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SAP HANA Studio Installation and Update Guide

Linux, Microsoft Windows, Mac OS

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1 Introduction

The installation of the SAP HANA studio can also be performed without being a root user. When installing the SAP HANA studio without administrative rights the installed SAP HANA studio is only available to the user who installed it.

The default installation folder for MS Windows is `%USERPROFILE%\sap\hdbstudio` and for Linux is `$HOME/sap/hdbstudio`. The default installation folder for Mac OS `/Applications/sap/hdbstudio`.

1.1 About the SAP HANA Studio

The SAP HANA studio is a collection of applications for SAP HANA.

It enables technical users to manage the SAP HANA database, to create and manage user authorizations, and to create new or modify existing models of data in the SAP HANA database. It is a client tool, which can be used to access local or remote SAP HANA databases.

The SAP HANA studio runs on the Eclipse platform 3.6.

Related Information

SAP HANA Master Guide

1.2 Supported Platforms

The SAP HANA studio runs on several platforms.

You can use the SAP HANA studio on the following platforms:

- Microsoft Windows x32 and x64 versions of:
  - Windows XP
  - Windows Vista
  - Windows 7
  - Windows 8
- SUSE Linux Enterprise Server SLES 11: x86 64-bit version
- Red Hat Enterprise Linux (RHEL) 6.5
- Mac OS 10.9 or higher

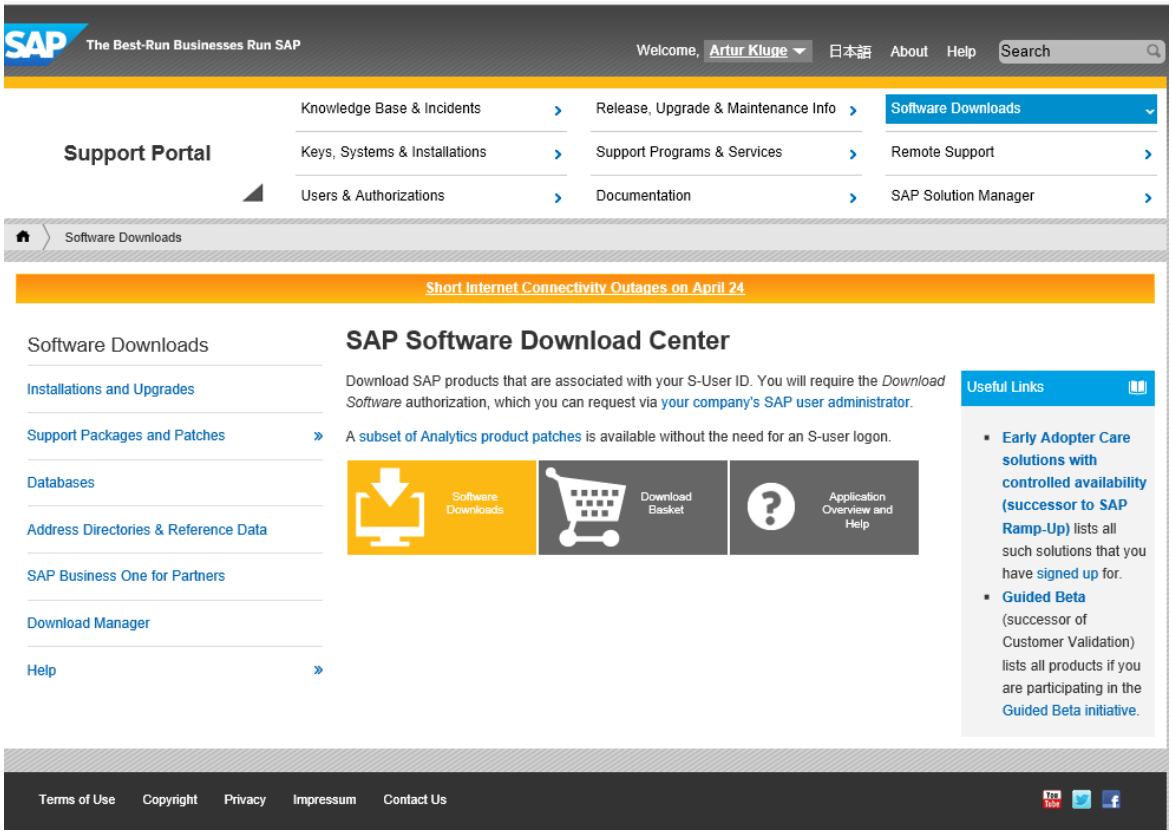
1.3 Software Download

In the SAP Software Download Center, you have access to the installation media and components for SAP HANA.

Installation Media and Components for SAP HANA

Installation Media for an SAP HANA SPS

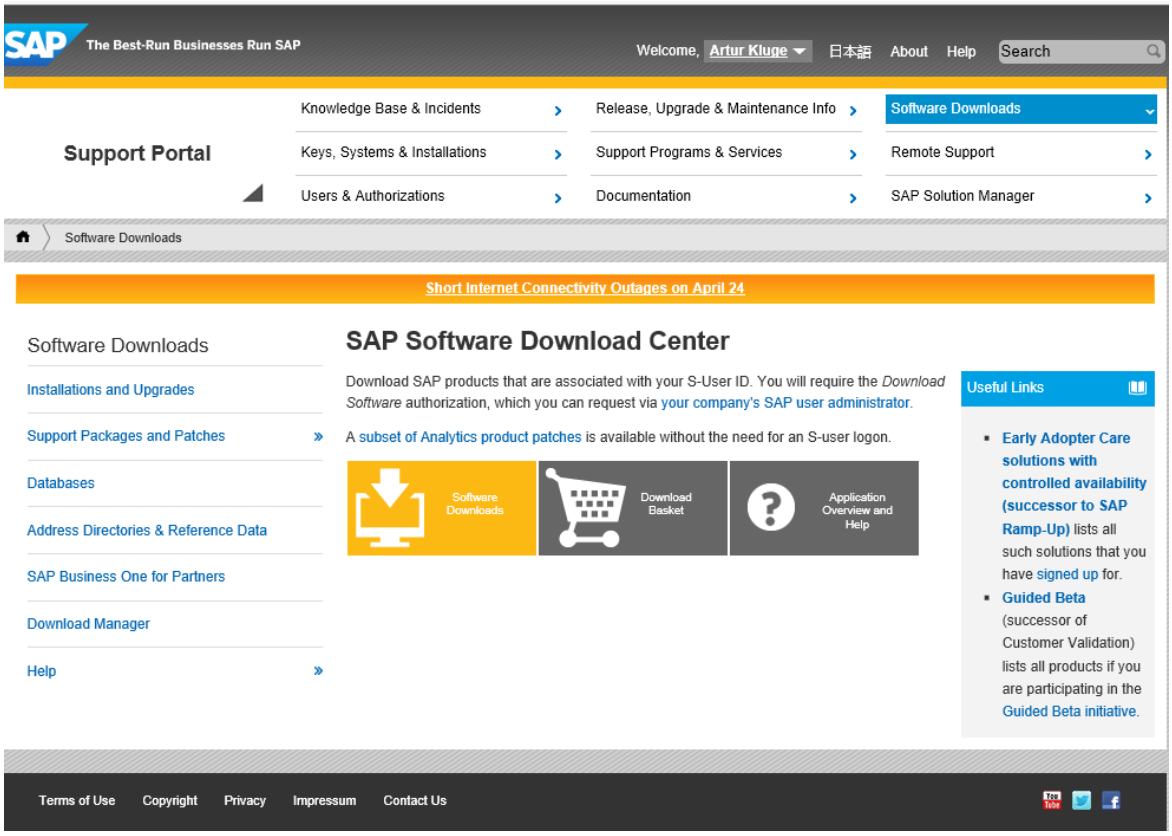
1. Open the *SAP Software Download Center*.
2. Choose *Software Downloads*.



