



**Program Directory for
IBM WebSphere Host On-Demand
Version 7**

Version 7 Release 0, Modification Level 0

Program Number 5733-A59

FMID HHOJ700

for Use with
OS/390 V2R9
OS/390 V2R10
z/OS V1.1 and higher

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Note!

Before using this information and the product it supports, be sure to read the general information under “Notices” on page vii.

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APAR numbers are provided in this document to assist in locating PTFs that may be required. Ongoing problem reporting may result in additional APARs being created. Therefore, the APAR lists in this document may not be complete. To obtain current service recommendations and to identify current product service requirements, always contact the IBM Customer Support Center.

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1.0 Introduction

This program directory is intended for the system programmer responsible for program installation and maintenance. It contains information concerning the material and procedures associated with the installation of IBM WebSphere Host On-Demand V7 for OS/390 and z/OS. This publication refers to IBM WebSphere Host On-Demand V7 for OS/390 and z/OS as Host On-Demand. You should read all of this program directory before installing the program and then keep it for future reference.

The program directory contains the following sections:

- 2.0, "Program Materials" on page 3 identifies the basic and optional program materials and documentation for Host On-Demand.
- 3.0, "Program Support" on page 9 describes the IBM support available for Host On-Demand.
- 4.0, "Program and Service Level Information" on page 11 lists the APARs (program level) and PTFs (service level) incorporated into Host On-Demand.
- 5.0, "Installation Requirements and Considerations" on page 13 identifies the resources and considerations for installing and using Host On-Demand.
- 6.0, "Installation Instructions" on page 23 provides detailed installation instructions for Host On-Demand. It also describes the procedures for activating the functions of Host On-Demand, or refers to appropriate publications.

Before installing Host On-Demand, read 3.2, "Preventive Service Planning" on page 9. This section tells you how to find any updates to the information and procedures in this program directory.

Do not use this program directory if you are installing Host On-Demand with a SystemPac or ServerPac. When using these offerings, use the jobs and documentation supplied with the offering. This documentation may point you to specific sections of the program directory as required.

If you are installing Host On-Demand using the Custom-Built Product Delivery Offering (CBPDO, 5751-CS3), a softcopy program directory is provided on the CBPDO tape which is identical to the printed copy shipped with your order. All service and HOLDDATA for Host On-Demand are included on the CBPDO tape.

This program directory is now being maintained as a 'living document' that contains up-to-date program and service level information. Please always reference the latest level of the Program Directory at the following web site and follow the library/documentation path:

<http://www.ibm.com/software/webservers/hostondemand/>

Introducing the new online Host On-Demand **InfoCenter** at:

**[http://www.ibm.com/software/webservers/hostondemand/library \(continued\):
/infocentergafinal/hod/en/help/2tabcontents.html](http://www.ibm.com/software/webservers/hostondemand/library (continued): /infocentergafinal/hod/en/help/2tabcontents.html)**

including all the product documentation, a search function, tutorials, white papers, and a link to Hints and Tips.

1.1 Host On-Demand Description

IBM WebSphere Host On-Demand is for to customers who wish to provide easy, cost-effective host access with security to users in intranet and extranet-based environments. It enables businesses to extend the reach of their host applications and data to new users, including business partners, suppliers, and sales personnel.

Host On-Demand gives users secure browser access to host applications and data, with Web browser-based emulation. With support for TN3270E, TN5250, VT52/100/220, and CICS applications included in a single package, users need to learn only one interface to reach key host data. Because Host On-Demand is Java based, users in different operating environments get the same look and feel, and identical feature set.

Host On-Demand is installed on the host and the Host On-Demand applet is downloaded via a Web URL to the users' Web browser. The Host On-Demand cached client will reduce download and user idle time, enhance productivity, and help save significant expense in product deployment and maintenance. Host On-Demand works with IBM Screen Customizer, providing customized GUI screens in place of "green screens" to help simplify the user experience for users who may be unfamiliar with or prefer not to use the traditional host green screens.

A rich Java toolset, including Host Access Beans for Java and the API, can enable customers to rapidly create custom e-business applications to achieve a competitive advantage. Because Host On-Demand is part of the WebSphere family, applications developed using the toolset can be incorporated into other WebSphere software projects, helping preserve your Host On-Demand investment and helping provide a quick start to the Web and e-business.

Host On-Demand is recommended for installations that require low-cost centralized deployment, easy, centralized administration, and support for a broad range of client and server platforms.

1.2 Host On-Demand FMIDs

Host On-Demand consists of the following FMID:

HHOJ700

2.0 Program Materials

An IBM program is identified by a program number and a feature number. The program number for Host On-Demand is 5733-A59.

Basic Machine-Readable Materials are materials that are supplied under the base license and feature code, and are required for the use of the product. Optional Machine-Readable Materials are orderable under separate feature codes, and are not required for the product to function.

The program announcement material describes the features supported by Host On-Demand. Ask your IBM representative for this information if you have not already received a copy.

2.1 Basic Machine-Readable Material

The distribution medium for this program is magnetic tape or downloadable files. It is installed using SMP/E, and is in SMP/E RELFILE format. See 6.0, "Installation Instructions" on page 23 for more information about how to install the program.

Figure 1 describes the physical tape. Figure 2 describes the file content.

Notes:

1. The data set attributes in these tables should be used in the JCL of jobs reading the data sets, but since the data sets are in IEBCOPY unloaded format, their actual attributes may be different.
2. If you are installing Host On-Demand using the Custom-Built Product Delivery Offering (CBPDO) (5751-CS3), some of the information in these figures may not be valid. Consult the CBPDO documentation for actual values.
3. If any RELFILEs are identified as PDSEs, ensure that SMPTLIB data sets are allocated as PDSEs.

Medium	Feature Number	Physical Volume	External Label	R/M *	VOLSERS
3480 Cart.		3	IBM WebSphere Host On-Demand V7	N	HOJ700 (1 of 3), HOJ701 (2 of 3), HOJ702 (3 of 3)

* R/M = Restricted Materials of IBM

Figure 2. Program File Content

Name	ORG	FORM	LENGTH	BLK SIZE
SMPMCS	PS	FB	80	6400
IBM.HHOJ700.F1	PO	VS	8816	8820
IBM.HHOJ700.F2	PO	VS	6160	6164
IBM.HHOJ700.F3	PO	VS	32620	32624

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for Host On-Demand.

2.3 Program Publications

The following sections identify the basic and optional publications for Host On-Demand.

2.3.1 Basic Program Publications

Figure 3 identifies the basic unlicensed program publications for Host On-Demand. The publications are in softcopy form and can be accessed by following the information following.

Note: Host On-Demand V7 requires the addition of *PASS RULES* added to your configuration file for your HTTP web server. Typically, this file is named **httpd.conf** and is typically found in your **/etc** directory in UNIX System Services. Listed below are the complete set of *Pass Rules* that you should have to successfully execute Host On-Demand V7. Please verify that the following *Pass* statements exist in your **httpd.conf**. Please also make sure that the statements are listed in the following order:

```
# *** ADD NEW PASS RULES HERE ***

Pass /hod/*.html /usr/lpp/HOD/hostondemand/HOD/*.html.ascii
Pass /hod/*.HTML /usr/lpp/HOD/hostondemand/HOD/*.HTML.ascii
Pass /hod/*.js /usr/lpp/HOD/hostondemand/HOD/*.js.ascii
Pass /hod/*.properties (continued on next line)
    /usr/lpp/HOD/hostondemand/HOD/*.properties.ascii
Pass /hod/*.props /usr/lpp/HOD/hostondemand/HOD/*.props.ascii
Pass /hod/* /usr/lpp/HOD/hostondemand/HOD/*
```

It is extremely important that the *Pass* statement "Pass /hod/* /usr/.." is the last *Pass* rule encountered. If this is not the last statement, problems will occur when you try to access Host On-Demand *htmls* and online publications.

