## Typographic Conventions

<table>
<thead>
<tr>
<th>Type Style</th>
<th>Represents</th>
<th>Icons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example Text</strong></td>
<td>Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.</td>
<td>![Caution]</td>
</tr>
<tr>
<td></td>
<td>Cross-references to other documentation.</td>
<td>![Example]</td>
</tr>
<tr>
<td></td>
<td>Emphasized words or phrases in body text, graphic titles, and table titles.</td>
<td>![Note]</td>
</tr>
<tr>
<td><strong>EXAMPLE TEXT</strong></td>
<td>Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.</td>
<td>![Recommendation]</td>
</tr>
<tr>
<td><strong>Example text</strong></td>
<td>Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.</td>
<td>![Syntax]</td>
</tr>
<tr>
<td><strong>Example text</strong></td>
<td>Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.</td>
<td></td>
</tr>
<tr>
<td><strong>&lt;Example text&gt;</strong></td>
<td>Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.</td>
<td></td>
</tr>
<tr>
<td><strong>EXAMPLE TEXT</strong></td>
<td>Keys on the keyboard, for example, F2 or ENTER.</td>
<td></td>
</tr>
</tbody>
</table>
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Overview

1 Overview

1.1 Purpose

Knowledge Provider is a component of SAP Web Application Server and provides the general infrastructure for storing and administering documents. SAP Content Server is based on the MAX DB and is available on Windows 2003 Server.

Both the MAX DB database, which serves as a Content Server, and the Content Server itself are provided with every SAP system installation. This provides the required technical infrastructure for all document-oriented applications and business scenarios that do not require long-term archiving. Because SAP Content Server is integrated via the HTTP interface, the actual storage medium used is transparent to the SAP applications.

The Content Server and the Cache Server are server components that interact with the Knowledge Provider. This document describes how to install these components. For further information on Knowledge Provider, the Content Server, and the Cache Server, see the SAP Library (on the documentation CD or under http://help.sap.com) under

SAP Web Application Server → Basis Services → Knowledge Provider.

1.2 Features

The graphic below illustrates the conceptual structure of the server system.
1.2.1 Content Server

The Content Server is accessed via HTTP. SAP AG has designed the interface required to do this. SAP also provides a certification procedure. For further information on certification, see http://www.sap.com/csp. You can find a description of the SAP Content Server Interface in the SAP Library (on the documentation CD or under www./help.sap.com) under

SAP Web Application Server → Basis Services → Knowledge Provider → Content Management Service → SAP Content Server HTTP Interface.

If you want to integrate another content server into your network, the new content server must fulfill the requirements of the interface.

1.2.2 Cache Server

The Cache Server serves the following purposes:

• To provide a seamless and transparent caching facility for existing Content Server landscapes
• To drastically reduce client response times
• To ensure that caching requires as little administration work as possible

Cache servers are used in distributed environments to store documents at a location close to the relevant client, and thus to allow faster access to document content. To do this, the Cache Server creates and stores “working copies” of documents from the Content Server. This also reduces network load, as no remote content server has to be accessed when a client requests read access to a document. Cache servers are similar to content servers. However, with cache servers, little administrative input is required, and access protection is maintained. The central document management functions in the SAP System make sure that out-of-date document versions that are still in the cache are no longer accessed and are eventually deleted.

If the client and the Content Server have the same location, the documents do not (usually) need to be cached. In these cases, the requested URL is sent directly to the Content Server and the content is obtained directly from the Content Server.

The installation procedure is available for both Windows 2003 Server only.

**Note**

This documentation doesn't cover the installation of SAP Content Server below Windows 2003 server Version.
1.3 Restrictions
SAP Content Server is not an alternative to optical storage systems and other storage media for long-term document archiving.

1.4 Points to Consider Before Installation

1.4.1 What should you think about before going live?
To dimension your Content Server as accurately as possible, you should take the following considerations into account before installation:

1. What types of objects will be involved?
   
   Note
   Estimate the existing data volume and compression level

2. By how much is the volume of objects per location likely to increase?
   
   Note
   Estimate the increase in data volume over a specific period of time

The results of points 1 and 2 indicate the devspace requirement.

