

**PUBLIC**

**Component Installation Guide**



# **SAP Web Application Server 6.40 SR1 Java on Windows: MS SQL Server**

## **Part II - Installation and Post-Installation**

### **Target Audience**

- System administrators
- Technology consultants

Document version: 2.00 – February 28, 2005

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## Typographic Conventions

Example	Description
< >	Angle brackets indicate that you replace these words or characters with appropriate entries to make entries in the system, for example, "Enter your <User Name>".
®	Arrows separating the parts of a navigation path, for example, menu options
<b>Example</b>	Emphasized words or expressions
<b>Example</b>	Words or characters that you enter in the system exactly as they appear in the documentation
<u>Example</u>	Textual cross-references to a URL, for example, <a href="http://www.sap.com">www.sap.com</a>
/example	Shortcuts added to the URL of a homepage to enable quick access to specific content on the Web
<i>Example</i>	<ul style="list-style-type: none"> <li>■ Words or characters quoted from the screen. These include field labels, screen titles, pushbutton labels, menu names, and menu options.</li> <li>■ Cross-references to other documentation or published works</li> </ul>
Example	<ul style="list-style-type: none"> <li>■ Output on the screen following a user action, for example, messages</li> <li>■ Source code or syntax quoted directly from a program</li> <li>■ File and directory names and their paths, names of variables and parameters, and names of installation, upgrade, and database tools</li> </ul>
EXAMPLE	Technical names of system objects. These include report names, program names, transaction codes, database table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE
<b>EXAMPLE</b>	Keys on the keyboard

# Document History



## Caution

Before you start the implementation, make sure you have the latest version of this document. You can find the latest version in SAP Service Marketplace at the following internet address: [service.sap.com/instguides](http://service.sap.com/instguides).

The following table provides an overview on the most important document changes.

Version	Date	Description
2.00	02/28/2005	Revised Version

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# 1 Introduction

## 1.1 Target Audience

- System administrators
- Technology consultants

## 1.2 About this Document

This documentation explains how to install the SAP Web Application Server (SAP Web AS) 6.40 Support Release 1 Java on Windows when your database is MS SQL Server.

SAP Web AS is the application server of SAP NetWeaver. For more information on the technology provided by SAP NetWeaver, see SAP Service Marketplace at: [service.sap.com/netweaver](http://service.sap.com/netweaver)

This documentation focuses on the **Java** part of the installation. It covers the **installation and post-installation**, which is the **second part** of the installation.

For the **planning and preparation**, which is the **first part** of the installation, see *Component Installation Guide – SAP Web Application Server 6.40 SR1 Java on Windows: MS SQL Server, Part I – Planning and Preparation*.

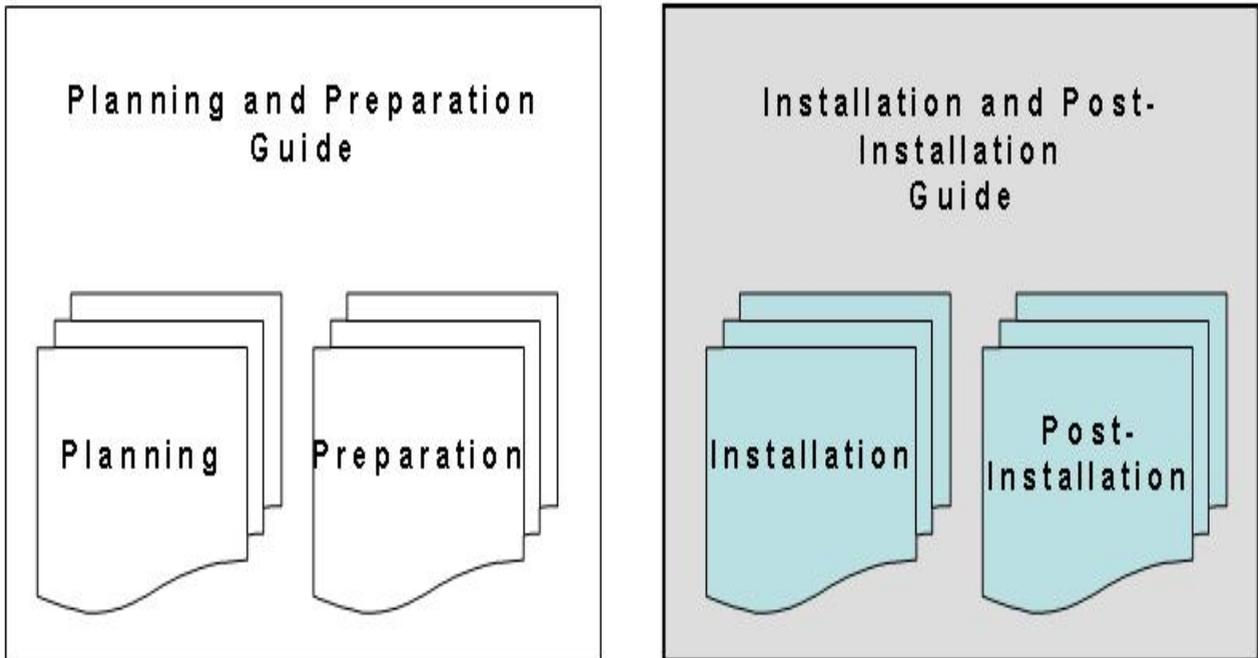


Note

If you want to install the **ABAP** part of SAP Web AS, see the documentation *Component Installation Guide – SAP Web Application Server 6.40 SR1 ABAP on Windows: MS SQL Server, Part I and Part II* on SAP Service Marketplace at: [service.sap.com/instguidesnw04](http://service.sap.com/instguidesnw04).

You are now **here**:

Figure 1:



### Constraints



#### Caution

You must only use the SAP installation tools according to the instructions and for the purposes described in the SAP installation documentation. Improper use of the SAP installation tools can damage files and systems already installed.

You need to consider the following constraints before you start your installation:

- This documentation **only** applies if you are installing an MS SQL Server database with a Windows operating system.
- SAP system installations should **only** be performed by SAP Technical Consultants, who are certified for your operating system, your database, and the SAP system that you are installing.
- For downward-compatible releases of DB/OS platforms for SAP products, SAP plans to regularly release the newest database (DB) and operating-system (OS) versions of SAP products. These releases are downward-compatible with earlier SAP system releases.

Be aware that, for already shipped SAP components, we only support the installation for database versions proposed by the installation tool. Therefore, you must install a SAP component or perform a system copy using a downward-compatible database as follows:

- Install the component with the old proposed database version.
- Upgrade the old database version to the downward-compatible new version.

## 1.3 New Features

### SAP System Installation

Area	Description
SAPinst	As of SAP Web AS 6.40 SR1 there is a new F1-field-help displaying information about the input parameter fields of the SAPinst screens. This new field help replaces the former “What’s this”-help on the SAPinst screens and the former input parameter tables in the installation guides.
Integration of the installation of SAP Internet Graphic Server (IGS)	As of SAP Web AS 6.40 the installation of the SAP Internet Graphic Server (IGS) is integrated into the installation of SAP Web Application Server 6.40.
Installation of a Java server in default mode	For this installation type, default values are used for most installation parameters. If those default values are sufficient for your purposes, you can install a SAP Web AS Java central system quickly and easily.
User Management Engine (UME)	You are now able to configure the User Management Engine (UME) of an SAP Web AS Java system to use the user management of a separate ABAP system.
System Landscape Directory (SLD)	The SLD is the central information provider for the whole system landscape. Generally, the SLD is deployed after the installation of SAP Web AS Java 6.40.
Installation DVDs	The installation is started from the <i>SAP Installation Master DVD</i> .
SAPinst Troubleshooting Guide for SAP Web AS Java Installation	This documentation provides troubleshooting information for the Java system installation procedures with the tool SAP Landscape Implementation Manager, referred to as SAPinst in this document.



### Operating System

Area	Description
Support of Operating Systems	<ul style="list-style-type: none"><li>■ See the <i>Product Availability Matrix (PAM)</i> on SAP Service Marketplace at <a href="http://service.sap.com/platforms">service.sap.com/platforms</a> → <i>Product Availability Matrix</i></li><li>■ For information on Windows operating system security, see <a href="http://www.microsoft.com/security">www.microsoft.com/security</a></li></ul>

## 1.4 Before You Start

The following sections provide information on:

- *SAP Notes for the Installation* [page 4]
- *Information in the SAP Service Marketplace* [page 5]
- *Accessing the SAP Library* [page 6]
- *Naming Conventions* [page 7]

### 1.4.1 SAP Notes for the Installation

You **must** read the following SAP Notes **before** you start the installation. These SAP Notes contain the most recent information on the installation, as well as corrections to the installation documentation. Make sure that you have the up-to-date version of each SAP Note which you can find in the SAP Service Marketplace at [service.sap.com/notes](http://service.sap.com/notes).

#### SAP Notes for the Installation

SAP Note Number	Title	Description
<a href="#">786608</a>	SAP Web AS 6.40 SR1 Java on Windows	Operating-system specific information about the Java system installation and corrections to this documentation
<a href="#">786671</a>	SAP Web AS 6.40 SR1 on Windows: MS SQL Server	MS SQL Server-specific information about the SAP system installation and corrections to this documentation
<a href="#">79991</a>	Multi Language Support / Unicode	Information about Unicode SAP systems and their availability. It is only required if you plan to install a Unicode SAP system.

SAP Note Number	Title	Description
<a href="#">45619</a>	R/3 with several languages or typefaces	Information about multiple languages and/or multiple typefaces on one SAP system.
<a href="#">42305</a>	RSCPINST (NLS installation tool)	Information about language and code page settings in your SAP system.

## 1.4.2 Information Available on SAP Service Marketplace

Information on the following areas is available on SAP Service Marketplace.

