

Adabas for Linux and Cloud

Installation on Linux

Version 7.3.0

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This document applies to Adabas for Linux and Cloud Version 7.3.0 and all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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Preface

This documentation describes the installation of Adabas 7.2 and the Adabas Client 7.2 on a Linux platform.

Hereafter, the generic term Adabas will be used to describe both the Adabas and the Adabas Client.

Adabas is installed using the Software AG Installer, which you download from the Software AG Empower website at <https://empower.softwareag.com/>.

This documentation provides product-specific instructions for installing Adabas. It is intended for use with *Using the Software AG Installer*. That guide explains how to prepare your machine to use the Software AG Installer, and how to install and uninstall your products. The most up-to-date version of *Using the Software AG Installer* is always available at <https://empower.softwareag.com/>.

This documentation is organized under the following headings:

System Requirements	Supported operating system platforms and prerequisites.
Components Installed With Adabas	General information on Adabas, on Adabas Client, on Adabas Client for Java, on Adabas Administration Services, and on the required license files.
Important Information	Important information that you should be aware of before you start the installation.
Installing Adabas	How to install Adabas and Adabas Client with the Software AG Installer.
Completing the Installation	How to proceed after the installation.
Uninstalling Adabas	How to uninstall Adabas.
Installing Fixes from Software AG Update Manager	How to install and uninstall fixes for Adabas using the Software AG Update Manager (SUM).
Upgrade Guide	How to upgrade from a previous version or previous Service Pack.

For important last-minute information, see the readme file that is provided with Adabas. You can find it in the Adabas product documentation at <https://empower.softwareag.com/>.

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About this Documentation

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Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
Monospace font	Identifies service names and locations in the format <i>folder.subfolder.service</i> , APIs, Java classes, methods, properties.
<i>Italic</i>	Identifies: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
Monospace font	Identifies: Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the symbol.
[]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

Online Information and Support

Product Documentation

You can find the product documentation on our documentation website at <https://documentation.softwareag.com>.

Product Training

You can find helpful product training material on our Learning Portal at <https://learn.software-ag.com>.

Tech Community

You can collaborate with Software GmbH experts on our Tech Community website at <https://tech-community.softwareag.com>. From here you can, for example:

- Browse through our vast knowledge base.
- Ask questions and find answers in our discussion forums.
- Get the latest Software GmbH news and announcements.
- Explore our communities.
- Go to our public GitHub and Docker repositories at <https://github.com/softwareag> and <https://containers.softwareag.com/products> and discover additional Software GmbH resources.

Product Support

Support for Software GmbH products is provided to licensed customers via our Empower Portal at <https://empower.softwareag.com>. Many services on this portal require that you have an account. If you do not yet have one, you can request it at <https://empower.softwareag.com/register>. Once you have an account, you can, for example:

- Download products, updates and fixes.
- Search the Knowledge Center for technical information and tips.
- Subscribe to early warnings and critical alerts.
- Open and update support incidents.
- Add product feature requests.

Data Protection

Software GmbH products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.

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System Requirements

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Supported Operating System Platforms

Adabas supports a variety of operating environments. For information on the support platforms for this release of Adabas, read *Supported Platforms*, in the *Release Notes*.

Disk Space Requirements

Approximately 1 GB of hard-disk space is required for Adabas (including Adabas, Adabas Client and Software AG Installer packages).

Additional Software Requirements

For the installation of Adabas, the following additional software requirements apply:

Operating System Platforms	Requirement
Red Hat Enterprise Linux Server 8 (IBM System z 64bit)	Please ensure that your host name is correctly configured. Issue the following command <code>hostname</code> or <code>uname -u</code> . If these commands return a fully-qualified domain name (FQDN), no additional actions are required. If, however, they return only the node name (other than localhost), you should look in the file <code>/etc/hosts</code> and ensure that the node name is not an alias for localhost. You may have to reconfigure your network and set an FQDN as host name.
Red Hat Enterprise Linux Server 8 (x86-64)	
Red Hat Enterprise Linux Server 9 (x86-64)	
SUSE Linux Enterprise Server 15 (x86-64)	
	The <code>libstdc++</code> package must be installed.
	Libncurses Adabas uses <code>libncurses.so.5</code> . Ensure that the appropriate package is installed: <code>ncurses-compat-libs-6.1</code> on Red Hat based systems <code>libncurses5-6.1</code> on SUSE

