



Installation Guide | PUBLIC

Software Provisioning Manager 1.0 SP33

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Installation of SAP SCM Optimizer on Linux

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Document History

i Note

Before you start reading, make sure you have the latest version of this installation guide, which is available at <https://support.sap.com/sltoolset> >>> *System Provisioning* > *Install a System using Software Provisioning Manager* > *Installation Option of Software Provisioning Manager 1.0 SP* <Current Number> > .

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

Version	Date	Description
3.5	2021-10-11	Updated version for Software Provisioning Manager 1.0 SP33 (SL Toolset 1.0 SP33)
3.2	2021-06-21	Updated version for Software Provisioning Manager 1.0 SP32 (SL Toolset 1.0 SP32)
3.1	2021-02-15	Updated version for Software Provisioning Manager 1.0 SP31 (SL Toolset 1.0 SP31)
3.0	2020-10-05	Updated version for Software Provisioning Manager 1.0 SP30 (SL Toolset 1.0 SP30)
2.9	2020-06-08	Updated version for Software Provisioning Manager 1.0 SP29 (SL Toolset 1.0 SP29)
2.8	2020-01-20	Updated version for Software Provisioning Manager 1.0 SP28 (SL Toolset 1.0 SP28)
2.7	2019-09-16	Updated version for Software Provisioning Manager 1.0 SP27 (SL Toolset 1.0 SP27)
2.6	2019-05-27	Updated version for Software Provisioning Manager 1.0 SP26 (SL Toolset 1.0 SP26)
2.5	2019-01-21	Updated version for Software Provisioning Manager 1.0 SP25 (SL Toolset 1.0 SP25)
2.4	2018-09-17	Updated version for Software Provisioning Manager 1.0 SP24 (SL Toolset 1.0 SP24)
2.3	2018-05-07	Updated version for Software Provisioning Manager 1.0 SP23 (SL Toolset 1.0 SP23)

Version	Date	Description
2.2	2018-01-15	Updated version for Software Provisioning Manager 1.0 SP22 (SL Toolset 1.0 SP22)
2.1	2017-09-11	Updated version for Software Provisioning Manager 1.0 SP21 (SL Toolset 1.0 SP21)
2.0	2017-05-22	Updated version for Software Provisioning Manager 1.0 SP20 (SL Toolset 1.0 SP20)
1.9	2017-02-06	Updated version for Software Provisioning Manager 1.0 SP19 (SL Toolset 1.0 SP19)
1.8	2016-10-07	Updated version for Software Provisioning Manager 1.0 SP18 (SL Toolset 1.0 SP18)
1.7	2016-06-06	Updated version for Software Provisioning Manager 1.0 SP17 (SL Toolset 1.0 SP17)
1.6	2016-02-15	Updated version for Software Provisioning Manager 1.0 SP10 (SL Toolset 1.0 SP16)
1.5	2015-10-12	Updated version for Software Provisioning Manager 1.0 SP09 (SL Toolset 1.0 SP15)
1.4	2015-09-14	Updated version Software Provisioning Manager 1.0 SP09 (SL Toolset 1.0 SP14)
1.3	2014-05-09	Changed introduction to be operating system-specific
1.2	2013-08-20	Guide renamed to be release-independent
1.1	2013-05-22	Added program paths for RFC check
1.0	2012-10-12	Initial version

1 About this Document

This documentation describes how to install SAP SCM Optimizer using the installation tool Software Provisioning Manager 1.0 SP33 (“installer” for short), which is part of SL Toolset 1.0 SP33.

You can install SAP SCM Optimizer either on an ABAP application server or on a dedicated server running on Linux with SAP Standalone Gateway installed.

Make sure that you have read the Master Guide for your SAP Business Suite Application before you continue with this installation guide. You can find a printed version of the Master Guide in your installation package or you can download the latest version at <https://help.sap.com/scm>.

i Note

Software provisioning manager is the successor of the product- and release-specific delivery of provisioning tools, such as SAPInst.

Before you perform an installation or system copy, we recommend that you always download the latest version of the software provisioning manager which is part of the Software Logistics Toolset (SL Toolset for short).

This way, you automatically get the latest SAPInst version including latest fixes in the tool and supported processes.


For more information about software provisioning manager as well as products and releases supported by it, see SAP Note [1680045](#).

1.1 SAP Notes for the Installation

You must read the following SAP Notes **before** you start the installation. These SAP Notes contain the most recent information on the installation, as well as corrections to the installation documentation.

Make sure that you have the up-to-date version of these SAP Notes, which you can find at: <http://support.sap.com/notes>

SAP Note Number	Title	Description
1680045	Release Note for Software Provisioning Manager 1.0	Remarks, annotations, and corrections discovered after publication of the documentation Software Provisioning Manager
1686826	Implementation of SCM Optimizer	SCM Optimizer information about the SAP system

SAP Note Number	Title	Description
1577112 	SCM Optimizer: Sizing Information	SCM Optimizer-specific sizing information and other requirements

2 Planning

2.1 Planning Checklist

This section tells you how to plan the installation of the SCM Optimizer:

You make yourself familiar with the [implementation considerations \[page 7\]](#).

2.2 Implementation Considerations

You can install SAP SCM Optimizer either on top of an existing ABAP application server or on a dedicated server.

