programming, *(G) SW Overview*, 4–12, 4–14; *(P) Environment*, 2–4
  real-time functions, *(G) SW Overview*, 4–16; *(P) Environment*, 2–5
  real-time interprocess communication, *(G) SW Overview*, 3–3
  shell, *(G) SW Overview*, 2–5, 4–14, 5–7
  sigwait service, *(P) DECthreads*, A–5
  standards, *(G) SW Overview*, 2–3, 5–2, A–1
  support of XPG3 BASE specifications, *(G) SW Overview*, 4–16
  system services, *(G) SW Overview*, 4–14; *(P) Environment*, 2–4
  use of ANSI C language, *(P) Environment*, 2–4
  using ISO C language, *(G) SW Overview*, 4–14
  using OpenVMS capabilities, *(G) SW Overview*, 4–13
  using RMS files, *(G) SW Overview*, 4–19
  utilities, *(G) SW Overview*, 2–5

POSIX (cont'd)
vi editor, *(G) SW Overview*, 5–12
POSIX 1003.1c (pthread) routines, *(P) DECthreads*, pthread–3
POSIX 1003.4a (Draft 4) pthread routines, *(P) DECthreads*, G–1
POS option, *(P) Rec Mgmt Util*, 4–20
PostScript output converter, *(G) DCL A-M*, DCLI–70
processing options, *(G) DCL A-M*, DCLI–73
PostScript printing, *(S) Sys Mgr Essentials*, 13–9
Power
electrical, *(S) Dependable*, 5–1
Power recovery
setting AST for, *(P) Sys Svc II*, SYS2–301
pow routine, *(P) Portable Math*, DPML–47, B–11
PPC protocol
part of NISCA transport protocol, *(S) VMScluster Sys*, F–3
PPD level
part of PPD protocol, *(S) VMScluster Sys*, F–3
PPD protocol
part of SCA architecture, *(S) VMScluster Sys*, F–3
PPL$ routines, *(P) Concepts*, 14–27
PPL$SPAWN routine, *(P) Concepts*, 14–27
PPP (Point-to-Point protocol), *(S) TCP/IP*, 2–7
PQL_DWSDEFAULT parameter, *(S) Alpha Perform*, 6–2
PQL_DWSEXTENT parameter, *(S) Alpha Perform*, 6–2
PQL_DWSQUOTA parameter, *(S) Alpha Perform*, 6–2
PRBR register
displaying, *(P) Alpha SDA*, SDA–87
PRBR symbol, *(P) Alpha SDA*, SDA–16
PRCLM (Process limit)
job quotas in use, *(S) DECamds*, 3–25
PRCLM process limit, *(S) Sys Mgr Essentials*, 6–43
Precedence operators, *(P) Alpha SDA*, SDA–13
parentheses used as, *(P) VAX SDA*, SDA–17
Predecessor
See Logical predecessor
Predefined logical name
LNM$FILE_DEV, *(P) Concepts*, 10–14
/PREDEFINED qualifier
on ACTIVATE BREAK command, *(P) Debugger*, CD–10
on ACTIVATE TRACE command, *(P) Debugger*, CD–12
on CANCEL ALL command, *(P) Debugger*, CD–21
on CANCEL BREAK command, *(P) Debugger*, CD–23
on CANCEL TRACE command, *(P) Debugger*, CD–37
/PREDEFINED qualifier (cont'd)
on DEACTIVATE BREAK command, *(P) Debugger*, CD–54
on DEACTIVATE TRACE command, *(P) Debugger*, CD–57
on SHOW BREAK command, *(P) Debugger*, CD–245
on SHOW TRACE command, *(P) Debugger*, CD–291
Predictive sizing
consulting from Digital, *(S) Dependable*, 10–1
Preferred channels, *(S) VMScluster Sys*, G–3
Preferred path specification, *(S) VMScluster Sys*, 6–5
Prefix list
displaying on Alpha systems, *(S) Sys Mgmt Util M-Z*, 6–42
setting on Alpha systems, *(S) Sys Mgmt Util M-Z*, 6–39
Preparing for installation, *(S) DECamds*, A–1
Preserving character case, *(S) TCP/IP*, 5–2
Preventing autostart queues from starting, *(S) Sys Mgr Essentials*, 13–54
%PREVIOUS_PROCESS built-in symbol, *(P) Debugger*, 14–12
%PREVIOUS_SCOPE_ENTRY built-in symbol, *(P) Debugger*, B–11
%PREVIOUS_TASK built-in symbol, *(P) Debugger*, 16–15
%PREVLOC built-in symbol, *(P) Debugger*, 8–8, 8–13, B–6
Primary attributes, *(P) Rec Mgmt Util*, 4–1; *(P) File Appl*, 4–9
Primary bootstrap image
definition, *(S) Sys Mgr Essentials*, 4–17
role in boot process, *(S) Sys Mgr Essentials*, 4–2
Primary data record, *(P) Rec Mgmt Util*, 1–3
PRIMARY day
defining for accounts, *(S) Sys Mgr Essentials*, 6–27
Primary dependability strategies
concepts, *(S) Dependable*, 1–10
Primary exception vector, *(P) Concepts*, 13–24
Primary handler, *(P) Debugger*, 13–22
Primary index structure, *(P) Rec Mgmt Util*, 1–3
Primary key, *(P) Rec Mgmt Util*, 2–12
Primary loader, *(S) DECnet Mgmt*, 4–2
Primary page cache, *(S) Alpha Perform*, 5–1, 5–2
Primary page file, *(S) Sys Mgr Tuning*, 15–5
location requirement, *(S) Sys Mgr Tuning*, 16–8
Primary processors, *(S) Sys Mgr Tuning*, 26–2
Primary record structures, *(P) File Appl*, 10–18
Primary sections
ordering requirement, *(P) Rec Mgmt Util*, 5–1

Primary swap file, *(S) Sys Mgr Tuning*, 15–5
Prime number search example, *(P) DECthreads*, 6–1
PRIMITIVE_IO.EXE file
  global symbols, *(P) VAX SDA*, SDA–65
Principles of dependable systems, *(S) Dependable*, 2–1
  See also Rules to remember for dependable computing
  continuous improvement process, *(S) Dependable*, 2–1
  determining requirements, *(S) Dependable*, 2–4
PRINT carriage control, *(P) Rec Mgmt Util*, 2–3, 4–32
PRINT command, *(G) User*, 4–16 to 4–19; *(G) DCL N-Z*, DCLII–14 to DCLII–25
  bypassing symbiont formatting, *(S) Sys Mgr Essentials*, 13–44
  files, *(G) DCL N-Z*, DCLII–14
  in Mail, *(G) User*, 6–16
  overriding default form-feed options with, *(S) Sys Mgr Essentials*, 13–44
  preventing users from executing, *(S) Sys Mgr Essentials*, 13–53
  procedure in batch job log, *(G) DCL N-Z*, DCLII–228
  processing of, *(S) Sys Mgr Essentials*, 13–2
  specifying a form, *(S) Sys Mgr Essentials*, 13–42
  specifying banner pages, *(S) Sys Mgr Essentials*, 13–60
  specifying characteristics, *(S) Sys Mgr Essentials*, 13–28
  specifying job retention, *(S) Sys Mgr Essentials*, 13–74
  specifying scheduling priority, *(S) Sys Mgr Essentials*, 13–72
  specifying setup and page setup modules, *(S) Sys Mgr Essentials*, 13–67
Printer device widths, *(P) Concepts*, 7–6
Printer paper
  controlling with forms, *(S) Sys Mgr Essentials*, 13–42, 13–64
  pausing to align, *(S) Sys Mgr Essentials*, 13–75
  sheet feed, *(S) Sys Mgr Essentials*, 13–62
  specifying stock, *(S) Sys Mgr Essentials*, 13–62
  specifying width, *(S) Sys Mgr Essentials*, 13–61
Printers
  C2 systems and, *(S) Security*, C–9
  configuring in a LAT environment, *(S) Sys Mgmt Util A-L*, 13–10, 13–35
  controlling functions of, *(S) Sys Mgr Essentials*, 13–44
  default security elements, *(S) Security*, 5–6
  LAT
    See LAT software, printers
  managing
    tasks for, *(S) Sys Mgr Essentials*, 7–13
Printers (cont'd)
  setting characteristics, *(S) Sys Mgr Essentials*, 7–13, 13–14
    in system startup, *(S) Sys Mgr Essentials*, 5–12, 7–13
  setting up, *(S) Sys Mgr Essentials*, 7–9
  setting up before creating queues, *(S) Sys Mgr Essentials*, 13–14
  spooled, *(S) Sys Mgr Essentials*, 13–14
    definition, *(S) Sys Mgr Essentials*, 7–14
    despooling, *(S) Sys Mgr Essentials*, 7–15
    recommended use, *(S) Sys Mgr Essentials*, 7–14
    requirement, *(S) Sys Mgr Essentials*, 7–13
    sample configuration, *(S) Sys Mgr Essentials*, 13–13
    spooling, *(S) Sys Mgr Essentials*, 7–14
    testing spooling of, *(S) Sys Mgr Essentials*, 7–16
  troubleshooting, *(S) Sys Mgr Essentials*, 13–78
Print format options
  See also FAB$V_PRN option
  for VFC records with 2-byte control area, *(P) RMS Ref*, 4–25
Print forms
  See Forms
Printing
  distributed, *(S) Sys Mgr Essentials*, 13–13
  files over the network, *(S) DECnet Intro*, 2–6
  from applications using spooled printers, *(S) Sys Mgr Essentials*, 7–14
  from a private volume, *(G) User*, 12–2
  job status, *(S) Sys Mgr Essentials*, 13–69
  landscape, *(G) User*, 4–19
  PostScript, *(S) Sys Mgr Essentials*, 13–9
  remotely, *(S) Sys Mgr Essentials*, 13–13
  resuming at a specified position, *(S) Sys Mgr Essentials*, 13–75, 13–76, 13–77
  test results, *(S) DECnet Mgmt Util*, 4–4, 4–6, 4–8, 4–11
Print jobs, *(G) User*, 4–16
  See also Batch jobs
  delaying, *(G) User*, 4–19
  executing, *(G) User*, 4–17
  list of DCL commands to use with, *(G) User*, 4–19
  obtaining multiple copies of, *(G) User*, 4–19
  priorities, *(G) User*, 4–17
  queue information, *(G) User*, 4–17
Print operations, *(G) SW Overview*, 3–11
Print queues, *(G) V7.0 New Feat*, 3–30; *(P) Rec Mgmt Util*, 4–22
  See also Queue managers
  assigning unique name to, *(S) VMScluster Sys*, 7–7
  controlling, *(G) User*, 4–19
  initializing, *(S) VMScluster Sys*, 7–8

Print queues (cont'd)
sample configuration, *(S) VMScluster Sys*, 7–6
setting up clusterwide, *(S) VMScluster Sys*, 7–6
starting, *(S) VMScluster Sys*, 7–8
Print queuing system
See Batch and print queuing system
PRINT/REMOTE command
in network operations, *(S) DECnet Intro*, 2–6
using for remote files, *(S) DECnet Intro*, 2–6
Print Symbiont Modification routines
See PSM routines
Print symbionts
See Symbionts
PRINT_ON_CLOSE attribute, *(P) Rec Mgmt Util*, 4–22
Priority, *(S) Sys Mgr Essentials*, 6–2, 6–31
base, *(S) Sys Mgr Essentials*, 6–2, 6–31; *(S) Alpha Perform*, 6–20
choosing for a batch queue, *(S) Sys Mgr Essentials*, 13–30
effect of changing, *(S) Sys Mgr Essentials*, 13–6
specifying for a batch queue, *(S) Sys Mgr Essentials*, 13–29
specifying for a queue, *(S) Sys Mgr Essentials*, 13–19
boosting, *(S) Alpha Perform*, 9–6
job scheduling, *(S) Sys Mgr Essentials*, 13–72
changing for a job, *(S) Sys Mgr Essentials*, 13–72, 13–73
display on banner pages, *(S) Sys Mgr Essentials*, 13–35, 13–37, 13–40, 13–41
specifying for a job, *(S) Sys Mgr Essentials*, 13–70, 13–72
modifying processes, *(G) DCL N-Z*, DCLII–177
obtaining for thread, *(P) DECthreads*, E–74, G–52
process, *(S) DECamds*, 3–21
process fix, *(S) DECamds*, 4–1
setting for thread, *(P) DECthreads*, E–79, E–81, G–77, G–79
specifying for batch jobs, *(G) DCL N-Z*, DCLII–416
specifying for detached processes, *(G) DCL N-Z*, DCLII–64
specifying for processes, *(P) Sys Svc II*, SYS2–303
specifying for subprocesses, *(G) DCL N-Z*, DCLII–64
task or thread, *(P) Debugger*, 16–16, 16–20
Priority attribute, *(P) DECthreads*, E–24, E–31, G–11, G–19
Priority inversion
avoiding, *(P) DECthreads*, E–59
how to avoid, *(P) DECthreads*, 3–7
Priority of task or thread, *(P) Debugger*, 3–27
/PRIORITY qualifier, *(P) Debugger*, CD–216, CD–288
Private disk file section
create and map, *(P) Sys Svc I*, SYS1–204
Private LAN transport security, *(S) DECamds*, 1–3
Private page frame
create and map, *(P) Sys Svc I*, SYS1–232
Private sections
definition, *(P) Concepts*, 19–13, 20–13
Private volumes, *(S) Sys Mgr Essentials*, 8–9
Privileged accounts, *(S) Security*, 8–14
Privileged architecture library
See PALcode
Privileged images, *(S) Sys Mgr Tuning*, 16–10, 16–14
Privileged library vector
See PLV
Privileged shareable images
creating, *(P) Concepts*, 18–1
declaring universal symbols in, *(P) Linker*, 4–11
definition, *(P) Concepts*, 18–1
protecting, *(P) Linker*, LINK–24
protecting image sections in, *(P) Linker*, LINK–59
Privilege mode
recommended for logical names of system components, *(S) Sys Mgr Essentials*, 5–9
Privileges, *(S) Sys Mgmt Util M-Z*, 2–6; *(P) Concepts*, 10–9
ACNT, *(S) Security*, A–1
affecting object access, *(S) Security*, 4–11
all, *(S) Sys Mgr Essentials*, 6–4
All category, *(S) Security*, 8–12, C–5
allocate terminal, *(P) Debugger*, 13–14
allowing nonprivileged users to run programs that require, *(S) Sys Mgr Tuning*, 16–14
ALLSPOOL, *(S) Security*, A–2
ALTPRI, *(S) Security*, A–2
assigning to installed images, *(S) Sys Mgmt Util A-L*, 11–9
assigning to known images, *(S) Sys Mgmt Util A-L*, 11–7
AUDIT, *(S) Security*, A–2
auditing use of, *(S) Security*, 3–19, 9–7
authorized process, *(S) Security*, 4–5, 8–12
BUGCHK, *(S) Security*, A–3
BYPASS, *(S) Security*, 4–11, 4–28, A–3; *(P) Concepts*, 9–5
bypassing ACLs, *(S) Security*, 4–28
bypassing protection codes, *(S) Security*, 4–28
captive accounts and, *(S) Security*, 7–7
categories of, *(S) Security*, 8–12
changing in SYSMAN, *(S) Sys Mgr Essentials*, 2–17

Privileges (cont'd)
checking, *(P) Sys Svc I*, SYS1–93
CMEXEC, *(S) Security*, A–4
CMKRNL, *(S) Security*, A–4
default process, *(S) Security*, 4–5, 8–12
defined by access mode, *(P) Interfaces*, 4–2
definition, *(S) Security*, 4–5
DETACH, *(S) Security*, A–5
Devour category, *(S) Security*, 8–12, C–5
DIAGNOSE, *(S) Security*, A–6
disabling, *(S) Security*, 4–5
displaying current, *(S) Sys Mgmt Util M-Z*, 6–58
displaying processes, *(G) DCL N-Z*, DCLII–313
DOWNGRADE, *(S) Security*, A–6
enabling through SETPRV, *(S) Security*, 4–5
enhancement for installed files, *(S) Sys Mgr Tuning*, 16–13
EXQUOTA, *(S) Security*, A–6
files, *(S) Sys Mgr Essentials*, 6–4
file sharing and, *(S) Security*, 12–20
for SYSTEM account, *(S) Sys Mgr Essentials*, 2–9
GROUP, *(S) Security*, A–6, A–7
Group category, *(S) Security*, 8–12, C–5
GRPNAM, *(S) Security*, A–7, C–5
GRPPRV, *(S) Security*, 4–11, 4–24, 4–28, C–5; *(S) Sys Mgr Essentials*, 11–8
I/O operations, *(P) Concepts*, 9–2
IMPORT, *(S) Security*, A–8
influence on object access, *(S) Security*, 4–11
installation requirements, *(S) DECamds*, A–2
logical I/Os, *(P) Concepts*, 9–4 to 9–6
LOG_IO, *(S) Security*, A–8
modifying for environment, *(S) Sys Mgmt Util M-Z*, 6–54
modifying processes, *(G) DCL N-Z*, DCLII–177
MOUNT, *(S) Security*, A–9; *(P) Concepts*, 9–4
needed to perform BACKUP operations, *(S) Sys Mgmt Util A-L*, 7–11
NETMBX, *(S) Security*, A–9
network requirements, *(S) Security*, 12–1
Normal category, *(S) Security*, 8–12, C–5
Objects category, *(S) Security*, 8–12, C–5
OPER, *(S) Security*, 4–29, A–9
PFNMAP, *(S) Security*, A–12
physical I/Os, *(P) Concepts*, 9–3, 9–5, 9–6
PHY_IO, *(S) Security*, A–12
PRMCEB, *(S) Security*, A–13
PRMGBL, *(S) Security*, A–13
PRMMBX, *(S) Security*, A–14
process, *(S) Security*, A–1; *(S) Sys Mgr Essentials*, 6–3
PSWAPM, *(S) Security*, A–14
READALL, *(S) Security*, 4–11, 4–28, A–14
recommendations for different users, *(S) Security*, 8–13
related to group UIC, *(S) Security*, 8–1
Privileges (cont'd)
reporting use with $CHECK_PRIVILEGE, *(S) Security*, 9–9
required by ACL editor, *(S) Sys Mgmt Util A-L*, 1–4
required by SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–5
required for UETP, *(S) Sys Mgr Tuning*, 17–23
required to analyze RMS Journaling files, *(P) Rec Mgmt Util*, 1–9
required to mount volumes, *(S) Sys Mgr Essentials*, 8–15
requirements
common event flag clusters, *(S) Security*, 5–3
devices, *(S) Security*, 5–7
global sections, *(S) Security*, 5–15
logical name tables, *(S) Security*, 5–16
queues, *(S) Security*, 5–18
resource domains, *(S) Security*, 5–19
volumes, *(S) Security*, 5–21
SECURITY, *(S) Security*, A–15
to mount volume with protected subsystems, *(S) Sys Mgr Essentials*, 8–15
security administrator requirements, *(S) Security*, 6–4
SET PROCESS/PRIVILEGES, *(S) Security*, 4–5
SETPRV, *(S) Security*, A–15
setting for process, *(P) Sys Svc II*, SYS2–314
SHARE, *(S) Security*, A–15
SHMEM, *(S) Security*, A–16
specifying for subprocesses, *(G) DCL N-Z*, DCLII–64
SS$_NOPRIV, *(P) Concepts*, 13–21
storage in UAF record, *(S) Security*, 8–12
summary of, *(S) Security*, 8–12, A–1
SYSGBL, *(S) Security*, A–16
SYSLCK, *(S) Security*, A–16
SYSNAM, *(S) Security*, A–16; *(S) Sys Mgr Essentials*, 8–16
SYSPRV, *(S) Security*, 4–11; *(S) Sys Mgr Essentials*, 8–16
controlling access through, *(S) Security*, 4–28
effect on protection mechanisms, *(S) Security*, 4–28
giving rights of system user, *(S) Security*, 4–24; *(S) Sys Mgr Essentials*, 11–8
tasks requiring, *(S) Security*, A–17
system
policies regarding, *(S) Dependable*, 3–14
SYSTEM, *(P) Concepts*, 9–5
System category, *(S) Security*, 8–12
system services, *(P) Interfaces*, 4–2
TMPMBX, *(S) Security*, A–18

Privileges (cont'd)
to run Data Analyzer node, *(S) DECamds*, A–14
to run Data Provider node, *(S) DECamds*, A–14
to start DECamds, *(S) DECamds*, A–13
trusted users and, *(S) Security*, C–5
UAF records and, *(S) Security*, 4–5
untrusted users and, *(S) Security*, C–5
UPGRADE, *(S) Security*, A–18
VOLPRO, *(G) User*, 12–5; *(S) Security*, A–18; *(S) Sys Mgr Essentials*, 8–14
to mount volume as foreign, *(S) Sys Mgr Essentials*, 8–15
WORLD, *(S) Security*, A–19
Privileges required
to analyze a crash dump, *(P) Alpha SDA*, SDA–30
to analyze a running system, *(P) Alpha SDA*, SDA–9, SDA–30
PRMCEB privilege, *(S) Security*, 5–3, A–13
PRMGBL privilege, *(S) Security*, A–13
PRMMBX privilege, *(S) Security*, 5–7, A–14
Proactive memory reclamation, *(S) Alpha Perform*, 6–13 to 6–15
See also Memory management
Proactive network monitoring and analysis products, *(S) Dependable*, 7–17 to 7–19
Probers, catching, *(S) Security*, 10–2, 10–5
Problems
See also Troubleshooting
OPCOM failure, *(S) Sys Mgr Essentials*, 2–22
Problems, reporting, *(S) DECamds*, A–15
Procedure calls
chain, *(P) Calling Std*, 3–29
format, *(P) Interfaces*, 1–3
testing for successful completion, *(P) Interfaces*, 2–22, 4–9
tracing, *(P) Calling Std*, 3–30
procedure data type, *(P) Interfaces*, B–14
Procedure descriptors
See PDSCs and DSCs
Procedures, *(P) Calling Std*, 3–3
definition, *(P) Environment*, 10–1; *(P) Calling Std*, 1–5
entry point names, *(P) Modular Proc*, 3–3
function code, *(P) Interfaces*, B–10
grouping, *(P) Modular Proc*, 5–1
interface, *(P) Modular Proc*, 2–4, A–1
invocation handles, *(P) Calling Std*, 3–30
invoking, *(P) Calling Std*, 3–29
language support, *(P) Calling Std*, 1–5
libraries, *(P) Modular Proc*, 5–1
library, *(P) Calling Std*, 1–5
monitoring, *(P) Modular Proc*, 4–8, 4–9
operation, *(P) Interfaces*, B–10
representation, *(P) Interfaces*, 2–8
Procedures (cont'd)
without frames, *(P) Calling Std*, 3–20
Procedure signature blocks
See PSBs
Procedure signature information blocks
See PSIGs
Procedure signatures, *(P) Calling Std*, 3–22
default, *(P) Calling Std*, 3–28
Procedure types, *(P) Calling Std*, 3–3
Procedure values, *(P) Interfaces*, 2–8, B–14; *(P) Calling Std*, 3–37
bound, *(P) Calling Std*, 3–3, 3–44
definition, *(P) Calling Std*, 3–3
examining, *(P) Calling Std*, 3–41
Process
See Single Process Summary window
account quotas required for installation, *(S) DECamds*, A–3
connecting debugger to, *(P) Debugger*, CD–43
creation, *(P) DECthreads*, pthread–3
disconnecting debugger from, *(P) Debugger*, CD–84
error messages, *(S) DECamds*, 3–25
fixes, *(S) DECamds*, 4–1
looping fix, *(S) DECamds*, 4–2
name in CPU, *(S) DECamds*, 3–3
quotas
AMDS$COMM process, *(S) DECamds*, 5–2
recommended, *(S) DECamds*, 5–15
releasing from debugger control, *(P) Debugger*, CD–84
security privileges, *(S) DECamds*, 1–4
states, *(S) DECamds*, 3–22; *(P) DECthreads*, pthread–3
queues on CPUs, *(S) DECamds*, 3–14
Process activity statistics
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–40
Process and time management subsystem, *(G) SW Overview*, 3–1
Process characteristics
commonly changed, *(G) User*, 15–18
Process command tables, *(P) CDU, LBR, & MU*, CDU–4
adding commands to, *(P) CDU, LBR, & MU*, CDU–5, CDU–48
deleting commands from, *(P) CDU, LBR, & MU*, CDU–41
Process contexts
changing, *(P) Alpha SDA*, SDA–69, SDA–72, SDA–89, SDA–127; *(P) VAX SDA*, SDA–72, SDA–77, SDA–99, SDA–148
list of characteristics, *(G) User*, 18–1, 18–2
using with $GETJPI system service, *(P) Concepts*, 3–8

Process control
system services, *(P) Environment*, 10–6, 10–11
Process control blocks
See PCBs
Process control region, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18
Process control region operator (H), *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–16
Process controls, *(P) Concepts*, 3–1
Process default extension quantity, *(P) File Appl*, 3–5, 3–7
Process defaults, *(P) Rec Mgmt Util*, 4–29
batch queue, *(P) Rec Mgmt Util*, 4–24
print queue, *(P) Rec Mgmt Util*, 4–22
Process directory tables, *(P) Concepts*, 10–3
Process dumps
analyzing of, *(G) DCL A-M*, DCLI–30
Processes, *(G) SW Overview*, 3–1, 5–2
See also Detached processes, Subprocesses, SYS$GETJPI system service, and SYS$PROCESS_SCAN system service
access rights of, *(S) Security*, 4–1
ACMS, *(S) Dependable*, 8–53
activation tracepoint, predefined, *(P) Debugger*, 14–13
activities permitted by privileges, *(S) Security*, 8–12
adding to exclusion list, *(S) Security*, 9–27
adjusting priorities, *(S) VAX Perform*, 5–16; *(S) Alpha Perform*, 19–1
affecting scheduling of, *(P) Sys Svc II*, SYS2–276
and job trees, *(G) User*, 18–4
auditing of, *(S) Security*, 9–6, 9–7
auditing system services controlling, *(S) Security*, 9–7
audit server, *(S) Security*, 9–23
base priority, *(S) Alpha Perform*, 6–21
blocked by higher-priority process, *(S) VAX Perform*, 4–33; *(S) Alpha Perform*, 15–1
changing characteristics using lexical functions, *(G) User*, 17–3
channel, *(P) Alpha SDA*, SDA–127; *(P) VAX SDA*, SDA–148
checking status with Ctrl/T, *(G) User*, 2–21
communicating between, *(P) Concepts*, 2–7
communicating within, *(P) Concepts*, 2–1
using logical names, *(P) Concepts*, 2–2
using symbols, *(P) Concepts*, 2–5
communication with, *(S) DECnet Intro*, 1–2
compute-bound, *(S) VAX Perform*, 5–9; *(S) Alpha Perform*, 9–2, 17–8
connecting debugger to, *(P) Debugger*, 14–4, 14–14
connecting to, *(G) User*, 2–7, 18–8
connecting to, restrictions, *(S) Security*, 3–6
creating, *(G) User*, 18–1; *(P) Sys Svc I*, SYS1–168

Processes
creating (cont'd)
restrictions, *(P) Concepts*, 3–2
creating with different UICs, *(S) Security*, 4–3
curtailing, *(S) VAX Perform*, 5–9; *(S) Alpha Perform*, 17–8
default protection for, *(S) Security*, 5–11
definition, *(G) User*, 18–1
deleting, *(P) Concepts*, 3–44, 3–47; *(P) Sys Svc I*, SYS1–263
detached, *(G) User*, 18–4
disabling swap mode, *(P) Concepts*, 19–12, 20–12
disconnected, *(G) User*, 2–7, 18–8; *(S) Security*, 3–6, 3–20
logging out, *(G) User*, 18–9
displaying
buffered I/O count, *(G) DCL N-Z*, DCLII–339
characteristics of, *(G) DCL N-Z*, DCLII–310
CPU time used, *(G) DCL N-Z*, DCLII–339
current physical memory occupied, *(G) DCL N-Z*, DCLII–339
current working set size, *(G) DCL N-Z*, DCLII–339
identification, *(G) DCL N-Z*, DCLII–311
information on, *(G) DCL N-Z*, DCLII–237
names, *(G) DCL N-Z*, DCLII–356
open file count, *(G) DCL N-Z*, DCLII–339
page faults, *(G) DCL N-Z*, DCLII–339
privilege, *(G) DCL N-Z*, DCLII–313
status, *(G) DCL N-Z*, DCLII–339
updated information about, *(G) DCL N-Z*, DCLII–311, DCLII–312
displaying list of systems processes, *(G) DCL N-Z*, DCLII–342
displaying process rights identifiers, *(G) User*, 19–2; *(S) Security*, 4–4
displaying SDA information, *(P) Alpha SDA*, SDA–127, SDA–155; *(P) VAX SDA*, SDA–148, SDA–179
dormant, *(S) VAX Perform*, 2–17; *(S) Alpha Perform*, 6–12
enabling privileges, *(S) Security*, 4–5
examining hung, *(P) Alpha SDA*, SDA–9; *(P) VAX SDA*, SDA–11
execution, *(P) Concepts*, 3–36
getting information asynchronously, *(P) Sys Svc I*, SYS1–427
getting information synchronously, *(P) Sys Svc I*, SYS1–448
granting identifiers to, *(S) Sys Mgmt Util A-L*, 1–15
hibernating, *(P) Concepts*, 3–36; *(P) Sys Svc II*, SYS2–108
hibernation

Processes
hibernation (cont'd)
with ATTACH command, *(G) DCL A-M*, DCLI–50; *(S) Sys Mgmt Util M-Z*, 6–13
I/O-bound, *(S) VAX Perform*, 3–30; *(S) Alpha Perform*, 11–2
identification, *(P) Concepts*, 3–3
idle, *(S) VAX Perform*, 2–19; *(S) Alpha Perform*, 6–13
image, *(P) Alpha SDA*, SDA–155; *(P) VAX SDA*, SDA–179
image wakeup, *(G) DCL N-Z*, DCLII–60
interactive mode, *(G) User*, 2–9; *(S) Security*, 3–4
interprocess communication, *(G) SW Overview*, 3–3
listening, *(P) Alpha SDA*, SDA–81; *(P) VAX SDA*, SDA–87
locating a subset of, *(P) Sys Svc II*, SYS2–214
lock, *(P) Alpha SDA*, SDA–128; *(P) VAX SDA*, SDA–149
lock information, *(P) Concepts*, 3–29
logging out of current, *(S) Security*, 3–20
long-waiting, *(S) VAX Perform*, 2–20; *(S) Alpha Perform*, 6–13
maintaining when disconnecting a terminal, *(S) Sys Mgr Essentials*, 7–11
mapping actions to dependability requirements, *(S) Dependable*, 2–11
modes of execution, *(P) Concepts*, 1–2
modifying characteristics of, *(G) DCL N-Z*, DCLII–177
modifying name, *(P) Concepts*, 3–31
modifying the rights list, *(S) Security*, 8–11
modifying working set default size, *(G) DCL N-Z*, DCLII–235
multiple, *(P) SMG$*, 4–1
multiprocess debugging, *(P) Debugger*, 14–1
obtaining information about
example, *(P) Concepts*, 3–8
processes on specific nodes, *(P) Concepts*, 3–21
synchronously, *(P) Concepts*, 3–22
using LIB$GETJPI routine, *(P) Concepts*, 3–5
using PIDs, *(P) Concepts*, 3–5, 3–8
using process name, *(P) Concepts*, 3–6, 3–8
using SYS$GETJPI system service, *(P) Concepts*, 3–5
using SYS$GETJPIW system service, *(P) Concepts*, 3–5
periodically waking, *(S) VAX Perform*, 2–21; *(S) Alpha Perform*, 6–14
placing in wait state, *(G) DCL N-Z*, DCLII–433
POSIX interprocess communication, *(G) SW Overview*, 3–3
Processes (cont'd)
priority, *(S) Sys Mgr Essentials*, 6–31; *(S) VAX Perform*, 4–33; *(S) Alpha Perform*, 6–20, 15–1
See also Priority
boosting, *(S) Alpha Perform*, 6–20
for detached processes, *(G) DCL N-Z*, DCLII–64
for subprocesses, *(G) DCL N-Z*, DCLII–64
modifying, *(P) Concepts*, 3–30
privileges
setting, *(P) Concepts*, 3–30
specifying for subprocesses, *(G) DCL N-Z*, DCLII–64
real-time, *(S) Alpha Perform*, 6–20
reconnecting, *(G) User*, 18–8
reconnecting to, restrictions, *(S) Security*, 3–6
reducing delay waiting for CPU, *(S) VAX Perform*, 5–17; *(S) Alpha Perform*, 19–2
remote, *(S) DECnet Intro*, 2–3
rescheduling, *(P) Sys Svc II*, SYS2–253
resuming after suspension, *(P) Sys Svc II*, SYS2–258
saving characteristics, *(G) User*, 17–4
scanning, *(P) Sys Svc II*, SYS2–214
scheduling, *(P) Concepts*, 3–30
scheduling state, *(P) Alpha SDA*, SDA–130, SDA–155; *(P) VAX SDA*, SDA–152, SDA–179
scheduling wakeup for, *(P) Sys Svc II*, SYS2–273
security profiles of, *(S) Security*, 4–1
setting default devices or directories, *(G) DCL N-Z*, DCLII–107
setting default protection for, *(P) Sys Svc II*, SYS2–287
setting name of, *(P) Sys Svc II*, SYS2–307
setting priority of, *(P) Sys Svc II*, SYS2–303
setting privileges, *(P) Sys Svc II*, SYS2–314
setting stack limits, *(P) Sys Svc II*, SYS2–323
setting swap mode for, *(P) Sys Svc II*, SYS2–325
spawned, *(P) Concepts*, 1–1
spawning a subprocess, *(P) Alpha SDA*, SDA–158; *(P) VAX SDA*, SDA–183
state, *(P) Debugger*, 14–3
states, *(S) Alpha Perform*, 6–19
collided page (COLPG), *(S) Alpha Perform*, 9–4
common event flag (CEF), *(S) Alpha Perform*, 9–4
compute (COM), *(S) Alpha Perform*, 9–1
compute outswapped (COMO), *(S) Alpha Perform*, 9–1
free page (FPG), *(S) Alpha Perform*, 9–4
hibernate (HIB), *(S) Alpha Perform*, 6–12
local event flag (LEF), *(S) Alpha Perform*, 6–12

Processes
states (cont'd)
MWAIT, *(S) Alpha Perform*, 2–2
page fault (PFW), *(S) Alpha Perform*, 9–4
status
displaying current, *(G) DCL N-Z*, DCLII–339
suspended, *(S) Alpha Perform*, 6–12
suspending, *(S) Security*, 9–27; *(P) Concepts*, 3–36, 3–40; *(P) Sys Svc II*, SYS2–444
swap mode
enabling or disabling, *(G) DCL N-Z*, DCLII–179
swapping, *(P) Concepts*, 19–12, 20–12
for created processes, *(G) DCL N-Z*, DCLII–65
switching control of input stream, *(G) DCL A-M*, DCLI–50; *(S) Sys Mgmt Util M-Z*, 6–13
synchronization, *(S) Alpha Perform*, 9–4
synchronizing with batch job, *(G) DCL N-Z*, DCLII–422
SYS$PROCESS_SCAN system service
item list
to specify selection criteria about processes, *(P) Concepts*, 3–18, 3–19
with remote procedures, *(P) Concepts*, 3–22
item-specific flags to control selection information, *(P) Concepts*, 3–15
search, *(P) Concepts*, 3–14
system, *(P) Alpha SDA*, SDA–72
termination mailboxes, *(P) Concepts*, 3–47, 9–43
termination tracepoint, predefined, *(P) Debugger*, 14–13
time slicing, *(S) VAX Perform*, 4–33; *(S) Alpha Perform*, 15–2
transferring control from, *(S) Sys Mgmt Util A-L*, 13–6
types of resources, *(P) File Appl*, 1–38
asynchronous system trap limit (ASTLM), *(P) File Appl*, 1–39
buffered I/O limit (BIOLM), *(P) File Appl*, 1–39
I/O limit (DIOLM), *(P) File Appl*, 1–39
UIC identifiers, *(S) Security*, 4–3
waiting for entire set of event flags, *(P) Sys Svc II*, SYS2–490
waiting for event flag to be set, *(P) Sys Svc II*, SYS2–487
waiting for one of set of event flags, *(P) Sys Svc II*, SYS2–492
waking, *(P) Sys Svc II*, SYS2–488
wildcard search, *(P) Concepts*, 3–12
working set
Processes
working set (cont'd)
displaying quota and limit, *(G) DCL N-Z*, DCLII–361
working set limits, *(S) Alpha Perform*, 6–2
writing messages to, *(P) Sys Svc II*, SYS2–231
PROCESSES class record
in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–28
Processes for achieving dependability, *(S) Dependable*, 2–1
Processes for continuous system improvement, *(S) Dependable*, 2–1 to 2–4
Process exclusion list, *(S) Security*, 9–27
Process headers, *(P) Alpha SDA*, SDA–16
See also PHDs
system, *(S) Alpha Perform*, 6–18
Process I/O segment, *(P) File Appl*, 1–38
Process I/O Summary window, *(S) DECamds*, 3–16 to 3–17
Process identification numbers
See PID numbers
Process identifier
See PID
1024 Process Identifiers, *(G) V7.0 New Feat*, 3–30
Process indexes, *(P) Alpha SDA*, SDA–128; *(P) VAX SDA*, SDA–148
Process information
system services, *(P) Environment*, 10–6, 10–12
Processing
batch, *(S) Alpha Perform*, 6–2
centralized, *(G) SW Overview*, 1–4
deferred-write option, *(P) File Appl*, 3–18, 3–28
distributed, *(G) SW Overview*, 1–4
interactive, *(S) Alpha Perform*, 6–2
modes, *(G) SW Overview*, 1–3
options for improving file performance, *(P) File Appl*, 3–10
priorities, *(G) SW Overview*, 3–2
read-ahead option, *(P) File Appl*, 3–14, 3–15
transaction, *(G) SW Overview*, 2–13
write-behind option, *(P) File Appl*, 3–14, 3–15
Processing environments
See Multiprocessing, Vector processing, and Distributed processing
Processing job status, *(S) Sys Mgr Essentials*, 13–69
Processing options
analysis output converter, *(G) DCL A-M*, DCLI–71
domain converter, *(G) DCL A-M*, DCLI–75
in an options file, *(G) DCL A-M*, DCLI–71
PostScript output converter, *(G) DCL A-M*, DCLI–73
text output converter, *(G) DCL A-M*, DCLI–72

Process limits
See Process quotas
Process logical name tables, *(P) Concepts*, 10–4
Process names, *(G) DCL N-Z*, DCLII–60; *(P) Concepts*, 3–3; *(P) Alpha SDA*, SDA–127; *(P) VAX SDA*, SDA–148
length of for remote processes, *(P) Concepts*, 3–6
obtain information about remote processes example, *(P) Concepts*, 3–12
setting, *(P) Sys Svc II*, SYS2–307
specifying for local processes, *(P) Concepts*, 3–6
specifying for remote processes, *(P) Concepts*, 3–6
specifying processes by, *(P) Sys Svc II*, SYS2–220
specifying processes with node name, *(P) Sys Svc II*, SYS2–219
using to obtain information about remote processes, *(P) Concepts*, 3–6, 3–8, 3–19
within group, *(P) Concepts*, 3–4
Processor base registers, *(P) Alpha SDA*, SDA–16
Processor context
changing, *(P) Alpha SDA*, SDA–68, SDA–73, SDA–86, SDA–89, SDA–127; *(P) VAX SDA*, SDA–72, SDA–78, SDA–95, SDA–99, SDA–148
Processor modes, *(S) Alpha Perform*, 9–7
Processor modes statistics
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–33
/PROCESSOR qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–30
Processors, *(S) Sys Mgr Tuning*, 26–3
Alpha, *(G) SW Overview*, 1–1, 1–14
causing thread to release control of, *(P) DECthreads*, pthread–115, E–85, G–84
fault-tolerant, *(G) SW Overview*, 1–14
real-time, *(G) SW Overview*, 1–14
showing state of attached, *(G) DCL N-Z*, DCLII–249
showing state of secondary, *(G) DCL N-Z*, DCLII–249
starting attached, *(G) DCL N-Z*, DCLII–370
starting secondary, *(G) DCL N-Z*, DCLII–370
stopping attached, *(G) DCL N-Z*, DCLII–392
stopping secondary, *(G) DCL N-Z*, DCLII–392
VAX, *(G) SW Overview*, 1–1, 1–14
Processor-specific loadable code
base address, *(P) VAX SDA*, SDA–18
Processor status
See PS
Processor status longwords
See PSLs
Processor types
displaying, *(P) VAX SDA*, SDA–96
Process-permanent files, *(P) File Appl*, 1–38, 6–19
restriction to gathering RMS statistics, *(P) File Appl*, 3–29
Process-permanent I/O structures, *(P) VAX SDA*, SDA–81
Process-private space
definition, *(P) 64-Bit Addr*, 1–2
/PROCESS qualifier, *(P) Debugger*, 14–6, 14–15, CD–89, CD–93; *(P) Alpha SDA*, SDA–159; *(P) VAX SDA*, SDA–184
Process quotas, *(S) Sys Mgr Essentials*, 6–2; *(S) VMScluster Sys*, 10–18; *(P) File Appl*, 1–38
See also Quotas
account jobs, *(S) Sys Mgr Essentials*, 6–43
adjusting for vector processing, *(S) Sys Mgr Tuning*, 26–7
AST queue, *(S) Sys Mgr Essentials*, 6–41
CPU times, *(S) Sys Mgr Essentials*, 6–42
detached process, *(S) Sys Mgr Essentials*, 6–43
direct I/O count, *(S) Sys Mgr Essentials*, 6–42
displaying, *(G) DCL N-Z*, DCLII–313
enqueue quota, *(S) Sys Mgr Essentials*, 6–42
expiration, *(S) Sys Mgr Essentials*, 6–42
for Snapshot facility, *(S) Sys Mgr Essentials*, 4–20
jobwide logical name table, *(S) Sys Mgr Essentials*, 6–43
open file, *(S) Sys Mgr Essentials*, 6–43
paging file, *(S) Sys Mgr Essentials*, 6–43
process jobs, *(S) Sys Mgr Essentials*, 6–43
recommended values for backups, *(S) Sys Mgr Essentials*, 10–10
setting, *(S) Sys Mgr Essentials*, 6–40
setting before a backup, *(S) Sys Mgr Essentials*, 10–9
specifying for detached processes, *(G) DCL N-Z*, DCLII–63, DCLII–64
specifying for subprocesses, *(G) DCL N-Z*, DCLII–63, DCLII–64
subprocess creation, *(S) Sys Mgr Essentials*, 6–43
system resources, *(S) Sys Mgr Essentials*, 6–39
timer queue entry, *(S) Sys Mgr Essentials*, 6–43
working set
default, *(S) Sys Mgr Essentials*, 6–43
quota, *(S) Sys Mgr Essentials*, 6–44
Process rights lists, *(P) Concepts*, 23–1
Process scan, *(P) Sys Svc II*, SYS2–214
Process scheduling
See Scheduling
Process searches, *(P) Concepts*, 3–8 to 3–21
searching nodes, *(P) Concepts*, 3–21
searching on all nodes, *(P) Concepts*, 3–20
searching on specific nodes, *(P) Concepts*, 3–20
using item list with remote procedures, *(P) Concepts*, 3–22

Process searches (cont'd)
using item-specific flags to control selection information, *(P) Concepts*, 3–15
using SYS$PROCESS_SCAN system service item list to specify processes example, *(P) Concepts*, 3–18
using SYS$PROCESS_SCAN system service item list to specify selection criteria about processes, *(P) Concepts*, 3–19
using wildcard on local system, *(P) Concepts*, 3–12
Process section table
See PST
Process states statistics
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–49
Process threads, *(P) Concepts*, 1–1
Process user capability set
modifying, *(P) Sys Svc II*, SYS2–209
$PROCESS_AFFINITY service, *(G) V7.0 New Feat*, 4–28
$PROCESS_CAPABILITIES service, *(G) V7.0 New Feat*, 4–26
/PROCESS_GROUP qualifier, *(P) Debugger*, 14–13, CD–69
process_id data type, *(P) Interfaces*, B–14
PROCESS_MANAGEMENT.EXE file
global symbols, *(P) VAX SDA*, SDA–65
PROCESS_MANAGEMENT.STB file
global symbols, *(P) Alpha SDA*, SDA–61
%PROCESS_NAME built-in symbol, *(P) Debugger*, 14–12
process_name data type, *(P) Interfaces*, B–14
%PROCESS_NUMBER built-in symbol, *(P) Debugger*, 14–12
%PROCESS_PID built-in symbol, *(P) Debugger*, 14–12
/PROCESS_SECTION_TABLE qualifier, *(P) Alpha SDA*, SDA–128; *(P) VAX SDA*, SDA–149
PRO/DECnet software, *(S) DECnet Intro*, 1–6
Product Authorization Keys
See PAKs
PRODUCT command, *(G) DCL N-Z*, DCLII–26; *(S) Sys Mgmt Util M-Z*, 3–3, 3–5
DCL interface syntax, *(S) Sys Mgr Essentials*, 3–18
DECwindows Motif interface syntax, *(S) Sys Mgr Essentials*, 3–18
Product configuration files
See PCFs
Product database, *(S) Sys Mgr Essentials*, 3–35
See PDB
definition of, *(S) Sys Mgr Essentials*, 3–20
how to use, *(S) Sys Mgr Essentials*, 3–26
noncompliant products, *(S) Sys Mgr Essentials*, 3–27
Product database (cont'd)
removing products from, *(S) Sys Mgr Essentials*, 3–34
retrieving product information from, *(S) Sys Mgr Essentials*, 3–33
tracking software dependencies, *(S) Sys Mgr Essentials*, 3–27
volume label change, *(S) Sys Mgr Essentials*, 3–33
Product dependencies, *(S) Sys Mgr Essentials*, 3–27
Product description files
See PDFs
PRODUCT INSTALL command, *(S) Sys Mgr Essentials*, 3–27
Production systems
dependability, *(G) SW Overview*, 7–2
description, *(G) SW Overview*, 7–1
managing and monitoring, *(G) SW Overview*, 7–4
needs, *(G) SW Overview*, 7–1
OpenVMS capabilities, *(G) SW Overview*, 2–1, 2–11
OpenVMS management tools, *(G) SW Overview*, 7–4
Productivity of personnel, *(S) Dependable*, 4–13 to 4–14
Product list
obtaining, *(S) Sys Mgr Essentials*, 3–10
VMSINSTAL.COM parameter, *(S) Sys Mgr Essentials*, 3–10
Product listing, *(S) Sys Mgr Essentials*, 3–35
Product options
See Options
Products
See Software products
Professional 300-series systems
in network operations, *(S) DECnet Intro*, 1–6
Profiles, *(S) Sys Mgmt Util M-Z*, 6–53
See also Security profiles
adjusting, *(S) Sys Mgmt Util M-Z*, 6–54
displaying, *(S) Sys Mgmt Util M-Z*, 6–58
in MAIL, *(S) Sys Mgr Essentials*, 6–38
in SYSMAN, *(S) Sys Mgr Essentials*, 2–16; *(S) Sys Mgmt Util M-Z*, 6–32
changing default directory, *(S) Sys Mgr Essentials*, 2–17
changing privileges, *(S) Sys Mgr Essentials*, 2–17
Program counters
See PCs
Program development, *(G) SW Overview*, 4–1
Program execution mode
using to call services, *(P) RMS Ref*, 2–8
Program load request, *(S) DECnet Mgmt*, 4–2

Programming
common environments, *(G) SW Overview*, 4–1
custom applications, *(S) Dependable*, 3–8
Digital methodology
services from Digital, *(S) Dependable*, 10–5
examples calling system services, *(P) Interfaces*, 4–10
modular techniques, *(G) SW Overview*, 4–2; *(P) Environment*, 2–1
prototyping applications, *(S) Dependable*, 8–31 to 8–33
software development tools, *(G) SW Overview*, 4–3
synchronization errors, list of, *(P) DECthreads*, 3–1
testing applications, *(S) Dependable*, 8–33 to 8–34
to standards, *(G) SW Overview*, 4–2; *(P) Environment*, 2–1
writing predictable code, *(S) Dependable*, 8–29 to 8–31
Programming interface, *(P) File Appl*, 4–20
to RMS, *(P) RMS Ref*, 2–1
Programming languages
accessing remote files, *(S) DECnet Intro*, 2–12
in network application, *(S) DECnet Mgmt*, 1–18
selecting for network operation, *(S) DECnet Mgmt*, 1–18
using control blocks with, *(P) RMS Ref*, 2–1
/PROGRAM qualifier, *(P) Debugger*, 11–20, CD–152
Program region page table
displaying, *(P) VAX SDA*, SDA–149
Program regions, *(P) Concepts*, 19–8, 20–6
adding page to, *(P) Sys Svc I*, SYS1–345
base register, *(P) VAX SDA*, SDA–18
deleting page from, *(P) Sys Svc I*, SYS1–265
examining, *(P) Alpha SDA*, SDA–49; *(P) VAX SDA*, SDA–56
length register, *(P) VAX SDA*, SDA–18
Programs
analyze retransmission errors, *(S) VMScluster Sys*, F–36
argument, *(P) Debugger*, 2–2, CD–140, CD–142
bringing under debugger control, *(P) Debugger*, 2–6
bringing under kept debugger control, *(P) Debugger*, 2–1
continuing execution of, *(G) DCL A-M*, DCLI–64
display kind, *(P) Debugger*, 11–19
executing, *(P) Concepts*, 3–34
execution, *(P) Concepts*, 3–31
including in data files, *(G) User*, 16–8
LAN analyzer partner, *(S) VMScluster Sys*, F–37
LAN analyzer scribe, *(S) VMScluster Sys*, F–38
Programs (cont'd)
LAN analyzer starter, *(S) VMScluster Sys*, F–36
marking beginning of input stream, *(G) DCL A-M*, DCLI–117
marking end of input stream, *(G) DCL A-M*, DCLI–211
rerunning under debugger control, *(P) Debugger*, 2–5
resuming execution of, *(G) DCL A-M*, DCLI–64
running under debugger control, *(P) Debugger*, 5–11
termination, *(P) Debugger*, 2–5, 5–10
Programs decomposition, *(P) Concepts*, 14–13
Program sections, *(P) Modular Proc*, 2–12, 3–4, A–2
as universal symbols, *(P) Linker*, 4–4
attributes
conflicting, *(P) Linker*, 3–25
determining image section attributes, *(P) Linker*, 3–12
effects on image section creation, *(P) Linker*, 3–11
modifying, *(P) Linker*, 3–22
collecting into image sections, *(P) Linker*, 3–10, 3–22, LINK–48
concatenated, *(P) Linker*, 3–17
declaring as universal symbols, *(P) Linker*, 4–9
determining image section location, *(P) Linker*, 3–16
determining the address of, *(P) Linker*, 3–18
Digital-written, *(P) Modular Proc*, 3–4
implicit setting of GBL attribute by linker, *(P) Linker*, 2–18
in ANALYZE/OBJECT listing, *(P) Linker*, 3–6
in shareable images
object module format, *(P) Linker*, B–14
isolating in an image section, *(P) Linker*, 3–23
LIB$INITIALIZE, *(P) Modular Proc*, 3–13
listed in map file, *(P) Linker*, 3–16, 5–6
modifying program section attributes, *(P) Linker*, 3–22
NOMOD attribute
resolving conflicts, *(P) Linker*, 3–25
object module definition format, *(P) Linker*, A–8, B–11
overlaid, *(P) Linker*, 2–1, 3–17, 4–4
significant attributes of, *(P) Linker*, 3–13
SOLITARY attribute, *(P) Linker*, 3–23
sorting by attributes, *(P) Linker*, 3–11
specifying values of attributes, *(P) Linker*, LINK–60
standard program section names (Alpha systems only), *(P) Linker*, B–16
user-written, *(P) Modular Proc*, 3–4
Program stubs
in command procedures, *(G) User*, 15–10
replacing with commands, *(G) User*, 15–19

PROHIBIT attribute, *(P) Rec Mgmt Util*, 4–36; *(P) File Appl*, 7–4
Project accounts, *(S) Security*, 8–21
  as protected subsystems, *(S) Security*, 13–2
Prolog 1 files, *(P) File Appl*, 3–19
Prolog 2 files, *(P) File Appl*, 3–19
Prolog 3 files, *(P) Rec Mgmt Util*, 4–26; *(P) File Appl*, 3–19, 10–28
Prolog 3 indexed files
  creating with CONVERT routines, *(P) Util Routines*, CONV–13
  reclaiming, *(P) Util Routines*, CONV–16
  reclaiming empty buckets, *(P) Rec Mgmt Util*, 3–1
  with Convert/Reclaim utility, *(P) Util Routines*, CONV–1
PROLOG attribute, *(P) Rec Mgmt Util*, 2–14, 4–26, 4–27, 4–28
Prolog files, *(P) File Appl*, 3–15, 3–18, 3–19, 3–22
  using with CONVERT routines, *(P) Util Routines*, CONV–13
Prolog levels, *(P) RMS Ref*, RMS–19
PROLOG structure, *(P) File Appl*, 10–15, 10–16
Prompt for input
  with LIB$GET_INPUT routine, *(P) Concepts*, 7–4
Prompting sequence
  examples, *(S) DECnet Mgmt Util*, 1–6 to 1–7
  exiting, *(S) DECnet Mgmt Util*, 1–5
/PROMPT qualifier, *(P) Debugger*, 11–20, CD–152
Prompts, *(G) User*, 3–5
  DCL, *(G) User*, 2–2
  debugger, *(P) Debugger*, 1–15, 5–7, 5–8, 5–15, 14–2, 14–8, CD–196
  display (PROMPT), *(P) Debugger*, 11–7
  displaying in command procedures, *(G) DCL A-M*, DCLI–278
  in Mail, *(G) User*, 6–2
  multiprocess program, *(P) Debugger*, 14–2, 14–8
  NCP syntax, *(S) DECnet Mgmt Util*, 1–4
  switchhook in Phone, *(G) User*, 7–3
Prompt strings, setting with CLI$DCL_PARSE, *(P) Util Routines*, CLI–7
Propagating protection, example, *(S) Security*, 12–22
PROTECT= option, *(P) Linker*, LINK–59
Protected attribute, *(S) Security*, 4–23, 4–28
  deleting ACEs with, *(S) Security*, 4–22
Protected images, *(S) Sys Mgr Tuning*, 16–11, 16–14, 16–15
Protected object databases, *(S) Security*, 11–6
Protected subsystems, *(G) SW Overview*, 3–16; *(S) Sys Mgr Essentials*, 6–16
  advantages of, *(S) Security*, 13–1
  applications for, *(S) Security*, 13–2
  constructing, *(S) Security*, 13–4
Protected subsystems (cont'd)
  controlling access to, *(S) Sys Mgmt Util A-L*, 1–15
  description of, *(S) Security*, 13–2, 13–6
  design requirements, *(S) Security*, 13–3
  enabling, *(S) Security*, 13–5; *(S) Sys Mgr Essentials*, 8–28
  example, *(S) Security*, 13–6
  file protection, *(S) Security*, 13–8, 13–9
  mounting volumes with, *(S) Security*, 13–5; *(S) Sys Mgr Essentials*, 8–15
  printer protection, *(S) Security*, 13–10
  Subsystem ACEs, *(S) Security*, 13–4
  system management requirements, *(S) Security*, 13–3
  user access, *(S) Security*, 13–6
Protecting against environmental factors, *(S) Dependable*, 1–5
Protecting image sections
  using the PROTECT= option, *(P) Linker*, LINK–59
Protecting remote files, *(S) DECnet Intro*, 2–3, 3–35
Protecting shareable images, *(P) Linker*, LINK–24
Protection
  See also File protection, Mailboxes, Security, and Security profiles
  access category, *(P) File Appl*, 4–26
  ACL-based, *(S) Security*, 8–20; *(S) Sys Mgr Essentials*, 6–16, 6–32, 11–9; *(P) File Appl*, 1–33, 4–26
  and MOUNT command, *(S) Sys Mgmt Util M-Z*, 2–31
  applying to public disk volumes, *(S) Sys Mgr Essentials*, 8–15
  applying to queues, *(S) Sys Mgr Essentials*, 13–22 to 13–26
  applying to system dump file, *(S) Sys Mgr Tuning*, 15–4
  assigning code when mounting a volume, *(S) Sys Mgr Essentials*, 8–23
  by access mode, *(P) Interfaces*, 4–2
  capability, *(S) Security*, 5–2
  changing, *(S) Sys Mgr Essentials*, 8–16
  changing with PROTECTION qualifier, *(S) Sys Mgr Essentials*, 8–18
  command procedures and, *(S) Security*, 8–25
  common event flag clusters, *(S) Security*, 5–3
  debugging with two terminals, *(P) Debugger*, 13–14
  default, *(G) User*, 19–5
    changing, *(S) Sys Mgr Essentials*, 9–8
  default at disk initialization, *(G) DCL A-M*, DCLI–256
  default for foreign volumes, *(S) Sys Mgmt Util M-Z*, 2–20
  defining at directory creation, *(G) DCL A-M*, DCLI–97

Protection (cont'd)
defining at file creation, *(G) DCL A-M*, DCLI–94
deleted data, *(S) Security*, 5–12
devices, *(S) Security*, 5–6; *(P) Concepts*, 9–5
directory, *(G) User*, 5–7
changing with SET SECURITY /PROTECTION command, *(S) Sys Mgr Essentials*, 9–12
specifying with CREATE/DIRECTORY command, *(S) Sys Mgr Essentials*, 9–12
specifying with /PROTECTION qualifier, *(S) Sys Mgr Essentials*, 9–12
directory entry, *(P) I/O User*, 1–9
disk and tape volumes, *(P) File Appl*, 1–33
disk volumes, *(G) DCL A-M*, DCLI–260; *(S) Sys Mgr Essentials*, 8–16
displaying, *(S) Sys Mgr Essentials*, 9–7
displaying default, *(G) DCL N-Z*, DCLII–318
displaying security profiles, *(G) DCL N-Z*, DCLII–335
establishing default, *(G) DCL N-Z*, DCLII–182
file
for system dump file, *(S) Sys Mgr Tuning*, 15–4
for interchange environments, *(S) Sys Mgr Essentials*, 8–20
format for object, *(S) Sys Mgr Essentials*, 11–8
global sections, *(S) Security*, 5–15
I/O operations, *(P) Concepts*, 9–2
logical name tables, *(S) Security*, 5–16
magnetic tape volumes, *(G) DCL A-M*, DCLI–260
mailboxes, *(P) Concepts*, 9–4
managing defaults, *(S) Security*, 8–15, 8–19
mask, *(S) Sys Mgr Essentials*, 8–17; *(P) Concepts*, 9–4
modifying security profiles, *(G) DCL N-Z*, DCLII–200
mounting a volume with protected subsystems, *(S) Sys Mgr Essentials*, 8–28
objects, *(G) User*, 19–3; *(S) Security*, 4–6
of devices, *(S) Sys Mgr Essentials*, 7–5
of files, *(G) User*, 4–16
in Mail, *(G) User*, 6–16
of queues, *(P) Sys Svc II*, SYS2–409
of terminal, *(P) Debugger*, 13–14
overriding, *(S) Sys Mgr Essentials*, 8–25
page, *(P) Concepts*, 19–10, 20–10
qualifier for SET VOLUME command, *(S) Sys Mgr Essentials*, 8–18
queues, *(S) Security*, 5–17
resource domains, *(S) Security*, 5–19
security class, *(S) Security*, 5–20
setting for page, *(P) Sys Svc II*, SYS2–308
through protected subsystems, *(S) Security*, 13–1
Protection (cont'd)
UIC-based codes, *(S) Security*, 4–7; *(S) Sys Mgr Essentials*, 6–16; *(P) File Appl*, 1–33, 4–26
volumes, *(S) Security*, 5–21; *(S) Sys Mgr Essentials*, 9–4; *(P) Concepts*, 9–4
disk, *(S) Sys Mgr Essentials*, 8–14, 8–15
ISO 9660-formatted media, *(S) Sys Mgr Essentials*, 8–17
standard-labeled, *(S) Sys Mgr Essentials*, 8–19
tape, *(S) Sys Mgr Essentials*, 8–15, 8–19, 9–22
VOLPRO privilege, *(S) Sys Mgr Essentials*, 8–14
volume set
ISO 9660-formatted media, *(S) Sys Mgr Essentials*, 8–17
PROTECTION attribute, *(P) Rec Mgmt Util*, 4–22; *(P) File Appl*, 4–32
Protection checking, *(S) Security*, 4–11
overriding MOUNT command, *(S) Sys Mgr Essentials*, 8–23
Protection codes, *(G) User*, 19–4; *(S) Security*, B–1; *(P) Rec Mgmt Util*, 4–23
access specification, *(S) Security*, 4–25
access types, *(G) User*, 19–5; *(S) Security*, 4–25; *(S) Sys Mgr Essentials*, 11–8
assigning during file creation, *(S) Security*, 8–16
bypassing with special rights, *(S) Security*, 4–28
categories of, *(G) User*, 19–4
changing, *(S) Security*, 4–26; *(S) Sys Mgr Essentials*, 9–8
default file protection, *(S) Security*, 4–27, 8–19
definition, *(S) Security*, 2–5, 4–7
denying all access, *(S) Security*, 4–26
effect of privileges, *(S) Security*, 4–11
evaluation sequence, *(S) Security*, 4–8
format, *(S) Security*, 4–24; *(S) Sys Mgr Essentials*, 11–8
granting control access, *(S) Security*, 4–25
interaction with ACLs, *(S) Security*, 4–26
interpreting, *(S) Security*, 4–8
multiple user categories and, *(S) Security*, 4–25
null access specification, *(S) Security*, 4–24, 4–25; *(S) Sys Mgr Essentials*, 11–8
priority in access evaluation, *(S) Security*, 4–11
processing, *(S) Security*, 4–25
propagating UIC-based protection in a directory tree, *(S) Sys Mgmt Util A-L*, 1–11
queue access rights, *(S) Security*, 5–17
reading, *(S) Security*, 4–25
restoring file default, *(S) Security*, 4–27
security element of an object, *(S) Security*, 4–7
sequence of checking categories, *(S) Security*, 4–25

Protection codes (cont'd)
specifying, *(S) Sys Mgr Essentials*, 9–6
user categories, *(S) Security*, 4–8
/PROTECTION qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–50
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–31
/PROTECT qualifier, *(P) Linker*, LINK–24
Protocol bit mask
error definitions, *(S) Sys Mgmt Util A-L*, 13–49
Protocol module counters, *(S) DECnet Mgmt Util*, B–13
Protocol ports, *(S) TCP/IP*, 2–5
Protocols, *(S) TCP/IP*, 1–1, 2–1; *(S) DECnet Mgmt*, 1–3
autodial, *(S) Security*, 12–17; *(S) DECnet Intro*, 3–26
Channel Control (CC), *(S) VMScluster Sys*, F–3
communications, *(S) DECnet Intro*, 1–4
Datagram Exchange (DX), *(S) VMScluster Sys*, F–3
DDCMP, *(S) DECnet Intro*, 1–12
DDE, *(P) Environment*, 3–6
DECnet data link, *(S) DECnet Intro*, 1–4
DNA, *(G) SW Overview*, 1–10, 2–10; *(S) DECnet Intro*, 1–4; *(P) Environment*, 3–1
for using TCP/IP, *(S) Sys Mgr Tuning*, 21–13
FTP, *(S) Sys Mgr Tuning*, 21–14
IPX, *(G) SW Overview*, 6–25
LAD, *(G) SW Overview*, 3–13, 6–8
LAST, *(G) SW Overview*, 6–8
LASTport, *(S) Sys Mgr Tuning*, 23–5
LASTport/Disk, *(S) Sys Mgr Tuning*, 23–5
LASTport/Tape, *(S) Sys Mgr Tuning*, 23–6
LAT, *(G) SW Overview*, 3–13, 6–8; *(S) DECnet Intro*, 1–7
NetWare, *(G) SW Overview*, 6–25
networking, *(G) SW Overview*, 1–9
NFS, *(G) SW Overview*, 1–10
OSI, *(G) SW Overview*, 1–10, 2–10; *(P) Environment*, 3–1
PEDRIVER implementation of NISCA, *(S) VMScluster Sys*, F–4
PEX, *(P) Environment*, 2–6
Physical Interconnect (PI), *(S) VMScluster Sys*, F–3
Port-to-Port Communication (PPC), *(S) VMScluster Sys*, F–3
Port-to-Port Driver (PPD), *(S) VMScluster Sys*, F–3
RCP, *(S) Sys Mgr Tuning*, 21–14
RLOGIN, *(S) Sys Mgr Tuning*, 21–13
System Application (SYSAP), *(S) VMScluster Sys*, F–2
System Communications Services (SCS), *(S) VMScluster Sys*, F–2
TCP/IP, *(G) SW Overview*, 1–10, 2–11, 6–6; *(P) Environment*, 3–2
TELNET, *(S) Sys Mgr Tuning*, 21–13
Protocols (cont'd)
Transport (TR), *(S) VMScluster Sys*, F–3
two-phase commit, *(G) SW Overview*, 3–6, 7–13
virtual terminal, *(S) Sys Mgr Tuning*, 21–13
Prototyping
applications, *(S) Dependable*, 8–31 to 8–33
Providing multiple paths to Ethernet and FDDI, *(S) Dependable*, 7–4
Providing multiple WAN connections for VAXft systems, *(S) Dependable*, 7–15
Proxies
access, *(S) DECnet Mgmt*, 2–34
setting up proxy database for, *(S) Security*, 12–5
access control, *(S) Security*, 12–3
removing, *(S) Security*, 12–7
access display for executor, *(S) DECnet Mgmt*, 3–71
access display for object, *(S) DECnet Mgmt*, 3–72
access file specification, *(S) DECnet Mgmt*, 3–71
account, *(S) DECnet Mgmt*, 2–34
adding, *(P) Sys Svc I*, SYS1–14
deleting, *(P) Sys Svc I*, SYS1–252
displaying, *(P) Sys Svc I*, SYS1–286
login, *(S) DECnet Mgmt*, 2–34
modifying, *(P) Sys Svc I*, SYS1–14, SYS1–252
parameters, *(S) DECnet Mgmt Util*, 3–75
verifying, *(P) Sys Svc II*, SYS2–482
Proxy access, *(S) Security*, 12–4
Proxy accounts, *(G) User*, 19–8; *(G) SW Overview*, 6–7; *(S) Security*, 3–15, 12–4, 12–10; *(S) DECnet Intro*, 2–3, 3–35, 4–10
adding, *(S) Sys Mgr Essentials*, 6–35; *(S) Sys Mgmt Util A-L*, 5–22
as captive accounts, *(S) Security*, 12–8
as restricted accounts, *(S) Security*, 7–13
C2 systems and, *(S) Security*, C–7
default, *(G) User*, 19–9; *(S) Security*, 3–17
deleting, *(S) Sys Mgmt Util A-L*, 5–42
example, *(S) Security*, 12–8, 12–22
for multiple users, *(G) User*, 19–9
for single user, *(G) User*, 19–9
general access, *(G) User*, 19–9
general-access, *(S) Security*, 3–16
maximum number allowed, *(G) User*, 19–8
modifying, *(S) Sys Mgmt Util A-L*, 5–39
multiple-user, *(S) Security*, 3–16
naming, *(G) User*, 19–9; *(S) Security*, 3–17
network, *(S) Sys Mgr Essentials*, 6–34
recommended restrictions, *(S) Security*, 12–8
selecting from multiple, *(G) User*, 19–9; *(S) Security*, 3–17
single-user, *(S) Security*, 3–16
Proxy Agent
PC NSI, *(P) Environment*, 3–5

Proxy authorization files, *(S) Sys Mgr Essentials*, 6–4
NET$PROXY.DAT, *(S) Sys Mgr Essentials*, 6–35
NETPROXY.DAT, *(S) Sys Mgr Essentials*, 6–35
Proxy database, *(S) Security*, 12–5
logical name defining location, *(S) Sys Mgr Essentials*, 5–8
managed by security server, *(S) Sys Mgr Essentials*, 5–5
setting up, *(S) Security*, 12–6
Proxy logins, *(G) User*, 2–10, 19–7; *(S) Security*, 3–7, 3–15, 12–4; *(S) Sys Mgmt Util A-L*, 5–22, 5–39
access control, *(S) Security*, 12–4; *(S) DECnet Mgmt*, 1–22, 2–34
access control commands, *(S) DECnet Mgmt*, 3–71
account, *(S) Security*, 12–4; *(S) DECnet Mgmt*, 2–34
control, *(S) DECnet Mgmt*, 2–35
controlling system use, *(S) Sys Mgr Essentials*, 6–37
enabling access, *(S) DECnet Mgmt*, 2–35
establishing and managing, *(S) Security*, 12–5
INCOMING PROXY parameter, *(S) DECnet Mgmt*, 2–35
key characteristic, *(G) User*, 19–9
NET$PROXY.DAT, *(S) Security*, 12–6
NETPROXY.DAT, *(S) Security*, 12–6; *(S) DECnet Mgmt*, 2–35
OUTGOING PROXY parameter, *(S) DECnet Mgmt*, 2–35
PROXY parameter, *(S) DECnet Mgmt*, 2–36
records, *(S) VMScluster Sys*, 5–18
security benefits, *(G) User*, 19–7
PROXY parameter, *(S) DECnet Intro*, 3–36
for SET OBJECT command, *(S) DECnet Mgmt*, 2–36
$PRTDEF macro, *(P) Interfaces*, B–14
PRTSMB symbiont, *(S) Sys Mgr Essentials*, 13–3
on LAT printers, *(S) Sys Mgr Essentials*, 13–78
PS (processor status)
evaluating, *(P) Alpha SDA*, SDA–45
examining, *(P) Alpha SDA*, SDA–49
PSBs (procedure signature blocks), *(P) Linker*, LINK–21
PSDNs (packet switching data networks), *(S) DECnet Mgmt*, 1–4
PSECTs
See Program sections
PSECT_ATTR= option, *(P) Linker*, LINK–60
controlling image section creation, *(P) Linker*, 3–22
Pseudodevices, *(S) DECnet Mgmt*, 8–25
Pseudoterminals
canceling request, *(P) I/O User*, 6–2
control connection routines, *(P) I/O User*, C–1
creating, *(P) I/O User*, 6–1
deleting, *(P) I/O User*, 6–2
device characteristics, *(P) I/O User*, 6–3
driver, *(P) I/O User*, 6–1
event notification, *(P) I/O User*, 6–6
features, *(P) I/O User*, 6–3
flow control, *(P) I/O User*, 6–5
I/O buffers, *(P) I/O User*, 6–3
programming example, *(P) I/O User*, 6–7
reading data, *(P) I/O User*, 6–5
using write with echo, *(P) I/O User*, 6–5
writing data, *(P) I/O User*, 6–5
PSIGs (procedure signature information blocks), *(P) Calling Std*, 3–22
field conversions, *(P) Calling Std*, 3–25
%PSL built-in symbol, *(P) Debugger*, 8–22, B–4
/PSL qualifier, *(P) Debugger*, CD–107; *(P) VAX SDA*, SDA–56
PSLs (processor status longwords), *(S) DECamds*, 3–21; *(P) Debugger*, 8–24
evaluating, *(P) VAX SDA*, SDA–26, SDA–53
examining, *(P) VAX SDA*, SDA–56
symbol, *(P) VAX SDA*, SDA–18
PSM$PRINT routine, *(P) Util Routines*, PSM–22
PSM$READ_ITEM_DX routine, *(P) Util Routines*, PSM–24
PSM$REPLACE routine, *(P) Util Routines*, PSM–26
PSM$REPORT routine, *(P) Util Routines*, PSM–31
PSM$_FUNNOTSUP routine, *(P) Util Routines*, PSM–35
PSM routines, *(P) Util Routines*, PSM–1
examples, *(P) Util Routines*, PSM–17 to PSM–21
USER-FORMAT-ROUTINE, *(P) Util Routines*, PSM–34
USER-INPUT-ROUTINE, *(P) Util Routines*, PSM–38
USER-OUTPUT-ROUTINE, *(P) Util Routines*, PSM–44
/PS qualifier, *(P) Debugger*, CD–107; *(P) Alpha SDA*, SDA–49
PS symbol, *(P) Alpha SDA*, SDA–15
PST (process section table)
displaying, *(P) Alpha SDA*, SDA–128; *(P) VAX SDA*, SDA–149
/PST qualifier, *(P) VAX SDA*, SDA–149
PSWAPM privilege, *(S) Security*, A–14
/PSW qualifier, *(P) Debugger*, CD–107
PSWRAP command, *(G) DCL N-Z*, DCLII–27
PTA option, *(P) Rec Mgmt Util*, 4–14
PTBR register
displaying, *(P) Alpha SDA*, SDA–87

PTBR symbol, *(P) Alpha SDA*, SDA–15
PTD$CANCEL control connection routine, *(P) I/O User*, C–2
PTD$CREATE control connection routine, *(P) I/O User*, C–3
PTD$DELETE control connection routine, *(P) I/O User*, C–6
PTD$READ control connection routine, *(P) I/O User*, C–7
PTD$READW control connection routine, *(P) I/O User*, C–9
PTD$SET_EVENT_NOTIFICATION control connection routine, *(P) I/O User*, C–10
PTD$WRITE control connection routine, *(P) I/O User*, C–13
/PTE qualifier, *(P) Alpha SDA*, SDA–45, SDA–49; *(P) VAX SDA*, SDA–53, SDA–56
PTEs (page table entries)
  extended addresses, *(P) Concepts*, 19–5
PTF (product text file), *(S) Sys Mgr Essentials*, 3–20
pthread.h, *(P) DECthreads*, A–2, B–2
pthread_debug, *(P) DECthreads*, pthread–57
pthread_exc.h, *(P) DECthreads*, A–2, B–2
pthread_join32 routine, *(P) DECthreads*, pthread–72
pthread_join64 routine, *(P) DECthreads*, pthread–72
pthread_join routine, *(P) DECthreads*, pthread–72
pthread_once_t data structure, *(P) DECthreads*, pthread–99, tis–23, G–70
Publications about system dependability
  See Bibliography
Public databases
  accessing, *(S) DECnet Intro*, 2–5
Public directories
  accessing, *(S) DECnet Intro*, 2–5
Public volumes
  conditions for using, *(S) Sys Mgr Essentials*, 8–8
  creating with SYSTEM qualifier, *(S) Sys Mgr Essentials*, 8–24
  definition, *(S) Sys Mgr Essentials*, 8–8
  initializing, *(S) Sys Mgr Essentials*, 8–12
  mounting, *(S) Sys Mgr Essentials*, 5–11, 8–20
  protecting, *(S) Sys Mgr Essentials*, 8–15
  setting protection, *(S) Sys Mgr Essentials*, 8–18
PURGE CIRCUIT command, *(S) DECnet Mgmt Util*, 3–2
PURGE command, *(G) User*, 4–15; *(G) DCL N-Z*, DCLII–28 to DCLII–31; *(S) DECnet Intro*, 3–10
  in Install utility, *(S) Sys Mgmt Util A-L*, 11–17
  in Mail, *(G) User*, 6–15
  in network operations, *(S) DECnet Intro*, 2–7
  NCP, *(S) Sys Mgr Tuning*, 21–11
  saving disk space, *(S) Sys Mgr Essentials*, 8–53
PURGE command (cont'd)
  to delete configuration database entries, *(S) DECnet Intro*, 3–34
PURGE DEVICE command
  in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–20
PURGE EXECUTOR command, *(S) DECnet Mgmt*, 3–14; *(S) DECnet Mgmt Util*, 3–6
PURGE LINE command, *(S) DECnet Mgmt Util*, 3–12
PURGE LOGGING command, *(S) DECnet Intro*, 4–6; *(S) DECnet Mgmt Util*, 3–16
PURGE LOGGING EVENTS command, *(S) DECnet Mgmt Util*, 3–17
PURGE LOGGING NAME command, *(S) DECnet Mgmt Util*, 3–19
PURGE MODULE CONFIGURATOR command, *(S) DECnet Mgmt Util*, 3–20
PURGE MODULE X25-ACCESS command, *(S) DECnet Mgmt Util*, 3–21
PURGE MODULE X25-PROTOCOL command, *(S) DECnet Mgmt Util*, 3–22
PURGE MODULE X25-SERVER command, *(S) DECnet Mgmt Util*, 3–25
PURGE MODULE X29-SERVER command, *(S) DECnet Mgmt Util*, 3–25
PURGE NODE CIRCUIT command, *(S) DECnet Mgmt Util*, 3–31
PURGE NODE command, *(S) DECnet Intro*, 3–34; *(S) DECnet Mgmt Util*, 3–27
  in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–20
PURGE OBJECT command, *(S) DECnet Mgmt Util*, 3–32
Purge Working Set fix, *(S) DECamds*, 4–5
$PURGE_WS system service
  description, *(P) Sys Svc II*, SYS2–229
Push button view
  customizing buttons on, *(P) Debugger*, 3–29
/PUSH qualifier, *(P) Debugger*, CD–90
$PUSH_ARG64 macro, *(P) 64-Bit Addr*, 9–1, C–2
  passing 64-bit values, *(P) 64-Bit Addr*, 9–2
PUT attribute, *(P) Rec Mgmt Util*, 4–3, 4–36; *(P) File Appl*, 7–3, 7–4
$PUT macro
  program example, *(P) RMS Ref*, A–27
$PUTMSG routine, *(P) CDU, LBR, & MU*, MSG–4
Put service, *(P) RMS Ref*, RMS–74 to RMS–78; *(P) File Appl*, 8–1, 8–3 to 8–4
  effect on next-record position, *(P) File Appl*, 8–17
  next record and, *(P) File Appl*, 8–17
  record-processing options, *(P) RMS Ref*, 6–18
  run-time options, *(P) File Appl*, 9–16 to 9–17

Putting constraints into perspective, *(S) Dependable*, 4–3
PXG, *(P) Environment*, 2–6
2P_CDDB symbol, *(P) VAX SDA*, SDA–17
2P_UCB symbol, *(P) VAX SDA*, SDA–17

Q

QDSKINTERVAL system parameter, *(S) VMScluster Sys*, A–3
QDSKVOTES system parameter, *(S) VMScluster Sys*, 2–9, A–3
$QIO, *(P) I/O User*, 5–76
QMAN$MASTER.DAT file, *(S) VMScluster Sys*, 7–3
  authorization elements, *(S) VMScluster Sys*, 5–13
QMAN$MASTER logical name, *(S) Sys Mgr Essentials*, 12–6
  defining during system startup, *(S) Sys Mgr Essentials*, 5–8
  defining to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
QNA device, *(S) DECnet Intro*, 3–33
/QUAD qualifier, *(P) Alpha SDA*, SDA–151
Quadword addresses
  computing, *(P) 64-Bit Addr*, 9–5
Quadword arguments
  declaring, *(P) 64-Bit Addr*, 9–4
  passing, *(P) 64-Bit Addr*, 9–2
/QUADWORD qualifier, *(P) Debugger*, 15–6, 15–7, CD–78, CD–107, CD–131
quadword_signed data type, *(P) Interfaces*, B–14
quadword_unsigned data type, *(P) Interfaces*, B–14
Qualifier lines
  help files, *(P) CDU, LBR, & MU*, LIB–8
Qualifiers
  command, *(S) Sys Mgmt Util A-L*, 7–7
  conflicting, *(G) User*, 3–10
  date formats, *(G) User*, 3–11
  for CDU, *(P) CDU, LBR, & MU*, CDU–39
    defining, *(P) CDU, LBR, & MU*, CDU–25, CDU–34
  for LIBRARY command, *(P) CDU, LBR, & MU*, LIB–14
  in DCL command lines, *(G) User*, 3–3
  input file-selection, *(S) Sys Mgmt Util A-L*, 7–7
  input save-set, *(S) Sys Mgmt Util A-L*, 7–7
  output file, *(S) Sys Mgmt Util A-L*, 7–7
  output save-set, *(S) Sys Mgmt Util A-L*, 7–7
  parameter, *(G) User*, 3–9
  positional, *(G) User*, 3–9
  position-dependent, *(S) Sys Mgmt Util A-L*, 7–7
  requiring special privileges, *(S) Sys Mgmt Util M-Z*, 2–6
  specifying values, *(G) User*, 3–10
  time formats, *(G) User*, 3–11
Quality metrics and mindsets, *(S) Dependable*, 3–10
Quantum
  allocating to process, *(S) VAX Perform*, 3–9
QUANTUM system parameter, *(S) Sys Mgr Tuning*, 26–8; *(S) Alpha Perform*, 6–19
  increasing, *(S) VAX Perform*, 5–17; *(S) Alpha Perform*, 19–2
Queue access routines, *(P) Concepts*, 6–13
Queue and journal files, *(G) DCL N-Z*, DCLII–384
Queue characteristics
  canceling, *(S) Sys Mgr Essentials*, 13–59
  commands for managing, *(S) Sys Mgr Essentials*, 13–57
  defining, *(S) Sys Mgr Essentials*, 13–58
  definition, *(S) Sys Mgr Essentials*, 13–28
  deleting, *(S) Sys Mgr Essentials*, 13–59
  obtaining information about, *(S) Sys Mgr Essentials*, 13–51, 13–59
  problems
    deleting, *(S) Sys Mgr Essentials*, 13–82
    mismatch, *(S) Sys Mgr Essentials*, 13–81
  sample use of, *(S) Sys Mgr Essentials*, 13–28
  specifying
    on a job, *(S) Sys Mgr Essentials*, 13–28
    on a queue, *(S) Sys Mgr Essentials*, 13–19, 13–28, 13–59
  storage of in queue database, *(S) Sys Mgr Essentials*, 13–17
Queue commands, *(G) SW Overview*, 3–12
  affected by multiple queue managers, *(S) Sys Mgr Essentials*, 12–4
  creating a queue database, *(S) Sys Mgr Essentials*, 12–7
  creating queues, *(S) Sys Mgr Essentials*, 13–48
  deleting queues, *(S) Sys Mgr Essentials*, 13–57
  displaying information about the queue manager, *(S) Sys Mgr Essentials*, 12–11
  displaying jobs, *(S) Sys Mgr Essentials*, 13–68
  displaying queues, *(S) Sys Mgr Essentials*, 13–49
  enabling autostart, *(S) Sys Mgr Essentials*, 13–16, 13–18, 13–48
  managing banner pages, *(S) Sys Mgr Essentials*, 13–60
  managing characteristics, *(S) Sys Mgr Essentials*, 13–57
  managing device control libraries, *(S) Sys Mgr Essentials*, 13–65
  managing forms and stock, *(S) Sys Mgr Essentials*, 13–61
  managing queues, *(S) Sys Mgr Essentials*, 13–46
  modifying jobs, *(S) Sys Mgr Essentials*, 13–70
  modifying queues, *(S) Sys Mgr Essentials*, 13–53
  pausing queues, *(S) Sys Mgr Essentials*, 13–53

Queue commands (cont'd)
relationship between starting and enabling autostart, *(S) Sys Mgr Essentials*, 13–4
setting UIC-based protection, *(S) Sys Mgr Essentials*, 13–23
showing UIC-based protection, *(S) Sys Mgr Essentials*, 13–23
specifying options, *(S) Sys Mgr Essentials*, 13–19, 13–31
starting queues
autostart, *(S) Sys Mgr Essentials*, 13–16, 13–18
nonautostart, *(S) Sys Mgr Essentials*, 13–17, 13–48
starting the queue manager, *(S) Sys Mgr Essentials*, 12–7
caution, *(S) Sys Mgr Essentials*, 12–8
creating an additional queue manager, *(S) Sys Mgr Essentials*, 12–10
restarting, *(S) Sys Mgr Essentials*, 12–9
specifying failover list, *(S) Sys Mgr Essentials*, 12–9
specifying name of queue manager, *(S) Sys Mgr Essentials*, 12–10
specifying nodes to run the queue manager, *(S) Sys Mgr Essentials*, 12–6
stopping
all queues on a node, *(S) Sys Mgr Essentials*, 12–9
queues, *(S) Sys Mgr Essentials*, 13–49, 13–54
the queue manager, *(S) Sys Mgr Essentials*, 12–9
Queue configurations
sample batch queuing system, *(S) Sys Mgr Essentials*, 13–4 to 13–7
sample output queuing environment, *(S) Sys Mgr Essentials*, 13–8 to 13–14
Queue database, *(S) VMScluster Sys*, 7–2
closing, *(S) Sys Mgr Essentials*, 12–9
closing files, *(G) DCL N-Z*, DCLII–399
creating, *(S) Sys Mgr Essentials*, 12–7
default location, *(S) Sys Mgr Essentials*, 12–5
definition, *(S) Sys Mgr Essentials*, 12–4
detection of queue corruption, *(S) Sys Mgr Essentials*, 13–84
determining location, *(S) Sys Mgr Essentials*, 12–7
determining location of master file, *(S) Sys Mgr Essentials*, 12–5
determining location of queue and journal file, *(S) Sys Mgr Essentials*, 12–6
files comprising, *(S) Sys Mgr Essentials*, 12–4
for multiple queue managers, *(S) Sys Mgr Essentials*, 12–4, 12–5
naming convention, *(S) Sys Mgr Essentials*, 12–5
function, *(S) Sys Mgr Essentials*, 12–4
Queue database (cont'd)
logical name defining location, *(S) Sys Mgr Essentials*, 5–8
managing, *(S) Sys Mgr Essentials*, 12–1
mounting the disk holding, *(S) Sys Mgr Essentials*, 12–6
moving, *(S) Sys Mgr Essentials*, 12–5
moving to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
requirement in a VMScluster environment, *(S) Sys Mgr Essentials*, 12–5, 12–6
restoring a damaged, *(S) Sys Mgr Essentials*, 12–12
saving, *(S) Sys Mgr Essentials*, 12–11
specifying location, *(S) Sys Mgr Essentials*, 12–5
Queue failover, *(S) Sys Mgr Essentials*, 13–4
Queue file of queue database, *(S) Sys Mgr Essentials*, 12–4
location, *(S) Sys Mgr Essentials*, 12–6, 12–7
changing, *(S) Sys Mgr Essentials*, 12–6
saving, *(S) Sys Mgr Essentials*, 12–12
Queue files
detection of corruption, *(S) Sys Mgr Essentials*, 13–84
Queue forms
See Forms
Queue I/O request system service, *(P) File Appl*, 7–4, 9–13
Queue I/O services
$QIO call, *(P) File Appl*, 1–18
Queue information, getting, *(P) LIB$*, LIB–233
Queue managers
automatic restart, *(S) Sys Mgr Essentials*, 12–3, 12–7, 12–9, 12–17
availability, *(S) VMScluster Sys*, 7–3
availability of, *(S) Sys Mgr Essentials*, 12–9, 12–17
clusterwide, *(S) Dependable*, 8–28; *(S) VMScluster Sys*, 7–1
communication with job controller, *(S) Sys Mgr Essentials*, 12–3
creating an additional, *(S) Sys Mgr Essentials*, 12–10
database, *(S) VMScluster Sys*, 7–2
default name, *(S) Sys Mgr Essentials*, 12–4
definition, *(S) Sys Mgr Essentials*, 12–1
displaying information about, *(S) Sys Mgr Essentials*, 12–11
failover, *(G) DCL N-Z*, DCLII–385; *(S) Sys Mgr Essentials*, 12–3, 12–17; *(S) Dependable*, 9–18; *(S) VMScluster Sys*, 7–3
forcing, *(S) Sys Mgr Essentials*, 12–9
list of nodes for, *(S) Sys Mgr Essentials*, 12–9, 12–17
function, *(S) Sys Mgr Essentials*, 12–1; *(S) VMScluster Sys*, 7–1

Queue managers (cont'd)
improving performance, *(S) Sys Mgr Essentials*, 12–13
limiting nodes that can run, *(S) Sys Mgr Essentials*, 12–9
managing, *(S) Sys Mgr Essentials*, 12–1
moving to another node in a VMScluster system, *(S) Sys Mgr Essentials*, 12–10
multiple, *(S) Sys Mgr Essentials*, 12–3, 12–10
commands affected by, *(S) Sys Mgr Essentials*, 12–4
managing queues with, *(S) Sys Mgr Essentials*, 12–10
moving a queue to another queue manager, *(S) Sys Mgr Essentials*, 12–10
restriction, *(S) Sys Mgr Essentials*, 12–3
specifying queue manager name, *(S) Sys Mgr Essentials*, 12–4, 12–10
naming, *(S) Sys Mgr Essentials*, 12–10
nodes eligible to run, *(S) VMScluster Sys*, 7–3
relationship to queues, *(S) Sys Mgr Essentials*, 12–1
restarting, *(G) DCL N-Z*, DCLII–385, DCLII–399; *(S) Sys Mgr Essentials*, 12–9
role in queuing process, *(S) Sys Mgr Essentials*, 12–2, 13–2
print jobs, *(S) Sys Mgr Essentials*, 13–3
role in starting active autostart queues, *(S) Sys Mgr Essentials*, 13–4
specifying name of, *(S) Sys Mgr Essentials*, 12–10
specifying preferred order in which nodes run, *(S) Sys Mgr Essentials*, 12–9
starting, *(G) DCL N-Z*, DCLII–384
starting initially, *(S) Sys Mgr Essentials*, 12–7
stopping, *(G) DCL N-Z*, DCLII–399; *(S) Sys Mgr Essentials*, 12–9
troubleshooting, *(S) Sys Mgr Essentials*, 12–14
Queue master file
logical name defining location, *(S) Sys Mgr Essentials*, 5–8
Queue names
default for batch queue, *(S) Sys Mgr Essentials*, 13–5
default for print queue, *(S) Sys Mgr Essentials*, 13–8
defining, *(S) Sys Mgr Essentials*, 13–15
Queue options, *(S) Sys Mgr Essentials*, 13–18
assigning, *(G) DCL N-Z*, DCLII–372
banner pages, *(S) Sys Mgr Essentials*, 13–33
changing, *(G) DCL A-M*, DCLI–263; *(G) DCL N-Z*, DCLII–372
characteristics, *(S) Sys Mgr Essentials*, 13–28
controlling job performance and resources, *(S) Sys Mgr Essentials*, 13–28
controlling page and line overflow, *(S) Sys Mgr Essentials*, 13–43
Queue options (cont'd)
device control libraries, *(S) Sys Mgr Essentials*, 13–44
forms, *(S) Sys Mgr Essentials*, 13–42
qualifiers for specifying, *(S) Sys Mgr Essentials*, 13–19 to 13–22
restricting access, *(S) Sys Mgr Essentials*, 13–22
retaining jobs, *(S) Sys Mgr Essentials*, 13–26
Queues, *(P) Concepts*, 6–12; *(P) DECthreads*, E–4
See also Autostart queues, Batch queues, Execution queues, Generic queues, Output queues, and Print queues
access granted by OPER privilege, *(S) Security*, 4–29
ACL access rights, *(S) Security*, 5–17
activating autostart, *(G) DCL A-M*, DCLI–207; *(G) DCL N-Z*, DCLII–372; *(S) Sys Mgr Essentials*, 13–15, 13–16, 13–49
allowing jobs to complete before shutdown, *(S) Sys Mgr Essentials*, 13–55
as protected objects, *(S) Security*, 4–10
assigning, *(G) DCL A-M*, DCLI–263
assigning a default form, *(S) Sys Mgr Essentials*, 13–63
assigning device control libraries, *(S) Sys Mgr Essentials*, 13–66
assigning logical names to, *(G) DCL A-M*, DCLI–48
assigning to devices, *(G) DCL A-M*, DCLI–48
automatic failover, *(S) Dependable*, 9–18
autostart, *(G) DCL A-M*, DCLI–266; *(G) DCL N-Z*, DCLII–373
availability of, *(S) Sys Mgr Essentials*, 13–4, 13–15
changing DEFAULT form, *(S) Sys Mgr Essentials*, 13–63
changing entries for batch and printer jobs, *(G) DCL N-Z*, DCLII–121
changing options on, *(G) DCL A-M*, DCLI–263; *(G) DCL N-Z*, DCLII–372; *(S) Sys Mgr Essentials*, 13–53
characteristics, *(S) Sys Mgr Essentials*, 13–28
closing, *(S) Sys Mgr Essentials*, 13–53
common command procedure, *(S) VMScluster Sys*, 7–14
controlling, *(G) SW Overview*, 3–18; *(S) VMScluster Sys*, 7–1
creating, *(G) DCL A-M*, DCLI–263; *(S) Sys Mgr Essentials*, 13–15, 13–48; *(P) DECthreads*, F–6
autostart execution, *(S) Sys Mgr Essentials*, 13–15, 13–16
generic, *(S) Sys Mgr Essentials*, 13–17
nonautostart execution, *(S) Sys Mgr Essentials*, 13–16
creating an attributes object for, *(P) DECthreads*, F–2

Queues (cont'd)
creating and managing asynchronously, *(P) Sys Svc II*, SYS2–359
creating and managing synchronously, *(P) Sys Svc II*, SYS2–417
deactivating autostart, *(G) DCL N-Z*, DCLII–400, DCLII–404
deassigning, *(G) DCL A-M*, DCLI–115
defining a form, *(S) Sys Mgr Essentials*, 13–61
defining CPU time limit for batch jobs, *(G) DCL A-M*, DCLI–268; *(G) DCL N-Z*, DCLII–184, DCLII–375
defining default working sets for batch jobs, *(G) DCL A-M*, DCLI–275, DCLI–285; *(G) DCL N-Z*, DCLII–188, DCLII–381, DCLII–418
defining working set extent for batch jobs, *(G) DCL A-M*, DCLI–275, DCLI–285; *(G) DCL N-Z*, DCLII–188, DCLII–381, DCLII–419
defining working set quotas for batch jobs, *(G) DCL A-M*, DCLI–285; *(G) DCL N-Z*, DCLII–189, DCLII–419
deleting, *(S) Sys Mgr Essentials*, 13–57; *(P) DECthreads*, F–7
deleting a job in, *(S) Sys Mgr Essentials*, 13–74
deleting an attributes object for, *(P) DECthreads*, F–3
deleting batch or print, *(G) DCL A-M*, DCLI–148
deleting entries, *(G) DCL A-M*, DCLI–141
designating as autostart, *(G) DCL A-M*, DCLI–265
disabled, *(S) Sys Mgr Essentials*, 13–84
disabling autostart, *(G) DCL A-M*, DCLI–180; *(G) DCL N-Z*, DCLII–406
displaying default characteristics of system print queues, *(G) DCL N-Z*, DCLII–308
displaying device entries, *(G) DCL N-Z*, DCLII–270, DCLII–319
displaying entries, *(G) DCL N-Z*, DCLII–319
displaying information about, *(S) Sys Mgr Essentials*, 13–49
ensuring availability of, *(G) DCL A-M*, DCLI–266; *(G) DCL N-Z*, DCLII–373
establishing a print queue as spooled, *(G) DCL N-Z*, DCLII–109
establishing base priority for batch jobs, *(G) DCL N-Z*, DCLII–183
establishing base priority for jobs, *(G) DCL A-M*, DCLI–266
events audited, *(S) Security*, 5–18
execution of, *(G) DCL A-M*, DCLI–264; *(P) Util Routines*, PSM–3
  designating autostart or nonautostart, *(G) DCL A-M*, DCLI–265
failover of, *(G) DCL A-M*, DCLI–266; *(G) DCL N-Z*, DCLII–373; *(S) Sys Mgr Essentials*, 13–15
Queues (cont'd)
forms, *(S) Sys Mgr Essentials*, 13–42
gathering information with F$GETQUI, *(S) Sys Mgr Essentials*, 13–51
getting information, *(P) Concepts*, 5–21
getting information asynchronously, *(P) Sys Svc II*, SYS2–3
getting information synchronously, *(P) Sys Svc II*, SYS2–46
holding and releasing jobs, *(S) Sys Mgr Essentials*, 13–71
in a VMScluster environment, *(S) Sys Mgr Tuning*, 20–2
initializing, *(G) DCL A-M*, DCLI–263; *(S) Sys Mgr Essentials*, 13–48
inserting an element at the end of, *(P) DECthreads*, F–9, F–12, F–13
inserting an element at the front of, *(P) DECthreads*, F–10, F–14
inserting an entry, *(P) LIB$*, LIB–317 to LIB–326
lock management, *(P) Concepts*, 15–6
logical, *(G) DCL A-M*, DCLI–265
managing with multiple queue managers, *(S) Sys Mgr Essentials*, 12–10
merging, *(S) Sys Mgr Essentials*, 13–56
merging jobs, *(G) DCL A-M*, DCLI–47
modifying, *(S) Sys Mgr Essentials*, 13–53
modifying characteristics of a print queue, *(G) DCL N-Z*, DCLII–174
monitoring, *(S) Sys Mgr Essentials*, 13–49
mounting a form on, *(S) Sys Mgr Essentials*, 13–42, 13–64
moving jobs from one queue to another, *(S) Sys Mgr Essentials*, 13–57
moving to another queue manager, *(S) Sys Mgr Essentials*, 12–10
obtaining size of, *(P) DECthreads*, F–4
on standalone workstations
  batch, *(S) Sys Mgr Essentials*, 13–5
  output, *(S) Sys Mgr Essentials*, 13–8
pausing, *(G) DCL N-Z*, DCLII–394; *(S) Sys Mgr Essentials*, 13–53
preparing for a shutdown, *(G) DCL N-Z*, DCLII–407
preventing failover, *(G) DCL A-M*, DCLI–180
privilege requirements, *(S) Security*, 5–18
problems deleting, *(S) Sys Mgr Essentials*, 13–82
profile storage, *(S) Security*, 5–18
protection, *(S) Sys Mgr Essentials*, 13–22 to 13–26; *(P) Sys Svc II*, SYS2–409
protection code access rights, *(S) Security*, 5–17
reinitializing existing, *(G) DCL A-M*, DCLI–263; *(S) Sys Mgr Essentials*, 13–53
releasing from paused states, *(G) DCL N-Z*, DCLII–394

