

IBM Tivoli Directory Server



Release Notes

Version 6.0

IBM Tivoli Directory Server



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Version 6.0

Note

Before using this information and the product it supports, read the general information under Appendix B, "Notices," on page 11.

First Edition (April 2005)

This edition applies to version 6, release 0, of IBM Tivoli Directory Server and to all subsequent releases and modifications until otherwise indicated in new editions.

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Preface

This document contains information about the new features in the IBM® Tivoli® Directory Server Version 6.0 release, as well as last-minute updates.

Who should read this book

This document is intended for system administrators and directory server administrators who are responsible for installing and maintaining IBM Tivoli Directory Server.

Publications

Read the descriptions of the IBM Tivoli Directory Server library, the prerequisite publications, and the related publications to determine which publications you might find helpful. After you determine the publications you need, see “Accessing publications online” on page vi for information about accessing publications online.

IBM Tivoli Directory Server library

The publications in the IBM Tivoli Directory Server library are:

IBM Tivoli Directory Server Version 6.0 Release Notes®

Contains information about the new features in the IBM Tivoli Directory Server Version 6.0 release, as well as last-minute updates.

IBM Tivoli Directory Server Version 6.0 Installation and Configuration Guide

Contains complete information for installing, configuring, and uninstalling IBM Tivoli Directory Server. Includes information about migrating from a previous version of IBM Tivoli Directory Server or SecureWay® Directory.

IBM Tivoli Directory Server Version 6.0 Administration Guide

Contains instructions for performing administrator tasks through the Web Administration Tool and the command line.

IBM Tivoli Directory Server Version 6.0 Performance Tuning Guide

Contains information about tuning your server for better performance.

IBM Tivoli Directory Server Version 6.0 Server Plug-ins Reference

Contains information about writing server plug-ins.

IBM Tivoli Directory Server Version 6.0 C-Client SDK Programming Reference

Contains information about writing Lightweight Directory Access Protocol (LDAP) client applications.

IBM Tivoli Directory Server Version 6.0 Problem Determination Guide

Contains information about possible problems and corrective actions that can be tried before contacting Software Support.

IBM Tivoli Directory Server Version 6.0 Messages Guide

Contains a list of all informational, warning, and error messages associated with IBM Tivoli Directory Server 6.0.

Related publications

Information related to IBM Tivoli Directory Server is available in the following publications:

- IBM Tivoli Directory Server Version 6.0 uses the JNDI client from Sun Microsystems. For information about the JNDI client, refer to the *Java™ Naming and Directory Interface™ 1.2.1 Specification* on the Sun Microsystems Web site at <http://java.sun.com/products/jndi/1.2/javadoc/index.html>.
- The Tivoli Software Library provides a variety of Tivoli publications such as white papers, datasheets, demonstrations, redbooks, and announcement letters. The Tivoli Software Library is available on the Web at <http://publib.boulder.ibm.com/tividd/td/tdprodlist.html>
- The *Tivoli Software Glossary* includes definitions for many of the technical terms related to Tivoli software. The *Tivoli Software Glossary* is available at <http://publib.boulder.ibm.com/tividd/glossary/tivoliglossarymst.htm>
- The DB2® documentation library is located at <http://www.ibm.com/software/data/db2/library/>.

Accessing publications online

The publications for this product are available online in Portable Document Format (PDF) or Hypertext Markup Language (HTML) format, or both in the Tivoli software library: <http://publib.boulder.ibm.com/tividd/td/tdprodlist.html>

To locate product publications in the library, click the **Product manuals** link on the left side of the library page. Then, locate and click the name of the product on the Tivoli software information center page.

Product publications include release notes, installation guides, user's guides, administrator's guides, and developer's references.

Note: To ensure proper printing of PDF publications, select the **Fit to page** check box in the Adobe Acrobat Print window (which is available when you click **File** → **Print**).