<i>Figure 3. Basic Material: Unlicensed Publications</i>	
Publication Title	Form Number
<i>IBM WebSphere Host On-Demand Getting Started</i>	N/A
README	N/A

The main Host On-Demand publication is *Getting Started* which details installation (for non OS/390 operating systems), configuration (all operating systems), and administration (all operating systems). The publications are included in soft copy form (HTML) with the product and are viewable from your browser once the product has been successfully installed using the URL format listed below:

- *Getting Started*:
 - <http://<server name>/<webserver alias>/<language>/doc/install/install.html>
- README:
 - <http://<server name>/<webserver alias>/<language>/doc/readme/readme.html>

where **<server name>** refers to your OS/390 or z/OS server's TCP/IP host name, **<webserver alias>** refers to your web server's Pass Rule alias (look in your **/etc/httpd.conf** file in the Pass Rule section - default is **hod**), and **<language>** refers to your installed language prefix (ie., **en** for English, **de** for German, etc.). A table of all the supported languages, publication availability and their associated prefix is found after the table of basic publications. An example of a URL to point to the English language Host On-Demand *Getting Started* is:

<http://mvs048/hod/en/doc/install/install.html>

The publications are also available from the Host On-Demand product Web page at the following URL (follow the library/documentation path):

<http://www.ibm.com/software/webservers/hostondemand/>

Figure 4 identifies the supported languages and the associated language prefix that you use in the URLs above to access the publications. If a 'Y' is indicated, the document is provided in that language. If an 'N' is indicated, an English language manual will be displayed instead of a translated version.

<i>Figure 4 (Page 1 of 2). Host On-Demand Supported Language Publication Availability with Prefix</i>			
Language	Language Prefix	README	Getting Started
Czech	cs	Y	Y
Danish	da	N	Y
Dutch	nl	N	Y
English	en	Y	Y

<i>Figure 4 (Page 2 of 2). Host On-Demand Supported Language Publication Availability with Prefix</i>			
Language	Language Prefix	README	Getting Started
German	de	Y	Y
Greek	el	Y	Y
Finnish	fi	N	Y
French	fr	Y	Y
Hungarian	hu	Y	Y
Italian	it	Y	Y
Japanese	ja	Y	Y
Korean	ko	Y	Y
Norwegian	no	Y	Y
Polish	pl	Y	Y
Portugese	pt_PT	Y	Y
Brazilian-Portugese	pt	Y	Y
Russian	ru	Y	Y
Slovenian	sl	Y	Y
Spanish	es	Y	Y
Swedish	sv	N	Y
Turkish	tr	N	Y
Simplified Chinese	zh	Y	Y
Traditional Chinese	zh_TW	Y	Y

Figure 5 identifies the basic licensed program publications for Host On-Demand.

<i>Figure 5. Basic Material: Licensed Publications</i>		
Publication Title	Form Number	Feature Number
No licensed publications		

2.3.2 Optional Program Publications

No optional publications are provided for Host On-Demand.

2.4 Program Source Materials

No program source materials or viewable program listings are provided for Host On-Demand.

2.5 Publications Useful During Installation

The publications listed in Figure 6 may be useful during the installation of Host On-Demand. To order copies, contact your IBM representative or visit the IBM Publications Center on the world wide web at: elink.ibm.com/applications/public/applications/publications/cgibin/pbi.cgi on the Internet.

<i>Figure 6. Publications Useful During Installation</i>	
Publication Title	Form Number
<i>IBM SMP/E for z/OS and OS/390 User's Guide</i>	SA22-7773
<i>IBM SMP/E for z/OS and OS/390 Commands</i>	SA22-7771
<i>IBM SMP/E for z/OS and OS/390 Reference</i>	SA22-7772
<i>IBM SMP/E for z/OS and OS/390 Messages, Codes, and Diagnosis</i>	GA22-7770
<i>UNIX System Services User's Guide</i>	SC28-1891
<i>UNIX System Services Command Reference</i>	SC28-1892
<i>UNIX System Services Planning</i>	SC28-1890
<i>UNIX System Services Messages & Codes</i>	SC28-1908

3.0 Program Support

This section describes the IBM support available for Host On-Demand.

3.1 Program Services

Contact your IBM representative for specific information about available program services.

3.2 Preventive Service Planning

Before installing Host On-Demand, you should also review the current support, product information, and Hints and Tips on the following Web sites:

- Support site: <http://www.ibm.com/software/webservers/hostondemand/support/>
- Product information site: <http://www.ibm.com/software/webservers/hostondemand/>
- Program Directory softcopy: <http://www.ibm.com/software/webservers/hostondemand/>
- Hints and Tips site: <http://www.ibm.com/support/>

If you obtained Host On-Demand as part of a CBPDO, there is HOLDDATA included on the CBPDO which you should review.

If you obtained Host On-Demand on a product tape, or if the CBPDO is more than two weeks old when you install it, you should contact the IBM Support Center or check the above websites to get the most current support information

For access to RETAIN, visit <http://www.ibm.link.ibm.com/> on the Internet.

3.3 Statement of Support Procedures

Report any difficulties you have using this program to your IBM Support Center. If an APAR is required, the Support Center will provide the address to which any needed documentation can be sent.

Figure 7 identifies the component IDs (COMPID) for Host On-Demand.

<i>Figure 7. Component IDs</i>			
FMID	COMPID	Component Name	RETAIN Release
HHOJ700	5733A5900	Host On-Demand V7	700

4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of Host On-Demand. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs integrated.

4.1 Program Level Information

No APARs have been incorporated into Host On-Demand.

4.2 Service Level Information

No PTFs against this release of Host On-Demand have been incorporated into the product tape.

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating Host On-Demand. The following terminology is used:

- *Driving system*: the system used to install the program.
- *Target system*: the system on which the program is installed.

In many cases, the same system can be used as both a driving system and a target system. However, you may want to set up a clone of your system to use as a target system by making a separate IPL-able copy of the running system. The clone should include copies of all system libraries that SMP/E updates, copies of the SMP/E CSI data sets that describe the system libraries, and your PARMLIB and PROCLIB.

Some cases where two systems should be used include the following:

- When installing a new level of a product that is already installed, the new product will delete the old one. By installing onto a separate target system, you can test the new product while still keeping the old one in production.
- When installing a product that shares libraries or load modules with other products, the installation can disrupt the other products. Installing onto a test system or clone will allow you to assess these impacts without disrupting your production system.

5.1 Driving System Requirements

This section describes the environment of the driving system required to install Host On-Demand.

5.1.1 Machine Requirements

The driving system can run in any hardware environment that supports the required software.

5.1.2 Programming Requirements

<i>Figure 8. Driving System Software Requirements</i>	
Program Number	Product Name and Minimum VRM/Service Level
Any one of the following:	
5647-A01	OS/390 SMP/E Version 2 Release 9 or higher
5694-A01	z/OS Version 1 Release 1 or higher
5655-G44	IBM SMP/E for z/OS and OS/390 Version 3 Release 1 or higher

5.2 Target System Requirements

This section describes the environment of the target system required to install and use Host On-Demand.

Host On-Demand installs in the MVS (Z038) SREL.

5.2.1 Machine Requirements

The target system can run in any hardware environment that supports the required software.

5.2.2 Programming Requirements

5.2.2.1 Mandatory Requisites: A mandatory requisite is defined as a product that is required without exception; this product either **will not install** or **will not function** unless this requisite is met. This includes products that are specified as REQs or PREs.