3. On average, how many users are likely to access the content server at any one time?
   
   Note
   The answer to this question indicates the size of main memory, and the CPU and log space requirements.

The answers to these questions will help you tailor your content server to best suit your individual requirements.

1.4.2 What types of objects will be involved?
When stored on the content server, every file is compressed according to its file type, and occupies a specific amount of storage space (devspace). Therefore, it is important to establish what file types are contained in your legacy data volume. You can use the following percentages to determine your legacy data volume:

| MIME Type | DOC | XLS | PPT | TIFF | GIF | JPG | CAD | ...
|-----------|-----|-----|-----|------|-----|-----|-----|-----
| Compr. approx. | 50 % | 50 % | 30 % | 5 % | 5 % | 5 % | ? | ? |

Note
File size * percentage = compression File size - compression = amount of devspace occupied
1.4.3 By how much is the volume of objects per location likely to increase?

The increase in data volume, taking into account the compression levels, has to be estimated for a specific time period. (Make sure that the memory is sufficient for the data volume expected during this period.) Once you have calculated the expected increase in data volume, add this to the legacy data volume. The result can be termed the "net" devspace required for the time period in question. Then add 20% to 25% more memory space to allow for internal database administration data (headroom). The result is the "gross" devspace requirement.

1.4.4 On average, how many users are likely to access the content server at any one time?

The goal here is to ensure that the transaction buffer is sufficiently large to allow a number of users to access the content server simultaneously. To this end, the log space should be approximately 10% of the calculated devspace. At a minimum, it should be at least twice the size of the largest expected document. This is so that the content server can at least handle two simultaneous accesses.

**Example**

<table>
<thead>
<tr>
<th>Legacy data volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>File</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>File1.doc</td>
</tr>
<tr>
<td>File2.doc</td>
</tr>
<tr>
<td>...</td>
</tr>
<tr>
<td>File10.doc</td>
</tr>
<tr>
<td>File1.ppt</td>
</tr>
<tr>
<td>File2.ppt</td>
</tr>
<tr>
<td>...</td>
</tr>
<tr>
<td>File10.ppt</td>
</tr>
<tr>
<td>File1.gif</td>
</tr>
<tr>
<td>File2.gif</td>
</tr>
<tr>
<td>...</td>
</tr>
<tr>
<td>File10.gif</td>
</tr>
</tbody>
</table>
Overview

File size - compression = devspace requirement

<table>
<thead>
<tr>
<th>File Size</th>
<th>Compression</th>
<th>Devspace Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 MB</td>
<td>50 MB</td>
<td>50 MB</td>
</tr>
<tr>
<td>130 MB</td>
<td>39 MB</td>
<td>91 MB</td>
</tr>
<tr>
<td>100 MB</td>
<td>5 MB</td>
<td>95 MB</td>
</tr>
</tbody>
</table>

---------

<table>
<thead>
<tr>
<th>236 MB</th>
<th>“Net” devspace requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ 20%</td>
<td>47.2 MB</td>
</tr>
</tbody>
</table>

---------

<table>
<thead>
<tr>
<th>283.2 MB</th>
<th>“Gross” devspace requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ 10% log space</td>
<td>28.32 MB</td>
</tr>
</tbody>
</table>

However, the largest existing document is 40 MB, or 28 MB when compressed. As we know, the log space has to be at least twice as large as the largest expected document. Therefore, 10% is not enough in this case. The log space should be at least 56 MB.

For the greatest possible data security, we recommend that you mirror your log file. If you do so, then you will need twice the calculated amount of log space; that is, once on the hard disk for the log file, and once on the hard disk for the mirrored log file.
1.5 Installation Prerequisites
Before you start installing SAP Content Server, note the following prerequisites.

1.5.1 General Prerequisites
You should save the following SAP Content Server sub-components to different hard disks, to ensure maximum performance and data security in the productive system:

- Data
- Log file
- Mirrored log file

A RAID 5 system with at least 2.5 GB of free hard disk capacity is recommended for storing the data. The hard disks must be set up in NTFS format.

