

IBM Distributed Computing Environment Version 3.1 for
Solaris:



Release Notes

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Note

Before using this document, read the general information under "Appendix. Notices" on page 11.

First Edition (August 1999)

This edition applies to Version 3.1 of *IBM Distributed Computing Environment for Solaris* and to all subsequent releases and modifications until otherwise indicated in new editions or technical newsletters.

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DCE Version 3.1 for Solaris Release Notes

Introduction

This document contains information about the IBM® DCE Version 3.1 for Solaris release. DCE 3.1 is available in the following packages:

- **DCE Version 3.1 Base Services for Solaris** which includes the following packages:
 - **DCE Client Services, Version 3.1**
 - **DCE System Management, Version 3.1**
 - **DCE X.500 API Library, Version 3.1**
 - **DCE Tools for Application Developers, Version 3.1**
 - **DCE Messages, Version 3.1**
 - **DCE Online Documentation, Version 3.1**
 - **DCE Data Encryption Standard (DES) Library, Version 3.1**
- **DCE Version 3.1 for Solaris** which includes all the packages found in **DCE Version 3.1 Base Services for Solaris** as well as the following packages:
 - **DCE Cell Directory Server, Version 3.1**
 - **DCE Security Server, Version 3.1**

Previous releases of the Distributed Computing Environment for Solaris included the Distributed File System (DFS) product. With this release, the packaging has been changed and DFS is no longer included. Previously shipped versions of DFS (Version 2.0 or prior) will not run on machines with DCE V3.1 for Solaris. IBM intends to release a new version of the DFS product that runs with the DCE V3.1 for Solaris product at a later date.

Highlights of This Release

IBM DCE Version 3.1 for Solaris is based upon The Open Group's (TOG) release, formerly known as Open Software Foundation (OSF) DCE 1.2.2 release. The following are significant items that have been added since the OSF Version 1.1 base release.

Significant OSF Additions

The significant items added by OSF in the DCE 1.2.2 release supported by IBM DCE Version 3.1 for Solaris include:

Kerberos V5 interoperability

The DCE security service includes an implementation of the MIT Kerberos Version 5 (V5) authentication and key distribution service. Prior to DCE 1.2.2 there had been no formal OSF DCE interoperability commitments.

DCE 1.2.2 enhances the high degree of interoperability that existed in previous releases with the committed support for the IETF-RFC 1510 protocol. The protocol formally allows Kerberos V5 applications running on either DCE or non-DCE platforms to access the DCE security server as a full-function IETF-RFC 1510 Kerberos server. The DCE security server's interoperability has been tested against MIT Kerberos, Version 5 release beta 4 and beta 5.

Public Key Login Server

Public Key Login Server support provides the OSF DCE 1.2.2 capability of using public and private keys for initial DCE authentication from client systems that support the OSF DCE 1.2.2 public key feature. DCE 3.1 for Solaris clients do not support this public key feature. Public key support does not include the public key certification API or the private key storage server.

User-to-user authentication

The user-to-user authentication facility provides an alternate Ticket Granting Service (TGS) protocol as defined in IETF-RFC 1510. In particular it is now possible to direct a protected RPC to a program that has only a login context, and no key table (file) or other access to a long-term key.

Global groups

DCE 1.2.2 allows principals from a foreign cell to be added to groups in the local cell. This makes enterprise-wide security administration easier.

Scalability improvements to security

Memory management in the security server has been enhanced to be more efficient when processing updates to the registry database. This will particularly benefit cells with large number of principals and updates to the registry.

The checkpoint interval for each security server replica is now configurable. This allows the cell administrator to set the times and intervals when a replica will checkpoint (save to disk) the registry database.

IDL C++ support

IDL C++ support allows client programs that are written in C++ to use DCE RPC in a transparent manner by using C++ constructs. In

DCE 1.2.2, the IDL language has been extended to support C++ features such as inheritance and object references.