<i>Figure 9. Mandatory Requisites</i>	
Program Number	Product Name and Minimum VRM/Service Level
Any one of the following for base Operating System:	
5647-A01	OS/390 V2R9 or R10 (for R10 see ** note **)
5694-A01	z/OS V1.1 or higher

Note: ******If you are running with OS/390 V2R10, there is an LDAP PTF that is needed to properly display LDAP sessions. The PTF number is UW74965. Please contact IBM Support to obtain the proper service.

5.2.2.2 Functional Requisites: A functional requisite is defined as a product that is **not** required for the successful installation of this product or for the basic function of the product, but **is** needed at run time for a specific function of this product to work. This includes products that are specified as IF REQs.

<i>Figure 10 (Page 1 of 4). Functional Requisites</i>		
Program Number	Product Name and Minimum VRM/Service Level	Function
5655-A46	IBM Java V1R1M8 or V1.3 and higher for OS/390 or z/OS (** see Java Note)	Java
	OS/390 Communications Server TCP/IP Services (must be running)	TCP/IP

Figure 10 (Page 2 of 4). Functional Requisites

Program Number	Product Name and Minimum VRM/Service Level	Function
	** Java Note	Host On-Demand V7 supports running with Java V1.3 and higher for OS/390 releases V2R9, R10, and z/OS V1.1 and higher. Java V1.1.8 is supported on all Host On-Demand supported OS/390 and z/OS releases. If you are running with Java V1.1.8 and OS/390 V2R10, there is a java PTF that is required, Generic APAR OW45575(PTF6). This includes PTF UW78944 (for component HJVA11G for OS/390 V2R9 and higher). This is required for running on R10 but is recommended for other releases. Please contact IBM support to obtain the proper service.
Any one of the following needed for Browser Function:		
	Netscape Navigator 4.6, 4.7, 6.1, 6.2	Browser Function
	Netscape Navigator (OS/2) 4.61, IBM Web Browser for OS/2 V1.2	Browser Function
	Microsoft Internet Explorer 4.01 with SP1, 5.0, 5.1, 5.5, 6.0	Browser Function
	Java Plugin 1.3, 1.3.1, 1.4 (Sun, IBM)	Browser Function
Any one of the following for Web Server Requisite		
5655-A98	WebSphere Application Server for OS/390 V3.5	Configuration Servlet
5655-F31	WebSphere Application Server for z/OS and OS/390 V4.0.1	Configuration Servlet
	Lotus Domino R5, R6	Configuration Servlet
	Netscape iPlanet (JRun) Version 4.1	Configuration Servlet
	iPlanet Web Server Enterprise Edition V6.0	Configuration Servlet
	iPlanet Application Server V6.0	Configuration Servlet
	IBM HTTPServer V1.3.6.2, V1.3.6.3, V1.3.12.6, V1.3.19.2, V2.0	Configuration Servlet
Any one or more for Client Function		
	Windows 95 Release 2 (** see Client Note)	Client
	Windows 98 (** see Client Note)	Client
	Windows Millenium Edition (** Client Note)	Client

Figure 10 (Page 3 of 4). Functional Requisites

Program Number	Product Name and Minimum VRM/Service Level	Function
	Windows NT 4.0 with SP5 (** see Client Note)	Client
	Windows 2000 - Professional (** Client Note)	Client
	Windows XP Professional and Home Edition (32-bit) (** see ClientNote)	Client
	IBM AIX V4.3.3, V5L, V5.1	Client
	IBM OS/2 Warp Server 4	Client
	Sun Solaris V2.6, V2.7, V2.8	Client
	HP-UX V10.20, V11.00, V11i	Client
	Redhat Linux V6.2, V7.0, V7.1, V7.2, V7.3	Client
	SUSE Linux V6.4, V7.0, V7.1, V7.2, V7.3	Client
	Caldera V2.3, V3.1	Client
	TurboLinux V6.0, V6.5, V7.0	Client
	Windows Terminal Server V4 and Windows Terminal Services for 2000	Client
	Netstation V2R1M0	Client
	Citrix Metaframe 1.8 for Windows Terminal Server 4.0 and 1.8 for Windows 2000 Server	Client
	Citrix Metaframe XP (Versions s, a, e) for Windows	Client
	** Client Note - A local client is only supported on Win 32 platform (Windows 95/98, Millenium, XP, 2000, NT).	
Optional - Any one for LDAP Server Function		
	IBM LDAP Directory Server for OS/390 V2R9,R10, z/OS V1.1 or higher	LDAP Function
	IBM LDAP Directory Server V2.1, V3.1.1, V3.2.1, V3.2.2	LDAP Function
	Netscape Directory Server V3.1 and V4.0 (Windows NT and AIX)	LDAP Function
Optional - Any one or more of the following needed for Development Environment		
	IBM VisualAge for Java Version V3.5, V4.0	Development Environment

Figure 10 (Page 4 of 4). Functional Requisites

Program Number	Product Name and Minimum VRM/Service Level	Function
	WebSphere Studio Application Developer 4.0	Development Environment
	WebSphere Studio Application Developer Integrated Edition 4.1	Development Environment
	WebSphere Studio Site Developer Advanced 4.0	Development Environment
	WebGain VisualCafe Professional Development Edition V4.0 or V4.1	Development Environment
	WebGain VisualCafe V4.5.1 (Standard, Expert, Enterprise Editions)	Development Environment
	WebGain VisualCafe Enterprise Suite V4.5.2	Development Environment
	Borland/Inprise JBuilder Version V3.5, V4.0, V5.0, V6.0	Development Environment
Optional - Miscellaneous Software		
	IBM WebSphere Portal Family V2.1	Portal Function
	IBM WebSphere Portal for Multiplatforms V4.1	Portal Function
	Acrobat Reader V4.0 or higher	View PDFs

5.2.2.3 Toleration/Coexistence Requisites: A toleration/coexistence requisite is defined as a product which must be present on a sharing system. These systems can be other systems in a multisystem environment (not necessarily sysplex), a shared DASD environment (such as test and production), or systems that reuse the same DASD at different time intervals.

Host On-Demand has no toleration/coexistence requisites.

5.2.2.4 Incompatibility (Negative) Requisites: A negative requisite identifies products which must *not* be installed on the same system as this product.

Host On-Demand has no negative requisites.

5.2.3 DASD Storage Requirements

Host On-Demand libraries can reside on all supported DASD types.

Figure 11 lists the total space required for each type of library.

Figure 11. Total DASD Space Required by Host On-Demand

Library Type	Total Space Required
Target	1 MB
Distribution	940 MB
HFS	3500 MB

Notes:

1. IBM recommends use of system determined block sizes for efficient DASD utilization for all non-RECFM U data sets. For RECFM U data sets, IBM recommends a block size of 32760, which is the most efficient from a performance and DASD utilization perspective.

2. Abbreviations used for the data set type are:

- U** Unique data set, allocated by this product and used only by this product. To determine the correct storage needed for this data set, this table provides all required information; no other tables (or program directories) need to be referenced for the data set size.
- S** Shared data set, allocated by this product and used by this product and others. To determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.
- E** Existing shared data set, used by this product and others. This data set is NOT allocated by this product. To determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other program directories). This existing data set must have enough free space to accommodate the storage size given in this table.

If you currently have a previous release of this product installed in these libraries, the installation of this release will delete the old one and reclaim the space used by the old release and any service that had been installed. You can determine whether or not these libraries have enough space by deleting the old release with a dummy function, compressing the libraries, and comparing the space requirements with the free space in the libraries.

For more information on the names and sizes of the required data sets, please refer to 6.1.6, "Allocate SMP/E Target and Distribution Libraries and Paths" on page 25.

3. Abbreviations used for the HFS Path type are:

- N** New path, created by this product.
- X** Path created by this product, but may already exist from a previous release.
- P** Previously existing path, created by another product.

