Operations Guide | PUBLIC

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Generator Application Operations Guide
SAP 3D Visual Enterprise

THE BEST RUN **SAP**

Content

Document History

> ⚠ Caution
>
> 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 Generator* ⮞.

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

Version	Date	Description
1.00	November 17, 2012	First version
1.10	February 12, 2014	Information relating to the *Security* tab page in the SAP 3D Visual Enterprise Generator Configuration program updated
1.20	June 26, 2014	Basic updates for Service Pack
1.30	December 10, 2014	Update for SP02. Updated farm certificate information and added section Setting the default SAP 3D Visual Enterprise Generator Upload Client 8.0 web service URL.
1.40	May 21, 2015	Minor updates for SP03
1.50	November 12, 2015	Minor updates for SP04
2.00	June 23, 2016	Major updates for 9.0
2.10	November 24, 2016	Minor updates for 9.0 FP01
2.20	April 27, 2017	Minor updates for 9.0 FP02
2.30	September 07, 2017	Minor updates for 9.0 FP03
2.40	December 15, 2017	Minor updates for 9.0 FP04
2.50	October 25, 2018	Update for 9.0 FP06.
2.60	May 23, 2019	Update for 9.0 FP07.
2.70	October 20, 2019	Update for 9.0 FP08.

Version	Date	Description
2.80	May 28, 2020	Update for 9.0 FP09.
2.90	December 2020	Update for 9.0 FP10.
2.91	May 2021	Update for 9.0 FP11.
2.92	November, 2021	Update for 9.0 FP12.

1 Getting Started

> ⚠ Caution
>
> This guide does not replace the daily operations handbook that we recommend customers to create for their specific production operations.

1.1 About this Guide

Designing, implementing, and running your SAP applications at peak performance 24 hours a day has never been more vital for your business success than now.

This guide provides a starting point for managing your SAP applications and maintaining and running them optimally. It contains specific information for various tasks and lists the tools that you can use to implement them. This guide also provides references to the documentation required for these tasks, so you will sometimes also need other Guides such as the Master Guide, Technical Infrastructure Guide, and SAP Library.

- Technical Consultants
- System Administrators
- Solution Consultants
- Business Process Owner
- Support Specialist

1.2 Global Definitions

- **SAP Application** – An SAP application is an SAP software solution that serves a specific business area like ERP, CRM, PLM, SRM, and SCM.
- **Business Scenario** – From a microeconomic perspective, a business scenario is a cycle, which consists of several different interconnected logical processes in time. Typically, a business scenario includes several company departments and involves with other business partners. From a technical point of view, a business scenario needs at least one SAP application (SAP ERP, SAP SCM, or others) for each cycle and possibly other third-party systems. A business scenario is a unit which can be implemented separately and reflects the customer's prospective course of business.
- **Component** – A component is the smallest individual unit considered within the Solution Development Lifecycle; components are separately produced, delivered, installed and maintained.

1.3   Important SAP Notes

> ⚠ Caution
>
> Check regularly for updates available for the Application Operations Guide.

SAP Notes

SAP Note Number	Title	Description
2237061	Information relating to the latest Service Pack	Information regarding this service pack, including new features and installation instructions
2208206	Windows Server 2012 R2 support	Information relating to Windows Server 2012 R2 support
1787261	SAP 3D Visual Enterprise: Corrections to Online Documents	Description of corrections made to online documentation after delivery to the customer
1951952	Detailed Job Report for Transaction Code `veg_jobmonitor`	SAP 3D Visual Integration Generator configuration steps for the Job report
1896319	SolidWorks CAD config to create fully resolved viewables	SolidWorks Integration specific, SolidWorks configuration to create fully resolved viewables
2334827	File formats supported by SAP 3D Visual Enterprise Generator.	Clarification on the full list of 2D and 3D file formats supported by SAP 3D Visual Enterprise Generator, including detailed information regarding features supported for CAD formats.
2794940	Release Notes for FP08.	Release information. > i 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 Generator 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.

1.4   Information Available

More information is available as follows on the SAP Help Portal.

Help Documentation

Description	Internet Address	Title
SAP 3D Visual Enterprise Generator	http://help.sap.com/ 🔧 ▶ *SAP 3D Visual Enterprise Generator* ❯ *SAP 3D Visual Enterprise Generator [Version Number]* ❯	Application Help for SAP 3D Visual Enterprise Generator Application Help for SAP 3D Visual Enterprise Generator Configuration
SAP 3D Visual Enterprise Author	http://help.sap.com/ 🔧 ▶ *SAP 3D Visual Enterprise Author* ❯ *SAP 3D Visual Enterprise Author [Version Number]* ❯	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 [Version Number]* ❯	Application Help for SAP 3D Visual Enterprise Link
SAP Visual Enterprise Access	http://help.sap.com/ 🔧 ▶ *SAP Visual Enterprise Access* ❯ *SAP Visual Enterprise Access [Version Number]* ❯	Application Help for SAP Visual Enterprise Access
SAP 3D Visual Enterprise Viewer	http://help.sap.com/ 🔧 ▶ *SAP 3D Visual Enterprise Viewer* ❯ *SAP 3D Visual Enterprise Viewer [Version Number]* ❯	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 [Version Number]* ❯	Security 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 [Version Number]* ❯	Installation Guide for SAP 3D Visual Enterprise Generator
SAP 3D Visual Enterprise structure manager	http://help.sap.com 🔧 ▶ *SAP 3D Visual Enterprise structure manager* ❯	Administrator's Guide for SAP 3D Visual Enterprise structure manager

Description	Internet Address	Title
SAP 3D Visual Enterprise Viewer	http://help.sap.com ► SAP 3D Visual Enterprise Viewer > SAP 3D Visual Enterprise Viewer[Version Number] ❯	Administrator's Guide for SAP 3D Visual Enterprise Viewer
SAP 3D Visual Enterprise Viewer for iPad	http://help.sap.com ► SAP 3D Visual Enterprise Mobile ❯	Administrator's Guide for SAP 3D Visual Enterprise Viewer for iPad
SAP 3D Visual Enterprise Viewer for Android	http://help.sap.com ► SAP 3D Visual Enterprise Viewer > SAP 3D Visual Enterprise Viewer [Version Number] ❯	Administrator's Guide for SAP 3D Visual Enterprise Viewer for Android
SAP 3D Visual Enterprise Author	http://help.sap.com ► SAP 3D Visual Enterprise Author > SAP 3D Visual Enterprise Author [Version Number] ❯	Administrator's Guide for SAP 3D Visual Enterprise Author
SAP 3D Visual Enterprise Access	http://help.sap.com ► SAP Visual Enterprise Access > SAP 3D Visual Enterprise Viewer [Version Number] ❯	Administrator's Guide for SAP Visual Enterprise Access

General Quick Links

Title	Internet Address
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 ►
Sizing	https://www.sap.com/about/benchmark/sizing.quick-sizer.html#quick-sizer ►
Security Notes	http://support.sap.com/security ►
SAP Help Portal	http://help.sap.com ►
SAP Solution Manager	http://support.sap.com/solutionmanager ►

2 Technical System Landscape

SAP 3D Visual Enterprise Generator is a graphical processing client-server application that allows you to automate the processing of CAD and other 2D and 3D graphics. With SAP Visual Enterprise Generator, you can create enterprise solutions that enable nontechnical users to search, access, manipulate, and integrate complex graphical data into any business or office application across an organization.