Adding User Account for Administration of Software AG Products

In this section the following is assumed:

- The user account for the administrator of Software AG products is called "sag".
- The group to which the administrator and all users of Software AG products are assigned is called "sag".
- The home directory for the user "sag" is `/opt/softwareag`.
- The root directory for Software AG products is `/opt/softwareag`.



Caution: If you use a different administrator user and/or group name, `showipc`, which is also used by the Adabas nucleus, only works after some environment variables have been set. For further information, please refer to ADANUC in the *Utilities* documentation and `showipc` in the *Database Monitoring and Tuning* documentation.

➤ To perform the following steps, use an appropriate system administration tool (e.g. `smit`).

- Create the administrator's account and group
 1. Create one administrator's account and one group for all Software AG products when you install your first Software AG product.
 2. Define an administrator account to which all of the Software AG products installed at your site belong. Since all environment definition files for the products are written for the Bourne shell, this shell is required as the login shell for the administrator account.
 3. Define a group to which the administrator and all users of Software AG products belong.
 4. Create a login directory for the user "sag".

Example:

It is assumed that user and group accounts are defined in the respective files in `/etc`.

The following is a possible entry in the system file `/etc/group`:

```
sag:*:21:sag
```

The following is a possible entry in the system file `/etc/passwd`:

```
sag::100:21:SAG - Product Administrator:/opt/softwareag:/bin/sh
```

Increasing the System Kernel Limits

Adabas requires increased System V resources. You can check your current settings by using the command `showipc -s`. In the following, the resources required for Adabas are described. Note that there are also other processes running on your system that require IPC resources. Therefore, you must add the IPC resources required by the other processes to parameters that describe a system-wide maximum number or size of resources. For parameters that describe the maximum size of a resource, the value must, of course, be large enough for the other processes.



Notes:

1. One or more of these parameters may not exist on all Linux platforms.
2. Adabas must already be installed before you can execute the `showipc` command.

Kernel Parameter	Description	Recommended Minimum Value
SHMMAX	The maximum size in bytes of a shared memory segment.	<p>The size of SHMMAX limits the size of the Adabas buffer pool and the number of attached buffers (LBP and LAB nucleus parameters).</p> <p>The maximum value for all databases of</p> $\text{LBP} + \text{LWP} + (\text{number of worker threads}/10 + 1) \text{ MB}$ <p>LAB</p> <p>LABX</p> <p>Note: For the number of worker threads, see the description of the ADANUC parameters NT and APU. If you use Adabas-to-Adabas replication add the number of replication threads (default: 3 * number of target databases).</p>
SHMMNI	The maximum number of shared memory segments, system-wide.	Number of databases * 4.
SHMSEG	The maximum number of shared memory segments, per process.	4 Segments.
SEMMX	The maximum value of any semaphore.	32767
SEMAEM	The maximum value of any semaphore's adjust-on-exit value.	1024

Kernel Parameter	Description	Recommended Minimum Value
SEMMNI	The maximum number of semaphore sets, system-wide.	Number of databases * 2
SEMMNS	The maximum number of semaphores, system-wide.	Number of databases * (2 + NCL)
SEMMNU	The maximum number of undo structures, system-wide.	For all databases - calculate the SUM (2 + NCL)
SEMMSL	The maximum number of semaphores per semaphore set.	This parameter limits the number of users per database (NCL parameter). This parameter should be at least as large as the largest NCL value of all databases + 1.
MSGMAX	The maximum number of bytes of a message we can send.	64 Bytes.
MSGMNB	The maximum number of bytes that can be queued in a single queue (i.e., the sum of all messages in that queue).	For all databases - select the maximum value of the NCL parameter * 32 Bytes.
MSGMNI	The maximum number of message queues, system-wide.	For all databases - calculate the SUM of (2 + NCL + maximum of (2 or NT/3)).
MSGTQL	The maximum number of messages, system-wide.	For all databases - calculate the SUM of (32 * NCL).