4. All target and distribution libraries listed have the following attributes:

- The default name of the data set may be changed
- The default block size of the data set may be changed
- The data set may be merged with another data set that has equivalent characteristics
- The data set may be either a PDS or a PDSE

5. All target libraries listed have the following attributes:

- The data set may be SMS managed
- It is not required for the data set to be SMS managed
- It is not required for the data set to reside on the IPL volume
- The values in the "Member Type" column are not necessarily the actual SMP/E element types identified in the SMPMCS.

6. All target libraries listed which contain load modules have the following attributes:

- The data set may be in the LPA
- It is not required for the data set to be in the LPA
- The data set may be in the LNKLIST
- It is not required for the data set to be APF authorized

Figure 12. Storage Requirements for SMP/E Work Data Sets

Library DDNAME	T Y P E	O R G A N I Z A T I O N	R E C O R D L E N G T H	L R E C O R D S	No. of 3390 Trks	No. of DIR Blks
SMPWRK1	S	PDS	FB	80	16	216
SMPWRK2	S	PDS	FB	80	16	216
SMPWRK3	S	PDS	FB	80	6	216
SMPWRK4	S	PDS	FB	80	6	216
SMPWRK6	S	PDS	FB	80	16	216
SYSUT1	U	SEQ	--	--	34	0
SYSUT2	U	SEQ	--	--	34	0
SYSUT3	U	SEQ	--	--	34	0
SYSUT4	U	SEQ	--	--	34	0

Figure 13. Storage Requirements for SMP/E Data Sets

Library DDNAME	T Y P E	O R G A N I Z A T I O N	R E C O R D L E N G T H	L R E C O R D S	No. of 3390 Trks	No. of DIR Blks
SMPLTS	E	PDS	U	0	15	0
SMPMTS	E	PDS	FB	80	0	
SMPPTS	E	PDS	FB	80	0	0
SMPSCDS	E	PDS	FB	80	0	0
SMPSTS	E	PDS	FB	80	0	0

The following figures describe the target and distribution libraries and HFS paths required to install Host On-Demand. The storage requirements of Host On-Demand must be added to the storage required by other programs having data in the same library or path.

Note: The data in these tables should be used when determining which libraries can be merged into common data sets. In addition, since some ALIAS names may not be unique, ensure that no naming conflicts will be introduced before merging libraries.

Figure 14. Storage Requirements for Host On-Demand Target Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
LINKLIB	LMOD	TGTVOL	E	PO	U	0	6	1
SHOMINST	Sample EXEC	TGTVOL	U	PDS	FB	80	6	5

Figure 15. Host On-Demand HFS Paths

DDNAME	T Y P E	Path Name
SHOM0001	N	/usr/lpp/HOD/IBM

Figure 16. Storage Requirements for Host On-Demand Distribution Libraries

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
AHOMHFS1	U	PDS	VB	32600	14000	15
AHOMINST	U	PDS	FB	80	6	5
AHOMMOD1	U	PDS	U	0	7	1

The following figures list data sets that are not used by SMP/E, but are required for Host On-Demand to execute.

5.3 FMIDs Deleted

Installing Host On-Demand may result in the deletion of other FMIDs. To see what FMIDs will be deleted, examine the ++VER statement in the product's SMPMCS.

If you do not wish to delete these FMIDs at this time, you must install Host On-Demand into separate SMP/E target and distribution zones.

Note: These FMIDs will not automatically be deleted from the Global Zone. Consult the SMP/E manuals for instructions on how to do this.

5.4 Special Considerations

The distribution libraries are assumed to be contained in a single HFS data set whose mount point is */usr/lpp/HOD*. Host On-Demand can be installed into an existing HFS, but if you wish to create your own HFS, the sample job HOMHFS can be used to allocate the HFS. It is recommended that you create your own HFS for Host On-Demand for serviceability. The HOMISMKD JCL sample is used to create the directory structure for your HFS. HOMISMKD also creates a directory structure under the */usr/lpp/HOD* filesystem, which is assumed to already be allocated and mounted on the target system.

After you finish with the SMP/E portion of your installation including running HOMAPPLY and HOMACCPT, you will have to run the shell script **hod70mvs.sh** to complete the installation. Refer to **6.2, “Activating Host On-Demand”** on page 30 for more details.

6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of Host On-Demand.

Please note the following:

- If you want to install Host On-Demand into its own SMP/E environment, consult the SMP/E manuals for instructions on creating and initializing the SMPCSI and the SMP/E control data sets.
- Sample jobs have been provided to help perform some or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries required for SMP/E execution have been defined in the appropriate zones.
- The SMP/E dialogs may be used instead of the sample jobs to accomplish the SMP/E installation steps.

6.1 Installing Host On-Demand

6.1.1 SMP/E Considerations for Installing Host On-Demand

This release of Host On-Demand is installed using the SMP/E RECEIVE, APPLY, and ACCEPT commands. The SMP/E dialogs may be used to accomplish the SMP/E installation steps.

6.1.2 SMP/E Options Subentry Values

The recommended values for some SMP/E CSI subentries are shown in Figure 17. Use of values lower than these may result in failures in the installation process. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. Refer to the SMP/E manuals for instructions on updating the global zone.

SUB-ENTRY	Value	Comment
DSSPACE	(6000,500,350)	Specifies the primary and secondary (in Tracks) and the number of directory blocks to be allocated for each SMPTLIB dataset.
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.3 SMP/E CALLLIBS Processing

Host On-Demand uses the CALLLIBS function provided in SMP/E to resolve external references during installation. When Host On-Demand is installed, ensure that DDDEFs exist for the following libraries:

- CEE.SCEELKED

Note: The DDDEFs above are used only to resolve the link-edit for Host On-Demand using CALLLIBS. These data sets are not updated during the installation of Host On-Demand.

6.1.4 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install Host On-Demand:

Figure 18. Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
HOMRECVE	RECEIVE	Sample RECEIVE job	IBM.HHOJ700.F1
HOMALLOC	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HHOJ700.F1
HOMDDDEF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HHOJ700.F1
HOMHFS	HFS	Sample job to define Host On-Demand HFS data set (Optional)	IBM.HHOJ700.F1
HOMISMKD	MKDIR	Sample job to invoke the supplied HOMMKDIR EXEC to allocate HFS paths	IBM.HHOJ700.F1
HOMAPPLY	APPLY	Sample APPLY job	IBM.HHOJ700.F1
HOMACCPT	ACCEPT	Sample ACCEPT job	IBM.HHOJ700.F1
HOMSERVR	START	Sample job for starting Host On-Demand	IBM.HHOJ700.F1

You may copy the jobs from the tape or product files by submitting the job following. Use either the //TAPEIN or the //FILEIN DD statement, depending on your distribution medium, and comment out or delete the other statement. Add a job card and change the lowercase parameters to uppercase values to meet your site's requirements before submitting.


```

//STEP1      EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//TAPEIN     DD DSN=IBM.HHOJ700.F1,UNIT=tunit,VOL=SER=HOJ700,
//           LABEL=(2,SL),DISP=(OLD,KEEP)
//FILEIN     DD DSN=IBM.HHOJ700.F1,UNIT=SYSALLDA,DISP=SHR,
//           VOL=SER=filevol
//OUT        DD DSNAME=jcl-library-name,
//           DISP=(NEW,CATLG,DELETE),
//           VOL=SER=dasdvol,UNIT=SYSALLDA,
//           SPACE=(TRK,(3,2,1))
//SYSUT3     DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN      DD *
            COPY INDD=xxxxIN,OUTDD=OUT
            SELECT MEMBER=(HOMACCPY,HOMALLOC,HOMAPPLY)
            SELECT MEMBER=(HOMDDDEF,HOMHFS,HOMISMKD,HOMMKDIR)
            SELECT MEMBER=(HOMRECVE,HOMSERVR)
/*

```

where **tunit** is the unit value matching the product tape, **filevol** is the volume serial of the DASD device where the downloaded files reside, **jcl-library-name** is the name of the output data set where the sample jobs will be stored, **dasdvol** is the volume serial of the DASD device where the output data set will reside and **xxxxIN** on the SYSIN DD to either TAPEIN or FILEIN depending on your input DD statement.