3. Choose *INSTALLATIONS & UPGRADES*.
4. Choose *By Alphabetical Index (A-Z)*.
5. Choose *H*.
6. Choose *SAP HANA PLATFORM EDITION*.
7. Choose *DOWNLOADS*.
8. Choose *SAP HANA PLATFORM EDITION 2.0*.
9. Choose *DOWNLOADS*.
10. Choose *INSTALLATION*.

Support Packages and Patches for SAP HANA

1. Open the *SAP Software Download Center*.
2. Choose *Software Downloads*.



3. Choose *SUPPORT PACKAGES & PATCHES*.
4. Choose *By Alphabetical Index (A-Z)*.
5. Choose *H*.
6. Choose *SAP HANA PLATFORM EDITION*.
7. Choose *DOWNLOADS*.
8. Choose *SAP HANA PLATFORM EDITION 2.0*.
9. Choose *DOWNLOADS*.
10. Choose *ENTRY BY COMPONENT* or *SUPPORT PACKAGE STACK DOWNLOAD*.

For more information, see *Application Overview and Help* on *SAP Software Download Center*.

Responsibilities

The responsibility for acquiring and installing SAP HANA depends on the chosen deployment model:

- If a customer chooses the **SAP HANA Tailored Datacenter Integration**, the components of SAP HANA must be installed on validated hardware by a certified administrator or official SAP HANA hardware partner.
- If a customer chooses an **SAP HANA appliance**, then the components of SAP HANA can only be installed by certified hardware partners on validated hardware running a specific operating system. Any other

system or content developed with systems of this type is not supported by SAP. For more information, see the information page of the product version. Support Package Stacks (SPS) can be downloaded and applied to appliances in accordance with agreements with the respective hardware partner.

Related Information

SAP Software Download Center
Application Overview and Help

2 Planning

You need to perform a number of planning steps.

2.1 System Requirements

Different system requirements have to be met.

- The SAP HANA studio does not depend on an external JVM installation. During the installation and the update of the SAP HANA studio an SAP JVM is being installed or updated.
  For information about the released version, see the *Product Availability Matrix (PAM)*.
- The SAP HANA studio uses the default Eclipse secure storage to store passwords, for example, of database users connecting to SAP HANA systems. However, depending on whether you are running a 32-bit installation or a 64-bit installation, different password providers are used. This means that switching between a 32-bit and a 64-bit installation results in the clearing of stored passwords. It is possible to override the default Eclipse configuration for password storage using the command line arguments –`eclipse.keyring` and –`eclipse.password`. For more information see the Eclipse documentation.

Related Information

Eclipse Documentation
Product Availability Matrix (PAM)

2.2 Installation Paths

The default installation paths are specific to the operating system on which the SAP HANA studio is installed.

Syntax

If you do not specify an installation path during installation, the following default values apply:

Table 1:

Platform	Package Version	Installation Path
Microsoft Windows x86, 32-bit	32-bit	`C:\Program Files\sap\hdbstudio`
Microsoft Windows x86, 64-bit	64-bit	`C:\Program Files\sap\hdbstudio`
Microsoft Windows x86, 64-bit	32-bit	`C:\Program Files (x86)\sap\hdbstudio`
Linux x86, 64-bit	64-bit	`/usr/sap/hdbstudio`
Mac OS	64-bit	old: `/Applications/sap/hdbstudio` new: `/Applications/sap/hdbstudio.app`

2.3 Installation or Update

There are several aspects to the installation or update of the SAP HANA studio.

> **Note**
>
> The commands for installing or updating the SAP HANA studio are the same (see *Installation and Update Commands* in the *SAP HANA Installation and Update Guide*). Depending on the current installation situation you can do the following:
>
> - If there is no SAP HANA studio installation you can only choose to perform an SAP HANA studio installation.
> - If there are already SAP HANA studio installations you can choose to update an existing SAP HANA studio installation or you can choose to perform an additional SAP HANA studio installation.

> **Note**
>
> Update all SAP HANA studio installations. Use the same revision as the SAP HANA database:
>
> - If you are using a complete SPS installation media, use the SAP HANA studio version on this media.
> - If you are downloading an individual SAP HANA studio installation media, make sure you use an SAP HANA studio version that matches with your SAP HANA database version. Check the version number in the file name of the SAP HANA studio installation media.

- Installation
  You can install the SAP HANA studio with one of the following methods:
  - Use the GUI-based Installation Manager, which is based on the program `hdbsetup`.
    This is the recommended installation method.

- Use the `hdbinst` program at the command line.

- Update
  You can update the SAP HANA studio with one of the following methods:
  - Use the SAP HANA database lifecycle manager (HDBLCM) to set up the update server for the SAP HANA studio update and regularly provide the newest installation files. Whenever you perform an installation or update, the installation files for the SAP HANA studio update are stored and updated inside the SAP HANA database in a delivery unit with a package that contains the installation files. The URL for the update site is:

    ```
    http://<host>:80<instance_number>/sap/hana/studio/
    ```

    The SAP HANA database lifecycle manager (command line tool `hdblcm`) is the recommend tool to set up the update site.
  - Manually set up the repository for the update site using the `hdbinst` program on any server with the call option `--copy_repository=<target_repository_path>`, then manually configure it to be available to the SAP HANA studio installations.
    This is suitable for large landscapes with multiple SAP HANA studios where the update needs to be centrally available. There is no dependency on the SAP HANA database lifecycle manager.
  - Download the latest version of SAP HANA studio from SAP Service Marketplace, and use the GUI-based Installation Manager, which is based on the program `hdbsetup`.
    This is suitable for quick updates of individual SAP HANA studios where there is no infrastructure.
  - Download the latest version of SAP HANA studio from SAP Service Marketplace, and use the `hdbinst` program at the command line.
    This is suitable for quick updates of individual SAP HANA studios where there is no infrastructure.
  - See *SAP Note 1828400 - SAPUI5 tools disappeared after updating SAP HANA Studio*.

> **Note**
>
> The installation of the SAP HANA studio can also be performed without being a root user. When installing the SAP HANA studio without administrative rights, the installed SAP HANA studio is only available to the user who installed it. The default installation folder for Mac OS is `/Users/%USERPROFILE%/sap/hdbstudio`. The default installation folder for Microsoft Windows is `%USERPROFILE%\sap\hdbstudio`, and the default installation folder for Linux is `$HOME/sap/hdbstudio`.