Description	Internet Address	Title
SAP Notes	<a href="http://service.sap.com/notes">service.sap.com/notes</a>	-
Released platforms and operating systems	<a href="http://service.sap.com/platforms">service.sap.com/platforms</a>	-
Master Guide for SAP NetWeaver '04	<a href="http://service.sap.com/instguidesNW04">service.sap.com/instguidesNW04</a> → <i>Installation</i>	<i>Master Guide — SAP NetWeaver '04</i>
List of media for installation or upgrade for SAP NetWeaver '04 SR1	<a href="http://service.sap.com/instguidesNW04">service.sap.com/instguidesNW04</a> → <i>Installation</i>	<i>Media Information for SAP NetWeaver '04 SR1</i>
Installation of an SAP system based on SAP Web AS ABAP	<a href="http://service.sap.com/instguidesNW04">service.sap.com/instguidesNW04</a> → <i>Installation → SAP Web AS</i>	<i>Installation Guide — SAP Web Application Server 6.40 SR1 ABAP on &lt;OS&gt;: &lt;Database&gt;</i>
Patching of SAP NetWeaver '04 scenarios	<a href="http://service.sap.com/instguidesNW04">service.sap.com/instguidesNW04</a> → <i>Operations</i>	<i>Support Package Stack Guide — SAP Netweaver'04 Support Package Stack &lt;current stack&gt;</i>
Upgrade to SAP Web AS	<a href="http://service.sap.com/instguidesNW04">service.sap.com/instguidesNW04</a> → <i>Operations</i>	<i>Upgrade to SAP Web Application Server &lt;Platform&gt;: &lt;Database&gt;</i>
Installation of SAP NetWeaver Developer Workplace	<a href="http://service.sap.com/instguidesNW04">service.sap.com/instguidesNW04</a> → <i>Installation → Dev Env</i>	<i>Installation Guide — SAP NetWeaver Developer Workplace</i>
Installation of SAP NetWeaver Developer Studio	<a href="http://service.sap.com/instguidesNW04">service.sap.com/instguidesNW04</a> → <i>Installation → Dev Env</i>	<i>Installation Guide — SAP NetWeaver Developer Studio</i>

Description	Internet Address	Title
Installation of the SAP System Landscape Directory (SLD)	<a href="http://service.sap.com/instguidesNW04">service.sap.com/instguidesNW04</a> → <i>Installation</i> → <i>SAP Web AS</i>	<i>Post-Installation Guide – SAP System Landscape Directory on SAP Web AS Java 6.40</i>
Unicode SAP systems and their availability	<a href="http://service.sap.com/unicode">service.sap.com/unicode</a> See also <b>SAP Note 79991</b> .	-
Technical infrastructure – configuration scenarios and related aspects such as security, load balancing, availability, and caching	<a href="http://service.sap.com/ti">service.sap.com/ti</a>	-
Network infrastructure	<a href="http://service.sap.com/network">service.sap.com/network</a>	-
System sizing	<a href="http://service.sap.com/sizing">service.sap.com/sizing</a>	<i>Quick Sizer tool</i>
Front End installation	<a href="http://service.sap.com/instguidesNW04">service.sap.com/instguidesNW04</a> → <i>Installation</i> → <i>SAP Web AS</i>	<i>Front End Installation Guide (this guide is available on the SAP Presentation DVD)</i>
High availability	<a href="http://service.sap.com/ha">service.sap.com/ha</a>	-
Homogeneous and heterogeneous system copy for a Java system	<a href="http://service.sap.com/instguidesNW04">service.sap.com/instguidesNW04</a> → <i>Installation</i> → <i>SAP Web AS</i>	<i>Homogeneous and Heterogeneous System Copy for SAP Systems based on SAP Web Application Server Java 6.40 SR1</i>
Security	<a href="http://service.sap.com/security">service.sap.com/security</a>	-
	 <b>Note</b> For information on Windows operating system security, see <a href="http://www.microsoft.com/security">www.microsoft.com/security</a>	
Information on SAP Support Package Stacks	<a href="http://service.sap.com/sp-stacks">service.sap.com/sp-stacks</a>	-

### 1.4.3 Accessing the SAP Library

For more information about SAP NetWeaver, access the SAP Library from the **SAP Help Portal** at [help.sap.com/nw04](http://help.sap.com/nw04):

1. Choose the required language.
2. Choose *SAP NetWeaver*.

## 1.4.4 Naming Conventions

In this documentation, the following naming conventions apply:

### Terminology

SAP system refers to SAP Web AS.

ABAP system refers to SAP Web AS ABAP.

Java system refers to SAP Web AS Java.

ABAP+Java system refers to SAP Web AS ABAP+Java.

### Variables

Variables	Description
<SAPSID>	SAP system ID in uppercase letters
<sapsid>	SAP system ID in lowercase letters
<DBSID>	Database ID in uppercase letters
<dbsid>	Database ID in lowercase letters
<host_name>	Name of the corresponding host
<INSTDIR>	Installation directory for the SAP system
<DVD_DIR>	Directory on which a DVD is mounted
<OS>	Operating system name within a path
<SCHEMA_ID>	Database schema ID

The following example shows how the variables are used:



#### Example

Log on as user <sapsid>adm and change to the directory \usr\sap\<SAPSID>.

If your SAP system ID is C11, log on as user c11adm and change to the directory \usr\sap\C11.



1 Introduction

1.4 Before You Start

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## 2 Standard Installation

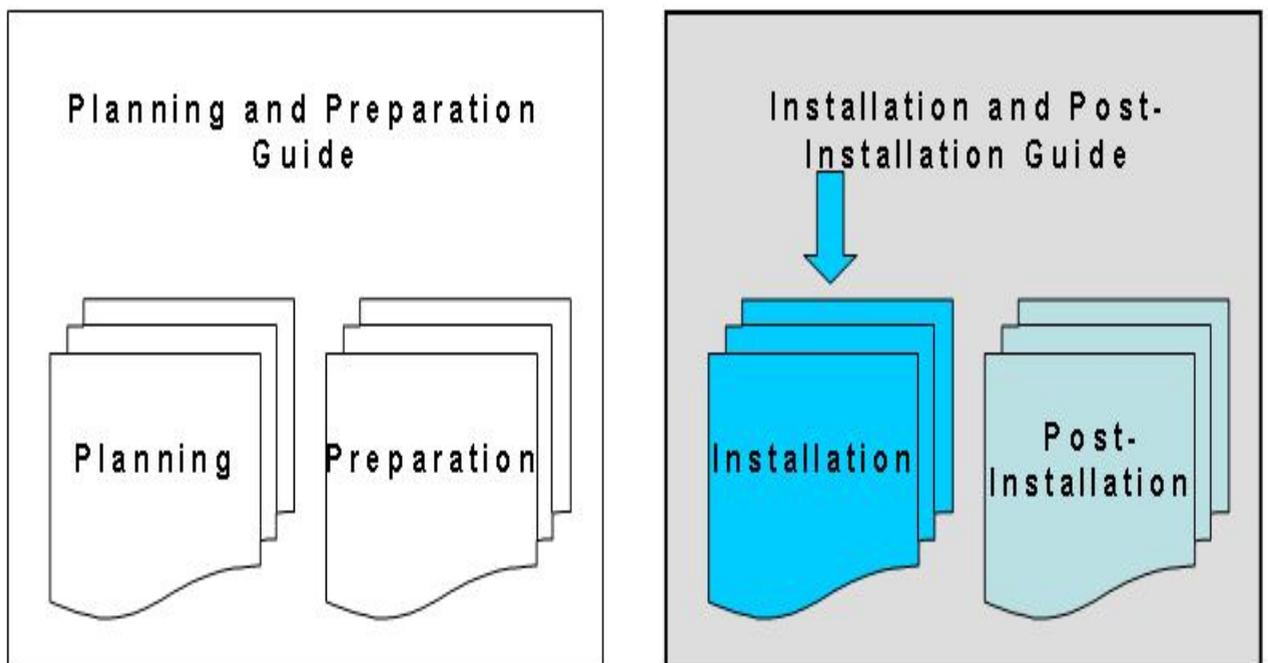
### 2.1 Installation Process

This section provides information about how to perform the installation of your SAP system.

You have completed the planning and preparation activities, described in the *Part I* of the *Component Installation Guide*, before you start the installation.

You are now **here**:

**Figure 2:**



You perform the following steps

1. You *prepare the installation DVDs* [page [10](#)].
2. You *install the MS SQL Server database software* [page [11](#)].

3. If required, you install the corrected MS SQL Server collation [page 15].
4. If required, you prepare your system for a Java Add-In installation [page 17].
5. You install an SAP instance using SAPinst [page 18].

## 2.1.1 Preparing the Installation DVDs

You use this procedure to prepare the installation DVDs.



Recommendation

We recommend that you make all required DVDs available **in parallel**.

### Procedure

1. Identify the required DVDs for your installation as listed below and keep them separate from the remaining DVDs. This helps you to avoid mixing up DVDs during the installation.



Caution

The DVD names in the table below are **abbreviated**.

You can find the **full names** in *Media Information for SAP NetWeaver'04 SR1* on SAP Service Marketplace at: [service.sap.com/instguidesNW04](http://service.sap.com/instguidesNW04) → *Installation*



Note

For the installation of a Unicode SAP system, the *Unicode SAP Kernel DVD* is required. For the installation of a non-Unicode SAP system, the *non-Unicode SAP Kernel DVD* is required.

The following table shows the required DVDs for the installation of a **Java System** or a **Java Add-In for ABAP**:

SAP Instance Installation	Required DVD
Central Instance,	■ SAP Installation Master DVD
Central Services Instance,	■ SAP Java DVD
Database Instance,	
Dialog Instance	

2. Use one of the following methods to make DVDs available in parallel:
  - Before the installation:
    - Have sufficient DVD drives
    - Copy DVDs manually to local hard disks
  - During the installation:
    - Use the SAPinst DVD Browser dialog, that is, you can check the entered location and then copy the entire DVD to the path you entered in column *Copy Package to*.

## 2.1.2 Installing the MS SQL Server Database Software

The MS SQL Server software has to be installed on each host in the system where you intend to set up an SAP instance. To prepare a host for the installation of a central, dialog or database instance, you have to install the database software. Depending on the type of host involved, you either have to install the software for the database **client** or **server**.

### Installation on 32-Bit Systems

- The software for the **server** must be installed on the host where the database runs. It provides all the functions required to run a relational database management system. To install the **server** software you run a batch file.
- The software for the **client** must be installed on all hosts without the database. It enables the communication between a host and the database. When you install the **client** software you use the Microsoft SQL Server 2000 installation program.

### Procedure

1. Log on to the host as a local administrator.



Caution

For security reasons, install the MS SQL Server software on an NTFS partition.

2. Insert the MS SQL Server 2000 RDBMS DVD into your DVD drive.
3. For the **database server**, run the file `SAP46C-.BAT` located in the `MSSQL8_I386` directory of the RDBMS DVD.



Recommendation

SAP recommends that you perform the installation using the file `SAP46C-.BAT`

If you nevertheless decide to use the *Microsoft SQL Server* installation program with `autorun.exe`, enter the information as specified in the *Server Input* column of the table below.

For a **database client**, start the installation program with `autorun.exe` located in the `MSSQL8_I386` directory of the RDBMS DVD. Enter the required information as specified in the table below in the *Client Input* column.