You can also access the sample installation jobs by performing an SMP/E RECEIVE and then copying the jobs from the SMPTLIBs to a work data set for editing and submission. See Figure 18 on page 24 to find the appropriate SMPTLIB data set.

6.1.5 Perform SMP/E RECEIVE

Edit and submit sample job HOMRECVE to perform the SMP/E RECEIVE for Host On-Demand. Consult the instructions in the sample job for more information.

NOTE: If you obtained Host On-Demand as part of a CBPDO, you can use the RCVPDO job found in the CBPDO RIMLIB data set to RECEIVE the Host On-Demand FMIDs as well as any service, or HOLDDATA included on the CBPDO tape. For more information, refer to the documentation included with the CBPDO.

Expected Return Codes and Messages:

This step should complete with Return Code = 0.

6.1.6 Allocate SMP/E Target and Distribution Libraries and Paths

Edit and submit sample job HOMALLOC to allocate the SMP/E target and distribution libraries for Host On-Demand. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages:

This step should complete with Return Code = 0.

6.1.7 Create DDDEF Entries

Edit and submit sample job HOMDDDEF to create DDDEF entries for the SMP/E target and distribution libraries for Host On-Demand. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages:

This step should complete with Return Code = 0.

This step may receive warning message GIM56501W and rc=4. This message is issued when DDDEF entries are added because they did not exist prior to running the job.

This step may also receive warning message GIM27701W and rc=4. This message is issued when DDDEF entries are added because they did not exist prior to running the job.

This step may also receive the following messages:

```
GIM35601E ** DATASET SUBENTRY WAS NOT ADDED BECAUSE
          IT ALREADY EXISTS.
GIM25601I - THE SPECIFIED ENTRY WAS NOT UPDATED
          BECAUSE OF AN ERROR DURING UCLIN PROCESSING.
```

with a rc=8 if the **SCEELKED** or **LINKLIB** DDDEF entries already exist. You can either delete the **ADD** for **SCEELKED** or **LINKLIB** or change the **ADD** to a **REP** and rerun the job.

Note: Please note that this job will update your LINKLIB system dataset.

6.1.8 Allocate Host On-Demand HFS Data Set (HOMHFS) - Optional

IBM WebSphere Host On-Demand V7 for OS/390 and z/OS can be installed into any HFS. However, if you wish to create your own HFS for Host On-Demand, edit and submit sample job HOMHFS to allocate the HFS. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages:

This step should complete with Return Code = 0.

6.1.9 Allocate HFS Mount Points and paths (HOMISMKD)

In this step you will create the HFS paths and the mount point for Host On-Demand. The instructions to create the mount point for Host On-Demand is detailed below as well as directions for running the HOMISMKD job which will create the paths.

The distribution libraries are assumed to be contained in a single HFS data set whose mount point is */usr/lpp/HOD*. Host On-Demand can be installed into an existing HFS or a new one created using the HOMHFS sample job. Use the commands below and the HOMISMKD job as needed to create the paths

and mount points for Host On-Demand. If you created a new HFS, you will need to complete all three (3) steps below. If you are installing into an existing HFS, you will only have to do step #3 (omit steps 1 and 2).

Note: The TSO MKDIR commands must be invoked using a RACF userid with root authority in the UNIX System Services. Path as well as mount point specification in UNIX System Services is case sensitive.

Follow these steps to create the mount point and directories:

1. From TSO issue the following TSO MKDIR command to create the /usr/lpp/HOD mount point.

```
TSO MKDIR '-PATHPREFIX-/usr/lpp/HOD' MODE (7,5,5)
```

Note: Change the occurrences of the string -pathprefix- to the appropriate high level directory name. For users installing in the root, this would be null. For others, the high level directory may be something like /service/ or a more meaningful name. Please note the replacement string is case sensitive.

2. Issue the following MOUNT command to mount the HFS on the /usr/lpp/HOD mount point. The HFS was previously allocated by the HOMHFS job.

Note: The mount command should be on one line.

Note: Change the **hfsprfx** qualifier to the name of the qualifier used in the HOMHFS installation job.

```
TSO MOUNT FILESYSTEM('hfsprfx.hom.hfs')  
MOUNTPPOINT('-PATHPREFIX-/usr/lpp/HOD') TYPE(HFS)
```

Note: Change the occurrences of the string -pathprefix- to the appropriate high level directory name. For users installing in the root, this would be null. For others, the high level directory may be something like /service/ or a more meaningful name. Please note the replacement string is case sensitive.

3. Edit and submit sample job HOMISMKD to allocate the HFS paths for Host On-Demand. Consult the instructions in the sample job for more information.

This job calls HOMMKDIR which creates the directory structure for Host On-Demand. HOMMKDIR is a REXX script which is called by HOMISMKD. HOMMKDIR should not be invoked by itself.

If you plan to create a new HFS for this product, you should consider updating the BPXPRMxx PARMLIB member to mount the new HFS at IPL time. This may be helpful if an IPL occurs before the installation is complete.

Expected Return Codes and Messages:

This step should complete with Return Code = 0.

6.1.10 Perform SMP/E APPLY

Edit and submit sample job HOMAPPLY to perform an SMP/E APPLY CHECK for Host On-Demand. Consult the instructions in the sample job for more information.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the following on the APPLY CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Once you have taken any actions indicated by the APPLY CHECK, remove the CHECK operand and run the job again to perform the APPLY.

Note: The GROUPEXTEND operand indicates that SMP/E apply all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

Expected Return Codes and Messages from APPLY CHECK:

This step should complete with Return Code = 0.

Expected Return Codes and Messages from APPLY:

This step should complete with Return Code = 0.

6.1.11 Perform SMP/E ACCEPT

Edit and submit sample job HOMACCPT to perform an SMP/E ACCEPT CHECK for Host On-Demand. Consult the instructions in the sample job for more information.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the following on the ACCEPT CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Before using SMP/E to load new distribution libraries, it is recommended that you set the ACCJCLIN indicator in the distribution zone. This will cause entries produced from JCLIN to be saved in the distribution zone whenever a SYSMOD containing inline JCLIN is ACCEPTed. For more information on the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E manuals.

Once you have taken any actions indicated by the ACCEPT CHECK, remove the CHECK operand and run the job again to perform the ACCEPT.

Note: The GROUPEXTEND operand indicates that SMP/E accept all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

Expected Return Codes and Messages from ACCEPT CHECK:

This step should complete with Return Code = 0.

Expected Return Codes and Messages from ACCEPT:

This step should complete with Return Code = 0.

If PTFs containing replacement modules are being ACCEPTed, SMP/E ACCEPT processing will linkedit/bind the modules into the distribution libraries. During this processing, the Linkage Editor or Binder may issue messages documenting unresolved external references, resulting in a return code of 4 from the ACCEPT step. These messages can be ignored, because the distribution libraries are not executable and the unresolved external references will not affect the executable system libraries.

6.1.12 Sample Job for starting Host On-Demand (HOMSERVER)

Edit the sample HOMSERVER job as a JCL example for starting Host On-Demand You will need to place this sample in an authorized PROCLIB and modify as necessary for your installation.

Expected Return Codes and Messages:

This step should complete with Return Code = 0.