Queues (cont'd)
removing and entry, *(P) LIB$*, LIB–402 to LIB–411
removing an element from, *(P) DECthreads*, F–8, F–11
removing jobs from, *(G) DCL A-M*, DCLI–47
requeuing
executing job, *(S) Sys Mgr Essentials*, 13–73
pending job, *(S) Sys Mgr Essentials*, 13–73
restarting, *(G) DCL N-Z*, DCLII–372, DCLII–400, DCLII–404
restarting after deactivating for autostart, *(G) DCL N-Z*, DCLII–400, DCLII–404
restarting batch, *(S) Dependable*, 9–19
security elements of, *(S) Security*, 5–17
self-relative, *(P) Concepts*, 6–12
server, *(G) DCL A-M*, DCLI–265
setting size of, *(P) DECthreads*, F–5
setting up for failover, *(G) DCL A-M*, DCLI–266; *(G) DCL N-Z*, DCLII–373
simplifying startup, *(S) Sys Mgr Essentials*, 13–4
single-computer and cluster, *(S) VMScluster Sys*, 7–1
spooling printers, *(S) Sys Mgr Essentials*, 7–14, 13–14
stalled
status of, *(S) Sys Mgr Essentials*, 13–79, 13–81
troubleshooting, *(S) Sys Mgr Essentials*, 13–81
starting, *(G) DCL N-Z*, DCLII–372
autostart, *(S) Sys Mgr Essentials*, 13–48
in startup command procedure, *(S) Sys Mgr Essentials*, 13–18
in system startup, *(S) Sys Mgr Essentials*, 5–12
nonautostart, *(S) Sys Mgr Essentials*, 13–16, 13–48
starting autostart, *(G) DCL A-M*, DCLI–207; *(G) DCL N-Z*, DCLII–372
starting queue managers, *(G) DCL N-Z*, DCLII–384
startup command procedure, *(S) Sys Mgr Essentials*, 5–12
sample, *(S) Sys Mgr Essentials*, 13–18
stepping through, *(P) Alpha SDA*, SDA–64; *(P) VAX SDA*, SDA–68
stopped
status of, *(S) Sys Mgr Essentials*, 13–79
stopping, *(G) DCL N-Z*, DCLII–372, DCLII–400, DCLII–404; *(S) Sys Mgr Essentials*, 13–54
abruptly, *(S) Sys Mgr Essentials*, 13–54
all, *(G) DCL N-Z*, DCLII–406
all on a node, *(S) Sys Mgr Essentials*, 13–55

Queues
stopping (cont'd)
before shutdown, *(G) DCL A-M*, DCLI–180; *(G) DCL N-Z*, DCLII–406; *(S) Sys Mgr Essentials*, 13–55
queue managers, *(G) DCL N-Z*, DCLII–399
smoothly, *(S) Sys Mgr Essentials*, 13–54
symbionts, *(G) DCL A-M*, DCLI–265
template profiles, *(S) Security*, 5–17
types of, *(G) DCL A-M*, DCLI–264; *(S) Sys Mgr Essentials*, 13–2; *(P) Sys Svc II*, SYS2–406
output execution, *(S) Sys Mgr Essentials*, 13–3
types of access, *(S) Security*, 5–17
validating, *(P) Alpha SDA*, SDA–160; *(P) VAX SDA*, SDA–185
Queue status, *(S) Sys Mgr Essentials*, 13–49, 13–50
determining, *(S) Sys Mgr Essentials*, 13–78
Queuing ACMS, *(S) Dependable*, 8–57
Queuing remote files
for printing, *(S) DECnet Intro*, 2–6
Queuing system
See Batch and print queuing system
QUIT command, *(P) Debugger*, 5–11, CD–135
multiprocess program, *(P) Debugger*, 14–10
Quorum, *(P) Alpha SDA*, SDA–80
adding or removing voting members, *(S) VMScluster Sys*, 8–33
algorithm, *(S) VMScluster Sys*, 2–6
calculating cluster votes, *(S) VMScluster Sys*, 2–6
changing expected votes, *(S) VMScluster Sys*, 10–22
enabling a quorum disk watcher, *(S) VMScluster Sys*, 2–9
EXPECTED_VOTES system parameter, *(S) VMScluster Sys*, 2–6, 10–22
reasons for loss, *(S) VMScluster Sys*, C–16
restoring after unexpected computer failure, *(S) VMScluster Sys*, 10–21
setting parameters on voting members, *(S) VMScluster Sys*, 2–6
system parameters, *(S) VMScluster Sys*, 2–6
VOTES system parameter, *(S) VMScluster Sys*, 2–6
QUORUM.DAT file, *(S) VMScluster Sys*, 2–10
Quorum disk
See also VMScluster environments, quorum disk, and VMScluster systems, quorum disk
adding, *(S) VMScluster Sys*, 8–18
adjusting EXPECTED_VOTES, *(S) VMScluster Sys*, 8–36
disabling, *(S) VMScluster Sys*, 8–21, 8–33
enabling, *(S) VMScluster Sys*, 8–33
in sample configuration, *(S) VMScluster Sys*, 3–14

Quorum disk (cont'd)
mounting, *(S) VMScluster Sys*, 2–10
QUORUM.DAT file, *(S) VMScluster Sys*, 2–10
restricted from shadow sets, *(S) VMScluster Sys*, 6–23
Quorum disk watcher
enabling, *(S) VMScluster Sys*, 2–9
mounting the quorum disk, *(S) VMScluster Sys*, 2–10
system parameters, *(S) VMScluster Sys*, 2–9
Quorum fix, *(S) DECamds*, 4–1
Quota checking
controlling, *(S) Sys Mgmt Util M-Z*, 2–32
Quota file
Analyze/Disk_Structure utility creates version, *(S) Sys Mgr Tuning*, A–9
contents, *(S) Sys Mgr Essentials*, 8–49
creating, *(S) Sys Mgr Essentials*, 8–51; *(S) Sys Mgmt Util M-Z*, 6–23
deleting, *(S) Sys Mgr Essentials*, 8–53
disabling, *(S) Sys Mgr Essentials*, 8–53; *(S) Sys Mgmt Util M-Z*, 6–23
displaying, *(S) Sys Mgmt Util M-Z*, 6–29
enabling, *(S) Sys Mgmt Util M-Z*, 6–25
modifying, *(S) Sys Mgmt Util M-Z*, 6–25
QUOTA.SYS, *(S) Sys Mgr Tuning*, A–9
removing an entry, *(S) Sys Mgmt Util M-Z*, 6–23, 6–27
requirements for, *(S) Sys Mgr Essentials*, 8–51
reserved file, *(S) Sys Mgr Tuning*, A–9
UIC [0,0] in, *(S) Sys Mgr Essentials*, 8–49
updating, *(S) Sys Mgr Essentials*, 8–53; *(S) Sys Mgmt Util M-Z*, 6–26
Quota file transfer block, *(P) I/O User*, 1–35
/QUOTA qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–32
Quotas, *(P) Interfaces*, B–12; *(P) Debugger*, 13–19
See also Disk quotas and Process quotas
assigning process, *(G) DCL N-Z*, DCLII–59
AST, *(P) Concepts*, 9–3; *(P) I/O User*, 2–27, 3–10, 4–5, 4–12, 5–44
AST limit, *(G) DCL N-Z*, DCLII–61
batch jobs
working set, *(G) DCL N-Z*, DCLII–419
buffered I/O, *(P) Concepts*, 9–3; *(P) I/O User*, 2–27, 3–10, 4–5
buffered I/O byte count, *(P) Concepts*, 9–3
BYTELIM, *(P) I/O User*, 1–11
controlling checking, *(S) Sys Mgmt Util M-Z*, 2–32
CPU
for created processes, *(G) DCL N-Z*, DCLII–65
direct I/O, *(P) Concepts*, 9–3; *(P) I/O User*, 2–27, 3–10
establishing, *(P) Concepts*, 10–11
I/O operations, *(P) Concepts*, 9–2
in use jobs, *(S) DECamds*, 3–25
Quotas (cont'd)
limit fix, *(S) DECamds*, 4–3
mailbox buffer, *(P) I/O User*, 4–1, 4–3, 4–5
of subprocesses process can create, *(G) DCL N-Z*, DCLII–65
pipeline, *(S) DECnet Mgmt*, 2–24, 3–58; *(S) DECnet Mgmt Util*, 3–69
process account quota requirements, *(S) DECamds*, A–3
process mode, *(S) DECamds*, 3–24
recommended for processes, *(S) DECamds*, 5–15
required to run UETP, *(S) Sys Mgr Tuning*, 17–23
SS$_EXQUOTA condition value, *(P) Concepts*, 13–21
system service resources, *(P) Interfaces*, 4–2
to run Data Analyzer node, *(S) DECamds*, A–14
working set
for batch jobs, *(G) DCL N-Z*, DCLII–419
modifying, *(G) DCL N-Z*, DCLII–235
Quotation marks (" ")
ASCII string delimiter, *(P) Debugger*, 8–16
for access control string in equivalence name, *(S) DECnet Intro*, 2–4
in character strings, *(G) User*, 16–10
in remote file specifications, *(G) DCL A-M*, DCLI–91; *(S) TCP/IP*, 5–6; *(S) DECnet Intro*, 2–3
instruction delimiter, *(P) Debugger*, 8–21
in task specification string, *(S) DECnet Intro*, 2–14

R

R0 register
use by control block store macros, *(P) RMS Ref*, A–7
use in asynchronous operations, *(P) RMS Ref*, 2–5
RA60 disk, *(P) I/O User*, 2–3
RA70 disk, *(P) I/O User*, 2–3
RA90 disk, *(P) I/O User*, 2–3
RAB$B_BID field, *(P) RMS Ref*, 6–2
RAB$B_BLN field, *(P) RMS Ref*, 6–3
RAB$B_KRF field, *(P) RMS Ref*, 6–4; *(P) File Appl*, 9–12, 9–14
for selecting key path, *(P) RMS Ref*, A–23
RAB$B_KSZ
used with performance caching optimization, *(P) RMS Ref*, 6–15
RAB$B_KSZ field, *(P) RMS Ref*, 6–4; *(P) File Appl*, 8–7, 8–8, 8–14, 9–12, 9–14, 9–16
use with limit option, *(P) RMS Ref*, 6–14
use with search key, *(P) RMS Ref*, 6–13, 6–14

RAB$B_MBC field, *(P) RMS Ref*, 6–6 to 6–7; *(P) File Appl*, 3–14, 3–15, 7–17, 9–9
  for establishing global buffer size in shared sequential file operations, *(P) RMS Ref*, 4–19
RAB$B_MBF field, *(P) RMS Ref*, 6–7; *(P) File Appl*, 3–14, 3–27, 9–9
RAB$B_PSZ field, *(P) RMS Ref*, 6–8
RAB$B_RAC field, *(P) RMS Ref*, 6–8
  RAB$C_KEY option, *(P) File Appl*, 8–6, 9–9, 9–15, 9–16
  RAB$C_RFA option, *(P) File Appl*, 8–6, 9–9, 9–15, 9–16
  RAB$C_SEQ option, *(P) File Appl*, 8–6, 9–9, 9–15, 9–16
RAB$B_TMO field, *(P) RMS Ref*, 6–21 to 6–22; *(P) File Appl*, 7–12, 7–13, 9–15
  use with timeout option for terminal operation, *(P) RMS Ref*, 6–20
RAB$C_KEY option, *(P) RMS Ref*, 6–9
RAB$C_RFA option, *(P) RMS Ref*, 6–9
RAB$C_SEQ option, *(P) RMS Ref*, 6–8
RAB$L_BKT field, *(P) RMS Ref*, 6–2
RAB$L_CTX field, *(P) RMS Ref*, 6–3
RAB$L_FAB field, *(P) RMS Ref*, 6–3
RAB$L_KBF field, *(P) RMS Ref*, 6–3; *(P) File Appl*, 8–7, 8–8, 8–14, 9–12, 9–14, 9–16
  use with limit option, *(P) RMS Ref*, 6–14
  use with search key, *(P) RMS Ref*, 6–13, 6–14
RAB$L_PBF field, *(P) RMS Ref*, 6–8
RAB$L_RBF field, *(P) RMS Ref*, 3–4, 6–9, A–15; *(P) File Appl*, 9–17, 9–18
RAB$L_RBZ field, *(P) File Appl*, 9–17
RAB$L_RHB field, *(P) RMS Ref*, 6–10; *(P) File Appl*, 9–15, 9–17, 9–18
RAB$L_ROP field, *(P) RMS Ref*, 6–10; *(P) File Appl*, 9–6
  RAB$V_ASY option, *(P) File Appl*, 8–18, 8–19, 9–8, 9–13, 9–16, 9–18
  RAB$V_EOF option, *(P) File Appl*, 8–15, 8–17, 9–10
  RAB$V_EQNXT option, *(P) File Appl*, 9–11, 9–14
  RAB$V_FDL option, *(P) File Appl*, 9–8, 9–11, 9–18
  RAB$V_KGE option, *(P) File Appl*, 8–8, 8–9
  RAB$V_KGT option, *(P) File Appl*, 8–8, 8–9
  RAB$V_LIM option, *(P) File Appl*, 9–12, 9–14
  RAB$V_LOA option, *(P) File Appl*, 9–12, 9–16
  RAB$V_LOC option, *(P) File Appl*, 9–9, 9–14
  RAB$V_NLK option, *(P) File Appl*, 7–11, 9–14
  RAB$V_NXR option, *(P) File Appl*, 7–14, 8–8, 9–14
  RAB$V_NXT option, *(P) File Appl*, 9–12, 9–14
  RAB$V_RAH option, *(P) File Appl*, 3–15, 9–9, 9–15
  RAB$V_REA option, *(P) File Appl*, 7–11, 9–14
RAB$L_ROP field (cont'd)
  RAB$V_RLK option, *(P) File Appl*, 7–11, 9–15, 9–16
  RAB$V_RRL option, *(P) File Appl*, 7–12, 9–15
  RAB$V_TMO option, *(P) File Appl*, 7–12, 7–13, 9–15, 9–17
  RAB$V_TPT option, *(P) File Appl*, 9–10, 9–17
  RAB$V_UIF option, *(P) File Appl*, 8–4, 8–7, 9–10, 9–17
  RAB$V_ULK option, *(P) File Appl*, 7–14, 9–15
  RAB$V_WAT option, *(P) File Appl*, 7–12, 9–16
  RAB$V_WBH option, *(P) File Appl*, 3–15, 9–9, 9–17
RAB$L_STS field, *(P) RMS Ref*, 6–21
RAB$L_STV0 field, *(P) RMS Ref*, RMS–51
RAB$L_STV field, *(P) RMS Ref*, 6–21
  for returning I/O status block, *(P) RMS Ref*, RMS–51
  for returning I/O status block from Put service, *(P) RMS Ref*, RMS–78
  for returning process identification (PID), *(P) RMS Ref*, RMS–51, RMS–75
  for returning record length, *(P) RMS Ref*, RMS–55
  using with Get service, *(P) RMS Ref*, RMS–52
RAB$L_UBF field, *(P) RMS Ref*, 6–22; *(P) File Appl*, 9–15
RAB$L_USZ field, *(P) File Appl*, 9–16
RAB$L_XAB field, *(P) RMS Ref*, 6–23
  requirement for using XABTRM, *(P) RMS Ref*, 17–1
RAB$V_ASY option, *(P) RMS Ref*, 6–12, 6–16
RAB$V_BIO option, *(P) RMS Ref*, 6–12
RAB$V_CCO option, *(P) RMS Ref*, 6–20
RAB$V_CDK option, *(P) RMS Ref*, 6–16
RAB$V_CVT option, *(P) RMS Ref*, 6–20
RAB$V_EOF option, *(P) RMS Ref*, 6–12
RAB$V_EQNXT option, *(P) RMS Ref*, 6–13
  specifying key match method, *(P) RMS Ref*, 6–5, 6–6
  used with reverse-search (RAB$V_REV) option, *(P) RMS Ref*, 6–15
RAB$V_ETO option
  required to use XABTRM, *(P) RMS Ref*, 17–1
RAB$V_FDL option, *(P) RMS Ref*, 6–16
RAB$V_KGE option
  See RAB$V_EQNXT option
RAB$V_KGT option
  See RAB$V_NXT option
  used with reverse-search (RAB$V_REV) option, *(P) RMS Ref*, 6–15
RAB$V_LIM option, *(P) RMS Ref*, 6–14
RAB$V_LOA option, *(P) RMS Ref*, 6–14
  determining fill size, *(P) RMS Ref*, 12–10
  example of use, *(P) RMS Ref*, A–19
  use restriction, *(P) RMS Ref*, 12–4, 12–10

RAB$V_LOC option, *(P) RMS Ref*, 6–16
use restriction, *(P) RMS Ref*, 6–17
RAB$V_NLK option, *(P) RMS Ref*, 6–18
RAB$V_NXR option, *(P) RMS Ref*, 6–18
RAB$V_NXT option, *(P) RMS Ref*, 6–14
specifying key match method, *(P) RMS Ref*, 6–5, 6–6
RAB$V_PMT option, *(P) RMS Ref*, 6–20
RAB$V_PTA option, *(P) RMS Ref*, 6–20
RAB$V_RAH option, *(P) RMS Ref*, 6–12, 6–17
RAB$V_REA option, *(P) RMS Ref*, 6–19
RAB$V_REV, *(P) RMS Ref*, 6–15
RAB$V_RLK option, *(P) RMS Ref*, 6–19
RAB$V_RNE option, *(P) RMS Ref*, 6–20
RAB$V_RNF option, *(P) RMS Ref*, 6–20
RAB$V_RRL option, *(P) RMS Ref*, 6–19
RAB$V_SYNCSTS option, *(P) RMS Ref*, 6–17
RAB$V_TMO option, *(P) RMS Ref*, 6–19, 6–20
for immediate mailbox service, *(P) RMS Ref*, 6–16
RAB$V_TPT option, *(P) RMS Ref*, 6–18
using with Put service, *(P) RMS Ref*, RMS–75
RAB$V_UIF option, *(P) RMS Ref*, 6–18
using with Put service, *(P) RMS Ref*, RMS–75
RAB$V_ULK option, *(P) RMS Ref*, 6–19
RAB$V_WAT option, *(P) RMS Ref*, 6–20
RAB$V_WBH option, *(P) RMS Ref*, 6–12, 6–17
RAB$W_ISI field, *(P) RMS Ref*, 6–3
RAB$W_RBF field, *(P) File Appl*, 8–3
RAB$W_RFA field, *(P) RMS Ref*, 6–9; *(P) File Appl*, 8–14, 8–17, 9–15
RAB$W_RSZ field, *(P) RMS Ref*, 3–4, 6–21, A–15; *(P) File Appl*, 8–3, 9–18
RAB$W_STV0 offset
alternate access to RAB$L_STV, *(P) RMS Ref*, 6–21
RAB$W_STV2 field
for returning length of escape sequence, *(P) RMS Ref*, RMS–51
RAB$W_STV2 offset
alternate access to RAB$L_STV, *(P) RMS Ref*, 6–21
RAB$W_USZ field, *(P) RMS Ref*, 6–22
RAB64 (64-bit record access blocks)
data structure, *(P) 64-Bit Addr*, 3–2
macros, *(P) 64-Bit Addr*, 3–3
RAB64$PQ_*x* fields, *(P) 64-Bit Addr*, 3–2, 3–3
RAB64$Q_*x* fields, *(P) 64-Bit Addr*, 3–2, 3–3
$RAB64 macro, *(P) 64-Bit Addr*, 9–2, 9–7
$RAB64_STORE macro, *(P) 64-Bit Addr*, 9–2, 9–7
rab data type, *(P) Interfaces*, B–15
$RABDEF macro, *(P) File Appl*, 5–10
$RAB macro, *(P) 64-Bit Addr*, 9–7
RABs (record access blocks), *(P) Environment*, 10–16; *(P) Concepts*, 8–15; *(P) Interfaces*, B–15; *(P) File Appl*, 1–34; *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–81
arguments, *(P) RMS Ref*, 1–5
description, *(P) RMS Ref*, 1–5, 6–1
in C example, *(P) RMS Ref*, 3–4
summary of fields, *(P) RMS Ref*, 6–1
use in VAX MACRO example, *(P) RMS Ref*, A–15
$RAB_STORE macro, *(P) 64-Bit Addr*, 9–7
Race conditions
avoiding at AST-level, *(P) Modular Proc*, 3–17
elimination of, *(P) Modular Proc*, 3–17
how to avoid, *(P) DECthreads*, 3–8
Radix
canceling, *(P) Debugger*, CD–32
current, *(P) Debugger*, CD–199
displaying, *(P) Debugger*, CD–272
specifying, *(P) Debugger*, CD–199
Radixes
conversion, *(P) Debugger*, 8–10, B–6
current, *(P) Debugger*, 8–10
default, *(P) Alpha SDA*, SDA–12; *(P) VAX SDA*, SDA–16
multilanguage program, *(P) Debugger*, 13–16
specifying, *(P) Debugger*, 8–10
Radix operators, *(P) CDU, LBR, & MU*, MSG–9; *(P) Alpha SDA*, SDA–12; *(P) VAX SDA*, SDA–16
used with linker options, *(P) Linker*, LINK–42
Radix point symbol, returning the system's, *(P) LIB$*, LIB–400
RAH option, *(P) Rec Mgmt Util*, 4–12
RAID (redundant arrays of independent disks), *(G) V7.0 New Feat*, C–2; *(G) SW Overview*, 7–8; *(S) VMScluster Sys*, 6–22
volume shadowing support, *(S) Sys Mgr Essentials*, 10–40
Rainbow
Digital personal computer in network, *(S) DECnet Intro*, 3–27
RAISE exception, *(P) DECthreads*, 5–3
RALLY, *(G) SW Overview*, 7–5, 7–17; *(P) Environment*, 1–4
programming technology, *(S) Dependable*, 3–9
prototyping tool, *(S) Dependable*, 8–32
RAM disks, *(S) VAX Perform*, 3–39; *(S) Alpha Perform*, 18–4
Random access
by key value, *(P) File Appl*, 2–6, 2–7, 8–6, 8–12 to 8–14
by relative record number, *(P) File Appl*, 2–6 to 2–7, 8–6, 8–7, 8–8
by RFA (record file address), *(P) File Appl*, 2–7, 8–6, 8–14
to indexed files, *(P) File Appl*, 2–6, 8–12 to 8–14

Random access (cont'd)
to relative files, *(P) File Appl*, 2–6, 8–8, 8–14
to sequential files, *(P) File Appl*, 2–6, 8–7, 8–14
with multibuffer count, *(P) File Appl*, 3–27
Random number generator, *(P) MTH$*, MTH–119
Random routine, *(P) Portable Math*, DPML–48, B–11
Range
colon (:), *(P) Debugger*, CD–103
Range checking
disabling, *(S) Sys Mgmt Util M-Z*, 6–44
enabling, *(S) Sys Mgmt Util M-Z*, 6–45
Ranges
colon (:), *(P) Debugger*, 8–17, 15–4, 15–6, 15–7
RARP (Reverse Address Resolution Protocol), *(S) TCP/IP*, 2–7
RB02 cartridge disk, *(P) I/O User*, 2–4
RBMS (Remote Bridge Management System), *(G) SW Overview*, 7–7
monitoring LAN traffic, *(S) VMScluster Sys*, 10–26
RC25 disk, *(P) I/O User*, 2–4
RCF (remote console facility)
error messages, *(S) DECnet Mgmt*, 4–19
invoking, *(S) DECnet Mgmt*, 4–19
RCK option, *(P) Rec Mgmt Util*, 4–23
RCP, *(S) Sys Mgr Tuning*, 21–14; *(S) TCP/IP*, 3–3, 5–5
rcp command, *(S) TCP/IP*, 3–4
RCW (record control word), *(P) File Appl*, 1–30
RD53 disk, *(P) I/O User*, 2–4
RD54 disk, *(P) I/O User*, 2–4
Rdb, *(G) SW Overview*, 7–6, 7–15 to 7–16; *(P) Environment*, 1–4
data integrity, *(G) SW Overview*, 2–13
RdbAccess for ORACLE on OpenVMS, *(P) Environment*, 1–4
RdbAccess for RMS, *(P) Environment*, 1–4
RdbExpert, *(G) SW Overview*, 7–9
optimizing physical database design, *(S) Dependable*, 8–50
RDO prototyping tool, *(S) Dependable*, 8–33
RDT (response descriptor table), *(P) Alpha SDA*, SDA–144; *(P) VAX SDA*, SDA–166
Read access, *(P) Rec Mgmt Util*, 4–23
See also Access types, read
continuation volumes, *(S) Sys Mgr Essentials*, 8–41
devices, *(S) Security*, 5–4
files, *(S) Security*, 5–8
for disk directory files, *(S) Sys Mgr Essentials*, 9–11
for disk files, *(S) Sys Mgr Essentials*, 9–6
global sections, *(S) Security*, 5–14
granting through ACLs, *(S) Security*, 4–20
granting through protection codes, *(S) Security*, 4–25; *(S) Sys Mgr Essentials*, 11–8
logical name tables, *(S) Security*, 5–16
Read access (cont'd)
queues
through ACLs, *(S) Security*, 5–17
through protection codes, *(S) Security*, 5–17
resource domains, *(S) Security*, 5–19
security class, *(S) Security*, 5–20
volumes, *(S) Security*, 5–21
READALL privilege, *(S) Security*, 4–11, 4–28, A–14
Read and write checking
of directory blocks, *(G) V7.0 New Feat*, 3–2
Read and write operations
ordering, *(P) Concepts*, 14–4
Read attention AST function, *(P) I/O User*, 4–12
Read check
with APPEND command, *(G) DCL A-M*, DCLI–39
with COPY command, *(G) DCL A-M*, DCLI–84
with INITIALIZE command, *(G) DCL A-M*, DCLI–255
READ command, *(G) DCL N-Z*, DCLII–32 to DCLII–35; *(P) Alpha SDA*, SDA–60; *(P) VAX SDA*, SDA–63
compared to INQUIRE command, *(G) User*, 16–6
for remote file, *(S) DECnet Intro*, 2–13
in Mail, *(G) User*, 6–3
in network operations, *(S) DECnet Intro*, 2–13
/NEW qualifier in Mail, *(G) User*, 6–3, 6–15
reading data into command procedures with, *(G) User*, 16–6
SYS$DISK, *(P) Alpha SDA*, SDA–60; *(P) VAX SDA*, SDA–64
Read error
if returned when booting, *(S) Sys Mgr Essentials*, 4–16
Readers locks
locking, *(P) DECthreads*, tis–26, tis–27
unlocking, *(P) DECthreads*, tis–29
Readers/writer locks, *(P) DECthreads*, 4–2
destroying, *(P) DECthreads*, tis–30
initializing, *(P) DECthreads*, tis–31
Readers/writer routines, *(P) DECthreads*, 4–3
READ/EXECUTIVE command, *(P) VAX SDA*, SDA–20
Reading messages
in Mail, *(G) User*, 6–22
Read-modify-write operations
atomic, *(P) Concepts*, 14–5
$READONLY$ program section name
definition, *(P) Linker*, B–16
Read-only access, *(S) DECamds*, 1–9
Read operation
See Access types, read

Read service, *(P) RMS Ref*, RMS–80 to RMS–82
Read/write attributes
ACP-QIO interface, *(P) I/O User*, 1–14
subfunction, *(P) I/O User*, 1–14
Read/write disk
partitions, *(S) Sys Mgr Tuning*, 23–2
Ready access
for directories on disk, *(G) DCL A-M*, DCLI–254
READ_AHEAD attribute, *(P) Rec Mgmt Util*, 4–12
READ_CHECK attribute, *(P) Rec Mgmt Util*, 4–23
/READ_CHECK qualifier, *(S) Sys Mgmt Util A-L*, 3–9
in Analyze/Disk_Structure utility, *(S) Sys Mgmt Util A-L*, 3–9
READ_REGARDLESS attribute, *(P) Rec Mgmt Util*, 4–13; *(P) File Appl*, 7–12
Real balance slots, *(S) VAX Perform*, 2–18
Real-time priority, *(S) Sys Mgr Essentials*, 6–31
Real-time processes, *(S) Alpha Perform*, 6–20
Real-time processing, *(G) SW Overview*, 1–3
Real types, *(P) Debugger*, 8–15
REA option, *(P) Rec Mgmt Util*, 4–11
REBOOT command, *(P) Debugger*, CD–138
Rebooting after configuration change, *(S) VMScluster Sys*, 8–33
Rebooting a satellite with operating system installed on local disk, *(S) VMScluster Sys*, 8–41
REBOOT phase of AUTOGEN, *(S) Sys Mgmt Util A-L*, 6–8
Rebuilding system disks, *(S) VMScluster Sys*, 6–21
Rebuilding volumes, *(S) Sys Mgr Essentials*, 7–4
/REBUILD qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–32
Recall buffers, *(G) User*, 19–7; *(S) Security*, 3–15
erasing, *(G) User*, 3–15
RECALL command, *(G) User*, 3–14; *(G) DCL N-Z*, DCLII–36 to DCLII–38
/ERASE qualifier, *(G) User*, 19–7
in LATCP, *(S) Sys Mgmt Util A-L*, 13–23
Recalling commands, *(G) User*, 3–14
using arrow keys, *(G) User*, 3–14
using RECALL command, *(G) User*, 3–15
Receive buffers, *(S) DECnet Mgmt*, 3–14
correcting insufficient number, *(S) DECnet Mgmt*, 3–42
Receive passwords, *(S) Security*, 12–16; *(S) DECnet Intro*, 3–26, 3–34; *(S) DECnet Mgmt*, 2–29
in network operations, *(S) DECnet Intro*, 3–21
Receiving data
Alpha, *(P) Calling Std*, 3–53
RECLAIMED_SPACE attribute, *(P) Rec Mgmt Util*, 4–4
Reclaiming buckets in a Prolog 3 indexed file, *(P) Rec Mgmt Util*, 3–1
RECNXINTERVAL system parameter, *(S) VMScluster Sys*, 3–20, A–3
Reconfiguration of software installation options, *(S) Sys Mgr Essentials*, 3–32
Reconfigurations
of node, *(S) DECnet Intro*, 3–10, 3–11
Reconfiguring the cluster, *(S) VMScluster Sys*, 8–33
Reconnection to processes, *(S) Security*, 7–25
Record access, *(P) File Appl*, 9–6, 9–9
in stream context, *(P) File Appl*, 8–15
options, *(P) File Appl*, 7–3
Record access blocks
See RABs
Record access modes, *(P) File Appl*, 2–2
for indexed files, *(P) File Appl*, 8–9 to 8–14
for relative files, *(P) File Appl*, 8–7, 8–9
for sequential files, *(P) File Appl*, 8–7
sequential, *(P) File Appl*, 8–6, 8–8, 8–12
specifying, *(P) File Appl*, 8–6, 8–7, 9–9, 9–15, 9–16
Record attributes value, *(P) I/O User*, 1–19
Record blocking
volume mount, *(S) Sys Mgmt Util M-Z*, 2–24
Record buffering
See Buffering techniques
Record buffers, *(P) File Appl*, 9–17
Record control word
See RCW
Record file addresses
See RFAs
Record formats, *(P) RMS Ref*, 1–3; *(P) File Appl*, 1–1, 1–2, 2–8, 3–16
fixed-length, *(P) Rec Mgmt Util*, 2–13; *(P) File Appl*, 1–29, 2–9, 2–10, 3–13, 3–16, 3–22
options, *(P) File Appl*, 4–34
selecting, *(P) File Appl*, 2–1
stream, *(P) File Appl*, 2–13, 3–13
undefined, *(P) File Appl*, 3–13, 3–14
variable-length, *(P) File Appl*, 1–29, 2–9, 2–10, 3–13, 3–16, 3–22
Record header buffer, *(P) File Appl*, 9–15, 9–17, 9–18
Record I/O
how to execute, *(P) RMS Ref*, A–34
Recording
event messages, *(S) DECamds*, B–4
lock contention information, *(S) DECamds*, B–4
Recording file description
in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–1

Recording files
class types, *(S) Sys Mgmt Util M-Z*, A–8
in Monitor utility
class header, *(S) Sys Mgmt Util M-Z*, A–9
class prefix for component classes, *(S) Sys Mgmt Util M-Z*, A–10
data block, *(S) Sys Mgmt Util M-Z*, A–11
Digital control records, *(S) Sys Mgmt Util M-Z*, A–3
file header record, *(S) Sys Mgmt Util M-Z*, A–3
I/O class record, *(S) Sys Mgmt Util M-Z*, A–20
node transition record, *(S) Sys Mgmt Util M-Z*, A–7
RMS class record, *(S) Sys Mgmt Util M-Z*, A–30
RMS file record, *(S) Sys Mgmt Util M-Z*, A–7
SCS class record, *(S) Sys Mgmt Util M-Z*, A–36
system information record, *(S) Sys Mgmt Util M-Z*, A–5
Record layout
Alpha, *(P) Calling Std*, 3–57
VAX compatible, *(P) Calling Std*, 3–59
Record length field, *(P) File Appl*, 1–31
Record lock blocks
See RLBs
Record locking record-processing options, *(P) RMS Ref*, 6–18
Record management, *(P) Environment*, 10–2
Record Management Services
See RMS
Record operation, *(P) File Appl*, 8–1 to 8–5
Record oriented devices
used as output to file specifications, *(G) User*, 12–9
Record processing
list of services, *(P) File Appl*, 8–5
RMS services listed, *(P) RMS Ref*, 1–1
services listed, *(P) RMS Ref*, 1–1
using record management services, *(P) RMS Ref*, A–3
Record processing macros
format example, *(P) RMS Ref*, A–10
Record-processing option
for Connect service, *(P) RMS Ref*, 6–12
Record processing run-time option, *(P) File Appl*, 9–13, 9–16 to 9–18
/RECORD qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–52
Record reference vector
See RRV
Records, *(P) Rec Mgmt Util*, 1–3
See also Data records
adding, *(P) File Appl*, 9–10
Records (cont'd)
alternate, *(P) Rec Mgmt Util*, 1–6
analyzing
debugger information, *(G) DCL A-M*, DCLI–27
global symbol directory, *(G) DCL A-M*, DCLI–28
link option specification, *(G) DCL A-M*, DCLI–28
module header, *(G) DCL A-M*, DCLI–28
module traceback, *(G) DCL A-M*, DCLI–28
patch text, *(G) DCL A-M*, DCLI–24
relocation, *(G) DCL A-M*, DCLI–29
analyzing end-of-file, *(G) DCL A-M*, DCLI–27
blocking, *(P) File Appl*, 1–16
blocking on tapes, *(S) Sys Mgr Essentials*, 8–6
comparing, *(G) DCL A-M*, DCLI–158
compressing, *(P) Util Routines*, DCX–1
contents, *(P) File Appl*, 2–1
deleting, *(P) File Appl*, 8–4, 9–18
duplicating, *(S) Sys Mgmt Util A-L*, 5–24
entering records from a terminal, *(G) User*, 11–12
examining remote, *(S) DECnet Intro*, 2–8
expanding, *(P) Util Routines*, DCX–8
I/O, *(P) Concepts*, 8–12
inserting, *(P) File Appl*, 8–3 to 8–4, 9–16 to 9–17
RMS program example, *(P) RMS Ref*, A–27
locating, *(P) File Appl*, 8–2 to 8–3
locking, *(P) File Appl*, 9–6
deadlock, *(P) File Appl*, 7–15
use with update operation, *(P) File Appl*, 8–3
maximum length, *(P) Rec Mgmt Util*, 2–17, 4–34
maximum number in a relative file, *(P) Rec Mgmt Util*, 4–19
maximum size, *(P) Rec Mgmt Util*, 4–34
modifying in occupied cells, *(P) File Appl*, 2–4
padding, *(P) Rec Mgmt Util*, 2–4, 2–13
positioning to, *(P) Rec Mgmt Util*, 1–21
program example show file insertion, *(P) RMS Ref*, A–27
reading, *(G) DCL N-Z*, DCLII–32
reading and writing requirements, *(P) RMS Ref*, A–23
retrieving, *(P) File Appl*, 8–2 to 8–3, 9–13 to 9–16
RMS program example, *(P) RMS Ref*, A–27
retrieving sequentially from an indexed file, *(P) File Appl*, 2–5
size, *(S) Sys Mgr Essentials*, 8–26
sorting, *(G) User*, 11–2
fields, *(G) User*, 11–2, 11–3
storing sequentially in a relative file, *(P) File Appl*, 2–4
truncation, *(P) Rec Mgmt Util*, 2–4

Records (cont'd)
updating, *(P) File Appl*, 8–4, 9–17, 9–18
writing to a file, *(G) DCL N-Z*, DCLII–435
Records CONTROL_FIELD_SIZE attribute, *(P) Rec Mgmt Util*, 4–34
Record size
See Tapes
/RECORDSIZE qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–33
Record sorting, *(G) User*, 11–1
See also Sort/Merge utility
Record stream connection option
See File opening options
Record streams
connecting to a file, *(P) File Appl*, 7–2
definition, *(P) File Appl*, 7–2
in the context of a RAB, *(P) RMS Ref*, 6–1
multiple, with block I/O, *(P) RMS Ref*, A–35
Record structures, *(P) Rec Mgmt Util*, 1–3
alternate, *(P) File Appl*, 10–21
Record transfer mode
locate, *(P) File Appl*, 7–15
move, *(P) File Appl*, 7–15
Record types, *(P) Debugger*, 3–18, 8–17
in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–2
/RECORD_ATTRIBUTES qualifier
in Analyze/Disk_Structure utility, *(S) Sys Mgmt Util A-L*, 3–10
RECORD_IO attribute, *(P) Rec Mgmt Util*, 4–3; *(P) File Appl*, 7–3
Recoverability, *(G) SW Overview*, 2–12
Recoveries
from device failures, *(S) Dependable*, 8–21
repair actions, *(S) Dependable*, 8–21t
Recovery procedures
after system message occurs, *(G) Help Msg*, 1–4
Recovery unit blocks
See RUBs
Recovery unit file blocks
See RUFBs
Recovery unit stream blocks
See RUSBs
Recovery unit system services
global symbols, *(P) Alpha SDA*, SDA–61; *(P) VAX SDA*, SDA–65
RECOVERY_UNIT_SERVICES.EXE file
global symbols, *(P) VAX SDA*, SDA–65
RECOVERY_UNIT_SERVICES.STB file
global symbols, *(P) Alpha SDA*, SDA–61
Recursive mutex, *(P) DECthreads*, 2–7, pthread–97, E–30, G–63
Redirecting output, *(G) User*, 12–9
Reducing I/O on system disk, *(S) Sys Mgr Tuning*, 16–8
Redundancy
circuit level, *(S) Dependable*, 4–4
functional units, *(S) Dependable*, 1–13 to 1–14
OpenVMS support, *(S) Dependable*, 8–10
network level, *(S) Dependable*, 4–11
subsystem level, *(S) Dependable*, 4–4
system kernel level, *(S) Dependable*, 4–5
Redundant arrays of independent disks
See RAID
Reentrancy
AST, *(P) Modular Proc*, 3–15
full, *(P) Modular Proc*, 3–15
Reentrant
AST, *(P) SMG$*, 4–1
Reentrant code
compilers that generate, *(P) DECthreads*, 4–1
necessary for multithreaded program, *(P) DECthreads*, 1–4
nonreentrant routines (avoiding), *(P) DECthreads*, 1–7
%REF built-in symbol, *(P) Debugger*, CD–16
%REF builtin_symbol, *(P) Debugger*, CD–16
Reference
definition, *(P) Calling Std*, 1–5
Reference argument item
for Alpha, *(P) Calling Std*, 3–48
Reference monitors, *(S) Security*, 2–1
applying to networks, *(S) Security*, 12–2
implementation, *(S) Security*, 2–3
Reference sites and support groups, *(S) Dependable*, 3–11
REFRESH command
in LATCP, *(S) Sys Mgmt Util A-L*, 13–24
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–40
/REFRESH qualifier, *(P) Debugger*, CD–90
Region
creating a virtual, *(P) Sys Svc I*, SYS1–141
Regions
deleting, *(P) Sys Svc I*, SYS1–255
Register 0
See R0 register
Register frame procedures, *(P) Calling Std*, 3–14
descriptors, *(P) Calling Std*, 3–15
Registers
See also PCs (program counters) and Vector registers
Alpha usage, *(P) Interfaces*, 2–2; *(P) Calling Std*, 3–1
built-in symbols, *(P) Debugger*, 8–22, B–4
data, *(P) Interfaces*, 1–5
depositing into, *(P) Debugger*, 3–25, 8–22
display, *(P) Debugger*, 3–25, 11–10
for routine on call stack, *(P) Debugger*, 3–23, 11–11, CD–201
displaying, *(P) Alpha SDA*, SDA–86, SDA–128; *(P) VAX SDA*, SDA–95, SDA–150

Registers (cont'd)
display kind, *(P) Debugger*, 11–18
examining, *(P) Debugger*, 3–25, 8–22
floating point usage, *(P) Calling Std*, 3–2
for returns, *(P) Interfaces*, 1–4, 1–12; *(P) Calling Std*, 2–1
general, *(P) VAX SDA*, SDA–18
integer, *(P) Alpha SDA*, SDA–15
integer usage, *(P) Calling Std*, 3–1
PSL, *(P) Debugger*, 8–24
saving when making call, *(P) RMS Ref*, 2–4
scalar, *(P) Calling Std*, 2–1
SET SCOPE/CURRENT command, *(P) Debugger*, 11–11, CD–201
symbolizing, *(P) Debugger*, 8–13, CD–306
symbols, *(P) Debugger*, 8–22, B–4
variable, *(P) Debugger*, 3–22, 7–14, 8–1
VAX usage, *(P) Interfaces*, 2–1; *(P) Calling Std*, 2–1
view, *(P) Debugger*, 3–25
watchpoint, *(P) Debugger*, 7–14
Register save area
See RSA
/REGISTERS qualifier, *(P) Alpha SDA*, SDA–128; *(P) VAX SDA*, SDA–150
Register view, *(P) Debugger*, 1–10, 3–25
Regression testing, *(P) Modular Proc*, 6–1
Reinitializing volumes, *(G) User*, 12–11; *(S) Sys Mgr Essentials*, 8–45
Related-file-position option, *(P) File Appl*, 4–35
/RELATED qualifier, *(P) Debugger*, CD–30, CD–187, CD–263
RELATIVE attribute, *(P) Rec Mgmt Util*, 4–21
Relative file field
record access, *(P) RMS Ref*, 6–2
Relative files, *(P) File Appl*, 2–17
advantages of using, *(P) File Appl*, 2–18
allocating, *(P) File Appl*, A–1
bucket sizes, *(P) File Appl*, 3–10, 3–16, 7–18, A–1
buffering, *(P) File Appl*, 7–18
buffer requirement, *(P) RMS Ref*, 6–7
deferred-write option with, *(P) File Appl*, 3–11
defining cell size, *(P) RMS Ref*, 4–21
description of relative record number, *(P) RMS Ref*, 6–5
designing, *(P) File Appl*, 3–15 to 3–18
determining record length, *(P) RMS Ref*, 4–22
disadvantages of using, *(P) File Appl*, 2–18
establishing highest record number, *(P) RMS Ref*, 4–21
examining, *(P) File Appl*, 10–14, 10–15
limit on number of records, *(P) Rec Mgmt Util*, 4–19
maximum record size, *(P) File Appl*, 3–16
nonexistent record processing, *(P) RMS Ref*, 6–19
omitting initial prezeroing, *(P) RMS Ref*, A–34
Relative files (cont'd)
optimizing performance, *(P) File Appl*, 3–15 to 3–18
organization, *(P) File Appl*, 1–2
random access, *(P) RMS Ref*, 6–3
record access, *(P) File Appl*, 8–7 to 8–9, 8–14
record size limit, *(P) RMS Ref*, 4–22
RFA value, *(P) RMS Ref*, 6–10
specifying bucket size, *(P) RMS Ref*, 7–4
specifying cell size, *(P) RMS Ref*, 9–4
structure, *(P) Rec Mgmt Util*, 1–1, 1–2
tuning, *(P) File Appl*, 3–15 to 3–18
viewing individual data buckets, *(P) Rec Mgmt Util*, 1–2
with global buffers, *(P) File Appl*, 3–18
/RELATIVE qualifier, *(P) File Appl*, 7–18
Relative record number, *(P) File Appl*, 1–2, 3–15
Release Notes, *(S) DECamds*, 5–2, A–1
extracting from software products, *(S) Sys Mgr Essentials*, 3–29
on software products, *(S) Sys Mgr Essentials*, 3–29; *(S) Sys Mgmt Util M-Z*, 3–9
VMSINSTAL.COM option, *(S) Sys Mgr Essentials*, 3–17
/RELEASE qualifier, *(P) VAX SDA*, SDA–6
Release service, *(P) RMS Ref*, RMS–83; *(P) File Appl*, 8–5
condition values, *(P) RMS Ref*, RMS–84
control block input and output fields, *(P) RMS Ref*, RMS–84
/RELEASE_TAPE qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–52
Releasing a job, *(S) Sys Mgr Essentials*, 13–71
Reliability, *(G) SW Overview*, 2–12
OSI, *(S) TCP/IP*, 2–2
TCP/IP, *(S) TCP/IP*, 2–2
Reliable Transaction Router
See RTR
RELOAD command
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–15
/RELOCATE qualifier, *(P) Alpha SDA*, SDA–60; *(P) VAX SDA*, SDA–63
Relocating symbols
definition, *(P) Linker*, 1–2
Relocation records
analyzing in object files, *(G) DCL A-M*, DCLI–29
remainder routine, *(P) Portable Math*, DPML–49, B–11
REMINDER.COM command procedure, *(G) User*, C–5
sample execution, *(G) User*, C–8
Remote (hot standby) sites, *(S) Dependable*, 5–11
multiple-site data center VMScluster systems, *(S) Dependable*, 7–12

Remote batch execution, *(S) DECnet Intro*, 2–12, 2–13
Remote Bridge Management System
  See RBMS
Remote command execution, *(S) DECnet Mgmt*, 3–6
Remote console connections, *(S) DECnet Mgmt*, 4–18
Remote console facility
  See RCF
Remote directory listings, *(S) Sys Mgr Tuning*, 21–14
Remote file access, *(S) Sys Mgr Tuning*, 21–14; *(S) DECnet Intro*, 2–2; *(S) DECnet Mgmt*, 1–17, 8–1
  See also File specifications
  controls, *(S) DECnet Intro*, 2–3
  through command procedures, *(S) DECnet Intro*, 2–12
  through high-level language programs, *(S) DECnet Intro*, 2–12
Remote file operations
  error messages, *(S) DECnet Intro*, 2–9
  in a multivendor network, *(S) DECnet Mgmt*, 9–1
  OpenVMS to MS–DOS, *(S) DECnet Mgmt*, 9–20
  OpenVMS to RT–11, *(S) DECnet Mgmt*, 9–11
  OpenVMS to TOPS–10, *(S) DECnet Mgmt*, 9–14
  OpenVMS to TOPS–20, *(S) DECnet Mgmt*, 9–17
  OpenVMS to IAS, *(S) DECnet Mgmt*, 9–2
  OpenVMS to MVS, *(S) DECnet Mgmt*, 9–26
  OpenVMS to RSTS/E, *(S) DECnet Mgmt*, 9–5
  OpenVMS to RSX (using FCS-based FAL), *(S) DECnet Mgmt*, 9–9
  OpenVMS to RSX (using RMS-based FAL), *(S) DECnet Mgmt*, 9–7
  OpenVMS to ULTRIX, *(S) DECnet Mgmt*, 9–23
  OpenVMS to VMS
    Version 5.4 to pre-V5.0 version, *(S) DECnet Mgmt*, 9–28
  restrictions on, *(S) DECnet Mgmt*, 9–1
Remote files
  backing up, *(S) DECnet Intro*, 2–9
  comparing, *(S) DECnet Intro*, 2–7
  copying, *(S) DECnet Intro*, 2–5
  creating with editor, *(S) DECnet Intro*, 2–7
  deleting, *(S) DECnet Intro*, 2–7
  displaying contents, *(S) DECnet Intro*, 2–9
  editing, *(S) DECnet Intro*, 2–7
  examining, *(S) DECnet Intro*, 2–8
  lexical functions, *(S) DECnet Intro*, 2–12, 2–13
  merging, *(S) DECnet Intro*, 2–7
  printing, *(S) DECnet Intro*, 2–6
  purging, *(S) DECnet Intro*, 2–7
Remote files (cont'd)
  restoring to local node, *(S) DECnet Intro*, 2–9
  searching, *(S) DECnet Intro*, 2–7
  sorting, *(S) DECnet Intro*, 2–7
  specifications and logical names, *(S) DECnet Intro*, 2–4
  specifying, *(G) DCL A-M*, DCLI–91; *(S) DECnet Intro*, 2–2, 2–3
Remote identifiers, *(S) Security*, 4–3; *(S) Sys Mgr Essentials*, 11–11
Remote InfoServer device
  BIND command, *(S) Sys Mgr Tuning*, 23–14
  making available, *(S) Sys Mgr Tuning*, 23–14
  mounting during system startup, *(S) Sys Mgr Tuning*, 23–14
Remote login, *(S) Sys Mgr Tuning*, 21–13
Remote monitoring
  limitation, *(S) Sys Mgr Tuning*, 18–43
  mixed-version VMScluster systems, *(S) Sys Mgr Tuning*, 18–43
Remote network command terminal facility, *(S) DECnet Intro*, 3–3
Remote node database
  logical name defining location, *(S) Sys Mgr Essentials*, 5–8
Remote nodes, *(S) DECnet Intro*, 3–1; *(S) DECnet Mgmt*, 1–12, 1–17, 2–1, 3–5; *(S) DECnet Mgmt Util*, 4–8
  See also Networks and Node names
  access control strings, *(G) User*, 4–7
  accessing interactively, *(S) DECnet Intro*, 3–3
  address, *(S) DECnet Intro*, 3–8
  copying database, *(S) DECnet Intro*, 3–18; *(S) DECnet Mgmt*, 2–5, 3–17
  definition, *(S) Sys Mgr Essentials*, 2–13
  displaying counter information with NCP, *(S) DECnet Intro*, 4–1
  loopback test, *(S) DECnet Mgmt*, 7–2
  losing connection, *(S) DECnet Intro*, 3–3
  name, *(S) DECnet Intro*, 3–8
  obtaining information about using F$CONTEXT, *(G) User*, 17–8, 17–9
  setting name and address, *(S) DECnet Mgmt*, 3–8
  terminating connection, *(S) DECnet Intro*, 3–3
Remote printing, *(S) Sys Mgr Essentials*, 13–13
Remote Procedure Call
  See DECrpc
Remote queue status, *(S) Sys Mgr Essentials*, 13–51
Remote sessions
  aborting, *(G) User*, 2–24
Remote system manager
  See RSM
Remote tasks, *(S) DECnet Intro*, 2–12, 2–14
  specification, *(S) DECnet Intro*, 2–14

Remote terminals, *(S) Sys Mgr Essentials*, 7–11
Remote terminal service, *(S) Sys Mgr Tuning*, 21–13
REMOVE (Field) command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–44
REMOVE CIRCUITS command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–40
REMOVE CLUSTER command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–41
REMOVE command
in Install utility, *(S) Sys Mgmt Util A-L*, 11–18
REMOVE CONNECTIONS command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–42
REMOVE COUNTERS command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–43
REMOVE CREDITS command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–43
REMOVE ERRORS command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–44
REMOVE LOCAL_PORTS command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–45
REMOVE MEMBERS command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–46
/REMOVE qualifier, *(P) Debugger*, CD–90, CD–131
Remove service, *(P) RMS Ref*, RMS–85 to RMS–87
REMOVE SYSTEMS command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–46
Removing a computer, *(S) VMScluster Sys*, 8–19, 8–33
adjusting EXPECTED_VOTES, *(S) VMScluster Sys*, 8–36
shutting down before removing from cluster, *(S) VMScluster Sys*, 8–18
Removing a satellite, *(S) VMScluster Sys*, 8–18
Removing installed software, *(S) Sys Mgmt Util M-Z*, 3–19
Removing installed software products, *(S) Sys Mgr Essentials*, 3–34
RENAME command, *(G) User*, 4–13; *(G) DCL N-Z*, DCLII–39 to DCLII–42
/INHERIT_SECURITY qualifier, *(S) Security*, 5–11
Rename service, *(P) RMS Ref*, RMS–89; *(P) File Appl*, 5–9
alternative to specifying arguments to $RENAME macro, *(P) RMS Ref*, RMS–90
Rename service (cont'd)
condition values, *(P) RMS Ref*, RMS–92
control block input fields, *(P) RMS Ref*, RMS–90
control block output fields, *(P) RMS Ref*, RMS–91
exception in argument list, *(P) RMS Ref*, 2–5
indicating successful completion, *(P) RMS Ref*, A–27
noting format difference, *(P) RMS Ref*, A–10
program example, *(P) RMS Ref*, A–25
requirements for using, *(P) RMS Ref*, RMS–90
Reorganizing a file, *(P) Rec Mgmt Util*, 3–1
REPAIR command
in LMCP, *(S) Sys Mgmt Util A-L*, 14–13
Repairing errors, *(S) Sys Mgmt Util A-L*, 3–3, 3–7, 3–10, 3–11
/REPAIR qualifier
in Analyze/Disk_Structure utility, *(S) Sys Mgmt Util A-L*, 3–11
REPEAT command, *(P) Debugger*, 12–10, CD–139; *(P) Alpha SDA*, SDA–64; *(P) VAX SDA*, SDA–68
Repeating characters, *(P) Rec Mgmt Util*, 4–26, 4–27
in compression, *(P) File Appl*, 3–19
REPLACE command
in Install utility, *(S) Sys Mgmt Util A-L*, 11–18
/REPLACE qualifier, *(P) Linker*, LINK–25
effect on debugging, *(P) Linker*, 1–16
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–53
LIBRARY command, *(P) Concepts*, 17–2
REPLY command, *(G) DCL N-Z*, DCLII–43 to DCLII–51
canceling a user request, *(S) Sys Mgr Essentials*, 8–27; *(S) Sys Mgr Tuning*, 18–19
closing current operator log file, *(S) Sys Mgr Tuning*, 18–17
disabling operator status, *(G) DCL N-Z*, DCLII–45
disabling operator terminals, *(S) Sys Mgr Essentials*, 2–24; *(S) Sys Mgr Tuning*, 18–18
enabling operator status, *(G) DCL N-Z*, DCLII–45
enabling operator terminals, *(S) Sys Mgr Essentials*, 2–23; *(S) Sys Mgr Tuning*, 18–17
specifying terminal, *(S) Sys Mgr Tuning*, 18–18
ensuring that correct volume is mounted, *(S) Sys Mgr Essentials*, 8–41
initializing tape, *(S) Sys Mgr Essentials*, 8–41
in Mail, *(G) User*, 6–11
linking continuation volume to volume set, *(S) Sys Mgr Essentials*, 8–41

REPLY command (cont'd)
opening a new operator log file, *(S) Sys Mgr Tuning*, 18–17, 18–22
putting request in wait state, *(S) Sys Mgr Essentials*, 8–27
replying to requests, *(S) Sys Mgr Essentials*, 2–25, 8–27
responding to file system requests, *(G) DCL N-Z*, DCLII–44
responding to user requests, *(G) DCL N-Z*, DCLII–44
response not recorded in operator log file, *(S) Sys Mgr Tuning*, 18–19
sending messages to users, *(S) Sys Mgr Essentials*, 2–22
REPLY/ENABLE=NETWORK command
in network operations, *(S) DECnet Intro*, 4–4
to enable network operator terminal, *(S) DECnet Intro*, 4–4
REPLY/ENABLE=SECURITY command
enabling security operator terminals, *(S) Sys Mgr Tuning*, 18–29
Report formats from Audit Analysis utility
brief, *(S) Sys Mgmt Util A-L*, 4–7
full, *(S) Sys Mgmt Util A-L*, 4–9
summary, *(S) Sys Mgmt Util A-L*, 4–23
Reporting errors, *(S) Sys Mgmt Util A-L*, 3–3; *(P) DECthreads*, 3–9
API, *(P) DECthreads*, 3–9
disk structure, *(S) Sys Mgr Essentials*, 8–56
internal, *(P) DECthreads*, 3–9
Reporting on product dependencies, *(S) Sys Mgr Essentials*, 3–27
Reporting problems, *(S) DECamds*, A–15
Reports
AUTOGEN, *(S) Sys Mgr Tuning*, 14–22
SHOW CLUSTER, *(S) Sys Mgmt Util M-Z*, 4–3
adding classes of data, *(S) Sys Mgr Tuning*, 20–4
adding data, *(S) Sys Mgr Tuning*, 20–8
adding fields of data, *(S) Sys Mgr Tuning*, 20–4
changing default at startup, *(S) Sys Mgr Tuning*, 20–14
command to modify, *(S) Sys Mgr Tuning*, 20–10; *(S) Sys Mgmt Util M-Z*, B–3
compressing reports, *(S) Sys Mgr Tuning*, 20–11
controlling displays, *(S) Sys Mgr Tuning*, 20–5, 20–10
controlling the display, *(S) Sys Mgmt Util M-Z*, 4–4
controlling with command procedures, *(S) Sys Mgr Tuning*, 20–5, 20–16
default display, *(S) Sys Mgmt Util M-Z*, 4–37
formatting, *(S) Sys Mgmt Util M-Z*, 4–52
moving display, *(S) Sys Mgr Tuning*, 20–12
Reports
SHOW CLUSTER (cont'd)
organization of, *(S) Sys Mgr Tuning*, 20–4; *(S) Sys Mgmt Util M-Z*, 4–3
panning, *(S) Sys Mgr Tuning*, 20–6
printing, *(S) Sys Mgmt Util M-Z*, 4–55
scrolling, *(S) Sys Mgr Tuning*, 20–14
time period for, *(S) Sys Mgmt Util M-Z*, 4–6, 4–7
update interval, *(S) Sys Mgmt Util M-Z*, 4–8, 4–54
Report system event
global symbols, *(P) Alpha SDA*, SDA–61; *(P) VAX SDA*, SDA–65
REQSYSDEF.STB file, *(P) Alpha SDA*, SDA–15
REQUEST command, *(G) DCL N-Z*, DCLII–52 to DCLII–53
recording request in operator log file, *(S) Sys Mgr Tuning*, 18–19
sending requests to an operator, *(S) Sys Mgr Essentials*, 2–25; *(S) Sys Mgr Tuning*, 18–19
Request descriptor table entries, *(S) VMScluster Sys*, 9–19
Request identification number
in operator log file, *(S) Sys Mgr Tuning*, 18–19
Request to unwind, *(P) Calling Std*, 6–23
Requeue, *(P) DECthreads*, E–4
Requeuing
executing job, *(S) Sys Mgr Essentials*, 13–73
pending job, *(S) Sys Mgr Essentials*, 13–73
Requirements
Bellcore Communications Research, *(G) V7.0 New Feat*, D–11
business, *(S) Dependable*, 2–5
user, *(S) Dependable*, 2–4
VMScluster, *(G) V7.0 New Feat*, D–11
Requirements and limitations
in ANALYZE/DISK_STRUCTURE, *(S) Sys Mgmt Util A-L*, 3–6
RERAISE exception, *(P) DECthreads*, 5–5, 5–8, 5–11
RERUN command, *(P) Debugger*, 5–11, 5–13, 5–14, 7–11, 7–13, CD–140
passing arguments, *(P) Debugger*, 5–8
Reserved data type codes, *(P) Calling Std*, 4–5
Reserved descriptor class codes, *(P) Calling Std*, 5–33
Reserved event flag
use of, *(P) RMS Ref*, 2–8
Reserved files, *(S) Sys Mgr Tuning*, A–4
list of, *(S) Sys Mgr Essentials*, 8–4
Reserved UIC group numbers, *(S) Security*, 4–2
Reserve region, *(P) Calling Std*, 3–60

Reset button on POLYCENTER Software Installation utility, *(S) Sys Mgr Essentials*, 3–40
Reset modules, *(S) Sys Mgr Essentials*, 13–44
See also Device control modules
Resetting saved information, *(S) Sys Mgr Essentials*, 3–40
Resident executive, *(S) Alpha Perform*, 5–2
Resident images, *(P) Alpha SDA*, SDA–127, SDA–138
creating, *(P) Linker*, 1–16, LINK–26
effect on data image sections, *(P) Linker*, LINK–26
effect on image map file, *(P) Linker*, 5–5
installing (Alpha), *(S) Sys Mgr Tuning*, 16–11, 16–12, 16–13
in system startup, *(S) Sys Mgr Essentials*, 5–13
link-time considerations, *(P) Linker*, 1–16
/RESIDENT qualifier
installing an image, *(P) Alpha SDA*, SDA–58
Resource
shared, *(S) Sys Mgr Tuning*, 20–1
Resource access, *(S) VMScluster Sys*, 1–4, 2–15
Resource attribute, *(P) Concepts*, 23–5
Resource attributes, *(S) Security*, 8–10, 8–21; *(S) Sys Mgmt Util A-L*, 5–21, 5–29, 5–37; *(P) Concepts*, 23–5
Resource blocks
See RSBs
Resource consumption, *(S) Alpha Perform*, 8–3
Resource contention considerations, *(S) Dependable*, 8–14
Resource domains, *(S) Security*, 4–10
events audited, *(S) Security*, 5–19
privilege requirements, *(S) Security*, 5–19
profile storage, *(S) Security*, 5–19
security elements of, *(S) Security*, 5–18
template profile, *(S) Security*, 5–19
types of access, *(S) Security*, 5–19
Resource file, debugger
customizing, *(P) Debugger*, 3–32
Resource granularity
in lock, *(P) Concepts*, 15–3
Resource identifiers, *(S) Security*, 8–21
as file owners, *(S) Security*, 5–10, 5–11
Resource limitations
compensating for, *(S) Alpha Perform*, 16–1
diagnosing, *(S) Alpha Perform*, 12–1
Resource limits
See Process quotas
Resource locking, *(S) VMScluster Sys*, 1–4, 2–15
Resource monitoring, *(S) Security*, 9–29
disabling, *(S) Security*, 9–29
Resources, *(P) Modular Proc*, 2–11
accounting, *(S) Sys Mgr Tuning*, 19–1
Resources (cont'd)
accounting, programming information, *(S) Sys Mgmt Util A-L*, C–1
compensating for limitations, *(S) VAX Perform*, 5–1
diagnosing limitations, *(S) VAX Perform*, 4–1
displaying SDA information, *(P) Alpha SDA*, SDA–139; *(P) VAX SDA*, SDA–160
evaluating, *(S) VAX Perform*, 3–8
evaluation strategy, *(S) VAX Perform*, 3–1
improving, *(S) VAX Perform*, 3–9
lock management concept, *(P) Concepts*, 15–2
managing, *(S) VAX Perform*, 2–1, 3–1, 3–2
name, *(P) Concepts*, 15–4
producing usage reports of, *(S) Sys Mgr Tuning*, 19–4; *(S) Sys Mgmt Util A-L*, 2–25
tracking use, *(S) Sys Mgr Tuning*, 19–1
Resource sharing
coordination between VMScluster nodes, *(S) VMScluster Sys*, 2–5
Resource wait mode
setting, *(P) Sys Svc II*, SYS2–319
system service, *(P) Interfaces*, 4–6
Response descriptor table
See RDT
Response time
external factors, *(S) DECamds*, 5–14
optimizing by customizing data collection, *(S) DECamds*, 5–14
system hardware, *(S) DECamds*, 5–17
Restarting
deactivated autostart queues, *(G) DCL N-Z*, DCLII–400, DCLII–404
DECnet, *(S) DECnet Intro*, 3–32, 3–34
queues, *(G) DCL N-Z*, DCLII–372
See also Starting queues
stopped queues, *(G) DCL N-Z*, DCLII–400, DCLII–404
the queue manager, *(G) DCL N-Z*, DCLII–385, DCLII–399
Restarting the queue manager, *(S) Sys Mgr Essentials*, 12–9
$RESTART symbol
using in command procedures, *(G) User*, 15–25
REST command, *(P) File Appl*, 10–11, 10–12, 10–15
Restore operations
with BACKUP, *(S) Sys Mgr Essentials*, 10–28
/RESTORE qualifier, *(P) Debugger*, CD–216
Restoring quorum, *(S) VMScluster Sys*, 10–21
Restoring satellite configuration data, *(S) VMScluster Sys*, 10–5
Restoring the queue database, *(S) Sys Mgr Essentials*, 12–12

Restricted accounts, *(S) Security*, 3–4, 7–10; *(S) Sys Mgr Essentials*, 6–13, 6–29
  danger of process spawning, *(S) Security*, 7–8
  setting up, *(S) Security*, 7–4
  when to use, *(S) Security*, 7–4
Restrictions
  See also Security restrictions
  in using SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–5
  Mount utility, *(S) Sys Mgmt Util M-Z*, 2–6
  to calling services, *(P) RMS Ref*, 2–8
RESTUSER.COM command procedure, *(S) Sys Mgr Essentials*, 10–36
Resultant string
  requesting, *(P) RMS Ref*, 5–2
Resume Process fix, *(S) DECamds*, 4–5
Resuming printing of an output job, *(S) Sys Mgr Essentials*, 13–75, 13–76, 13–77
Resuming queue status, *(S) Sys Mgr Essentials*, 13–51
Retained job status, *(S) Sys Mgr Essentials*, 13–74
  definition, *(S) Sys Mgr Essentials*, 13–69
  releasing jobs in, *(S) Sys Mgr Essentials*, 13–71
Retaining jobs in a queue
  changing retention of a job, *(S) Sys Mgr Essentials*, 13–74
Retransmissions
  analyzing errors, *(S) VMScluster Sys*, F–36
  caused by HELLO datagram congestion, *(S) VMScluster Sys*, G–2
  caused by lost ACKs, *(S) VMScluster Sys*, F–20
  caused by lost messages, *(S) VMScluster Sys*, F–19
  problems, *(S) VMScluster Sys*, F–18
  under congestion conditions, *(S) VMScluster Sys*, G–1
Retransmit limit, *(S) Sys Mgmt Util A-L*, 13–31
Retransmit timer, *(S) DECnet Mgmt*, 3–43
  formula for, *(S) DECnet Mgmt*, 3–44
Retrieval pointer, *(P) File Appl*, 9–7
Retrieving duplicate secondary keys
  example, *(P) Rec Mgmt Util*, 2–2
Retrieving records
  program example, *(P) RMS Ref*, A–27
Return address arrays, *(P) Concepts*, 19–9, 20–8
RETURN command, *(G) DCL N-Z*, DCLII–54 to DCLII–55
Return conditions
  wait, *(P) Interfaces*, 4–6
Return condition values, *(P) Modular Proc*, 2–21; *(P) Interfaces*, 3–6, 4–7
Returning data
  Alpha, *(P) Calling Std*, 3–53
Return key, *(G) User*, 3–18; *(P) I/O User*, 5–6
  logical successor, *(P) Debugger*, 8–8, 8–13, B–6
  to log in, *(G) DCL A-M*, DCLI–415
/RETURN qualifier, *(P) Debugger*, CD–162, CD–223, CD–300
Returns, *(P) Interfaces*, 1–12
  address, *(P) Calling Std*, 3–37
  call frame, *(P) Interfaces*, 2–5
  condition value, *(P) Interfaces*, 2–22; *(P) Calling Std*, 6–1
  errors, *(P) Interfaces*, 2–22
  function value, *(P) Interfaces*, 2–22; *(P) Calling Std*, 2–6
  I/O status block, *(P) Interfaces*, 1–12, B–10
  in mailbox, *(P) Interfaces*, 1–12
  object, *(P) Interfaces*, B–10
  RTL routines, *(P) Interfaces*, 3–6
  signaled in register, *(P) Interfaces*, 1–12
  system service condition value, *(P) Interfaces*, 4–7
Returns heading
  in routine documentation, *(P) Interfaces*, 1–4
Return status, *(P) Concepts*, 13–21
  from signal, *(P) Concepts*, 13–71
Return symbols
  for RTL routines, *(P) Interfaces*, 3–6
Reverse Address Resolution Protocol
  See RARP
Reverse path caching, *(S) DECnet Mgmt*, 2–20
Reverse-search key option, *(P) File Appl*, 8–9, 8–17
  design characteristics, *(P) RMS Ref*, 6–15
  performance caching optimization, *(P) RMS Ref*, 6–15
  used with duplicate keys, *(P) RMS Ref*, 6–15
Revert to caller's handling, *(P) Calling Std*, 6–8
REVISION attribute, *(P) Rec Mgmt Util*, 4–15, 4–23; *(P) File Appl*, 4–32
Revision data, *(P) File Appl*, 9–10
Revision date and time
  establishing with XABDAT, *(P) RMS Ref*, 8–3
Revision number, *(P) Rec Mgmt Util*, 4–23
Rewind offline function, *(P) I/O User*, 3–18
/REWIND qualifier
  as Backup utility input save-set qualifier, *(S) Sys Mgmt Util A-L*, 7–54
  as Backup utility output save-set qualifier, *(S) Sys Mgmt Util A-L*, 7–55
Rewind service, *(P) RMS Ref*, RMS–93; *(P) File Appl*, 8–5
  condition values, *(P) RMS Ref*, RMS–94
  control block input fields, *(P) RMS Ref*, RMS–94
  control block output fields, *(P) RMS Ref*, RMS–94
  effect on next-record position, *(P) File Appl*, 8–18
  use restriction, *(P) RMS Ref*, RMS–94

REXMT flag, *(S) VMScluster Sys*, F–20
RF30 disk, *(P) I/O User*, 2–5
RF71 disk, *(P) I/O User*, 2–5
RFAs (record file addresses), *(P) Rec Mgmt Util*, 2–1, 3–1; *(P) File Appl*, 1–2, 8–14, 9–15, 10–28
  access, *(P) Rec Mgmt Util*, 3–1; *(P) File Appl*, 10–28
  created by CONVERT, *(P) File Appl*, 3–19
  use of table for rapid access, *(P) File Appl*, 8–3
RFC, *(S) TCP/IP*, 3–1
  description of, *(S) TCP/IP*, 1–6
/RIGHT qualifier, *(P) Debugger*, CD–119, CD–133, CD–147
Rights database context
  terminating, *(P) Sys Svc I*, SYS1–384
Rights databases, *(S) Sys Mgr Essentials*, 5–8; *(P) Concepts*, 23–1, 23–8, 23–16
  adding identifiers, *(S) Security*, 8–6
  adding to, *(P) Concepts*, 23–12
  assigning identifiers to users, *(S) Security*, 8–7
  creating, *(P) Sys Svc I*, SYS1–139
  creating and maintaining, *(S) Security*, 8–5
  default protection, *(P) Concepts*, 23–9
  displaying, *(S) Security*, 8–6
  elements of, *(P) Concepts*, 23–10
  holder record, *(P) Concepts*, 23–8
  identifier records, *(P) Concepts*, 23–8
  initializing, *(P) Concepts*, 23–9
  keys, *(P) Concepts*, 23–9
  modifying, *(P) Concepts*, 23–13, 23–14, 23–16
  removing identifiers and holders, *(S) Security*, 8–7
Rights identifiers
  See Identifiers
RIGHTSLIST.DAT files, *(G) SW Overview*, 3–15
  adding identifiers to, *(S) Sys Mgmt Util A-L*, 5–20
  altering identifiers in, *(S) Sys Mgmt Util A-L*, 5–37
  auditing, *(S) Security*, 9–3
  authorization elements, *(S) VMScluster Sys*, 5–13
  creating and maintaining, *(S) Security*, 8–6; *(S) Sys Mgmt Util A-L*, 5–3, 5–26
  default protection, *(S) Sys Mgr Essentials*, 6–5
  deleting identifiers from, *(S) Sys Mgmt Util A-L*, 5–41
  displaying identifiers in, *(S) Sys Mgmt Util A-L*, 5–50
  displaying records in, *(S) Sys Mgmt Util A-L*, 5–54
  how UICs are stored, *(S) Security*, 4–3
  merging, *(S) VMScluster Sys*, B–3
  moving to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
  renaming identifiers, *(S) Sys Mgmt Util A-L*, 5–45
RIGHTSLIST logical name
  defining during system startup, *(S) Sys Mgr Essentials*, 5–8
  defining to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
Rights lists
  access arranged by capability, *(S) Security*, 2–8
  modifying, *(G) DCL N-Z*, DCLII–193
  process, *(P) Concepts*, 23–19
  system, *(P) Concepts*, 23–19
rights_holder data type, *(P) Interfaces*, B–15
rights_id data type, *(P) Interfaces*, B–15
Ring buffer
  nonpaged pool history, *(P) VAX SDA*, SDA–134
/RING_BUFFER qualifier, *(P) Alpha SDA*, SDA–120; *(P) VAX SDA*, SDA–134
rint routine, *(P) Portable Math*, DPML–50, B–12
RISC
  See Architectures
RJOBLIM parameter, *(S) Alpha Perform*, 1–5
RK06 cartridge disk, *(P) I/O User*, 2–5
RK07 cartridge disk, *(P) I/O User*, 2–5
RL02 cartridge disk, *(P) I/O User*, 2–4
RLBs (record lock blocks), *(P) Alpha SDA*, SDA–76; *(P) VAX SDA*, SDA–81
RLK option, *(P) Rec Mgmt Util*, 4–11
RLOGIN, *(S) Sys Mgr Tuning*, 21–13
rlogin command, *(S) TCP/IP*, 3–3
RLOGIN utility, *(S) TCP/IP*, 3–2, 5–1
RM03 disk, *(P) I/O User*, 2–5
RM05 disk, *(P) I/O User*, 2–5
RMCP.EXE file, *(S) DECamds*, B–3
RMDRIVER.EXE file, *(S) DECamds*, B–3
RMS, *(G) SW Overview*, 3–4, 4–18 to 4–19; *(P) Environment*, 10–16 to 10–18; *(P) Rec Mgmt Util*, 5–3, 6–3; *(P) File Appl*, 1–18, 1–29, 1–30, 1–33
  access to files at record level, *(S) Sys Mgr Essentials*, 9–13
  allocating buffers, *(P) File Appl*, 3–15, 3–18
  allowable program execution modes, *(P) RMS Ref*, 2–8
  Analyze/RMS_File utility, *(P) Environment*, 10–18
  and remote file access, *(S) DECnet Intro*, 2–12
  applicable macro programming rules, *(P) RMS Ref*, A–5
  attributes, *(P) File Appl*, 1–31, 1–32
  block I/O, *(P) RMS Ref*, 1–2, A–4
  block I/O processing services, *(P) RMS Ref*, 1–2
  blocking used to reduce I/O operations, *(S) VAX Perform*, 3–9
  bucket splits, *(P) File Appl*, 3–24
  buffer parameters, *(S) VAX Perform*, 3–4
  buffers, *(S) Alpha Perform*, 7–6, 18–5
  calculating extension size, *(P) File Appl*, 3–14
  calling example, *(P) RMS Ref*, A–10
  calling sequence, *(P) RMS Ref*, 2–4

RMS (cont'd)
calling services, *(P) RMS Ref*, 1–1
calls, *(S) DECnet Mgmt*, 1–18
connect-time options, *(P) File Appl*, 4–2
consumption of executive mode processing time, *(S) VAX Perform*, 3–14, 3–18; *(S) Alpha Perform*, 9–9
control blocks, *(P) Environment*, 10–15, 10–16; *(P) RMS Ref*, 1–3; *(P) Rec Mgmt Util*, 4–1; *(P) File Appl*, 1–34, 4–13
with FDL routines, *(P) Util Routines*, FDL–16, FDL–19
CONVERT, *(P) Environment*, 10–18
CONVERT/RECLAIM, *(P) Environment*, 10–18
Create/FDL utility, *(P) Environment*, 10–19
creation-time options, *(P) Rec Mgmt Util*, 5–2; *(P) File Appl*, 4–2, 4–15
data structures, *(P) File Appl*, 1–34
data structures shown by SDA, *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
default, *(P) Rec Mgmt Util*, 2–14, 4–18
deferred-write operation, *(P) File Appl*, 3–18, 3–28
device support, *(P) Environment*, 10–16
displaying data structures, *(P) Alpha SDA*, SDA–128, SDA–143; *(P) VAX SDA*, SDA–150, SDA–165
displaying default block count, *(G) DCL N-Z*, DCLII–334
Edit/FDL utility, *(P) Environment*, 10–19
file organizations, *(P) RMS Ref*, 1–3
file tags in Mail, *(G) User*, 6–9
global symbols, *(P) Alpha SDA*, SDA–15, SDA–61; *(P) VAX SDA*, SDA–64, SDA–65
image
base address, *(P) VAX SDA*, SDA–18
image activation, *(P) File Appl*, 5–5
implementation from high-level language, *(P) RMS Ref*, 3–1
improving caching, *(S) VAX Perform*, 5–14; *(S) Alpha Perform*, 18–5
in indexed files, *(P) File Appl*, 3–18
interface enhancements for 64-bit addressing, *(P) 64-Bit Addr*, 3–1
invoking at run time, *(P) RMS Ref*, A–1
MACRO parameter, *(P) File Appl*, 3–15
macros, *(P) Environment*, 10–17
misuse, *(S) VAX Perform*, 4–35; *(S) Alpha Perform*, 15–3
modifying defaults for, *(G) DCL N-Z*, DCLII–196
naming conventions, *(P) RMS Ref*, 1–1, A–3
opening file for mapping, *(P) Concepts*, 19–14, 20–14
optional arguments to, *(P) RMS Ref*, A–10
option selection, *(P) File Appl*, 9–1
overflow into P0, *(P) File Appl*, 7–16
passing argument list to, *(P) RMS Ref*, A–9
RMS (cont'd)
passing arguments to, *(P) RMS Ref*, 1–3
performance implications of file design, *(S) VAX Perform*, 3–18; *(S) Alpha Perform*, 9–9
placing file information in prologs, *(P) File Appl*, 3–18
program interface description, *(P) RMS Ref*, 2–1
Put service, *(P) Rec Mgmt Util*, 2–8
record access modes, *(P) RMS Ref*, 1–3
record formats, *(P) RMS Ref*, 1–3
restrictions to calling, *(P) RMS Ref*, 2–8
role in reclaiming buckets, *(P) Rec Mgmt Util*, 3–1
security features, *(P) RMS Ref*, 1–3
statistics
cache display, *(P) File Appl*, 3–31
determining when enabled, *(P) File Appl*, 3–30
displaying, *(P) File Appl*, 3–30
enabling gathering, *(P) File Appl*, 3–29
example of using, *(P) File Appl*, 3–30
impact on resources associated with global sections, *(P) File Appl*, 3–30
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–43
restrictions to gathering, *(P) File Appl*, 3–29
using to improve performance, *(P) File Appl*, 3–30
structures, *(P) Concepts*, 8–15
supporting file operations, *(P) RMS Ref*, 1–3
supporting record operations, *(P) RMS Ref*, 1–3
truncation
error, *(P) File Appl*, 3–9
requesting, *(P) File Appl*, 3–9
use with large extends, *(P) File Appl*, 3–9
use of DEC Multinational character set, *(P) RMS Ref*, 2–9
use of multiblocks, *(P) File Appl*, 3–14
use of reserved event flags, *(P) RMS Ref*, 2–8
using with languages, *(P) File Appl*, 1–33
utilities
ANALYZE/RMS_FILE, *(P) File Appl*, 1–35
CONVERT, *(P) File Appl*, 1–36
CONVERT/RECLAIM, *(P) File Appl*, 1–36
CREATE/FDL, *(P) File Appl*, 1–37
EDIT/FDL, *(P) File Appl*, 1–37
with Prolog 3 files, *(P) File Appl*, 10–28
RMS$_OK_DUP alternate success status, *(P) RMS Ref*, 6–16
RMS$_OK_LIM success status code, *(P) RMS Ref*, 6–14
RMS$_XAB error, *(P) RMS Ref*, 10–12

RMS (Record Management Services), *(S) TCP/IP*, 5–5
RMS.EXE file, *(P) VAX SDA*, SDA–65
RMS.STB file, *(P) Alpha SDA*, SDA–61
RMS–11
  block identifier field limitation, *(P) RMS Ref*, 4–4
  stream files, *(P) Rec Mgmt Util*, 4–33
RMS calling services, *(P) RMS Ref*, 1–1
RMSDEF.STB file, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–64
RMS distributed file system, *(S) VMScluster Sys*, 1–4, 2–17
RMS errors
  recommended method for signaling, *(P) RMS Ref*, 2–6
RMS Journaling, *(G) SW Overview*, 3–20, 7–6
  Refer also to the *RMS Journaling for OpenVMS Manual*
  as data integrity tool, *(S) Dependable*, 8–28
  data integrity, *(G) SW Overview*, 2–13, 7–4
  handling errors, *(P) Rec Mgmt Util*, 1–7, 1–8
  how to turn off, *(P) Rec Mgmt Util*, 1–8
RMS Journaling flag
  example of testing for, *(P) RMS Ref*, 4–20
RMS macros
  arguments for service completion routines, *(P) RMS Ref*, A–10
  capabilities listed, *(P) RMS Ref*, A–11
  description, *(P) RMS Ref*, A–1
  for creating and processing files, *(P) RMS Ref*, A–11
  format, *(P) RMS Ref*, A–9
  format rules, *(P) RMS Ref*, A–10
  support for data buffers in 64-bit address space, *(P) 64-Bit Addr*, 9–2, 9–7
  types, *(P) RMS Ref*, A–11
/RMS qualifier, *(P) Alpha SDA*, SDA–128; *(P) VAX SDA*, SDA–150
RMS service macros
  format, *(P) RMS Ref*, A–10
RMS symbol, *(P) VAX SDA*, SDA–18
RMS_DEFAULT command, *(P) Rec Mgmt Util*, 4–29
RMS_DFNBC system parameter
  for specifying default network block count, *(P) RMS Ref*, 4–23
RMS_EXTEND_SIZE system parameter, *(S) Sys Mgr Tuning*, 16–7; *(S) Alpha Perform*, 4–2
RMS_FILEPROT system parameter, *(S) Security*, 5–11, 8–16, 8–19, C–10
RMS_GBLBUFQUO system parameter, *(P) File Appl*, 1–38
RMS_RELATED_CONTEXT option, *(P) Linker*, LINK–61
RNE option, *(P) Rec Mgmt Util*, 4–14
RNF option, *(P) Rec Mgmt Util*, 4–14
Rolling upgrade, *(S) VMScluster Sys*, 10–3
Root directory
  adding to an existing system disk, *(S) Sys Mgr Essentials*, 2–31
Rooted-device logical names, *(P) File Appl*, 6–14
Rooted-directory logical names
  concealed, *(P) Debugger*, CD–208
Rooted-directory specifications, *(P) File Appl*, 6–13 to 6–18
Root level, *(P) File Appl*, 3–20
Root volume
  definition, *(S) Sys Mgr Essentials*, 8–31
  MFD on, *(S) Sys Mgr Essentials*, 8–31
Rotational latency, *(P) File Appl*, 1–10
Round-robin scheduling, *(S) Alpha Perform*, 6–19, 9–6
Routers, *(S) DECnet Intro*, 1–2, 3–8, 3–12; *(S) DECnet Mgmt*, 1–1, 1–12, 2–15, 3–33, 6–1
  area, *(S) DECnet Intro*, 1–3; *(S) DECnet Mgmt*, 1–2, 2–17
  definition, *(S) DECnet Mgmt*, 2–15
  designated, *(S) DECnet Mgmt*, 1–7, 2–15, 2–19
  LAN, *(S) DECnet Mgmt*, 1–7, 2–19
  Level 1, *(S) DECnet Intro*, 1–3; *(S) DECnet Mgmt*, 1–2, 2–15, 2–17
  Level 2, *(S) DECnet Intro*, 1–3; *(S) DECnet Mgmt*, 1–2, 2–15, 2–17
  network, *(S) Sys Mgr Tuning*, 21–5
  on VMScluster, *(S) DECnet Mgmt*, 1–10
  Phase IV, *(S) DECnet Mgmt*, 2–17
  X.25, *(S) DECnet Intro*, 1–6
Route-through control, *(S) DECnet Mgmt*, 3–53
Routines
  See also String manipulation routines and Utility routines
  breakpoint on, *(P) Debugger*, 3–9, 7–6
  callable system, *(G) SW Overview*, 4–9
  calling, *(P) Interfaces*, 3–1; *(P) Debugger*, 12–11, 15–22, CD–16
  call stack, *(P) Debugger*, CD–201, CD–247
  call stack sequence, *(P) Debugger*, 3–6, 6–7
  definition, *(P) Environment*, 10–3
  displaying instructions for, on call stack, *(P) Debugger*, 3–23, 11–9, CD–201
  displaying register values for, on call stack, *(P) Debugger*, 3–23, 11–11, CD–201
  displaying source code for, on call stack, *(P) Debugger*, 3–23, 11–6, CD–201
  EXAMINE/SOURCE command, *(P) Debugger*, 10–4
  how to call, *(P) Interfaces*, 3–3
  industry-standard, *(G) SW Overview*, 4–9
  LBR, *(P) CDU, LBR, & MU*, LIB–11
  multiple invocations of, *(P) Debugger*, 9–10, CD–201

Routines (cont'd)
processwide resource allocation, *(P) Concepts*, 6–16
returning from, *(P) Debugger*, 3–8, 7–3
RTL, *(G) SW Overview*, 4–10
SET BREAK command, *(P) Debugger*, 7–6
SET SCOPE command, *(P) Debugger*, 9–11, CD–201
SET TRACE command, *(P) Debugger*, 7–6
SHOW CALLS command, *(P) Debugger*, 6–7
STEP/INTO command, *(P) Debugger*, 7–3
stepping into, *(P) Debugger*, 3–7, 7–3
STEP/RETURN command, *(P) Debugger*, 7–3
system, *(P) Environment*, 10–1
traceback information, *(P) Debugger*, 9–3
tracepoint on, *(P) Debugger*, 7–6
variable-length bit field, *(P) Concepts*, 6–10
Routines descriptions
DECthreads Library routines, *(P) DECthreads*, F–1
Digital Proprietary Interfaces: cma routines, *(P) DECthreads*, E–1
Digital Proprietary Interfaces: tis routines, *(P) DECthreads*, tis–3
POSIX 1003.1c (pthread) Routines, *(P) DECthreads*, pthread–3
POSIX 1003.4a (Draft 4) pthread routines, *(P) DECthreads*, G–1
Routing, *(S) TCP/IP*, 1–1, 1–2; *(S) DECnet Intro*, 1–2; *(S) DECnet Mgmt*, 2–15
adaptive, *(S) DECnet Intro*, 1–3
area, *(S) Sys Mgr Tuning*, 21–6; *(S) DECnet Intro*, 1–3; *(S) DECnet Mgmt*, 1–2, 2–16
advantages, *(S) DECnet Mgmt*, 2–18
concepts, *(S) DECnet Mgmt*, 2–18
limiting number of areas, *(S) DECnet Mgmt*, 3–51
broadcast message timer, *(S) DECnet Mgmt*, 2–24
commands, *(S) DECnet Mgmt*, 3–49
concepts, *(S) DECnet Mgmt*, 2–21
configuration considerations, *(S) DECnet Mgmt*, 2–15
control parameters, *(S) DECnet Mgmt*, 3–51
cost, *(S) DECnet Mgmt*, 2–21
data, *(S) DECnet Intro*, 1–1
definition, *(S) DECnet Mgmt*, 1–1
displaying information, *(S) DECnet Intro*, 3–2
end node, *(S) DECnet Intro*, 1–2
equal cost path splitting, *(S) DECnet Mgmt*, 2–22, 3–53
hop, *(S) DECnet Intro*, 1–3; *(S) DECnet Mgmt*, 2–21
initialization passwords, *(S) DECnet Mgmt*, 1–10, 2–16, 2–29, 2–36, 3–67
IP, *(S) TCP/IP*, 2–6
levels of, *(S) Sys Mgr Tuning*, 21–5
maximum visits, *(S) DECnet Mgmt*, 2–22
Routing (cont'd)
message, *(S) DECnet Mgmt*, 2–23, 3–54
message timer, *(S) DECnet Mgmt*, 2–24
network
adaptive, *(S) Sys Mgr Tuning*, 21–5
definition, *(S) Sys Mgr Tuning*, 21–5
parameters, *(S) DECnet Mgmt*, 2–21
path, *(S) DECnet Intro*, 1–2; *(S) DECnet Mgmt*, 2–21
path, tracing, *(S) DECnet Intro*, 4–14
path control parameters, *(S) DECnet Mgmt*, 3–52
path cost, *(S) DECnet Intro*, 1–3; *(S) DECnet Mgmt*, 2–21
path length, *(S) DECnet Intro*, 1–3; *(S) DECnet Mgmt*, 2–21
problems, *(S) DECnet Intro*, 4–14
reachable node, *(S) DECnet Mgmt*, 2–21
route-through control parameters, *(S) DECnet Mgmt*, 3–53
segmented message, *(S) DECnet Mgmt*, 2–23
setting configuration limits, *(S) DECnet Mgmt*, 3–50
timer, *(S) DECnet Mgmt*, 3–54
timing of messages, *(S) DECnet Mgmt*, 2–24
verification, *(S) DECnet Mgmt*, 3–30
Routing initialization passwords, *(S) Security*, 12–14
Routing layer events, *(S) DECnet Mgmt Util*, D–4
Routing nodes
See Routers
Routing timer, *(S) DECnet Mgmt*, 2–24
RP05 disk, *(P) I/O User*, 2–5
RP06 disk, *(P) I/O User*, 2–5
RP07 disk, *(P) I/O User*, 2–5
RPC, *(G) SW Overview*, 2–10, 6–14
See DECrpc
RPG II
data type declarations, *(P) Interfaces*, B–49
implementation table, *(P) Interfaces*, B–49
RQDX3 disk controller, *(P) I/O User*, 2–3
RR (round-robin) scheduling, *(P) DECthreads*, 2–4
RRL option, *(P) Rec Mgmt Util*, 4–13
RRV (record reference vector), *(P) Rec Mgmt Util*, 1–3; *(P) File Appl*, 3–10, 3–23
RSA (register save area)
layout, *(P) Calling Std*, 3–12, 3–13
stack frames, *(P) Calling Std*, 3–12
RSBs (resource blocks), *(P) Alpha SDA*, SDA–108, SDA–139; *(P) VAX SDA*, SDA–123, SDA–160
RSM (Remote System Manager)
startup restrictions, *(S) Sys Mgr Tuning*, 23–12
RSPID (response ID)
displaying SDA information, *(P) Alpha SDA*, SDA–144; *(P) VAX SDA*, SDA–166

RSTs (run-time symbol tables), *(P) Debugger*, 9–5
and symbol search, *(P) Debugger*, 9–7
deleting symbol records in, *(P) Debugger*, 9–6, CD–30
displaying modules in, *(P) Debugger*, 9–6, CD–263
displaying symbols in, *(P) Debugger*, 9–8, CD–284
inserting symbol records in, *(P) Debugger*, 9–6, CD–187
shareable image, *(P) Debugger*, 9–13
RSTS/E nodes, *(S) DECnet Mgmt*, 9–5
RSX–11S systems
checkpointing tasks, *(S) DECnet Mgmt*, 4–18
downline load of system, *(S) DECnet Mgmt*, 4–1
NETGEN procedure, *(S) DECnet Mgmt*, 4–15
overlaying tasks, *(S) DECnet Mgmt*, 4–18
task load, *(S) DECnet Mgmt*, 4–14
RSX nodes, *(S) DECnet Mgmt*, 9–7, 9–9
RSX systems
in network operations, *(S) DECnet Intro*, 1–6
specifying UIC format directory names, *(G) User*, 5–10
RT–11 nodes, *(S) DECnet Mgmt*, 9–11
RT–11 volume
block-addressable, *(S) Sys Mgr Essentials*, 9–24
RTA*n* devices, *(S) Sys Mgr Essentials*, 7–11
RTL mathematics (MTH$)
Refer to the *OpenVMS VAX RTL Mathematics (MTH$) Manual*
RTLs (run-time libraries), *(G) SW Overview*, 3–4
routines, *(G) SW Overview*, 4–10
RTPAD component of SET HOST, *(P) I/O User*, 5–11
RTS, *(P) Environment*, 1–4
rtVAX, *(G) SW Overview*, 1–14
RUBs (recovery unit blocks), *(P) Alpha SDA*, SDA–76; *(P) VAX SDA*, SDA–81
RUFBs (recovery unit file blocks), *(P) Alpha SDA*, SDA–76; *(P) VAX SDA*, SDA–81
Rules for FDL validity, *(P) Rec Mgmt Util*, 6–1
Rules to remember for dependable computing
complex applications require more sophisticated recovery strategies, *(S) Dependable*, 8–46
consider cable terminations when modifying DSSI configurations, *(S) Dependable*, 6–14
consider memory and I/O as well as CPU capacity, *(S) Dependable*, 4–11
continuous improvement means constant change, *(S) Dependable*, 2–4
disaster/risk management is for professionals, *(S) Dependable*, 5–8
eliminate single points of failure, *(S) Dependable*, 6–1
environmental maintenance equipment covered by UPS, *(S) Dependable*, 5–4
Rules to remember for dependable computing (cont'd)
I/O throughput of Ethernet-only VMScluster systems, *(S) Dependable*, 6–12
include users in planning phase
preventing complaints in operational phase, *(S) Dependable*, 2–3
location of journal files, *(S) Dependable*, 8–39
personal safety is more important than system safety, *(S) Dependable*, 5–5
severely restrict use of BYPASS privilege, *(S) Dependable*, 8–49
stacking can make a small computer room more orderly, *(S) Dependable*, 5–7
water in an overcooled computer room can freeze, *(S) Dependable*, 5–4
Runaway process fix, *(S) DECamds*, 4–3
Runaway tapes
stopping, *(G) DCL A-M*, DCLI–254
RUN command
DCL command, *(P) Debugger*, 2–1, 2–7, 5–6, 5–7, 5–13, 9–4
debugger command, *(P) Debugger*, 5–7, 5–11, 5–13, 5–14, 9–13, CD–142
effect of installed images on, *(S) Sys Mgr Tuning*, 16–10
passing arguments, *(P) Debugger*, 5–8
used with search lists, *(G) User*, 13–30
with images, *(G) DCL N-Z*, DCLII–56, DCLII–57
abbreviating, *(G) DCL N-Z*, DCLII–56
with processes, *(G) User*, 18–4; *(G) DCL N-Z*, DCLII–58 to DCLII–67
creating detached processes, *(G) DCL N-Z*, DCLII–66
Runoff
See DSR
RUNOFF command, *(G) DCL N-Z*, DCLII–68
Run-time
implementation of RMS, *(P) RMS Ref*, 3–1, A–11
information to RMS listed, *(P) RMS Ref*, 1–5
processing environment, *(P) RMS Ref*, 2–1
Run-time access options, *(P) RMS Ref*, 1–4
Run-time attributes
establishing value, *(P) Rec Mgmt Util*, 4–2
Run-time kitting
creating shareable images for, *(P) Linker*, LINK–15
Run-time libraries
See RTLs
condition handling, *(P) Concepts*, 13–1
queue access, *(P) Concepts*, 6–12
Run-time library (RTL) routines
LIB$CREATE_DIR, *(G) V7.0 New Feat*, 4–31
Run-time library routines
accessing command language interpreter, *(P) Concepts*, 6–2

