

Coach Documentation

Wednesday, February 24, 2021 12:05 PM

Activity 1:

Make sure that SAP S/4 appliance is installed and have access details in right SAP client.

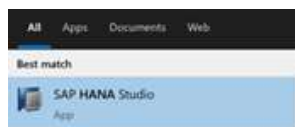
Activity 2:

Now install the Power BI client and SAP HANA studio on SAP windows jump box to configure the DB connection and create the direct query using power BI desktop,

Activity 3:

Now need to configure the connection to SAP HANA DB using some pre-requisite steps on HANA studio and power BI desktop.

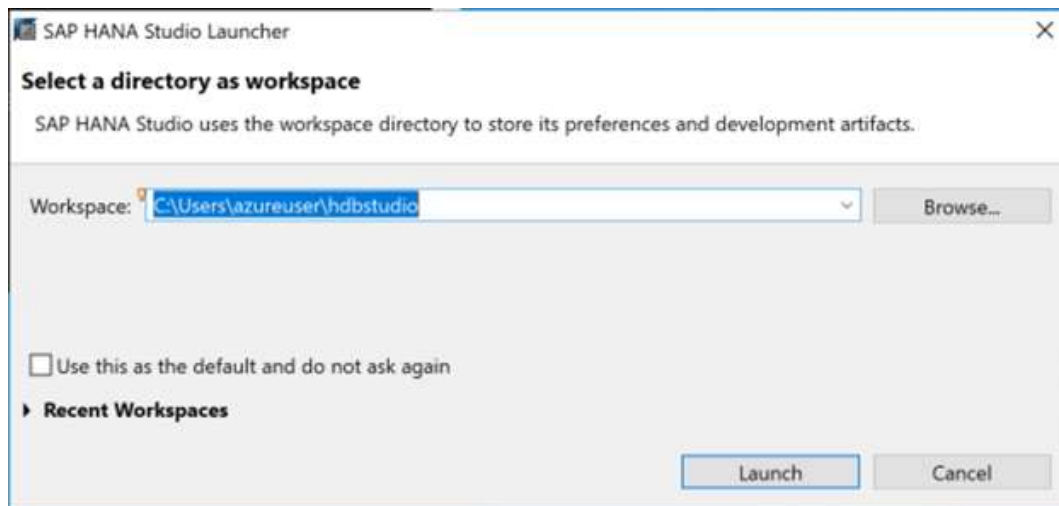
Login in SAP HANA Database using HANA Studio:



Or

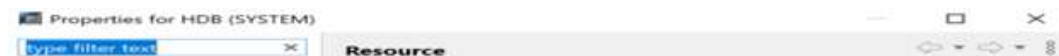


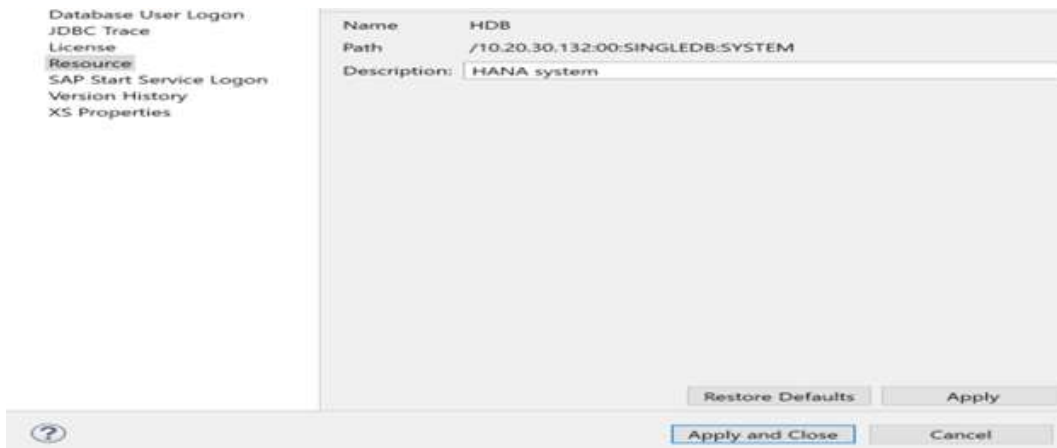
Following pop up will appear -



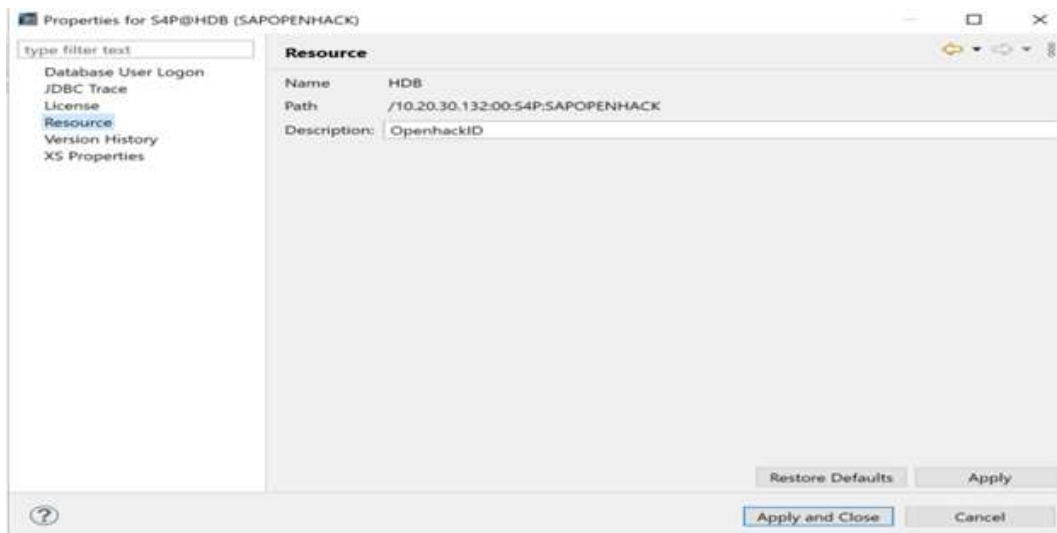
Select "Launch" Button ...