The following applies:

- SAP SCM Optimizer runs on Windows and Linux platforms.
For more information, see the Product Availability Matrix at <https://support.sap.com/pam>.
- If you use a dedicated server for SAP SCM Optimizer, you need to install an SAP Standalone Gateway beforehand. For more information, see the *Installation Guide - Installation of a Standalone Gateway Instance for SAP Systems Based on SAP NetWeaver 7.0 to 7.5x on <os>* at <https://support.sap.com/sltoolset> [▶▶▶](#) [System Provisioning ▶ Installation Option of Software Provisioning Manager ▶ Installation Guides - Standalone Engines and Clients ▶ Standalone Gateway Instance ▶](#).

→ Recommendation

The CPU time and memory requirement can be very high when you execute an optimizer instance. If insufficient resources are available, this can impact heavily on performance or affect correct implementation. Therefore, we highly recommend that you install an SAP SCM Optimizer server for a production or test environment on dedicated hardware (that is, no additional applications will run on this hardware). If you want to run other applications on the optimizer server, you must make sure that these are executed in sequence or that the hardware used provides sufficient resources. This also applies to executing several optimizer instances.

- Check SAP Note [1577112](#) for sizing information and other requirements.

3 Preparation

3.1 Preparation Checklist

You have to complete the following preparations:

1. If you want to install the SCM Optimizer on top of an existing ABAP application server, you make sure that there is an ABAP application server in your system landscape.
2. If you want to install the SCM Optimizer on a dedicated host, you make sure that there is a standalone Gateway on this host. For more information, see the *Installation Guide - Installation of a Standalone Gateway Instance for SAP Systems Based on SAP NetWeaver 7.0 to 7.5x on <os>* at <https://support.sap.com/sltoolset> >> *System Provisioning* > *Installation Option of Software Provisioning Manager* > *Installation Guides - Standalone Engines and Clients* > *Standalone Gateway Instance* >.
3. You [prepare the installation media \[page 8\]](#) for the SCM Optimizer installation.

3.2 Preparing the Installation Media

This section describes how to prepare the installation media.

Installation media are available as follows:

- The Software Provisioning Manager 1.0 archive containing the installer
You always have to download the latest version of the Software Provisioning Manager 1.0 archive.
For more information, see [Downloading and Extracting the Software Provisioning Manager 1.0 Archive \[page 9\]](#).
- SAP SCM Optimizer Installation Media
You can provide them in one of the following ways:
 - Use the physical SAP SCM Optimizer installation medium as part of the installation package of your SAP system.
 - Download the SAP SCM Optimizer installation medium from the SAP Software Download Center.
For more information, see [Downloading Installation Media \[page 10\]](#).

3.2.1 Downloading and Extracting the Software Provisioning Manager 1.0 Archive

You must always download and extract the Software Provisioning Manager 1.0 archive from the SAP Software Download Center because you must use the latest version.

Prerequisites

- Make sure that you are logged on as a user with `root` authorizations, and that the download directory has at least the permissions `755`.
- Make sure that you use the **latest** version of the `SAPCAR` tool when manually extracting the Software Provisioning Manager archive.

i Note

An older `SAPCAR` version might extract archive files in a wrong way and this could prevent the installer from working consistently.

Proceed as follows to get the latest version of `SAPCAR`:

1. Go to <https://launchpad.support.sap.com/#/softwarecenter> > **SUPPORT PACKAGES & PATCHES** > **By Category** > **SAP TECHNOLOGY COMPONENTS** > **SAPCAR**.
2. Select the archive file for your operating system and download it to an empty directory.
3. To check the validity of the downloaded executable, right-click the executable and choose *Properties*. On the *Digital Signatures* tab you can find information about the SAP signature with which the executable was signed.
4. Rename the executable to `sapcar.exe`.

For more information about `SAPCAR`, see SAP Note [212876](#).

Procedure

1. Download the latest version of the Software Provisioning Manager 1.0 archive
`[70] SWPM10SP<Support_Package_Number>_<Version_Number>.SAR`:
 - Valid for SAP systems based on SAP NetWeaver 7.0 and SAP NetWeaver 7.0 including enhancement package `<Number>`:
Download the `70SWPM10SP<Support_Package_Number>_<Version_Number>.SAR`
 - Valid for SAP systems based on SAP NetWeaver 7.3 EHP1 and higher :
Download the `SWPM10SP<Support_Package_Number>_<Version_Number>.SAR`

<https://support.sap.com/sltoolset> > **System Provisioning** > **Download Software Provisioning Manager**

2. Unpack the Software Provisioning Manager archive to a local directory using the following command:

```
<code>/<Path to SAPCAR>/sapcar -xvf <Path to Download Directory>/
[70]SWPM10SP<Support_Package_Number>_<Version_Number>.SAR -R <Path to Unpack
Directory></code>
```

Note

Make sure that all users have at least read permissions for the directory to which you unpack the installer.

Caution

Make sure that you unpack the Software Provisioning Manager archive to a dedicated folder. Do not unpack it to the same folder as other installation media.

3.2.2 Downloading Installation Media

This section describes how you can download media from the SAP Software Download Center.

Procedure

1. Download and unpack the latest version of Software Provisioning Manager as described in [Downloading and Extracting the Software Provisioning Manager 1.0 Archive \[page 9\]](#).
2. You identify the required media as listed in [Preparing the Installation Media \[page 8\]](#).
3. Identify **all** download objects that belong to one medium according to one of the following:

Note

Installation media might be split into several files. In this case, you have to reassemble the required files after the download.