6.1.13 Completing the Installation of Host On-Demand

To complete the install of Host On-Demand, the **hod70mvs.sh** shell script is provided in the `/usr/lpp/HOD` directory. This shell script will migrate V2.0 through V6.X configuration data and install the current version of the software. Review the instructions in the shell script prior to running this script.

Here is a more detailed description of what this shell script does:

1. If you are migrating from V2.0 through V6.X to the current version of Host On-Demand, this script will do the following based on what version you are migrating from. Uncomment the shell script statements that are appropriate to the version you are migrating from.

- Delete these two directories:
 - `/usr/lpp/HOD/ondemand/lib`
 - `/usr/lpp/HOD/ondemand/HOD`
- The directory which has the V2.0 through V6.X configuration data is not deleted and that configuration data will be migrated to the current version of the software. The directory which is not deleted is:
 - `/usr/lpp/HOD/ondemand/private`
- Install Host On-Demand

This shell script will install the `hod70mvs.tar.Z` file. If no earlier version was installed, the current version of Host On-Demand will be installed in the following directory:

- `/usr/lpp/HOD/hostondemand`

2. This shell script will also create the necessary installation directories for the Native Authentication Service (HODRAPD). Two directories will be created in the default /usr/lpp/HOD/hostondemand/private directory which will link to the HODRAPD module that was installed and link-edited by SMP/E during the Host On-Demand V7.0 SMP/E installation.

Note: Please note that the subdirectory named "ondemand" in earlier versions of this product has been renamed to "hostondemand" in the current version.

Note: If you find that after you successfully install Host On-Demand (after the execution of hod70mvs.sh), you are running out of space on your HFS, you may take the following steps (your SMP/E environment must be available):

1. Remove the files in the default /usr/lpp/HOD directory. These are actually hardlinks of the files in the /usr/lpp/HOD/IBM directory.
2. Delete the files in the /usr/lpp/HOD/IBM directory, specifically the HOMETARx files.
3. To restore these files to your HFS, run the SMP/E APPLY job with the REDO option in the SMP/E control statements. The APPLY will create the hardlinks in the /usr/lpp/HOD directory.

6.2 Activating Host On-Demand

6.2.1 Update Web Server Pass Rules and Resource Mapping Directives

To activate the functions of Host On-Demand, add the Pass Rules listed below to the *Pass Rule* section of your Web Server configuration file. The configuration file name is typically **httpd.conf**. (For IBM WebSphere Application Server and Domino Go Webserver). The **httpd.conf** file is typically found in your **/etc** directory in UNIX System Services. Listed below are the *Pass Rules* that you will need to have in your **httpd.conf** file.

These *Pass Rules* **must be** in the order listed and must be placed prior to the **Pass /*** Pass Rule. The rules assume an alias of **/hod/**. Consult your Web Server documentation for further details.

The Pass Rules are:

```
# *** ADD NEW PASS RULES HERE ***

Pass /hod/*.html /usr/lpp/HOD/hostondemand/HOD/*.html.ascii
Pass /hod/*.HTML /usr/lpp/HOD/hostondemand/HOD/*.HTML.ascii
Pass /hod/*.js /usr/lpp/HOD/hostondemand/HOD/*.js.ascii
Pass /hod/*.properties (continued on next line)
    /usr/lpp/HOD/hostondemand/HOD/*.properties.ascii
Pass /hod/*.props /usr/lpp/HOD/hostondemand/HOD/*.props.ascii
Pass /hod/* /usr/lpp/HOD/hostondemand/HOD/*
```

Note: Please note that the subdirectory named "ondemand" in earlier versions of this product has been renamed to "hostondemand" in the current version.

The following resource mapping directives should also be included among the other rules in the AddType section of the Web Server configuration file:

```
AddType .cab application/octet-stream binary 1.0
AddType .jar multipart/x-zip binary 1.0
```

6.2.2 Start Host On-Demand

The HOMSERVR sample job is supplied to start Host On-Demand. This job starts the **ServiceManager.sh** shell script, which starts the Host On-Demand Service Manager. The **ServiceManager.sh** shell script is found in the **/usr/lpp/HOD/hostondemand/lib** directory (if installing to the default directory) and must be modified for correct execution of Host On-Demand. You must modify the **ServiceManager.sh** for the correct level of both Java and your level of debug. Please note the comments in **ServiceManager.sh** regarding the CLASSPATH variables. You will need to uncomment one of the CLASSPATH statements that corresponds to your level of Java. Java V1.1.8 is supported for all Host On-Demand supported releases of OS/390(V2R9 and R10) and z/OS V1.1 and higher. Java V1.3.X is supported for OS/390 V2 R9 and R10 and z/OS V1.1 and higher.

Note: You may want to rename the HOMSERVR sample job to a started PROC name of less than 8 characters (ie., HOMSRV). This will help when displaying subprocesses and stopping HOD. You will be able to cancel HOD and all subprocesses at once if your started PROC name is less than 8 characters.

Prior to starting Host On-Demand, copy the HOMSERVR sample job from your install library SHOMINST to an authorized PROCLIB. If you are installing in a directory other than the default directory (**/usr/lpp/HOD**) you must change the PARM parameter to point to the location where you have ServiceManager.sh installed.

The HOMSERVR procedure must be started from a RACF USERID with root authority in UNIX System Services. Here are the basic instructions to enable Host On-Demand to be assigned to the appropriate USERID. These are not detailed instructions. If you need assistance or authorization, contact your RACF system Administrator.

- Create a USERID for the HOMSERVR procedure, (for example you might create a HOMSERVR USERID)
 - Choose a default group that is defined to UNIX System Services (has an UNIX System Services segment with a GID (Groupid) defined; for example you might have a group called OMVSGRP which contains all UNIX System Services users).
 - Add a UNIX System Services segment giving the userid root authority by assigning it a UID of 0.
- Create a started class entry (or update ICHRIN03) for the HOMSERVR procedure
 - Make the entry name procname.* (for example, HOMSERVR.*)
 - Assign "=Member" to the user thereby making userid and the procname the same (for example HOMSERVR.*).
 - Assign the procname to the USSgroup that is the default group for the user (for example OMVSGRP).

To start Host On-Demand, start the sample job HOMSERVER.

To stop Host On-Demand, cancel sample job HOMSERVER.

Note: With a procname of 8 characters, you will need to provide the job's address space value to cancel the main proc. You will also need the address space value to cancel the subprocesses. If your procname is > 8 characters (ie., HOMSRV), you will only need to issue the 'cancel HOMSRV' command to cancel both the main process as well as the subprocesses.

6.2.3 Configuring Host On-Demand (Administration)

You must now load the Host On-Demand Administration Utility to define and configure USER and GROUP accounts, define emulator sessions, the Redirector and Database On-Demand, as necessary

1. Type the following URL into your browser URL area: `http://<server_name>/hod/HODMain.html` where `<server name>` refers to your OS/390 or z/OS TCP/IP host name.
2. Select **README - Please!** to see information that was not included in this document, the **Getting Started** guide or the Helps.
3. Select **Administration Client** to begin configuring the Server.

Information about the Administration Utility and how to perform the above administration tasks is provided in the **Configuring Host On-Demand** section in **Getting Started**.

6.2.4 Starting the Optional Native (Platform) Authentication Service (HODRAPD)

Note: The following can be done only after the `hod60mvs.sh` has been successfully completed. The `hod70mvs.sh` shell script sets up `hodrapd` directories in your `/usr/lpp/HOD/hostondemand/private` directory for accessing the HODRAPD module that was installed during the SMP/E CALLLIBS processing. When the Native (Platform) Authentication Service is started from USS (UNIX System Services), the HODRAPD module is executed.

