



Administration Guide | PUBLIC
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Author Administration Guide

SAP 3D Visual Enterprise

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Document History

Note

Before you start the implementation, make sure that you have the latest version of the document. You can find the latest version at the following location: <http://help.sap.com>  **SAP 3D Visual Enterprise Author** .

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

Version	Date	Description
1.00	November 28, 2012	First Version
1.10	May 28, 2013	Updated licensing information for network licensing
2.00	November 28, 2013	Document updated for SAP 3D Visual Enterprise Author version 8.0. SAP 3D Visual Enterprise Link information added
3.00	June 27, 2014	The Installation Information section was updated.
3.10	December 10, 2014	Update for SP02, including removal of section 5.3 - Installing SAP 3D Visual Enterprise Link Metadata Key Group Policy. Updated "Installing the Network License Server" section.
4.00	June 28, 2016	Document updated for version 9.0. SAP 3D Visual Enterprise Planner section removed.
4.10	November 24, 2016	Update for 9.0 FP01
4.20	April 27, 2017	Update for 9.0 FP02. "Activation Code" workflow removed from licensing. Links in "Getting Started" section updated.
4.30	September 07, 2017	Update for 9.0 FP03. System requirements updated.
4.40	December 15, 2017	Small updates for FP04.

Version	Date	Description
4.50	June 14, 2018	Update for 9.0 FP05. System requirements updated.
4.60	October 25, 2018	Update for 9.0 FP06.
4.70	May 23, 2019	Update for 9.0 FP07.
4.70	October 20, 2019	Update for 9.0 FP08.
4.80	May 28, 2020	Update for 9.0 FP09.
4.90	December 2020	Update for 9.0 FP10.
4.91	May 2021	Update for 9.0 FP11.
4.92	November 2021	Update for 9.0 FP12. Technical system landscape requirements updated.
4.93	March 2022	Update for 9.0 SP13
4.94	May 2022	Update for 9.0 SP14
4.95	September 2022	Update for 9.0 FP15
4.96	December 2022	Update for 9.0 SP16
4.97	March 2023	Update for 9.0 SP17
4.98	June 2023	Update for 9.0 SP18
4.99	September 2023	Update for 9.0 FP19
5.00	December 2023	Update for 9.0 SP20

1 Getting Started

1.1 About This Document

This Administrator's Guide is the central source of information for the technical implementation of SAP 3D Visual Enterprise Author. It provides cross-scenario implementation information as well as scenario-specific information.

You can use the Administrator's Guide to get an overview of SAP 3D Visual Enterprise Author and its software units from a technical perspective. The Administrator's Guide is a planning tool that helps you to design your system landscape and it refers you to the detailed documentation that is required, mainly:

- Installation guides for single software units
- SAP Notes
- Configuration documentation
- SAP Library documentation

This Administrator's Guide is a single source of information for the documentation that is available to support the installation and operation of SAP 3D Visual Enterprise Author.

→ Remember

SAP 3D Visual Enterprise Author doesn't have a separate guide for Installation, Operations, and Security information. Instead, this information is contained within the one guide.

This Guide contains all of the following:

- **Installation Information**
This chapter gives you an overview of the installation components and the sequence in which they're installed
- **Operations Information**
This chapter provides information on monitoring, backup, and restore functionality.
- **Security Information**
This chapter provides you with the information that you require to operate SAP 3D Visual Enterprise Author securely
- **Upgrade Information**
This chapter provides you with the latest upgrade information

📌 Note

You can find the most current version of this document on SAP Help Portal at:

<http://help.sap.com>  **SAP 3D Visual Enterprise Author** 

We strongly recommend that you use the document available there. The guide is updated according to updates of the software.

1.2 SAP Notes for the Installation

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.

SAP Note Number	Title	Description
2334841 	File Formats Supported by SAP 3D Visual Enterprise Author	Clarification on the full list of 2D and 3D file formats supported by SAP 3D Visual Enterprise Author 9.0.
2794919 	Release Notes for FP08.	Release information.
 Note Microsoft has now reached end of life for support of Windows 7; Jan 2020. See https://www.microsoft.com/en-us/windows/windows-7-end-of-life-support-information  As of FP09, SAP 3D Visual Enterprise Author is no longer certified against Windows 7 (not tested against this environment). We support customers that maintain Windows 7, however if the issue is operating system dependent, we can't guarantee fixes.		
3375608 	Inventor Quick View load	For using Quick View load option, installation details for Inventor Apprentice Server are mentioned here.
2197650 	SAP 3D Visual Enterprise Author's release dates	Estimated dates for releases and navigation links to the latest releases.

1.3 Information Available in SAP Help Portal

You can find information on the following areas in the SAP Help Portal:

Help Documentation

Description	Internet Address	Title
SAP 3D Visual Enterprise Author	http://help.sap.com/  SAP 3D Visual Enterprise Author > SAP 3D Visual Enterprise Author 9.0 	Application Help for SAP 3D Visual Enterprise Author
SAP 3D Visual Enterprise Link	http://help.sap.com/  SAP 3D Visual Enterprise Link > SAP 3D Visual Enterprise Link 9.0 	Application Help for SAP 3D Visual Enterprise Link
SAP Visual Enterprise Access	http://help.sap.com/  SAP Visual Enterprise Access > SAP Visual Enterprise Access 7.1 	Application Help for SAP Visual Enterprise Access
SAP 3D Visual Enterprise Generator	http://help.sap.com/  SAP 3D Visual Enterprise Generator > SAP 3D Visual Enterprise Generator 9.0 	Application Help for SAP 3D Visual Enterprise Generator
SAP 3D Visual Enterprise Viewer	http://help.sap.com/  SAP 3D Visual Enterprise Viewer > SAP 3D Visual Enterprise Viewer 9.0 	Application Help for SAP 3D Visual Enterprise Viewer

User Guides

Description	Internet Address	Title
Security Guide for SAP 3D Visual Enterprise Generator	http://help.sap.com/  SAP 3D Visual Enterprise Generator > SAP 3D Visual Enterprise Generator 9.0 	Security Guide for SAP 3D Visual Enterprise Generator
Application Operations Guide for SAP 3D Visual Enterprise Generator	http://help.sap.com/  SAP 3D Visual Enterprise Generator > SAP 3D Visual Enterprise Generator 9.0 	Application Operations Guide for SAP 3D Visual Enterprise Generator
Installation Guide for SAP 3D Visual Enterprise Generator	http://help.sap.com/  SAP 3D Visual Enterprise Generator > SAP 3D Visual Enterprise Generator 9.0 	Installation Guide for SAP 3D Visual Enterprise Generator