After selecting launch ...

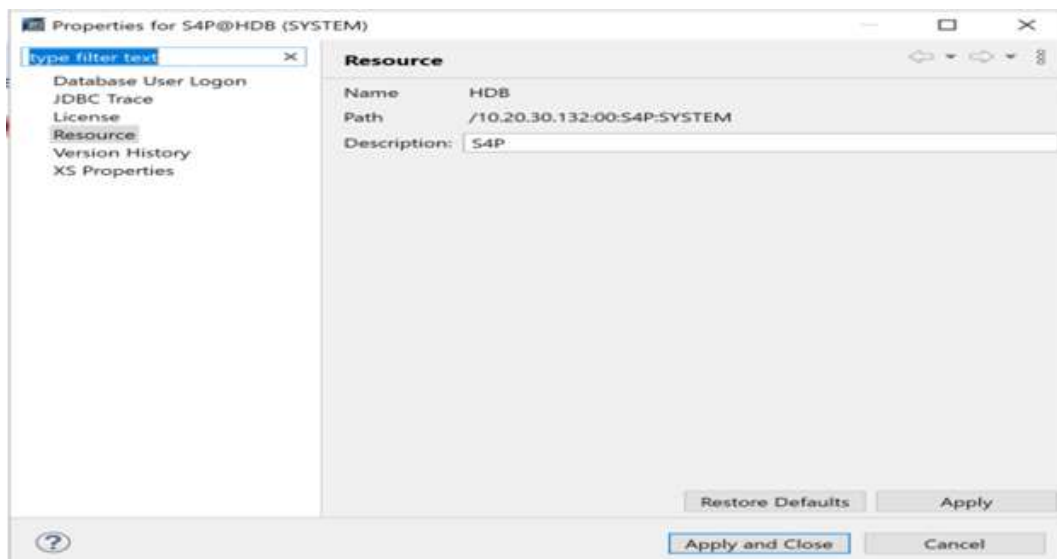




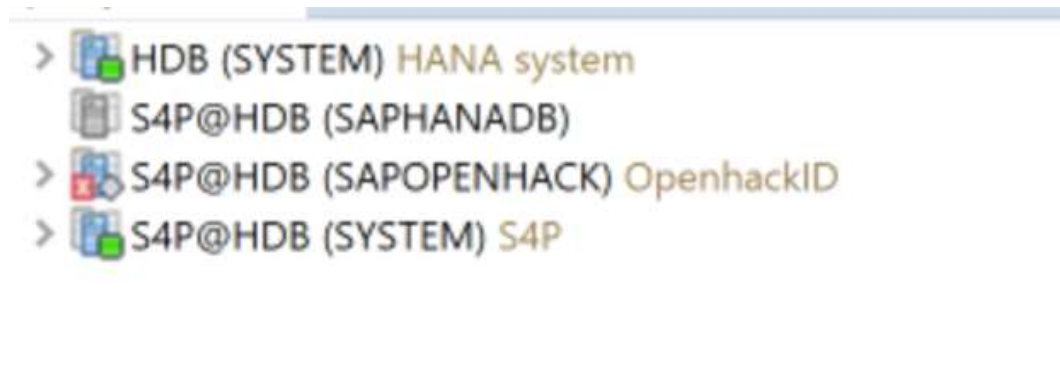
Select "Apply and Close "



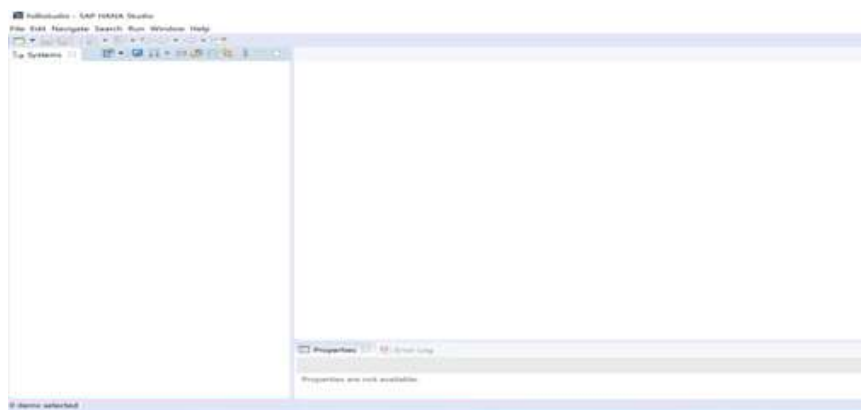
Select description "Open Hack ID" - apply and close



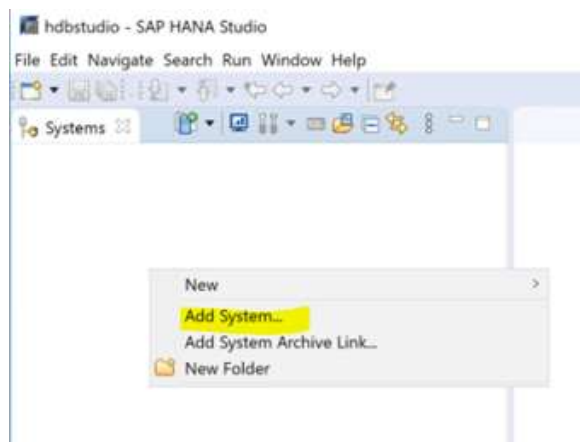
It will create "OpenhackID" entry in the SAP studio



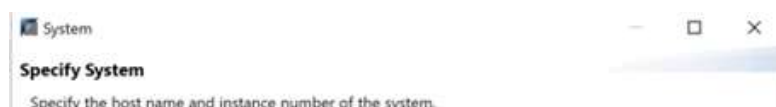
Initial screen of SAP HANA studio will pop up



Right click on the left space under systems and select "Add System"



Enter the system information as below



Host Name: 10.20.30.132

Instance Number: 00

Mode: ☒ Single container
☐ Multiple containers
 ☐ Tenant database
 Name:
 ☐ System database

Description: HDB

Locale: English (United States)

Folder: /

Enter system user ID and password for SAP HANA DB

System

Connection Properties

Specify the properties for connecting to the system.

