

Document Version: 1.0 – 2018-08-14

Getting Started with SAP HANA, express edition



Table of Contents

| | | |
|----------|--|-----------|
| 1 | Solution Information..... | 3 |
| 1.1 | Installed Products..... | 3 |
| 1.2 | Overview..... | 3 |
| 2 | Accessing the Solution..... | 4 |
| 2.1 | Overview..... | 4 |
| 2.2 | Database Server Details..... | 4 |
| 2.3 | OS Users and Groups..... | 5 |
| 2.3.1 | Accessing Your Instance on OS Level..... | 5 |
| 3 | Licenses..... | 6 |
| 4 | Security Aspects..... | 7 |
| 5 | Solution Provisioning in SAP Cloud Appliance Library..... | 9 |
| 6 | Appendix..... | 10 |

1 Solution Information

1.1 Installed Products

You get access to a system (landscape) that has been built using the following installation media:
SAP HANA Express Edition 2.0 (2.00.031.00)

1.2 Overview

The [SAP HANA, express edition](#) solution is a pre-configured appliance, ready to use for development purposes. The XSA runtime, including all appropriate SAP development and administration tools are installed and configured.

For further information about SAP HANA, express edition, including tutorials, content and getting started material, visit the [SAP HANA, express edition website](#).

2 Accessing the Solution

2.1 Overview

The solution is configured to be identical to the on-premises deployment of SAP HANA, express edition.

Access a getting started tutorial [here](#).

Quick connect with Eclipse or SAP HANA Studio

The solution is installed as MDC (Multi tenancy). Connect to either SystemDB, tenant or to HXE tenant depending on your usage scenario in Multiple Containers mode in SAP HANA Studio.

1. Start *SAP HANA Studio* > Systems Tab > right click to *Add System*.
2. Enter your Host Name and instance number (90), select Multiple containers mode > System database
3. Choose *Next* and enter *User Name* and *Password*.

For more information and how-to details, see [this tutorial](#). A number of other guides and tutorials for connecting development environments, frameworks and tools to SAP HANA can be found at the bottom of [this page](#).

Visit [SAP tutorial catalog](#) for a full listing of tutorials for SAP HANA, express edition, with example code, scenarios and best practices.

2.2 Database Server Details

Connect details are in the table below:

| Name | Value | Description |
|-----------------|---|---|
| Instance Number | 90 | Instance number of the HANA system |
| DB SID | HXE | System ID of the database of the SAP system |
| Username | SYSTEM XSA_ADMIN XSA_DEV XSA_SHINE | These are the standard users which you can use to access the database server. |
| Password | <Master Password> | The initial master password of the system you provided in the SAP Cloud Appliance Library when creating the instance. |

2.3 OS Users and Groups

| Name | Description |
|--------|---|
| hxeadm | SAP system administrator |
| hxeshm | Group needed by SAP HANA database on OS level for shared memory operations |
| sapadm | SAP database administrator |
| sapsys | Group containing all <SID>adm users (should be a group in a central user storage like LDAP, NIS, or Active Directory) |

2.3.1 Accessing Your Instance on OS Level

For information how to access a solution on OS level, go to [this FAQ wiki page](#) and check this question: How to connect to a running instance via the secure shell protocol (SSH)?

3 Licenses

3.1 Running Free Solutions

This solution can be used under the provisions in this [license agreement](#).

Once you create the solution instance, the SAP system will generate a license key that is appropriate for the usage of the solution.

4 Security Aspects

Be aware that creating your instances in the public zone of your cloud computing platform is convenient but less secure. Ensure that only port 22 (SSH) is opened when working with Linux-based solutions and port 3389 (RDP) when working with Windows based solutions. In addition, we also recommend that you limit the access to your instances by defining a specific IP range in the Access Points settings, using [CIDR notation](#). The more complex but secure alternative is to set up a virtual private cloud (VPC) with VPN access, which is described in [this tutorial on SCN](#).