Description	Internet Address	Title
SAP 3D Visual Enterprise Viewer	http://help.sap.com  <i>SAP 3D Visual Enterprise Viewer</i>  <i>SAP 3D Visual Enterprise Viewer 9.0</i> 	Administrator's Guide for SAP 3D Visual Enterprise Viewer
SAP 3D Visual Enterprise structure manager	http://help.sap.com  <i>SAP 3D Visual Enterprise structure manager</i> 	Administrator's Guide for SAP 3D Visual Enterprise structure manager
SAP 3D Visual Enterprise Viewer for iPad	http://help.sap.com  <i>SAP 3D Visual Enterprise Mobile</i> 	Administrator's Guide for SAP 3D Visual Enterprise Viewer for iPad
SAP 3D Visual Enterprise Viewer for Android	http://help.sap.com  <i>SAP 3D Visual Enterprise Viewer</i>  <i>SAP 3D Visual Enterprise Viewer 9.0</i> 	Administrator's Guide for SAP 3D Visual Enterprise Viewer for Android

1.4 Further Information Available

You can find further information on the following areas:

General Quick Links

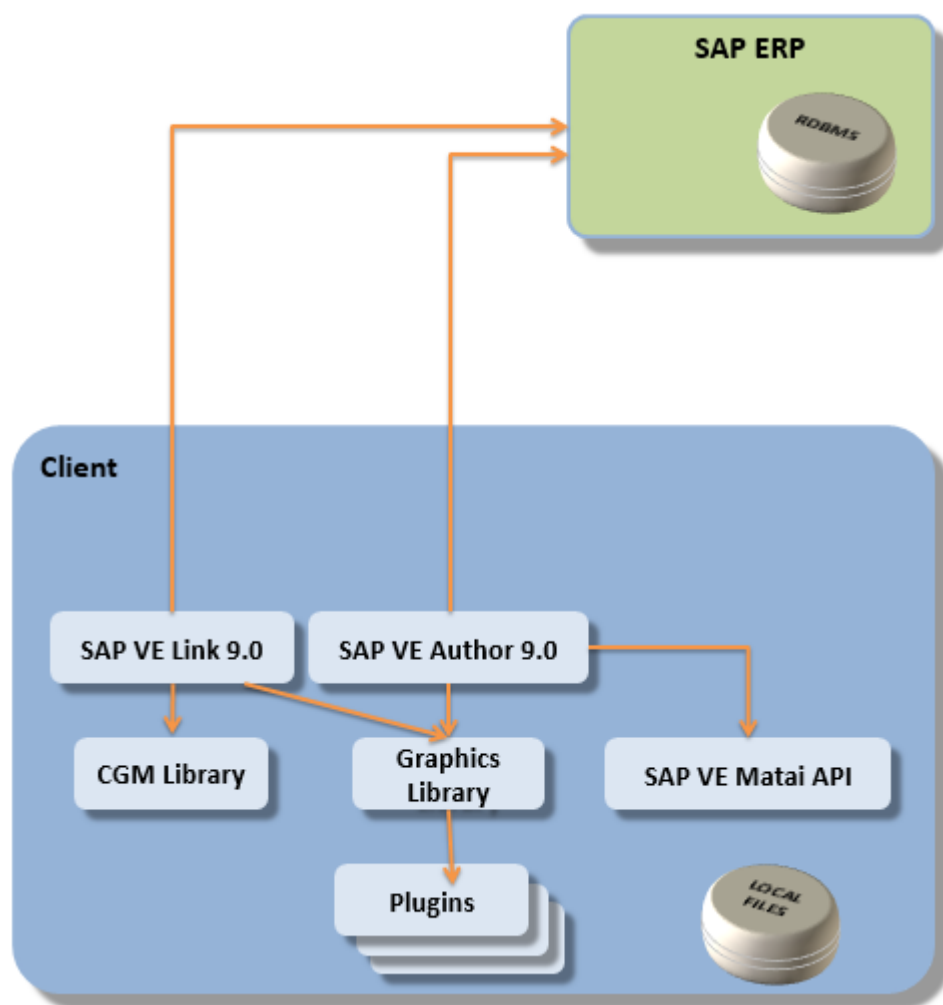
Description	Internet Address	Title
SAP Notes	http://support.sap.com/notes 	-
Released platforms	https://www.sap.com/products.html  To access the Platform Availability Matrix directly, enter http://support.sap.com/pam 	-
System sizing	https://www.sap.com/about/benchmark/sizing.quick-sizer.html#quick-sizer 	Quick Sizer tool
SAP Software Distribution Center (software download and ordering of software)	http://support.sap.com/swdc 	-
SAP Product Availability Matrix	http://support.sap.com/pam 	-

2 SAP Visual Enterprise Author 9.0

SAP 3D Visual Enterprise Author 9.0 is a standalone application that allows you to reuse 3D CAD design data. With it, you can search, view and manage all your assets in one program, repurpose 3D assets for use in Web pages, training, sales presentations and marketing, and create interactive 3D content for Web-based presentations.

2.1 System Landscape

The following graphic shows the system landscape for SAP 3D Visual Enterprise Author with the required software units and the required business functions:



SAP 3D Visual Enterprise Author with Link

2.2 Overall Implementation Sequence

SAP 3D Visual Enterprise Author is standalone, and does not integrate with a back-end system, so there is no equivalent installation sequence. SAP 3D Visual Enterprise Author and SAP 3D Visual Enterprise Link are installed directly onto your desktop, with no reliance on any other software or hardware.

3 Installation Information

SAP 3D Visual Enterprise Author 9.0 is installed directly onto your computer, with no reliance on any other software or hardware.

3.1 Installing the Software

This section describes the process for installing SAP 3D Visual Enterprise Author on your computer. As part of the SAP 3D Visual Enterprise Author installation, you can also choose to install SAP 3D Visual Enterprise Link, which is a subcomponent.

Prerequisites

DMS Integration

If you intend using DMS integration, you must have the following:

- SAP PLM with KPro Storage. Versions supported from the listed below and higher:
 - EHP5 SP11
 - EHP6 SP09
 - EHP6 on HANA SP03
 - EHP7 SP02
- SAP GUI installed in local system

To enable Single Sign On, refer to:

- SAP Note [1808526](#), [1851341](#) and [1864636](#)

If you wish to enable Query (Advanced Search), you will need the following:

- Package: CDESK
- Function Group: CDESK_SRV_SEARCH
- EHP 5 SP11, EHP6 SP8, EHP6 on HANA SP03, or EHP7 SP02

To enable fast Enterprise Search (TREX-based), you need to install SAP PLM Web UI with Enterprise Search license.

Procedure

1. Close all applications on the computer.
2. Navigate to, and double-click the `VisualEnterpriseAuthor_xx.exe` file (where xx is the version number), file in Windows Explorer.
3. Choose [Next](#) when the installer starts. The *Front-End Installer* window is displayed, showing the appropriate available options.
4. Do one of the following:
 - Choose [Select All](#) to install all components of SAP 3D Visual Enterprise Author on the local hard drive. Note that this is the recommended option.
 - Use the checkboxes to select the features to be installed.
5. Continue to the next window to select an install location, and do one of the following:
 - Accept the default location in which to install SAP 3D Visual Enterprise Author.
 - Choose [Browse](#), navigate to, and select the installation folder you require.
6. Choose [Next](#) to start the installation, and then [Close](#) when the installation is complete.
7. Register and activate the product.

