



ADMINISTRATION GUIDE | PUBLIC  
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# Viewer Administration Guide



## SAP 3D Visual Enterprise

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# Document History

## ⚠ Caution

Before you start the implementation, make sure that you have the latest version of this document. You can find the latest version at the following location: <http://help.sap.com>  [SAP 3D Visual Enterprise Viewer](#) 

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

Version	Date	Description
1.00	November 28, 2012	First version.
1.1	July 18, 2013	The Security Information section was updated.
2.0	November 28, 2013	The Installation Information section was updated.
2.1	June 27, 2014	The following sections were updated: <ul style="list-style-type: none"><li>• Supported Operating Systems</li><li>• Additional Requirements</li><li>• Trace and Log Files</li></ul>
2.2	August 13, 2014	The Installing and Activating the SAP 3D Visual Enterprise Viewer, Add-On for Electronic Design Automation section was updated.
2.3	December 11, 2014	The following sections were updated: <ul style="list-style-type: none"><li>• Supported Operating Systems</li><li>• Hardware Configuration</li><li>• Additional Requirements</li></ul>
2.4	May 21, 2015	Minor updates for SP03.
2.5	November 16, 2015	The following sections were updated: <ul style="list-style-type: none"><li>• Supported Operating Systems</li><li>• Hardware Configuration</li><li>• Additional Requirements</li></ul>
2.6	March 10, 2016	Updated for SP05.
3.0	June 23, 2016	Updated for version 9.0.

<b>Version</b>	<b>Date</b>	<b>Description</b>
3.10	November 24, 2016	Updated for version 9.0 FP01
3.20	April 27, 2017	Updated for version 9.0 FP02
3.30	September 07, 2017	Updated for version 9.0 FP03
3.40	December 15, 2017	Updated for version 9.0 FP04
3.50	June 14, 2018	Updated for version 9.0 FP05
3.60	October 25, 2018	Update for 9.0 FP06.
3.70	May 23, 2019	Update for 9.0 FP07.

# 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 Viewer. 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 Viewer 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 Viewer. Therefore, 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 are installed.




- Security Information

This chapter provides you with the information that you require to operate SAP 3D Visual Enterprise Viewer securely.

- Upgrade Information

This chapter provides you with the latest upgrade information.

### i Note

You can find the most current version of this document at <http://help.sap.com>   [SAP 3D Visual Enterprise Viewer](#) .

We strongly recommend that you use the document available there. The guide will be 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, which you can find at the Internet address: <https://support.sap.com/notes>.



















SAP Note Number	Title	Description
<a href="#">2176101</a>	Removal of NPAPI Support in Chrome affecting SAP 3D Visual Enterprise Viewer	Removal of Chrome support as of April 2015
<a href="#">2776183</a>	Java dependencies for SAP 3D Visual Enterprise Viewer	Describes version change for Java.

## 1.3 Information Available




Help Documentation

Description	Internet Address	Title
SAP 3D Visual Enterprise Viewer	<a href="http://help.sap.com/">http://help.sap.com/</a>  <a href="#">SAP 3D Visual Enterprise Viewer</a>  <a href="#">SAP 3D Visual Enterprise Viewer [Version number]</a> 	Application Help for SAP 3D Visual Enterprise Viewer
SAP 3D Visual Enterprise Author	<a href="http://help.sap.com/">http://help.sap.com/</a>  <a href="#">SAP 3D Visual Enterprise Author</a>  <a href="#">SAP 3D Visual Enterprise Author [Version number]</a> 	Application Help for SAP 3D Visual Enterprise Author
SAP 3D Visual Enterprise Link	<a href="http://help.sap.com/">http://help.sap.com/</a>  <a href="#">SAP 3D Visual Enterprise Link</a>  <a href="#">SAP 3D Visual Enterprise Link [Version number]</a> 	Application Help for SAP 3D Visual Enterprise Link
SAP Visual Enterprise Access	<a href="http://help.sap.com/">http://help.sap.com/</a>  <a href="#">SAP Visual Enterprise Access</a>  <a href="#">SAP Visual Enterprise Access 7.1</a> 	Application Help for SAP Visual Enterprise Access
SAP 3D Visual Enterprise Generator	<a href="http://help.sap.com/">http://help.sap.com/</a>  <a href="#">SAP 3D Visual Enterprise Generator</a>  <a href="#">SAP 3D Visual Enterprise Generator [Version number]</a> 	Application Help for SAP 3D Visual Enterprise Generator

