



INTERNAL

SAP HANA Client 2.0

Document Version: 1.1 – 2022-09-30

SAP HANA Client Installation and Update Guide

Content

- 1 SAP HANA Client Installation and Update Guide. 3**
- 2 Introduction. 4**
 - 2.1 Supported Platforms. 4
 - 2.2 How to Use the Client Interfaces with SAP HANA Service. 5
- 3 SAP HANA Client on UNIX, macOS, or Linux. 6**
 - 3.1 Planning an SAP HANA Client Installation on UNIX, macOS, or Linux. 6
 - Available Client Interfaces on UNIX, macOS, or Linux. 6
 - Default Installation Paths for UNIX, macOS, or Linux. 6
 - 3.2 Installing the SAP HANA Client on UNIX, macOS, or Linux. 7
 - Install the SAP HANA Client on UNIX, macOS, or Linux. 7
 - Logging the Installation on UNIX, macOS, or Linux. 9
 - 3.3 Uninstalling the SAP HANA Client on UNIX, macOS, or Linux. 9
 - Uninstall on UNIX, macOS, or Linux in Interactive Mode. 9
 - Uninstall on UNIX, macOS, or Linux in Batch Mode. 10
- 4 SAP HANA Client on Microsoft Windows. 12**
 - 4.1 Planning an SAP HANA Client Installation on Microsoft Windows. 12
 - Available Client Interfaces on Microsoft Windows. 12
 - Default Installation Paths for Microsoft Windows. 13
 - 4.2 Installing the SAP HANA Client on Microsoft Windows. 13
 - Install the SAP HANA Client on Microsoft Windows. 14
 - Logging the Installation on Microsoft Windows. 15
 - 4.3 Uninstall the SAP HANA Client on Microsoft Windows. 15
- 5 Download and Install SAP Common Crypto Library. 16**
- 6 Command and Call Option Reference. 19**
- 7 Important Disclaimer for Features in SAP HANA. 20**

1 SAP HANA Client Installation and Update Guide

This guide describes how to install the SAP HANA database clients (for connecting applications).

2 Introduction

SAP HANA provides client interfaces for connecting applications as part of the SAP HANA client software package. The SAP HANA client can be installed on UNIX, Linux, macOS, and Microsoft Windows operating systems, as well as on an SAP HANA server host during server installation.

2.1 Supported Platforms

The SAP HANA client software can be installed on various platforms.

The following platform types are supported and in active maintenance:

- AIX
- Linux (x86_64, Power PC LE, ARM64)
- Microsoft Windows (x86, x64)
- macOS (x64, ARM64)
- Java SE 8

The following platform types are considered Legacy Platforms. They are only available in the 2.4 client version and receive emergency bug fixes:

- HP-UX IA64
- Linux IA32
- Linux Power PC BE
- Linux zSeries
- Solaris (SPARC, x64)
- Java SE (6, 7)

Related Information

[SAP Product Availability Matrix \(PAM\)](#) 

[SAP Note 2499500](#) 

[SAP Note 3006307](#) 

[SAP Note 2938939](#) 

2.2 How to Use the Client Interfaces with SAP HANA Service

There are some differences when using the client interfaces with SAP HANA Service. Refer to the client interfaces documentation for SAP HANA Service.

Related Information

[SAP BTP, SAP HANA Service: SAP HANA Client Installation and Update Guide](#)

[SAP BTP, SAP HANA Service: SAP HANA Client Interface Programming Reference](#)

3 SAP HANA Client on UNIX, macOS, or Linux

The SAP HANA client can be installed or uninstalled on supported UNIX, macOS, and Linux operating systems.

3.1 Planning an SAP HANA Client Installation on UNIX, macOS, or Linux

Before installing the SAP HANA client on a supported UNIX, macOS, or Linux operating system, review the available supported clients and the default installation paths.

3.1.1 Available Client Interfaces on UNIX, macOS, or Linux

When you install the SAP HANA client, supported client interfaces are installed and available.