All users, in particular application servers and workstation PCs, must be able to access the Content Server or Cache Server system via HTTP. A workstation PC without direct HTTP access will not be able to execute individual scenarios, or will only have very limited access to individual scenarios.
1.5.2 Technical Prerequisites

Hardware for a Typical Configuration
To install the software components, including MAX DB, you need at least 300 MB of hard disk space. You also need as much hard disk capacity as you specified for the data files and the log files for each partition.

<table>
<thead>
<tr>
<th>Main memory</th>
<th>At least 512 MB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>Possible: 1 CPU</td>
</tr>
<tr>
<td></td>
<td>Recommended: 2 CPUs (the DB kernel runs on one CPU and the other CPU is used to process accesses to the content server)</td>
</tr>
<tr>
<td>Network protocol</td>
<td>TCP/IP</td>
</tr>
</tbody>
</table>

Software
- Operating system:
  - Microsoft Windows 2003 Server (with Internet Information Server)

<table>
<thead>
<tr>
<th>Component</th>
<th>Sub-Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet Information Server (IIS) (release 6.0)</td>
<td>World Wide Web server</td>
</tr>
<tr>
<td></td>
<td>Internet Service Manager (HTML)</td>
</tr>
<tr>
<td>Microsoft Data Access Components</td>
<td>MDAC: ADO, ODBC and OLE DB</td>
</tr>
<tr>
<td>Microsoft Management Console</td>
<td></td>
</tr>
</tbody>
</table>

Further Notes
The SAP System that you want to link to the SAP Content Server must be at least release 4.5B. The hardware platform and operating system used in the SAP System do not limit the SAP Content Server in any way. The HTTP interface ensures that the SAP System is platform-independent.
Technical Prerequisites of the SAP System

- For the Content Server:
  Release 4.5B or higher of the SAP system

- For the Cache Server:
  Release 4.6B or higher (4.6B with Support Package 10) of the SAP System or an SAP System with KW 4.0 or higher (KW 4.0 with Support Package 5) (see note 181696, Caching). See also Note.

To be able to perform administrative tasks (transaction CSADMIN), you may need a higher version of the SAP system.

- For the Content Server:
  At least Release 4.6C or KW 4.0

- For the Content Server:
  At least Release 4.6C

1.5.3 Preparing the System for SAPinst

You need to prepare the system for the J2EE Engine by installing the Java Development Kit (JDK). As of SAP NetWeaver 2004s you must install the J2EE Engine with strong encryption. The J2EE Engine requires a Java Development Kit (Java™ 2 SDK, Standard Edition = JDK) on every host where the J2EE Engine is to be installed. You need this for the system variants with Java. The JDK includes the Java Runtime Environment (JRE), which is required both for SAPinst and the SAPinst GUI.

Note

If required, you can perform a remote installation using a standalone SAPinst GUI on a separate Windows or UNIX host. This lets you perform the installation on a remote host, controlling it with the SAPinst GUI from a local host. If you want to perform a remote installation, see Starting SAPinst on the Remote Host. In this case, you need at least a JRE on the local host to start the SAPinst GUI there.
Procedure

1. Check the JDK versions that are released for SAP systems on SAP Service Marketplace at: service.sap.com/pam → SAP NetWeaver → SAP NetWeaver 2004s → JSE Platforms

2. Make sure a valid JDK version is installed on every host on which you want to install an SAP instance with the J2EE Engine, as follows:
   - If JDK is not already installed
     Since JDK is not part of the SAP shipment, you need to download and install it. For additional information on the recommended JDK version, see SAP Note 709140.
   - If JDK is already installed
     Check the installed version of JDK by entering the following command:

     ```bash
     java -version
     ```

   Note
   SAPinst checks environment variable SAPINST_JRE_HOME for a valid Java runtime environment. If SAPINST_JRE_HOME is not found, SAPinst also checks JAVA_HOME.

3. As of SAP NetWeaver 2004s strong encryption is mandatory for the J2EE Engine and for all usage types that are deployed on it. You need to obtain the JCE policy files beforehand so that they can be installed by SAPinst:

   a) Download the JCE policy files for your platform at http://java.sun.com/j2se/1.4.2/downloads.
   b) SAPinst installs the JCE policy files during the installation process.
Overview

1.6 Installation Process

1.6.1 Installing an SAP Content Server Using SAPinst

The following sections provide the steps that you have to perform to install SAP Content Server using SAPinst.

