SAP S/4HANA 1809 (FPS01&FPS02) Fully-Activated appliance: Business Intelligence & SAP Analytics Cloud
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Document History

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<th>Revision</th>
<th>Date</th>
<th>Change</th>
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<tr>
<td>1.0</td>
<td>&lt;2019-05-15&gt;</td>
<td>Release for customer</td>
</tr>
<tr>
<td>1.1</td>
<td>&lt;2019-07-15&gt;</td>
<td>Slight adaptation to make it work for FPS01 &amp; 02</td>
</tr>
</tbody>
</table>
1  Where Can This Script Be Used?

This demo script has been written for usage with the SAP S/4HANA 1809 Fully-Activated Appliance (FPS01 or FPS02), in short “appliance” in this script, hence you will need such an appliance to make use of this guide.

The appliance can be brought up in two ways, and the demo scenario in this script is largely the same for both:

1. Via SAP Cloud Appliance Library (hosted on cloud providers)
   You need a cloud provider account at AWS, MS Azure, or GCP. With this, you can deploy the appliance within 1-2 hours from https://cal.sap.com > Solutions > SAP S/4HANA 1809 FPS<<x>> Fully-Activated Appliance.

2. Via installing it on your own on-premise hardware.
   You need to provide your own hardware, and order & install the appliance as explained in SAP Note 2041140.

If you are new to the SAP S/4HANA Fully-Activated Appliance, introductory information can be found here: https://blogs.sap.com/2018/12/12/sap-s4hana-fully-activated-appliance-create-your-sap-s4hana-1809-system-in-a-fraction-of-the-usual-setup-time/

Important:
Before you start your demo, please read SAP S/4HANA Fully-Activated Appliance: Demo Scripts for information about necessary preparations, especially any post-deployment steps to ensure the full functionality of your appliance.

Besides this, you will also find links to all demo scripts on this page.
2 Demo Guide: SAP Business Objects BI Platform

This scenario demonstrates how to access pre-configured business intelligence reports that are populated with data from an SAP S/4HANA 1809 system.

2.1 Prerequisite: BI platform in your trial landscape

If you are running this scenario via SAP CAL (i.e. hosted on AWS, Azure, GCP):
As default, the BI platform will be deployed as part of your landscape. However, during the creation of your system instance, you can deactivate the deployment of the BI platform to save hosting costs. This can be done in the Advanced Mode of the instance creation process via de-selecting a checkbox in the Virtual Machines section of the instance creation wizard. If this flag has been de-selected, you need to create a new instance with the BI platform deployed.

If you have the BI platform deployed and are using a local browser to access the BI platform, please map your hosts file as described in the Getting Started Guide that is referenced in the instance details page of the SAP Cloud Appliance Library console (“http://cal.sap.com → Instances”, and then click on your instance). You will need a mapping between the bihost alias and the IP address of your BI platform. If you are using the remote desktop within SAP CAL, this mapping is done automatically.

If you are running this scenario on your own hardware (i.e. you received the appliance via download or Blu-Ray):
There is no BI landscape contained in the local shipment, so you need to install a BI platform system on your own, import the BI reports and make the connection to your locally installed SAP S/4HANA system. Please see the ‘SAP Best Practices for analytics with SAP S/4HANA’ package on https://rapid.sap.com/bp/#/BP_S4H_ANA (scope item SAP Business Intelligence (BI) → Integration between SAP S/4HANA and SAP BI) how to obtain the reports and configure your BI system.

2.2 Accessing the BI platform

This activity shows you how to access the BI platform and display reports with data from the SAP S/4HANA backend. Note: Not all the reports will display (sensible) data, namely in Cost Center Plan/Actual and Profit Center Plan/Actual, you might receive a ‘No data available’ message.