2.1 Scenario/Component Matrix

2.1.1 Standalone

The following graphic shows the system landscape for standalone SAP 3D Visual Enterprise Generator with the required software units and the required business functions.
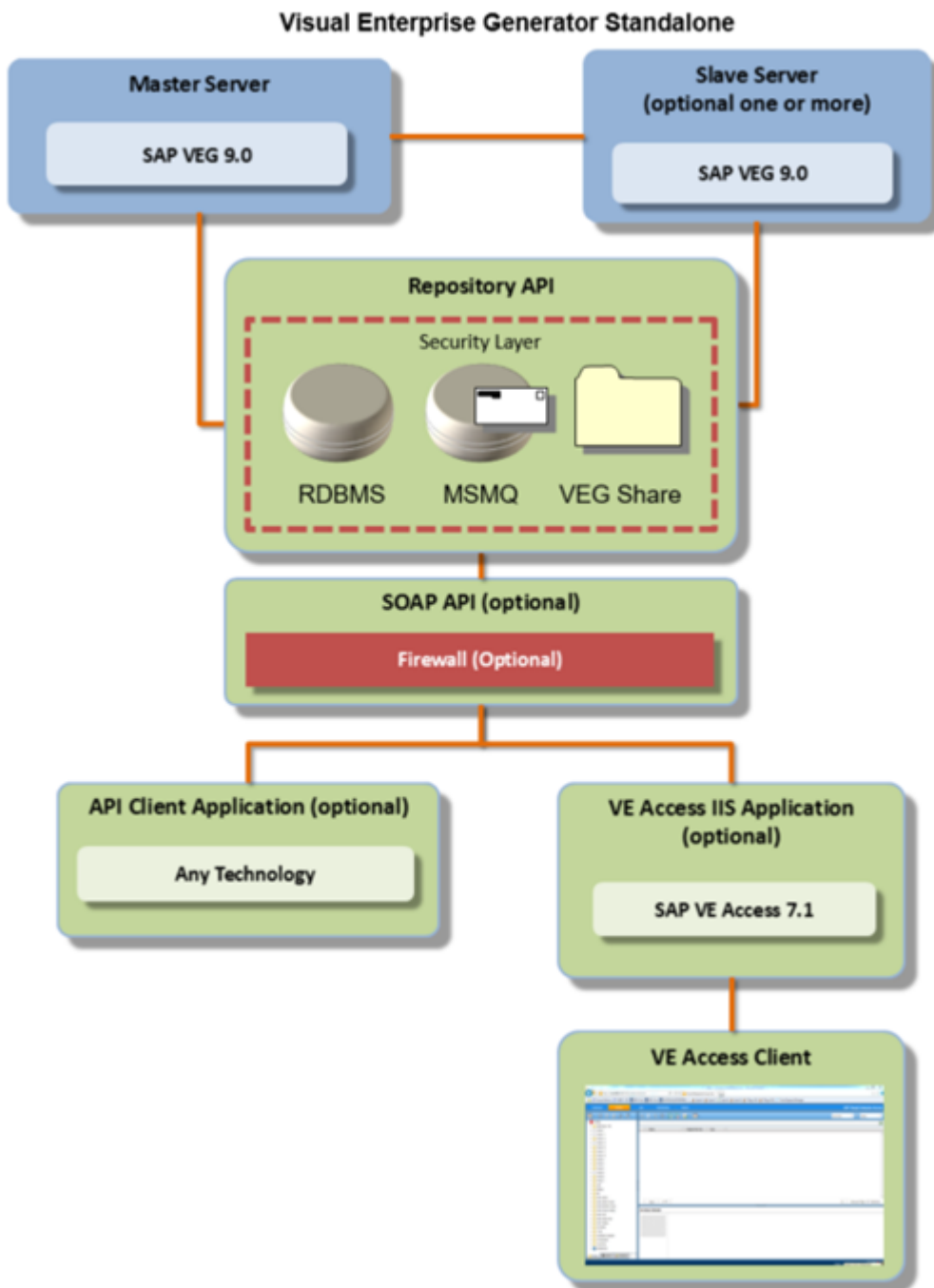
3D Visual Enterprise Generator 9.0 Standalone mode

To use SAP 3D Visual Enterprise Generator in standalone mode, you need the following:

- Microsoft Windows Server 2008 R2, or 2012 R2 with Internet Information Server (IIS)
- Microsoft Message Queuing (MSMQ)
- Microsoft .NET Framework 4.8
- Microsoft SQL Server 2008 R2, 2012, 2014, 2017, and 2019

> ⚠ **Caution**
>
> The instance must be configured with Accent-Sensitive, Case-Insensitive Collation and Mixed Mode Authentication.

> ⚠ **Caution**
>
> SQL Server 2017 and later versions are only supported by Windows Server 2016 (and above).

- File Sharing enabled

2.1.2 Integrated

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

Visual Enterprise Generator ERP Integration

SAP_APPL 605

Content Management Service

KPRO REST API

Generator Server Farm

SAP VEG 9.0

Document Management Service

Visual Enterprise Connector

Repository API

Security Layer

RDBMS   MSMQ   VEG Share

DMS/VDI Integration API

Security Layer

Upload Client tool

.NET 4.6
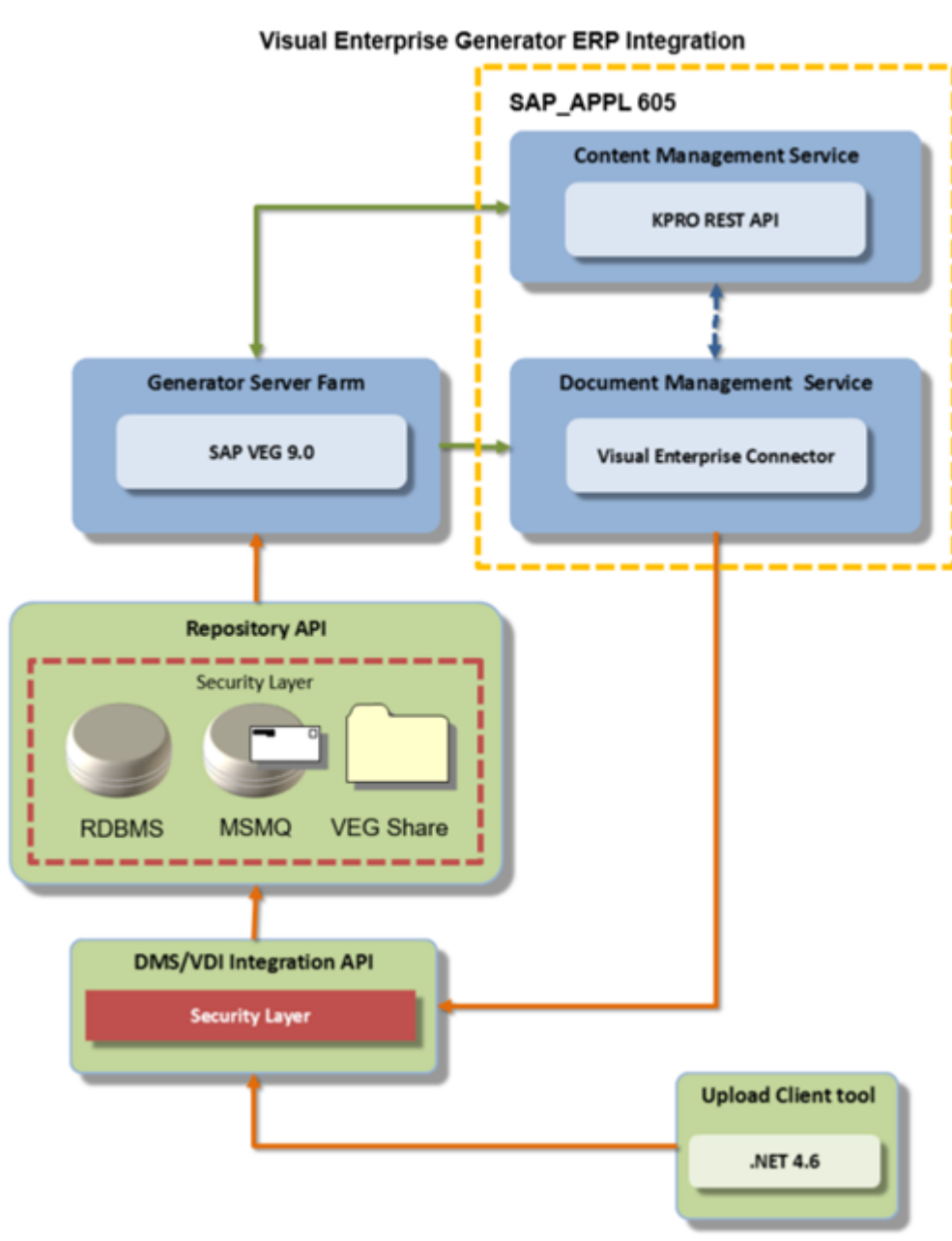
3D Visual Enterprise Generator 9.0 Integrated mode

To use SAP 3D Visual Enterprise Generator in integrated mode, you need the following:

- Microsoft Windows Server 2008 R2, or 2012 R2 with Internet Information Server (IIS)
- Microsoft Message Queuing (MSMQ)
- Microsoft .NET Framework 4.8
- File Sharing enabled

Conversion Process

For the conversion process, the communication starts from `SAP_APPL` to `SAP_BS_FND` which then communicates with SAP 3D Visual Enterprise Generator for the actual process to be performed. SAP 3D Visual Enterprise Generator stores the files in the content server.

2.1.3 Minimal

The following graphic shows the system landscape for minimal SAP 3D Visual Enterprise Generator with the required software units and the required business functions.
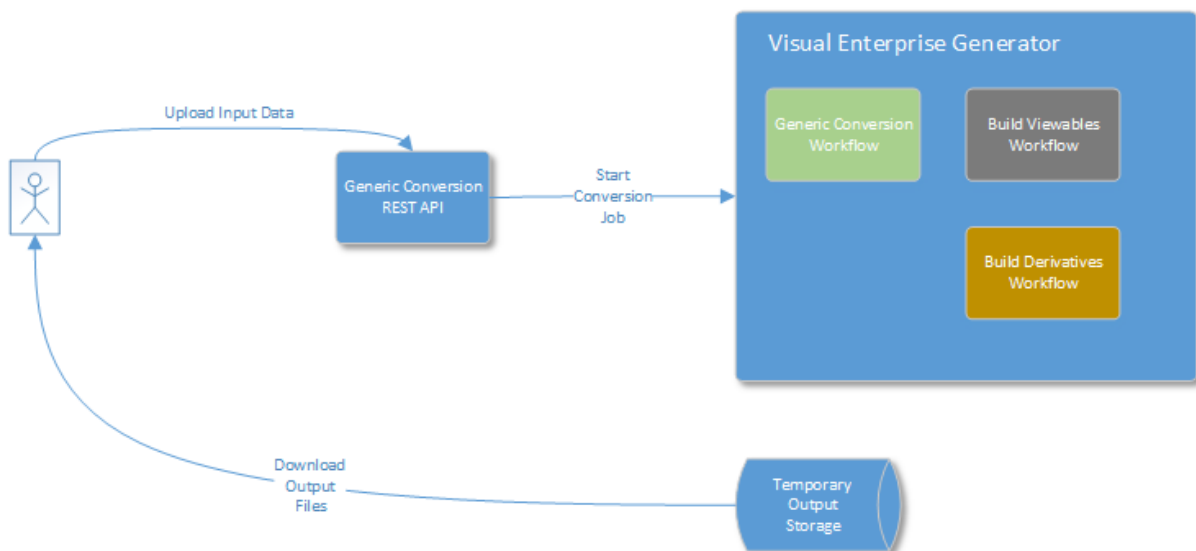
3D Visual Enterprise Generator 9.0 Minimal mode