## User Guides

Description	Internet Address	Title
SAP 3D Visual Enterprise Viewer	<a href="http://help.sap.com">http://help.sap.com</a>  <a href="#">SAP 3D Visual Enterprise Viewer</a>  <a href="#">SAP 3D Visual Enterprise Viewer [Version number]</a> 	Administrator's Guide for SAP 3D Visual Enterprise Viewer
SAP 3D Visual Enterprise Viewer for iPad	<a href="http://help.sap.com">http://help.sap.com</a>  <a href="#">SAP 3D Visual Enterprise Mobile</a> 	Administrator's Guide for SAP 3D Visual Enterprise Viewer for iPad
SAP 3D Visual Enterprise Viewer for Android	<a href="http://help.sap.com">http://help.sap.com</a>  <a href="#">SAP 3D Visual Enterprise Viewer</a>  <a href="#">SAP 3D Visual Enterprise Viewer [Version number]</a> 	Administrator's Guide for SAP 3D Visual Enterprise Viewer for Android
Security Guide for SAP 3D Visual Enterprise Generator	<a href="http://help.sap.com">http://help.sap.com</a>  <a href="#">SAP 3D Visual Enterprise Generator</a>  <a href="#">SAP 3D Visual Enterprise Generator [Version number]</a> 	Security Guide for SAP 3D Visual Enterprise Generator
Application Operations Guide for SAP 3D Visual Enterprise Generator	<a href="http://help.sap.com">http://help.sap.com</a>  <a href="#">SAP 3D Visual Enterprise Generator</a>  <a href="#">SAP 3D Visual Enterprise Generator [Version number]</a> 	Application Operations Guide for SAP 3D Visual Enterprise Generator
Installation Guide for SAP 3D Visual Enterprise Generator	<a href="http://help.sap.com">http://help.sap.com</a>  <a href="#">SAP 3D Visual Enterprise Generator</a>  <a href="#">SAP 3D Visual Enterprise Generator [Version number]</a> 	Installation Guide for SAP 3D Visual Enterprise Generator
SAP 3D Visual Enterprise structure manager	<a href="http://help.sap.com">http://help.sap.com</a>  <a href="#">SAP 3D Visual Enterprise structure manager</a> 	Administrator's Guide for SAP 3D Visual Enterprise structure manager

## General Quick Links

Description	Internet Address	Title
Released platforms	<a href="https://www.sap.com/products.html">https://www.sap.com/products.html</a>   To access the Platform Availability Matrix directly, enter <a href="http://support.sap.com/pam">http://support.sap.com/pam</a> 	-
System sizing	<a href="https://www.sap.com/about/benchmark/sizing.quick-sizer.html#quick-sizer">https://www.sap.com/about/benchmark/sizing.quick-sizer.html#quick-sizer</a> 	Quick Sizer tool

## 1.4 Information Available in SAP Support Portal

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

General Quick Links

Description	Internet Address	Title
SAP Notes	<a href="https://support.sap.com/notes">https://support.sap.com/notes</a>	-
SAP Software Distribution Center (software download and ordering of software)	<a href="https://support.sap.com/swdc">https://support.sap.com/swdc</a>	-
SAP Product Availability Matrix	<a href="https://support.sap.com/release-upgrade-maintenance/pam.html">https://support.sap.com/release-upgrade-maintenance/pam.html</a>	-