Additional Kernel Parameters on Linux

In addition to the general kernel parameters described above, on Linux systems it is necessary to configure the kernel parameters for the "inotify" file system monitoring mechanism. The following parameters should be set in the */etc/sysctl.conf* according to the number of Adabas client processes:

- **fs.inotify.max_user_instances**

This specifies an upper limit on the number of inotify instances that can be created per real user ID (at least number of parallel used databases multiplied with the number of client processes).

- **fs.inotify.max_user_watches**

This specifies an upper limit on the number of watches that can be created per real user ID (at least number of parallel used databases multiplied with the number of client processes).

See also */proc/sys/fs/inotify* for further details.

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Components Installed With Adabas

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Adabas

Adabas covers all components of the Database Management System itself. Adabas requires the Adabas Client and the Infrastructure subcomponent Security Libraries.

To complete the Adabas installation, you must activate the license files as described in the section [Completing the Installation](#).

Adabas Client

Adabas Client covers all components needed to access Adabas from Client applications. It is used by several Software AG products such as Adabas and Entire Net-Work.

Adabas Client for Java (optional)

The Adabas Client for Java is an interface to Adabas for Java-based applications. The product consists of three individual components:

- The Java-based API itself;
- the Adabas Rest Interface, which can be used to access data from any programming language that supports HTTP request handling;
- the Adabas Data Designer, which is used to configure the Java API maps from Adabas FDT, Natural DDM or XSD definitions, as well as to browse the data in Adabas files.

If you have installed the Adabas Client for Java, see the description of the appropriate *Adabas Client for Java* documentation in Empower for further information. This documentation is available separately.

Adabas Administration Services (optional)

Adabas Administration Services is a communication component required by Adabas Manager. It must be installed and running if you want to monitor and administer Adabas databases with Adabas Manager.

See the appropriate *Adabas Manager* and *Adabas Administration Services* documentation in Empower for further information.

Adabas Manager (optional)

Adabas Manager is used to interactively monitor and administer Adabas databases. See the appropriate *Adabas Manager* documentation in Empower for further information.

Infrastructure

Adabas, or the components installed with Adabas, require a number of infrastructure components that are automatically installed with the Software AG Installer. For instance, the Infrastructure Security Libraries are required by Adabas. These libraries contain the functionality required to implement the Adabas Authentication feature.

Further Products

Depending on your credentials, you may see (and can select or deselect) further entries in the **Adabas Products** node. Please refer to the separate documentation of the individual product(s) for a detailed description of the required installation steps.

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User ID for Installation

When installing Adabas, the user ID under which you run the Software AG Installer must not be longer than eight characters. If you use a longer user ID, an error message is shown.

The user ID that you use to install the product must have full read and write permissions to the installation directory. In addition, it is helpful if the user has extended security privileges (sudo or su rights).

It is recommended that you use the user *sag*, for further information see *Adding User Account for Administration of Software AG Products* .

Administrator Status

During the installation, the **Sudo** panel may appear. When you enter the sudo password in this panel, the installer will execute the scripts which require sudoers privileges. If sudoers privileges are not available you may run the script manually after installation as explained later in the section *Final Installation Steps*.

Installation Directory

During the installation, you are asked to specify an installation directory in which to install your Software AG products. By default, the name of the main installation directory is */opt/softwareag*.

The directory name should not contain embedded spaces. For further information, see *Using the Software AG Installer*.

Side-by-Side Installations

You can install the same Adabas version more than once on the same machine. And you can also install several different versions of Adabas on the same machine. Each version, however, must be installed in a separate directory. You cannot overwrite an existing version, you can only uninstall it.

Choose for instance */opt/softwareag/Suite1* for the first installation and */opt/softwareag/Suite2* for the second one.