Run-time library routines (cont'd)
accessing operating system components, *(P) Concepts*, 6–1
accessing VAX instruction set, *(P) Concepts*, 6–9
calling, *(P) Interfaces*, 3–1, 3–3
capabilities of, *(P) Environment*, 10–4
conversion, *(P) LIB$*, 1–8
CVT$, *(P) LIB$*, 1–8
definition, *(P) Environment*, 10–3
entry point, *(P) Interfaces*, 3–3, 3–4, 3–6, 4–3
general purpose, *(P) OTS$*, 1–1
integer and floating-point, *(P) Concepts*, 6–12
interaction with operating system, *(P) Concepts*, 6–1
jacket routine, *(P) Concepts*, 6–1
library, *(P) LIB$*, 1–1
manipulating character string, *(P) Concepts*, 6–14
names, *(P) Interfaces*, 3–3
on Alpha systems, *(P) Concepts*, 13–18
output formatting control, *(P) Concepts*, 6–20
performance measurement, *(P) Concepts*, 6–17
return status, *(P) Concepts*, 13–21
string manipulation, *(P) STR$*, 2–1
system service access, *(P) Concepts*, 6–1
translated, *(P) LIB$*, 1–8
variable-length bit field instruction, *(P) Concepts*, 6–10
Run-time options
example, *(P) File Appl*, 9–18 to 9–20
specifying, *(P) File Appl*, 9–1 to 9–5
Run-time symbol tables
See RSTs
RUSBs (recovery unit stream blocks), *(P) Alpha SDA*, SDA–76; *(P) VAX SDA*, SDA–81
RV60 optical disk drives
supported by UETP, *(S) Sys Mgr Tuning*, 17–7
RVN (relative volume number)
See File identification
RWAITCNT symbol, *(P) VAX SDA*, SDA–18
RWAST wait state, *(S) Alpha Perform*, 9–4
RWC option, *(P) Rec Mgmt Util*, 4–20
RWMBP wait state, *(S) Alpha Perform*, 9–4
RWMPE wait state, *(S) Alpha Perform*, 9–4
RWO option, *(P) Rec Mgmt Util*, 4–21
RWPGF wait state, *(S) Alpha Perform*, 9–4
RWSWP wait state, *(S) Alpha Perform*, 9–4
RX01 console disk, *(P) I/O User*, 2–6
RX02 diskette, *(P) I/O User*, 2–6
RX23 diskette, *(P) I/O User*, 2–7
RX33 diskette, *(P) I/O User*, 2–7
RX50 diskette, *(P) I/O User*, 2–7
RZ22 disk, *(P) I/O User*, 2–7
RZ23 disk, *(P) I/O User*, 2–7
RZ55 disk, *(P) I/O User*, 2–7

S

S0 region
examining, *(P) Alpha SDA*, SDA–49; *(P) VAX SDA*, SDA–56
S0 space
definition, *(P) 64-Bit Addr*, 1–2
SAG (SQL Access Group), *(G) SW Overview*, 6–10
Samples
a company's first steps to dependability, *(S) Dependable*, 2–11
dependability requirements worksheet, *(S) Dependable*, 2–9
LAVC$FAILURE_ANALYSIS.MAR program, *(S) Dependable*, 7–9 to 7–11
mapping options to requirements, *(S) Dependable*, 2–13
multiadapter connections to LAN segments, *(S) Dependable*, 7–6
proposed dependability enhancements, *(S) Dependable*, 2–13
Satellite booting, *(S) Dependable*, 7–9
Satellite links, *(S) DECnet Intro*, 1–2, 1–7
Satellite loader
See SLD
Satellite nodes
adding, *(S) VMScluster Sys*, 8–13, 8–15
altering local disk labels, *(S) VMScluster Sys*, 8–40
booting, *(S) VMScluster Sys*, 9–5, 9–6
disabling conversational bootstrap operations, *(S) VMScluster Sys*, 8–10
failure to boot, *(S) VMScluster Sys*, C–4, C–6
failure to join the cluster, *(S) VMScluster Sys*, C–13
functions, *(S) VMScluster Sys*, 3–7
local disk used for paging and swapping, *(S) VMScluster Sys*, 3–7
maintaining network configuration data, *(S) VMScluster Sys*, 10–5
modifying LAN hardware address, *(S) VMScluster Sys*, 8–22
obtaining LAN hardware address, *(S) VMScluster Sys*, 8–5
rebooting if operating system installed on local disk, *(S) VMScluster Sys*, 8–41
removing, *(S) VMScluster Sys*, 8–18
restoring network configuration data, *(S) VMScluster Sys*, 10–5
startup controlled by DECbootsync, *(S) VMScluster Sys*, 9–11
system files created by CLUSTER_CONFIG.COM procedure, *(S) VMScluster Sys*, 8–1
updating network data in NETNODE_REMOTE.DAT, *(S) VMScluster Sys*, 8–39

Satellites
booting, *(S) Sys Mgr Tuning*, 22–20
booting across architectures, *(S) VMScluster Sys*, 10–5
boot process, *(S) VMScluster Sys*, 3–7
controlling booting, *(S) VMScluster Sys*, 9–10
cross-architecture booting, *(S) Sys Mgr Tuning*, 22–23
downline loading, *(S) VMScluster Sys*, 9–9
LAN MOP and DECnet MOP downline load service, *(S) Sys Mgr Tuning*, 22–20
maintaining network data for, *(S) VMScluster Sys*, 5–19
migrating to LAN MOP downline load service, *(S) Sys Mgr Tuning*, 22–20
preparing to boot, *(S) VMScluster Sys*, 9–4
troubleshooting booting, *(S) VMScluster Sys*, C–5
Satellite transmission control, *(S) DECnet Mgmt*, 3–44
SATELLITE_PAGE.COM command procedure, *(S) Sys Mgr Essentials*, 5–6; *(S) Sys Mgr Tuning*, 15–20
execution of during system startup, *(S) Sys Mgr Essentials*, 5–5
SAVE command, *(P) Debugger*, 11–22, CD–144
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–48
SAVEDUMP system parameter, *(G) V7.0 New Feat*, 4–21; *(S) Sys Mgr Tuning*, 15–2, 15–3, 15–7; *(P) Alpha SDA*, SDA–4, SDA–28; *(P) VAX SDA*, SDA–5
/SAVE qualifier, *(P) Debugger*, CD–140
Save sets, *(S) Sys Mgr Essentials*, 10–6, 10–23; *(P) File Appl*, 10–29
description of, *(S) Sys Mgmt Util A-L*, 7–3
directing output to, *(S) Sys Mgmt Util A-L*, 7–11
Files–11 disk, *(S) Sys Mgr Essentials*, 10–7
Get Save Set
VMSINSTAL.COM option, *(S) Sys Mgr Essentials*, 3–15
in network operations, *(S) DECnet Intro*, 2–9
listing the contents of, *(S) Sys Mgr Essentials*, 10–18
magnetic tape, *(S) Sys Mgr Essentials*, 10–6
multivolume, *(S) Sys Mgr Essentials*, 10–29
name, *(S) Sys Mgr Essentials*, 10–24
network, *(S) Sys Mgr Essentials*, 10–7
on multiple tapes, *(S) Sys Mgr Essentials*, 10–21
product
storing temporarily during installation, *(S) Sys Mgr Essentials*, 3–15
sequential disk, *(S) Sys Mgr Essentials*, 10–7
types, *(S) Sys Mgr Essentials*, 10–6
Save-set specification, *(S) Sys Mgmt Util A-L*, 7–5
/SAVE_SET qualifier
as Backup utility input save-set qualifier, *(S) Sys Mgmt Util A-L*, 7–58
as Backup utility output save-set qualifier, *(S) Sys Mgmt Util A-L*, 7–58
/SAVE_VECTOR_STATE qualifier, *(P) Debugger*, 15–22, CD–17
Saving breakpoints, *(P) Debugger*, 2–5, 5–11
Saving the queue database, *(S) Sys Mgr Essentials*, 12–11
SBR register
displaying, *(P) VAX SDA*, SDA–96
SBs (system blocks), *(P) Alpha SDA*, SDA–81, SDA–94; *(P) VAX SDA*, SDA–87, SDA–105
SB symbol, *(P) VAX SDA*, SDA–18
SCA architecture
NISCA transport protocol, *(S) VMScluster Sys*, F–1, F–3
protocol levels, *(S) VMScluster Sys*, F–1, F–3
Scalability
Refer also to the *Guidelines for VMScluster Configurations*
predicting future software requirements, *(S) Dependable*, 8–30
Scalars
definition, *(S) Sys Mgr Tuning*, 26–4
processor synchronization, *(P) Calling Std*, 2–8
register usage, *(P) Calling Std*, 2–1
Scalar types, *(P) Debugger*, 8–15
scalb routine, *(P) Portable Math*, DPML–51, B–12
S/call button, *(P) Debugger*, 3–8
SCAN
data type declarations, *(P) Interfaces*, B–51
implementation table, *(P) Interfaces*, B–51
Scanning
for devices, *(P) Sys Svc I*, SYS1–275
intrusion database, *(P) Sys Svc II*, SYS2–268
SCBB register
displaying, *(P) Alpha SDA*, SDA–87; *(P) VAX SDA*, SDA–96
SCBB symbol, *(P) Alpha SDA*, SDA–16
SCBs (storage control blocks)
in storage bit map file, *(S) Sys Mgr Tuning*, A–8
SCF option, *(P) Rec Mgmt Util*, 4–24
Scheduler
definition, *(S) Alpha Perform*, 6–1
global symbols, *(P) Alpha SDA*, SDA–61; *(P) VAX SDA*, SDA–65
Schedulers
callback, *(G) V7.0 New Feat*, 4–11
DECthreads, *(G) V7.0 New Feat*, 4–11
OpenVMS, *(G) V7.0 New Feat*, 4–11
Scheduling, *(S) Sys Mgr Essentials*, 6–2, 6–31
See also Priority
of batch jobs, *(S) Sys Mgr Essentials*, 13–72

Scheduling (cont'd)
of print jobs, *(S) Sys Mgr Essentials*, 13–32, 13–72
overview, *(S) VAX Perform*, 2–25
real-time processes, *(S) Alpha Perform*, 6–20
round-robin, *(S) Alpha Perform*, 6–19, 9–6
states
compute (COM), *(S) Alpha Perform*, 9–1
compute outswapped (COMO), *(S) Alpha Perform*, 9–1
threads, *(P) DECthreads*, 3–7
tuning, *(S) Alpha Perform*, 6–20
wait states, *(S) Alpha Perform*, 9–3
types of, *(S) Alpha Perform*, 9–3
Scheduling jobs, *(G) SW Overview*, 3–2
Scheduling parameters
getting for thread, *(P) DECthreads*, pthread–68
setting for thread, *(P) DECthreads*, pthread–106
Scheduling parameters attribute, *(P) DECthreads*, pthread–12
Scheduling policy
getting for thread, *(P) DECthreads*, pthread–68
obtaining for thread, *(P) DECthreads*, E–75, G–53
setting for thread, *(P) DECthreads*, pthread–106, E–81, G–79
Scheduling policy attribute, *(P) DECthreads*, 2–4, pthread–14, pthread–28, E–33, G–21
obtaining, *(P) DECthreads*, E–25, G–12
Scheduling policy attribute parameters, *(P) DECthreads*, pthread–26
Scheduling priority attribute, *(P) DECthreads*, 2–5
Scheduling states, *(S) VAX Perform*, 3–11 to 3–12
isolating CPU limitations, *(S) VAX Perform*, 4–32
Scheduling thread, *(P) DECthreads*, 2–17
Scheduling timer, *(S) DECnet Mgmt*, 3–43
Scope
canceling, *(P) Debugger*, 9–11, CD–33
current, *(P) Debugger*, 9–10, CD–201
default, *(P) Debugger*, CD–33, CD–202, CD–273
definition of, *(P) DECthreads*, 3–4
displaying, *(P) Debugger*, 9–11, CD–273
for instruction display, *(P) Debugger*, CD–201
for register display, *(P) Debugger*, CD–201
for source display, *(P) Debugger*, CD–201
for symbol search, *(P) Debugger*, 9–10, CD–33, CD–201, CD–273
relation to call stack, *(P) Debugger*, 9–10, 9–11, CD–201
SEARCH command, *(P) Debugger*, CD–148
search list, *(P) Debugger*, 3–23, 9–10, CD–33, CD–201, CD–273
SET SCOPE command, *(P) Debugger*, 9–10, CD–201
Scope (cont'd)
setting, *(P) Debugger*, 9–10, CD–201
TYPE command, *(P) Debugger*, CD–310
Scopes
built-in symbol, *(P) Debugger*, 11–6, 11–8, B–11
current, *(P) Debugger*, 3–23
default, *(P) Debugger*, 9–7
for instruction display, *(P) Debugger*, 3–23, 11–9
for register display, *(P) Debugger*, 3–23, 11–11
for source display, *(P) Debugger*, 3–23, 11–6
for symbol search, *(P) Debugger*, 3–23, 7–7, 9–7
PC, *(P) Debugger*, 3–23, 9–7
relation to call stack, *(P) Debugger*, 3–23, 9–9, 11–6, 11–9, 11–11
SEARCH command, *(P) Debugger*, 10–6
search list, *(P) Debugger*, 9–7
SET SCOPE command, *(P) Debugger*, 11–6, 11–9, 11–11
setting, *(P) Debugger*, 3–23
specifying with path name, *(P) Debugger*, 9–8
TYPE command, *(P) Debugger*, 10–4
vector register, *(P) Debugger*, 15–1
Scratch files, *(P) Rec Mgmt Util*, 2–8
Screen clearing, *(S) Security*, 3–20, C–9
Screen displays
See Displays
Screen management, *(P) Concepts*, 7–7
See also Virtual displays
debugging DECwindows Motif application, *(P) Debugger*, 2–8
debugging screen-oriented program, *(P) Debugger*, 2–9, 13–13
definition of, *(P) SMG$*, 1–1
deleting text, *(P) Concepts*, 7–22
double-width characters, *(P) Concepts*, 7–19, 7–20
drawing lines, *(P) Concepts*, 7–21
inserting characters, *(P) Concepts*, 7–19
menus
creating, *(P) Concepts*, 7–22
reading, *(P) Concepts*, 7–24
types of, *(P) Concepts*, 7–22
reading data, *(P) Concepts*, 7–23
resources, *(P) Modular Proc*, 2–15
scrolling, *(P) Concepts*, 7–20
setting background color, *(P) Concepts*, 7–10
setting screen dimensions, *(P) Concepts*, 7–10
using system routines, *(P) Environment*, 10–2
video attributes, *(P) Concepts*, 7–21
viewports, *(P) Concepts*, 7–18
Screen mode, *(P) Debugger*, 11–1, CD–184
built-in symbol, *(P) Debugger*, 11–23, 11–24
multiprocess program, *(P) Debugger*, 14–15
predefined windows, *(P) Debugger*, 11–24

Screen-oriented programs
debugging, *(P) Debugger*, 2–8, 2–9, 13–13
Screens
minimal update, *(P) SMG$*, 2–16
refreshing from LATCP, *(S) Sys Mgmt Util A-L*, 13–24
Screen sizes
displaying, *(P) Debugger*, 11–23, CD–290
%PAGE, %WIDTH symbols, *(P) Debugger*, 11–23
setting, *(P) Debugger*, 11–22, CD–218
/SCREEN_LAYOUT qualifier, *(P) Debugger*, CD–121
Scribe programs
capturing traffic data, *(S) VMScluster Sys*, F–38
/SCRIPT qualifier, *(P) File Appl*, 10–26
Scripts
EDIT/FDL, *(P) Rec Mgmt Util*, 6–15
executing Optimize without terminal dialogue, *(P) Rec Mgmt Util*, 6–7
generating Indexed, *(P) Rec Mgmt Util*, 6–11
invoking, *(P) Rec Mgmt Util*, 6–15
list of, *(P) File Appl*, 4–4
Optimize, *(P) File Appl*, 10–1
using with FDL ANALYSIS_OF_AREA and ANALYSIS_OF_KEY sections, *(P) Rec Mgmt Util*, 1–25
restrictions on use of Design and Add Key scripts, *(P) Rec Mgmt Util*, 6–4
selecting response method, *(P) Rec Mgmt Util*, 6–9
specifying FDL file with Optimize, *(P) Rec Mgmt Util*, 6–4
specifying title, *(P) Rec Mgmt Util*, 6–10
Touch-up, *(P) File Appl*, 10–26
using Optimize with ANALYSIS_OF_AREA and ANALYSIS_OF_KEY sections, *(P) Rec Mgmt Util*, 1–25
using Optimize with special analysis sections, *(P) Rec Mgmt Util*, 1–12
using with INVOKE command, *(P) Rec Mgmt Util*, 6–11
SCROLL command, *(S) Sys Mgr Tuning*, 20–13; *(P) Debugger*, 11–11, CD–146
in LATCP, *(S) Sys Mgmt Util A-L*, 13–25
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–49
Scrolling
backward, *(P) Concepts*, 7–20
down, *(P) Concepts*, 7–20
forward, *(P) Concepts*, 7–20
output, *(P) Concepts*, 7–20
up, *(P) Concepts*, 7–20
SCROLL keypad function, *(S) Sys Mgr Tuning*, 20–7; *(S) Sys Mgmt Util M-Z*, B–3
Scroll modes, *(P) Debugger*, CD–184
jump, *(P) SMG$*, SMG–355
smooth, *(P) SMG$*, SMG–355
/SCROLL qualifier, *(P) Debugger*, 11–20, CD–152
SCS (System Communications Services), *(G) SW Overview*, 3–18; *(S) Alpha Perform*, 9–7
base address, *(P) VAX SDA*, SDA–18
definition, *(S) VMScluster Sys*, 1–4
displaying SDA information, *(P) Alpha SDA*, SDA–80, SDA–81, SDA–84, SDA–124, SDA–144; *(P) VAX SDA*, SDA–86, SDA–87, SDA–91, SDA–141, SDA–166
global symbols, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–64
SHOW CLUSTER information, *(S) Sys Mgmt Util M-Z*, 4–3
statistics in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–46
SCSBUFFCNT system parameter, *(S) VMScluster Sys*, 9–19
SCSCONNCNT system parameter, *(S) VMScluster Sys*, 9–18
SCSDEF.STB file, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–64
SCSI (Small Computer Systems Interface), *(G) SW Overview*, 1–6, A–2; *(S) Sys Mgr Essentials*, 10–40; *(S) Sys Mgr Tuning*, 21–9
class driver, *(P) I/O User*, 8–3
class/port architecture, *(P) I/O User*, 8–2
cluster-accessible disks, *(S) VMScluster Sys*, 1–3
disk class driver, *(P) I/O User*, 2–18
disks, *(S) VMScluster Sys*, 1–4, 2–17
class driver, *(P) I/O User*, 2–17
error recovery, *(P) I/O User*, 2–13, 2–17
enabling disconnect feature, *(P) I/O User*, 8–7
handling errors in audio applications, *(P) I/O User*, 2–23
hardware compliance, *(P) I/O User*, 7–2
port driver, *(P) I/O User*, 8–2
$QIO interface to disk class driver, *(P) I/O User*, 2–19
support for compliant hardware, *(S) VMScluster Sys*, 6–23
SCSI bus
arbitration rules, *(G) V7.0 New Feat*, C–36
control of, *(G) V7.0 New Feat*, C–36
SCSI command
disabling retry, *(P) I/O User*, 8–7
enabling retry, *(P) I/O User*, 8–12
padding, when required, *(P) I/O User*, 8–13
setting disconnect timeout for, *(P) I/O User*, 8–8, 8–13
setting DMA timeout for, *(P) I/O User*, 8–8, 8–13
setting phase change timeout for, *(P) I/O User*, 8–8, 8–13

SCSI disks
accessing, *(G) V7.0 New Feat*, C–2
configurations requirements, *(G) V7.0 New Feat*, C–4
modes of operation, *(G) V7.0 New Feat*, C–6
unique device IDs, *(G) V7.0 New Feat*, C–6
SCSI interconnect, *(G) V7.0 New Feat*, C–1
ANSI standard, *(G) V7.0 New Feat*, C–1
cabling and termination, *(G) V7.0 New Feat*, C–8
concepts, *(G) V7.0 New Feat*, C–6
configuration requirements, *(G) V7.0 New Feat*, C–4
configurations using add on SCSI adapters, *(G) V7.0 New Feat*, C–9
configurations using an HSZ40 controller, *(G) V7.0 New Feat*, C–12
configurations using BA350/BA353 StorageWorks enclosures, *(G) V7.0 New Feat*, C–9
configurations using DWZZA converters, *(G) V7.0 New Feat*, C–11
configurations using integral SCSI adapters, *(G) V7.0 New Feat*, C–18
configuring device IDs, *(G) V7.0 New Feat*, C–21
configuring SCSI node IDs, *(G) V7.0 New Feat*, C–20
configuring with CLUSTER_CONFIG.COM, *(G) V7.0 New Feat*, C–26
connected to a single host, *(G) V7.0 New Feat*, C–2
connected to multiple hosts, *(G) V7.0 New Feat*, C–3
data transfer rates, *(G) V7.0 New Feat*, C–7
grounding requirements, *(G) V7.0 New Feat*, C–20
hardware configurations, *(G) V7.0 New Feat*, C–9
hot plugging devices with, *(G) V7.0 New Feat*, C–38
installation, *(G) V7.0 New Feat*, C–19
maximum distances, *(G) V7.0 New Feat*, C–8
maximum length, *(G) V7.0 New Feat*, C–7
number of devices supported, *(G) V7.0 New Feat*, C–6
performance, *(G) V7.0 New Feat*, C–6
power up and verify, *(G) V7.0 New Feat*, C–22
show and set console parameters, *(G) V7.0 New Feat*, C–24
TERMPWR line, *(G) V7.0 New Feat*, C–8
troubleshooting, *(G) V7.0 New Feat*, C–33
SCSI tapes
no support for SCSI retension, *(G) V7.0 New Feat*, E–2
support in a VMScluster system, *(G) V7.0 New Feat*, E–1
SCSI_NOAUTO system parameter, *(P) I/O User*, 8–9
SCSLOA symbol, *(P) VAX SDA*, SDA–18
SCSNODE system parameter, *(S) Sys Mgr Tuning*, 23–10; *(S) DECnet Intro*, 3–8
in DECdtm Services, *(S) Sys Mgr Tuning*, 25–22
unique value for DECdtm use, *(S) Sys Mgr Tuning*, 25–24
SCS protocol
connections, *(S) VMScluster Sys*, C–20
DX header, *(S) VMScluster Sys*, F–22
for interprocessor communication, *(S) VMScluster Sys*, 1–4
part of the SCA architecture, *(S) VMScluster Sys*, F–2
port polling, *(S) VMScluster Sys*, C–19
system parameters, *(S) VMScluster Sys*, A–4 to A–5
/SCS qualifier, *(P) Alpha SDA*, SDA–80; *(P) VAX SDA*, SDA–86
SCSRESPCNT system parameter, *(S) VMScluster Sys*, 9–20
SCSSYSTEMID system parameter, *(S) DECnet Intro*, 3–8
and LATCP CREATE LINK command, *(S) Sys Mgmt Util A-L*, 13–7
SDA$INIT logical name, *(P) Alpha SDA*, SDA–9; *(P) VAX SDA*, SDA–10
SDA$READ_DIR:REQSYSDEF.STB file, *(P) Alpha SDA*, SDA–7, SDA–8
SDA$READ_DIR:SYS$BASE_IMAGE.EXE file, *(P) Alpha SDA*, SDA–7, SDA–8
SDA$READ_DIR:SYSDEF.STB file, *(P) Alpha SDA*, SDA–9
SDA (System Dump Analyzer utility)
See System Dump Analyzer utility
SDA CLUE commands
analyzing the system dump file, *(S) Sys Mgr Tuning*, 15–2
saving contents of system dump file, *(S) Sys Mgr Tuning*, 15–15
using to archive dump file information, *(S) Sys Mgr Tuning*, 15–11
using to collect dump file information, *(S) Sys Mgr Tuning*, 15–11
SDA command format, *(P) Alpha SDA*, SDA–11 to SDA–12; *(P) VAX SDA*, SDA–15 to SDA–16
SDA current CPU, *(P) Alpha SDA*, SDA–10, SDA–68, SDA–73, SDA–86, SDA–89, SDA–127, SDA–152
changing, *(P) VAX SDA*, SDA–14
displaying, *(P) VAX SDA*, SDA–177
implicitly setting using SHOW CRASH command, *(P) VAX SDA*, SDA–99
implicitly setting using /SYSTEM qualifier, *(P) VAX SDA*, SDA–148

SDA current CPU (cont'd)
selecting using SET CPU command, *(P) VAX SDA*, SDA–72
selecting using SET PROCESS command, *(P) VAX SDA*, SDA–78
using the SHOW CPU command, *(P) VAX SDA*, SDA–95
SDA current process, *(P) Alpha SDA*, SDA–10, SDA–11, SDA–69, SDA–72, SDA–89, SDA–127, SDA–152
changing, *(P) VAX SDA*, SDA–12
changing using SHOW CRASH command, *(P) VAX SDA*, SDA–99
displaying, *(P) VAX SDA*, SDA–177
implicitly changed, *(P) VAX SDA*, SDA–14, SDA–72
implicitly setting using /SYSTEM qualifier, *(P) VAX SDA*, SDA–148
selecting using SET PROCESS command, *(P) VAX SDA*, SDA–77
SDA symbol table, *(P) VAX SDA*, SDA–17
building, *(P) Alpha SDA*, SDA–8; *(P) VAX SDA*, SDA–10
expanding, *(P) Alpha SDA*, SDA–9; *(P) VAX SDA*, SDA–10
SDI (standard disk interface), *(S) VMScluster Sys*, 1–3
SEARCH command, *(G) DCL N-Z*, DCLII–69 to DCLII–76; *(P) Debugger*, 10–5, CD–148; *(P) Alpha SDA*, SDA–66; *(P) VAX SDA*, SDA–70
displaying default qualifiers for, *(P) Debugger*, 10–7, CD–275
in Mail, *(G) User*, 6–4
in network operations, *(S) DECnet Intro*, 2–7
/NEXT qualifier, *(G) V7.0 New Feat*, 2–9
setting default qualifiers for, *(P) Debugger*, 10–6, CD–205
Search key option example program, *(P) File Appl*, 8–10
Search key options, *(P) File Appl*, 8–8, 8–9
Search key types, *(P) File Appl*, 8–9
Search lists, *(G) User*, 13–1; *(G) DCL A-M*, DCLI–41, DCLI–120; *(S) VMScluster Sys*, 5–5; *(P) Concepts*, 10–2
See also File specifications
as alternative to using wildcard characters, *(P) RMS Ref*, A–21
creating with logical names, *(G) User*, 13–7
with wildcards, *(G) User*, 13–8
definition, *(P) File Appl*, 5–7
example, *(P) File Appl*, 5–14, 5–15
how translated
with wildcards, *(G) User*, 13–29, 13–30
multiple file locations, *(P) File Appl*, 5–7, 5–8
priority of installed images, *(S) Sys Mgr Tuning*, 16–10
scope, *(P) Debugger*, 3–23, 9–7, 9–10, CD–201, CD–273
Search lists (cont'd)
search order, *(G) User*, 13–30
source file, *(P) Debugger*, 10–2, CD–34, CD–207, CD–278
translation, *(G) User*, 13–28, 13–29
translations, *(P) File Appl*, 6–6, 6–8
using a semicolon, *(G) User*, 13–8
using with Remove service, *(P) RMS Ref*, RMS–86
with RUN command, *(G) User*, 13–30
$SEARCH macro
for processing wildcard characters, *(P) RMS Ref*, A–21
Search operations, *(P) Concepts*, 23–16
Search path of Help Message database files, *(S) Sys Mgr Essentials*, 5–28
Search service, *(P) RMS Ref*, RMS–95; *(P) File Appl*, 5–8 to 5–12
condition values, *(P) RMS Ref*, RMS–98
control block input fields, *(P) RMS Ref*, RMS–96
control block output fields, *(P) RMS Ref*, RMS–97
example of completion code handling, *(P) RMS Ref*, A–23
program example, *(P) RMS Ref*, A–20
requirement for Parse service, *(P) RMS Ref*, A–20
using with wildcard characters and search lists, *(P) RMS Ref*, RMS–96
Search string translations
requirements for parsing, *(P) RMS Ref*, A–20
SECAUDIT.COM command procedure
See Audit Analysis utility
Secondary Bootstrap image
role in boot process, *(S) Sys Mgr Essentials*, 4–2
Secondary completion status value field, *(P) File Appl*, 5–12
SECONDARY day
defining for accounts, *(S) Sys Mgr Essentials*, 6–27
Secondary exception vectors, *(P) Concepts*, 13–24
Secondary index data record
See SIDR
Secondary indexes
See Alternate indexes
Secondary keys
duplicate retrieval order, *(P) Rec Mgmt Util*, 2–2
Secondary loaders, *(S) DECnet Mgmt*, 4–8
Secondary page and swap files, *(S) Sys Mgr Tuning*, 15–5
See also Page files and Swap files
creating
in system startup, *(S) Sys Mgr Tuning*, 15–20

Secondary page and swap files
creating (cont'd)
with AUTOGEN, *(S) Sys Mgr Tuning*, 15–17, 15–24
with SYPAGSWPFILES.COM procedure, *(S) Sys Mgr Tuning*, 15–20
improving system performance, *(S) Sys Mgr Tuning*, 16–8
installing
in system startup, *(S) Sys Mgr Tuning*, 15–20
requirement, *(S) Sys Mgr Tuning*, 15–5
with SYPAGSWPFILES.COM command procedure, *(S) Sys Mgr Tuning*, 15–20
installing during system startup, *(S) Sys Mgr Essentials*, 5–6
Secondary page cache, *(S) Alpha Perform*, 10–4, 10–5
evaluating, *(S) VAX Perform*, 3–24, 3–34; *(S) Alpha Perform*, 10–5, 11–6
free-page list, *(S) Alpha Perform*, 5–2
modified-page list, *(S) Alpha Perform*, 5–2
Secondary passwords
length, *(G) User*, 2–6
Secondary processors, *(S) Sys Mgr Tuning*, 26–2
Secondary services
effect on next-record position, *(P) File Appl*, 8–18
Secondary storage, *(S) Alpha Perform*, 5–2
Second-level trimming, *(S) Alpha Perform*, 6–12
See also Memory management
SECSRV$CLIENT
reserved identifier, *(S) Security*, 13–3
SECSRV$COMMUNICATION
reserved identifier, *(S) Security*, 13–3
SECSRV$OBJECT
reserved identifier, *(S) Security*, 13–3
Section files, *(S) Alpha Perform*, 5–2
updating asynchronously, *(P) Sys Svc II*, SYS2–470
updating synchronously, *(P) Sys Svc II*, SYS2–480
Sections, *(P) Concepts*, 19–13, 20–12
characteristic, *(P) Concepts*, 19–15, 20–15
creating, *(P) Concepts*, 19–14, 20–13; *(P) Sys Svc I*, SYS1–192
defining extent, *(P) Concepts*, 19–15, 20–15
deleting, *(P) Concepts*, 8–11, 19–23, 20–24, 20–25
deleting global, *(P) Sys Svc I*, SYS1–279
global, *(S) Sys Mgr Tuning*, 16–12; *(P) Concepts*, 17–8
global paging file, *(P) Concepts*, 19–20, 20–21
image, *(P) Concepts*, 19–23, 20–25
mapping, *(P) Concepts*, 8–4, 19–18, 20–18; *(P) Sys Svc I*, SYS1–192
page frame, *(P) Concepts*, 19–24, 20–26
pages, *(S) Sys Mgr Tuning*, 16–12
Sections (cont'd)
paging, *(P) Concepts*, 19–20, 19–21, 20–22, 20–23
private, *(P) Concepts*, 8–5
releasing, *(P) Concepts*, 19–23, 20–24
sharing data, *(P) Concepts*, 19–22, 20–24
unmapping, *(P) Concepts*, 19–23, 20–24
updating, *(P) Concepts*, 8–11
writing back, *(P) Concepts*, 19–23, 20–25
writing modifications to disk, *(P) Sys Svc II*, SYS2–470, SYS2–480
Section type, *(P) Alpha SDA*, SDA–127, SDA–138
/SECTION_BINDING qualifier, *(P) Linker*, LINK–26
creating resident shareable images, *(P) Linker*, 1–16
improving the performance of installed shareable images, *(P) Linker*, 4–11
section_id data type, *(P) Interfaces*, B–15
section_name data type, *(P) Interfaces*, B–15
Sectors, *(P) File Appl*, 1–10
Files–11
definition, *(S) Sys Mgr Tuning*, A–2
Sector translation, *(P) I/O User*, 2–14
Secure terminal servers, *(S) Security*, 3–14, 7–26
Security, *(S) DECamds*, 1–3; *(P) Environment*, 10–2
See also Protection
administrator, *(G) User*, 2–5
alarms
enabling, *(S) Sys Mgr Tuning*, 18–29
assessing auditing requirements, *(S) Security*, 9–10
at the network circuit level, *(S) DECnet Intro*, 3–37
at the network node level, *(S) DECnet Intro*, 3–36
at the network system level, *(S) DECnet Intro*, 3–36
auditing events, *(P) Sys Svc I*, SYS1–43, SYS1–61
auditing subsystem, *(G) SW Overview*, 3–14
audit log files, *(G) User*, 19–11
authenticating user's identity, *(S) Sys Mgr Tuning*, 21–14
authentication, *(G) SW Overview*, 3–16
B1 class, *(G) SW Overview*, 3–14
C2 class, *(G) SW Overview*, 3–14, A–2
checking privileges, *(P) Sys Svc I*, SYS1–93, SYS1–98
converting message from binary to ASCII, *(P) Sys Svc I*, SYS1–402
customizing files, *(S) DECamds*, 1–7
Data Analyzer file, *(S) DECamds*, A–14
data center policies, *(S) Dependable*, 9–19
data protection mechanisms, *(G) User*, 19–3; *(S) Security*, 4–6
Data Provider file, *(S) DECamds*, A–13

Security (cont'd)
data transfer, *(S) DECamds*, 1–4
DCE Security Server, *(P) Environment*, 3–6
definition of levels, *(S) Security*, 1–2
disposing of hardcopy output, *(G) User*, 2–26
enabling operator terminals, *(S) Sys Mgr Tuning*, 18–21
environmental factors, *(S) Security*, 1–3; *(S) Dependable*, 5–4
erasing data on disk, *(S) Security*, 5–12
file protection, *(G) SW Overview*, 3–14; *(S) DECamds*, 1–4
filtering sensitive message information, *(P) Sys Svc I*, SYS1–402
for DECnet node, *(S) DECnet Intro*, 3–34 to 3–38
for devices, *(G) User*, 12–2
for dynamic asynchronous connection, *(S) DECnet Intro*, 3–25; *(S) DECnet Mgmt*, 1–10
for point-to-point connection, *(S) DECnet Mgmt*, 2–36, 3–67
for static asynchronous connection, *(S) DECnet Intro*, 3–21
getting erase patterns, *(P) Sys Svc I*, SYS1–341
hashing passwords, *(P) Sys Svc II*, SYS2–105
high-level, *(G) User*, 19–10
highwater marking, *(S) Security*, 5–12
image, *(P) Debugger*, 9–5
LAN encryption, *(G) SW Overview*, 6–7
locking the data center, *(S) Dependable*, 3–5
logging issues with OPCOM, *(S) DECamds*, 1–4
managing auditing, *(S) Security*, 9–23
managing default protection and ownership, *(S) Security*, 8–15
messages in operator log file, *(S) Sys Mgr Tuning*, 18–21
modifying characteristics of an object, *(P) Sys Svc II*, SYS2–344
network, *(G) SW Overview*, 6–7; *(S) DECnet Intro*, 3–38
See also DECnet and Networks
providing for, *(S) Sys Mgr Tuning*, 21–12
object protection, *(G) DCL N-Z*, DCLII–200, DCLII–335
objects protected by system, *(S) Security*, 4–10
OPCOM alarm messages, *(S) Sys Mgr Tuning*, 18–21
OpenVMS services for PC clients, *(G) SW Overview*, 6–23
OpenVMS system, *(G) SW Overview*, 3–14, 3–15
operating system model, *(S) Security*, 2–1
optimizing file security, *(S) Security*, 5–13
password, *(G) SW Overview*, 3–14
password management, *(S) Sys Mgr Essentials*, 11–2
Security (cont'd)
performance impact
auditing, *(S) Security*, 9–12
private LAN transport, *(S) DECamds*, 1–3
process privileges, *(S) DECamds*, 1–4
protected subsystems, *(S) Sys Mgr Essentials*, 8–28
protecting network configuration files, *(S) DECnet Mgmt*, 2–33
protecting public disk volumes, *(S) Sys Mgr Essentials*, 8–15
protecting queues, *(S) Sys Mgr Essentials*, 13–22
protecting the system dump file, *(S) Sys Mgr Tuning*, 15–4
protection mask, *(G) SW Overview*, 3–10
read-only access, *(S) DECamds*, 1–9
retrieving information about objects, *(P) Sys Svc II*, SYS2–89
risk of compromise by installing images with privileges, *(S) Sys Mgr Tuning*, 16–13
services enabled by PATHWORKS, *(P) Environment*, 3–5
software, *(G) SW Overview*, 2–15
specifying alarm events, *(S) Sys Mgr Tuning*, 18–21
steps after installing
Data Analyzer, *(S) DECamds*, A–14
Data Provider, *(S) DECamds*, A–13
system services, *(P) Environment*, 10–6, 10–12
terminal, *(P) Debugger*, 13–14
Trojan horse programs, *(S) Security*, 5–14
user access, *(G) SW Overview*, 5–1
VMScluster, *(S) Sys Mgr Tuning*, 20–16
VMScluster requires single domain, *(S) VMScluster Sys*, 5–10
SECURITY.AUDIT$JOURNAL files, *(S) Security*, 9–18
SECURITY.EXE file
global symbols, *(P) VAX SDA*, SDA–65
SECURITY.STB file
global symbols, *(P) Alpha SDA*, SDA–61
SECURITY.SYS file
See Volume security profile
Security administrators
C2 requirements, *(S) Security*, C–10
checklist for maintaining a secure system, *(S) Security*, 6–8
cluster managers and, *(S) Security*, 11–1
goals of, *(S) Security*, 1–1
personal accounts, *(S) Security*, 6–4
privilege requirements, *(S) Security*, 6–4
role of, *(S) Security*, 6–1
system passwords and, *(S) Security*, 3–3
training users, *(S) Security*, 3–21, 6–5
Security Alarm ACEs
See Alarm ACEs

Security alarm messages
specifying access criteria for, *(S) Sys Mgmt Util A-L*, 1–6, 1–8
Security alarms, *(G) User*, 19–10; *(S) Security*, 3–18
applications, *(S) Sys Mgr Essentials*, 11–13
audit log file, *(S) Security*, C–8
disabling on system consoles, *(S) Security*, 9–15
events to enable as, *(S) Security*, 9–3, 9–12
events triggering, *(S) Security*, 3–19
example of enabling events, *(S) Security*, 9–10
sample messages, *(S) Security*, 9–1, D–1
Security archive files
analyzing, *(S) Sys Mgmt Util A-L*, 4–4
losing the remote link to, *(S) Security*, 9–29
Security attacks, forms of, *(S) Security*, 1–1, 10–1
Security Audit ACEs
See Audit ACEs
Security audit data packets
fields, *(S) Sys Mgmt Util A-L*, F–6
format, *(S) Sys Mgmt Util A-L*, F–6
Security audit event flags, *(S) Sys Mgmt Util A-L*, F–6
Security audit event messages
changing disk transfer rate, *(S) Security*, 9–28
controlling delivery to server, *(S) Security*, 9–26
data packets in, *(S) Sys Mgmt Util A-L*, F–6
delaying delivery at startup, *(S) Security*, 9–25
event flags, *(S) Sys Mgmt Util A-L*, F–6
format, *(S) Sys Mgmt Util A-L*, F–1
subtypes for events, *(S) Sys Mgmt Util A-L*, F–2
types of events, *(S) Sys Mgmt Util A-L*, F–2
when to ignore, *(S) Security*, 9–17
Security audit header packets, *(S) Sys Mgmt Util A-L*, F–2
Security auditing, *(G) User*, 19–10; *(G) DCL N-Z*, DCLII–83; *(S) Security*, 3–17, 10–4; *(S) Sys Mgr Essentials*, 11–13
See also Audit server processes
account and file access, *(G) User*, 19–10
adding ACEs to files, *(G) User*, 19–12
analyzing audit log files, *(S) Security*, 9–17
archive files, *(S) Security*, 9–16
assessing site requirements, *(S) Security*, 9–10
audit server databases, *(S) Security*, 9–24
C2 system restrictions, *(S) Security*, C–8
capability objects, *(S) Security*, 5–2
cluster considerations, *(S) Security*, 11–5
common event flag clusters, *(S) Security*, 5–3
controlling event messages, *(S) Security*, 9–26
deciding when to use, *(G) User*, 19–12
default auditing events, *(S) Security*, 2–6
default characteristics, *(S) Security*, 9–24
Security auditing (cont'd)
defining log file in system startup, *(S) Sys Mgr Essentials*, 5–9
description, *(S) Sys Mgr Tuning*, 18–25
devices, *(S) Security*, 5–7
directories, *(S) Security*, 5–11
disabling auditing, *(S) Security*, 9–25
disabling events, *(S) Security*, 9–3; *(S) Sys Mgr Tuning*, 18–28
disabling resource monitoring, *(S) Security*, 9–29
displaying using SHOW AUDIT command, *(S) Sys Mgr Tuning*, 18–27
effective use, *(S) Security*, 9–17
enabling auditing, *(S) Security*, 9–25
enabling event classes, *(S) Security*, 9–3
enabling events, *(S) Security*, 9–2
enabling operator terminal, *(S) Sys Mgr Tuning*, 18–29
error handling, *(S) Security*, 9–28, 9–29
excluding processes from suspension, *(S) Security*, 9–27
files, *(S) Security*, 5–11
global sections, *(S) Security*, 5–15
granularity of events, *(S) Security*, 4–29
high security needs, *(S) Security*, 1–2, 9–11
listener devices, *(S) Security*, 9–16
logical name tables, *(S) Security*, 5–17
low security needs, *(S) Security*, 1–2, 9–10
managing the audit server, *(S) Security*, 9–23
memory limitations and, *(S) Security*, 9–27
messages, *(G) User*, 19–11; *(S) Security*, 3–18
moderate security needs, *(S) Security*, 1–2, 9–10
object class enabled, *(S) Security*, 4–29
overview, *(S) Security*, 9–1
performance impact, *(S) Security*, 9–12
queues, *(S) Security*, 5–18
reporting object access, *(S) Security*, 4–29
reporting object use, *(S) Security*, 4–5
resource domains, *(S) Security*, 5–19
security class objects, *(S) Security*, 5–20
sending event messages to archive files, *(S) Security*, 9–15, 9–16
sending event messages to mailboxes, *(S) Security*, 9–16
sending event messages to operator terminals, *(S) Security*, 9–15
server process, creation during system startup, *(S) Sys Mgr Essentials*, 5–5
synchronizing cluster time, *(S) Security*, 9–28
volumes, *(S) Security*, 5–21
Security-auditing ACEs
See also Alarm ACEs and Audit ACEs
position in ACL, *(S) Security*, 4–21

Security-auditing events, *(G) User*, 19–10; *(S) Security*, 3–19
based on security needs, *(S) Security*, 9–10
classes of, *(S) Security*, 9–7
default classes, *(S) Security*, 9–1, 9–3, 9–10
disabling all classes, *(S) Security*, 9–11
displaying, *(S) Security*, 9–3
enabling all classes, *(S) Security*, 9–11
enabling as alarms, *(S) Security*, 9–10
enabling as audits, *(S) Security*, 9–10
example, *(S) Security*, 9–3
network, *(S) Security*, 12–2
reporting, *(S) Security*, 9–3, 9–12, 9–13
sending to audit log files, *(S) Security*, 9–13
sending to listener mailboxes, *(S) Security*, 9–16
sending to operator terminals, *(S) Security*, 9–15
sending to remote archive files, *(S) Security*, 9–15
suppressing privilege audits, *(S) Security*, 9–8
suppressing process control audits, *(S) Security*, 9–8
system services for, *(S) Security*, 9–9
Security audit log files, *(G) User*, 19–11; *(S) Security*, 2–6, 3–18
See also Audit Analysis utility
advancing to next record, *(S) Sys Mgmt Util A-L*, 4–29
advantages of, *(S) Security*, 9–12
allocating disk space, *(S) Security*, 9–28
analyzing, *(S) Sys Mgmt Util A-L*, 4–4
C2 systems and, *(S) Security*, C–8
changing location, *(S) Security*, 9–14
changing message transfer rate, *(S) Security*, 9–28
characteristics, *(S) Security*, 9–13
creating, *(S) Security*, 9–13
data packet format, *(S) Sys Mgmt Util A-L*, F–6
definition, *(S) Sys Mgr Tuning*, 18–2
description, *(S) Security*, 9–13
displaying records, *(S) Sys Mgmt Util A-L*, 4–25
displaying the full record, *(S) Sys Mgmt Util A-L*, 4–9
events to report, *(S) Security*, 9–12
excluding information from reports, *(S) Sys Mgmt Util A-L*, 4–9
header packet format, *(S) Sys Mgmt Util A-L*, F–1
interactive analysis, *(S) Security*, 9–21
maintaining, *(S) Security*, 9–13
opening new input file, *(S) Sys Mgmt Util A-L*, 4–28
pre-extending, *(S) Security*, 9–29
procedures, *(S) Security*, 9–13
Security audit log files (cont'd)
resuming processing, *(S) Sys Mgmt Util A-L*, 4–25
returning to previous record, *(S) Sys Mgmt Util A-L*, 4–29
reviewing, *(S) Sys Mgr Tuning*, 18–26
selecting records by event class, *(S) Sys Mgmt Util A-L*, 4–7
selecting records by time, *(S) Sys Mgmt Util A-L*, 4–5, 4–22
selecting records from, *(S) Security*, 9–20
specifying duration of record display, *(S) Sys Mgmt Util A-L*, 4–12
writing alarm messages to, *(S) Sys Mgmt Util A-L*, 1–8
Security audit records
criteria for selecting, *(S) Sys Mgmt Util A-L*, 4–12
Security audit reports, *(S) Security*, 9–17 to 9–22; *(S) Sys Mgmt Util A-L*, 4–3 to 4–30
advancing the display, *(S) Sys Mgmt Util A-L*, 4–29
binary output, *(S) Sys Mgmt Util A-L*, 4–6
brief format, *(S) Sys Mgmt Util A-L*, 4–7
creating, *(S) Sys Mgmt Util A-L*, 4–4
directing output, *(S) Sys Mgmt Util A-L*, 4–11
displaying selection criteria, *(S) Sys Mgmt Util A-L*, 4–30
duration of record display, *(S) Sys Mgmt Util A-L*, 4–12
excluding information, *(S) Sys Mgmt Util A-L*, 4–9
full format, *(S) Sys Mgmt Util A-L*, 4–9
interrupting the display, *(S) Sys Mgmt Util A-L*, 4–25
modifying selection criteria, *(S) Sys Mgmt Util A-L*, 4–25
processing additional log files, *(S) Sys Mgmt Util A-L*, 4–28
resuming the processing, *(S) Sys Mgmt Util A-L*, 4–25
rights identifiers in, *(S) Security*, 4–5
summary of records, *(S) Sys Mgmt Util A-L*, 4–23
Security breaches, handling, *(S) Security*, 1–1, 10–6
Security characteristics
modifying for an object, *(P) Sys Svc II*, SYS2–344
retrieving for an object, *(P) Sys Svc II*, SYS2–89
Security checklists
for C2 systems, *(S) Security*, C–10
for designing a secure system, *(S) Security*, 2–9
for maintaining a secure system, *(S) Security*, 6–8
for training users, *(S) Security*, 6–5
for users, *(S) Security*, 3–21

Security class object, *(S) Security*, 5–19 to 5–20
  definition, *(S) Security*, 4–10
Security Enhancement Service software
  See SEVMS
Security event classes
  extracting audit records by, *(S) Sys Mgmt Util A-L*, 4–7
Security event messages
  extracting from log files, *(S) Sys Mgmt Util A-L*, 4–4
Security features
  access controls, *(S) Security*, 4–1, 7–1
  account duration, *(G) User*, 2–16, 2–17; *(S) Security*, 3–12, 3–13, 7–3
  auditing, *(S) Security*, 3–17, 9–1, 10–4
  automatic password generation, *(S) Security*, 3–10, 7–13
  break-in evasion, *(G) User*, 2–12
  dialup retries, *(G) User*, 2–12; *(S) Security*, 3–9
  erase-on-allocate, *(S) Security*, 8–28
  erase-on-delete, *(S) Security*, 8–28
  erasure patterns, *(S) Security*, 5–12
  highwater marking, *(S) Security*, 8–28
  intrusion detection, *(S) Security*, 3–9, 7–15
  login class restrictions, *(G) User*, 2–11; *(S) Security*, 3–8, 7–2
  password changes, *(S) Security*, 3–9
  password expiration, *(G) User*, 2–16; *(S) Security*, 3–12, 7–17
  password protection, *(S) Security*, 3–13, 7–22
  password requirements, *(S) Security*, 3–4, 7–19
  password restrictions, *(S) Security*, 3–2, 7–13
  passwords, *(S) Security*, 7–13 to 7–23
  protected subsystems, *(S) Security*, 13–1
  proxy accounts, *(S) Security*, 12–10
  proxy logins, *(S) Security*, 3–15, 12–4
  secondary passwords, *(S) Security*, 3–4, 3–11
  secure terminal servers, *(G) User*, 2–18; *(S) Security*, 3–14, 7–25
  security alarms, *(G) User*, 19–10; *(S) Security*, 3–18
  shift restrictions, *(G) User*, 2–12; *(S) Security*, 3–8
  system passwords, *(S) Security*, 3–3, 3–8
Security kernel, definition, *(S) Security*, 2–2
Security levels, *(S) Security*, 1–4
  event monitoring and, *(S) Security*, 9–10
  high, *(S) Security*, 1–2, 3–17
  low, *(S) Security*, 1–2, 3–17
  medium, *(S) Security*, 1–2
Security management, *(S) Security*, 6–1; *(S) Sys Mgr Essentials*, 6–16
  See also Access control, Password management, and Protection
  cluster group number and password, *(S) VMScluster Sys*, 2–14
Security management (cont'd)
  controlling conversational bootstrap operations, *(S) VMScluster Sys*, 8–10
  for clusters, *(S) Security*, 11–2, 11–3
  in SYSMAN on remote nodes, *(S) Sys Mgr Essentials*, 2–16
  managing audit log file, *(S) Security*, 11–5
  membership integrity, *(S) VMScluster Sys*, 5–10
  modifying cluster group number, *(S) Security*, 11–7; *(S) VMScluster Sys*, 10–16
  modifying cluster password, *(S) Security*, 11–7; *(S) VMScluster Sys*, 10–16
  network, *(S) VMScluster Sys*, 5–17
  overview, *(S) VMScluster Sys*, 10–15
  policy development, *(S) Security*, 1–2, 6–1, 10–1
  protected objects, cluster-visible, *(S) Security*, 11–6
  protected objects, databases, *(S) Security*, 11–6
  protecting queues, *(S) Sys Mgr Essentials*, 13–22 to 13–26
  synchronizing authorization data, *(S) Security*, 11–4
  VMS$OBJECTS database, *(S) VMScluster Sys*, 5–16
Security objects
  classes, *(S) Sys Mgmt Util A-L*, 1–4
Security operators
  sending alarm messages to audit log files, *(S) Sys Mgmt Util A-L*, 1–8
  sending alarm messages to terminals, *(S) Sys Mgmt Util A-L*, 1–6
Security operator terminals, *(S) Security*, 9–15; *(S) Sys Mgr Tuning*, 18–29
SECURITY privilege, *(S) Security*, A–15; *(S) DECnet Mgmt*, 5–1
  hidden ACEs and, *(S) Security*, 4–21
Security problems
  anonymity of network and dialup users, *(S) Security*, 7–3
  autologin accounts, reducing, *(S) Security*, 7–11
  categories of, *(S) Security*, 1–1
  disk scavenging, *(S) Security*, 5–12
  hardcopy terminal output, *(S) Security*, 3–20
  logging out, *(S) Security*, 3–19
  network access control strings, *(S) Security*, 3–14
  password detection, *(S) Security*, 3–11
  telephone system as, *(S) Security*, 10–7
Security profiles
  assigning to new devices, *(S) Security*, 5–6
  capability object, *(S) Security*, 5–2
  changing objects, *(G) User*, 19–3
  common event flag clusters, *(S) Security*, 5–3
  devices, *(S) Security*, 5–6
  displaying, *(P) Concepts*, 23–20
  displaying class defaults, *(S) Security*, 8–23

Security profiles (cont'd)
displaying objects, *(G) User*, 19–3
displaying processes, *(G) User*, 19–2
displaying users, *(G) User*, 19–2
files, *(S) Security*, 4–27, 5–8, 5–9
global sections, *(S) Security*, 5–15
in access evaluations, *(S) Security*, 4–11
logical name tables, *(S) Security*, 5–16
modification requirements, *(S) Security*, 4–11, 4–28
modifying, *(P) Concepts*, 23–21
objects, *(G) User*, 19–3; *(S) Security*, 4–6
ACLs, *(S) Security*, 4–8
changing, *(S) Security*, 4–9
contents, *(S) Security*, 4–7
deleting ACLs, *(S) Security*, 4–22
displaying, *(S) Security*, 4–9
modifying class templates, *(S) Security*, 8–24
origin of, *(S) Security*, 4–7
owner element, *(S) Security*, 4–7
protection codes, *(S) Security*, 4–7, 4–24
processes, *(S) Security*, 4–1
displaying, *(G) User*, 19–2; *(S) Security*, 4–4
identifiers, *(S) Security*, 4–3
privileges, *(S) Security*, 4–5
UICs, *(S) Security*, 4–2
queues, *(S) Security*, 5–17
resource domains, *(S) Security*, 5–19
security class, *(S) Security*, 5–20
users, *(S) Security*, 4–1
displaying, *(G) User*, 19–2; *(S) Security*, 4–4
identifiers, *(S) Security*, 4–3
privileges, *(S) Security*, 4–5
UICs, *(S) Security*, 4–2, 4–3
volumes, *(S) Security*, 5–21
Security restrictions
captive command procedures, *(S) Security*, 7–9
login class, *(G) User*, 2–11; *(S) Security*, 3–8
on command usage, *(S) Security*, 8–27
on mode of operation, *(S) Security*, 7–3
shift, *(G) User*, 2–12
shifts, *(S) Security*, 3–8, 7–2
time-of-day, *(G) User*, 2–12; *(S) Security*, 3–8, 7–2
Security server
starting, *(S) Sys Mgr Essentials*, 5–5
Security Server process, *(S) Security*, 7–31
intrusion database, *(S) Sys Mgr Essentials*, 11–7
network proxy database, *(S) Sys Mgr Essentials*, 11–7
Security triplet, *(S) DECamds*, 1–5 to 1–7, Glossary–2
Security using Kerberos, *(S) TCP/IP*, 3–3
SECURITY_AUDIT.AUDIT$JOURNAL file
moving to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
SECURITY_POLICY system parameter, *(S) Security*, 11–6, C–10
SECURITY_SERVER
starting, *(S) Sys Mgr Essentials*, 5–5
Seek operation, *(P) I/O User*, 2–13
Seek time, *(P) File Appl*, 1–10
Segmented keys, *(P) RMS Ref*, 12–12; *(P) Rec Mgmt Util*, 4–29; *(P) File Appl*, 2–20
restriction against overlapping, *(P) RMS Ref*, 12–12
SEG*n* secondary attribute
ordering within KEY section, *(P) Rec Mgmt Util*, 6–1
SEGn_LENGTH attribute, *(P) Rec Mgmt Util*, 4–29
SEGn_POSITION attribute, *(P) Rec Mgmt Util*, 4–29
SELECT command, *(P) Debugger*, 11–19, CD–151
in Mail, *(G) User*, 6–4, 6–13
in SHOW CLUSTER, *(S) Sys Mgr Tuning*, 20–13
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–50
Selecting a systems integrator, *(S) Dependable*, 3–11
Selective dump, *(S) Sys Mgr Tuning*, 15–3
Selective searches
specifying the /SELECTIVE_SEARCH qualifier, *(P) Linker*, LINK–28
/SELECTIVE_SEARCH qualifier, *(P) Linker*, 2–14
/SELECT qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–59
Self-relative queue
validating, *(P) Alpha SDA*, SDA–160; *(P) VAX SDA*, SDA–185
/SELF_RELATIVE qualifier, *(P) Alpha SDA*, SDA–160; *(P) VAX SDA*, SDA–185
Semantic events, *(P) Debugger*, 13–5
Semantics tags
See File tags
/SEMANTIC_EVENT qualifier, *(P) Debugger*, CD–300
Semaphores, *(S) Alpha Perform*, 2–1; *(P) Concepts*, 14–28
See also Synchronization
Semicolons (;)
used as command separator, *(P) Debugger*, CD–4
used as comment delimiters or statement terminators, *(P) Rec Mgmt Util*, 6–1
used as delimiter, *(P) Util Routines*, FDL–2

SEND command
in Mail, *(G) User*, 6–5, 6–8
/EDIT qualifier, *(G) User*, 6–18
Sending a signal, *(P) DECthreads*, tis–25
Sending data, *(P) Calling Std*, 3–52
Alpha mechanisms, *(P) Calling Std*, 3–52
argument order evaluation, *(P) Calling Std*, 3–53
Sending files
in Mail, *(G) User*, 6–8
Sense tape mode function, *(P) I/O User*, 3–18
Separation of job controller and queue manager, *(S) VMScluster Sys*, 7–1
Separators
in symbolic name, *(P) RMS Ref*, 2–2
SEQ (file sequence number)
See File identification
Sequence number
thread, *(P) DECthreads*, pthread–70
Sequence numbers
for datagram flags, *(S) VMScluster Sys*, F–26
Sequence tests, *(S) DECnet Mgmt Util*, 4–7, 4–12
Sequential access, *(P) File Appl*, 1–2, 8–6
to indexed files, *(P) File Appl*, 2–5, 8–12
to relative files, *(P) File Appl*, 2–3, 8–8
use with sequential files, *(P) File Appl*, 2–3, 8–7
with multibuffer count, *(P) File Appl*, 3–27
SEQUENTIAL attribute, *(P) Rec Mgmt Util*, 4–21
Sequential cell search in relative files, *(P) File Appl*, 2–3
Sequential-disk save set, *(S) Sys Mgr Essentials*, 10–7
Sequential files, *(P) Rec Mgmt Util*, 4–24; *(P) File Appl*, 2–15
advantages of using, *(P) File Appl*, 2–16
allocating, *(P) File Appl*, A–1
buffering, *(P) File Appl*, 7–17
creating, *(P) Concepts*, 8–12
creating over the network, *(S) DECnet Intro*, 2–7
designing, *(P) File Appl*, 3–13 to 3–15
disadvantages of using, *(P) File Appl*, 2–16
examining, *(P) File Appl*, 10–11, 10–12
maximum record size, *(P) File Appl*, 3–13
optimizing performance, *(P) File Appl*, 3–13 to 3–15
read-ahead and write-behind, *(P) File Appl*, 3–13
record access, *(P) File Appl*, 8–7, 8–14
structure, *(P) Rec Mgmt Util*, 1–1
tuning, *(P) File Appl*, 3–13 to 3–15
updating, *(P) Concepts*, 8–13
/SEQUENTIAL qualifier, *(P) File Appl*, 7–17
SEQUENTIAL_ONLY attribute, *(P) Rec Mgmt Util*, 4–23
Serial line multiplexer, *(P) I/O User*, 5–1
Server, *(S) TCP/IP*, 1–2
Server module counters, *(S) DECnet Mgmt Util*, 3–163, B–14
Server queues, *(G) DCL A-M*, DCLI–265; *(S) Sys Mgr Essentials*, 13–3
Server queue status, *(S) Sys Mgr Essentials*, 13–51
Servers, *(G) SW Overview*, 2–7, 6–17; *(P) Environment*, 3–2; *(P) DECthreads*, 1–1
actions during booting, *(S) VMScluster Sys*, 3–7
audit, *(S) Security*, 9–23
configuration memory and LAN adapters, *(S) VMScluster Sys*, 9–5
DCE Cell Directory, *(P) Environment*, 3–6
DCE Security, *(P) Environment*, 3–6
disk, *(G) SW Overview*, 6–21
enabling circuit service for MOP, *(S) VMScluster Sys*, 4–7
file, *(G) SW Overview*, 6–21
mail, *(G) SW Overview*, 6–21
MOP and disk, *(S) VMScluster Sys*, 8–4
MSCP, *(S) Sys Mgmt Util M-Z*, 5–14; *(S) VMScluster Sys*, 6–24
OpenVMS, *(G) SW Overview*, 1–2
OpenVMS distributed production, *(G) SW Overview*, 7–2
other vendor, *(G) SW Overview*, 7–2
PATHWORKS, *(G) SW Overview*, 6–18
print, *(G) SW Overview*, 6–21
secure terminal, *(S) Security*, 3–14
secure terminals, *(G) User*, 2–18
Security, *(S) Security*, 7–31
terminal, *(G) SW Overview*, 6–8; *(S) DECnet Intro*, 1–7
TMSCP, *(S) VMScluster Sys*, 1–4, 2–18
transaction processing, *(G) SW Overview*, 6–22
used for downline load, *(S) VMScluster Sys*, 3–6
VMScluster, *(G) SW Overview*, 6–17; *(P) Environment*, 3–3
Service and maintenance arrangements, *(S) Dependable*, 3–11
Service macros
for creating and processing files, *(P) RMS Ref*, 3–1
Service node, *(S) Sys Mgmt Util A-L*, 13–3
controlling access to, *(S) Sys Mgmt Util A-L*, 13–29, 13–33
deleting a port, *(S) Sys Mgmt Util A-L*, 13–20
modifying characteristics of, *(S) Sys Mgmt Util A-L*, 13–27, 13–39
naming, *(S) Sys Mgmt Util A-L*, 13–37
service announcements, *(S) Sys Mgmt Util A-L*, 13–30

Service operations, *(S) DECnet Mgmt*, 3–29
circuit identification for downline load, *(S) DECnet Mgmt*, 4–10
password for downline load, *(S) DECnet Mgmt*, 4–11
system privileges for, *(S) DECnet Mgmt*, 4–11
timer, *(S) DECnet Mgmt*, 3–43
Service routines
AST, *(P) Concepts*, 4–6
Services
application, *(S) Sys Mgmt Util A-L*, 13–10, 13–14, 13–16, 13–36, 13–39
bindings, *(S) Sys Mgr Tuning*, 23–13
creating with LATCP, *(S) Sys Mgmt Util A-L*, 13–14
database, *(S) Sys Mgmt Util A-L*, 13–30, 13–33
deleting with LATCP, *(S) Sys Mgmt Util A-L*, 13–21
displaying characteristics of, *(S) Sys Mgmt Util A-L*, 13–58
displaying counters, *(S) Sys Mgmt Util A-L*, 13–57
displaying information using LATCP, *(S) Sys Mgmt Util A-L*, 13–57
general timesharing, *(S) Sys Mgmt Util A-L*, 13–16
identifier, *(S) Sys Mgmt Util A-L*, 13–14, 13–30, 13–39
limiting size of node database, *(S) Sys Mgmt Util A-L*, 13–30, 13–33
modifying characteristics of, *(S) Sys Mgmt Util A-L*, 13–39
naming with LATCP, *(S) Sys Mgmt Util A-L*, 13–14, 13–26
nodes, *(S) Sys Mgr Tuning*, 24–4
password protection, *(S) Sys Mgr Tuning*, 23–13
rating, *(S) Sys Mgmt Util A-L*, 13–15, 13–40, 13–51, 13–58
responder, *(S) Sys Mgmt Util A-L*, 13–31
target, *(S) Sys Mgmt Util A-L*, 13–54
write protection, *(S) Sys Mgr Tuning*, 23–13
Serving corporate data to local personal computers, *(S) Dependable*, 3–5
Session Control layer events, *(S) DECnet Mgmt Util*, D–4
Session limit, *(S) Sys Mgmt Util A-L*, 13–31
Sessions
maintaining on more than one terminal, *(S) Sys Mgr Essentials*, 7–11
maintaining when disconnecting a terminal, *(S) Sys Mgr Essentials*, 7–11
terminating, *(S) Sys Mgmt Util A-L*, 3–6
SET (Field) command
SHOW CLUSTER, *(S) Sys Mgr Tuning*, 20–11
SET ABORT_KEY command, *(P) Debugger*, 5–12, CD–155
SET ACCOUNTING command, *(G) DCL N-Z*, DCLII–80 to DCLII–82; *(S) Sys Mgr Tuning*, 19–3
SET ACL command
for vector capability (VAX), *(S) Sys Mgr Tuning*, 26–8
modifying disk file characteristics, *(S) Sys Mgr Essentials*, 9–8
modifying file characteristics, *(S) Sys Mgr Essentials*, 9–9
SET ACP command
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–21
SET ALLOCATE command, *(S) VMScluster Sys*, 6–9
SET ATSIGN command, *(P) Debugger*, 12–2, CD–157
Set attention AST
See Attention AST
SET AUDIT command, *(G) DCL N-Z*, DCLII–83 to DCLII–95; *(S) VMScluster Sys*, 5–12
creating new version of security audit log file, *(S) Sys Mgr Tuning*, 18–30
on local node only, *(S) Sys Mgr Tuning*, 18–30
enabling security alarms, *(S) Sys Mgr Tuning*, 18–29
enabling security-relevant events, *(S) Security*, 9–2
/EXCLUDE qualifier, *(S) Security*, 9–27
/LISTENER qualifier, *(S) Security*, 9–16
opening new log files, *(S) Security*, 9–13
/SERVER qualifier, *(S) Security*, 9–27
/THRESHOLD qualifier, *(S) Security*, 9–28
to create new version of security audit log file, *(S) Sys Mgr Tuning*, 18–30
to enable security auditing, *(S) Sys Mgr Tuning*, 18–25
SET AUTO_POSITIONING command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–51
SET BREAK command, *(P) Debugger*, 7–4, 10–7, 13–19, 15–3, 16–25, 16–29, CD–158
SET BREAK/UNALIGNED_DATA command and system service routine, *(P) Debugger*, CD–164
SET BROADCAST command, *(G) DCL N-Z*, DCLII–96 to DCLII–97
SET CARD_READER command, *(G) DCL N-Z*, DCLII–98
SET CIRCUIT ALL command, *(S) DECnet Mgmt Util*, 3–56
SET CIRCUIT command, *(S) DECnet Mgmt Util*, 3–57
polling control parameters, *(S) DECnet Mgmt*, 3–31

SET CLUSTER/EXPECTED_VOTES command, *(G) DCL N-Z*, DCLII–99 to DCLII–100
SET command, *(G) DCL N-Z*, DCLII–77 to DCLII–79
establishing volatile network database, *(S) DECnet Intro*, 3–10, 3–33
(Field), *(S) Sys Mgmt Util M-Z*, 4–52
in conversational boot, *(S) Sys Mgr Essentials*, 4–6
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–15
NCP, *(S) Sys Mgr Tuning*, 21–11
SET COMMAND command, *(G) DCL N-Z*, DCLII–101 to DCLII–103; *(P) CDU, LBR, & MU*, CDU–19
See also Command Definition utility (CDU)
/ALPHA qualifier, *(P) CDU, LBR, & MU*, CDU–40
delete mode, *(P) CDU, LBR, & MU*, CDU–16
/DELETE qualifier, *(P) CDU, LBR, & MU*, CDU–41
input for, *(P) CDU, LBR, & MU*, CDU–46
/LISTING qualifier, *(P) CDU, LBR, & MU*, CDU–42
object mode, *(P) CDU, LBR, & MU*, CDU–16
/OBJECT qualifier, *(P) CDU, LBR, & MU*, CDU–43
/OUTPUT qualifier, *(P) CDU, LBR, & MU*, CDU–44
processing modes, *(P) CDU, LBR, & MU*, CDU–15
qualifiers for, *(P) CDU, LBR, & MU*, CDU–39
replace mode, *(P) CDU, LBR, & MU*, CDU–16
/REPLACE qualifier, *(P) CDU, LBR, & MU*, CDU–45
/TABLE qualifier, *(P) CDU, LBR, & MU*, CDU–46
/VAX qualifier, *(P) CDU, LBR, & MU*, CDU–47
SET CONTROL=T command, *(G) User*, 2–21
SET CONTROL command, *(G) DCL N-Z*, DCLII–104 to DCLII–105
SET CPU command, *(P) Alpha SDA*, SDA–11, SDA–68; *(P) VAX SDA*, SDA–14, SDA–72
analyzing a running system, *(P) Alpha SDA*, SDA–10; *(P) VAX SDA*, SDA–11
SET DAY command, *(G) DCL N-Z*, DCLII–106
SET DEFAULT command, *(G) DCL N-Z*, DCLII–107 to DCLII–108; *(S) Sys Mgmt Util M-Z*, 1–60; *(P) File Appl*, 6–13
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–60
setting a default device with, *(G) User*, 5–6
setting a default directory with, *(G) User*, 5–5
/TRANSLATION_ATTRIBUTES qualifier, *(P) File Appl*, 6–14
SET DEFINE command, *(P) Debugger*, 12–6, CD–167
SET DEVICE command, *(G) DCL N-Z*, DCLII–109 to DCLII–110
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–22, 12–26
spooling printers, *(S) Sys Mgr Essentials*, 7–14
SET DEVICE/SERVED command, *(G) DCL N-Z*, DCLII–111
SET DIRECTORY command, *(G) DCL N-Z*, DCLII–112 to DCLII–114
changing directory characteristics, *(S) Sys Mgr Essentials*, 9–12
limiting disk space consumed, *(S) Sys Mgr Essentials*, 8–8
modifying disk file characteristics, *(S) Sys Mgr Essentials*, 9–8
SET DISPLAY command, *(G) DCL N-Z*, DCLII–115 to DCLII–120
SET EDITOR command, *(P) Environment*, 9–5; *(P) Debugger*, 5–4, CD–168
in Mail, *(G) User*, 6–18
SET ENTRY command, *(G) User*, 18–16; *(G) DCL N-Z*, DCLII–121 to DCLII–130; *(S) Sys Mgr Essentials*, 13–70
changing forms, *(S) Sys Mgr Essentials*, 13–80
changing scheduling priority, *(S) Sys Mgr Essentials*, 13–72
holding jobs, *(S) Sys Mgr Essentials*, 13–71
qualifiers to, *(G) User*, 18–16
releasing jobs, *(S) Sys Mgr Essentials*, 13–71
requeuing pending jobs, *(S) Sys Mgr Essentials*, 13–73
specifying job retention, *(S) Sys Mgr Essentials*, 13–74
SET ENVIRONMENT command, *(S) Sys Mgr Essentials*, 2–14
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–52
SET EVENT_FACILITY command, *(P) Debugger*, 16–30, CD–170
SET EXECUTOR ALL command, *(S) DECnet Mgmt Util*, 3–63
SET EXECUTOR command, *(S) DECnet Intro*, 3–36; *(S) DECnet Mgmt Util*, 3–64
DEFAULT ACCESS parameter, *(S) DECnet Mgmt*, 2–34
INCOMING PROXY parameter, *(S) DECnet Mgmt*, 2–35
local node address, *(S) DECnet Mgmt*, 3–8
OUTGOING PROXY parameter, *(S) DECnet Mgmt*, 2–35
SET EXECUTOR NODE command, *(S) DECnet Mgmt*, 3–6; *(S) DECnet Mgmt Util*, 3–73
access control information, *(S) DECnet Mgmt*, 3–69
SET FETCH
SDA command, *(G) V7.0 New Feat*, 3–23

SET FILE command, *(G) DCL N-Z*, DCLII–131 to DCLII–137
/ACL qualifier, *(P) File Appl*, 4–27
example, *(S) Sys Mgr Essentials*, 6–33
for changing global buffer count value, *(P) RMS Ref*, 4–19
for storing journaling attributes, *(P) RMS Ref*, 4–20
/GLOBAL_BUFFERS qualifier, *(P) File Appl*, 3–12, 7–20
modifying disk file characteristics, *(S) Sys Mgr Essentials*, 9–8
using to assign an alias, *(S) Sys Mgr Essentials*, 9–10
using to modify file characteristics, *(S) Sys Mgr Essentials*, 9–10
SET FILE/EXTENSION=n command, *(P) File Appl*, 3–7
SET FILE/SEMANTICS command
example of tagging file, *(P) File Appl*, 4–19
SET FILE/STATISTICS command, *(P) File Appl*, 3–29
SET FOLDER command, *(G) User*, 6–13
SET FUNCTION command, *(S) Sys Mgr Tuning*, 20–7; *(S) Sys Mgmt Util M-Z*, B–3
in SHOW CLUSTER, *(S) Sys Mgr Tuning*, 20–13
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–53
SET HOST command, *(G) User*, 2–9; *(G) DCL N-Z*, DCLII–138 to DCLII–140; *(G) SW Overview*, 5–2; *(S) Security*, 3–5; *(S) Sys Mgr Tuning*, 21–13
and network security, *(S) DECnet Intro*, 3–34
command terminal, *(S) DECnet Mgmt*, 8–2
heterogeneous command terminal, *(S) DECnet Mgmt*, 1–18
in network operations, *(S) DECnet Intro*, 2–2
to access remote node, *(S) DECnet Intro*, 3–3
SET HOST/DTE command, *(G) DCL N-Z*, DCLII–141
in network operations, *(S) DECnet Intro*, 3–26
SET HOST/DUP command, *(G) DCL N-Z*, DCLII–148, DCLII–149
SET HOST facility, *(P) I/O User*, 5–11
SET HOST/HSC command, *(G) DCL N-Z*, DCLII–150, DCLII–151
SET HOST/LAT command, *(G) DCL N-Z*, DCLII–152 to DCLII–156; *(S) Sys Mgr Tuning*, 24–2
/FRAME qualifier, *(G) V7.0 New Feat*, 3–12
SET HOST/RLOGIN command, *(G) DCL N-Z*, DCLII–157 to DCLII–158; *(S) TCP/IP*, 3–3, 5–1, 5–2
SET HOST/TELNET command, *(G) DCL N-Z*, DCLII–159; *(S) TCP/IP*, 3–2, 5–1, 5–3
SET HOST/TN3270 command, *(G) DCL N-Z*, DCLII–160; *(S) TCP/IP*, 3–2, 5–1, 5–4
SET IMAGE command, *(P) Debugger*, 9–14, CD–172
effect on symbol definitions, *(P) Debugger*, CD–63
SET INTERVAL command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–54
SET KEY command, *(G) DCL N-Z*, DCLII–161; *(P) Debugger*, 12–9, CD–174
SET KNOWN NODES command, *(S) DECnet Intro*, 3–18
SET KNOWN PROXIES ALL command, *(S) DECnet Mgmt*, 3–72; *(S) DECnet Mgmt Util*, 3–75
SET LANGUAGE command, *(P) Debugger*, 8–10, CD–175
SET LINE ALL command, *(S) DECnet Mgmt Util*, 3–76
SET LINE command, *(S) DECnet Mgmt Util*, 3–77
SET LINK command
in LATCP, *(S) Sys Mgmt Util A-L*, 13–26
SET LOG command, *(P) Debugger*, 12–5, CD–177; *(P) Alpha SDA*, SDA–70; *(P) VAX SDA*, SDA–75
compared with SET OUTPUT command, *(P) Alpha SDA*, SDA–70; *(P) VAX SDA*, SDA–75
SET LOGGING ALL command, *(S) DECnet Mgmt Util*, 3–85
SET LOGGING command, *(S) DECnet Mgmt*, 3–72
to set logging sink state, *(S) DECnet Intro*, 4–5
SET LOGGING EVENTS command, *(S) DECnet Mgmt*, 3–62; *(S) DECnet Mgmt Util*, 3–86
SET LOGGING STATE command, *(S) DECnet Mgmt*, 3–62; *(S) DECnet Mgmt Util*, 3–88
SET LOGINS command, *(G) DCL N-Z*, DCLII–162; *(S) Sys Mgr Tuning*, 16–4; *(S) VMScluster Sys*, 4–7
SET MAGTAPE command, *(G) DCL N-Z*, DCLII–163, DCLII–164; *(S) Sys Mgr Essentials*, 7–16, 8–42
SET MAGTAPE/RETENSION command, *(G) DCL N-Z*, DCLII–163
SET MARGINS command, *(P) Debugger*, 10–8, CD–178
SET MESSAGE command, *(G) DCL N-Z*, DCLII–165, DCLII–166
used to access uninstalled messages, *(G) Help Msg*, 2–7
using, *(P) CDU, LBR, & MU*, MSG–8
Set Mode
Set Mac qualifier, *(P) I/O User*, 9–43

SET MODE command, *(P) Debugger*, CD–181
Set modes
magnetic tape, *(P) I/O User*, 3–19
mailbox, *(P) I/O User*, 4–11
terminal, *(P) I/O User*, 5–40
SET MODE [NO]DYNAMIC command, *(P) Debugger*, 9–6, 9–13, CD–181
SET MODE [NO]G_FLOAT command, *(P) Debugger*, CD–181
SET MODE [NO]INTERRUPT command, *(P) Debugger*, 14–6, CD–182
SET MODE [NO]KEYPAD command, *(P) Debugger*, 12–8, CD–182, A–1
SET MODE [NO]LINE command, *(P) Debugger*, CD–183
SET MODE [NO]OPERANDS command, *(P) Debugger*, 8–19, CD–183
SET MODE [NO]SCREEN command, *(P) Debugger*, 11–1, CD–184
SET MODE [NO]SCROLL command, *(P) Debugger*, CD–184
SET MODE [NO]SEPARATE command, *(P) Debugger*, 2–9, 13–13, CD–185
SET MODE [NO]SYMBOLIC command, *(P) Debugger*, 8–13, CD–185
SET MODULE command, *(P) Debugger*, 9–6, 9–15, CD–187
SET MODULE CONFIGURATOR command, *(S) DECnet Intro*, 4–6; *(S) DECnet Mgmt Util*, 3–90
STATUS display, *(S) DECnet Mgmt*, 3–35
SET MODULE X25-ACCESS command, *(S) DECnet Mgmt Util*, 3–92
SET MODULE X25-PROTOCOL command, *(S) DECnet Mgmt Util*, 3–94
SET MODULE X25-SERVER command, *(S) DECnet Mgmt Util*, 3–100
SET MODULE X29-SERVER command, *(S) DECnet Mgmt Util*, 3–100
SET NOCONTROL=Y command
disabling Ctrl/Y, *(G) User*, 15–40
SET NODE ALL command, *(S) DECnet Mgmt Util*, 3–105
SET NODE CIRCUIT command, *(S) DECnet Mgmt Util*, 3–111
SET NODE command, *(S) DECnet Mgmt*, 7–4; *(S) DECnet Mgmt Util*, 3–106
ACCESS parameter, *(S) DECnet Mgmt*, 2–34
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–28
in LATCP, *(S) Sys Mgmt Util A-L*, 13–27
remote node name and address, *(S) DECnet Mgmt*, 3–8
SET NOLOG command, *(P) Alpha SDA*, SDA–70; *(P) VAX SDA*, SDA–75
SET NOON command
in command procedures, *(G) User*, 15–33
with command levels, *(G) User*, 15–34
SET OBJECT ALL command, *(S) DECnet Mgmt Util*, 3–112
SET OBJECT command, *(S) DECnet Intro*, 3–36; *(S) DECnet Mgmt Util*, 3–113
PROXY parameter, *(S) DECnet Mgmt*, 2–36
SET ON command, *(G) DCL N-Z*, DCLII–167
with command levels, *(G) User*, 15–34
SET OUTPUT command, *(P) Debugger*, CD–190; *(P) Alpha SDA*, SDA–71; *(P) VAX SDA*, SDA–76
compared with SET LOG command, *(P) Alpha SDA*, SDA–70; *(P) VAX SDA*, SDA–75
SET/OUTPUT command
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–16
SET OUTPUT [NO]LOG command, *(P) Debugger*, 12–5, CD–190
SET OUTPUT [NO]SCREEN_LOG command, *(P) Debugger*, 12–6, CD–190
SET OUTPUT [NO]TERMINAL command, *(P) Debugger*, CD–190
SET OUTPUT [NO]VERIFY command, *(P) Debugger*, 12–2, CD–190
SET OUTPUT_RATE command, *(G) User*, 18–14; *(G) DCL N-Z*, DCLII–168
SETPARAMS.DAT file, *(S) Sys Mgr Tuning*, 14–18; *(S) Sys Mgmt Util A-L*, 6–7
SETPARAMS phase of AUTOGEN, *(S) Sys Mgmt Util A-L*, 6–7
SET PASSWORD command, *(G) User*, 2–13; *(G) DCL N-Z*, DCLII–169 to DCLII–171; *(S) Security*, 3–9, 3–10
automatic password generation, *(G) User*, 2–14
SET PORT command
in LATCP, *(S) Sys Mgmt Util A-L*, 13–35
SET PREFIX command, *(G) User*, 18–14; *(G) DCL N-Z*, DCLII–172, DCLII–173
SET PRINTER command, *(G) DCL N-Z*, DCLII–174 to DCLII–176; *(S) Sys Mgr Essentials*, 7–13, 13–14
in system startup, *(S) Sys Mgr Essentials*, 5–12
SET PROCESS command, *(G) DCL N-Z*, DCLII–177 to DCLII–180; *(P) Debugger*, 14–7, 14–8, CD–192; *(P) Alpha SDA*, SDA–10, SDA–72; *(P) VAX SDA*, SDA–12, SDA–77
/NAME qualifier, *(G) User*, 18–3
SET PROCESS/PRIVILEGES command, *(S) DECnet Intro*, 3–7
SET PROFILE command
in SYSMAN, *(S) Sys Mgr Essentials*, 2–17; *(S) Sys Mgmt Util M-Z*, 6–54
SET PROMPT command, *(G) DCL N-Z*, DCLII–181; *(P) Debugger*, 5–13, CD–196
multiprocess program, *(P) Debugger*, 14–2
SET PROTECTION command, *(P) File Appl*, 4–26
/DEFAULT qualifier, *(G) User*, 19–5
for network file security, *(S) DECnet Intro*, 3–35

SET PROTECTION/DEFAULT command, *(G) DCL N-Z*, DCLII–182
$SETPRT_64 system service
description, *(P) Sys Svc II*, SYS2–312
SETPRV privilege, *(S) Security*, A–15
SET QUEUE command, *(G) DCL N-Z*, DCLII–183 to DCLII–190; *(S) Sys Mgr Essentials*, 13–53
assigning a default form, *(S) Sys Mgr Essentials*, 13–63
assigning characteristics, *(S) Sys Mgr Essentials*, 13–59, 13–81
canceling characteristics, *(S) Sys Mgr Essentials*, 13–59
controlling page overflow, *(S) Sys Mgr Essentials*, 13–44
/ENTRY qualifier, *(G) User*, 18–16
in Mail, *(G) User*, 6–16
mounting a form, *(S) Sys Mgr Essentials*, 13–64
qualifiers to, *(G) User*, 18–16
setting block limits, *(S) Sys Mgr Essentials*, 13–32
setting scheduling policy, *(S) Sys Mgr Essentials*, 13–32
setting UIC-based protection on queues, *(S) Sys Mgr Essentials*, 13–23
specifying banner pages, *(S) Sys Mgr Essentials*, 13–60
specifying job processing options, *(S) Sys Mgr Essentials*, 13–31
specifying queue options with, *(S) Sys Mgr Essentials*, 13–19
specifying reset modules, *(S) Sys Mgr Essentials*, 13–65
SET QUORUM command
avoiding use of /CLUSTER with SYSMAN DO command, *(S) Sys Mgr Tuning*, 20–21; *(S) Sys Mgmt Util M-Z*, 6–31
SET RADIX command, *(P) Debugger*, 8–10, 13–16, CD–199
SET RESTART_VALUE command, *(G) DCL N-Z*, DCLII–191 to DCLII–192
SET RIGHTS_LIST command, *(G) DCL N-Z*, DCLII–193 to DCLII–195
attributes, *(G) DCL N-Z*, DCLII–193
SET RMS command, *(P) Alpha SDA*, SDA–75; *(P) VAX SDA*, SDA–80
SET RMS_DEFAULT command, *(G) DCL N-Z*, DCLII–196 to DCLII–199; *(P) RMS Ref*, 6–7; *(P) File Appl*, 3–15
/BUFFER_COUNT qualifier, *(P) File Appl*, 3–11, 3–14, 3–16, 7–17, 7–18, 7–19
/EXTEND_QUANTITY qualifier, *(P) File Appl*, 9–7
/INDEXED qualifier, *(P) File Appl*, 7–19
/RELATIVE/BUFFER_COUNT qualifier, *(P) File Appl*, 3–17
/RELATIVE qualifier, *(P) File Appl*, 7–18
SET RMS_DEFAULT command (cont'd)
/SEQUENTIAL qualifier, *(P) File Appl*, 7–17
to limit default extension quantity, *(P) RMS Ref*, 4–7
SET SCOPE command, *(P) Debugger*, 9–10, 10–4, 11–6, 11–9, 11–11, CD–201
SET SCREEN command
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–54
SET SEARCH command, *(P) Debugger*, 10–6, CD–205
SET SECURITY command, *(G) DCL N-Z*, DCLII–200 to DCLII–207
/ACL qualifier, *(G) User*, 19–6; *(S) Security*, 4–21
adding Identifier ACEs, *(S) Security*, 4–17
deleting, *(S) Security*, 4–22
deleting ACEs, *(S) Security*, 4–22
replacing ACEs, *(S) Security*, 4–22
/AFTER qualifier, *(S) Security*, 4–22
changing object security profile, *(G) User*, 19–3; *(S) Security*, 4–9
changing protection codes, *(S) Security*, 4–26
/CLASS qualifier, *(S) Security*, 4–9, 4–18
copying ACLs, *(S) Security*, 4–23
/COPY_ATTRIBUTE qualifier, *(S) Security*, 4–23
/DEFAULT qualifier, *(S) Security*, 4–23
/DELETE qualifier, *(S) Security*, 4–22
deleting ACEs, *(S) Security*, 4–22
for queues, *(S) Sys Mgr Essentials*, 13–23
/LIKE qualifier, *(S) Security*, 4–23
managing site defaults, *(S) Security*, 8–22
modifying file characteristics, *(S) Sys Mgr Essentials*, 9–9
/OWNER qualifier, *(S) Security*, 4–9
/PROTECTION qualifier, *(G) User*, 19–3, 19–6; *(S) Security*, 4–9, 4–25
modifying codes, *(S) Security*, 4–26
modifying for devices, *(S) Security*, 8–31
/REPLACE qualifier, *(S) Security*, 4–22
SET SECURITY/PROTECTION command, *(S) Sys Mgr Essentials*, 9–9
changing directory protection, *(S) Sys Mgr Essentials*, 9–12
setting default protection, *(S) Sys Mgr Essentials*, 9–8
SET SERVICE command
in LATCP, *(S) Sys Mgmt Util A-L*, 13–39
SET SOURCE command, *(P) Debugger*, 10–2, CD–207
with concealed rooted-directory logical name, *(P) Debugger*, CD–208
SET/STARTUP command
in conversational boot, *(S) Sys Mgr Essentials*, 4–12
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–17

SET STEP command, *(P) Debugger*, 7–2, 8–19, 10–7, 15–3, CD–211
SET STEP SEMANTIC_EVENT command, *(P) Debugger*, 13–5
SET SYMBOL command, *(G) User*, 14–28; *(G) DCL N-Z*, DCLII–210 to DCLII–212
  verb string translation, *(G) User*, 14–28
Set system failure exception mode
  See SYS$SETSFM system service
SET TASK/ACTIVE command, not for DECthreads, *(P) Debugger*, 16–11, CD–216
SET TASK command, *(P) Debugger*, 16–11, 16–23, CD–215
SET TERMINAL command, *(G) User*, 3–16; *(G) DCL N-Z*, DCLII–213 to DCLII–225; *(S) Sys Mgr Essentials*, 7–9, 13–14; *(P) Debugger*, 11–22, CD–218; *(P) I/O User*, 5–4, 5–19, 5–26
  /APPLICATION_KEYPAD qualifier, *(G) User*, 3–17
  /BROADCAST qualifier, *(G) User*, 2–21
  despooling a printer, *(S) Sys Mgr Essentials*, 7–15
  determining characteristics of a LAT line, *(S) Sys Mgr Essentials*, 7–12
  enabling virtual terminals, *(S) Sys Mgr Essentials*, 7–11
  in network operations, *(S) DECnet Intro*, 3–20, 3–25
  /INSERT qualifier, *(G) User*, 3–16
  in system startup, *(S) Sys Mgr Essentials*, 5–12, 7–10, 7–13
  /LINE_EDIT qualifier, *(G) User*, 3–16
  /NONUMERIC qualifier, *(G) User*, 3–17
  /OVERSTRIKE qualifier, *(G) User*, 3–16
  setting printer characteristics, *(S) Sys Mgr Essentials*, 7–13
  using over the network, *(S) Security*, 12–15
  /WRAP qualifier, *(G) User*, 3–17
SET TIME command, *(G) DCL N-Z*, DCLII–226 to DCLII–227
  setting time across a cluster, *(S) VMScluster Sys*, 5–20
SET TIMEOUT command, *(S) Sys Mgr Essentials*, 2–18; *(S) Sys Mgmt Util M-Z*, 6–55
  in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–55
Setting broadcast intervals, *(S) DECamds*, 1–10
Setting characteristics
  magnetic tape, *(P) I/O User*, 3–19
  terminal, *(P) I/O User*, 5–40
Setting system parameters
  recommended method, *(S) Sys Mgmt Util A-L*, 6–3
Setting up printers, *(S) Sys Mgr Essentials*, 13–14
Setting up terminals, *(S) Sys Mgr Essentials*, 13–14
SET TRACE command, *(P) Debugger*, 7–5, 10–7, 13–19, 15–3, 16–25, 16–29, CD–220
SET TYPE command, *(P) Debugger*, 8–25, CD–228
SET TYPE/OVERRIDE command, *(P) Debugger*, 8–26, CD–228
Set-Up key, *(G) User*, 2–25; *(S) Security*, 3–20
Setup module, *(S) Sys Mgr Essentials*, 13–44
  See also Device control modules
  specifying in forms, *(S) Sys Mgr Essentials*, 13–42
$SETUP_CALL64 macro, *(P) 64-Bit Addr*, 9–1, C–1
  passing 64-bit values, *(P) 64-Bit Addr*, 9–2
SET VECTOR_MODE command, *(P) Debugger*, 15–19, CD–232
SET VERIFY command, *(G) User*, 18–14; *(G) DCL N-Z*, DCLII–228 to DCLII–230
SET VOLUME command, *(G) DCL N-Z*, DCLII–231 to DCLII–234
  changing protection code, *(S) Sys Mgr Essentials*, 8–18
  disabling high-water marking, *(S) Sys Mgr Tuning*, 16–7
  encoding labels on volumes, *(S) Sys Mgr Essentials*, 8–29
  /ERASE_ON_DELETE qualifier, *(S) Security*, 5–12
  modifying disk volume characteristics, *(S) Sys Mgr Essentials*, 8–29
  modifying file characteristics, *(S) Sys Mgr Essentials*, 9–8
  performing data checks, *(S) Sys Mgr Essentials*, 8–29
  specifying file retention periods, *(S) Sys Mgr Essentials*, 8–54
SET WATCH command, *(P) Debugger*, 7–11, 10–7, 15–3, CD–234
SET WINDOW command, *(P) Debugger*, 11–14, CD–240
SET WORKING_SET command, *(G) DCL N-Z*, DCLII–235, DCLII–236
$SET_IMPLICIT_AFFINITY service, *(G) V7.0 New Feat*, 4–29
/SET_STATE qualifier, *(P) Debugger*, 12–9, CD–66; *(P) Alpha SDA*, SDA–43; *(P) VAX SDA*, SDA–50
Severity codes, *(P) Calling Std*, 6–3
  handling, *(P) Calling Std*, 6–4
  in completion status code field, *(P) RMS Ref*, 2–5
  interpreting, *(P) Calling Std*, 6–4
  meanings, *(P) Calling Std*, 6–4
  symbols, *(P) Calling Std*, 6–4
.SEVERITY directive, *(P) Concepts*, 13–59