3.2 Acquiring and Activating Licenses for SAP 3D Visual Enterprise Author

SAP 3D Visual Enterprise Author is licensed per-user. You must activate your licenses in order to operate SAP 3D Visual Enterprise Author on any computer after the 30 day temporary period expires.

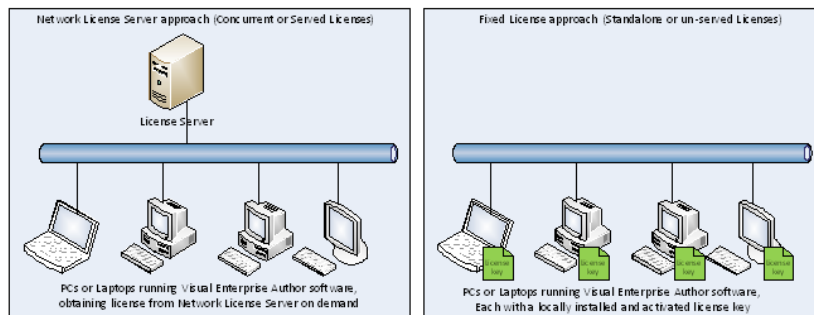
3.2.1 Technical Licensing Models

There are two basic models for licensing:

- **Served License** – also called a “Network License”
A single license file with licenses for all users, which resides on a network license server on your local network. This is suitable for larger installations with many users. Administering a license server is simpler than managing licenses on each user machine. The system administrator installs and configures the license server, and obtains and installs a single license file to activate all the served licenses.
- **Fixed License** – also called a “Standalone” or “Un-served License”
A license key specific to each user’s workstation is installed.

These models are illustrated in the following diagrams.

If you are using SAP 3D Visual Enterprise Author in a corporate environment, typically the system administrator will decide which licensing model is preferred.



License Models

Prerequisites

SAP software and licenses are delivered by way of the SAP Support Portal – <http://www.support.sap.com>. If you have purchased SAP software, one or more people in your organization are set up as a user on Support Portal. If you purchased through a partner, that partner can obtain your licenses for you. The licenses are available through a “license self-service” page on the portal <http://support.sap.com/licensekey>.

You or your system administrator needs to be able to log into the Support Portal to get license keys in some situations.

3.2.2 Activating a Network License Server

A License Server delivers licenses to the users on an internal network.

Network License activation is a four part process. You must:

1. Install the Network License Server
2. Acquire the License File
3. Install the License File on your License Server

4. Configure SAP 3D Visual Enterprise Author

3.2.2.1 Installing the Network License Server

Use

You need to download the SAP 3D Visual Enterprise Author License Manager.

Procedure

1. Open <https://developers.sap.com/trials-downloads.html?search=SAP+3D>.
2. Download the installer on your target license server machine. Install the License Manager
3. Install the service by choosing ► *Start* ► *SAP 3D Visual Enterprise* ► *SAP 3D Visual Enterprise Author Network License Manager* ► *Install License Server* . Ensure that you have administrative privileges, and that the command is executed with elevated to admin UAC rights.
4. Use the HostID utility to determine the Host ID for the server machine by choosing ► *Start* ► *SAP 3D Visual Enterprise* ► *SAP 3D Visual Enterprise Author Network License Manager* ► *HostID Tool* .

3.2.2.2 Acquiring the License File

1. Log into the Support Portal License Keys area <http://support.sap.com/licensekey>, and select the appropriate installation. If you do not know how to find an installation, or if you cannot log in, contact the SAP Customer Interaction Center (CIC), or the partner who supplied SAP 3D Visual Enterprise Author.
2. In the *Select System* window, do one of the following:
 - Edit an existing system.
 - Create a new system by choosing *New System*. If you are creating a new system, you must generate a System ID.
3. Enter the appropriate information in the required fields. Choose *SAP 3D Visual Enterprise Author* from the drop down list of products, and choose the appropriate version.

Note

If SAP 3D Visual Enterprise Author is not in the list, there is a problem with the order or the entitlement. You must do one of the following:

- Contact your account executive
- Contact your supplier or partner
- Open a CSS Incident using component **xx-ser-likey**

4. Continue to the *License Generating* window, choose the entitlement, (the set of available licenses to use), and choose *Select to Generate*. Note that this does not generate the keys immediately.

5. In the *License Model* window, choose the licensing model *Served License*.
6. Define the number of licenses to serve on this License Server.
7. Enter the required information about the server (machine name, machine host ID), and any optional information. You can find more information in the documentation delivered with the license server software installation.
8. Generate the license file and download it to the location of the license server software.

3.2.2.3 Installing the License File on your License Server

Use

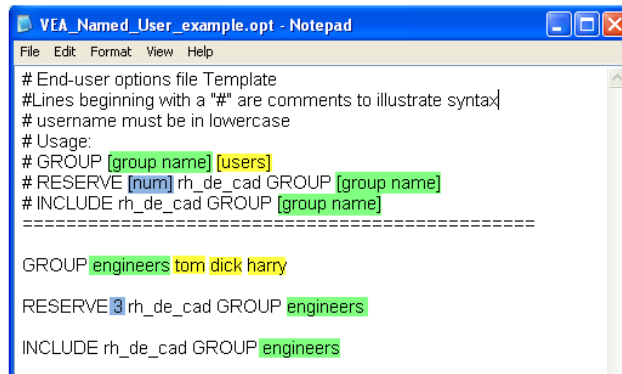
The next step in the process is to install the Named licenses on your license server. The four step workflow is as follows:

- Define the set(s) of users (by **username**, **hostname**, **IP-address**) who are entitled to check out licenses for SAP 3D Visual Enterprise Author by creating an *Option* File. An example file is shown below.
- Reference the *Option* file in your *License File* by editing the license file obtained in the SAP marketplace.
- Deploy the license and option files by placing them into a location where the server can access them.
- Start the RLM service by choosing ► *Start* ► *All Programs* ► *Administrative Tools* ► *Services (Computer Management Console)* ►.

Procedure

Step 1: Creating an Option File (*.opt)

1. Create a text file in Notepad . exe. Add your users' group(s), name(s), and end users' names, as detailed in the example below.



```
# End-user options file Template
# Lines beginning with a "#" are comments to illustrate syntax
# username must be in lowercase
# Usage:
# GROUP [group name] [users]
# RESERVE [num] rh_de_cad GROUP [group name]
# INCLUDE rh_de_cad GROUP [group name]
=====
GROUP engineers tom dick harry
RESERVE 3 rh_de_cad GROUP engineers
INCLUDE rh_de_cad GROUP engineers
```

Option File

Note

The tag [users] in the above example must be populated with your Windows login names.