Note

If you mount the DVD from a remote server, it must be assigned a drive letter. The installation writes a log file `sqlstp.log` to the Windows directory `%windir%`



**Input for MS SQL Server Installation on 32-Bit Systems**

Window	Server Input	Client Input
Microsoft SQL Server 2000 Enterprise Edition	Select <i>SQL Server 2000 Components</i> .	Select <i>SQL Server 2000 Components</i> .
Install Components Microsoft SQL Server 2000 Enterprise Edition	Select <i>Install Database Server</i> .	Select <i>Install Database Server</i> .
Welcome	Choose <i>Next</i> .	Choose <i>Next</i> .
Computer Name	Select <i>Local Computer</i> .	Select <i>Local Computer</i> .
Installation Selection	Select <i>Create a new instance of SQL Server, or install Client Tools</i> .	Select <i>Create a new instance of SQL Server or install Client Tools</i> .
User Information	Enter your personal information.	Enter your personal information.
Software License Agreement	Choose <i>Yes</i> .	Choose <i>Yes</i> .
CD-Key	Enter the key specified in the file <i>SAPCDKEY.txt</i> in the <i>MSSQL8_I386</i> directory of the RDBMS DVD.	Enter the key specified in the file <i>SAPCDKEY.txt</i> in the <i>MSSQL8_I386</i> directory of the RDBMS DVD.
Installation Definition	Select <i>Server and Client Tools</i> .	Select <i>Client Tools Only</i> .
Instance Name	Select <i>Default</i> . Do not specify an instance name.	Dialog box does not appear.
Setup Type	Select <i>Custom</i> .	Dialog box does not appear.
Select Components	Select all components.	Select all components.
Service Accounts	Select <i>Use the same account for each service. Auto start SQL Server Service</i> . Select <i>Use the Local System account</i> .	Dialog box does not appear.

Window	Server Input	Client Input
<i>Authentication mode</i>	Select the authentication mode. We recommend to use <i>Windows authentication mode</i> .	Dialog box does not appear.
	 <b>Note</b> For a Java system, <i>Mixed mode</i> is required. SAPinst automatically changes the authentication mode into <i>Mixed mode</i> when installing a Java system.	
<i>Collation settings</i>	Select <i>SQL Collations</i> . From the drop-down list select <i>Binary order, for use with the 850 (Multilingual) Character Set</i> .	Dialog box does not appear.
<i>Network Libraries</i>	Leave selection unchanged and choose <i>Next</i> .	Dialog box does not appear.
<i>Start Copying Files</i>	Choose <i>Next</i> .	Choose <i>Next</i> .
<i>Choose Licensing Mode</i>	Select the mode you require.	Dialog box does not appear.

- When you have finished the installation, install Service Pack 3 for SQL Server 2000, and the latest hot fix. For more information on how to get Service Pack 3, see [SAP Note 62988](#). For the installation of SP3, also see the SP3README.HTM file on the RDBMS DVD.  
For more information on the latest hot fix, see [SAP Note 608651](#).
- If you have installed the server software, install the corrected MS SQL Server Collation.

#### Installation on 64-Bit Systems

In a 64-bit system, you cannot run the SQL Server 2000 graphical user interface (GUI) tools, with the following exceptions:

- Client Network Utility (supported by the 64-bit Windows operating system)
- Server Network Utility
- Service Manager
- SQL Server 2000 Licensing (in Control Panel)
- Setup.exe (supported by Windows Installer)

If you want to use the other SQL Server 2000 GUI tools with the 64-bit version of SQL Server 2000, you have to install them with the 32-bit version of SQL Server 2000 on a 32-bit computer and use them to remotely manage the 64-bit server.

Note

- You can install the 32-bit graphical user interface management tools from the 32-bit SQL Server 2000 RDBMS DVD.
- Graphical interface management tools which were installed with the 32-bit version of SQL Server 2000 are not supported in the 64-bit version. For more information refer to the `readme.txt` file in the `MSSQL8_IA64\IA64` subdirectory.

**Procedure**

1. Log on to the host as a local administrator.

Caution

For security reasons, install the MS SQL Server software on an NTFS partition.

2. Insert the MS SQL Server 2000 RDBMS DVD into your DVD drive.
3. To start the installation, run `setup.exe` located in the directory `MSSQL8_IA64\IA64`.
4. Enter the required information as specified in the following table.

Note

For the installation of the client software, some of the screens may not appear.

**Input for the MS SQL Server Installation on 64-Bit Systems**

Window	Input
<i>Registration Information</i>	Enter your name and the product key specified in the file <code>SAPCDKEY.txt</code> in the root directory of the RDBMS DVD.
<i>Software License Agreement</i>	Choose <i>Yes</i> .
<i>Feature Selection</i>	<ul style="list-style-type: none"><li>■ <b>Server Software:</b> Select <b>all</b> components.</li><li>■ <b>Client Software:</b> Select <i>SQL Server Management Tools</i>.</li></ul>
	<p> Note</p> <p>To select a component, left-click on it and choose <i>Entire feature will be installed on local hard drive</i>.</p> <p>To deselect a component, left-click on it, and choose <i>Entire feature will be unavailable</i>.</p>
<i>Instance Name</i>	Select the instance type you want to install.

Window	Input
<i>Service Account</i>	Select <i>Use the same account for each service. Auto start SQL Server Service.</i> Select <i>Use the Local System account.</i>
<i>Authentication Mode</i>	<ul style="list-style-type: none"> <li>Select the authentication mode. We recommend to use <i>Windows authentication mode.</i></li> </ul> <p> <b>Note</b> For a Java system, <i>Mixed mode</i> is required. SAPinst automatically changes the authentication mode into <i>Mixed mode</i> when installing a Java system.</p> <ul style="list-style-type: none"> <li>Enter and confirm the <i>sa</i> login.</li> </ul> <p> <b>Note</b> If you have chosen <i>Windows authentication mode</i>, the <i>sa</i> login is created, but cannot be used.</p>
<i>Security Enhancement: Cross Database Ownership Chaining</i>	Leave selection unchanged and choose <i>Next.</i>
<i>Collation Settings</i>	Select <i>SQL Collations.</i> From the drop-down list select <i>Binary order, for use with the 850 (Multilingual) Character Set.</i>
<i>Licensing Mode</i>	Select the licensing mode and choose <i>Next.</i>
<i>Ready to Install</i>	Select <i>Install.</i>

5. Install the latest hot fix for SQL Server 2000. For more information, see [SAP Note 608651](#)
6. When you have installed the server software, install the corrected MS SQL Server Collation.

### 2.1.3 Installing the Corrected MS SQL Server Collation

When you install the MS SQL Server 2000 database for an SAP system, in the field *Collation Settings* we recommend that you select *Binary order for use with the 850 (Multilingual) Character Set.*

This means that all new databases and table columns will be created with this collation setting.



**Note**

To view the default collation of MS SQL Server use the query:

```
select serverproperty('collation')
```

This query returns the default collation of the overall server. When you have selected code page cp850, it returns: `SQL_Latin1_General_CP850_BIN`

Unfortunately this collation setting does not sort Unicode data as it is required by an SAP system. To solve this problem, Microsoft provides a corrected collation as a hot fix (QFE) for SQL Server. The QFE is included in the hot fix you installed during the *standard installation for the MS SQL Server database*. [page 11]

When you have installed the hot fix, you have to run the executable `INSTCOLL.EXE` from SAP, as described below. For more information on `INSTCOLL.EXE`, see [SAP Note 600027](#).

## Prerequisites

- You have installed the MS SQL Server 2000 database. In the field *Collation Settings*, you selected *Binary order for use with the 850 (Multilingual) Character Set*.
- If you run your SQL Server in a **32-bit system**, you have installed SP3 and the latest hot fix. For more information, refer to [SAP Note 62988](#) and [SAP Note 608651](#).
- If you run your SQL Server in a **64-bit system**, you have installed the latest hot fix. For more information, see [SAP Note 608651](#).



### Note

Besides applying SP3 and/or the hot fix you do not have to make any changes on the client side (SAP application servers).

- To obtain a correct collation order with MS SQL Server, you have to use the new collation for all new installations of a Unicode or non-Unicode SAP system with the MS SQL Server database. New versions of the `SAPinst` installation tool check for the new collation.
- At present, there is no need to convert existing SAP system installations to the new collation.
- A new SAP system using the new collation and an existing SAP system that is using the old collation cannot run as two databases in the same MS SQL Server instance. If you want to install a new system on a database server with an existing system you have to apply the new collation with `INSTCOLL.EXE`.

## Procedure

1. Download the `INSTCOLL.EXE` file, which is attached as zip file to [SAP Note 600027](#), and extract it to your server.
2. Open a command prompt and change to the directory where you extracted the `INSTCOLL.EXE` file.
3. Enter the following:

- For a default instance enter: `INSTCOLL.EXE`
- For a named instance enter: `INSTCOLL.EXE -S<server>\<instance>` (without any spaces after `-S`)

The collation executable starts the SQL Server Service if it is not running already and runs several checks.

When you are asked to apply the new collation to all databases confirm with Yes.

When the conversion has finished it stops the SQL Server Service.

4. To verify whether the MS SQL Server is properly configured, run:
 

```
select serverproperty('collation')
```



### Caution

You have to run `INSTCOLL.EXE` only once to apply the new collation. To convert a single SAP database to the new collation, see [SAP Note 600027](#).

### Result

You can now continue with the standard SAP system installation and install any SAP instance on this server.

## 2.1.4 Preparing your System for an Java Add-In Installation

If you want to perform a Java Add-In installation for an existing ABAP system that has been upgraded to Web AS 6.40 SR1, you have to perform the following steps:

### Procedure

1. In your default profile `\usr\sap\<SAPSID>\SYS\profile\default.pfl` check the parameter `db/mss/schema`.
  - If it is set to `<sapsid>` (lowercase letters), no further action is required.
  - If it does not exist or is set to `dbo`, convert the schema as follows:
    - a) If you use a MS Cluster environment, bring your SAP resource offline.
    - b) Start the SAPinst schema conversion tool:
      - For a standard installation, start *SAPinst* [page 18] and choose *SAPNetWeaver '04 Support Release 1* → *Datubase Tools* → *MS SQL Server* → *Schema conversion*
      - For an installation with Microsoft Cluster (MSCS) open a command prompt and change to the directory: `IM<x>\SAPINST\NT\<platform>`.  
Start SAPinst manually with the command:  
`sapinst SAPINST_USE_HOSTNAME=<virtual_hostname_of_SAP_system>`
    - c) Enter the required information in the installation screens. For more information about the input parameters use the F1 help.
    - d) **MSCS only:** When the conversion is finished, bring the SAP resource `SAP-R/3 <SAPSID>` offline again.
2. Check if you use SQL Server collation `SQL_Latin1_General_CP850_BIN2`:
  - a) Start the SQL Server Enterprise Manager.
  - b) Right-click on your SQL Server and choose *Properties*.  
In the *General* tab under *Server collation* you see the collation installed.
    - If you use `SQL_Latin1_General_CP850_BIN2` no further action is required.
    - If you use collation `SQL_Latin1_General_CP850_BIN`, convert it to `SQL_Latin1_General_CP850_BIN2` as described in *Installing the Corrected MS SQL Server Collation* [page 15].

## 2.1.5 Installing an SAP System Instance Using SAPinst

The following sections tell you how to run SAPinst to install an SAP instance and provide useful background information about SAPinst itself.

