



IBM Directory Server 4.1 Release Notes



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Note

Before using this information and the product it supports, read the general information under "Notices" on page 9.

First Edition (April, 2002)

This edition applies to version 4, release 1, of The IBM[®] Directory Server and to all subsequent releases and modifications until otherwise indicated in new editions. See the *IBM Directory Server Version 4.1 README Addendum* for later updates.

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Preface

This document is a supplement to the IBM Directory 4.1 product documentation and describes features and functions made available to you in this release.

Chapter 1. Environments

Supported platforms

IBM Directory 4.1 is supported on the following platforms:

- Directory server
 - AIX[®] 4.3.3 or higher
 - Hewlett-Packard UNIX[®] (HP-UX) 11
 - Red Hat Linux 7.1 or higher
 - SuSE Linux 7.2 or higher
 - Turbolinux 6.5 or higher
 - Linux S/390[®]
 - Red Hat 7.2
 - TurboLinux 6.5
 - SuSE Linux 7.0
 - Solaris Operating Environment Software (Solaris) Version 7 or higher
 - Microsoft[®] Windows NT[®] 4.0, Windows[®] 2000

Notes:

1. Linux SuSE 7.2 and Turbolinux 6.5 distributions use 2.2 kernels.
2. Microsoft Windows XP operating system is not supported at this time.

- LDAP Client and Runtime Applications
 - AIX 4.3.3 or higher
 - Hewlett-Packard UNIX (HP-UX) 11
 - Red Hat Linux 7.1 or higher
 - SuSE Linux 7.2 or higher
 - Turbolinux 6.5 or higher
 - Linux S/390
 - Solaris Operating Environment Software (Solaris) Version 7 or higher
 - Microsoft Windows 98, Windows NT and Windows 2000

Note: Windows XP operating system is not supported at this time

- LDAP/Java (class libraries provided by Sun Microsystems)
 - AIX 4.3.3 or higher
 - Red Hat Linux 7.1 or higher
 - SuSE Linux 7.2 or higher
 - Turbolinux 6.5 or higher
 - Solaris 7 or higher
 - Windows 98, Windows NT and Windows 2000 or higher

Note: Windows XP operating system is not supported at this time.

Software requirements

IBM Directory server requires the following software to be installed:

- One of the following versions of DB2 Universal Database™:
 - version 7.1 with Fix Pack 3 or later
 - version 7.2
- One of the following Web servers (does not apply to HP-UX or Linux platforms):
 - IBM HTTP 1.3.12 or higher
 - iPlanet Enterprise server 3.6.3 or 4.0, or iPlanet Fast Track Server 3.01
 - Apache Server 1.3.12
 - Microsoft Internet Information Server 4.0
 - Lotus® Domino™ Enterprise Webserver 5.0.2b

Support for industry standards

The following standards were implemented in this release:

- RFC 1274 The COSINE and Internet X.500 Schema
- RFC 1777 Lightweight Directory Access Protocol (V2)
- RFC 1778 String Representation of Standard Attribute Syntaxes
- RFC 1779 String Representation of Distinguished Names
- RFC 1823 LDAP Application Program Interface (V2)
- RFC 2052 A DNS RR for Specifying the Location of Services (DNS SRV)
- RFC 2219 Use of DNS Aliases for Network Services
- RFC 2222 Simple Authentication and Security Layer (SASL)
- RFC 2247 Using Domains in LDAP/X.500 Distinguished Names
- RFC 2251 Lightweight Directory Access Protocol (V3)
- RFC 2252 Lightweight Directory Access Protocol (V3): Attribute Syntax Definitions
- RFC 2253 Lightweight Directory Access Protocol (V3): UTF-8 String Representation of Distinguished Names
- RFC 2254 The String Representation of LDAP Search Filters
- RFC 2255 The LDAP URL Format
- RFC 2256 A Summary of the X.500(96) User Schema for use with LDAPv3
- RFC 2891 LDAP Control Extension for Server Side Sorting of Search Results
- The Open Group schema for liPerson and liOrganization (NAC/LIPS)

Interoperability

The IBM Directory client interoperates with:

- iPlanet Web Server or Fast Track Edition.
- SecureWay® Directory server.
- Active Directory Services for Microsoft Windows. See Active Directory documentation for which versions are compatible with IBM Directory.
- Tivoli® Policy Director. See Policy Director documentation for which versions are compatible with IBM Directory.
- WebSphere® Application Server 4.x product suite. For a list of Websphere products compatible with IBM Directory 4.1, see the *IBM Directory Server 4.1 Server README* or the *IBM Directory Server 4.1 README Addendum*.

- Lotus Domino.

The IBM Directory server interoperates with:

- IBM's LDAP client (with and without SSL).
- Windows 2000 LDAP clients.
- iPlanet Client Directory.

DMT interoperates with:

- IBM Directory Server on AIX, Windows , Solaris, Linux (Intel-based distributions), and OS/400[®] operating systems. It might work with some other LDAP directories, but such use is not supported.