- Running SAPinst on Windows
- Running Content Server Installation
- Post Installation of Content Server
- Installation Check

1.6.2 Running SAPinst on Windows

This procedure tells you how to install an SAP Content Server with SAPinst. SAPinst includes a SAPinst GUI and a GUI server, which both use Java.

This section describes an installation where SAPinst, SAPinst GUI, and the GUI server are running on the same host. If required, you can instead perform a remote installation with SAPinst, where SAPinst GUI is running on a separate host from SAPinst and the GUI server.

Note the following about SAPinst:

- When you start SAPinst, SAPinst GUI and the GUI server also start. SAPinst GUI connects via a secure SSL connection to the GUI server and the GUI server connects to 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.
- SAPinst creates a subdirectory for each installation service, called <sapinst_instdir>\installation_service which is located below %ProgramFiles%\sapinst_instdir.
- 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.exe.xxxxx.xxxxx 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 FCO-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.
Overview

Prerequisites

- You are logged on as user with the required rights and privileges that authorize you to install the SAPinst tool

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.

Procedure

1. Insert the SAP Installation Master DVD in your DVD drive or mount it locally.
2. Start SAPinst from the SAP Installation Master DVD by double-clicking sapinst.exe from the following path:

   `<DVD drive>:\IM_WINDOWS_<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

   - During the installation, the default ports 21200 and 21212 are used for communication between SAPinst, GUI server, and SAPinst GUI. SAPinst uses port 21200 to communicate with the GUI server. The GUI server uses port 21212 to communicate with SAPinst GUI. You get an error message if one of these ports is already in use by another service.

   In this case, open a command prompt and change to the required directory as follows:

   `<DVD drive>:\IM_WINDOWS_<platform>`.

   Enter the following command in a single line:

   ```
   sapinst.exe
   SAPINST_DIALOG_PORT=<free_port_number_sapinst_gui_to_gui_server>
   GUISERVER_DIALOG_PORT=<free_port_number_gui_server_to_sapinst_gui>
   ```

   For a list of all available SAPinst properties, enter the following command:

   ```
   sapinst -p.
   ```
1.6.3 Running Content Server Installation

Step 1:

Please select Content Server installation folder in the welcome screen. On the Description page you will find the details regarding the Content Server and Cache server. For additional information and documentation you can reach at http://service.sap.com/ContentServer
Step 2:

Welcome to SAP Installation Master

Before you start the installation, make sure that you have identified the required scenario as described in the Master Guide.

Select the service that you want to install:

- **SAP Installation Master**
  - SAP CRM 5.x Support Release 1
  - SAP ERP 2005 Support Release 1
  - SAP SCM 2005 Support Release 1
  - SAP SRM 2005 Support Release 1
  - SAP NetWeaver 2004s Support Release 1
  - SAP Systems
  - Standalone Engines
    - Content Server
      - Content Server and / or Cache Server
      - MaxDB Database Instances
    - Gateway
    - LiveCache
    - Search and Classification (TREX)
    - Web Dispatcher
    - Optional Standalone Units
    - Additional Software Life-Cycle Tasks

Please Select the Content Server and / or Cache Server installation if you intend to install Content Server or Cache Server.

The MAX DB Database instance can be chosen if you need to create only a database instance and not the complete content server or cache server installation.

Please press next after choosing the right installation requirement.
Step 3:

If you have chosen to install Content Server and/or Cache server in the first step you would be provided with the option checklist to proceed further. Check the required components for your installation. If you choose a Database instance also then you can set the Database instance name and the size.

Please press next after choosing the required components to be installed.
Step 4:

Please provide the location of the Content server DVD package.