2. When editing is complete, rename the file extension from .txt to .opt.

Step 2. Referencing the Option file in the License File

Open the license file (*.lic) in Notepad .exe. Copy and paste your option file name to the ISV option line.

Caution

With the exception of two optional parameters: option file name and port number, all other parameters in the license file are protected by digital signature. Never modify these values as this will make the license file invalid.

```

1  HOST localhost 001279cdefb3 5053
2  ISV righthemi righthemi VEA_Named_User_example.opt 28000
3  LICENSE righthemi rh_de_tcp 1 permanent 100000 _ck=64c6fcd666 sig="60P
4  G4580VBMX7SDVFT3JGFQ858MRJF1A4AY8SU7E08A6YH120NOVDWW81TWG5R47P3NXPXH
5  NOP1G"
6

```

License File

Step 3. Deploying the Named license

1. Save the License File (*.lic) and the Option file (*.opt) to the SAP 3D Visual Enterprise Author Network License Manager installation directory. The default path is: %PROGRAMFILES32%\SAP\3D Visual Enterprise Author Network License Manager\.
2. Restart the RLM service.

Step 4. Starting the RLM service

The RLM service can be manually started by choosing **Start > All Programs > Administrative Tools > Services (Computer Management Console)**.

3.2.2.4 Configuring SAP 3D Visual Enterprise Author

1. Set up all named users in the options file on the license server. Refer to the documentation that was delivered with the license server. This also helps you to set up your options file with all the named users in it.
2. Install SAP 3D Visual Enterprise Author on a client machine, configure it to point to the license server, and test the installation.
3. Start SAP 3D Visual Enterprise Author and open the *Activation Wizard* from the Help menu.

4. Select the *Network* option and continue to the next window.
5. Enter the *Server Name* or *IP Address and Port Number* of the main license server. Optionally, you can specify a backup server. This information is supplied by the system administrator.
6. Choose *Next* to save the settings to the registry. SAP 3D Visual Enterprise Author is now licensed.

Note

Access to the license server is required each time SAP 3D Visual Enterprise Author is run.

3.2.3 Activating a Standalone License

If you are using standalone licenses, you must obtain and install a license key specific to each user's workstation.

The way in which you activate standalone licenses is as follows:

- **License Key:** You obtain the required number of Licensing Keys from the Service Marketplace and activate SAP 3D Visual Enterprise Author. The License Key string is copied and pasted.

Note

As a prerequisite, you need to know the **Host ID** of the particular workstation in order to obtain the license key.

3.2.3.1 Manually Obtaining a License Key

This procedure describes the process of manually obtaining a license key from the Support Portal.

Procedure

1. Open SAP 3D Visual Enterprise Author, and open the *License Activation* window from the Help menu by choosing  *Help*  *Activate SAP 3D Visual Enterprise Author* .
2. Choose the *Standalone (Unservd)* option, continue, and choose *Next*.
3. Choose *Copy to Clipboard* to store the **Host ID** information.
4. Log into Support Portal: <http://support.sap.com/licensekey> .
5. In the *Select Installation* window, select an appropriate installation to work with, either from the *Recently Used Installations* section, or by searching.
6. In the *Select System* window, do one of the following:
 - Edit an existing system.
 - Create a system by choosing *New System*.
7. If you are creating a system, you must generate a System ID. You can include all of your workstations grouped under this one System ID.

8. Enter the appropriate information in the required fields. Choose *SAP 3D Visual Enterprise Author* from the dropdown list of products, and choose the appropriate version.

Note

If SAP 3D Visual Enterprise Author is not in the list, there is a problem with the order or the entitlement. Contact your Account Executive, your supplier or partner.

9. Continue to the *License Generating* window, choose the entitlement (the set of available licenses to use), and choose *Select to Generate*. Note that this process does not generate the keys immediately.
10. In the *License Model* window, choose the licensing model *Unservd*.

Note

Unservd licensing is also known as “Standalone” or “Fixed” licensing.

11. Move to the *License Quantity* window and enter the required quantity. You can generate up to ten keys at a time.
12. Choose *Next*, and in the following window enter the *Host ID* obtained earlier. In addition, provide a name for each machine. This name is not used in the licensing process– it is just for identification purposes.
13. Click *Generate* to generate the required license keys.
14. Open SAP 3D Visual Enterprise Author, and open the *License Activation* window from the Help menu by choosing **Help > Activate SAP 3D Visual Enterprise Author**.
15. Choose the *Standalone (Unservd)* option, continue, and choose *Next*.
16. Copy and paste the license text into the *License Key* field.
17. To complete licensing, choose *Next* and then *Finish*.

Note

If you experience any difficulties with the process, open a CSS Incident using component **xx-ser-likey**, and include the computer *HostID* to obtain a license key.

3.3 Restoring Default Configuration

When you run SAP 3D Visual Enterprise Author for the first time, it creates various default configuration files:

- Default UI layouts
- Query examples
- Sandbox policy
- Default callouts
- Profiles and styles
- Default line styles
- Default output sizes
- Default viewport views

The folder containing the configuration files is located as follows:

- For SAP 3D Visual Enterprise Author 9.0 at %AppData%\SAP\SAP 3D Visual Enterprise Author 9.0

Restoring Default Configuration

If this folder gets accidentally deleted or files corrupted, you can reset them to initial state.

⚠ Caution

The following procedure involves editing the registry. You use the Registry Editor at your own risk.

To restore default configuration, proceed as follows:

1. Close SAP 3D Visual Enterprise Author
2. Choose ► **Start** ► **Run** ►, enter **Regedit** and choose **OK**
3. Access HKEY_CURRENT_USER\Software\SAP\SAP 3D Visual Enterprise Author 9.0 or HKEY_CURRENT_USER\Software\SAP\SAP 3D Visual Enterprise Author 8.0, depending on your product version.
4. Change the **Default** value to **FFFFFFFF**.
5. Restart SAP 3D Visual Enterprise Author.

When SAP 3D Visual Enterprise Author starts, it overwrites and adds missing configuration files, however, all user files remain.

Restoring Default Callout Profiles

To restore default callout profiles, proceed as follows:

1. Close SAP 3D Visual Enterprise Author.
2. Open folder %AppData%\SAP\SAP 3D Visual Enterprise Author 9.0 or %AppData%\SAP\SAP 3D Visual Enterprise Author 8.0
3. Delete Callouts.xml file and restart SAP 3D Visual Enterprise Author.

📘 Note

This procedure deletes custom user profiles.