> **Note**
>
> When you start the SAP HANA studio, you can pass standard Eclipse command line arguments. You can specify the workspace you are using with the `-data <path to workspace>` command line argument. You can install and use more than one SAP HANA studio installation with different workspaces on one computer with the `-data` command line argument.
>
> For more information, see the Eclipse standard documentation (search for "Eclipse runtime options").

> **Note**
>
> For information about data storage security, see the *SAP HANA Security Guide* (*Secure Storage of Passwords in SAP HANA*, *Protection of Data in SAP HANA Studio Workspaces*).

Related Information

Installation and Update Commands [page 12]
SAP Software Download Center
Software Download [page 5]

2.4 SAP HANA Studio Features

SAP HANA studio features provide toolsets for different use cases of the SAP HANA studio.

During installation or update you can select the following features:

- SAP HANA Studio Administration
  Toolset for various administration tasks, excluding transportable design-time repository objects. General troubleshooting tools like tracing, the catalog browser and SQL Console are also included.
- SAP HANA Studio Database Development
  Toolset for content development. It addresses, in particular, the DataMarts and ABAP on SAP HANA scenarios, which do not include SAP HANA native application development (XS).
- SAP HANA Studio Application Development
  Toolset for developing SAP HANA native applications (XS and UI5 tools). SAP UI5 Tools are not included.

By default, all features are installed.

> **Note**
>
> The SAP HANA studio repository is divided into core features (see above list) and additional features. Additional features need to be installed and updated in a separate step (see *Update the SAP HANA Studio Using an Update Site*).

Related Information

Update the SAP HANA Studio Using an Update Site [page 21]

2.5 Installation and Update Commands

The installation and update commands are specific to the operating system.

Table 2:

Operating System	Installation Manager (Graphical User Interface)	Installation in the Command Line

Microsoft Windows	`hdbsetup [-a studio]`	`hdbinst [-a studio] [<option_list>]`
		`<option_list> :: = <option> <option> ...`
		You can omit the call option `-a studio` if you only have one installation kit - that is, one installation variant - on your system.

Linux	`./hdbsetup [-a studio]`	`./hdbinst [-a studio] [<option_list>]`
		`<option_list> :: = <option> <option> ...`
		You can omit the call option `-a studio` if you only have one installation kit - that is, one installation variant - on your system.

Mac OS	`./hdbsetup [-a studio]`	`./hdbinst [-a studio] [<option_list>]`
		`<option_list> :: = <option> <option> ...`
		You can omit the call option `-a studio` if you only have one installation kit - that is, one installation variant - on your system.

2.6 Call Options for an Installation

The call options are specific to the studio installation.

`archive_dir`

Description

Specifies the installation variant - a directory containing the installation kit.

Syntax

In the command line, the following syntax is used:

```
--archive_dir=<dir>
```

or, in short form:

```
-a <dir>
```

Remarks

The default for this parameter is `--archive_dir=server`. If the server installation kit is not present, default values are (in order): `client`, `studio`.

`batch`

Description

Runs the SAP HANA lifecycle management tool from the command line in batch mode using default values for unspecified parameters. If mandatory values are omitted or if invalid values are specified, the program issues an error message.

Syntax

In the command line, the following syntax is used:

```
--batch
```

or, in short form:

```
-b
```

`check_files`

Description

Checks whether components of the installation kit are already installed on this host.

Syntax

In the command line, the following syntax is used:

```
--check_files
```

configfile

Description

Loads a configuration file of call option key-value pairs to be passed to the SAP HANA lifecycle management program.

Syntax

In the command line, the following syntax is used:

```
--configfile=<file path>
```

Remarks

The configuration file makes installation and configuration tasks more efficient and reliable. For more information, see Related Information.

This complement to this call option is the call option `dump_configfile_template`.

copy_repository

Description

Specifies the target path to which SAP HANA studio repository should be copied.

Syntax

In the command line, the following syntax is used:

```
--copy_repository=<path>
```

dump_configfile_template

Description

Specifies a file path to which a template configuration file is exported. The call options in the template configuration file are set to their default values, and can be edited.

Syntax

In the command line, the following syntax is used:

```
--dump_configfile_template=<file path>
```

Remarks

The configuration file makes installation and configuration tasks more efficient and reliable. For more information, see Related Information.

This complement to this call option is the call option `configfile`.

`features`

Description

Specifies the features (admin, appdev, dbdev, ...) to be installed [interactive, default: --features=all].

Syntax

In the command line, the following syntax is used:

```
--features=all|feat1[,feat2]...
```

`help`

Description

Displays the inline help information.

Syntax

In the command line, the following syntax is used:

```
--help
```

or, in short form:

```
-h
```

Remarks

A general help output is available for all SAP HANA lifecycle management programs. Task-specific help output is available for some programs. Refer to the task documentation for more details.

`ignore`

Description

Ignores failing prerequisite checks. Refer to the inline help output for program-specific checks that can be ignored.

Syntax

In the command line, the following syntax is used:

```
--ignore=<check1>[,<check2>]...
```

`list_packages`

Description

Displays available software components and their versions.

Syntax

In the command line, the following syntax is used:

```
--list_packages
```

or, in short form:

```
-l
```

`list_systems`

Description

Displays a list of the installed SAP HANA systems on the current host, including the SAP system ID (SID), instance number, version number, and hosts.

Syntax

In the command line, the following syntax is used:

```
--list_systems
```

or, in short form:

```
-L
```

`no_debug_packages`

Description

Suppresses the installation of debug packages.

Syntax

In the command line, the following syntax is used:

```
--no_debug_packages
```

`path`

Description

Specifies the installation path of a client or studio installation.

Syntax

In the command line, the following syntax is used:

```
--path=<path>
```

or, in short form:

```
-p <path>
```

Remarks

The default for this parameter is `--path=/usr/sap/hdbclient` or `--path=/usr/sap/hdbstudio`.

This parameter is available in interactive mode.

`repository`

Description

Source path of SAP HANA studio repository [default: --repository=`studio_installation_media`\studio\repository].

Syntax

In the command line, the following syntax is used:

```
--repository=<source repository>
```

or, in short form:

```
-r <source repository>
```

`timeouts`

Description

Sets customized timeouts (`start_instance`, `start_service`, `stop_instance`, `stop_service`).

Syntax

In the command line, the following syntax is used:

```
--timeouts=<name1>:<sec>[,<name2>:<sec>]...
```

`version`

Description

Displays the version of the SAP HANA lifecycle management tool.

Syntax

In the command line, the following syntax is used:

```
--version
```

or, in short form:

```
-v
```

`vm`

Description

Specifies the path of the Java runtime file.

Syntax

In the command line, the following syntax is used:

```
--vm=<path>
```

3 SAP HANA Studio on Linux

You can run SAP HANA studio on Linux.

3.1 Installation or Update on Linux

You can install SAP HANA studio on the SAP HANA system during the installation of SAP HANA or as a standalone installation on a Linux machine.