You can also copy the package to a local folder.
Once done please press OK.
Step 5:

Depending on your Content Server and / or Cache Server selection in the Step 2 the options in this Screen will prompt you to provide the Content Server and / or Cache Server Default file system root repository paths

Please press next.
Step 6: (only if the Creation of DB instance is chosen)

If DB instance is also selected in Step 3 Please provide the package location of MAX DB package and Press OK
Step 7: (only if the Creation of DB instance is chosen)

MaxDB > Database Users

Enter the passwords of the database system administrator and the database manager operator.

**Database System Administrator**
- Account: superdba
- Password of superdba
- Confirm

**Database Manager Operator**
- Account: control
- Password of control
- Confirm

The installation now requests for the default administrative users’ ‘superdba’ password and the default database manager users’ ‘control’ password.

Please press next.
Step 8: (only if the Creation of DB instance is chosen)

MaxDB > Log Volumes

Specify the log volumes for your database

Database Parameters
- Database ID (DBSID): MDB
- Minimum Log Size (MB): 200

Log Volumes
Each row in the table below represents a log volume

<table>
<thead>
<tr>
<th>Location</th>
<th>Size [MB]</th>
</tr>
</thead>
<tbody>
<tr>
<td>/repos/db/log/00</td>
<td>200</td>
</tr>
</tbody>
</table>

Provide the data and log volume size and press next.
Step 9: (only if the Creation of DB instance is chosen)

MaxDB > Data Volumes

Specify the data volumes for your database

Database Parameters

- Database ID (UDID)
- Minimum Data Size [MB]: 2.00

Data Volumes

Each row of the table below represents one data volume.

<table>
<thead>
<tr>
<th>Location</th>
<th>Status</th>
<th>Size [MB]</th>
</tr>
</thead>
<tbody>
<tr>
<td>/opspb/UD/opspdata</td>
<td></td>
<td>204</td>
</tr>
</tbody>
</table>

Provide the data volume size and press next.
Step 10:

Finally before starting the actual installation SAP Content Server installation lists all the settings that you have chosen in the previous steps. You can revise/re-edit any of these parameters by checking the parameter and pressing Revise.

If everything is fine please press Start.
Step 11:

The screen indicates the progress of the installation.

Task Progress

The task is running.

Phase 2 of 3

Phase List

- SAP Content Server
- Install Content Server Extensions
- Install Cache Server Extensions

The phase is in progress.
1.6.4 Post-Installation

System Configuration

Use
Before you store data on SAP Content Server and start using the system productively, you have to make the system settings described in this section. You can make these settings directly in the SAP System.

Prerequisites
You have to fulfill the technical prerequisites described in Installation Prerequisites.

Overview
Make the system settings described in the following sections:
- Content Server Settings
- Cache Server Settings

The system settings are mainly Customizing settings. You make the Customizing settings in the SAP System in the Implementation Guide (IMG). The individual Customizing activities are described in the SAP reference IMG under SAP Web Application Server → Basis Services → Knowledge Provider. In the IMG, simply choose Execute to go to the transaction in question. For online help, choose Documentation. Also, for detailed documentation on SAP Content Server, see the SAP Library under SAP Web Application Server → Basis Services → Knowledge Provider → Content Management Service and its sub-sections. As the settings are described in detail in SAP Library, they are only mentioned briefly here.

Content Server Settings
Once you have installed your new Content Server, you need to create content repositories where you can store your content.

Testing the Connection to the Content Server
...
1. Open a Web browser on a host that is connected to your local network.
2. Navigate to the following URL:


Note that the URL is case-sensitive.

The information on the Content Server that is the result of the test is then displayed. In this information, the status should be "running".
Creating Content Repositories

1. In transaction CSADMIN, create at least one content repository for your Content Server.

   Make sure that you change the pre-set ContentStorageName from SDB to the name of the database instance you set during the installation procedure.

2. Send a certificate to your repository and activate the certificate.

3. From the tab page Detail; call up transaction OAC0, so that you can make the repository known in the SAP System.

   From Release 4.6D; you can use the Customizing icon (a blue arrow) in change mode to jump from transaction CSADMIN to transaction OAC0. In OAC0, you can simply accept the pre-set entries and save them.

   For more information on administrating the Content Server, see the SAP Library under SAP Web Application Server → Basis Services → Knowledge Provider → Content Management Service → Content Server and Cache Server Administration.