3.4 Setting up Default Settings for SAP 3D Visual Enterprise Author 9.0

Silent Installation

Run the installer with special arguments:

- `/Silent`: Runs in completely silent mode, nothing is visible
- `/noDLG`: Only progress page is displayed

Selecting Default UI Language

Set by registry value as follows:

Value	Setting
SAP 3D Visual Enterprise Author 9	HKEY_CURRENT_USER\Software\SAP\SAP 3D Visual Enterprise Author 9.0
Value Name	Language
Type	REG_SZ
Data	• eh: English • de: German • es: Spanish • fr: French • ja: Japanese • ko: Korean • pl: Polish • pt: Brazilian Portuguese • ru: Russian • zh: Simplified Chinese

Suppressing Initial Layouts Choice Window

Set by registry value as follows:

Value	Setting
SAP 3D Visual Enterprise Author 9	HKEY_CURRENT_USER\Software\SAP\SAP 3D Visual Enterprise Author 9.0\Features
Name	<i>SkipWelcomeScreen</i>
Type	REG_DWORD
Data	0x2

Selecting Default UI Layout

Standard Layout (default)

Set by registry values as follows:

SAP 3D Visual Enterprise Author 9.0: HKEY_CURRENT_USER\Software\SAP\SAP 3D Visual Enterprise Author 9.0\Features

- Name: UIRestrictions
- Type: REG_DWORD
- Data: 0x0

Note

Replace <User name> with the actual user name.

SAP 3D Visual Enterprise Author 9.0: HKEY_CURRENT_USER\Software\SAP\SAP Visual Enterprise Author 9.0\Layout\LastActiveLayout

- Name: LastActiveLayout
- Type: REG_SZ
- Data: C:\Users\<User name>\AppData\Roaming\SAP\SAP 3D Visual Enterprise Author 9.0\Layouts\Standard Author (Default).Layout

Note

Replace <User name> with the actual user name.

3.5 Configuring SAP Engineering Control Center Integration

Defining Session Directory

The `PLM_FILESPACE` variable is defined in the `plm_setenv.bat` configuration file in `n%ectr_install_dir%\customize\config`.

Configuring SAP Engineering Control Center

Refer to the SAP Engineering Control Center Configuration Guide, see [SAP Engineering Control Center](#) for details.

Defining Document Types in SAP Engineering Control Center

You make the required settings for the document type in this operation. You can describe documents language-specifically, define the document status and specify object links. You define these settings in the [Customizing](#) window by using:

► [Cross-Application Components](#) ► [Document Management](#) ► [Control Data](#) ► [Define Document Types](#) ►

For each operation, online documentation is available directly in the maintenance window.

When you set up the attributes for a document type, keep the following in mind:

- You must select **KPro Storage** (document storage using Knowledge Providers)
- You only check the **file size** value if originals are not stored using a Knowledge Provider. Hence, this value is not relevant here.

Defining Document Types in PLM

When viewables are produced by SAP 3D Visual Enterprise Generator or SAP 3D Visual Enterprise Author and stored in the SAP document management system, the following information is stored for each file:

- The [workstation application](#) with which the file is associated
- The [MIME type](#) with which the file is associated

The default values are as follows:

Default Values

File Format	Workstation Application	MIME Type	
.vds	RH	application/rh	Recommended
.rh	RH	application/rh	

⚠ Caution

If the workstation application does not exist in SAP ERP, KPRO storage jobs may fail. You can create the workstation application by using the transaction **DC30**. For further information, see [Checking Document Types and Workstation Applications \[page 26\]](#).

Setting a Default Storage Category

A default storage category must be set in the ECTR installation folder.

To do this, go to ► *<ECTR installation folder>* ► *Applications* ► *VEA* ► *Customize* ► *config* ►, and select the `default.txt` file. Specify

↗ Code Syntax

```
plm.kpro.storageCateg.default.VWI = <storage category>
```

Refer to the SAP Engineering Control Center Configuration Guide, see [SAP Engineering Control Center](#) for details..

Defining Dependent Documents in DTypes

To allow creation of VWI as dependent documents for a particular document type, you must add the following line to the corresponding DType definition:

↗ Code Syntax

```
<allowed_nonmaster DType="VWINM" max_count="999" />
```

Security

Refer to SAP Engineering Control Center Security Guide, see [SAP Engineering Control Center](#) for details.

3.5.1 Checking Document Types and Workstation Applications

Context

SAP ERP must have a workstation application set up for viewing the files produced by SAP 3D Visual Enterprise Generator or SAP 3D Visual Enterprise Author. The default workstation application set up for viewable files is RH.

To check whether the SAP ERP system already has a workstation application setup:

Procedure

1. Open SAP GUI, and logon to the system that will be used.
2. Run transaction **DC30** and check whether the workstation application RH already exists.
3. If it does not, add a new one by choosing [New Entries](#).
4. Fill the fields as shown below and choose [Save](#).

Option	Entry
WS Application	RH
Description	Right Hemisphere
Archive Identification	*
File Suffix for Appl.	rh
File Format	*.rh, *.rhz, *.vds
MIME Type	application/rh
Start Authorization	Check
Addnl Files	Check
Content Version	Check

Checking Default Document Information Record Type

Context

The default document information record type for SAP Engineering Control Center integration is **VWI**.

To check whether the documentation information record type already exists:

Procedure

1. Open SAP GUI, and logon to the system that will be used.
2. Run transaction **DC10** and check whether the documentation information record type **VWI** already exists.
3. If it does not, add a new one by choosing [New Entries](#).
4. Fill the fields as shown below and choose [Save](#).

Option	Entry
Document Type Description	Visual Work Instruction
Use KPro	Check
Change Docs	Check
Display Object Links	Check
Number Assgmt	1
Internal Number Range	02
External Number Range	01
Number Exit	MCDOKZNR
Vers. No. Incr.	1
File Size	0
Default Appl.	RH

5. Configure the statuses for the **VWI** document type by selecting the **VWI** document type and double-clicking the [Define Document Type](#) menu item.
6. Click [Status Net](#) to view the document type's status network.

4 Operation Information

4.1 Monitoring of SAP 3D Visual Enterprise Author

Within the management of SAP Technology, monitoring is an essential task. A section has therefore been devoted solely to this subject

4.1.1 Trace and Log Files

Trace files and log files are essential for analyzing problems. Log files contain details of errors that occur during a working session. These errors can be interrogated with the log viewer.

Important Log and Trace files for component SAP 3D Visual Enterprise Author

Component	Content	File	Path
SAP 3D Visual Enterprise Author	System processes, memory state	SAP 3D Visual Enterprise Author 9.0.log	%userprofile%\appdata\LocalLow\sap\ <SAP 3D Visual Enterprise Author 9.0

4.2 Backup and Restore

You need to back up your system landscape regularly to ensure that you can restore and recover it in case of failure.

The following table lists the components used by SAP 3D Visual Enterprise Author, and the required actions.

Component	Data to be Backed Up	Backup Method/Tool	Recommended Backup Frequency	Backup Sequence (if required)
SAP 3D Visual Enterprise Author	Application data at <Application data>\SAP\SAP 3D Visual Enterprise Author 9.0\	No backup, new installation in case of a recovery	1 month	Install application Run SAP 3D Visual Enterprise Author Exit SAP 3D Visual Enterprise Author Restore Application Data

5 Security Information

SAP 3D Visual Enterprise Author has no user management security mechanism in its standalone form.

