SAP S4HANA2020 and SAP NetWeaver 7.5 as Application Server JAVA Information Document

CLOUDWRXS – Azure Marketplace – SAP S4HANA2020 and SAP NetWeaver 7.5 as Application Server JAVA

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Change history

Date	Version	Created by	Description of change
04-Feb-2022	1.0	Cloudwrxs Inc.	Initial version

Contents

Purpose, scope, and users

- The purpose of this document is to provide image information about the SAP S4HANA2020 and SAP NetWeaver 7.5 as Application Server JAVA image on Azure.

Reference documents

- The review was performed using configuration information available on SAP best practices.

Installed Products

- Using this solution one virtual machine will be deployed and you get access to a system landscape that has been built using the following components
    1. SAP NetWeaver 7.55 application server ABAP incl. SAP S/4HANA 2020 (SP00)
    2. SAP NetWeaver 7.50 application server JAVA with installed Adobe Document Services. (SP21)

        ABAP client structure & business users
- Standard ABAP clients are configured in the solution.

        - 000 serves as standard delivery client (as usual in on-premises deployments)

    Post-installation Steps & Sample Demo Walkthroughs

    Once you have created a system instance in Azure using the pre-built, you will have a principally working system. However, there are some settings that you should adapt prior to first usage to ensure the Compliance (Licensing, Business Process Configuration etc.) and best experience for your end users.

    1. Installing the License for SAP Product Installed S4HANA 2020, SAP NetWeaver 7.5 as application server java and SAP Hana DB license
    2. SGEN and STMS configuration (Single System, Two System Landscape, Three system Landscape, etc)
    3. Scheduling the Standard SAP Jobs, Database Backup schedule etc
    4. Adobe Document Service configuration between S4HANA 2020 S4D & SAP NetWeaver 7.5 as JAVA (S4J)

1. **Accessing the Solution**
    Overview

    The appliance can be accessed via client tools (SAP GUI, Any Browser Chrome, Internet Explorer etc) on your local PC.

    Since UI performance is usually better via access from your local PC, please evaluate if you can use this method as standard access. It requires administrator access on your PC and 5 minutes of effort.

    System access via local PC

Mapping your local /etc/hosts file

    To log on to the Fiori Launchpad from your local PC, you need to ensure that you have mapped the IP addresses of your instance against clear text host names. This mapping step is needed since the

connection to the cloud providers uses IP addresses, whereas the S/4HANA system needs dedicated host names to work correctly.

After you have done the mapping (by editing a local file on your computer), you will be able to access the Fiori Launchpad of SAP S/4HANA via this URL:

https://cwxs4hana2020:44300/sap/bc/ui5_ui5/ui2/ushell/shells/abap/FioriLaunchpad.html

If you cannot map your local hosts file (e.g. you don't have administrator rights on your computer), you can use the IP address of your instance in the URL (https://<IP_Address>:44301/...), however, not all applications and scenarios will work correctly with it e.g. WebGUI or Web Dynpro applications will not display in the browser.

Another option could be to use browser plugins (e.g. Chrome Virtual Host) that simulate the mapping in the browser session only. Again, not all scenarios might work correctly with it.

The following describes how to modify the local hosts file on a Windows computer.
Instructions for modifying it on a Mac can be found in the appendix.

1. Open Notepad as administrator (search for Notepad on your computer > Right mouse click > Run as administrator):

2. Click File ⬛ Open and enter the following path:

    For Windows operating system: c:\windows\system32\drivers\etc\hosts
    For Linux operating system: /etc/hosts

3. Ensure to select All Files (*.*)

4. Open the hosts file and add the following lines to it (the IP addresses for the servers are displayed in the CAL console in the instance properties, take the external IP address):

    # cloudwrxs Solution

    <External IP Address SAP S4HANA, SAP NetWeaver 7.5 as Application Server JAVA & HDB server> cwxs4hana2020

    <IP Address SAP S4HANA, SAP NetWeaver 7.5 as Application Server JAVA & HDB server> cwxs4hana2020

5. Save the hosts file and exit.

Users & passwords Information About the SAP S4HANA 2020 system (S4D)

- SAP S/4HANA ABAP application server

Pre-configured Standard users in SAP S/4HANA2020

Client	Business Content	Sample users
000 Standard delivery client	• Nothing specific (Standard customizing only)	• DDIC / SAP* (<Cl0udwrxs@2021>

- Administrative data & users for SAP S/4HANA

Connect to SAP S4D using the information in the table below (URLs with the host name cwxs4hana2020 require host's file.