National Language Support (NLS)

The IBM Directory is NLS-enabled. Sever Administration and Directory Management Tool, as well as messages, helps and documentation are translated into all French, Italian, German, Spanish, Japanese, Korean, Simplified Chinese, Traditional Chinese and Brazilian Portuguese on all platforms except HP-UX. In addition, the AIX operating system is translated into Russian, Slovakian, Polish, Hungarian, Czech and Catalan.

IBM Directory 4.1 on HP-UX is not translated at this time.

Linux operating system Intel distributions now include translation where supported by the distribution and IBM. Please see the following tables for languages supported by the Linux distributions:

Linux single byte language support:

Distribution	English	French	Italian	German	Spanish	Brazilian Portuguese
Red Hat 7.1	Yes	Yes	Yes	Yes	Yes	No
SuSE 7.2	Yes	Yes	Yes	Yes	Yes	Yes
Turbolinux 6.5	Yes	No	No	No	No	No

Linux double byte language support:

Distribution	Japanese	Korean	Simplified Chinese	Traditional Chinese
Red Hat 7.1	Yes	No	No	No
SuSE 7.2	No	No	No	No
Turbolinux 6.5	Yes	Yes	Yes	Yes

Chapter 2. New Function

The following functions have been added in the 4.1 release:

- 64-bit client (AIX)
- Dynamic groups
- Improved performance
- InstallShield MultiPlatform
- Nested groups
- Network Authentication Services (Kerberos) 1.2
- Paged search
- Process size limit increase and local loopback connections
- Sorted search results
- Special characters in distinguished names

64-bit client (AIX 5.1)

The C API for the AIX 5.1 client expands the previous SDK and allows non-SSL 64-bit IBM Directory applications.

Dynamic groups

Dynamic groups are groups that are defined using a search expression. When an attribute is added to a directory entry, the entry automatically becomes a member of the group. In addition, simple, efficient methods are provided for client applications to:

- Test whether a specific entry is a member of a specific group
- List all the members of a specific group
- List all the groups to which a specific entry belongs

The search expressions can be used in combination with existing group attributes.

These groups can be used for access control.

Improved performance

Several performance improvements are featured in this release. For example, it is now possible for multiple clients to update their directories simultaneously. Communication between the server and plugins has been significantly improved, as well as search and compare performance. For more detailed information about performance tuning for IBM Directory 4.1, see the *IBM Directory Server Version 4.1 Tuning Guide*.

InstallShield MultiPlatform

The IBM Directory installation program uses InstallShield MultiPlatform, which gives the installation program the same look and feel across all supported platforms except HP-UX and Linux 390. The installation program now includes an integrated installation of DB2[®] V7.2, IBM HTTP Server V1.3.12, and GSKit Version 5.0.4.48, and componentized installation of the client and DMT.

Nested groups

Nesting of groups enables the creation of hierarchical relationships that can be used to define inherited group membership. A nested group is defined as a child group entry whose DN is referenced by an attribute contained within a parent group entry. A new attribute has been defined to explicitly distinguish nested groups from ordinary members.

Network Authentication Services (Kerberos) 1.2

The IBM Directory C client and server now use the Network Authentication 1.2 C client on AIX, Windows NT, and Windows 2000 operating systems. The IBM Directory server is compatible with the authentication services provided by Microsoft.

Paged search

The paged results control allows you to manage the amount of data returned from a search request. You can request a subset of entries (a page) instead of receiving all the results at once. Subsequent search requests display the next page of results until the operation is canceled or the last result is returned. For example, if you have a hundred entries that match your search, you can specify that the entries be displayed on pages containing 25 results each.

Process size limit increase and local loopback connections

The process size limit for slapd on the AIX, Solaris, and Linux operating systems has been increased from 256 MB to 2 GB. This allows for increased cache sizes and better scalability. In addition, database connections on all UNIX platforms now use local loopback TCP/IP connections, which eliminate the need for shared memory segments and make 2 GB of memory available for a server running on an AIX operating system. This also greatly increases the number of available database connections.

Sorted search

The sorted search control allows a client to receive search results sorted based on a list of criteria, where each criteria represents a sort key. This moves the responsibility of sorting from the client application to the server, where it might be done more efficiently. For example, you might want to sort a list of employees by surname, common name, and telephone number. Instead of building the search list twice so it can be sorted (once at the server and then again at the client after all the results are returned), the search list is built only once, and then sorted, before returning the results to the client application.

Special characters in distinguished names

A distinguished name (DN) can now contain the following special characters: , (comma), = (equals), + (plus), <, >, #, ; (semicolon), \ (backslash), and "" (quotation marks).

Instructions are provided for using these special characters in an attribute value in a DN string.

Chapter 3. Changed Functionality

IBM Directory 4.1 no longer supports IBM JNDI. IBM Directory 4.1 includes the Sun Microsystems JNDI. Please see Sun documentation for information about Sun JNDI. There might be some functional differences between IBM and Sun implementations that require changes to existing JNDI applications. In Chapter 11 of IBM Directory Server Version 4.1 Installation and Configuration Guide for Multiplatforms, there are instructions that show you how to back up your IBM JNDI code. IBM JNDI applications might still run, but it is recommended that you begin using Sun JNDI immediately.

Appendix. Notices

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