<table>
<thead>
<tr>
<th>What to Do</th>
<th>What You Will See</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open the BI launch pad <a href="http://bihost:8080/BOE/BI">http://bihost:8080/BOE/BI</a> (hosts file mapping needed)</td>
<td><img src="image" alt="SAP BusinessObjects BI launch pad" /></td>
</tr>
<tr>
<td>System bihost:6400</td>
<td><img src="image" alt="SAP BusinessObjects" /></td>
</tr>
<tr>
<td>User BPINST</td>
<td></td>
</tr>
<tr>
<td>Password Welcome1</td>
<td></td>
</tr>
<tr>
<td>After log-on, confirm the Data Protection pop-up</td>
<td></td>
</tr>
</tbody>
</table>

Error! Use the Home tab to apply Heading 2:Chapter Title to the text that you want to appear here.
<table>
<thead>
<tr>
<th>What to Do</th>
<th>What You Will See</th>
</tr>
</thead>
<tbody>
<tr>
<td>From the <strong>Home → My Recently Viewed Documents</strong> tile, choose some of the reports e.g. the <strong>Sales Order Analysis</strong></td>
<td><img src="image1.png" alt="My Recently Viewed Documents" /></td>
</tr>
<tr>
<td>Notes:</td>
<td>- The list of recently viewed documents may vary</td>
</tr>
<tr>
<td></td>
<td>- The first calls into the backend instance will take longer than usual</td>
</tr>
</tbody>
</table>

The report(s) will show up in a separate tab in the BI launch pad.

Depending on the type of report, you need to enter some attributes before executing the report.
Also, there are different ways to filter or drill-down inside the reports.

If you want to explore the list of all reports, navigate to **Documents → Folders → Public Folders → S/4HANA**

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### 2.3 Connecting the BI platform to SAP S/4HANA

The following sections briefly describe how the connection to the SAP S/4HANA is defined. The aforementioned ‘SAP Best Practices for analytics with SAP S/4HANA’ package ([https://rapid.sap.com/bp/#/BP_S4H_ANA](https://rapid.sap.com/bp/#/BP_S4H_ANA)) explains this in detail.
The connection into SAP S/4HANA is defined in the BI Central Management Console (http://bihost:8080/B0E/CMC)

System bihost:6400
User Administrator
Password Welcome1

Choose Organize → OLAP Connections.

Right click on the S4HANA connection and choose Organize → Edit

The pre-defined connection into SAP S/4HANA is displayed (using the system alias vhcal54hcs)

If you want to connect your own SAP S/4HANA system, please maintain them accordingly. Depending on your network setup, you might also need to maintain the hosts file on the (Linux) server where the BI platform is running to make the connection work.

Use the Connect button to test your setup.
3 Demo Guide: Integration with SAP Analytics Cloud (SAC)

The appliance can be connected to the SAP Analytics Cloud (SAC), allowing you to create analytical visualizations for the data residing in SAP S/4HANA.

For this scenario, you need an account for the SAP Analytics Cloud since this cannot be delivered as part of the appliance. Also, since there are many tutorials on the SAP Analytics Cloud page and in the Internet for SAC usage, we will only describe a very basic scenario in this guide and refer to the existing tutorials for details.

3.1 Components Needed for SAC connectivity

<table>
<thead>
<tr>
<th>Component</th>
<th>Where to get it</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP S/4HANA backend system</td>
<td>Use the appliance or any other S/4HANA on-premise system</td>
</tr>
<tr>
<td>SAP Analytics Cloud account</td>
<td>Use an existing SAC account or get one from SAP Store: <a href="https://www.sapstore.com/solutions/40117/SAP-Analytics-Cloud-for-Business-Intelligence">https://www.sapstore.com/solutions/40117/SAP-Analytics-Cloud-for-Business-Intelligence</a>. For SAP Partners, the T&amp;D license 8004109 will also be sufficient for such an account (please see SAP PartnerEdge for details). The free SAC trial account (see <a href="https://www.sapanalytics.cloud/">https://www.sapanalytics.cloud/</a> → Try it free) does not contain the option to connect to an SAP S/4HANA system.</td>
</tr>
</tbody>
</table>

3.2 Technical Settings

3.2.1 CORS (Cross-Origin Resource Sharing)

CORS is a technology that allows a browser to securely use coding & data from multiple web sites in the same browser session (this is needed for the Live Data Connection from SAC to S/4HANA).

The setup for CORS is described in detail on https://help.sap.com/doc/00f68c2e08b941f081002fd3691d86a7/release/en-US/0d1cd72012804eb78e2aea45a562e439.html.

In the appliance the profile parameters (tCodes RZ10/RZ11) and the whitelist entry *sapanalytics.cloud (tCode /nUCONCockpit) have been set accordingly, so you don’t have to maintain those unless you have a special setup.