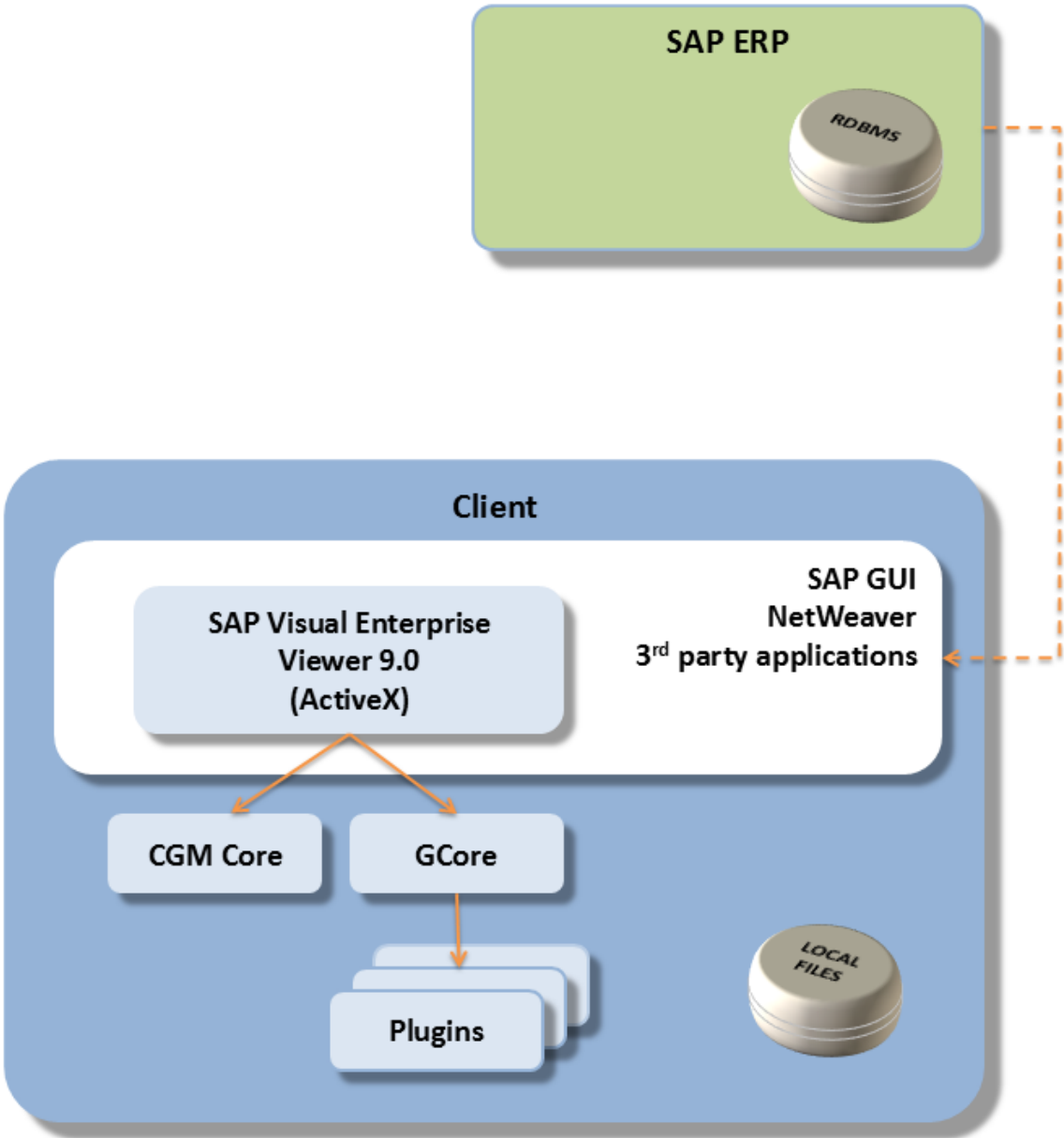
## 2 SAP 3D Visual Enterprise Viewer 9.0

SAP 3D Visual Enterprise Viewer 9.0 can run as a standalone viewer, or as an ActiveX control embedded in Microsoft Office, NetWeaver, SAP GUI, or HTML. You can use it to view 2D and 3D output from other SAP 3D Visual Enterprise tools. It is required to insert and view 3D content embedded in Microsoft Office Documents. SAP 3D Visual Enterprise Viewer is designed to work with Microsoft PowerPoint, Word, and SAP 3D Visual Enterprise Author to view 3D content.

# 2.1 System Landscape

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

## Visual Enterprise Viewer



SAP 3D Visual Enterprise Viewer

## 2.2 Overall Implementation Sequence

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

## 3 Installation Information

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

### → Recommendation

The installer only upgrades from SAP 3D Visual Enterprise Viewer 7.1.x version to SAP 3D Visual Enterprise Viewer 9.0 version. If you have an earlier release than 7.1, it is recommended that you uninstall the previous version of SAP 3D Visual Enterprise Viewer first, and then install SAP 3D Visual Enterprise Viewer 9.0.

### 3.1 Installing the Software

This topic describes the process for installing SAP 3D Visual Enterprise Viewer on your computer.

#### Procedure

1. Close all applications on the computer.
2. Navigate to, and double-click the `VisualEnterpriseViewer_xx.exe` file in Windows Explorer, where `xx` is the version number.
3. Choose *Next* when the installer starts. The *Front-End Installer* screen is displayed.
4. Do one of the following:
  - Select the *SAP 3D Visual Enterprise Viewer 9.0* checkbox to install all components of SAP 3D Visual Enterprise Viewer
  - Expand the *SAP 3D Visual Enterprise Viewer 9.0* checkbox to select the features to be installed
5. Click the *Next* button to choose an install location. Do one of the following:
  - Accept the default location in which to install SAP 3D Visual Enterprise Viewer.
  - Click *Browse*, navigate to, and select the installation folder you require.
6. Choose *Next* to start the installation.