If several Adabas versions are installed on the same machine, any other Software AG products using Adabas must be installed into the directory where the specific Adabas version had been

installed. As an alternative, you can create your own *sagenv.new*, which sets up the appropriate settings for other products installed in different libraries. This script can be called, for example, in the login script. Regardless of the option chosen, the Adabas SQL Gateway and Adabas Event Replicator must be installed in addition to each Adabas installation (for further information see *Reinstall Adabas SQL Gateway and Adabas Event Replicator*).

Adabas requires that every Adabas installation is licensed separately. The Adabas license has to be activated for each installation directory. For further information see *Final Installation Steps*.

Software AG Environment

The installation procedure generates the environment file called *sagenv.new* in the *bin* directory under the main installation directory. This script creates all environmental variables needed to run the Software AG products installed under the same main installation directory. It must be sourced before any of the products run.



Note: If you schedule the automatic execution of a batch script, the Software AG environment is usually not defined when the script is started. Therefore, the script must first source the environment file before performing any Adabas activities.

Starting a Database using systemd on Linux

If systemd is enabled on Linux, it is possible to create an example systemd service file to start/stop an Adabas database on system start/stop.

For further information, execute *Adabas/INSTALL/create_systemd_service_file.sh*.



Note: If you are using Adabas Manager to start/stop a database that is under the control of systemd, systemd will not be aware this.

Adabas Data Directory

Adabas stores its configuration data and information about the available databases in a directory identified by the environment variable ADADATADIR. In particular, if you use Adabas Extended Operations or the Adabas Manager, the descriptions of all databases to be accessed must be stored in ADADATADIR.

By default, ADADATADIR is the installation directory. If you install more than one Adabas version on the same machine, you will have to put those versions into different directories and therefore you will have several ADATADADIRs.

However, the database IDs used should be unique on the same machine. Moreover, the file *ADABAS.INI* located in *\$ADADATADIR/etc* contains setup data that should be unique on your machine as well. Therefore, it is recommended to have all databases located in a directory common to all Adabas installations on the machine. A supplied script modifies the related environment file to let ADADATADIR point to such a common directory (for further information see *Final Installation Steps*).

- Database IDs must be unique on the computer. In order to avoid double usage of database IDs it is useful to see all defined databases.
- Typically you have installed an earlier Adabas version used for all databases. Then you install a higher version, and afterwards you want to convert the databases to the higher version. If you want to see which databases have already been converted, you must use the same ADADATADIR.

For this reason, a script is provided to change ADADATADIR.

Canceling the Installation

As you move through the wizard, the installer stores some of the files it requires in a temporary directory. If you cancel the installer and later restart it on the same machine, the installer will use the stored files rather than downloading them from the installer server again, to improve performance. After a successful installation, the installer deletes the stored files.

If you cancel the installation before it has finished and if you want to remove already installed files, you have to do this manually. For further information, see [Uninstalling Adabas](#).

Mandatory Environment Variable for Adabas Utilities

The environment variables ADADATADIR and ADAPROGDIR are mandatory environment variables which must be defined for Adabas utilities. If either one or both is undefined, this will result in failure and Adabas utilities execution will end. Both environment variables ADADATADIR and ADAPROGDIR have a default value defined.

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Installing Adabas

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Using the GUI to Install Adabas

This installation documentation provides a brief description on how to install Adabas directly on the target machine using the Software AG Installer GUI. For detailed information on the Software AG Installer, see the *Software AG Installer* documentation > *Using GUI Mode*.

> To install Adabas

- 1 Start the Software AG Installer GUI as described in the *Software AG Installer* documentation > *Using GUI Mode*.
- 2 If the installer can connect to the Software AG Installer server without going through a proxy, it displays a message to that effect. You can click **Next** to continue, click **AutoDetect** to have the installer auto-detect your proxy servers so you can select one to use, or manually supply the settings for an HTTP or Socks proxy server.

For more information, see the *Software AG Installer* documentation > *Use a Proxy Server*.

- 3 Provide your Empower user name and password. Click **Next**.

After you provide your credentials, a panel with the licence agreement text will be shown if you have not read and accepted the license agreement previously. To continue your installation, read and accept the license agreement in the panel.