They describe an installation where SAPinst GUI and SAPinst server are running on the same host as well as a remote installation, where SAPinst GUI is running on another host:

- *Running SAPinst on Windows* [page 18]
- *Using SAPinst GUI* [page 22]
- *Interrupted Installation with SAPinst* [page 23]
- *Remote Installation with SAPinst* [page 25]

## 2.1.5.1 Running SAPinst on Windows

This procedure tells you how to run SAPinst to install one or more SAP instances.

It describes an installation where SAPinst GUI and SAPinst server are running on the same host. If you want to perform a remote installation (that is, SAPinst GUI is running on another host), see *Remote Installation with SAPinst* [page 25].

Note the following about SAPinst:

- SAPinst normally creates the installation directory `sapinst_instdir` where it keeps its log files, and which is located directly below the `Program Files` directory. If SAPinst is not able to create `sapinst_instdir` directly below the `Program Files` directory, SAPinst tries to create `sapinst_instdir` in the directory defined by the environment variable `TEMP`.
- The SAPinst Self-Extractor extracts the executables to a temporary directory (`TEMP`, `TMP`, `TMPDIR`, or `SystemRoot`). These executables are deleted after SAPinst has stopped running. Directories with the name `sapinst_exe.xxxxxx.xxxx` sometimes remain in the temporary directory. You can safely delete them. In the temporary directory you can also find the SAPinst Self-Extractor log file `dev_selfex.out`, which might be useful if an error occurs.



### Caution

If SAPinst cannot find a temporary directory, the installation terminates with the error FC0-00058.

- If you want to terminate SAPinst and the SAPinst Self-Extractor, do one of the following:
  - Right-click the icon for the SAPinst output window located in the Windows tray and choose *Exit*.
  - Click the icon for the SAPinst output window located in the Windows tray and choose *File* → *Exit*.

## Prerequisites

- Each SAP instance requires a separate installation directory.



### Recommendation

We recommend that you keep all installation directories until the system is completely and correctly installed.

- You need at least 130 MB of free space in the installation directory for each Java installation service. In addition, you need 60-200 MB free space for the SAPinst executables.
- If you are installing a second or subsequent SAP system into an existing database, make sure that the database is **up and running before** starting the installation. For more information, see “Installation of Multiple Components in One Database” in *Part I — Planning and Preparation*.

## Procedure

1. Log on to your host as a user who is a member of the local administrators group.
2. Insert the *SAP Installation Master DVD* in your DVD drive or mount it locally.



### Note

If you want to install a gateway instance you have to use the SAP Presentation DVD. In this case, replace <SAP Installation Master DVD> with <SAP Presentation DVD> in this section.

3. Start SAPinst from the SAP Installation Master DVD by double-clicking `sapinst.exe` from the following path:

**<DVD drive>:\IM<x>\SAPINST\NT\<platform>**

SAPinst GUI starts automatically by displaying the *Welcome* screen.

However, if there is only one component to install, SAPinst directly displays the first input dialog without presenting the *Welcome* screen.



### Note

SAPinst uses the ports 21212 during the installation for communication with SAPinst GUI. You get an error message if one of these ports is already used by another service. In this case, open a command prompt and change to `<DVD drive>:\IM<x>\SAPINST\NT\<platform>`.

Run `sapinst.exe SAPINST_DIALOG_PORT=<free_port_number>`

4. In the *Welcome* screen, select the corresponding installation service from the tree structure and choose *Next*.
  - For a Java system, you have the following installation services:

### Installation Services for a Java System

Installation Procedure	Installation Service	Remarks
Installing a central or distributed Java system	a) Choose one of the following: <ul style="list-style-type: none"> <li>■ <i>Java System</i> → <i>&lt;Database&gt;</i> → <i>Default Installation — Java System</i></li> <li>■ <i>Java System</i> → <i>&lt;Database&gt;</i> → <i>Custom Installation — Java System</i></li> </ul> b) <i>Java System</i> → <i>&lt;Database&gt;</i> → <i>Dialog Instance Installation</i>	a) Installs one of the following: <ul style="list-style-type: none"> <li>■ A central or distributed Java system with default installation parameters. This option allows you to install the Java system with the default values for the basic system parameters.</li> <li>■ A central or distributed Java system with custom installation parameters. This option allows you to install the Java system with custom values for the system parameters.</li> </ul> b) Installs a dialog instance.

- For a Java Add-In system, you have the following installation services:



**Caution**

If your existing SAP system includes a J2EE Engine 6.20, the installation services for a Java Add-In delete the J2EE Engine 6.20 before installing the J2EE Engine 6.40 SR1.

### Installation Services for a Java Add-In Installation

Installation Procedure	Installation Service	Remarks
Installing a Java Add-In for an ABAP system	a) <i>Java Add-In for ABAP</i> → <i>&lt;Database&gt;</i> → <i>Java System Finalization</i>	a) Installs the SCS instance, the Java part of the central instance, and the Java database schema.
	b) <i>Java Add-In for ABAP</i> → <i>&lt;Database&gt;</i> → <i>Dialog Instance Finalization</i>	b) Installs the Java part of the dialog instance.



#### Caution

Do not patch the J2EE Engine or SDM during the deployment. Only apply patches after the whole installation procedure of the J2EE Engine has been finished successfully.

SAPinst creates a subdirectory for each installation service, named

`<sapinst_instmdir>\<installation_service>` which is located below `%ProgramFiles%\sapinst_instmdir`.

The exact name of the subdirectory depends on the installation service chosen by you.

- If SAPinst prompts you to log off from your system, log off and log on again. SAPinst restarts automatically.
- Follow the instructions in the SAPinst dialogs and enter the required parameters.



#### Note

For more information about the input parameters, position the cursor in the field of the respective parameter and press the F1 key.

After you have entered all required input information, SAPinst starts the installation and displays the progress of the installation. If the installation was successful, the screen *Finished installation successfully* is displayed.

- For security reasons, delete the file `<drive>:\Documents and settings\%userprofile%\sdtgui\sdtgui.trc`, which contains all passwords entered during the installation.

### Troubleshooting

- If an error occurs during the **dialog phase**, SAPinst:
  - Stops the installation
  - Displays a dialog informing you about the error

You can now directly view the log file by choosing *View Logs*  
You must abort the installation with *Stop* or *Reset*, and try to solve the problem.
- If an error occurs during the **processing phase**, SAPinst:
  - Stops the installation
  - Displays a dialog informing you about the error

You can now:

- Directly view the log file by choosing *View Logs*
- Try to solve the problem.
- Continue the installation by choosing *Retry*.
- *Stop* or *Reset* the installation

For more information, see *Interrupted Installation with SAPinst* [page 23].

## 2.1.5.2 Using SAPinst GUI

The following buttons are available on the SAPinst GUI dialogs (input screens, installation progress screen, message boxes):

Button / Function Key	Meaning
F1	Displays detailed information about each input parameter. The new field help replaces the former “What’s this”-help on the SAPinst screens and the former input parameter tables in the installation guide.
<i>Back</i>	Displays the previous dialog for editing.
<i>Next</i>	Displays the next dialog for editing.
<i>Cancel</i>	<p>Cancels the installation with the following options:</p> <ul style="list-style-type: none"> <li>■ <i>Stop</i> Stops the installation without further changing the installation files. You can continue the installation later from this point.</li> <li>■ <i>Reset</i> Resets all installation input files. All files in the installation directory are removed from the system. No backup is available. You must restart the installation from the beginning.</li> </ul>

Button / Function Key	Meaning
<i>Log off</i>	<p>Cancels the connection to the SAPinst GUI only. The SAPinst server keeps running.</p> <p> <b>Example</b>            Typical case: For some reason you need to log off during the installation from the host where you control the installation with SAPinst GUI. The installation continues while you are logged off. You can later reconnect to SAPinst GUI from another host to the same installation. For this you need the <i>SAP Installation Master DVD</i>. For more information on running SAPinst GUI in standalone mode for a remote installation, see section “Starting SAPinst GUI on the Local Host”.</p>
<i>View Log</i>	Displays the content of the <code>sapinst.log</code> file during the installation.
<i>Retry</i>	Performs the installation step again (if an error has occurred).
<i>Stop</i>	Stops the installation without further changing the installation files. You can continue the installation later from this point.
<i>Reset</i>	<p>Resets all installation input files. All files in the installation directory are removed from the system. No backup is available.</p> <p>You must restart the installation from the beginning.</p>
<i>Continue</i>	Continues with the option you have chosen before.

### 2.1.5.3 Interrupted Installation with SAPinst

The SAP system installation might be interrupted for one of the following reasons:

- An error occurred during the processing phase:  
 SAPinst does not abort the installation in error situations. If an error occurs during the processing phase, the installation will hold and a dialog box appears. The dialog box contains a short description about the choices listed in the following table as well as a path to a log file that contains detailed information about the error.
- You interrupted the installation by choosing *Cancel*.

The following table describes the options in the dialog box:

Option	Meaning
<i>View Log</i>	<p>SAPinst displays history information (log files) about the most recent steps that you performed. These log files contain a short description of the error that has occurred.</p> <p>The dialog box remains in the background so you can choose <i>Retry</i> or <i>Stop</i> after viewing the log information.</p>
<i>Retry</i>	<p>SAPinst retries the installation from the point of failure without repeating any of the previous steps.</p> <p>This is possible because SAPinst records the installation progress in the <code>keydb.xml</code> file.</p> <p>We recommend that you view the entries in the log files, try to solve the problem and then choose <i>Retry</i>.</p> <p>If the same or a different error occurs again, SAPinst displays the same dialog box again.</p>
<i>Stop</i>	<p>SAPinst stops the installation, closing both the dialog box and the SAPinst GUI.</p> <p>SAPinst records the installation progress in the <code>keydb.xml</code> file. Therefore, you can continue the installation from the point of failure without repeating any of the previous steps. See the procedure below.</p>
<i>Reset</i>	<p>SAPinst resets the installation so that you can now restart the installation from the beginning, that is, with the default <code>keydb.xml</code> file.</p>
	<p> <b>Caution</b></p> <p>You must delete the previous installation <b>before</b> you restart SAPinst. For more information, see <i>Deletion of an SAP System Installation</i> [page 40].</p>
<i>Continue</i>	<p>SAPinst continues the installation from the current step.</p>

## Procedure

The following procedures describe the steps to restart an installation, which you stopped by choosing *Stop*, or to continue an interrupted installation after an error situation.

1. Log on to your remote host as a user who is a member of the local administration group.
2. Insert the Installation Master DVD in your DVD drive.
3. Enter the following commands at the Windows command prompt:  
`cd <DVD drive>:\IM<x>_<OS>\SAPINST\NT\<platform>  
sapinst.exe`
4. From the tree structure in the *Welcome* screen, select the installation task that you want to continue and choose *Next*.