To use SAP 3D Visual Enterprise Generator in minimal mode, you need the following:

- Microsoft Windows Server 2008 R2, or 2012 R2 with Internet Information Server (IIS)
- Microsoft Message Queuing (MSMQ)
- Microsoft .NET Framework 4.8
- File Sharing enabled

3 Monitoring of SAP 3D Visual Enterprise Generator

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

SAP 3D Visual Enterprise Generator in this release does not use standard SAP monitoring systems

3.1 Alert Monitoring

Proactive, automated monitoring is the basis for ensuring reliable operations for your SAP system environment. SAP provides you with the infrastructure and recommendations needed to set up your alert monitoring to recognize critical situations for SAP 3D Visual Enterprise Generator as quickly as possible.

Monitoring Installation and Setup

SAP 3D Visual Enterprise Generator uses e-mail to send notifications for critical events.

During configuration of SAP 3D Visual Enterprise Generator, specify SMTP server used to send e-mails and e-mail to which e-mail notifications are going to be sent.

3.2 Detailed Monitoring and Tools for Problem and Performance Analysis

Trace and Log Files

Trace files and log files are essential for analyzing problems.

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

Component	Content	File	Path
Processing Engine	Errors, Warnings, Information	DSProcessingEngine_*.log	%ProgramData%\SAP\Visual Enterprise Generator\Logs\Debug

Component	Content	File	Path
Processing Engine	Trace	DSProcessingEngine_*.trace	%ProgramData%\SAP\Visual Enterprise Generator\Logs\Debug
Controller	Errors, Warnings, Information	DSController_*.log	%ProgramData%\SAP\Visual Enterprise Generator\Logs\Debug
Controller	Trace	DSController_*.trace	%ProgramData%\SAP\Visual Enterprise Generator\Logs\Debug
Job Manager	Errors, Warnings, Information	VEGWorkflowManager_*.log	%ProgramData%\SAP\Visual Enterprise Generator\Logs\Debug
Job Manager	Trace	VEGWorkflowManager_*.trace	%ProgramData%\SAP\Visual Enterprise Generator\Logs\Debug
Lock Manager	Errors, Warnings, Information	VEGLockManager_*.log	%ProgramData%\SAP\Visual Enterprise Generator\Logs\Debug
Lock Manager	Trace	VEGLockManager_*.log	%ProgramData%\SAP\Visual Enterprise Generator\Logs\Debug

Logging and tracing can be controlled using SAP 3D Visual Enterprise Generator Configuration application.

Higher logging and tracing levels will introduce a slight performance penalty.

You can use the *Create Diagnostic Archive* feature in SAP 3D Visual Enterprise Generator Administration application to pack all log and trace files that are related to a selected job.

Both log and trace files are pure textual files and can be opened in any text editor, size of file permitting.

Workload Monitors

SAP 3D Visual Enterprise Generator Administration application and SAP 3D Visual Enterprise Access can be used to monitor jobs and tasks being performed by SAP 3D Visual Enterprise Generator farm.

Component	Monitor	Description	Prerequisites
SAP 3D Visual Enterprise Generator Administrator	Server Monitoring / Jobs	Lists current and recently completed jobs	SAP 3D Visual Enterprise Generator farm must be running
SAP 3D Visual Enterprise Generator Administrator	Server Monitoring / Tasks	Lists current and recently completed tasks	SAP 3D Visual Enterprise Generator farm must be running
SAP 3D Visual Enterprise Generator Administrator	Server Monitoring / Server Farm	Lists servers and their statuses in the farm	SAP 3D Visual Enterprise Generator farm must be running
SAP 3D Visual Enterprise Generator Administrator	Server Monitoring / Cache Report	Lists cache usage details, provides mechanism to clear cache	SAP 3D Visual Enterprise Generator farm must be running
SAP 3D Visual Enterprise Access	Reports	Lists execution time and latency, and workload	SAP 3D Visual Enterprise Access must be installed and user must be logged in with *Reports Page* functional permission
SAP 3D Visual Enterprise Access	Jobs	Lists current and recently completed jobs	SAP 3D Visual Enterprise Access must be installed and user must be logged in with *Reports Page* functional permission

Interface Monitors

Interface monitors are essential for analyzing problems with interfaces such as RFC, IDoc, and HTTP.

Data Growth and Data Archiving Monitors

SAP 3D Visual Enterprise Generator in this release does not contain any monitors that monitor data growth or monitor data archiving.

The following is a list of the fastest growing tables in SAP 3D Visual Enterprise Generator database:

- DS_BLOB
- DS_Metadata
- DS_SecurityAudit
- DS_File

For periodic tasks required to contain data growth (to reorganize temporary data), refer to the periodic tasks section in this guide.

4 Management of SAP 3D Visual Enterprise Generator

4.1 Introduction

SAP provides you with an infrastructure to help your technical support consultants and system administrators effectively manage all SAP components and complete all tasks related to technical administration and operation.

4.2 Starting and Stopping

The Stop Sequence is in reverse order to the Start Sequence.

Start and Stop Sequences and Tools

Software Component	Start and Stop Sequences and Tools		
	Sequence	Tool	Description
Processing Server Farm – Master Server	1	SAP 3D Visual Enterprise Generator Configuration	You can use the SAP 3D Visual Enterprise Generator *Configuration* application to start the server or user *Farm Server* to start and stop the entire farm
Processing Server Farm– Slave Servers	2	SAP 3D Visual Enterprise Generator Configuration	If starting slave servers manually, you must wait for the master server to be started
SAP 3D Visual Enterprise Generator Administration	2	SAP 3D Visual Enterprise Generator Administration	Once the master server is started, you can connect to it using the SAP 3D Visual Enterprise Generator *Administration* program

Software Component	Start and Stop Sequences and Tools		
	Sequence	Tool	Description
SAP 3D Visual Enterprise Generator Integration API	2	N/A	This API is started when the request is first issued. No other component needs to be started, but no processing is performed until the processing engine is started.
SAP 3D Visual Enterprise Generator Web API	2	N/A	This API is started when the request is first issued. No other component needs to be started, but no processing is performed until the processing engine is started.
SAP 3D Visual Enterprise Generator Generic Conversion API	2	N/A	This API is started when the request is first issued. No other component needs to be started, but no processing is performed until the processing engine is started.

4.3 Software Configuration

This chapter explains which components or scenarios used by this application are configurable and which tools are available for adjusting.

Component Configuration Tool

Component	Configuration Tool	Description
All Components	SAP 3D Visual Enterprise Generator Configuration application	This application allows users to perform the initial configuration of the SAP 3D Visual Enterprise Generator as well as the ability to re-configure logging and trace, e-mail, number of processes, security, and licensing.

4.4   Administration Tools

Software Component	Transaction/Tool	Description	Prerequisites
All Components	SAP 3D Visual Enterprise Generator Administration	This application allows administration and monitoring of SAP 3D Visual Enterprise Generator	SAP 3D Visual Enterprise Generator Processing Engine started

4.5   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 backup and restore strategy for your system landscape should not only consider SAP systems but should also be embedded in overall business requirements and incorporate your company's entire process flow. In addition, the backup and restore strategy must cover disaster recovery processes, such as the loss of a data center through fire. It is most important in this context that you ensure that backup devices are not lost together with normal data storage (separation of storage locations).

We recommend that all SAP Visual Enterprise Generator databases are backed up periodically. This provides the best chance of successfully recovering a production environment in the quickest amount of time in the event of a SQL Server failure.

> i Note
>
> Backups should not be written to the same physical drive containing the data files.

In addition to backup, the SAP Visual Enterprise Generator database may require regular maintenance to optimize SAP Visual Enterprise Generator performance including rebuilding indices, regenerating statistics, and de-fragging data and index pages. Below is the recommended maintenance and backup plans for the SAP Visual Enterprise Generator database.

