

IBM AIX 6 with Technology Level 7 Expansion Pack

*Release Notes*





IBM AIX 6 with Technology Level 7 Expansion Pack

*Release Notes*



**Note**

Before using this information and the product it supports, read the information in "Notices" on page 23.

This edition applies to AIX Version 6.1 and to all subsequent releases and modifications until otherwise indicated in new editions.

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## About this document

The release notes include late technical information that is not included in other topics and highlights new functions for the AIX® release.

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## Highlighting

The following highlighting conventions are used in this document:

<b>Bold</b>	Identifies commands, subroutines, keywords, files, structures, directories, and other items whose names are predefined by the system. Also identifies graphical objects such as buttons, labels, and icons that the user selects.
<i>Italics</i>	Identifies parameters whose actual names or values are to be supplied by the user.
Monospace	Identifies examples of specific data values, examples of text similar to what you might see displayed, examples of portions of program code similar to what you might write as a programmer, messages from the system, or information you should actually type.

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## Case-sensitivity in AIX

Everything in the AIX operating system is case-sensitive, which means that it distinguishes between uppercase and lowercase letters. For example, you can use the **ls** command to list files. If you type **LS**, the system responds that the command is not found. Likewise, **FILEA**, **FiLea**, and **filea** are three distinct file names, even if they reside in the same directory. To avoid causing undesirable actions to be performed, always ensure that you use the correct case.

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## ISO 9000

ISO 9000 registered quality systems were used in the development and manufacturing of this product.





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## Read this before installation

This software might contain errors that can result in critical business impact. You must install the latest available fixes before using this software. Fixes can be obtained from IBM® support at <http://www.ibm.com/support/fixcentral/>.

This DVD contains programs provided by IBM and other program suppliers. Each program is licensed under the terms and conditions of that specific program. These terms and conditions can vary depending on the specific program or the program supplier. Specific information on the content of this DVD and the terms and conditions under which these programs are licensed are contained in a readme file on Volume 1 of the media.

To obtain the Content and Terms and Conditions information:

1. Log in as the root user.
2. Insert the *Volume 1* DVD into the media drive. If your media drive is not `/dev/cd0`, substitute the correct device name and type the following commands:

```
mount -v cdrfs -o ro /dev/cd0 /mnt
cp /mnt/README* /tmp
umount /mnt
```

The `/tmp/README` and `/tmp/README.html` files contain the content or the terms and conditions under which these programs are licensed. View this information using a web browser or run the **more** command or the **pg** command.

Softcopy documentation for each product is included with the product. This document supplements the product documentation by outlining the steps for getting started and pointing you to additional product information.



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## Installation, migration, upgrade, and configuration information

These release notes are provided for IBM AIX 6 with Technology Level 7 Expansion Pack.

The AIX 6 with 6100-07 Expansion Pack release notes include information that helps you install the products that are included on the AIX 6 with 6100-07 Expansion Pack. To view the most current version of the Release Notes, go to the online Release Notes topic in the AIX 6.1 Information Center. To view the AIX 6.1 Information Center, go to <http://publib.boulder.ibm.com/infocenter/aix/v6r1/index.jsp>.

The AIX 6 with 6100-07 Expansion Pack is shipped with the AIX 6 with 6100-07 operating system as a vehicle for delivering new IBM and non-IBM products. Most Expansion Pack products are installed using normal installation methods. Because some Expansion Pack products cannot be installed using normal installation methods, their installation procedures are provided under their product descriptions.

The AIX 6 with 6100-07 Expansion Pack might include products that contain a cryptographic function that is subject to special export-licensing requirements by the US Department of Commerce. Import restrictions can also apply to certain countries. Different packages of the AIX 6 with 6100-07 Expansion Pack accommodate varying country export or import restrictions. Refer to “Ordering Information” located in the Expansion Pack announcement to determine which package is appropriate for you. Contact your IBM representative or IBM Business Partner to determine what encryption you are entitled to receive.

The contents of the Expansion Pack vary over time. New software products can be added, changed, or removed. Changes to the content of the AIX 6 with 6100-07 Expansion Pack are announced either as part of an AIX announcement or independently of the release announcement.