The client interfaces available on UNIX, macOS, and Linux platforms are as follows:

- ODBC - AIX, Linux (x86_64, ARM64, PowerPC LE), macOS (x86_64)
- JDBC - JVM 8 and higher
- Python - Linux (x86_64, ARM64, PowerPC LE), macOS (x86_64)
- Go (golang) - Linux (x86_64, ARM64, PowerPC LE), macOS (x86_64)
- Node.js - Linux (x86_64, ARM64, PowerPC LE), macOS (x86_64, ARM64)
- Ruby - Linux (x86_64, PowerPC LE), macOS (x86_64)
- Microsoft .NET Core - Linux (x86_64, ARM64), macOS (x86_64)

3.1.2 Default Installation Paths for UNIX, macOS, or Linux

The SAP HANA client software is unpacked to a default path during installation, depending on the platform type and user. Change the default value can by using the `path` call option.

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

Platform	Package Version	Installation Path
Linux x86, 32-bit	32-bit	<code>/usr/sap/hdbclient</code>

Platform	Package Version	Installation Path
Linux x86, 64-bit	64-bit	/usr/sap/hdbclient
Linux x86, 64-bit	32-bit	/usr/sap/hdbclient32
macOS	-	/Applications/sap/ hdbclient

When installing the SAP HANA client without administrative rights, the installed SAP HANA client is only available to the user who installed it, and the default installation folder is <\$HOME>/sap/hdbclient.

Related Information

3.2 Installing the SAP HANA Client on UNIX, macOS, or Linux

The SAP HANA client can be installed on the command line.

You can perform the install as root user or without administrative rights so that it is only available to the user who installed it.

3.2.1 Install the SAP HANA Client on UNIX, macOS, or Linux

Install the SAP HANA client from a graphical user interface or on the command line.

Context

To connect the SAP HANA client to the SAP HANA service, download the [SAP HANA CLIENT FOR HAAS 1.0](#) software. This software is the same as the SAP HANA client software that is part of the SAP HANA Platform Edition. If you already have a license for the SAP HANA Platform Edition, then you do not need to download the SAP HANA Client for SAP HANA Cloud separately.

To update the SAP HANA client to SAP HANA Cloud, download [SAP HANA CLIENT FOR HAAS 1.0 \(Maintenance Product\)](#).

Procedure

1. Download and extract the software to an empty directory.
2. Open a shell and go to the directory where you unpacked the software.
3. Call the program `hdbsetup` (GUI installation) or `hdbinst` (command-line installation) by entering one of the following commands:

Option	Description
Command line	<pre>./hdbinst [-a client] [<option list>]</pre>

You can omit the call option `-a client` if you only have one installation kit (one installation variant) on your system.

4. Follow the instructions displayed by the installation tool.
5. For the environment of client users, including the `<sid>` adm user, add the installation path to the `PATH` and library path environment variables. The library path environment variable differs according to the operating system:

Operating System	Library Path Environment Variable
AIX	LIBPATH
HP-UX	SHLIB_PATH
Linux	LD_LIBRARY_PATH
Solaris	LD_LIBRARY_PATH
macOS	DYLD_LIBRARY_PATH

For information on how to set environment variables, see your operating system documentation. The SAP HANA client installation includes a bash script, `hdbclienv.sh`, that sets all relevant environment variables for the client, such as:

- `PATH`
- `<library-path>`
- `HDB_CLIENT_HOME`
- `SECUDIR`, if SAP Cryptographic Library is installed

i Note

In order to source the bash script for your environment, type `source hdbclienv.sh`.

Results

The client software is installed.

Related Information

[Connecting to SAP HANA Databases and Servers](#)
[Configuring the Client for Client-Side Encryption and LDAP](#)

3.2.2 Logging the Installation on UNIX, macOS, or Linux

The SAP HANA client installation is logged by the system.

The following log files are written during installation.

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

The log files are stored in `/var/tmp/hdb_client_<timestamp>`.

3.3 Uninstalling the SAP HANA Client on UNIX, macOS, or Linux

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

3.3.1 Uninstall on UNIX, macOS, or Linux in Interactive Mode

Each installation has its own uninstallation tool.

Prerequisites

You are logged on to the host where the client software is installed.