The following table lists the components used by SAP 3D Visual Enterprise Generator and how to backup them:

Component	Data to be Backed Up	Backup Method / Tool	Recommended Backup Frequency	Backup Sequence (if required)
SAP 3D Visual Enterprise Generator	`DATA` file	A `DIFFERENTIAL` backup should be written to the file `VEGenerator_DataDiff.DAT`. The backup is appended to the existing file. ⓘ Note A differential backup only backs up any changes made since the last backup. There must be at least one full database backup before any differential backup can take place	Every night at 1:00 a.m., except Sunday	N/A
SAP 3D Visual Enterprise Generator	`IMAGE` file	A `DIFFERENTIAL` backup should be written to the file `VEGenerator_ImagesDiff.DAT`. The backup is appended to the existing file. ⓘ Note A differential backup only backs up any changes made since the last backup. There must be at least one full database backup before any differential backup can take place	Every night at 2:00 a.m., except Sunday	N/A
SAP 3D Visual Enterprise Generator	`Transaction log`	Truncated	Every night at 1:00 a.m., except Sunday	N/A
SAP 3D Visual Enterprise Generator	`DATA` file	A `COMPLETE` backup should be written to the file `VEGenerator_DataComplete.DAT`. This file `VEGenerator_DataComplete.DAT` should be moved to another disk or tape. The `VEGenerator_DataDiff.DAT` file of the previous week should also be moved to another disk or tape.	Every Sunday at 1:00 a.m.	N/A

Component	Data to be Backed Up	Backup Method / Tool	Recommended Backup Frequency	Backup Sequence (if required)
SAP 3D Visual Enterprise Generator	IMAGE file	A COMPLETE backup of the IMAGES file should be written to file VEGenerator_ImagesComplete.DAT. The file VEGenerator_ImagesComplete.DAT should be moved to another disk or tape. The VEGenerator_ImagesDiff.DAT file of the previous week should be moved to another disk or tape	Every Sunday at 2:00 a.m.	N/A
SAP 3D Visual Enterprise Generator	DATA file	DATA file has all indices recomputed. i Note SAP 3D Visual Enterprise Generator and SAP 3D Visual Enterprise Access must both be offline during this backup.	Every last Sunday of the month	N/A

4.6 Periodic Tasks

Scheduled Periodic Tasks

This chapter describes all automatable tasks required to run periodically in order to keep the application running smoothly over time. Such tasks may be required on component level and are therefore relevant in each scenario that uses the component. You can find the mapping in the chapter Scenario / Component Matrix above. Other tasks may be relevant for certain business scenarios only. It is important that you monitor the successful execution of these tasks on a regular basis.

Scheduled Periodic Tasks for SAP 3D Visual Enterprise Generator

Program Name/Task	Task Scheduling Tool	Recommended Frequency	Description
System Maintenance	Internal, SAP 3D Visual Enterprise Generator Administration\Server Configuration\Scheduled Activities	Every Day	Purges records marked for deletion

Scenario Specific Scheduled Periodic Tasks

Required for Scenario(s)	Program Name/Task	Task Scheduling Tool	Recommended Frequency	Description
Subscriptions Reporting	Subscriptions and Notifications Reporting	Internal, SAP 3D Visual Enterprise Generator Administration\Server Configuration\Scheduled Activities	Daily	Gathers notifications for all subscriptions in the system and sends updates

Required Manual Periodic Tasks

This chapter describes all manual tasks required to run periodically in order to keep the application running smoothly over time. A manual task need an a person to for each execute in opposite to the scheduled tasks listed above which can be automated using a task scheduler program. Such tasks may be required on component level and are therefore relevant in each scenario that uses the component. You can find the mapping in the chapter Scenario / Component Matrix above. Other tasks may be relevant for certain business scenarios only. It is important that you monitor the successful execution of these tasks on a regular basis.

Manual Tasks for SAP 3D Visual Enterprise Generator

Task	Tool(s) Supporting this Task	Recommended Frequency	Description
Database Maintenance (shrinking files manually)	SQL Server Management Studio	When required	Shrinking files manually

4.6.1 Database Maintenance

The scheduled System Maintenance job takes care of most of the cleanup activities required to ensure that the SAP 3D Visual Enterprise Generator database is kept running to maximum efficiency. However, in the event that you require space to be freed up over and above what is done by this controller, you can take the following corrective actions:

- Set the log level to *Error* on the production servers, to conserve disk and database space. This can be done using the SAP 3D Visual Enterprise Generator Configuration tool.
- Ensure that your SQL server backups (if any), are archived and moved off the disk where they're stored. This action should be done by the database administrator.

- If the log level is set to a more verbose level, the `DS_LogMessages` table in the SAP 3D Visual Enterprise Generator database may be preventing shrinking past a certain point. If so, you may be able to free up storage space by removing log messages older than a certain date. Removing log messages has no impact on operation other than removing this information from being viewable for historical jobs. Once the relevant log message rows have been removed, see the Shrinking files manually section for more details.

- It's recommended to regularly check the status of the SAP 3D Visual Enterprise Generator's database, especially its used space in relation to limitations (if any) that may be imposed on your SQL Server version. Usually, SQL Server Express has a maximum database size limit of 10 GB. When you connect to the database, you'll find five files. These files should be allowed to Autogrow, and all together these files need to be less than 10 GB. If some of these files are close to the limit, check which tables are taking maximum space. Most tables are being cleaned up regularly by the scheduled System Maintenance job, so you must ensure that this job runs regularly and is finishes successfully. Also, ensure that the log level and age of logs are set to reasonable values. If the size of the database still continues to grow, you can create a support ticket for assistance on preventing overfill.

4.6.2 Shrinking Files Manually

1. Open SQL Server Management Studio, right-click the SAP 3D Visual Enterprise Generator database that you are using, and select ▌ *Tasks* ❯ *Shrink* ❯ *Files* ▐ .
2. Select the `DSLog` file group, and a file name of `DS_AuditLogs`.
3. Select *Reorganize pages before releasing unused space*, and specify the new size to which you wish to shrink the `filegroup`. A message displays, informing you what the minimum size is.
4. Click `OK` to perform the shrinking operation.

4.7   Scenario Administration Tasks

4.7.1 Introduction

There are two different scenarios for which you may need to perform administrative tasks. These are as follows:

- SAP 3D Visual Enterprise Generator runs on a single server; for example, 3D Visual Enterprise Generator, 3D Visual Enterprise Access, and Microsoft SQL Server all runs on the same machine.

- SAP 3D Visual Enterprise Generator runs in a Farm environment; for example, 3D Visual Enterprise Generator, 3D Visual Enterprise Access, and Microsoft SQL Server run on more than one machine.

The various available options behave in a certain way, dependent on your scenario.

> **i Note**
>
> In order to apply any changes, the Farm must be stopped.

4.7.2 Repair or Restore

You can repair or restore using only the database using one of the following methods:

- By using the SAP 3D Visual Enterprise Generator Configuration program *Configure* button
- Starting the program in installation mode

Procedure

1. Ensure that the SAP 3D Visual Enterprise Generator farm has been stopped.
2. Select the existing share if you have one, or select a new one.
3. Enter the service user account.
4. Select the existing database.
5. Continue with configuration until complete.
6. Start the farm.

4.7.3 Caching Maintenance

Context

The integrated workflows in SAP 3D Visual Enterprise Generator 9.0 have an option to reuse the originals and viewables while processing in order to gain on performance during file retrieval and viewable building. The originals and viewables are stored in a cache.

This cache can grow in size over a period and it may be desired to clear the cache.

Procedure

1. Open SAP 3D Visual Enterprise Generator Administration.
2. Select ▎▶ *Server Monitoring* ❯ *Cache Report* ❯ *Clear Cache* ▮.

4.7.4 Exporting and Importing a Farm Certificate

You can export and import a farm certificate in repair and restore scenarios, or more commonly for joining remote computers (SAP 3D Visual Enterprise Generator slaves to the farm or SAP 3D Visual Enterprise Generator Web API running on a remote computer).

You can export and import certificates by using the *Security* tab page in the SAP 3D Visual Enterprise Generator Configuration program.

> **i Note**
>
> This process should only need to be performed once in any environment, and the farm must be stopped prior to commencing.

Procedure

Exporting a Farm Certificate

1. Run the SAP 3D Visual Enterprise Configuration program.
2. Click the *Farm Certificate* tab, and choose *Export Farm Certificate*.
3. Store the file in a safe folder and remember the password.

> **i Note**
>
> The SAP 3D Visual Enterprise Configuration program requires a farm certificate. If the user running it does not have a farm certificate, the application displays a window at start up allowing the user to import a certificate from file, import it from a service account, or re-configure the system.

4. Specify the folder path and file name, specify the password for the certificate file, and choose `OK`.

Importing a Certificate from File

1. Choose *Import Farm Certificate*, select the file path, and click *Open*.
2. Enter the password for the certificate file, and choose `OK`.

SAP 3D Visual Enterprise Configurator restarts if the certificate is valid and imported successfully, otherwise the application will exit.

Importing Certificate from Service Account

1. Choose *Import from Service Account*, and click *Open*.
2. Enter the password for the service account, and choose `OK`.

SAP 3D Visual Enterprise Configurator restarts if the certificate is imported successfully, otherwise the application will exit.

Re-configuring SAP 3D Visual Enterprise Generator

1. Choose *Reconfigure*.
2. Enter the required information in the configuration wizard.

4.7.5 Changing the Database Password

For security reasons you might be required to change the SQL Server password for the account that SAP 3D Visual Enterprise Generator uses (`deepserver` SQL logon).