- Download path or location:
 - To download the complete kernel media, go to <https://support.sap.com/sltoolset> > *System Provisioning* > *Software Provisioning Manager 1.0 SP<Current Version>* > *Download Kernel releases delivered for SL Toolset* > *SL TOOLSET 1.0 (INSTALLATIONS AND UPGRADES)* > *KERNEL FOR INSTALLATION/SWPM* > .
 - To download all media required for your SAP product, you can use one of the following navigation paths:
 - <https://launchpad.support.sap.com/#/softwarecenter> > *INSTALLATIONS & UPGRADES* > *By Category* > *SAP NETWEAVER AND COMPLEMENTARY PRODUCTS* > <Product> > <Product Release> >
 - <https://launchpad.support.sap.com/#/softwarecenter> > *INSTALLATIONS & UPGRADES* > *By Alphabetical Index (A-Z)* > <First Letter of Product> > <Product> > <Product Release> >

- Material number
All download objects that are part of an installation medium have the same material number and an individual sequence number:

`<Material_Number>_<Sequence_Number>`

❁ Example

51031387_1

51031387_2

...

- Title
All objects that are part of an installation medium have the same title, such as
`<Solution><Media_Name><OS>` or `<Database>RDBMS<OS>` for database media.
4. Download the objects to the download directory.
 5. To correctly re-combine the media that are split into small parts, unpack all parts into the same directory.

In the unpacking directory, the system creates a subdirectory with a short text describing the medium and copies the data into it. The data is now all in the correct directory, the same as on the medium that was physically produced. For more information, see SAP Note [1258173](#).

⚠ Caution

Make sure that you unpack each installation media to a separate folder. Do not unpack installation media to the same folder where you unpack the Software Provisioning Manager archive.

Do not unpack installation media to the same folder where you unpack the SAP kernel archives for archive-based installation.

4 Installation

4.1 Installation Checklist

This section provides information about the steps that you have to perform to install SAP SCM Optimizer.

1. Make sure that you have completed the [planning \[page 7\]](#) and [preparation \[page 8\]](#) activities **before** you start the installation.
2. You [check the prerequisites \[page 12\]](#) and [run the installation with Software Provisioning Manager 1.0 \(the Installer\) \[page 15\]](#).

Additional information about the installer:

- [Interrupted Installation with the Installer \[page 20\]](#)
- [Troubleshooting with the Installer \[page 24\]](#)

4.2 Prerequisites for Running the Installer

Make sure you fulfil the following prerequisites before running the installer.

- For the SL Common GUI, make sure that the following web browser requirements are met:
 - You have one of the following supported browsers on the device where you want to run the SL Common GUI:
 - Google Chrome (recommended)
 - Mozilla Firefox
 - Microsoft Edge
 - Microsoft Internet Explorer 11 or higher.Always use the latest version of these web browsers.
 - If you copy the SL Common GUI URL manually in the browser window, make sure that you open a new Web browser window in private browsing mode (Internet Explorer), incognito mode (Chrome) or private browsing mode (Firefox). This is to prevent Web browser plugins and settings from interfering with the SL Common GUI.

Caution

The installer uses a self-signed certificate, which is used temporarily only while the installer is running. This certificate is not trusted by the browser unless it is imported manually by the user running the installer. This behavior is intentionally designed in this way because - unlike ordinary public web servers - the installer has different usage patterns. You must configure your browser do trust the self-issued certificate of the installer after carefully performing the “thumbprint” verification described in [Running the Installer \[page 15\]](#) . For more information about adding trusted certificates, see the documentation of your browser.

For more information about the SL Common GUI, see [Useful Information about the Installer \[page 18\]](#).

- The installer uses shell scripts to obtain the environment for user `<sapsid>adm`.
 - If user `<sapsid>adm` does not yet exist, a working `/bin/csh` must be available on the host where you run the installer. For more information about recommended login shells, see SAP Note [202227](#).
 - If `<sapsid>` already exists and uses `csh`, before you start the installer, execute the following command as user `<sapsid>` to make sure that the `csh` scripts are up-to-date, depending on your UNIX OS platform:


```
/bin/csh -c "source /home/<sapsid>adm/.cshrc;env" or /bin/csh -c "source /home/<sapsid>adm/.login;env"
```
- Make sure that your operating system does not delete the contents of the temporary directory `/tmp` or the contents of the directories to which the variables `TEMP`, `TMP`, or `TMPDIR` point, for example by using a `crontab` entry.

Make sure that the temporary directory has the permissions `755`.
- Make sure that you have at least 300 MB of free space in the installation directory for each installation option. In addition, you need 300 MB free space for the installer executables. If you cannot provide 300 MB free space in the temporary directory, you can set one of the environment variables `TEMP`, `TMP`, or `TMPDIR` to another directory with 300 MB free space for the installer executables.

You can set values for the `TEMP`, `TMP`, or `TMPDIR` environment variable to an alternative installation directory as described in section [Useful Information About the Installer \[page 18\]](#).
- Make sure that `umask` is set to `022` for the user with `root` permissions that you want to use for running the installer.

As the user with `root` permissions that you want to use for running the installer, enter the following command: `umask 022`
- **HP-UX, Linux, Oracle-Solaris:** Make sure that you have set the limits for operating system users `root`, `<sapsid>adm`, and your database-specific operating system users (see also sections *Creating Operating System Users and Groups* and *Running the Installer* in the installation guide).

⚠ Caution

Caution: the `limit` mechanism supports hard- and soft-limits. The soft-limit cannot be bigger than the hard-limit. The hard-limit can be set/increased by the root user like: `limit -h <limit> <new_value>`, for example `limit -h datasize unlimited`.

- Using `csh` shell, the output of command `limit` needs to be at least as follows:

❁ Example

The following table lists example output taken from SUSE Linux Enterprise Server 11 (x86_64).