Unless otherwise indicated, products can be installed from the DVD using the Web-based System Manager or System Management Interface Tool (SMIT). For more information, see Installation and Migration.

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### Listing and previewing installation software

You can list the available software products, packages, and filesets on AIX media, which can be a CD, DVD, tape, diskette, or directory. The output shows the available packages and filesets on the media. The descriptions are provided at the fileset level.

You can perform a preview installation before doing the actual installation. A preview installation provides the preinstallation information that occurs during a regular installation, except that no software is installed.

When you select a package or fileset to be installed with the preview installation process, you see a list that contains all the requisite packages and filesets needed by the selected package or fileset to be successfully installed.

Other information generated during the preinstallation process concerns file system-size checking. The file systems are checked to ensure that there is enough free space available to install the selected package or fileset.

You can list the software and use the previewing software functions from the command line, the SMIT interface, or the Web-based System Manager interface.

**Note:** RS64, POWER3, and 604 processors, 32-bit kernel, 32-bit kernel extensions, and 32-bit device drivers are no longer supported.

## Listing and previewing software from the command line

1. Log in as the root user.
2. To list the software on the first DVD of the base media, insert the *Volume 1* disk in the media drive, and type:

```
installp -ld/dev/cd0 | pg
```

A list similar to the following is displayed:

```
Fileset Name                Level                I/U Q Content
-----
ICU4C.adt                    2.8.0.0             I  N usr
#  ICU Application Developer's Toolkit

ICU4C.man.en_US              2.8.0.0             I  N usr
#  ICU Manual Pages - U.S. English

...

```

3. To perform a preview installation at the command line, use the **-p** flag with the **installp** command. For example, to preview the installation of the ICU4C.adt fileset, enter the following command from the command line:

```
installp -aXgq -p -d/dev/cd0 ICU4C.adt
```

The preview option displays the filesets that are to be installed, the filesets that are pulled in by requisites, and the system resources that are being used.

## Listing and previewing software from the ASCII SMIT interface

1. Log in as the root user.
2. From the command line, enter `smitty install_update`.
3. Select **Install Software**.
4. Press F4 (List) to list the available input devices and select the appropriate one, or type the input device name in the blank field. Press Enter to continue.
5. In the **SOFTWARE to Install** field, press F4 (List) to list all available software on the selected media.
6. Scroll through the list of software by using the arrow keys or the Page Up or Page Down keys.

**Note:** The following listing shows the available software packages and filesets for that software product.

If the fileset is preceded by a plus sign (+), it is available to be installed. If the fileset is preceded by an at sign (@), the fileset is already installed.

For example, in the following output example, the software product is ICU4C:

```
ICU4C.adt                                ALL
+ 2.8.0.0  ICU Application Developer's Toolkit

ICU4C.man.en_US                           ALL
+ 2.8.0.0  ICU Manual Pages - U.S. English

ICU4C.rte                                  ALL
+ 2.8.0.0  International Components for Unicode

```

The three packages are **ICU4C.adt**, **ICU4C.man.en\_US**, and **ICU4C.rte**. The fileset in the **ICU4C.adt** package is the ICU Application Developer's Toolkit at the 2.8.0.0 level. The descriptions for the software product are provided at the fileset level. There is often more than one fileset per package.

7. Select the package or fileset you want to install and press the F7 (Edit). Press Enter to continue.
8. To preview the installation of the package or fileset that you selected, press the Tab key and select **yes** in the **PREVIEW only?** field. Press Enter to continue.

**Note:** To obtain detailed information about the installation, select **yes** in the **DETAILED output?** field. The filesets being installed are displayed in parentheses.