> **Note**
>
> The commands for installing or updating the SAP HANA studio are the same (see *Installation and Update Commands* in the *SAP HANA Installation and Update Guide*). Depending on the current installation situation you can do the following:
>
> - If there is no SAP HANA studio installation you can only choose to perform an SAP HANA studio installation.
> - If there are already SAP HANA studio installations you can choose to update an existing SAP HANA studio installation or you can choose to perform an additional SAP HANA studio installation.

> **Note**
>
> Update all SAP HANA studio installations. Use the same revision as the SAP HANA database.

Related Information

Installation and Update Commands [page 12]

3.1.1 Use the Installation Manager on Linux

The installation manager is a graphical installation tool.

Prerequisites

- The default installation folder is `/usr/sap/hdbstudio`

- If the default installation folder is already in use, then a continuous sequence of numbers is used (`/usr/sap/hdbstudio2` and so on).
- GTK2 is installed so that you can run the graphical installation tool (this is contained in SLES 11).

Procedure

1. Download and extract the software to an empty directory.
2. Open a `root` shell and go to the directory where you unpacked the software.
3. Call the Installation Manager as follows:

   ```
   ./hdbsetup
   ```

   > **Note**
   >
   > If you have several installation kits - that is, several installation variants - on your system, navigate to the download directory, and enter the following command instead to start the Installation Manager:

   ```
   ./hdbsetup -a studio
   ```
4. Choose the activity to be performed.
5. Follow the instructions displayed by the Installation Manager.
6. Leave the `root` shell after the installation or update has completed.

Results

The SAP HANA studio is installed or updated.

Related Information

Start the SAP HANA Studio on Linux [page 23]

3.1.2 Use the Command Line on Linux

SAP HANA studio can be installed using the command line tool.

Prerequisites

- The default installation folder is `/usr/sap/hdbstudio`

- If the default installation folder is already in use, then a continuous sequence of numbers is used (`/usr/sap/hdbstudio2` and so on).

Procedure

1. Download and extract the software to an empty directory.
2. Open a `root` shell and go to the directory where you unpacked the software.
3. Call the installation program as follows:
   `./hdbinst [<option_list>]`
4. Follow the instructions displayed by the installation tool.
5. Leave the `root` shell after the installation or update has completed.

Results

The SAP HANA studio is installed or updated.

Related Information

Start the SAP HANA Studio on Linux [page 23]
Call Options for an Installation [page 13]

3.1.3 Update the SAP HANA Studio Using an Update Site

An update site can be used to provide the newest installation media for a large number of installations.

Prerequisites

Before you can manually update the SAP HANA studio and configure the SAP HANA studio to check automatically for updates, you must have configured the update site from which updates are downloaded. You use the SAP HANA XS Web server to provide the installation files for the SAP HANA studio update. The installation files are packed in a delivery unit and imported into a package in the SAP HANA database when you perform an installation or an update with the SAP HANA database lifecycle manager.

You can also use an SAP HANA repository located in the file system as the update site.

Context

When you choose the SAP HANA studio during an installation or update of an SAP HANA system with the SAP HANA database lifecycle manager the following actions are performed:

- An SAP HANA studio is installed or updated on the SAP HANA system. The default installation folder is: `/hana/shared/<SID>/hdbstudio`
- SAP HANA studio update files are provided:
  - The following folder structure contains the update files: `/hana/shared/<SID>/hdbstudio_update/repository`
  - The following tgz file contains the delivery unit HANA_STUDIO_<SID> which consists of the update files: `/hana/shared/<SID>/hdbstudio_update/HANA_STUDIO_<SID>.tgz`
  - The update files are imported into the SAP HANA content repository with the following path: `/sap/hana/studio`

> **Note**
>
> The SAP HANA studio repository is divided into core features and additional features. Additional features need to be installed and updated in a separate step.

Procedure

1. In the SAP HANA studio, specify the update site as follows:
   a. From the main menu, choose *Window* > *Preferences* > *Install/Update* > *Available Software Sites* (Mac OS X: *hdbstudio* > *Preferences* > *Install/Update* > *Available Software Sites*).
   b. Choose *Add...* and specify the name of the update repository (optional) and its location, for example, `http://<host>:80<instance_number>/sap/hana/studio/` if you are using the SAP HANA XS Web server or `file:/<target_repository_path>` if you are using a file system location.
2. To update the SAP HANA studio manually, proceed as follows:
   a. From the main menu, choose *Help* > *Check for Updates*.
   The SAP HANA studio checks the specified software site for an update.
   b. If an update is available, follow the on-screen instructions to install the update.

   > **Note**
   >
   > The update can also be performed using the Eclipse standard function *Help* > *Install New Software...* If you use this function, you enter the update site for the studio update just for the current session.
3. To configure the SAP HANA studio to check for updates automatically and notify you of their availability, proceed as follows:
   a. From the main menu, choose *Window* > *Preferences* > *Install/Update* > *Automatic Updates* (Mac OS X: *hdbstudio* > *Preferences* > *Install/Update* > *Automatic Updates*).

b. Specify your update settings.

You are automatically notified if an update is available in accordance with your settings.

> **Note**
>
> By default, the SAP HANA studio does not automatically check for updates and notify you.

Related Information

Install or Update the Repository on Linux [page 28]
Install or Update the Repository on Windows [page 38]
Install or Update the Repository on Mac OS [page 49]

3.2 Start the SAP HANA Studio on Linux

Ensure that the Java runtime is set in the system `PATH` variable.

Context

To start the SAP HANA studio, perform the following steps:

Procedure

1. Open a shell and go to the installation directory, such as the following:
   `/usr/sap/hdbstudio`
2. Execute the following command:
   `./hdbstudio`
   The SAP HANA studio starts.

3.2.1 Start the SAP HANA Studio with Immediate System Logon

The SAP HANA studio program accepts command line parameters that allow you to specify the system to be connected to immediately on startup. This can be useful to system administrators, as well as to other programs that call the SAP HANA studio.

Prerequisites

You have a database user in the SAP HANA system that you want to log on to.

Procedure

1. Launch the SAP HANA studio from its installation directory passing the following start parameters:

Option	Description
-h	Host name
-n	Instance number
-u	User name

> **Note**
>
> User names containing special characters that represent conjunction or redirection characters in the command line program must be enclosed in double quotation marks ("..."), regardless of where the special character appears in the user name.

> **Example**
>
> Windows:
>
> - `hdbstudio.exe -h hana1 -n 02 -u DBADMIN`
> - `hdbstudio.exe -h hana1 -n 02 -u "&test"`
>
> Linux
>
> - `hdbstudio -h hana1 -n 02 -u DBADMIN`
> - `hdbstudio -h hana1 -n 02 -u "&test"`
>
> Mac OS:
>
> - `open -a /Applications/sap/hdbstudio.app --args -h hana1 -n 02 -u DBADMIN`
> - `open -a /Applications/sap/hdbstudio.app --args -h hana1 -n 02 -u "&test"`

   The SAP HANA studio opens.

2. If prompted, enter your user password.

Results

The system is added in the *Systems* view (if it is not already there), and you are logged on.

3.2.2 Set the Studio Workspace on Linux

During the start of the SAP HANA studio you can specify the workspace.