If SAP 3D Visual Enterprise Author is integrated with DMS, we rely on PLM user management to provide access to data. Therefore, the security recommendations and guidelines for user administration and authentication as described in the SAP PLM Security Guide [SAP Library] also apply to SAP 3D Visual Enterprise Author in this instance.

For more information about user management within PLM, see the SAP PLM Library at <https://help.sap.com/viewer/DRAFT/5550be7056c34ee6ada730c35e41e967/1809.001/en-US/1095732dbd44438c9fa1489e36b89266.html>  *Product Lifecycle Management* .

SAP DMS Integration security

The following applies with SAP DMS Integration security:

- User management and access is defined by SAP PLM. Users of SAP 3D Visual Enterprise Author are not able to view or access restricted documents in DMS.
- For Edit and Preview operations, files are downloaded into a local cache
- Location of downloaded files cache can be changed to a secure external drive. Setting is in DMS Panel toolbar | Preferences | Favorites Location
- Local cache is automatically cleaned at the end of every session, with the exception of files belonging to the documents from the Favorites list. These will remain to allow offline work. The files are automatically deleted when documents are removed from the Favorites list.

5.1 Sandbox

SAP 3D Visual Enterprise Author uses sandboxing to provide security controls for files.

Some of SAP 3D Visual Enterprise Author's supported file formats use third party libraries over which there is little control in terms of security. This means that vulnerabilities in those libraries, encountered when processing corrupt or maliciously crafted data from an external, mistrusted source, might pose security issues and compromise SAP products.

Sandboxing creates an isolated, secure environment, and provides guarantees about what a piece of code can or cannot do while being executed in that controlled environment, no matter what the inputs. Sandboxing leverages the operating system-provided security to allow code execution that cannot make persistent changes to the computer or access information that is confidential. The architecture and exact assurances that the sandbox provides are dependent on the operating system

Use

The Sandbox for plug-ins feature is found in the Plug-In Manager in SAP 3D Visual Enterprise Author.

The Sandbox for plug-ins feature also supports the Group Policy option. Using this, the network administrator can set a maximum security level and prevent users from changing it. This feature is implemented over registry, and is version dependent. The Group Policy writes to the registry and SAP 3D Visual Enterprise Author uses it to enable or disable Sandbox settings.

The .adm file is located at:

- SAP 3D Visual Enterprise Author 9.0\Domain Group Policies\Sandbox.adm

Prerequisites

You have:

- A Windows Server setup with a domain
- Full administrative rights to that server
- SAP 3D Visual Enterprise Author already installed

5.2 Installing the SAP 3D Visual Enterprise Author Group Policy “Sandbox.adm”

Procedure

1. Log into the domain server with full administrative rights.
2. Copy the file `Sandbox.adm` from the installation folder of SAP 3D Visual Enterprise Author, (`C:\Program Files\SAP\SAP 3D Visual Enterprise Author X.X\DomainGroupPolicies`), and paste into a location in the domain server for installation.
3. From the Windows Start Menu, choose ► *Administrative Tools* ► *Group Policy Management* .
4. In the *Group Policy Management* tree, right-click *Group Policy Objects* and choose *New*. Give the group policy a name; for example, `<SAP Group Policy>`. The newly added group policy displays under the Group Policy objects.
5. Select the newly created policy object, right-click and choose *Edit* to display the *Group Policy Object Editor* window.
6. From the *User Configuration* folder, right-click *Administrative Templates*, select *Add/Remove Templates*, and choose *Add*.
7. Browse for the file `Sandbox.adm` that you have transferred across to the domain server, and open it.
8. Choose *Close* to apply the changes. A folder entitled “SAP 3D Visual Enterprise” displays in the administrative templates. In that folder, double click the `Sandbox` item to display the sandbox properties.
9. Close the *Group Policy Object Editor* window to return to the *Group Policy Management* window. Right-click the domain to which you want to apply the group policy, and choose *Link an Existing GPO*.
10. In the Select GPO, under *Group Policy Objects*, the group policy object is displayed.
11. Login and run SAP 3D Visual Enterprise Author. Check whether the changes in group policy display in the SAP 3D Visual Enterprise Author settings.

Note

You must login again to see the updates, based on the way in which the group policy update is configured.

More Information

The following links provide further assistance for administrators when implementing sandboxing:

- Deploying Custom Registry Changes through Group Policy: <http://blogs.technet.com/b/askds/archive/2007/08/14/deploying-custom-registry-changes-through-group-policy.aspx> ➡
- Pushing out Security Settings: <https://techgenix.com/pushing-out-security-settings-configured-registry/>
- Group Policy Management Console: <https://techgenix.com/group-policy-management-console/>

6 Network Licensing for SAP 3D Visual Enterprise Author

This service supports network licensing for SAP 3D Visual Enterprise Author concurrent licenses.

Prerequisites

The following is required to deploy network licenses:

- Machine with Windows operating system
- SAP 3D Visual Enterprise Author License Manager
- License file (*.lic) - this file is emailed to you

Procedures

Installing SAP 3D Visual Enterprise Author License Manager

SAP 3D Visual Enterprise Author License Manager must be installed on a Local Area Network.

1. Run the `SAP3DVisualEnterpriseLicenseManager_3.0.0.xxxx.exe` on the computer to host the concurrent licenses.
2. Accept the default install path and follow the instructions to complete the installation.

Generating the License File (*.lic)

SAP creates a unique license file for each production server as well as any backup server as required. To receive this file, e-mail the following information to support@sap.com:

- The concurrent License Code supplied upon purchase.
- The SAP Host ID of your license server.
- SAP 3D Visual Enterprise Author License Manager includes a utility that generates the Host ID. From the [Start](#) menu, launch ► [SAP 3D Visual Enterprise](#) ► [License Server HostID Tool](#) ►.
- If you require fixed licenses, you must include the machine name to be associated with each license.

You receive a reply e-mail within two working days with your unique license file (*.lic) as specified in your SAP Invoice.

Deploying the Network License

1. Save the License File (*.lic) to the License Manager installation directory.
The default path is:
`C:\Program Files\SAP\SAP 3D Visual Enterprise Author License Manager.`
2. Restart the SAP 3D Visual Enterprise Author License Manager service (see the following instructions).

Starting and Restarting the License Manager service

1. After License Manager has been installed, the service must be installed using the Windows Start Menu shortcuts: [Install License Service](#).
2. The License Manager service can be manually started and stopped via Windows: ► [Start](#) ► [All Programs](#) ► [Administrative Tools](#) ► [Services \(Computer Management console\)](#) ►.
3. The License Manager service can be uninstalled via the Windows Start Menu shortcut: [Uninstall License Service](#).

7 SAP 3D Visual Enterprise Author License Manager Start Menu Options

The following table discusses the start menu options for SAP 3D Visual Enterprise Author License Manager.