3.2.2 Supported browsers & certificate handling

SAP Analytics Cloud is optimized for Google Chrome. Other browsers might have functional limitations (for details, please see https://help.sap.com/doc/00f68c2e08b941f081002fd3691d86a7/release/en-US/11b4e5ff76eb4747bc255d7037be1f01.html).

There are two ways for using Google Chrome in the appliance: either on the remote desktop of the appliance (recommended) or on your local computer (has some security constraints).
3.2.2.1 Install Google Chrome on the remote desktop

Due to license restrictions, Google Chrome cannot be delivered by default on the remote desktop of the appliance, so you need to install it yourself.

The “Welcome” page on the remote desktop contains a link for downloading the Chrome installer. This will take only a few minutes and is the recommended way since the needed certificates to establish a trust relation between SAC and S/4HANA are already installed on the remote desktop.

Once you have installed Chrome on the remote desktop, you can access your SAC tenant and establish a connection to the S/4HANA appliance from there (see chapter 3.3. below).

3.2.2.2 Use Chrome on your local PC

For this to work, you will need to import the existing appliance certificate (self-signed by SAP) into the trusted certificate store of your local PC (Chrome uses this store as well).

CAUTION!
This is a possible temporary workaround for trial scenarios only but should not be left permanently in place.
If you want to use your local browser over a longer period, it is strongly recommended to install your own trusted certificate into the SAP S/4HANA system. Please see the standard documentation for SAP S/4HANA security for details.

IMPORTANT NOTE:
Once you have imported the certificate of a dedicated instance into your local certificate store, you will get a browser security error if you try to connect to other S/4HANA instances (this is valid at least for Chrome, other browsers might behave differently).

To overcome this issue, you need to remove the imported certificate from your certificate store again: Simply select the certificate in the certificate store (see next steps) and remove it from there. Afterwards, restart your browser.

To import the existing appliance certificate, follow the below procedure. If you are missing authorizations to do this, please check with your system administrators.

<table>
<thead>
<tr>
<th>What to Do</th>
<th>What You Will See</th>
</tr>
</thead>
<tbody>
<tr>
<td>On the remote desktop, search for “certificates” and open “Manage Computer Certificates”</td>
<td>![Image of certificate management interface]</td>
</tr>
</tbody>
</table>
### What to Do

In the Certificates Manager, navigate to **Trusted Root Certification Authorities → Certificates**.

Right click on the cal.dummy.nodomain entry and choose **All Tasks → Export**.

Go through the wizard:

- Next → Choose Base-64 encoded X.509 (.CER) → Save on local PC → Next → Finish

Copy the .cer file to your local computer.

Result:

you have saved the certificate as local file, and now need to upload it back again into your local Chrome as a trusted certificate.
<table>
<thead>
<tr>
<th>What to Do</th>
<th>What You Will See</th>
</tr>
</thead>
</table>
| On your local PC open the Chrome settings by clicking on the three vertical dots in the Chrome header bar | ![Certificate Export Wizard](image)  
Completing the Certificate Export Wizard  
You have successfully completed the certificate export wizard.  
You have specified the following settings:  
- **Certificate Path:** C:\Users\Certificate\CA Certificate\bc.auth  
- **Export Key:** No  
- **Include all certificates in the certificate path:** No  
- **File Format:** Base64-encoded X.509 (.cer)  
![Chrome settings](image)  
Log On  
Client: 100 |
<table>
<thead>
<tr>
<th>What to Do</th>
<th>What You Will See</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search for certificates in the Chrome Settings tab.</td>
<td><img src="image" alt="Chrome Settings" /></td>
</tr>
<tr>
<td>Click on Manage certificates.</td>
<td><img src="image" alt="Manage certificates" /></td>
</tr>
<tr>
<td>In the Certificates manager, choose Trusted Root Certification Authorities → Import</td>
<td><img src="image" alt="Import certificate" /></td>
</tr>
</tbody>
</table>
In the wizard, choose the .cer file that you downloaded from the remote desktop before, and place it in the *Trusted Root Certification Authorities* certificate store.

Finish the wizard and confirm the warning.

As said above, this procedure is meant as a temporary workaround and should not be left in place permanently!

Close all Chrome windows.

Afterwards restart Chrome to make the connection into SAC as described in the next section of this guide.