### Note

If there is only one component to install, the *Welcome* screen does not appear.

The *What do you want to do?* screen appears.

5. In the *What do you want to do?* screen, decide between the following alternatives and confirm with *OK*.

Alternative	Behavior
<i>Run a new Installation</i>	The interrupted installation is not continued. Instead, SAPInst moves the content of the old installation directory and all installation-specific files to the backup directory. Afterwards, you can no longer continue the old installation. For the backup directory, the following naming convention is used: <code>&lt;log_day_month_year_hours_minutes_seconds&gt;</code> (for example, <code>log_01_Oct_2003_13_47_56</code> ).
<i>Continue old installation</i>	The installation that was interrupted is continued from the point of failure.

## 2.1.5.4 Remote Installation with SAPInst (Optional)

### 2.1.5.4.1 General Information about the Remote Installation with SAPInst (Optional)

You can run the SAPInst GUI in standalone mode to perform a remote installation.

This enables you to install an SAP system on another host (the remote host) while monitoring the installation with the SAPInst GUI on your local Windows or UNIX computer (the local host).

#### Prerequisites

- Both computers are in the same network and can ping each other.  
To test this:
  - Log on to your remote host and enter the command `ping <local host>`.
  - Log on to the local host and enter the command `ping <remote host>`.

#### Process Flow

1. You start *SAPInst on the remote host* [page 26]
2. You start *SAPInst GUI on the local host* [page 27]
3. You perform the installation using the SAPInst GUI.



## 2.1.5.4.2 Starting SAPinst on the Remote Host (Optional)

You use this procedure to run SAPinst on the **remote** host when you want to run SAPinst as a remote installation. The remote host is the host where you want to install the SAP system.

### Prerequisites

You have prepared your system for SAPinst. For more information, see “Preparing the System for SAPinst” in *Part I – Planning and Preparation*.

### Procedure

#### Your Remote Host Runs on a Windows Platform

1. Log on to your remote host as a user who is a member of the local administration group.
2. Insert the SAP Installation Master DVD in your DVD drive.
3. Enter the following commands from the Windows command prompt:

```
cd <DVD drive>:\IM<x>_<OS>\SAPINST\NT\<platform>
sapinst.exe SAPINST_START_GUI=false
```

For more information, also see *Running SAPinst on Windows* [page 18].

SAPinst now starts and waits for the connection to the SAPinst GUI. That is, you see the following at the command prompt:

```
guiengine: no GUI connected; waiting for a connection on host <host_name>, port
<port_number> to continue with the installation
```

4. Start SAPinst GUI on your local host, as described in *Starting SAPinst GUI on the Local Host* [page 27].

#### Your Remote Host Runs on a UNIX Platform

1. Log on to your remote host as user root.
2. Mount the Installation Master DVD.
3. Enter the following commands:

```
cd <SAP_Installation_Master_DVD>/IM<x>_<OS>/SAPINST/UNIX/<OS>
./sapinst SAPINST_START_GUI=false
```

For more information, also see section *Running SAPinst on UNIX* in the Component Installation Guide for UNIX.

SAPinst now starts and waits for the connection to the SAPinst GUI. That is, you see the following at the command prompt:

```
guiengine: no GUI connected; waiting for a connection on host <host_name>, port
<port_number> to continue with the installation.
```

4. Start the SAPinst GUI on your local host, as described in *Starting SAPinst GUI on the Local Host* [page 27].

### 2.1.5.4.3 Starting SAPinst GUI on the Local Host (Optional)

You use this procedure to run SAPinst GUI on the **local** host when you want to run SAPinst as a remote installation. The local host is the host where you want to control the installation with the SAPinst GUI.

#### Prerequisites

You have prepared your system for SAPinst. For more information, see “Preparing the System for SAPinst” in *Part I – Planning and Preparation*.

#### Procedure

##### Your Local Host Runs on a Windows Platform

1. Log on as a member of the local administration group.
2. Insert the SAP Installation Master DVD into your DVD drive.
3. Go to the following directory:  
`cd <DVD drive>:\IM<x>_<OS>\SAPinst\NT\<OS>`
4. Start the SAPinst GUI in one of the following ways:
  - With additional parameters  
 Enter the following from the Windows command line:  
`startinstgui.bat -host <host_name> -port <port_number>`  
`<host_name>` is the host name of the installation host  
`<port_number>` is the same port as SAPinst uses on the remote host
  - Without additional parameters
    - a) Enter the following from the Windows command line:  
`startinstgui.bat`  
 The SAPinst GUI starts and tries to connect to SAPinst on the local host. However, normally there is no SAPinst running on the local host.  
 Therefore, the SAPinst GUI cannot connect and the *SAP Installation GUI Connection* dialog appears.
    - b) Enter the host name of the *Installation Host* and the same *Port* as SAPinst uses on the remote host and choose *Log on*.  
 SAPinst GUI connects to the SAPinst server and the first dialog of the installation appears.
5. Perform the installation from your local host.

##### Your Local Host Runs on a UNIX Platform

1. Log on as user root.
2. Mount your installation DVD.



Note

Mount the DVD locally. We do **not** recommend using Network File System (NFS).

3. Change to the following directory:  
`cd <SAP_Installation_Master_DVD>/IM<x>_<OS>/SAPINST/UNIX/<OS>`

## 4. Start the SAPinst GUI in one of the following ways:

- With additional parameters

Enter the following from the UNIX command line:

```
./startinstgui.sh -host <host_name> -port <port_number>
```

**<host\_name>** is the host name of the installation host

**<port\_number>** is the same port as SAPinst uses on the remote host

- Without additional parameters

a) Enter the following from the UNIX command line:

```
./startinstgui.sh
```

The SAPinst GUI starts and tries to connect to SAPinst on the local host. However, normally there is no SAPinst running on the local host.

Therefore, the SAPinst GUI cannot connect and the SAP Installation GUI Connection dialog appears.

b) Enter the host name of the *Installation Host* and the same *Port* as SAPinst uses on the remote host and choose *Log on*.

SAPinst GUI connects to the SAPinst server and the first dialog of the installation appears.

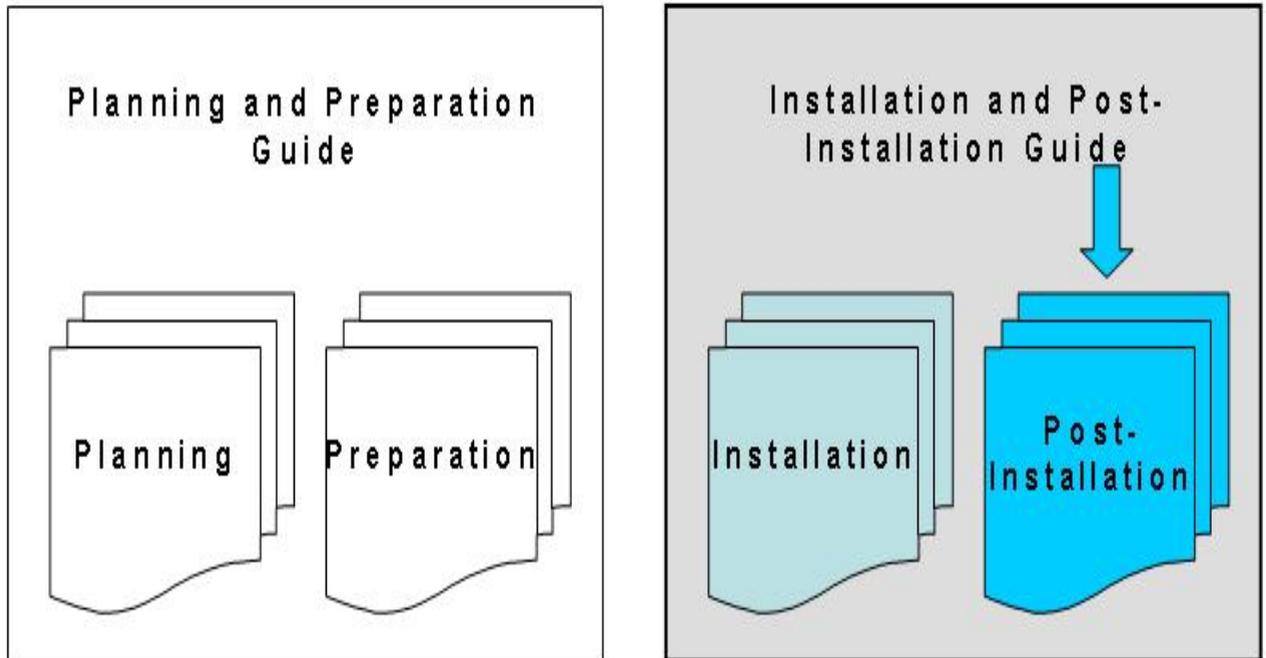
## 5. Perform the installation from your local host.

## 2.2 Post-Installation Activities

This section provides information on how to perform the post-installation activities of your SAP system.

You are now here:

Figure 3:



Caution

You have completed the:

- Planning and preparation activities, described in *Part I* of the *Component Installation Guide*
- Installation activities, before you perform the post-installation activities.

You perform the following post-installation steps:

1. You *start and stop the SAP system* [page [30](#)].
2. You *log on to the J2EE Engine* [page [31](#)].
3. You *install the SAP license* [page [32](#)].
4. You *install the SAP online documentation* [page [32](#)].
5. If required, you *apply the latest kernel and Support Packages* [page [34](#)].
6. You *check the SAP Java documentation* [page [33](#)].
7. You *perform a full installation backup* [page [35](#)].
8. You *change passwords of created users* [page [36](#)].
9. You *apply strong encryption after the installation* [page [37](#)].

## 2.2.1 Starting and Stopping the SAP System

You use this procedure to check that you can start and stop the SAP system after the installation. You use the Microsoft Management Console (MMC) to start and stop the SAP system.



### Note

The newly installed MMC only allows you to start or stop the SAP system **locally** on the host that you are logged on to. Later you can configure the MMC to enable central management of **all** hosts.

For more information, choose the following in the SAP Library: *Solution Life Cycle Management* → *Solution Monitoring* → *Monitoring in the CCMS* → *Microsoft Management Console: Windows*.

### Prerequisites

- You have logged on to the SAP system host as user <sapsid>adm
- You have checked the settings for VM parameters as described in [SAP Note 723909](#).

### Procedure

#### Starting the SAP System

1. To start the central services instance, central instance, and database instance:
  - a) On the SAP system host, choose *Start* → *Programs* → *SAP Management Console*.
  - b) Right-click the SAP system node and choose *Start*.  
The central services, central instance, and database start.
2. If you have installed a dialog instance on another host, repeat the above steps on the dialog instance host.



### Note

Make sure that the SAP system (and its J2EE Engines) is up and running before you start or restart dialog instances (and their J2EE Engines).