IBM Enhancements

Significant improvements added by IBM to the IBM DCE Version 3.1 for Solaris release include:

Internationalization

DCE 3.1 has naming extensions for internationalization. It is being translated into several language versions.

Global Directory Agent (GDA) over LDAP

Global Directory Agent (GDA) over LDAP is an extension to GDA that allows the resolution of non-DNS style foreign cell names. X.500 directories and any directories that support the LDAP protocol can be used to establish intercell communication.

Improved SMP Performance

The connection-oriented RPC has been improved to provide greater scalability on multiprocessor clients and servers.

Slim client configuration

A new client configuration option has been added. It reduces DCE memory consumption on client systems and simplifies client administration.

Password Strength Server

The Password Strength Server originally provided in OSF DCE 1.1 is available on DCE 3.1. It provides the tools necessary to develop customized password management servers and to call them from client password change programs.

Password Strength Enhancements

The IBM DCE Enhanced Password Strength Server extends the capabilities of the password strength server in previous DCE releases. The enhanced server allows you to control the following characteristics of user passwords:

- Password composition
- Password age
- Password history and re-use
- Password dictionaries and user-defined rules

DCE Event Management Service (EMS)

Event Management Service (EMS) provides asynchronous event support for DCE based applications. DCE EMS manages event services in a DCE cell. EMS consists of two parts - the emsd (EMS daemon) server and APIs to access event services through an interface to the suppliers, consumers, and event service administration for use by EMS clients.

DCE Simple Network Management Protocol (SNMP) Agent

Simple Network Management Protocol (SNMP) provides network management support in the TCP/IP environment for monitoring DCE resources and services. System administrators and system management application programmers can use SNMP to easily monitor the DCE environment so that they can focus on making their resources and services more manageable.

New configuration utilities

The dcecp control program offers a common command line interface for managing DCE services. DCE 3.1 provides the following configuration utilities:

- **clean_up.dce**
- **config.dce**
- **kerberos.dce**
- **mkreg.dce**
- **rmreg.dce**
- **show.cfg**
- **start.dce**
- **stop.dce**
- **unconfig.dce**

CDS Update Propagation

CDS updates are now propagated immediately to all relevant clearinghouses.

Audit support and new audit APIs

The DCE audit service is a feature of OSF DCE 1.1 and is available in IBM DCE 3.1. It provides the capability to log critical events in a DCE application server.

Events can be logged in audit records based on specified criteria. APIs are provided which can be used in application server programs to record audit events. APIs are also provided to analyze audit records, and IBM provides enhancements to those provided by OSF. The DCE security server, CDS, DTS, and password strength daemon use the audit service and have specific events which can be audited.

DCE Audit Information Enhancements

Audit Information Enhancements provide enhanced enablement for an administrator to recognize if the security of the Trusted Computing Base (TCB) has been compromised. The administrator has enhanced abilities to reconstruct, completely, the state of the system before the event took place. DCE also provides the ability to read and understand the textual representation of this information. This translation of event-specific information for the administrator is the default behavior.

Preferred Security Replica

This feature allows a cell administrator to prioritize a DCE client's use of security server replicas within a cell. This can improve the performance and efficiency when a client attempts to contact a security server to authenticate or to perform registry operations.

CDS Prefencing

CDS Prefencing enables administrators to specify a preferred CDS clearinghouse from which a client will obtain CDS information. This feature is provided to improve performance at CDS clients, by enabling cell administrators the ability to specify a preferred CDS clearinghouse from which a client will obtain CDS information. This is useful in situations where, for example, there are multiple high-performance LANs connected by a low-performance WAN, and there are CDS replica clearinghouses in each of the LANs. With this feature, administrators can specify that local clearinghouses are preferred over distant clearinghouses, and then clients will use the distant clearinghouses only when the local clearinghouses are unable to satisfy a request.