Option	Functional Description
License Server Install Service Without Web Interface	Adds the license server as a Windows Service. The name of the service is <code>VisualEnterpriseAuthorLM</code>. This method is recommended for the license server. ⚠ Caution For Windows7 and Windows Server 2008 operating systems, when UAC is enabled, the license service cannot be installed from the Start Menu shortcut. The shortcut runs a command line that must have Local Administrator rights. The workaround in this case is to install the service via the command line with an account that has administrator privileges. SAP 3D Visual Enterprise Author License Manager includes two *.cmd files for this purpose. These files can be found in the License Manager program folder. Install the service: <code>run service.cmd</code>. Uninstall the service: <code>run unservice.cmd</code>. The service is automatically started as a part of the License service installation.
License Server Console Application	Launches the command line and starts the <code>VisualEnterpriseAuthorLM</code> service
License Server HostID Tool	Generates and displays the Host ID for SAP 3D Visual Enterprise Author License Manager. Send the Host ID to SAP Support along with the port number. Launch the tool from the Start Menu. The Host ID is displayed. Copy and paste this information in an e-mail and send to Support@sap.com.
License Server Uninstall Service	Removes the <code>VisualEnterpriseAuthorLM</code> service from the services list.

Option	Functional Description
VisualEnterpriseAuthorLM Administration	Launches VisualEnterpriseAuthorLM Administration. The VisualEnterpriseAuthorLM service or console application must be running in order to access this function. Features include: • Status: shows the status of the server and license usage • Shutdown: shuts down the server when running as a service • Reread/Restart Servers: re-reads the license file for all servers • Switch ReportLog and New ReportLog: set and switch report log to a new location • Switch DebugLog: switch debug log. The debug log is located in the program folder in which SAP 3D Visual Enterprise Author License Manager is installed by default. The name of the log is <code>licensemanager.dlog</code>, and it can be changed inside the <code>service.cmd</code> command file. The service must be stopped in order to view this log. • System Info: shows system information. • Activate License: non-functional as it is not needed in the current configuration. Manual

8 Installing the License File

Ensure that your license file is copied to the SAP 3D Visual Enterprise Author License Manager program folder.

If you have installed the License service before obtaining the license file, the service must be restarted once the license file is copied to the SAP 3D Visual Enterprise Author License Manager folder.

There are two ways to run the License service:

1. **Console application:** At the command line, change folders to the SAP 3D Visual Enterprise Author License Manager program folder. Type **RLM** to start the service.
2. **Service (recommended):** From the [Start](#) menu, launch ► [SAP 3D Visual Enterprise](#) ► [License Server Install Service Without Web Interface](#) ►. On installation, the service starts automatically.

Note

When running SAP 3D Visual Enterprise Author License Manager as a service, ensure that any license server (production or backup) has `rlm.exe` on the firewall exception list.

8.1 To Activate the SAP 3D Visual Enterprise Author License

Context

Activate the license by entering the server name and port number in the [SAP 3D Visual Enterprise Author Activation](#) window, on the [Concurrent License Activation](#) tab.

Procedure

1. Enter the **Servername** (machine name or IP address).
2. Enter the **Port number** (available port).

8.2 Backup (failover) Server

Prerequisites

Ensure that your license file is copied to the SAP 3D Visual Enterprise Author License Manager on the backup server.

→ Recommendation

SAP recommends configuring the backup server as a stand-alone server that does not serve its own compliment of licenses.

Context

If a backup server is required, SAP will create a backup license. SAP will require the host ID and port for the backup server.

To implement a backup server, follow these steps

Procedure

1. Ensure that your license file is copied to the RLM program folder.
2. Copy the license file from all production servers to the program folder of the backup server.
3. Install the Service. The service is started as a part of the install process.
4. Ensure that *Use Backup Server Settings* is ticked, and the backup server name and port specified, in the *SAP 3D Visual Enterprise Author Activation* window on client machines

8.3 Mass Deployment

A registry key can be created and deployed via a network .bat file, which sets these values.

My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\SAP\SAP 3D Visual Enterprise Author 9.0.

1. Add key - **Reg3**.
2. Add the following string values:

String	Required Value
ActivationMethod	This value is Network .
FailoverEnable	The value is No , unless you are using a backup server. In that case, this value is Yes .
FailoverPort	This value is left blank unless you are using a backup server. If so, enter the port number.
FailoverServer	This value is left blank unless you are using a backup server. If so, the value is the machine name or IP address.
 Note The fail-over server must be on the same network as the licensing server.	
Port	The port number used to connect to the license server.
Product	The type of product (rh_de_cad for 3D Visual Enterprise Author).
Server	The machine name or IP address where License Manager is installed

8.4 User Options File

The option file allows control of the use of licenses by various groups and groups of users within an organization, logging of license servers, roaming, timeout, timezone, and queuing behavior. The *.opt file is referenced in the *.lic file.

Options include the following:

- RESERVE
- INCLUDE or INCLUDEALL
- EXCLUDE or EXCLUDEALL
- GROUP
- HOST_GROUP
- MAX

Logging of license servers includes the following:

- DEBUGLOG
- REPORTLOG
- NOLOG

- ROTATE

Control over license roaming is provided by the following:

- INCLUDEALL_ROAM
- EXCLUDEALL_ROAM
- MOAN_MAX_DAYS
- ROAM_MAX_COUNT

License Timeout:

- TIMEOUT
- TIMEOUTALL

License timezone restrictions are controlled with the **TIMEZONE** option.

License queuing behavior is controlled with the **EXPRESS** and **PRIORITY** options.

The ISV options file is specified on the ISV line of the License file. The following is an example of where the reference to the option file is located in the license file.

❁ Example

```
HOST meng-yo-nz 23c21cee 2764
ISV righthemi rh option.opt
LICENSE righthemi rh_de_tcp 1 permanent 100000 sig=""
LICENSE righthemi rh_de_std 5 17-jun-2010 5 min_timeout=3600
```

9 Technical System Landscape

9.1 Supported Operating Systems

SAP 3D Visual Enterprise Author runs on the following supported operating system:

- Microsoft Windows 10 (64-bit version)
- Microsoft Windows 11 (64-bit version)

Please see SAP Note [3073267](#) for additional details regarding the support of virtual and other environments by SAP 3D Visual Enterprise products.

⚠ Restriction

The operating system supports 64-bit version only.