#### i Note

The installer firstly performs a check for previous versions of the software, and if detected, the previous version of SAP 3D Visual Enterprise Viewer is uninstalled.

7. Choose *Close* when the installation is complete.

### **i** Note

Upon installation SAP 3D Visual Enterprise Viewer will associate with the types `.rh`, `.rhz`, and `.vds`. All other SAP 3D Visual Enterprise Viewer readable file formats will be associated with only if no other application is already associated.

## 3.2 Post-Installation

These are the post-installation steps that are specific for SAP 3D Visual Enterprise Viewer.

### Procedure

#### **Creating `.rh` or `.vds` files in SAP 3D Visual Enterprise Author for use with SAP 3D Visual Enterprise Viewer**

Load the required files into SAP 3D Visual Enterprise Author, create any required additional content, and use the [Save As](#) functionality to save as `.rh` or `.vds` files.

#### **Creating `.rh` or `.vds` files in Visual Enterprise Generator for use with SAP 3D Visual Enterprise Viewer**

1. If you are using SAP 3D Visual Enterprise Generator, this can be used to produce `.rh` or `.vds` using batch processing. The creation of `.rh` and `.vds` files is an out-of-the-box workflow that can be configured to produce `.rh` and `.vds` derivatives. This can also be configured as an auto translation on checking into SAP DMS.
2. Configure and run the SAP 3D Visual Enterprise Generator process to produce `.rh` and `.vds` files. For further information on creating `.rh` and `.vds` derivatives, refer to the [Configuring Derivatives](#) section of the application help on the SAP Help Portal (<http://help.sap.com/>) for SAP 3D Visual Enterprise Generator.

# 4 Operation Information

## 4.1 Trace, Log, and Dump Files

Trace files, log files, and dump files are essential for analyzing problems, as they 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 Viewer

Component	Content	File	Path
SAP 3D Visual Enterprise Viewer	System processes, memory state	SAP 3D Visual Enterprise Viewer.log	%userprofile%\AppData\LocalLow\sap\SAP 3D Visual Enterprise Viewer
SAP 3D Visual Enterprise Viewer	Tracing information, including benchmark tracing	SAP 3D Visual Enterprise Viewer.trc	%userprofile%\AppData\LocalLow\SAP\SAP 3D Visual Enterprise Viewer
SAP 3D Visual Enterprise Viewer	Application information while it is running	SAP 3D Visual Enterprise Viewer.dmp	\AppData\Roaming\SAP\SAP 3D Visual Enterprise Viewer\Dumps

### SAP.VE.FileTransfer

The File transfer component is used exclusively by the Dynamic Mockup (DMU) transaction. If you do not run this transaction then no folder or trace file will be present.

You can change the component settings that are stored in %AppData%\SAP\SAP 3D Visual Enterprise FileTransfer 1.0\Settings.xml. The trace file is located at %USERPROFILE%\AppData\LocalLow\SAP\SAP 3D Visual Enterprise FileTransfer 1.0\Logs\FileTransfer.trc.

Setting Name	Description	Log File Location
LoggerSeverityLevel	<p>Specifies what severity levels of log messages are written into the log file</p> <p>Valid values by priority from highest to lowest are:</p> <ul style="list-style-type: none"> <li>• <i>Fatal</i></li> <li>• <i>Error</i></li> <li>• <i>Warning</i></li> <li>• <i>Info</i> (default)</li> <li>• <i>Debug</i></li> <li>• <i>None</i></li> </ul> <p>For example, if the <code>LoggerSeverityLevel</code> is set to <i>Warning</i>, then only messages with severity level <i>Fatal</i>, <i>Error</i> and <i>Warning</i> are written into the log file. If the <code>LoggerSeverityLevel</code> is <i>None</i>, then messages are not written into the log file.</p>	<p>%USERPROFILE%\AppData\LocalLow\SAP\SAP 3D Visual Enterprise FileTransfer 1.0\Logs</p> <p>\FileTransfer.log</p>
TracerSeverityLevel	<p>Specifies what severity levels of trace messages are written into the trace file</p> <p>Valid values and their meanings are the same as for <code>LoggerSeverityLevel</code>.</p> <p>If <code>TracerSeverityLevel</code> is lower than <code>LoggerSeverityLevel</code>, all messages written into the log file are duplicated in the trace file.</p>	<p>%USERPROFILE%\AppData\LocalLow\SAP\SAP 3D Visual Enterprise FileTransfer 1.0\Logs</p> <p>\FileTransfer.trc</p>
MaxParallelDownloadTaskCount	<p>Specifies the maximum number of parallel download tasks.</p> <p>Valid values: non-negative integer</p> <p>Default value: 8</p> <p>Zero (0) value means use up to the number of virtual processors in the computer.</p>	
MaxDownloadRedirectionCount	<p>Specifies the maximum number of URL redirections allowed when downloading one file.</p> <p>Valid values are: non-negative integer.</p> <p>Default value: 8</p> <p>Zero (0) value means that URL redirections are not allowed.</p>	