Ordering publications

You can order many Tivoli publications online at the following Web site:

<http://www.elink.ibm.com/public/applications/publications/cgibin/pbi.cgi>

You can also order by telephone by calling one of these numbers:

- In the United States: 800-879-2755
- In Canada: 800-426-4968

In other countries, see the following Web site for a list of telephone numbers:

<http://www.ibm.com/software/tivoli/order-lit/>

Accessibility

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use software products successfully. With this product, you can use assistive technologies to hear and navigate the interface. You also can use the keyboard instead of the mouse to operate all features of the graphical user interface.

Tivoli technical training

For Tivoli technical training information, refer to the IBM Tivoli Education Web site: <http://www.ibm.com/software/tivoli/education>.

Support information

If you have a problem with your IBM software, you want to resolve it quickly. IBM provides the following ways for you to obtain the support you need:

- Searching knowledge bases: You can search across a large collection of known problems and workarounds, Technotes, and other information.
- Obtaining fixes: You can locate the latest fixes that are already available for your product.
- Contacting IBM Software Support: If you still cannot solve your problem, and you need to work with someone from IBM, you can use a variety of ways to contact IBM Software Support.

For more information about these three ways of resolving problems, see Appendix A, "Support information," on page 7.

Conventions used in this book

This reference uses several conventions for special terms and actions and for operating system-dependent commands and paths.

Typeface conventions

The following typeface conventions are used in this reference:

Bold Lowercase commands or mixed case commands that are difficult to distinguish from surrounding text, keywords, parameters, options, names of Java classes, and objects are in **bold**.

Italic Variables, titles of publications, and special words or phrases that are emphasized are in *italic*.

<*Italic*>

Variables are set off with < > and are in <*italic*>.

Monospace

Code examples, command lines, screen output, file and directory names that are difficult to distinguish from surrounding text, system messages, text that the user must type, and values for arguments or command options are in monospace.

Operating system differences

This book uses the UNIX[®] convention for specifying environment variables and for directory notation. When you are using the Windows[®] command line, replace *\$variable* with *%variable%* for environment variables and replace each forward slash (/) with a backslash (\) in directory paths. If you are using the bash shell on a Windows system, you can use the UNIX conventions.

Chapter 1. About this release

IBM Tivoli Directory Server is the IBM implementation of the Lightweight Directory Access Protocol (LDAP) for supported Windows, AIX®, xSeries®, zSeries®, iSeries™, and pSeries® Linux®, Solaris, and HP-UX operating systems. IBM Tivoli Directory Server provides a server that stores directory information using a DB2 database, a proxy server for routing LDAP operations to other servers, a client, and a graphical user interface (GUI) for managing servers.

IBM Tivoli Directory Server is:

- A powerful and authoritative enterprise directory infrastructure that is a critical enabler for enterprise security.
- An important part of the IBM Tivoli Integrated Identity Management portfolio and plays a key role in building the enterprise identity data infrastructure for applications such as identity management, portals, and Web services.
- The default directory for WebSphere® Application Server and Portal, Tivoli Identity Manager and Access Managers, as well as the AIX operating system.

Release 6.0 of IBM Tivoli Directory Server includes the following enhancements:

- Directory standard enhancements
- Security enhancements
- Serviceability and deployment enhancements
- Enhanced platform support
- Performance enhancements

New in this release

IBM Tivoli Directory Server 6.0 includes the following new capabilities:

- Multiple directory servers on a single computer
 - Beginning with this release, multiple directory server instances (all version 6.0) can co-exist on the same computer.
 - Multi-homed support for directory servers.
- Multiple versions of clients on a single computer
 - Beginning with this release:
 - A client from a previous release (4.1, 5.1, or 5.2) can run on the same computer as a version 6.0 server.
 - The version 6.0 client can run on the same computer as a version 4.1, 5.1 or 5.2 server.
 - Coexistence of IBM Tivoli Directory Server with other directory vendors, including openLDAP and sunOne, is supported in this release.
- 64-bit client support

Beginning with this release, 64-bit clients are provided on Solaris, zSeries Linux, iSeries Linux, and pSeries Linux operating systems. (64-bit client and server support was provided on AIX operating systems starting in version 5.2).
- Proxy server
 - A proxy server allows IBM Tivoli Directory Server clients to search and update directory data that is partitioned across multiple directory server instances. The proxy server handles connection pooling, chaining and routing

of requests to reduce complexity for the LDAP client-side applications, and it provides optimum performance. The proxy server supports replicas of partitions, load balancing between replicas, and automatic failover.