Context

Use the `hdbuninst` program of the software package for which you want to uninstall the client software. Interactive mode requires call options to be accepted or changed during installation. Defaults are offered for some call options.

Procedure

1. Open a shell and go to the directory in which the client is installed.
2. Enter the following command:
`install/hdbuninst`
3. Press `y` to finalize the configuration.

Results

The client software is removed from this host.

3.3.2 Uninstall on UNIX, macOS, or Linux in Batch Mode

Each installation has its own uninstallation tool.

Context

Use the `hdbuninst` program of the software package for which you want to uninstall the client software. Batch mode runs the installation without interaction. Required call options must be specified with the command; defaults are accepted for all unspecified call options.

To call the `hdbuninst` program in batch mode, specify the installation path of the client software by using the `-path` option.

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

Procedure

1. Open a shell and go to the directory in which the client is installed.
2. Enter the following command:

```
install/hdbuninst --path <installation-path> -b
```

Results

The client software is removed from this host.

4 SAP HANA Client on Microsoft Windows

The SAP HANA client can be installed or uninstalled on supported Microsoft Windows operating systems.

4.1 Planning an SAP HANA Client Installation on Microsoft Windows

Before installing the SAP HANA client on Microsoft Windows, review the available supported clients and the default installation paths.

The SAP HANA client cannot be installed directly to UNC network paths (such as `\\server\share`).

4.1.1 Available Client Interfaces on Microsoft Windows

When you install the SAP HANA client, supported client interfaces are installed and available.

The following client interfaces are available on Microsoft Windows platforms:

- SQLDBC
- ODBC
- JDBC - JVM 8 and higher
- Microsoft ADO.NET - Microsoft .NET Framework and Microsoft .NET Core
- Python (PyDBAPI) - Microsoft Windows x64
- Go (golang) - Microsoft Windows x64
- Node.js - Microsoft Windows x64
- Ruby - Microsoft Windows x64

Related Information

[SAP Note 1577128](#) 

4.1.2 Default Installation Paths for Microsoft Windows

The SAP HANA client software is unpacked to a default path during installation, depending on the platform type and user. The default value can be changed by using the `path` call option.

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

Platform	Package Version	Installation Path
Microsoft Windows x86, 32-bit	32-bit	C:\Program Files\SAP\hdbclient
Microsoft Windows x86, 64-bit	64-bit	C:\Program Files\SAP\hdbclient
Microsoft Windows x86, 64-bit	32-bit	C:\Program Files (x86)\SAP\hdbclient

When installing the SAP HANA client without administrative rights, the installed SAP HANA client is only available to the user who installed it, and the default installation folder is `<%USERPROFILE%>\SAP\hdbclient`.

i Note

The SAP HANA client cannot be installed directly to UNC network paths (such as `\\server\share`).

Related Information

4.2 Installing the SAP HANA Client on Microsoft Windows

The SAP HANA client can be installed on the command line.

An administrator can perform the installation of the SAP HANA client. If the SAP HANA client is installed by a user without administrative rights, then it is only available to the user who installed it.

i Note

The SAP HANA client cannot be installed directly to UNC network paths (such as `\\server\share`).

4.2.1 Install the SAP HANA Client on Microsoft Windows

Install the SAP HANA client from a graphical user interface or on the command line.

Context

To connect the SAP HANA client to the SAP HANA service, download the [SAP HANA CLIENT FOR HAAS 1.0](#) software. This software is the same as the SAP HANA client software that is part of the SAP HANA Platform Edition. If you already have a license for the SAP HANA Platform Edition, you do not need to download the SAP HANA Client for SAP HANA Cloud separately.

To update the SAP HANA client for SAP HANA Cloud, download [SAP HANA CLIENT FOR HAAS 1.0 \(Maintenance Product\)](#).

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 program `hdbsetup` (GUI installation) or `hdbinst` (command-line installation) by entering one of the following commands:

Option	Description
Command line	<code>hdbinst [-a client] [<option-list>]</code>

If you only have one installation kit (one installation variant) on your system, then you can omit the call option `-a client`.