Authentication can be carried out using the current operating system user or a valid SAP HANA database user

☐ Authentication by current operating system user
☒ Authentication by database user

User Name: SYSTEM

Password:

☒ Store user name and password in [secure storage](#)

☐ Connect using SSL

☒ Enable SAP start service connection
 ☐ Use HTTPS

Add SAP system S4P

System

Specify System

Specify the host name and instance number of the system.

Host Name: 10.20.30.132

Instance Number: 00

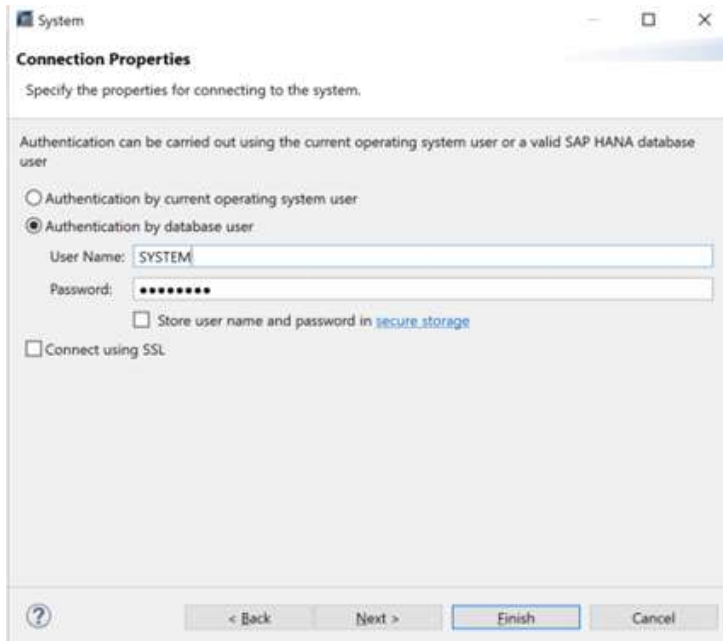
Mode: ☐ Single container
☒ Multiple containers
 ☒ Tenant database
 Name: S4P
 ☐ System database

Description: S4P

Locale: English (United States)

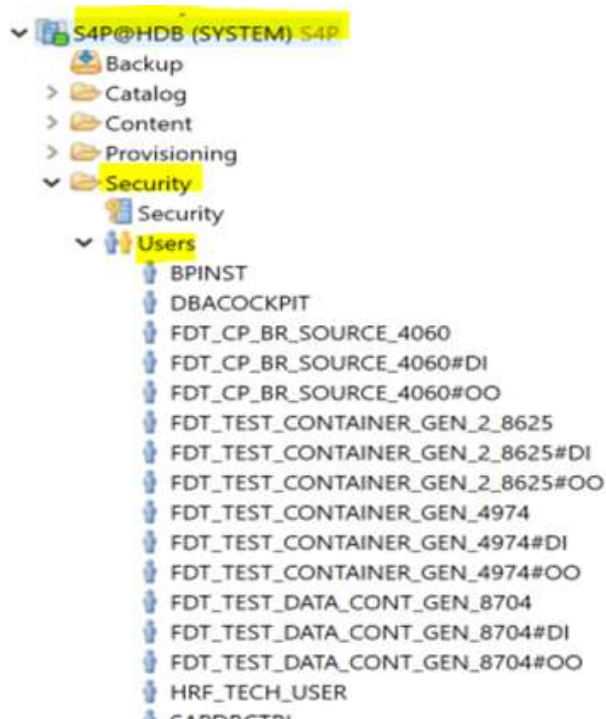


Enter the "SYSTEM" DB user and password

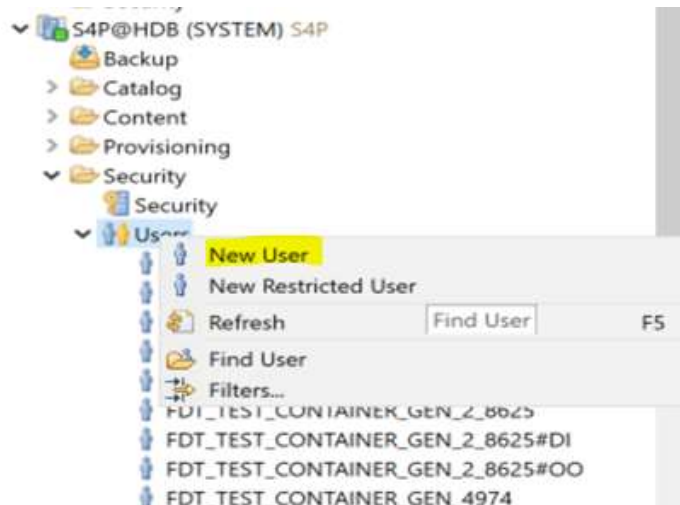


Setup new User ID in SAP HANA Database:

Create a new user ID SAPOPENHACK in SAP HANA, this user will be used to connect Power BI to SAP HANA Database



Create new user SAOPENHACK



Enter "SAOPENHACK" ID and Password --

Add " ABAP admin" "content admin" public" roles

The screenshot shows the 'New User' configuration window in SAP. The 'User Name' field is set to 'SAOPENHACK'. The 'Authentication' section has 'Password' selected. The 'Valid From' and 'Valid Until' fields are empty. The 'Session Client' is set to 'SAP'. The 'Granted Roles' tab is active, showing a table of roles granted to the user.

Role	Grantor
ABAP_ADMIN	SYSTEM
CONTENT_ADMIN	SYSTEM
PUBLIC	SYSTEM

The 'Details for PUBLIC' section shows the option 'Grantable to other users and roles' is unchecked.

Add "catalog read", "data admin" and "export" system privileges ..