This option updates the `deepserver` SQL logon password information held by SAP 3D Visual Enterprise Generator, but does not change the Microsoft SQL Password.

If you change the SQL Server `deepserver` user password, you must choose the *Configure* option from the *General* tab of your SAP 3D Visual Enterprise Generator Configuration tool, first on the Master Server then on all Slave servers in the Farm, in order to get all elements of SAP 3D Visual Enterprise Generator working correctly.

> ⚠ Caution
>
> We do not recommend that you use this option. Instead, we recommend that you re-configure SAP 3D Visual Enterprise Generator.

To change the database password, proceed as follows:

Procedure

1. Stop the SAP 3D Visual Enterprise Generator farm.
2. Open the SAP 3D Visual Enterprise Generator Configuration program, navigate to the *Security* tab page, and in the Database Password section, choose *Enter New*.
3. Enter a new password and choose **OK**. The new password will be tested for validity.
4. Choose the *Configure* option from the *General* tab page to run the wizard on the Master Server.
5. Repeat the above step for all Slave servers in the farm.
6. Start the SAP 3D Visual Enterprise Generator farm.

4.7.6 Setting the default SAP 3D Visual Enterprise Generator Upload Client 9.0 Web Service URL

Use

You can set the default SAP 3D Visual Enterprise Generator Upload Client 9.0 web service URL for all users in your network.

Procedure

1. Using group policy, set the registry value `Software\SAP\SAP 3D Visual Data Integration Upload Client\WebService` in the `HKEY_LOCAL_MACHINE` or `HKEY_CURRENT_USER` hive to the URL of the Visual Enterprise Generator server you want your users to use by default.

Example

For example, **http://someserver/VDIIntegrationService** where `someserver` is your Visual Enterprise Generator Server. This will ensure that users starting the Upload Client will use

the URL `http://someserver/VDIIntegrationService` instead of the URL `http://localhost/`
`VDIIntegrationService` which is the URL provided by default.

4.8   Managing Databases

SAP 3D Visual Enterprise Generator and the SAP 3D Visual Enterprise Generator API use the Microsoft SQL
Server 2008 R2, 2012 R2, 2014, 2017, and 2019 database. The SAP 3D Visual Enterprise Generator database
is created when SAP 3D Visual Enterprise Generator is installed. The SAP 3D Visual Enterprise Generator API
uses dynamic SQL to identify and build queries, which are then executed against the database to sort and store
the results to allow paging.

As shown below, the SAP 3D Visual Enterprise Generator database consists of tables that can grow rapidly. You
must manage the database to ensure the integrity of the database maintenance policy. For example, mirroring
the database.

Major SAP 3D Visual Enterprise Generator Database Activities

The major database activities are as follows:

- **Model upload in database**: When you upload a model via the SAP 3D Visual Enterprise Generator API to
  convert it into `.rh` format, a record is added to the database. The SAP 3D Visual Enterprise Generator
  API then triggers a process that converts the actual file and uploads the derivative images (`BLOBs`) to the
  database.
- **Assembly upload in database**: For processing assemblies, the SAP 3D Visual Enterprise Generator API
  sends a notification specifying the location of the assembly definition and the folder location of associated
  parts. Each part is then processed individually.
- **Process execution (task)**: Every execution of any process is recorded in the database.
- **Jobs recorded in database**: Any user-triggered event such as uploading an assembly or model, or creating
  derivatives on demand, is represented by a series of processes. The occurrence of an event is called a
  job and consists of tasks. All data relating to the execution of each job is also recorded in the database.
  Optionally, log messages are recorded in the database. For example, errors and warning messages.

> ⚠ Caution
>
> SQL Server allows you to split the data up to more than one file on the operating system. This can help to
> control backups more precisely. For example, you could have two files on the hard drive – one for the file
> data and one for the image data.
>
> You should aim to size the database manually during system maintenance, and try to avoid growing the
> database as this impedes performance and reliability.
>
> Regular downtime is required for database maintenance. If downtime is unacceptable, you should consider
> mirroring the database.

4.8.1 Growing the Database

Due to the significant amount of data that SAP 3D Visual Enterprise Generator writes to the database, we recommend increasing the database size (the default size is 10 megabytes). The size to which you increase depends on the amount of available space on the hard drive, and how much data you plan to place in SAP 3D Visual Enterprise Generator; however, we recommend that the database be set to grow at 10% of current size, and modified every three months in production.

We recommend sizing the database manually during system maintenance, allowing enough space for at least one year's expected data volume. This is to avoid auto-growing the database as this impedes performance and reliability. Manual sizing also reduces any risk of the database commands waiting or timing out while the database file is growing automatically.

For more information on growing the database, contact your system administrator.

4.8.2 Mirroring the Database

Database mirroring is a feature in SQL Server that enhances SQL Server database availability: the original SQL Server instance, called the *principal* instance, continuously sends a database's transaction log records to another SQL Server instance called a *mirror* instance.

The mirror database serves as a standby database. Because the principal server sends the transaction logs to the mirror server as quickly as possible, the mirror server very closely matches the principal server. In addition to the principal and the mirror server, the database mirroring configuration may have an optional third server, called a *witness*. The witness server's role is to enable automatic failover. When database mirroring is used for high availability, the mirror server, with confirmation from the witness, can automatically take on the role of principal, and make its database available within a few seconds of a principal server suddenly failing.

The SAP 3D Visual Enterprise Generator SQL Server database can be set up in database mirror configuration. Further details on database mirroring can be found at the following Microsoft sites:

- Database mirroring setup overview: (http://msdn.microsoft.com/en-us/library/ms365599.aspx ⬈)
- Database mirroring – SQL Server 2008: (http://msdn.microsoft.com/en-us/library/ms175134.aspx ⬈).

> ⚠ Caution
>
> An SQL Server database for SAP 3D Visual Enterprise Generator with a Database Mirror set-up must have the following:
>
> - The principal SAP 3D Visual Enterprise Generator database is in the *Full* recovery mode
> - The mirrored SAP 3D Visual Enterprise Generator database has the same name as the principal SAP 3D Visual Enterprise Generator database
> - The mirrored and principal databases are on separate servers, and are on a bandwidth network
> - SAP 3D Visual Enterprise Generator re-configured to point to the mirror database, in case the principal database fails and automatic failover redirection is not set

5 Troubleshooting

This section discusses various troubleshooting issues and their recommended solutions.

Troubleshooting Issues and Solutions

Issue	Solution
SAP 3D Visual Enterprise Generator fails to start	• Ensure that the product is fully licensed • Ensure that all the required components for the configuration are installed • Check debug logs • Check alerts • Check the Windows event log • Ensure there are no firewall issues • Ensure there is no interference from anti-virus software • Ensure that the common folder in the SAP 3D Visual Enterprise Generator install directory is shared, the appropriate share permissions are set, and the `Configdir` attribute in `DeepServerStartup.exe.config` is set to the correct share (`\\<servername>\<sharename>`) For more information, see *Creating the Shared Directory* in the Installation Guide.
SAP 3D Visual Enterprise Generator: • Fails to start and there are no messages • Times out • Takes over 30 seconds to start	Disable *Publisher Certificate Revocation* checking

Issue	Solution
SAP 3D Visual Enterprise Generator was processing data, but now it will not do anything	• Ensure that the drive where SAP 3D Visual Enterprise Generator is installed is not full • Ensure the Windows event log for SAP 3D Visual Enterprise Generator is not full. If it is, ensure *Overwrite events as needed* is selected in the *VEGenerator* event viewer properties in the Computer Management console. This should be set automatically during the SAP 3D Visual Enterprise Generator installation. • Ensure the SQL server has not run out of memory and is not responding. Note that SQL Server 2005 cannot use virtual memory and SAP 3D Visual Enterprise Generator stops processing if it does not receive a timely response from the database. To resolve this issue, pause SAP 3D Visual Enterprise Generator and restart the SQL service. • Ensure that the memory allocation value in the Data file *Initial size* option is sufficient to store an entire years-worth of files. • Ensure that the value in the *Automatically extend the database by* option is larger than the size of any file or assembly that you expect to upload.
I am not receiving any E-mail notifications	• Ensure that you entered a fully qualified `hostname` for the SMTP server • Ensure that you entered a real and valid e-mail account • Define SAP 3D Visual Enterprise Generator e-mail as a trusted address in your spam protection settings
I have a share locking error	The lock must be released (see the *Share Locking and McAfee* section of this guide).

5.1   Certificate Issues

5.1.1 Analyzing a Server Certificate Error

Server Certificate Errors in Internet Explorer provide specific information about a range of possible issues with certificates. If you know the target address to be safe:

1. Click *Continue to this Website (Not Recommended)*. The browser should navigate to the URL, but the address bar will be highlighted in red and the text `Certificate Error` should be visible next to the address bar.
2. Double click on this text to display the error details. The following sections can be used to resolve some common certificate errors. Make a note of the heading of the error details window.
3. Choosing *View Certificates*. The *General* tab of the certificate details dialog should contain an *Issued To* field. This address should match the root Web address in the browser address bar.