Switching Off Access Control for Content Server Administration

AdminSecurity is activated by default. This means that only members of specified groups (and local administrators) can execute administrative commands. To do this, they have to enter their user name and password.
Cache Server Settings

Testing the Connection to the Cache Server

1. Open a Web browser on a host that is connected to your local network.
2. Enter the following URL in the address field and choose Return:


   Note that the URL is case-sensitive.

   The information on the Cache Server that is the result of the test is then displayed. In this information, the status should be "running" (serverStatus="running").

Making the Cache Known to the SAP System

1. In transaction SCMSCA, maintain the entries for your Cache Server.
2. If you are using distributed cache servers, you need to make additional entries.

For information on this, see both the installation guide (IMG) under SAP Web Application Server → Basis Services → Knowledge Provider → Distribution and the SAP Library under SAP Web Application Server → Basis Services → Knowledge Provider → Content Management Service → Distribution.

For more information on administrating the Cache Server, see the SAP Library under SAP Web Application Server → Basis Services → Knowledge Provider → Content Management Service → KPro and Caching.

For more information on caching and the required system settings for previous releases, see note 216419 (Multi-Level Caching and Content Server Proxies; see also Note Overview).
1.6.5 Installation Check

After you have created your repositories (see Post-Installation), you may want to run report RSCMST to check that your repositories can be accessed from the SAP system.

**Testing the Content Repositories**

...  
1. In transaction SE38, execute the report RSCMST.  
2. Enter the name of one of your content repositories and execute one or more test runs.

The traffic light symbols show you whether or not the tests were successful. You can also read the test logs at this point.

**Testing the Caches**

You can test the cache independently of the Customizing settings described above. To do this, use the test report RSCMST to set that a specific cache should be used for access, regardless of the Customizing settings.

...  
1. In transaction SE38, execute the report RSCMST.  
2. Specify the name of your cache in the following format:

   `<host name>[:Port]/Cache/CSProxyCache.dll`

   For example:  
3. Execute the test.  
4. Execute the test run RSCMSTH0 or RSCMSTAC.

The traffic light symbols show you whether or not the tests were successful. You can also read the test logs at this point.

   **RSCMSTH0**  
   URLs that contain the `forward` parameter are `get` URLs that are transferred via the cache that you specified.

   **RSCMSTAC**  
   If data is found in the cache, `[cache]` is output after each `get` request.
2 Additional Information

2.1 Using SAPinst GUI

The following table shows the most important functions that are available in SAPinst GUI:

<table>
<thead>
<tr>
<th>Button / Function Key / Menu Entries</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>Displays detailed information about each input parameter.</td>
</tr>
<tr>
<td><strong>Exit</strong></td>
<td>Cancels the installation with the following options:</td>
</tr>
<tr>
<td></td>
<td>Stop</td>
</tr>
<tr>
<td></td>
<td>Stops the installation without further changing the Installation files. You can restart SAPinst to continue the Installation later from this point.</td>
</tr>
<tr>
<td></td>
<td>Continue</td>
</tr>
<tr>
<td></td>
<td>Continues the installation.</td>
</tr>
<tr>
<td><strong>Log off</strong></td>
<td>Stops the SAPinst GUI, but SAPinst and the GUI server Continue running.</td>
</tr>
<tr>
<td></td>
<td>Note</td>
</tr>
<tr>
<td></td>
<td>If 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 the same SAPinst installation from the same or another host. For more information, see Starting SAPinst GUI Separately.</td>
</tr>
<tr>
<td><strong>Retry</strong></td>
<td>Performs the installation step again (if an error has occurred).</td>
</tr>
<tr>
<td><strong>Stop</strong></td>
<td>Stops the installation without further changing the installation files. You can continue the installation later from this point.</td>
</tr>
<tr>
<td><strong>Continue</strong></td>
<td>Continues with the option you have chosen before.</td>
</tr>
</tbody>
</table>
An error occurred during the dialog or processing phase:
SAPinst does not abort the installation in error situations. If an error occurs, the installation pauses and a dialog box appears. The dialog box contains a short description about the choices listed in the table below as well as a path to a log file that contains detailed information about the error.