Workspace as Eclipse Command Line Argument

When you start the SAP HANA studio, you can pass standard Eclipse command line arguments. You can specify the workspace you are using with the `-data <path to workspace>` command line argument. You can install and use more than one SAP HANA studio installation with different workspaces on one computer with the `-data` command line argument.

These are examples for two SAP HANA studio installations with different workspaces on one Linux machine:

```
/usr/sap/hdbstudio1/hdbstudio -data /usr/sap/shared/hdbstudio1
/usr/sap/hdbstudio2/hdbstudio -data /usr/sap/shared/hdbstudio2
```

For more information, see the Eclipse standard documentation (search for "Eclipse runtime options").

Enter Workspace During First Start of SAP HANA Studio

If you do not specify the workspace as a standard Eclipse command line argument during the first start of the SAP HANA studio, you are asked to select a workspace. You can choose the selected workspace as the default workspace for this studio installation.

> **Note**
>
> You can always select a different workspace for an installation by choosing *File* > *Switch Workspace*.

3.3 Logging the Installation on Linux

The installation process is logged by the system.

There are two log files written during installation:

- `*.log`: can be read using a text editor
- `*.msg`: XML format for the display in the installation tool with the GUI

The log files are stored at the following path: `/var/tmp/hdb_studio_<time_stamp>`

3.4 Uninstalling the SAP HANA Studio on Linux

Each installation has its own uninstallation tool. Use the `hdbuninst` program of the software package for which you want to uninstall the studio software.

> **Note**
>
> For information about data storage security, see the SAP HANA Security Guide (*Secure Storage of Passwords in SAP HANA*, *Protection of Data in SAP HANA Studio Workspaces*).

Related Information

SAP HANA Security Guide

3.4.1 Uninstall the SAP HANA Studio on Linux in Interactive Mode

You can uninstall the SAP HANA studio on Linux in interactive mode.

Prerequisites

- You are logged on to the host where the SAP HANA studio software is installed.
- You are logged on as the `root` user.

Procedure

1. Open a `root` shell and go to the directory where you unpacked the SAP HANA studio software that was used for this installation.
2. Enter the following command:
   `./hdbuninst`
   A list of installation IDs is displayed.
3. Enter the installation ID of the SAP HANA studio software and press `Enter`.

Results

The studio software is removed from this host.

3.4.2 Uninstall the SAP HANA Studio on Linux in Batch Mode

You can uninstall the SAP HANA studio on Linux in batch mode.

Prerequisites

- You are logged on to the host where the SAP HANA studio software is installed.
- You are logged on as the `root` user.

Context

To call the hdbuninst program in batch mode, specify the installation path of the SAP HANA studio software using the `--path` option.

If you omit the installation path, the program does not run in batch mode but instead queries the installation ID.

Procedure

1. Open a `root` shell and go to the directory where you unpacked the software that was used for this installation.
2. Enter the following command:
   ```
   ./hdbuninst --path <installation_path> -b
   ```

3.5 Install or Update the Repository on Linux

You can create an update site on any server.

Prerequisites

You are logged on as a `root` user.

Procedure

1. Open a `root` shell and go to the directory where you unpacked the software for this installation.
2. Call the installation program as follows:
   `./hdbinst -a studio --copy_repository=<target_repository_path>`
3. Leave the `root` shell after the copy is completed.

Results

The repository is copied to the specified path.

Next Steps

You can use the repository that was just created to update the SAP HANA studio using an update site. Enter the path to the repository as the update site.

Related Information

Update the SAP HANA Studio Using an Update Site [page 21]

4 SAP HANA Studio on Microsoft Windows

You can run SAP HANA studio on Microsoft Windows.

4.1 Installation or Update on Microsoft Windows

If the SAP HANA studio is installed in the default directory on a Microsoft Windows operating system, write access to the files is prevented if you are not running the studio as a Microsoft Windows administrator.

We therefore recommend that - if you do not have Microsoft Windows administrator rights - you install the SAP HANA Studio in an alternative location, such as below the user's home folder.

> **Note**
>
> The commands for installing or updating the SAP HANA studio are the same (see *Installation and Update Commands* in the *SAP HANA Installation and Update Guide*). Depending on the current installation situation you can do the following:
>
> - If there is no SAP HANA studio installation you can only choose to perform an SAP HANA studio installation.
> - If there are already SAP HANA studio installations you can choose to update an existing SAP HANA studio installation or you can choose to perform an additional SAP HANA studio installation.

> **Note**
>
> Update all SAP HANA studio installations. Use the same revision as the SAP HANA database.

Related Information

Installation and Update Commands [page 12]

4.1.1 Use the Installation Manager on Windows

The installation manager is a graphical installation tool.

Prerequisites

- The default installation folder is `C:/Program Files/SAP/hdbstudio`
- If the default installation folder is already in use, then a continuous sequence of numbers is used (`C:/Program Files/SAP/hdbstudio2` and so on).

Procedure

1. Download and extract the software to an empty directory.
2. In the Windows Explorer, go to the directory where you unpacked the software and double-click `hdbsetup` to start the Installation Manager.

   > **Note**
   >
   > If you have several installation kits - that is, several installation variants - on your system, open a command prompt, navigate to the download directory, and enter the following command instead to start the Installation Manager:

   ```
   hdbsetup -a studio
   ```
3. Choose the activity to be performed and follow the instructions displayed by the Installation Manager.

Results

The SAP HANA studio is installed or updated.

Related Information

Start the SAP HANA Studio on Windows [page 33]

4.1.2 Use the Command Line on Windows

SAP HANA studio can be installed using the command line tool.

Prerequisites

- The default installation folder is `C:/Program Files/SAP/hdbstudio`
- If the default installation folder is already in use, then a continuous sequence of numbers is used (`C:/Program Files/SAP/hdbstudio2` and so on).

Procedure

1. Download and extract the software to an empty directory.
2. Open a command prompt and go to the directory where you unpacked the software.
3. Call the installation program as follows:
   ```
   hdbinst [<option_list>]
   ```
4. Follow the instructions displayed by the installation tool.

Results

The SAP HANA studio is installed or updated.

Related Information

Start the SAP HANA Studio on Windows [page 33]
Call Options for an Installation [page 13]

4.1.3 Update the SAP HANA Studio Using an Update Site

An update site can be used to provide the newest installation media for a large number of installations.

Prerequisites

Before you can manually update the SAP HANA studio and configure the SAP HANA studio to check automatically for updates, you must have configured the update site from which updates are downloaded. You use the SAP HANA XS Web server to provide the installation files for the SAP HANA studio update. The installation files are packed in a delivery unit and imported into a package in the SAP HANA database when you perform an installation or an update with the SAP HANA database lifecycle manager.

You can also use an SAP HANA repository located in the file system as the update site.