4. Also note the *Issued By* field on the *General* tab. In some cases you may need to obtain the certificate for the *Trusted Root Certificate Authority*.

The following sections cover some common issues.

5.1.1.1   Mismatched Address

Error message	The security certificate presented by this website was issued for a different website's address
	This error indicates that a website is using a digital certificate that was issued to a different web address. This error can also occur if a company owns several websites and uses a certificate that was issued for one web address for another site (for example, for a different department or division). This error should only be ignored if you are confident that the site really is related to the website on the certificate
Solution	Certificates must be issued to the same address as that specified in the address bar URL. For a server, this is typically the fully qualified domain name of the machine. If the server is on a local network it is possible that the address you have entered only contains the domain name; for example, `http://mymachine/`, when the fully qualified domain name might be `http://mymachine.sap.com/`. You can check the address to which the certificate is issued by clicking on the *Security/Certificates* icon next to the address bar and choosing *View Certificates*. The *General* tab of the certificate details window should contain an *Issued To* field. This address should match the root web address in the browser address bar.

> **i Note**
>
> If the address listed in *Issued To* is also valid for the website you are browsing, substituting the domain name that gave you the Certificate Mismatch error for the address specified in the *Issued To* field should resolve the mismatch.

5.1.1.2   Untrusted Certificate

Error message: `The security certificate presented by this website was not issued by a trusted certificate authority`

This error occurs when the certificate has been issued by a certification authority that is not recognized by Internet Explorer. It is unlikely that this error will occur on a legitimate business or banking site. Phishing sites often attempt to use fake certificates that will trigger this error.

If you are trying to access an SAP System, follow the steps in *Trust a certificate from an SAP System*

Procedure

Obtain the Root Certification Authority certificate for SAP System as follows:

1. On the machine running SAP 3D Visual Enterprise Generator, choose ▶ *Start Menu* ❯ *Run* ❯ *MMC* ❙.
2. Choose ▶ *File* ❯ *Add/Remove Snap-in* ❙.
3. In the Available snap-ins list, select *Certificates* and choose *Add.*
4. Select *Computer Account* and choose *Next*.
5. Select *Local Computer*, choose *Finish*, and choose OK.
6. Expand the tree on the left as follows: ▶ *Console Root* ❯ *Certificates* ❯ *Personal* ❙.
7. Right-click ▶ *Personal* ❯ *All Tasks* ❯ *Import* ❙, then choose *Next*.
8. Choose *Browse* and select your .CER file for the machine running SAP 3D Visual Enterprise Generator.
9. Choose *Next* twice, then *Finish*.
10. Choose *OK* to confirm the success message.

MMC: ▶ *Add/Remove Snap-In* ❯ *(Available snap-ins) Certificate* ❯ *Add* ❯ *Computer Account* ❯ *Select Computer (Local Computer)* ❯ *OK* ❯ *Trusted Root Certification Authorities* ❯ *Certificates* ❙

5.1.1.3   Obtain Client certificate from ERP and trust as Trusted Publisher for computer account

Obtain the Root Certification Authority certificate for SAP System as follows:

1. On the machine running SAP 3D Visual Enterprise Generator, choose ▶ *Start Menu* ❯ *Run* ❯ *MMC* ❙.
2. Choose ▶ *File* ❯ *Add/Remove Snap-in* ❙.
3. In the Available snap-ins list, select *Certificates* and choose *Add.*
4. Select *Computer Account* and choose *Next*.
5. Select *Local Computer*, choose *Finish*, and choose OK.
6. Expand the tree on the left as follows: ▶ *Console Root* ❯ *Certificates* ❯ *Personal* ❙.
7. Right-click ▶ *Personal* ❯ *All Tasks* ❯ *Import* ❙, then choose *Next*.
8. Choose *Browse* and select your .CER file for the machine running SAP 3D Visual Enterprise Generator.
9. Choose *Next* twice, then *Finish*.
10. Choose OK to confirm the success message.

MMC: ▶ *Add/Remove Snap-In* ❯ *(Available snap-ins) Certificate* ❯ *Add* ❯ *Computer Account* ❯ *Select Computer (Local Computer)* ❯ *OK* ❯ *Trusted Root Certification Authorities* ❯ *Certificates* ❙

5.2 Connections to SAP DMS

If a conversion job in SAP 3D Visual Enterprise Generator is started, but then fails, the issue is in reverse connection setup. This time SAP 3D Visual Enterprise Generator is acting as a client and DMS is the server. Possible problems are:

- DMS does not have server authentication certificate installed, it is self-signed, or signed by an untrusted authority.
- SAP 3D Visual Enterprise Generator does not have a client certificate installed in Local Computer/Personal certificates store.
- SAP 3D Visual Enterprise Generator does have a client certificate installed, but it is not correct, or not signed by the trusted authority.
- SAP 3D Visual Enterprise Generator client certificate is not loaded in DMS, there is no user mapped to it, or the password is incorrect.

5.2.1 Error: KPRO Retrieval fails with HTTP error 401 Unauthorized (Certificate Exchange)

This could mean that the SAP 3D Visual Enterprise Generator does not have access to the SAP DMS system so it cannot obtain the KPRO URL to download original files. This condition is also indicated by the failure of the "Post Completion Workflow Conversion Complete" job.

First confirm that SAP DMS server authentication certificate is valid. The simplest way in which to confirm is to open the SAP DMS URL in Internet Explorer.

Procedure

1. Locate the Job containing the unauthorized error message, and navigate to the *Start-up Arguments* section of the assembly conversion job report.
2. Choose *Copy to Clipboard* and paste the information in Notepad. Select just the underlined URL and copy it.
3. Open Internet Explorer, paste the URL into the address bar and press **ENTER**. If there is anything wrong with the SAP DMS server authentication certificate, a Server Certificate Error will display.
4. Review the *Analyzing a Server Certificate Error* section. If this does not resolve the issue, continue to the next step.
5. Open the SAP 3D Visual Enterprise Generator task log for KPRO Retrieve job and ensure that client authentication certificates are found and included in the connection request.
   1. On the SAP 3D Visual Enterprise Generator machine open SAP 3D Visual Enterprise Generator Administrator and login.
   2. Select *Server Monitoring* on the left hand side and then choose *Tasks*.
   3. Locate the task for process jmp_KproRetrieve and double-click it.
   4. Scroll the list of messages to the bottom and see if there is a message that indicates that *Client Certificates found* and that your client authentication certificate is displayed.

> **i Note**
>
> It is possible to have multiple certificates found and listed as possible matches. In this case all will be sent to SAP DMS, but only the last one will be accepted

6. Check the user mapping on the DMS side by checking that the user exists. Login to your DMS system, and run transaction `SU01`. Enter **VEG_CONNECT** into the *User* field and press **Display** . The user details are displayed.
7. Run transaction `SM30`. Enter **VUSREXTID** into the *Table/View* field and press **Display**. In the *External ID type* field enter **DN**. Ensure that the user `VEG_CONNECT` exists in the list, and that it has correct certificate mapping. This certificate is `Base64` encoded VEG client certificate.

5.2.2 Error: KPRO Retrieval fails with status 401

If your error is *401 Unauthorized* and not *HTTP error 401 Unauthorized*, and the Post Completion Workflow *Conversion Complete* job finishes successfully, this means that you have established connection with DMS, but the connection to KPRO has failed.

Procedure

1. Check the `KPRO` URL that is received from DMS. In order to check it open SAP 3D Visual Enterprise Generator Administrator, switch to *Tasks* view, locate the *KPRO Retrieve* task, and double–click it. Double–click the task for process `jmp_KproRetrieve` in the list of tasks at the top of the window. Switch to the *XML* tab and scroll down to locate the `kpro_getsourceurl` element. The following line contains the `KPRO` URL. Copy it and paste in Internet Explorer's address bar to check if there is any more information about connection errors. If everything is OK, Internet Explorer will ask you if you want to open or to save the downloaded file.
2. In the event of a firewall preventing a user running the SAP 3D Visual Enterprise Generator service from accessing KPRO, check whether this is the case by logging on to the SAP 3D Visual Enterprise Generator system as the user who is running the SAP 3D Visual Enterprise Generator service and repeat the test above.
3. Check the user setting in KPRO. You will need to run the ransaction `CSADMIN` and to ensure that the DMS connection user `VEG_CONNECT` is registered and set as active.

5.3   Visual Data Integration Upload Client

5.3.1 Logon Connection Fails With Invalid or Unavailable Web Service

If the logon connection fails and cites an invalid or unavailable Web service, it is possible that the Web service was configured incorrectly in SAP 3D Visual Enterprise Generator Administrator.

5.3.2 Authentication Issues

The application will also display this message if the `<SAPERPCommunicationUse>` has not been configured correctly.

If a configured user cannot log into the client and authentication cited as the issue, it is possible that the password or username were not created correctly when the ERP communication user was created. Refer back to that section earlier in this guide.

Ensure that the required permissions for that user exist and that the user's password and username were entered correctly.

5.3.3 No Workflows are Displayed on the Logon Page

If no workflows are displayed once the web service has been correctly configured, the workflow has not been configured correctly in SAP 3D Visual Enterprise Generator Administrator.