You interrupted the installation by choosing *Exit* in the SAPinst menu.

The following table describes the options in the dialog box:

<table>
<thead>
<tr>
<th>Option</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Retry</strong></td>
<td>SAPinst retries the installation from the point of failure without repeating any of the previous steps. This is possible because SAPinst records the installation progress in the keydb.xml file. We recommend that you view the entries in the log files, try to solve the problem and then choose <em>Retry</em>. If the same or a different error occurs again, SAPinst displays the same dialog box again.</td>
</tr>
<tr>
<td><strong>Stop</strong></td>
<td>SAPinst stops the installation, closing the dialog box, the SAPinst GUI, and the GUI server. SAPinst records the installation progress in the keydb.xml file. Therefore, you can continue the installation from the point of failure without repeating any of the previous steps. See the procedure below.</td>
</tr>
<tr>
<td><strong>Continue</strong></td>
<td>SAPinst continues the installation from the current point.</td>
</tr>
</tbody>
</table>
Note
You can also terminate SAPinst by choosing Ctrl+C. However, we do not recommend that you use Ctrl+C, because this kills the process immediately.

2.2.1 Procedure
This procedure describes 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 local UNIX host as user root.
2. Mount your Installation Master DVD.

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

Enter the following commands:

```
  cd <Installation_Master_DVD>/IM_<OS>
  ./sapinst
```

3. From the tree structure in the Welcome screen, select the installation service 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.

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

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Run a new Installation</strong></td>
<td>SAPinst does not continue the interrupted installation. Instead, it 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: &lt;log_day_month_year_hours_minutes_seconds&gt; (for example, log_01_Oct_2003_13_47_56).</td>
</tr>
<tr>
<td><strong>Continue old installation</strong></td>
<td>SAPinst continues the interrupted installation from the point of failure.</td>
</tr>
</tbody>
</table>
2.3 Starting SAPinst on the Remote Host (Optional)

You can use this procedure to install your SAP system on a remote host. In this case, SAPinst and the GUI server run on the remote host, and SAPinst GUI runs on the local host. The local host is the host from which you want to control the installation with SAPinst GUI.

2.3.1 Prerequisites

- You have prepared your system for SAPinst
- 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>`.

2.3.2 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 administrators group.
2. Insert the Installation Master DVD in the DVD drive on your remote host.
3. To change to the relevant directory enter the following command:

```
cd <DVD drive>:\IM_WINDOWS<platform>
```

```
sapinst.exe –nogui
```

For more information, see *Running SAPinst on Windows* in the installation guide for Windows.

SAPinst now starts and waits for the connection to the SAPinst GUI. 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 Separately*. 
2.3.3 Your Remote Host Runs on a UNIX Platform

1. Log on to your remote host as user root.

Caution
Make sure that the root user has not set any environment variables for a different SAP system or database

2. Mount the Installation Master DVD.
3. Enter the following commands:

   ```
   cd <Installation_Master_DVD>/IM_<OS>
   ./sapinst -nogui
   ```

For more information, see *Running SAPinst on UNIX*. SAPinst now starts and waits for the connection to the SAPinst GUI. 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 localhost described in *Starting SAPinst GUI Separately*. 
2.4 Starting SAPinst GUI Separately (Optional)

You use this procedure to start SAPinst GUI separately. You might need to start SAPinst GUI separately in the following cases:

**You have logged off from SAPinst.**
If you logged off during the installation and you later want to reconnect to the still running installation, you can start SAPinst GUI separately.

**You want to perform a remote installation.**
If SAPinst GUI runs on a different host than SAPinst and the GUI server, you also have to start SAPinst GUI separately.

### 2.4.1 Prerequisites

You have prepared your system for SAPinst.

### 2.4.2 Starting SAPinst GUI on a Windows Platform

1. Log on as a member of the local administrators group.
2. Insert the SAP Installation Master DVD into your DVD drive.
3. To change to the relevant directory enter the following command:
   
   ```
   cd <DVD drive>:\IM_WINDOWS<platform>
   ```

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

   If SAPinst GUI runs on the same host as SAPinst and the GUI server, enter the following command **without** additional parameters:
   
   ```
   startinstgui.bat
   ```
   SAPinst GUI uses as default the local host.