Context

When you choose the SAP HANA studio during an installation or update of an SAP HANA system with the SAP HANA database lifecycle manager the following actions are performed:

- An SAP HANA studio is installed or updated on the SAP HANA system. The default installation folder is: `/hana/shared/<SID>/hdbstudio`
- SAP HANA studio update files are provided:
  - The following folder structure contains the update files: `/hana/shared/<SID>/hdbstudio_update/repository`
  - The following tgz file contains the delivery unit HANA_STUDIO_<SID> which consists of the update files: `/hana/shared/<SID>/hdbstudio_update/HANA_STUDIO_<SID>.tgz`
  - The update files are imported into the SAP HANA content repository with the following path: `/sap/hana/studio`

> **Note**
>
> The SAP HANA studio repository is divided into core features and additional features. Additional features need to be installed and updated in a separate step.

Procedure

1. In the SAP HANA studio, specify the update site as follows:
   a. From the main menu, choose *Window* > *Preferences* > *Install/Update* > *Available Software Sites* (Mac OS X: *hdbstudio* > *Preferences* > *Install/Update* > *Available Software Sites*).

b. Choose *Add...* and specify the name of the update repository (optional) and its location, for example, `http://<host>:80<instance_number>/sap/hana/studio/` if you are using the SAP HANA XS Web server or `file:/<target_repository_path>` if you are using a file system location.

2. To update the SAP HANA studio manually, proceed as follows:
   a. From the main menu, choose *Help* > *Check for Updates*.
      The SAP HANA studio checks the specified software site for an update.
   b. If an update is available, follow the on-screen instructions to install the update.

> **Note**
>
> The update can also be performed using the Eclipse standard function *Help* > *Install New Software...* If you use this function, you enter the update site for the studio update just for the current session.

3. To configure the SAP HANA studio to check for updates automatically and notify you of their availability, proceed as follows:
   a. From the main menu, choose *Window* > *Preferences* > *Install/Update* > *Automatic Updates* (Mac OS X: *hdbstudio* > *Preferences* > *Install/Update* > *Automatic Updates*).
   b. Specify your update settings.

   You are automatically notified if an update is available in accordance with your settings.

> **Note**
>
> By default, the SAP HANA studio does not automatically check for updates and notify you.

Related Information

Install or Update the Repository on Linux [page 28]
Install or Update the Repository on Windows [page 38]
Install or Update the Repository on Mac OS [page 49]

4.2 Start the SAP HANA Studio on Windows

Ensure that the Java runtime is set in the system `PATH` variable.

Procedure

In the Windows Start menu, choose *All Programs* > *SAP HANA* > *SAP HANA Studio*.
The SAP HANA studio starts.

> **Note**
>
> If the start of the SAP HANA studio aborts with "`folder ...\Windows\system32 is read-only`" check SAP Note 2036350.

> **Note**
>
> The SAP HANA studio uses the default Eclipse secure storage to store passwords, for example, of database users connecting to SAP HANA systems. However, depending on whether you are running a 32-bit installation or a 64-bit installation, different password providers are used. This means that when you start the SAP HANA studio after having switched between a 32-bit and a 64-bit installation, any stored passwords will be cleared. It is possible to override the default Eclipse configuration for password storage using the command line arguments `-eclipse.keyring` and `-eclipse.password`. For more information see the Eclipse documentation.

Related Information

Eclipse Documentation
2036350 - Start of SAP HANA Studio aborts with "folder ...\Windows\system32 is read-only"

4.2.1 Start the SAP HANA Studio with Immediate System Logon

The SAP HANA studio program accepts command line parameters that allow you to specify the system to be connected to immediately on startup. This can be useful to system administrators, as well as to other programs that call the SAP HANA studio.

Prerequisites

You have a database user in the SAP HANA system that you want to log on to.

Procedure

1. Launch the SAP HANA studio from its installation directory passing the following start parameters:

Option	Description
-h	Host name

Option	Description
-n	Instance number
-u	User name

> **Note**
>
> User names containing special characters that represent conjunction or redirection characters in the command line program must be enclosed in double quotation marks ("..."), regardless of where the special character appears in the user name.

> **Example**
>
> Windows:
>
> - `hdbstudio.exe -h hana1 -n 02 -u DBADMIN`
> - `hdbstudio.exe -h hana1 -n 02 -u "&test"`
>
> Linux
>
> - `hdbstudio -h hana1 -n 02 -u DBADMIN`
> - `hdbstudio -h hana1 -n 02 -u "&test"`
>
> Mac OS:
>
> - `open -a /Applications/sap/hdbstudio.app --args -h hana1 -n 02 -u DBADMIN`
> - `open -a /Applications/sap/hdbstudio.app --args -h hana1 -n 02 -u "&test"`

The SAP HANA studio opens.

2. If prompted, enter your user password.

Results

The system is added in the *Systems* view (if it is not already there), and you are logged on.

4.2.2 Set the Studio Workspace on Microsoft Windows

During the start of the SAP HANA studio you can specify the workspace.

Workspace as Eclipse Command Line Argument

When you start the SAP HANA studio, you can pass standard Eclipse command line arguments. You can specify the workspace you are using with the `-data <path to workspace>` command line argument. You can install and use more than one SAP HANA studio installation with different workspaces on one computer with the `-data` command line argument.

These are examples for two SAP HANA studio installations with different workspaces on one Microsoft Windows machine (the backslash \ is only used for Microsoft Windows):

```
C:\Program Files\sap\hdbstudio1\hdbstudio.exe -data "c:\shared\hdbstudio1"
C:\Program Files\sap\hdbstudio2\hdbstudio.exe -data "c:\shared\hdbstudio2"
```

For more information, see the Eclipse standard documentation (search for "Eclipse runtime options").

Enter Workspace During First Start of SAP HANA Studio

If you do not specify the workspace as a standard Eclipse command line argument during the first start of the SAP HANA studio, you are asked to select a workspace. You can choose the selected workspace as the default workspace for this studio installation.

> **Note**
>
> You can always select a different workspace for an installation by choosing *File* > *Switch Workspace*.

4.3 Logging the Installation on Windows

The installation process is logged by the system.

There are two log files written during installation:

- `*.log`: can be read using a text editor
- `*.msg`: XML format for the display in the installation tool with the GUI

The log files are stored at the following path:

```
%TEMP%\hdb_studio_<time_stamp>
```

4.4 Uninstalling the SAP HANA Studio on Windows

Each installation has its own uninstallation tool. Use the `hdbuninst` program of the software package for which you want to uninstall the studio software.

> **Note**
>
> For information about data storage security, see the SAP HANA Security Guide (*Secure Storage of Passwords in SAP HANA*, *Protection of Data in SAP HANA Studio Workspaces*).

Related Information

SAP HANA Security Guide

4.4.1 Uninstall the SAP HANA Studio on Windows from the Control Panel

You can uninstall the SAP HANA studio on Windows from the control panel.

Prerequisites

You are logged on as a local administrator.

Procedure

1. Choose the following from the *Start* menu:

   Start > *Control Panel*.
2. In the *Category View* choose:

   Uninstall a Program
3. Navigate to the SAP HANA studio and choose *Uninstall*.

Results

The studio software is removed from this host.

4.4.2 Uninstall the SAP HANA Studio on Windows from the Command Line

You can uninstall the SAP HANA studio on Windows from the command line.

Prerequisites

You are logged on as a local administrator.