#### Stopping the SAP System

If you have installed a dialog instance on a dialog instance host, you first have to stop the dialog instance before you stop the central services instances, central instance, and database instance.

1. To stop the dialog instance:
  - a) On the dialog instance host, choose *Start* → *Programs* → *SAP Management Console*.
  - b) Right-click the SAP system node and choose *Stop*.
2. To stop the central services instance, central instance, and database instance:
  - a) On the SAP system host, choose *Start* → *Programs* → *SAP Management Console*.
  - b) Right-click the SAP system node and choose *Stop*.  
The central services instance, central instance and database instance stop.

## 2.2.2 Logging On to the J2EE Engine

There are two standard users for the J2EE Engine after the installation, an administrator user and a guest user. You need to check that you can log on to the J2EE Engine using the administrator user. The actual user ID depends on your installation option and data source for user management. For more information, see the following tables:

### Java Add-In Users

User	User ID Data Source: ABAP	Initial Password
Administrator	J2EE_ADMIN	Set during installation process
Guest	J2EE_GUEST	Set during installation process

### Java Standalone Users

User	User ID Data Source: DBMS	User ID Data Source: External ABAP	Initial Password
Administrator	Administrator	Set during the installation process	Set during the installation process
Guest	Guest	Set during the installation process	Set during the installation process

## Prerequisites

You have already started the SAP system, including the J2EE Engine.



### Caution

During the installation, SAPinst prompts you to assign passwords for the administrator and other standard users.

## Procedure

1. Start a web browser and enter the following URL:

**http://<hostname\_of\_SAP\_J2EE\_Engine\_Server>:5<Instance\_Number>00**



### Example

If you installed the J2EE Engine on host saphost06 and the instance number of your J2EE Engine is 15, enter the following URL:

**http://saphost06:51500**

The start page of the J2EE Engine appears in the Web browser.

2. Log on by pressing *EXAMPLES* in the upper right corner of the Web page.

## 2.2.3 Installing the SAP License

You must install a **permanent** SAP license. When you install your SAP system, a **temporary** license is automatically installed. This temporary license allows you to use the system for **only four weeks** from the date of installation.



### Caution

**Before** the temporary license expires, you must apply for a permanent license key from SAP. We recommend that you apply for a permanent license key as soon as possible after having installed your system.



### Note

If you installed a Java system as a prerequisite for the SAP Enterprise Portal installation, do **not** install the SAP license now. The license of the SAP Web AS Java system is automatically installed as part of the SAP Enterprise Portal installation. For more information, see *Solution Life Cycle Management* → *SAP Licenses* → *SAP License Keys* → *SAP License* → *Licensing the Portal* in the *SAP Library* [page 6].

When you install the SAP Web AS license, a license for the J2EE Engine is installed automatically.

### Procedure

The installation procedure of the SAP license depends on the installation that you performed:

- If you installed an SAP Web AS **ABAP+Java** system or an SAP system based on SAP Web AS ABAP+Java, see:
  - *Solution Life Cycle Management* → *SAP Licenses* → *SAP License Keys* → *SAP License* in the *SAP Library* [page 6].
  - **SAP Note 94998** (general)
  - **SAP Note 767123** (especially for the licensing of SAP NetWeaver '04)
- If you installed an SAP Web AS **Java** system, see *Solution Life Cycle Management* → *SAP Licenses* → *SAP License Keys* → *Licensing of the SAP J2EE Engine* in the *SAP Library* [page 6].



### Note

You can install multiple licenses, one for each host running a message server. For example, on Windows, this applies if you have an installation with Microsoft Cluster Service (MSCS). The SAP system then searches for the current license.

## 2.2.4 Installing the SAP Online Documentation

SAP currently provides an HTML-based solution for the online documentation, the SAP Library. The library includes the Application Help, Glossary, Implementation Guide (IMG), and Release Notes. You can display the documentation with a Java-compatible Web browser on all front-end platforms supported by SAP.

### Procedure

Install the SAP online documentation (SAP Library) in your SAP system as described in the `README.TXT` file contained in the root directory of the online documentation DVD, delivered as part of the installation package.

For other ways to access the SAP Library, see *Accessing the SAP Library* [page 6].

## 2.2.5 Checking the SAP Java Documentation

You need to check important information about the configuration of the J2EE Engine and about SAP Java technology in the SAP Library.

### Procedure

1. In the *SAP Library* [page 6], choose *SAP NetWeaver Configuration* → *SAP Web Application Server (Java)* → *J2EE Engine Configuration* → *Template Configuration Tool*.  
Check the information here on the Template Configuration Tool, which enables you to configure the J2EE Engine and the SAP NetWeaver components running on it.



Note

The Template Configuration Tool will be available as of NW '04 SP Stack 10.

2. In the *SAP Library* [page 6], choose *Application Platforms (SAP Web Application Server)* → *Java Technology in SAP Web Application Server*.
3. Check the following:

Manual	Contents
Architecture	This manual describes the architecture of a Java or ABAP+Java system. It contains information on: <ul style="list-style-type: none"><li>■ Java cluster architecture including central services, load balancing, and high availability.</li><li>■ J2EE Engine system architecture</li><li>■ SAP NetWeaver Java development infrastructure, including SAP NetWeaver Developer Studio</li></ul>



Note

The SAP NetWeaver Developer Studio is the SAP development infrastructure for Java. The Architecture Manual describes the integration of the SAP NetWeaver Developer Studio into the SAP development infrastructure.

Manual	Contents
Administration	<p>This manual describes how to administer the SAP system, focusing on the J2EE Engine. It contains information on:</p> <ul style="list-style-type: none"><li>■ Network and cluster infrastructure</li><li>■ Installation information</li><li>■ Server administration including J2EE Engine security</li><li>■ Administration of SAP NetWeaver Java development infrastructure</li></ul> <p> Caution Make sure that you check the mandatory post-installation procedures listed in the Administration Manual under <i>Installation Information</i> → <i>Post-Installation Procedures</i>.</p>
Development	<p>This manual describes the technologies for developing Java-based business applications. It explains how to use the SAP Netweaver Developer Studio, which is the SAP Java development environment.</p>
Migration	<p>This manual contains all the information you need to migrate an application created in J2EE Engine 6.20.</p>
Reference	<p>This manual contains reference information for administration and development.</p>

## 2.2.6 Applying the Latest Kernel and Support Packages

You use this procedure to apply the latest kernel and Support Packages for your SAP system from SAP Service Marketplace.

### Procedure

1. Apply the latest kernel.  
You must **always** replace the installed kernel with the latest kernel from SAP Service Marketplace. In particular, you must replace the installed kernel in the following cases:
  - If you installed the kernel executables locally on every host
  - If your central instance host runs on a different operating system than your dialog instance host or your gateway instance hostFor more information about how to download a kernel, see [SAP Note 19466](#).
2. Apply Support Packages.  
You have to apply SAP NetWeaver '04 support package stacks as described in the documentation *Support Package Stack Guide – SAP Netweaver '04 Support Package Stack <current stack>* on SAP Service Marketplace at: [service.sap.com/instguidesNW04](http://service.sap.com/instguidesNW04) → *Operations* → *Cross-NW*:

## 2.2.7 Performing a Full Installation Backup

You must perform an offline full backup at the end of the installation.

### Prerequisites

- You have completed client maintenance (for example, client copy).
- You have stopped:
  - The SAP system
  - SAP-related services (SAP<SAPSID>\_<instance> and SAP0SCo1)
  - The database
- You are logged on as user <sapsid>adm.
- You have shut down the SAP system and database.

### Procedure

1. Save the registry:
  - a) Choose *Start* → *Programs* → *Accessories* → *System Tools* → *Backup*.
  - b) Choose *Emergency Repair Disk*.  
The *Emergency Repair Diskette* dialog box appears.
  - c) Select *Also Backup the Registry to the Repair directory...*  
When you confirm your entry, the registry is written to diskette.
2. Save the system state data:
  - a) Choose *Start* → *Programs* → *Accessories* → *System Tools* → *Backup*.
  - b) Choose *Backup Wizard* → *Next*.
  - c) Select *Only back up the System State data* and choose *Next*.
  - d) In *Where to Store the Backup*, select the *Backup media type* and enter the *Backup media* or *file name*.
  - e) Choose *Next*.
  - f) Check the information displayed and choose *Finish* to start the backup.
3. Back up all SAP-specific and all database-related directories:
  - a) Choose *Start* → *Programs* → *Accessories* → *System Tools* → *Backup*.
  - b) Choose *Backup Wizard* → *Next*.
  - c) Select *Back up selected files, drives, or network data* and choose *Next*.
  - d) In *What to back up*, select the Windows directory and all SAP and database-related directories, including:
    - \USR\SAP
    - <HOMEDIR> of <sapsid>adm
    - \%WINDIR%
  - e) Choose *Next*.
  - f) In *Where to Store the Backup*, select the *Backup media type* and enter the *Backup media* or *file name* for the backup.
  - g) Choose *Next*.
  - h) Check the information displayed and then choose *Finish* to start the backup.

## 2.2.8 Changing Passwords of Created Java Users

You need to change the password of the user(s) that SAPinst creates during the installation, as shown in the table below.

For security reasons, you also need to copy the installation directory to a separate, secure location. For example, you can copy it to a removable storage medium such as a DVD, which you then store separately and securely. Finally, delete the installation directory from your SAP system.

### Procedure



#### Caution

Make sure that you perform this procedure **before** the newly installed SAP system goes into production.

Change the password of this user according to the *SAP Security Guide*.

For more information, see SAP Service Marketplace at [service.sap.com/securityguide](http://service.sap.com/securityguide).



#### Note

- SAP system users might exist in more SAP system clients than listed below (for example, if a user was copied as part of the client copy. For more information, see “Performing the Client Copy” in *Part II — Installation and Post-Installation* of the **ABAP** installation guide.
- We strongly recommend that you change the initial passwords even if SAPinst prompted for a new password during the installation procedure.

User Type	User	Comment
SAP system user	SAPJSF	User exists at least in SAP system client that you have specified during the installation.



#### Recommendation

You do **not** need to change the initial passwords of SAP system users. However, we recommend you to take the precautions described in the table below:

User Type	User	Precaution
J2EE Engine Administrator	Administrator or J2EE_ADMIN	This user’s password is stored in secure storage. Therefore, whenever you change the administrator’s password, you must also re-encrypt the password in secure storage.

User Type	User	Precaution
Guest account on the J2EE Engine	Guest or J2EE_GUEST	Lock this user to prevent it from being used for explicit logons.
Communication user for the J2EE Engine	SAPJSF	This user is only necessary if you use an ABAP system as the data source for user management. For more information, see “Preparing User Management for an External ABAP System” in <i>Part I — Planning and Preparation</i> . Specify this user as a <i>Communications</i> user and not as a dialog user. This user exists at least in the SAP system client that you specified during the installation.