$SEVERITY global symbol, *(G) DCL N-Z*, DCLII–167
changing, *(G) DCL A-M*, DCLI–227; *(G) DCL N-Z*, DCLII–54
Severity levels, *(P) CDU, LBR, & MU*, MSG–3
SEVMS (Security Enhancement Service software), *(G) SW Overview*, 3–14
S field in symbolic offset
for specifying field length, *(P) RMS Ref*, 2–3
/SFPCR qualifier, *(P) Debugger*, CD–107
SFSBs (shared file synchronization blocks), *(P) Alpha SDA*, SDA–76; *(P) VAX SDA*, SDA–81
SGEC Ethernet device, *(S) DECnet Mgmt*, 2–10
Shadowed disks
See Volume shadowing
Shadowing
support for, *(G) V7.0 New Feat*, C–4
/SHADOW qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–34
Shadow set members
inaccessibility because of failures, *(S) Dependable*, 8–21
Shadow sets, *(G) SW Overview*, 2–12, 3–19
accessed through MSCP server, *(S) VMScluster Sys*, 6–24f
backing up, *(S) Sys Mgr Essentials*, 10–40
definition, *(S) VMScluster Sys*, 6–22
displaying SDA information, *(P) Alpha SDA*, SDA–95; *(P) VAX SDA*, SDA–106
distributing, *(S) VMScluster Sys*, 6–23
maximum number of sets, *(S) VMScluster Sys*, 6–25
mounting disks, *(S) Sys Mgr Essentials*, 10–42
overview, *(S) VMScluster Sys*, 6–22
quorum disk restriction, *(S) VMScluster Sys*, 6–23
restoring, *(S) Sys Mgr Essentials*, 10–47
Shadow set virtual unit driver, *(P) I/O User*, 7–1
functions, *(P) I/O User*, 7–2
hardware configurations, *(P) I/O User*, 7–2
Shareable address data section, *(P) Alpha SDA*, SDA–58
Shareable image libraries, *(P) Environment*, 8–4; *(P) CDU, LBR, & MU*, LIB–3, LIB–5, LIB–41
shareable images in, *(P) CDU, LBR, & MU*, LIB–5
Shareable images, *(S) Sys Mgr Tuning*, 16–11; *(P) Concepts*, 17–3
See also Modules
activating, *(P) Linker*, LINK–52
analyzing, *(G) DCL A-M*, DCLI–22
as linker input files, *(P) Linker*, 1–6
assigning logical names for, *(S) Sys Mgr Tuning*, 16–17
benefits of, *(P) Linker*, 1–6
CANCEL IMAGE command, *(P) Debugger*, 9–13, CD–28
Shareable images (cont'd)
creating, *(P) Linker*, 1–13, 4–1, LINK–30
creating a based shareable image, *(P) Linker*, 4–7
creating a run-time kit, *(P) Linker*, 4–10, LINK–15
creating resident shareable images, *(P) Linker*, 1–16
debugging, *(P) Linker*, LINK–9; *(P) Debugger*, 9–11
declaring alias names for universal symbols, *(P) Linker*, 4–11
declaring universal symbols on Alpha systems, *(P) Linker*, LINK–65
declaring universal symbols on VAX systems, *(P) Linker*, 4–2
default base address, *(P) Linker*, LINK–43
definition, *(P) Linker*, 1–1
enhancing performance of, *(P) Linker*, 1–16
ensuring upward compatibility, *(P) Linker*, LINK–53
deleting universal symbols, *(P) Linker*, 4–10
guidelines, *(P) Linker*, 4–6
on Alpha systems, *(P) Linker*, 4–9
on VAX systems, *(P) Linker*, 4–4
file analyzing, *(G) DCL A-M*, DCLI–22
implicit processing of, *(P) Linker*, 2–11
improving the performance of, *(P) Linker*, 4–11
in libraries, *(P) Linker*, 1–8
default location, *(P) Linker*, 1–9
specifying as linker input, *(P) Linker*, LINK–17, LINK–19
installing, *(S) Alpha Perform*, 4–2, 6–18; *(P) Linker*, 1–7, 1–8
naming, *(P) Linker*, LINK–30
patching, *(G) DCL N-Z*, DCLII–12
privileged, *(P) Concepts*, 18–1; *(P) Linker*, 4–11
protecting, *(P) Linker*, LINK–24, LINK–59
resident images
effect on image map file, *(P) Linker*, 5–5
SET BREAK/INTO command, *(P) Debugger*, 7–9, CD–162
SET IMAGE command, *(P) Debugger*, 9–14, CD–172
SET STEP INTO command, *(P) Debugger*, 7–4, CD–212
SET TRACE/INTO command, *(P) Debugger*, 7–9, CD–224
SET WATCH command, *(P) Debugger*, 7–16
SHOW IMAGE command, *(P) Debugger*, 9–13, CD–255
specifying as linker input, *(P) Linker*, 1–7, LINK–30
in libraries, *(P) Linker*, LINK–19
specifying identification numbers, *(P) Linker*, LINK–52

Shareable images (cont'd)
STEP/INTO command, *(P) Debugger*, CD–300
symbol vector program section, *(P) Linker*, 3–3
updating, *(P) Modular Proc*, 6–5
use of GSMATCH= option, *(P) Linker*, LINK–53
Shareable linkage sections, *(S) Sys Mgr Tuning*, 16–13
/SHAREABLE qualifier, *(P) Linker*, LINK–30; *(P) Debugger*, 9–11
creating shareable images, *(P) Linker*, 4–1
Shareable volumes
initializing disk as, *(G) DCL A-M*, DCLI–260
SHARE command
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–17
Shared access, *(P) File Appl*, 3–3
requirement to specify, *(P) RMS Ref*, 3–1, A–12
Shared command procedure files, *(S) VMScluster Sys*, 5–8
Shared data
providing dependability, *(S) Dependable*, 8–58
Shared disk and tape resources, *(S) VMScluster Sys*, 1–3
in VMScluster environments, *(S) VMScluster Sys*, 1–3
Shared disk volumes, *(S) VMScluster Sys*, 6–19
mounting, *(S) VMScluster Sys*, 6–19
Shared files
See also File sharing
clusterwide coordination, *(S) VMScluster Sys*, 5–17
end-of-file positioning, *(P) RMS Ref*, RMS–7
NETPROXY.DAT file, *(S) VMScluster Sys*, 5–17
SYSUAF.DAT file, *(S) VMScluster Sys*, 5–17
Shared file synchronization blocks
See SFSBs
Shared linkage images, *(P) Debugger*, 4–8, 5–7
Shared memory, *(P) DECthreads*, 3–4
Shared processing and printer resources, *(S) VMScluster Sys*, 5–1
Shared queues, *(S) VMScluster Sys*, 7–1
Shared resources
access, *(P) DECthreads*, 4–2
making DECnet databases available clusterwide, *(S) VMScluster Sys*, 4–8
SYSTARTUP.COM procedure, *(S) VMScluster Sys*, 5–8
Shared sequential file operations
establishing global buffer size, *(P) RMS Ref*, 4–19, 6–7; *(P) File Appl*, 3–15, 7–21
Shared variables, *(P) DECthreads*, 3–4
SHARE/INITIALIZE command
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–18
SHARE privilege, *(S) Security*, A–15
/SHARE qualifier, *(P) Debugger*, 7–9, 9–15, CD–162, CD–224, CD–263, CD–300
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–35
Sharing data
RMS shared files, *(P) Concepts*, 17–12
SHDRIVER.EXE file, *(P) I/O User*, 7–1
Sheet-feed paper
specifying in forms, *(S) Sys Mgr Essentials*, 13–42
Shelving
controlling whether file is shelvable, *(G) DCL N-Z*, DCLII–135; *(P) RMS Ref*, 10–8
determining if file is shelvable, *(G) DCL A-M*, DCLI–174, DCLI–325; *(P) RMS Ref*, 10–9; *(P) I/O User*, 1–18
determining if file is shelved, *(G) DCL A-M*, DCLI–174, DCLI–175, DCLI–325; *(P) RMS Ref*, 10–9; *(P) I/O User*, 1–18
Shifting operator (@), *(P) VAX SDA*, SDA–17
Shift restrictions, *(G) User*, 2–12; *(S) Security*, 3–8
SHMEM privilege, *(S) Security*, A–16
SHOW ABORT_KEY command, *(P) Debugger*, 5–12, CD–242
SHOW ACCOUNTING command, *(G) DCL N-Z*, DCLII–240, DCLII–241; *(S) Sys Mgr Tuning*, 19–2
SHOW ACL command, *(S) Sys Mgr Tuning*, 26–8
SHOW/ADAPTER command
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–23
SHOW AREA command, *(S) DECnet Mgmt Util*, 3–118
SHOW AST command, *(P) Debugger*, 13–25, CD–243
SHOW ATSIGN command, *(P) Debugger*, 12–2, CD–244
SHOW AUDIT command, *(G) DCL N-Z*, DCLII–242 to DCLII–245; *(S) Security*, 9–3, 9–24
to display event classes being audited, *(S) Sys Mgr Tuning*, 18–27
SHOW BREAK command, *(P) Debugger*, 7–5, CD–245
not displaying individual instructions, *(P) Debugger*, CD–245
SHOW BROADCAST command, *(G) DCL N-Z*, DCLII–246, DCLII–247
SHOW/BUS command
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–24
SHOW CALLS command, *(P) Debugger*, 5–14, 6–7, 13–20, CD–247
SHOW CALL_FRAME command, *(P) Alpha SDA*, SDA–78; *(P) VAX SDA*, SDA–69, SDA–83
SHOW CIRCUIT command, *(S) DECnet Mgmt Util*, 3–120
SHOW CLUSTER
SDA command, *(G) V7.0 New Feat*, 3–24

SHOW CLUSTER (Show Cluster utility)
See Show Cluster utility
SHOW CLUSTER command, *(G) DCL N-Z*, DCLII–248; *(P) Alpha SDA*, SDA–80; *(P) VAX SDA*, SDA–86
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–5
Show Cluster utility (SHOW CLUSTER), *(S) VMScluster Sys*, 1–10, 10–21
activation time, *(S) Sys Mgmt Util M-Z*, 4–6, 4–7, 4–8, 4–54
classes of data, *(S) Sys Mgmt Util M-Z*, 4–3
CL_QUORUM command, *(S) VMScluster Sys*, 10–22
CL_VOTES command, *(S) VMScluster Sys*, 10–22
commands, *(S) Sys Mgmt Util M-Z*, 4–9, 4–11
continuous mode, *(S) Sys Mgmt Util M-Z*, 4–5, 4–7
controlling displays, *(S) Sys Mgr Tuning*, 20–5, 20–10; *(S) Sys Mgmt Util M-Z*, 4–4
data fields, *(S) Sys Mgmt Util M-Z*, 4–3
DCL qualifiers, *(S) Sys Mgmt Util M-Z*, 4–6, 4–8
defining arrow keys, *(S) Sys Mgmt Util M-Z*, B–3
defining keypad keys, *(S) Sys Mgr Tuning*, 20–7; *(S) Sys Mgmt Util M-Z*, 4–33, B–3
deselecting window, *(S) Sys Mgmt Util M-Z*, 4–35
directing output, *(S) Sys Mgmt Util M-Z*, 4–5
display formatting, *(S) Sys Mgmt Util M-Z*, 4–4
Execute Procedure (@) command, *(S) Sys Mgmt Util M-Z*, 4–11
exiting, *(S) Sys Mgmt Util M-Z*, 4–5, 4–35
EXPECTED_VOTES command, *(S) VMScluster Sys*, 10–22
invoking, *(S) Sys Mgmt Util M-Z*, 4–5
keypad, *(S) Sys Mgmt Util M-Z*, B–1
moving display window, *(S) Sys Mgmt Util M-Z*, 4–37, 4–50
panning display window, *(S) Sys Mgmt Util M-Z*, 4–39
qualifiers, *(S) Sys Mgmt Util M-Z*, 4–6
refreshing the display, *(S) Sys Mgmt Util M-Z*, 4–40
refreshing the screen, *(S) Sys Mgr Tuning*, 20–10
removing display information, *(S) Sys Mgmt Util M-Z*, 4–40 to 4–46
reports, *(S) Sys Mgr Tuning*, 20–4; *(S) Sys Mgmt Util M-Z*, 4–3
controlling displays, *(S) Sys Mgr Tuning*, 20–10
formatting, *(S) Sys Mgr Tuning*, 20–5, 20–11, 20–14
initialization file, *(S) Sys Mgr Tuning*, 20–10
Show Cluster utility (SHOW CLUSTER) (cont'd)
resetting display information, *(S) Sys Mgmt Util M-Z*, 4–37
sample display, *(S) Sys Mgmt Util M-Z*, 4–3
scrolling display window, *(S) Sys Mgmt Util M-Z*, 4–39, 4–50
selecting display fields, *(S) Sys Mgmt Util M-Z*, 4–19
CIRCUITS class, *(S) Sys Mgmt Util M-Z*, 4–11
CLUSTER class, *(S) Sys Mgmt Util M-Z*, 4–13
CONNECTIONS class, *(S) Sys Mgmt Util M-Z*, 4–14
COUNTERS class, *(S) Sys Mgmt Util M-Z*, 4–15
CREDITS class, *(S) Sys Mgmt Util M-Z*, 4–17
ERRORS class, *(S) Sys Mgmt Util M-Z*, 4–18
LOCAL_PORTS class, *(S) Sys Mgmt Util M-Z*, 4–28
MEMBERS class, *(S) Sys Mgmt Util M-Z*, 4–30
SYSTEMS class, *(S) Sys Mgmt Util M-Z*, 4–31
selecting display window, *(S) Sys Mgmt Util M-Z*, 4–50
startup initialization files, *(S) Sys Mgr Tuning*, 20–5, 20–14; *(S) Sys Mgmt Util M-Z*, 4–4
using, *(S) Sys Mgr Tuning*, 20–4
SHOW command, *(G) DCL N-Z*, DCLII–237 to DCLII–239; *(S) Sys Mgr Essentials*, 9–1; *(S) DECnet Intro*, 4–1; *(S) DECnet Mgmt*, 3–72
in CLUE, *(S) Sys Mgmt Util A-L*, 8–8
in conversational boot, *(S) Sys Mgr Essentials*, 4–6
in SYSGEN, *(S) Sys Mgr Tuning*, 14–31
specifying languages, *(S) Sys Mgr Essentials*, 5–43, 5–44
summary of options, *(G) DCL N-Z*, DCLII–237
time and date formats, *(S) Sys Mgr Essentials*, 5–42
to display network configuration database, *(S) DECnet Intro*, 3–34
SHOW CONFIGURATION command
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–31
SHOW/CONFIGURATION command
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–24
SHOW CONNECTIONS
SDA command, *(G) V7.0 New Feat*, 3–24
SHOW CONNECTIONS command, *(P) Alpha SDA*, SDA–84; *(P) VAX SDA*, SDA–91
SHOW COUNTER command, *(S) DECnet Intro*, 4–3

SHOW CPU command, *(G) V7.0 New Feat*, 4–29; *(G) DCL N-Z*, DCLII–249 to DCLII–253; *(S) Sys Mgr Tuning*, 26–3, 26–9; *(P) Alpha SDA*, SDA–11, SDA–68, SDA–86; *(P) VAX SDA*, SDA–14, SDA–72, SDA–95
  analyzing a running system, *(P) Alpha SDA*, SDA–10; *(P) VAX SDA*, SDA–11
SHOW CRASH command, *(P) Alpha SDA*, SDA–11, SDA–19, SDA–68, SDA–89; *(P) VAX SDA*, SDA–14, SDA–19, SDA–21, SDA–72, SDA–99
  analyzing a running system, *(P) Alpha SDA*, SDA–10; *(P) VAX SDA*, SDA–11
SHOW DEFAULT command, *(G) User*, 5–6; *(G) DCL N-Z*, DCLII–254, DCLII–255
  in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–61
SHOW DEFINE command, *(P) Debugger*, 12–6, CD–249
SHOW DEVICE command, *(P) Alpha SDA*, SDA–19, SDA–93; *(P) VAX SDA*, SDA–20, SDA–27, SDA–104
  in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–32
SHOW/DEVICE command
  in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–27
SHOW DEVICES command, *(G) User*, 12–2; *(G) DCL N-Z*, DCLII–256 to DCLII–262; *(S) Sys Mgr Essentials*, 7–2, 7–16, 9–5
  checking mounted volumes, *(S) Sys Mgr Essentials*, 8–37
  determining the status of files, *(S) Sys Mgr Essentials*, 8–44; *(S) Sys Mgr Tuning*, 16–18
  examples, *(S) Sys Mgr Essentials*, 7–2
  for ISO-9660 formatted devices, *(S) Sys Mgr Essentials*, 7–5
  volume rebuild status, *(S) Sys Mgr Essentials*, 7–4
SHOW DEVICES/SERVED command, *(G) DCL N-Z*, DCLII–263 to DCLII–267
SHOW DISPLAY command, *(G) DCL N-Z*, DCLII–268, DCLII–269; *(P) Debugger*, 11–12, CD–250
SHOW/DRIVER command
  in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–28
SHOW EDITOR command, *(P) Environment*, 9–5; *(P) Debugger*, 5–4, CD–252
SHOW ENTRY command, *(G) User*, 4–17, 18–10, 18–18; *(G) DCL N-Z*, DCLII–270 to DCLII–274; *(S) Sys Mgr Essentials*, 13–68
SHOW entry point, *(P) Modular Proc*, 4–8
SHOW ENVIRONMENT command, *(S) Sys Mgr Essentials*, 2–14; *(S) Sys Mgmt Util M-Z*, 6–53, 6–56
  in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–56
SHOW ERROR command, *(G) DCL N-Z*, DCLII–275, DCLII–277
SHOW EVENT_FACILITY command, *(P) Debugger*, 7–10, 16–30, CD–253
SHOW EXECUTIVE command, *(P) Alpha SDA*, SDA–97; *(P) VAX SDA*, SDA–20, SDA–111
SHOW EXECUTOR CHARACTERISTICS command
  display of proxy access, *(S) DECnet Mgmt*, 3–71
SHOW EXECUTOR command, *(S) DECnet Mgmt*, 3–8; *(S) DECnet Mgmt Util*, 3–125
  display of executor type, *(S) DECnet Mgmt*, 3–49
SHOW EXIT_HANDLERS command, *(P) Debugger*, 13–25, CD–254
SHOW HEADER command, *(P) Alpha SDA*, SDA–99; *(P) VAX SDA*, SDA–113
SHOW IMAGE command, *(P) Debugger*, 9–13, CD–255
Showing system parameters
  with SYSGEN, *(S) Sys Mgr Tuning*, 14–31
SHOW INTRUSION command, *(G) DCL N-Z*, DCLII–278 to DCLII–280; *(S) Sys Mgr Essentials*, 11–7
SHOW KEY command, *(G) DCL N-Z*, DCLII–281, DCLII–282; *(P) Debugger*, 12–8, CD–256
  in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–57
SHOW LAN
  SDA command, *(G) V7.0 New Feat*, 3–24
SHOW LAN command, *(P) Alpha SDA*, SDA–101; *(P) VAX SDA*, SDA–114
SHOW LANGUAGE command, *(P) Debugger*, 8–10, CD–259
SHOW LICENSE command, *(G) DCL N-Z*, DCLII–283 to DCLII–290
SHOW LINE command, *(S) DECnet Mgmt Util*, 3–128
  Ethernet hardware address, *(S) DECnet Mgmt*, 3–46, 7–10
SHOW LINK command
  in LATCP, *(S) Sys Mgmt Util A-L*, 13–41
SHOW LINKS command, *(S) DECnet Mgmt Util*, 3–131
SHOW LOCK
  SDA command, *(G) V7.0 New Feat*, 3–24
SHOW LOCK command, *(P) Alpha SDA*, SDA–107; *(P) VAX SDA*, SDA–122
SHOW LOG command, *(P) Debugger*, 12–6, CD–260
  in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–35
  in LMCP, *(S) Sys Mgmt Util A-L*, 14–16
SHOW LOGGING command, *(S) DECnet Mgmt Util*, 3–133
  to display network logging activity, *(S) DECnet Intro*, 4–6

SHOW LOGICAL command, *(G) User*, 13–20, 13–21; *(G) DCL N-Z*, DCLII–291 to DCLII–296
displaying access mode, *(G) User*, 13–21
displaying directory table structure, *(G) User*, 13–22
displaying logical name tables, *(G) User*, 13–21
displaying process permanent files, *(G) User*, 13–21
in network operations, *(S) DECnet Intro*, 3–2
to display name of local node, *(S) DECnet Intro*, 3–2
SHOW LOGS command, *(P) VAX SDA*, SDA–126
SHOW MACHINE_CHECK command, *(P) Alpha SDA*, SDA–11, SDA–110
SHOW MARGINS command, *(P) Debugger*, 10–8, CD–261
SHOW MEMORY command, *(G) V7.0 New Feat*, 4–21; *(G) DCL N-Z*, DCLII–297 to DCLII–306; *(P) Alpha SDA*, SDA–4; *(P) VAX SDA*, SDA–5
determining size of page and swap files, *(S) Sys Mgr Tuning*, 15–23
displaying page and swap files, *(S) Sys Mgr Tuning*, 15–6
monitoring page file usage, *(S) Sys Mgr Tuning*, 15–6
monitoring swap file usage, *(S) Sys Mgr Tuning*, 15–10
showing the size of nonpaged pool, *(S) Sys Mgr Tuning*, 26–7
SHOW MODE command, *(P) Debugger*, CD–262
SHOW MODULE command, *(P) Debugger*, 9–6, 9–15, CD–263
SHOW MODULE CONFIGURATOR command, *(S) DECnet Intro*, 4–6; *(S) DECnet Mgmt*, 3–34, 3–35; *(S) DECnet Mgmt Util*, 3–136
SHOW MODULE X25-ACCESS command, *(S) DECnet Mgmt Util*, 3–139
SHOW MODULE X25-PROTOCOL command, *(S) DECnet Mgmt Util*, 3–141
SHOW MODULE X25-SERVER command, *(S) DECnet Mgmt Util*, 3–145
SHOW MODULE X29-SERVER command, *(S) DECnet Mgmt Util*, 3–145
SHOW MOPDLL command
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–37
SHOW NETWORK command, *(G) DCL N-Z*, DCLII–307; *(S) DECnet Intro*, 3–4; *(S) DECnet Mgmt*, 8–1
display of network status, *(S) DECnet Mgmt*, 8–1
in network operations, *(S) DECnet Intro*, 2–2, 3–2
to display name and address of local node, *(S) DECnet Intro*, 3–2
SHOW NETWORK command (cont'd)
to display routing information, *(S) DECnet Intro*, 3–2
SHOW NODE command, *(S) DECnet Intro*, 3–34; *(S) DECnet Mgmt Util*, 3–147
display of node type, *(S) DECnet Mgmt*, 3–49
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–37
in LATCP, *(S) Sys Mgmt Util A-L*, 13–46
Show Nodes, *(S) DECamds*, 2–4
changing default behavior, *(S) DECamds*, 5–2
SHOW OBJECT command, *(S) DECnet Mgmt Util*, 3–152
SHOW OUTPUT command, *(P) Debugger*, 12–2, 12–6, CD–266
SHOW PAGE_TABLE
SDA command, *(G) V7.0 New Feat*, 3–25
SHOW PAGE_TABLE command, *(P) Alpha SDA*, SDA–112; *(P) VAX SDA*, SDA–26, SDA–127
SHOW PFN_DATA
SDA command, *(G) V7.0 New Feat*, 3–25
SHOW PFN_DATA command, *(P) Alpha SDA*, SDA–116; *(P) VAX SDA*, SDA–131
SHOW POOL command, *(P) Alpha SDA*, SDA–120; *(P) VAX SDA*, SDA–134
SHOW PORT command
in LATCP, *(S) Sys Mgmt Util A-L*, 13–52
SHOW PORTS command, *(P) Alpha SDA*, SDA–124; *(P) VAX SDA*, SDA–141
SHOW PRINTER command, *(G) DCL N-Z*, DCLII–308, DCLII–309
SHOW PROCESS
SDA command, *(G) V7.0 New Feat*, 3–27
SHOW PROCESS/ALL command, *(P) Alpha SDA*, SDA–129; *(P) VAX SDA*, SDA–151
SHOW PROCESS command, *(G) V7.0 New Feat*, 4–29; *(G) DCL N-Z*, DCLII–310 to DCLII–317; *(S) Sys Mgr Essentials*, 9–5; *(S) Sys Mgr Tuning*, 26–9; *(P) Debugger*, 14–3, 15–2, CD–267; *(P) Alpha SDA*, SDA–73, SDA–127; *(P) VAX SDA*, SDA–78, SDA–148
/ALL qualifier, *(G) User*, 18–1
SHOW PROCESS/LOCKS command, *(P) Alpha SDA*, SDA–107; *(P) VAX SDA*, SDA–122
SHOW PROCESS/PRIVILEGES command, *(S) DECnet Intro*, 3–7
in network operations, *(S) DECnet Intro*, 3–1
SHOW PROCESS/RMS command, *(P) Alpha SDA*, SDA–143; *(P) VAX SDA*, SDA–165
selecting display options, *(P) Alpha SDA*, SDA–76; *(P) VAX SDA*, SDA–81
SHOW PROFILE command, *(S) Sys Mgmt Util M-Z*, 6–58
in SYSMAN, *(S) Sys Mgr Essentials*, 2–17; *(S) Sys Mgmt Util M-Z*, 6–58

SHOW PROTECTION command, *(G) DCL N-Z*, DCLII–318; *(S) Sys Mgr Essentials*, 9–5
SHOW QUEUE/CHARACTERISTICS command, *(G) DCL N-Z*, DCLII–326, DCLII–327
SHOW QUEUE command, *(G) User*, 4–17, 18–18; *(G) DCL N-Z*, DCLII–319 to DCLII–325; *(S) Sys Mgr Essentials*, 13–26
  /FULL qualifier, *(G) User*, 18–13
SHOW QUEUE/FORM command, *(G) DCL N-Z*, DCLII–328, DCLII–329
SHOW QUEUE/MANAGER command, *(G) DCL N-Z*, DCLII–330 to DCLII–332; *(S) Sys Mgr Essentials*, 12–11
SHOW QUEUE_ENTRY command
  in LATCP, *(S) Sys Mgmt Util A-L*, 13–55
SHOW QUOTA command, *(G) DCL N-Z*, DCLII–333; *(S) Sys Mgr Essentials*, 8–52
SHOW RADIX command, *(P) Debugger*, 8–10, CD–272
SHOW RESOURCE
  SDA command, *(G) V7.0 New Feat*, 3–27
SHOW RESOURCE command, *(P) Alpha SDA*, SDA–107, SDA–139; *(P) VAX SDA*, SDA–122, SDA–160
SHOW RMS command, *(P) Alpha SDA*, SDA–143; *(P) VAX SDA*, SDA–165
SHOW RMS_DEFAULT command, *(G) DCL N-Z*, DCLII–334; *(P) Rec Mgmt Util*, 2–14, 4–29; *(P) File Appl*, 3–11, 3–17
  current default extension size, *(P) File Appl*, 9–7
  current process-default buffer count, *(P) File Appl*, 7–17 to 7–19
SHOW RSPID command, *(P) Alpha SDA*, SDA–144; *(P) VAX SDA*, SDA–166
SHOW SCOPE command, *(P) Debugger*, 9–11, CD–273
SHOW SEARCH command, *(P) Debugger*, 10–7, CD–275
SHOW SECURITY command, *(G) DCL N-Z*, DCLII–335 to DCLII–338; *(S) Security*, 4–20
  displaying security profiles of objects, *(G) User*, 19–3; *(S) Security*, 4–9
  displaying site defaults, *(S) Security*, 8–22, 8–23
  displaying the object's class, *(S) Security*, 4–9
  for queues, *(S) Sys Mgr Essentials*, 13–23
SHOW SELECT command, *(P) Debugger*, 11–21, CD–276
SHOW SERVICE command
  in LATCP, *(S) Sys Mgmt Util A-L*, 13–57
SHOW SNAPSHOT command, *(P) VAX SDA*, SDA–168
Show software products, *(S) Sys Mgr Essentials*, 3–35
SHOW SOURCE command, *(P) Debugger*, 10–2, CD–278
SHOW SPINLOCKS command, *(P) Alpha SDA*, SDA–147; *(P) VAX SDA*, SDA–171
SHOW STACK command, *(P) Debugger*, 13–21, CD–280; *(P) Alpha SDA*, SDA–151; *(P) VAX SDA*, SDA–25, SDA–177
SHOW/STARTUP command, *(S) Sys Mgmt Util M-Z*, 5–29
  in conversational boot, *(S) Sys Mgr Essentials*, 4–12
SHOW STATUS command, *(G) DCL N-Z*, DCLII–339
SHOW STEP command, *(P) Debugger*, 7–3, CD–283
SHOW SUMMARY
  SDA command, *(G) V7.0 New Feat*, 3–27
SHOW SUMMARY command, *(P) Alpha SDA*, SDA–127, SDA–155; *(P) VAX SDA*, SDA–148, SDA–179
SHOW SYMBOL command, *(G) User*, 14–6; *(G) DCL N-Z*, DCLII–340, DCLII–341; *(P) Debugger*, 9–8, 16–28, CD–284; *(P) Alpha SDA*, SDA–157; *(P) VAX SDA*, SDA–181
SHOW SYMBOL/DEFINED command, *(P) Debugger*, 12–6
SHOW SYSTEM command, *(G) DCL N-Z*, DCLII–342 to DCLII–349
SHOW TASK command, *(P) Debugger*, 16–13, 16–16, CD–287
SHOW TERMINAL command, *(G) User*, 3–16; *(G) DCL N-Z*, DCLII–350, DCLII–352; *(P) Debugger*, 11–23, CD–290
SHOW TIME command, *(G) DCL N-Z*, DCLII–353
  in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–58
SHOW TIMEOUT command, *(S) Sys Mgmt Util M-Z*, 6–58
SHOW TRACE command, *(P) Debugger*, 7–5, CD–291
  not displaying individual instructions, *(P) Debugger*, CD–291
SHOW TRANSACTIONS command, *(P) VAX SDA*, SDA–182
SHOW TRANSLATION command, *(G) DCL N-Z*, DCLII–354, DCLII–355
SHOW/TURBOCHANNEL command
  in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–29
SHOW TYPE command, *(P) Debugger*, 8–26, CD–293
SHOW/UNIBUS command
  in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–30
SHOW USERS command, *(G) DCL N-Z*, DCLII–356 to DCLII–360
SHOW VECTOR_MODE command, *(P) Debugger*, 15–19, CD–294

SHOW WATCH command, *(P) Debugger*, 7–13, CD–295
SHOW WINDOW command, *(P) Debugger*, 11–15, CD–296
SHOW WORKING_SET command, *(G) DCL N-Z*, DCLII–361 to DCLII–362
SHOW ZONE command, *(G) DCL N-Z*, DCLII–363
SHOW [parameter] command
  in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–20
SHOW_CLUSTER$INIT, *(S) Sys Mgmt Util M-Z*, 4–11
SHOW_CLUSTER$INIT.COM command procedure, *(S) Sys Mgr Tuning*, 20–14
SHOW_CLUSTER$INIT logical name, *(S) Sys Mgr Tuning*, 20–14
Shutdown
  See System shutdown
SHUTDOWN$DECNET_MINUTES logical name, *(S) Sys Mgr Essentials*, 4–33
SHUTDOWN$DISABLE_AUTOSTART logical name, *(S) Sys Mgr Essentials*, 4–33, 13–56
SHUTDOWN$INFORM_NODES logical name, *(S) Sys Mgr Essentials*, 4–33
SHUTDOWN$MINIMUM_MINUTES logical name, *(S) Sys Mgr Essentials*, 4–33
SHUTDOWN$QUEUE_MINUTES logical name, *(S) Sys Mgr Essentials*, 4–33
SHUTDOWN$TIME logical name, *(S) Sys Mgr Essentials*, 4–33
SHUTDOWN$VERBOSE logical name, *(S) Sys Mgr Essentials*, 4–33
SHUTDOWN.COM command procedure, *(S) Sys Mgr Essentials*, 4–27
  See also System shutdown
  customizing, *(S) Sys Mgr Essentials*, 4–32, 4–33
  defining time before shutdown, *(S) Sys Mgr Essentials*, 4–33
  example, *(S) Sys Mgr Essentials*, 4–30
  executing with SYSMAN, *(S) Sys Mgr Essentials*, 4–34
  reboot options, *(S) Sys Mgr Essentials*, 4–29
  required privileges, *(S) Sys Mgr Essentials*, 4–27
SHUTDOWN command
  shutting down a node or subset of nodes, *(S) VMScluster Sys*, 8–38
  shutting down the cluster, *(S) VMScluster Sys*, 8–38
SHUTDOWN NODE command
  in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–59
SHUTDOWN phase of AUTOGEN, *(S) Sys Mgmt Util A-L*, 6–8
Shutdown procedure, node, *(S) DECamds*, A–13
Shutting down a node, *(S) VMScluster Sys*, 8–38
Shutting down the cluster, *(S) VMScluster Sys*, 8–38, 10–22
SIDR (secondary index data record), *(P) Rec Mgmt Util*, 1–6, 4–5; *(P) File Appl*, 3–18, 3–22, 10–21
  for storing sorted pointers, *(P) Rec Mgmt Util*, 2–9
SID register
  displaying, *(P) VAX SDA*, SDA–96
Signal
  delivery, *(P) DECthreads*, pthread–78
  sending to a thread, *(P) DECthreads*, pthread–78, tis–25
Signal argument vectors, *(P) Concepts*, 13–28, 13–32, 13–63; *(P) Calling Std*, 6–13
Signal array, *(P) Alpha SDA*, SDA–21; *(P) VAX SDA*, SDA–22
Signaler's register, *(P) Calling Std*, 6–24
Signal filter, *(S) DECamds*, 2–7
Signaling, *(P) Concepts*, 13–32
  changing to return status, *(P) Concepts*, 13–71
Signaling and condition handling, *(P) Modular Proc*, 2–20
Signaling a wake-up, *(P) DECthreads*, pthread–43, pthread–45, tis–8, E–40, E–41, G–36, G–37, G–39
Signaling conditions, *(P) Calling Std*, 6–9
  with GENTRAP, *(P) Calling Std*, 6–9
  with LIB$SIGNAL, *(P) Calling Std*, 6–9
Signaling error conditions, *(P) Modular Proc*, 2–20
Signaling errors
  example in a VAX MACRO program, *(P) File Appl*, 5–12
Signal mask
  examining, *(P) DECthreads*, pthread–111
  setting, *(P) DECthreads*, pthread–111
Signals
  alternatives to using, *(P) DECthreads*, A–5
  asynchronous, *(P) DECthreads*, A–4, A–6
  nonterminating, *(P) DECthreads*, A–4
  reasons to avoid in a multithreaded program, *(P) DECthreads*, A–5
  reported as exceptions, *(P) DECthreads*, A–6
  synchronous, *(P) DECthreads*, A–5
  terminating, *(P) DECthreads*, A–4, A–6
  types of, *(P) DECthreads*, A–4
Signature file item codes, *(G) V7.0 New Feat*, 4–14
Signature files, *(G) V7.0 New Feat*, 4–14
  using with Mail utility, *(G) V7.0 New Feat*, 2–6
Signature information, *(P) Calling Std*, 3–22
Sign-extended longword fields, *(P) LIB$*, LIB–170
Sign extension
  checking with $IS_32BITS macro, *(P) 64-Bit Addr*, 9–6, C–4
  using EVAX_SEXTL built-in, *(P) 64-Bit Addr*, 9–6

Sign representation
preference for key type coding, *(P) RMS Ref*, 12–6
SII integral adapter, *(P) I/O User*, 2–3
/SILENT qualifier, *(P) Debugger*, 7–9, 16–33, CD–162, CD–224, CD–235, CD–301
Simple keys, *(P) RMS Ref*, 12–12
Simple Mail Transfer Protocol
See SMTP
Simple names
converting to opaque, *(P) Sys Svc I*, SYS1–305
Simple Network Management Protocol
See SNMP
Simple procedure, *(P) Calling Std*, 3–44
S/in button, *(P) Debugger*, 1–9, 3–8
/SINCE qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–60
sincosd routine, *(P) Portable Math*, DPML–53, B–12
sincos routine, *(P) Portable Math*, DPML–53, B–12
sind routine, *(P) Portable Math*, DPML–52, B–12
Sine
hyperbolic, *(P) MTH$*, MTH–101, MTH–133
in degrees, *(P) MTH$*, MTH–99, MTH–128, MTH–131
in radians, *(P) MTH$*, MTH–98, MTH–123, MTH–125
of complex number, *(P) MTH$*, MTH–52, MTH–53
Single-ended signaling
for SCSI, *(G) V7.0 New Feat*, C–7
Single instruction access, *(P) Modular Proc*, 3–17
Single Lock Summary window, *(S) DECamds*, 3–18 to 3–19
error messages, *(S) DECamds*, 3–19
Granted, Conversion, and Waiting Queue Lock, *(S) DECamds*, 3–19
Granted Lock, *(S) DECamds*, 3–19
Single node
collecting data, *(S) DECamds*, 2–5
Single points of failure
in configurations, *(S) Dependable*, 6–1
in networks, *(S) Dependable*, 7–1, 7–6, 7–11
Single Process Summary window, *(S) DECamds*, 3–20 to 3–26
rate, *(S) DECamds*, 3–23 to 3–24
sinhcosh routine, *(P) Portable Math*, DPML–55, B–13
sinh routine, *(P) Portable Math*, DPML–54, B–13
Sinks, *(S) DECnet Mgmt*, 2–28
logging, *(S) DECnet Mgmt*, 2–28, 3–62
name, *(S) DECnet Mgmt*, 2–28
node, *(S) DECnet Mgmt*, 2–28
related event, *(S) DECnet Mgmt*, 2–28
state, *(S) DECnet Mgmt*, 2–29
Sink tests, *(S) DECnet Mgmt Util*, 4–7, 4–11, 4–12
sin routine, *(P) Portable Math*, DPML–52, B–12
SISR register
displaying, *(P) Alpha SDA*, SDA–87; *(P) VAX SDA*, SDA–96
SISR symbol, *(P) Alpha SDA*, SDA–16
Site-independent startup command procedure
See STARTUP.COM command procedure
Site security, *(S) Security*, 1–3; *(S) Dependable*, 5–4
Site-specific startup command files
elements, *(S) VMScluster Sys*, 5–10
Site-specific startup command procedure, *(P) Alpha SDA*, SDA–6, SDA–171
releasing page file blocks, *(G) V7.0 New Feat*, 4–22; *(P) Alpha SDA*, SDA–5
Site-specific startup procedure
See SYS$MANAGER:SYSTARTUP_VMS.COM
SIZE attribute, *(P) Rec Mgmt Util*, 4–34; *(P) File Appl*, 4–33
/SIZE qualifier, *(P) Debugger*, CD–90
Skip file function, *(P) I/O User*, 3–16
Skip sectoring, *(P) I/O User*, 2–14
Slash (/)
division operator, *(P) Debugger*, B–8
Slave nodes, *(S) DECnet Mgmt*, 4–11
SLD (satellite loader), *(S) DECnet Mgmt*, 4–14
building, *(S) DECnet Mgmt*, 4–15
Slicing images, *(S) Sys Mgr Tuning*, 16–12
SLIP (serial line Internet protocol), *(S) TCP/IP*, 2–7
SLR register
displaying, *(P) VAX SDA*, SDA–96
SLS (Storage Library System), *(G) SW Overview*, 2–14, 7–5, 7–8; *(S) VMScluster Sys*, 1–10
archiving backup data, *(S) Dependable*, 9–16
use at CSC lights out data center, *(S) Dependable*, 11–19
Small Computer Systems Interface
See SCSI
SMB$CHECK_FOR_MESSAGE routine, *(P) Util Routines*, SMB–14
SMB$INITIALIZE routine, *(P) Util Routines*, SMB–15
SMB$READ_MESSAGE routine, *(P) Util Routines*, SMB–17
SMB$READ_MESSAGE_ITEM routine, *(G) V7.0 New Feat*, 4–22; *(P) Util Routines*, SMB–20
SMB$SEND_TO_JOBCTL routine, *(P) Util Routines*, SMB–30
SMBMSG$K_PRINT_CONTROL message item code, *(G) V7.0 New Feat*, 4–22
SMBMSG$V_NO_INITIAL_FF symbol, *(G) V7.0 New Feat*, 4–22

SMB routines, *(P) Util Routines*, SMB–1
SMG$ADD_KEY_DEF routine, *(P) Concepts*, 7–28; *(P) SMG$*, 3–2, SMG–3
SMG$BEGIN_DISPLAY_UPDATE routine, *(P) SMG$*, 2–17, SMG–6
SMG$BEGIN_PASTEBOARD_UPDATE routine, *(P) SMG$*, 2–17, SMG–7
SMG$CANCEL_INPUT routine, *(P) SMG$*, 1–7, 3–1, SMG–8
SMG$CHANGE_PBD_CHARACTERISTICS routine, *(P) SMG$*, 1–5, SMG–9
SMG$CHANGE_RENDITION routine, *(P) SMG$*, 2–9, SMG–12
SMG$CHANGE_VIEWPORT routine, *(P) SMG$*, 2–13, SMG–15
SMG$CHANGE_VIRTUAL_DISPLAY routine, *(P) Concepts*, 7–16; *(P) SMG$*, 2–9, SMG–21
SMG$CHECK_FOR_OCCLUSION routine, *(P) Concepts*, 7–13; *(P) SMG$*, 2–5, SMG–24
SMG$CONTROL_MODE routine, *(P) SMG$*, 2–16, SMG–28
SMG$COPY_VIRTUAL_DISPLAY routine, *(P) SMG$*, SMG–31
SMG$CREATE_KEY_TABLE routine, *(P) Concepts*, 7–28; *(P) SMG$*, 3–2, SMG–37
SMG$CREATE_MENU routine, *(P) SMG$*, 2–13, SMG–38
SMG$CREATE_PASTEBOARD routine, *(P) Concepts*, 7–9; *(P) SMG$*, 1–4, 6–2, SMG–42
SMG$CREATE_SUBPROCESS routine, *(P) Concepts*, 7–17; *(P) SMG$*, SMG–47
SMG$CREATE_VIEWPORT routine, *(P) SMG$*, 2–12, SMG–51
SMG$CREATE_VIRTUAL_DISPLAY routine, *(P) Concepts*, 7–9; *(P) SMG$*, 1–6, SMG–55
SMG$CREATE_VIRTUAL_KEYBOARD routine, *(P) Concepts*, 7–24; *(P) SMG$*, 1–7, 3–1, SMG–60
SMG$CURSOR_COLUMN routine, *(P) SMG$*, 2–6, SMG–64
SMG$CURSOR_ROW routine, *(P) SMG$*, 2–6, SMG–65
SMG$DEFAULT_CHARACTER_SET logical name, *(P) Debugger*, 11–26
SMG$DEFINE_KEY routine, *(P) SMG$*, 3–2, SMG–66
SMG$DELETE_CHARS routine, *(P) Concepts*, 7–22; *(P) SMG$*, 2–7, SMG–69
SMG$DELETE_KEY_DEF routine, *(P) SMG$*, 3–2, SMG–74
SMG$DELETE_LINE routine, *(P) Concepts*, 7–22; *(P) SMG$*, 2–7, SMG–76
SMG$DELETE_MENU routine, *(P) SMG$*, 2–14, SMG–80
SMG$DELETE_PASTEBOARD routine, *(P) Concepts*, 7–9; *(P) SMG$*, 1–5, SMG–81
SMG$DELETE_SUBPROCESS routine, *(P) Concepts*, 7–17; *(P) SMG$*, SMG–83
SMG$DELETE_VIEWPORT routine, *(P) SMG$*, 2–12, SMG–84
SMG$DELETE_VIRTUAL_DISPLAY routine, *(P) Concepts*, 7–15; *(P) SMG$*, 1–6, 2–4, 6–1, SMG–85
SMG$DELETE_VIRTUAL_KEYBOARD routine, *(P) SMG$*, 3–1, SMG–86
SMG$DEL_TERM_TABLE routine, *(P) SMG$*, 5–2, SMG–68
SMG$DISABLE_BROADCAST_TRAPPING routine, *(P) SMG$*, SMG–87
SMG$DISABLE_UNSOLICITED_INPUT routine, *(P) SMG$*, SMG–97
SMG$DRAW_CHAR routine, *(P) SMG$*, 2–10, SMG–99
SMG$DRAW_LINE routine, *(P) Concepts*, 7–21; *(P) SMG$*, 2–10, SMG–103
SMG$DRAW_RECTANGLE routine, *(P) Concepts*, 7–21; *(P) SMG$*, 2–10, SMG–108
SMG$ENABLE_UNSOLICITED_INPUT routine, *(P) SMG$*, 4–2, SMG–113
SMG$END_DISPLAY_UPDATE routine, *(P) SMG$*, 2–17, SMG–116
SMG$END_PASTEBOARD_UPDATE routine, *(P) SMG$*, 2–17, SMG–117
SMG$ERASE_CHARS routine, *(P) Concepts*, 7–22; *(P) SMG$*, 2–8, SMG–118
SMG$ERASE_COLUMN routine, *(P) Concepts*, 7–22; *(P) SMG$*, 2–8, SMG–122
SMG$ERASE_DISPLAY routine, *(P) Concepts*, 7–22; *(P) SMG$*, 2–8, SMG–124
SMG$ERASE_LINE routine, *(P) Concepts*, 7–22; *(P) SMG$*, 2–8, SMG–129
SMG$ERASE_PASTEBOARD routine, *(P) Concepts*, 7–9; *(P) SMG$*, 1–5, SMG–133
SMG$EXECUTE_COMMAND routine, *(P) Concepts*, 7–17; *(P) SMG$*, SMG–135
SMG$FIND_CURSOR_DISPLAY routine, *(P) SMG$*, SMG–137
SMG$FLUSH_BUFFER routine, *(P) SMG$*, 2–16, SMG–139
SMG$FLUSH_DISPLAY_UPDATE routine, *(P) SMG$*, 2–17, SMG–140
SMG$GET_BROADCAST_MESSAGE routine, *(P) SMG$*, 4–2, SMG–141
SMG$GET_CHAR_AT_PHYSICAL_CURSOR routine, *(P) SMG$*, SMG–143
SMG$GET_DISPLAY_ATTR routine, *(P) SMG$*, SMG–145
SMG$GET_KEYBOARD_ATTRIBUTES routine, *(P) SMG$*, 3–2, SMG–151
SMG$GET_KEY_DEF routine, *(P) SMG$*, SMG–148

SMG$GET_NUMERIC_DATA routine, *(P) SMG$*, 5–2, SMG–154
SMG$GET_PASTEBOARD_ATTRIBUTES routine, *(P) SMG$*, 1–5
SMG$GET_PASTING_INFO routine, *(P) SMG$*, SMG–156, SMG–158
SMG$GET_TERM_DATA routine, *(P) SMG$*, 5–2, SMG–160
SMG$GET_VIEWPORT_CHAR routine, *(P) SMG$*, 2–13, SMG–162
SMG$HOME_CURSOR routine, *(P) Concepts*, 7–18; *(P) SMG$*, 2–7, SMG–166
SMG$INIT_TERM_TABLE routine, *(P) SMG$*, 5–2, SMG–168
SMG$INIT_TERM_TABLE_BY_TYPE routine, *(P) SMG$*, 5–2, SMG–170
SMG$INSERT_CHARS routine, *(P) Concepts*, 7–19; *(P) SMG$*, 2–8, SMG–172
SMG$INSERT_LINE routine, *(P) Concepts*, 7–20; *(P) SMG$*, 2–8, SMG–178
SMG$INVALIDATE_DISPLAY routine, *(P) SMG$*, SMG–184
SMG$KEYCODE_TO_NAME routine, *(P) SMG$*, 3–4, SMG–185
SMG$LABEL_BORDER routine, *(P) Concepts*, 7–11; *(P) SMG$*, SMG–187
SMG$LIST_KEY_DEFS routine, *(P) SMG$*, SMG–193
SMG$LIST_PASTEBOARD_ORDER routine, *(P) SMG$*, 2–5, SMG–196
SMG$LIST_PASTING_ORDER routine, *(P) Concepts*, 7–15; *(P) SMG$*, 2–5, SMG–198
SMG$LOAD_KEY_DEFS routine, *(P) SMG$*, 3–2, SMG–200
SMG$LOAD_VIRTUAL_DISPLAY routine, *(P) SMG$*, 2–15, SMG–202
SMG$ logical name
  debugging screen-oriented program, *(P) Debugger*, 13–13
SMG$MOVE_TEXT routine, *(P) SMG$*, 2–4, SMG–204
SMG$MOVE_VIRTUAL_DISPLAY routine, *(P) SMG$*, 2–3, SMG–207
SMG$NAME_TO_KEYCODE routine, *(P) SMG$*, 3–4, SMG–209
SMG$PASTE_VIRTUAL_DISPLAY routine, *(P) Concepts*, 7–9; *(P) SMG$*, 2–1, SMG–211
SMG$POP_VIRTUAL_DISPLAY routine, *(P) Concepts*, 7–31; *(P) SMG$*, 2–4, 6–2, SMG–214
SMG$PRINT_PASTEBOARD routine, *(P) SMG$*, SMG–216
SMG$PUT_CHARS routine, *(P) SMG$*, 2–8, SMG–218
SMG$PUT_CHARS_HIGHWIDE routine, *(P) Concepts*, 7–19; *(P) SMG$*, 2–8, SMG–223
SMG$PUT_CHARS_MULTI routine, *(P) SMG$*, 2–8, SMG–226
SMG$PUT_CHARS_WIDE routine, *(P) SMG$*, 2–8, SMG–229
SMG$PUT_HELP_TEXT routine, *(P) SMG$*, SMG–232
SMG$PUT_LINE routine, *(P) Concepts*, 7–20; *(P) SMG$*, 2–9, SMG–235
SMG$PUT_LINE_HIGHWIDE routine, *(P) SMG$*, 2–9, SMG–242
SMG$PUT_LINE_MULTI routine, *(P) SMG$*, 2–9, SMG–245
SMG$PUT_LINE_WIDE routine, *(P) Concepts*, 7–20; *(P) SMG$*, 2–9, SMG–250
SMG$PUT_PASTEBOARD routine, *(P) SMG$*, SMG–255
SMG$PUT_STATUS_LINE routine, *(P) SMG$*, SMG–257
SMG$PUT_WITH_SCROLL routine, *(P) Concepts*, 7–20
SMG$READ_COMPOSED_LINE routine, *(P) Concepts*, 7–28; *(P) SMG$*, 1–7, 3–2, SMG–259
SMG$READ_FROM_DISPLAY routine, *(P) Concepts*, 7–24; *(P) SMG$*, 2–12, SMG–264
SMG$READ_KEYSTROKE routine, *(P) SMG$*, 3–1, SMG–269
SMG$READ_LOCATOR routine, *(P) SMG$*, SMG–276
SMG$READ_STRING routine, *(P) Concepts*, 7–24; *(P) SMG$*, 1–7, 3–1, SMG–279
SMG$READ_VERIFY routine, *(P) SMG$*, 3–1, SMG–290
SMG$REMOVE_LINE routine, *(P) SMG$*, 2–10, SMG–296
SMG$REPAINT_LINE routine, *(P) SMG$*, SMG–298
SMG$REPAINT_SCREEN routine, *(P) SMG$*, SMG–300
SMG$REPASTE_VIRTUAL_DISPLAY routine, *(P) SMG$*, 2–3, SMG–304
SMG$REPLACE_INPUT_LINE routine, *(P) SMG$*, SMG–310
SMG$RESTORE_PHYSICAL_SCREEN routine, *(P) Concepts*, 7–30; *(P) SMG$*, 6–3, SMG–313
SMG$RETURN_CURSOR_POS routine, *(P) Concepts*, 7–18; *(P) SMG$*, 2–6, SMG–315
SMG$RETURN_INPUT_LINE routine, *(P) SMG$*, SMG–317
SMG$RING_BELL routine, *(P) SMG$*, SMG–320
SMG$SAVE_PHYSICAL_SCREEN routine, *(P) Concepts*, 7–30; *(P) SMG$*, 6–3, SMG–321
SMG$SAVE_VIRTUAL_DISPLAY routine, *(P) SMG$*, 2–15, SMG–323
SMG$SCROLL_DISPLAY_AREA routine, *(P) Concepts*, 7–20; *(P) SMG$*, SMG–325

SMG$SCROLL_VIEWPORT routine, *(P) SMG$*, 2–13, SMG–328
SMG$SELECT_FROM_MENU routine, *(P) SMG$*, 2–14, SMG–335
SMG$SET_BROADCAST_TRAPPING routine, *(P) SMG$*, 4–2, SMG–351
SMG$SET_CURSOR_ABS routine, *(P) Concepts*, 7–18; *(P) SMG$*, 2–7, SMG–353
SMG$SET_CURSOR_MODE routine, *(P) SMG$*, SMG–355
SMG$SET_CURSOR_REL routine, *(P) Concepts*, 7–18; *(P) SMG$*, 2–7, SMG–357
SMG$SET_DEFAULT_STATE routine, *(P) SMG$*, SMG–359
SMG$SET_DISPLAY_SCROLL_REGION routine, *(P) Concepts*, 7–20; *(P) SMG$*, SMG–361
SMG$SET_KEYPAD_MODE routine, *(P) SMG$*, 3–2, SMG–363
SMG$SET_OUT_OF_BAND_ASTS routine, *(P) SMG$*, 4–2, SMG–365
SMG$SET_PHYSICAL_CURSOR routine, *(P) Concepts*, 7–18; *(P) SMG$*, SMG–369
SMG$SET_TERM_CHARACTERISTICS routine, *(P) SMG$*, SMG–371
SMG$SNAPSHOT routine, *(P) SMG$*, 2–15, SMG–375
SMG$SNAPSHOT_TO_PRINTER routine, *(P) SMG$*, 2–15, SMG–377
SMG$UNPASTE_VIRTUAL_DISPLAY routine, *(P) Concepts*, 7–15; *(P) SMG$*, 2–2, 6–2, SMG–379
SMISERVER process, *(S) Sys Mgr Essentials*, 2–12
  attributes of, *(S) Sys Mgr Essentials*, 2–16
    changing, *(S) Sys Mgr Essentials*, 2–16
  starting, *(S) Sys Mgr Essentials*, 2–12
    in system startup, *(S) Sys Mgr Essentials*, 5–5
SMP (symmetric multiprocessing), *(G) SW Overview*, 1–4; *(S) DECamds*, 2–3
  See also Multiprocessing
  after CPU failure, *(S) Dependable*, 4–12
  equivalent processing functions, *(S) Dependable*, 4–4
  features of multiple CPUs, *(S) Dependable*, 5–10
SMP_CPUS system parameter, *(S) Sys Mgr Tuning*, 26–3, 26–6
SMTP (Simple Mail Transfer Protocol), *(S) TCP/IP*, 2–5
Snapshot facility (Snapshot), *(S) Sys Mgr Essentials*, 4–19
Snapshot files
  displaying information in, *(P) VAX SDA*, SDA–168
SNMP (Simple Network Management Protocol), *(S) TCP/IP*, 2–5
Soft faults
  characterizing, *(S) VAX Perform*, 4–6
Software
  Refer also to the *OpenVMS Software Overview*
  analyzing options, *(S) Dependable*, 3–7 to 3–12
  application software dependability features, *(S) Dependable*, 8–35 to 8–58
  building block, *(S) Dependable*, 1–15 to 1–16
  evolution, *(S) Dependable*, 8–31
  fifth generation languages (5GL), *(S) Dependable*, 3–9
  fourth generation languages (4GL), *(S) Dependable*, 3–9
  managing shared information, *(S) Dependable*, 8–58 to 8–61
  OpenVMS dependability features, *(S) Dependable*, 8–10 to 8–28
  prototyping applications, *(S) Dependable*, 8–31 to 8–33
  quality metrics and mindsets, *(S) Dependable*, 3–10
  remote access with DNS, *(S) Dependable*, 8–60
  scalability, *(S) Dependable*, 8–30
  systems integration, *(S) Dependable*, 8–31
  transaction processing, *(S) Dependable*, 3–9
  writing custom applications, *(S) Dependable*, 3–8
Software development
  environment, *(G) SW Overview*, 4–18
  life cycle, *(G) SW Overview*, 4–3
  tools, *(G) SW Overview*, 4–2, 6–14
Software errors, *(P) File Appl*, 10–2
  DECnet messages, *(S) DECnet Intro*, 3–31
  OPCOM failure, *(S) Sys Mgr Essentials*, 2–22
  queue manager, *(S) Sys Mgr Essentials*, 12–14
  when booting, *(S) Sys Mgr Essentials*, 4–16
Software fault tolerance
  provided by DEC Reliable Transaction Router, *(S) Dependable*, 8–2 to 8–10
Software installation
  See also Installing software
  identifying kit location, *(S) Sys Mgr Essentials*, 3–28
Software interrupt status register, *(P) Alpha SDA*, SDA–16
Software license
  definition, *(S) Sys Mgr Essentials*, 3–8
Software loopback tests, *(S) DECnet Intro*, 4–9; *(S) DECnet Mgmt*, 7–6, 7–7
Software Performance Reports
  See SPRs
Software products
  consistent installation of, *(S) Sys Mgr Essentials*, 3–22

Software products (cont'd)
converting formats, *(S) Sys Mgr Essentials*, 3–33
copying to new locations, *(S) Sys Mgr Essentials*, 3–33
dependencies on other products, *(S) Sys Mgr Essentials*, 3–27
installing more than one, *(S) Sys Mgr Essentials*, 3–29
reconfiguring after installing, *(S) Sys Mgr Essentials*, 3–32
registering noncompliant software, *(S) Sys Mgr Essentials*, 3–27
release notes, *(S) Sys Mgr Essentials*, 3–29
removing after installing, *(S) Sys Mgr Essentials*, 3–34
tracking dependencies of, *(S) Sys Mgr Essentials*, 3–27
Software transmissions
loading downline to target node, *(S) DECnet Mgmt Util*, 3–44
loading downline to target node on specified circuit, *(S) DECnet Mgmt Util*, 3–47
SOGW user category abbreviation, *(S) Security*, 4–24; *(S) Sys Mgr Essentials*, 11–8
Solid-state disks, *(S) VAX Perform*, 3–33
SONET OC-3 Intersite Link Specifications, *(G) V7.0 New Feat*, D–10
SOR$$STAT routine, *(P) Util Routines*, SOR–49
SOR$BEGIN_MERGE routine, *(P) Util Routines*, SOR–17
SOR$BEGIN_SORT routine, *(P) Util Routines*, SOR–24
SOR$DTYPE routine, *(P) Util Routines*, SOR–30
SOR$END_SORT routine, *(P) Util Routines*, SOR–33
SOR$PASS_FILES routine, *(P) Util Routines*, SOR–35
SOR$RELEASE_REC routine, *(P) Util Routines*, SOR–40
SOR$RETURN_REC routine, *(P) Util Routines*, SOR–42
SOR$ routines
high-performance Sort/Merge utility, *(G) V7.0 New Feat*, 4–8
SOR$SORT_MERGE routine, *(P) Util Routines*, SOR–44
SOR$SPEC_FILE routine, *(P) Util Routines*, SOR–47
SOR routines, *(P) Util Routines*, SOR–1
examples, *(P) Util Routines*, SOR–4 to SOR–16
interface
file, *(P) Util Routines*, SOR–2
record, *(P) Util Routines*, SOR–2
list of, *(P) Util Routines*, SOR–1
reentrancy using context argument, *(P) Util Routines*, SOR–3
SORT command, *(G) User*, 11–1; *(G) DCL N-Z*, DCLII–364
See also Sort/Merge utility (SORT/MERGE)
high-performance Sort/Merge utility, *(G) V7.0 New Feat*, 2–4
in command procedure, *(G) User*, 11–9
in network operations, *(S) DECnet Intro*, 2–8
/KEY qualifier, *(G) User*, 11–2, 11–4
/NODUPLICATES qualifier, *(G) User*, 11–5
/STABLE qualifier, *(G) User*, 11–5
using default key records, *(G) User*, 11–3
Sorting
suggestions for improving performance, *(P) Rec Mgmt Util*, 2–16
Sorting data, *(S) DECamds*, 5–12
Sort/Merge utility (SORT/MERGE), *(G) SW Overview*, 5–11
collating sequence, *(G) User*, 11–7
default, *(G) User*, 11–7
defined, *(G) User*, 11–8
EBCDIC, *(G) User*, 11–8
multinational, *(G) User*, 11–8
NCS, *(G) User*, 11–8
entering records from a terminal, *(G) User*, 11–12
high-performance Sort/Merge utility, *(G) V7.0 New Feat*, 2–4, 4–8
improving performance, *(G) User*, 11–15
during sorting, *(G) User*, 11–16, 11–17
managing work files, *(G) User*, 11–17
modifying working set extent, *(G) User*, 11–18
/STATISTICS qualifier, *(G) User*, 11–15
keys, *(P) Util Routines*, SOR–1
merging files, *(G) User*, 11–10
when sorted by key field, *(G) User*, 11–11
merging records
with identical key fields, *(G) User*, 11–11
open file limitation, *(P) Rec Mgmt Util*, 2–16
optimizing batch queues for, *(S) Sys Mgr Essentials*, 13–31
output files, *(G) User*, 11–6
qualifiers, *(G) User*, 11–18 to 11–22
for input file specification, *(G) User*, 11–19
for output file specification, *(G) User*, 11–19
in specification files, *(G) User*, 11–20
with SORT and MERGE commands, *(G) User*, 11–18
running as a batch job, *(G) User*, 11–9
command procedure, *(G) User*, 11–9
including input records, *(G) User*, 11–9
SORT command, *(G) User*, 11–1
sorting
by key field, *(G) User*, 11–4
noncharacter data files, *(G) User*, 11–7
record fields, *(G) User*, 11–2
records, *(G) User*, 11–1, 11–2

Sort/Merge utility (SORT/MERGE)
sorting (cont'd)
with identical key fields, *(G) User*, 11–5, 11–6
with multiple key field, *(G) User*, 11–4
specification files, *(G) User*, 11–12, 11–13
creating, *(G) User*, 11–13
format, *(G) User*, 11–12
including comments, *(G) User*, 11–13
order of qualifiers, *(G) User*, 11–13
overriding commands, *(G) User*, 11–13
using default key records, *(G) User*, 11–3
using over the network, *(S) DECnet Intro*, 2–8
Sort order
effect on record retrieval, *(P) File Appl*, 2–5
establishing, *(P) RMS Ref*, 6–6
Source and destination locations of software kits, *(S) Sys Mgr Essentials*, 3–28
SOURCE attribute, *(P) Rec Mgmt Util*, 4–36
Source Code Analyzer
DEC LSE/SCA, *(S) Dependable*, 8–58
Source directory
displaying, *(P) Debugger*, 10–2, CD–278
search list, *(P) Debugger*, 10–2, CD–34, CD–207
Source display, *(P) Debugger*, 3–1, 6–3, 10–1, 11–1
discrepancies in, *(P) Debugger*, 3–2, 3–4, 11–4, 13–1
display kind, *(P) Debugger*, 11–18
EXAMINE/SOURCE command, *(P) Debugger*, 10–4, 11–6, 11–18
for routine on call stack, *(P) Debugger*, 3–23, 11–6, CD–201
line-oriented, *(P) Debugger*, 10–3
main window, *(P) Debugger*, 1–5
margins in, *(P) Debugger*, 10–8, CD–261
multiprocess program, *(P) Debugger*, 14–15
not available, *(P) Debugger*, 3–4, 6–4, 6–5, 10–1, 11–4, CD–207
optimized code, *(P) Debugger*, 3–2, 5–5, 11–7, 13–1
SEARCH command, *(P) Debugger*, 10–5, CD–148
SET BREAK command, *(P) Debugger*, 10–7
SET SCOPE/CURRENT command, *(P) Debugger*, 11–6, CD–201
SET STEP command, *(P) Debugger*, 10–7, CD–211
SET TRACE command, *(P) Debugger*, 10–7
SET WATCH command, *(P) Debugger*, 10–7
source browser, *(P) Debugger*, 3–2, 3–4
SRC, predefined, *(P) Debugger*, 11–4
STEP command, *(P) Debugger*, 10–7
TYPE command, *(P) Debugger*, 10–3, CD–310
Source files
See also Message source files
correct version of, *(P) Debugger*, CD–207, CD–278
Source files (cont'd)
defined, *(P) Debugger*, 10–2
file specification, *(P) Debugger*, 10–2
location, *(P) Debugger*, 3–4, 10–2, CD–34, CD–207, CD–278
not available, *(P) Debugger*, 3–4, 10–2, CD–207
Source files for installing software
PCSI$SOURCE location, *(S) Sys Mgr Essentials*, 3–28
specifying location, *(S) Sys Mgr Essentials*, 3–28
Source file statements
See Message source file statements
Source lines
breakpoint on, *(P) Debugger*, 3–8, 7–6
not available, *(P) Debugger*, 3–4, 6–4, 10–1
tracepoint on, *(P) Debugger*, 7–6
Source parameter
VMSINSTAL.COM, *(S) Sys Mgr Essentials*, 3–11
/SOURCE qualifier, *(P) Debugger*, 10–4, 10–7, 11–6, 11–21, 16–28, CD–107, CD–153, CD–162, CD–224, CD–235, CD–301
Source-related events, *(S) DECnet Mgmt*, 2–28
Source statements in FDL files, *(P) Rec Mgmt Util*, 6–1
Source task, *(S) DECnet Mgmt*, 8–11
%SOURCE_SCOPE, *(P) Debugger*, 11–6, 11–18
Space service, *(P) RMS Ref*, RMS–99
condition values, *(P) RMS Ref*, RMS–100
control block input fields, *(P) RMS Ref*, RMS–100
control block output fields, *(P) RMS Ref*, RMS–100
Spanning block boundaries
stream records, *(P) File Appl*, 2–13
SPAWN command, *(G) User*, 18–4; *(G) DCL N-Z*, DCLII–365 to DCLII–369; *(P) Debugger*, 5–12, CD–297; *(P) Alpha SDA*, SDA–158; *(P) VAX SDA*, SDA–183
and ATTACH command, *(S) Sys Mgmt Util M-Z*, 6–13
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–39
in LATCP, *(S) Sys Mgmt Util A-L*, 13–59
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–62
/NOLOGICAL_NAMES qualifier, *(G) User*, 18–8
/NOSYMBOL qualifier, *(G) User*, 18–8
/NOWAIT qualifier, *(G) User*, 18–5
See also ATTACH command, *(G) DCL A-M*, DCLI–50
SPAWN function
LAN Control Program (LANCP) utility, *(S) Sys Mgr Tuning*, 22–9
Spawning a subprocess, *(P) LIB$*, LIB–492

Spawning processes, security implications in restricted accounts, *(S) Security*, 7–8
Spawn mode
as execution mode for a startup procedure, *(S) Sys Mgr Essentials*, 5–19
SPAWN/NOWAIT command and Kept Debugger, *(P) Debugger*, CD–298
%SP built-in symbol, *(P) Debugger*, 8–22, B–4
Specifications
ATM Intersite Link, *(G) V7.0 New Feat*, D–10
DS3 Intersite Link, *(G) V7.0 New Feat*, D–10
T3 Intersite Link, *(G) V7.0 New Feat*, D–10
WAN Intersite Link, *(G) V7.0 New Feat*, D–10
Speed
See Performance
Spin locks, *(S) Alpha Perform*, 9–8; *(P) Concepts*, 14–27
definition, *(S) Alpha Perform*, 9–1
displaying SDA information, *(P) Alpha SDA*, SDA–146; *(P) VAX SDA*, SDA–170
owned, *(P) Alpha SDA*, SDA–87; *(P) VAX SDA*, SDA–96
Spiralog file system, *(G) V7.0 New Feat*, 4–18
Split-lifetime variables, *(P) Debugger*, 13–9
SPL option, *(P) Rec Mgmt Util*, 4–22
Spooled printers
See Printers
Spool-on-close option, *(P) File Appl*, 9–11
SPRs (Software Performance Reports), *(P) File Appl*, 10–2; *(P) VAX SDA*, SDA–4, SDA–31
including system dump file with, *(S) Sys Mgr Tuning*, 15–2, 15–11
submitting to report system failure, *(S) Sys Mgr Tuning*, 15–11
SP symbol, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18
SPT (system page table)
displaying, *(P) Alpha SDA*, SDA–112; *(P) VAX SDA*, SDA–26, SDA–127
in system dump file, *(G) V7.0 New Feat*, 4–20; *(P) Alpha SDA*, SDA–4; *(P) VAX SDA*, SDA–4, SDA–9
SQL (Structured Query Language), *(G) SW Overview*, 2–3, 2–4, 7–15; *(P) Environment*, 1–4, 2–2, 2–5
SQL prototyping tool, *(S) Dependable*, 8–33
SQO option, *(P) Rec Mgmt Util*, 4–23
sqrt routine, *(P) Portable Math*, DPML–56, B–13
Square root, *(P) MTH$*, MTH–103, MTH–136
SRC, source display, screen mode, *(P) Debugger*, 11–4
S/ret button, *(P) Debugger*, 1–9, 3–8
SS$_ALIGN exception, *(P) Concepts*, 13–12
signal array format, *(P) Concepts*, 13–15
SS$_DEBUG condition, *(P) Debugger*, 6–2, B–1
SS$_DEVACTIVE, *(P) I/O User*, 5–76
SS$_DEVREQERR, *(P) I/O User*, 5–76
SS$_ENDOFFILE return
LAN driver status return, *(P) I/O User*, A–8
magnetic tape status return, *(P) I/O User*, A–4
mailbox status return, *(P) I/O User*, A–5
SS$_HPARITH exception, *(P) Concepts*, 13–12
signal array format, *(P) Concepts*, 13–14
SSI and static watchpoints, *(P) Debugger*, CD–237
SSP symbol, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18
SSRVEXCEPT bugcheck, *(P) Alpha SDA*, SDA–19; *(P) VAX SDA*, SDA–21
STABACKIT.COM command procedure, *(S) Sys Mgr Essentials*, 10–52, 10–53
STACK= option, *(P) Linker*, LINK–62
Stack commands
Alpha object language, *(P) Linker*, B–28
VAX object language, *(P) Linker*, A–23
Stack corruption, effect of, *(P) Debugger*, 13–19
Stack frames, *(P) Interfaces*, 2–3
displaying in SDA, *(P) Alpha SDA*, SDA–78; *(P) VAX SDA*, SDA–83
fixed size, *(P) Calling Std*, 3–9
following a chain, *(P) Alpha SDA*, SDA–78; *(P) VAX SDA*, SDA–83
format, *(P) Calling Std*, 3–8
procedure descriptors, *(P) Calling Std*, 3–5
procedures, *(P) Calling Std*, 3–4
register save area, *(P) Calling Std*, 3–12
variable size, *(P) Calling Std*, 3–10
Stack guard area
location of, *(P) DECthreads*, E–21, E–27
Stack guard region
multithreads, *(P) Calling Std*, 3–60
Stack limit
changing size of, *(P) Sys Svc II*, SYS2–323
checking, *(P) DECthreads*, E–65
multithreads, *(P) Calling Std*, 3–60
Stack limit checking
methods, *(P) Calling Std*, 3–60
Stack memory, *(P) DECthreads*, 3–5
Stack overflow
handling, *(P) Calling Std*, 3–62
multithreads, *(P) Calling Std*, 3–60
Stack pointer, *(P) Debugger*, 8–22, B–4; *(P) VAX SDA*, SDA–18
adjusting, *(P) Sys Svc I*, SYS1–18
Stack region, *(P) Calling Std*, 3–60
Stack reserve region
checking, *(P) Calling Std*, 3–62
multithreads, *(P) Calling Std*, 3–60
Stack return
mechanism, *(P) Calling Std*, 3–56
values to top, *(P) Calling Std*, 2–7
Stacks, *(P) DECthreads*, 3–6
See also Call stacks and Scope

Stacks (cont'd)
changing minimum size of, *(P) DECthreads*, pthread–30, E–35, G–23
changing minimum size of guard area, *(P) DECthreads*, E–27
displaying contents, *(P) Alpha SDA*, SDA–151; *(P) VAX SDA*, SDA–177
for Alpha procedure calls, *(P) Interfaces*, 2–5
for VAX procedure calls, *(P) Interfaces*, 2–3
obtaining minimum size of, *(P) DECthreads*, pthread–16, E–26, G–13
obtaining minimum size of guard area, *(P) DECthreads*, E–21
overflow, *(P) DECthreads*, 3–6
preventing and detecting overflow, *(P) DECthreads*, E–21, E–27
routines for, *(P) DECthreads*, E–65
sizing, *(P) DECthreads*, 3–6
Stacksize attribute, *(P) DECthreads*, 2–6, pthread–30, E–26, E–35, G–23
obtaining, *(P) DECthreads*, pthread–16, G–13
Stack temporary area, *(P) Calling Std*, 3–11
Stack usage, *(P) Interfaces*, 2–3, 2–5; *(P) Calling Std*, 3–39, 6–7
for Alpha systems, *(P) Calling Std*, 3–8
for VAX, *(P) Calling Std*, 2–2
Stack variables, *(P) Debugger*, 3–22, 7–14, 8–1
Staffing tradeoffs, *(S) Dependable*, 4–14
Stage checks, *(S) Sys Mgmt Util A-L*, D–1
Stalled job status, *(S) Sys Mgr Essentials*, 13–69
Stalled queues
status, *(S) Sys Mgr Essentials*, 13–51
Standalone BACKUP, *(S) Sys Mgmt Util A-L*, 7–11
booting, *(S) Sys Mgr Essentials*, 10–52, 10–54
building, *(S) Sys Mgr Essentials*, 10–51, 10–53
definition, *(S) Sys Mgr Essentials*, 10–51
qualifiers, *(S) Sys Mgr Essentials*, 10–50
relation to Backup utility, *(S) Sys Mgr Essentials*, 10–51
using to back up the system disk, *(S) Sys Mgr Essentials*, 10–51, 10–55, 10–59
using to restore the system disk, *(S) Sys Mgr Essentials*, 10–57
Standalone computers
converting to cluster computer, *(S) VMScluster Sys*, 8–25
Standalone configurations, *(G) SW Overview*, 1–7
computing capabilities, *(G) SW Overview*, 6–1
Standard calls
definition, *(P) Calling Std*, 1–6
Standard-conforming procedures
definition, *(P) Calling Std*, 1–6
Standard Disk Interface (SDI), *(P) I/O User*, 2–3
Standards
ANSI, *(G) SW Overview*, 2–2
DEC Rdb support for, *(G) SW Overview*, 7–15
ISO, *(G) SW Overview*, 2–2, 6–3
Standards (cont'd)
NAS support for, *(G) SW Overview*, 6–10
open, *(G) SW Overview*, 1–1, 2–2
OpenVMS support, *(P) Environment*, 1–3, 2–2
OpenVMS support for, *(G) SW Overview*, A–1
OSF AES, *(G) SW Overview*, 2–2
OSF DCE, *(G) SW Overview*, 2–2
OSF DME, *(G) SW Overview*, 2–2
POSIX, *(G) SW Overview*, 2–2, 2–3
X/Open, *(G) SW Overview*, 2–2
Standard tape interface
See STI
Standby active system kernels, *(S) Dependable*, 4–5
Star couplers
in CI configurations, *(S) VMScluster Sys*, 3–2
STARLET.OLB file, *(P) Concepts*, 17–2, 17–5; *(P) Linker*, 2–13, LINK–14
included in image map files, *(P) Linker*, LINK–8
order of processing, *(P) Linker*, 2–18
processing by linker, *(P) Linker*, LINK–36
START/CPU command, *(G) DCL N-Z*, DCLII–370 to DCLII–371; *(S) Sys Mgr Tuning*, 26–3, 26–6
Starter programs
capturing retransmitted packets, *(S) VMScluster Sys*, F–36
Start I/O routine, *(P) Alpha SDA*, SDA–94; *(P) VAX SDA*, SDA–105
Starting debugger, *(P) Debugger*, 2–6, 5–7, 14–2, 14–13
Starting DECamds, *(S) DECamds*, 2–1
Starting InfoServer Client for OpenVMS, *(S) Sys Mgr Tuning*, 23–10
Starting kept debugger, *(P) Debugger*, 2–1
Starting key position, *(P) Rec Mgmt Util*, 4–28
Starting queues, *(G) DCL N-Z*, DCLII–372; *(S) Sys Mgr Essentials*, 13–4
See also Restarting, queues
autostart, *(G) DCL A-M*, DCLI–207, DCLI–266; *(G) DCL N-Z*, DCLII–372; *(S) Sys Mgr Essentials*, 13–48
in startup command procedure, *(S) Sys Mgr Essentials*, 13–18
relationship to activating an autostart queue, *(S) Sys Mgr Essentials*, 13–4
nonautostart, *(G) DCL A-M*, DCLI–266; *(S) Sys Mgr Essentials*, 13–16, 13–48
in startup command procedure, *(S) Sys Mgr Essentials*, 13–18
queue manager, *(G) DCL N-Z*, DCLII–384
Starting queue status, *(S) Sys Mgr Essentials*, 13–51

Starting the Data Analyzer, *(S) DECamds*, 2–1, A–15
Starting the Data Provider, *(S) DECamds*, A–14
Starting the LAT software
with LAT$STARTUP.COM, *(S) Sys Mgr Essentials*, 5–15; *(S) Sys Mgr Tuning*, 24–10, 24–11
Starting the queue manager, *(S) Sys Mgr Essentials*, 12–7
initially, *(S) Sys Mgr Essentials*, 12–7
restarting, *(S) Sys Mgr Essentials*, 12–9
STARTNET.COM command procedure, *(S) Security*, 12–16; *(S) Sys Mgr Essentials*, 5–15, 7–8; *(S) DECnet Intro*, 3–14, 3–22, 3–26, 3–32, 3–33; *(S) DECnet Mgmt*, 3–72, 5–20
Start phase of AUTOGEN
default, *(S) Sys Mgmt Util A-L*, 6–10
START/QUEUE command, *(G) DCL N-Z*, DCLII–372 to DCLII–383; *(S) Sys Mgr Essentials*, 13–18
activating an autostart queue, *(S) Sys Mgr Essentials*, 13–49
assigning a default form, *(S) Sys Mgr Essentials*, 13–63
assigning characteristics, *(S) Sys Mgr Essentials*, 13–59
canceling characteristics, *(S) Sys Mgr Essentials*, 13–59
controlling page overflow, *(S) Sys Mgr Essentials*, 13–44
mounting a form, *(S) Sys Mgr Essentials*, 13–64
resuming printing of a suspended job, *(S) Sys Mgr Essentials*, 13–76
setting block limits, *(S) Sys Mgr Essentials*, 13–32
setting scheduling policy, *(S) Sys Mgr Essentials*, 13–32
setting UIC-based protection on queues, *(S) Sys Mgr Essentials*, 13–23
specifying autostart information, *(S) Sys Mgr Essentials*, 13–15
specifying banner pages, *(S) Sys Mgr Essentials*, 13–60
specifying job processing options, *(S) Sys Mgr Essentials*, 13–31
specifying queue options with, *(S) Sys Mgr Essentials*, 13–19
specifying reset modules, *(S) Sys Mgr Essentials*, 13–65
starting a generic queue, *(S) Sys Mgr Essentials*, 13–17
starting a nonautostart queue, *(S) Sys Mgr Essentials*, 13–48
START/QUEUE/MANAGER command, *(G) DCL N-Z*, DCLII–384 to DCLII–387; *(S) Sys Mgr Essentials*, 12–7, 12–9
caution, *(S) Sys Mgr Essentials*, 12–8
creating an additional queue manager, *(S) Sys Mgr Essentials*, 12–10
creating a queue database, *(S) Sys Mgr Essentials*, 12–7
specifying failover list, *(S) Sys Mgr Essentials*, 12–9
specifying name of queue manager, *(S) Sys Mgr Essentials*, 12–10
specifying nodes to run the queue manager, *(S) Sys Mgr Essentials*, 12–6
storage of, *(S) Sys Mgr Essentials*, 12–7
STARTUP$AUTOCONFIGURE_ALL symbol, *(S) Sys Mgr Essentials*, 7–8
STARTUP$INTERACTIVE_LOGINS symbol, *(S) Sys Mgr Essentials*, 5–16
STARTUP$STARTUP_LAYERED logical name, *(S) Sys Mgr Essentials*, 5–18; *(S) Sys Mgmt Util M-Z*, 6–71
STARTUP$STARTUP_VMS logical name, *(S) Sys Mgr Essentials*, 5–18; *(S) Sys Mgmt Util M-Z*, 6–71
STARTUP.COM command procedure, *(S) Sys Mgr Essentials*, 4–4, 5–3
configuring devices, *(S) Sys Mgr Essentials*, 5–7, 7–6
definition, *(S) Sys Mgr Essentials*, 5–2
if it does not execute, *(S) Sys Mgr Essentials*, 4–16
message indicating execution of, *(S) Sys Mgr Essentials*, 4–5
tasks performed by, *(S) Sys Mgr Essentials*, 4–4, 4–12; *(S) Sys Mgr Tuning*, 16–10
STARTUP ADD command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–65
STARTUP command, *(S) Sys Mgr Essentials*, 2–11
in SYSMAN, *(S) Sys Mgr Essentials*, 5–18
Startup command procedure, *(S) Sys Mgmt Util M-Z*, 5–17, 5–31, 5–32
See also STARTUP.COM command procedure
booting without, *(S) Sys Mgr Essentials*, 4–8
changing execution mode, *(S) Sys Mgr Essentials*, 5–21
changing node restrictions, *(S) Sys Mgr Essentials*, 5–21
changing startup phase, *(S) Sys Mgr Essentials*, 5–21
coordinating, *(S) VMScluster Sys*, 5–7
creating common version, *(S) VMScluster Sys*, 5–8
creating your own, *(S) Sys Mgr Essentials*, 7–10, 7–13
DECbootsync controls satellites, *(S) VMScluster Sys*, 9–11

Startup command procedure (cont'd)
enabling a temporarily disabled, *(S) Sys Mgr Essentials*, 5–22
failure to complete, *(S) VMScluster Sys*, C–15
functions that must remain computer-specific, *(S) VMScluster Sys*, 5–8
known file lists, *(S) Sys Mgr Essentials*, 5–12
minimum startup, *(S) VMScluster Sys*, 2–10
minimum startup recommendations, *(S) VMScluster Sys*, 8–36, 8–43
modifying site-specific, *(S) Sys Mgr Essentials*, 5–2
node restriction, *(S) Sys Mgr Essentials*, 5–19
passing parameters to, *(S) Sys Mgr Essentials*, 5–19
preventing from executing, *(S) Sys Mgr Essentials*, 5–21
temporarily, *(S) Sys Mgr Essentials*, 5–22
SATELLITE_PAGE.COM
See SATELLITE_PAGE.COM command procedure
setting the name, *(S) Sys Mgmt Util M-Z*, 6–46
setting up output devices, *(S) Sys Mgr Essentials*, 13–14
site-independent
specifying an alternate, *(S) Sys Mgr Essentials*, 4–12, 4–13
site-independent file name, *(S) Sys Mgmt Util M-Z*, 5–29
site-specific, *(S) Sys Mgr Essentials*, 5–2; *(S) DECnet Intro*, 3–19, 3–25, 3–32
announcements, *(S) Sys Mgr Essentials*, 5–14
creating your own, *(S) Sys Mgr Essentials*, 5–2
definition, *(S) Sys Mgr Essentials*, 5–2
modifying, *(S) Sys Mgr Essentials*, 5–4
order of execution, *(S) Sys Mgr Essentials*, 5–3
required location, *(S) Sys Mgr Essentials*, 5–4
use in VMSKITBLD, *(S) Sys Mgr Essentials*, 5–3
versions of, *(S) Sys Mgr Essentials*, 5–3
site-specific elements, *(S) VMScluster Sys*, 5–10
specifying execution mode, *(S) Sys Mgr Essentials*, 5–20
specifying node restrictions, *(S) Sys Mgr Essentials*, 5–20
specifying startup phase, *(S) Sys Mgr Essentials*, 5–20
starting queues, *(S) Sys Mgr Essentials*, 13–18
when errors prevent you from logging in, *(S) Sys Mgr Essentials*, 4–8
Startup database
adding files to, *(S) Sys Mgr Essentials*, 5–20
changing information in, *(S) Sys Mgr Essentials*, 5–21
definition, *(S) Sys Mgr Essentials*, 5–18
deleting records in, *(S) Sys Mgr Essentials*, 5–21
disabling files in, *(S) Sys Mgr Essentials*, 5–22
establishing, *(S) Sys Mgmt Util M-Z*, 6–71
files
adding, *(S) Sys Mgmt Util M-Z*, 6–65
deleting, *(S) Sys Mgmt Util M-Z*, 6–70
disabling, *(S) Sys Mgmt Util M-Z*, 6–67
enabling, *(S) Sys Mgmt Util M-Z*, 6–68
modifying, *(S) Sys Mgmt Util M-Z*, 6–69
reenabling disabled files in, *(S) Sys Mgr Essentials*, 5–22
restriction, *(S) Sys Mgr Essentials*, 5–21
setting the default, *(S) Sys Mgmt Util M-Z*, 6–71
showing contents of, *(S) Sys Mgr Essentials*, 5–20
showing name of the target, *(S) Sys Mgr Essentials*, 5–20
specifying the current, *(S) Sys Mgr Essentials*, 5–20
STARTUP DISABLE command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–67
STARTUP ENABLE command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–68
STARTUP MODIFY command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–69
Startup phases
determining order of, *(S) Sys Mgr Essentials*, 5–18
layered product, *(S) Sys Mgr Essentials*, 5–18
operating system, *(S) Sys Mgr Essentials*, 5–4
STARTUP REMOVE command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–70
Startup restrictions
InfoServer Client for OpenVMS software, *(S) Sys Mgr Tuning*, 23–12
PATHWORKS, *(S) Sys Mgr Tuning*, 23–12
RSM, *(S) Sys Mgr Tuning*, 23–12
SYSMAN, *(S) Sys Mgr Tuning*, 23–12
STARTUP SET DATABASE command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–71
STARTUP SET OPTIONS command, *(S) Sys Mgr Essentials*, 4–15
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–72
STARTUP SHOW command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–73
STARTUP SHOW OPTIONS command, *(S) Sys Mgr Essentials*, 4–16
STARTUP_P1 system parameter, *(S) Security*, C–10; *(S) Sys Mgr Essentials*, 4–14
does not start all processes, *(S) VMScluster Sys*, 8–36, 8–43

STARTUP_P1 system parameter (cont'd)
minimum startup, *(S) VMScluster Sys*, 2–10
STARTUP_P2 system parameter, *(S) Sys Mgr Essentials*, 4–14
SYSMAN startup logging, *(S) Sys Mgr Essentials*, 4–15
STARTUP_Pn system parameters, *(S) Sys Mgmt Util M-Z*, C–39
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–66
START/ZONE command, *(G) DCL N-Z*, DCLII–388
$START_ALIGN_FAULT_REPORT routine and SET BREAK/UNALIGNED DATA, *(P) Debugger*, CD–164
/START_POSITION qualifier, *(P) Debugger*, CD–168
Statements
in command definition files, *(P) CDU, LBR, & MU*, CDU–20
message definition, *(P) CDU, LBR, & MU*, MSG–4
STAT entry point, *(P) Modular Proc*, 4–8
/STATE qualifier, *(P) Debugger*, 12–9, CD–75, CD–174, CD–257, CD–288
States, *(P) SMG$*, 3–3
circuit, *(S) DECnet Mgmt*, 2–7, 3–28
lines, *(S) DECnet Mgmt*, 2–12, 3–41
local node, *(S) DECnet Mgmt*, 2–4
logging, *(S) DECnet Mgmt*, 3–65
substates, *(S) DECnet Mgmt Util*, C–1
transitions, *(S) DECnet Mgmt Util*, C–2
STATES class record
in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–38
State transitions, *(S) VMScluster Sys*, 1–4
due to adding a member, *(S) VMScluster Sys*, 2–10
due to loss of a member, *(S) VMScluster Sys*, 2–11
overview, *(S) VMScluster Sys*, 2–10
Static asynchronous connections, *(S) DECnet Mgmt*, 1–3, 1–9
connection example, *(S) DECnet Intro*, 3–23
installing, *(S) DECnet Intro*, 3–19
local intermittent, *(S) DECnet Intro*, 3–22
network configuration, *(S) DECnet Mgmt*, 5–27
procedure for establishing, *(S) DECnet Intro*, 3–19
reasons for failure, *(S) DECnet Intro*, 4–16; *(S) DECnet Mgmt*, 5–13
receive password, *(S) DECnet Intro*, 3–21
security, *(S) DECnet Intro*, 3–21
switching of terminal line, *(S) DECnet Intro*, 3–22
transmit password, *(S) DECnet Intro*, 3–21
turning back on, *(S) DECnet Intro*, 3–22
turning on and off line and circuit, *(S) DECnet Intro*, 3–22
Static asynchronous lines, *(S) DECnet Mgmt*, 1–9, 2–13, 5–12
installing, *(S) DECnet Mgmt*, 5–12
shutting down, *(S) DECnet Mgmt*, 5–14
Static data, *(P) Calling Std*, 3–56
Static data alignment, *(P) Calling Std*, 3–56
Static memory, *(P) DECthreads*, 3–5
/STATIC qualifier, *(P) Debugger*, CD–235
Static service rating, *(S) Sys Mgmt Util A-L*, 13–15, 13–40
displaying, *(S) Sys Mgmt Util A-L*, 13–51, 13–58
Static variables, *(P) Debugger*, 3–22, 7–14, 8–1
Static watchpoints and ASTs, *(P) Debugger*, CD–237
Static watchpoints and system service calls, *(P) Debugger*, CD–237
Statistics
network performance and error, *(S) DECnet Intro*, 4–3
printing, *(S) DECnet Mgmt Util*, 4–6, 4–11
produced by Convert/Reclaim utility, *(P) Rec Mgmt Util*, 2–17, 3–3
produced by Convert utility, *(P) Rec Mgmt Util*, 2–17
reporting, *(S) DECnet Mgmt Util*, 4–4, 4–6, 4–11
/STATISTICS qualifier, *(P) File Appl*, 10–6; *(P) Debugger*, CD–288; *(P) Alpha SDA*, SDA–121; *(P) VAX SDA*, SDA–135
Statistics reports, *(P) Rec Mgmt Util*, 1–9; *(P) File Appl*, 10–6, 10–10
Status
returned by SYS$LAVC_DEFINE_NET_COMPONENT subroutine, *(S) VMScluster Sys*, E–6
returned by SYS$LAVC_DEFINE_NET_PATH subroutine, *(S) VMScluster Sys*, E–8
returned by SYS$LAVC_DISABLE_ANALYSIS subroutine, *(S) VMScluster Sys*, E–11
returned by SYS$LAVC_ENABLE_ANALYSIS subroutine, *(S) VMScluster Sys*, E–10
returned by SYS$LAVC_START_BUS subroutine, *(S) VMScluster Sys*, E–2
returned by SYS$LAVC_STOP_BUS subroutine, *(S) VMScluster Sys*, E–4
Status code
controlling command interpreter response to, *(G) DCL N-Z*, DCLII–167
system service status return, *(S) DECnet Mgmt*, 8–19, 8–31
$STATUS global symbol, *(G) DCL N-Z*, DCLII–167
changing, *(G) DCL A-M*, DCLI–227; *(G) DCL N-Z*, DCLII–54

Status of volume rebuilds, *(S) Sys Mgr Essentials*, 7–4
$STATUS symbol
  accessing value stored in, *(G) Help Msg*, 1–3
STEP button, *(P) Debugger*, 1–9, 3–7
STEP command, *(P) Debugger*, 7–2, 10–7, CD–299
  and instruction-level debugging, *(P) Debugger*, 8–19
  displaying default qualifiers for, *(P) Debugger*, CD–283
  multiprocess program, *(P) Debugger*, 14–6
  setting default qualifiers for, *(P) Debugger*, CD–211
  vectorized program, *(P) Debugger*, 15–3
STEP/OVER command and Fortran RTL routines, *(P) Debugger*, 13–18
STEP/SEMANTIC_EVENT command, *(P) Debugger*, 13–6, CD–303
STI (standard tape interface), *(S) VMScluster Sys*, 1–3
Stock
  See also Forms
  commands used with, *(S) Sys Mgr Essentials*, 13–61
  mismatch, *(S) Sys Mgr Essentials*, 13–42
    troubleshooting, *(S) Sys Mgr Essentials*, 13–80
  specifying, *(S) Sys Mgr Essentials*, 13–42
Stop button, *(P) Debugger*, 1–9, 2–6
STOP command, *(G) DCL N-Z*, DCLII–389 to DCLII–391
  in command procedures, *(G) User*, 15–14
  runaway tapes, *(G) DCL A-M*, DCLI–254
STOP/CPU command, *(G) DCL N-Z*, DCLII–392, DCLII–393; *(S) Sys Mgr Tuning*, 26–3, 26–6
Stopped queue status, *(S) Sys Mgr Essentials*, 13–51
Stop pending queue status, *(S) Sys Mgr Essentials*, 13–51
Stopping data collection, *(S) DECamds*, 2–5
Stopping queues, *(G) DCL N-Z*, DCLII–400; *(S) Sys Mgr Essentials*, 13–54
  abruptly, *(G) DCL N-Z*, DCLII–404
  all queues on a node, *(S) Sys Mgr Essentials*, 12–9, 13–55
Stopping the queue manager, *(S) Sys Mgr Essentials*, 12–9
Stopping the queue managers, *(G) DCL N-Z*, DCLII–399
STOP/QUEUE/ABORT command, *(G) DCL N-Z*, DCLII–395, DCLII–396
STOP/QUEUE command, *(G) DCL N-Z*, DCLII–394; *(S) Sys Mgr Essentials*, 13–53, 13–75
STOP/QUEUE/ENTRY command, *(G) DCL N-Z*, DCLII–397, DCLII–398
STOP/QUEUE/MANAGER/CLUSTER command, *(G) DCL N-Z*, DCLII–399; *(S) Sys Mgr Essentials*, 12–9
STOP/QUEUE/NEXT command, *(G) DCL N-Z*, DCLII–400; *(S) Sys Mgr Essentials*, 13–49, 13–54
  with autostart queues, *(S) Sys Mgr Essentials*, 13–54
STOP/QUEUE/REQUEUE command, *(G) DCL N-Z*, DCLII–401 to DCLII–403
STOP/QUEUE/RESET command, *(G) DCL N-Z*, DCLII–404, DCLII–405; *(S) Sys Mgr Essentials*, 13–49, 13–54
  with autostart queues, *(S) Sys Mgr Essentials*, 13–54
STOP/QUEUES/ON_NODE command, *(G) DCL N-Z*, DCLII–406 to DCLII–408; *(S) Sys Mgr Essentials*, 12–9
  entering before shutting down a system, *(S) Sys Mgr Essentials*, 13–55
  relationship to DISABLE AUTOSTART /QUEUES command, *(S) Sys Mgr Essentials*, 13–55
STOP/ZONE command, *(G) DCL N-Z*, DCLII–409
Storage, *(P) Modular Proc*, 2–11
  heap, *(P) Modular Proc*, 2–11
  initializing, *(P) Modular Proc*, 3–9
  stack, *(P) Modular Proc*, 2–11
  static, *(P) Modular Proc*, 2–12, A–4
  summary, *(P) Modular Proc*, 2–13
  types of, *(P) DECthreads*, 3–5
Storage bit map file, *(P) File Appl*, 1–7
  definition, *(S) Sys Mgr Tuning*, A–8
  storage control block (SCB), *(S) Sys Mgr Tuning*, A–8
Storage control blocks
  See SCBs
Storage management, *(G) SW Overview*, 3–10
  database dependability features, *(S) Dependable*, 8–35
  database failover in VMSclusters, *(S) Dependable*, 8–35
  in VMScluster configurations
    Refer to the *Guidelines for VMScluster Configurations*
  online database backups, *(S) Dependable*, 8–40
  redundant disk devices, *(S) Dependable*, 4–4
  software, *(G) SW Overview*, 2–14
  tools, *(G) SW Overview*, 3–10, 7–7
StorageWorks
  BA350/BA353 enclosures, *(G) V7.0 New Feat*, C–9
StorageWorks RAID Array, *(S) Sys Mgr Essentials*, 10–42
Store commands
  Alpha object language, *(P) Linker*, B–29
  VAX object language, *(P) Linker*, A–25