## Benchmark Tracing Information

SAP 3D Viewer includes benchmark tracing information. To enable the trace logs, add the Registry key manually: `HKEY_CURRENT_USER\Software\SAP\SAP 3D Visual Enterprise Viewer\Plugins\{A9E67F33-6DE8-4C19-93B1-197E6963435B}`.

The benchmark trace is enabled by default in the registry with the following attributes:

- Name: `import_enable_tracing`
- Type: `REG_DWORD`
- Data: `1`

### **i** Note

Set value to `0` to turn the trace off.

The benchmark information is written into a `.trc` file. The `.trc` file contains the following benchmark counters:

Counter	Type	Description
Total time spent on loading a <code>vzxml</code> file	milliseconds	
Time spent on parsing a <code>vzxml</code> file	milliseconds	
Time spent on enqueueing referenced files	milliseconds	
<b>Cumulative counters</b>		
Total tasks		The total number of download tasks
Succeeded tasks		The number of succeeded download tasks
Cancelled tasks		The number of cancelled tasks
Failed tasks		The number of failed tasks
Tasks caused waiting		The number of tasks caused waiting. See <a href="#">Time spent on waiting for a file to be downloaded</a> below.
Average waiting duration	milliseconds	The average time spent on waiting for one task caused waiting. See <a href="#">Time spent on waiting for a file to be downloaded</a> below.
Total task group duration	milliseconds	The total time spent on downloading all referenced files

Counter	Type	Description
Average task total duration	milliseconds	The average total time spent on downloading one referenced file
Average task <i>In queue</i> duration	milliseconds	The average time spent by one file in the queue before being processed for downloading
Average task <i>In progress</i> duration	milliseconds	The average time spent on downloading one file
Average task <i>Awaiting response</i> duration	milliseconds	The average time spent on awaiting response from a server when downloading one file
Average task <i>Download content</i> duration	milliseconds	The average time spent on actual transmission of content of one file over the network
Average task download speed	kilobytes per second	The average speed of downloading one file
Average task content size	kilobytes	The average size of one file.
Total content size	kilobytes	Total size of all files downloaded from a server
Total URI redirection count		The total number of URI redirections occurred while downloading all files
<b>Per file counters</b>		
Time spent on waiting for a file to be downloaded	milliseconds	Files are downloaded in parallel in background. By the time when a file is going to be processed it might happen that it is not downloaded yet. This counter shows how much time was spent on waiting.
Total duration	milliseconds	The total time spent on downloading the file
<i>In queue</i> duration	milliseconds	The time spent by the file in the queue before being processed for downloading
<i>In progress</i> duration	milliseconds	The time spent on downloading the file
<i>Awaiting response</i> duration	milliseconds	The time spent on awaiting response from a server when downloading the file

Counter	Type	Description
<i>Download content</i> duration	milliseconds	The time spent on actual transmission of content of the file over the network
Average download speed	kilobytes per second	The average speed of downloading the file
Content size	kilobytes	The size of the file
Redirection count		The number of URI redirections occurred while downloading the file

## 4.2 Registry Settings

### 4.2.1 Registry Settings for Saving Files and Loading Assemblies

There are two Registry settings that may require a manual change if you wish to work with RH files in Legacy mode.

#### Saving Files (Compatibility Mode Flag)

The settings for saving files, by default, are always `.vds`, regardless of the file type with which you are working. If you are working with `.rh` files, and wish to save to `.rh`, you must make changes in the registry to set the compatibility mode flag. The flag defines SAP 3D Visual Enterprise Viewer Save behavior.

