Getting Started Guide **CUSTOMER**

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Getting Started with SAP BW/4HANA 2.0 including SAP BW/4HANA Content 1.0 SP9 [Developer Edition]

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1 Solution Information

1.1 Installed Products

You get access to a system (landscape) that has been built using the following software products:

- SAP BW/4HANA 2.0 SP0
- SAP BW/4HANA Content Add-On 1.0 SP9
- SAP HANA Platform Edition 2.0 SPS03 Rev36, Version 2.00.036, Linux x86_64

1.2 Overview

SAP BW/4HANA 2.0 SP0 is the second release of SAP Next Generation Data Warehouse. It provides enterprise Data Warehouse capabilities combined with ETL Tools and powerful analytics.

- Solution name: SAP BW/4HANA 2.0 SP0
- Standard installation version, BW/4HANA and BW/4HANA Cockpit configured

2 Accessing the Solution

2.1 Overview

- Backend systems can be accessed directly
- Solution can be accessed on OS level access

2.2 ABAP Application Server Details

Connect to SAP A4H using the information in the table below.

For more information, how to connect to the Frontend Server, see Connecting to a Solution Instance.

Name	Value	Description
SID	A4H	System ID of the SAP system
CI Instance Number	00	The instance number of the central instance (CI)
CS Instance Number	01	The instance number of the central services (CS) instance.
Password	<Master Password>	The initial master password of the system you provided in the SAP Cloud Appliance Library when creating the instance.
Username	DDIC SAP* DEVELOPER	These are the standard users which you can use to access the ABAP server. BW/4HANA user with all roles for BW/4HANA Cockpit
Clients	000 001	These are the standard clients available in a newly installed SAP system. BW/4HANA client

2.3 Database Server Details

Connect to SAP HDB using the information in the table below.

For more information, how to connect to the Frontend Server, see Connecting to a Solution Instance.

Database Server Details

Name	Value	Description
SID	HDB	System ID of the SAP system
DB SID	HDB	System ID of the database of the SAP system
DB Type	HDB	Type of the database
Instance Number	02	Instance number of the central instance of the SAP HANA System
Username	SYSTEM SAPHANADB DBACOCKPIT BWREMOTE DBMS_USER	These are the standard users which you can use to access the database server. SAPHANADB is the ABAP SCHEMA User for secondary DB connection for mixed BW/4HANA scenarios (prepared for configuration) User for secondary DB connection for HANA-ABAP user mapping
Password	<master password>	The password set during instance creation.

2.4 OS Users and Groups

Name	Description
a4hadm	SAP BW4 system administrator
hdbadm	SAP HANA system administrator
sapsys	Group containing all SAP OS users

2.5 Accessing Your Instance on OS Level

For information on 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)?

2.5.1 Connecting to Your Backend Instance

In case you want to access your backend instance on OS level you need an SSH client for your local environment, e.g. PuTTY for Windows.

The following steps describe how to connect to your backend instance using PuTTY, but are similar for alternative SSH clients:

- Click on the instance name in your CAL account, to retrieve the IP of your backend instance and download the instance key pair (maybe you already downloaded the key pair during instance creation).
- Extract the private key of the key pair by using a tool like puttygen.exe.
- Open PuTTY and enter the IP of your backend instance.
- Navigate to the SSH > Auth node and enter your private key file.
- Navigate to the Connection > Data node and enter root as auto-login username.
- Save these session settings and hit the Open button.

Now you can log in to your backend instance on OS level (SLES) for monitoring, troubleshooting, or accessing files on the server.

The following tables list all important users on OS level:

Parameter ID	Parameter Value	Note
OS User Name	root	The default OS Administrator user for Linux SUSE.
OS Password	<none>	Use the private key (downloaded during the activation of the instance in SAP Cloud Appliance Library) for login with the root user.

The administration users for HANA and ABAP on operating system level are defined as follows:

Parameter ID	Parameter Value	Note
HANA administrator name	hdbadm	Additional user for HANA lifecycle management – start/stop, administration, functions, recovery
HANA administrator password	<master password>	The password is the same as the master password provided during instance creation in the SAP Cloud Appliance Library.
ABAP administrator name	a4h	Additional user for ABAP lifecycle management – start/stop, administration, functions, recovery
ABAP administrator password	<master password>	The password is the same as the master password provided during instance creation in the SAP Cloud Appliance Library.

Additional users on operating system level are:

Parameter ID	Parameter Value	Note
SAP System Administrator	sapadm	
SAP System Administrator password	<master password>	The password is the same as the master password provided during instance creation in the SAP Cloud Appliance Library.