9.2 Hardware Configuration

The minimum configuration for SAP 3D Visual Enterprise Author is:

- Core i3 equivalent, or higher
- 8 GB of RAM (more for large model and texture sizes)
- 500GB/1TB (64 bit) hard drive
- Video card with the following:
 - 24-bit color with pixel and 3D vertex shader support
 - 3D hardware accelerator video card, capable of displaying 24-bit color and supporting Shader Model 3.0 with at least 512 MB of RAM supporting Shader Model 3.0

→ Recommendation

The recommended configuration for SAP 3D Visual Enterprise Author is:

- 64-bit multi-core Intel® Core i-7 ® processor
- 16 GB or higher of RAM
- Video card with the following:
 - 24-bit color with pixel and 3D vertex shader support
 - 3D hardware accelerator video card, capable of displaying 24-bit color and supporting Shader Model 3.0.with 4 GB of RAM
- 64-bit Operating System

9.3 Software Configuration

The required software configuration for SAP 3D Visual Enterprise Author is:

- Microsoft .NET 4.8 Framework, client profile and Extended
- Microsoft DirectX, version 11 GAPI

9.4 Additional Requirements

There are a number of additional requirements, depending on the way in which you plan to use SAP 3D Visual Enterprise Author:

- To view and save Autodesk 3ds Max files, a copy of 3ds Max 2023 and above must be installed. See [3232566](#)  for installation details.
- To view Inventor files, Autodesk Inventor Viewer must be installed.
- To view 3D content in a HTML Document with 3D (.html) files, SAP 3D Visual Enterprise Viewer must be installed.

Adobe Software

Reader version 8.1 and above is required to view PDFs with 3D content.

Acrobat Professional versions 8.1, 9, 10, or 11 are required to develop custom PDF templates for 3D viewing and interaction.

MS Office

The Microsoft Office 2016 version is certified for use with SAP 3D Visual Enterprise Author.

10 Upgrade Information

Installation of a new version of SAP 3D Visual Enterprise Author does not upgrade or uninstall previous versions. These must be uninstalled manually if they are not required. The uninstall procedure is detailed below.

When you load a new version, the user interface settings and licensing information are copied automatically from SAP 3D Visual Enterprise Author 9.0 if found, for each user.

ⓘ Note

You don't have to uninstall the previous version if you are upgrading from a Feature Pack (FP) release to a Service Pack (SP) release or vice versa, or upgrading from a SP release to another SP release. You need to uninstall and install the new version only when upgrading to a major release, such as, upgrading from 7.0 to 8.0 or 9.0.

Procedure

1. From the Windows Start Menu, choose ► *Control Panel* ► *Uninstall a Program* ▾.
2. Highlight the *SAP 3D Visual Enterprise Author X.X* row and choose *Uninstall*.
3. Choose *Next* to start the uninstall, and then *Close* when it finishes.

A Reference

The Main SAP Document Types

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

Cross-Phase Documentation

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:
 - On SAP Help Portal at ► <http://help.sap.com> ► *Glossary* ►
 - In the SAP system in transaction **STERM**

SAP Library is a collection of documentation for SAP software covering functions and processes.

- Target group:
 - Consultants
 - System administrators
 - Project teams for implementations or upgrades
- Current version:
 - On SAP Help Portal at <http://help.sap.com> (also available as documentation DVD)

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 SAP NetWeaver. This document contains general guidelines and suggestions. SAP applications have a security guide of their own.

- Target group:
 - System administrators
 - Technology consultants
 - Solution consultants
- Current version:
 - On SAP Help Portal at <http://help.sap.com> ►► *[Product Name]* ► *[Version Number]* ►

Implementation

The **master guide** is the starting point for implementing an SAP solution. It lists the required installable units for each business or IT scenario. It provides scenario-specific descriptions of preparation, execution, and follow-up of an implementation. It also provides references to other documents, such as installation guides, the technical infrastructure guide and SAP Notes

- Target group:
 - Technology consultants
 - Project teams for implementations
- Current version:
 - On SAP Help Portal at <http://help.sap.com> ►► [Product Name] ► [Version Number] ►

The **Installation guide** describes the technical implementation of an installable unit, 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:
 - On SAP Help Portal at <http://help.sap.com> ►► [Product Name] ► [Version Number] ►

Configuration Documentation in SAP Solution Manager – SAP Solution Manager is a life-cycle platform. One of its main functions is the configuration of business scenarios, business processes, and implementable steps. It contains Customizing activities, transactions, and so on, as well as documentation

- Target group:
 - Technology consultants
 - Solution consultants
 - Project teams for implementations
- Current version:
 - In SAP Solution Manager

The **Implementation Guide (IMG)** is a tool for configuring (Customizing) a single SAP system. The Customizing activities and their documentation are structured from a functional perspective. (In order to configure a whole system landscape from a process-oriented perspective, SAP Solution Manager, which refers to the relevant Customizing activities in the individual SAP systems, is used.)

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

Production Operation

The **technical operations manual** is the starting point for operating a system that runs on SAP NetWeaver, and precedes the application operations guides of SAP Business Suite. The manual 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.

- Target group:
 - System administrators
- Current version:
 - On SAP Help Portal at <http://help.sap.com> ►► [Product Name] ► [Version Number] ►

The **application operations guide** is used for operating an SAP application once all tasks in the technical operations manual have been completed. It refers users to the tools and documentation that are needed to carry out the various operations-related tasks.

- Target group:
 - System administrators
 - Technology consultants
 - Solution consultants
- Current version:
 - On SAP Help Portal at <http://help.sap.com>   [Product Name]  [Version Number] 

Upgrade

The **upgrade master guide** is the starting point for upgrading the business scenarios and processes 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 upgrade guides and SAP Notes

- Target group:
 - Technology consultants
 - Project teams for upgrades
- Current version:
 - On SAP Help Portal at <http://help.sap.com>   [Product Name]  [Version Number] 

The **upgrade guide** describes the technical upgrade of an installable unit, 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:
 - On SAP Help Portal at <http://help.sap.com>   [Product Name]  [Version Number] 

Release notes are documents that contain short descriptions of new features in a particular release or changes to existing features since the previous release. Release notes about ABAP developments are the technical prerequisite for generating delta and upgrade Customizing in the Implementation Guide (IMG).

- Target group:
 - Consultants
 - Project teams for upgrades
- Current version:
 - On SAP Help Portal at <http://help.sap.com>   [Product Name]  [Version Number] 
 - In the SAP menu of the SAP system under  *Help*  *Release Notes*  (only ABAP developments).

Typographic Conventions

Example	Description
<Example>	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>".
▶ Example ▶ Example ▶	Arrows separating the parts of a navigation path, for example, menu options
Example	Emphasized words or expressions
Example	Words or characters that you enter in the system exactly as they appear in the documentation
http://sap.com 	Textual cross-references to an internet address
/Example	Quicklinks added to the internet address of a homepage to enable quick access to specific content on the Web
123456 	Hyperlink to an SAP Note, for example, SAP Note 123456
Example	- Words or characters quoted from the screen. These include field labels, screen titles, pushbutton labels, menu names, and menu options. - Cross-references to other documentation or published works
Example	- Output on the screen following a user action, for example, messages - Source code or syntax quoted directly from a program - File and directory names and their paths, names of variables and parameters, and names of installation, upgrade, and database tools
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
EXAMPLE	Keys on the keyboard

Important Disclaimers and Legal Information

Hyperlinks

Some links are classified by an icon and/or a mouseover text. These links provide additional information.

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