The VDS save is enabled by default in the registry. To save to RH instead, change the attributes to match the following values:

- `SAVE_LEGACY_MODE` Registry Key
- `[HKEY_CURRENT_USER\Software\SAP\SAP 3D Visual Enterprise Viewer]`
- `SAVE_LEGACY_MODE "=dword:00000001`
  - Value of **1** – Saving using Viewer UI will save RH files
  - Value of **0** – Saving using Viewer UI will save VDS files

If this flag is not set, SAP 3D Visual Enterprise Viewer works in default (Standard) mode. If set, SAP 3D Visual Enterprise Viewer works in compatibility (Legacy) mode.

## Loading Assemblies

The settings for loading assemblies, by default, always support .vds features. If you are working with .rh files, and wish to load .rh assemblies, you must make changes in the registry to set the compatibility mode flag. The flag defines SAP 3D Visual Enterprise Viewer Load Assembly behavior.

- LOAD\_ASSEMBLY\_LEGACY\_MODE Registry Key
- [HKEY\_CURRENT\_USER\Software\SAP\SAP 3D Visual Enterprise Viewer]
- LOAD\_ASSEMBLY\_LEGACY\_MODE"=dword:00000001
  - Value of **1** – Assemblies loaded in embedded ABAP scenarios support all features available for RH files as in SAP 3D Visual Enterprise Viewer 8.0
  - Value of **0** – Assemblies loaded in embedded ABAP scenarios support newer features only available with VDS files. Assemblies created from RH files will only support features that are also available with VDS files.

If this flag is not set, assemblies are loaded using new Namespace in default (Standard) mode. If set, assemblies are loaded using the old Namespace in compatibility (Legacy) mode.

### 4.2.2 Registry Setting for TIFF Files

There is a Registry setting that may require a manual change if you wish to work with large TIFF files. By default, SAP 3D Visual Enterprise Viewer switches to software rendering for large TIFF files, which means that they are not available for collaboration. This setting renders all TIFF files with hardware acceleration, no matter the file size.

#### **i** Note

If you wish to use this functionality, a discrete 3D hardware accelerator video card is required, with at least 4 GB of RAM.

### Setting for Hardware Acceleration

Software rendering is enabled by default in the registry for large TIFF files. To use hardware acceleration instead, change the attributes to match the following values:

- [HKEY\_CURRENT\_USER\Software\SAP\SAP 3D Visual Enterprise Viewer]
- "USE\_2D\_TIFF\_VIEWER\_ALWAYS"=dword:00000001

If this flag is not set, SAP 3D Visual Enterprise Viewer works in default mode. If set, SAP 3D Visual Enterprise Viewer works with hardware acceleration for all files.

## 4.2.3 Registry Setting for Loading VDS Shattered Assemblies

There is a Registry setting that may require a manual change if you wish to work with shattered VDS assemblies.

### Loading Shattered Assemblies

The setting defines loading of VDS shattered assemblies. You can locate Components either by file name or Component ID.

- `HKEY_CURRENT_USER\Software\SAP\SAP 3D Visual Enterprise Viewer\Plugins\{C92C054E-B911-4546-B2BD-09E9667A4531}}`
- `EnableFileScan`"=dword
  - Value of **1** – Search by Component ID
  - Value of – Search by File Name.

If this flag is not set, assemblies are searchable by File Name, which is the default.



# 5 Security Information

## 5.1 Sandbox

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

Sandboxing provides guarantees about what a piece of code can or cannot do, 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.

Security through sandboxing is achieved by granting the sandboxed code the least possible access rights and privileges, ensuring that it works in accordance with a predefined set of rules. The collection of rules that any code running in the Sandbox must obey is called a Policy, and no other system resources beyond those defined in the policy can be accessed or operated on from within the sandbox.

The Sandbox for plug-ins feature is found under either the menu **► Edit ► Preferences ► Security Configuration** , or context menu **► Preferences ► Settings ► Security Configuration** . Sandboxing leverages the OS-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.

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. The sandbox handling is implemented over registry, and is version dependent. The group policy writes to the registry and SAP 3D Visual Enterprise Viewer uses it to enable or disable sandbox settings.

The .adm file is located at `SAP 3D Visual Enterprise Viewer install folder\Group Policies \SandBox.adm`

### Prerequisites

You have:

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

## Procedure

### Installing the SAP 3D Visual Enterprise Viewer Group Policy "SandBox.adm"

1. Log on to the domain server with full administrative rights.
2. Copy the file `Sandbox.adm` from the installation folder of SAP 3D Visual Enterprise Viewer, 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**. The group policy object is displayed in the **Select GPO**, under **Group Policy Objects**.
10. Log on and run SAP 3D Visual Enterprise Viewer. Check whether the changes in group policy display in the SAP 3D Visual Enterprise Viewer settings.