The screenshot shows the 'New User' configuration window in SAP, with the 'System Privileges' tab active. The 'User Name' field is set to 'SAOPENHACK'. The 'Authentication' section has 'Password' selected. The 'Valid From' and 'Valid Until' fields are empty. The 'Session Client' is set to 'SAP'. The 'System Privilege' table shows the following privileges granted to the user:

System Privilege	Grantor
CATALOG READ	SYSTEM
DATA ADMIN	SYSTEM
EXPORT	SYSTEM

The 'Details for EXPORT' section shows the option 'Grantable to other users and roles' is unchecked.

Add following object privileges --- create and select

S4P@HDB (SYSTEM) S4P 10.20.30.132 00

User / User Parameters

New User

User Name*: SAOPENHACK ☐ Disable ODBC/JDBC access

Authentication

☒ Password Password*: ***** Confirm*: ***** ☐ SAML ☐ SAP Logon Ticket

Force password change on next login: ☐ Yes ☒ No

☐ Kerberos External ID*: ☐ XS09 ☐ SAP Assertion Ticket

Valid From: Valid Until:

Session Client:

Granted Roles: System Privileges **Object Privileges** Analytic Privileges Package Privileges Application Privileges Privileges on Users

Catalog Object	Grantor
SAOPENHACK	SYSTEM
TBTCO (SAPHANADB)	SYSTEM

Privileges for 'SAOPENHACK'

☐ ALTER ☐ Grantable to Others: Yes No

☒ CREATE ANY ☐ Yes ☒ No

☐ CREATE OBJECT STRUCTURED PRIVILEGE ☐ Yes ☐ No

S4P@HDB (SYSTEM) S4P 10.20.30.132 00

User / User Parameters

New User

User Name*: SAOPENHACK ☐ Disable ODBC/JDBC access

Authentication

☒ Password Password*: ***** Confirm*: ***** ☐ SAML ☐ SAP Logon Ticket

Force password change on next login: ☐ Yes ☒ No

☐ Kerberos External ID*: ☐ XS09 ☐ SAP Assertion Ticket

Valid From: Valid Until:

Session Client:

Granted Roles: System Privileges **Object Privileges** Analytic Privileges Package Privileges Application Privileges Privileges on Users

Catalog Object	Grantor
SAOPENHACK	SYSTEM
TBTCO (SAPHANADB)	SYSTEM

Privileges for 'TBTCO (SAPHANADB)'

☒ SELECT ☐ Grantable to Others: Yes ☒ No

☐ UPDATE ☐ Yes ☐ No

☐ DELETE ☐ Yes ☐ No

☐ EXECUTE ☐ Yes ☐ No

Save the configuration

S4P@HDB (SYSTEM) S4P 10.20.30.132 00

User / User Parameters

New User

User Name*: SAOPENHACK ☐ Disable ODBC/JDBC access

Authentication

☒ Password Password*: ***** Confirm*: ***** ☐ SAML ☐ SAP Logon Ticket

Force password change on next login: ☐ Yes ☒ No

☐ Kerberos External ID*: ☐ XS09 ☐ SAP Assertion Ticket

Valid From: Valid Until:

Session Client:

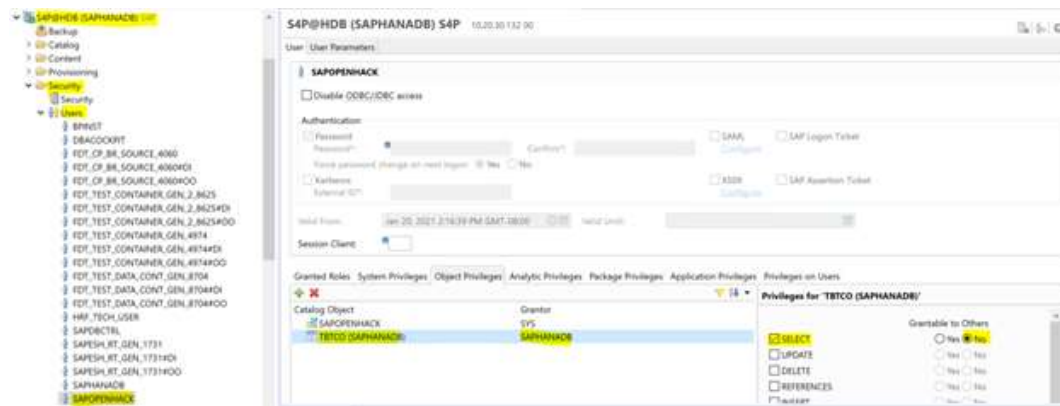
Granted Roles: System Privileges **Object Privileges** Analytic Privileges Package Privileges Application Privileges Privileges on Users

Catalog Object	Grantor
SAOPENHACK	SYSTEM

Privileges for 'TBTCO (SAPHANADB)'

Grantable to Others

When we update the “Object Privileges” with TBTCO and granter is SYSTEM it won’t save it and gives an error. So remove that object and login into S4P with SAPHANADB (User ID) and then goto security→Users→SAPOPENHACK and add the object privileges with TBTCO.



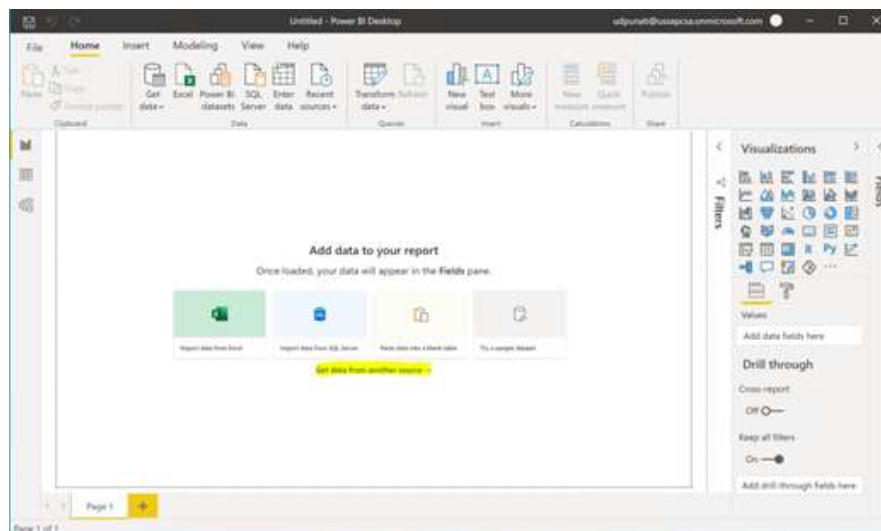
HANA configuration is complete ... now Let's work on Power BI connection and report...