Name	Value	Description
SID	S4D	System ID of the SAP system
Instance Number	00	The instance number of the central instance (CI)
Clients	000	These are the pre-configured clients (standard customizing only)
Password for users DDIC & SAP*	<Cl0udwrxs@2021> in client 000	The master password is the password "Cl0udwrxs@2021".
ABAP administrator	s4dadm / <Cl0udwrxs@2021>	Additional user for ABAP lifecycle management – start/stop, administration,

- SAP HANA DB server(H4D) for S4HANA 2020

Two database entities are relevant for the Solution:

1.2. The tenant database (used to store the S/4HANA data) and the system database (for general data and settings e.g., maintaining the license key for SAP HANA).
1.3. An entry for both needs to be configured in the HANA Studio on your local HANA Studio.

Tenant database (use Single Container when adding it to your local HANA Studio)

Database Information:

Name	Value	Description
HANA DB system	H4D	System ID of the HANA DB
HANA DB Instance Number	02	Instance number of HANA DB

Name	Value	Description
HANA SYSTEM user name	SYSTEM / <Cl0udwrxs@2021>	Standard HANA system user
HANA administrator name	H4dadm / <Cl0udwrxs@2021>	Additional user for HANA lifecycle management – start/stop, administration functions, recovery.

System database (use Multiple Containers ⮕ System DB when adding it to your local HANA Studio, needed e.g. for applying your own HANA DB license key)

Tenant Database Information:

Name	Value	Description
HANA DB system	SYSTEMDB	System ID of the HANA DB
HANA DB Instance Number	02	Instance number of HANA DB
HANA SYSTEM user name	SYSTEM / <Cl0udwrxs@2021>	Standard HANA system user
HANA administrator name	H4dadm / <Cl0udwrxs@2021>	Additional user for HANA lifecycle management – start/stop, administration functions, recovery.

1.4. Users & passwords Information About the SAP NetWeaver as Java Application Server (SID: S4J)

The administration users for Hana Database and JAVA on operating system level are defined as follows:

Name	Value	Description
JAVA administrator name	Administrator / <Cl0udwrxs@2021>	Additional user for JAVA lifecycle management – start/stop, administration, functions, recovery. Access to SAP NetWeaver Administrator: https://cwxs4hana2020:51000/nwa

SAP HANA DB (H4J) server for SAP NetWeaver 7.5 As Application Server JAVA

One database entity is installed as H4J for SAP NetWeaver 7.5 As Application Server JAVA.

The tenant database (used to store the S/4HANA data) and the system database (for general data and settings e.g., maintaining the license key for SAP HANA).

An entry for both needs to be configured in the HANA Studio on your local HANA Studio.

Tenant database (use Single Container when adding it to your local HANA Studio)

Database Information:

Name	Value	Description
HANA DB system	H4J	System ID of the HANA DB
HANA DB Instance Number	12	Instance number of HANA DB

System Database Information:

Name	Value	Description
HANA SYSTEM user name	SYSTEM / <Cl0udwrxs@2021>	Standard HANA system user
HANA administrator name	H4jadm / <Cl0udwrxs@2021>	Additional user for HANA lifecycle management – start/stop, administration functions, recovery.

System database (use Multiple Containers ☐ System DB when adding it to your local HANA Studio, needed e.g. for applying your own HANA DB license key)

Tenant Database Information:

Name	Value	Description
HANA DB system	SYSTEMDB	System ID of the HANA DB
HANA DB Instance Number	12	Instance number of HANA DB
HANA SYSTEM user name	SYSTEM / <Cl0udwrxs@2021>	Standard HANA system user
HANA administrator name	H4jadm / <Cl0udwrxs@2021>	Additional user for HANA lifecycle management – start/stop, administration functions, recovery.

Name	Value	Description
HANA SYSTEM user name	SYSTEM / <Cl0udwrxs@2021>	Standard HANA system user
HANA administrator name	hdbadm / <Cl0udwrxs@2021>	Additional user for HANA lifecycle management – start/stop, administration functions, recovery.

System database (use Multiple Containers ▯ System DB when adding it to your local HANA Studio, needed e.g. for applying your own HANA DB license key)

Name	Value	Description
HANA DB system	SYSTEMDB	System ID of the HANA DB
HANA DB Instance Number	12	Instance number of HANA DB
HANA SYSTEM user name	SYSTEM / <Cl0udwrxs@2021>	Standard HANA system user
HANA administrator name	hdbadm / <Cl0udwrxs@2021>	Additional user for HANA lifecycle management – start/stop, administration functions, recovery.