#### Note

You must log on again to see the updates. This is based on how group policy update is configured.

## 5.2 URL Redirect Protection

SAP 3D Visual Enterprise Viewer can be embedded in a variety of hosting applications. One of the main usages is Web applications using SAP 3D Visual Enterprise Viewer to open online files. SAP 3D Visual Enterprise Viewer achieves this by accepting an URL pointing to an online resource, managing the downloading process and displaying the content to the user. When an application sends rogue URL with a redirection directive to an unsafe domain to SAP 3D Visual Enterprise Viewer, it might pose security issues and compromise SAP products.

The URL Redirect Protection feature provides defence to make sure URLs redirected to an unknown domain will not be loaded. First, redirecting to the same domain as the source URL will always be allowed. Second, redirecting to a domain that matches an entry in the white list will also be allowed. All other redirections will be denied. In case of nested redirection, SAP 3D Visual Enterprise Viewer allows up to 8 levels of redirection in one URL access. Any more redirection request will be denied.

The URL Redirect Protection main switch and the white list can be set by user. However this setting can be overridden when there is Group Policy applied by administrator.

When the administrator enables URL Redirect Protection, an entry is required in the white list before the setting can be applied. The entry does not have to be a valid URL. To stop all redirection, administrator chooses **Enable**

[URL Redirect Protection](#) and enters some text in the white list. That allows the administrator to apply the setting.

The URL Redirect Protection settings located under either the menu ► [Edit](#) ► [Preferences](#) ► [Security Configuration](#) ⌵, or context menu ► [Preferences](#) ► [Settings](#) ► [Security Configuration](#) ⌵. The [URL Redirect Protection](#) main switch dictates whether SAP 3D Visual Enterprise Viewer will apply this protection. The white list is a flat editable list containing URLs that can be redirected when the protection is enabled.

The URL Redirect Protection also supports the [Group Policy](#) option. Using this, the network administrator can set a maximum security level and prevent users from changing it. The [Group Policy](#) script file (.adm) is located at: `SAP 3D Visual Enterprise Viewer install folder\Group Policies\URLRedirect.adm`

## Prerequisites

You have:

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

## Procedure

### Installing the SAP 3D Visual Enterprise Viewer Group Policy URLRedirect.adm

1. Log on to the domain server with full administrative rights.
2. Copy the file `URLRedirect.adm` from the installation folder of SAP 3D Visual Enterprise Viewer, 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 `URLRedirect.adm` that you have transferred across to the domain server, and open it.
8. Choose [Close](#) to apply the changes. A folder [SAP 3D Visual Enterprise](#) displays in the administrative templates. In that folder, double click the [URL Redirect](#) item to display the [URL Redirect Protection](#) 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](#). The group policy object is displayed in the [Select GPO](#), under [Group Policy Objects](#).
10. Log on and run SAP 3D Visual Enterprise Viewer. Check whether the changes in group policy display in the SAP 3D Visual Enterprise Viewer settings.

### **i** Note

You must log on again to see the updates. This is based on how group policy update is configured.

# 6 Technical System Landscape

## 6.1 Supported Operating Systems

SAP 3D Visual Enterprise Viewer can run on three supported operating systems. These are:

- Microsoft Windows 7 64-bit version
- Microsoft Windows 8.1 64-bit version
- Microsoft Windows 10 64-bit version

### → Recommendation

We recommend that you use Microsoft Windows 10 64-bit version.

## 6.2 Hardware Configuration

The minimum configuration for SAP 3D Visual Enterprise Viewer 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
- Gigabit Ethernet controller network

### → Recommendation

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

- 64-bit multi-core Intel® Core i-7 processor®
- 8 GB of RAM (more for large model and texture sizes)
- 3D hardware accelerator video card, capable of displaying 24-bit color and supporting Shader Model 3.0 with 1 GB of RAM

### i Note

To use hardware acceleration for viewing large raster images, a video card with the following is required:

- Discrete 3D hardware accelerator video card, with at least 4 GB of RAM

## 6.3 Extra Requirements

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

- Publishing to Office Documents
  - Microsoft Office for Windows 2013 (32-bit version only)
  - Microsoft Office for Windows 2016 (32-bit version only)
- HTML viewing - Browser Client:
  - Internet Explorer 9 or later versions
- MP4 viewing
  - For MP4 media file within steps, there is a video pop-up window which plays the video. For other formats; for example, AVI and MPG, the video plays inside the viewport.