Setup the connection in Power BI desktop to SAP HANA Database:

Install Power BI Desktop

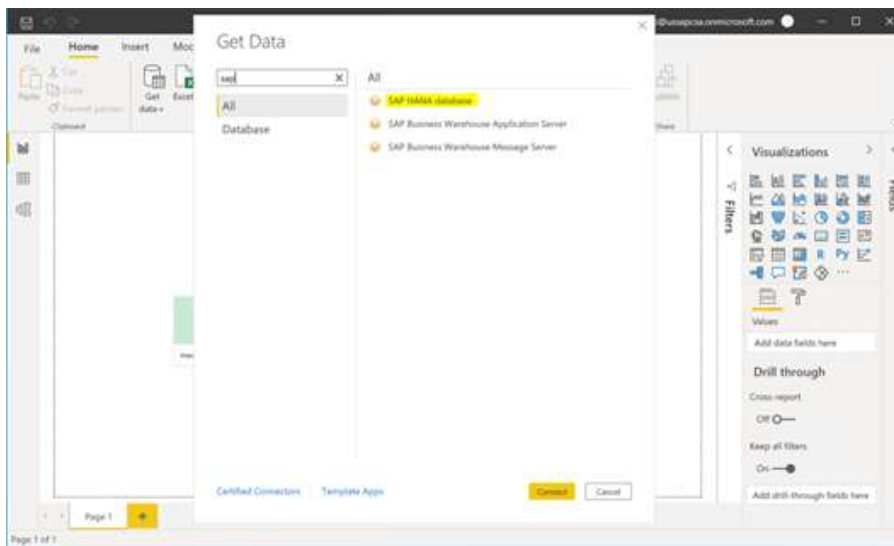


Open Power BI desktop

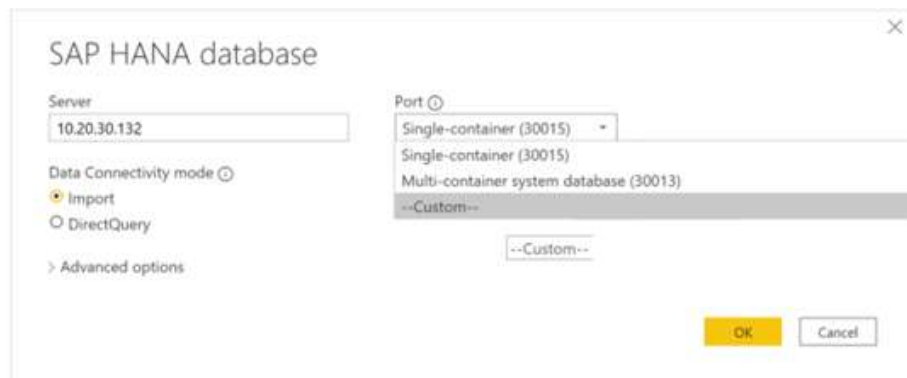


Click on “Get data from another source” and select “ Connect”

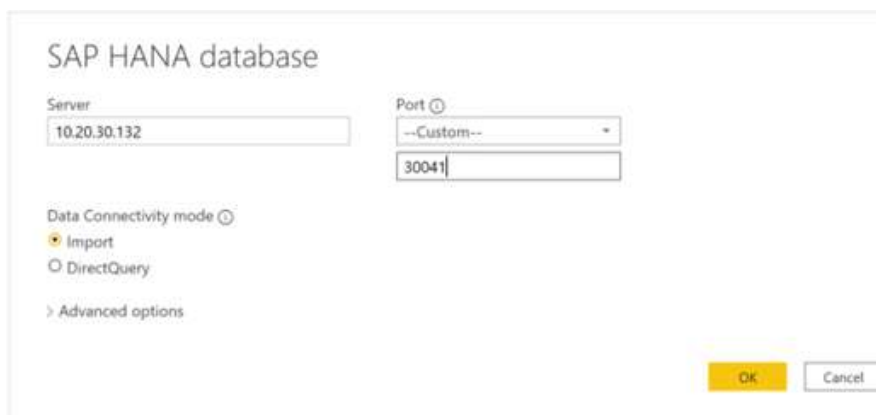
On following screen, type SAP Keyword



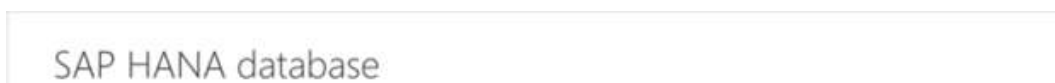
Enter SAP DB information on following screen



Enter port information as follows



Select custom and SQL query as follows



Server: 10.20.30.132

Port: --Custom--
30041

Data Connectivity mode: ☒ Import ☐ DirectQuery

Advanced options

SQL statement (optional):
SELECT * FROM "SAPHANADB"."TBTCO"