Output	Properties
cputime	unlimited
filesize	unlimited
datasize	unlimited
stacksize	8192 KB

Output	Properties
coredumpsize	unlimited
descriptors	8192
memoryuse	unlimited

- Using `sh` or `ksh` shell, the output of command `ulimit -a` needs to be at least as follows:

❁ Example

The following table lists example output taken from SUSE Linux Enterprise Server 11 (x86_64).

Output sh	Output ksh	Properties
cpu time (seconds)	cpu time (seconds)	unlimited
file size (blocks)	file size (blocks)	unlimited
data seg size (kbytes)	data size (Kibytes)	unlimited
stack size (kbytes)	stack size (Kibytes)	8192 KB
core file size (blocks)	core file size (blocks)	unlimited
open files	nofile	8192
max memory size (kbytes)	max memory size (Kibytes)	unlimited

- Make sure that the following ports are not used by other processes:
 - Port 4237 is used by default as HTTPS port for communication between the installer and the SL Common GUI.
If this port cannot be used, you can assign a free port number by executing `sapinst` with the following command line parameter:
SAPINST_HTTPS_PORT=<Free Port Number>
 - Port 4239 is used by default for displaying the feedback evaluation form at the end of the installer processing.
The filled-out evaluation form is then sent to SAP using HTTPS.
If this port cannot be used, you can assign a free port number by executing `sapinst` with the following command line parameter:
SAPINST_HTTP_PORT=<Free Port Number>

4.3 Running the Installer

This section describes how to run the installer.

Prerequisites

For more information, see [Prerequisites for Running the Installer \[page 12\]](#).

Context

The installer has a web browser-based GUI named “SL Common GUI of the Software Provisioning Manager” - “SL Common GUI” for short.

This procedure describes an installation where you run the installer and use the SL Common GUI, that is you can control the processing of the installer from a browser running on any device.

For more information about the SL Common GUI, see [Useful Information About the Installer \[page 18\]](#).

Procedure

1. Log on to the installation host as a user with `root` permissions.

⚠ Caution

Make sure that the user with `root` permissions that you want to use for running the installer has not set any environment variables for a different SAP system or database.

If your security policy requires that the person running the installer is not allowed to know the credentials of a user with `root` permissions on the installation host, you can specify another operating system user for authentication purposes. You do this using the `SAPINST_REMOTE_ACCESS_USER` parameter when starting the `sapinst` executable from the command line. You must confirm that the user is a trusted one. For more information, see SAP Note [1745524](#).

2. Make the installation media available.

executable from the command line. You must confirm that the user is a trusted one. For more information, see SAP Note

For more information, see [Preparing the Installation Media \[page 8\]](#).

→ Recommendation

Make the installation media available **locally**. For example, if you use Network File System (NFS), reading from media mounted with NFS might fail.

3. Start the installer from the directory to which you unpacked the Software Provisioning Manager archive by entering the following command:

```
<Path_To_Unpack_Directory>/sapinst
```

i Note

```
<Path_To_Unpack_Directory>/sapinst SAPINST_USE_HOSTNAME=<Virtual_Host_Name>
```

4. The installer is starting up.

The installer now starts and waits for the connection with the SL Common GUI.

You can find the URL you require to access the SL Common GUI at the bottom of the shell from which you are running the installer.

```
...
*****
Open your browser and paste the following URL address to access the GUI
https://[<hostname>]:4237/sapinst/docs/index.html
Logon users: [<users>]
*****
...
```

i Note

If the host specified by `<hostname>` cannot be reached due to a special network configuration, proceed as follows:

1. Terminate the installer as described in [Useful Information about the Installer \[page 18\]](#).
2. Restart the installer from the command line with the `SAPINST_GUI_HOSTNAME=<hostname>` property.
You can use a fully-qualified host name.

If you have a supported web browser (see [Prerequisites for Running the Installer \[page 12\]](#)) installed on the host where you run the installer, you can open this URL directly in the shell. Otherwise, open the URL in a supported web browser that runs on another device.

⚠ Caution

After opening the browser URL, make sure that the URL in the browser starts with "https://" to avoid security risks such as SSL stripping.

Before you reach the [Welcome](#) screen, your browser warns you that the certificate of the `sapinst` process on this computer could not be verified.

Proceed as follows to avoid security risks such as a man-in-the-middle attack:

1. Click on the certificate area on the left hand side in the address bar of your browser, and view the certificate.
2. Open the certificate fingerprint or thumbprint, and compare all hexadecimal numbers to the ones displayed in the console output of the installer.

Proceed as follows to get the certificate fingerprint or thumbprint from the server certificate printed in the installer console:

1. Go to the `sapinst_exe.xxxxxx.xxxx` directory in the temporary directory to which the installer has extracted itself:

```
<User_Home>/sapinst/
```


2. In the `sapinst_exe.xxxxxx.xxxx` directory, execute the `sapgenpse` tool with the command line option `get_my_name -p`.
As a result, you get the server fingerprint or thumbprint from the server certificate.
3. Accept the warning to inform your browser that it can trust this site, even if the certificate could not be verified.

The SL Common GUI opens in the browser by displaying the *Welcome* screen.

5. On the *Welcome* screen, choose the required option:
 - If you are using the `70SWPM*.SAR`:
Choose ► *SAP Business Suite <Version>* ► *<SAP SCM Product Version>* ► *Standalone Engines* ► *SCM Optimizer Installation* ►.
 - If you are using the `SWPM*.SAR`:
Choose ► *Generic Options* ► *SCM Optimizer Installation* ►.
6. Choose *Next*.

i Note

If there are errors during the self-extraction process of the installer, you can find the log file `dev_selfex.out` in the temporary directory.