## 2.2.9 Applying Strong Encryption After the Installation

If you installed the J2EE Engine with weak encryption but want to change to strong encryption later, then you can deploy the library after the installation. For more information see *SAP Library* [page 6] → *Application Platform (SAP Web Application Server)* → *Java Technology in SAP Web Application Server* → *Administration Manual* → *Installation Information* → *Post-Installation Procedures*.

## 2.3 Additional Information

This section provides additional information about the installation of your SAP system.

1. *Additional Information about the J2EE Engine* [page 37]
2. *Configuring User Management to User an LDAP Directory* [page 40].
3. *Deleting an SAP System* [page 40]

### 2.3.1 Additional Information about the J2EE Engine



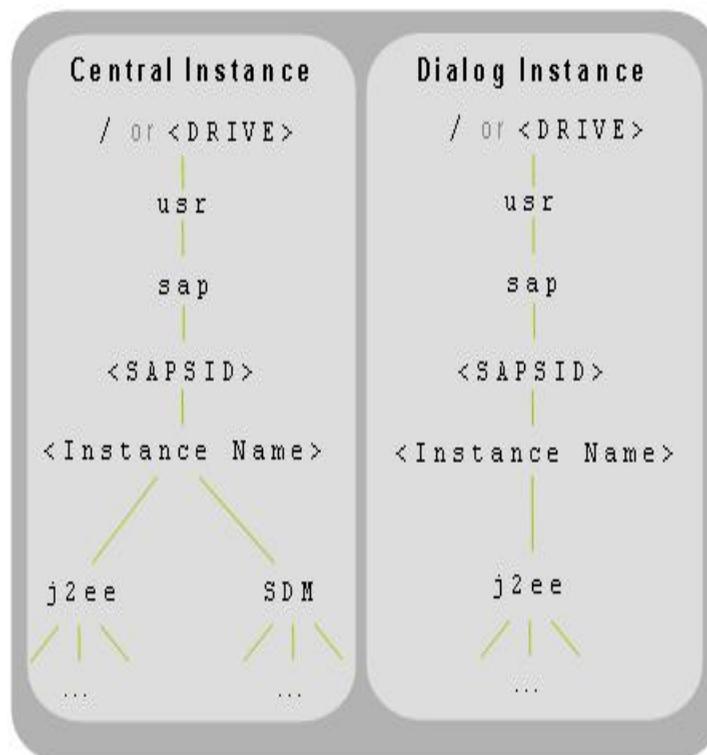
Note

For more information, also see “Java Technology in SAP Web Application Server” in the *SAP library* [page 6].

### File System Structure of the J2EE Engine Installation

After the installation of the J2EE Engine, the following file system structure applies for the J2EE Engine (j2ee) and its Software Deployment Manager (SDM):

Figure 4:



For more information on SDM, see “The Software Deployment Manager” below in this section.

 Example

For example, the file system structure might look as follows:

On a dialog instance with instance name `D01` on Windows, the J2EE Engine is installed to `c:\usr\sap\C11\D01\j2ee`. No SDM is installed.

 Note

SAP Web AS Java system only:

The instance name (instance ID) of the central instance is `JC<Instance_Number>`, the instance name of a Java dialog instance is `J<Instance_Number>`.

## Procedure

### Starting the Administration Tool of the J2EE Engine



**Note**

For more information about the administration tool of the J2EE Engine, see *Java Technology in SAP Web Application Server* → *Administration Manual* → *Server Administration* → *J2EE Engine Administration Tools* → *Visual Administrator* in the *SAP Library* [page 6].

1. For the user who will run the administration tool (for example, <sapsid>adm), make sure that the SAPINST\_JRE\_HOME environment variable contains the path to the Java Development Kit (JDK) of the J2EE Engine.
2. Enter the following command to start the administration tool:  

```
/usr/sap/<SAPSID>/<Instance_Name>/j2ee/admin/go
```

```
<Drive>:\usr\sap\<SAPSID>\<Instance_Name>\j2ee\admin\go.bat
```
3. The *J2EE Engine – Administration* screen with the dialog box *Connect to J2EE Engine* appears.
4. To connect do the following:

Installation Option	How to Connect
Java System	Choose <i>Connect</i> to use the <i>Default</i> login and enter the password for the <i>Administrator</i> user of the J2EE Engine.
Java Add-In	<p>You cannot use the <i>Default</i> login. Instead, perform the following steps:</p> <ol style="list-style-type: none"> <li>a) Choose <i>New</i>.</li> <li>b) Enter a display name and choose <i>Direct Connection to a dispatcher Node</i>.</li> <li>c) Choose <i>Next</i>.</li> <li>d) Enter at least the following:           <ul style="list-style-type: none"> <li>■ <i>User Name:</i> <b>J2EE_ADMIN</b></li> <li>■ <i>Host:</i> &lt;host_name&gt; of the J2EE engine</li> <li>■ <i>Port:</i> &lt;P4_Port&gt;</li> </ul> <p>The following convention applies for the port:            5&lt;Instance_Number_of_SAP_J2EE_Engine&gt;04. For example, if your J2EE instance number is 15, the P4port is 51504.</p> </li> <li>e) Choose <i>Save</i> and connect with your new login account by choosing <i>Connect</i>.</li> <li>f) Enter the password for the <i>J2EE_ADMIN</i> user and choose <i>Connect</i>.</li> </ol>

### Deactivation of the J2EE Engine



**Note**

This section is only valid for the Java Add-in.

After the installation, the J2EE Engine is activated. If you do not want to use the J2EE Engine, you can deactivate it by setting the parameter `rdisp/j2ee_start` to `0` in the instance profile of every installed SAP instance:

<DRIVE>: \usr\sap\<SAPSID>\sys\profile\<SAPSID\_INSTANCENAME\_HOSTNAME>

### Software Deployment Manager

Every J2EE Engine on a central instance and every J2EE Engine installed standalone requires a Software Deployment Manager (SDM). SDM is a tool for managing and deploying SAP software packages. For more information, see *Application Platform → Java Technology in SAP Web Application Server → Development Manual → Deployment: Putting it all together → Software Deployment Manager* in the *SAP Library* [page 6].

## 2.3.2 Configuring User Management to Use an LDAP Directory (Optional)

If your user data source is an LDAP directory, you need to configure the connection to the LDAP directory after installation.

For more information, see “Configuring UME to Use an LDAP Server as Data Source” in *SAP Library* [page 6] → *Security → Identity Management → User Management Engine → UME Configuration → Configuring UME to Use an LDAP Server as Data Source*

## 2.3.3 General Information on How to Delete an SAP System

### Purpose

The following sections describe how to delete a particular component or a complete SAP system.



### Note

The description assumes that the installation of your SAP system has been performed with SAP standard tools according to the installation documentation.

### Process Flow



### Caution

If you delete network-wide users, groups or service entries in an environment with Network Information System (NIS), other SAP installations might also be affected. Make sure that the users, groups, and service entries to be deleted are no longer required.

### Deleting a Complete SAP System

1. You delete all dialog instances [page 41], if there are any.
2. You delete the central services instance [page 41].
3. You delete the central instance [page 41].



Note

When you delete the central instance, the Java Add-In installation is deleted automatically together with the central instance.

4. You delete the MS SQL Server database instance and the database software [page 44]



Note

When you delete the database instance, the Java database schema is deleted automatically together with the database instance.

### Deleting the Java Add-In Installation

The following describes how to delete the Java part of ABAP+Java system. With this procedure you do **not** delete the ABAP system.

1. You delete the Java parts of all dialog instances, [page 41] if there are any.
2. You delete the Java Add-In installation [page 42].
3. You delete the central services instance [page 41].
4. You delete the Java database schema [page 44]

## 2.3.4 Deleting an SAP Instance

You use this procedure to delete a particular SAP instance.



Note

- With this procedure you do not delete the Java Add-In installation, or the database instance.
- When you delete a SAP system installation, you need to uninstall the SAP instance software.

### Prerequisites

The SAP instance is stopped.

### Procedure



Caution

We recommend that you use this procedure only if you have performed a full backup of your SAP instance.

1. Log on as a user with domain administration rights.
2. Choose *Start* → *Settings* → *Control Panel* → *Add/Remove Programs*.
3. The *Add/Remove Programs* dialog box appears.
4. Find the SAP entries.

**Note**

Each SAP instance that is installed on the computer is listed with an entry like *SAP Application Server for System <SAPSID> instance*.

5. Choose *Remove*.

The *SAP Uninstall Wizard* starts.

6. In the *Welcome* window, choose *Next*.

The dialog box *Uninstalling SAP System* appears for you to select an uninstall method.

**Caution**

Depending on your selection, note the following when you use the check box to delete an SAP instance:

- If your check box is marked gray, you delete or uninstall the following:
  - The SAP instance directory, for example:
 

```
\usr\sap\<SAPSID>\D00
```
  - Services, for example:
 

```
SAP<SAPSID>_00
```
  - The whole system directory, for example:
 

```
\usr\sap\<SAPSID>\*
```
- If your check box is marked black, you delete or uninstall the following:
  - The SAP instance directory, for example:
 

```
\usr\sap\<SAPSID>\D00
```
  - Services, for example, `SAP <SAPSID>_00`
  - The whole system directory, for example:
 

```
\usr\sap\<SAPSID>\*
```
  - Local and domain user accounts
- If you have different SAP instances that use the same <SAPSID>, you can delete the instance directory only.

The wizard informs you when the SAP system or selected instances have been deleted successfully.

## 2.3.5 Deleting a Java Add-In Installation

This section describes how to delete the Java Add-In installation of your SAP system.

**Note**

If you delete a Java Add-In installation, the ABAP system is not deleted.

**Caution**

This description assumes that the installation of your SAP system has been performed using SAP standard tools according to the installation documentation.

### Procedure

1. Stop the central services instance and all dialog instances of your SAP system:

- a) Log on to the corresponding instance host as user <sapsid>adm.
- b) Execute the following commands:
  - To stop the central services instance:  
**stopsap <SCSInstanceName>**
  - To stop a dialog instance:  
**stopsap <DialogInstanceName>**
2. Stop the J2EE Engine of the central instance:
  - a) Log on to your SAP system.
  - b) Call transaction SMICM.
  - c) Choose *Administration* → *J2EE Server* → *send hard shutdown*.



Note

You do **not** need to stop the central instance.