OK Cancel

Will pop up with information about SAP table TBTCO as follows

10.20.30.132:30041

JOBNAME	JOBCOUNT	JOBGROUP	INTREPORT	STEPCOUNT	SOLSTRFTDT	SOLSTRFTTM	BTCSYSTEM	SOLCDV
Y_AVC_SESSION_CLE	22371500		NEWSTEP		20210205	224121		2021C
SAP_LCM_LCA_TMPL_IMPORT	22371500		NEWSTEP		20210205	224121		2021C
Y_AVC_SESSION_CLE	22471500		NEWSTEP		20210205	225121		2021C
SAP_LCM_LCA_TMPL_IMPORT	22471500		NEWSTEP		20210205	225121		2021C
SAP_CA_OTIMP_DATA_COLLECTION	22471500		NEWSTEP		20210205	224825		2021C
SAP_WORKFLOW_SYSTEM	22471500		NEWSTEP		20210205	224725		2021C
SAP_POC_PROCESS_EVENT_QUEUES	22471500		NEWSTEP		20210205	224725		2021C
SAP_CA_OTIMP_DATA_COLLECTION	22471501		NEWSTEP		20210205	224826		2021C
SAP_WORKFLOW_SYSTEM	22471600		NEWSTEP		20210205	224727		2021C
SAP_POC_PROCESS_EVENT_QUEUES	22471600		NEWSTEP		20210205	224728		2021C
SAP_LCM_RELTN_USECASE_SCHEDULED	22471600		NEWSTEP		20210205	225633		2021C
SAP_WORKFLOW_SYSTEM	22471601		NEWSTEP		20210205	224729		2021C
PLM/SEA_EXTRACT_OKEY	22511600		NEWSTEP		20210205	225938		2021C
PLM/SEA_EXTRACT_OKEY	22511601		NEWSTEP		20210205	225946		2021C
IMP/ODATA_TRANSFER_TECH_JOB	22511600		NEWSTEP		20210205	230546		2021C
SAP_MKT_UTILS_CLEANUP	23084900		NEWSTEP		20210205	230849		2021C
SAP_POC_PROCESS_EVENT_QUEUES	23111500		NEWSTEP		20210205	231125		2021C
SAP_CA_OTIMP_DATA_COLLECTION	23111600		NEWSTEP		20210205	231247		2021C
SAPON_WF_UTILS_ID	23111600		NEWSTEP		20210205	231601		2021C
SAP_MM_PUR_PO_AND_RF_FROM_QTN	23151600		NEWSTEP		20210205	232452		2021C

The data in the preview has been truncated due to size limits.

Load Transform Data Cancel

Select "Load" after the screen appears

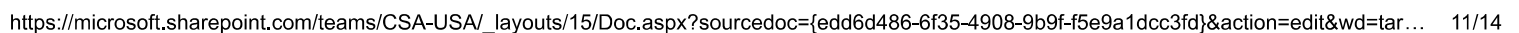
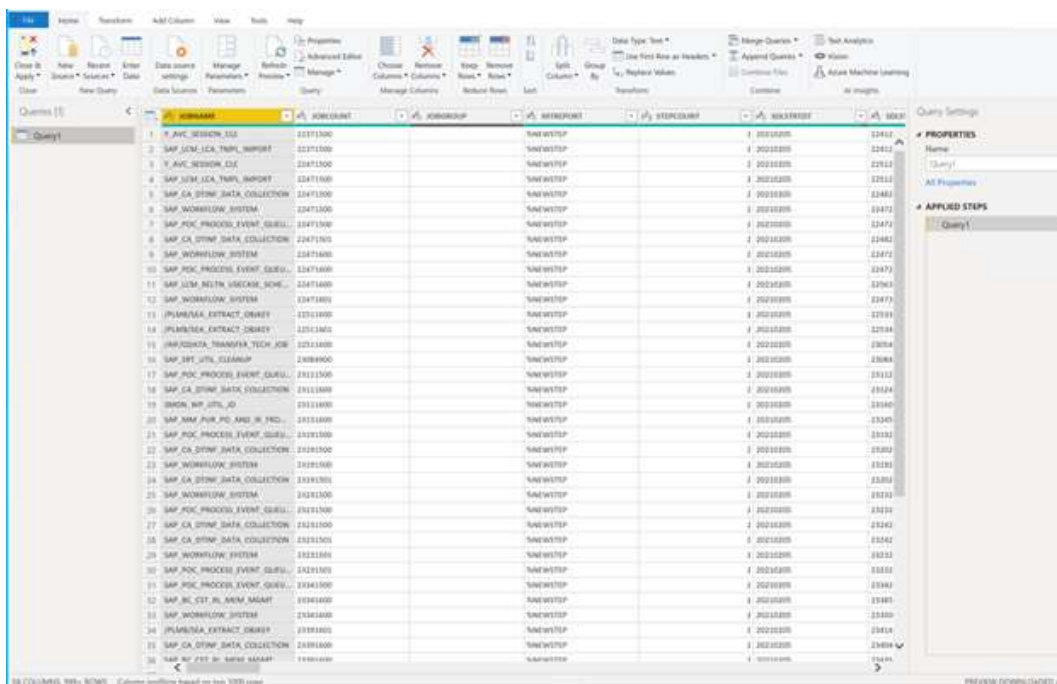
Load

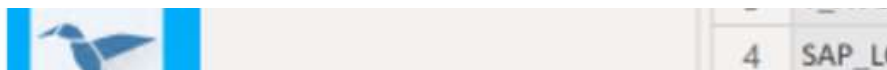
Query1
21,276 rows from 10.20.30.132:30041.