2.5.2 Configure the HTTP port

The following entries are edit to the instance profile A4H_D00_VHCALA4HCI to enable HTTPS access.

```
icm/server_port_0 = PROT=HTTP,PORT=54410,TIMEOUT=600,PROCTIMEOUT=600
icm/server_port_1 = PROT=HTTPS,PORT=54430,TIMEOUT=600,PROCTIMEOUT=600
icm/server_port_2 = PROT=SMTP,PORT=25,TIMEOUT=600,PROCTIMEOUT=600
```

2.5.3 Manually starting and stopping the system

The system (ABAP server and database) is automatically started when you activate an instance in CAL. The system (ABAP server and database) is automatically stopped, when you suspend the instance in CAL. There might be nevertheless situations where you want to start or stop the ABAP server or the database manually. The next sections describe how to do this.

ABAP System

To check the status of the ABAP system logon as root on operating system level and execute:

```
su - a4hadm
sapcontrol -nr 00 -function GetProcessList
sapcontrol -nr 00 -function GetSystemInstanceList
```

For stopping the ABAP system logon as root on operating system level and execute:

```
su - a4hadm
sapcontrol -nr 00 -function Stop
sapcontrol -nr 01 -function Stop
```

For starting the ABAP system logon as root on operating system level and execute (database must run):

```
su - a4hadm
sapcontrol -nr 00 -function Start
sapcontrol -nr 01 -function Start
```

SAP HANA Database

To check the status of the database logon as root on operating system level and execute:

```
su - hdbadm
sapcontrol -nr 02 -function GetProcessList
```

For stopping the database logon as root on operating system level and execute (make sure the ABAP system has been stopped before):

```
su – hdbadm
sapcontrol -nr 02 -function StopSystem HDB
```

For starting the database logon as root on operating system level and execute:

```
su - hdbadm
sapcontrol -nr 02 -function StartSystem HDB
```

2.6 System Setup Activities

The latest Information about BW/4HANA can be found in note 2347382 - SAP BW/4HANA – General Information (Installation, SAP HANA, ...)

2.6.1 Transport of Copies

To enable transporting please go to transaction STMS in client 000 to setup the transport management system.

Use your own password.

2.6.2 Setting up BW/4HANA Client

The following setups have been already executed in the Developer Edition.

To set up the BW/4HANA Client please go to transaction STC01 and run task list: SAP_BW4_SETUP_SIMPLE

To set up the BW4 Cockpit run SAP_BW4_LAUNCHPAD_SETUP.

After applying a Support Package, you need to run task list SAP_BW4_AFTER_UPDATE.

Please keep in mind that HANA User System does not see the ABAP Schema. You need to give privileges on HANA Side (as SAP<SID> User) to the user which needs to see ABAP/BW4 Tables.

User Developer has assigned all existing BW/4HANA roles (SAP_BW4*)

These privileges and roles are already set.

For HANA-ABAP user mapping the DBMS_USER has been created on HANA side. To enable this feature in transaction SU01 please go to transaction DBCO, remove the leading "_" from the server name (_vhcalhdbdb.dummy.nodomain:30241) in the connection info and set the master password.

2.6.3 Exporting transport requests

To export objects with a transport of copies you have to execute the following procedure:

- In transaction SE01 choose Create (F6).
- Mark Transport of Copies and choose Enter.
- Enter a description.
- As transport target enter DMY and choose Save.
- Add the objects you need into the request. You may enter them either directly or via the menu Request/Task → Object List → Include Objects...
- Release the request.

You will find your transport files in the directories: /usr/sap/trans/data

2.6.4 Setting-up the BW Modelling Tools

For locally installing the BW ModelingTools you have to check the supported Eclipse Version from https://tools.hana.ondemand.com.

Eclipse can be downloaded from www.eclipse.org/downloads.

After installing Eclipse, you need to add the following Software Site https://tools.hana.ondemand.com to your available update sites in the Eclipse Preferences.

The frontend server delivered with this solution has already BW Modeling tools installed.

3 Licenses

3.1 Running Solution with a Developer License

This solution can be used for development purpose under the perpetual Developer License Agreement. Note that you can install only “Minisap” license keys that can be renewed as long as you adhere to the Terms and Conditions of the Developer License Agreement.

3.2 License Keys Installation

Once you create the solution instance in SAP Cloud Appliance Library, the SAP system will generate a temporary license key that is sufficient to logon to the system. As a first step before using the system you need to install a Minisap license as follows.

For example, Developer License Agreement:

1. HDB - SAP HANA Platform Edition (64GB)
2. A4H - SAP NetWeaver 7.4 AS ABAP (Linux / SAP HANA)

For more information about how to request and install “Minisap” license keys, see How to request and install Minisap Licnese keys.

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.