DCE Web Secure

In addition to the Netscape FastTrack 3.01 and Enterprise 3.61 Web servers, the DCE Web Secure component includes support for the Netscape Enterprise 3.01 and 3.51 Web servers. Also supported are the Netscape FastTrack 2.01 and Enterprise 2.01 Web servers. This allows administration of the DCE cell using a Web browser from a machine that is not configured into the cell. The DCE Web Secure component provides DCE credentials to Common Gateway Interface (CGI) programs.

Pluggable Authentication Modules (PAM)

PAM is an API and framework that allows integration of multiple authentication mechanisms into standard system programs like **login**, **ftpd**, and **passwd**.

Public Key Certificate Login

Public Key Certificate Login allows DCE users to prove their identity to the DCE authentication service using an X509v3 digital certificate and its associated public key pair, rather than a shared-secret key password. This authentication mechanism, in the event of a compromise of the DCE Security Server, prevents exposure to the intruder of any identifying information about the users. Users need not have either a traditional secret-key password nor a public key pair generated by the DCE Security Server. This feature is intended for customers who are currently using the Entrust Public Key Infrastructure (PKI) and have a need to map Entrust users to DCE users for authentication and access to resources provided by DCE. DCE 3.1 for Solaris servers and clients support this public key certificate login feature.

Public Key Server

Public Key Server support provides the OSF DCE 1.2.2 capability of using public and private keys for initial DCE authentication from client systems that support the OSF DCE 1.2.2 public key feature. DCE 3.1 for Solaris clients do not support this public key feature. Public key support does not include the public key certification API or the private key storage server.

Transarc DCE Commands

The following DCE Transarc commands documented in Transarc's DCE Command Reference Supplement are enabled in this release:

- cdscat
- cdsedit
- cdsfind
- cdsls
- cdsping
- cdsrepl
- chpass
- kinfo
- kpurge
- pdgquery
- seccat
- secls

Read the following information before installing IBM DCE Version 3.1 for Solaris.

README File

The README files contain information about the installation and configuration of DCE Version 3.1 for Solaris as well as notes on known problems and limitations. The READMEs are available on the CD-ROM as well as on installed systems. The README files are located on the CD-ROM in the following location (where *directory* is the directory to which you have mounted the CD-ROM):

- *directory/README* - Lists the README files shipped with this release.
- *directory/README.en_US* - English README
- *directory/README.it* - Italian README
- *directory/README.ko* - Korean README
- *directory/README.zh.GBK* - Simplified Chinese (GBK) README
- *directory/README.zh* - Simplified Chinese (EUC) README

The README files are located on an installed machine in the following location (*/opt/dcelocal* also contains symbolic links to these files):

- */opt/dce/README* - Lists the README files shipped with this release.
- */opt/dce/README.en_US* - English README
- */opt/dce/README.it* - Italian README
- */opt/dce/README.ko* - Korean README
- */opt/dce/README.zh.GBK* - Simplified Chinese (GBK) README
- */opt/dce/README.zh* - Simplified Chinese (EUC) README

Supported Versions of Solaris

DCE Version 3.1 for Solaris supports the Solaris 7 for SPARC release of the Solaris operating system.

Before You Install

In addition to the base operating system requirements, additional Solaris software updates might be required. The following describes the DCE packages and the Solaris software updates that they require. See Table 1 on page 8 for a listing of the prerequisite software.

Prerequisite Software

Table 1 on page 8 lists the DCE 3.1 for Solaris packages in the order in which they are installed.

Note: Those software names beginning with IDCE are at the same release level as the shipped DCE product.