Cancel

Select "transform data" on pop up screen as shown in following screen

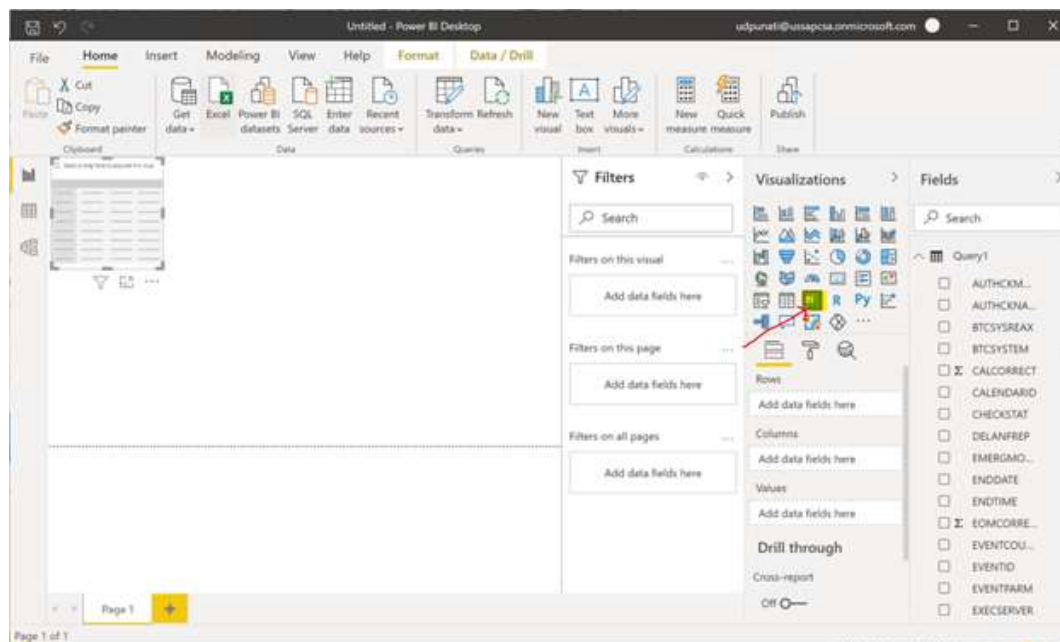






Creating visualization in Power BI using the SAP table TBTCO

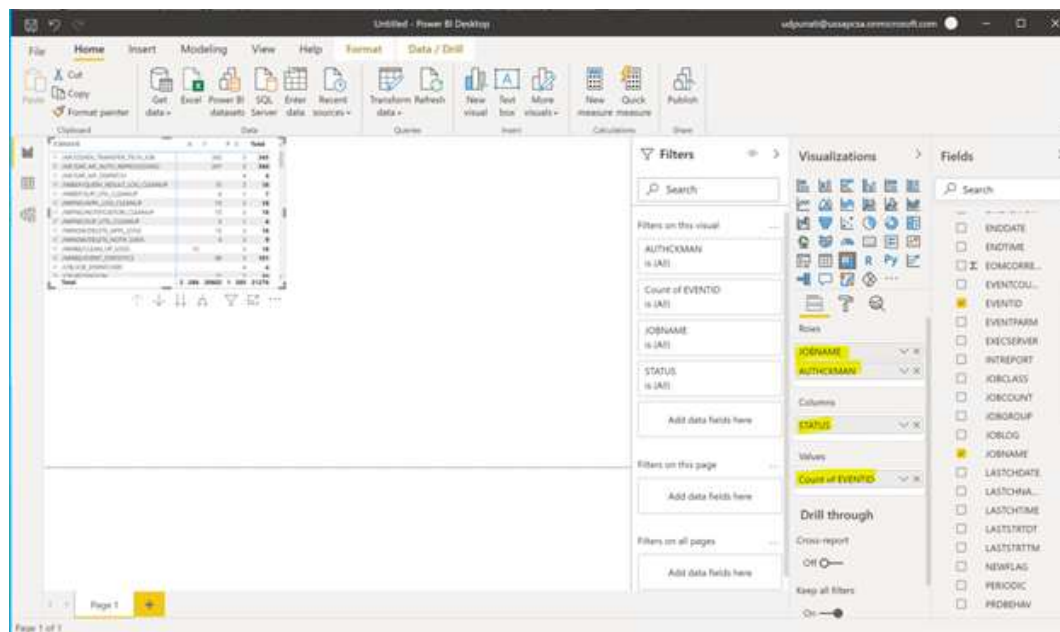
Create a Matrix.