- 4 Click the product release that includes the products you have licensed and want to install. Click **Next**.
- 5 Specify the installation directory and host name or IP address (optional).



Note: If you plan to install several versions of Adabas, you should not use the proposed installation directory `/opt/softwareag`, but a subdirectory.

The section [Side-by-Side Installations](#) provides details on the restrictions which apply to the installation directory when multiple instances of the Adabas are being installed side-by-side. The installation wizard does not allow you to install two Adabas versions into the same directory. Click **Next**.

- 6 Select and/or deselect products from the panel containing the product selection tree. The tree lists the products for which you have valid credentials and which can be installed on the operating system of the machine on which you are installing.

If you want to customize the list of selected product components, expand the Adabas Products node, deselect Adabas Products and select the product components that you want to install. The installer automatically selects any additional components which are also required (for further information see [Components Installed with Adabas](#)). Click **Next**.

Usually, the Adabas Client is always installed together with Adabas, but can also be installed separately.



Notes:

1. You may deselect the Adabas Administration Services component if the Adabas Manager is not used to operate Adabas.
2. During the Adabas Administration Services installation, you will be asked for the Adabas Directory Server URL. If your databases are to be remotely administered via Adabas Manager, the URL should point to the same Adabas Directory Server instance as your Adabas Manager installation.
- 7 If language packs are available for products you are installing or have already installed, the installer displays the language packs tree. Select the language packs to install, and then click **Next**.
- 8 You can choose whether to install the latest updates for all products or install updates for only a subset of products. Updates can be installed both online and offline and any user data that is needed, for example credentials and proxy settings, is collected from the Installer client. Click **Next**.
- 9 Specify whether to use sudo or not.

Some parts of the installation require root permissions. On the following sudo panel you must either select **Use sudo, with password** supplying a valid sudo password or you can skip these installation steps by selecting **Do not use sudo or sudo is not available**.

You will then have to execute those steps as described on the screen. Both alternatives are equivalent.



Note: Using sudo without specifying a password is not possible.

- 10 On the last panel, review the list of products and items you have selected for installation. If the list is correct, press the **Next** button to start the installation process.

When the Software AG Installer has completed the first-time installation, additional configuration steps are required. See [Completing the Installation](#) for further details.

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Completing the Installation

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Final Installation Steps

This section describes the steps, which need to be completed after the installation of Adabas on Linux.



Note: All scripts mentioned in the following steps are to be executed in a Bourne shell.

➤ **To complete the installation of Adabas on Linux.**

- 1 Change to the bin directory of your main installation directory.
- 2 If you did not use sudo during the installation, you must run the script *afterInstallAsRoot.sh* to complete the installation or some products might not work correctly.
 - Run the script *afterInstallAsRoot.sh* with root privileges.

- 3 Source the environment settings by executing the command

```
./sagenv.new
```

- 4 Activate the Adabas License.

1. Copy the file holding the license key to a temporary location on your Linux machine
2. Change to the *Adabas/INSTALL* directory of your main installation directory.
3. Execute the `adalic` command. Enter:

```
adalic activate path_to_license_file
```

Where *path_to_license_file* represents the fully qualified path to the license file.

- 5 Change the default Adabas Data directory.



Notes:

1. This step is optional.
2. If this step is omitted, the Adabas Data directory is set to the default.
3. The `adaenv` environment file will be modified by these steps.

The default Adabas Data directory is the Adabas installation directory (i.e. */Adabas*). If you want to choose a different location:

1. Change to the *Adabas/INSTALL* directory of your main installation directory.

2. Execute the `change_adadatadir.sh` command. Enter:

```
change_adadatadir.sh new_location
```

Where *new_location* represents the fully qualified path to the new location of your Data directory.