4. Follow the instructions displayed by the installation tool.
5. The client installer automatically adds the installation path to the `PATH` environment variable. Modify the `PATH` variable to reflect any additional changes required. If you do not want the `PATH` variable modified at installation time, set the environment variable `HDB_INSTALL_NOPATH` first.

For information on setting environment variables, see the documentation for your operating system. The SAP HANA client installation includes a batch file, `hdbclient.bat`, that sets all relevant environment variables for the client, such as:

- `PATH`
- `HDB_CLIENT_HOME`
- `SECUDIR`, if SAP Cryptographic Library is installed

Results

The client software is installed.

Related Information

[Connecting to SAP HANA Databases and Servers](#)
[Configuring the Client for Client-Side Encryption and LDAP Environment Variables](#)

4.2.2 Logging the Installation on Microsoft Windows

The SAP HANA client installation 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 graphical user interface

The log files are stored in %TEMP%\hdb_client_<time-stamp>.

4.3 Uninstall the SAP HANA Client on Microsoft Windows

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

Procedure

1. Open a command prompt and go to the directory where you unpacked the software for this installation.
2. Enter the following command:
`hdbuninst`
3. Enter the installation ID assigned to the client software installation and press .

Results

The client software is removed from this host.

i Note

You can also use the standard Microsoft Windows functionality **Start > Control Panel > Add or remove programs** to remove the client software.

5 Download and Install SAP Common Crypto Library

Download SAP Common Crypto Library from SAP Software Downloads and install it locally to encrypt communication between your SAP HANA client and the SAP HANA server.

Prerequisites

The SAP Common Crypto Library must be installed on the host where the SAP HANA client will be installed or already is installed.

To install SAP Common Crypto Library, use the SAPCAR utility, which is included in your SAP HANA client installation.

Note

This process is only required if your client installation does not already contain the file `sapcrypto.dll` (Microsoft Windows), `libsapcrypto.so` (Linux/UNIX), or `libsapcrypto.dylib` (macOS).

Context

You must use SAP Common Crypto Library if you are using client-side data encryption or LDAP authentication.

Procedure

1. Download SAP Common Crypto Library from SAP Software Downloads.
 - a. Navigate to the [SAP ONE Support Launchpad](#).
 - b. Click *Software Downloads*.
 - c. Click *INSTALLATIONS & UPGRADES*.
 - d. Open **► By Alphabetical Index (A-Z) ► C**.
 - e. Click **► SAP CRYPTOGRAPHIC SOFTWARE ► SAPCRYPTOLIB**.
 - f. Click **► COMMONCRYPTOLIB 8 ► DOWNLOADS**.
 - g. Select your operating system from the dropdown menu, and download the desired `.SAR` file.
2. Install SAP Common Crypto Library on your local computer.

- a. Using the SAPCAR utility, navigate to the directory where you downloaded the SAP Common Crypto Library and run the following command to unpack the .SAR file:

```
sapcar -xvf <sar-filename>.SAR
```

- b. Set the SECUDIR environment variable to the directory where the extracted files are located and ensure that the following criteria are met:

To use the SAP CommonCryptoLib (CCL), you must define several environment variables. For example, <SECUDIR>, <PATH>, and <LD_LIBRARY_PATH>. Instead of configuring these environment variables individually, you can run the scripts below with the SAP HANA client installer to set these variables automatically. Use `hdbclienv.sh` for Linux, UNIX, and macOS and `hdbclienv.bat` for Microsoft Windows.

Operating System	Method	Command
Linux/UNIX/macOS	bash	<p>Set the environment variables temporarily in a bash shell by running the following command:</p> <pre>. /usr/sap/hdbclient/hdbclienv.sh</pre> <p>To set the environment variables for your operating system on every login, source the <code>hdbclienv.sh</code> environment script in your login script (<code>~/.bashrc</code>).</p>
Microsoft Windows	Command prompt	<p>Set the environment variables by using the <code>hdbclienv.bat</code> batch file by running the following command:</p> <pre>"C:\Program Files\SAP\hdbclient\hdbclienv"</pre> <p>To set the environment variables permanently for all users, use the Microsoft = Windows Environment Variables system setting. If you are using client communication encryption, then the %SECUDIR% environment variable must contain the location of <code>sapcli.pse</code>.</p>

For Linux, UNIX, and macOS, in addition to the root environment script, two helper scripts are also provided to launch the `hdbuserstore` or `hdbsql` utilities with the environment script already sourced and SAP CommonCryptoLib already configured:

- `/scripts/hdbuserstore`
- `/scripts/hdbsql`

Results

You have successfully downloaded and installed the SAP Common Crypto Library.