3. If lines beginning with the following parameters appear, delete these lines from the default profile,  
usr\sap\<SAPSID>\SYS\profile\default.pfl:  
j2ee\dbname =  
j2ee\dbtype =  
j2ee\dbhost =  
j2ee\dbadminurl =
4. If lines beginning with the following parameters appear, delete these lines from the central instance profile and from all dialog instance profiles,  
usr\sap\<SAPSID>\SYS\profile\<SAPSID>\_<INSTANCE\_NAME>\_<host\_name>:  
exe\j2ee =  
rdisp\j2ee\_start\_control =  
rdisp\j2ee\_start =  
rdisp\j2ee\_timeout =  
rdisp\frfc\_fallback =  
jstartup\trimming\_properties =  
jstartup\instance\_properties =  
jstartup\protocol =  
exe\jlaunch =
5. Delete the central services instance [page 41].
6. Delete the Java database schema [page 44].
7. Delete the following directories (<xx> is the central instance number):

- \usr\sap\<SAPSID>\DVEBMGS<xx>\SDM
- \usr\sap\<SAPSID>\DVEBMGS<xx>\j2ee

## 2.3.6 Deleting the MS SQL Server Database Instance and the Database Software

This section describes how to delete the MS SQL Server database instance, the database schema, or the database software.

### Prerequisites

Before deleting the database schema, or database instance, make sure that you have:

- Performed a recent offline database backup.



Note

This step is mandatory if you have more than one schema in the same database.

- Stopped or deleted all SAP instances belonging to this database schema.

### Procedure

#### Deleting the MS SQL Server Database Instance, or the Database Schema

1. Log on as local administrator.
2. Delete the MS SQL Server database instance using one of the following ways:
  - Use the *Database Tools* from your SAPinst Installation Master DVD.
    - a) Start SAPinst and choose *Database Tools* → *MS SQL Server* → *Delete Database Schema*.
    - b) Follow the dialogs.

For more information about how to use *SAP Tools for MS SQL Server*, see [SAP Note 683447](#).
  - Delete the database schema manually as described in [SAP Note 639710](#).

#### Deleting the MS SQL Server Database Software

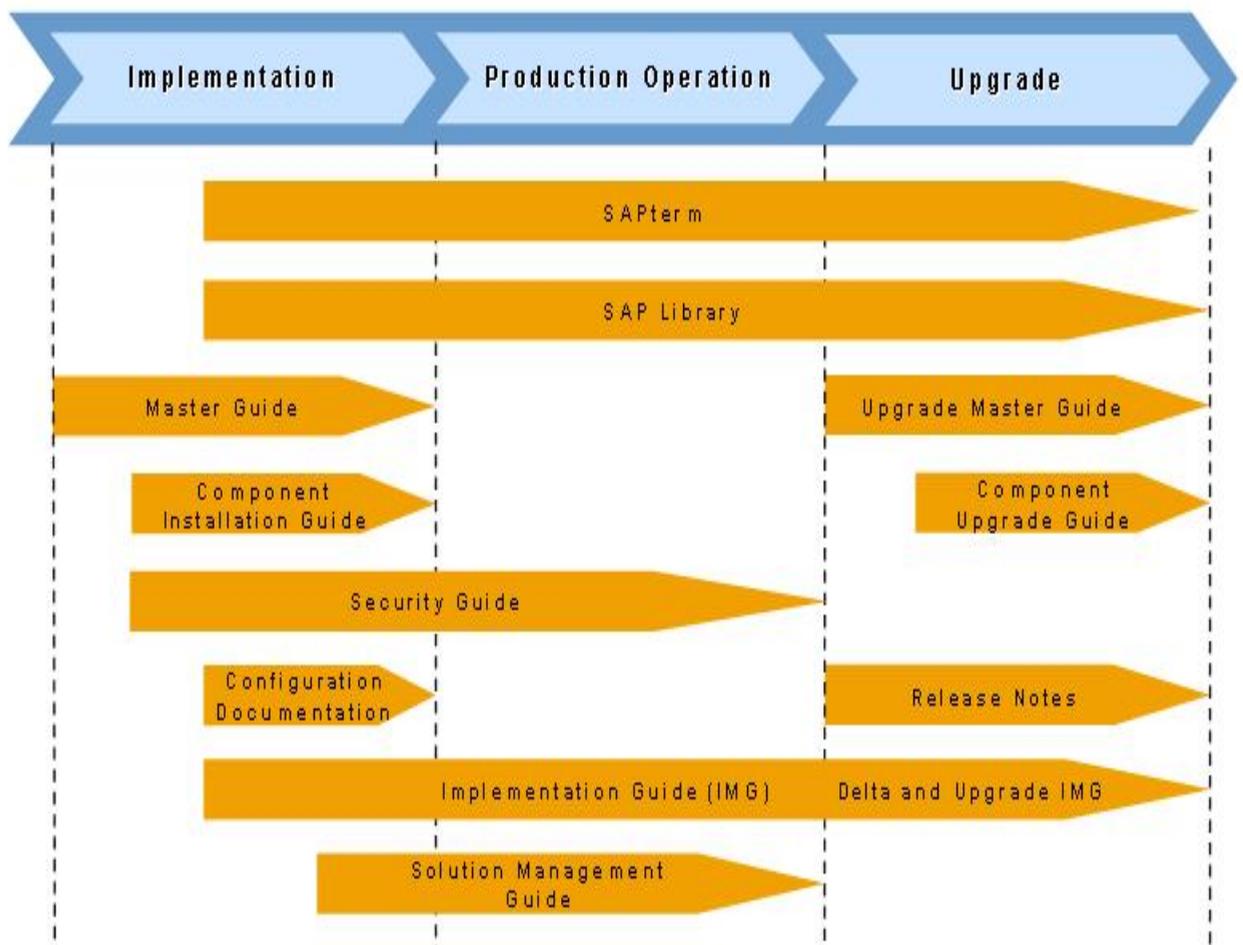
Use the MS SQL Server Uninstaller under *Add or Remove Programs*.

# A Reference

## A.1 The Main SAP Documentation Types

The following is an overview of the **most important** documentation types that you need in the various phases in the life cycle of an SAP solution.

**Figure a:** Documentation types in the software life cycle



### Cross-Phase Documentation

**SAPterm**—SAPterm is SAP's terminology database. It contains SAP-specific vocabulary in over 30 languages, as well as many glossary entries in English and German.

- Target group:
  - Relevant for all target groups

- Current version:
  - Located in the SAP Service Marketplace at [service.sap.com/sapterm](http://service.sap.com/sapterm)

**SAP Library**—The SAP Library is a collection of function- and process-oriented documentation for SAP components. The SAP Library also contains the Business Scenario Descriptions.

- Target group:
  - Consultants
  - System administrators
  - Project teams for implementations or upgrades
- Current version:
  - Located in the SAP Help Portal at [help.sap.com](http://help.sap.com) (also available as documentation CD)
  - Located in the SAP Service Marketplace at [service.sap.com/ibc](http://service.sap.com/ibc) (only the Business Scenario Descriptions)

**Implementation Guide (IMG)**—The Implementation Guide is a tool for configuring the SAP system to meet customer requirements. Its structure and documentation are component-oriented.

- Target group:
  - Solution consultants
  - Project teams for implementations or upgrades
- Current version:
  - In the SAP menu of the SAP system under *Tools* → *Customizing* → *IMG*

**Security Guide**—The Security Guide describes the settings for a medium security level and offers suggestions for raising security levels. A collective security guide is available for the SAP NetWeaver technologies, such as the SAP Web Application Server (SAP Web AS). This document contains general guidelines and suggestions about system security. Other technologies and individual applications have a Security Guide of their own.

- Target group:
  - Technology consultants
  - Solution consultants
  - Project teams for implementations or upgrades
- Current version:
  - Located in the SAP Service Marketplace at [service.sap.com/securityguide](http://service.sap.com/securityguide)

### Implementation

**Master Guide**—The Master Guide is the starting point for implementing an SAP solution. It lists the required SAP components, and third-party applications that are required for each Business Scenario. It provides scenario-specific descriptions of preparation, execution, and follow-up of an implementation. It also offers references to other documents, such as Component Installation Guides and SAP Notes.

- Target group:
  - Technology consultants
  - System administrators
  - Project teams for implementations
- Current version:
  - Located in the SAP Service Marketplace at [service.sap.com/instguides](http://service.sap.com/instguides)

**Component Installation Guide**—The Component Installation Guide describes the technical implementation of an SAP component, taking into account the combinations of operating systems and databases. It does not describe any business-related configuration.

- Target group:
  - Technology consultants
  - Project teams for implementations
- Current version:
  - Located in the SAP Service Marketplace at [service.sap.com/instguides](http://service.sap.com/instguides)

**Configuration Documentation in SAP Solution Manager**—SAP Solution Manager is a tool with various functions, one of its main functions being the configuration of SAP solutions and Business Scenarios. It contains IMG activities, transactions, and so on, as well as documentation. Instead of the configuration documentation in SAP Solution Manager, there may be separate Business Scenario Configuration Guides in the SAP Service Marketplace for previous shipments of the Business Scenarios.

- Target group:
  - Solution consultants
  - Project teams for implementations
- Current version:
  - In SAP Solution Manager
  - Located in the SAP Service Marketplace at [service.sap.com/ibc](http://service.sap.com/ibc)

#### **Production Operation**

**Solution Management Guide**—The Solution Management Guide is the starting point for operating an SAP solution. The guide refers users to the tools and documentation that are needed to carry out various tasks, such as monitoring, backup / restore, master data maintenance, transports, and tests. It also refers users to other documents, for example the SAP Library, the Master Guide, and the Component Management Guides.

- Target group:
  - System administrators
  - Technology consultants
  - Solution consultants
  - Project teams for implementations or upgrades
- Current version:
  - Located in the SAP Service Marketplace at [service.sap.com/instguides](http://service.sap.com/instguides)

#### **Upgrade**

**Upgrade Master Guide**—The Upgrade Master Guide is the starting point for upgrading the Business Scenarios of an SAP solution. It provides scenario-specific descriptions of preparation, execution, and follow-up of an upgrade. It also refers to other documents, such as the Component Upgrade Guides and SAP Notes. Instead of an Upgrade Master Guide, there may be several Business Scenario Upgrade Guides or a Solution Upgrade Guide for previous shipments of the Business Scenarios of an SAP solution.

- Target group:
  - Technology consultants
  - Project teams for upgrades
- Current version:
  - Located in the SAP Service Marketplace at [service.sap.com/instguides](http://service.sap.com/instguides)

**Component Upgrade Guide**—The Component Upgrade Guide describes the technical upgrade of an SAP component, taking into account the combinations of operating systems and databases. It does not describe any business-related configuration.

- Target group:
  - Technology consultants
  - Project teams for upgrades
- Current version:
  - Located in the SAP Service Marketplace at [service.sap.com/instguides](http://service.sap.com/instguides)

**Release Notes**—Release Notes are documents that contain short descriptions of new features or changes in an SAP component since the previous release. Release Notes about ABAP developments enable the SAP system to generate delta and upgrade IMGs

- Target group:
  - Consultants
  - Project teams for upgrades
- Current version:
  - Located in the SAP Service Marketplace at [service.sap.com/releasenotes](http://service.sap.com/releasenotes)
  - In the SAP menu of the SAP system under *Help* → *Release Notes* (only ABAP developments)