7. Follow the instructions on the installer screens and enter the required parameters.

i Note

To find more information on each parameter during the *Define Parameters* phase, position the cursor on the required parameter input field, and choose either `F1` or the *HELP* tab. Then the available help text is displayed in the *HELP* tab.

⚠ Caution

The signature of installation media and installation archives is checked **automatically** during the *Define Parameters* phase while processing the *Media Browser* and - if you perform an archive-based installation - the *Software Package Browser* screens.

Note that this automatic check is only committed once and **not** repeated if you modify artifacts such as SAR archives or files on the media **after** the initial check has been done. This means that - if you modify artefacts later on either during the remaining *Define Parameters* phase or later on during the *Execute Service* phase - the signature is not checked again.

For more information, see SAP Note [2393060](#).

After you have entered all requested input parameters, the installer displays the *Parameter Summary* screen. This screen shows both the parameters that you entered and those that the installer set by default. If required, you can revise the parameters before starting the installation.

8. To start the installation, choose *Next*.

The installer starts the installation and displays the progress of the installation. When the installation has finished, the installer shows the message: Execution of `<Option_Name>` has completed.

9. If required, delete directories with the name `sapinst_exe.xxxxxx.xxxx` after the installer has finished. Sometimes these directories remain in the temporary directory.

10. If you copied the installer software to your hard disk, you can delete these files when the installation has successfully completed.
11. For security reasons, we recommend that you remove the operating system users from the group `sapinst` **after** you have completed the installation.

i Note

This step is only required, if you did **not** specify during the *Define Parameters* phase that the operating system users are to be removed from the group `sapinst` **after** the execution of the installer has completed.

12. For security reasons, we recommend that you delete the `.sapinst` directory within the home directory of the user with which you ran the installer:

```
<User_Home>/ .sapinst/
```

13. The installer log files contain IP addresses and User IDs such as the ID of your S-User. For security, data protection, and privacy-related reasons we strongly recommend that you delete these log files once you do not need them any longer.

You find the installer log files in the `sapinst_instdir` directory. For more information, see [Useful Information about the Installer \[page 18\]](#).

4.4 Additional Information about the Installer

The following sections provide additional information about the installer.

[Useful Information about the Installer \[page 18\]](#)

This section contains some useful technical background information about the installer and the installer GUI.

[Interrupted Processing of the Installer \[page 20\]](#)

Here you find information about how to restart the installer if its processing has been interrupted.

[Troubleshooting with the Installer \[page 24\]](#)

This section tells you how to proceed when errors occur while the installer is running.

[Using the Step State Editor \(SAP Support Experts Only\) \[page 25\]](#)

This section describes how to use the `Step State Editor` available in the installer.

4.4.1 Useful Information about the Installer

This section contains some useful technical background information about the installer and the installer GUI.

- Software Provisioning Manager (the “installer” for short) has the web browser-based “SL Common GUI of the Software Provisioning Manager” - “SL Common GUI” for short.

The SL Common GUI uses the SAP UI Development Toolkit for HTML5 - also known as SAPUI5 - a client-side HTML5 rendering library based on JavaScript. The benefits of this new user interface technology for the user are:

- Zero foot print, since only a web browser is required on the client
- New controls and functionality, for example, view logs in web browser.

As of version 1.0 SP24 Patch Level (PL) 5, Software Provisioning Manager comes with a new look and feel of the SL Common GUI. For more information, see <https://blogs.sap.com/2018/11/10/new-look-for-software-provisioning-manager/>.

The SL Common GUI connects the web browser on a client with the `sapinst` executable - which is part of Software Provisioning Manager - running on the installation host using the standard protocol HTTPS.

For the SL Common GUI the installer provides a pre-generated URL at the bottom of the shell from which you are running the installer. If you have a supported web browser installed on the host where you run the installer, you can start the SL Common GUI directly from this URL. Otherwise, open a web browser supported by the SL Common GUI on any device and run the URL from there.

For more information about supported web browsers see [Prerequisites for Running the Installer \[page 12\]](#). If you need to run the **SL Common GUI in accessibility mode**, apply the standard accessibility functions of your web browser.

- As soon as you have started the `sapinst` executable, the installer creates a `.sapinst` directory underneath the `/home/<User>` directory where it keeps its log files. `<User>` is the user with which you have started the installer.

After you have reached the *Welcome* screen and selected the relevant installer option for the SAP system or instance to be installed, the installer creates a directory `sapinst_instdir` where it keeps its log files, and which is located directly below the temporary directory. The installer finds the temporary directory by checking the value of the `TEMP`, `TMP`, or `TMPDIR` environment variable. If no value is set for these variables, the installer uses `/tmp` by **default**.

All log files which have been stored so far in the `.sapinst` folder are moved to the `sapinst_instdir` directory as soon as the latter has been created.

If you want the `sapinst_instdir` directory to be created in another directory than `/tmp`, set the environment variable `TEMP`, `TMP`, or `TMPDIR` to this directory before you start the installer.

Shell Used	Command
Bourne shell (sh)	<code>TEMP=<Directory></code> <code>export TEMP</code>
C shell (csh)	<code>setenv TEMP <Directory></code>
Korn shell (ksh)	<code>export TEMP=<Directory></code>

⚠ Caution

Make sure that the installation directory is not mounted with NFS, or there might be problems when the Java Virtual Machine is started.

The installer records its progress in the `keydb.xml` file located in the `sapinst_instdir` directory. Therefore, if required, you can continue with the installer from any point of failure, without having to repeat the already completed steps and without having to reenter the already processed input parameters. For

security reasons, a variable encryption key is generated as soon as the `sapinst_inst_dir` directory is created by the installer. This key is used to encrypt the values written to the `keydb.xml` file.