Store-conditional instructions, *(P) Concepts*, 14–8
Stored semantics file attribute, *(P) RMS Ref*, 10–10; *(P) File Appl*, 4–19
STR$ADD routine, *(P) STR$*, STR–3
STR$ANALYZE_SDESC routine, *(P) STR$*, 2–4, STR–7
STR$APPEND routine, *(P) STR$*, 2–9, STR–9
STR$CASE_BLIND_COMPARE routine, *(P) STR$*, STR–11
STR$COMPARE routine, *(P) STR$*, STR–13
STR$COMPARE_EQL routine, *(P) STR$*, STR–15
STR$COMPARE_MULTI routine, *(P) STR$*, STR–17
STR$CONCAT routine, *(P) STR$*, 2–9, STR–19
STR$COPY_DX routine, *(P) STR$*, 2–6, 2–8, STR–22
STR$COPY_R routine, *(P) STR$*, STR–24
STR$DIVIDE routine, *(P) STR$*, STR–26
STR$DUPL_CHAR routine, *(P) STR$*, STR–30
STR$ELEMENT routine, *(P) STR$*, STR–32
STR$FIND_FIRST_IN_SET routine, *(P) STR$*, STR–34
STR$FIND_FIRST_NOT_IN_SET routine, *(P) STR$*, STR–36
STR$FIND_FIRST_SUBSTRING routine, *(P) STR$*, STR–39
STR$FREE1_DX routine, *(P) STR$*, STR–42
STR$GET1_DX routine, *(P) STR$*, STR–43; *(P) File Appl*, 5–10
STR$LEFT routine, *(P) STR$*, 2–9, STR–45
STR$LEN_EXTR routine, *(P) STR$*, STR–48
STR$MATCH_WILD routine, *(P) STR$*, STR–51
STR$MUL routine, *(P) STR$*, STR–54
STR$POSITION routine, *(P) STR$*, STR–58
STR$POS_EXTRA routine, *(P) STR$*, 2–9
STR$POS_EXTR routine, *(P) STR$*, STR–61
STR$PREFIX routine, *(P) STR$*, 2–9, STR–64
STR$RECIP routine, *(P) STR$*, STR–66
STR$REPLACE routine, *(P) STR$*, STR–70
STR$RIGHT routine, *(P) STR$*, 2–9, STR–73
STR$ROUND routine, *(P) STR$*, STR–76
STR$TRANSLATE routine, *(P) STR$*, STR–80
STR$TRIM routine, *(P) STR$*, STR–83
STR$UPCASE routine, *(P) STR$*, STR–85
Strategies
  for building dependable systems, *(S) Dependable*, 1–10 to 1–12
STREAM carriage control, *(P) Rec Mgmt Util*, 2–3
STREAM formats, *(P) Rec Mgmt Util*, 4–33
Stream record format
  set of terminating characters, *(P) File Appl*, 2–13
Stream record type, *(P) File Appl*, 1–30
Stream timer, *(S) DECnet Mgmt*, 3–43
STREAM_CR format, *(P) File Appl*, 2–13
STREAM_LF format, *(P) File Appl*, 2–13
String arithmetic
  addition of decimal strings, *(P) STR$*, STR–4
  division of decimal strings, *(P) STR$*, STR–28
  multiplication, *(P) STR$*, STR–55
:= (String assignment) command, *(G) DCL A-M*, DCLI–5 to DCLI–8
String assignments
  including symbols, *(G) User*, 14–7
String data types, *(P) Calling Std*, 4–4
String descriptors, *(P) LIB$*, LIB–10, LIB–12; *(P) STR$*, STR–8
String keys, *(P) RMS Ref*, RMS–20
  specifying size value, *(P) RMS Ref*, 6–4
String key type, *(P) Rec Mgmt Util*, 4–30
String manipulation routines, *(P) STR$*, 2–1
  descriptor classes and string semantics, *(P) STR$*, 2–4
  how to select, *(P) STR$*, 2–8
  list of severe errors, *(P) STR$*, 2–10
  reading input string arguments, *(P) STR$*, 2–5
  writing output string arguments, *(P) STR$*, 2–6
/STRING qualifier, *(P) Debugger*, 10–6, CD–149
Strings, *(P) CDU, LBR, & MU*, CDU–6
  See also Descriptors
  allocating, *(P) OTS$*, OTS–93
  appending source string to end of destination string, *(P) STR$*, STR–9
  comparing for equality, no padding, *(P) STR$*, STR–15
  comparing two, *(P) STR$*, STR–13
  comparing without regard to case, *(P) STR$*, STR–11
  concatenating, *(P) STR$*, STR–20
  converting to uppercase, *(P) STR$*, STR–85
  copying by descriptor, *(P) LIB$*, LIB–434; *(P) OTS$*, OTS–87; *(P) STR$*, STR–23
  copying by reference, *(P) LIB$*, LIB–436 to LIB–438; *(P) OTS$*, OTS–89; *(P) STR$*, STR–25
  dividing two decimal strings, *(P) STR$*, STR–28
  dynamic length, *(P) STR$*, 2–2, 2–10, 2–11
    allocating, *(P) LIB$*, LIB–450 to LIB–452
    deallocating, *(P) LIB$*, LIB–447, LIB–448
  evaluation rules, *(P) STR$*, 2–1
  finding substring, *(P) STR$*, STR–59
  fixed length, *(P) STR$*, 2–1
  formatting output, *(P) Sys Svc I*, SYS1–351
  freeing, *(P) OTS$*, OTS–92
  inserting source string at front of destination, *(P) STR$*, STR–64
  maximum length of, *(P) STR$*, 2–1
  null strings, *(P) STR$*, 2–10
  output length argument, *(P) STR$*, 2–7
  position of substring in, *(P) LIB$*, LIB–291
  reciprocal of decimal string, *(P) STR$*, STR–67

Strings (cont'd)
removing trailing blanks and tabs, *(P) STR$*, STR–84
rounding or truncating a decimal string, *(P) STR$*, STR–77
searching for file specification in, *(P) Sys Svc I*, SYS1–372
semantics of, *(P) STR$*, 2–1, 2–4
skipping characters in, *(P) LIB$*, LIB–489
translating matched characters, *(P) STR$*, STR–81
String types, *(P) Debugger*, 8–16, 8–27
String with bounds descriptors, *(P) Calling Std*, 5–29
Stripe sets
shadowed, *(S) VMScluster Sys*, 6–24
Striping data on disks
dependability features, *(S) Dependable*, 8–26
Strong symbol
definition, *(P) Linker*, 2–19
reference, *(P) Linker*, 2–19
Structured Query Language
See SQL
Structure levels
defining for disks, *(G) DCL A-M*, DCLI–261
STS field
contents, *(P) RMS Ref*, 2–6
Stubs
See Program stubs
STV field
See also Completion status value field
contents, *(P) RMS Ref*, 2–6
Subdirectories
See also Directories
creating, *(G) User*, 5–3; *(G) DCL A-M*, DCLI–96
listing, *(G) User*, 5–3
setting default to another, *(G) User*, 5–5
syntax, *(G) User*, 5–3
Subkeys, *(P) CDU, LBR, & MU*, LIB–7
Sublock, *(P) Concepts*, 15–14
Submit access, *(S) Security*, 5–17
SUBMIT/AFTER command, *(G) User*, 18–11
SUBMIT command, *(G) User*, 18–10; *(G) DCL A-M*, DCLI–285; *(G) DCL N-Z*, DCLII–410 to DCLII–420
/LOG qualifier, *(G) User*, 18–14
passing parameters to command procedures with, *(G) User*, 16–5
preventing users from executing, *(S) Sys Mgr Essentials*, 13–53
processing of, *(S) Sys Mgr Essentials*, 13–2
qualifiers, *(G) User*, 18–17
/RESTART qualifier, *(G) User*, 18–19
specifying characteristics, *(S) Sys Mgr Essentials*, 13–28
SUBMIT command (cont'd)
specifying job retention, *(S) Sys Mgr Essentials*, 13–74
specifying multiple command procedures with, *(G) User*, 18–12
specifying scheduling priority, *(S) Sys Mgr Essentials*, 13–72
using with command procedures, *(G) User*, 15–24
SUBMIT/REMOTE command
in network operations, *(S) DECnet Intro*, 2–13
SUBMIT_ON_CLOSE attribute, *(P) Rec Mgmt Util*, 4–24
SUBMON.COM command procedure, *(S) Alpha Perform*, 7–7
sample, *(S) Sys Mgr Tuning*, 18–41
used with Monitor utility, *(S) Sys Mgr Tuning*, 18–39
Subnets, *(S) TCP/IP*, 2–6
Subprocesses, *(P) Concepts*, 1–1; *(P) SMG$*, 4–2; *(P) Alpha SDA*, SDA–158; *(P) VAX SDA*, SDA–183
See also Detached processes and Processes
accounting, *(G) DCL N-Z*, DCLII–60
and job trees, *(G) User*, 18–4
assigning resource quotas to, *(G) DCL N-Z*, DCLII–59
base priority, *(S) Alpha Perform*, 6–21
characteristics inherited from parent process, *(G) User*, 18–7
connecting to using LIB$ATTACH routine, *(P) Concepts*, 6–9
context, *(G) User*, 18–7
creating, *(G) User*, 18–4, 18–5; *(P) Sys Svc I*, SYS1–180; *(P) SMG$*, 4–2
multiple, *(G) User*, 18–5
with LIB$SPAWN, *(P) Concepts*, 1–3
with PPL$ routines, *(P) Concepts*, 14–27
with PPL$SPAWN, *(P) Concepts*, 1–5
with SMG$ routines, *(P) Concepts*, 7–17
with SYS$CREPRC, *(P) Concepts*, 1–5
creating from LATCP, *(S) Sys Mgmt Util A-L*, 13–6, 13–59
creating with RUN command, *(G) DCL N-Z*, DCLII–58
creating with SPAWN command, *(G) DCL N-Z*, DCLII–365; *(S) Sys Mgmt Util M-Z*, 6–62
creating with the LANCP SPAWN command, *(S) Sys Mgmt Util A-L*, 12–39
creating with the LANCP SPAWN function, *(S) Sys Mgr Tuning*, 22–9
creation of using LIB$SPAWN routine, *(P) Concepts*, 6–9
defining attributes, *(G) DCL N-Z*, DCLII–59
defining equivalence names for process-permanent logical names, *(G) DCL N-Z*, DCLII–58
definition, *(G) User*, 18–4

Subprocesses (cont'd)
deleting, *(P) SMG$*, 4–2
deleting with PPL$ routines, *(P) Concepts*, 14–27
disk and directory default, *(P) Concepts*, 1–9
displaying characteristics of, *(G) DCL N-Z*, DCLII–310
displaying quotas, *(G) DCL N-Z*, DCLII–313
establishing values for, *(S) VAX Perform*, 5–5; *(S) Alpha Perform*, 17–4
excluding characteristics from parent process, *(G) User*, 18–7
executing commands, *(P) SMG$*, 4–3
exiting, *(G) User*, 18–6
image, *(P) Concepts*, 1–9
image hibernation, *(G) DCL N-Z*, DCLII–60
input, output, and error device, *(P) Concepts*, 1–6
names, *(G) DCL N-Z*, DCLII–64
naming with RUN/PROCESS_NAME, *(G) DCL N-Z*, DCLII–60
priority setting, *(P) Concepts*, 3–30
program debugging, *(P) Concepts*, 1–10
scheduling wakeup, *(G) DCL N-Z*, DCLII–62
specifying default working set, *(G) DCL N-Z*, DCLII–66
specifying quotas, *(G) DCL N-Z*, DCLII–62
subprocess creation limit, *(S) Sys Mgr Essentials*, 6–2, 6–43
switching control of input stream, *(G) DCL A-M*, DCLI–50
switching control of input stream to, *(S) Sys Mgmt Util M-Z*, 6–13
transferring control, *(G) User*, 18–8
working set characteristics, *(S) Alpha Perform*, 6–2
SUBROUTINE command, *(G) DCL A-M*, DCLI–54, DCLI–55; *(G) DCL N-Z*, DCLII–421
Subroutines
termination of GOSUB, *(G) DCL N-Z*, DCLII–54
Substrings, *(P) STR$*, 2–1
replacing, *(P) STR$*, STR–71
Subsystem ACEs, *(S) Security*, 8–8, 13–3 to 13–5; *(S) Sys Mgmt Util A-L*, 1–15
example, *(S) Sys Mgr Essentials*, 11–10; *(S) Sys Mgmt Util A-L*, 1–15
specifying identifier characteristics, *(S) Sys Mgmt Util A-L*, 1–16
specifying identifiers, *(S) Sys Mgmt Util A-L*, 1–16
Subsystem attribute, *(S) Sys Mgmt Util A-L*, 5–21, 5–29, 5–37; *(P) Concepts*, 23–5
Subsystem level redundancy, *(S) Dependable*, 4–4
/SUBSYSTEM qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–35
Subsystems
See Protected subsystems
Subtraction
quadword times, *(P) LIB$*, LIB–510
two's complement, *(P) LIB$*, LIB–509
Subtraction operator (–), *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–16
Success completion routine, *(P) RMS Ref*, 2–4
Successor
See Logical successor
/SUFFIX qualifier, *(P) Debugger*, 14–16, CD–26, CD–91, CD–119, CD–122, CD–134, CD–144, CD–147, CD–153, CD–196, CD–250
/SUMMARY qualifier, *(P) Alpha SDA*, SDA–121; *(P) VAX SDA*, SDA–135
Summary report
example, *(S) Sys Mgmt Util A-L*, 9–24
Summary XAB
for key information, *(P) RMS Ref*, 12–1
SUMSLP editor, *(G) DCL A-M*, DCLI–202
SUMSLP utility (SUMSLP), *(P) Environment*, 5–3
Refer also to the *OpenVMS SUMSLP Utility Manual*
SUPERSEDE attribute, *(P) Rec Mgmt Util*, 4–24; *(P) File Appl*, 4–31
Supersede option, *(P) File Appl*, 4–31, 5–9
Supervisor mode, *(S) Alpha Perform*, 9–7
logical names, *(S) Sys Mgr Tuning*, 16–15
Supervisor-mode (PSL$C_SUPER) constant
for FAB$V_CHAN_MODE, *(P) RMS Ref*, 4–6
/SUPERVISOR qualifier, *(P) Alpha SDA*, SDA–151; *(P) VAX SDA*, SDA–177
Supervisor stack
displaying contents, *(P) Alpha SDA*, SDA–151; *(P) VAX SDA*, SDA–177
Supervisor stack pointer, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18
Supplementary Volume Descriptor
See SVD
Support consulting
See Digital consulting
Suppressing message display, *(S) Sys Mgr Tuning*, 14–12
Surface_Plot graph, *(P) File Appl*, 4–11, A–2
Surveillance guidelines, *(S) Security*, 6–8
Suspended processes, *(S) Alpha Perform*, 6–12
Suspended process fix, *(S) DECamds*, 4–2
Suspending a job, *(S) Sys Mgr Essentials*, 13–75
Suspend Process and Resume Process fix, *(S) DECamds*, 4–5
Suspension, *(P) Concepts*, 3–36, 3–40
compared with hibernation, *(P) Concepts*, 3–37
SVD (Supplementary Volume Descriptor), *(S) Sys Mgmt Util M-Z*, 2–36

Swap file
default data collection, *(S) DECamds*, 5–2
SWAPFILE.SYS file, *(S) Sys Mgr Tuning*, 15–4
SWAPFILE*n*_NAME symbol, *(S) Sys Mgr Tuning*, 15–17, 15–24
SWAPFILE*n*_SIZE symbol, *(S) Sys Mgr Tuning*, 15–18, 15–24
Swap files
changing size, *(S) Sys Mgmt Util A-L*, 6–3
with SWAPFILES.COM, *(S) Sys Mgr Tuning*, 15–25
created by CLUSTER_CONFIG.COM procedure, *(S) VMScluster Sys*, 8–1, 8–6
creating
with AUTOGEN, *(S) Sys Mgr Tuning*, 15–17, 15–24
with SYSGEN, *(S) Sys Mgr Tuning*, 15–18
definition, *(S) Sys Mgr Tuning*, 15–4
deleting after creating a new version, *(S) Sys Mgr Tuning*, 15–28
displaying, *(S) Sys Mgr Tuning*, 15–6
displaying the size calculated by AUTOGEN, *(S) Sys Mgr Tuning*, 15–17, 15–22; *(S) Sys Mgmt Util A-L*, 6–7
fragmentation of, *(S) Sys Mgr Tuning*, 15–27
generating a new file sized by AUTOGEN, *(S) Sys Mgmt Util A-L*, 6–7
installing
in system startup, *(S) Sys Mgr Essentials*, 5–5, 5–6; *(S) Sys Mgr Tuning*, 15–5, 15–19, 15–21
when resized with AUTOGEN, *(S) Sys Mgr Tuning*, 15–18, 15–22
with SYPAGSWPFILES.COM procedure, *(S) Sys Mgr Tuning*, 15–20
with SYSGEN, *(S) Sys Mgr Tuning*, 15–19
location
specifying for individual files, *(S) Sys Mgr Tuning*, 15–24
message indicating high fragmentation, *(S) Sys Mgr Tuning*, 15–27
monitoring usage of, *(S) Sys Mgr Tuning*, 15–6, 15–10
mounting disk during system startup, *(S) Sys Mgr Essentials*, 5–6; *(S) Sys Mgr Tuning*, 15–20
moving to improve performance, *(S) Sys Mgr Tuning*, 16–8
on a satellite, *(S) Sys Mgr Tuning*, 15–20
primary, *(S) Sys Mgr Tuning*, 15–5
purging, *(S) Sys Mgr Tuning*, 15–28
requirements
location, *(S) Sys Mgr Tuning*, 15–5
secondary, *(S) Sys Mgr Tuning*, 15–5, 15–20
tasks for managing, *(S) Sys Mgr Tuning*, 15–1
VMScluster satellite node, *(S) Sys Mgr Essentials*, 5–6
SWAPFILES.COM command procedure
changing size of primary page, swap, and dump files, *(S) Sys Mgr Tuning*, 15–25
Swap file sizes
calculating
manually, *(S) Sys Mgr Tuning*, 15–9
with AUTOGEN, *(S) Sys Mgr Tuning*, 15–5
changing
recommended method, *(S) Sys Mgr Tuning*, 15–22
when to increase, *(S) Sys Mgr Tuning*, 15–10
with AUTOGEN, *(S) Sys Mgr Tuning*, 15–22
with SYSGEN, *(S) Sys Mgr Tuning*, 15–26
determining current, *(S) Sys Mgr Tuning*, 15–23
displaying AUTOGEN's calculations, *(S) Sys Mgr Tuning*, 15–17, 15–22
specifying
for individual files, *(S) Sys Mgr Tuning*, 15–22, 15–24
total for multiple files, *(S) Sys Mgr Tuning*, 15–22, 15–23
when to increase, *(S) Sys Mgr Tuning*, 15–10
SWAPFILE symbol, *(S) Sys Mgr Tuning*, 15–24
Swapper, *(G) SW Overview*, 3–2; *(S) Alpha Perform*, 5–4, 6–11
definition, *(S) Alpha Perform*, 5–1
global symbols, *(P) VAX SDA*, SDA–65
trimming, *(S) Alpha Perform*, 5–5, 6–11
adjusting, *(S) Alpha Perform*, 17–6
alternative to swapping, *(S) Alpha Perform*, 10–6
analyzing when ineffective, *(S) Alpha Perform*, 13–11
disabling, *(S) Alpha Perform*, 6–13
dormant processes, *(S) Alpha Perform*, 6–12
first-level, *(S) Alpha Perform*, 6–12
investigating, *(S) Alpha Perform*, 13–7
memory reclamation, *(S) Alpha Perform*, 17–9
second-level, *(S) Alpha Perform*, 6–12
suspended processes, *(S) Alpha Perform*, 6–12
SWAPPER process
fixes ignored, *(S) DECamds*, 4–2
Swapper trimming
adjusting, *(S) VAX Perform*, 5–7
alternative to swapping, *(S) VAX Perform*, 3–25
analyzing when ineffective, *(S) VAX Perform*, 4–21
investigating, *(S) VAX Perform*, 4–13
memory reclamation, *(S) VAX Perform*, 5–10
overview, *(S) VAX Perform*, 2–16

Swapping, *(S) Alpha Perform*, 5–4, 5–5
artificially induced, *(S) VAX Perform*, 3–25; *(S) Alpha Perform*, 10–6
by suspension, *(P) Concepts*, 3–40
converting to system that rarely swaps, *(S) VAX Perform*, 5–8; *(S) Alpha Perform*, 17–7
effect on CPU resource, *(S) VAX Perform*, 3–25; *(S) Alpha Perform*, 10–6
effect on disk subsystem, *(S) VAX Perform*, 3–25; *(S) Alpha Perform*, 10–6
enabling for disk ACPs, *(S) VAX Perform*, 5–9; *(S) Alpha Perform*, 17–8
files, *(S) Alpha Perform*, 5–2, 6–15
for created processes, *(G) DCL N-Z*, DCLII–65
I/O activity, *(S) VAX Perform*, 3–35; *(S) Alpha Perform*, 11–7
inducing paging to reduce, *(S) VAX Perform*, 5–10; *(S) Alpha Perform*, 17–9
long waiting processes, *(S) VAX Perform*, 2–20
processes
enabling or disabling swap mode, *(G) DCL N-Z*, DCLII–179
symptoms, *(S) VAX Perform*, 4–14, 4–15, 4–20, 4–29
analyzing, *(S) Alpha Perform*, 13–8
diagnosing, *(S) Alpha Perform*, 13–8
for disks, *(S) Alpha Perform*, 14–4
for large waiting process, *(S) Alpha Perform*, 13–10
harmful, *(S) Alpha Perform*, 13–8
to move information between physical memory and files stored on disk, *(S) Sys Mgr Tuning*, 15–4
Switchhook character (%)
in Phone, *(G) User*, 7–3
Switching of terminal lines
automatic, *(S) DECnet Intro*, 3–27
manual, *(S) DECnet Intro*, 3–27
SWPOUTPGCNT system parameter
swapping and swapper trimming, *(S) VAX Perform*, 3–25, 3–29; *(S) Alpha Perform*, 10–6, 10–11
SYCONFIG.COM command procedure, *(S) Sys Mgr Essentials*, 5–3
AUTOGEN failure, *(S) Sys Mgr Essentials*, 7–9
configuring devices, *(S) Sys Mgr Essentials*, 7–6
in startup, *(S) Sys Mgr Essentials*, 5–4
modifying to connect special devices, *(S) Sys Mgr Essentials*, 5–7
modifying to mount disks early, *(S) Sys Mgr Essentials*, 5–12
STARTUP$AUTOCONFIGURE_ALL symbol, *(S) Sys Mgr Essentials*, 7–8
SYLOGICALS.COM command procedure, *(S) Sys Mgr Essentials*, 5–3, 5–8
in system startup, *(S) Sys Mgr Essentials*, 5–5
mounting the queue database disk, *(S) Sys Mgr Essentials*, 12–6
redefining location of master file of queue database, *(S) Sys Mgr Essentials*, 12–6
redefining location of system files, *(S) Sys Mgr Tuning*, 16–8
to specify default state of operator log files, *(S) Sys Mgr Tuning*, 18–23
SYLOGIN.COM command procedure, *(G) User*, 18–10; *(S) Sys Mgr Essentials*, 5–16, 6–20
ensuring execution, *(S) Sys Mgr Essentials*, 6–13
sample systemwide, *(S) Sys Mgr Essentials*, 6–20
SYLOGOUT.COM command procedure, *(S) Sys Mgr Essentials*, 6–22
Symbiont/Job Controller Interface routines
See SMB routines
Symbiont/Job Controller Routines, *(G) V7.0 New Feat*, 4–22
Symbionts, *(S) Sys Mgr Essentials*, 13–53
See also Queues
active stream, *(P) Util Routines*, PSM–3
allocating memory, *(P) Util Routines*, SMB–4
bypass formatting, *(S) Sys Mgr Essentials*, 13–44
carriage control, processing of, *(P) Util Routines*, PSM–11
communicating with, *(S) Sys Mgr Essentials*, 13–75
connecting to a device, *(P) Util Routines*, SMB–4
customer-written, *(G) DCL A-M*, DCLI–265
default, *(G) DCL A-M*, DCLI–265; *(S) Sys Mgr Essentials*, 13–3
demand input routines, *(P) Util Routines*, PSM–6
determining, *(S) Sys Mgr Essentials*, 13–78
device, *(P) Util Routines*, PSM–2
environments, *(P) Util Routines*, SMB–5
for LAT printers, *(S) Sys Mgr Essentials*, 13–3, 13–78
function of, *(S) Sys Mgr Essentials*, 12–3, 13–2; *(P) Util Routines*, PSM–4, SMB–2
input, *(P) Util Routines*, PSM–2, SMB–1
INPSMB.EXE file, *(P) Util Routines*, SMB–1
internal logic, *(P) Util Routines*, PSM–5
main format routine, *(P) Util Routines*, PSM–13
main input routine, *(P) Util Routines*, PSM–10
main output routine, *(P) Util Routines*, PSM–14

Symbionts (cont'd)
invoking, *(P) Util Routines*, PSM–22
job controller, communication with, *(P) Util Routines*, SMB–1
job controller requests, *(P) Util Routines*, SMB–5
asynchronous, *(P) Util Routines*, SMB–6
processing, *(P) Util Routines*, SMB–10
reading, *(P) Util Routines*, SMB–7
responding, *(P) Util Routines*, SMB–13
synchronous, *(P) Util Routines*, SMB–5
LATSYM, *(S) Sys Mgr Essentials*, 13–3, 13–78
modifying, *(P) Util Routines*, PSM–1, PSM–7, SMB–3
format routine, *(P) Util Routines*, PSM–12
guidelines, *(P) Util Routines*, PSM–8
initialization routine, *(P) Util Routines*, PSM–15
input routine, *(P) Util Routines*, PSM–10
integration of routines, *(P) Util Routines*, PSM–16
output routine, *(P) Util Routines*, PSM–13
restrictions, *(P) Util Routines*, PSM–8
multiple streams, *(P) Util Routines*, PSM–3, SMB–7
multithreaded, *(P) Util Routines*, PSM–3
output, *(P) Util Routines*, PSM–2, SMB–1
PRTSMB.EXE file, *(P) Util Routines*, SMB–1
printer, *(P) Util Routines*, SMB–1
processing, *(P) Util Routines*, PSM–1
process-permanent file, *(P) Util Routines*, SMB–4
PRTSMB on LAT printers, *(S) Sys Mgr Essentials*, 13–78
role in processing print jobs, *(S) Sys Mgr Essentials*, 13–3
server, *(P) Util Routines*, PSM–2, SMB–1
single stream, *(P) Util Routines*, PSM–3, SMB–7
special purpose, *(G) DCL A-M*, DCLI–265
system MAXBUF parameter, *(P) Util Routines*, PSM–7
type, *(P) Util Routines*, SMB–1
user-written, *(S) Sys Mgr Essentials*, 13–3; *(P) Util Routines*, PSM–1, SMB–1, SMB–3
user-written guidelines, *(P) Util Routines*, SMB–4
user-written interfaces, *(P) Util Routines*, PSM–7
Symbiont thread, *(P) Util Routines*, PSM–3
SYMBOL= option, *(P) Linker*, LINK–63
Symbol definition macros
description, *(P) RMS Ref*, A–1
using, *(P) RMS Ref*, A–7
Symbol definitions, *(P) Modular Proc*, A–4
Symbolic addresses
use in locating start of control block, *(P) RMS Ref*, A–6
Symbolic bit offsets
use in specifying options, *(P) RMS Ref*, 2–3
Symbolic codes
for condition values, *(P) Interfaces*, 4–8
Symbolic mode, *(P) Debugger*, 8–13, CD–185
Symbolic naming exceptions
control block, *(P) RMS Ref*, 2–3
Symbolic offsets
control block, *(P) RMS Ref*, 2–3
format, *(P) RMS Ref*, 2–2
use in locating control block fields, *(P) RMS Ref*, 2–2
/SYMBOLIC qualifier, *(P) Debugger*, 8–13, CD–108
Symbolize
address, *(P) Debugger*, CD–306
register, *(P) Debugger*, CD–306
SYMBOLIZE command, *(P) Debugger*, 7–8, 8–13, CD–306
Symbolizing
address, *(P) Debugger*, 7–8, 8–13
register, *(P) Debugger*, 8–13
vector register, *(P) Debugger*, 15–1
Symbol resolution processing
definition, *(P) Linker*, 1–2
description, *(P) Linker*, 2–2
handling undefined symbols, *(P) Linker*, 2–5
of object modules, *(P) Linker*, 2–6
ordering of input files, *(P) Linker*, 2–15
overview, *(P) Linker*, 2–1
performed by linker, *(P) Linker*, 1–2
processing default libraries, *(P) Linker*, 2–13
processing files selectively, *(P) Linker*, 2–14
specifying selective processing, *(P) Linker*, LINK–28
types of input files included, *(P) Linker*, 2–5
Symbols, *(P) CDU, LBR, & MU*, CDU–6; *(P) VAX SDA*, SDA–17 to SDA–19
See also CLI symbols, Global symbols, Local symbols, Logical names, Universal symbols, and Symbol resolution processing
abbreviating, *(G) User*, 14–4
ambiguity, resolving, *(P) Debugger*, 9–7
ampersand (&), *(G) User*, 14–32 to 14–33
and arithmetic operations, *(G) User*, 14–15, 14–16
and character strings, *(G) User*, 14–8
and expressions, *(G) User*, 14–8
and numeric expressions, *(G) User*, 14–15
apostrophe ('), *(G) User*, 14–31
as DCL command, *(G) User*, 14–4
as foreign commands, *(G) User*, 14–5
assigning value with READ command, *(G) DCL N-Z*, DCLII–32
asterisk (*), *(G) User*, 14–4

Symbols (cont'd)
binary overlay in, *(G) DCL A-M*, DCLI–1
built-in, *(P) Debugger*, 6–2, B–3
character overlays in, *(G) DCL A-M*, DCLI–6
character string expressions, *(G) User*, 14–9, 14–10
character string operations, *(G) User*, 14–10
compared to logical names, *(G) User*, 14–2
comparing numbers, *(G) User*, 14–16, 14–17
compiler generated type, *(P) Debugger*, 8–4
concatenating, *(G) User*, 14–7
creating with assignment statement, *(G) User*, 14–3
cross-referenced in image map file, *(P) Linker*, 5–8
declaring universal symbols on Alpha systems, *(P) Linker*, 4–8
declaring universal symbols on VAX systems, *(P) Linker*, 4–2
defining, *(G) User*, 14–3; *(P) Concepts*, 17–3; *(P) Debugger*, 12–6, CD–63
as a symbol, *(G) User*, 14–6
as lexical functions, *(G) User*, 14–21, 14–22
character strings, *(G) User*, 14–9
defining character strings, *(G) User*, 14–9
defining for SDA, *(P) Alpha SDA*, SDA–40; *(P) VAX SDA*, SDA–48
defining in MODPARAMS.DAT file, *(S) Sys Mgr Tuning*, 14–19, 15–17
defining shared information, *(S) Dependable*, 8–60
definition, *(G) User*, 14–1
definition macros, *(P) Interfaces*, A–4
deleting, *(G) User*, 14–6
from global symbol tables, *(G) DCL A-M*, DCLI–151
from local symbol tables, *(G) DCL A-M*, DCLI–151
displaying, *(G) DCL N-Z*, DCLII–340; *(P) Debugger*, 9–8, 12–6, CD–63, CD–284
displaying values, *(G) User*, 14–6
evaluating, *(G) User*, 14–24; *(P) Alpha SDA*, SDA–157; *(P) VAX SDA*, SDA–181
finding in memory location, *(P) VAX SDA*, SDA–27
for argument lists, *(P) Interfaces*, A–4
for page, swap, and dump file sizes, *(S) Sys Mgr Tuning*, 15–23 to 15–25
for system parameters, *(S) Sys Mgr Tuning*, 14–19
general assignment, *(G) DCL A-M*, DCLI–1
global, *(G) User*, 14–3, 14–4; *(P) Linker*, 2–1
determining the address of, *(P) Linker*, 3–18
identifying with F$TYPE lexical function, *(G) User*, 17–18
image setting, *(P) Debugger*, 9–13

Symbols (cont'd)
implemented as overlaid program sections, *(P) Linker*, 2–1
indicating numeric values, *(G) User*, 14–14, 14–24
in string assignments, *(G) User*, 14–7
interactive assignment in command procedures, *(G) DCL A-M*, DCLI–278
label, *(P) Debugger*, 7–6, 9–1
line number, *(P) Debugger*, 7–7, 9–1
listed by name in image map file, *(P) Linker*, 5–8
listed by value in image map file, *(P) Linker*, 5–9
listing, *(P) Alpha SDA*, SDA–157; *(P) VAX SDA*, SDA–181
loading into the SDA symbol table, *(P) Alpha SDA*, SDA–60; *(P) VAX SDA*, SDA–63
local, *(G) User*, 14–3; *(P) Linker*, 2–1; *(P) Debugger*, 3–22
logical data, *(G) User*, 14–18, 14–19
masking, *(G) DCL N-Z*, DCLII–210
module setting, *(P) Debugger*, 9–5
name, *(P) Alpha SDA*, SDA–40; *(P) VAX SDA*, SDA–17, SDA–48
not in symbol table, *(P) Debugger*, 9–5, 9–14
not unique, *(P) Debugger*, 3–23, 9–8
numeric overlays, *(G) User*, 14–18
NUM_ETHERADAPT, *(S) Sys Mgr Tuning*, 14–21
NUM_NODES, *(S) Sys Mgr Tuning*, 14–21
overloaded, *(P) Debugger*, 16–28
PAGEFILE*n*_NAME, *(S) Sys Mgr Tuning*, 15–17
PAGEFILE*n*_SIZE, *(S) Sys Mgr Tuning*, 15–18
referring to, *(P) Concepts*, 17–3
relation to address expression, *(P) Debugger*, 8–4
relation to path name, *(P) Debugger*, 9–8
representing executive modules, *(P) Alpha SDA*, SDA–97; *(P) VAX SDA*, SDA–111
resolving ambiguities, *(P) Debugger*, 3–23
routine, *(P) Debugger*, 7–6, 9–1
search based on call stack, *(P) Debugger*, 3–23, 9–11, CD–201
search conventions, *(P) Debugger*, 7–7, 9–7, CD–202
SET SCOPE command, *(P) Debugger*, 9–10, CD–201
shareable image, *(P) Debugger*, 9–13
SHOW SYMBOL command, *(P) Debugger*, 9–8
STARTUP$AUTOCONFIGURE_ALL, *(S) Sys Mgr Essentials*, 7–8
STARTUP$INTERACTIVE_LOGINS, *(S) Sys Mgr Essentials*, 5–16
storage, *(P) Concepts*, 17–3
string assignment, *(G) DCL A-M*, DCLI–5
strong, *(P) Linker*, 2–1, 2–19

Symbols (cont'd)
strong definition of, *(P) Linker*, 2–20
substitution, *(G) User*, 14–5, 14–29
automatic, *(G) User*, 14–29
command input scanning, *(G) User*, 14–34
command parsing, *(G) User*, 14–34
expression evaluation, *(G) User*, 14–34
forced, *(G) User*, 14–30
iterative, *(G) User*, 14–34
on data lines, *(G) User*, 14–34
operators, *(G) User*, 14–31
order of, *(G) User*, 14–30, 14–31
phases, *(G) User*, 14–33
repetitive, *(G) User*, 14–34
using an Ampersand (&), *(G) User*, 14–32 to 14–33
using an apostrophe ('), *(G) User*, 14–31, 14–32
SWAPFILE*n*_NAME, *(S) Sys Mgr Tuning*, 15–17
SWAPFILE*n*_SIZE, *(S) Sys Mgr Tuning*, 15–18
symbolic mode, *(P) Debugger*, 8–13, CD–185
symbol resolution processing, *(P) Linker*, 2–2
traceback information, *(P) Debugger*, 9–3
types of, *(P) Linker*, 2–1
types of characters, *(G) User*, 14–8
undefined, *(G) User*, 14–37
universal, *(P) Linker*, 2–1
unresolved, *(P) Concepts*, 17–4
user-defined, *(P) Alpha SDA*, SDA–40; *(P) VAX SDA*, SDA–48
using as variables, *(G) User*, 14–8
variable, *(P) Debugger*, 7–11, 8–1, 8–14, 9–1
vectored symbol definition subrecords, *(P) Linker*, B–26
vector register, *(P) Debugger*, 15–1
weak, *(P) Linker*, 2–1, 2–19
weak definition of, *(P) Linker*, 2–20
Symbol scope
definition, *(G) User*, 14–28
global, *(G) User*, 14–29
local, *(G) User*, 14–28
SYMBOLS qualifier
for SDA EVALUATE command, *(P) VAX SDA*, SDA–53
/SYMBOLS qualifier
for EVALUATE, *(P) Alpha SDA*, SDA–45
Symbol substitutions
forcing in character strings, *(G) User*, 16–10
Symbol table files
as linker input files, *(P) Linker*, 1–10
controlling the contents of, *(P) Linker*, LINK–64
creating, *(P) Linker*, 1–14, LINK–32
naming, *(P) Linker*, LINK–32
reading into SDA symbol table, *(P) Alpha SDA*, SDA–60; *(P) VAX SDA*, SDA–63
Symbol table files (cont'd)
using with SDA utility, *(P) Linker*, 1–10, LINK–32
Symbol tables, *(G) User*, 14–26
See also GSTs, Local symbol tables, SDA symbol table, and System symbol table
command interpreter, *(S) Sys Mgmt Util M-Z*, C–11
global, *(G) User*, 14–26, 14–27
$RESTART symbol, *(G) User*, 14–27
$SEVERITY symbol, *(G) User*, 14–27
$STATUS symbol, *(G) User*, 14–27
local, *(G) User*, 14–26
parameters, *(G) User*, 14–26
search order, *(G) User*, 14–27
specifying an alternate SDA, *(P) Alpha SDA*, SDA–34; *(P) VAX SDA*, SDA–40
Symbol vectors
creating, *(P) Linker*, 4–8, LINK–65
declaring alias names for universal symbols, *(P) Linker*, 4–11
ensuring upward compatibility on Alpha systems, *(P) Linker*, 4–9
guidelines, *(P) Linker*, 4–9
in program section, *(P) Linker*, 3–3
run-time flow of control, *(P) Linker*, 4–8
SYMBOL_TABLE= option, *(P) Linker*, LINK–64
/SYMBOL_TABLE qualifier, *(P) Linker*, LINK–32
SYMBOL_VECTOR= option, *(P) Linker*, LINK–65
declaring universal symbols, *(P) Linker*, 4–8
Symmetric multiprocessing
See SMP and Multiprocessing
Symmetric vector processing configuration, *(S) Sys Mgr Tuning*, 26–4
/SYMVA qualifier, *(P) Alpha SDA*, SDA–60
$SYMVECT program section, *(P) Linker*, 3–3
Synchronization
See also Event synchronization and Parallel processing
asynchronous system traps, *(P) Concepts*, 4–1
barrier, *(P) Concepts*, 14–28
debugging vectorized program, *(P) Debugger*, 15–19, CD–232, CD–294, CD–308
definition of, *(P) Concepts*, 14–1
delivery of vector exception, *(P) Debugger*, 15–19, 15–22
exception, *(P) Calling Std*, 2–8
hardware-level, *(P) Concepts*, 14–7
memory, *(P) Calling Std*, 2–8
mutex, *(P) DECthreads*, pthread–84, tis–18, E–57, G–65
passing control to another image, *(P) Concepts*, 3–40
SET VECTOR_MODE command, *(P) Debugger*, 15–19, CD–232
SHOW VECTOR_MODE command, *(P) Debugger*, 15–19, CD–294

Synchronization (cont'd)
software-level, *(P) Concepts*, 14–10
using detached processes, *(P) Concepts*, 3–31
using events flags, *(P) Concepts*, 14–14
using PPL$ routines with spin locks, *(P) Concepts*, 14–27
using process priority, *(P) Concepts*, 14–11
using semaphores with PPL$ routines, *(P) Concepts*, 14–28
using spin locks, *(P) Concepts*, 14–13
using subprocesses, *(P) Concepts*, 3–31
Synchronization, asynchronous
coding for, *(P) DECthreads*, 3–1
Synchronization objects
atomic queue, *(P) DECthreads*, E–4
condition variable, *(P) DECthreads*, 2–9
join, *(P) DECthreads*, 2–13
mutex, *(P) DECthreads*, 2–7
Synchronization techniques, *(S) Dependable*, 8–17
SYNCHRONIZE command, *(G) User*, 18–19, 18–20; *(G) DCL N-Z*, DCLII–422 to DCLII–423
SYNCHRONIZE VECTOR_MODE command, *(P) Debugger*, 15–19, CD–308
Synchronous circuits
See Circuits
Synchronous connections, *(S) DECnet Mgmt*, 1–3
Synchronous disconnects, *(S) DECnet Mgmt*, 8–10, 8–14, 8–30, 8–36
Synchronous input/output, *(P) Concepts*, 9–18
Synchronous lines
See Lines
Synchronous operations, *(P) File Appl*, 8–18
Synchronous SCSI data transfer mode
enabling, *(P) I/O User*, 8–6, 8–12
Synchronous signals, *(P) DECthreads*, A–5
Synchronous system services, *(P) Interfaces*, 4–5
Syntax
file specifications on tape volumes, *(G) User*, 4–11
for DCL commands, *(G) User*, 3–3
for event list identification, *(S) DECnet Mgmt Util*, 1–9
node specifications, *(G) User*, 4–6
of BACKUP commands, *(S) Sys Mgmt Util A-L*, 7–5
of NCP commands, *(S) DECnet Mgmt Util*, 1–2
rules for naming NCP components and parameters, *(S) DECnet Mgmt Util*, 1–7 to 1–11
VMScluster device specifications, *(G) User*, 12–10
Syntax-name verb clauses, *(P) CDU, LBR, & MU*, CDU–7
SYPAGSWPFILES.COM command procedure, *(S) Sys Mgr Essentials*, 5–3; *(S) Sys Mgr Tuning*, 15–19, 15–20
execution of during system startup, *(S) Sys Mgr Essentials*, 5–5, 5–6
modifying to install page and swap files, *(S) Sys Mgr Essentials*, 5–6
SYS$ABORT_TRANS system service, *(P) Concepts*, 12–2; *(P) Sys Svc I*, SYS1–3
SYS$ABORT_TRANSW system service, *(P) Concepts*, 12–2, 12–3; *(P) Sys Svc I*, SYS1–7
SYS$ADD_HOLDER system service, *(P) Concepts*, 23–12; *(P) Sys Svc I*, SYS1–8
SYS$ADD_IDENT system service, *(P) Concepts*, 23–12; *(P) Sys Svc I*, SYS1–11
SYS$ADD_PROXY system service, *(P) Sys Svc I*, SYS1–14
SYS$ADJSTK system service, *(P) Sys Svc I*, SYS1–18
SYS$ADJWSL system service, *(P) Concepts*, 19–11, 20–11; *(P) Sys Svc I*, SYS1–20
SYS$ALLOC system service, *(P) Sys Svc I*, SYS1–22
example, *(P) Concepts*, 9–33
SYS$ANNOUNCE logical name, *(S) Security*, 7–23; *(S) Sys Mgr Essentials*, 5–14
SYS$ASCEFC system service, *(P) Sys Svc I*, SYS1–25
SYS$ASCTIM system service, *(P) Concepts*, 5–6; *(P) Sys Svc I*, SYS1–29
example, *(P) Concepts*, 5–10
SYS$ASCTOID system service, *(P) Concepts*, 23–11; *(P) Sys Svc I*, SYS1–32
SYS$ASCUTC system service, *(P) Concepts*, 5–2 to 5–4; *(P) Sys Svc I*, SYS1–35
SYS$ASSIGN routine, *(P) I/O User*, 4–1, 5–18, 5–75, 9–4
SYS$ASSIGN system service, *(S) DECnet Mgmt*, 5–1, 8–18; *(P) Sys Svc I*, SYS1–38
example, *(P) Concepts*, 9–11
format, *(S) DECnet Mgmt*, 8–20, 8–32
_NET: pseudodevice, *(S) DECnet Mgmt*, 8–32
nontransparent use of, *(S) DECnet Mgmt*, 8–25
transparent use of, *(S) DECnet Mgmt*, 8–18
SYS$AUDIT_EVENT system service, *(P) Sys Svc I*, SYS1–43
SYS$AUDIT_EVENTW system service, *(P) Sys Svc I*, SYS1–61
SYS$AUDIT_SERVER_INHIBIT logical name, *(S) Sys Mgr Essentials*, 5–9; *(S) Sys Mgr Tuning*, 18–27
SYS$BASE_IMAGE.EXE file
linking against, *(P) Linker*, 2–18
order of processing, *(P) Linker*, 2–18, LINK–34
SYS$BATCH default queue name, *(S) Sys Mgr Essentials*, 13–5

SYS$BINTIM system service, *(P) Concepts*, 5–2 to 5–4, 5–6; *(P) Sys Svc I*, SYS1–62
  for storing time in XABDAT, *(P) RMS Ref*, A–9
SYS$BINUTC system service, *(P) Concepts*, 5–2 to 5–4; *(P) Sys Svc I*, SYS1–65
SYS$BRKTHRU system service, *(P) Sys Svc I*, SYS1–68
SYS$BRKTHRUW system service, *(P) Sys Svc I*, SYS1–76
SYS$CALL_HANDL+4 routine
  using, *(P) Calling Std*, 6–24
SYS$CANCEL system service, *(S) DECnet Mgmt*, 8–31; *(P) Sys Svc I*, SYS1–77
  example, *(P) Concepts*, 9–26
SYS$CANEXH system service, *(P) Sys Svc I*, SYS1–79
SYS$CANTIM system service, *(P) Concepts*, 5–13; *(P) Sys Svc I*, SYS1–80
  example, *(P) Concepts*, 5–16
SYS$CANWAK system service, *(P) Concepts*, 5–13, 5–17; *(P) Sys Svc I*, SYS1–82
SYS$CHECK_ACCESS system service, *(P) Concepts*, 23–25; *(P) Sys Svc I*, SYS1–84
SYS$CHECK_FEN system service
  on Alpha systems only, *(P) Sys Svc I*, SYS1–92
SYS$CHECK_PRIVILEGE system service, *(P) Sys Svc I*, SYS1–93
SYS$CHECK_PRIVILEGEW system service, *(P) Sys Svc I*, SYS1–98
SYS$CHKPRO system service, *(P) Concepts*, 23–25; *(P) Sys Svc I*, SYS1–99
SYS$CLRCLUEVT system service
  on Alpha systems only, *(P) Sys Svc I*, SYS1–107
SYS$CLREF system service, *(P) Concepts*, 14–23; *(P) Sys Svc I*, SYS1–109
SYS$CMEXEC system service, *(P) Sys Svc I*, SYS1–110
SYS$CMEXEC_64 system service, *(P) Sys Svc I*, SYS1–112
SYS$CMKRNL system service, *(P) Sys Svc I*, SYS1–114
SYS$CMKRNL_64 system service, *(P) Sys Svc I*, SYS1–116
SYS$CPU_CAPABILITIES system service, *(P) Sys Svc I*, SYS1–118
SYS$CREATE system service, *(P) Concepts*, 8–10
SYS$CREATE_BUFOBJ_64 system service, *(P) Sys Svc I*, SYS1–122
SYS$CREATE_GFILE system service, *(P) Sys Svc I*, SYS1–126
SYS$CREATE_GPFILE system service, *(P) Sys Svc I*, SYS1–131
SYS$CREATE_GPFN system service, *(P) Sys Svc I*, SYS1–135
SYS$CREATE_RDB system service, *(P) Concepts*, 23–9; *(P) Sys Svc I*, SYS1–139
SYSCREATE_REGION_64 system service, *(P) Sys Svc I*, SYS1–141
SYS$CREATE_USER_PROFILE system service, *(P) Sys Svc I*, SYS1–145
SYS$CRELNM system service, *(P) Sys Svc I*, SYS1–149
SYS$CRELNT system service, *(P) Sys Svc I*, SYS1–155
SYS$CREMBX system service, *(S) DECnet Mgmt*, 5–1, 8–25; *(P) Concepts*, 1–6, 2–9, 3–49; *(P) Sys Svc I*, SYS1–161; *(P) I/O User*, 4–1
SYS$CREPRC system service, *(S) DECnet Mgmt*, 5–1; *(P) Sys Svc I*, SYS1–168
  example, *(P) Concepts*, 1–9
SYS$CRETVA system service, *(P) Concepts*, 19–9, 20–8; *(P) Sys Svc I*, SYS1–185
  See also SYS$EXPREG system service
SYS$CRETVA_64 system service, *(P) Sys Svc I*, SYS1–188
SYS$CRMPSC system service, *(P) Concepts*, 8–4, 8–5; *(P) Sys Svc I*, SYS1–192
SYS$CRMPSC_FILE_64 system service, *(P) Sys Svc I*, SYS1–204
SYS$CRMPSC_GFILE_64 system service, *(P) Sys Svc I*, SYS1–210
SYS$CRMPSC_GPFILE_64 system service, *(P) Sys Svc I*, SYS1–218
SYS$CRMPSC_GPFN_64 system service, *(P) Sys Svc I*, SYS1–225
SYS$CRMPSC_PFN_64 system service, *(P) Sys Svc I*, SYS1–232
SYS$DACEFC system service, *(P) Sys Svc I*, SYS1–236
SYS$DALLOC system service, *(P) Sys Svc I*, SYS1–238
SYS$DASSGN routine, *(P) I/O User*, 4–3, 9–4
SYS$DASSGN system service, *(S) DECnet Mgmt*, 8–14, 8–19, 8–23, 8–39; *(P) Concepts*, 8–11; *(P) Sys Svc I*, SYS1–240
  example, *(P) Concepts*, 9–24
SYS$DCLAST system service, *(P) Sys Svc I*, SYS1–242
  example, *(P) Concepts*, 4–8
SYS$DCLCMH system service, *(P) Sys Svc I*, SYS1–244
SYS$DCLEXH system service, *(P) Concepts*, 13–74; *(P) Sys Svc I*, SYS1–247
  example, *(P) Concepts*, 3–43
SYS$DECDTM_INHIBIT logical name, *(S) Sys Mgr Tuning*, 25–21
SYS$DELETE_BUFOBJ system service, *(P) Sys Svc I*, SYS1–249

SYS$DELETE_INTRUSION system service, *(P) Sys Svc I*, SYS1–250
SYS$DELETE_PROXY system service, *(P) Sys Svc I*, SYS1–252
SYS$DELETE_REGION_64 system service, *(P) Sys Svc I*, SYS1–255
SYS$DELLNM system service, *(P) Sys Svc I*, SYS1–258
SYS$DELMBX system service, *(P) Sys Svc I*, SYS1–261; *(P) I/O User*, 4–3
SYS$DELPRC system service, *(P) Sys Svc I*, SYS1–263
SYS$DELTVA system service, *(P) Concepts*, 8–11; *(P) Sys Svc I*, SYS1–265
SYS$DELTVA_64 system service, *(P) Sys Svc I*, SYS1–267
SYS$DEQ system service, *(P) Sys Svc I*, SYS1–270
  example, *(P) Concepts*, 15–17
SYS$DEVICE_SCAN system service, *(P) Sys Svc I*, SYS1–275
SYS$DGBLSC system service, *(P) Sys Svc I*, SYS1–279
SYS$DISK
  as SDA output, *(P) Alpha SDA*, SDA–71
  global read, *(P) Alpha SDA*, SDA–60
SYS$DISK logical name, *(P) VAX SDA*, SDA–64
  applied to file specification, *(P) File Appl*, 6–2
SYS$DISMOU system service, *(P) Concepts*, 9–35; *(P) Sys Svc I*, SYS1–282; *(P) I/O User*, 1–34
SYS$DISPLAY_PROXY system service, *(P) Sys Svc I*, SYS1–286
SYS$DLCEFC system service, *(P) Sys Svc I*, SYS1–292
SYS$DNS system service
  on VAX systems only, *(P) Sys Svc I*, SYS1–294
SYS$DNSW system service
  on VAX systems only, *(P) Sys Svc I*, SYS1–321
SYS$END_TRANS system service, *(P) Concepts*, 12–2; *(P) Sys Svc I*, SYS1–322
SYS$END_TRANSW system service, *(P) Concepts*, 12–2, 12–3; *(P) Sys Svc I*, SYS1–327
SYS$ENQ system service, *(P) Sys Svc I*, SYS1–328
  example, *(P) Concepts*, 15–9
SYS$ENQW system service, *(P) Sys Svc I*, SYS1–340
SYS$ERAPAT system service, *(P) Sys Svc I*, SYS1–341
SYS$ERROR logical name
  in log files, *(G) User*, 18–14
  process-permanent files, *(G) User*, 18–14
  specifying equivalence name with RUN command, *(G) DCL N-Z*, DCLII–62
SYS$ERRORLOG logical name
  defining during system startup, *(S) Sys Mgr Essentials*, 5–8
SYS$ERRORLOG logical name (cont'd)
  defining to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
SYS$ERROR system service, *(P) Concepts*, 13–56
SYS$ERROR warning message, *(P) Rec Mgmt Util*, 2–4
SYS$EXAMPLES data center evaluation checklists, *(S) Dependable*, A–1
SYS$EXIT system service, *(P) Concepts*, 3–42; *(P) Sys Svc I*, SYS1–344; *(P) Debugger*, 13–25
  issuing for specified process, *(P) Sys Svc I*, SYS1–386
SYS$EXPREG system service, *(P) Concepts*, 19–8, 20–6; *(P) Sys Svc I*, SYS1–345
  example, *(P) Concepts*, 19–8, 20–6
SYS$EXPREG_64 system service, *(P) Sys Svc I*, SYS1–348
SYS$FAOL system service, *(P) Sys Svc I*, SYS1–351
SYS$FAOL_64 system service, *(P) Sys Svc I*, SYS1–371
SYS$FAO system service, *(P) Concepts*, 5–2 to 5–4, 13–42, 13–50, 13–55; *(P) Sys Svc I*, SYS1–351
  example, *(P) Concepts*, 9–38
SYS$FILESCAN system service, *(P) Sys Svc I*, SYS1–372; *(P) File Appl*, 5–8
SYS$FIND_HELD system service, *(P) Concepts*, 23–13, 23–16; *(P) Sys Svc I*, SYS1–378
SYS$FIND_HOLDER system service, *(P) Concepts*, 23–13, 23–16; *(P) Sys Svc I*, SYS1–381
SYS$FINISH_RDB system service, *(P) Sys Svc I*, SYS1–384
SYS$FORCEX system service, *(P) Sys Svc I*, SYS1–386
  See also SYS$DELPRC system service and SYS$EXIT system service
  example, *(P) Concepts*, 3–43
SYS$FORMAT_ACL system service, *(P) Concepts*, 23–22; *(P) Sys Svc I*, SYS1–389
SYS$FORMAT_AUDIT system service, *(P) Sys Svc I*, SYS1–402
SYS$GETDVI routine, *(P) I/O User*, 3–8
  disk, *(P) I/O User*, 2–25
  LAN drivers, *(P) I/O User*, 9–22
  mailbox, *(P) I/O User*, 4–4
  SCSI generic class driver, *(P) I/O User*, 8–13
  terminal, *(P) I/O User*, 5–20
SYS$GETDVI system service, *(S) DECnet Mgmt*, 8–31; *(P) Concepts*, 9–28; *(P) Sys Svc I*, SYS1–406
SYS$GETDVIW system service, *(P) Sys Svc I*, SYS1–426
SYS$GETJPI system service, *(P) Concepts*, 3–5, 3–8; *(P) Sys Svc I*, SYS1–427
  AST in target process, *(P) Concepts*, 3–25
  buffer, *(P) Concepts*, 3–23, 3–24

SYS$GETJPI system service (cont'd)
control flags, *(P) Concepts*, 3–25
item list
specifying criteria to select processes
example, *(P) Concepts*, 3–18
item-specific flags, *(P) Concepts*, 3–15
obtaining information about all processes on the local system, *(P) Concepts*, 3–8 to 3–14
obtaining information about one process, *(P) Concepts*, 3–8
obtaining information with wildcard search
example, *(P) Concepts*, 3–13
packing information in buffers, *(P) Concepts*, 3–23, 3–24
searching for processes on all nodes, *(P) Concepts*, 3–20
searching for processes on specific nodes, *(P) Concepts*, 3–20, 3–21
searching for selected processes, *(P) Concepts*, 3–14
specifying buffer size, *(P) Concepts*, 3–23, 3–24
specifying criteria to select processes
example, *(P) Concepts*, 3–19
swapping processes, *(P) Concepts*, 3–25
synchronizing calls, *(P) Concepts*, 3–20, 3–21, 3–22
using item lists, *(P) Concepts*, 3–15, 3–22
using item list with remote procedures, *(P) Concepts*, 3–22
using multiple $PROCESS_SCAN service contexts, *(P) Concepts*, 3–21
using SYS$PROCESS_SCAN system service
item list to specify selection criteria about processes, *(P) Concepts*, 3–15, 3–18, 3–19
item-specific flags to control selection information, *(P) Concepts*, 3–15
search, *(P) Concepts*, 3–14
using wildcard
example, *(P) Concepts*, 3–13
using wildcard as pidadr, *(P) Concepts*, 3–8
using wildcards, *(P) Concepts*, 3–8 to 3–14
SYS$GETJPIW system service, *(P) Sys Svc I*, SYS1–448
SYS$GETLKI system service, *(P) Sys Svc I*, SYS1–449
SYS$GETLKIW system service, *(P) Sys Svc I*, SYS1–461
SYS$GETMSG system service, *(P) Concepts*, 13–50; *(P) Sys Svc I*, SYS1–462
SYS$GETQUI system service, *(P) Concepts*, 5–21; *(P) Sys Svc II*, SYS2–3
SYS$GETQUIW system service, *(P) Sys Svc II*, SYS2–46
SYS$GETSYI system service, *(P) Concepts*, 5–21; *(P) Sys Svc II*, SYS2–51
SYS$GETSYIW system service, *(P) Sys Svc II*, SYS2–70
SYS$GETTIM system service, *(P) Concepts*, 5–2 to 5–4, 5–10; *(P) Sys Svc II*, SYS2–71
SYS$GETUAI system service, *(P) Sys Svc II*, SYS2–72
SYS$GETUTC system service, *(P) Concepts*, 5–2 to 5–4; *(P) Sys Svc II*, SYS2–84
SYS$GET_ALIGN_FAULT_DATA system service, *(P) Concepts*, 22–10
on Alpha systems only, *(P) Sys Svc II*, SYS2–85
SYS$GET_ARITH_EXCEPTION system service
on Alpha systems only, *(P) Sys Svc II*, SYS2–87
SYS$GET_REGION_INFO system service, *(P) Sys Svc II*, SYS2–47
SYS$GET_SECURITY system service, *(P) Concepts*, 23–21, 23–22; *(P) Sys Svc II*, SYS2–89
SYS$GET_SYS_ALIGN_FAULT_DATA system service, *(P) Concepts*, 22–11
on Alpha systems only, *(P) Sys Svc II*, SYS2–97
SYS$GOTO_UNWIND system service, *(P) Concepts*, 13–45, 13–49; *(P) Calling Std*, 6–26
on Alpha systems only, *(P) Sys Svc II*, SYS2–99
unwinding, *(P) Calling Std*, 6–28
SYS$GRANTID system service, *(P) Sys Svc II*, SYS2–101
SYS$HASH_PASSWORD system service, *(P) Sys Svc II*, SYS2–105
SYS$HELP.HLB file, *(S) DECamds*, B–1, B–3
SYS$HIBER system service, *(P) Concepts*, 3–37; *(P) Sys Svc II*, SYS2–108
See also SYS$WAKE system service
example, *(P) Concepts*, 3–39
SYS$IDTOASC system service, *(P) Concepts*, 23–11, 23–16; *(P) Sys Svc II*, SYS2–110
SYS$IEEE_SET_FP_CONTROL system service
on Alpha systems only, *(P) Sys Svc II*, SYS2–113
SYS$INIT_SYS_ALIGN_FAULT_REPORT system service, *(P) Concepts*, 22–11
on Alpha systems only, *(P) Sys Svc II*, SYS2–115
SYS$INIT_VOL system service, *(P) Concepts*, 9–36; *(P) Sys Svc II*, SYS2–118
example, *(P) Concepts*, 9–36
SYS$INOUT logical name
redefining, *(G) User*, 16–5
SYS$INPUT logical name, *(G) User*, 16–7; *(S) Sys Mgr Tuning*, 17–31
defining as a separate file, *(G) User*, 16–8
process-permanent files, *(G) User*, 18–13
redefining, *(G) User*, 16–7
specifying equivalence name with RUN command, *(G) DCL N-Z*, DCLII–62

SYS$INPUT system service, *(P) Concepts*, 13–56
  default value, *(P) Concepts*, 7–3
  redefining value, *(P) Concepts*, 7–3
  using with LIB$GET_INPUT routine, *(P) Concepts*, 7–4
  using with LIB$PUT_OUTPUT routine, *(P) Concepts*, 7–4
SYS$IO_CLEANUP system service, *(P) Sys Svc II*, SYS2–131
SYS$IO_PERFORM system service, *(P) Sys Svc II*, SYS2–132
SYS$IO_SETUP system service, *(P) Sys Svc II*, SYS2–136
SYS$JOURNAL logical name, *(S) Sys Mgr Tuning*, 25–3
SYS$LANGUAGE logical, *(S) Sys Mgr Essentials*, 5–48
SYS$LAVC_DEFINE_NET_COMPONENT subroutine, *(S) VMScluster Sys*, E–5 to E–6
SYS$LAVC_DEFINE_NET_PATH subroutine, *(S) VMScluster Sys*, E–7 to E–9
SYS$LAVC_DISABLE_ANALYSIS subroutine, *(S) VMScluster Sys*, E–10 to E–11
SYS$LAVC_ENABLE_ANALYSIS subroutine, *(S) VMScluster Sys*, E–10
SYS$LAVC_START_BUS.MAR subroutine, *(S) VMScluster Sys*, E–2
SYS$LAVC_START_BUS subroutine, *(S) VMScluster Sys*, E–2
SYS$LAVC_STOP_BUS.MAR subroutine, *(S) VMScluster Sys*, E–3
SYS$LAVC_STOP_BUS subroutine, *(S) VMScluster Sys*, E–4 to E–5
SYS$LCKPAG system service, *(P) Concepts*, 19–12, 20–12; *(P) Sys Svc II*, SYS2–139
SYS$LCKPAG_64 system service, *(P) Sys Svc II*, SYS2–142
SYS$LIBRARY:STARLET.MLB library
  as source of RMS macros, *(P) RMS Ref*, A–2
SYS$LIBRARY logical name, *(G) V7.0 New Feat*, 4–11; *(P) Linker*, 1–9, 2–13
SYS$LIBRARY system directory, *(S) VMScluster Sys*, 5–5
SYS$LKWSET system service, *(P) Concepts*, 19–12, 20–11; *(P) Sys Svc II*, SYS2–145
SYS$LKWSET_64 system service, *(P) Sys Svc II*, SYS2–148
SYS$LOADABLE_IMAGES:SYS.EXE file contents, *(P) Alpha SDA*, SDA–61
SYS$LOGIN:NETSERVER.LOG file, *(S) DECnet Mgmt*, 2–27, 4–17
SYS$LOST directory, *(G) DCL N-Z*, DCLII–134
SYS$MANAGER:EVL.LOG file, *(S) DECnet Mgmt*, 3–65
SYS$MANAGER:NET.LOG file, *(S) DECnet Mgmt*, 3–74
SYS$MANAGER:NETCONFIG.COM command procedure, *(S) DECnet Mgmt*, 5–5
SYS$MANAGER:RTTLOAD.COM command procedure, *(S) DECnet Mgmt*, 6–2
SYS$MANAGER:STARTNET.COM command procedure, *(S) DECnet Mgmt*, 5–7, 5–20, 6–2
SYS$MANAGER:SYLOGICALS.COM command procedure
  OPCOM logical names, *(G) V7.0 New Feat*, 3–12
SYS$MANAGER:SYSTARTUP_VMS.COM command procedure
  invoking SDA, *(P) VAX SDA*, SDA–7
  producing an SDA listing, *(P) VAX SDA*, SDA–7
  releasing page file blocks, *(P) VAX SDA*, SDA–5
SYS$MANAGER system directory, *(S) VMScluster Sys*, 5–5
SYS$MGBLSC system service, *(P) Concepts*, 17–8; *(P) Sys Svc II*, SYS2–151
SYS$MGBLSC_64 system service, *(P) Sys Svc II*, SYS2–157
SYS$MGBLSC_GPFN_64 system service, *(P) Sys Svc II*, SYS2–163
SYS$MOD_HOLDER system service, *(P) Concepts*, 23–14; *(P) Sys Svc II*, SYS2–169
SYS$MOD_IDENT system service, *(P) Concepts*, 23–13; *(P) Sys Svc II*, SYS2–172
SYS$MONITOR logical name
  defining during system startup, *(S) Sys Mgr Essentials*, 5–8
  defining to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
SYS$MOUNT system service, *(P) Concepts*, 9–34; *(P) Sys Svc II*, SYS2–176
SYS$MTACCESS system service, *(P) Sys Svc II*, SYS2–191
SYS$NET logical name, *(S) DECnet Mgmt*, 8–12, 8–18, 8–29
SYS$NODE logical name, *(S) Security*, 7–24
SYS$NUMTIM system service, *(P) Concepts*, 5–2 to 5–4, 5–7; *(P) Sys Svc II*, SYS2–194
SYS$NUMUTC system service, *(P) Concepts*, 5–2 to 5–4; *(P) Sys Svc II*, SYS2–196
SYS$NXTVOL system service
  See Next Volume service
SYS$OPEN system service, *(P) Concepts*, 8–10
SYS$OUTPUT logical name, *(S) Sys Mgr Tuning*, 17–33
  for check report, *(P) File Appl*, 10–1
  in log files, *(G) User*, 18–14
  process-permanent files, *(G) User*, 18–14
  specifying equivalence name with RUN command, *(G) DCL N-Z*, DCLII–63
  used for terminal display, *(G) DCL N-Z*, DCLII–424
  using with Convert utility, *(P) Rec Mgmt Util*, 2–7

SYS$OUTPUT system service
default value, *(P) Concepts*, 7–3
redefining value, *(P) Concepts*, 7–3
using with LIB$GET_INPUT routine, *(P) Concepts*, 7–4
using with LIB$PUT_OUTPUT routine, *(P) Concepts*, 7–4
SYS$OUTPUT_HELP routine, *(P) Util Routines*, LBR–8
SYS$PARSE_ACL system service, *(P) Concepts*, 23–22; *(P) Sys Svc II*, SYS2–198
SYS$PERFORMW system service, *(P) Sys Svc II*, SYS2–135
SYS$PERM_DIS_ALIGN_FAULT_REPORT system service, *(P) Concepts*, 22–11
on Alpha systems only, *(P) Sys Svc II*, SYS2–201
SYS$PERM_REPORT_ALIGN_FAULT system service, *(P) Concepts*, 22–11
on Alpha systems only, *(P) Sys Svc II*, SYS2–202
SYS$PRINT default queue name, *(S) Sys Mgr Essentials*, 13–8
SYS$PRINT logical name, *(G) User*, 4–17
SYS$PROCESS_AFFINITY system service, *(P) Sys Svc II*, SYS2–204
SYS$PROCESS_CAPABILITIES system service, *(P) Sys Svc II*, SYS2–209
SYS$PROCESS_SCAN system service, *(P) Concepts*, 3–5, 3–8; *(P) Sys Svc II*, SYS2–214
searching nodes, *(P) Concepts*, 3–21
setting up multiple contexts, *(P) Concepts*, 3–21
using item lists, *(P) Concepts*, 3–15 to 3–22
using item list with remote procedures, *(P) Concepts*, 3–22
using item-specific flags to control selection information, *(P) Concepts*, 3–15
SYS$PROCESS_SCAN system services
obtaining information about processes on nodes, *(P) Concepts*, 3–20 to 3–21
SYS$PUBLIC_VECTORS.EXE file
order of processing, *(P) Linker*, 2–18, LINK–34
processing, *(P) Linker*, 2–14, LINK–36
SYS$PURGE_WS system service, *(P) Sys Svc II*, SYS2–229
SYS$PURGWS system service, *(P) Sys Svc II*, SYS2–227
See also $ADJWSL system service
SYS$PUTMSG system service, *(P) Concepts*, 13–6, 13–42, 13–50, 13–55; *(P) Sys Svc II*, SYS2–231
SYS$QIO routines
format for request to SCSI generic class driver, *(P) I/O User*, 8–10
SYS$QIO system service, *(P) Concepts*, 9–12; *(P) Sys Svc II*, SYS2–239
example, *(P) Concepts*, 9–12
for additional processing, *(P) RMS Ref*, 4–16
interface to audio functions, *(P) I/O User*, 2–19
IO$_ACCESS!IO$M_ABORT function code, *(S) DECnet Mgmt*, 8–30, 8–34
IO$_ACCESS function code, *(S) DECnet Mgmt*, 8–27, 8–30, 8–32, 8–33
IO$_ACPCONTROL function code, *(S) DECnet Mgmt*, 8–29, 8–38
IO$_DEACCESS!IO$M_ABORT function code, *(S) DECnet Mgmt*, 8–31, 8–37
IO$_DEACCESS!IO$M_SYNCH function code, *(S) DECnet Mgmt*, 8–36
IO$_READVBLK function code, *(S) DECnet Mgmt*, 8–22, 8–35
IO$_WRITEVBLK!IO$M_INTERRUPT function code, *(S) DECnet Mgmt*, 8–30, 8–35
IO$_WRITEVBLK!IO$M_MULTIPLE function code, *(S) DECnet Mgmt*, 8–21
IO$_WRITEVBLK function code, *(S) DECnet Mgmt*, 8–35
use in RMS I/O operations, *(P) RMS Ref*, 2–8
SYS$QIOW system service, *(P) Sys Svc II*, SYS2–245
SYS$QUEUE_MANAGER.QMAN$JOURNAL file, *(S) VMScluster Sys*, 7–3
SYS$QUEUE_MANAGER.QMAN$QUEUES file, *(S) VMScluster Sys*, 7–3
SYS$QUEUE_MANAGER queue manager, *(S) Sys Mgr Essentials*, 12–4
SYS$READEF system service, *(P) Sys Svc II*, SYS2–246
SYS$RELEASE_VP system service
on VAX systems only, *(P) Sys Svc II*, SYS2–248
SYS$REM_HOLDER system service, *(P) Concepts*, 23–16; *(P) Sys Svc II*, SYS2–249
SYS$REM_IDENT system service, *(P) Concepts*, 23–16; *(P) Sys Svc II*, SYS2–251
SYS$RESCHED system service, *(P) Sys Svc II*, SYS2–253
SYS$RESTORE_VP_EXCEPTION system service
on VAX systems only, *(P) Sys Svc II*, SYS2–254
SYS$RESTORE_VP_STATE system service
on VAX systems only, *(P) Sys Svc II*, SYS2–256
SYS$RESUME system service, *(P) Sys Svc II*, SYS2–258
SYS$REVOKID system service, *(P) Sys Svc II*, SYS2–260
SYS$RMDRIVER.EXE file, *(S) DECamds*, B–3
SYS$RMSRUNDWN system service, *(P) Sys Svc II*, SYS2–264
SYS$SAVE_VP_EXCEPTION system service
on VAX systems only, *(P) Sys Svc II*, SYS2–266

SYS$SCAN_INTRUSION system service, *(P) Sys Svc II*, SYS2–268
SYS$SCHDWK system service, *(P) Concepts*, 5–13, 5–16, 5–17; *(P) Sys Svc II*, SYS2–273
SYS$SCHED system service, *(P) Sys Svc II*, SYS2–276
SYS$SETAST system service, *(P) Sys Svc II*, SYS2–281
SYS$SETCLUEVT system service
  on Alpha systems only, *(P) Sys Svc II*, SYS2–282
SYS$SETDDIR system service, *(P) Sys Svc II*, SYS2–285; *(P) File Appl*, 6–13
SYS$SETDFPROT system service, *(P) Sys Svc II*, SYS2–287
SYS$SETEF system service, *(P) Concepts*, 14–23; *(P) Sys Svc II*, SYS2–289
SYS$SETEXV system service, *(P) Concepts*, 13–24; *(P) Sys Svc II*, SYS2–290
  example, *(P) Concepts*, 13–4
SYS$SETIME system service, *(P) Concepts*, 5–11; *(P) Sys Svc II*, SYS2–292
SYS$SETIMR system service, *(P) Concepts*, 5–13; *(P) Sys Svc II*, SYS2–294
  example with ASTs, *(P) Concepts*, 4–2
SYS$SETPRA system service, *(P) Sys Svc II*, SYS2–301
SYS$SETPRI system service, *(P) Sys Svc II*, SYS2–303
SYS$SETPRN system service, *(P) Sys Svc II*, SYS2–307
SYS$SETPRT system service, *(P) Sys Svc II*, SYS2–308
SYS$SETPRT_64 system service, *(P) Sys Svc II*, SYS2–311
SYS$SETPRV system service, *(P) Sys Svc II*, SYS2–314
SYS$SETRWM system service, *(P) Concepts*, 9–2; *(P) Sys Svc II*, SYS2–319
SYS$SETSFM system service
  use in signaling RMS errors, *(P) RMS Ref*, 2–6
SYS$SETSHLV system service, *(P) Sys Svc II*, SYS2–321
SYS$SETSTK system service, *(P) Sys Svc II*, SYS2–323
SYS$SETSWM system service, *(P) Concepts*, 19–12, 20–12; *(P) Sys Svc II*, SYS2–325
  example, *(P) Concepts*, 19–12, 20–12
SYS$SETUAI system service, *(P) Sys Svc II*, SYS2–327
SYS$SET_IMPLICIT_AFFINITY, *(P) Sys Svc II*, SYS2–297
SYS$SET_RESOURCE_DOMAIN system service, *(P) Sys Svc II*, SYS2–339
SYS$SET_SECURITY system service, *(P) Concepts*, 23–21, 23–22; *(P) Sys Svc II*, SYS2–344
SYS$SHOW_INTRUSION system service, *(P) Sys Svc II*, SYS2–351
SYS$SIGNAL_ARRAY system service, *(P) Sys Svc II*, SYS2–356
SYS$SNDERR system service, *(P) Sys Svc II*, SYS2–358
SYS$SNDJBC system service, *(P) Sys Svc II*, SYS2–359
SYS$SNDJBCW system service, *(P) Sys Svc II*, SYS2–417
SYS$SNDOPR system service, *(P) Sys Svc II*, SYS2–418
SYS$SPECIFIC directory, *(S) VMScluster Sys*, 5–5
SYS$STARTUP.COM file, *(S) DECamds*, B–3
SYS$STARTUP logical name, *(S) Sys Mgr Essentials*, 4–4, 5–2, 5–18
SYS$START_ALIGN_FAULT_REPORT system service, *(P) Concepts*, 22–10
  on Alpha systems only, *(P) Sys Svc II*, SYS2–432
SYS$START_TRANS system service, *(P) Concepts*, 12–2; *(P) Sys Svc II*, SYS2–435
SYS$START_TRANSW system service, *(P) Concepts*, 12–2, 12–3; *(P) Sys Svc II*, SYS2–439
SYS$STOP_ALIGN_FAULT_REPORT system service, *(P) Concepts*, 22–10
  on Alpha systems only, *(P) Sys Svc II*, SYS2–440
SYS$STOP_SYS_ALIGN_FAULT_REPORT system service, *(P) Concepts*, 22–11
  on Alpha systems only, *(P) Sys Svc II*, SYS2–441
SYS$SUBSYSTEM system service, *(P) Sys Svc II*, SYS2–442
SYS$SUSPND system service, *(P) Sys Svc II*, SYS2–444
SYS$SYLOGIN logical name, *(S) Sys Mgr Essentials*, 5–17
  executing, *(G) DCL A-M*, DCLI–415
SYS$SYNCH system service, *(P) Concepts*, 9–16, 9–18; *(P) Sys Svc II*, SYS2–447
SYS$SYSROOT logical name, *(S) VMScluster Sys*, 5–5
SYS$SYSTEM:LOGINOUT.EXE file
  using as image to create new processes, *(P) Sys Svc I*, SYS1–168, SYS1–180
SYS$SYSTEM:NETNODE_REMOTE.DAT file, *(S) Sys Mgr Tuning*, 21–10
SYS$SYSTEM:OPCCRASH.COM command procedure
  involvement in writing crash dump, *(P) VAX SDA*, SDA–7

SYS$SYSTEM:PAGEFILE.SYS file, *(G) V7.0 New Feat*, 4–21; *(P) Alpha SDA*, SDA–28; *(P) VAX SDA*, SDA–8, SDA–32
See also System dump files
as dump file, *(P) Alpha SDA*, SDA–4; *(P) VAX SDA*, SDA–5
releasing blocks containing a crash dump, *(P) Alpha SDA*, SDA–33; *(P) VAX SDA*, SDA–39
SYS$SYSTEM:REQSYSDEF.STB file, *(P) VAX SDA*, SDA–8, SDA–10
SYS$SYSTEM:SHUTDOWN.COM command procedure
involvement in writing crash dump, *(P) VAX SDA*, SDA–7
SYS$SYSTEM:STARTUP.COM command procedure, *(S) Sys Mgmt Util M-Z*, D–6
SYS$SYSTEM:SYS.EXE file, *(P) Alpha SDA*, SDA–59; *(P) VAX SDA*, SDA–63
contents, *(P) Alpha SDA*, SDA–97; *(P) VAX SDA*, SDA–64, SDA–111
SYS$SYSTEM:SYS.STB file, *(P) VAX SDA*, SDA–8, SDA–10, SDA–11, SDA–20
SYS$SYSTEM:SYSDEF.STB file, *(P) Alpha SDA*, SDA–9; *(P) VAX SDA*, SDA–10
SYS$SYSTEM:SYSDUMP.DMP file, *(G) V7.0 New Feat*, 4–20; *(P) Alpha SDA*, SDA–28; *(P) VAX SDA*, SDA–32
See also System dump files
protection, *(P) Alpha SDA*, SDA–6; *(P) VAX SDA*, SDA–7
size of, *(P) Alpha SDA*, SDA–4; *(P) VAX SDA*, SDA–5
SYS$SYSTEM logical name for system directory, *(S) VMScluster Sys*, 5–5
SYS$TEST logical name, *(S) Sys Mgr Tuning*, 17–4, 17–11, 17–20
SYS$TIMCON system service, *(P) Concepts*, 5–2 to 5–4; *(P) Sys Svc II*, SYS2–449
SYS$TIMEZONE_DIFFERENTIAL logical name, *(S) Sys Mgr Essentials*, 5–35
SYS$TRNLNM system service, *(P) Sys Svc II*, SYS2–451
SYS$TRNLOG system service, *(S) DECnet Mgmt*, 8–13
SYS$TSTCLUEVT system service
on Alpha systems only, *(P) Sys Svc II*, SYS2–456
SYS$ULKPAG system service, *(P) Concepts*, 19–12, 20–12; *(P) Sys Svc II*, SYS2–458
SYS$ULKPAG_64 system service, *(P) Sys Svc II*, SYS2–460
SYS$ULWSET system service, *(P) Concepts*, 19–12, 20–11; *(P) Sys Svc II*, SYS2–463
SYS$ULWSET_64 system service, *(P) Sys Svc II*, SYS2–465
SYS$UNWIND system service, *(P) Concepts*, 13–45, 13–47, 13–49, 13–64, 13–65, 13–67, 13–71; *(P) Sys Svc II*, SYS2–468
example, *(P) Concepts*, 13–48
unwinding, *(P) Calling Std*, 6–23, 6–28
SYS$UPDATE logical name
with VMSINSTAL.COM command procedure, *(S) Sys Mgr Essentials*, 3–9
SYS$UPDSEC system service, *(P) Concepts*, 8–11; *(P) Sys Svc II*, SYS2–470
SYS$UPDSECW system service, *(P) Sys Svc II*, SYS2–480
SYS$UPDSEC_64 system service, *(P) Sys Svc II*, SYS2–475
SYS$UPDSEC_64W system service, *(P) Sys Svc II*, SYS2–481
SYS$VERIFY_PROXY system service, *(P) Sys Svc II*, SYS2–482
SYS$WAITFR system service, *(P) Sys Svc II*, SYS2–487
SYS$WAKE system service, *(P) Concepts*, 3–37; *(P) Sys Svc II*, SYS2–488
See also SYS$HIBER system service
example, *(P) Concepts*, 3–39
SYS$WELCOME logical name, *(S) Security*, 7–24; *(S) Sys Mgr Essentials*, 5–15
SYS$WFLAND system service, *(P) Sys Svc II*, SYS2–490
SYS$WFLOR system service, *(P) Sys Svc II*, SYS2–492
SYS.COM command procedure, *(G) User*, C–11
sample execution, *(G) User*, C–13
SYS.STB file
linking against, *(P) Linker*, 2–18
SYSALF.DAT database in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–11; *(S) VMScluster Sys*, 5–13
SYSAP (system application), *(P) VAX SDA*, SDA–166
SYSAP protocol, *(P) Alpha SDA*, SDA–144
definition, *(S) VMScluster Sys*, F–2
part of SCA architecture, *(S) VMScluster Sys*, F–2
use of SCS, *(S) VMScluster Sys*, 1–5
/SYSAP qualifier, *(P) VAX SDA*, SDA–91
SYSBOOT.EXE image, *(S) Sys Mgr Essentials*, 4–2
See also Conversational boot
renaming before rebooting satellite, *(S) VMScluster Sys*, 8–42
SYSDEVICE.EXE file
global symbols, *(P) VAX SDA*, SDA–65
SYSDEVICE.STB file
global symbols, *(P) Alpha SDA*, SDA–62

SYSDUMP.DMP file, *(S) Sys Mgr Tuning*, 15–2 to 15–4
See also System dump files
SYSECURITY.COM command procedure, *(S) Security*, 9–14; *(S) Sys Mgr Essentials*, 5–3, 5–9
/SYSEXE qualifier, *(P) Linker*, LINK–34
linking against the executive image, *(P) Linker*, 2–18
SYSGBL privilege, *(S) Security*, 5–15, A–16
SYSGEN (System Generation utility)
See System Generation utility
SYSGEN parameters
See also System parameters
adjusting page cache size, *(S) Alpha Perform*, 17–2
changing, *(S) Alpha Perform*, 16–2
SYSGETSYI.EXE file
global symbols, *(P) VAX SDA*, SDA–65
SYSGETSYI.STB file
global symbols, *(P) Alpha SDA*, SDA–62
SYSHUTDWN.COM command procedure, *(S) Sys Mgr Essentials*, 4–27
SYSLCK privilege, *(S) Security*, 5–19, A–16
SYSLDR_DYN.STB file
global symbols, *(P) Alpha SDA*, SDA–62
/SYSLIB qualifier, *(P) Linker*, LINK–36
effect on default library processing, *(P) Linker*, 2–19
SYSLICENSE.EXE file
global symbols, *(P) VAX SDA*, SDA–65
SYSLICENSE.STB file
global symbols, *(P) Alpha SDA*, SDA–62
SYSLOA symbol, *(P) VAX SDA*, SDA–18
SYSLOST.DIR file, *(S) Sys Mgmt Util A-L*, 3–4
lost files in, *(S) Sys Mgr Essentials*, 8–57
SYSMAN databases and C2 environments, *(S) Security*, C–4
SYSMANINI logical name, *(S) Sys Mgr Essentials*, 2–19
changing file specification, *(S) Sys Mgmt Util M-Z*, 6–4
SYSMSG.EXE file
global symbols, *(P) VAX SDA*, SDA–65
SYSMWCNT system parameter, *(S) Alpha Perform*, 6–18
adjusting to curtail page thrashing, *(S) VAX Perform*, 3–27; *(S) Alpha Perform*, 10–8
SYSNAM privilege, *(S) Security*, 5–16, A–16; *(S) DECnet Mgmt*, 5–1, 8–29
modifying system operations, *(S) Security*, 4–5
overriding access controls, *(S) Security*, 4–12
queue management, *(S) Security*, 5–18
SYSPRV privilege, *(S) Security*, 4–11, 4–28; *(S) DECnet Mgmt*, 5–1; *(P) Concepts*, 9–5
as requirement for creating files with different UIC, *(P) RMS Ref*, 13–7
SYSPRV privilege (cont'd)
as requirement to change permanent database, *(S) DECnet Intro*, 3–33
giving rights of system user, *(S) Security*, 4–24; *(S) Sys Mgr Essentials*, 11–8
tasks requiring, *(S) Security*, A–17
using NETCONFIG.COM, *(S) DECnet Mgmt*, 5–5
using NETCONFIG_UPDATE.COM, *(S) DECnet Mgmt*, 5–10
/SYSSHR qualifier, *(P) Linker*, LINK–37
effect on default library processing, *(P) Linker*, 2–19
SYSTARTUP.COM procedures
setting up, *(S) VMScluster Sys*, 5–8
SYSTARTUP_VMS.COM command procedure, *(S) Security*, 12–15; *(S) Sys Mgr Essentials*, 5–3 to 5–17
freeing page file of dump information, *(S) Sys Mgr Tuning*, 15–4, 15–17
installing known images, *(S) Sys Mgr Tuning*, 16–10
invoking the System Dump Analyzer utility, *(S) Sys Mgr Tuning*, 15–15
making remote InfoServer disks available, *(S) Sys Mgr Tuning*, 23–14
message indicating execution of, *(S) Sys Mgr Essentials*, 4–5
modifying, *(S) Sys Mgr Essentials*, 5–10
operations performed in, *(S) Sys Mgr Essentials*, 5–10
saving contents of system dump file in, *(S) Sys Mgr Tuning*, 15–15
setting printer device characteristics, *(S) Sys Mgr Essentials*, 7–13
setting terminal device characteristics, *(S) Sys Mgr Essentials*, 7–10
starting InfoServer Client for OpenVMS, *(S) Sys Mgr Essentials*, 5–13; *(S) Sys Mgr Tuning*, 23–10
System
disk, *(S) Alpha Perform*, 4–3
fault rate, *(S) Alpha Perform*, 10–5
fix, *(S) DECamds*, 4–1
libraries
decompressing, *(S) Alpha Perform*, 4–1
load recommendations for hardware, *(S) DECamds*, 5–17
parameters
adjusting, *(S) Alpha Perform*, 3–3
changing, *(S) Alpha Perform*, 16–2
parameter settings required for installation, *(S) DECamds*, A–3
processes, *(S) DECamds*, 4–6
process header, *(S) Alpha Perform*, 6–18
requirements, *(S) DECamds*, 1–3 to 1–10, A–2
resource
definition, *(S) Alpha Perform*, 1–1

SYSTEM account
changing passwords for security of, *(S) Sys Mgr Essentials*, 2–9
exercising caution with privileges, *(S) Sys Mgr Essentials*, 2–9
initial modification, *(S) Sys Mgr Essentials*, 6–9
in UAF, *(S) Sys Mgr Essentials*, 6–6, 6–7
logging in to, *(S) Sys Mgr Essentials*, 2–10
setting process quotas for efficient backups, *(S) Sys Mgr Essentials*, 10–9
using AUTHORIZE to modify process limits, *(S) Sys Mgr Essentials*, 3–7
System alignment fault reporting
disabling for user image, *(P) Sys Svc II*, SYS2–441
System applications
See SYSAP protocol
System blocks
See SBs
System capabilities, *(G) V7.0 New Feat*, 4–24
SYSTEM class record
in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–40
System command procedures
coordinating, *(S) VMScluster Sys*, 5–7
System command tables, *(P) CDU, LBR, & MU*, CDU–4
adding commands to, *(P) CDU, LBR, & MU*, CDU–5
System Communications Architecture, *(G) SW Overview*, 1–8
See SCA architecture
System Communications Services
See SCS
System configurations, *(S) VMScluster Sys*, 6–23
See also Configurations
System console
? message, *(S) Sys Mgr Essentials*, 4–16
System console terminal, *(P) I/O User*, 5–1
System control block base register, *(P) Alpha SDA*, SDA–16
System crash
See Crash dumps and System failures
System default extension quantity, *(P) File Appl*, 3–5, 3–7
System defaults, *(P) Rec Mgmt Util*, 4–29
System-defined identifiers
See Environmental identifiers
System-dependent field, *(P) File Appl*, 1–31
System directories, *(S) VMScluster Sys*, 5–5
restoring original names
before upgrading, *(S) Sys Mgr Essentials*, 3–5
System directory table, *(P) Concepts*, 10–3
System disks
adding an alternate root directory, *(S) Sys Mgr Essentials*, 2–31
automatic mounting of, *(S) Sys Mgr Essentials*, 5–11
avoiding rebuilds, *(S) VMScluster Sys*, 9–14
backing up, *(S) Sys Mgr Essentials*, 5–49, 10–48, 10–55, 10–59
backing up after installation, *(S) Sys Mgr Essentials*, 3–13
backing up for software installations, *(S) Sys Mgr Essentials*, 3–7
booting from an alternate, *(S) Sys Mgr Essentials*, 4–3
building with VMSKITBLD, *(S) Sys Mgr Essentials*, 2–27
completing a disk created with VMSKITBLD, *(S) Sys Mgr Essentials*, 2–29
configuring a system root added with VMSKITBLD, *(S) Sys Mgr Essentials*, 2–32
configuring in large cluster, *(S) VMScluster Sys*, 9–14, 9–15
configuring multiple, *(S) VMScluster Sys*, 9–16
controlling dump files, *(S) VMScluster Sys*, 9–17
copying system files from, *(S) Sys Mgr Essentials*, 2–26
copying system files using VMSKITBLD, *(S) Sys Mgr Essentials*, 2–29
creating duplicate, *(S) VMScluster Sys*, 8–31
directory structure on common, *(S) VMScluster Sys*, 5–4
disk space needed to run UETP, *(S) Sys Mgr Tuning*, 17–5
fragmentation of, *(S) Sys Mgr Tuning*, 15–27
installing software on alternate, *(S) Sys Mgr Essentials*, 3–18
moving files off to improve system performance, *(S) Sys Mgr Tuning*, 16–8
moving high-activity files, *(S) VMScluster Sys*, 9–15
moving page and swap files off, *(S) Sys Mgr Tuning*, 15–5
not in volume sets, *(S) Sys Mgr Essentials*, 8–31
quotas for, *(S) Sys Mgr Essentials*, 8–50
rebuilding, *(S) VMScluster Sys*, 6–21
restoring, *(S) Sys Mgr Essentials*, 10–57
saving space by removing optional files, *(S) Sys Mgr Essentials*, 5–1
saving space on, *(S) Sys Mgr Tuning*, 15–5
shadowing across a VMScluster, *(S) VMScluster Sys*, 6–25
test error during UETP, *(S) Sys Mgr Tuning*, 17–24, 17–25
testing with UETP, *(S) Sys Mgr Tuning*, 17–33

System disks (cont'd)
UETP test image, *(S) Sys Mgr Tuning*, 17–34
System Dump Analyzer utility (SDA), *(G) SW Overview*, 4–9; *(S) VMScluster Sys*, 1–10; *(P) Environment*, 9–9 to 9–10
analyzing dump files, *(P) Environment*, 9–9
analyzing the system dump file, *(S) Sys Mgr Tuning*, 15–2
in system startup, *(S) Sys Mgr Essentials*, 5–13; *(S) Sys Mgr Tuning*, 15–4, 15–11
command format, *(P) Alpha SDA*, SDA–11 to SDA–30; *(P) VAX SDA*, SDA–15 to SDA–35
commands, *(P) Alpha SDA*, SDA–1 to SDA–2, SDA–36 to SDA–161; *(P) VAX SDA*, SDA–1 to SDA–3, SDA–42 to SDA–186
context, *(P) Alpha SDA*, SDA–9, SDA–10 to SDA–11; *(P) VAX SDA*, SDA–11, SDA–12 to SDA–14
COPY command, *(S) Sys Mgr Tuning*, 15–15
determining cause of system failure, *(S) Sys Mgr Tuning*, 15–11
exiting, *(P) Alpha SDA*, SDA–31, SDA–52; *(P) VAX SDA*, SDA–35, SDA–59
expressions, *(P) Alpha SDA*, SDA–12 to SDA–19
freeing dump information from the page file, *(S) Sys Mgr Tuning*, 15–16
initialization file, *(P) Alpha SDA*, SDA–9; *(P) VAX SDA*, SDA–10
logging a session, *(P) Alpha SDA*, SDA–70; *(P) VAX SDA*, SDA–75
monitoring PEDRIVER, *(S) VMScluster Sys*, F–13
multiple screen displays, *(P) Alpha SDA*, SDA–52; *(P) VAX SDA*, SDA–59
new and changed commands, *(G) V7.0 New Feat*, 3–23
obtaining help, *(P) Alpha SDA*, SDA–55; *(P) VAX SDA*, SDA–62
recording output, *(P) Alpha SDA*, SDA–30, SDA–71; *(P) VAX SDA*, SDA–35, SDA–76
saving contents of system dump file, *(S) Sys Mgr Tuning*, 15–15
specifying an alternate system symbol table, *(P) Alpha SDA*, SDA–34; *(P) VAX SDA*, SDA–40
usage summary, *(P) Alpha SDA*, SDA–30; *(P) VAX SDA*, SDA–35
using with symbol table files, *(P) Linker*, 1–10, LINK–32
System dump files, *(G) V7.0 New Feat*, 4–18 to 4–22; *(P) Alpha SDA*, SDA–2 to SDA–5; *(P) VAX SDA*, SDA–4 to SDA–6
analyzing, *(S) Sys Mgr Tuning*, 15–11; *(P) Environment*, 9–9; *(P) Alpha SDA*, SDA–30; *(P) VAX SDA*, SDA–35
calculating size, *(S) Sys Mgr Tuning*, 15–6
System dump files (cont'd)
changing sizes
with SWAPFILES.COM, *(S) Sys Mgr Tuning*, 15–25
comparison of contents of physical and selective dumps, *(S) Sys Mgr Tuning*, 15–3, 15–10
controlling size, *(S) VMScluster Sys*, 10–13
copying the contents, *(P) Alpha SDA*, SDA–39; *(P) VAX SDA*, SDA–47
copying with BACKUP, *(S) Sys Mgr Tuning*, 15–4, 15–14
default location, *(S) Sys Mgr Tuning*, 15–2
definition, *(S) Sys Mgr Tuning*, 15–2
deleting after creating a new version, *(S) Sys Mgr Tuning*, 15–28
displaying a summary of, *(P) Alpha SDA*, SDA–166
displaying machine check information, *(P) Alpha SDA*, SDA–172
displaying memory with CLUE MEMORY, *(P) Alpha SDA*, SDA–173
displaying process information, *(P) Alpha SDA*, SDA–180
displaying the current stack, *(P) Alpha SDA*, SDA–182
displaying the size calculated by AUTOGEN, *(S) Sys Mgr Tuning*, 15–17, 15–22
displaying virtual I/O cache, *(P) Alpha SDA*, SDA–186
displaying XQP information, *(P) Alpha SDA*, SDA–188
extracting errorlog buffers, *(P) Alpha SDA*, SDA–169
freeing page file, *(S) Sys Mgr Tuning*, 15–4
header, *(P) VAX SDA*, SDA–7
information captured in, *(S) Sys Mgr Tuning*, 15–2
in large clusters, *(S) VMScluster Sys*, 9–17
installing
automatically, *(S) Sys Mgr Tuning*, 15–2
when resized with AUTOGEN, *(S) Sys Mgr Tuning*, 15–18, 15–22
investigating cause of system failure, *(S) Sys Mgr Tuning*, 15–11
lack of, *(S) Sys Mgr Tuning*, 15–2
managing, *(S) VMScluster Sys*, 10–13
mapping physical memory to, *(P) Alpha SDA*, SDA–8; *(P) VAX SDA*, SDA–9
overwriting of, *(S) Sys Mgr Tuning*, 15–2
protecting with UIC security, *(S) Sys Mgr Tuning*, 15–4
purging files using CLUE CLEANUP, *(P) Alpha SDA*, SDA–163
requirements, *(S) Sys Mgr Tuning*, 15–3
location, *(S) Sys Mgr Tuning*, 15–3
size, *(S) Sys Mgr Tuning*, 15–4
requirements for analysis, *(P) Alpha SDA*, SDA–7; *(P) VAX SDA*, SDA–8