Add fields "JOBNAME" and "AUTHCKMAN" in Rows

Add field "STATUS" in Columns

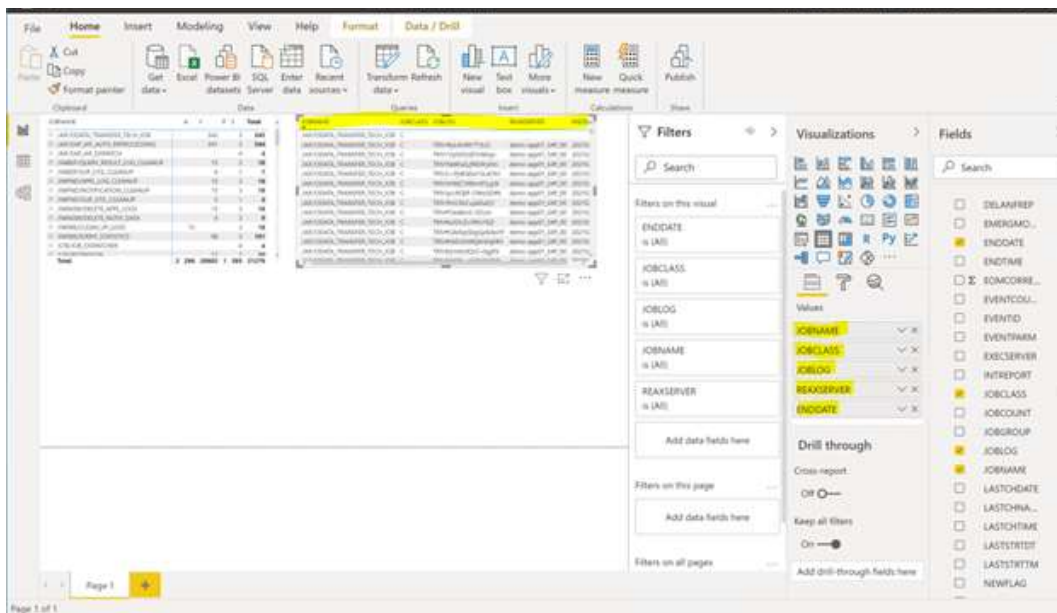
Add "EVENTID" in Values



Create a new Table in the visualization

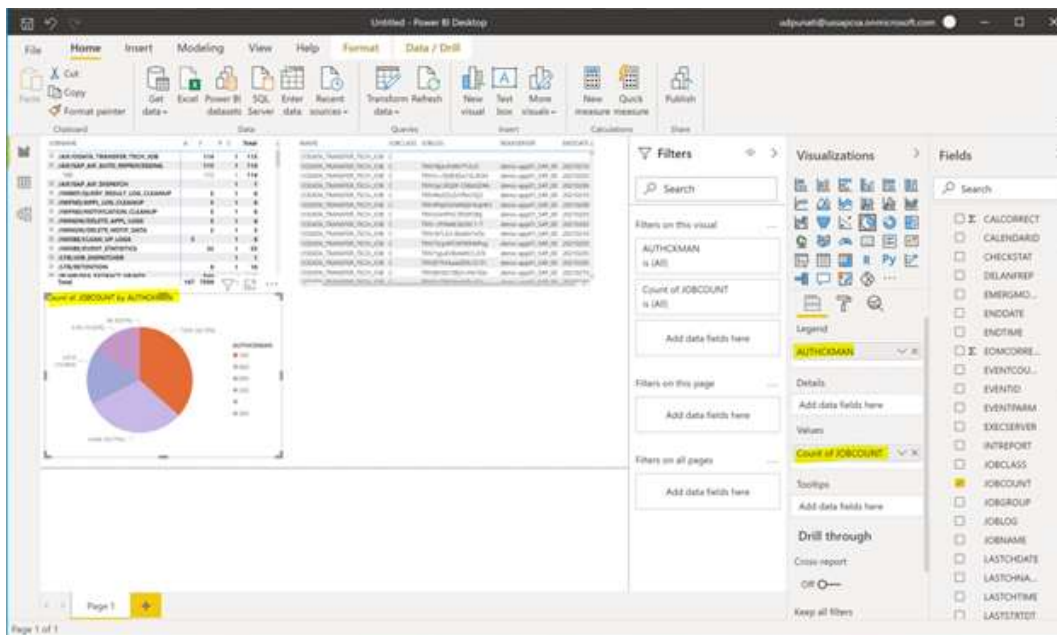
Drag and drop fields "JOBNAME", "JOBCLASS", "JOBLOG", "REAXSERVER" and "ENDDATE" under values





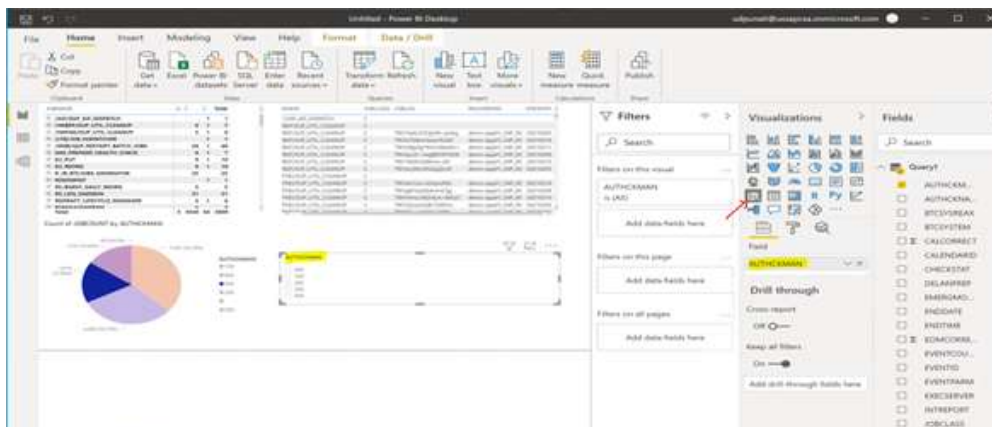
Create a Pie chart:

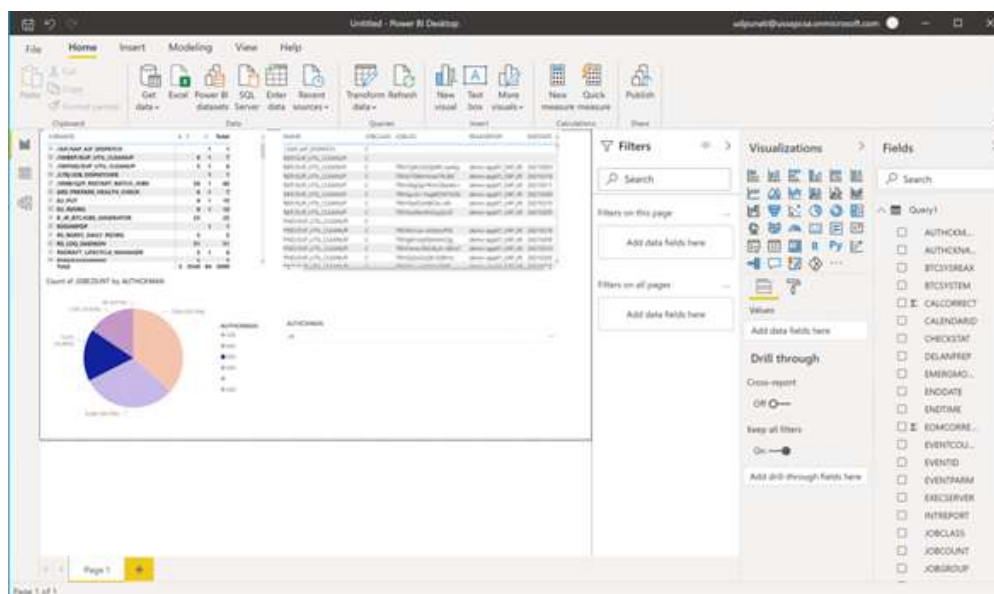
Drag and drop field "AUTHCKMAN" under Legend and field "JOBCOUNT" under Values (with count).



Create a Filter or Slicer

Drag and drop field "AUTHCKMAN" under Field.





https://microsoft.sharepoint.com/teams/CSA-USA/_layouts/15/Doc.aspx?sourcedoc={edd6d486-6f35-4908-9b9f-f5e9a1dcc3fd}&action=edit&wd=tar... 14/14