Procedure

1. Open a command prompt and go to the directory where you unpacked the software that was used for this installation.
2. Enter the following command:

   ```
   hdbuninst
   ```

   A list of installation IDs is displayed.
3. Enter the installation ID of the studio software and press `Enter`.

Results

The studio software is removed from this host.

4.5 Install or Update the Repository on Windows

You can create an update site on any server.

Prerequisites

You are logged on as a local administrator.

Procedure

1. Open a command prompt and go to the directory where you unpacked the software for this installation.
2. Call the installation program as follows:

   ```
   hdbinst -a studio --copy_repository=<target_repository_path>
   ```
3. Follow the instructions displayed by the installation tool.
4. Leave the command prompt after the copy is completed.

Results

The repository is copied to the specified path.

Next Steps

You can use the repository that was just created to update the SAP HANA studio using an update site. Enter the path to the repository as the update site.

Related Information

Update the SAP HANA Studio Using an Update Site [page 21]

5 SAP HANA Studio on Mac OS

You can run SAP HANA studio on Mac OS.

5.1 Installation or Update on Mac OS

You can install SAP HANA studio as a standalone installation on a Mac OS machine.

> **Note**
>
> The installation path and the file system layout for the SAP HANA studio installation on Mac OS has been changed. The SAP HANA studio is installed as a Mac OS application. The default installation path is:
>
> `/Applications/sap/hdbstudio.app`
>
> An update from the old installation path and file system layout to the new one is not possible. Only new installations can be performed.

> **Note**
>
> The commands for installing or updating the SAP HANA studio are the same (see *Installation and Update Commands* in the *SAP HANA Installation and Update Guide*). Depending on the current installation situation you can do the following:
>
> - If there is no SAP HANA studio installation you can only choose to perform an SAP HANA studio installation.
> - If there are already SAP HANA studio installations you can choose to update an existing SAP HANA studio installation or you can choose to perform an additional SAP HANA studio installation.

> **Note**
>
> Update all SAP HANA studio installations. Use the same revision as the SAP HANA database.

Related Information

Installation and Update Commands [page 12]

5.1.1 Use the Installation Manager on Mac OS

The installation manager is a graphical installation tool.

Prerequisites

- You are logged with an `administrator account`.
- SAP HANA studio is installed as a Mac OS application. The default installation path is: `/Applications/sap/hdbstudio.app`
- If the default installation path is already in use, then a continuous sequence of numbers is used (`/Applications/sap/hdbstudio2.app` and so on).

Procedure

1. Download and extract the software to an empty directory.
2. Open a `Terminal` and go to the directory where you unpacked the software.
3. Call the Installation Manager as follows:

   ```
   ./hdbsetup
   ```

   > **Note**
   >
   > If you have several installation kits - that is, several installation variants - on your system, navigate to the download directory, and enter the following command instead to start the Installation Manager:

   ```
   ./hdbsetup -a studio
   ```
4. Choose the activity to be performed.
5. Follow the instructions displayed by the Installation Manager.
6. Leave the `Terminal` after the installation or update has completed.

5.1.2 Use the Command Line on Mac OS

SAP HANA studio can be installed using the command line tool.

Prerequisites

- You are logged on with an `administrator account`.
- SAP HANA studio is installed as a Mac OS application. The default installation path is: `/Applications/sap/hdbstudio.app`

- If the default installation path is already in use, then a continuous sequence of numbers is used (`/Applications/sap/hdbstudio2.app` and so on).

Procedure

1. Download and extract the software to an empty directory.
2. Open a `Terminal` and go to the directory where you unpacked the software.
3. Call the installation program as follows:
   `./hdbinst [<option_list>]`

   > **Note**
   >
   > If you have several installation kits - that is, several installation variants - on your system, navigate to the download directory, and enter the following command instead to start the Installation Manager:

   `./hdbinst -a studio`
4. Follow the instructions displayed by the installation tool.
5. Leave the `Terminal` after the installation or update has completed.

5.1.3 Update the SAP HANA Studio Using an Update Site

An update site can be used to provide the newest installation media for a large number of installations.

Prerequisites

Before you can manually update the SAP HANA studio and configure the SAP HANA studio to check automatically for updates, you must have configured the update site from which updates are downloaded. You use the SAP HANA XS Web server to provide the installation files for the SAP HANA studio update. The installation files are packed in a delivery unit and imported into a package in the SAP HANA database when you perform an installation or an update with the SAP HANA database lifecycle manager.

You can also use an SAP HANA repository located in the file system as the update site.

Context

When you choose the SAP HANA studio during an installation or update of an SAP HANA system with the SAP HANA database lifecycle manager the following actions are performed:

- An SAP HANA studio is installed or updated on the SAP HANA system. The default installation folder is: `/hana/shared/<SID>/hdbstudio`

- SAP HANA studio update files are provided:
  - The following folder structure contains the update files:
    `/hana/shared/<SID>/hdbstudio_update/repository`
  - The following tgz file contains the delivery unit HANA_STUDIO_<SID> which consists of the update files:
    `/hana/shared/<SID>/hdbstudio_update/HANA_STUDIO_<SID>.tgz`
  - The update files are imported into the SAP HANA content repository with the following path:
    `/sap/hana/studio`

> **Note**
>
> The SAP HANA studio repository is divided into core features and additional features. Additional features need to be installed and updated in a separate step.

Procedure

1. In the SAP HANA studio, specify the update site as follows:
   a. From the main menu, choose *Window* > *Preferences* > *Install/Update* > *Available Software Sites* (Mac OS X: *hdbstudio* > *Preferences* > *Install/Update* > *Available Software Sites*).
   b. Choose *Add...* and specify the name of the update repository (optional) and its location, for example, `http://<host>:80<instance_number>/sap/hana/studio/` if you are using the SAP HANA XS Web server or `file:/<target_repository_path>` if you are using a file system location.
2. To update the SAP HANA studio manually, proceed as follows:
   a. From the main menu, choose *Help* > *Check for Updates*.
   The SAP HANA studio checks the specified software site for an update.
   b. If an update is available, follow the on-screen instructions to install the update.

   > **Note**
   >
   > The update can also be performed using the Eclipse standard function *Help* > *Install New Software...* If you use this function, you enter the update site for the studio update just for the current session.

3. To configure the SAP HANA studio to check for updates automatically and notify you of their availability, proceed as follows:
   a. From the main menu, choose *Window* > *Preferences* > *Install/Update* > *Automatic Updates* (Mac OS X: *hdbstudio* > *Preferences* > *Install/Update* > *Automatic Updates*).
   b. Specify your update settings.

   You are automatically notified if an update is available in accordance with your settings.

   > **Note**
   >
   > By default, the SAP HANA studio does not automatically check for updates and notify you.

Related Information

Install or Update the Repository on Linux [page 28]
Install or Update the Repository on Windows [page 38]
Install or Update the Repository on Mac OS [page 49]

5.2 Start the SAP HANA Studio on Mac OS

There are several ways to start the SAP HANA Studio on Mac OS.

5.2.1 Start SAP HANA Studio in a Finder

Ensure that the Java runtime is set in the system `PATH` variable.