The list below describes the ports opened for the security group formed by the server components of your solution instance:

To access back-end servers on the operating system (OS) level, use the following information:

| Protocol | Port | Description |
|----------|------|--|
| SSH | 22 | Used for SSH connection to Linux-based servers |
| RDP | 3389 | Used for RDP connection to Windows based servers |

The additional ports for accessing SAP HANA are described below:

| Protocol | Port | Description |
|----------|-------------|---|
| SSH | 22 | Used for SSH connection to Linux-based servers |
| HTTP(s) | 4390 | SAP Web Dispatcher (HANA) |
| HTTP(s) | 8090 | SAP Web Dispatcher (HANA) |
| Custom | 39013 | SQL and MDX access port to the SYSTEM database |
| Custom | 39015 | SQL and MDX access to the first tenant of a HANA system – in the case of HXE, a user has to initiate the tenant before trying to connect to this port |
| Custom | 39041-39045 | Additional open ports for 5 Tenants |
| Custom | 39017 | Port for statistics server connections |
| HTTP(s) | 39033 | Default XSA port if hostname routing is used for HANA. |
| HTTP(s) | 39032 | Default XSA port if hostname routing is used for HANA. |
| HTTP(s) | 39030 | XS-controller managed Web Dispatcher |
| HTTP(s) | 59013 | Instance Agent |
| HTTP(s) | 59014 | Instance Agent SSL |
| HTTP(s) | 51000-51060 | XSA application instances. |

| Protocol | Port | Description |
|----------|-------------|-----------------------------------|
| Custom | 39026-39030 | Ports for SDS streaming clients |
| Custom | 39040 | Default DPServer Port |
| Custom | 1128-1129 | SAP Host Agent |
| Custom | 53075 | WEB based IDE for XSA Development |
| Custom | 53030 | DICore Service |

You must change the initial user passwords provided by SAP when you log onto the system for the first time.

Note that when using **HANA based appliances**, HANA systems are not installed individually but **cloned from a template system**. As a consequence of this cloning process, the existing root keys are cloned. For more information, see this [SAP Note 2134846 - HANA encryption key handling during system cloning](#).

For more information about security vulnerabilities, see this [community page](#).

5 Solution Provisioning in SAP Cloud Appliance Library

If you have a user in SAP Cloud Appliance Library, you need to meet the following prerequisites before starting to use the SAP Cloud Appliance library:


- Cloud Provider Configurations

You have a valid account in one of the cloud providers supported by SAP Cloud Appliance Library. If you already have an active cloud provider account, you can proceed directly with the next section. Otherwise, navigate to the cloud provider home page and sign up.

For more information about the supported cloud providers, see the [FAQ page](#).

- Navigate to SAP Cloud Appliance Library

Open the SAP Cloud Appliance Library in your Web browser using the following link: <https://cal.sap.com>

For more information about how to use solutions in SAP Cloud Appliance Library, see the official documentation of SAP Cloud Appliance Library (choose [Support](#) → [Documentation](#) link and choose  (expand all) button to see all documents in the structure). You can also use the context help in SAP Cloud Appliance Library by choosing the [Help](#) panel from the right side.

6 Appendix

Installed Software Components

| Name | Release | Support Package Stack |
|-----------------------------|-------------|-----------------------|
| HDB_LCM_LINUX_X86_64 | 2.00.031.00 | 2 |
| HDB_SERVER_LINUX_X86_64 | 2.00.031.00 | 2 |
| HDB_AFL_LINUX_X86_64 | 2.00.031.00 | 2 |
| HDB_EML_AFL_LINUX_X86_64 | 2.00.031.00 | 2 |
| XSA_RT_10_LINUX_X86_64 | 1.0.85 | 2 |
| XSA_CONTENT_10 | 1.0.85 | 2 |
| XSAC_SAP_WEB_IDE_20 | 4. | 2 |
| XSAC_HRTT_20 | 2. | 2 |
| HANA_COCKPIT_20 | 2.3.9 | 2 |
| HCO_HANA_SHINE | 1.2 | 2 |
| SAP_HANA_STREAMING | 2.00.031.00 | 2 |
| HANA_SDI | 2.00.031.00 | 2 |
| HANA_DP_AGENT_20_LIN_X86_64 | 2.00.031.00 | 2 |
| XSA_CLIENT_10 | 2.00.031.00 | 2 |
| HDB_CLIENT_LINUX_X86_64 | 2.3.106 | 2 |
| HDB_CLIENT_LINUX_PPC64LE | 2.3.106 | 2 |
| HDB_CLIENT_WINDOWS_X86_64 | 2.3.106 | 2 |
| HDB_CLIENT_NTINTEL | 2.3.106 | 2 |
| HDB_CLIENT_MACOS | 2.3.106 | 2 |



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