If you want to access another SAP S/4HANA Fully-Activated Appliance instance in the future, please remove the certificate from the certificate store (otherwise you may see security errors in the browser).
3.3 Demo scenarios for the SAP Analytics Cloud & SAP S/4HANA

There are many tutorials in the Internet that describe how to use SAP Analytics Cloud (SAC) with SAP S/4HANA, plus there’s lot of pre-defined SAP content that can be directly loaded into your SAC tenant.

In this guide, we will therefore only show how to establish the connection between SAC and S/4HANA, and how to create a very basis chart on top of S/4HANA content.

For more detailed scenarios, please have a look at the referenced tutorials at the end of this guide.

3.3.1 Create an SAC connection into the fully-activated appliance

<table>
<thead>
<tr>
<th>What to Do</th>
<th>What You Will See</th>
</tr>
</thead>
</table>
| Log on to your SAC account. | ![Connection Menu]
| Click on **Main Menu → Connection**. | ![Connection Menu]
| Click on the **to create a new connection.** | ![Create New Connection]
| Choose **Connect to Live Data → SAP S/4HANA** | ![Create New Connection]
Enter the connection data as shown below.

**Recommended:**
The name of the connection should be SAPEMC since the pre-delivered SAP content uses a hard-coded reference to this connection name.

Click OK (this will also test the connection).
3.3.2 Create an SAC model on top of your S/4HANA connection

For creating a model, you need to choose a data source (in our case a CDS query residing in S/4HANA) and define certain attributes for it.

As data source, we will choose a query for spend analysis of procured materials (the technical name of the query is 2CCMMPURORDVALUEQ).

<table>
<thead>
<tr>
<th>What to Do</th>
<th>What You Will See</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log on to your SAC account.</td>
<td>![SAC interface screenshot]</td>
</tr>
<tr>
<td>Click on Main Menu → Create → Model</td>
<td></td>
</tr>
<tr>
<td>Choose Get data from a datasource → Connect to live data</td>
<td>![Connect to live data interface screenshot]</td>
</tr>
<tr>
<td>Choose how you’d like to start your model</td>
<td></td>
</tr>
<tr>
<td>Start with a blank model</td>
<td></td>
</tr>
<tr>
<td>Import a file from your computer</td>
<td></td>
</tr>
<tr>
<td>Get data from a datasource</td>
<td></td>
</tr>
</tbody>
</table>

Error! Use the Home tab to apply Heading 2:Chapter Title to the text that you want to appear here.
Choose these values:

System Type: SAP BW
Connection: SAPEMC
Data Source: Type spend analysis and select query 2CCMPURORDVALUEQ from the upcoming search results

Choose OK

Note: the underlying technology for S/4HANA queries is the same as for SAP BW, therefore we can choose this system type.

We will now exclude certain dimensions to simplify the model a bit, this step is optional.

Choose All Dimensions.

Hide all dimensions except for:

- Material
- Display Currency
- Material description
- Calendar month

Click Save.
### 3.3.3 Create a story on top of your SAC model

A story is a data visualization in SAC. It is based on a model and can range from a simple chart or table to complex dashboards or management reporting screens.

In our simple example, we will just create one bar chart of our monthly spend per material but feel free to add more data or visualizations and explore the tutorials for ideas.

<table>
<thead>
<tr>
<th>What to Do</th>
<th>What You Will See</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log on to your SAC account. Click on Main Menu → Create → Story</td>
<td><img src="image" alt="Image of SAC interface showing the creation of a story" /></td>
</tr>
</tbody>
</table>
Choose **Add a canvas page**

Choose **Chart**

Choose the model you just created

Choose **Set**
What to Do

Add the measure *PO Net Amount*

Add the dimensions *Material description* and *Calendar month*

The chart will be filled with data and you now can further refine it.

Once you’re done, *Save* your model in your SAC file structure.
3.3.4 Explore further scenarios

As said above, there are many tutorials on the SAP Analytics Cloud page itself (https://www.sapanalytics.cloud/resources-getting-started-guide/) and in the Internet how to build reports on top of any data. Please explore them to get further ideas.

I’d like to specifically highlight one video created by the SAP S/4HANA DEMO21 partner program where the SAP S/4HANA Fully-Activated Appliance is used as system basis. This extends our above demo scenario (Spend Analysis) with SAP pre-delivered content and further features:
https://www.youtube.com/watch?v=lNIAzYb4rkk