## To list and preview software using the Web-based System Manager interface

1. Log in as the root user.
2. To initialize the environment, type **wsm &** at the command prompt.
3. In the **Navigation Area**, click on the plus sign (+) to the left of the client you want to manage.
4. Select the **Software** icon by clicking once on the plus sign (+) to the left of the **Software** icon. This action expands the **Software** tree.
5. Click the **Installed Software** icon.
6. At the top of the Web-based System Manager window in the menu bar, click **Software** to display the Software menu.
7. Click **New Software (Install/Update) > Install Additional Software > Advanced Method**.
8. Specify or select a software source.
9. To list available software, click **Browse** to display a tree view of all the software on the media. The tree can be expanded by clicking the plus sign (+) to the left of the icon.

**Note:** If the software is already installed, you will see a small check mark to the left of the fileset description.

10. Select the package or fileset you want to install by clicking the package or fileset.
  - You can select multiple packages or filesets by holding down the left mouse button and dragging the mouse pointer up or down.
  - You can also use the Ctrl key or the Shift key to select multiple items. To choose nonconsecutive selections, hold the Ctrl key while making your selections with the left mouse button. To choose consecutive selections, hold the Shift key while making your selections with the left mouse button.
11. To preview the installation of the selected package or fileset, press the **Preview** button.

For additional information about AIX products, see <http://www.ibm.com/servers/aix/products/ibmsw/list/>.



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## AIX 6 with 6100-07 Expansion Pack security

This section lists security restrictions and limitations for the AIX 6 with 6100-07 Expansion Pack.

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### Open Secure Sockets Layer, Version 0.9.8.1800

Open Secure Shell (OpenSSH) requires Open Secure Sockets Layer (OpenSSL) Version 0.9.8.1800 for encryption. The OpenSSL package is available as an installp image in the AIX 6 with 6100-07 Expansion Pack. The package name is **Openssl-0.9.8.1800**, and it can be installed using SMIT. You must use the OpenSSL Version 0.9.8.1800 before installing OpenSSH.

After OpenSSH is installed, find the readme file in the `/usr/openssh/` directory.

This version of OpenSSH supports PAM authentication on the AIX 6 with 6100-07 operating system. You can find the details in the readme file in the `/usr/openssh/` directory.

**Note:** OpenSSH installation uses the AIX electronic license feature. When you are installing OpenSSH through SMIT, you must view and accept the license text provided with OpenSSH.

OpenSSH 4.3 and later versions use Kerberos 5 authentication and authorization through the Network Authentication Service (NAS), Version 1.4.0.7. You must be running NAS (Kerberos) Version 1.4.0.7, or later, before updating OpenSSH.

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### AIX Certificate and SSL Base Runtime, Version 7.0

The **GSKit.README** file for AIX Certificate and SSL Base Runtime (GSKIT), Version 7.0 is located in the root directory of the *AIX 6 with 6100-07 Expansion Pack DVD*, Volume 2.

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### Data Encryption Standard kernel extension 64-bit

With the Data Encryption Standard (DES) kernel extension, `nfs_kdes_full.ext`, you can now use 64-bit kernels. This extension uses secure NFS by encrypting time stamps sent between the client and the server, which allows each remote procedure call (RPC) message to be authenticated. For more information about this extension, see *Network File Systems security*.

The DES encryption kernel extension is available from the `des` fileset on the AIX Expansion Pack.

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### IP Filters converted to the AIX operating system

IP Filter, Version 5.3.0.0 open source software is converted to the AIX operating system. The IP Filters software package can be used to provide Network Address Translation (NAT) or firewall services. For more information about licensing, see <http://coombs.anu.edu.au/~avalon/>.

---

### Network security options TCP Wrapper 1.1.0.0

TCP Wrapper is a simple open source tool to monitor and control incoming network traffic. For more information about the TCP Wrapper, see <ftp://ftp.porcupine.org/pub/security/index.html>.

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### AIX Network Data Administration Facility

The AIX Network Data Administration Facility (AIX NDAF) for the AIX 6 with 6100-07 operating system is not on the Expansion Pack media. It is on the base media.





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## IBM 64-bit SDK for AIX, Java 2 Technology Edition, Version 5

IBM 64-bit SDK for AIX, Java 2 Technology Edition, Version 5 is released in **Java5.\*** filesets. For more information about this version, see the `/usr/java5_64/docs/sdkguide.aix64.htm` file. To see if a more recent service refresh is available, do the following:

1. Go to the developerWorks® Web site at <http://www.ibm.com/developerworks/java/jdk/aix>.
2. Click **Downloads, User Guides, and Service information**.
3. Click **Fix Info** in the Java 1.4 64-bit column.