→ Recommendation

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

- The installer extracts itself to the temporary directory. These executables are deleted again after the installer has stopped running. Directories called `sapinst_exe.xxxxxx.xxxx` sometimes remain in the temporary directory after the installer has finished. You can safely delete them. The temporary directory also contains the log file `dev_selfex.out` from the self-extraction process of the installer, which might be useful if an error occurs.

⚠ Caution

If the installer cannot find a temporary directory, the installation terminates with the error `FCO-00058`.

- To see a list of all available installer properties, start the installer as described above with the option `-p`:
`./sapinst -p`
- If required, stop the installer by choosing the *Cancel* button.

i Note

If you need to terminate the installer, press `Ctrl + C`.

4.4.2 Interrupted Processing of the Installer

Here you find information about how to restart the installer if its processing has been interrupted.

Context

The processing of the installer might be interrupted for one of the following reasons:

- An error occurred during the *Define Parameters* or *Execute* phase:
The installer does not abort the installation in error situations. If an error occurs, the installation pauses and a dialog box appears. The dialog box contains a short description of the choices listed in the table below as well as a path to a log file that contains detailed information about the error.
- You interrupted the processing of the installer by choosing *Cancel* in the SL Common GUI.

⚠ Caution

If you stop an option in the *Execute* phase, any system or component **installed** by this option is incomplete and not ready to be used. Any system or component **uninstalled** by this option is not completely uninstalled.

The following table describes the options in the dialog box:

Option	Definition
Retry	<p>The installer retries the installation from the point of failure without repeating any of the previous steps.</p> <p>This is possible because the installer records its progress in the <code>keydb.xml</code> file.</p> <p>We recommend that you view the entries in the log files, try to solve the problem, and then choose Retry.</p> <p>If the same or a different error occurs, the installer displays the same dialog box again.</p>
Stop	<p>The installer stops the installation, closing the dialog box, the installer GUI, and the GUI server.</p> <p>The installer records its progress in the <code>keydb.xml</code> file. Therefore, you can continue with the installer from the point of failure without repeating any of the previous steps. See the procedure below.</p>
Continue	The installer continues the installation from the current point.
View Log	Access installation log files.

i Note

You can also terminate the installer by choosing `Ctrl` + `C` but we do **not** recommend this because it kills the process immediately.

The following procedure describes the steps to restart an installation, which you stopped by choosing [Stop](#), or to continue an interrupted installation after an error situation.

Procedure

1. Log on to the installation host as a user with the required permissions as described in [Running the Installer \[page 15\]](#).
2. Make sure that the installation media are still available.

For more information, see [Preparing the Installation Media \[page 8\]](#).

→ Recommendation

Make the installation media available **locally**. For example, if you use remote file shares on other Windows hosts, CIFS shares on third-party SMB-servers, or Network File System (NFS), reading from media mounted with NFS might fail.

3. Make sure that the installation media are still available.

For more information, see [Preparing the Installation Media \[page 8\]](#).

→ Recommendation

Make the installation media available **locally**. For example, if you use remote file shares on other Windows hosts, CIFS shares on third-party SMB-servers, or Network File System (NFS), reading from media mounted with NFS might fail.

4. Restart the installer from the directory to which you unpacked the Software Provisioning Manager archive by executing the following command:

```
<Path_To_Unpack_Directory>/sapinst
```

5. The installer is restarting.

The installer now starts and waits for the connection with the SL Common GUI.

You can find the URL you require to access the SL Common GUI at the bottom of the shell from which you are running the installer.

```
...
*****
Open your browser and paste the following URL address to access the GUI
https://[<hostname>]:4237/sapinst/docs/index.html
Logon users: [<users>]
*****
...
```

i Note

If the host specified by `<hostname>` cannot be reached due to a special network configuration, proceed as follows:

1. Terminate the installer as described in [Useful Information about the Installer \[page 18\]](#).
2. Restart the installer from the command line with the `SAPINST_GUI_HOSTNAME=<hostname>` property.
You can use a fully-qualified host name.

If you have a supported web browser (see [Prerequisites for Running the Installer \[page 12\]](#)) installed on the host where you run the installer, you can open this URL directly in the shell. Otherwise, open the URL in a supported web browser that runs on another device.

⚠ Caution

After opening the browser URL, make sure that the URL in the browser starts with “https://” to avoid security risks such as SSL stripping .

Before you reach the *Welcome* screen, your browser warns you that the certificate of the `sapinst` process on this computer could not be verified.

Proceed as follows to avoid security risks such as a man-in-the-middle attack:

1. Click on the certificate area on the left hand side in the address bar of your browser, and view the certificate.
2. Open the certificate fingerprint or thumbprint, and compare all hexadecimal numbers to the ones displayed in the console output of the installer.

Proceed as follows to get the certificate fingerprint or thumbprint from the server certificate printed in the installer console:

1. Go to the `sapinst_exe.xxxxxxx.xxxx` directory in the temporary directory to which the installer has extracted itself:

```
<User_Home>/sapinst/
```

2. In the `sapinst_exe.xxxxxxx.xxxx` directory, execute the `sapgenpse` tool with the command line option `get_my_name -p`.

As a result, you get the server fingerprint or thumbprint from the server certificate.

3. Accept the warning to inform your browser that it can trust this site, even if the certificate could not be verified.

The SL Common GUI opens in the browser by displaying the *Welcome* screen.