- IBM Tivoli Directory Server can handle search and write operations across a distributed LDAP topology that allows clients to bind using single credentials and have group membership handled seamlessly across the server instances. This allows directories to scale to 120 million or more LDAP entries, depending on the environment.
- The proxy server also provides easy deployment for failover and high availability solutions.
- IPv6 middleware enablement
 - IBM Tivoli Directory Server version 6.0 provides support for the IPv6 for host IP names and addresses on all supported operating systems. IPv6 support was provided on AIX operating systems starting with IBM Tivoli Directory Server version 5.2.
- Security enhancements
 - Replication agreements are more secure.
 - Advanced Encryption Standard (AES) based password encryption algorithm is provided.
 - Password policy support is provided for directory administrator passwords.
 - Change log data is more secure.
 - Replication change data is more secure.
- Performance enhancements
 - Search processing modifications have been made to improve the performance of base-scoped searches.
 - Enhancements to the **bulkload** utility reduce the time it takes to load LDAP entries into DB2 using the utility.
 - Replication improvements are provided for faster propagation of updates
- Serviceability and manageability enhancements
 - Unique message identifiers have been added for all messages.
 - A *Problem Determination Guide* is included with this release.
 - A *Messages Guide* is provided. This book describes the user actions that are recommended when errors or warnings occur.
 - Simple Network Management Protocol (SNMP) monitoring of the server is provided.
 - IBM Tivoli Directory Server 6.0 supports using DB2 online backup capabilities for the Directory Server databases.
 - Other enhancements include server tracing, first failure data capture (FFDC), and log file management and collection.
- Ease of use and deployment improvements
 - Replication conflict resolution and logging by use of an entry modification timestamp are provided.
 - Non-root users on AIX, Linux, Solaris, and HP-UX operating systems can now administer the server.
 - The InstallShield GUI installation program is now provided for all supported Linux operating systems, including zSeries, iSeries, and pSeries.
 - Silent uninstallation on Windows operating systems is provided.
- Additional operating system support
 - Support for SuSe Linux Enterprise Server 9 is provided.

- Support for AIX 5.3 is provided.
- Updated versions of corequisite products are provided.
The InstallShield GUI installation program includes an integrated installation of the following products, which can be downloaded on the electronic software delivery:
 - DB2 Universal Database™ V8.1 FP8 Enterprise Server Edition (DB2)
 - Global Security Kit (GSKit) Version 7.0.3.3
 - The embedded version of WebSphere Application Server Express V5.1.1
 - IBM SDK Java 2 Technology Edition V1.4.2
 - If you acquire IBM Tivoli Directory Server through Passport Advantage, a copy of IBM Tivoli Directory Integrator 6.0 is also provided for limited use with IBM Tivoli Directory Server 6.0.

Chapter 2. Known limitations, problems, and workarounds

The following sections describe known limitations and problems that you might encounter and workarounds that you might need.

Limitations

The following sections describe limitations you might encounter when using IBM Tivoli Directory Server 6.0.

Limitations of IBM Tivoli Directory Server 6.0 on SuSE Linux Enterprise Server 8

Because there are several limitations when you run IBM Tivoli Directory Server 6.0 on SuSE Linux Enterprise Server 8, use SuSE Linux Enterprise Server 9 if at all possible. The following limitations are present on SuSE Linux Enterprise Server 8:

- The proxy server is **not** supported on SuSE Linux Enterprise Server 8.
- The **ibmdiradm** process is not startable through the inittab on SuSE Linux Enterprise Server 8.
- New memory and threading capabilities introduced with SuSE Linux Enterprise Server 9 provide significant performance improvements, especially on multi-processor environments.

Focus not visible when using keyboard in Web Administration Tool

If you are using the Mozilla browser on AIX, xSeries Linux, Solaris, or HP-UX operating systems, you might see incorrect results when using the keyboard in the Web Administration Tool. (The following is an example of the problem.)