> ℹ Note
>
> This could also be the case if uploads can be initiated from the client but they fail (right–click; the *Job Report* to view a detailed description from the *Monitor* window of the SAP 3D Visual Data Integration Client). In this case, some of the workflow settings will have been set incorrectly and will need to be re–configured.

5.4   E-mail Configuration

This section describes resolving E-mail configuration issues.

5.4.1 SMTP Server

The SMTP server fully-qualified `hostname` is defined during SAP 3D Visual Enterprise Generator configuration; SAP 3D Visual Enterprise Generator uses the `hostname` as an SMTP gateway to send notification E-mails. For example, a Job complete notification. The E-mail is sent only if the SMTP server allows it. Typically, it is allowed, as the SAP 3D Visual Enterprise Generator computer is an internal node.

5.4.2 E-Mail Account

The E-mail account to which SAP 3D Visual Enterprise Generator send E-mails is also defined during SAP 3D Visual Enterprise Generator configuration. For example, `DSadministrator@customer.com`. You do not need

to create an E-mail account on the E-mail servers; however, a real and valid E-mail account is required for SAP 3D Visual Enterprise Generator to send notifications. This address must be reachable from the SMTP server defined during SAP 3D Visual Enterprise Generator configuration.

5.4.3 Spam Protection

Specify SAP 3D Visual Enterprise Generator E-mail as a trusted address in your spam protection settings to avoid spam protection hiding SAP 3D Visual Enterprise Generator E-mail notifications on your E-mail system.

5.5　　Firewalls and Security Checking

This section describes resolving the security checking and performance degradation issue.

When SAP 3D Visual Enterprise Generator is running behind a firewall, the security checking can cause performance degradation. Windows attempts periodically to connect to `crl.microsoft.com` in order to retrieve and cache the validated certificates list; this remains valid for about 15 days. If the SAP 3D Visual Enterprise Generator computer is behind a firewall, the list cannot be obtained.

In some cases, the firewall is not configured to immediately refuse such requests; it just silently drops them, and Windows waits about 15-30 seconds per request for a response before the process is abandoned. This waiting time adds 15-30 seconds to every process in SAP 3D Visual Enterprise Generator.

There are two solutions for this situation:

- Turn the checking off. We recommend using this solution.
- Re-configure the firewall to either allow access to both `crl.microsoft.com` and `crl.verisign.com`, or to immediately refuse such requests.

> ⚠ Caution
>
> This is a per user setting and must be done using the user name and password that SAP 3D Visual Enterprise Generator uses to run. For example, if SAP 3D Visual Enterprise Generator is configured to run under the user name `deepserver`, in order to make this change you must logon to Windows using this user name and password.

The procedure for turning Certificate Checking off is as follows:

Procedure

1. Choose *Internet Options* in the Control Panel.
2. Choose the *Advanced* tab page and scroll down the list to the *Security* area.
3. Deselect the *Check for publisher's certificate revocation* checkbox.
4. Choose OK and close the Control Panel.

5.6   Publisher Certificate Revocation

This section describes resolving the following SAP 3D Visual Enterprise Generator configuration and startup issues:

- SAP 3D Visual Enterprise Generator fails to start and there are no messages advising of the cause
- SAP 3D Visual Enterprise Generator times out when starting up
- SAP 3D Visual Enterprise Generator takes over 30 seconds to start

Possible Causes

If your computer reports correct internet connectivity but is unable to reach actual web sites, the certain default Windows cryptographic behavior may be causing each SAP 3D Visual Enterprise Generator section to take longer to start than normal, (30 to 60 seconds for each section) resulting in time-outs and a failure to start.

This may be caused specifically by a wrongly configured network, a broken NAT system, or broken virtualization host networking if running a virtual machine.

Solution

Disable Publisher Certificate Revocation checking for `.net` applications http://support.microsoft.com/kb/936707 ➤ or the entire system.

Procedure

Disabling Publisher Certificate Revocation Checking for .net Applications

1. Locate the `machine.config` file in the following folders:
   - `Windows\Microsoft.NET\Framework64\v2.0.50727\config\`
   - `Windows\Microsoft.NET\Framework\v2.0.50727\config\`
2. Modify the `/configuration/runtime` node default each file from:

   ```
   <runtime/>
   ```

   to:

   ```
   <runtime>
   <generatePublisherEvidence enabled="false"/></runtime>
   ```

3. Save and close each file.

Disabling Publisher Certificate Revocation Checking for the Entire System

1. Open the *Internet Options* window and choose ▌▶ *Security* ❭ *Advanced* ❭.
2. Ensure that the *Check for Publisher Certificate Revocation* checkbox is deselected.

5.7 Share Locking and McAfee

This section describes resolving the share locked file issue.

SAP 3D Visual Enterprise Generator sometimes locks a share by creating a `share.lck` file in the SAP 3D Visual Enterprise Generator shared directory. Antivirus software sometimes prevents this file from being deleted. If this happens, the share remains locked and must be excluded from the Antivirus application, and released.

Procedure

Excluding the Share Location from Antivirus

1. Double-click the *McAfee* icon in your system tray. The *On-Access Scan Properties* window displays.
2. Choose *Properties*, choose *All Processes*, and then select the *Detection* tab page.
3. Choose *Exclusions* and choose *Add*. The *Add Exclusion Item* window displays.
4. Navigate to, and select the folder where the share is located.
5. Enter the required exclusion details, and choose **OK**. The exclusion is added to the antivirus exclusion list.

Releasing the share.lck File

1. Open the Microsoft Process Explorer.
2. Choose ▶ *Find* ▶ *Find Handle or DLLshare.lck* and enter `share.lck`.
3. Select `Mcshield.exe` from the displayed list.
4. Right-click the two listed handles, and choose *Close handle* for each.
5. Search for `share.lck` to ensure that no entries remain.

> **i Note**
>
> SAP 3D Visual Enterprise Generator uses the "System" entry.

6 Support

When a problem occurs that is not a configuration error and cannot be resolved by following the troubleshooting procedures in this document, we recommend that you open an incident with SAP Global Support.

In order to efficiently and accurately service your request, we highly recommend that the following information be included in your incident report:

- The major software version of SAP 3D Visual Enterprise Generator; for example, 8.0 or 9.0
- The patch level of SAP 3D Visual Enterprise Generator; for example, 0 or 1
- A description of the expected result and the actual result
- The error message from SAP 3D Visual Enterprise Generator, if applicable
- A diagnostics archive for all jobs related to the issue. See below for more details on how to produce archives.
- A screenshot showing the problem, if applicable

It is highly likely that the support agent will request this information if it is not provided at the time the issue is reported. This increases the amount of time needed to resolve the issue.

6.1 Identifying the Jobs related to an Issue

For a conversion job, it is possible that in addition to the main processing job, child jobs were created while processing. These jobs can be identified by them referencing their parent job in their job name. Examples are KPRO retrieval and storage jobs, as well as *Build Viewables* or *Build Derivatives* jobs.

> → Recommendation
>
> We highly recommend that diagnostic information for all jobs related to the main processing job is supplied when reporting an issue.

6.2 Creating Diagnostic Archives for a Job

You can create a diagnostic archive for each job related to the issue by performing the following.

Procedure

1. In SAP 3D Visual Enterprise Generator Administrator, right-click the job in ▐▶ *Server Monitoring* ❯ *Jobs* ◀▌.
2. Select the *Create Diagnostic Archive* menu option. This displays a window to select the information that is included in the diagnostics archive.
3. If original files are required to reproduce and resolve the problem, and you are allowed to provide them, select the *All Files* option in this window from the workspace files dropdown list, instead of the *Workflow Controller Specified* option.
4. Choose *Create* to create the archive. It will be named `DiagnosticsArchive-Job-JOBID.zip`.

> **→ Recommendation**
>
> If you have multiple archives for your issue, we recommend that you combine them in one `.zip` file.

5. If the file is too large to be attached to the incident, arrange a suitable secure method of transferring the files with the support agent.

> **i Note**
>
> If the job did not fail with an error but the result was not satisfactory, the files in the workspace for the job - which will be needed to reproduce the issue - may not be included in the archive. This is because the default behavior of SAP 3D Visual Enterprise Generator is to clear these workspaces on successful job completion to save disk space. If this is the case, see follow the steps in the next section Disabling Workspace Clearing.

6.3   Disabling Workspace Clearing

The setting that enables or disables successful job clearing is in the `farm.config` file, which can be found in the SAP 3D SAP 3D Visual Enterprise Generator share, and the setting that controls job clearing is named `clearonjobcomplete`. Its value needs to change from **true** to **false.**

Procedure

1. Determine the location of the share by launching the SAP 3D Visual Enterprise Generator Configuration tool.
2. Change the default setting: `<config name="clearonjobcomplete" value="true" />`
   To: `<config name="clearonjobcomplete" value="false" />`
3. After making this change, restart SAP 3D Visual Enterprise Generator.

> **→ Recommendation**
>
> Once the issue is resolved, we recommend that you change the setting back to **true**, to avoid excessive usage of disk space, especially on production servers.