Provided below are the statements and links that are set-up for the HODRAPD module by the `hod70mvs.sh` shell script. These statements and links are provided in the event they are somehow removed at a later time:

```
#####
# Create installation directories for Native Authentication
#
# Two directories will be created in the
# $HOD70_INSTALL_DIR/hostondemand/private directories which will
# execute the HODRAPD module that was installed by SMP/E
# during the Host On-Demand V7.0 SMP/E installation.
#
#####

touch $HOD70_INSTALL_DIR/hostondemand/private/HODRAPD
ln -s $HOD70_INSTALL_DIR/hostondemand/private/(cont. on next line)
    HODRAPD $HOD70_INSTALL_DIR/hostondemand/private/hodrapd
```



```
chmod 744 $HOD70_INSTALL_DIR/hostondemand/private/HODRAPD
chmod +t $HOD70_INSTALL_DIR/hostondemand/private/HODRAPD
```

6.2.4.1 Setup for Starting the Native Authentication Service: The installation is designed to install the server load module into SYS1.LINKLIB. The module is automatically link-edited during the the JCLIN CALLLIBS processing during the APPLY. If you choose to install and execute the server from an alternative dataset, that dataset must be accessed by the system LNKLST or LPALIB concatenation.

The authentication server is invoked as a USS (UNIX) command. The server must run under the ownership of an ID that has an OMVS segment defined that includes superuser authority.

The following example illustrates the RACF command used to create a user profile with superuser authority:

```
AU userid DFLTGRP(oegroup) name(AUTHSERV) OMVS(UID(0) HOME('/'))
```

Additionally, if your site is running in a BPX.DAEMON environment, then RACF NOPADCHK processing must be enabled for the dataset containing the HOMRAPD load module. The following example gives the appropriate RACF commands:

```
RALTER PROGRAM * ADDMEM ('your.rapd.dataset'/volser/NOPADCHK)
SETROPTS WHEN(PROGRAM) REFRESH
```

6.2.4.2 Starting the Native (Platform) Authentication Service in USS: To start the Native Authentication Service (HODRAPD) using USS (Unix System Services), go to the /usr/lpp/HOD directory on the system where HODRAPD is installed and at the command prompt, enter:

```
hodrapd.sh
```

Options such as logging, time-out values, and maximum number of requests the server will allow can be specified when you start the Native Authentication Service. To change the options, edit (oedit) **hodrapd.sh** in the /usr/lpp/HOD default directory. You **must** keep the (-x) option, but you can append the following options to the (-x) where the options are:

l (ie., -xl)	Enable logging.
t (ie., -xt)	Set socket timeout value, in seconds. The default is 20.
c (ie., -xc)	Set the maximum number of requests the server will allow.

For example, to start the native authentication service and set the socket timeout to 100 seconds, edit the line where the hodrapd module is called (line 82) and change the call (i.e., hodrapd -x) to:

```
hodrapd -xt100
```

To start the platform authentication service with a maximum number of requests, edit the line where the hodrapd module is called (i.e., hodrapd -x) to:

```
hodrapd -xc100
```

You will see a message displayed to USS that the Native Authentication Service is starting. When the Service has completely started, you will see a message display to your OS/390 or z/OS console as follows:

```
BPXF024I (USER2) 08/11/00 09:32:27 hodrapd: PAS0001 Starting IBM
Platform Authentication Service.
```

You can also check the status of the Native Authentication Service by issuing the following from your USS prompt:

```
netstat -a
```

This command will display the status of the Service. The Native Authentication Service uses the *well_known_port=2569*. The netstat -a command will display the following based on your USERID for the Native Authentication Service:

```
MVS TCP/IP onetstat CS V2R8      TCPIP Name: TCPIP          09:37:37
User Id Conn      Local Socket      Foreign Socket      State
-----
USER25  000002E5 0.0.0.0..2569      0.0.0.0..0          Listen
```

where USER2 is the USERID where the Native Authentication has been started from and USER25 is the Native Authenticated process that has started.

The **hodrapd.sh** shell script appends to your LIBPATH and NLSPATH. You may want to take the statements found in the shell script and add them to your /etc/profile on USS. You will need to re-execute your /etc/profile to activate the changes. You do this by entering *. profile* from your /etc directory. The LIBPATH and NLSPATH statements are provided below (using default paths):

```
export NLSPATH=$NLSPATH:/usr/lpp/HOD/hostondemand/lib/msgs/%N
export LIBPATH=$LIBPATH:/usr/lpp/HOD/hostondemand/lib/
```

6.2.5 OS/390 and z/OS LDAP Directory Configuration

If you have an existing OS/390 Security Server LDAP Server and are running on OS/390 V2R9/R10 or z/OS V1.1 and above, verify the following before configuring it for Host On-Demand:

- Verify that the LDAP Server is configured as described in the *OS/390 Security Server LDAP Server Administration and Usage Guide*(SC24-5561) and the *z/OS V1R2 LDAP Server Admin and Usage Guide* (SC24-5923).
- Verify that a suffix has been added and associated with an object class.

You can use this suffix as the parent distinguished name (DN) for Host On-Demand or you can use a lower-level object.

To configure an existing LDAP directory for Host On-Demand, familiarize yourself with the LDAP directory and the default schema shipped with it. You will need to use the IBM schema shipped with the LDAP Server in order to use Host On-Demand with LDAP. The process for setting up this IBM Schema is different depending on the DB2 backend you are using, RDBM or TDBM.

6.2.5.1 To Set Up Schema When Using RDBM Backend: To add the IBM schema to the existing LDAP Directory:

1. Edit the LDAP directory configuration file **slapd.conf** that the LDAP Server is using.
2. Change the includes from the original files to the IBM files as listed below. Refer to "Using IBM Schema Configuration Files" in the *Security Server LDAP Server Administration and Usage Guide* for more information.

Original	IBM
slapd.at.system	schema.system.at
slapd.cb.at.conf	schema.IBM.at
slapd.at.conf	schema.user.at
slapd.oc.system	schema.system.oc
slapd.cb.oc.conf	schema.IBM.oc
slapd.oc.conf	schema.user.oc

3. Save your changes to **slapd.conf**.
4. Restart the LDAP Server.

Note: The original schema files shipped with OS/390 LDAP Server create about 100 DB2 tables. The original schema definitions create about 600 tables. Before attempting to use these schema files, be sure that DB2 is configured to allow over 600 DB2 tables to be created and used. LDAP32K is the tablespace for most of the over 600 created tables. The SPUFI command for creating this tablespace should look similar to:

```
create large tablespace eeeeeee in dddddddd
  numparts 1 bufferpool BP32K
  using stogroup sysdeflt priqty 720 secqty 720;
```

where *sysdeflt* is the installation-dependent, systems default stogroup that you obtain from your local DB2 administrator.

6.2.5.2 To Set Up Schema When Using TDBM Backend: To add the IBM schema to the existing LDAP Directory:

1. Use `ldapmodify` command to add the **schema.user.ldif** that is shipped with the LDAP Server.
2. Use `ldapmodify` command to add the **schema.IBM.ldif** that is shipped with the LDAP Server.

Note: See chapter 17 of the *z/OS V1R2.0 Security Server LDAP Server Administration and Use* publication (SC24-5923-02) for detailed information on using `ldapmodify` to update schema in TDBM.

6.2.5.3 To Set Up the Directory Tree (for either RDBM or TDBM): Decide how Host On-Demand will fit into your network and organizational structure, and design the LDAP directory information tree. For example,

- To build a directory information tree for an entire organization, use the organization object class for the suffix:

```
dn: o=MyOrganization
objectclass: organization
o: MyOrganization
```

- To build a directory information tree for one division of an organization, use the organizationalUnit object class for the suffix:

```
dn: ou=MyDivision, o=MyOrganization
objectclass: organizationalUnit
ou: MyDivision
```

The directory information tree should be defined in an LDAP Data Interchange Format (LDIF) file and added in the LDAP directory using the ldapadd command. Details on using the ldapadd command can be found in the LDAP Server Admin documentation.