If you are using only the keyboard, and you log on to the console as superadmin and then select **Manage console servers**, while viewing the table of servers, if you use the keyboard to tab to the **Collapse table** icon, the focus does not appear to be on the icon even though it is selected.

This problem might also occur with other icons on other panels in the Web Administration Tool.

Known problems and workarounds

The following sections describe problems you might encounter when using IBM Tivoli Directory Server 6.0 and solutions for these problems.

Connecting to a directory server through the Web Administration Tool using SSL

After you configure the Web Administration Tool for SSL, as described in the *IBM Tivoli Directory Server Version 6.0 Administration Guide*, you might also need to do the following to successfully log in.

Stop the application server, and then edit the IDSServersInfo.xml file to manually add the **jks** value to the attribute in the xml file.

You can find the IDSServersInfo.xml file in the following directory:

```
<WAS_HOME>\installedApps\DefaultNode\IDSWebApp.war.ear\  
  IDSWebApp.war\WEB-INF\classes\IDSServerConfig\IDSServersConfig
```

<WAS_HOME> is the directory where the embedded version of WebSphere Application Server - Express or WebSphere Application Server is installed.

The file contains the information that follows. Edit the file and add the **jks** strings that are shown in **bold** font to the file.

```
<!-- Location of the key ring file password -->  
<ids-key-ring-password>f002d7843f1ec4</ids-key-ring-password>  
  
<!-- The key ring file type -->  
<ids-key-ring-file-type>jks</ids-key-ring-file-type>  
  
<!-- Location of the trust store file Relative -->  
<ids-trust-store-file>E:/gskkit7/webkey/ldapkey.jks</ids-trust-store-file>  
  
<!-- The trust store file password -->  
<ids-trust-store-password>f002d7843f1ec4</ids-trust-store-password>  
  
<!-- The trust store file type -->  
<ids-trust-store-file-type>jks</ids-trust-store-file-type>
```

Start the application server.

Correction to Web Administration Tool help information

The Web Administration Tool helps, when describing the `ibm-slapdReplContextCacheSize` attribute, are incorrect. This attribute specifies the size in bytes of the replication context cache, rather than the number of entries in the cache. The information in the *IBM Tivoli Directory Server Version 6.0 Administration Guide* is correct.

Appendix A. Support information

This section describes the following options for obtaining support for IBM products:

- “Searching knowledge bases”
- “Obtaining fixes”
- “Contacting IBM Software Support” on page 8

Searching knowledge bases

If you have a problem with your IBM software, you want it resolved quickly. Begin by searching the available knowledge bases to determine whether the resolution to your problem is already documented.

Search the information center on your local system or network

IBM provides extensive documentation that can be installed on your local computer or on an intranet server. You can use the search function of this information center to query conceptual information, instructions for completing tasks, reference information, and support documents.

Search the Internet

If you cannot find an answer to your question in the information center, search the Internet for the latest, most complete information that might help you resolve your problem. To search multiple Internet resources for your product, expand the product folder in the navigation frame to the left and select **Web search**. From this topic, you can search a variety of resources including:

- IBM technotes
- IBM downloads
- IBM Redbooks™
- IBM developerWorks®
- Forums and newsgroups
- Google

Obtaining fixes

A product fix might be available to resolve your problem. You can determine what fixes are available for your IBM software product by checking the product support Web site:

1. Go to the IBM Software Support Web site (<http://www.ibm.com/software/support>).
2. Under **Products A - Z**, select your product name. This opens a product-specific support site.
3. Under **Self help**, follow the link to **All Updates**, where you will find a list of fixes, fix packs, and other service updates for your product. For tips on refining your search, click **Search tips**.
4. Click the name of a fix to read the description and optionally download the fix.

To receive weekly e-mail notifications about fixes and other news about IBM products, follow these steps:

1. From the support page for any IBM product, click **My support** in the upper-right corner of the page.
2. If you have already registered, skip to the next step. If you have not registered, click register in the upper-right corner of the support page to establish your user ID and password.
3. Sign in to **My support**.
4. On the My support page, click **Edit profiles** in the left navigation pane, and scroll to **Select Mail Preferences**. Select a product family and check the appropriate boxes for the type of information you want.
5. Click **Submit**.
6. For e-mail notification for other products, repeat Steps 4 and 5.