7 Appendix A: Controllers Error Messages and Solutions

7.1 CAD Assembly Upload Workflow Controller

The following table describes various error messages that you may encounter, and their possible solutions:

Error	Possible Cause	Possible Solution
`Prepare Workspace: Some files could not be copied to workspace`	Assembly uploaded references files not accessible by the server.	• Make sure that the referenced files are in a location visible from the server • Make sure the SAP 3D Visual Enterprise Generator user has read privileges to the referenced file location
`Locking Assets: Failed to lock assets`	Existing assembly was not checked out before uploading a new version.	Check out the old version of the assembly before uploading a new version
`Build Secondary Derivatives: Build Secondary Derivatives child job not started, make sure a child workflow is configured`	No child workflow controller is configured for building secondary derivatives	Configure a Build Derivatives job in SAP 3D Visual Enterprise Generator Administrator and assign it as the child job for building secondary derivatives for the CAD Assembly Upload workflow controller

7.2 Asset Upload Workflow Controller

The following table describes various error messages that you may encounter, and their possible solutions:

Error	Possible Cause	Possible Solution
`User does not have Create permission on the folder`	The group of the user performing the Asset Upload is not assigned the *Create* privilege on the folder to which they are trying to upload.	Modify the security of the folder in question in SAP 3D Visual Enterprise Access, and grant the *Create* privilege to the user's group

Error	Possible Cause	Possible Solution
`Existing asset is not checked out, checkout is required to make changes`	The user attempted to upload an asset that already exists, but did not check out the asset before doing the upload.	Check out the asset using SAP 3D Visual Enterprise Access, then upload the asset again
`Skipped: No derivative workflow configured`	The user selected derivatives to create, or the Asset Upload workflow has a default derivative group, but no Select Derivatives child workflow is configured.	On the `Child Workflows` tab for the asset workflow, select a properly-configured Select Derivatives workflow

7.3 SAP Visual Enterprise Navigator Scene Build Workflow Controller

The following table describes various error messages that you may encounter, and their possible solutions:

Error	Possible Cause	Possible Solution
`Required startup argument CacheFolder was not provided`	Cache Folder startup argument has not been provided.	Re-configure the hot folder and/or scheduled activity and provide the Cache Folder startup argument
`Required startup argument TargetServerPath was not provided. If InputFile is not specified, then PartnerName, TargetServerPath and OutputFolder must be specified.`	Target Server Path startup argument has not been provided.	Re-configure the hot folder and/or scheduled activity and provide the Target Server Path startup argument
`Required startup argument PartnerSystem was not provided. If InputFile is not specified, then ParterName, TargetServerPath and OutputFolder must be specified`	External System Name startup argument has not been provided.	Re-configure the hot folder and/or scheduled activity and provide the External System Name startup argument
`Specified Input file [file path] does not exist or cannot be accessed`	BuildDeepVision Notification Xml startup argument is not valid.	Provide a valid and accessible BuildDeepVision Notification XML startup argument

Error	Possible Cause	Possible Solution
`Failed to validate BuildNotificationXML. Error – [error message]`	Provided BuildDeepVision notification file is not valid as per schema.	Provide a valid BuildDeepVision notification file
`Project '[Project Name]' does not exist`	In case BuildDeepVision Notification XML startup argument has not been provided, the specified Target Server Path startup argument is not correct; otherwise, the Project attribute value inside the BuildDeepVision notification file is not correct.	Provide a valid Target Server Path startup argument or BuildDeepVision notification file
`Caught error during ExtractData. Controller Setting <ExtractErrorsCritical> is True. Terminating job`	The Extract Errors Are Critical, controller setting is set to TRUE, and an error occurred while extracting data.	Contact technical support with the error details
`Error creating DeepVision scene – [error message]. Plug-in Log file has been copied to [file path]`	An error occurred while creating a VDS.	Contact technical support with the error details and log file
`Error creating DeepVision scene – [error message]`	An error occurred while creating a VDS.	Contact technical support with the error details
`Could not copy DeepVision scene to the specified output location`	An error occurred while copying the created VDS to the specified output location.	Contact technical support with the error details

7.4   ERP Integration Workflow Controller

The following table describes various error messages that you may encounter, and their possible solutions:

Error	Possible Cause	Possible Solution
`Prepare Workspace: Some files could not be copied to workspace`	Assembly uploaded references files not accessible by the server.	- Make sure that the referenced files are in a location visible from the server. - Make sure the SAP 3D Visual Enterprise Generator user has read privileges to the referenced file location
`Locking Assets: Failed to lock assets`	Existing assembly was not checked out before uploading a new version.	Check out the old version of the assembly before uploading a new version
`Build Secondary Derivatives: Build Secondary Derivatives child job not started, make sure a child workflow is configured`	No child workflow controller is configured for building secondary derivatives.	Configure a Build Derivatives job in SAP 3D Visual Enterprise Generator Administrator and assign it as the child job for building secondary derivatives for the CAD Assembly Upload workflow controller.

7.5   Generic Conversion Workflow Controller

The following table describes various error messages that you may encounter, and their possible solutions:

Error	Possible Cause	Possible Solution
Not a Visual Data Integration manifest	The input manifest is not in correct XML format	Input a manifest in Visual Data Integration manifest format
Structure from CAD or resolved structure required	The input manifest does not contain any usable data	Populate the input manifest with data
Analysis conversion kind is not supported when resolved structure is supplied	Analysis only conversion was requested for an already resolved structure	Analysis only conversion is supported only when the input manifest contains structure from CAD data

Error	Possible Cause	Possible Solution
Visual Data Integration manifest is not valid - at least one viewable must be requested for conversion kind "Monolithic"	Input manifest structure is correct but no viewables were requested	Request at least one viewable
Visual Data Integration manifest is not valid - all viewables must be requested for conversion kind "Shattered"	Input manifest structure is correct but some viewables were not requested	Request all viewables
Document with id "[id]" references itself through child with id "[id]"	A cyclic reference was detected in supplied input manifest	Remove the cyclic reference
Cannot find a match for document with id "[id]", configuration "[configuration name]" and file name "[file name]"	A document referenced in the input manifest CAD structure is not found in the CAD structure extracted from the supplied top level documents	Remove the document from the input manifest CAD structure
Cannot find viewable with Id "[id]"	A viewable was built for a document that does not exist in the input manifest	Add the document to the input manifest if the input manifest CAD structure
Cannot map derivative group "[name]"	A derivative group referenced in the input manifest does not exist	Supply a valid derivative group name
Cannot map derivative type "[name]"	A derivative type referenced in the input manifest does not exist	Supply a valid derivative type name
Build Derivatives child workflow not configured	No child workflow controller is configured for building secondary derivatives	Configure a Build Derivatives job in SAP 3D Visual Enterprise Generator Administrator and assign it as the child job for building secondary derivatives for the Generic Conversion workflow controller

7.6   PLM Translation Workflow Controller

The error messages reported by the PLM Translation workflow controller during `Schema1` validation will identify the XML elements that are in error, and suggest corrective actions to perform to resolve the error.

The following table describes various error messages that you may encounter, and their possible solutions:

Error	Possible Cause	Possible Solution
`Level X parent <Entity> Y of <Node> Z already exists with asset ID N, version O. All ancestors in the tree for a new or updated asset must have new versions created in the same job.`	If a part external ID version or revision was increased, all of its parent assets, all the way up to the root asset, must have their version or revision updated as well.	Modify the `Schema1` to rev all the parents of the part.
`Derivative group X not found`	The PreProcess step specified that a particular asset should have derivatives from group X built for it.	Correct the derivative group name in the PreProcess process, or create the derivative group X if it is missing

7.7 Process User Report Workflow Controller

The following table describes various error messages that you may encounter, and their possible solutions:

Error	Possible Cause	Possible Solution
`Administrative E-mail not configured, specify Send From or configure administrative E-mail`	Administrative E-mail not configured or specified in the process.	Use Configuration program to specify it or enter value in the process
`No Subscription was found with specified ID: {0}`	Specified Subscription ID was not found.	Check subscription ID
`SMTP Server not configured, please configure SMTP server before trying to send E-mail reports`	SMTP server not configured.	Use Configuration program to specify SMTP server

7.8 Subscriptions and Notifications Reporting Workflow Controller

The following table describes various error messages that you may encounter, and their possible solutions:

Error	Possible Solution
`Child Process User Report Job has failed`	Check the child job report for details
`User <name, id> could not be notified: <reason>`	Check the reason

7.9 System Maintenance Workflow Controller

The following table describes various error messages that you may encounter, and their possible solutions:

Error	Possible Cause	Possible Solution
`Another instance of a system maintenance job is already running`	Another job using the System Maintenance workflow controller is already running.	Wait for the other job to complete processing, and then restart the job
`User does not have permission to execute this workflow`	User does not have System Administrator rights.	Run the job as a user with System Administrator rights
`Security check response is missing`	The workflow controller did not receive a security check response.	Rerun the job
`Getting Records to Purge Failed: [error message] ([failure type])`	An error occurred while getting records to purge from the database.	Contact technical support with the error details
`Batch [batch number] response is empty`	The batch was processed, but the response was empty.	Rerun the job
`Purge Records Task Failed: [error message] ([failure type])`	An error occurred while purging records from the database.	Contact technical support with the error details

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

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