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## IBM 32-bit SDK for AIX, Java 2 Technology Edition, Version 6

IBM 32-bit SDK for AIX, Java 2 Technology Edition, Version 6 is released in **Java6.\*** filesets. For more information about this version, see the `/usr/java6/docs/sdkguide.aix32.htm` file. To see if a more recent service refresh is available, do the following:

1. Go to the developerWorks Web site at <http://www.ibm.com/developerworks/java/jdk/aix>.
2. Click **Downloads, User Guides, and Service information**.
3. Click **Fix Info** in the Java 6 32-bit column.



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## IBM 64-bit SDK for AIX, Java 2 Technology Edition, Version 6

IBM 64-bit SDK for AIX, Java 2 Technology Edition, Version 6 is released in **Java6\_64.\*** filesets. For more information about this version, see the **/usr/java6\_64/docs/sdkguide.aix64.htm** file. To see if a more recent service refresh is available, do the following:

1. Go to the developerWorks Web site at <http://www.ibm.com/developerworks/java/jdk/aix>.
2. Click **Downloads, User Guides, and Service information**.
3. Click **Fix Info** in the Java 6 64-bit column.



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## IBM Directory Server

To access the latest IBM Directory Server Lightweight Directory Access Panel (LDAP) product information, go to <http://www.ibm.com/software/tivoli/products/directory-server/>.

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### Installation and configuration

For information specific to IBM Tivoli® Directory Server installation and configuration, go to <https://www.ibm.com/developerworks/wikis/display/tivolidoccentral/Tivoli+Directory+Server>

You can use the Web Administration Tool on the AIX operating system. You can install the Web Administration Tool on a system with or without the client or server.





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# IBM Network Authentication Service, Version 1.5.0.2 for AIX

IBM Network Authentication Service, Version 1.5.0.2 for the AIX environment is a network-authentication protocol based on the IETF RFC 1510 standards protocol for the Kerberos V5 IBM Network Authentication Service. The IBM Network Authentication Service includes the Generic Security Service API (GSSAPI), the Key Distribution Center (KDC) server, and the server. With IBM Network Authentication Service, AIX middleware and external application writers can use authenticated and optionally encrypted message flow between their respective components.

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## Documentation

Read the **README.lang** file for IBM Network Authentication Service, Version 1.5 before configuring or using the program, where *lang* is one of the following language locales:

- Chinese (Simplified)
- Chinese (Traditional)
- English
- Korean
- Portuguese (Brazilian)

The **README.lang** file for the AIX environment is located in the `/usr/lpp/krb5` directory after the **krb5.client.rte** fileset is installed from the `krb5.client` client installation package. The **README.lang** file can also be viewed by using the SMIT **list\_media\_info** command to list supplemental fileset information about the installation media for the **krb5.client.rte** fileset.

Documentation for IBM Network Authentication Service is available in the **krb5.doc.lang** installation packages, where *lang* is one of the following language locales:

- en\_US (US English)
- Ja\_JP (Japanese)
- ko\_KR (Korean)
- zh\_CN (Simplified Chinese)

The documentation is in both HTML and PDF files. Install the **krb5.doc.lang.html** fileset for access to HTML documents and the **krb5.doc.lang.pdf** fileset for access to PDF documents.

The *IBM Network Authentication Service Version 1.5 Administrator's and User's Guide* is installed in the following directories:

- HTML

`/usr/lpp/krb5/doc/html/lang/ADMINGD`

- PDF

`/usr/lpp/krb5/doc/pdf/lang/ADMINGD`

The *IBM Network Authentication Service Version 1.5 Application Development Reference* is installed in the following directories:

- HTML

`/usr/lpp/krb5/doc/html/lang/APDEVREF`

- PDF

## **Installation and configuration**

The *IBM Network Authentication Service Version 1.5 Administrator's and User's Guide* details the installation and configuration procedures for the product.