6. From the tree structure on the *Welcome* screen, select the installation option that you want to continue and choose *Next*.

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

7. On the *What do you want to do?* screen, decide between the following alternatives and continue with *Next*:

Alternative	Behavior
<i>Perform a new run</i>	<p>The installer does not continue the interrupted installation option. Instead, it moves the content of the old installer directory and all installer-specific files to a backup directory. Afterwards, you can no longer continue the old option.</p> <p>The following naming convention is used for the backup directory:</p> <pre>log_<Day>_<Month>_<Year>_<Hours>_<Minutes>_<Seconds></pre> <div>❖ Example</div> <pre>log_01_Oct_2016_13_47_56</pre> <div>i Note</div> <p>All actions taken by the installation before you stopped it (such as creating directories or users) are not revoked.</p> <div>⚠ Caution</div> <p>The installer moves all the files and folders to a new log directory, even if these files and folders are owned by other users. If there are any processes currently running on these files and folders, they might no longer function properly.</p>
<i>Continue with the existing one</i>	The installer continues the interrupted installation from the point of failure.

4.4.3 Troubleshooting with the Installer

This section tells you how to proceed when errors occur while the installer is running.

Context

If an error occurs, the installer:

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

Procedure

1. Check SAP Note [2393060](#) for known installer issues.
2. If an error occurs during the *Define Parameters* or the *Execute Service* phase, do one of the following:
 - Try to solve the problem:
 - To check the installer log files (`sapinst.log` and `sapinst_dev.log`) for errors, choose the *LOG FILES* tab.

i Note

The *LOG FILES* tab is only available if you have selected on the *Welcome* screen the relevant installer option for the SAP product to be installed .

If you need to access the log files before you have done this selection, you can find them in the `.sapinst` directory underneath the `/home/<User>` directory, where `<User>` is the user that you used to start the installer.

For more information, see [Useful Information about the Installer \[page 18\]](#).

- To check the log and trace files of the installer GUI for errors, go to the directory `<User_Home>/ .sapinst/`
 - Then continue by choosing *Retry*.
 - If required, abort the installer by choosing *Cancel* in the tool menu and restart the installer. For more information, see [Interrupted Processing of the Installer \[page 20\]](#).
3. If you cannot resolve the problem, report an incident using the appropriate subcomponent of BC-INS*. For more information about using subcomponents of BC-INS*, see SAP Note [1669327](#).

4.4.4 Using the Step State Editor (SAP Support Experts Only)

This section describes how to use the `Step State Editor` available in the installer.

i Note

Only use the `Step State Editor` if the SAP Support requests you to do so, for example to resolve a customer incident.

Prerequisites

- SAP Support requests you to use the `Step State Editor`.
- Make sure that the host where you run the installer meets the requirements listed in [Prerequisites for Running the Installer \[page 12\]](#).

Procedure

1. Start the installer from the command line as described in [Running the Installer \[page 15\]](#) with the additional command line parameter `SAPINST_SET_STEPSTATE=true`
2. Follow the instructions on the installer screens and fill in the parameters prompted during the *Define Parameters* phase until you reach the *Parameter Summary* screen.
3. Choose *Next*.

The `Step State Editor` opens as an additional dialog. Within this dialog you see a list of all steps to be executed by the installer during the *Execute Service* phase. By default all steps are in an initial state. Underneath each step, you see the assigned installer component. For each step you have a *Skip* and a *Break* option.

- Mark the checkbox in front of the *Break* option of the steps where you want the installer to pause.
 - Mark the checkbox in front of the *Skip* option of the steps which you want the installer to skip.
4. After you have marked all required steps with either the *Break* or the *Skip* option, choose *OK* on the *Step State Editor* dialog.

The installer starts processing the *Execute Service* phase and pauses one after another when reaching each step whose *Break* option you have marked. You can now choose one of the following:

- Choose *OK* to continue with this step.
 - Choose *Step State Editor* to return to the `Step State Editor` and make changes, for example you can repeat the step by marking the checkbox in front of the *Repeat* option.
 - Choose *Cancel* to abort the installer.
5. Continue until you have run through all the steps of the *Execute Service* phase of the installer.

4.5 Installing SAP SCM Optimizer

Procedure

1. On the *Welcome* screen of the installer, choose ► *Generic Installation Options* ► *SCM Optimizer Installation* ►.
2. On the *Define Parameter* screen, enter the installation directory in the *Installation Directory* field. The default installation directory proposed by the installer is `scmopt`.

i Note

You can change the installation directory.

The selected installation directory will later on be referred to as `<INST_DIR>`.

3. In the *Installation Archive* field, enter an installation archive that is valid for SCM Optimizer 13.0 or higher. You can retrieve the respective archive from your SAP SCM Optimizer installation media.

i Note

You can find the SAR archive in the `DATA_UNITS/<OS>` directory on the installation media.

For more information on which media to use, see the Master Guide for your product and release.

5 Post-Installation

5.1 Post-Installation Checklist

You need to perform the following post-installation steps for SAP SCM Optimizer after the installer has finished:

1. You [perform a setup check of the RFC Gateway \[page 27\]](#).
2. You [customize the SAP Optimizer destination entries \[page 30\]](#).
3. You [test the SCM Optimizer installation \[page 30\]](#).
4. You [check for patches and support packages \[page 31\]](#).

5.2 Performing a Setup Check of the RFC Gateway

We recommend that you perform a setup check of the RFC Gateway.

Procedure

1. If you use a standalone Gateway instance, start the Gateway instance.
2. Log on to the ABAP application server.
3. Call transaction `SM59`. The *Display and maintain RFC destinations* screen appears.
4. Open the node *TCP/IP connection*.
5. For the first optimizer server, you have to adapt the RFC entries that are existing in your system.