Accessing Your Instance on Linux Level

You can access the Linux backend system of your appliance (ABAP / JAVA / BI) as root using secure SSH tools, e.g., PuTTY

For information how to access a solution on OS level, go to this FAQ page and look under the question:

How to connect to a running instance via the secure shell protocol (SSH)?

Parameter ID	Parameter Value	Note
OS User Name	Setup on creation of Virtual Machine.	Azure VM Creation
OS Password	Setup on creation of Virtual Machine. (Password, open SSH keys)	Use the generated private key with SSH tools, Even use stored SSH Keys in Azure.

2. Licenses & Fees

Cloudwrxs is a platform for quickly using SAP on-premise software products in a hyperscale environment. Therefore, three separate license / cost factors need to be considered, each depending on the duration that your system should be used:

a) the SAP on-premises product (e.g. SAP S/4HANA)

b) SAP Cloud Appliance Library.

SAP S/4HANA

To use an instance under your own SAP Product License Agreements, you need to possess at least a license for the SAP HANA DB (application runtime) and for SAP S/4HANA Enterprise Management professional use.

If you don't possess these licenses already, you can either obtain them via your SAP account executive, or online as self-service by licensing the free SAP S/4HANA 90-day trial in SAP Store.

The licenses entitle your organization to use the appliance, however, since technically you will still be running under the 90-day temporary license key, we recommend generating your own license key and apply it to your system as soon as possible. 90 days after the initial instance creation, the system will stop working without these technical license keys

License key installation in your instance

Latest 90 days after instance creation (but better directly after unlocking the solution from SAP Marketplace after 30 days), you need to apply a valid license key to the system components.

SAP S/4HANA2020

SAP HANA database

SAP NetWeaver 7.5 As Application Server JAVA

SID	Product	Version	DB	OS	Comment	Where to apply (incl. hardware key) ?
H4D & H4J	SAP HANA, platform edition	SAP HANA 2.0, platform edition	n/a	Linux	License type: SAP In-memory Appliance platform Quantity: 256 GB Memory Volume	Right-click in HANA Studio on HANA System DB ⮕ *Properties* ⮕ *Licenses*. Remote desktop has pre-configured entry Local HANA Studio: host name cwxs4hana2020 or IP address; instance number 02; multiple containers > system database.
S4D	SAP S/4HANA	SAP S/4HANA 2020	SAP HANA database	Linux	N/A	S/4HANA GUI tCode /nSLICENSE
S4J	SAP NetWeaver	SAP NetWeaver 7.5	Sybase ASE	Linux	As license type, select 'J2EE - Web AS JAVA'	NW Administrator (https://cwxs4hana2020:51000/nwa) ⮕ Configuration ⮕ Infrastructure ⮕ Licenses.

Security Aspects in Solution

- ### Internet ports for accessing your system

By default, the following ports are opened for your solution instance (i.e. this is
the inbound firewall of your cloud provider). The access from your local computer to your system instance happens via those ports (see 'Description' what port is used where).

Please make sure that your outbound firewall (e.g. if you are behind a corporate firewall) allows access through the needed ports as well. If you encounter problems behind a firewall, a good test is to use a public network (e.g. from home) or test access via the delivered remote desktop – assuming you can access the remote desktop via port 3389.

You can edit/add/remove ports manually in the instance details from Azure Portal

Virtual Machine*	Protocol	Port (open by default)	Description
ABAP	SSH	22	Used for secure connection to Linux-based server operating system
ABAP	HTTPS	44301, 44300	Used for access of a local web browser to appliance (Fiori etc.). 44301 via Web Dispatcher, 44300 via ABAP ICM directly
ABAP	HTTP	50000	Standard HTTP port for ABAP
ABAP	HTTPS	8443	Access to integrated Cloud Connector
ABAP	SAP GUI	3200	Used for access of local SAP GUI to appliance
ABAP	TCP	3300	Used for connection of ABAP Development Tools (Eclipse-based) to SAP S/4HANA ABAP repository & RFC calls to other systems if intended
ABAP	TCP	30213 / 30215	Used for connection of SAP HANA Studio to HANA DB
JAVA	SSH	22	SSH connection to Linux operating system (e.g. for PuTTY)
JAVA	HTTPS	50001	Used for access to SAP NetWeaver Administrator and other web-based J2EE applications
BIP	SSH	22	Used for secure connection to Linux-based server operating system
BIP	HTTP	8080 & 6400	Used for HTTP connection to BI platform
WIN	RDP	3389	Used for access from MS Windows remote desktop connection