Table 1. Installation packages and prerequisite software

Package	Prerequisite ¹ Packages	Prerequisite Package Description
IDCEclnt	Solaris 7 for SPARC	Solaris 7 for SPARC Operating System
IDCEsecs	IDCEclnt	DCE Client Services
IDCEcdss	IDCEclnt	DCE Client Services
IDCEtools	IDCEclnt	DCE Client Services
IDCEsmgmt	IDCEclnt	DCE Client Services
IDCEpriv	IDCEclnt	DCE Client Services
IDCEenUSm	IDCEclnt	DCE Client Services
IDCEitm ²	IDCEclnt	DCE Client Services
IDCEesm ²	IDCEclnt	DCE Client Services
IDCEjam ²	IDCEclnt	DCE Client Services
IDCEjaPm ²	IDCEclnt	DCE Client Services
IDCEkom ²	IDCEclnt	DCE Client Services
IDCEzhm ²	IDCEclnt	DCE Client Services
IDCEGBKm	IDCEclnt	DCE Client Services
IDCEenUSd	IDCEclnt	DCE Client Services
IDCEitd ³	IDCEclnt	DCE Client Services
IDCEkod ³	IDCEclnt	DCE Client Services
IDCEzhd ³	IDCEclnt	DCE Client Services

Notes:

¹Prerequisite package(s) must be installed prior to the the package that you want to install. (The package can not be installed before the prerequisite package.)

²Translated Message Catalogs. Note that messages will be displayed in English unless the **NLSPATH** variable includes the clause **/usr/lib/locale/%L/LC_MESSAGES/%N**. See Chapter 3 of the *IBM DCE Version 3.1 for AIX and Solaris: Problem Determination Guide* for more information.

³Translated Online Documentation. Note that documentation will be displayed in English unless the **NLSPATH** variable includes the clause **/usr/lib/locale/%L/LC_MESSAGES/%N**. See Chapter 3 of the *IBM DCE Version 3.1 for AIX and Solaris: Problem Determination Guide* for more information.

Disk Space Requirements

See the **README** file for the most currently available package space requirements. Note that the sizes listed are approximations.

The following packages require the following amounts of disk space.

Table 2. Package disk requirements

Installable Packages	Space in Mb
IDCEclnt	25.5
IDCEsecs	3.8
IDCEcdss	1.7
IDCEsmgmt	.9
IDCEtools	6.5
IDCEpriv	.2
IDCEenUSm	.9
IDCEesm	1.1
IDCEitm	1.0
IDCEjam	1.0
IDCEjaJPm	1.0
IDCEkom	.9
IDCEGBKm	.7
IDCEzhm	.7
IDCEenUSd	63.5
IDCEitd	64.7
IDCEkod	67.3
IDCEzhd	69.2

DCE Hardcopy Documentation for Installation and Configuration

IBM DCE Version 3.1 for Solaris comes with a hardcopy version of *IBM DCE Version 3.1 for Solaris: Quick Beginnings*. This book describes the IBM DCE 3.1 product and explains how to plan for, install, and configure DCE 3.1. It also contains information on how to print PDF versions of the DCE online documentation for those customers who prefer hardcopy documentation.

DCE Online Documentation

All IBM DCE Version 3.1 for Solaris online information is provided with the product.

Packages to Install

DCE documentation is shipped in HTML and PDF (Adobe Acrobat Reader) formats. To get the documentation, install the appropriate packages as follows:

- **IDCEenUSd** - English Documentation
- **IDCEitd** - Italian Documentation
- **IDCEkod** - Korean Documentation
- **IDCEzhd** - Simplified Chinese (EUC) Documentation

Viewing the DCE Online Documentation

The IBM DCE Version 3.1 for Solaris online documentation is provided in two file formats:

- HTML files that are viewable from any frame-enabled Web browser, such as Netscape Navigator.
- PDF files that are viewable with a PDF viewer, such as Adobe Acrobat Reader.

Viewing the DCE Online Documentation Using a Web Browser

Users with graphic interfaces can use a Web browser such as the **Netscape Navigator** browser, to read the DCE documentation HTML files.

If you have installed the documentation files locally, use your Web browser to view the DCE HTML documentation by opening the file:

`/opt/dce/docs/html/en_US/index.html`

Note: `en_US` can be substituted with one of the following locale names:

- **it**
- **ko**
- **zh**

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