The RFC entries existing in your system might look as follows:

i Note

You **only** have to adapt the entries that **actually exist** in your system, for example `OPTSERVER_CS01`.

You do not have to add entries that are missing in your system as your system **only** requires the entries that actually exist in your system.

For example, SAP TM systems might only have entries starting with "T" such as `TVRG01`.

i Note

As of SAP S/4HANA 1709, the default RFC-destinations are no longer available.

Instead, you can use report `RCC_RFC_S4_DFLT_SCMOPT_DESTS` to create them.

For more information, see SAP Note [2644038](#).

❁ Example

- OPTSERVER_CS01
- OPTSERVER_CTM01
- OPTSERVER_DPS01
- OPTSERVER_MIP01
- OPTSERVER_MMP01
- OPTSERVER_SEQ01
- OPTSERVER_SNP01
- OPTSERVER_VSR01
- OPTSERVER_TSPS01
- OPTSERVER_TVRG01
- OPTSERVER_TVSR01
- OPTSERVER_TVSS01
- OPTSERVER_VSO01

i Note

For any additional optimizer server, you have to create a new RFC entry (for example, OPTSERVER_CTM02). Make sure that this new RFC entry ends with a two-digit number that is different from 01.

To adapt an RFC entry proceed as follows:

1. Double-click the destination name OPTSERVER_<Optimizer>01. The *RFC Destination* OPTSERVER_<Optimizer>01 screen appears.

- Depending on the server, you must do the following to check the RFC entries:

Standalone SAP SCM Optimizer on Separate Host

SAP SCM Optimizer and ABAP Application Server on Same Host

- | | |
|---|---|
| <ol style="list-style-type: none"> Choose <i>Start on Explicit host</i>. In the <i>Program</i> field, check your program path (see table <i>Program Paths of RFC Entries</i> below). Check the name of your <i>Target Host</i>. Enter the number of the Gateway host and the corresponding Gateway service <code>SAPGW<GW_NO></code>. | <ol style="list-style-type: none"> Choose <i>Start on Application server</i>. In the <i>Program</i> entry field, check your program path (see table <i>Program Paths of RFC Entries</i> below). |
|---|---|

i Note

You can find out the required parameters on your target host as follows:

- On your target host, call transaction SMGW.
- Choose **Goto** > **Parameters** > **Display** (see entries for *gateway host-name* and *gateway service*).

- Confirm with OK.

⚠ Caution

If your ABAP application server is a **Unicode** system, you must do the following in addition to the above setting for each `OPTSERVER_<Optimizer>01` destination:

- Choose the tab *Unicode*.
- You must select the indicator *Unicode*, and in the group frame *Character Conversion*, leave the indicator at the default setting.

i Note

In SCM Optimizer 10.0, the default path has changed from `APOOPT` to `SCMOPT`. Furthermore, all subdirectories have been deleted so that any optimizer executables are extracted directly to the chosen installation directory.

RFC	Program Path
OPTSERVER_CTM01	<INST_DIR>/ctmsvr
OPTSERVER_DPS01	<INST_DIR>/dsoptsvr
OPTSERVER_SNP01	<INST_DIR>/snpopsvr
OPTSERVER_SEQ01	<INST_DIR>/seqopsvr

RFC	Program Path
OPTSERVER_VSR01	<INST_DIR>/vsropsvr
OPTSERVER_MMP01	<INST_DIR>/mmpopsvr
OPTSERVER_CS01	<INST_DIR>/csopsvr
OPTSERVER_TS01	<INST_DIR>/csopsvr
OPTSERVER_TVRG01	<INST_DIR>/vsropsvr
OPTSERVER_TVSR01	<INST_DIR>/vsropsvr
OPTSERVER_TVSS01	<INST_DIR>/vsropsvr
OPTSERVER_MIP01	<INST_DIR>/mipopsvr
OPTSERVER_TVSO01	<INST_DIR>/vsoopsvr
OPTSERVER_TSF01	<INST_DIR>/csopsvr
OPTSERVER_VSO01	<INST_DIR>/vsoopsvr

3. Save your entry and choose *Exit*.
4. Repeat the steps 1. to 3. for the remaining RFC entries.

5.3 Customizing the Optimizer Destination Entries

1. Log on to the ABAP application server.
2. Call transaction `SPRO`.
3. Choose *SAP Reference IMG*.
4. Expand the *Cross-Application Components* tree and choose **► Processes and Tools for Enterprise Applications ► Remote Control and Communication Framework ▾**.
5. Choose the *Execute* button of the step *Edit Destinations* and maintain it according to the customizing documentation.
6. Perform the *Connection Test* in this transaction after the customization.

5.4 Testing the Optimizer Installation

1. Log on to the ABAP application server.
2. Call transaction `RCC_CUST` and click the connection test button. All tests must be successful (green light).

5.5 Applying the Latest Patches and Support Packages

Proceed as described in SAP Note [1686826](#).

6 Additional Information

6.1 Additional Information

This section contains additional information on the SAP SCM Optimizer installation:

- [Uninstalling the SAP SCM Optimizer \[page 32\]](#)

6.2 Uninstalling SAP SCM Optimizer

Use

Proceed as follows to uninstall SAP SCM Optimizer

Procedure



1. If your SAP SCM Optimizer runs on a dedicated host, stop the SAP Standalone Gateway.
2. Delete the directory `/INST_DIR` completely with all its content.
3. If required, uninstall also the SAP Standalone Gateway.

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