3. Source the environment settings to enable the change. Execute the command:

```
. ./adaenv
```

Or close the current shell, open a new shell, change to the *bin* directory of your main installation directory, then source the environment by executing

```
. ./sagenv.new
```

4. If installed, restart the Adabas Administration Service with the changed environment.

Working with Adabas REST Administration

If you have Adabas REST Administration installed, the changed Adabas Data directory needs to be updated for Adabas REST Administration service in two locations:

- `<install-dir>/AdabasRestAdministration/configuration/config.xml`
- `<install-dir>/AdabasRestAdministration/INSTALL/restenv.xml`

To apply the changes to these files, you must execute the following command in the Adabas REST administration bin directory:

```
./service.sh data_dir new_location
```

Where *new_location* represents the fully qualified path to the new location of your Data directory.

Restart the Adabas REST Administration system service for the new Adabas Data directory location to take effect.

6. Verify the Installation.



Note: This step is optional.

To verify your installation, you may choose to:

- Create the Demo Database
- Start the database
- Generate a database report
- Terminate the database

To achieve this, execute the following steps:

1. Open a command shell.
2. Source the environment settings.
3. Create the Demo Database
 - Execute the `crdemodb` command. Enter:

```
crdemodb dbid [port]
```

Where *dbid* represents the Database ID of your database.

port is an optional parameter. When this parameter is provided, it will create a new entry `ADASTARTPORTNUMBER = <port>` in `DB<dbid>.INI` file in the `NUCPARMS` section.

This port number will be used by `adastart` to connect to nucleus.

Valid port number is between 1024 and 65535 and the port must not be in use. Any character is not allowed.

4. Start the database issuing the command:

```
adastart dbid
```

Where *dbid* represents the Database ID of your database.

For further details on `adastart`, refer to the section *Start Database: adastart* in the *Extended Operation* documentation

5. Generate a database report issuing the command:

```
adarep dbid=dbid contents
```

Where *dbid* represents the Database ID of your database.

For further details on `adarep`, refer to the section *ADAREP* in the *Utilities* documentation.

6. Terminate the database issuing the command:

```
adastop dbid
```

Where *dbid* represents the Database ID of your database.

For further details on `adastop`, refer to the section *Stop Database: adastop* in the *Extended Operation* documentation

Information about the Installed Version

Adabas

Information about the version number can be obtained using either of the following methods:

- Open a command shell. Then source the environment settings and execute

```
sagver $ADAPROGDIR/bin/adanuc.bin
```

- Open a command shell. Then source the environment settings and execute

```
cat $ADAPROGDIR/version.txt
```

Adabas Client

Information about the version number can be obtained using the following method:

- Open a command shell. Then source the environment settings and execute

```
sagver $ACLDIR/lib/ libadalnkx.so
```

Reinstall Adabas SQL Gateway and Adabas Event Replicator

If you are also using the Adabas SQL Gateway or the Adabas Event Replicator, you must reinstall these products. For further information, refer to the related product documentation.

Adapting the Installation for Use with other Products

If you are also using other Software AG products, you must either install those products into the same directory where you installed Adabas, or you must modify the generated script *sagenv.new* to setup up your environment properly. For further information see [Side-by-Side Installations](#).

Adabas Client and Applications using s-bits

The default installation directory for Adabas Client is */opt/softwareag/AdabasClient*.

If you are installing Adabas Client into a directory which is not the default (e.g. */opt/softwareag/Suite1/Adabas Client*) and you want to use an Adabas interface with applications that have the s-bit set, you must create a symbolic link pointing the directory */opt/softwareag/AdabasClient* to the physical location of the Adabas Client Installation directory..

➤ To create a new symbolic link

- 1 Open a command shell.
- 2 Source the environment settings.
- 3 Create the symbolic link by executing:

```
ln -s <installation_directory> /opt/softwareag/AdabasClient
```

For example:

```
ln -s /opt/softwareag/Suite1/AdabasClient /opt/softwareag/AdabasClient
```



Note: These operations require root permissions.

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Uninstalling Adabas

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You uninstall Adabas using the Software AG Uninstaller. For detailed information on how to use the uninstaller, see the *Using the Software AG Installer* guide.

Uninstalling Adabas

To uninstall Adabas, proceed as follows:

1. Ensure that all databases and processes, which use the directory that is to be removed, have been terminated.
2. Open a command shell and go to the *bin* directory of your main installation directory.
3. Execute the script *beforeUninstallAsRoot.sh* with root privileges.
4. Run the command `uninstall`. This starts the Software AG Uninstaller.