6.2.5.4 Performance Considerations (when using RDBM): The following configuration changes are offered as possible performance enhancements:

- Add the following lines to **slapd.conf**:

```
ndex pr nc palPtr eq
ndex dc eq
ndex o eq
ndex name eq
ndex objectClass eq
ndex u d eq
```

- Sizelimit is the number of entries LDAP will return on a search request; change the sizelimit to 5000 (this applies when using either RDBM or TDBM).

6.2.6 Hints and Tips

1. **Running out of space on HFS** - If your Host On-Demand on z/OS or OS/390 platform is running out of space on your HFS, you may take the following steps. Your SMP/E environment must be available.
 - a. Remove the files in the default /usr/lpp/HOD directory. These are actually hardlinks of the files in the /usr/lpp/HOD/IBM directory.
 - b. Delete the files in the /usr/lpp/HOD/IBM directory, specifically the HOMTARx files.
 - c. To restore these files to your HFS, run the SMP/E APPLY job with the REDO option in the SMP/E control statements. The APPLY will create the hardlinks in the /usr/lpp/HOD directory.
2. For the best performance of Host On-Demand, we recommend that you install the latest version of Java for OS/390 or z/OS. For information on how to download Java, go to this web site:
<http://www.ibm.com/java/jdk/index.html>
3. If you are installing Host On-Demand in a directory other than the default directory (/usr/lpp/HOD), you need to change paths in these shell scripts:
 - hod70mvs.sh (full path is /usr/lpp/HOD/hod70mvs.sh)

- ServiceManager.sh (full path is /usr/lpp/HOD/hostondemand/lib/ServiceManager.sh)
- hodrapd.sh (full path is /usr/lpp/HOD/hodrapd.sh)

Refer to the shell script comments for instructions.

4. For product-support information, go to the Host On-Demand Support Site at <http://www.ibm.com/software/webservers/hostondemand/support.html>
5. The program tape has both the **Getting Started** guide and the **README** which can be viewed via your browser once the product has been installed or from the Host On-Demand Web site. Please see Section 2.3 on how to access the publications via your browser.
6. Make sure that the CLASSPATH, LIBPATH, and PATH statements are all set correctly in your USS profile. For the CLASSPATH, LIBPATH, and PATH statements, you will need updates for your installed Java libraries as detailed below. Since Host On-Demand V6 and above supports both Java 1.1.8 (for all supported Host On-Demand OS/390 releases and all supported z/OS releases) and Java V1.3.X (for OS/390 releases R9-R10 and z/OS V1.1 or higher), you will need to point to your installed level of Java. You should also make sure that the CLASSPATH, LIBPATH, and PATH statements also include the proper WebSphere product statements (ie., usually /usr/lpp/internet/bin) Usually, the USS profile is found in your **/etc** directory in USS.
 - The CLASSPATH environment variable should point to your installed OS/390 or z/OS Java library directory base class. The CLASSPATH statement would include the first statement below for Java V1.1.8 support. For Java V1.3.X support, you will not have to include any Java related CLASSPATH information.

```
CLASSPATH=/usr/lpp/java/J1.1/lib/classes.zip
```
 - The LIBPATH environment variable should also point to the correct Java libs. The LIBPATH statement would include one of the following paths as below. The first is for Java V1.1.8 support, the second is for Java V1.3.X support.

```
LIBPATH=/usr/lpp/java/J1.1/lib  
LIBPATH=/usr/lpp/java/IBM/J1.3/lib
```
 - The PATH environment variable should also point to the correct Java binaries. The PATH statement would include one of the following paths as below. The first is for Java V1.1.8 support, the second is for Java V1.3.X support.

```
PATH=/usr/lpp/java/J1.1/bin  
PATH=/usr/lpp/java/IBM/J1.3/bin
```
7. You cannot run two Host On-Demand servers on the same stack because the Service Manager listens on a specific IP port. Two service managers running at the same time will try to grab the same port; the result is that one of the two will fail.
8. If you decide the job name for the Host On-Demand server from HOMSERVR to something fewer than eight characters, beware that the job names for the tasks listening on ports 8999 and 3470 will get a digit appended to them. This is important if you decide to make port reservations in your TCPIP.PROFILE using the explicit job names.
9. Since the configuration files are all stored in the /private directory, you should ensure that the directory path is correct. If you installed Version 3 in the default directories, it would be

/usr/lpp/HOD/ondemand/private. The installation script *hod70mvs.sh* will migrate your Version 3 */private* directory. Double check to make sure the migration was successful and you see your Version 3 */ondemand/private* files in */hostondemand/private*.

10. Be aware that whatever method you may use to edit those files could cause problems such as carriage returns or blanks being inserted. Use a flat-text editor. Or simply use **FTP** to *ftp* your file to a Windows based text editor and then *ftp* back the modified file to your USS Host.
11. During the installation of Host On-Demand, the */usr/lpp/HOD/hostondemand/private* directory will be updated with files that will be updated in an execution environment, not just by maintenance (PTFs). It is advised that customers may now want to mount a separate (non-service) HFS onto the */usr/lpp/HOD/hostondemand/private* directory as it is now updated during the execution of Host On-Demand. Please make sure you do a TSO MKDIR for the new mountpoint and also MOUNT the new HFS to the new mountpoint.
12. If you are running multiple stacks and you want the Host On-Demand server to run on one stack only, you need to create stack affinity by adding the respective environment variable to the *ServiceManager.sh* shell script:

```
export _BPXK_SETIBMOPT_TRANSPORT=XXXXXXXX
```

where XXXXXXXX is the name of the TCP/IP stack with which you want to establish affinity.

13. If you you experience java Service Manager 'out-of-memory' errors, causing various tasks to fail such as:
 - Saving session information
 - Loading a large number of users
 - Attempting to save large blocks of trace data

The following two parameters can be used on the start-up command in the Host On-Demand Service Manager shell start-up script (*/usr/lpp/HOD/hostondemand/lib/ServiceManager.sh*)

a. *-mx32m*

- The *mx32m* parameter increases the maximum Java heap size. The heap size is increased from the default value of 3 to 32MB.

b. *-oss256k*

- The *oss256k* parameter increases the maximum Java stack size (per thread). The value is changed from the default of 128 KB to 256 KB.

These parameters have been added as a new start-up option line in your *ServiceManager.sh* script. The line is commented out by default. If you need to run Host On-Demand with increased Java heap and stack parameters, uncomment the line in the *ServiceManager.sh* shell script that begins as follows (making sure to comment out your previous executable statement):

```
java -mx32m -oss256k -classpath ../sm.zip:.....
```

Appendix A. Host On-Demand Install Logic

A.1 SMP/E Modification Control Statements

The SMP/E Modification Control Statements (SMPMCS) for Host On-Demand are contained in the SMPMCS file on the installation tape. The SMPMCS for each FMID in the product will be loaded to the SMPPTS data set, with a member name matching the FMID, when the FMID is SMP/E RECEIVED. You may browse or print these members using TSO/E, ISPF, or IEBGENER (or IEBPTPCH) .

A.2 SMP/E JCLIN

The files containing JCLIN are:

FMID HHOJ700: 'high-level-qualifier'.HHOJ700.F1(HHOJ700)

Note: The high-level-qualifier is the qualifier specified as the DSPREFIX in the SMP/E OPTIONS.

Reader's Comments

Program Directory for IBM WebSphere Host On-Demand V7 for OS/390 and z/OS October 2002

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Necessity of all installation tasks	1	2	3	4	5	N
Accuracy of the definition of the installation tasks	1	2	3	4	5	N
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