Related Information

[SAP HANA Platform: Cryptographic Service Provider](#)

6 Command and Call Option Reference

The SAP HANA installation tool, hdbinst, can be called on the command line in combination with call options.

Commands

Operating System	Syntax
UNIX or Linux	<pre>./hdbinst [-a client] [<option list>] <option-list> :: = <option> <option> ...</pre>
Microsoft Windows	<pre>hdbinst [-a client] [<option-list>] <option-list> :: = <option> <option> ...</pre>

Related Information

[Default Installation Paths for UNIX, macOS, or Linux \[page 6\]](#)

[Default Installation Paths for Microsoft Windows \[page 13\]](#)

[Parameter Reference](#)

7 Important Disclaimer for Features in SAP HANA

For information about the capabilities available for your license and installation scenario, refer to the [Feature Scope Description for SAP HANA](#). Some SAP HANA features and capabilities mentioned in this document are not applicable in the SAP BTP, SAP HANA service context. In some cases, additional information about the SAP HANA service context is placed near the feature information to advise you.



For information about the capabilities available for your contract type and provisioning scenario, refer to the [Feature Scope Description for SAP HANA Service for SAP BTP](#) or [Feature Scope Description for SAP HANA Cloud](#).

Important Disclaimers and Legal Information

Hyperlinks

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

About the icons:

- Links with the icon : You are entering a Web site that is not hosted by SAP. By using such links, you agree (unless expressly stated otherwise in your agreements with SAP) to this:
 - The content of the linked-to site is not SAP documentation. You may not infer any product claims against SAP based on this information.
 - SAP does not agree or disagree with the content on the linked-to site, nor does SAP warrant the availability and correctness. SAP shall not be liable for any damages caused by the use of such content unless damages have been caused by SAP's gross negligence or willful misconduct.
- Links with the icon : You are leaving the documentation for that particular SAP product or service and are entering a SAP-hosted Web site. By using such links, you agree that (unless expressly stated otherwise in your agreements with SAP) you may not infer any product claims against SAP based on this information.

Videos Hosted on External Platforms

Some videos may point to third-party video hosting platforms. SAP cannot guarantee the future availability of videos stored on these platforms. Furthermore, any advertisements or other content hosted on these platforms (for example, suggested videos or by navigating to other videos hosted on the same site), are not within the control or responsibility of SAP.

Beta and Other Experimental Features

Experimental features are not part of the officially delivered scope that SAP guarantees for future releases. This means that experimental features may be changed by SAP at any time for any reason without notice. Experimental features are not for productive use. You may not demonstrate, test, examine, evaluate or otherwise use the experimental features in a live operating environment or with data that has not been sufficiently backed up.

The purpose of experimental features is to get feedback early on, allowing customers and partners to influence the future product accordingly. By providing your feedback (e.g. in the SAP Community), you accept that intellectual property rights of the contributions or derivative works shall remain the exclusive property of SAP.

Example Code

Any software coding and/or code snippets are examples. They are not for productive use. The example code is only intended to better explain and visualize the syntax and phrasing rules. SAP does not warrant the correctness and completeness of the example code. SAP shall not be liable for errors or damages caused by the use of example code unless damages have been caused by SAP's gross negligence or willful misconduct.

Bias-Free Language

SAP supports a culture of diversity and inclusion. Whenever possible, we use unbiased language in our documentation to refer to people of all cultures, ethnicities, genders, and abilities.

© 2022 SAP SE or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company. The information contained herein may be changed without prior notice.

Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors. National product specifications may vary.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. All other product and service names mentioned are the trademarks of their respective companies.

Please see <https://www.sap.com/about/legal/trademark.html> for additional trademark information and notices.