   If SAPinst and the GUI server runs on a different host than SAPinst GUI (remote installation), enter the following command **with** additional parameters:

   ```
   startinstgui.bat -host <host_name>
   ```
   
   `<host_name>` is the host name of the installation host.

**Note**

If you enter the command without additional parameters, SAPinst GUI uses as default the local host. SAPinst GUI starts and tries to connect to the GUI server and SAPinst. As SAPinst and the GUI server are running on another host, SAPinst GUI cannot connect and the **SAP Installation GUI Connection** dialog appears. In this case, enter the host name where SAPinst is running and choose **Log on**. The first dialog of the installation appears and you can perform the remote installation from your local host.

For a list of options to start SAPinst GUI, change to the same directory as your SAPinst executable and enter the command

```
startinstgui.bat -h.
```
2.4.3 Starting SAPinst GUI on a UNIX Platform

1. Log on as user root.

⚠️ Caution
Make sure that the root user has not set any environment variables for a different SAP system or database.

2. Mount your installation DVD.

⚠️ Note
Mount the DVD locally. We do not recommend that you use Network File System (NFS).

3. To change to the mount directory enter the following command:
   ```
cd <Installation_Master_DVD>/IM_<OS>
```

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

   If SAPinst GUI runs on the same host as SAPinst and the GUI server, enter the following command **without** additional parameters:
   ```
   ./startInstGui.sh
   ```
   SAPinst GUI uses as default the local host.

   If SAPinst and the GUI server runs on a different host than SAPinst GUI (remote installation), enter the following command **with** additional parameters:
   ```
   ./startInstGui.sh -host <host_name>
   ```
   `<host_name>` is the host name of the installation host

   ⚠️ Note
   If you enter the command without additional parameters, SAPinst GUI uses as default the local host. SAPinst GUI starts and tries to connect to the GUI server and SAPinst. As SAPinst and GUI server are running on another host, SAPinst GUI cannot connect and the **SAP Installation GUI Connection** dialog appears. In this case, enter the host name where SAPinst is running and choose *Log on*. The first dialog of the installation appears and you can perform the remote installation from your local host.
   For a list of options to start SAPinst GUI, change to the same directory as your SAPinst executable and enter the command
   ```
   ./startInstGui.sh -h.
   ```
2.5 Troubleshooting with SAPinst

The following tells you how to proceed when errors occur during the installation with SAPinst.

If an error occurs, SAPinst:

- Stops the installation
- Displays a dialog informing you about the error

2.5.1 Procedure

1. You can directly view the log file by choosing View Logs.
2. If an error occurs during the dialog or processing phase, you can:
   a. Try to solve the problem
   b. Abort the installation with Exit

   For more information, see Interrupted Installation with SAPinst

   Continue the installation by choosing Retry.
3. We recommend that you check the log and trace files of the GUI server and SAPinst GUI in the directory
   <user_home>/sdtsgui/ for errors.
4. If you find error messages like the following in the SDM logs, you can ignore them:
   Error: <SCA name>: Location of software component '<SCA name>' / <SCA vendor> / '<SCA location>' / '<SCA counter>' unknown.
   Error: <SCA name> : system component version store not updated.

   For more information, see SAP Note 828978.
### 2.6 NOTES OVERVIEW

<table>
<thead>
<tr>
<th>Note</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>216419</td>
<td>Multi-Level Caching and Content Server Proxies</td>
</tr>
<tr>
<td>310218</td>
<td>Delete SAP DB Installation</td>
</tr>
<tr>
<td>351647</td>
<td>Cache Server Administration</td>
</tr>
<tr>
<td>350067</td>
<td>Administration Content Server/SAP DB</td>
</tr>
<tr>
<td>181696</td>
<td>Caching</td>
</tr>
<tr>
<td>329473</td>
<td>Description of File ContentServer.INI</td>
</tr>
<tr>
<td>514500</td>
<td>Upgrade Content Server to latest Version</td>
</tr>
</tbody>
</table>