For more information about types of fixes, see the *Software Support Handbook* (<http://techsupport.services.ibm.com/guides/handbook.html>).

Contacting IBM Software Support

IBM Software Support provides assistance with product defects.

Before contacting IBM Software Support, your company must have an active IBM software maintenance contract, and you must be authorized to submit problems to IBM. The type of software maintenance contract that you need depends on the type of product you have:

- For IBM distributed software products (including, but not limited to, Tivoli, Lotus®, and Rational® products, as well as DB2 and WebSphere products that run on Windows or UNIX operating systems), enroll in Passport Advantage® in one of the following ways:
 - **Online:** Go to the Passport Advantage Web page (http://www.lotus.com/services/passport.nsf/WebDocs/Passport_Advantage_Home) and click **How to Enroll**
 - **By phone:** For the phone number to call in your country, go to the IBM Software Support Web site (<http://techsupport.services.ibm.com/guides/contacts.html>) and click the name of your geographic region.
- For IBM eServer™ software products (including, but not limited to, DB2 and WebSphere products that run in zSeries, pSeries, and iSeries environments), you can purchase a software maintenance agreement by working directly with an IBM sales representative or an IBM Business Partner. For more information about support for eServer software products, go to the IBM Technical Support Advantage Web page (<http://www.ibm.com/servers/eserver/techsupport.html>).

If you are not sure what type of software maintenance contract you need, call 1-800-IBMSERV (1-800-426-7378) in the United States or, from other countries, go to the contacts page of the IBM Software Support Handbook on the Web (<http://techsupport.services.ibm.com/guides/contacts.html>) and click the name of your geographic region for phone numbers of people who provide support for your location.

Follow the steps in this topic to contact IBM Software Support:

1. Determine the business impact of your problem.
2. Describe your problem and gather background information.

3. Submit your problem to IBM Software Support.

Determine the business impact of your problem

When you report a problem to IBM, you are asked to supply a severity level. Therefore, you need to understand and assess the business impact of the problem you are reporting. Use the following criteria:

Severity 1	Critical business impact: You are unable to use the program, resulting in a critical impact on operations. This condition requires an immediate solution.
Severity 2	Significant business impact: The program is usable but is severely limited.
Severity 3	Some business impact: The program is usable with less significant features (not critical to operations) unavailable.
Severity 4	Minimal business impact: The problem causes little impact on operations, or a reasonable circumvention to the problem has been implemented.

Describe your problem and gather background information

When explaining a problem to IBM, be as specific as possible. Include all relevant background information so that IBM Software Support specialists can help you solve the problem efficiently. To save time, know the answers to these questions:

- What software versions were you running when the problem occurred?
- Do you have logs, traces, and messages that are related to the problem symptoms? IBM Software Support is likely to ask for this information.
- Can the problem be re-created? If so, what steps led to the failure?
- Have any changes been made to the system? (For example, hardware, operating system, networking software, and so on.)
- Are you currently using a workaround for this problem? If so, please be prepared to explain it when you report the problem.

Submit your problem to IBM Software Support

You can submit your problem in one of two ways:

- **Online:** Go to the "Submit and track problems" page on the IBM Software Support site (<http://www.ibm.com/software/support/probsub.html>). Enter your information into the appropriate problem submission tool.
- **By phone:** For the phone number to call in your country, go to the contacts page of the IBM Software Support Handbook on the Web (techsupport.services.ibm.com/guides/contacts.html) and click the name of your geographic region.

If the problem you submit is for a software defect or for missing or inaccurate documentation, IBM Software Support creates an Authorized Program Analysis Report (APAR). The APAR describes the problem in detail. Whenever possible, IBM Software Support provides a workaround for you to implement until the APAR is resolved and a fix is delivered. IBM publishes resolved APARs on the IBM product support Web pages daily, so that other users who experience the same problem can benefit from the same resolutions.

For more information about problem resolution, see Searching knowledge bases and Obtaining fixes.

Appendix B. Notices

This information was developed for products and services offered in the U.S.A. IBM might not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

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