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# Certificate Authentication Services (CAS), Version 5.2.0.50

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## Migrating database tables

This section describes the steps needed to migrate the database tables used by the **cas.server.rte** fileset version 5.2.0.50.

You may need to run a migration script to migrate the database tables used by CAS server (JavaPKI) after you have performed a migration installation of the **cas.server.rte** fileset version 5.2.0.50 over an earlier version of the **cas.server.rte** fileset.

In some cases, you must complete the migration steps manually. The migration script is `/usr/cas/server/bin/MigrateData.sh`.

**Note:** The script only supports migration from pre-5.2.0.10 to 5.2.0.10.

You must run the database migration script if the following conditions are true:

- You have performed a **cas.server.rte** version 5.2.0.50 migration installation over a previous version of **cas.server.rte** (version number is less than 5.2.0.50).
- You have configured the previous CAS server correctly.
- The previous CAS server has been running and there is data in the database tables used by the previous CAS server.

---

## Running the migration script

You must have root user authority to run the `/usr/cas/server/bin/MigrateData.sh` migration script.

The script will show the default CAS user name (`$PKIUSER`) in your current CAS server configuration file, `/usr/cas/server/PkiConfig.properties`, and ask you to enter another one if you want to use a CAS user name other than the default. The CAS user name is the user name that CAS server uses when it runs.

The utility will print some SQL information and any errors during processing.

When you run the migration script, it does the following:

- Creates backup tables for all tables used by JavaPKI.
- Copies data from the original tables to backup tables.
- Drops the original tables.
- Creates new tables using the new schema.
- Copies data from the backup tables to the new tables.

The only data not copied to the new tables is audit information. Because this data is for audit only, this data remains in the backup tables.

Backup tables are found with **tmp** appended to their names. For example: **icltmp**, **rlcltmp**, **reqptmp**, and **audit\_logtmp**. Keep the backup tables for later use.

If there is no data in the database tables, complete the manual migration steps listed in the **Manual migration steps** section.

After the migration is complete, you can start the new version of the CAS server (JavaPKI).

---

## Manual migration steps

The migration script only runs if there is data in the current tables. If there are no tables or no data in the tables, you must drop any previous tables and create new tables.

Log in as the CAS user (\$PKIUSER), and use the following DB2® commands to drop the previous tables (**drop\_tables.sql** is located in the /home/\$PKIUSER/javapki/sqlscripts/ directory):

```
db2 -tf javapki/sqlscripts/drop_tables.sql
db2 -tf javapki/sqlscripts/audit_drop_tables.sql
```

Log in as the CAS user (\$PKIUSER), and use the following commands to create the new tables (**create\_tables.sql** is located in the /home/\$PKIUSER/javapki/sqlscripts/ directory):

```
db2 -tf javapki/sqlscripts/create_tables.sql
audit_create_tables.aix dbname dbuser language
```

After the new tables are created, you can start the new version of the CAS server (JavaPKI).

---

## Roll back database tables

The migration tool will ask DB2 to roll back if there are any problems during the migration.

Performing the rollback after you successfully run the migration script is completed manually. The tables must be migrated from the backup tables to their original names. You must also populate the serial table using the SQL statements. Obtain the last serial number issued prior to setting the serial table. Add 1 to the value of the last serial number, and insert the value into the icl table.

The following is an example of SQL statements that populate the serial table:

```
serialnum = select max(serial) from icl;
serialnum++;
insert into serial set serial=serialnum;
```

---

## RSCT CIM Resource Manager, Version 3.1.2.0

The Common Information Model (CIM) Resource Manager is a Resource Monitoring and Control (RMC) resource manager that enables RMC to be used to query system configuration through CIM classes. CIM Resource Manager is contained in the **rsct.exp** package.

---

### Documentation

For more information about the CIM Resource Manager, see the *IBM Reliable Scalable Cluster Technology Administration Guide*. After installation, the CIM Resource Manager readme file is found in the `/usr/sbin/rsct/README/rsct.exp.README` directory.



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