Context

To start the SAP HANA studio, perform the following steps:

Procedure

1. Open a `Finder` window and open the following directory:
   `/Applications/sap/`
2. Start the SAP HANA studio application:
   `hdbstudio`
   The SAP HANA studio starts.

5.2.2 Start SAP HANA Studio in a Terminal

Ensure that the Java runtime is set in the system `PATH` variable.

Context

To start the SAP HANA studio, perform the following steps:

Procedure

1. Open a `Terminal` and navigate to the following directory:
   `/Applications/sap/`
2. Start the SAP HANA studio application:
   `open -a hdbstudio.app`

   > **Note**
   >
   > If you start the SAP HANA studio in a terminal you can add command line options (for example to set the SAP HANA studio workspace or to start an immediate system logon). You can also use a shell script to start the SAP HANA studio and input the command line options in the shell script.

   The SAP HANA studio starts.

5.2.3 Start the SAP HANA Studio with Immediate System Logon

The SAP HANA studio program accepts command line parameters that allow you to specify the system to be connected to immediately on startup. This can be useful to system administrators, as well as to other programs that call the SAP HANA studio.

Prerequisites

You have a database user in the SAP HANA system that you want to log on to.

Procedure

1. Launch the SAP HANA studio from its installation directory passing the following start parameters:

Option	Description
-h	Host name
-n	Instance number
-u	User name

> **Note**
>
> User names containing special characters that represent conjunction or redirection characters in the command line program must be enclosed in double quotation marks ("..."), regardless of where the special character appears in the user name.

> **Example**
>
> Windows:
>
> - `hdbstudio.exe -h hana1 -n 02 -u DBADMIN`
> - `hdbstudio.exe -h hana1 -n 02 -u "&test"`
>
> Linux
>
> - `hdbstudio -h hana1 -n 02 -u DBADMIN`
> - `hdbstudio -h hana1 -n 02 -u "&test"`
>
> Mac OS:
>
> - `open -a /Applications/sap/hdbstudio.app --args -h hana1 -n 02 -u DBADMIN`
> - `open -a /Applications/sap/hdbstudio.app --args -h hana1 -n 02 -u "&test"`

   The SAP HANA studio opens.

2. If prompted, enter your user password.

Results

The system is added in the *Systems* view (if it is not already there), and you are logged on.

5.2.4 Set the Studio Workspace on Mac OS

During the start of the SAP HANA studio you can specify the workspace.

Workspace as Eclipse Command Line Argument

When you start the SAP HANA studio, you can pass standard Eclipse command line arguments. You can specify the workspace you are using with the `-data <path to workspace>` command line argument. You can install and use more than one SAP HANA studio installation with different workspaces on one computer with the `-data` command line argument.

These are examples for two SAP HANA studio installations with different workspaces on one Mac OS machine:

```
open -a /Applications/sap/hdbstudio1.app --args -data /Users/%USERPROFILE%/
Documents/hdbstudio1
open -a /Applications/sap/hdbstudio2.app --args -data /Users/%USERPROFILE%/
Documents/hdbstudio2
```

For more information, see the Eclipse standard documentation (search for "Eclipse runtime options").

Enter Workspace During First Start of SAP HANA Studio

If you do not specify the workspace as a standard Eclipse command line argument during the first start of the SAP HANA studio, you are asked to select a workspace. You can choose the selected workspace as the default workspace for this studio installation.

> **Note**
>
> You can always select a different workspace for an installation by choosing *File* > *Switch Workspace* .

5.3 Logging the Installation on Mac OS

The installation process is logged by the system.

There are two log files written during installation:

- `*.log`: can be read using a text editor
- `*.msg`: XML format for the display in the installation tool with the GUI

The log files are stored at the following path: `/var/tmp/hdb_studio_<time_stamp>`

5.4 Uninstalling the SAP HANA Studio on Mac OS

Each installation has its own uninstallation tool. Use the `hdbuninst` program of the software package for which you want to uninstall the studio software.

> **Note**
>
> For information about data storage security, see the SAP HANA Security Guide (*Secure Storage of Passwords in SAP HANA*, *Protection of Data in SAP HANA Studio Workspaces*).

Related Information

SAP HANA Security Guide

5.4.1 Uninstall the SAP HANA Studio on Mac OS in Interactive Mode

You can uninstall the SAP HANA studio on Mac OS in interactive mode.

Prerequisites

- You are logged on to the host where the SAP HANA studio software is installed.
- You are logged on with an `administrator account`.

Procedure

1. Open a `Terminal` and go to the directory where you unpacked the SAP HANA studio software that was used for this installation.
2. Enter the following command:
   `./hdbuninst`
   A list of installation IDs is displayed.
3. Enter the installation ID of the SAP HANA studio software and press `Enter`.

5.4.2 Uninstall the SAP HANA Studio on Mac OS in Batch Mode

You can uninstall the SAP HANA studio on Mac OS in batch mode.

Prerequisites

- You are logged on to the host where the SAP HANA studio software is installed.
- You are logged on with an `administrator account`.

Context

To call the hdbuninst program in batch mode, specify the installation path of the SAP HANA studio software using the `--path` option.

If you omit the installation path, the program does not run in batch mode but instead queries the installation ID.

Procedure

1. Open a `Terminal` and go to the directory where you unpacked the software that was used for this installation.
2. Enter the following command:

   ```
   ./hdbuninst --path <installation_path> -b
   ```

5.5 Install or Update the Repository on Mac OS

You can create an update site on any server.

Prerequisites

You are logged on with an `administrator account`.

Procedure

1. Open a `Terminal` and go to the directory where you unpacked the software for this installation.
2. Call the installation program as follows:
   `./hdbinst -a studio --copy_repository=<target_repository_path>`
3. Leave the `Terminal` after the copy is completed.

Results

The repository is copied to the specified path.

Next Steps

You can use the repository that was just created to update the SAP HANA studio using an update site. Enter the path to the repository as the update site.

Related Information

Update the SAP HANA Studio Using an Update Site [page 21]

6 Appendix

The appendix provides additional information.

6.1 Install SAP HANA Studio in an Existing Eclipse Installation

You can install the SAP HANA studio tools into an existing Eclipse installation using an update site.

You need to take the following into account:

- You will use the Eclipse functions to install or update software.
- You will neither use `hdbinst` nor use `hdbsetup` to install the SAP HANA studio.
- It is not possible to update the SAP HANA studio using `hdbinst` or `hdbsetup`.
- It is not possible to uninstall the SAP HANA studio using `hdbuninst`.
- The `Microsoft Visual studio runtime 2010 dll` will not be installed automatically.
- You have to manually adjust the memory settings in `eclipse.ini`, according to the set of tools you install. For the SAP HANA studio tools we recommend the following minimal settings:
  - `-vmargs`
  - `-Xmx1024m`
  - `-Xms256m`
  - `-XX:MaxPermSize=512m`
- SAP JVM will not be installed automatically. We strongly recommend installing it manually and configuring the use of SAP JVM for Eclipse in `eclipse.ini`.

For more information, see *Update the SAP HANA Studio Using an Update Site* in the *SAP HANA Studio Installation and Update Guide*.

Related Information

Update the SAP HANA Studio Using an Update Site [page 21]

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