System dump files (cont'd)
saving contents on reboot, *(S) Sys Mgr Essentials*, 5–13; *(S) Sys Mgr Tuning*, 15–15
saving minimal information in, *(S) Sys Mgr Tuning*, 15–10
saving output, *(P) Alpha SDA*, SDA–170
sharing, *(S) VMScluster Sys*, 10–14
storing selective portions of memory, *(S) Sys Mgr Tuning*, 15–10
tasks for managing, *(S) Sys Mgr Tuning*, 15–1
use of page file for, *(S) Sys Mgr Tuning*, 15–2
using CLUE CONFIG, *(P) Alpha SDA*, SDA–164
System dump file sizes
calculating
manually, *(S) Sys Mgr Tuning*, 15–6
with AUTOGEN, *(S) Sys Mgr Tuning*, 15–2
changing
recommended method, *(S) Sys Mgr Tuning*, 15–22
with AUTOGEN, *(S) Sys Mgr Tuning*, 15–10, 15–22
with SYSGEN, *(S) Sys Mgr Tuning*, 15–26
displaying AUTOGEN's calculations, *(S) Sys Mgr Tuning*, 15–17, 15–22
minimizing, *(S) Sys Mgr Tuning*, 15–10
required, *(S) Sys Mgr Tuning*, 15–4
for page file, *(S) Sys Mgr Tuning*, 15–4
System failures, *(S) Sys Mgr Tuning*, 15–2
See also Crash dumps
analyzing, *(P) Alpha SDA*, SDA–18; *(P) VAX SDA*, SDA–19 to SDA–31
causing, *(P) Alpha SDA*, SDA–27 to SDA–30; *(P) VAX SDA*, SDA–31 to SDA–35
determining cause, *(S) Sys Mgr Tuning*, 15–2, 15–11
diagnosing from PC contents, *(P) Alpha SDA*, SDA–18
disposing of hardcopy output, *(G) User*, 2–26; *(S) Security*, 3–20
example, *(P) VAX SDA*, SDA–24 to SDA–31
reporting with a Software Performance Report, *(S) Sys Mgr Tuning*, 15–11
saving contents of system dump file after, *(S) Sys Mgr Essentials*, 5–13; *(S) Sys Mgr Tuning*, 15–15
security implications, *(G) User*, 2–18
summary, *(P) Alpha SDA*, SDA–89; *(P) VAX SDA*, SDA–99
writing of system dump file, *(S) Sys Mgr Tuning*, 15–2
System files
adding ACLs, *(S) Security*, 8–26
Alpha default protection, *(S) Security*, 8–26
auditing recommendations, *(S) Security*, 10–5
benefiting from ACLs, *(S) Security*, 10–5
System files (cont'd)
coordinating, *(S) VMScluster Sys*, 5–17
default protection, *(S) Security*, 8–25
duplicating using VMSKITBLD, *(S) Sys Mgr Essentials*, 2–26
moving off system disk to improve performance, *(S) Sys Mgr Tuning*, 16–8
on public volumes, *(S) Sys Mgr Essentials*, 8–8
optional
adding or deleting, *(S) Sys Mgr Essentials*, 5–2
protecting, *(S) Security*, 8–25
protection codes and ownership, *(S) Security*, B–1
recommended, *(S) Security*, 11–3
required, *(S) Security*, 11–2
VAX default protection, *(S) Security*, B–1
System Generation utility (SYSGEN), *(G) SW Overview*, 3–8; *(S) Sys Mgmt Util M-Z*, 5–3, 5–4
See also System parameters
and version checking, *(S) Sys Mgr Essentials*, 5–23
assign parameter values, *(S) Sys Mgmt Util M-Z*, 5–15
AUTOCONFIGURE command (VAX)
in system startup, *(S) Sys Mgr Essentials*, 5–7
changing page, swap, and dump file sizes, *(S) Sys Mgr Tuning*, 15–22, 15–26
changing system parameter file with, *(S) Sys Mgr Tuning*, 14–33
changing system parameters, *(S) Sys Mgr Tuning*, 14–33, 18–20
commands
AUTOCONFIGURE, *(S) Sys Mgmt Util M-Z*, 5–5
CONFIGURE, *(S) Sys Mgmt Util M-Z*, 5–7
CONNECT/ADAPTER, *(S) Sys Mgmt Util M-Z*, 5–9
CREATE, *(S) Sys Mgmt Util M-Z*, 5–11
DEINSTALL, *(S) Sys Mgmt Util M-Z*, 5–11
DISABLE, *(S) Sys Mgmt Util M-Z*, 5–12
ENABLE, *(S) Sys Mgmt Util M-Z*, 5–13
INSTALL, *(S) Sys Mgmt Util M-Z*, 5–13
LOAD, *(S) Sys Mgmt Util M-Z*, 5–14
MSCP, *(S) Sys Mgmt Util M-Z*, 5–14
RELOAD, *(S) Sys Mgmt Util M-Z*, 5–15
SET, *(S) Sys Mgmt Util M-Z*, 5–15
SET/OUTPUT, *(S) Sys Mgmt Util M-Z*, 5–16
SET/STARTUP, *(S) Sys Mgmt Util M-Z*, 5–17
SHARE, *(S) Sys Mgmt Util M-Z*, 5–17
SHARE/INITIALIZE, *(S) Sys Mgmt Util M-Z*, 5–18
SHOW, *(S) Sys Mgmt Util M-Z*, 5–20

System Generation utility (SYSGEN)
commands (cont'd)
SHOW/ADAPTER, *(S) Sys Mgmt Util M-Z*, 5–23
SHOW/BUS, *(S) Sys Mgmt Util M-Z*, 5–24
SHOW/CONFIGURATION, *(S) Sys Mgmt Util M-Z*, 5–24
SHOW/DEVICE, *(S) Sys Mgmt Util M-Z*, 5–27
SHOW/DRIVER, *(S) Sys Mgmt Util M-Z*, 5–28
SHOW/STARTUP, *(S) Sys Mgmt Util M-Z*, 5–29
SHOW/TURBOCHANNEL, *(S) Sys Mgmt Util M-Z*, 5–29
SHOW/UNIBUS, *(S) Sys Mgmt Util M-Z*, 5–30
TERMINAL, *(S) Sys Mgmt Util M-Z*, 5–31
USE, *(S) Sys Mgmt Util M-Z*, 5–32
WRITE, *(S) Sys Mgmt Util M-Z*, 5–33
configuring devices
in system startup, *(S) Sys Mgr Essentials*, 5–7
configuring SCSI devices, *(P) I/O User*, 8–8
CONNECT command (VAX), *(S) Sys Mgr Essentials*, 7–7
in system startup, *(S) Sys Mgr Essentials*, 5–7
connecting multiport memory, *(S) Sys Mgmt Util M-Z*, 5–17
converting parameters for use with AUTOGEN, *(S) Sys Mgr Tuning*, 14–5
CREATE command, *(S) Sys Mgr Tuning*, 15–18, 15–26
creating a new system parameter file, *(S) Sys Mgr Tuning*, 14–34
creating page, swap, and dump files, *(S) Sys Mgr Tuning*, 15–18
initializing multiport memory, *(S) Sys Mgmt Util M-Z*, 5–18
INSTALL command, *(S) Sys Mgr Tuning*, 15–19
in SYPAGSWPFILES.COM, *(S) Sys Mgr Tuning*, 15–21
in system startup, *(S) Sys Mgr Essentials*, 5–7
installing page, swap, and dump files, *(S) Sys Mgr Tuning*, 15–19, 15–21
installing page, swap and dump files
in system startup, *(S) Sys Mgr Essentials*, 5–7
LOAD command (VAX), *(S) Sys Mgr Essentials*, 7–7
managing system parameters, *(S) Sys Mgr Tuning*, 14–4
NPAGEDYN parameter, *(S) DECnet Mgmt*, 5–31
System Generation utility (SYSGEN) (cont'd)
operator log messages, *(S) Sys Mgr Tuning*, 18–20
running, *(S) DECnet Mgmt*, 5–31
showing parameter values, *(S) Sys Mgmt Util M-Z*, 5–20
showing system parameters, *(S) Sys Mgr Tuning*, 14–31
system parameters, *(S) Sys Mgmt Util M-Z*, C–1
updating parameters for DECnet, *(S) DECnet Mgmt*, 5–31
work area, *(S) Sys Mgmt Util M-Z*, 5–15, 5–32, 5–33
System global sections
See Global sections
System hang, *(P) Alpha SDA*, SDA–28; *(P) VAX SDA*, SDA–31
System hangup, *(S) Sys Mgr Tuning*, 17–21, 17–29
System help library, *(P) CDU, LBR, & MU*, LIB–9
System images
contents, *(P) Alpha SDA*, SDA–61, SDA–97; *(P) VAX SDA*, SDA–64, SDA–111
creating, *(P) Linker*, 1–13, LINK–38
creating a header for, *(P) Linker*, LINK–16
default base address, *(P) Linker*, LINK–43
definition, *(P) Linker*, 1–1
global symbols, *(P) Alpha SDA*, SDA–59; *(P) VAX SDA*, SDA–63
naming, *(P) Linker*, LINK–38
System information
See Timers, statistics
System-level access control, *(S) DECnet Mgmt*, 2–30
System libraries, *(P) Interfaces*, 4–1, A–1
decompressing, *(S) Sys Mgr Tuning*, 16–6; *(S) VAX Perform*, 1–10
System library files
including in image map files, *(P) Linker*, LINK–8, LINK–14
linker processing of, *(P) Linker*, 2–13, LINK–36
order of processing, *(P) Linker*, 2–18
open systems support library, *(P) Linker*, 2–14
System loadable image
adding, *(S) Sys Mgmt Util M-Z*, 6–74
removing, *(S) Sys Mgmt Util M-Z*, 6–76
System logical name tables, *(P) Concepts*, 10–6
System login images
and detached processes, *(G) DCL N-Z*, DCLII–61
System macro library
default, *(P) Interfaces*, 4–8

System management, *(G) SW Overview*, 2–1, 2–15, 3–12; *(S) VMScluster Sys*, 1–7; *(P) File Appl*, 3–11
ATM multisite, *(G) V7.0 New Feat*, D–12
AUTOGEN.COM command procedure, *(S) VMScluster Sys*, 1–10
backup procedures, *(S) Dependable*, 9–14
centralizing with SYSMAN, *(S) Sys Mgr Essentials*, 2–10
clearing counters, *(S) Sys Mgr Tuning*, 22–25; *(S) Sys Mgmt Util A-L*, 12–9
creating access control lists (ACLs), *(S) Sys Mgr Essentials*, 11–9
creating a crash dump file, *(P) Alpha SDA*, SDA–2; *(P) VAX SDA*, SDA–4
creating disk quota files, *(S) Sys Mgmt Util M-Z*, 6–23
data center operations, *(S) Dependable*, 9–8 to 9–9
defining target system, *(S) Sys Mgmt Util M-Z*, 6–52
deleting device information, *(S) Sys Mgr Tuning*, 22–17; *(S) Sys Mgmt Util A-L*, 12–8, 12–20
deleting node information, *(S) Sys Mgr Tuning*, 22–20; *(S) Sys Mgmt Util A-L*, 12–9, 12–20
disabling MOP downline load service, *(S) Sys Mgr Tuning*, 22–23
displaying device information, *(S) Sys Mgr Tuning*, 22–15
displaying LAN device configurations, *(S) Sys Mgr Tuning*, 22–9
displaying LAN device parameters, *(S) Sys Mgr Tuning*, 22–10; *(S) Sys Mgmt Util A-L*, 12–17, 12–32
displaying node information, *(S) Sys Mgr Tuning*, 22–18; *(S) Sys Mgmt Util A-L*, 12–18, 12–37
displaying OPCOM messages, *(S) Sys Mgr Tuning*, 22–25; *(S) Sys Mgmt Util A-L*, 12–21
displaying status and counters, *(S) Sys Mgr Tuning*, 22–23, 22–24; *(S) Sys Mgmt Util A-L*, 12–18, 12–37
displaying target environment, *(S) Sys Mgmt Util M-Z*, 6–56
displaying user profile, *(S) Sys Mgmt Util M-Z*, 6–58
displaying wait time for node response, *(S) Sys Mgmt Util M-Z*, 6–58
DS3, *(G) V7.0 New Feat*, D–12
enabling MOP downline load service, *(S) Sys Mgr Tuning*, 22–23
environment, *(S) Sys Mgr Essentials*, 2–12 to 2–15; *(S) Sys Mgmt Util M-Z*, 6–53
establishing the software environment, *(S) Dependable*, 9–14

System management (cont'd)
for multiprocess debugging, *(P) Debugger*, 14–17
image activation, *(P) File Appl*, 5–5
invoking the LANCP utility, *(S) Sys Mgmt Util A-L*, 12–4
LANACP device database, *(S) Sys Mgr Tuning*, 22–14
LAN Auxiliary Control Program (LANACP) utility, *(S) Sys Mgr Tuning*, 22–5
LAN Control Program (LANCP) utility, *(S) Sys Mgr Tuning*, 22–6
LANCP command files, *(S) Sys Mgr Tuning*, 22–9
LANCP SPAWN command, *(S) Sys Mgmt Util A-L*, 12–39
LANCP SPAWN function, *(S) Sys Mgr Tuning*, 22–9
LAN devices, *(S) Sys Mgr Tuning*, 22–9
LAN enhancements, *(S) Sys Mgr Tuning*, 22–1
LAN firmware updates, *(S) Sys Mgr Tuning*, 22–14
LAN node database management, *(S) Sys Mgr Tuning*, 22–17
large systems, *(G) SW Overview*, 2–14
limiting response time, *(S) Sys Mgmt Util M-Z*, 6–55
Load Trace facility, *(S) Sys Mgr Tuning*, 22–25
methods and tools, *(G) V7.0 New Feat*, D–13
MOP console carrier, *(S) Sys Mgr Tuning*, 22–26; *(S) Sys Mgmt Util A-L*, 12–10
MOP downline load service management, *(S) Sys Mgr Tuning*, 22–23
MOP trigger boot, *(S) Sys Mgr Tuning*, 22–27; *(S) Sys Mgmt Util A-L*, 12–40
multisite, *(G) V7.0 New Feat*, D–12
on multiple nodes, *(S) Sys Mgr Essentials*, 2–13
operating environments, *(S) VMScluster Sys*, 5–2
products, *(S) VMScluster Sys*, 1–8
responsibilities, *(S) DECnet Mgmt*, 1–12
running the LANACP utility, *(S) Sys Mgr Tuning*, 22–6
running the LANCP utility, *(S) Sys Mgr Tuning*, 22–7
security policies, *(S) Dependable*, 9–19
setting device information, *(S) Sys Mgr Tuning*, 22–15; *(S) Sys Mgmt Util A-L*, 12–11
setting LAN device parameters, *(S) Sys Mgr Tuning*, 22–12
setting node information, *(S) Sys Mgr Tuning*, 22–18
setting wait time for node response, *(S) Sys Mgmt Util M-Z*, 6–55
startup procedures
See Startup database

System management (cont'd)
stopping the LANACP utility, *(S) Sys Mgr Tuning*, 22–6
storage library system, *(S) VMScluster Sys*, 1–10
SYSMAN tasks, *(S) Sys Mgmt Util M-Z*, 6–3
SYSMAN utility, *(S) VMScluster Sys*, 1–10
system dump analyzer, *(S) VMScluster Sys*, 1–10
tasks, *(G) SW Overview*, 3–8
clusterwide management, *(S) Sys Mgr Tuning*, 20–3
customizing the system, *(S) Sys Mgr Essentials*, 5–1
establishing node in network, *(S) Sys Mgr Tuning*, 21–11
installing software, *(S) Sys Mgr Essentials*, 3–4
managing devices, *(S) Sys Mgr Essentials*, 7–1
managing page, swap, and dump files, *(S) Sys Mgr Tuning*, 15–1
managing performance, *(S) Sys Mgr Tuning*, 16–1
managing security, *(S) Sys Mgr Essentials*, 11–1
managing storage media, *(S) Sys Mgr Essentials*, 8–1
managing system parameters, *(S) Sys Mgr Tuning*, 14–1
managing the queue manager and queue database, *(S) Sys Mgr Essentials*, 12–1
managing user accounts, *(S) Sys Mgr Essentials*, 6–1
starting up a system, *(S) Sys Mgr Essentials*, 4–1
updating operating system, *(S) Sys Mgr Essentials*, 3–5
upgrading operating system, *(S) Sys Mgr Essentials*, 3–5
working with files and directories, *(S) Sys Mgr Essentials*, 9–1
techniques, *(S) Dependable*, 9–1
tools, *(S) Sys Mgr Essentials*, 2–2
tools for daily operations, *(S) VMScluster Sys*, 1–8
utilities, *(G) SW Overview*, 3–9; *(S) Sys Mgr Essentials*, 2–2
WAN multisite, *(G) V7.0 New Feat*, D–12
System Management utility (SYSMAN), *(G) SW Overview*, 3–13; *(S) VMScluster Sys*, 1–10
accessing disks, *(S) Sys Mgr Essentials*, 8–50
adding startup files to a startup database, *(S) Sys Mgr Essentials*, 5–20, 5–21
ALF commands, *(S) Sys Mgr Essentials*, 6–32
authorization checks in, *(S) Sys Mgr Essentials*, 2–16
System Management utility (SYSMAN) (cont'd)
changing privileges in, *(S) Sys Mgr Essentials*, 2–17
changing system parameters
active values, *(S) Sys Mgr Tuning*, 14–28
commands
ALF ADD, *(S) Sys Mgmt Util M-Z*, 6–10
ALF REMOVE, *(S) Sys Mgmt Util M-Z*, 6–11
ALF SHOW, *(S) Sys Mgmt Util M-Z*, 6–13
ATTACH, *(S) Sys Mgmt Util M-Z*, 6–13
CONFIGURATION SET CLUSTER_AUTH, *(S) Sys Mgmt Util M-Z*, 6–15
CONFIGURATION SET TIME, *(S) Sys Mgmt Util M-Z*, 6–16
CONFIGURATION SHOW CLUSTER_AUTHORIZATION, *(S) Sys Mgmt Util M-Z*, 6–17
CONFIGURATION SHOW TIME, *(S) Sys Mgmt Util M-Z*, 6–18
DISKQUOTA ADD, *(S) Sys Mgmt Util M-Z*, 6–21
DISKQUOTA CREATE, *(S) Sys Mgmt Util M-Z*, 6–22
DISKQUOTA DELETE, *(S) Sys Mgmt Util M-Z*, 6–23
DISKQUOTA DISABLE, *(S) Sys Mgmt Util M-Z*, 6–23
DISKQUOTA ENABLE, *(S) Sys Mgmt Util M-Z*, 6–24
DISKQUOTA MODIFY, *(S) Sys Mgmt Util M-Z*, 6–25
DISKQUOTA REBUILD, *(S) Sys Mgmt Util M-Z*, 6–26
DISKQUOTA REMOVE, *(S) Sys Mgmt Util M-Z*, 6–27
DISKQUOTA SHOW, *(S) Sys Mgmt Util M-Z*, 6–29
DO, *(S) Sys Mgmt Util M-Z*, 6–30
EXITx, *(S) Sys Mgmt Util M-Z*, 6–32
HELPx, *(S) Sys Mgmt Util M-Z*, 6–32
IO AUTOCONFIGURE, *(S) Sys Mgmt Util M-Z*, 6–33
IO CONNECT, *(S) Sys Mgmt Util M-Z*, 6–34
IO LOAD, *(S) Sys Mgmt Util M-Z*, 6–37
IO SET PREFIX, *(S) Sys Mgmt Util M-Z*, 6–38, 6–39
IO SHOW BUS, *(S) Sys Mgmt Util M-Z*, 6–39
IO SHOW DEVICE, *(S) Sys Mgmt Util M-Z*, 6–40
IO SHOW EXCLUDE, *(S) Sys Mgmt Util M-Z*, 6–41
IO SHOW PREFIX, *(S) Sys Mgmt Util M-Z*, 6–42
LICENSE LOAD, *(S) Sys Mgmt Util M-Z*, 6–43

System Management utility (SYSMAN)
commands (cont'd)
LICENSE UNLOAD, *(S) Sys Mgmt Util M-Z*, 6–43
PARAMETERS DISABLE CHECKS, *(S) Sys Mgmt Util M-Z*, 6–44
PARAMETERS ENABLE CHECKS, *(S) Sys Mgmt Util M-Z*, 6–45
PARAMETERS SET, *(S) Sys Mgmt Util M-Z*, 6–46
PARAMETERS SHOW, *(S) Sys Mgmt Util M-Z*, 6–47
PARAMETERS USE, *(S) Sys Mgmt Util M-Z*, 6–50
PARAMETERS WRITE, *(S) Sys Mgmt Util M-Z*, 6–51
SET ENVIRONMENT, *(S) Sys Mgmt Util M-Z*, 6–52
SET PROFILE, *(S) Sys Mgmt Util M-Z*, 6–54
SET TIMEOUT, *(S) Sys Mgmt Util M-Z*, 6–55
SHOW ENVIRONMENT, *(S) Sys Mgmt Util M-Z*, 6–56
SHOW KEY, *(S) Sys Mgmt Util M-Z*, 6–57
SHOW PROFILE, *(S) Sys Mgmt Util M-Z*, 6–58
SHOW TIME, *(S) Sys Mgmt Util M-Z*, 6–58
SHUTDOWN NODE, *(S) Sys Mgmt Util M-Z*, 6–59
SPAWN, *(S) Sys Mgmt Util M-Z*, 6–62
STARTUP ADD, *(S) Sys Mgmt Util M-Z*, 6–65
STARTUP DISABLE, *(S) Sys Mgmt Util M-Z*, 6–67
STARTUP ENABLE, *(S) Sys Mgmt Util M-Z*, 6–68
STARTUP MODIFY, *(S) Sys Mgmt Util M-Z*, 6–69
STARTUP REMOVE, *(S) Sys Mgmt Util M-Z*, 6–70
STARTUP SET DATABASE, *(S) Sys Mgmt Util M-Z*, 6–71
STARTUP SET OPTIONS, *(S) Sys Mgmt Util M-Z*, 6–72
STARTUP SHOW, *(S) Sys Mgmt Util M-Z*, 6–73
SYS_LOADABLE ADD, *(S) Sys Mgmt Util M-Z*, 6–74
SYS_LOADABLE REMOVE, *(S) Sys Mgmt Util M-Z*, 6–76
command verification in, *(S) Sys Mgr Essentials*, 2–17
common tasks, *(S) Sys Mgmt Util M-Z*, 6–3
configuring devices (Alpha)
in system startup, *(S) Sys Mgr Essentials*, 5–7
System Management utility (SYSMAN) (cont'd)
converting parameters for use with AUTOGEN, *(S) Sys Mgr Tuning*, 14–5
creating command procedures for, *(S) Sys Mgr Essentials*, 2–18
deleting startup files, *(S) Sys Mgr Essentials*, 5–21
disabling startup files, *(S) Sys Mgr Essentials*, 5–22
DISKQUOTA commands, *(S) Sys Mgr Essentials*, 8–50
disk quotas with, *(S) Sys Mgr Essentials*, 8–48
Disk Quota utility, *(S) Sys Mgr Essentials*, 8–50
DO command, *(S) Sys Mgr Essentials*, 2–18
enabling cluster alias operations, *(S) VMScluster Sys*, 4–11
enabling remote systems to execute commands, *(S) Sys Mgr Essentials*, 2–12
enabling startup files, *(S) Sys Mgr Essentials*, 5–22
executing a command procedure, *(S) Sys Mgmt Util M-Z*, 6–9
executing SYSMAN commands, *(S) Sys Mgmt Util M-Z*, 6–4
exiting from, *(S) Sys Mgmt Util M-Z*, 6–5
features of, *(S) Sys Mgr Essentials*, 2–10
how commands execute, *(S) Sys Mgr Essentials*, 2–11
initialization file, *(S) Sys Mgr Essentials*, 2–19; *(S) Sys Mgmt Util M-Z*, 6–4
invoking, *(S) Sys Mgmt Util M-Z*, 6–5
IO AUTOCONFIGURE command (Alpha)
in system startup, *(S) Sys Mgr Essentials*, 5–7
IO CONNECT command (Alpha), *(S) Sys Mgr Essentials*, 7–8
in system startup, *(S) Sys Mgr Essentials*, 5–7
IO LOAD (Alpha), *(S) Sys Mgr Essentials*, 7–8
loading licenses with, *(S) Sys Mgr Essentials*, 3–8
management environment, *(S) Sys Mgr Essentials*, 2–12
managing a VMScluster, *(S) Sys Mgr Tuning*, 20–16 to 20–23
managing startup, *(S) Sys Mgr Essentials*, 5–18
managing system parameters, *(S) Sys Mgr Tuning*, 14–4, 14–25
modifying cluster group data, *(S) VMScluster Sys*, 10–16
modifying LGI parameters, *(S) Security*, 11–2
modifying the system parameter file, *(S) Sys Mgr Tuning*, 14–28
overview, *(S) Sys Mgmt Util M-Z*, 6–3
PARAMETERS command, *(S) Sys Mgr Tuning*, 14–25

System Management utility (SYSMAN)
PARAMETERS command (cont'd)
summary, *(S) Sys Mgr Tuning*, 14–25
privilege requirements, *(S) Sys Mgmt Util M-Z*, 6–5
privileges required, *(S) Sys Mgr Essentials*, 2–11
profile, *(S) Sys Mgr Essentials*, 2–16
adjusting, *(S) Sys Mgr Essentials*, 2–16
restrictions, *(S) Sys Mgmt Util M-Z*, 6–5
showing system parameters, *(S) Sys Mgr Tuning*, 14–27
showing the contents of a startup database, *(S) Sys Mgr Essentials*, 5–20
showing the name of the target startup database, *(S) Sys Mgr Essentials*, 5–20
shutdown, *(S) Sys Mgr Essentials*, 4–34
SMISERVER process, *(S) Sys Mgr Essentials*, 2–12
specifying the current startup database, *(S) Sys Mgr Essentials*, 5–20
STARTUP command, *(S) Sys Mgr Essentials*, 5–18
startup logging, *(S) Sys Mgr Essentials*, 4–15
startup restrictions, *(S) Sys Mgr Tuning*, 23–12
timeout periods, *(S) Sys Mgr Essentials*, 2–18
use of passwords, *(S) Sys Mgr Essentials*, 2–13, 2–16
using logical names in, *(S) Sys Mgr Essentials*, 2–14
using to centralize system management, *(S) Sys Mgr Essentials*, 2–10
System managers
assessing auditing requirements, *(S) Security*, 9–10
controlling proxy accounts at local node, *(S) DECnet Intro*, 3–35
coordinating with other networks, *(S) DECnet Intro*, 3–38
establishing DECnet configuration database, *(S) DECnet Intro*, 3–10, 3–32
establishing dynamic asynchronous connection, *(S) DECnet Intro*, 3–24
establishing static asynchronous connection, *(S) DECnet Intro*, 3–20
maintaining password security at local node, *(S) DECnet Intro*, 3–35
network responsibilities, *(S) DECnet Intro*, 2–16 to 2–17
providing network security, *(S) DECnet Intro*, 3–34 to 3–38
using NETCONFIG.COM, *(S) DECnet Intro*, 3–11
System map, *(P) VAX SDA*, SDA–20
System message routines
global symbols, *(P) VAX SDA*, SDA–65
System messages
See also Messages
auditing, *(G) User*, 19–11
login failure, *(G) User*, 19–10
System objects
access, *(P) Interfaces*, B–15
using logical names with, *(G) User*, 13–1
System overview statistics
in Monitor utility, *(S) Sys Mgmt Util M-Z*, 1–52
System Overview window, *(S) DECamds*, 2–2, Glossary–2
hiding node name on startup with customization file, *(S) DECamds*, 5–2
how to define groups, *(S) DECamds*, 1–7
known problems, *(S) DECamds*, 5–15
menus, *(S) DECamds*, 2–3
System page file
as dump file, *(G) V7.0 New Feat*, 4–21; *(P) Alpha SDA*, SDA–4; *(P) VAX SDA*, SDA–5
releasing blocks containing a crash dump, *(P) Alpha SDA*, SDA–33; *(P) VAX SDA*, SDA–39
System page table
See SPT
System parameters
See also AUTOGEN.COM command procedure, AWSA, MODPARAMS.DAT file, and Parameter files
ACP, *(S) Sys Mgmt Util M-Z*, C–6 to C–9
ACP cache system, *(S) Sys Mgr Essentials*, 8–43
ACP_DATACHECK, *(G) V7.0 New Feat*, 3–2
ACP_REBLDSYSD, *(S) VMScluster Sys*, 6–21
active values, *(S) Sys Mgr Tuning*, 14–3, 14–26
adjusting for cluster growth, *(S) VMScluster Sys*, 9–18
adjusting LRPSIZE parameter, *(S) VMScluster Sys*, 10–17
adjusting NISCS_MAX_PKTSZ parameter, *(S) VMScluster Sys*, 10–17
adjusting page cache size, *(S) VAX Perform*, 5–3
affected by AUTOGEN calculations, *(S) Sys Mgr Tuning*, 14–10; *(S) Sys Mgmt Util A-L*, 6–4
affected by AUTOGEN feedback, *(S) Sys Mgmt Util A-L*, 6–5
ALLOCLASS, *(S) VMScluster Sys*, 6–9
ALPHAVMSSYS.PAR file (Alpha), *(S) Sys Mgr Tuning*, 14–3
auditing modification of, *(S) Security*, 9–7
automatic setting by AUTOGEN, *(S) Sys Mgr Tuning*, 14–3
booting with default, *(S) Sys Mgr Essentials*, 4–8
categories, *(S) Sys Mgmt Util M-Z*, C–1

System parameters (cont'd)
categories by function, *(S) Sys Mgr Tuning*, 14–2
caution to prevent data corruption, *(S) VMScluster Sys*, 8–22, A–3, A–4
changing, *(S) VAX Perform*, 5–1
checking AUTOGEN's settings, *(S) Sys Mgr Tuning*, 14–10
editing MODPARAMS.DAT file, *(S) Sys Mgr Tuning*, 14–18
recommended method, *(S) Sys Mgr Tuning*, 14–4, 14–18; *(S) Sys Mgmt Util A-L*, 6–3
specifying values in MODPARAMS.DAT file, *(S) Sys Mgr Tuning*, 14–4
with AUTOGEN, *(S) Sys Mgr Tuning*, 14–18
with conversational boot, *(S) Sys Mgr Essentials*, 4–3, 4–6; *(S) Sys Mgr Tuning*, 14–36
with SYSGEN, *(S) Sys Mgr Tuning*, 14–33
with SYSMAN, *(S) Sys Mgr Tuning*, 14–28
checking, *(S) Sys Mgmt Util M-Z*, 6–45
checking AUTOGEN's settings, *(S) Sys Mgmt Util A-L*, 6–4
checking before using VMSINSTAL.COM command procedure, *(S) Sys Mgr Essentials*, 3–7
cluster parameters, *(S) VMScluster Sys*, A–1 to A–4
controlling disconnected processes, *(S) Security*, 7–24
creating a new parameter file
with SYSGEN, *(S) Sys Mgr Tuning*, 14–34
current values, *(S) Sys Mgr Tuning*, 14–3, 14–26
default parameter file, *(S) Sys Mgmt Util A-L*, 6–5, 6–7
default values, *(S) Sys Mgr Tuning*, 14–3
defining system users (security category), *(S) Security*, 4–29
definition, *(S) Sys Mgr Tuning*, 14–1
descriptions, *(S) Sys Mgmt Util M-Z*, C–6 to C–57
disabling checking, *(S) Sys Mgmt Util M-Z*, 6–44
DISK_QUORUM, *(S) VMScluster Sys*, A–1
displaying, *(S) Sys Mgmt Util M-Z*, 6–47
device configuration, *(S) Sys Mgmt Util M-Z*, 5–24
device driver addresses, *(S) Sys Mgmt Util M-Z*, 5–28
I/O subsystems, *(S) Sys Mgmt Util M-Z*, 5–27
parameter values, *(S) Sys Mgmt Util M-Z*, 5–20
startup procedure, *(S) Sys Mgmt Util M-Z*, 5–29
System parameters
displaying (cont'd)
UNIBUS I/O addresses, *(S) Sys Mgmt Util M-Z*, 5–30
values, *(S) Sys Mgmt Util M-Z*, 5–20
DUMPBUG, *(S) Sys Mgr Tuning*, 15–3
DUMPSTYLE, *(S) Sys Mgr Tuning*, 15–3, 15–10
dynamic, *(S) Sys Mgr Tuning*, 14–3
effect on other parameters, *(S) Sys Mgr Tuning*, 14–4
ERLBUFFERPAGES, *(S) Sys Mgr Tuning*, 15–6
ERRORLOGBUFFERS, *(S) Sys Mgr Tuning*, 15–6
EXPECTED_VOTES, *(S) VMScluster Sys*, 2–6, 8–12, A–1
file extensions, *(S) Sys Mgr Tuning*, 16–7
GBLPAGES, *(S) Sys Mgr Tuning*, 16–12
GBLSECTIONS, *(S) Sys Mgr Tuning*, 16–12
initialization at boot time, *(S) Sys Mgr Tuning*, 14–36
limiting global buffers, *(P) File Appl*, 1–38
LOCKDIRWT, *(S) VMScluster Sys*, 2–16, A–2
Login security, *(S) Sys Mgmt Util M-Z*, C–18 to C–19
LRPSIZE, *(S) VMScluster Sys*, A–2
modifying, *(S) Sys Mgmt Util M-Z*, 6–51
recommended method, *(S) Sys Mgmt Util A-L*, 6–3
MSCP_LOAD, *(S) VMScluster Sys*, 6–15, A–2
MSCP_SERVE_ALL, *(S) VMScluster Sys*, 6–15, A–2
MULTIPROCESSING, *(S) Sys Mgr Tuning*, 26–3
MVTIMEOUT, *(S) Sys Mgr Essentials*, 8–60, 8–62
MVTIMEOUT parameter, *(S) Dependable*, 8–22
new, *(G) V7.0 New Feat*, 3–1
NISCS_CONV_BOOT, *(S) VMScluster Sys*, 8–10, A–2, C–6
NISCS_LAN_OVRHD, *(S) VMScluster Sys*, A–2
NISCS_LOAD_PEA0, *(S) VMScluster Sys*, A–2, C–13
NISCS_MAX_PKTSZ, *(S) VMScluster Sys*, A–3
NISCS_PORT_SERV, *(S) VMScluster Sys*, A–6
NPAGEDYN, *(S) Sys Mgr Tuning*, 26–7
on disk, *(S) Sys Mgr Tuning*, 14–3
in ALPHAVMSSYS.PAR file (Alpha), *(S) Sys Mgr Tuning*, 14–36
in VAXVMSSYS.PAR file (VAX), *(S) Sys Mgr Tuning*, 14–36
Process limits and quotas, *(S) Sys Mgmt Util M-Z*, C–29 to C–31
QDSKINTERVAL, *(S) VMScluster Sys*, A–3
QDSKVOTES, *(S) VMScluster Sys*, A–3

System parameters (cont'd)
QUANTUM, *(S) Sys Mgr Tuning*, 26–8
quorum, *(S) VMScluster Sys*, 2–6
RECNXINTERVAL, *(S) VMScluster Sys*, 3–20, A–3
recommended method for changing, *(S) Sys Mgr Tuning*, 14–4, 14–5
required C2 settings, *(S) Security*, C–10
retaining with feedback option, *(S) VMScluster Sys*, 8–42
RMS, *(S) Sys Mgmt Util M-Z*, C–33 to C–34
RMS_EXTEND_SIZE, *(S) Sys Mgr Tuning*, 16–7
SAVEDUMP, *(S) Sys Mgr Tuning*, 15–2, 15–3
SCSBUFFCNT, *(S) VMScluster Sys*, 9–19
SCSCONNCNT, *(S) VMScluster Sys*, 9–18
SCSNODE, *(S) Sys Mgr Tuning*, 23–10
SCSRESPCNT, *(S) VMScluster Sys*, 9–20
setting, *(S) Sys Mgmt Util M-Z*, 6–46
parameter addresses, *(S) Sys Mgmt Util M-Z*, 5–15
parameter values, *(S) Sys Mgmt Util M-Z*, 5–3, 5–15, 5–20, 5–32, 5–33
recommended method, *(S) Sys Mgmt Util A-L*, 6–3
setting parameters in MODPARAMS.DAT file, *(S) VMScluster Sys*, 6–9
sharing multiport memory, *(S) Sys Mgmt Util M-Z*, 5–17
showing, *(S) Sys Mgmt Util M-Z*, 5–20
with conversational boot, *(S) Sys Mgr Essentials*, 4–3, 4–6; *(S) Sys Mgr Tuning*, 14–36
with SYSGEN, *(S) Sys Mgr Tuning*, 14–31
with SYSMAN, *(S) Sys Mgr Tuning*, 14–27
SMP_CPUS, *(S) Sys Mgr Tuning*, 26–3, 26–6
specifying startup procedure, *(S) Sys Mgmt Util M-Z*, 5–17, 5–32, 5–33
STARTUP_P1, *(S) Sys Mgr Essentials*, 4–14
STARTUP_P1 set to MIN, *(S) VMScluster Sys*, 2–10
STARTUP_P2, *(S) Sys Mgr Essentials*, 4–14
storing your changes for use with AUTOGEN, *(S) Sys Mgr Tuning*, 14–5
summary, *(S) Sys Mgmt Util M-Z*, C–2
symmetric multiprocessing, *(S) Sys Mgr Tuning*, 26–3
System Communications Services, *(S) Sys Mgmt Util M-Z*, C–35 to C–36
SYSTEM_CHECK, *(G) V7.0 New Feat*, 3–2
TAPE_ALLOCLASS, *(S) VMScluster Sys*, 6–9, A–3
TAPE_MVTIMEOUT, *(S) Sys Mgr Essentials*, 8–60, 8–62
tasks for managing, *(S) Sys Mgr Tuning*, 14–1
terminal behavior, *(S) Sys Mgmt Util M-Z*, C–43 to C–46
TIMVCFAIL, *(S) VMScluster Sys*, A–3
System parameters (cont'd)
TMSCP_LOAD, *(S) VMScluster Sys*, 6–15, A–3
TTY_DEFCHAR, *(S) Sys Mgr Essentials*, 7–10
TTY_DEFCHAR2, *(S) Sys Mgr Essentials*, 7–10, 7–11
types of, *(S) Sys Mgr Tuning*, 14–2
UAFALTERNATE, *(S) Sys Mgr Essentials*, 4–10
updating in MODPARAMS.DAT and AGEN$ files, *(S) VMScluster Sys*, 8–36
user definable, *(S) Sys Mgr Tuning*, 14–3
VAXCLUSTER, *(S) VMScluster Sys*, A–3
VAXVMSSYS.PAR file (VAX), *(S) Sys Mgr Tuning*, 14–3
VCC_FLAGS, *(S) Sys Mgmt Util M-Z*, C–49
VCC_FLAGS_D, *(S) Sys Mgmt Util M-Z*, C–49
VCC_FLAGS_S, *(S) Sys Mgmt Util M-Z*, C–49
VCC_MAXSIZE, *(S) Sys Mgmt Util M-Z*, C–49
VCC_MINSIZE, *(S) Sys Mgmt Util M-Z*, C–49
vector processing, *(S) Sys Mgr Tuning*, 26–5
VECTOR_MARGIN, *(S) Sys Mgr Tuning*, 26–8
VECTOR_PROC, *(S) Sys Mgr Tuning*, 26–5
VIRTUALPAGECNT, *(S) Sys Mgr Essentials*, 13–32
VMS, *(S) Sys Mgmt Util M-Z*, C–56
VOTES, *(S) VMScluster Sys*, 2–6, A–4
when incorrect values prevent the system from booting, *(S) Sys Mgr Essentials*, 4–8
work area, *(S) Sys Mgmt Util M-Z*, 6–50, 6–51
writing contents of, *(S) Sys Mgmt Util M-Z*, 6–51
writing to file, *(S) Sys Mgmt Util M-Z*, 5–33
WSMAX, *(S) Sys Mgr Essentials*, 13–30; *(S) Sys Mgr Tuning*, 26–7
System passwords, *(S) Sys Mgmt Util A-L*, 5–40
System PCB (process control block)
displaying, *(P) Alpha SDA*, SDA–129
System privileges, *(S) DECnet Mgmt*, 5–1
determining own, *(S) DECnet Intro*, 3–1
DIAGNOSE, *(S) DECnet Mgmt*, 5–2
for access control, *(S) DECnet Mgmt*, 2–31
for DECnet system management, *(S) DECnet Intro*, 3–6
for network operations, *(S) DECnet Intro*, 2–2
minimum for network login, *(S) DECnet Intro*, 3–1
NETMBX, *(S) DECnet Intro*, 2–2, 3–1; *(S) DECnet Mgmt*, 2–31
OPER, *(S) DECnet Intro*, 3–33; *(S) DECnet Mgmt*, 5–5, 5–10, 5–11
protecting files, *(G) User*, 4–16
SYSPRV, *(S) DECnet Intro*, 3–33; *(S) DECnet Mgmt*, 5–5, 5–10
TMPMBX, *(S) DECnet Intro*, 2–2, 3–1; *(S) DECnet Mgmt*, 2–31
to configure network, *(S) DECnet Mgmt*, 5–1

System processes, *(P) VAX SDA*, SDA–77
System protection code, *(P) Rec Mgmt Util*, 4–22
/SYSTEM qualifier, *(P) Linker*, LINK–38; *(P) Debugger*, 7–9, CD–162, CD–224, CD–301; *(P) Alpha SDA*, SDA–49, SDA–72, SDA–112, SDA–129, SDA–151; *(P) VAX SDA*, SDA–56, SDA–77, SDA–127, SDA–131, SDA–150
  in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–36
System region
  examining, *(P) Alpha SDA*, SDA–49; *(P) VAX SDA*, SDA–56
System resources
  networking activity, *(S) DECnet Intro*, 4–7
System responsiveness
  dependent on resources, *(S) VAX Perform*, 3–8
System routines, *(P) Environment*, 10–1
  documentation, *(P) Interfaces*, 1–1 to 1–12
  returns register data, *(P) Interfaces*, 1–5
Systems
  See also Alpha systems, OpenVMS systems, and VAX systems
  accessing, *(G) DCL A-M*, DCLI–415
  analyzing running, *(P) Alpha SDA*, SDA–2, SDA–9 to SDA–10, SDA–30; *(P) VAX SDA*, SDA–4, SDA–11, SDA–35
  building blocks for dependable computing, *(S) Dependable*, 3–1
  changing
    date, *(G) DCL N-Z*, DCLII–226
    passwords, *(G) DCL N-Z*, DCLII–169
    time, *(G) DCL N-Z*, DCLII–226
  communications options, *(S) Dependable*, 3–5 to 3–7
  controlling access to, *(S) Security*, 3–5
  controlling use of, *(G) User*, 2–5; *(S) Security*, 3–3
  dependable software applications, *(S) Dependable*, 8–1
  displaying
    information on, *(G) DCL N-Z*, DCLII–237
    status, *(G) DCL N-Z*, DCLII–237
  environmental factors, *(S) Dependable*, 3–2, 3–3
  exception dispatcher, *(P) Concepts*, 13–24
  failures and recoveries, *(S) Dependable*, 9–10
  getting information asynchronously, *(P) Sys Svc II*, SYS2–51
  getting information synchronously, *(P) Sys Svc II*, SYS2–70
  hardware options, *(S) Dependable*, 3–3 to 3–5
  hot standby sites, *(S) Dependable*, 5–11
  implementation tradeoffs, *(S) Dependable*, 4–13 to 4–14
  integration of software, *(S) Dependable*, 8–31
  investigating performance problems, *(P) Alpha SDA*, SDA–9; *(P) VAX SDA*, SDA–11
  kernel level redundancy, *(S) Dependable*, 4–5
  mailbox, *(P) Concepts*, 9–42
Systems (cont'd)
  multiple-site data center VMScluster, *(S) Dependable*, 5–11, 6–17, 7–12
  network redundancy, *(S) Dependable*, 4–11
  operational procedures options, *(S) Dependable*, 3–12 to 3–14
  outages
    surviving external failures, *(S) Dependable*, 8–30
  performance tradeoffs, *(S) Dependable*, 4–3 to 4–13
  personnel options, *(S) Dependable*, 3–15 to 3–16
  principles for creating dependability, *(S) Dependable*, 2–1
  software options, *(S) Dependable*, 3–7 to 3–12
  using new equipment, *(S) Dependable*, 3–4
SYSTEMS class
  adding or restoring, *(S) Sys Mgmt Util M-Z*, 4–31
  fields belonging to, *(S) Sys Mgmt Util M-Z*, 4–27
  removing, *(S) Sys Mgmt Util M-Z*, 4–46
Systems Communications Services
  See SCS
System security
  audit log file, *(G) User*, 19–11
System service access, *(P) Concepts*, 6–1, 6–2
System service calls, *(S) DECnet Mgmt*, 1–18, 8–14, 8–15, 8–24
  summary for nontransparent use, *(S) DECnet Mgmt*, 8–24, 8–31
  summary for transparent use, *(S) DECnet Mgmt*, 8–17, 8–20
System service calls and static watchpoints, *(P) Debugger*, CD–237
System service exception, *(P) RMS Ref*, 2–6
System service interception and /DEBUG, *(P) Debugger*, 5–7
System services, *(P) Environment*, 10–4; *(P) Modular Proc*, 3–7, A–1; *(P) Sys Svc II*, SYS2–131, SYS2–132, SYS2–135, SYS2–136
  Abort Transaction, *(P) Sys Svc I*, SYS1–3
  Abort Transaction and Wait, *(P) Sys Svc I*, SYS1–7
  Add Holder Record to Rights Database, *(P) Sys Svc I*, SYS1–8
  Add Identifier to Rights Database, *(P) Sys Svc I*, SYS1–11
  Add Proxy, *(P) Sys Svc I*, SYS1–14
  Adjust Outer Mode Stack Pointer, *(P) Sys Svc I*, SYS1–18
  Adjust Working Set Limit, *(P) Sys Svc I*, SYS1–20
  Affect Process Scheduling, *(P) Sys Svc II*, SYS2–276
  Allocate Device, *(P) Sys Svc I*, SYS1–22
  Assign I/O Channel, *(P) Sys Svc I*, SYS1–38

System services (cont'd)
Associate Common Event Flag Cluster, *(P) Sys Svc I*, SYS1–25
AST, *(P) Environment*, 10–5, 10–7
asynchronous and synchronous, *(P) Concepts*, 14–28
Audit Event, *(P) Sys Svc I*, SYS1–43
Audit Event and Wait, *(P) Sys Svc I*, SYS1–61
Breakthrough, *(P) Sys Svc I*, SYS1–68
Breakthrough and Wait, *(P) Sys Svc I*, SYS1–76
calling, *(P) Interfaces*, 4–1
Cancel Exit Handler, *(P) Sys Svc I*, SYS1–79
Cancel I/O on Channel, *(P) Sys Svc I*, SYS1–77
Cancel Timer, *(P) Sys Svc I*, SYS1–80
Cancel Wakeup, *(P) Sys Svc I*, SYS1–82
Change to Executive Mode, *(P) Sys Svc I*, SYS1–110
with quadword argument list, *(P) Sys Svc I*, SYS1–112
Change to Kernel Mode, *(P) Sys Svc I*, SYS1–114, SYS1–116
Check Access, *(P) Sys Svc I*, SYS1–84
Check Access Protection, *(P) Sys Svc I*, SYS1–99
Check Floating Point (Alpha only), *(P) Sys Svc I*, SYS1–92
checking completion status of, *(P) Sys Svc II*, SYS2–447
Check Privilege, *(P) Sys Svc I*, SYS1–93
Check Privilege and Wait, *(P) Sys Svc I*, SYS1–98
Clear Cluster Event (Alpha only), *(P) Sys Svc I*, SYS1–107
Clear Event Flag, *(P) Sys Svc I*, SYS1–109
cluster event notification, *(P) Environment*, 10–5, 10–7
condition handling, *(P) Environment*, 10–5, 10–7
Convert ASCII String to Binary Time, *(P) Sys Svc I*, SYS1–62
Convert ASCII String to UTC Binary Time, *(P) Sys Svc I*, SYS1–65
Convert Binary Time to ASCII String, *(P) Sys Svc I*, SYS1–29
Convert Binary Time to Numeric Time, *(P) Sys Svc II*, SYS2–194
Convert UTC Time to Numeric Components, *(P) Sys Svc II*, SYS2–196
Convert UTC to ASCII, *(P) Sys Svc I*, SYS1–35
Create and Map a Global Disk File Section, *(P) Sys Svc I*, SYS1–210
Create and Map Global Page File Section, *(P) Sys Svc I*, SYS1–218
Create and Map Global Page Frame Section, *(P) Sys Svc I*, SYS1–225
Create and Map Private Disk File Section, *(P) Sys Svc I*, SYS1–204
System services (cont'd)
Create and Map Private Page Frame Section, *(P) Sys Svc I*, SYS1–232
Create and Map Section, *(P) Sys Svc I*, SYS1–192
Create Global Page Frame Section, *(P) Sys Svc I*, SYS1–135
Create Logical Name, *(P) Sys Svc I*, SYS1–149
Create Logical Name Table, *(P) Sys Svc I*, SYS1–155
Create Mailbox and Assign Channel, *(P) Sys Svc I*, SYS1–161
Create Permanent Global Disk File Section, *(P) Sys Svc I*, SYS1–126
Create Permanent Global Page File, *(P) Sys Svc I*, SYS1–131
Create Process, *(P) Sys Svc I*, SYS1–168
Create Rights Database, *(P) Sys Svc I*, SYS1–139
Create User Profile, *(P) Sys Svc I*, SYS1–145
Create Virtual Address Space, *(P) Sys Svc I*, SYS1–185, SYS1–188
Create Virtual Region, *(P) Sys Svc I*, SYS1–141
Deallocate Device, *(P) Sys Svc I*, SYS1–238
Deassign I/O Channel, *(P) Sys Svc I*, SYS1–240
DECdtm, *(P) Environment*, 10–5, 10–7
Declare AST, *(P) Sys Svc I*, SYS1–242
Declare Change Mode or Compatibility Mode Handler, *(P) Sys Svc I*, SYS1–244
Declare Exit Handler, *(P) Sys Svc I*, SYS1–247
Delete a Virtual Region, *(P) Sys Svc I*, SYS1–255
Delete Buffer Object, *(P) Sys Svc I*, SYS1–249
Delete Common Event Flag Cluster, *(P) Sys Svc I*, SYS1–292
Delete Global Section, *(P) Sys Svc I*, SYS1–279
Delete Intrusion Records, *(P) Sys Svc I*, SYS1–250
Delete Logical Name, *(P) Sys Svc I*, SYS1–258
Delete Mailbox, *(P) Sys Svc I*, SYS1–261
Delete or Modify Proxy, *(P) Sys Svc I*, SYS1–252
Delete Process, *(P) Sys Svc I*, SYS1–263
Delete Virtual Address Space, *(P) Sys Svc I*, SYS1–265, SYS1–267
Dequeue Lock Request, *(P) Sys Svc I*, SYS1–270
Disable Alignment Fault Reporting (Alpha only), *(P) Sys Svc II*, SYS2–201
Disassociate Common Event Flag Cluster, *(P) Sys Svc I*, SYS1–236
Dismount Volume, *(P) Sys Svc I*, SYS1–282
Display Proxy Information, *(P) Sys Svc I*, SYS1–286
Distributed Name Service (DNS) Clerk (VAX only), *(P) Sys Svc I*, SYS1–294, SYS1–321
End Transaction, *(P) Sys Svc I*, SYS1–322

System services (cont'd)
End Transaction and Wait, *(P) Sys Svc I*, SYS1–327
Enqueue Lock Request, *(P) Sys Svc I*, SYS1–328
Enqueue Lock Request and Wait, *(P) Sys Svc I*, SYS1–340
event flag, *(P) Environment*, 10–5, 10–8
executing
asynchronously, *(P) Interfaces*, 4–5
synchronously, *(P) Interfaces*, 4–5
execution wait, *(P) Interfaces*, 4–6
Exit, *(P) Sys Svc I*, SYS1–344
Expand Program/Control Region, *(P) Sys Svc I*, SYS1–345
Expand Virtual Address Space, *(P) Sys Svc I*, SYS1–348
file management, *(P) Environment*, 10–5, 10–8
Find Holder of Identifier, *(P) Sys Svc I*, SYS1–381
Find Identifiers Held by User, *(P) Sys Svc I*, SYS1–378
Force Exit, *(P) Sys Svc I*, SYS1–386
Format Access Control List Entry, *(P) Sys Svc I*, SYS1–389
Format Security Audit Event Message, *(P) Sys Svc I*, SYS1–402
Formatted ASCII Output Services, *(P) Sys Svc I*, SYS1–351
Formatted ASCI Output with List Parameter for 64-Bit Memory, *(P) Sys Svc I*, SYS1–371
Get Alignment Fault Data (Alpha only), *(P) Sys Svc II*, SYS2–85
Get Arithmetic Exception Information (Alpha only), *(P) Sys Svc II*, SYS2–87
Get Device/Volume Information, *(P) Sys Svc I*, SYS1–406
Get Device/Volume Information and Wait, *(P) Sys Svc I*, SYS1–426
Get Information About a Specified Virtual Region, *(P) Sys Svc II*, SYS2–47
Get Job/Process Information, *(P) Sys Svc I*, SYS1–427
Get Job/Process Information and Wait, *(P) Sys Svc I*, SYS1–448
Get Lock Information, *(P) Sys Svc I*, SYS1–449
Get Lock Information and Wait, *(P) Sys Svc I*, SYS1–461
Get Message, *(P) Sys Svc I*, SYS1–462
Get Queue Information, *(P) Sys Svc II*, SYS2–3
Get Queue Information and Wait, *(P) Sys Svc II*, SYS2–46
Get Security Characteristics, *(P) Sys Svc II*, SYS2–89
Get Security Erase Pattern, *(P) Sys Svc I*, SYS1–341
System services (cont'd)
Get System Alignment Fault Data (Alpha only), *(P) Sys Svc II*, SYS2–97
Get Systemwide Information, *(P) Sys Svc II*, SYS2–51
Get Systemwide Information and Wait, *(P) Sys Svc II*, SYS2–70
Get Time, *(P) Sys Svc II*, SYS2–71
Get User Authorization Information, *(P) Sys Svc II*, SYS2–72
Get UTC Time, *(P) Sys Svc II*, SYS2–84
Grant Identifier to Process, *(P) Sys Svc II*, SYS2–101
Hash Password, *(P) Sys Svc II*, SYS2–105
Hibernate, *(P) Sys Svc II*, SYS2–108
I/O, *(P) Environment*, 10–6, 10–8
Initialize System Alignment Fault Reporting (Alpha only), *(P) Sys Svc II*, SYS2–115
Initialize Volume, *(P) Sys Svc II*, SYS2–118
Initializing volumes, *(P) Concepts*, 9–36
loading site-specific, *(P) Concepts*, 23–26
lock management, *(P) Environment*, 10–6, 10–10
Lock Pages in Memory, *(P) Sys Svc II*, SYS2–139, SYS2–142
Lock Pages in Working Set, *(P) Sys Svc II*, SYS2–145, SYS2–148
logical name, *(P) Environment*, 10–6, 10–10
macros, *(P) Interfaces*, 4–1, A–1
Magnetic Tape Accessibility, *(P) Sys Svc II*, SYS2–191
Map Global Disk or Page File Section, *(P) Sys Svc II*, SYS2–157
Map Global Page Frame Section, *(P) Sys Svc II*, SYS2–163
Map Global Section, *(P) Sys Svc II*, SYS2–151
memory management, *(P) Environment*, 10–6, 10–10
Modify CPU User Capabilities, *(P) Sys Svc I*, SYS1–118
Modify Holder Record in Rights Database, *(P) Sys Svc II*, SYS2–169
Modify Identifier in Rights Database, *(P) Sys Svc II*, SYS2–172
Modify Process Affinity, *(P) Sys Svc II*, SYS2–204
Modify Process Implicit Affinity, *(P) Sys Svc II*, SYS2–297
Modify Process User Capabilities, *(P) Sys Svc II*, SYS2–209
Mount Volume, *(P) Sys Svc II*, SYS2–176
obsolete, *(P) Sys Svc II*, A–1
obtaining information about processes, *(P) Concepts*, 3–5, 3–8
Parse Access Control List Entry, *(P) Sys Svc II*, SYS2–198
privileges, *(P) Interfaces*, 4–2
process control, *(P) Environment*, 10–6, 10–11

System services (cont'd)
process information, *(P) Environment*, 10–6, 10–12
Process Scan, *(P) Sys Svc II*, SYS2–214
Purge Working Set, *(P) Sys Svc II*, SYS2–227, SYS2–229
Put Message, *(P) Sys Svc II*, SYS2–231
Queue I/O Request, *(P) Sys Svc II*, SYS2–239
Queue I/O Request and Wait, *(P) Sys Svc II*, SYS2–245
Read Event Flags, *(P) Sys Svc II*, SYS2–246
Release Vector Processor (VAX only), *(P) Sys Svc II*, SYS2–248
Remove Holder Record from Rights Database, *(P) Sys Svc II*, SYS2–249
Remove Identifier from Rights Database, *(P) Sys Svc II*, SYS2–251
Report Alignment Fault (Alpha only), *(P) Sys Svc II*, SYS2–202
Reschedule Process, *(P) Sys Svc II*, SYS2–253
resolving references to, *(P) Linker*, 2–14, 2–18, LINK–34, LINK–36
resource wait, *(P) Interfaces*, 4–6
Restore Vector Processor Exception State (VAX only), *(P) Sys Svc II*, SYS2–254
Restore Vector State (VAX only), *(P) Sys Svc II*, SYS2–256
restrictions, *(P) Interfaces*, 4–2
Resume Process, *(P) Sys Svc II*, SYS2–258
return status, *(P) Concepts*, 13–21
Revoke Identifier from Process, *(P) Sys Svc II*, SYS2–260
RMS Rundown, *(P) Sys Svc II*, SYS2–264
Save Vector Processor Exception State (VAX only), *(P) Sys Svc II*, SYS2–266
Scan for Devices, *(P) Sys Svc I*, SYS1–275
Scan Intrusion Database, *(P) Sys Svc II*, SYS2–268
Scan String for File Specification, *(P) Sys Svc I*, SYS1–372
Schedule Wakeup, *(P) Sys Svc II*, SYS2–273
security, *(P) Environment*, 10–6, 10–12
Send Message to Error Logger, *(P) Sys Svc II*, SYS2–358
Send Message to Operator, *(P) Sys Svc II*, SYS2–418
Send to Job Controller, *(P) Sys Svc II*, SYS2–359
Send to Job Controller and Wait, *(P) Sys Svc II*, SYS2–417
Set AST Enable, *(P) Sys Svc II*, SYS2–281
Set Automatic Unshelving, *(P) Sys Svc II*, SYS2–321
Set Cluster Event (Alpha only), *(P) Sys Svc II*, SYS2–282
Set Default Directory, *(P) Sys Svc II*, SYS2–285
System services (cont'd)
Set Default File Protection, *(P) Sys Svc II*, SYS2–287
Set Event Flag, *(P) Sys Svc II*, SYS2–289
Set Exception Vector, *(P) Sys Svc II*, SYS2–290
Set IEEE Floating-Point Control Register (Alpha only), *(P) Sys Svc II*, SYS2–113
Set Power Recovery AST, *(P) Sys Svc II*, SYS2–301
Set Priority, *(P) Sys Svc II*, SYS2–303
Set Privileges, *(P) Sys Svc II*, SYS2–314
Set Process Name, *(P) Sys Svc II*, SYS2–307
Set Process Swap Mode, *(P) Sys Svc II*, SYS2–325
Set Protection on Pages, *(P) Sys Svc II*, SYS2–308, SYS2–311
Set Resource Domain, *(P) Sys Svc II*, SYS2–339
Set Resource Wait Mode, *(P) Sys Svc II*, SYS2–319
Set Security, *(P) Sys Svc II*, SYS2–344
Set Stack Limits, *(P) Sys Svc II*, SYS2–323
Set System Time, *(P) Sys Svc II*, SYS2–292
Set Timer, *(P) Sys Svc II*, SYS2–294
Set User Authorization Information, *(P) Sys Svc II*, SYS2–327
Show Intrusion Information, *(P) Sys Svc II*, SYS2–351
Signal Array, *(P) Sys Svc II*, SYS2–356
Start Alignment Fault Reporting (Alpha only), *(P) Sys Svc II*, SYS2–432
Start Transaction, *(P) Sys Svc II*, SYS2–435
Start Transaction and Wait, *(P) Sys Svc II*, SYS2–439
Stop Alignment Fault Reporting (Alpha only), *(P) Sys Svc II*, SYS2–440
Stop System Alignment Fault Reporting (Alpha only), *(P) Sys Svc II*, SYS2–441
Subsystem, *(P) Sys Svc II*, SYS2–442
Suspend Process, *(P) Sys Svc II*, SYS2–444
Synchronize, *(P) Sys Svc II*, SYS2–447
SYS$CPU_CAPABILITIES, *(G) V7.0 New Feat*, 4–23
SYS$CREPRC node argument, *(G) V7.0 New Feat*, 4–23
SYS$PROCESS_AFFINITY, *(G) V7.0 New Feat*, 4–23
SYS$PROCESS_CAPABILITIES, *(G) V7.0 New Feat*, 4–23
SYS$SET_IMPLICIT_AFFINITY, *(G) V7.0 New Feat*, 4–23
Terminate Rights Database Context, *(P) Sys Svc I*, SYS1–384
Test Cluster Event (Alpha only), *(P) Sys Svc II*, SYS2–456
testing for successful completion, *(P) Interfaces*, 4–9
Time Converter, *(P) Sys Svc II*, SYS2–449

System services (cont'd)
timer and time conversion, *(P) Environment*, 10–6, 10–14
Translate Identifier Name to Identifier, *(P) Sys Svc I*, SYS1–32
Translate Identifier to Identifier Name, *(P) Sys Svc II*, SYS2–110
Translate Logical Name, *(P) Sys Svc II*, SYS2–451
Unlock Pages from Memory, *(P) Sys Svc II*, SYS2–458, SYS2–460
Unlock Pages from Working Set, *(P) Sys Svc II*, SYS2–463
Unlock Pages in Working Set, *(P) Sys Svc II*, SYS2–465
Unwind Call Stack, *(P) Sys Svc II*, SYS2–468
Unwind Call Stack (Alpha only), *(P) Sys Svc II*, SYS2–99
Update Global Section File on Disk, *(P) Sys Svc II*, SYS2–475
Update Global Section File on Disk and Wait, *(P) Sys Svc II*, SYS2–481
Update Section File on Disk, *(P) Sys Svc II*, SYS2–470
Update Section File on Disk and Wait, *(P) Sys Svc II*, SYS2–480
used to access remote files, *(S) DECnet Intro*, 2–12
user-written, *(P) Linker*, 4–11
Verify Proxy, *(P) Sys Svc II*, SYS2–482
Wait for Logical AND of Event Flags, *(P) Sys Svc II*, SYS2–490
Wait for Logical OR of Event Flags, *(P) Sys Svc II*, SYS2–492
Wait for Single Event Flag, *(P) Sys Svc II*, SYS2–487
Wake Process from Hibernation, *(P) Sys Svc II*, SYS2–488
System Services
C function prototypes, *(P) 64-Bit Addr*, 2–5
Create Buffer Object, *(P) Sys Svc I*, SYS1–122
MACRO-32, *(P) 64-Bit Addr*, 2–5
System shutdown
See also SHUTDOWN.COM command procedure and SYSHUTDWN.COM command procedure
adjusting quorum when shutting down a node, *(S) Sys Mgr Essentials*, 4–29
after software installation, *(S) Sys Mgr Essentials*, 3–13
allowing batch and print jobs to complete before, *(S) Sys Mgr Essentials*, 13–55
caution about timing of system halt, *(S) Sys Mgr Tuning*, 15–2
checking for existence of system files before, *(S) Sys Mgr Essentials*, 4–29
customizing, *(S) Sys Mgr Essentials*, 4–32
System shutdown
customizing (cont'd)
with SYSHUTDWN.COM command procedure, *(S) Sys Mgr Essentials*, 4–27
defining the minimum number of minutes before shutdown, *(S) Sys Mgr Essentials*, 4–33
emergency procedure
OPCCRASH, *(S) Sys Mgr Essentials*, 4–27, 4–36
emergency procedures
console, *(S) Sys Mgr Essentials*, 4–27
for an entire VMScluster, *(S) Sys Mgr Essentials*, 4–29
notification of, *(S) Sys Mgr Essentials*, 4–33
operator-requested, *(P) VAX SDA*, SDA–7
options
automatic reboot, *(S) Sys Mgr Essentials*, 4–29
manual reboot, *(S) Sys Mgr Essentials*, 4–29
specifying time interval between DISABLE AUTOSTART/QUEUES and STOP /QUEUES/ON_NODE commands, *(S) Sys Mgr Essentials*, 13–56
time of shutdown, *(S) Sys Mgr Essentials*, 4–33
orderly, *(S) Sys Mgr Essentials*, 4–27
order of events, *(S) Sys Mgr Essentials*, 4–31
preparing queue for, *(G) DCL N-Z*, DCLII–407
procedures for performing, *(S) Sys Mgr Essentials*, 4–27
saving AUTOGEN feedback data, *(S) Sys Mgr Essentials*, 4–29
SHUTDOWN.COM, *(S) Sys Mgr Essentials*, 4–27
stopping autostart queues before, *(G) DCL A-M*, DCLI–180
stopping queues before, *(G) DCL N-Z*, DCLII–406; *(S) Sys Mgr Essentials*, 13–55
to install changed system parameters, *(S) Sys Mgmt Util A-L*, 6–8
with SYSMAN, *(S) Sys Mgr Essentials*, 4–34
System space
definition, *(P) 64-Bit Addr*, 1–2
SET BREAK command, *(P) Debugger*, CD–162
SET STEP command, *(P) Debugger*, CD–213
SET TRACE command, *(P) Debugger*, CD–224
STEP command, *(P) Debugger*, CD–301
System space base address, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–18
System space operator (G), *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–16
System startup
See also Booting and Startup command procedure

System startup (cont'd)
analyzing a crash dump, *(S) Sys Mgr Essentials*, 5–13
and OPCOM, *(S) DECnet Intro*, 4–4
assigning systemwide logical names, *(S) Sys Mgr Essentials*, 5–8
booting with minimum, *(S) Sys Mgr Essentials*, 4–14
CONFIGURE phase, *(S) Sys Mgr Essentials*, 7–6
configuring devices, *(S) Sys Mgr Essentials*, 4–4, 5–7, 7–6
controlling when booting, *(S) Sys Mgr Essentials*, 4–12
creating systemwide announcements, *(S) Sys Mgr Essentials*, 5–14
defining location of systemwide login procedure, *(S) Sys Mgr Essentials*, 5–17
definition of logical names, *(S) Sys Mgr Essentials*, 5–4, 5–5
description, *(S) Sys Mgr Essentials*, 4–12
displaying startup commands as they execute, *(S) Sys Mgr Essentials*, 4–14
enabling autostart, *(S) Sys Mgr Essentials*, 5–12
events, *(S) Sys Mgr Essentials*, 4–4
order of, *(S) Sys Mgr Essentials*, 5–4
possibility of future change in order, *(S) Sys Mgr Essentials*, 5–5
freeing dump information from page file, *(S) Sys Mgr Tuning*, 15–4
in an emergency
with default system parameters, *(S) Sys Mgr Essentials*, 4–8
without startup and login procedures, *(S) Sys Mgr Essentials*, 4–8
without the UAF, *(S) Sys Mgr Essentials*, 4–10
installing images, *(S) Sys Mgr Tuning*, 16–10
installing page and swap files, *(S) Sys Mgr Essentials*, 5–6; *(S) Sys Mgr Tuning*, 15–5, 15–19, 15–21
limiting the number of interactive users, *(S) Sys Mgr Essentials*, 5–16
location of files used in, *(S) Sys Mgr Essentials*, 4–4
logging, *(S) Sys Mgmt Util M-Z*, 6–72
making remote InfoServer devices available, *(S) Sys Mgr Tuning*, 23–14
messages
indicating execution of site-independent startup, *(S) Sys Mgr Essentials*, 4–5
indicating execution of site-specific startup, *(S) Sys Mgr Essentials*, 4–5
mounting the queue database disk, *(S) Sys Mgr Essentials*, 12–6
performing site-specific operations, *(S) Sys Mgr Essentials*, 5–10
System startup (cont'd)
phase, *(S) Sys Mgmt Util M-Z*, 6–66
purging the operator log file, *(S) Sys Mgr Essentials*, 5–14
saving contents of system dump file, *(S) Sys Mgr Tuning*, 15–15
setting
printer device characteristics, *(S) Sys Mgr Essentials*, 7–13
terminal device characteristics, *(S) Sys Mgr Essentials*, 7–10
setting up a LAT network, *(S) Sys Mgr Essentials*, 5–15
starting InfoServer Client for OpenVMS software, *(S) Sys Mgr Essentials*, 5–13
starting queues, *(S) Sys Mgr Essentials*, 5–12
starting the DECnet network, *(S) Sys Mgr Essentials*, 5–15
starting the queue manager, *(S) Sys Mgr Essentials*, 12–3
startup command procedures, *(S) Sys Mgr Essentials*, 5–2
status, *(S) Sys Mgmt Util M-Z*, 6–72
submitting batch jobs, *(S) Sys Mgr Essentials*, 5–14
suppressing autoconfiguration, *(S) Sys Mgr Essentials*, 5–8, 7–8
tasks, *(S) Sys Mgr Essentials*, 4–1
VMS$PHASES.DAT database, *(S) Sys Mgr Essentials*, 5–4
System symbol table, *(P) Alpha SDA*, SDA–7; *(P) VAX SDA*, SDA–8, SDA–17
System time
See also Time
converting 64-bit time to UTC time, *(P) Sys Svc II*, SYS2–449
resetting after January 1st, *(S) Sys Mgr Tuning*, 20–18
setting, *(S) Sys Mgmt Util M-Z*, 6–16; *(P) Sys Svc II*, SYS2–292
System time quadword
examining, *(P) Alpha SDA*, SDA–49; *(P) VAX SDA*, SDA–56
System timer
canceling, *(P) Concepts*, 3–36
setting, *(P) Concepts*, 3–35
System tuning, *(G) SW Overview*, 3–10, 3–11
See also Tuning
System user authorization file
See SYSUAFs
System users (security category), *(S) Security*, 4–8, 4–29
defining with MAXSYSGROUP parameter, *(S) Security*, 4–24; *(S) Sys Mgr Essentials*, 11–8
qualifications for, *(S) Security*, 4–24; *(S) Sys Mgr Essentials*, 11–8

System version
registering images with dependencies on, *(S) Sys Mgr Essentials*, 5–22
System volumes
definition, *(S) Sys Mgr Essentials*, 8–8
Systemwide information, getting, *(P) LIB$*, LIB–238
Systemwide logical names, *(S) Sys Mgr Essentials*, 5–8
system_access_id data type, *(P) Interfaces*, B–15
SYSTEM_CHECK parameter, *(S) Alpha Perform*, 10–10
SYSTEM_PRIMITIVES.EXE file
global symbols, *(P) VAX SDA*, SDA–65
SYSTEM_PRIMITIVES.STB file
global symbols, *(P) Alpha SDA*, SDA–62
SYSTEM_SYNCHRONIZATION.EXE file
global symbols, *(P) VAX SDA*, SDA–65
SYSTEM_SYNCHRONIZATION_*xxx*.STB file
global symbols, *(P) Alpha SDA*, SDA–62
SYSTEST account
initial modification, *(S) Sys Mgr Essentials*, 6–9
in UAF, *(S) Sys Mgr Essentials*, 6–7
logging into for UETP, *(S) Sys Mgr Tuning*, 17–2, 17–4
privileges required for UETP, *(S) Sys Mgr Tuning*, 17–23
quotas required to run UETP, *(S) Sys Mgr Tuning*, 17–23
SYSTEST directory
creating for UETP, *(S) Sys Mgr Tuning*, 17–6
function during UETP, *(S) Sys Mgr Tuning*, 17–4
SYSTEST_CLIG account
in UAF, *(S) Sys Mgr Essentials*, 6–7
reenabling for UETP, *(S) Sys Mgr Tuning*, 17–10
requirements for UETP, *(S) Sys Mgr Tuning*, 17–10, 17–37
SYSUAF.DAT files, *(G) SW Overview*, 3–15
See also UAFs
authorization elements, *(S) VMScluster Sys*, 5–14
creating common version, *(S) VMScluster Sys*, B–2
determining process limits and quotas, *(S) VMScluster Sys*, 10–18
merging, *(S) VMScluster Sys*, B–1
moving to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
printing listing of, *(S) VMScluster Sys*, B–1
setting up, *(S) VMScluster Sys*, 5–17
SYSUAFALT.DAT files, *(S) Sys Mgr Essentials*, 4–10
authorization elements, *(S) VMScluster Sys*, 5–16
SYSUAF logical name
defining, *(S) Sys Mgmt Util A-L*, 5–5
defining during system startup, *(S) Sys Mgr Essentials*, 5–8
defining to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
SYSUAFs (system user authorization files)
modifying, *(S) Sys Mgmt Util A-L*, 5–3
SYS_LOADABLE ADD command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–74
SYS_LOADABLE REMOVE command
in SYSMAN, *(S) Sys Mgmt Util M-Z*, 6–76
/S_FLOAT qualifier, *(P) Debugger*, CD–79, CD–107

T

T3 Intersite Link Specifications, *(G) V7.0 New Feat*, D–10
TA90E tape drive
support for, *(G) DCL N-Z*, DCLII–163
using /MEDIA_FORMAT qualifier, *(G) DCL N-Z*, DCLII–163
Tab key, *(G) User*, 3–19
Tablets
obtaining data from, *(P) SMG$*, 3–1
Tabs
Ctrl/I, *(P) I/O User*, 5–6
terminal mechanical, *(P) I/O User*, 5–22
terminal tab stops, *(P) I/O User*, 5–37
Tab stop
advancing to using Ctrl/K, *(G) User*, 3–19
Tags
See File tags
Tailoring a system disk
with VMSTAILOR and DECW$TAILOR, *(S) Sys Mgr Essentials*, 5–1
Tailoring the configuration database, *(S) DECnet Mgmt*, 5–11
Tailoring utilities (VMSTAILOR and DECW$TAILOR), *(S) Sys Mgr Essentials*, 5–1
tand routine, *(P) Portable Math*, DPML–57, B–13
Tangent, *(P) MTH$*, MTH–105, MTH–107, MTH–138, MTH–140
hyperbolic, *(P) MTH$*, MTH–109, MTH–142
tanh routine, *(P) Portable Math*, DPML–58, B–14
tan routine, *(P) Portable Math*, DPML–57, B–13
Tape cartridge drives
preparing for UETP, *(S) Sys Mgr Tuning*, 17–7
Tape class drivers, *(S) VMScluster Sys*, 1–4, 2–18
disabling the loading of, *(P) I/O User*, 8–9
Tape commands
DISMOUNT, *(S) Sys Mgr Essentials*, 8–44
MOUNT, *(S) Sys Mgr Essentials*, 8–18
Tape controllers, *(S) VMScluster Sys*, 1–3

Tape drive
using /MEDIA_FORMAT qualifier, *(S) Sys Mgmt Util A-L*, 7–46
Tape files, *(P) Rec Mgmt Util*, 4–20
accessing at file level, *(S) Sys Mgr Essentials*, 9–13
accessing for read and write operations, *(S) Sys Mgr Essentials*, 9–14
ANSI names, *(P) File Appl*, 1–26
append operation, *(S) Sys Mgr Essentials*, 9–18
attributes, *(P) I/O User*, 3–6
closing after opening for read access, *(S) Sys Mgr Essentials*, 9–17
closing after opening for write access, *(S) Sys Mgr Essentials*, 9–18
copying, *(S) Sys Mgr Essentials*, 9–21
definition, *(S) Sys Mgr Essentials*, 8–7
expiration, *(P) Rec Mgmt Util*, 4–15
locating for read and write access, *(S) Sys Mgr Essentials*, 9–15
modifying characteristics, *(S) Sys Mgr Essentials*, 9–8
reading, *(S) Sys Mgr Essentials*, 9–17
update operation, *(S) Sys Mgr Essentials*, 9–18
writing to, *(S) Sys Mgr Essentials*, 9–18
Tape file system
checking
continuation volume, *(S) Sys Mgr Essentials*, 8–41
expiration date field, *(S) Sys Mgr Essentials*, 9–18
locating files, *(S) Sys Mgr Essentials*, 9–15
overwriting existing information, *(S) Sys Mgr Essentials*, 9–17
protection on, *(S) Sys Mgr Essentials*, 8–19
writing files to tape volume, *(S) Sys Mgr Essentials*, 9–18
Tape marks, *(S) Sys Mgr Essentials*, 8–6; *(P) I/O User*, 3–14, 3–17
BOT, *(P) File Appl*, 1–20
EOT, *(P) File Appl*, 1–20
Tape mass storage control protocol servers
See TMSCP servers
Tape processing
run-time options, *(P) File Appl*, 9–12 to 9–13
Tapes
See also Dual-pathed tapes
accessing file level, *(S) Sys Mgr Essentials*, 9–14
ACP control function, *(P) I/O User*, 1–32, 3–12
ACP create file operation, *(P) I/O User*, 1–25
allocating drives, *(S) Sys Mgr Essentials*, 8–9, 9–22
allocation class, *(S) VMScluster Sys*, 6–7
ANSI data, *(P) File Appl*, 1–17
ANSI standard, *(P) File Appl*, 1–17
available function, *(P) I/O User*, 3–22
Tapes (cont'd)
basic concepts, *(P) File Appl*, 1–16
basic concepts of, *(S) Sys Mgr Essentials*, 8–6
blocks, *(S) Sys Mgr Essentials*, 8–6
BOT marker, *(P) I/O User*, 3–16, 3–17
bpi, *(S) Sys Mgr Essentials*, 8–6
byte count
read, *(P) I/O User*, 3–14
write, *(P) I/O User*, 3–15
cluster-accessible, *(S) VMScluster Sys*, 6–1
clusterwide access to local, *(S) VMScluster Sys*, 6–15
commands, *(S) Sys Mgr Essentials*, 8–27
copying files from, *(S) Sys Mgr Essentials*, 9–21
data check, *(P) I/O User*, 3–6, 3–14, 3–15
data security erase function, *(P) I/O User*, 3–22
deallocating drives, *(G) User*, 12–3; *(S) Sys Mgr Essentials*, 8–10
default security elements, *(S) Security*, 5–6
density, *(P) I/O User*, 3–21
device characteristics, *(P) I/O User*, 3–8
device characteristics for, *(G) DCL N-Z*, DCLII–163
disabling operator status, *(G) DCL N-Z*, DCLII–45
dismounting, *(G) DCL A-M*, DCLI–184; *(S) Sys Mgr Essentials*, 10–16
DOS–11, *(S) Sys Mgr Essentials*, 9–24
driver, *(P) I/O User*, 3–1
dual-pathed, *(S) VMScluster Sys*, 6–14
dual-ported, *(S) VMScluster Sys*, 6–2
enabling operator status, *(G) DCL N-Z*, DCLII–45
enabling write cache, *(S) Sys Mgr Essentials*, 8–24
end-of-volume detection, *(P) I/O User*, 3–17
EOF status, *(P) I/O User*, 3–14
EOT marker, *(P) I/O User*, 3–16
status, *(P) I/O User*, 3–14, 3–15, 3–17
error recovery, *(P) I/O User*, 3–6
establishing operational status for, *(G) DCL N-Z*, DCLII–109
extended characteristics, *(P) I/O User*, 3–9
features, *(P) I/O User*, 3–4
file names, *(S) Sys Mgr Essentials*, 9–16
files protection, *(P) Rec Mgmt Util*, 4–21
file system, *(S) Sys Mgr Essentials*, 8–7
function codes, *(P) I/O User*, 3–9, 3–10
function modifiers
IO$M_DATACHECK, *(P) I/O User*, 3–6, 3–15
IO$M_ERASE, *(P) I/O User*, 3–15
IO$M_INHEXTGAP, *(P) I/O User*, 3–7
IO$M_INHRETRY, *(P) I/O User*, 3–7
IO$M_NOWAIT, *(P) I/O User*, 3–16, 3–18
getting information about, *(S) Sys Mgr Essentials*, 7–16

Tapes (cont'd)
I/O functions, *(P) I/O User*, 3–9
See also ACP-QIO interface
arguments, *(P) I/O User*, 3–12
IO$_ACPCONTROL, *(P) I/O User*, 1–33
I/O status block, *(P) I/O User*, 3–23
initializing, *(G) User*, 12–5; *(G) DCL A-M*, DCLI–253; *(S) Sys Mgr Essentials*, 10–13
initializing from within a program, *(P) Sys Svc II*, SYS2–118
example, *(P) Concepts*, 9–36
initializing using REPLY command, *(G) DCL N-Z*, DCLII–44
IRG (interrecord gap), *(S) Sys Mgr Essentials*, 8–6
label format, *(G) User*, 12–8; *(S) Sys Mgr Essentials*, 8–24
labeling, *(S) Sys Mgr Essentials*, 10–21
loading on drive, *(S) Sys Mgr Essentials*, 9–22
management
tasks, *(S) Sys Mgr Essentials*, 7–16
managing security profiles, *(S) Security*, 5–6
master adapters, *(P) I/O User*, 3–5
modify function, *(P) I/O User*, 3–22
modifying device characteristics, *(S) Sys Mgr Essentials*, 7–16, 8–42
modifying RMS defaults for file operations, *(G) DCL N-Z*, DCLII–196
mounting, *(S) Sys Mgr Essentials*, 10–15; *(S) Sys Mgmt Util M-Z*, 2–4
mounting ANSI-labeled, *(S) Sys Mgmt Util M-Z*, 2–21, 2–23
mounting multiple foreign volumes, *(S) Sys Mgmt Util M-Z*, 2–26
MTACP process, *(S) Sys Mgr Essentials*, 8–6
no support for SCSI retension, *(G) V7.0 New Feat*, E–2
overriding overwrite protection on, *(G) DCL A-M*, DCLI–259
overriding protection checks, *(S) Sys Mgmt Util M-Z*, 2–27
pack acknowledge function, *(P) I/O User*, 3–22
parity, *(P) I/O User*, 3–21
positioning, *(P) I/O User*, 1–33
preparing for UETP, *(S) Sys Mgr Tuning*, 17–2, 17–5, 17–6
programming example, *(P) I/O User*, 3–23
protection, *(S) Sys Mgr Essentials*, 8–14
quotas, *(P) I/O User*, 3–10
read function, *(P) I/O User*, 3–13
reading from, *(S) Sys Mgr Essentials*, 9–17
read reverse function, *(P) I/O User*, 3–14
record blocking, *(S) Sys Mgr Essentials*, 8–6
advantages, *(S) Sys Mgr Essentials*, 8–7
record size
specifying, *(S) Sys Mgr Essentials*, 8–26
restricted access, *(S) VMScluster Sys*, 6–1
retensioning, *(G) DCL N-Z*, DCLII–163

Tapes (cont'd)
rewind function, *(P) I/O User*, 3–16
rewind offline function, *(P) I/O User*, 3–18
save set, *(S) Sys Mgr Essentials*, 10–6
SCSI, *(G) V7.0 New Feat*, E–1
sequential organization of, *(S) Sys Mgr Essentials*, 8–6
served by TMSCP, *(S) VMScluster Sys*, 6–1
set characteristics function, *(P) I/O User*, 3–19
set mode function, *(P) I/O User*, 3–19, 3–21
setting allocation class, *(S) VMScluster Sys*, 6–9, 6–14
skip file function, *(P) I/O User*, 3–16
skip record function, *(P) I/O User*, 3–16
slave formatter, *(P) I/O User*, 3–5
specifying block size, *(S) Sys Mgr Essentials*, 8–24
specifying block size for, *(S) Sys Mgmt Util M-Z*, 2–11
specifying density for, *(S) Sys Mgmt Util M-Z*, 2–19
specifying record size for, *(S) Sys Mgmt Util M-Z*, 2–33
specifying volume density, *(G) DCL A-M*, DCLI–255
specifying volume label for, *(S) Sys Mgr Essentials*, 10–14
standard-labeled
mounting, *(S) Sys Mgr Essentials*, 8–24
starting position, *(P) Rec Mgmt Util*, 4–20
stopping runaway, *(G) DCL A-M*, DCLI–254
streaming tape systems, *(P) I/O User*, 3–7
structure of, *(S) Sys Mgr Essentials*, 8–6
supported devices, *(P) I/O User*, 3–1
SYS$GETDVI returns, *(P) I/O User*, 3–8
tape controllers, *(P) I/O User*, 3–1
tape mark, *(P) I/O User*, 3–14, 3–16, 3–17
testing with UETP, *(S) Sys Mgr Tuning*, 17–31, 17–33
thrashing, *(P) I/O User*, 3–7
TMSCP magnetic tapes, *(P) I/O User*, 3–1
TMSCP served, *(G) V7.0 New Feat*, E–2
9-track drive, *(P) File Appl*, 1–18
TU58 magnetic tape
See Disks, TU58 magnetic tape
TUDRIVER, *(S) VMScluster Sys*, 1–4, 2–18
UETP test image, *(S) Sys Mgr Tuning*, 17–34
unload function, *(P) I/O User*, 3–18
volume label
overriding protection, *(S) Sys Mgr Essentials*, 8–25
volume sets, *(S) Sys Mgr Essentials*, 8–6
write cache
enabling, *(S) Sys Mgr Essentials*, 8–24
write end-of-file function, *(P) I/O User*, 3–17
write function, *(P) I/O User*, 3–15
writing files to, *(S) Sys Mgr Essentials*, 9–22

Tape servers, *(G) SW Overview*, 6–17
TMSCP on LAN configurations, *(S) VMScluster Sys*, 3–6
VMScluster, *(P) Environment*, 3–3
Tape volumes, *(S) Sys Mgr Essentials*, 9–23
See also Disk volumes, Volumes, and Volume sets
accessibility protection, *(S) Sys Mgr Essentials*, 8–19
accessing files on, *(S) Sys Mgr Essentials*, 9–13, 9–17
access to, *(S) Sys Mgr Essentials*, 9–14
ANSI, *(P) File Appl*, 1–17, 1–20
ANSI format, *(P) File Appl*, 1–18
continuation, *(S) Sys Mgr Essentials*, 8–39
copying files, *(S) Sys Mgr Essentials*, 9–21
from, *(S) Sys Mgr Essentials*, 9–21
to, *(S) Sys Mgr Essentials*, 9–20
to and from, *(S) Sys Mgr Essentials*, 9–24
deallocating, *(S) Sys Mgr Essentials*, 9–23
dismounting, *(S) Sys Mgr Essentials*, 9–23
files on, *(P) File Appl*, 1–21
file specifications, *(G) User*, 4–11
file-structured, *(S) Sys Mgr Essentials*, 8–20
foreign, *(S) Sys Mgr Essentials*, 8–20
header labels, *(S) Sys Mgr Essentials*, 8–24
initializing, *(S) Sys Mgr Essentials*, 9–22
mounting, *(S) Sys Mgr Essentials*, 8–20, 8–21, 8–24, 8–27; *(P) Concepts*, 9–33
mounting volume sets, *(S) Sys Mgr Essentials*, 8–36
mounting with automatic switching disabled, *(S) Sys Mgr Essentials*, 8–40
mount verification, *(S) Sys Mgr Essentials*, 8–58
overriding UIC, *(S) Sys Mgr Essentials*, 8–25
private, *(S) Sys Mgr Essentials*, 8–9
reading attributes of header labels, *(S) Sys Mgr Essentials*, 9–17
reading files on, *(S) Sys Mgr Essentials*, 9–17
searching for files on, *(S) Sys Mgr Essentials*, 9–5
specifying record size, *(S) Sys Mgr Essentials*, 8–26
standard-labeled, *(S) Sys Mgr Essentials*, 9–21
copying files from, *(S) Sys Mgr Essentials*, 9–21
wildcard characters supported, *(S) Sys Mgr Essentials*, 9–16
write-enabling, *(S) Sys Mgr Essentials*, 8–28
write-locking, *(S) Sys Mgr Essentials*, 8–37
write rings, *(S) Sys Mgr Essentials*, 8–37
writing files to, *(S) Sys Mgr Essentials*, 9–22
writing to files on, *(S) Sys Mgr Essentials*, 9–18
TAPE_ALLOCLASS system parameter, *(S) VMScluster Sys*, 6–9, A–3
/TAPE_EXPIRATION qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–61
TAPE_MVTIMEOUT system parameter, *(S) Sys Mgr Essentials*, 8–60, 8–62
TARGET attribute, *(P) Rec Mgmt Util*, 4–37
Target-initiated downline load, *(S) DECnet Mgmt*, 4–2
Target node name, *(S) Sys Mgmt Util A-L*, 13–54
Target nodes, *(S) DECnet Mgmt*, 4–1
starting bootstrap and self-load program, *(S) DECnet Mgmt Util*, 3–156
through a specified circuit, *(S) DECnet Mgmt Util*, 3–158
testing, *(S) DECnet Mgmt Util*, 3–54
Target port name, *(S) Sys Mgmt Util A-L*, 13–54
Target service name, *(S) Sys Mgmt Util A-L*, 13–54
Target task, *(S) DECnet Mgmt*, 8–11
Task ID, *(P) Debugger*, 3–27, 16–7, 16–13, 16–15, 16–16, 16–20
Tasking (multithread) programs
active task, *(P) Debugger*, 3–27, 16–11
changing task characteristics, *(P) Debugger*, 3–28, 16–23
comparison of task and DECthreads terminology, *(P) Debugger*, 16–2
controlling and monitoring execution, *(P) Debugger*, 16–25
controlling task switching, *(P) Debugger*, 16–24
deadlock condition, *(P) Debugger*, 16–32
debugging, *(P) Debugger*, 3–26, 16–1
displaying task information, *(P) Debugger*, 3–27, 16–16
environment task, *(P) Debugger*, 16–7
event facility, *(P) Debugger*, 16–29
eventpoints, *(P) Debugger*, 16–25
monitoring events, *(P) Debugger*, 16–29
obtaining priority of task or thread, *(P) Debugger*, 16–16, 16–20
predefined breakpoint, *(P) Debugger*, 16–31
sample Ada program for debugging, *(P) Debugger*, 16–6
sample C program for debugging, *(P) Debugger*, 16–2
SET EVENT_FACILITY command, *(P) Debugger*, 16–30, CD–170
SET TASK command, *(P) Debugger*, 16–23, CD–215
setting breakpoint, *(P) Debugger*, 16–25
setting priority of task or thread, *(P) Debugger*, 3–28, 16–23, 16–32
setting time-slice value, *(P) Debugger*, 16–25
setting tracepoint, *(P) Debugger*, 16–25
setting watchpoint, *(P) Debugger*, 16–25
SHOW EVENT_FACILITY command, *(P) Debugger*, 16–30, CD–253

Tasking (multithread) programs (cont'd)
SHOW TASK command, *(P) Debugger*, 16–16, CD–287
specifying task body, *(P) Debugger*, 16–12
specifying task or thread, *(P) Debugger*, 16–11
stack checking, *(P) Debugger*, 16–33
state of task or thread, *(P) Debugger*, 3–27, 16–16, 16–20
substate of task or thread, *(P) Debugger*, 3–27, 16–16, 16–20
task built-in symbols, *(P) Debugger*, 16–14
task event, *(P) Debugger*, 16–29
task ID, *(P) Debugger*, 16–7, 16–13, 16–15, 16–16, 16–20
task object, *(P) Debugger*, 16–12
visible task, *(P) Debugger*, 16–11
Tasking view, *(P) Debugger*, 1–10, 3–27
TASK object
default access account, *(S) DECnet Intro*, 3–13
/TASK qualifier, *(P) Debugger*, 16–13, CD–79, CD–108, CD–131
Tasks, *(P) Debugger*, 3–26
declaring for network, *(S) DECnet Mgmt*, 8–8
definition, *(S) DECnet Mgmt*, 1–17
downline load, *(S) DECnet Mgmt*, 4–14
general purpose, *(S) DECnet Mgmt*, 4–16
identifier in specification, *(S) DECnet Mgmt*, 1–20
installation, *(S) DECnet Mgmt*, 4–16
remote, *(S) DECnet Intro*, 2–14
remote execution, *(S) DECnet Intro*, 2–12
source, *(S) DECnet Mgmt*, 8–13
specification, *(S) DECnet Mgmt*, 1–20
specification for task, *(S) DECnet Mgmt*, 1–20
specification over the network, *(S) DECnet Mgmt*, 1–20
specification string, *(S) DECnet Mgmt*, 1–20, 8–9, 8–15, 8–27
target, *(S) DECnet Mgmt*, 8–13, 8–21
Task specification strings, *(S) DECnet Intro*, 2–14
on networks, *(G) User*, 4–8
Task state, *(P) Debugger*, 3–27, 16–16, 16–20
Task substate, *(P) Debugger*, 3–27, 16–16, 16–20
Task switching, *(P) Debugger*, 16–24, 16–27
Task-to-task communications, *(S) DECnet Intro*, 2–12; *(S) DECnet Mgmt*, 1–2, 1–17, 8–1, 8–15, 8–24
nontransparent, *(S) DECnet Intro*, 2–14; *(S) DECnet Mgmt*, 8–7, 8–8, 8–24
nontransparent example, *(S) DECnet Mgmt*, 8–43
transparent, *(S) DECnet Intro*, 2–14; *(S) DECnet Mgmt*, 8–1, 8–15
transparent FORTRAN example, *(S) DECnet Mgmt*, 8–40
$TASK_BODY, *(P) Debugger*, 16–13, 16–26
TCB (trusted computing base), *(S) Security*, C–2, C–3, C–5
TCP/IP (Transmission Control Protocol/Internet Protocol), *(G) SW Overview*, 1–11; *(P) Environment*, 3–2
applications, *(S) Sys Mgr Tuning*, 21–13; *(S) TCP/IP*, 1–1, 3–1
capabilities, *(S) TCP/IP*, 1–6
development of, *(S) TCP/IP*, 1–5
gateways, *(S) TCP/IP*, 1–3
hosts, *(S) TCP/IP*, 1–2
layers, *(S) TCP/IP*, 2–1, 2–3
model, *(S) TCP/IP*, 2–1
network connections, *(G) SW Overview*, 2–11
networking products, *(G) SW Overview*, 1–9
networks, *(G) SW Overview*, 6–6
network transport, *(G) SW Overview*, 6–24
OpenVMS layered products, *(S) TCP/IP*, 1–4, 4–1, A–1
packet-switching network, *(S) TCP/IP*, 1–2
protocols, *(G) SW Overview*, 1–10, 2–11, 6–6; *(S) TCP/IP*, 1–1
server, *(S) TCP/IP*, 1–2
standards, *(S) TCP/IP*, 1–6
UNIX connections, *(G) SW Overview*, 2–6
TCP/IP Services for OpenVMS, *(G) SW Overview*, 1–10, 6–2, 6–6; *(P) Environment*, 3–2
TDF (time differential factor), *(G) V7.0 New Feat*, 3–15; *(S) Sys Mgr Essentials*, 5–34 to 5–36
how to set, *(S) Sys Mgr Essentials*, 5–34
tables of, *(S) Sys Mgr Tuning*, B–1
TEAMDATA, *(G) SW Overview*, 7–5, 7–17
Teamwork, *(S) Dependable*, 3–15
TEBs (thread environment blocks), *(P) Calling Std*, 3–59
TECO editor, *(G) DCL A-M*, DCLI–203; *(G) SW Overview*, 4–5
Refer also to the *PDP–11 TECO User's Guide*
TEF option, *(P) Rec Mgmt Util*, 4–24
Telephone lines, *(S) DECnet Intro*, 1–2, 1–12
dialup, *(S) DECnet Intro*, 1–7, 3–19
leased, *(S) DECnet Intro*, 1–7
TELL command, *(S) DECnet Mgmt Util*, 3–154
TELL prefix
description, *(S) DECnet Mgmt*, 3–6
for NCP command SHOW, *(S) DECnet Intro*, 4–3
TELNET, *(S) Sys Mgr Tuning*, 21–13; *(S) TCP/IP*, 2–5
service, *(S) TCP/IP*, 3–2, 5–1
telnet command, *(S) TCP/IP*, 3–2
Temperature as an environmental factor of dependable computing, *(S) Dependable*, 5–3
Template devices, security elements of, *(S) Security*, 5–7