### **i** Note

The appropriate codec is required to view the media file. You may require a third-party video player that has required codecs.

- Visual Compare
  - Graphics Card which supports Direct X 9 and Shader Model 2
- HDR Renderer
  - Graphics card which supports OpenGL 2.0 and Shader Model 3.0

# 7 Upgrade Information

For upgrading, when you install SAP 3D Visual Enterprise Viewer 9.0, any previous versions of SAP 3D Visual Enterprise Viewer are uninstalled. For regularly updated release and upgrade information, see the SAP Notes at <https://support.sap.com/notes>.

## **i** Note

The installer only upgrades from SAP Visual Enterprise Viewer 7.1.x version to SAP 3D Visual Enterprise Viewer 9.0 version. If you have an earlier release than 7.1, it is recommended that you uninstall the previous version of SAP 3D Visual Enterprise Viewer first, and then install SAP 3D Visual Enterprise Viewer 9.0.

# 8 SAP 3D Visual Enterprise Viewer Dashboards 4 Add-On v2.0

## 8.1 Introduction

SAP 3D Visual Enterprise Viewer Dashboards 4 Add-On v2.0 is an add-on for SAP Dashboards 4.1 that contains a 3D Viewer2 component. The 3D Viewer2 component provides 3D model viewing and 3D analytics capabilities using SAP 3D Visual Enterprise Viewer.

The 3D Viewer2 component allows 3D models to be displayed in HTML output produced by exporting to HTML (with Flash). Dashboards allow exporting to various types of output file, but exporting to HTML is the only option that works when a 3D Viewer2 component is used in a dashboard.

The 3D Viewer2 component must run inside an HTML page in order to allow an ActiveX control to be used in a Dashboards application implemented in Adobe Flex.

Note that 3D Viewer2 components do not work in the Dashboards preview.

### ⚠ Caution

Two SAP 3D Visual Enterprise Viewer add-ons in the same published Dashboard is not a supported configuration. The SAP 3D Visual Enterprise Viewer Dashboards 4 Add-on fully supports having both v1 and v2 add-ons loaded in the same design session but a designer is expected to configure a Dashboard using one add-on.

You can use the 3D Viewer2 component to do the following:

- *Visual Indexing*  
Selecting objects in a 3D scene in order to view or use business data related to the selected objects
- *Painting*  
Modifying the appearance of objects in a 3D scene using a set of rules that are applied to business data associated with the objects in the scene
- *Model Views*  
Selecting views embedded in 3D models in order to select a particular scene
- *Steps*  
Playing step animations embedded in 3D models
- *Queries*  
Running SAP 3D Visual Enterprise queries against the loaded 3D models

For more information, see <http://help.sap.com/> ► [SAP 3D Visual Enterprise Viewer](#) ► [Version #](#) ► [SAP Library for Analytics 3D Add-On for Dashboards](#) ►

### i Note

This chapter assumes the user has basic knowledge of creating Dashboards and using SAP 3D Visual Enterprise Viewer.

## 8.2 Installing the Add-On

Installing SAP 3D Visual Enterprise Viewer Dashboards 4 Add-On v2.0 is done through the file management option in Dashboards. This installs a further component labeled 3D Viewer, which allows you to add and configure a 3D viewport.

### Prerequisites

As a designer, you have installed the following:

- Office 2010
- Dashboards 4.1
- SAP 3D Visual Enterprise Viewer Dashboards 4 Add-On v2.0
- Internet Explorer 9, 10, or 11
- SAP 3D Visual Enterprise Viewer 9.0

As a runtime user, you have installed the following:

- Internet Explorer 9, 10, or 11
- SAP 3D Visual Enterprise Viewer 9.0

### Procedure



1. Open the Dashboard Designer, and choose *Blank Model* to open a blank dashboard.
2. From the Dashboard Designer, choose **File > Manage Add-Ons**. The *Add-On Manager* window opens.
3. Choose *Install Add-On*, browse to new *SAP 3D Visual Enterprise Viewer Dashboards 4.0 Add-On* and click *Open*.
4. Open Dashboards and choose **File > New > New** to open a blank dashboard.
5. In Dashboards, choose **File > Manage Add-Ons**.
6. Click *Install Add-On*, browse to the location of the .x1x file for the SAP 3D Viewer Dashboards 4 Add-On and click *Open*. The *Add-On Manager* dialog shows that the SAP 3D Visual Enterprise Dashboards 4 Add-On has been installed.

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