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
SAPGUI	3200 3600	Used for SAPGUI and ABAP in Eclipse to establish connection to SAP Application Server
SAP HANA SQL	30215 30213 30241	Used to establish SQL connection to SYSTEMDB tenant of SAP HANA 30213 used to establish connection to tenant DB SQL port of tenant DB for ABAP System
http(s) to SAP HANA Web Dispatcher	4302 8002	Used for http(s) communication with SAP HANA Web Dispatcher
http(s) to SAP BW/4HANA Application Server	54410 54430	Used for http communication for SAP BW/4HANA Cockpit Used for https communication for SAP BW/4HANA Cockpit

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**. Because 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).

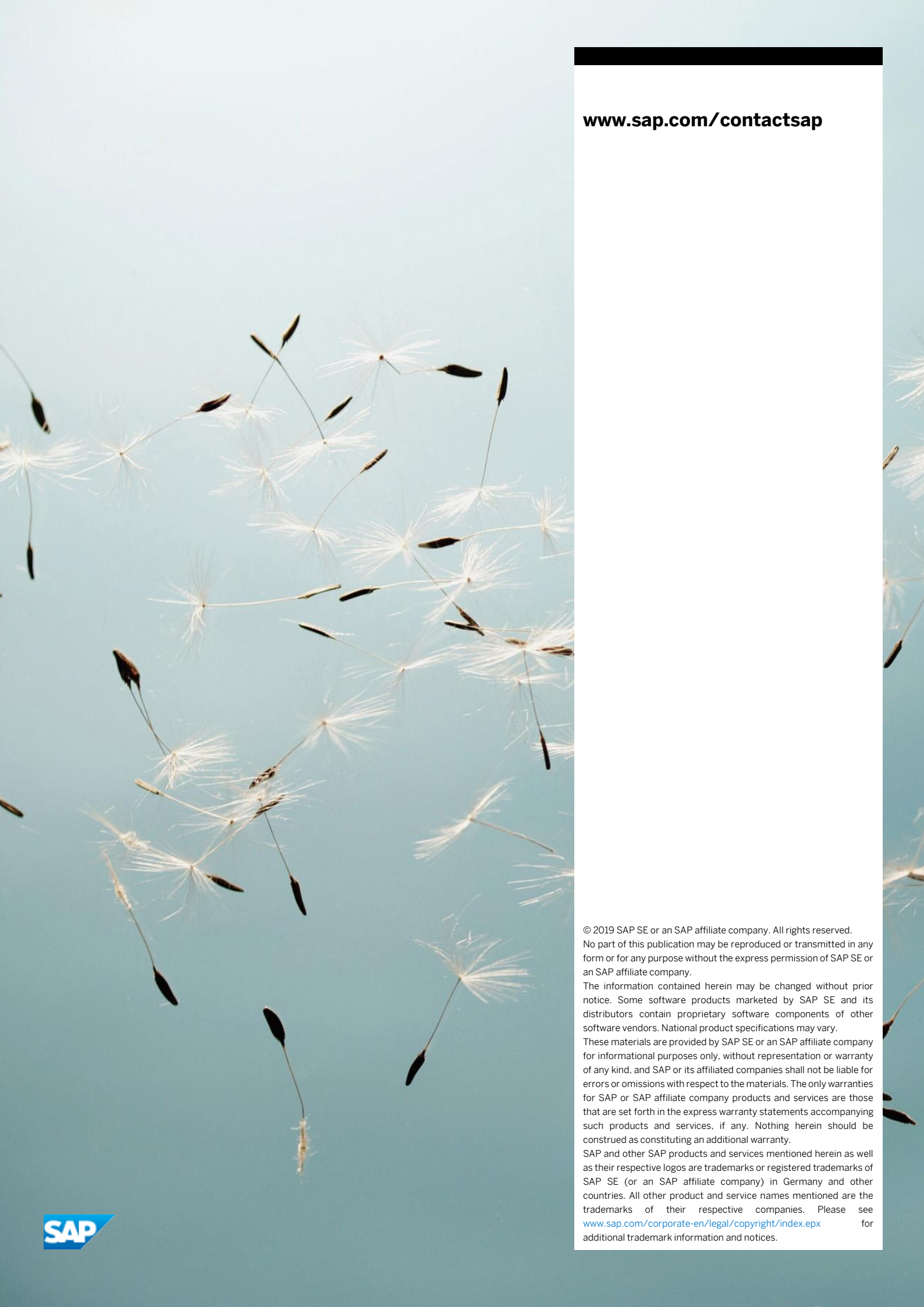
You can also use the context help in SAP Cloud Appliance Library by choosing the Help panel from the right side:

To familiarize yourself how to use SAP solutions in SAP Cloud Appliance Library, go to this topic.

6 Appendix

Installed Software Components

Name	Release	Support Package Stack
SAP_BASIS	753	0001
SAP_ABA	75D	0001
SAP_GWFND	753	0001
SAP_UI	753	0002
ST-PI	740	0010
BW4CONT	100	0009
BW4CONTB	100	0009
DW4CORE	200	0000
UIBAS001	400	0001



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