Template files
for site-specific startup, *(S) Sys Mgr Essentials*, 5–3
Template profiles
See Security profiles
TEMPORARY, delete option, *(P) File Appl*, 4–31
TEMPORARY attribute, *(P) Rec Mgmt Util*, 4–24
Temporary defaults in input file lists, *(G) User*, 5–6
Temporary files, *(P) Rec Mgmt Util*, 2–18, 4–19
Temporary mailboxes, *(P) I/O User*, 4–4
TEMPORARY option, *(P) File Appl*, 4–31
/TEMPORARY qualifier, *(P) Debugger*, CD–163, CD–224, CD–235
Temporary working directory
specifying alternate working device for, *(S) Sys Mgr Essentials*, 3–14
Terminal characteristics, *(P) Concepts*, 9–29
TERMINAL command
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–31
Terminal connections
to remote console, *(S) DECnet Mgmt*, 4–18
Terminal device record processing options, *(P) RMS Ref*, 6–20
Terminal device widths, *(P) Concepts*, 7–6
Terminal echo, *(P) Concepts*, 7–39
disabling, *(P) Concepts*, 7–40
Terminal emulation, *(S) TCP/IP*, 3–2
Terminal emulators, *(S) Security*, 12–18; *(S) DECnet Intro*, 3–26; *(S) DECnet Mgmt*, 1–9, 5–16
creating, *(G) DCL A-M*, DCLI–104
Terminal Fallback Utility (TFU)
Refer also to the *OpenVMS Terminal Fallback Utility Manual*
Terminal I/Os, *(P) Modular Proc*, 2–15
example, *(P) Concepts*, 9–24
reducing interrupts, *(S) VAX Perform*, 5–15
Terminal keys
defining for SDA, *(P) VAX SDA*, SDA–48
Terminal lines, *(S) Security*, 12–17
asynchronous DECnet, *(S) DECnet Intro*, 3–19
conversion to DECnet line, *(S) DECnet Mgmt*, 1–9, 2–13, 5–11
Terminal operations
improper handling, *(S) VAX Perform*, 4–29; *(S) Alpha Perform*, 14–4
in relation to CPU limitation, *(S) VAX Perform*, 4–29; *(S) Alpha Perform*, 14–4
in relation to I/O limitation, *(S) VAX Perform*, 4–29; *(S) Alpha Perform*, 14–4
Terminal queues, *(S) Sys Mgr Essentials*, 13–3
Terminal read operations
RAB$L_ROP field options, *(P) RMS Ref*, 17–1
Terminals
See also Virtual terminals
ANSI CRT terminal, *(P) I/O User*, 5–23
Terminals (cont'd)
autobaud detection, *(P) I/O User*, 5–19, 5–23
automatic switching of line, *(S) DECnet Intro*, 3–27
baud rate, *(P) I/O User*, 5–19, 5–23, 5–42
baud rates
lowering, *(S) VAX Perform*, 5–16
bell (Ctrl/G), *(P) I/O User*, 5–9
breaking dialup connection, *(G) User*, 2–26; *(S) Security*, 3–20
broadcast messages, *(P) I/O User*, 5–19, 5–22, 5–24, 5–49
C2 system restrictions, *(S) Security*, C–7, C–8
carriage control, *(P) I/O User*, 5–38
clearing DECwindows screen, *(S) Security*, 3–15
clearing the screen, *(G) User*, 2–25, 19–7; *(S) Security*, 3–15, 3–19
command line editing, *(P) I/O User*, 5–3, 5–37
command recall (Ctrl/B), *(P) I/O User*, 5–4, 5–6
console, *(S) Sys Mgr Essentials*, 2–21
control and data signals, *(P) I/O User*, 5–16
control characters, *(G) User*, D–3; *(P) I/O User*, 5–4 to 5–7, 5–9, 5–28
numeric values, *(P) I/O User*, B–1
control keys, *(G) User*, D–1
control key sequences, *(P) I/O User*, 5–8
controlling access, *(S) Security*, 3–2, 7–14
controlling access through system passwords, *(S) Sys Mgr Essentials*, 11–3
controlling access to, *(G) User*, 2–5
cursor movement, *(P) I/O User*, 5–3, 5–6, 5–23
default characteristics, *(G) DCL A-M*, DCLI–415
default security elements, *(S) Security*, 5–6
delete character, *(P) I/O User*, 5–3
delete line (Ctrl/U), *(P) I/O User*, 5–5, 5–28
determining physical type, *(S) Sys Mgr Essentials*, 7–12
device characteristics, *(P) I/O User*, 5–20, 5–21
categories, *(P) I/O User*, 5–27
changing, *(P) I/O User*, 5–43
extended, *(P) I/O User*, 5–23
dial-up
characteristic, *(P) I/O User*, 5–22
lines, *(P) I/O User*, 5–13, 5–25, 5–44
support, *(P) I/O User*, 5–13
dialup login, *(G) User*, 2–9; *(S) Security*, 3–5
Digital CRT terminal, *(P) I/O User*, 5–24, 5–25
discard output (Ctrl/O), *(P) I/O User*, 5–5, 5–28, 5–38
disconnected, *(G) User*, 18–8
disconnecting without terminating a process, *(S) Sys Mgr Essentials*, 7–11
displaying characteristics of, *(G) DCL N-Z*, DCLII–350
displaying files at, *(G) DCL N-Z*, DCLII–424

Terminals (cont'd)
documenting owners of, *(S) Sys Mgr Essentials*, 7–10
driver, *(P) I/O User*, 5–1
duplex modes, *(P) I/O User*, 5–10, 5–13
enable Ctrl/C AST, *(P) I/O User*, 5–44
enable Ctrl/Y AST, *(P) I/O User*, 5–44
escape sequences, *(P) I/O User*, 5–7, 5–80
ANSI, *(P) I/O User*, B–9
Digital-private, *(P) I/O User*, B–9
overflow size (item code), *(P) I/O User*, 5–32
establishing as spooled, *(G) DCL N-Z*, DCLII–109
extended characteristics, *(P) I/O User*, 5–23
failing to respond, *(S) Security*, 3–3
failover, *(S) Dependable*, 8–52, 8–55
fallback conversion, *(P) I/O User*, 5–11, 5–25, 5–44
features, *(P) I/O User*, 5–2
for debugger input/output, separate, *(P) Debugger*, 13–13, CD–185
using DECterm window, *(P) Debugger*, 2–9
foreign
input support, *(P) SMG$*, 5–21
form feed, *(P) I/O User*, 5–22, 5–37
for security alarms, *(S) Sys Mgr Tuning*, 18–29
frame size, *(P) I/O User*, 5–43
function codes, *(P) I/O User*, 5–27, A–6
function modifiers
See also Terminals
IO$M_BRDCST, *(P) I/O User*, 5–49, 5–80
IO$M_BREAKTHRU, *(P) I/O User*, 5–11, 5–38
IO$M_CANCTRLO, *(P) I/O User*, 5–5, 5–38
IO$M_CTRLCAST, *(P) I/O User*, 5–44
IO$M_CTRLYAST, *(P) I/O User*, 5–5, 5–13, 5–44
IO$M_CVTLOW, *(P) I/O User*, 5–29
IO$M_DSABLMBX, *(P) I/O User*, 5–29
IO$M_ENABLMBX, *(P) I/O User*, 5–38
IO$M_ESCAPE, *(P) I/O User*, 5–7, 5–29
IO$M_EXTEND, *(P) I/O User*, 5–29, 5–31
IO$M_HANGUP, *(P) I/O User*, 5–44
IO$M_INCLUDE, *(P) I/O User*, 5–20, 5–45, 5–48
IO$M_LOOP, *(P) I/O User*, 5–47
IO$M_LT_CONNECT, *(P) I/O User*, 5–51
IO$M_LT_DISCON, *(P) I/O User*, 5–51
IO$M_LT_SENSEMODE, *(P) I/O User*, 5–51
IO$M_LT_SETMODE, *(P) I/O User*, 5–51
IO$M_MAINT, *(P) I/O User*, 5–45, 5–47
IO$M_NOECHO, *(P) I/O User*, 5–9, 5–11, 5–26, 5–29
IO$M_NOFILTR, *(P) I/O User*, 5–29

Terminals
function modifiers (cont'd)
IO$M_NOFORMAT, *(P) I/O User*, 5–11, 5–38, 5–47
IO$M_OUTBAND, *(P) I/O User*, 5–48
IO$M_PURGE, *(P) I/O User*, 5–29
IO$M_RD_MODEM, *(P) I/O User*, 5–79
IO$M_REFRESH, *(P) I/O User*, 5–38
IO$M_SET_MODEM, *(P) I/O User*, 5–45
IO$M_TIMED, *(P) I/O User*, 5–29
IO$M_TRMNOECHO, *(P) I/O User*, 5–30
IO$M_TT_ABORT, *(P) I/O User*, 5–20, 5–48
IO$M_TYPEAHDCNT, *(P) I/O User*, 5–78
IO$M_UNLOOP, *(P) I/O User*, 5–48
hangup, *(P) I/O User*, 5–13, 5–17, 5–18, 5–25, 5–44, 5–77
hard copy
disposing of output, *(G) User*, 2–26; *(S) Security*, 3–20
I/O functions
CTDRIVER, *(P) I/O User*, 5–37
IO$_READLBLK, *(P) I/O User*, 5–28
IO$_READPROMPT, *(P) I/O User*, 5–28
IO$_READVBLK, *(P) I/O User*, 5–28
IO$_SENSECHAR, *(P) I/O User*, 5–77
IO$_SENSEMODE, *(P) I/O User*, 5–77
IO$_SETCHAR, *(P) I/O User*, 5–40
IO$_SETMODE, *(P) I/O User*, 5–40
IO$_TTY_PORT, *(P) I/O User*, 5–51
IO$_WRITELBLK, *(P) I/O User*, 5–37
IO$_WRITEPBLK, *(P) I/O User*, 5–37
IO$_WRITEVBLK, *(P) I/O User*, 5–37
I/O status block, *(P) I/O User*, 5–80
initiate login, *(P) I/O User*, 5–10
input processing, *(P) I/O User*, 5–3
insert/overstrike (Ctrl/A), *(P) I/O User*, 5–3, 5–7
interrupt (Ctrl/Y), *(P) I/O User*, 5–5
item codes, *(P) I/O User*, 5–32 to 5–36
itemlist read, *(P) I/O User*, 5–31
item codes, *(P) I/O User*, 5–32 to 5–36
item descriptor, *(P) I/O User*, 5–31
keeping sessions on multiple, *(S) Sys Mgr Essentials*, 7–11
LAT, *(S) Sys Mgr Essentials*, 7–12
determining characteristics of, *(S) Sys Mgr Essentials*, 7–12
disconnecting, *(S) Sys Mgr Essentials*, 7–11
LAT line, *(P) I/O User*, 5–1
LAT port driver, *(P) I/O User*, 5–49
application services creation, *(P) I/O User*, 5–75
I/O functions, *(P) I/O User*, 5–51
LAT rejection codes, *(P) I/O User*, 5–83
limiting access, *(S) Security*, 8–31
line editing, *(P) I/O User*, 5–3, 5–25
line feed, *(P) I/O User*, 5–37

Terminals (cont'd)
lines for modems, security of, *(S) Security*, 8–31
line terminators, *(P) I/O User*, 5–9
logout considerations, *(G) User*, 2–25; *(S) Security*, 3–19
mailbox, *(P) I/O User*, 5–18, 5–38
message format, *(P) I/O User*, 5–19
message types, *(P) I/O User*, 5–19
managing
tasks for, *(S) Sys Mgr Essentials*, 7–9
manual switching of line, *(S) DECnet Intro*, 3–27
modem
characteristic, *(P) I/O User*, 5–22
control signals, *(P) I/O User*, 5–16
data signals, *(P) I/O User*, 5–16
protocol, *(P) I/O User*, 5–14
sense signals, *(P) I/O User*, 5–79
signal control, *(P) I/O User*, 5–13
modem signal control, *(P) I/O User*, 5–13
modifying characteristics of, *(G) DCL N-Z*, DCLII–213
modifying control-key echo strings, *(S) Sys Mgmt Util M-Z*, 5–31
modifying security profiles, *(S) Security*, 5–7
no type-ahead, *(P) I/O User*, 5–22
operator
See Operator terminals
out-of-band
See also Out-of-band AST
characters, *(P) I/O User*, 5–20
output
CTDRIVER, *(P) I/O User*, 5–11
RTPAD, *(P) I/O User*, 5–11
SET HOST, *(P) I/O User*, 5–11
output formatting, *(P) I/O User*, 5–11, 5–27
output processing, *(P) I/O User*, 5–10
page length and width, *(P) I/O User*, 5–41, 5–78
parity flag, *(P) I/O User*, 5–42
PASTHRU mode, *(P) I/O User*, 5–9, 5–11, 5–26, 5–28
port, *(S) Security*, 12–17; *(S) DECnet Intro*, 3–26
preparing for UETP, *(S) Sys Mgr Tuning*, 17–3, 17–5, 17–8, 17–14
process preservation, *(P) I/O User*, 5–17
programming examples, *(P) I/O User*, 5–84
protocol, *(P) I/O User*, 5–14
read verify, *(P) I/O User*, 5–7, 5–36
receive speed, *(P) I/O User*, 5–42
redisplay data (Ctrl/R), *(P) I/O User*, 5–6, 5–28
ReGIS graphics, *(P) I/O User*, 5–26
remote, *(S) Sys Mgr Essentials*, 7–11
requiring a system password, *(G) User*, 2–11; *(S) Security*, 3–8
restart data (Ctrl/Q), *(P) I/O User*, 5–6

Terminals (cont'd)
security alarms and, *(S) Security*, 9–15
sending alarm messages to, *(S) Sys Mgmt Util A-L*, 1–6
sending messages to, *(G) DCL N-Z*, DCLII–43
sense characteristics function, *(P) I/O User*, 5–77
sense mode function, *(P) I/O User*, 5–77
serial line multiplexer, *(P) I/O User*, 5–1
session logging, *(S) Security*, 6–6
set characteristics function, *(P) I/O User*, 5–40
arguments, *(P) I/O User*, 5–40
set mode function, *(P) I/O User*, 5–40
arguments, *(P) I/O User*, 5–40
SET TERMINAL DCL command, *(P) I/O User*, 5–4, 5–19, 5–26
SET TERMINAL/INQUIRE command, *(S) Sys Mgr Essentials*, 7–12
setting characteristics, *(S) Sys Mgr Essentials*, 7–9
default values, *(S) Sys Mgr Essentials*, 7–10
in system startup, *(S) Sys Mgr Essentials*, 5–12, 7–10
simulating users for UETP, *(S) Sys Mgr Tuning*, 17–34
SIXEL graphics, *(P) I/O User*, 5–26
special keys, *(G) User*, D–1, D–3
special operating modes, *(P) I/O User*, 5–10
status (Ctrl/T), *(P) I/O User*, 5–7
status returns, *(P) I/O User*, A–7
stop data (Ctrl/S), *(P) I/O User*, 5–6
stopping and starting displays, *(G) User*, 3–20
supported devices, *(P) I/O User*, 5–1
support for SET and SHOW TERMINAL commands, *(P) SMG$*, 5–22
SYS$GETDVI returns, *(P) I/O User*, 5–20
system password, *(P) I/O User*, 5–26
system password, requirement for, *(G) User*, 2–5; *(S) Security*, 3–3
tab
Ctrl/I, *(P) I/O User*, 5–6
mechanical, *(P) I/O User*, 5–22
stops, *(P) I/O User*, 5–37
terminator mask, *(P) I/O User*, 5–30, 5–31
testing with UETP, *(S) Sys Mgr Tuning*, 17–31, 17–33
third party
support for, *(P) SMG$*, 5–1
time (Ctrl/T), *(P) I/O User*, 5–7
transmit speed, *(P) I/O User*, 5–42
TTY_DIALTYPE SYSGEN parameter, *(P) I/O User*, 5–13, 5–16, 5–17
type-ahead, *(P) I/O User*, 5–9, 5–18, 5–21, 5–78
alternate buffer, *(P) I/O User*, 5–23
UETP output, *(S) Sys Mgr Tuning*, 17–33
UETP test image, *(S) Sys Mgr Tuning*, 17–34

Terminals (cont'd)
unsolicited data, *(P) I/O User*, 5–18
usage restrictions, *(S) Security*, 8–31
user, in C2 systems, *(S) Security*, C–9
virtual, *(G) User*, 2–8, 18–8, 18–9; *(S) Security*, 7–25
VT200 series function keys, *(G) User*, D–1
VT300 series function keys, *(G) User*, D–1
write breakthrough function, *(P) I/O User*, 5–38
writing data to, *(G) User*, 16–9
XON/XOFF control, *(P) I/O User*, 5–26
Terminal Server Manager
See TSM
Terminal servers, *(S) Sys Mgr Tuning*, 24–5; *(S) DECnet Intro*, 1–7
DECservers, *(G) SW Overview*, 6–8
defined, *(S) Sys Mgr Tuning*, 24–1
multiprotocol, *(G) SW Overview*, 6–8
on Ethernet, *(S) DECnet Mgmt*, 1–10
on OpenVMS system, *(S) Sys Mgr Tuning*, 24–8
Terminal sessions
logging in, *(G) DCL A-M*, DCLI–415
logging out, *(G) DCL A-M*, DCLI–419
Terminal timeouts, *(P) Concepts*, 7–40
/TERMINATE qualifier, *(P) Debugger*, 12–8, CD–66; *(P) Alpha SDA*, SDA–43; *(P) VAX SDA*, SDA–50
Terminating
a remote session, *(S) DECnet Intro*, 3–3
dynamic asynchronous link, *(S) DECnet Intro*, 3–28
/TERMINATING qualifier, *(P) Debugger*, 14–13, CD–10, CD–13, CD–23, CD–37, CD–55, CD–57, CD–163, CD–224
Terminating signals, *(P) DECthreads*, A–4
Terminating threads
normal, *(P) DECthreads*, pthread–64
premature successful completion, *(P) DECthreads*, pthread–64
without returning from start routine, *(P) DECthreads*, pthread–64
Termination mailboxes, *(P) Concepts*, 3–47, 9–43
Termination messages
format of, *(P) Sys Svc I*, SYS1–177
Termination of a thread
error, *(P) DECthreads*, pthread–54, E–69, E–72, G–45
events that cause, *(P) DECthreads*, pthread–54, E–69, G–45
normal, *(P) DECthreads*, pthread–54, E–69, E–73, G–45, G–50
premature successful completion, *(P) DECthreads*, E–73, G–50
without raising an exception, *(P) DECthreads*, E–72
Termination of a thread (cont'd)
without returning from start routine, *(P) DECthreads*, E–73, G–50
Terminations
debugging session, *(P) Debugger*, 2–6, 5–11, 14–10, CD–114, CD–135
execution of handlers at, *(P) Debugger*, 13–25
multiprocess program, *(P) Debugger*, 14–10, 14–13
of command procedure, *(G) DCL A-M*, DCLI–227
of GOSUB subroutine, *(G) DCL N-Z*, DCLII–54
of terminal session, *(G) DCL A-M*, DCLI–419
program, *(P) Debugger*, 2–5
programs, *(P) Debugger*, 5–10
waiting for, *(P) DECthreads*, pthread–72, E–77, G–55
Terminator
variations, *(P) File Appl*, 3–13
Terminator character bit mask, *(P) I/O User*, 5–30
Terminator characters
used to delimit stream records, *(P) File Appl*, 2–13
Terminators, *(P) SMG$*, 3–3
See also I/O (input/output)
codes, *(P) SMG$*, 3–4
echos, *(P) Concepts*, 7–24
file, *(P) Concepts*, 9–31
for SCSI, *(G) V7.0 New Feat*, C–8
record, *(P) Concepts*, 9–31
TERMTABLE.EXE file, *(P) SMG$*, 5–1, 5–16
creating, *(P) SMG$*, 5–20
TERMTABLE.TXT file, *(P) SMG$*, 5–1, 5–16
Terse report
example, *(S) Sys Mgmt Util A-L*, 9–23
Test and set instructions, *(P) Modular Proc*, 3–18
Testing
application dependability, *(S) Dependable*, 8–33 to 8–34
command procedures, *(G) User*, 15–14
DECnet hardware and software with UETP, *(S) DECnet Intro*, 3–29
for software dependability, *(S) Dependable*, 3–10
the network, *(S) DECnet Mgmt*, 7–1; *(S) DECnet Mgmt Util*, 4–1
the value of an expression, *(G) DCL A-M*, DCLI–250
Testing new procedures, *(P) Modular Proc*, 4–1
black box, *(P) Modular Proc*, 4–2
integration, *(P) Modular Proc*, 4–1, 4–5
language independence, *(P) Modular Proc*, 4–1, 4–4
modularity, *(P) Modular Proc*, 4–1
reentrancy, *(P) Modular Proc*, 4–6
regression, *(P) Modular Proc*, 6–1
unit, *(P) Modular Proc*, 4–1

Testing new procedures (cont'd)
white box, *(P) Modular Proc*, 4–3
Test Manager, *(G) SW Overview*, 6–15; *(P) Environment*, 9–12
testing applications, *(S) Dependable*, 8–58
Tests
See also DECnet Test Sender/DECnet Test Receiver utility (DTS/DTR)
circuit loopback test, *(S) DECnet Mgmt*, 7–6, 7–9
controller loopback test, *(S) DECnet Mgmt*, 7–8
LAN (local area network) loopback, *(S) DECnet Mgmt*, 7–9
local loopback test, *(S) DECnet Mgmt*, 7–6
local-to-remote test, *(S) DECnet Mgmt*, 7–4
loopback, *(S) DECnet Intro*, 4–7
node-level test, *(S) DECnet Mgmt*, 7–1
remote loopback test, *(S) DECnet Mgmt*, 7–2
software loopback test, *(S) DECnet Mgmt*, 7–7
Text
analyzing in object files, *(G) DCL A-M*, DCLI–29
Text compression, *(P) Util Routines*, DCX–1
Text display
customizing font for, *(P) Debugger*, 3–37
Text editors
See also Editors
creating files, *(G) User*, 4–11
displaying files with, *(G) User*, 4–14
modifying files, *(G) User*, 4–11
Text file formatting
See DSR
Text files
using text editor to create, *(P) Rec Mgmt Util*, 5–1
Text formatters, *(G) SW Overview*, 5–12
Text information and relocation (TIR) records
Alpha object language, *(P) Linker*, B–27
VAX object language, *(P) Linker*, A–21
Text input converter, *(G) DCL A-M*, DCLI–69
Text libraries, *(P) Environment*, 8–4; *(P) CDU, LBR, & MU*, LIB–3, LIB–44
character case in, *(P) CDU, LBR, & MU*, LIB–4
Text output converter, *(G) DCL A-M*, DCLI–70
processing options, *(G) DCL A-M*, DCLI–72
Text processing, *(P) Environment*, 5–1
EVE, *(P) Environment*, 5–2
Text processing routines
See DECTPU routines
Text processors, *(G) SW Overview*, 4–4
Text retrieval facility
See VTX
Text selection
language sensitive, *(P) Debugger*, 3–14, 3–37
T field in symbolic offset
for specifying varying field length, *(P) RMS Ref*, 2–3
TFTP (Trivial File Transfer Protocol), *(S) TCP/IP*, 2–5
THEN command
using in command procedures, *(G) User*, 15–10
THEN keyword
and IF command, *(G) DCL A-M*, DCLI–250
ThinWire Ethernet, *(S) DECnet Intro*, 1–6, 3–5
THIS_CATCH exception, *(P) DECthreads*, 5–6
Thread
sequence number, *(P) DECthreads*, pthread–70
signal to, *(P) DECthreads*, pthread–78
Thread attributes, *(P) DECthreads*, 2–4
Thread attributes object
creating, *(P) DECthreads*, G–5
creating and initializing, *(P) DECthreads*, pthread–18
deleting, *(P) DECthreads*, G–7
destroying, *(P) DECthreads*, pthread–5
Thread creation
detached creation attribute, *(P) DECthreads*, pthread–6, pthread–20, G–8, G–14
guardsize attribute, *(P) DECthreads*, pthread–8, pthread–22, E–21, E–27, G–9, G–16
inherit scheduling attribute, *(P) DECthreads*, pthread–10, pthread–24, E–22, E–28, G–10, G–17
priority attribute, *(P) DECthreads*, E–24, E–31, G–11, G–19
scheduling parameters attribute, *(P) DECthreads*, pthread–12
scheduling policy attribute, *(P) DECthreads*, pthread–14, pthread–28, E–25, E–33, G–12, G–21
scheduling policy parameters attribute, *(P) DECthreads*, pthread–26
stacksize attribute, *(P) DECthreads*, pthread–16, pthread–30, E–26, E–35, G–13, G–23
Thread environment blocks
See TEBs
Threading library
asynchronous, *(P) DECthreads*, 3–1
Thread manager, *(G) V7.0 New Feat*, 4–11
Thread-reentrant code
definition of, *(P) DECthreads*, 3–3
Threads, *(P) Modular Proc*, 3–16; *(P) Concepts*, 1–2, 13–48
See also Multithreaded programming, Tasking (multithread) programs
alerting, *(P) DECthreads*, 2–14
binding to a CPU, *(P) DECthreads*, E–68, G–25
canceling, *(P) DECthreads*, 2–14, pthread–32, G–26
cancelability state, *(P) DECthreads*, 2–14

Threads
canceling (cont'd)
cancelability type, *(P) DECthreads*, 2–14
creating, *(P) DECthreads*, 2–1, pthread–54, E–69, G–45
creating detached threads, *(P) DECthreads*, pthread–6, pthread–20, G–8, G–14
definition, *(P) Calling Std*, 1–6
definition of, *(P) DECthreads*, 1–1
delaying execution of, *(P) DECthreads*, pthread–60, E–48, G–47
deleting, *(P) DECthreads*, 2–3, pthread–61, E–71, G–48
detaching, *(P) DECthreads*, pthread–6, pthread–20, G–8, G–14
error termination, *(P) DECthreads*, pthread–54, E–69, E–72, G–45
events that cause termination, *(P) DECthreads*, pthread–54, E–69, G–45
getting scheduling policy and parameters, *(P) DECthreads*, pthread–68
initializing, *(P) DECthreads*, E–51
nonreentrant routines (avoiding), *(P) DECthreads*, 1–7
normal termination, *(P) DECthreads*, pthread–54, E–69, E–73, G–45, G–50
obtaining current priority of, *(P) DECthreads*, E–74, G–52
obtaining current scheduling policy of, *(P) DECthreads*, E–75, G–53
obtaining handle of, *(P) DECthreads*, E–76
obtaining identifier of, *(P) DECthreads*, pthread–101, tis–32, G–72
per-thread context of, *(P) DECthreads*, pthread–74, tis–12, E–52, G–57
reentrant code necessary, *(P) DECthreads*, 1–4
releasing processor, *(P) DECthreads*, pthread–115, E–85, G–84
scheduling, *(P) DECthreads*, 2–17, 3–7
inherit scheduling attribute, *(P) DECthreads*, 2–4
scheduling policy attribute, *(P) DECthreads*, 2–4
scheduling priority attribute, *(P) DECthreads*, 2–5
setting current cancelability state, *(P) DECthreads*, pthread–102
setting current cancelability type, *(P) DECthreads*, pthread–104
setting current priority of, *(P) DECthreads*, E–79, G–77
setting current scheduling policy and parameters of, *(P) DECthreads*, pthread–106
setting current scheduling policy and priority of, *(P) DECthreads*, E–81, G–79
signal mask, *(P) DECthreads*, pthread–111
starting, *(P) DECthreads*, 2–1
Threads (cont'd)
states, *(P) DECthreads*, 1–4
terminating, *(P) DECthreads*, 2–1, E–67
normal termination, *(P) DECthreads*, 2–2
termination, normal, *(P) DECthreads*, pthread–64
unlocking global mutex, *(P) DECthreads*, pthread–114
waiting for a mutex, *(P) DECthreads*, tis–20, E–59, G–67
waiting for another to terminate, *(P) DECthreads*, 2–2
waiting for the termination of, *(P) DECthreads*, pthread–72, E–77, G–55
waiting on mutex, *(P) DECthreads*, pthread–86
waking, *(P) DECthreads*, pthread–37, pthread–43, pthread–45, tis–3, tis–8, E–36, E–40, E–41, G–32, G–36, G–37, G–39
yielding processor to another thread, *(P) DECthreads*, pthread–115, E–85, G–84
Thread-safe code
condition variables, *(P) DECthreads*, 4–2
definition of, *(P) DECthreads*, 3–3
mutexes, *(P) DECthreads*, 4–2
Threads identifier
comparing, *(P) DECthreads*, pthread–63, G–49
Threads of execution, *(P) Modular Proc*, 3–15
Thread-specific data, *(P) DECthreads*, 2–13, 4–2
Three-dimensional graphics applications, *(G) SW Overview*, 6–16
Thresholds, customizing for events or different computer classes, *(S) DECamds*, 5–9
Throughput (default) scheduling, *(P) DECthreads*, 2–4
Throughput rate
definition, *(S) Alpha Perform*, 1–1
Tightly coupled system kernels, *(S) Dependable*, 4–5
Time
See also Absolute time, Delta time, and TDF
adding interval to current time, *(P) DECthreads*, pthread–66, E–83, G–51
auditing changes to system time, *(S) Security*, 9–7
64-bit system format, *(P) Concepts*, 5–1
128-bit system format, *(P) Concepts*, 5–34
changing system, *(G) DCL N-Z*, DCLII–226
conversions, *(P) Concepts*, 5–2
converting 64-bit system format to UTC, *(P) Sys Svc II*, SYS2–449
converting ASCII to binary, *(P) Concepts*, 5–6
converting binary to ASCII string, *(P) Sys Svc I*, SYS1–29
converting binary to numeric, *(P) Sys Svc II*, SYS2–194
converting UTC to 64-bit system format, *(P) Sys Svc II*, SYS2–449

Time (cont'd)
converting UTC to ASCII, *(P) Sys Svc I*, SYS1–35
converting UTC to numeric components, *(P) Sys Svc II*, SYS2–196
CPU quota for created processes, *(G) DCL N-Z*, DCLII–65
CPU used by current process, *(G) DCL N-Z*, DCLII–339
displaying, *(G) DCL N-Z*, DCLII–353
extracting records by, *(S) Sys Mgmt Util A-L*, 4–5
getting current system, *(P) Concepts*, 5–10; *(P) Sys Svc II*, SYS2–71
internal format, *(P) Concepts*, 5–2
modifying system time, *(S) Sys Mgr Tuning*, 20–17
numeric and ASCII, *(P) Concepts*, 5–7
obtaining expiration, *(P) DECthreads*, pthread–66, E–83, G–51
resetting after January 1st, *(S) Sys Mgr Tuning*, 20–18
setting clusterwide, *(S) VMScluster Sys*, 5–20
setting system, *(S) Sys Mgmt Util M-Z*, 6–16; *(P) Concepts*, 5–11; *(P) Sys Svc II*, SYS2–292
specifying absolute and delta date and time combinations, *(G) User*, 3–13
specifying absolute date and time, *(G) User*, 3–11
specifying delta date and time, *(G) User*, 3–12
synchronizing cluster time, *(S) Security*, 9–28
updating in a VMScluster, *(S) Sys Mgr Tuning*, 20–18; *(S) Sys Mgmt Util M-Z*, 6–17
using system services, *(P) Concepts*, 5–2 to 5–4
VMScluster
displaying, *(S) Sys Mgmt Util M-Z*, 6–18
Time conversion routine, *(P) LIB$*, LIB–90
F_Floating value, *(P) LIB$*, LIB–80
Time conversions
formatting, *(P) Concepts*, 5–4
Time conversion service, *(S) Sys Mgr Essentials*, 5–33
Time differential factor
See TDF
Timed retention
specifying, *(G) DCL N-Z*, DCLII–23, DCLII–128, DCLII–418
Time formats, *(S) Sys Mgr Essentials*, 5–42
predefined, *(S) Sys Mgr Essentials*, 5–47
specifying, *(S) Sys Mgr Essentials*, 5–45
Time manipulation
using LIB$ routines, *(P) Concepts*, 5–5 to 5–7
Time-of-day login restrictions, *(S) Security*, 3–8
Timeout filter, *(S) DECamds*, 2–7
Timeout periods, *(G) User*, 2–2
count of network, *(S) DECnet Intro*, 4–3
displaying, *(S) Sys Mgmt Util M-Z*, 6–58
Timeout periods (cont'd)
for SCSI device, *(P) I/O User*, 8–8, 8–13
in SYSMAN, *(S) Sys Mgr Essentials*, 2–18
mount verification OPCOM message, *(S) Sys Mgr Essentials*, 8–60
setting, *(S) Sys Mgmt Util M-Z*, 6–55
TIMEOUT_ENABLE attribute, *(P) Rec Mgmt Util*, 4–13
TIMEOUT_PERIOD attribute, *(P) Rec Mgmt Util*, 4–13; *(P) File Appl*, 7–12
/TIME qualifier, *(P) Alpha SDA*, SDA–49; *(P) VAX SDA*, SDA–56
Timer and time conversion
system services, *(P) Environment*, 10–6, 10–14
Timer queue entry limit, *(S) Sys Mgr Essentials*, 6–43
Timer requests, *(P) Concepts*, 5–13
canceling, *(P) Concepts*, 5–16; *(P) Sys Svc I*, SYS1–80
Timers
babble, *(S) DECnet Mgmt*, 3–32
broadcast routing, *(S) DECnet Mgmt*, 3–55
counter, *(S) DECnet Mgmt*, 3–21
dead, *(S) DECnet Mgmt*, 3–43
deallocating, *(P) Concepts*, 5–19
delay, *(S) DECnet Mgmt*, 3–43
for circuits, *(S) Sys Mgmt Util A-L*, 13–27
for multicast message in LAT environment, *(S) Sys Mgmt Util A-L*, 13–30
hello, *(S) DECnet Mgmt*, 3–29
inactivity, *(S) DECnet Mgmt*, 2–24, 3–57
incoming, *(S) DECnet Mgmt*, 2–24, 3–57
initializing, *(P) Concepts*, 5–18
line, *(S) DECnet Mgmt*, 3–43
logical link, *(S) DECnet Mgmt*, 2–24
obtaining statistics, *(P) Concepts*, 5–19
outgoing, *(S) DECnet Mgmt*, 2–24, 3–57
retransmit, *(S) DECnet Mgmt*, 3–43
routing, *(S) DECnet Mgmt*, 2–24, 3–54
scheduling, *(S) DECnet Mgmt*, 3–43
service, *(S) DECnet Mgmt*, 3–43
setting, *(P) Sys Svc II*, SYS2–294
setting in a LAT environment, *(S) Sys Mgmt Util A-L*, 13–30
statistics
buffered input/output, *(P) Concepts*, 5–18
CPU time, *(P) Concepts*, 5–18
direct input/output, *(P) Concepts*, 5–18
elapsed time, *(P) Concepts*, 5–18
page faults, *(P) Concepts*, 5–18
stream, *(S) DECnet Mgmt*, 3–43
transmit, *(S) DECnet Mgmt*, 3–32
Timesharing, *(G) SW Overview*, 1–4
Timeslice
definition of, *(P) DECthreads*, 2–4
Time slicing, *(S) Alpha Perform*, 6–19
between processes, *(S) VAX Perform*, 4–33; *(S) Alpha Perform*, 15–2

Time-stamping
and verification settings, *(G) User*, 17–5
using SET PREFIX command, *(G) User*, 18–14
Time-stamps
synchronizing in cluster, *(S) Security*, 9–28
Time zones
setting up your system to compensate for, *(S) Sys Mgr Essentials*, 5–33
time_name data type, *(P) Interfaces*, B–15
/TIME_SLICE qualifier, *(P) Debugger*, 16–25, CD–216, CD–288
TIMVCFAIL system parameter, *(S) VMScluster Sys*, A–3
TITLE attribute, *(P) Rec Mgmt Util*, 4–37
.TITLE directive, *(P) Concepts*, 13–60
TLK image, *(S) DECnet Mgmt*, 4–15
TLZ04 tape drives
supported by UETP, *(S) Sys Mgr Tuning*, 17–7
/TMASK qualifier, *(P) Debugger*, 15–13, CD–108
TMD option, *(P) Rec Mgmt Util*, 4–24
TMO option, *(P) Rec Mgmt Util*, 4–13
TMPMBX privilege, *(S) Security*, A–18; *(S) DECnet Mgmt*, 2–31
for network operations, *(S) DECnet Intro*, 2–2, 3–1
TMP option, *(P) Rec Mgmt Util*, 4–19
TMSCP (tape mass storage control protocol), *(S) Sys Mgr Tuning*, 20–2
TMSCP server code
base address, *(P) VAX SDA*, SDA–18
TMSCP servers
cluster-accessible files, *(S) VMScluster Sys*, 6–1
cluster-accessible tapes, *(S) VMScluster Sys*, 6–15
controlled by TMSCP_LOAD, *(G) V7.0 New Feat*, E–2
controlled by TMSCP_SERVE_ALL, *(G) V7.0 New Feat*, E–2
functions, *(S) VMScluster Sys*, 6–15
LAN tape server, *(S) VMScluster Sys*, 3–6
SCSI tapes in a VMScluster system, *(G) V7.0 New Feat*, E–1
shared tapes, *(S) VMScluster Sys*, 6–1
TUDRIVER, *(S) VMScluster Sys*, 1–4, 2–18
TMSCP symbol, *(P) VAX SDA*, SDA–18
TMSCP_LOAD system parameter, *(G) V7.0 New Feat*, E–2; *(S) VMScluster Sys*, 6–15, A–3
TMSCP_SERVE_ALL system parameter, *(G) V7.0 New Feat*, E–2
TN3270, *(S) Sys Mgr Tuning*, 21–13
Token Ring
Address mappings, *(P) I/O User*, 9–7
Token ring LAN, *(G) SW Overview*, 1–11, 6–18
adapters, *(G) SW Overview*, 1–6, 6–25
Tools
alignment, *(P) Concepts*, 22–9
for dependable computing, *(S) Dependable*, 5–6
for network monitoring, *(S) DECnet Intro*, 4–1
TOP command, *(P) File Appl*, 10–11
Topologies
of a multiple-area network, *(S) DECnet Mgmt*, 1–14
of a single-area network, *(S) DECnet Mgmt*, 1–14
/TOP qualifier, *(P) Debugger*, CD–147
TOPS–10 nodes, *(S) DECnet Mgmt*, 9–14
TOPS–20 nodes, *(S) DECnet Mgmt*, 9–17
Total exception records, *(P) Rec Mgmt Util*, 2–17
Total records processed, *(P) Rec Mgmt Util*, 2–17
Total valid records, *(P) Rec Mgmt Util*, 2–17
TP monitors
See Transaction-processing monitors
TPT option, *(P) Rec Mgmt Util*, 4–13
TPU
See DECTPU
TPU$CLEANUP routine, *(P) Util Routines*, DECTPU–28
TPU$CLIPARSE routine, *(P) Util Routines*, DECTPU–32
TPU$CLOSE_TERMINAL routine, *(P) Util Routines*, DECTPU–34
TPU$CONTROL routine, *(P) Util Routines*, DECTPU–35
regaining control from, *(P) Util Routines*, DECTPU–35, DECTPU–53
TPU$EDIT routine, *(P) Util Routines*, DECTPU–37
TPU$EXECUTE_COMMAND routine, *(P) Util Routines*, DECTPU–39
TPU$EXECUTE_INIFILE routine, *(P) Util Routines*, DECTPU–40
TPU$FILEIO routine, *(P) Util Routines*, DECTPU–42
TPU$HANDLER routine, *(P) Util Routines*, DECTPU–52
TPU$MESSAGE routine, *(P) Util Routines*, DECTPU–61
TPU$PARSEINFO routine, *(P) Util Routines*, DECTPU–62
TPU$SPECIFY_ASYNC_ACTION routine, *(P) Util Routines*, DECTPU–6, DECTPU–35, DECTPU–53, DECTPU–64
TPU$TPU routine, *(P) Util Routines*, DECTPU–66
TPU$TRIGGER_ASYNC_ACTION routine, *(P) Util Routines*, DECTPU–6, DECTPU–35, DECTPU–53, DECTPU–67
TP_SERVER process
stopping permanently, *(S) Sys Mgr Tuning*, 25–20
stopping to dismount a disk, *(S) Sys Mgr Tuning*, 25–14
TQELM (Timer queue entry limit)
See TQELM process limit
job quotas in use, *(S) DECamds*, 3–25

TQELM process limit, *(S) Sys Mgr Essentials*, 6–43
  effect of canceling timer request, *(P) Sys Svc I*, SYS1–80
Traceback
  compiler option, *(P) Debugger*, 9–3
  link option, *(P) Debugger*, 5–6, 9–4
  SHOW CALLS display, *(P) Debugger*, 6–7
Traceback facility
  link-time considerations, *(P) Linker*, LINK–39
Traceback handlers, *(P) Concepts*, 13–25
Traceback information records
  Alpha object language, *(P) Linker*, B–45
  VAX object language, *(P) Linker*, A–33
/TRACEBACK qualifier, *(P) Linker*, LINK–39; *(P) Debugger*, 5–7, 9–4, 9–5
  shareable image, *(P) Debugger*, 9–12
Tracepoints
  action, *(P) Debugger*, 7–9
  activating, *(P) Debugger*, 2–5, 7–11, CD–12
  canceling, *(P) Debugger*, 7–11, CD–37
  conditional, *(P) Debugger*, 7–9
  deactivating, *(P) Debugger*, 7–11, CD–56
  defined, *(P) Debugger*, 7–5
  delayed triggering of, *(P) Debugger*, 7–9, CD–221
  displaying, *(P) Debugger*, 7–5, CD–291
  DO clause, *(P) Debugger*, 7–9
  exception, *(P) Debugger*, 13–19, CD–220
  in tasking (multithread) program, *(P) Debugger*, 16–25
  on activation (multiprocess program), *(P) Debugger*, 14–13
  on label, *(P) Debugger*, 7–6
  on routine, *(P) Debugger*, 7–6
  on source line, *(P) Debugger*, 7–6
  on task event, *(P) Debugger*, 16–29
  on termination (image exit), *(P) Debugger*, 14–13
  on vector instruction, *(P) Debugger*, 15–3
  predefined, *(P) Debugger*, 14–13
  saving when rerunning program, *(P) Debugger*, 2–5, 5–11
  saving with RERUN command, *(P) Debugger*, 5–11, CD–13, CD–57, CD–140
  setting, *(P) Debugger*, 7–5, CD–220
  source display at, *(P) Debugger*, 10–7
  WHEN clause, *(P) Debugger*, 7–9
Track, *(P) File Appl*, 1–10, 3–16
  definition, *(S) Sys Mgr Tuning*, A–2
Traffic
  count of user data, *(S) DECnet Intro*, 4–3
  isolating VMScluster data, *(S) VMScluster Sys*, F–28
Trailer labels, *(P) File Appl*, 1–20, 1–32
  on tape files, *(S) Sys Mgr Essentials*, 8–7
Trailer pages, *(S) Sys Mgr Essentials*, 13–33
  file, *(S) Sys Mgr Essentials*, 13–37
  job, *(S) Sys Mgr Essentials*, 13–37
Training
  environment for, *(S) Dependable*, 5–6
  for users, importance to security, *(S) Security*, 6–5
  lights out data center, *(S) Dependable*, 11–6
  personnel, *(S) Dependable*, 1–4, 3–12
  software programmers, *(S) Dependable*, 3–10
TRANSACTION class record
  in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–41
Transaction group
  example, *(S) Sys Mgr Tuning*, 25–22
Transaction logs
  changing the size of, *(S) Sys Mgr Tuning*, 25–9
  checking the size of, *(S) Sys Mgr Tuning*, 25–8
  creating, *(S) Sys Mgr Tuning*, 25–4
  moving, *(S) Sys Mgr Tuning*, 25–11
  planning, *(S) Sys Mgr Tuning*, 25–3
Transaction processing
  ACMS, *(G) SW Overview*, 7–12
  applications, *(G) SW Overview*, 2–13, 7–10
  client/server systems, *(G) SW Overview*, 7–11
  distributed environments, *(G) SW Overview*, 4–12, 7–11
  distributed management, *(G) SW Overview*, 3–6
  environments, *(S) Dependable*, 3–9
  global symbols, *(P) Alpha SDA*, SDA–15
  monitor, *(G) SW Overview*, 2–13, 7–12
  servers to desktop clients, *(G) SW Overview*, 6–22
  software, *(G) SW Overview*, 2–13
  two-phase commit protocol, *(G) SW Overview*, 7–13
  use of DECADMIRE, *(S) Dependable*, 3–9
  using DECdtm, *(G) SW Overview*, 7–13
Transaction-processing monitors, *(S) Dependable*, 8–52, 8–53
Transactions
  aborting asynchronously, *(P) Sys Svc I*, SYS1–3
  aborting synchronously, *(P) Sys Svc I*, SYS1–7
  characteristics, *(G) SW Overview*, 7–10
  default, *(P) Concepts*, 12–3; *(P) Sys Svc II*, SYS2–437
  distributed, *(G) SW Overview*, 2–14, 3–6
  ending asynchronously, *(P) Sys Svc I*, SYS1–322
  ending synchronously, *(P) Sys Svc I*, SYS1–327
  managing transaction logs, *(S) Sys Mgmt Util A-L*, 14–1
  monitoring, *(S) Sys Mgr Tuning*, 25–6; *(S) Sys Mgmt Util M-Z*, 1–55
  programming, *(P) Concepts*, 12–1
  starting asynchronously, *(P) Sys Svc II*, SYS2–435

Transactions (cont'd)
starting synchronously, *(P) Sys Svc II*, SYS2–439
Transactions, number of disk, *(S) DECamds*, 3–6
Transaction sequence numbers
See TSNs
/TRANSACTIONS qualifier, *(P) VAX SDA*, SDA–150
transaction_id data type, *(P) Interfaces*, B–15
Transfer address, *(P) Debugger*, 5–7, 13–15
Transfer code
address, *(P) Calling Std*, 3–44
sequence, *(P) Calling Std*, 3–44
Transfer from disk volumes, *(P) Rec Mgmt Util*, 4–23
Transfer modes
EXCHANGE/NETWORK command, *(G) DCL A-M*, DCLI–220
Transferring
files over the network, *(S) Sys Mgr Tuning*, 21–14; *(S) TCP/IP*, 5–5; *(S) DECnet Intro*, 2–5
files remotely, *(S) Sys Mgr Tuning*, 21–14; *(S) TCP/IP*, 5–5
records over the network, *(S) TCP/IP*, 5–5; *(S) DECnet Intro*, 2–9
Transfer vectors, *(P) Linker*, 4–4 to 4–7
Transitions
managing in a VMScluster, *(S) VMScluster Sys*, 2–10
Translated images, *(P) Debugger*, 13–26, 14–1
Translation
of character sets, *(P) LIB$*, LIB–356
Translation buffer, *(S) Alpha Perform*, 10–9
Translation modes
card reader, *(S) Sys Mgr Essentials*, 7–18
Translations
logical to physical, *(P) I/O User*, 2–14
/TRANSLATION_ATTRIBUTES qualifier, *(P) File Appl*, 5–7, 6–14
Transmission speed
setting for terminals, *(S) Sys Mgr Essentials*, 7–9, 7–10
Transmit channel
selection, *(S) VMScluster Sys*, G–3
Transmit passwords, *(S) DECnet Mgmt*, 2–29
in network operations, *(S) DECnet Intro*, 3–21
Transmit timer, *(S) DECnet Mgmt*, 3–32
Transparent network file access
providing with DFS, *(S) Dependable*, 7–17
Transparent task-to-task communications, *(S) DECnet Intro*, 2–14; *(S) DECnet Mgmt*, 1–20, 8–1
Transparent user network operations, *(S) DECnet Mgmt*, 1–17
Transport header
See TR header
Transport layers, *(S) TCP/IP*, 2–3, 2–4
Transport protocol
See TR protocol
Transports, *(S) Sys Mgr Tuning*, 23–6
See also NISCA transport protocol
LASTport, *(S) Sys Mgr Tuning*, 23–5
TRAPB instruction, *(P) Calling Std*, 6–20
TR/CC flag
setting in the CC header, *(S) VMScluster Sys*, F–23
setting in the TR header, *(S) VMScluster Sys*, F–25
Tree, balanced binary, *(P) LIB$*, LIB–299, LIB–308
Tree structures
of indexed files, *(P) File Appl*, 10–16
of relative files, *(P) File Appl*, 10–14
of sequential files, *(P) File Appl*, 10–11
TR header, *(S) VMScluster Sys*, F–25
Tributaries, *(S) DECnet Mgmt*, 1–8, 2–8
address, *(S) DECnet Mgmt*, 2–8
circuit timers, *(S) DECnet Mgmt*, 3–32
control, *(S) DECnet Mgmt*, 3–31, 3–32
Trigger boot
LANCP MOP downline load service, *(S) Sys Mgmt Util A-L*, 12–40
MOP downline load service, *(S) Sys Mgr Tuning*, 22–27
TRIGGER command, *(S) DECnet Mgmt*, 4–2, 4–5
Trigger message, *(S) DECnet Mgmt*, 4–2
TRIGGER NODE command, *(S) DECnet Mgmt Util*, 3–156
in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–40
Trigger operations
bootstrap ROM, *(S) DECnet Mgmt*, 4–4
primary bootstrap, *(S) DECnet Mgmt*, 4–4
primary loader, *(S) DECnet Mgmt*, 4–2
TRIGGER command, *(S) DECnet Mgmt*, 4–5
TRIGGER VIA command, *(S) DECnet Mgmt*, 4–10; *(S) DECnet Mgmt Util*, 3–158
Trimming, *(S) VAX Perform*, 2–21
Triplet
See Security triplet
Trivial File Transfer Protocol
See TFTP
TRM$M_TM_ESCAPE routine, *(P) Concepts*, 7–25
TRM$M_TM_NOECHO routine, *(P) Concepts*, 7–25
TRM$M_TM_NOTRMECHO routine, *(P) Concepts*, 7–24
TRM$M_TM_PURGE routine, *(P) Concepts*, 7–25

TR numbers
display on Alpha systems, *(S) Sys Mgmt Util M-Z*, 6–39
Trojan horse programs, *(S) Security*, 5–14, 8–24
Troubleshooting
See also LAVC$FAILURE_ANALYSIS.MAR program
adding or deleting a device control library module, *(S) Sys Mgr Essentials*, 13–83
analyzing port error-log entries, *(S) VMScluster Sys*, C–27
autostart queues, *(S) Sys Mgr Essentials*, 13–81
booting problems, *(S) Sys Mgr Essentials*, 4–14, 4–16, 4–17
fixing by booting with default parameter values, *(S) Sys Mgr Essentials*, 4–8
channel formation, *(S) VMScluster Sys*, F–17
CLUEXIT bugcheck, *(S) VMScluster Sys*, C–18
Data Link layer, *(S) DECnet Intro*, 4–13
device is not recognized by the system, *(S) Sys Mgr Essentials*, 7–7
disk servers, *(S) VMScluster Sys*, C–10
distributed enable messages, *(S) VMScluster Sys*, F–35
distributed trigger messages, *(S) VMScluster Sys*, F–35
error-log entries for CI and LAN ports, *(S) VMScluster Sys*, C–33
failure of computer to boot, *(S) VMScluster Sys*, C–1, C–6
failure of computer to join the cluster, *(S) VMScluster Sys*, C–1, C–13
failure of startup procedure to complete, *(S) VMScluster Sys*, C–15
forgotten passwords, *(S) Sys Mgr Essentials*, 4–10
general printer problems, *(S) Sys Mgr Essentials*, 13–78
hang condition, *(S) VMScluster Sys*, C–16
holding jobs, *(S) Sys Mgr Essentials*, 13–79
isolating data, *(S) VMScluster Sys*, F–28
jobs that will not execute, *(S) Sys Mgr Essentials*, 13–79
jobs with characteristic mismatch, *(S) Sys Mgr Essentials*, 13–81
LAN network components, *(S) VMScluster Sys*, D–3
LAN network failure analysis, *(S) VMScluster Sys*, D–3
logging in, *(S) Sys Mgr Essentials*, 4–8
loss of quorum, *(S) VMScluster Sys*, C–16
MOP servers, *(S) VMScluster Sys*, C–9
network problems, *(S) DECnet Intro*, 3–31, 4–10 to 4–17
network retransmission filters, *(S) VMScluster Sys*, F–33
Troubleshooting (cont'd)
NISCA communications, *(S) VMScluster Sys*, F–16
NISCA transport protocol, *(S) VMScluster Sys*, F–1
OPA0 error messages, *(S) VMScluster Sys*, C–41
OPCOM problems, *(S) Sys Mgr Essentials*, 2–22
pending jobs, *(S) Sys Mgr Essentials*, 13–79
port device problem, *(S) VMScluster Sys*, C–19
print jobs with stock mismatch, *(S) Sys Mgr Essentials*, 13–80
problems deleting a queue, form, or characteristic, *(S) Sys Mgr Essentials*, 13–82
queue manager, *(S) Sys Mgr Essentials*, 12–14
queue problems, *(S) Sys Mgr Essentials*, 13–77
repairing CI cables, *(S) VMScluster Sys*, C–26
retransmission errors, *(S) VMScluster Sys*, F–36
retransmission problems, *(S) VMScluster Sys*, F–18
routing problems, *(S) DECnet Intro*, 4–14
satellite booting, *(S) VMScluster Sys*, C–10
SCSI configurations, *(G) V7.0 New Feat*, C–33
shared resource is inaccessible, *(S) VMScluster Sys*, C–17
stalled output queue, *(S) Sys Mgr Essentials*, 13–81
startup problems, *(S) Sys Mgr Essentials*, 4–14
system dump file for, *(S) Sys Mgr Tuning*, 15–11
system failure, *(S) Sys Mgr Tuning*, 15–11
system hang, *(S) Sys Mgr Tuning*, 15–16
system startup problems, *(S) Sys Mgr Essentials*, 4–15
the network, *(S) DECnet Intro*, 2–16
UETP, *(S) Sys Mgr Tuning*, 17–21
using distributed enable filter, *(S) VMScluster Sys*, F–34
using distributed trigger filter, *(S) VMScluster Sys*, F–34
using Ethernet LAN analyzers, *(S) VMScluster Sys*, F–30
using LAN analyzer filters, *(S) VMScluster Sys*, F–33
using packet filters, *(S) VMScluster Sys*, F–33
verifying CI cable connections, *(S) VMScluster Sys*, C–22
verifying CI port, *(S) VMScluster Sys*, C–21
verifying virtual circuit state open, *(S) VMScluster Sys*, C–22
VMScluster LAN network failure analysis, *(S) VMScluster Sys*, C–16
VMScluster satellite booting, *(S) VMScluster Sys*, C–6

TR protocol
part of NISCA transport protocol, *(S) VMScluster Sys*, F–3
PEDRIVER implements packet delivery service, *(S) VMScluster Sys*, F–4
True expression
and IF command, *(G) DCL A-M*, DCLI–250
TRUNCATE attribute, *(P) Rec Mgmt Util*, 4–3; *(P) File Appl*, 7–3
Truncate-on-put option
access requirement, *(P) File Appl*, 7–7
/TRUNCATE qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–62
Truncate service, *(P) RMS Ref*, RMS–101; *(P) File Appl*, 8–4, 8–5
condition values, *(P) RMS Ref*, RMS–102
See also Completion status codes
control block input fields, *(P) RMS Ref*, RMS–102
control block output fields, *(P) RMS Ref*, RMS–102
effect on next-record position, *(P) File Appl*, 8–17
use restriction, *(P) RMS Ref*, RMS–101
Truncate subfunction, *(P) I/O User*, 1–13
TRUNCATE_ON_CLOSE attribute, *(P) Rec Mgmt Util*, 4–24
TRUNCATE_ON_PUT attribute, *(P) Rec Mgmt Util*, 4–13
Truncation errors, *(P) File Appl*, 3–9
trunc routine, *(P) Portable Math*, DPML–59, B–14
Trusted computing base
See TCB
TRY/ENDTRY block
restriction, *(P) DECthreads*, B–4
TSM (Terminal Server Manager), *(G) SW Overview*, 7–7
TSNs (transaction sequence numbers)
used by DEC Rdb, *(S) Dependable*, 8–41
TT2$M_DISCONNECT characteristic, *(S) Sys Mgr Essentials*, 7–11
TTDRIVER device driver
loading, *(S) Sys Mgr Essentials*, 7–11
TTY system parameters
See System parameters, terminal behavior
TTY_DECCHAR system parameter, *(S) Sys Mgr Essentials*, 7–10
TTY_DEFCHAR2 system parameter, *(S) Sys Mgr Essentials*, 7–10, 7–11
TT_CANCEL_CONTROL_O attribute, *(P) Rec Mgmt Util*, 4–13
TT_PROMPT attribute, *(P) Rec Mgmt Util*, 4–13
TT_PURGE_TYPE_AHEAD attribute, *(P) Rec Mgmt Util*, 4–14
TT_READ_NOECHO attribute, *(P) Rec Mgmt Util*, 4–14
TT_READ_NOFILTER attribute, *(P) Rec Mgmt Util*, 4–14
TT_UPCASE_INPUT attribute, *(P) Rec Mgmt Util*, 4–14
TU58 magnetic tapes
See Disks
TUDRIVER (tape class driver), *(S) VMScluster Sys*, 1–4, 2–18
Tuning, *(P) File Appl*, 3–3, 10–24
See also Performance, Performance optimization tasks
considering hardware capacity, *(S) Sys Mgr Tuning*, 16–6
deciding when to stop, *(S) VAX Perform*, 1–9
definition, *(S) Sys Mgr Tuning*, 16–4; *(S) VAX Perform*, 1–7; *(S) Alpha Perform*, 3–1
evaluating, *(S) Alpha Perform*, 3–4
evaluating success, *(S) Sys Mgr Tuning*, 16–6; *(S) VAX Perform*, 1–9
indexed files, *(P) File Appl*, 3–18
minimizing with AUTOGEN feedback, *(S) Sys Mgr Tuning*, 14–10
OpenVMS systems for network use, *(S) DECnet Intro*, 3–7
predicting when required, *(S) Sys Mgr Tuning*, 16–5; *(S) VAX Perform*, 1–8
prerequisites, *(S) Alpha Perform*, 3–2
relative files, *(P) File Appl*, 3–15
sequential files, *(P) File Appl*, 3–13, 3–14
suggestions, *(S) Alpha Perform*, 3–2
the network, *(S) DECnet Intro*, 2–16
when to stop, *(S) Alpha Perform*, 3–4
with AUTOGEN, *(S) Sys Mgr Tuning*, 14–5
TURBOchannel
device on, *(S) Sys Mgmt Util M-Z*, 5–29
TURBOchannel I/O interconnect, *(G) SW Overview*, 1–6
Turnkey accounts
See Captive accounts
Turnkey user accounts, *(G) SW Overview*, 5–2
24x365 computing, *(S) Dependable*, 1–1
Two-phase commit protocol, *(G) SW Overview*, 3–6, 7–13
Type-ahead buffers, *(P) Concepts*, 7–38
TYPE attribute, *(P) Rec Mgmt Util*, 4–27, 4–28, 4–29
TYPE command, *(G) DCL N-Z*, DCLII–424 to DCLII–430; *(P) Debugger*, 10–3, 11–6, CD–310
and wildcard characters, *(G) User*, 4–14
displaying files on remote nodes with, *(G) User*, 4–14
displaying files with, *(G) User*, 4–14
displaying files with in EDT, *(G) User*, 9–3
in network operations, *(S) DECnet Intro*, 2–5

TYPE command (cont'd)
tape, *(S) Sys Mgr Essentials*, 9–17
using to execute remote command procedure, *(S) DECnet Intro*, 2–14
Type entry
in argument descriptions, *(P) Interfaces*, 1–7
/TYPE qualifier, *(P) Debugger*, 8–28, CD–79, CD–109, CD–285; *(P) Alpha SDA*, SDA–53, SDA–121; *(P) VAX SDA*, SDA–60, SDA–135
Types
address expression, *(P) Debugger*, 8–4, 8–25
array, *(P) Debugger*, 3–15, 3–18, 8–16
ASCII string, *(P) Debugger*, 8–16, 8–27
compiler generated, *(P) Debugger*, 8–4, 8–14
conversion, numeric, *(P) Debugger*, 8–7
current, *(P) Debugger*, 8–25, CD–228, CD–293
displaying, *(P) Debugger*, 8–26, CD–293
instruction, *(P) Debugger*, 8–19
integer, *(P) Debugger*, 3–15, 8–15, 8–27
override, *(P) Debugger*, 8–26, CD–40, CD–228, CD–293
pointer, *(P) Debugger*, 3–20, 8–18
real, *(P) Debugger*, 8–15
record, *(P) Debugger*, 3–18, 8–17
scalar, *(P) Debugger*, 8–15
SET TYPE command, *(P) Debugger*, 8–25, CD–228
structure, *(P) Debugger*, 3–18, 8–17
symbolic address expression, *(P) Debugger*, 8–4
/TYPE qualifier, *(P) Debugger*, 8–28, CD–79, CD–109, CD–285
vector register, *(P) Debugger*, 15–6
TYPE WHOLE command
in EDT, *(G) User*, 9–3
TZK10 tape cartridge drives, *(G) DCL N-Z*, DCLII–163
/T_FLOAT qualifier, *(P) Debugger*, CD–79, CD–108

U

U.S. Government OSI Profile (GOSIP) Test Facility, *(G) SW Overview*, 2–2
UAFALTERNATE logical name, *(S) Sys Mgr Essentials*, 4–10
UAFALTERNATE system parameter, *(S) Sys Mgr Essentials*, 4–10
UAFs (user authorization files), *(G) User*, 2–4; *(S) Security*, 3–1; *(S) DECnet Mgmt*, 8–12
See also NETPROXY.DAT
account expiration, *(G) User*, 2–17
account records, *(G) SW Overview*, 3–16
and detached processes, *(G) DCL N-Z*, DCLII–61
auditing modifications to, *(S) Security*, 9–3
booting with alternate, *(S) Sys Mgr Essentials*, 4–10
UAFs (user authorization files) (cont'd)
building a common file, *(S) VMScluster Sys*, 5–11, B–2
checking quotas for software installation, *(S) Sys Mgr Essentials*, 3–7
creation of default nonprivileged DECnet account, *(S) DECnet Mgmt*, 5–3
default directory entry, *(S) Sys Mgmt Util A-L*, 5–18
default values, *(S) Sys Mgmt Util A-L*, 5–18
description of, *(S) Sys Mgr Essentials*, 6–2
displaying records in, *(S) Sys Mgmt Util A-L*, 5–46
enabling auditing through, *(S) Security*, 9–2, 9–6
general maintenance, *(S) Sys Mgr Essentials*, 6–6
getting information about, *(P) Sys Svc II*, SYS2–72
initial contents, *(S) Sys Mgr Essentials*, 6–6
initial modification, *(S) Sys Mgr Essentials*, 6–9
listing records in, *(S) Sys Mgr Essentials*, 6–23
LOCKPWD flag, *(G) User*, 2–7; *(S) Security*, 3–4
logical name defining location, *(S) Sys Mgr Essentials*, 5–8
login check, *(S) Sys Mgr Essentials*, 6–5
login class restrictions, *(G) User*, 2–11; *(S) Security*, 3–8
modifications and security audit, *(S) Security*, 3–19, 9–7
modifying, *(S) Sys Mgmt Util A-L*, 5–3; *(P) Sys Svc II*, SYS2–327
user record, *(S) Sys Mgr Essentials*, 6–23
network proxy, *(S) Sys Mgr Essentials*, 6–35
normal protection, *(S) Security*, 7–23
password storage, *(S) Security*, 2–3
privileges and, *(S) Security*, 8–12, A–1
process characteristics, *(G) SW Overview*, 5–2
recording privileges, *(S) Security*, 4–5
record of last login, *(G) User*, 19–10; *(S) Security*, 3–17
records
creating multiple default, *(S) Sys Mgr Essentials*, 6–24
re-creating, *(S) Sys Mgmt Util A-L*, 5–3
renaming records, *(S) Sys Mgmt Util A-L*, 5–43
resource limits for VAX and Alpha, *(S) Sys Mgr Essentials*, 6–40
returning to the default, *(S) Sys Mgr Essentials*, 4–11
synchronization with rights database, *(S) Security*, 8–5
SYSMAN checks, *(S) Sys Mgr Essentials*, 2–16
SYSUAF.DAT, *(S) Sys Mgr Essentials*, 6–2
use during login, *(G) SW Overview*, 3–9
user accounts, *(G) SW Overview*, 5–1

UAFs (user authorization files) (cont'd)
user priorities, *(S) Sys Mgr Essentials*, 6–31
UCBs (unit control blocks), *(P) Alpha SDA*, SDA–84; *(P) VAX SDA*, SDA–91
UCB symbol, *(P) VAX SDA*, SDA–18
/UCS_SEQUENCE=(ESCAPE_SEQUENCE) qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–36
UDA50 disk adapter, *(P) I/O User*, 2–1
UDP (User Datagram Protocol), *(S) TCP/IP*, 2–4, 2–5
UETCONT00.DAT file, *(S) Sys Mgr Tuning*, 17–31
creation of, *(S) Sys Mgr Tuning*, 17–31
UETINIDEV.DAT file, *(S) Sys Mgr Tuning*, 17–31, 17–32
creation of, *(S) Sys Mgr Tuning*, 17–31
format, *(S) Sys Mgr Tuning*, 17–32
UETININET.DAT file, *(S) Sys Mgr Tuning*, 17–36
UETINIT00.EXE image, *(S) Sys Mgr Tuning*, 17–31
UETINIT01.EXE image, *(S) Sys Mgr Tuning*, 17–21, 17–31
UETLOAD00.DAT file, *(S) Sys Mgr Tuning*, 17–34
UETNETS00.EXE file, *(S) Sys Mgr Tuning*, 17–36
UETP$NODE_ADDRESS logical name, *(S) Sys Mgr Tuning*, 17–12
UETP (User Environment Test Package), *(S) DECnet Mgmt*, 6–2
aborting execution, *(S) Sys Mgr Tuning*, 17–15
compact disc drives supported by, *(S) Sys Mgr Tuning*, 17–7
creating a command procedure to run, *(S) VMScluster Sys*, 8–44
DECnet installation defaults, *(S) Sys Mgr Tuning*, 17–30
description, *(S) Sys Mgr Tuning*, 17–1
displaying tests as they run, *(S) Sys Mgr Tuning*, 17–18
initialization phase, *(S) Sys Mgr Tuning*, 17–31
interpreting output, *(S) Sys Mgr Tuning*, 17–17
Loopback mirror account requirement, *(S) DECnet Intro*, 3–29
master command procedure, *(S) Sys Mgr Tuning*, 17–30
MIRRO$SERVER account, *(S) DECnet Mgmt*, 5–5
normal completion, *(S) Sys Mgr Tuning*, 17–15
optical disk drives supported by, *(S) Sys Mgr Tuning*, 17–7
organization, *(S) Sys Mgr Tuning*, 17–30
required privileges, *(S) Sys Mgr Tuning*, 17–23
required quotas, *(S) Sys Mgr Tuning*, 17–23
requirements for small disk systems, *(S) Sys Mgr Tuning*, 17–11
running all phases, *(S) Sys Mgr Tuning*, 17–3
running individual phase, *(S) Sys Mgr Tuning*, 17–13
UETP (User Environment Test Package) (cont'd)
running in large cluster, *(S) VMScluster Sys*, 8–44
running multiple passes, *(S) Sys Mgr Tuning*, 17–14, 17–20
specifying values for LOAD phase, *(S) VMScluster Sys*, 8–44
starting, *(S) Sys Mgr Tuning*, 17–13
system resource requirements, *(S) Sys Mgr Tuning*, 17–2, 17–4
testing vector processors, *(S) Sys Mgr Tuning*, 17–12
TLZ04 tape drive, *(S) Sys Mgr Tuning*, 17–7
typical failures reported by, *(S) Sys Mgr Tuning*, 17–21
using to test DECnet hardware and software, *(S) DECnet Intro*, 3–29
VAX Vector Instruction, *(S) Sys Mgr Tuning*, 17–12
UETP.COM procedure, *(S) Sys Mgr Tuning*, 17–30
terminating, *(S) Sys Mgr Tuning*, 17–15
UETP.LOG file, *(S) Sys Mgr Tuning*, 17–15, 17–20, 17–29, 17–35
UETPHAS00.EXE program, *(S) Sys Mgr Tuning*, 17–30, 17–31
UETUNAS00.EXE UETP test image, *(S) Sys Mgr Tuning*, 17–19
UFDs (user file directories), *(S) Sys Mgr Tuning*, A–4
See also Directory structures
UFO (user-file open), *(P) Concepts*, 8–10
UFO option, *(P) Rec Mgmt Util*, 4–24
UIC-based protection, *(P) File Appl*, 4–26
See Protection codes
uic data type, *(P) Interfaces*, B–16
UIC directory specifications, *(G) User*, 5–10
translating to named format, *(G) User*, 5–10
UIC groups
design limitations, *(S) Security*, 8–2
UIC identifiers
example, *(G) User*, 19–2; *(S) Security*, 4–4, 4–19
UICs (user identification codes), *(G) SW Overview*, 3–15; *(S) Security*, 2–4, 4–2; *(S) Sys Mgr Essentials*, 6–14; *(S) TCP/IP*, 4–1; *(P) Interfaces*, B–15, B–16; *(P) Rec Mgmt Util*, 4–22, 4–28; *(P) File Appl*, 1–33
adding to rights database, *(S) Security*, 8–5
building common file, *(S) VMScluster Sys*, 5–11, B–2
C2 systems and, *(S) Security*, C–7
changing an object's, *(S) Security*, 4–7
default protection, *(G) User*, 19–5
changing, *(S) Sys Mgr Essentials*, 9–7
delimiting in control block fields, *(P) RMS Ref*, A–6
directory protection, *(S) Sys Mgr Essentials*, 9–11

UICs (user identification codes) (cont'd)
disk usage kept in quota file, *(S) Sys Mgr Tuning*, A–9
for disk quota file, *(S) Sys Mgmt Util M-Z*, 6–21
for UETP, *(S) Sys Mgr Tuning*, 17–6
identifiers, *(S) Sys Mgr Essentials*, 11–10; *(S) Sys Mgmt Util A-L*, 1–13
interpreting, *(S) Sys Mgr Essentials*, 11–7
member number, *(S) Sys Mgr Essentials*, 6–18
object access evaluations and, *(S) Security*, 4–11
overriding for tape volumes, *(S) Sys Mgr Essentials*, 8–25
process, *(S) Security*, 4–3
protection
of queues, *(S) Sys Mgr Essentials*, 13–22
public volumes, *(S) Sys Mgr Essentials*, 8–15
protection mechanisms, *(G) SW Overview*, 5–1
single process summary, *(S) DECamds*, 3–21
specifying, *(S) Sys Mgmt Util M-Z*, 2–29
specifying for directories, *(G) DCL A-M*, DCLI–96
specifying for files, *(G) DCL A-M*, DCLI–94
storage of, *(S) Security*, 4–3
uniqueness requirement for clustered systems, *(S) Security*, 11–5
[0,0], *(S) Sys Mgr Essentials*, 8–49
UID (user identification), *(S) TCP/IP*, 4–1
UID/GID (user identification/group identification) pair, *(S) TCP/IP*, 4–1
UIF option, *(P) Rec Mgmt Util*, 4–14
ULK option, *(P) Rec Mgmt Util*, 4–11
$ULKPAG_64 system service
description, *(P) Sys Svc II*, SYS2–461
ULTRIX systems, *(S) DECnet Mgmt*, 9–23
in network operations, *(S) DECnet Intro*, 1–6
$ULWSET_64 system service
description, *(P) Sys Svc II*, SYS2–466
Unaligned bit array descriptors, *(P) Calling Std*, 5–25
Unaligned bit string descriptors, *(P) Calling Std*, 5–24
Unaligned bit string with bounds descriptors, *(P) Calling Std*, 5–31
/UNALIGNED_DATA qualifier, *(P) Debugger*, CD–10, CD–24, CD–55, CD–163
Unalignment, *(P) Concepts*, 22–1
Unary operators, *(P) Alpha SDA*, SDA–12 to SDA–13; *(P) VAX SDA*, SDA–16
Unattended systems
memory dump, *(S) DECnet Mgmt*, 4–11
slave, *(S) DECnet Mgmt*, 4–11
UNDEFINED format, *(P) Rec Mgmt Util*, 4–33
/UNDEFINED_FAT qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–37
Underflow detection, *(P) MTH$*, 2–8
UNIBUS I/O addresses, *(S) Sys Mgmt Util M-Z*, 5–30
Uniform resource locators
See URLs
Uninterruptible power systems
See UPS
Uniprocessing, *(G) SW Overview*, 1–4
Uniprocessor operations, *(P) Concepts*, 14–5
Unit control blocks
See UCBs
Unit errors
recovery from, *(S) Dependable*, 8–22t
Unit number field, *(G) User*, 12–10
default value, *(G) User*, 12–9
Unit testing, *(P) Modular Proc*, 4–1
black box, *(P) Modular Proc*, 4–2
white box, *(P) Modular Proc*, 4–3
UNIVERSAL= option, *(P) Linker*, LINK–67
comparison to transfer vectors, *(P) Linker*, 4–4
declaring universal symbols, *(P) Linker*, 4–2
specifying, *(P) Linker*, 4–8
Universal alias names
specifying, *(P) Linker*, 4–11, LINK–65
Universal symbols, *(P) Debugger*, 9–3, 9–5, 9–11, 9–15
declaring alias names for, *(P) Linker*, 4–11
declaring on Alpha systems, *(P) Linker*, 4–8
declaring on VAX systems, *(P) Linker*, 4–2, LINK–67
definition, *(P) Linker*, 2–1
for symbols that represent data, *(P) Linker*, 4–5
for symbols that represent procedures, *(P) Linker*, 4–4
object module definition format, *(P) Linker*, B–20
UNIX systems, *(S) TCP/IP*, 1–4, 1–5, 1–6; *(P) DECthreads*, A–2
files, *(S) TCP/IP*, 5–6
identification codes, *(S) TCP/IP*, 4–1
UID/GID pair, *(S) TCP/IP*, 4–1
Unknown opcode errors, *(S) VMScluster Sys*, C–37
Unload function
disk, *(P) I/O User*, 2–35
magnetic tape, *(P) I/O User*, 3–18
Unloading devices
with DISMOUNT command, *(G) DCL A-M*, DCLI–186
Unloading licenses, *(S) Sys Mgmt Util M-Z*, 6–43
/UNLOAD qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–38
UNLOCK command, *(G) DCL N-Z*, DCLII–431
Unlocking
readers locks, *(P) DECthreads*, tis–29
writer lock, *(P) DECthreads*, tis–42

Unlocking a global mutex, *(P) DECthreads*, pthread–114, tis–38, E–84, G–83
Unlocking a mutex, *(P) DECthreads*, pthread–90, tis–22, E–61, G–69
Unlocking pages from memory, *(P) Sys Svc II*, SYS2–460
Unlocking pages in the working set, *(P) Sys Svc II*, SYS2–465
unordered routine, *(P) Portable Math*, DPML–60, B–14
Unsegmented key, *(P) Rec Mgmt Util*, 4–27
Unused bits in passed data, *(P) Calling Std*, 3–50
Unwind condition handlers, *(P) Concepts*, 13–67
Unwinds
  completion, *(P) Calling Std*, 6–25, 6–28
  exit, *(P) Calling Std*, 6–26
  GOTO, *(P) Calling Std*, 6–25
  handler invocation, *(P) Calling Std*, 6–27
  nested, *(P) Calling Std*, 6–29
  operations, *(P) Calling Std*, 6–23
    multiple active, *(P) Calling Std*, 6–29
  overlapping, *(P) Calling Std*, 6–30
UNXSIGNAL bugcheck, *(P) Alpha SDA*, SDA–19
Upcall, *(G) V7.0 New Feat*, 4–11
UP command, *(P) File Appl*, 10–11
UPDATE attribute, *(P) Rec Mgmt Util*, 4–3, 4–36; *(P) File Appl*, 7–3, 7–4
UPDATE DEVICE command
  in LANCP utility, *(S) Sys Mgmt Util A-L*, 12–41
Update-if option, *(P) File Appl*, 8–3 to 8–4
Update operation, *(P) File Appl*, 3–13
Update procedures
  definition, *(S) Sys Mgr Essentials*, 3–5
  restrictions, *(S) Sys Mgr Essentials*, 3–5
Update service, *(P) RMS Ref*, RMS–104; *(P) File Appl*, 8–1, 8–4
  comparing with Put service for stream format files, *(P) RMS Ref*, RMS–105
  condition values, *(P) RMS Ref*, RMS–106
  control block input fields, *(P) RMS Ref*, RMS–105
  control block output fields, *(P) RMS Ref*, RMS–106
  high-level language equivalents, *(P) File Appl*, 8–1
  invoking, *(P) RMS Ref*, 4–11
  program example, *(P) RMS Ref*, A–31
  requirements for using, *(P) RMS Ref*, RMS–105
  run-time options, *(P) File Appl*, 9–17 to 9–18
  using with indexed files, *(P) RMS Ref*, RMS–105
UPDATE_IF attribute, *(P) Rec Mgmt Util*, 4–14; *(P) File Appl*, 8–7
UPD option, *(P) Rec Mgmt Util*, 4–3, 4–36
$UPDSEC_64 system service
  description, *(P) Sys Svc II*, SYS2–478
Upgraded systems, *(S) VMScluster Sys*, 4–1
UPGRADE privilege, *(S) Security*, A–18
Upgrade procedures
  and system version dependent applications, *(S) Sys Mgr Essentials*, 5–23
  definition, *(S) Sys Mgr Essentials*, 3–5
  on Alpha systems, *(S) Sys Mgr Essentials*, 3–2
  POLYCENTER Software Installation utility, *(S) Sys Mgr Essentials*, 3–2, 3–29
  restrictions, *(S) Sys Mgr Essentials*, 3–5
  steps in, *(S) Sys Mgr Essentials*, 3–5
  using with existing OpenVMS, *(S) Sys Mgr Essentials*, 3–2
Upgrades
  for multiple-system disk VAXclusters, *(S) VMScluster Sys*, 10–3
  rolling, *(S) VMScluster Sys*, 10–3
UPI option, *(P) Rec Mgmt Util*, 4–36
Upline memory dumps, *(S) DECnet Intro*, 2–16; *(S) DECnet Mgmt*, 4–11
  over LAN, *(S) DECnet Mgmt*, 4–13
  requirements, *(S) DECnet Mgmt*, 4–13
/UP qualifier, *(P) Debugger*, CD–119, CD–134, CD–147
UPS (uninterruptible power systems)
  VAXft built-in use of, *(S) Dependable*, 5–2
Upward compatibility, *(P) Modular Proc*, 6–1, A–5
URLs (uniform resource locators), *(S) TCP/IP*, 3–5
Usage count
  DIRECTORY/SIZE command, *(S) Sys Mgr Essentials*, 8–49
  DISKQUOTA display, *(S) Sys Mgr Essentials*, 8–49
  updating, *(S) Sys Mgmt Util M-Z*, 6–26
/USAGE qualifier, *(S) Sys Mgmt Util A-L*, 3–5, 3–11
  in Analyze/Disk_Structure utility, *(S) Sys Mgmt Util A-L*, 3–11
Use access, *(S) Security*, 5–1
USE command
  in conversational boot, *(S) Sys Mgr Essentials*, 4–7
  in SYSGEN, *(S) Sys Mgr Tuning*, 14–31, 14–33; *(S) Sys Mgmt Util M-Z*, 5–32
UseNet (User's Network) protocol, *(S) TCP/IP*, 3–6
User (security category)
  controlling types of access, *(S) Sys Mgmt Util A-L*, 1–13
User accounts, *(S) Security*, 6–6
  altering, *(S) Sys Mgmt Util A-L*, 5–36
  changing quotas or privileges, *(S) Sys Mgr Essentials*, 6–23
  comparing, *(S) VMScluster Sys*, B–1
  coordinating, *(S) VMScluster Sys*, B–2
  creating, *(S) Sys Mgmt Util A-L*, 5–8

User accounts (cont'd)
Data Analyzer node privileges and quotas, *(S) DECamds*, A–14
deleting, *(S) Sys Mgr Essentials*, 6–25; *(S) Sys Mgmt Util A-L*, 5–41
disabling, *(S) Sys Mgr Essentials*, 6–27
group UIC, *(S) VMScluster Sys*, B–2
listing records of, *(S) Sys Mgr Essentials*, 6–23
maintaining, *(S) Sys Mgr Essentials*, 6–24
modifying, *(S) Sys Mgr Essentials*, 6–23
restricting use, *(S) Sys Mgr Essentials*, 6–27
security considerations, *(S) Security*, 7–4
setting up, *(S) Sys Mgr Essentials*, 6–6
User-action routines, *(P) Modular Proc*, 2–6
optional, *(P) Modular Proc*, 3–7
passing, *(P) Modular Proc*, 3–7
User authorization, *(S) Sys Mgr Essentials*, 6–5
account expiration, *(S) Security*, 3–13
login class restrictions, *(S) Security*, 3–8
privilege use, *(S) Security*, 4–5
shift restrictions, *(S) Security*, 3–8
User authorization files
See UAFs and SYSUAF.DAT files
User buffers
address, *(P) File Appl*, 9–15
size, *(P) File Appl*, 9–16
User capabilities, *(G) V7.0 New Feat*, 4–25
User classes
list of symbolic offsets, *(P) RMS Ref*, 13–5
User classification, *(P) Rec Mgmt Util*, 4–23
User Datagram Protocol
See UDP
User-defined condition values
signaling, *(P) Concepts*, 13–61
User-defined logical name tables, *(P) Concepts*, 10–6
User-defined objects, *(S) DECnet Mgmt*, 2–25
User-defined patterns
ability of LAN protocol analyzer to detect, *(S) VMScluster Sys*, F–27
User disks
preparing for UETP, *(S) Sys Mgr Tuning*, 17–2, 17–6
space requirements for UETP, *(S) Sys Mgr Tuning*, 17–5
test error during UETP, *(S) Sys Mgr Tuning*, 17–24
testing with UETP, *(S) Sys Mgr Tuning*, 17–33
UETP test image, *(S) Sys Mgr Tuning*, 17–34
User-entered reply
as used in example for selecting key path, *(P) RMS Ref*, A–23
User environment
computer-specific functions, *(S) VMScluster Sys*, 5–8
creating a common-environment cluster, *(S) VMScluster Sys*, 5–8
User file directories
See UFDs
User identification
See UID
User identification codes
See UICs
User interfaces, *(G) SW Overview*, 1–3
accessing different environments, *(G) SW Overview*, 5–2
graphical, *(G) SW Overview*, 5–2, 5–4
portable, *(G) SW Overview*, 2–4
programming tools, *(G) SW Overview*, 4–17
responding to forms, *(G) SW Overview*, 5–8
standards, *(G) SW Overview*, A–2
system access, *(G) SW Overview*, 5–1
User irresponsibility
training as antidote, *(S) Security*, 6–5
User libraries
See Help libraries
User library files
limiting scope of linker processing, *(P) Linker*, LINK–40
linker's search of, *(P) Linker*, LINK–41
specifying, *(P) Linker*, 2–13, LINK–40
/USERLIBRARY qualifier, *(P) Linker*, LINK–40
User loads
defined for UETP DECnet test, *(S) Sys Mgr Tuning*, 17–36
defining for the UETP load test, *(S) Sys Mgr Tuning*, 17–14
equation used to determine for UETP load test, *(S) Sys Mgr Tuning*, 17–18, 17–19
User Mail profile, *(S) Sys Mgr Essentials*, 6–38
User mode, *(S) Alpha Perform*, 9–7
logical names, *(S) Sys Mgr Tuning*, 16–15
User-mode (PSL$C_USER) constant
for FAB$V_CHAN_MODE, *(P) RMS Ref*, 4–6
User names
as identifiers, *(S) Security*, 2–3, 4–3; *(S) Sys Mgr Essentials*, 11–10; *(S) Sys Mgmt Util A-L*, 1–13
entering when logging in, *(S) Sys Mgr Essentials*, 2–10
identifiers added with, *(S) Sys Mgmt Util A-L*, 5–19
specifying at login, *(G) DCL A-M*, DCLI–415
specifying with wildcards, *(S) Sys Mgmt Util A-L*, 5–6
/USERNAME value, *(S) TCP/IP*, 5–2
User number, *(P) Rec Mgmt Util*, 4–22
User-open routines, *(P) Concepts*, 8–15
User passwords
See Passwords
User portability, *(G) SW Overview*, 2–5
User privileges, *(P) Interfaces*, 4–2

User procedures, *(P) Interfaces*, 3–1
User profile entry
  Signature file, *(G) V7.0 New Feat*, 4–14
User profiles
  creating, *(P) Sys Svc I*, SYS1–145
User programs
  working set limits, *(S) Alpha Perform*, 6–3
User prompt strings
  program example, *(P) RMS Ref*, A–27
/USER qualifier, *(P) Debugger*, CD–10, CD–13, CD–21, CD–24, CD–38, CD–55, CD–57, CD–245, CD–291; *(P) Alpha SDA*, SDA–151; *(P) VAX SDA*, SDA–177
User resources, *(S) Sys Mgr Essentials*, 6–39
User rights database file
  See RIGHTSLIST.DAT
Users
  access through ACEs, *(S) Security*, 4–17
  analyzing dependability needs of, *(S) Dependable*, 2–1
  C2 systems and, *(S) Security*, C–7
  capturing user requests in queues, *(S) Dependable*, 8–57
  displaying disk quota of, *(G) DCL N-Z*, DCLII–333
  displaying interactive terminal name of, *(G) DCL N-Z*, DCLII–356
  displaying names on system, *(G) DCL N-Z*, DCLII–356
  displaying process identification code (PID) of, *(G) DCL N-Z*, DCLII–356
  displaying process rights identifiers, *(G) User*, 19–2; *(S) Security*, 4–4
  displaying rights, *(S) Security*, 8–6
  file security and, *(S) Security*, 5–13
  granting privileges, *(S) Security*, 8–12
  interface to network, *(S) DECnet Mgmt*, 1–17
  interfacing through forms, *(S) Dependable*, 8–50
  introduction to system, *(S) Security*, 6–5
  limiting the number of interactive, *(S) Sys Mgr Essentials*, 5–16; *(S) Sys Mgr Tuning*, 16–4
  network operations, *(S) DECnet Mgmt*, 8–1
  protection code categories, *(S) Security*, 4–24; *(S) Sys Mgr Essentials*, 11–8
  recording name on disk volume, *(G) DCL N-Z*, DCLII–233
  requesting access, *(S) Security*, 4–12
  responding to requests, *(G) DCL N-Z*, DCLII–44
  restricting login hours for, *(S) Sys Mgr Tuning*, 16–4
  security categories of, *(S) Security*, 4–8, 4–24 to 4–25; *(S) Sys Mgr Essentials*, 11–8
  security profiles of, *(S) Security*, 4–1
  sending messages to with OPCOM, *(S) Sys Mgr Essentials*, 2–22
Users (cont'd)
  sending requests to an operator, *(S) Sys Mgr Essentials*, 2–25
  setting default object protection, *(S) Security*, 8–15
  training, *(S) Security*, 6–5
  transparent network operations, *(S) DECnet Mgmt*, 1–17
  trusted, *(S) Security*, C–5, C–8
  untrusted, *(S) Security*, C–5
  validation of, *(S) Sys Mgr Essentials*, 2–16
User-specified job retention
  changing, *(S) Sys Mgr Essentials*, 13–74
  PRINT/RETAIN command, *(G) DCL N-Z*, DCLII–21
  SET ENTRY/RETAIN command, *(G) DCL N-Z*, DCLII–127
  SUBMIT/RETAIN command, *(G) DCL N-Z*, DCLII–416
User stacks
  displaying contents, *(P) Alpha SDA*, SDA–151; *(P) VAX SDA*, SDA–177
  pointer, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–19
User training, *(S) Security*, 6–5
User-written system services, *(S) Security*, C–3
  implemented as privileged shareable images, *(P) Linker*, 4–11
  replacing with protected subsystems, *(S) Security*, 13–1
user_arg data type, *(P) Interfaces*, B–16
USER_FILE_OPEN attribute, *(P) Rec Mgmt Util*, 4–24; *(P) File Appl*, 7–4
USER_INTERLOCK attribute, *(P) Rec Mgmt Util*, 4–36; *(P) File Appl*, 7–4, 7–6
/USE_CLAUSE qualifier, *(P) Debugger*, CD–285
USP symbol, *(P) Alpha SDA*, SDA–15; *(P) VAX SDA*, SDA–19
UTC$CONFIGURE_TDF.COM command procedure
  sample session, *(S) Sys Mgr Essentials*, 5–39
  showing and setting your time differential factor (TDF), *(S) Sys Mgr Essentials*, 5–35
UTC (Coordinated Universal Time), *(S) Sys Mgr Essentials*, 5–33 to 5–34
  converting format to ASCII, *(P) Sys Svc I*, SYS1–35
  getting format, *(P) Sys Svc II*, SYS2–84
UTC system services, *(P) Concepts*, 5–34
Utilities
  OpenVMS, *(G) SW Overview*, 3–1, 3–4
  POSIX, *(G) SW Overview*, 4–14
Utility routines, *(P) Environment*, 10–15; *(P) Util Routines*, SMB–1
  See also ACL editor routines, CLI routines, DCX routines, DECTPU routines, EDT routines, FDL routines, PSM routines, SMB routines, and SOR routines

Utility routines (cont'd)
definition, *(P) Util Routines*, 1–1

V

VACK datagram, *(S) VMScluster Sys*, F–24
%VAL built-in symbol, *(P) Debugger*, CD–16
VALIDATE QUEUE command, *(P) Alpha SDA*, SDA–160; *(P) VAX SDA*, SDA–185
Validation of users, *(S) Sys Mgr Essentials*, 2–16
Validity rules, *(P) Rec Mgmt Util*, 6–1
/VALUE qualifier, *(P) Debugger*, 12–6, CD–62
Values
See also Built-in value types
in DCL command lines, *(G) User*, 3–3, 3–4
Value test in expression, *(G) DCL A-M*, DCLI–250
Variable buffer descriptors, *(P) Calling Std*, 5–33
VARIABLE format, *(P) Rec Mgmt Util*, 4–34
Variable format units
See VFUs
Variable-length bit field routine, *(P) Concepts*, 6–10
Variable-length records, *(P) Rec Mgmt Util*, 4–34; *(P) File Appl*, 1–30
guidelines for specifying, *(P) RMS Ref*, 4–22
with D format, *(P) File Appl*, 2–10
with V (LSB) format, *(P) File Appl*, 2–9
with V (MSB) format, *(P) File Appl*, 2–9
Variable names
address expression, *(P) Debugger*, 8–7
DEPOSIT command, *(P) Debugger*, 8–3
EXAMINE command, *(P) Debugger*, 8–2
language expression, *(P) Debugger*, 8–6
SET WATCH command, *(P) Debugger*, 7–11
Variables
as override type, *(P) Debugger*, 8–28
assigning in command procedures, *(G) User*, 15–9
assigning using INQUIRE command, *(G) User*, 15–9
automatic, *(P) Debugger*, 3–20, 3–22, 8–1
changing value of, *(P) Debugger*, 3–21, 8–3, 8–14
definition, *(G) User*, 15–7
depositing into, *(P) Debugger*, 3–21, 8–3, 8–14
determining in command procedures, *(G) User*, 15–8
displaying value of, *(P) Debugger*, 3–15, 8–2, 8–14
examining, *(P) Debugger*, 3–15, 8–2, 8–14
global section, *(P) Debugger*, 14–16
monitoring, *(P) Debugger*, 3–18, CD–129
nonstatic, *(P) Debugger*, 3–22, 7–14, 8–1
optimized code, *(P) Debugger*, 3–21, 13–1
register, *(P) Debugger*, 3–22, 7–14, 8–1
selecting name from window, *(P) Debugger*, 3–14
stack local, *(P) Debugger*, 3–22, 7–14, 8–1
Variables (cont'd)
static, *(P) Debugger*, 3–22, 7–14
uninitialized, *(P) Debugger*, 3–21, 8–1
watchpoint, *(P) Debugger*, 3–20, 7–11, 14–16
Variable-size stack frames, *(P) Interfaces*, 2–6; *(P) Calling Std*, 3–10
Variable with fixed-length control field
See VFC records
Varying character string data types, *(P) Calling Std*, 4–6
Varying length strings, *(P) STR$*, 2–1, 2–2, 2–3, STR–9, STR–23, STR–64
Varying string
returned to stack, *(P) Calling Std*, 2–8
Varying string array descriptors, *(P) Calling Std*, 5–21
Varying string descriptors, *(P) Calling Std*, 5–19
varying_arg data type, *(P) Interfaces*, B–16
VAX
images
specifying in link operations, *(G) V7.0 New Feat*, 4–13
VAX$LIBRARY logical name, *(G) V7.0 New Feat*, 4–11
VAX ACMS
See ACMS
VAX Ada
See Ada
VAX APL
See APL
VAX Application Control and Management System
See ACMS
VAX BASIC
See BASIC
VAX BLISS
See BLISS
VAX BLISS-32
See BLISS-32
VAX C
See C
VAXcluster environments
See also VMScluster systems
availability, *(G) SW Overview*, 2–12
base address of loadable code, *(P) VAX SDA*, SDA–17
building single security domain, *(S) Security*, 11–2
Business Recovery Server, *(G) SW Overview*, 7–10
C2 system restrictions, *(S) Security*, C–9
client/server, *(G) SW Overview*, 2–8
computer interconnect, *(S) Dependable*, 6–15
configurations, *(G) SW Overview*, 1–4, 1–7
defining the number of nodes for AUTOGEN, *(S) Sys Mgr Tuning*, 14–21
Digital Storage Systems Interconnect (DSSI), *(S) Dependable*, 6–13

VAXcluster environments (cont'd)
disaster tolerant, *(G) SW Overview*, 1–8, 2–12
displaying SDA information, *(P) VAX SDA*, SDA–86
Ethernet interconnect, *(S) Dependable*, 6–11
LAN adapter support, *(S) Dependable*, 7–4
managing audit log file, *(S) Security*, 11–5
multiadapter support, *(S) Dependable*, 7–4
protected object databases, *(S) Security*, 11–6
protected objects, *(S) Security*, 11–6
security considerations, *(S) Security*, 11–1
security implementation, *(S) Security*, 11–7
summary display, *(P) VAX SDA*, SDA–86
synchronizing authorization data, *(S) Security*, 11–4
system file recommendations, *(S) Security*, 11–3
system file requirements, *(S) Security*, 11–2
use of CI data link, *(S) DECnet Mgmt*, 1–10
with fault tolerant system kernels, *(S) Dependable*, 6–9
VAXCLUSTER system parameter, *(S) VMScluster Sys*, A–3
caution when setting to 0, *(S) VMScluster Sys*, 8–22, A–4
VAXcluster systems
adjusting quorum after shutting down a node, *(S) Sys Mgr Essentials*, 4–29
providing high data availability, *(S) Dependable*, 8–20f
shutting down an entire VAXcluster, *(S) Sys Mgr Essentials*, 4–29
VAX COBOL
See COBOL
VAX Data Distributor
See Data Distributor
VAX DATATRIEVE
See DATATRIEVE
VAX data types
See Data types
VAX DEC/Code Management System
See CMS
VAX DEC/Module Management System
See MMS
VAX Distributed File Service
See DFS
VAX Distributed Name Service
See DNS
VAX DOCUMENT
See DOCUMENT
VAXELN toolkit, *(G) SW Overview*, 4–18
VAX Environment Software Translator
See VEST
VAX FMS
See FMS
VAX FORTRAN
See also Fortran
/BLAS qualifier, *(P) MTH$*, 2–2
VAX FORTRAN-HPO compiler, *(P) MTH$*, 2–2, 2–9
VAXft
fault tolerant systems, *(S) Dependable*, 6–8
meeting requirements for fault tolerance, *(S) Dependable*, 1–2
providing multiple WAN connections for, *(S) Dependable*, 7–15
use of built-in uninterruptible power systems, *(S) Dependable*, 5–2
VAXft computers, *(G) SW Overview*, 1–14, 2–12
VAX GKS
See GKS
VAX installation, *(S) DECamds*, A–6 to A–15
VAX instruction set
accessing through run-time library, *(P) Concepts*, 6–9
VAX KDC
See KDC
VAX language extension, *(P) Calling Std*, 2–5
VAX language implementation tables
See Implementation tables
VAX MACRO
See MACRO
VAX object language, *(P) Linker*, A–1
control commands, *(P) Linker*, A–30
debugger information record format, *(P) Linker*, A–33
operator commands, *(P) Linker*, A–28
stack commands, *(P) Linker*, A–23
store commands, *(P) Linker*, A–25
traceback information record format, *(P) Linker*, A–33
VAX OPS5
See OPS5 programming technology
VAX P.S.I.
See P.S.I.
VAX Pascal
See Pascal
VAX PL/I
See PL/I
VAXport drivers, *(G) SW Overview*, 3–18
/VAX qualifier, *(G) V7.0 New Feat*, 4–12, 4–13
VAX RALLY
See RALLY
VAX Remote System Manager
See VAXrsm
VAX RPG II
See RPG II
VAXrsm
use in wide area networks, *(S) Dependable*, 3–6