All files created or modified by the user are not removed. Scripts in the *Adabas/INSTALL* directory which may be needed to stop services or daemons are not removed either

8 Installing Fixes from Software AG Update Manager

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With the Software AG Update Manager (SUM) you can download and install fixes for Adabas.

Installation Steps

➤ To install a fix using the Software AG Update Manager

- 1 Make sure that all Adabas processes and all application accessing Adabas are terminated.
- 2 Start the Software AG Update Manager and choose **Install fixes from Software AG Empower**.
- 3 Specify the installation directory and supply your Empower credentials, and choose **Next**.
- 4 Specify the fix you want to install and choose **Next**.
- 5 Once the fix has been successfully installed, details of the installation are displayed in the Software AG Update Manager. Choose **Close** to terminate the Update Manager, or choose **Home** to return to the main screen.

Verifying the Fix Version

You can verify the version of the installed fix by starting a utility (for example, ADAREP) from the command line; the version number of the fix is displayed in the first line of the output.

Uninstalling a Fix

You can use the Software AG Update Manager to uninstall the fix and thereby go back to the previous fix version.

➤ To uninstall a fix using the Software AG Update Manager

- 1 Make sure that all Adabas processes and all application accessing Adabas are terminated.
- 2 Start the Software AG Update Manager and choose **Uninstall fixes**, then choose **Next**.
- 3 Specify the fix you want to uninstall and choose **Next**.

Once the fix has been successfully uninstalled, details of the uninstallation are displayed in the Software AG Update Manager. Choose **Close** to terminate the Update Manager, or choose **Home** to return to the main screen.

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Upgrade Guide

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Upgrading from a previous Adabas Version

This section is intended to assist a user upgrading from an older version of Adabas.

- [Installation](#)
- [Adabas License and ADADATADIR](#)
- [Converting a Database from a previous version to the current version and vice versa](#)

Installation

One of the new major features is that installation of the product is now performed by the SAG Installer, which requires different handling procedures compared to previous versions.

On Linux platforms, the default installation directory is `/opt/softwareag`. Nevertheless, it is recommended that you install in a separate subdirectory (e.g. `/opt/softwareag/Suite1`) or in another location because it is not possible to install more than one Adabas version into the same directory. You cannot overwrite an existing version, you can only uninstall it.

For further information see the section [Important Information](#) and follow the instructions in the section *Installing Adabas*.

Adabas License and ADADATADIR

Adabas requires that every Adabas installation is licensed separately. If you are upgrading Adabas from an older version and want to access existing databases, ADADATADIR must be changed to point to the directory where the database directories are located.

Follow the instructions in the section [Completing the Installation](#) to complete the installation, to activate the license, and to change the default ADADATADIR.

Converting a Database from a previous version to the current version and vice versa

After installing Adabas, the databases to be used need to be prepared for use with this version. Several options to convert those databases are described in the *Release Notes*. The conversion back to a previous version is also described there.

Before a database is converted to a different version, you are strongly recommended to make a backup of that database with utilities provided for the version of the database, and, following successful conversion, to run ADAPFY's FIELD and INDEX functions to check the consistency of the database.

Upgrading from a previous Adabas Service Pack

This section is intended to assist a user upgrading from a previous Adabas Service Pack to the current Adabas version.

- [Installation](#)
- [Adabas License and ADADATADIR](#)

Installation

You can install multiple versions of Adabas on the same machine, but each version must be installed in a separate directory, over-installing is not allowed. Therefore, you must choose a separate installation directory for installing a new version and/or Service Pack in parallel to an installed version.

For further information see the section [Important Information](#) and follow the instructions in the section *Installing Adabas*.

Adabas License and ADADATADIR

Adabas requires that every Adabas installation is licensed separately.

If you want to access existing databases, ADADATADIR must be changed to point to the directory where the database directories are located.

Follow the instructions in the section [Completing the Installation](#) to complete the installation, to activate the license, and to change the default ADADATADIR.