VAX SCAN
See SCAN
VAXsimPLUS, *(G) SW Overview*, 7–7, 7–10
minimizing failures, *(S) Dependable*, 9–12
use at CSC lights out data center, *(S) Dependable*, 11–18
VAXstation
See Workstations
VAX Storage Library System
See SLS
VAX systems
downline loading, *(S) Sys Mgr Tuning*, 23–2
VAX unit of performance
See VUP
VAX Vector Instruction Emulation facility (VVIEF), *(S) Sys Mgr Tuning*, 17–12
definition, *(S) Sys Mgr Tuning*, 26–5
determining presence of, *(S) Sys Mgr Tuning*, 26–9, 26–10
loading, *(S) Sys Mgr Tuning*, 26–10
SHOW PROCESS/FULL command, *(P) Debugger*, 15–2
unloading, *(S) Sys Mgr Tuning*, 26–10
VAXVMSSYS.OLD file, *(S) Sys Mgmt Util A-L*, 6–7
VAXVMSSYS.PAR file, *(S) Sys Mgr Essentials*, 4–2; *(S) Sys Mgr Tuning*, 14–3; *(S) Sys Mgmt Util A-L*, 6–7
created by CLUSTER_CONFIG.COM, *(S) VMScluster Sys*, 8–1
initializing parameters at boot time, *(S) Sys Mgr Tuning*, 14–36
VBNs (virtual block numbers), *(P) Rec Mgmt Util*, 1–3
VBS class record
in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–44
VBSs (virtual balance slots)
data reduction, *(S) VAX Perform*, 2–18
direct I/O map, *(S) VAX Perform*, 2–18
disabling, *(S) VAX Perform*, 2–18
enabling, *(S) VAX Perform*, 2–18
VCBs (volume control blocks), *(P) Alpha SDA*, SDA–95; *(P) VAX SDA*, SDA–106
VCB symbol, *(P) VAX SDA*, SDA–19
VCC_FLAGS system parameter, *(S) Sys Mgmt Util M-Z*, C–49; *(S) Alpha Perform*, 18–3
VCC_FLAGS_D system parameter, *(S) Sys Mgmt Util M-Z*, C–49
VCC_FLAGS_S system parameter, *(S) Sys Mgmt Util M-Z*, C–49
VCC_MAXSIZE system parameter, *(S) Sys Mgmt Util M-Z*, C–49; *(S) Alpha Perform*, 18–3
VCC_MINSIZE system parameter, *(S) Sys Mgmt Util M-Z*, C–49
VCC_PTES system parameter, *(S) Sys Mgmt Util M-Z*, C–49
/VC qualifier, *(P) Alpha SDA*, SDA–124; *(P) VAX SDA*, SDA–141
VCRs (vector count registers), *(S) Sys Mgr Tuning*, 26–4; *(P) Debugger*, 15–4, B–4
VCS (VMScluster Console System), *(G) SW Overview*, 2–14, 7–6, 7–10
detecting operational failures, *(S) Dependable*, 9–11
introduction, *(S) Dependable*, 7–18
use at CSC lights out data center, *(S) Dependable*, 11–18
VCS for OpenVMS AXP (VMScluster Console System), *(S) VMScluster Sys*, 1–8
Vector capability
determining availability within a system, *(S) Sys Mgr Tuning*, 26–9
placing an ACL on, *(S) Sys Mgr Tuning*, 26–8
Vector-capable, *(S) Sys Mgr Tuning*, 26–4
VECTOR class record
in Monitor utility, *(S) Sys Mgmt Util M-Z*, A–45
Vector consumer
determining the identity of, *(S) Sys Mgr Tuning*, 26–9
managing, *(S) Sys Mgr Tuning*, 26–6
marginal, *(S) Sys Mgr Tuning*, 26–8
obtaining information about, *(S) Sys Mgr Tuning*, 26–8
Vector context switch
obtaining information about, *(S) Sys Mgr Tuning*, 26–9
Vector count registers
See VCRs
Vector CPU time
obtaining information regarding process, *(S) Sys Mgr Tuning*, 26–9
obtaining information regarding processor, *(S) Sys Mgmt Util M-Z*, A–45
obtaining information regarding system, *(S) Sys Mgmt Util M-Z*, A–45
Vector exceptions
delivery of, *(P) Debugger*, 15–19, 15–22
Vector instructions, *(P) Debugger*, 15–8
ACTIVATE BREAK/VECTOR_INSTRUCTION command, *(P) Debugger*, CD–10
ACTIVATE TRACE/VECTOR_INSTRUCTION command, *(P) Debugger*, CD–13
CANCEL BREAK/VECTOR_INSTRUCTION command, *(P) Debugger*, 15–3, CD–24
CANCEL TRACE/VECTOR_INSTRUCTION command, *(P) Debugger*, 15–3, CD–38
DEACTIVATE BREAK/VECTOR_INSTRUCTION command, *(P) Debugger*, CD–55

Vector instructions (cont'd)
DEACTIVATE TRACE/VECTOR_INSTRUCTION command, *(P) Debugger*, CD–57
delivery of vector exception, *(P) Debugger*, 15–19, 15–22
depositing, *(P) Debugger*, 15–12
displaying, *(P) Debugger*, 15–8
EXAMINE/OPERANDS command, *(P) Debugger*, 15–9
examining, *(P) Debugger*, 15–9
masked operation, *(P) Debugger*, 15–9, 15–14
operand, *(P) Debugger*, 15–9
replacing, *(P) Debugger*, 15–12
SET BREAK/VECTOR_INSTRUCTION command, *(P) Debugger*, 15–3, CD–163
SET STEP VECTOR_INSTRUCTION command, *(P) Debugger*, 15–3, CD–213
SET TRACE/VECTOR_INSTRUCTION command, *(P) Debugger*, 15–3, CD–225
STEP/VECTOR_INSTRUCTION command, *(P) Debugger*, 15–3, CD–301
Vectorization of a loop
preventing, *(P) MTH$*, MTH–190, MTH–194, MTH–198, MTH–202
Vectorized programs
CALL/[NO]SAVE_VECTOR_STATE command, *(P) Debugger*, 15–22, CD–17
controlling and monitoring execution, *(P) Debugger*, 15–2
debugging, *(P) Debugger*, 15–1
delivery of vector exception, *(P) Debugger*, 15–19, 15–22
depositing into vector register, *(P) Debugger*, 15–4, 15–6
depositing vector instruction, *(P) Debugger*, 15–12
EXAMINE/FMASK command, *(P) Debugger*, 15–13
EXAMINE/OPERANDS command, *(P) Debugger*, 15–9, CD–106
EXAMINE/TMASK command, *(P) Debugger*, 15–13
examining vector instruction, *(P) Debugger*, 15–9
examining vector register, *(P) Debugger*, 15–4, 15–6
masked operation, *(P) Debugger*, 15–5, 15–9, 15–13
obtaining information about, *(P) Debugger*, 15–2
setting breakpoint, *(P) Debugger*, 15–3
setting tracepoint, *(P) Debugger*, 15–3
setting watchpoint, *(P) Debugger*, 15–3
SET VECTOR_MODE command, *(P) Debugger*, 15–19, CD–232
SHOW PROCESS/FULL command, *(P) Debugger*, 15–2
Vectorized programs (cont'd)
SHOW VECTOR_MODE command, *(P) Debugger*, 15–19, CD–294
specifying vector register, *(P) Debugger*, 15–4
SYNCHRONIZE VECTOR_MODE command, *(P) Debugger*, 15–19, CD–308
synchronizing scalar and vector processors, *(P) Debugger*, 15–19
V0 to V15, *(P) Debugger*, 15–6
VCR, *(P) Debugger*, 15–4
VLR, *(P) Debugger*, 15–4
VMR, *(P) Debugger*, 15–5, 15–9, 15–13
Vectorizing FORTRAN compiler, *(P) MTH$*, 2–7
Vector length registers
See VLRs
Vector mask registers
See VMRs
Vector mode
SET VECTOR_MODE [NO]SYNCHRONIZED command, *(P) Debugger*, 15–19
SYNCHRONIZE VECTOR_MODE command, *(P) Debugger*, 15–19
Vector-present processors, *(S) Sys Mgr Tuning*, 26–4
identifying, *(S) Sys Mgr Tuning*, 26–9
Vector processing, *(G) SW Overview*, 3–5; *(S) Sys Mgr Tuning*, 26–4 to 26–9
monitoring, *(S) Sys Mgmt Util M-Z*, 1–58
Vector processors
exception handling, *(P) Calling Std*, 6–16
releasing, *(P) Sys Svc II*, SYS2–248
restoring the exception state of, *(P) Sys Svc II*, SYS2–254
saving the exception state of, *(P) Sys Svc II*, SYS2–266
synchronization, *(P) Calling Std*, 2–8
Vector quantum adjustment disabling option, *(S) Sys Mgmt Util M-Z*, C–34
Vector registers, *(S) Sys Mgr Tuning*, 26–4
See also Registers
built-in symbol, *(P) Debugger*, 15–4, B–4
composite address expression, *(P) Debugger*, 15–16
depositing into, *(P) Debugger*, 15–4, 15–6
display, screen mode, *(P) Debugger*, 11–10, 11–16, 15–22
examining, *(P) Debugger*, 15–4, 15–6
scope, *(P) Debugger*, 15–1
usage, *(P) Calling Std*, 2–2
V0 to V15, *(P) Debugger*, 15–6, B–4
VCR, *(P) Debugger*, 15–4, B–4
VLR, *(P) Debugger*, 15–4, B–4
VMR, *(P) Debugger*, 15–5, 15–9, 15–13, B–4
watchpoint, *(P) Debugger*, 15–3
Vector routines
naming conventions, *(P) MTH$*, 2–8
table of entry points, *(P) MTH$*, B–1 to B–4

Vectors, *(G) SW Overview*, 3–5
addresses, *(S) Sys Mgmt Util M-Z*, 5–7, 5–9
copying, *(P) MTH$*, MTH–160
definition, *(S) Sys Mgr Tuning*, 26–4
Euclidean norm, obtaining, *(P) MTH$*, MTH–170
fixed space, *(S) Sys Mgmt Util M-Z*, D–1
floating space, *(S) Sys Mgmt Util M-Z*, D–1
Givens plane rotation
applying, *(P) MTH$*, MTH–173
generating the elements for, *(P) MTH$*, MTH–178
index, obtaining, *(P) MTH$*, MTH–149
inner product, obtaining, *(P) MTH$*, MTH–165
multiplying, *(P) MTH$*, MTH–155
scaling, *(P) MTH$*, MTH–182
sum of absolute values, obtaining, *(P) MTH$*, MTH–152
swapping, *(P) MTH$*, MTH–186
Vector state
restoring, *(P) Sys Svc II*, SYS2–256
vector_byte_signed data type, *(P) Interfaces*, B–16
vector_byte_unsigned data type, *(P) Interfaces*, B–16
/VECTOR_INSTRUCTION qualifier, *(P) Debugger*, 15–3, CD–10, CD–13, CD–24, CD–38, CD–55, CD–57, CD–163, CD–225, CD–301
vector_longword_signed data type, *(P) Interfaces*, B–16
vector_longword_unsigned data type, *(P) Interfaces*, B–16
VECTOR_MARGIN system parameter, *(S) Sys Mgr Tuning*, 26–8
VECTOR_PROC system parameter, *(S) Sys Mgr Tuning*, 26–5
vector_quadword_signed data type, *(P) Interfaces*, B–16
vector_quadword_unsigned data type, *(P) Interfaces*, B–16
/VECTOR_REGS qualifier, *(P) VAX SDA*, SDA–151
vector_word_signed data type, *(P) Interfaces*, B–16
vector_word_unsigned data type, *(P) Interfaces*, B–16
Vendors
backup sites supplied by, *(S) Dependable*, 5–11
evaluating tradeoffs, *(S) Dependable*, 4–15 to 4–16
Verbs
See also DEFINE VERB statement
defining, *(P) CDU, LBR, & MU*, CDU–9 to CDU–10
VERF datagram, *(S) VMScluster Sys*, F–17, F–24
Verification
See also Mount verification
Verification (cont'd)
enabling during execution of command procedures, *(G) User*, 15–16
end-to-end, *(S) TCP/IP*, 2–4
modifying for command procedures, *(G) DCL N-Z*, DCLII–228
of disk volumes, *(S) Sys Mgmt Util A-L*, 3–3
startup, *(S) Sys Mgr Essentials*, 4–15
turning on during system startup, *(S) Sys Mgr Essentials*, 4–14
Verifying
network connection, *(S) DECnet Intro*, 3–29, 3–31
successful network installation, *(S) DECnet Intro*, 3–31
Verifying security triplets, *(S) DECamds*, 1–7
/VERIFY qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–62
Version dependencies
registering images, *(S) Sys Mgr Essentials*, 5–22
Version limits
for files in directory, *(G) DCL A-M*, DCLI–97
setting on files, *(S) Sys Mgr Essentials*, 8–53
Version numbers, *(S) Sys Mgr Essentials*, 9–15; *(P) File Appl*, 1–27
assigning to files, *(G) DCL A-M*, DCLI–221
specifying, *(P) Rec Mgmt Util*, 4–20
VEST (VAX Environment Software Translator), *(G) SW Overview*, 4–6
See also DECmigrate for OpenVMS AXP
alignment, *(P) Concepts*, 22–8
VFC record format, *(P) File Appl*, 1–2, 1–30, 3–13
VFC records, *(P) Rec Mgmt Util*, 4–32 to 4–34
converting, *(P) Rec Mgmt Util*, 2–11
format, *(P) File Appl*, 2–11, 3–13
VFUs (variable format units)
RMS support for, *(P) RMS Ref*, 4–25; *(P) Rec Mgmt Util*, 4–33
Video attributes, *(P) Concepts*, 7–11, 7–17, 7–21
current, *(P) Concepts*, 7–17
default, *(P) Concepts*, 7–17
Video terminals
See Terminals
Videotex
See VTX
vi editor, *(G) SW Overview*, 4–5, 5–12
VIEW command, *(G) DCL N-Z*, DCLII–432
Viewing groups, *(S) DECamds*, 2–4
View menu, *(S) DECamds*, 2–4
Viewports, *(P) Concepts*, 7–18; *(P) SMG$*, 1–6, 2–12 to 2–13
in Phone, *(G) User*, 7–2
Views
See also Windows
Breakpoint, *(P) Debugger*, 1–10, 3–10
Instruction, *(P) Debugger*, 1–10, 3–26
Monitor, *(P) Debugger*, 1–10, 3–18

Views (cont'd)
Register, *(P) Debugger*, 1–10, 3–25
startup configuration, *(P) Debugger*, 3–29
Tasking, *(P) Debugger*, 1–10, 3–27
Virtual address operator (@), *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–16
Virtual address space, *(P) Concepts*, 19–1, 19–8, 20–2, 20–7
adding page to, *(P) Sys Svc I*, SYS1–185, SYS1–345
creating, *(P) Sys Svc I*, SYS1–185
deleting page from, *(P) Sys Svc I*, SYS1–265
increasing and decreasing, *(P) Concepts*, 19–8, 20–6
mapping section of, *(P) Concepts*, 19–18, 20–19
specifying array, *(P) Concepts*, 19–10, 20–8
sufficient for system dump analysis, *(P) VAX SDA*, SDA–8
Virtual Address Space
expanding, *(P) Sys Svc I*, SYS1–348
Virtual address space, deleting, *(P) Sys Svc I*, SYS1–267
Virtual balance slots
See VBSs
Virtual block dump, *(P) Rec Mgmt Util*, 1–18
Virtual block numbers
See VBNs
Virtual-block-position option, *(P) File Appl*, 4–35
Virtual circuits, *(S) VMScluster Sys*, C–19; *(S) DECnet Mgmt*, 1–4, 1–8
definition, *(S) VMScluster Sys*, F–4
OPEN state, *(S) VMScluster Sys*, C–22
transmission window size, *(S) VMScluster Sys*, G–1
Virtual devices, *(G) DCL A-M*, DCLI–217, DCLI–339
mounting during system startup, *(S) Sys Mgr Tuning*, 23–14
Virtual displays, *(P) Concepts*, 7–10; *(P) SMG$*, 1–5
See also Viewports
changing rendition of, *(P) SMG$*, 2–9
checking occlusion, *(P) Concepts*, 7–13
creating, *(P) Concepts*, 7–11
creating a subprocess from, *(P) Concepts*, 7–17
cursor movement, *(P) Concepts*, 7–20
deleting, *(P) Concepts*, 7–15
deleting text, *(P) Concepts*, 7–22
drawing lines, *(P) Concepts*, 7–21
erasing, *(P) Concepts*, 7–15
ID, *(P) Concepts*, 7–11, 7–32
inserting text, *(P) Concepts*, 7–19, 7–20
list pasting order of, *(P) Concepts*, 7–15
logical cursor position, *(P) Concepts*, 7–18
modifying, *(P) Concepts*, 7–16
obtaining the pasting order, *(P) Concepts*, 7–15
outputting through, *(P) SMG$*, 2–5
overwriting text, *(P) Concepts*, 7–19, 7–20
Virtual displays (cont'd)
pasting, *(P) Concepts*, 7–11
physical cursor position, *(P) Concepts*, 7–18
popping, *(P) Concepts*, 7–15
reading data from, *(P) Concepts*, 7–23
reading from, *(P) SMG$*, 2–12
rearranging, *(P) Concepts*, 7–14
saving, *(P) SMG$*, 2–15
scrolling, *(P) Concepts*, 7–20
sharing, *(P) Concepts*, 7–32
specifying double-size characters, *(P) Concepts*, 7–20
specifying video attributes, *(P) Concepts*, 7–11
viewports, *(P) Concepts*, 7–18
writing double-width characters, *(P) Concepts*, 7–19
writing text to, *(P) Concepts*, 7–18
Virtual I/O, *(P) Concepts*, 9–6
canceling requests for, *(P) Sys Svc I*, SYS1–77
Virtual I/O caches, *(G) SW Overview*, 3–11; *(S) VAX Perform*, 3–37, 5–12; *(S) Alpha Perform*, 18–1 to 18–3
adjusting size, *(S) VAX Perform*, 3–38
caching policies, *(S) VAX Perform*, 3–37
disabling, *(S) VAX Perform*, 3–38
enabling, *(S) VAX Perform*, 3–38
memory allocation, *(S) VAX Perform*, 3–39
memory reclamation, *(S) VAX Perform*, 3–39
objects, *(S) VAX Perform*, 3–37
statistics, *(S) VAX Perform*, 3–37
VAXcluster configurations, *(S) VAX Perform*, 3–39
Virtual keyboards, *(P) SMG$*, 1–7, 3–1 to 3–2
reading data from, *(P) Concepts*, 7–23, 7–24
Virtual memory
allocating for images, *(P) Linker*, 1–2, 3–17
examining contents, *(G) DCL A-M*, DCLI–214
replacing contents, *(G) DCL A-M*, DCLI–153
Virtual memory address
See Addresses
Virtual memory statistics
returning, *(P) LIB$*, LIB–502, LIB–504
showing, *(P) LIB$*, LIB–458, LIB–461
VIRTUAL option, *(P) File Appl*, 4–35
VIRTUALPAGECNT system parameter, *(P) VAX SDA*, SDA–8
optimizing batch queues for Sort/Merge utility, *(S) Sys Mgr Essentials*, 13–32
Virtual page size, *(P) Concepts*, 19–1
Virtual performance monitor
See VPM
Virtual region
getting information about, *(P) Sys Svc II*, SYS2–47

Virtual terminal protocols, *(S) Sys Mgr Tuning*, 21–13; *(S) TCP/IP*, 3–2, 5–1
Virtual terminals, *(S) Security*, 7–25, 12–15; *(S) DECnet Intro*, 3–25; *(S) DECnet Mgmt*, 1–9, 5–17
See also Terminals
connecting, *(G) DCL A-M*, DCLI–61; *(S) Sys Mgr Essentials*, 7–11
disabling, *(G) User*, 2–8; *(S) Security*, 3–6
disconnected processes and, *(G) User*, 18–8, 18–9; *(S) Security*, 3–20
disconnecting from, *(G) DCL A-M*, DCLI–182
enabling, *(S) DECnet Mgmt*, 5–15
logging out of, *(S) Security*, 3–20
managing disconnected processes, *(G) User*, 18–9
purpose of, *(S) Sys Mgr Essentials*, 7–11
reconnecting to disconnected processes, *(G) User*, 18–8
restrictions, *(G) User*, 18–9
Virtual units
definition, *(S) VMScluster Sys*, 6–22
distributed, *(S) VMScluster Sys*, 6–25
Viruses, *(S) Security*, 8–24
cause of disasters, *(S) Dependable*, 5–8
effect on site security, *(S) Dependable*, 5–5
Visible processes, *(P) Debugger*, 14–2, 14–3, 14–8
/VISIBLE qualifier, *(P) Debugger*, 16–11, CD–193, CD–216, CD–268
%VISIBLE_PROCESS built-in symbol, *(P) Debugger*, 14–12
%VISIBLE_TASK built-in symbol, *(P) Debugger*, 16–11, 16–15
VLRs (vector length registers), *(S) Sys Mgr Tuning*, 26–4; *(P) Debugger*, 15–4, B–4
VMB.EXE file, *(S) Sys Mgr Essentials*, 4–18
role in boot process, *(S) Sys Mgr Essentials*, 4–2
VMEbus, *(G) SW Overview*, 1–6
VMRs (vector mask registers), *(S) Sys Mgr Tuning*, 26–4; *(P) Debugger*, 15–4, 15–5, 15–9, 15–13, B–4
VMR utility, *(S) DECnet Mgmt*, 4–15
VMS$AUDIT_SERVER.DAT file
authorization elements, *(S) VMScluster Sys*, 5–12
VMS$LAYERED.DAT file, *(S) Sys Mgr Essentials*, 5–19
function in startup procedure, *(S) Sys Mgr Essentials*, 5–18
VMS$OBJECTS.DAT file, *(S) Security*, 11–6
authorization elements, *(S) VMScluster Sys*, 5–16
VMS$PASSWORD_DICTIONARY.DATA file
authorization elements, *(S) VMScluster Sys*, 5–16
VMS$PASSWORD_HISTORY.DATA file
authorization elements, *(S) VMScluster Sys*, 5–16
VMS$PASSWORD_POLICY.EXE file
authorization elements, *(S) VMScluster Sys*, 5–17
VMS$PHASES.DAT file
in startup procedure, *(S) Sys Mgr Essentials*, 5–4, 5–18
VMS$SYSTEM_IMAGES.IDX
adding an entry, *(S) Sys Mgmt Util M-Z*, 6–75
removing an entry, *(S) Sys Mgmt Util M-Z*, 6–76
VMS$VMS.DAT file
in startup procedure, *(S) Sys Mgr Essentials*, 5–18
VMScluster Console System
See VCS
VMScluster envirnments
specifying cluster size on disk, *(G) DCL A-M*, DCLI–255
VMScluster environments, *(P) File Appl*, 3–32
alias node identifier, *(G) SW Overview*, 3–18
alternate adapter booting, *(S) Dependable*, 7–9
application environment topologies, *(S) Dependable*, 8–13
availability, *(G) SW Overview*, 7–2
batch queues, *(G) SW Overview*, 1–8
CI, *(G) SW Overview*, 1–8
client/server capabilities, *(P) Environment*, 3–2
cluster-accessible disks, *(G) SW Overview*, 1–7
cluster-accessible tapes, *(G) SW Overview*, 1–7
clusterwide queue manager, *(S) Dependable*, 8–28
common system disks, *(S) Dependable*, 9–22
computing capabilities, *(G) SW Overview*, 6–1
configuration recommendations for dependability, *(S) Dependable*, 7–5
configurations, *(G) SW Overview*, 1–4, 1–7
configurations with three LAN segments, *(S) Dependable*, 7–7
configurations with two LAN segments, *(S) Dependable*, 7–6
connection manager, *(G) SW Overview*, 3–18
database failover in, *(S) Dependable*, 8–35
data servers, *(G) SW Overview*, 6–17
disk servers, *(G) SW Overview*, 3–18, 6–17
dismounting volumes on, *(G) DCL A-M*, DCLI–185
displaying SDA information, *(P) Alpha SDA*, SDA–80
distributed file system, *(G) SW Overview*, 3–18
distributed lock manager, *(G) SW Overview*, 3–18
DSSI, *(G) SW Overview*, 1–8
dual-architecture configurations, *(G) SW Overview*, 1–7
execution queues, *(G) SW Overview*, 3–18

VMScluster environments (cont'd)
FDDI adapter support, *(S) Dependable*, 7–5
Fiber Distributed Data Interface (FDDI), *(S) Dependable*, 6–17
generic queues, *(G) SW Overview*, 3–18
hardware, *(G) SW Overview*, 1–8
hardware topologies, *(S) Dependable*, 6–10
HSC, *(G) SW Overview*, 1–8
interconnects, *(G) SW Overview*, 1–8
LAN address for satellite, *(S) Dependable*, 7–9
locking considerations, *(P) File Appl*, 3–33
management tools, *(G) SW Overview*, 7–9
managing, *(G) SW Overview*, 2–15, 3–13, 3–17
mixed interconnect, *(S) Dependable*, 6–19
mixed-interconnect, *(G) SW Overview*, 1–8
multiple-site data center, *(S) Dependable*, 5–11, 6–17, 7–12
network failure analysis program, *(S) Dependable*, 7–9 to 7–12
operating system support of, *(S) Dependable*, 9–22
PATHWORKS support for, *(G) SW Overview*, 6–23
preparing for UETP, *(S) Sys Mgr Tuning*, 17–11
print queues, *(G) SW Overview*, 1–8
queue manager, *(G) SW Overview*, 3–18
queue manager in, *(S) Dependable*, 8–28
quorum disk, *(S) Dependable*, 9–22
resource access, *(G) SW Overview*, 3–18
resource locking, *(G) SW Overview*, 3–18
sample programs for LAN environments, *(S) Dependable*, 7–9
satellite booting, *(S) Dependable*, 7–9
servers, *(G) SW Overview*, 6–17; *(P) Environment*, 3–3
shared disk resources, *(G) SW Overview*, 3–18
shared processing and printer resources, *(G) SW Overview*, 3–18
software, *(G) SW Overview*, 1–8, 3–17
software components, *(G) SW Overview*, 3–17
surviving LAN bridge failover, *(S) Dependable*, 7–9
System Communications Services (SCS), *(G) SW Overview*, 3–18
tape servers, *(G) SW Overview*, 3–18, 6–17
test failure during UETP, *(S) Sys Mgr Tuning*, 17–26
using with SYSMAN commands, *(S) Sys Mgmt Util M-Z*, 6–6 to 6–31
VAXport driver, *(G) SW Overview*, 3–18
VMScluster sample programs, *(S) VMScluster Sys*, D–1
LAVC$FAILURE_ANALYSIS.MAR, *(S) VMScluster Sys*, D–3
LAVC$START_BUS.MAR, *(S) VMScluster Sys*, D–1
VMScluster sample programs (cont'd)
LAVC$STOP_BUS.MAR, *(S) VMScluster Sys*, D–2
VMScluster systems
See also Alias node identifiers and VAXcluster environments
adjusting quorum after shutting down a node, *(S) Sys Mgr Essentials*, 4–29
alias node identifier, *(S) DECnet Intro*, 3–18
alias node names, *(S) DECnet Intro*, 2–4, 3–8
architecture, *(S) VMScluster Sys*, 2–1
ATM communications service, *(G) V7.0 New Feat*, D–5
ATM multisite system management, *(G) V7.0 New Feat*, D–12
autostart queues in, *(S) Sys Mgr Essentials*, 13–4
background, *(S) VMScluster Sys*, 1–1
benefits, *(S) VMScluster Sys*, 1–2
benefits of, *(S) Sys Mgr Tuning*, 20–1
boot events, *(S) VMScluster Sys*, C–2
CI connection, *(S) DECnet Intro*, 1–8
client software licensing, *(G) V7.0 New Feat*, E–1
cluster-accessible disks, *(S) VMScluster Sys*, 1–3
cluster-accessible tapes, *(S) VMScluster Sys*, 1–3
cluster group number and password, *(S) VMScluster Sys*, 10–16
CLUSTER_CONFIG.COM, *(G) V7.0 New Feat*, C–26
common-environment, *(S) VMScluster Sys*, 5–2
coordinating system files, *(S) VMScluster Sys*, 5–17
common parameter files in, *(S) Sys Mgr Tuning*, 14–22
common SYSUAF.DAT file, *(S) VMScluster Sys*, 10–18
configurations, *(S) VMScluster Sys*, 8–4; *(S) DECnet Mgmt*, 1–10
Refer also to the *Guidelines for VMScluster Configurations*
adding nodes to set up a large, *(S) VMScluster Sys*, 9–1
changing, *(S) VMScluster Sys*, 8–21
keeping records, *(S) VMScluster Sys*, 10–4
reconfiguring, *(S) VMScluster Sys*, 8–33
configuration types, *(S) VMScluster Sys*, 3–1
cross-architecture booting, *(S) Sys Mgr Tuning*, 22–23
DECnet network functions, *(S) VMScluster Sys*, 1–6
defining in SYSMAN, *(S) Sys Mgr Essentials*, 2–15
defining location of queue database files, *(S) Sys Mgr Essentials*, 12–5
definition, *(S) VMScluster Sys*, 1–1

VMScluster systems (cont'd)
determining allocation class values, *(S) VMScluster Sys*, 6–6
device names, *(G) User*, 12–10
allocation class fields, *(G) User*, 12–10
dual-pathed, *(G) User*, 12–10
format, *(G) User*, 12–10
device names in, *(S) Sys Mgr Essentials*, 7–1
disks in, *(S) Sys Mgr Essentials*, 8–2
dismounting a volume, *(S) Sys Mgr Essentials*, 8–45
distributed file system, *(S) VMScluster Sys*, 1–4, 2–17
distributed job controller, *(S) VMScluster Sys*, 1–4, 2–19
distributed lock manager, *(S) VMScluster Sys*, 1–4, 2–15
distributed processing, *(S) VMScluster Sys*, 5–1
downline load sequence originating from, *(S) DECnet Mgmt*, 4–3
DS3 communications service, *(G) V7.0 New Feat*, D–5
DS3 system management, *(G) V7.0 New Feat*, D–12
dual-architecture
installing images, *(S) Sys Mgr Tuning*, 20–20, 20–21
end node, *(S) DECnet Mgmt*, 1–10, 2–21
executing commands in, *(S) Sys Mgr Essentials*, 2–11
file specifications, *(S) DECnet Intro*, 2–4
generic batch queues in, *(S) Sys Mgr Essentials*, 13–7
generic output queues in, *(S) Sys Mgr Essentials*, 13–12
generic queues in, *(S) Sys Mgr Essentials*, 13–2
hardware components, *(S) VMScluster Sys*, 1–2
hosts, nodes, and computers, *(G) V7.0 New Feat*, C–1
including in groups, *(S) DECamds*, 1–7
in network environment, *(S) Sys Mgr Tuning*, 21–6
installing licenses, *(S) VMScluster Sys*, 4–5
installing SCSI, *(G) V7.0 New Feat*, C–19
interconnects, *(S) VMScluster Sys*, 1–3
interprocessor communications, *(S) VMScluster Sys*, 6–24
LAN (local area network) connection, *(S) DECnet Intro*, 1–8
LAN management enhancements, *(S) Sys Mgr Tuning*, 22–1
LAN MOP coexisting with DECnet MOP, *(S) Sys Mgr Tuning*, 22–20
limiting nodes that can run the queue manager, *(S) Sys Mgr Essentials*, 12–9
local and nonlocal, *(S) Sys Mgr Essentials*, 2–15
local resources, *(S) VMScluster Sys*, 5–2

VMScluster systems (cont'd)
LOGINOUT determination of process quota values, *(S) VMScluster Sys*, 10–18
maintenance, *(S) VMScluster Sys*, 10–1
managing shared queues, *(S) VMScluster Sys*, 7–1
managing with SYSMAN, *(S) Sys Mgr Tuning*, 20–16 to 20–23
maximum number of shadow sets, *(S) VMScluster Sys*, 6–25
members, *(S) VMScluster Sys*, 1–3
membership management, *(S) VMScluster Sys*, 2–14
migrating from DECnet MOP to LAN MOP, *(S) Sys Mgr Tuning*, 22–20
mixed-architecture support, *(G) V7.0 New Feat*, 3–30
mixed-version support, *(G) V7.0 New Feat*, 3–30
monitoring LAN activity, *(S) VMScluster Sys*, 10–25
monitoring with SHOW CLUSTER, *(S) Sys Mgr Tuning*, 20–4
mounting volumes in, *(S) Sys Mgr Essentials*, 8–21
moving the queue manager to another node, *(S) Sys Mgr Essentials*, 12–10
MSCP server in, *(S) VMScluster Sys*, 1–4, 2–17
multiple-environment, *(S) VMScluster Sys*, 5–3
startup functions, *(S) VMScluster Sys*, 5–10
node address, *(S) DECnet Intro*, 3–8, 3–12
node name, *(S) DECnet Intro*, 3–8, 3–12
node restriction for a startup command procedure, *(S) Sys Mgr Essentials*, 5–19
nodes, *(S) DECnet Intro*, 1–8
operating environments, *(S) VMScluster Sys*, 5–2
partitioning, *(S) VMScluster Sys*, 2–5
password, *(S) VMScluster Sys*, 10–16, F–17, F–25
preparing the operating environment, *(S) VMScluster Sys*, 4–1
print and batch queues in, *(S) Sys Mgr Tuning*, 20–2
quorum disk, *(S) VMScluster Sys*, 2–8
remote monitoring limitation, *(S) Sys Mgr Tuning*, 18–43
router, *(S) DECnet Mgmt*, 1–10, 2–21
SCSI configuration requirements, *(G) V7.0 New Feat*, C–4
SCSI hardware configurations, *(G) V7.0 New Feat*, C–9
SCSI performance, *(G) V7.0 New Feat*, C–6
SCSI storage connected to a single-host, *(G) V7.0 New Feat*, C–2
SCSI storage connected to multiple-hosts, *(G) V7.0 New Feat*, C–3

VMScluster systems (cont'd)
SCSI storage interconnect, *(G) V7.0 New Feat*, C–1
security, *(S) Sys Mgr Tuning*, 20–16
security log files in, *(S) Sys Mgr Tuning*, 18–30
security management, *(S) VMScluster Sys*, 5–10, 10–15
sending mail over the network, *(S) DECnet Intro*, 2–11
serving SCSI tapes, *(G) V7.0 New Feat*, E–1
setting up for LAN MOP, *(S) Sys Mgr Tuning*, 22–22
shadowing across, *(S) VMScluster Sys*, 6–24
shared processing and printer resources, *(S) VMScluster Sys*, 5–1
shared resources, *(S) Sys Mgr Tuning*, 20–1
shared SCSI storage concepts, *(G) V7.0 New Feat*, C–6
shutdown, *(S) VMScluster Sys*, 10–22
shutting down an entire VMScluster, *(S) Sys Mgr Essentials*, 4–29
single security domain, *(S) VMScluster Sys*, 5–10
specifying location of queue database, *(S) Sys Mgr Essentials*, 12–6
specifying preferred order of queue manager nodes, *(S) Sys Mgr Essentials*, 12–9
SYSMAN management environment, *(S) Sys Mgr Essentials*, 2–12
System Communications Services (SCS), *(S) VMScluster Sys*, C–19
system management, *(S) Sys Mgr Tuning*, 20–3
system management overview, *(S) VMScluster Sys*, 1–7
TMSCP server in, *(S) VMScluster Sys*, 1–4, 2–18
tools and utilities, *(S) VMScluster Sys*, 1–8
troubleshooting, *(S) VMScluster Sys*, C–1
updating AGEN$ files, *(S) VMScluster Sys*, 8–36
updating MODPARAMS.DAT files, *(S) VMScluster Sys*, 8–36
use of an alias node identifier, *(S) DECnet Mgmt*, 1–11, 2–5, 2–26, 3–9, 8–8
use of DECnet data link, *(S) DECnet Mgmt*, 1–10
using CLUSTER_CONFIG.COM, *(S) Sys Mgr Tuning*, 20–2
using CLUSTER_CONFIG to set up LAN MOP, *(S) Sys Mgr Tuning*, 22–21
using FDDI, *(G) V7.0 New Feat*, D–4
voting member, *(S) VMScluster Sys*, 2–6
adding, *(S) VMScluster Sys*, 8–10, 8–33
removing, *(S) VMScluster Sys*, 8–19, 8–33
WAN multisite system management, *(G) V7.0 New Feat*, D–12
warranted and migration support, *(G) V7.0 New Feat*, 3–30
VMScluster systems (cont'd)
workload balancing, *(S) VMScluster Sys*, 5–1
VMSIMAGES.DAT file, *(S) Sys Mgmt Util A-L*, 6–7
VMSINSTAL (VAX only) installation requirements, *(S) DECamds*, A–4
VMSINSTAL.COM command procedure
Refer also to the *OpenVMS Developer's Guide to VMSINSTAL*
See also Installation procedures and Installing software
Alternate System Root option, *(S) Sys Mgr Essentials*, 3–18
restriction, *(S) Sys Mgr Essentials*, 3–18
Alternate Working Device option, *(S) Sys Mgr Essentials*, 3–14
answer file, *(S) Sys Mgr Essentials*, 3–14
Autoanswer option, *(S) Sys Mgr Essentials*, 3–14
BACKUP qualifiers, *(S) Sys Mgr Essentials*, 3–16
command line syntax, *(S) Sys Mgr Essentials*, 3–9
completing installation, *(S) Sys Mgr Essentials*, 3–13
correcting problems, *(S) Sys Mgr Essentials*, 3–9
creating new answer file, *(S) Sys Mgr Essentials*, 3–14
destination parameter, *(S) Sys Mgr Essentials*, 3–12
File Log option, *(S) Sys Mgr Essentials*, 3–17
Get Save Set option, *(S) Sys Mgr Essentials*, 3–15, 3–16
getting help in, *(S) Sys Mgr Essentials*, 3–9
installing layered products, *(S) Sys Mgr Essentials*, 3–6
options, *(S) Sys Mgr Essentials*, 3–13
option list parameter, *(S) Sys Mgr Essentials*, 3–12
specifying, *(S) Sys Mgr Essentials*, 3–12
table of, *(S) Sys Mgr Essentials*, 3–11
preparing to use, *(S) Sys Mgr Essentials*, 3–6
product list parameter, *(S) Sys Mgr Essentials*, 3–9
product save-set format, *(S) Sys Mgr Essentials*, 3–16
Release Notes option, *(S) Sys Mgr Essentials*, 3–17
saving answers, *(S) Sys Mgr Essentials*, 3–14
source parameter, *(S) Sys Mgr Essentials*, 3–11
starting, *(S) Sys Mgr Essentials*, 3–9
system failure
conditions for, *(S) Sys Mgr Essentials*, 3–13
system shutdown following, *(S) Sys Mgr Essentials*, 3–13
temporary working directory

VMSINSTAL.COM command procedure
temporary working directory (cont'd)
specifying location of, *(S) Sys Mgr Essentials*, 3–14
VMSINSTAL command procedure, *(G) SW Overview*, 3–7
VMSKITBLD.COM command procedure
ADD option, *(S) Sys Mgr Essentials*, 2–31
BUILD option, *(S) Sys Mgr Essentials*, 2–27
compared to CLUSTER_CONFIG.COM command procedure, *(S) Sys Mgr Essentials*, 2–31
completing a system disk created with the BUILD option, *(S) Sys Mgr Essentials*, 2–29
configuring a system root added with, *(S) Sys Mgr Essentials*, 2–32
copying system files from the system disk, *(S) Sys Mgr Essentials*, 2–26
COPY option, *(S) Sys Mgr Essentials*, 2–29
options, *(S) Sys Mgr Essentials*, 2–26
reliance on .TEMPLATE version of site-specific command procedures, *(S) Sys Mgr Essentials*, 5–3
VMSMAIL logical name
defining to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
VMSMAIL_PROFILE.DATA file, *(S) Sys Mgr Essentials*, 6–38
authorization elements, *(S) VMScluster Sys*, 5–16
moving to reduce system disk I/O, *(S) Sys Mgr Tuning*, 16–8
VMSMAIL_PROFILE logical name
defining during system startup, *(S) Sys Mgr Essentials*, 5–8
VMSTAILOR
See Tailoring utility
Volatile databases, *(S) DECnet Mgmt*, 1–13, 3–2
copying node entries, *(S) DECnet Mgmt*, 3–18
display information, *(S) DECnet Mgmt*, 3–73
network, *(S) Security*, 12–16; *(S) Sys Mgr Tuning*, 21–11; *(S) DECnet Intro*, 3–10, 3–18, 3–26
use of, *(S) DECnet Mgmt*, 3–2
VOLPRO (Volume Protection Override), *(G) User*, 12–5
VOLPRO privilege, *(S) Security*, 5–21, A–18; *(S) Sys Mgr Essentials*, 8–14
VOLSET.SYS file, *(P) File Appl*, 1–8
See Volume sets, list file
Volume, *(S) DECamds*, 3–6, 3–8
default data collection, *(S) DECamds*, 5–2
Volume accessibility fields
writing characters to, *(G) DCL A-M*, DCLI–258
VOLUME attribute, *(P) Rec Mgmt Util*, 4–8; *(P) File Appl*, 4–36
Volume default extension quantity, *(P) File Appl*, 3–5, 3–7
Volume identifier field, *(S) Sys Mgr Essentials*, 8–39; *(P) File Appl*, 1–25
Volume integrity, *(S) Sys Mgr Essentials*, 8–58
Volume labels
assigning to devices, *(S) Sys Mgr Essentials*, 5–11
changing, *(S) Sys Mgr Essentials*, 3–33
definition, *(S) Sys Mgr Essentials*, 10–56
EOF (end-of-file) label, *(P) File Appl*, 1–20
EOV (end-of-volume) label, *(P) File Appl*, 1–20
format, *(S) Sys Mgr Essentials*, 8–24
modifying for satellite's local disk, *(S) VMScluster Sys*, 8–6
specifying for magnetic tape, *(S) Sys Mgr Essentials*, 10–14
used with BACKUP command, *(S) Sys Mgr Essentials*, 10–56
VOL1 label, *(P) File Appl*, 1–22
accessibility field, *(P) File Appl*, 1–25
volume identifier field, *(P) File Appl*, 1–25
VOL label, *(P) File Appl*, 1–20
Volume-number option, *(P) File Appl*, 4–36
/VOLUME qualifier
in Backup utility, *(S) Sys Mgmt Util A-L*, 7–63
Volume quota file
See Disk quotas
Volumes, *(G) User*, 12–2; *(P) File Appl*, 1–5
See also Disk volumes, Public volumes, and Tape volumes
access requirements, *(S) Security*, 5–5
adding to an existing disk set, *(S) Sys Mgr Essentials*, 8–34
advantages of using separate, *(S) Sys Mgr Essentials*, 8–30
allocating map pointers for file windows, *(S) Sys Mgmt Util M-Z*, 2–39
as protected objects, *(S) Security*, 4–10
auditing mounts or dismounts, *(S) Security*, 9–7
availability
OPCOM message, *(S) Sys Mgr Essentials*, 8–59
binding into volume set, *(S) Sys Mgr Essentials*, 8–22
canceling mount verification, *(S) Sys Mgr Essentials*, 8–62
continuation, *(S) Sys Mgr Essentials*, 8–41
controlling cache size, *(S) Sys Mgr Essentials*, 8–58
deleting disk files, *(G) DCL A-M*, DCLI–136
disabling mount messages, *(S) Sys Mgr Essentials*, 8–23

Volumes (cont'd)
dismounting, *(G) User*, 12–10, 12–11; *(S) Sys Mgr Essentials*, 8–43, 10–16; *(S) Sys Mgmt Util M-Z*, 2–38; *(P) Sys Svc I*, SYS1–282
allocated devices, *(G) User*, 12–11
restriction, *(S) Sys Mgr Tuning*, 16–18
dismounting disk and tape, *(G) DCL A-M*, DCLI–184
displaying disk quota, *(G) DCL N-Z*, DCLII–333
displaying information, *(G) User*, 12–2
dumping, *(G) DCL A-M*, DCLI–188
erasing data, *(S) Security*, 8–28
events audited, *(S) Security*, 5–21
file configurations, *(P) File Appl*, 1–22
Files–11, *(S) Sys Mgr Essentials*, 8–3
modifying characteristics of, *(G) DCL N-Z*, DCLII–231
recording name on, *(G) DCL N-Z*, DCLII–233
foreign
copying files to and from, *(S) Sys Mgr Essentials*, 9–24
mounting, *(S) Sys Mgr Essentials*, 8–21, 9–13
foreign, access requirements, *(S) Security*, 5–5
getting information asynchronously, *(P) Sys Svc I*, SYS1–406
getting information synchronously, *(P) Sys Svc I*, SYS1–426
group, *(S) Sys Mgr Essentials*, 8–8
initializing, *(G) User*, 12–4; *(G) DCL A-M*, DCLI–253; *(S) Sys Mgr Essentials*, 8–10, 10–13
initializing from within a program, *(P) Concepts*, 9–36; *(P) Sys Svc II*, SYS2–118
example, *(P) Concepts*, 9–36
label, *(G) DCL A-M*, DCLI–253
label format, *(G) User*, 12–8
making for group, *(S) Sys Mgmt Util M-Z*, 2–21
mounting, *(G) User*, 12–6; *(S) Sys Mgr Essentials*, 8–28, 10–15; *(S) Sys Mgmt Util M-Z*, 2–4; *(P) Concepts*, 9–33; *(P) Sys Svc II*, SYS2–176
continuation tape, *(S) Sys Mgr Essentials*, 8–40
foreign, *(G) User*, 12–7
from a subprocess, *(S) Sys Mgmt Util M-Z*, 2–3
if device is unavailable, *(S) Sys Mgr Essentials*, 8–27
magnetic tape, *(G) User*, 12–7, 12–8
operator functions, *(S) Sys Mgr Essentials*, 8–18
public, *(S) Sys Mgr Essentials*, 8–20
steps, *(S) Sys Mgr Essentials*, 8–27
mounting foreign, *(S) Sys Mgmt Util M-Z*, 2–20
Volumes (cont'd)
mounting with operator assistance, *(S) Sys Mgmt Util M-Z*, 2–8
mounting without HDR2 labels, *(P) File Appl*, 1–31
mounting with shadowing, *(S) Sys Mgmt Util M-Z*, 2–16, 2–17
mount verification aborted
OPCOM message, *(S) Sys Mgr Essentials*, 8–63
mount verification timeout, *(S) Sys Mgr Essentials*, 8–60
OPCOM message, *(S) Sys Mgr Essentials*, 8–60
multidisk, *(P) File Appl*, 3–24
nonstandard format, *(S) Sys Mgmt Util M-Z*, 2–20
operator assistance, *(G) User*, 12–6
operator-assisted mount, *(S) Sys Mgr Essentials*, 8–28
owner field, *(P) File Appl*, 1–25
ownership, *(S) Sys Mgmt Util M-Z*, 2–36
positioning, *(P) File Appl*, 3–24
private, *(G) User*, 12–2; *(S) Sys Mgr Essentials*, 8–9
privilege requirements, *(S) Security*, 5–21
profile storage, *(S) Security*, 5–21
protecting, *(G) DCL A-M*, DCLI–260
protection, *(S) Security*, 5–20; *(S) Sys Mgr Essentials*, 8–14; *(P) Concepts*, 9–4
mounting with shadowing, *(S) Sys Mgmt Util M-Z*, 2–34
ownership, *(S) Sys Mgmt Util M-Z*, 2–29
processor, *(S) Sys Mgmt Util M-Z*, 2–30
recovery, *(S) Sys Mgmt Util M-Z*, 2–32
user quotas, *(S) Sys Mgmt Util M-Z*, 2–32
with MOUNT command, *(S) Sys Mgmt Util M-Z*, 2–27, 2–31, 2–39
public
creating, *(S) Sys Mgmt Util M-Z*, 2–36
rebuild
determining if needed, *(S) Sys Mgr Essentials*, 7–4
rebuilding, *(S) Sys Mgr Essentials*, 8–50
recovering from errors, *(S) Sys Mgr Essentials*, 8–60
repairing errors on a disk volume, *(S) Sys Mgmt Util A-L*, 3–11
reusing in C2 systems, *(S) Security*, C–9
security elements of, *(S) Security*, 5–20
sharing, *(S) Sys Mgr Essentials*, 8–23; *(S) Sys Mgmt Util M-Z*, 2–35
specifying maximum file number, *(G) DCL A-M*, DCLI–258
specifying ownership, *(G) DCL A-M*, DCLI–260
standard ANSI and Files–11 format, *(S) Sys Mgmt Util M-Z*, 2–23
substituting, *(S) Sys Mgr Essentials*, 8–27

Volumes (cont'd)
template profile, *(S) Security*, 5–21
types of access, *(S) Security*, 5–21
write protection, *(S) Sys Mgmt Util M-Z*, 2–39
Volume security profile
reserved file, *(S) Sys Mgr Tuning*, A–9
SECURITY.SYS, *(S) Sys Mgr Tuning*, A–9
Volume sets, *(P) File Appl*, 1–5
adding a volume to, *(S) Sys Mgmt Util M-Z*, 2–11
and MOUNT command, *(S) Sys Mgmt Util M-Z*, 2–5
backing up, *(S) Sys Mgr Essentials*, 10–40
CD–ROM
partially mounted ISO 9660, *(S) Sys Mgr Essentials*, 8–35
characteristics, *(S) Sys Mgr Essentials*, 8–30
creating, *(S) Sys Mgr Essentials*, 8–22, 8–30; *(S) Sys Mgmt Util M-Z*, 2–11
definition, *(G) User*, 12–8; *(S) Sys Mgr Essentials*, 8–2, 8–30
disk, *(S) Sys Mgr Essentials*, 8–31 to 8–34
dismounting, *(G) DCL A-M*, DCLI–186
for improving performance, *(P) File Appl*, 3–10
image save operation, *(S) Sys Mgmt Util A-L*, 7–36
list file, *(S) Sys Mgr Tuning*, A–9; *(P) File Appl*, 1–8
loosely coupled, *(P) File Appl*, 1–8
mounting, *(G) User*, 12–6; *(S) Sys Mgr Essentials*, 8–31
privileges to access, *(S) Sys Mgr Essentials*, 8–32
processing continuation volumes, *(S) Sys Mgr Essentials*, 8–37
restoring, *(S) Sys Mgr Essentials*, 10–47
restriction for system disk, *(S) Sys Mgr Essentials*, 8–31
root volume, *(S) Sys Mgr Essentials*, 8–31
shadowed, *(S) VMScluster Sys*, 6–24
tape, *(S) Sys Mgr Essentials*, 8–6, 8–36 to 8–40
to minimize disk head competition, *(P) File Appl*, 3–24
VOLSET.SYS file, *(S) Sys Mgr Tuning*, A–9
Volume shadowing, *(G) SW Overview*, 3–19, 7–6; *(S) Sys Mgr Essentials*, 10–40, 10–47
Refer also to the *Volume Shadowing for OpenVMS*
and multiple system disks, *(S) VMScluster Sys*, 9–17
concepts, *(S) VMScluster Sys*, 6–22
data availability, *(G) SW Overview*, 2–12, 7–3
defined, *(S) VMScluster Sys*, 6–23
interprocess communication, *(S) VMScluster Sys*, 6–24
mounting disks in host-based shadow set, *(S) Sys Mgr Essentials*, 10–42
overview, *(S) VMScluster Sys*, 6–22
Volume shadowing (cont'd)
providing high data availability, *(S) Dependable*, 8–19
RAID, *(S) Sys Mgr Essentials*, 10–40
recovery from device failures, *(S) Dependable*, 8–21t
redundant storage devices, *(S) Dependable*, 4–4
shadow set configurations, *(S) Dependable*, 8–23
shadow sets, *(S) VMScluster Sys*, 3–11
to support dependable computing, *(S) Dependable*, 8–12
virtual units, *(S) VMScluster Sys*, 6–25
Volume structure
ISO 9660, *(S) Sys Mgr Essentials*, 8–3
Volume switching
automatic, *(S) Sys Mgr Essentials*, 8–39
Voluntary decrementing, *(S) Alpha Perform*, 6–13
disabling, *(S) VAX Perform*, 5–6; *(S) Alpha Perform*, 17–5
oscillations, *(S) VAX Perform*, 4–12; *(S) Alpha Perform*, 13–6
tuning, *(S) VAX Perform*, 5–7; *(S) Alpha Perform*, 17–6
turning on, *(S) VAX Perform*, 5–7; *(S) Alpha Perform*, 17–6
Votes, *(P) Alpha SDA*, SDA–80
VOTES system parameter, *(S) VMScluster Sys*, 2–6, A–4
Voting members
adding, *(S) VMScluster Sys*, 8–10
adding and removing, *(S) VMScluster Sys*, 8–33
removing, *(S) VMScluster Sys*, 8–19, 8–33
VPM$SERVER account
enabling default access, *(S) DECnet Mgmt*, 2–26, 5–3, 5–6
VPM (virtual performance monitor)
default access account, *(S) DECnet Intro*, 3–13
VPM$SERVER account
default access, *(S) DECnet Mgmt*, 5–3, 5–6
VPM objects, *(S) DECnet Mgmt*, 2–26
VT100-series terminals
clearing screen, *(G) User*, 2–25; *(S) Security*, 3–20
VT200-series terminals
clearing screen, *(G) User*, 2–25; *(S) Security*, 3–20
VTA0 device
connecting, *(S) Sys Mgr Essentials*, 7–11
VTX, *(G) SW Overview*, 5–13
VUIT
prototyping tool, *(S) Dependable*, 8–32
VUP
overview, *(S) Dependable*, 4–8
VVIEF
See VAX Vector Instruction Emulation Facility

VVIEF$DEINSTAL.COM command procedure, *(S) Sys Mgr Tuning*, 26–10
VVIEF$INSTAL.COM command procedure, *(S) Sys Mgr Tuning*, 26–5, 26–10

W

WAIT command, *(G) DCL N-Z*, DCLII–433 to DCLII–434
  synchronizing command procedures, *(G) User*, 18–19, 18–20, 18–21
Waiting for condition variable, *(P) DECthreads*, pthread–47, pthread–49, tis–9, E–42, E–44, G–41, G–43
Waiting job status, *(S) Sys Mgr Essentials*, 13–69
$WAIT macro format, *(P) RMS Ref*, A–11
Wait mode system service, *(P) Interfaces*, 4–6
/WAIT qualifier, *(P) Debugger*, CD–297
Wait service, *(P) RMS Ref*, RMS–107; *(P) File Appl*, 8–5
  asynchronous operations and, *(P) File Appl*, 8–19
  ASYNCHRONOUS option, *(P) Rec Mgmt Util*, 4–6
  condition values, *(P) RMS Ref*, RMS–108
  control block input fields, *(P) RMS Ref*, RMS–107
  control block output field, *(P) RMS Ref*, RMS–107
Wait state
  delaying command processing, *(G) DCL N-Z*, DCLII–433
  inducing to synchronize process with batch job, *(G) DCL N-Z*, DCLII–422
  involuntary, *(S) VAX Perform*, 3–12
  placing current process in, *(G) DCL N-Z*, DCLII–433
  scheduling
    types of, *(S) Alpha Perform*, 9–3
  voluntary, *(S) VAX Perform*, 3–11
Wait states, *(S) DECamds*, 3–5 to 3–25
  HIB, *(S) Alpha Perform*, 6–12
  involuntary, *(S) Alpha Perform*, 9–4
  LEF, *(S) Alpha Perform*, 6–12
  MWAIT, *(S) Alpha Perform*, 2–2, 9–4
  resource, *(S) Alpha Perform*, 9–4
  voluntary, *(S) Alpha Perform*, 9–3
WAIT_FOR_RECORD attribute, *(P) Rec Mgmt Util*, 4–14; *(P) File Appl*, 7–12
Wakeup requests
  canceling, *(G) DCL A-M*, DCLI–57; *(P) Sys Svc I*, SYS1–82
  canceling request, *(G) DCL N-Z*, DCLII–60
  scheduling, *(P) Concepts*, 5–16
  scheduling with RUN command, *(G) DCL N-Z*, DCLII–60
Waking a thread, *(P) DECthreads*, pthread–37, pthread–43, pthread–45, tis–3, tis–8, E–36, E–40, E–41, G–32, G–36, G–37, G–39
WAN communications service
  system management, *(G) V7.0 New Feat*, D–12
WAN Intersite Link Specifications, *(G) V7.0 New Feat*, D–10
WANrouter, *(G) SW Overview*, 6–8
WANs
  utilizing in a VMScluster, *(G) V7.0 New Feat*, D–2
WANs (wide area networks), *(G) SW Overview*, 1–11; *(S) TCP/IP*, 1–3; *(S) DECnet Intro*, 1–5
  Refer also to the *OpenVMS Wide Area Network I/O User's Reference Manual*
  comparison with VMSclusters, *(S) Dependable*, 6–20
  configuration, *(S) DECnet Intro*, 1–11
  connections, *(S) Sys Mgr Tuning*, 21–8
    multipoint, *(S) Sys Mgr Tuning*, 21–9
    point-to-point, *(S) Sys Mgr Tuning*, 21–8
  dependability constraints, *(S) Dependable*, 3–6
WASTEBASKET folder
  emptying in Mail, *(G) User*, 6–15
Watchpoints, *(P) Debugger*, 3–20
  activating, *(P) Debugger*, 2–5, 3–20, 7–13, CD–14
  aggregate, *(P) Debugger*, 7–13, 15–3
  canceling, *(P) Debugger*, 7–13, CD–41
  deactivating, *(P) Debugger*, 3–20, 7–13, CD–58
  defined, *(P) Debugger*, 3–20, 7–11
  displaying, *(P) Debugger*, 3–20, 7–13, CD–295
  effect on execution speed, *(P) Debugger*, 7–15
  global section, *(P) Debugger*, 14–16
  in multiprocess program, *(P) Debugger*, 14–16
  in tasking (multithread) program, *(P) Debugger*, 16–25
  nonstatic variable, *(P) Debugger*, 3–20, 7–14
  register, *(P) Debugger*, 3–20, 7–14
  saving when rerunning program, *(P) Debugger*, 2–5, 5–11
  saving with RERUN command, *(P) Debugger*, 5–11, CD–14, CD–58, CD–140
  setting, *(P) Debugger*, 3–20, 7–11, CD–234
  shareable image, *(P) Debugger*, 7–16
  source display at, *(P) Debugger*, 10–7
  static, and ASTs, *(P) Debugger*, CD–237
  static variable, *(P) Debugger*, 3–20, 7–14
  vector register, *(P) Debugger*, 15–3
WAT option, *(P) Rec Mgmt Util*, 4–14
WBH option, *(P) Rec Mgmt Util*, 4–15
WCBs (window control blocks), *(P) Alpha SDA*, SDA–76; *(P) VAX SDA*, SDA–81
WCK option, *(P) Rec Mgmt Util*, 4–25
Weak symbols, *(P) Linker*, 2–19

Weekday login restrictions, *(S) Security*, 3–8
Welcome messages, *(S) Security*, 3–6
  defining, *(S) Sys Mgr Essentials*, 5–14
  displaying, *(S) Sys Mgr Essentials*, 5–15
  login, *(S) Sys Mgr Essentials*, 2–10
  security disadvantages, *(S) Security*, 7–24
WHEN clause, *(P) Debugger*, 7–9, CD–4
WHILE command, *(P) Debugger*, 12–10, CD–312
White box testing, *(P) Modular Proc*, 4–3
Wide area networks
  See WANs
%WIDTH built-in symbol, *(P) Debugger*, 11–23
/WIDTH qualifier, *(P) Debugger*, 11–22, CD–218
Wildcard address
  security triplet, *(S) DECamds*, 1–6
Wildcard characters, *(S) Sys Mgmt Util A-L*, 7–8; *(P) Rec Mgmt Util*, 2–5
  asterisk (*), *(G) User*, 4–9
    using with tape volumes, *(S) Sys Mgr Essentials*, 9–16
  ellipsis (...), *(G) User*, 5–8, 5–9
  for events, *(S) DECnet Mgmt*, 3–64
  for NCP component names, *(S) DECnet Mgmt*, 3–4
  hyphen (-), *(G) User*, 5–9
  in DCL command lines, *(G) User*, 3–4
  in DECnet event types, *(S) DECnet Intro*, 4–5
  in file names, *(S) Sys Mgr Essentials*, 9–15
  in file specifications for network copying operations, *(S) DECnet Intro*, 2–6
  multiple file locations and, *(P) File Appl*, 5–8
  percent sign (%), *(G) User*, 4–10
  program preprocessing, *(P) File Appl*, 5–8 to 5–12
  restriction in ACL editor, *(S) Sys Mgmt Util A-L*, 1–4
  use with Remove service, *(P) RMS Ref*, RMS–86
  use with Search service, *(P) RMS Ref*, A–21
  using to represent directories, *(S) Sys Mgmt Util A-L*, 7–8
  using with ANALYZE/RMS_FILE, *(P) Rec Mgmt Util*, 1–9
  using with CONVERT routines, *(P) Util Routines*, CONV–10
  using with file names, *(G) User*, 4–9
  using with NCP, *(S) DECnet Mgmt Util*, 1–3
  with OpenVMS extended names, *(S) Sys Mgr Essentials*, 9–16
  with standard names, *(S) Sys Mgr Essentials*, 9–16
  with tape volumes, *(S) Sys Mgr Essentials*, 9–15
Wildcard operations, *(P) Sys Svc I*, SYS1–427
Wildcard searches
  obtaining information about processes, *(P) Sys Svc II*, SYS2–214
    example, *(P) Concepts*, 3–13
Wildcard searches (cont'd)
  using SYS$GETJPI system service, *(P) Concepts*, 3–12
Wildcard substitutions
  specifying NAM$L_RSA field, *(P) RMS Ref*, 5–8
Window control blocks
  See WCBs
Windowing, *(G) SW Overview*, 1–3, 5–5
  graphical interfaces, *(G) SW Overview*, 5–4
  services for PCs, *(G) SW Overview*, 6–23
Windowing system
  using threads in, *(P) DECthreads*, 1–1
Windows, *(P) File Appl*, 9–7 to 9–9
  See also DECwindows Motif software, Data Windows, and Views
  compressing or expanding, *(S) Sys Mgmt Util M-Z*, 4–54
  designating, *(S) Sys Mgmt Util M-Z*, 4–50
  displaying size and count for open files, *(G) DCL N-Z*, DCLII–260
  display SHOW CLUSTER information, *(S) Sys Mgmt Util M-Z*, 4–3
  for debugger command interface, *(P) Debugger*, 1–15
    DECwindows Motif DECterm window, *(P) Debugger*, 2–9
    VWS window, *(P) Debugger*, 13–13, CD–185
  for entering debugger commands, *(P) Debugger*, 1–15
  instruction, *(P) Debugger*, 3–26
  moving, *(S) Sys Mgmt Util M-Z*, 4–51
  optional views window, *(P) Debugger*, 1–10
  rearranging, *(S) Sys Mgmt Util M-Z*, 4–37
  screen-mode
    creating definition for, *(P) Debugger*, 11–14, CD–240
    defined, *(P) Debugger*, 11–2
    deleting definition of, *(P) Debugger*, 11–15, CD–42
    identifying, *(P) Debugger*, 11–15, CD–296
    predefined, *(P) Debugger*, 11–24, CD–296
    specifying, *(P) Debugger*, 11–14
  scrolling, *(S) Sys Mgmt Util M-Z*, 4–49
  sizes, *(P) File Appl*, 10–27
  source, *(P) Debugger*, 1–5
    screen-mode, *(P) Debugger*, 11–4
  startup configuration, *(P) Debugger*, 1–5
  terminating selection, *(S) Sys Mgmt Util M-Z*, 4–35
  viewing large display, *(S) Sys Mgmt Util M-Z*, 4–39
/WINDOWS qualifier
  in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–39

WINDOW_SIZE attribute, *(P) Rec Mgmt Util*, 4–24
Wind/U Version 3.0, *(G) V7.0 New Feat*, 4–31
Word dumps, *(G) DCL A-M*, DCLI–192
/WORD qualifier, *(P) Debugger*, CD–79, CD–109, CD–131
word_signed data type, *(P) Interfaces*, B–16
word_unsigned data type, *(P) Interfaces*, B–16
Work area, *(S) Sys Mgmt Util M-Z*, 6–50, 6–51
Work crew model, *(P) DECthreads*, 1–5
Working directory
  temporary
    in VMSINSTAL.COM command procedure, *(S) Sys Mgr Essentials*, 3–14
Working set
  purging, *(P) Sys Svc II*, SYS2–229
Working set lists
  displaying, *(P) VAX SDA*, SDA–151
Working sets, *(S) Alpha Perform*, 6–2 to 6–4; *(S) DECamds*, 3–11 to 3–12, 3–22 to 3–23; *(P) File Appl*, 1–38
  adjusting, *(S) VAX Perform*, 5–3; *(S) Alpha Perform*, 17–2
    with AUTHORIZE, *(S) VAX Perform*, 2–24
  adjusting for optimal sort performance, *(P) Rec Mgmt Util*, 2–16
  adjusting for vectorized applications, *(S) Sys Mgr Tuning*, 26–7
  adjusting limit, *(P) Sys Svc I*, SYS1–20
  adjusting size, *(P) Concepts*, 19–11, 20–11
  analyzing problems, *(S) VAX Perform*, 4–7; *(S) Alpha Perform*, 13–4
  automatic adjustment, *(S) VAX Perform*, 2–6
    enabling, *(S) VAX Perform*, 5–7
    in relation to performance management, *(S) VAX Perform*, 2–15
    investigating status, *(S) VAX Perform*, 4–11
    of system parameters, *(S) VAX Perform*, 2–14
    page faulting, *(S) VAX Perform*, 2–7
    tuning to respond to increased demand, *(S) VAX Perform*, 5–6
  batch jobs
    defining default for, *(G) DCL A-M*, DCLI–275, DCLI–285; *(G) DCL N-Z*, DCLII–188, DCLII–381, DCLII–418
    defining extent for, *(G) DCL A-M*, DCLI–275, DCLI–285; *(G) DCL N-Z*, DCLII–188, DCLII–381, DCLII–419
  count
    definition, *(S) Alpha Perform*, 6–1
  default size, *(S) Sys Mgr Essentials*, 6–43
  defining quotas for batch job, *(G) DCL N-Z*, DCLII–381
  defining quotas for batch jobs, *(G) DCL A-M*, DCLI–285; *(G) DCL N-Z*, DCLII–66, DCLII–189, DCLII–419
Working sets (cont'd)
  determining quotas, *(P) Rec Mgmt Util*, 2–16
  determining when too large, *(S) VAX Perform*, 4–21; *(S) Alpha Perform*, 13–12
  discouraging loans when memory is scarce, *(S) VAX Perform*, 5–10; *(S) Alpha Perform*, 17–9
  displaying
    process quota, *(G) DCL N-Z*, DCLII–361
  displaying information, *(S) Alpha Perform*, 10–3
  displaying lists, *(P) Alpha SDA*, SDA–129
  establishing sizes, *(S) VAX Perform*, 2–12
  extent, *(S) Sys Mgr Essentials*, 6–44
  limits and quotas
    choosing a value for batch queues, *(S) Sys Mgr Essentials*, 13–30, 13–31
    specifying for batch queues, *(S) Sys Mgr Essentials*, 13–21, 13–29
    specifying for output queues, *(S) Sys Mgr Essentials*, 13–21
  locking page into, *(P) Sys Svc II*, SYS2–145
  modifying default size, *(G) DCL N-Z*, DCLII–235
  obtaining information, *(S) VAX Perform*, 3–21; *(S) Alpha Perform*, 10–2
  paging, *(S) Alpha Perform*, 5–4; *(P) Concepts*, 19–11, 20–10
  purging, *(S) DECamds*, 4–5; *(P) Sys Svc II*, SYS2–227
  quota, *(S) Sys Mgr Essentials*, 6–44
  size, *(S) Alpha Perform*, 5–4
  size fix, *(S) DECamds*, 4–3
  specifying default
    for detached processes, *(G) DCL N-Z*, DCLII–66
    for subprocesses, *(G) DCL N-Z*, DCLII–66
  specifying quotas, *(G) DCL N-Z*, DCLII–63
  specifying values, *(S) VAX Perform*, 4–10; *(S) Alpha Perform*, 13–4
  suggested initial limits, *(S) VAX Perform*, 2–13
  too high or too low, *(S) DECamds*, 4–3
  unlocking page from, *(P) Sys Svc II*, SYS2–463
/WORKING_SET qualifier, *(P) Alpha SDA*, SDA–129; *(P) VAX SDA*, SDA–151
WORKING_SET_MANAGEMENT.EXE file
  global symbols, *(P) VAX SDA*, SDA–65
Work load
  adjusting system parameters for, *(S) Sys Mgr Tuning*, 16–5
  distributing, *(S) Sys Mgr Tuning*, 16–4; *(S) Alpha Perform*, 1–5
    designing efficient applications, *(S) Sys Mgr Tuning*, 16–4
    restricting login hours, *(S) Sys Mgr Tuning*, 16–4
  importance of knowing, *(S) Sys Mgr Tuning*, 16–2; *(S) VAX Perform*, 1–2

Work load (cont'd)
knowing, *(S) Alpha Perform*, 1–3
managing, *(S) VAX Perform*, 1–3; *(S) Alpha Perform*, 1–4
monitoring, *(S) Sys Mgr Tuning*, 16–2
tools used for, *(S) Sys Mgr Tuning*, 16–2
strategies for managing, *(S) Sys Mgr Tuning*, 16–3
Work queues
variation of boss/worker model, *(P) DECthreads*, 1–5
Work restrictions, *(S) Security*, 7–2
WORKSET.COM command procedure
using to obtain working set information, *(S) VAX Perform*, 3–21; *(S) Alpha Perform*, 10–2
Worksheets
See also Checklists
evaluation of data centers, *(S) Dependable*, A–3 to A–20
sample requirements worksheet, *(S) Dependable*, 2–9
Workstations
backing up, *(S) Sys Mgr Essentials*, 10–36
debugger commands when using VWS, *(P) Debugger*, CD–5
debugging DECwindows Motif application, *(P) Debugger*, 2–8
debugging screen-oriented program
using separate DECterm window, *(P) Debugger*, 2–9
using separate VWS window, *(P) Debugger*, 13–13, CD–185
managing queues on, *(S) Sys Mgr Essentials*, 13–2
OPCOM behavior on, *(S) Sys Mgr Essentials*, 2–21
OPCOM startup on, *(S) Sys Mgr Essentials*, 2–21
popping debugger window when using VWS, *(P) Debugger*, CD–197
printer queue configuration, *(S) Sys Mgr Essentials*, 13–8
separate, for debugger DECwindows Motif interface, *(P) Debugger*, 2–8
separate debugger terminal-emulator window
using DECwindows Motif (DECterm), *(P) Debugger*, 2–9
using VWS, *(P) Debugger*, 13–13, CD–185
setting up media on, *(S) Sys Mgr Essentials*, 8–11
starting SMISERVER process, *(S) Sys Mgr Essentials*, 2–12
terminal emulator screen size, *(P) Debugger*, 11–22, CD–218
use of Snapshot facility with, *(S) Sys Mgr Essentials*, 4–21
WORLD privilege, *(S) Security*, A–19
impact on SHOW PROCESS command, *(S) Security*, 8–15
World protection code, *(P) Rec Mgmt Util*, 4–22
World users (security category), *(S) Security*, 4–8, 4–24; *(S) Sys Mgr Essentials*, 11–8
Write access, *(P) Rec Mgmt Util*, 4–23
See also Access types, write
continuation volumes, *(S) Sys Mgr Essentials*, 8–41
devices, *(S) Security*, 5–4
files, *(S) Security*, 5–8, 5–9
for disk directory files, *(S) Sys Mgr Essentials*, 9–11
for disk files, *(S) Sys Mgr Essentials*, 9–6
global sections, *(S) Security*, 5–14
granting through ACLs, *(S) Security*, 4–20
granting through protection codes, *(S) Security*, 4–25; *(S) Sys Mgr Essentials*, 11–8
logical name tables, *(S) Security*, 5–16
resource domains, *(S) Security*, 5–19
security class, *(S) Security*, 5–20
volumes, *(S) Security*, 5–21
Write attention AST function, *(P) I/O User*, 4–12
Write-back sections, *(P) Concepts*, 19–23, 20–25
Writeboot utility (WRITEBOOT), *(S) Sys Mgr Essentials*, 4–17
error messages, *(S) Sys Mgr Essentials*, 4–19
Write breakthrough function, *(P) I/O User*, 5–38
Write cache
enabling for tape device, *(S) Sys Mgr Essentials*, 8–24
Write check
with APPEND command, *(G) DCL A-M*, DCLI–39
with COPY command, *(G) DCL A-M*, DCLI–85
with INITIALIZE command, *(G) DCL A-M*, DCLI–255
WRITE command, *(G) DCL N-Z*, DCLII–435 to DCLII–437
for remote file, *(S) DECnet Intro*, 2–13
in network operations, *(S) DECnet Intro*, 2–13
in Show Cluster utility, *(S) Sys Mgmt Util M-Z*, 4–55
in SYSGEN, *(S) Sys Mgmt Util M-Z*, 5–33
writing data with, *(G) User*, 16–9
writing strings to records, *(G) User*, 17–15
Write end-of-file function
magnetic tape, *(P) I/O User*, 3–17
message, *(P) I/O User*, 4–11
Write in Progress Fault Rate, *(S) Alpha Perform*, 10–4
Write-locked devices
mount verification, *(S) Sys Mgr Essentials*, 8–61

Write-locking
disk volumes, *(S) Sys Mgr Essentials*, 8–60
tape volumes, *(S) Sys Mgr Essentials*, 8–37
Write protection
hardware, *(P) I/O User*, 7–2
/WRITE qualifier
in Mount utility, *(S) Sys Mgmt Util M-Z*, 2–39
Write rings
on tape volumes, *(S) Sys Mgr Essentials*, 8–37
Writer lock
locking, *(P) DECthreads*, tis–39, tis–40
unlocking, *(P) DECthreads*, tis–42
Write service, *(P) RMS Ref*, RMS–109 to RMS–111
$WRITE service
use in calculating auto extend, *(P) File Appl*, 3–5
WRITE_BEHIND attribute, *(P) Rec Mgmt Util*, 4–14
WRITE_CHECK attribute, *(P) Rec Mgmt Util*, 4–24
Writing a condition handler
example, *(P) Concepts*, 13–65
Writing operations, *(P) SMG$*, 2–8
WSDEFAULT process limit
specifying values, *(S) Sys Mgr Essentials*, 13–21 to 13–30
WSDEF process limit, *(S) Sys Mgr Essentials*, 6–43
WSEXTENT process limit, *(S) Sys Mgr Essentials*, 6–44
choosing a value for batch queues, *(S) Sys Mgr Essentials*, 13–30
for efficient sorting, *(S) Sys Mgr Essentials*, 13–31
specifying a value for batch queues, *(S) Sys Mgr Essentials*, 13–22, 13–29
specifying a value for output queues, *(S) Sys Mgr Essentials*, 13–22
value for efficient backups, *(S) Sys Mgr Essentials*, 10–10
WSINC system parameter
page faulting, *(S) VAX Perform*, 2–7
/WSL qualifier, *(P) VAX SDA*, SDA–151
WSMAX system parameter, *(S) Sys Mgr Essentials*, 13–30; *(S) Sys Mgr Tuning*, 26–7; *(S) Alpha Perform*, 17–2
WSQUO process limit, *(S) Sys Mgr Essentials*, 6–44
WSQUOTA process limit
choosing a value for batch queues, *(S) Sys Mgr Essentials*, 13–30
specifying a value for batch queues, *(S) Sys Mgr Essentials*, 13–22, 13–29
specifying a value for output queues, *(S) Sys Mgr Essentials*, 13–22
value for efficient backups, *(S) Sys Mgr Essentials*, 10–10
WSQUOTA system parameter
page faulting, *(S) VAX Perform*, 2–7
WWW (World Wide Web), *(S) TCP/IP*, 3–5

X

X.25 networks
accessing with specified multihost connector, *(S) DECnet Mgmt Util*, 3–92
clearing DTE counters, *(S) DECnet Mgmt Util*, 3–162
connecting to, *(S) DECnet Intro*, 1–6, 1–13; *(S) DECnet Mgmt*, 1–4
testing lines, *(S) DECnet Mgmt Util*, 3–52
X.25 packet level events, *(S) DECnet Mgmt Util*, D–11
X.25 protocol modules
counters, *(S) DECnet Mgmt Util*, 3–162, B–13
parameters, *(S) DECnet Mgmt Util*, 3–22, 3–94, 3–141
X.25 server modules
See also P.S.I.
clearing call handler counters, *(S) DECnet Mgmt Util*, 3–163
counters, *(S) DECnet Mgmt Util*, 3–163, B–14
parameters, *(S) DECnet Mgmt Util*, 3–25, 3–100, 3–145
states, *(S) DECnet Mgmt Util*, C–8
state transitions, *(S) DECnet Mgmt Util*, C–8
X.25 software
CCITT recommendations, *(G) SW Overview*, 6–5, A–2
packet-switching networks, *(G) SW Overview*, 1–11, 6–5
X/Open consortium, *(G) SW Overview*, 2–2, 6–10
X/Open Portability Guide Issue 3
See XPG3
X/Open Portability Guide Issue 4
See XPG4
X/Open standards, *(G) SW Overview*, 2–2, 6–10, A–1
XAB$B_AID field, *(P) RMS Ref*, 7–2; *(P) File Appl*, 4–34
XAB$B_ALN field, *(P) RMS Ref*, 7–2
options, *(P) File Appl*, 4–35
XAB$B_AOP field, *(P) RMS Ref*, 7–3
options, *(P) File Appl*, 4–34
XAB$B_ATR field, *(P) RMS Ref*, 9–2
XAB$B_BKZ field, *(P) File Appl*, 3–25, 4–32, 7–18
as output, *(P) RMS Ref*, 7–4
default logic, *(P) RMS Ref*, 7–4, 7–5
determining bucket size, *(P) RMS Ref*, 7–4
in allocation XAB (XABALL), *(P) RMS Ref*, 7–4
in file header characteristics allocation XAB (XABFHC), *(P) RMS Ref*, 9–2
RMS–11 restriction, *(P) RMS Ref*, 7–4

XAB$B_BKZ field (cont'd)
size requirements for multiple index areas, *(P) RMS Ref*, 7–5
XAB$B_BLN field
in allocation XAB (XABALL), *(P) RMS Ref*, 7–5
in date and time XAB (XABDAT), *(P) RMS Ref*, 8–2
in file header characteristics XAB (XABALL), *(P) RMS Ref*, 9–3
in item list XAB (XABITM), *(P) RMS Ref*, 10–2
in key XAB (XABKEY), *(P) RMS Ref*, 12–2
in protection XAB (XABPRO), *(P) RMS Ref*, 13–4
in revision date and time XAB (XABRDT), *(P) RMS Ref*, 14–2
in summary XAB (XABSUM), *(P) RMS Ref*, 16–1
in terminal XAB (XABTRM), *(P) RMS Ref*, 17–2
XAB$B_COD field
in allocation XAB (XABALL), *(P) RMS Ref*, 7–5
in date and time XAB (XABDAT), *(P) RMS Ref*, 8–2
in file header characteristics XAB (XABFHC), *(P) RMS Ref*, 9–3
in item list XAB (XABITM), *(P) RMS Ref*, 10–2
in key XAB (XABKEY), *(P) RMS Ref*, 12–2
in protection XAB (XABPRO), *(P) RMS Ref*, 13–4
in revision date and time XAB (XABRDT), *(P) RMS Ref*, 14–2
in summary XAB (XABSUM), *(P) RMS Ref*, 16–1
in terminal XAB (XABTRM), *(P) RMS Ref*, 17–2
XAB$B_DAN field, *(P) RMS Ref*, 12–3
XAB$B_DBS field, *(P) RMS Ref*, 12–4
XAB$B_DTP field, *(P) RMS Ref*, 12–4, 12–5
use with search key, *(P) RMS Ref*, 6–13, 6–15
XAB$B_FLG field, *(P) RMS Ref*, 12–7
option allowable combinations, *(P) RMS Ref*, 12–9
options, *(P) RMS Ref*, 12–8
XAB$B_HSZ field, *(P) RMS Ref*, 9–4
XAB$B_IAN field, *(P) RMS Ref*, 12–9
XAB$B_IBS field, *(P) RMS Ref*, 12–10
XAB$B_LAN field, *(P) RMS Ref*, 12–11
indicating index level, *(P) RMS Ref*, 7–5
XAB$B_LVL field, *(P) RMS Ref*, 12–11
XAB$B_MODE field, *(P) RMS Ref*, 10–2
for stored semantics functions, *(P) RMS Ref*, 10–11
XAB$B_MTACC field, *(P) RMS Ref*, 13–4
XAB$B_NOA field, *(P) RMS Ref*, 16–2
XAB$B_NOK field, *(P) RMS Ref*, 16–2
XAB$B_NSG field, *(P) RMS Ref*, 12–12
XAB$B_NUL field, *(P) RMS Ref*, 12–12
XAB$B_PROLOG field, *(P) RMS Ref*, 12–13
XAB$B_PROT_OPT field, *(P) RMS Ref*, 13–7
XAB$B_RFO field, *(P) RMS Ref*, 9–5
XAB$B_SIZ0 through XAB$B_SIZ7 field, *(P) RMS Ref*, 12–14
XAB$B_TKS field, *(P) RMS Ref*, 12–14
XAB$C_ALLLEN value, *(P) RMS Ref*, 7–5
XAB$C_ALL value, *(P) RMS Ref*, 7–5
XAB$C_DATLEN value, *(P) RMS Ref*, 8–2
XAB$C_DAT value, *(P) RMS Ref*, 8–2
XAB$C_FHCLEN value, *(P) RMS Ref*, 9–3
XAB$C_FHC value, *(P) RMS Ref*, 9–3
XAB$C_ITMLEN value, *(P) RMS Ref*, 10–2
XAB$C_ITM value, *(P) RMS Ref*, 10–2
XAB$C_KEYLEN value, *(P) RMS Ref*, 12–2
XAB$C_KEY value, *(P) RMS Ref*, 12–2
XAB$C_PROLEN value, *(P) RMS Ref*, 13–4
XAB$C_PRO value, *(P) RMS Ref*, 13–4
XAB$C_RDTLEN value, *(P) RMS Ref*, 14–2
XAB$C_RDT value, *(P) RMS Ref*, 14–2
XAB$C_SUMLEN value, *(P) RMS Ref*, 16–1
XAB$C_SUM value, *(P) RMS Ref*, 16–1
XAB$C_TRMLEN value, *(P) RMS Ref*, 17–2
XAB$C_TRM value, *(P) RMS Ref*, 17–2
XAB$K_SEMANTICS_MAX_LEN value
for sensing and setting stored semantics, *(P) RMS Ref*, 10–10
XAB$L_ACLBUF field, *(P) RMS Ref*, 13–2
XAB$L_ACLCTX field, *(P) RMS Ref*, 13–2, 13–3
XAB$L_ACLSTS field, *(P) RMS Ref*, 13–3
XAB$L_ALQ field, *(P) RMS Ref*, 7–3; *(P) File Appl*, 4–34
using to specify additional file space, *(P) RMS Ref*, RMS–37
XAB$L_COLNAM field, *(P) RMS Ref*, 12–2
XAB$L_COLSIZ field, *(P) RMS Ref*, 12–3
XAB$L_COLTBL field, *(P) RMS Ref*, 12–3
XAB$L_DVB field, *(P) RMS Ref*, 12–7
XAB$L_EBK field, *(P) RMS Ref*, 9–3
XAB$L_HBK field, *(P) RMS Ref*, 9–4
XAB$L_ITEMLIST field, *(P) RMS Ref*, 10–2
XAB$L_ITMLST field, *(P) RMS Ref*, 17–2
XAB$L_KNM field, *(P) RMS Ref*, 12–11
XAB$L_LOC field, *(P) RMS Ref*, 7–5; *(P) File Appl*, 4–35
XAB$L_NXT field
in XABALL, *(P) RMS Ref*, 7–6
in XABDAT, *(P) RMS Ref*, 8–2
in XABFHC, *(P) RMS Ref*, 9–5
in XABITM, *(P) RMS Ref*, 10–2
in XABKEY, *(P) RMS Ref*, 12–12
in XABPRO, *(P) RMS Ref*, 13–5
in XABRDT, *(P) RMS Ref*, 14–3
in XABSUM, *(P) RMS Ref*, 16–2
in XABTRM, *(P) RMS Ref*, 17–2

XAB$L_RVB field, *(P) RMS Ref*, 12–14
XAB$L_SBN field, *(P) RMS Ref*, 9–5
XAB$L_UIC field, *(P) RMS Ref*, 13–4, 13–7
XAB$Q_BDT field, *(P) RMS Ref*, 8–2
XAB$Q_CDT field, *(P) RMS Ref*, 8–2
XAB$Q_EDT field, *(P) RMS Ref*, 8–2
XAB$Q_RDT field, *(P) RMS Ref*, 8–3, 14–3
XAB$V_BLK option, *(P) RMS Ref*, 9–2
XAB$V_CBT option, *(P) RMS Ref*, 7–4
XAB$V_CHG option, *(P) RMS Ref*, 12–8
XAB$V_CR option, *(P) RMS Ref*, 9–2
XAB$V_CTG option, *(P) RMS Ref*, 7–4
XAB$V_DAT_NCMPR option, *(P) RMS Ref*, 12–8
XAB$V_DUP option, *(P) RMS Ref*, 12–8
XAB$V_FTN option, *(P) RMS Ref*, 9–2
XAB$V_HRD option, *(P) RMS Ref*, 7–4
XAB$V_IDX_NCMPR option, *(P) RMS Ref*, 12–8
XAB$V_KEY_NCMPR option, *(P) RMS Ref*, 12–8
XAB$V_NUL option, *(P) RMS Ref*, 12–8
  use in defining string keys, *(P) RMS Ref*, 12–12
XAB$V_ONC option, *(P) RMS Ref*, 7–4
XAB$V_PRN option, *(P) RMS Ref*, 9–2
XAB$V_PROPAGATE option, *(P) RMS Ref*, 13–7
XAB$W_ACLLEN field, *(P) RMS Ref*, 13–3
XAB$W_ACLSIZ field, *(P) RMS Ref*, 13–3
XAB$W_DEQ field, *(P) RMS Ref*, 7–5; *(P) File Appl*, 4–35
XAB$W_DFL field, *(P) RMS Ref*, 12–4
  use with RAB$V_LOA option, *(P) RMS Ref*, 6–14
XAB$W_DXQ field, *(P) RMS Ref*, 9–3
XAB$W_FFB field, *(P) RMS Ref*, 9–3
XAB$W_GBC field, *(P) RMS Ref*, 9–4
XAB$W_GRP field, *(P) RMS Ref*, 13–4
XAB$W_IFL field, *(P) RMS Ref*, 12–10
XAB$W_ITMLST_LEN field, *(P) RMS Ref*, 17–2
  requirement for valid terminal driver, *(P) RMS Ref*, 17–1
XAB$W_LRL field, *(P) RMS Ref*, 9–4
XAB$W_MBM field, *(P) RMS Ref*, 13–4
XAB$W_MRL field, *(P) RMS Ref*, 12–11
XAB$W_MRZ field, *(P) RMS Ref*, 9–4
XAB$W_POS0 through XAB$W_POS7 field, *(P) RMS Ref*, 12–12
XAB$W_PRO field, *(P) RMS Ref*, 13–5 to 13–6
XAB$W_PVN field, *(P) RMS Ref*, 16–2
XAB$W_RFI field, *(P) RMS Ref*, 7–6
XAB$W_RVN field, *(P) RMS Ref*, 8–3, 14–3
XAB$W_VERLIMIT field in XABFHC, *(P) RMS Ref*, 9–5
XAB$W_VOL field, *(P) RMS Ref*, 7–6; *(P) File Appl*, 4–36
XAB$_ACCESS_SEMANTICS item, *(P) RMS Ref*, 10–10
XAB$_ENABLE symbol, *(P) RMS Ref*, 10–12
XAB$_MULTIBUFFER_COUNT XABITM, *(P) RMS Ref*, 10–11
XAB$_NORECORD XABITM, *(P) RMS Ref*, 10–11
XAB$_REF field, *(P) RMS Ref*, 12–13
XAB$_STORED_SEMANTICS item, *(P) RMS Ref*, 10–10
XABALL block, *(P) RMS Ref*, 1–4, 7–1
XABDAT blocks, *(P) RMS Ref*, 8–1
  CDT field, *(P) File Appl*, 1–29
  description, *(P) RMS Ref*, 1–4
  EDT field, *(P) File Appl*, 1–29
$XABDAT_STORE macro
  example of use, *(P) RMS Ref*, A–8
XABFHC block, *(P) RMS Ref*, 9–1
  description, *(P) RMS Ref*, 1–4
XABITM block, *(P) RMS Ref*, 10–1 to 10–2
  description, *(P) RMS Ref*, 1–4
XABJNL block, *(P) RMS Ref*, 11–1
  description, *(P) RMS Ref*, 1–4
  using to obtain journaling information, *(P) RMS Ref*, 4–20
XABKEY block, *(P) RMS Ref*, 12–1
  data type options, *(P) RMS Ref*, 12–5
  default logic, *(P) RMS Ref*, 12–9
  description, *(P) RMS Ref*, 1–4
  XAB$W_MRL field, *(P) RMS Ref*, 12–11
XABPRO block, *(P) RMS Ref*, 13–1
  description, *(P) RMS Ref*, 1–4
  XAB$B_BLN field, *(P) RMS Ref*, 13–4
  XAB$W_GRP field, *(P) RMS Ref*, 13–4
XABRDT block, *(P) RMS Ref*, 14–1 to 14–2
  description, *(P) RMS Ref*, 1–4
XABRU block, *(P) RMS Ref*, 15–1
  description, *(P) RMS Ref*, 1–5
XABs (extended attribute blocks), *(P) Environment*, 10–16; *(P) File Appl*, 1–34, 4–2; *(P) Alpha SDA*, SDA–76; *(P) VAX SDA*, SDA–81
  date and time fields, *(P) File Appl*, 4–32
  description, *(P) RMS Ref*, 1–6
  key definition fields, *(P) File Appl*, 4–33
  naming conventions for FAB, *(P) RMS Ref*, 1–6
  naming conventions for RAB, *(P) RMS Ref*, 1–5
  program example, *(P) RMS Ref*, A–19
  protection fields, *(P) File Appl*, 4–32
  types, *(P) RMS Ref*, 1–4
XABSUM block, *(P) RMS Ref*, 16–1
  description, *(P) RMS Ref*, 1–5
XABTRM block, *(P) RMS Ref*, 17–1
  description, *(P) RMS Ref*, 1–5
XAR keyword
  with MOUNT/PROTECTION command, *(S) Sys Mgr Essentials*, 8–23
XARs (extended attribute records), *(S) Sys Mgr Essentials*, 8–17
%X format, *(P) Rec Mgmt Util*, 1–18

XOR operator (\), *(P) Alpha SDA*, SDA–13; *(P) VAX SDA*, SDA–16
XPG3 (X/Open Portability Guide Issue 3), *(G) SW Overview*, A–1
  BASE specification, *(G) SW Overview*, 2–2, 2–4
  Common Applications Environment, *(G) SW Overview*, 4–16
XPG4 (X/Open Portability Guide Issue 4), *(G) SW Overview*, A–1
  BASE profile specifications, *(G) SW Overview*, 2–2, 2–4
XPG4 localization utilities, *(G) V7.0 New Feat*, B–1
  character map (charmap) file, *(G) V7.0 New Feat*, B–42 to B–47
  GENCAT command, *(G) V7.0 New Feat*, B–2
  ICONV commands
    COMPILE, *(G) V7.0 New Feat*, B–6
    CONVERT, *(G) V7.0 New Feat*, B–10
  LOCALE commands
    COMPILE, *(G) V7.0 New Feat*, B–11
    LOAD, *(G) V7.0 New Feat*, B–14
    SHOW CHARACTER_DEFINITIONS, *(G) V7.0 New Feat*, B–15
    SHOW CURRENT, *(G) V7.0 New Feat*, B–16
    SHOW PUBLIC, *(G) V7.0 New Feat*, B–18
    SHOW VALUE, *(G) V7.0 New Feat*, B–18
    UNLOAD, *(G) V7.0 New Feat*, B–15
  locale file format, *(G) V7.0 New Feat*, B–22 to B–42
  ZIC command, *(G) V7.0 New Feat*, 4–31
XQP (extended QIO processor), *(P) VAX SDA*, SDA–105; *(P) I/O User*, 1–1
X terminal client, *(S) Sys Mgr Tuning*, 23–4
X Window System, *(G) SW Overview*, 5–4, 6–23, A–1
/X_FLOAT qualifier, *(P) Debugger*, CD–79, CD–109

Y

y0 routine, *(P) Portable Math*, DPML–11, B–14
y1 routine, *(P) Portable Math*, DPML–11, B–14
Yielding to another thread, *(P) DECthreads*, pthread–115, E–85, G–84
yn routine, *(P) Portable Math*, DPML–11, B–14

Z

ZERO CIRCUITS command, *(S) DECnet Mgmt*, 3–36; *(S) DECnet Mgmt Util*, 3–159
ZERO COUNTERS command, *(S) DECnet Intro*, 4–3
  in LATCP, *(S) Sys Mgmt Util A-L*, 13–60
Zero creation date, *(P) File Appl*, 1–29
ZERO EXECUTOR command, *(S) DECnet Mgmt*, 3–22; *(S) DECnet Mgmt Util*, 3–160
Zeroing
  line counters, *(S) DECnet Mgmt*, 3–49
  node counters, *(S) DECnet Mgmt*, 3–22
ZERO LINE command, *(S) DECnet Mgmt*, 3–49; *(S) DECnet Mgmt Util*, 3–161
ZERO MODULE X25-PROTOCOL command, *(S) DECnet Mgmt Util*, 3–162
ZERO MODULE X25-SERVER command, *(S) DECnet Mgmt Util*, 3–163
ZERO MODULE X29-SERVER command, *(S) DECnet Mgmt Util*, 3–163
ZERO NODE command, *(S) DECnet Mgmt*, 3–22; *(S) DECnet Mgmt Util*, 3–164
Zero-numbered objects, *(S) DECnet Mgmt*, 2–25
Zero UICs, protection checking and, *(S) Security*, 4–11
ZIC command, *(G) V7.0 New Feat*, 4–31
ZIC Link Lines, *(G) V7.0 New Feat*, 4–35
ZIC parameters, *(G) V7.0 New Feat*, 4–32
ZIC Rule Lines, *(G) V7.0 New Feat*, 4–32 to 4–34
ZIC Zone Lines, *(G) V7.0 New Feat*, 4–34 to 4–35
ZLX-E1, *(P) Environment*, 2–6
ZLX-M1, *(P) Environment*, 2–6
ZLX-M2, *(P) Environment*, 2–6
Zones, *(P) Concepts*, 21–6 to 21–14
  See also Memory, virtual, and Virtual memory allocation algorithm, *(P) Concepts*, 21–14
  use on VAXft systems, *(S) Dependable*, 6–8

NOTES

NOTES

NOTES

NOTES

NOTES

NOTES