

# Activate CDS view for ODP ODATA

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## Prerequisites

Install and configure Eclipse and SAP perspectives.

Install Eclipse and HANA components from Hana software tools

Create connection from the HANA perspective:

Application server: 172.29.50.44

Instance: 00

User: DRICHERT

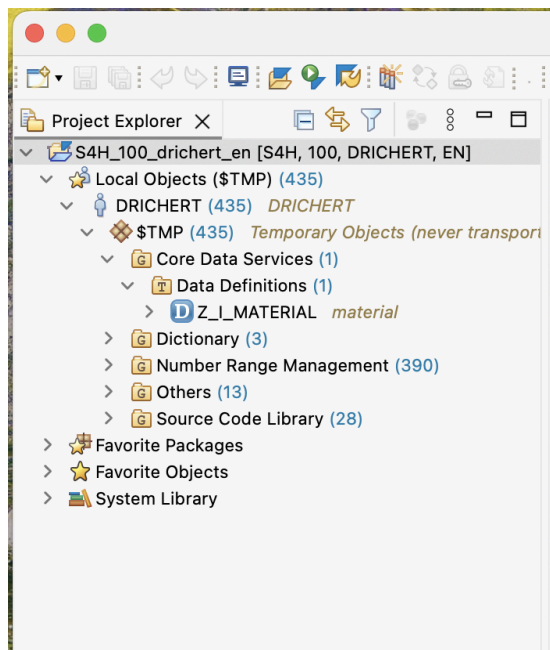
Password:

## Security Profiles to add to your user (SU01)

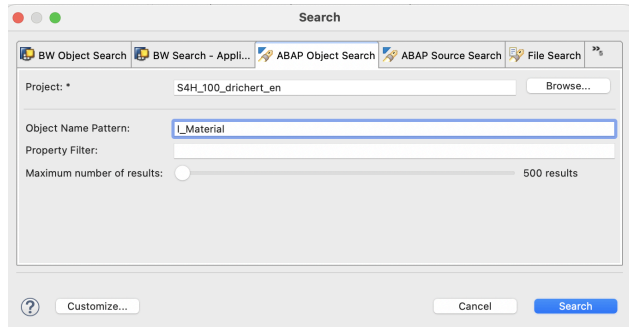
Add profile to user: S\_BI-WX\_RFC (for ODP contexts DataSource/extractors or ABAP CDS) or S\_BI-WHM\_RFC (for ODP context SAP BW or BW/4HANA) to the communication user.

## Extend Existing CDS View for Analytic consumption (Eclipse)

Open ABAP perspective.



Open the cds view you want to modify. Tool Bar ->Search -> Search -> ABAP Object Search -> I\_Material:



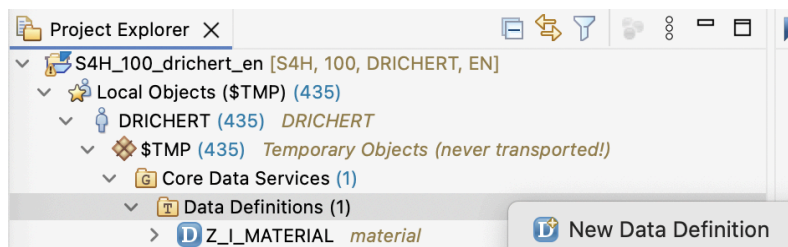
Double click on D I\_Material:

[S4H] ABAP Object Search: 'I_Material' - 362 objects found		
Object	Description	Package
I_MATERIAL		VDM_MD_PRODUCT
I_MATERIAL	Authorization for I_Material	VDM_MD_PRODUCT
D I_MATERIAL	Material	VDM_MD_PRODUCT
I_MATERIALACTUALSTKONHRZN	Auto assigned Mapping Role for I_MaterialActualStk	ODATA_PP_DD_STLM

It should look something like this:

```
@AbapCatalog: {
  sqlViewName: 'IMATERIAL',
  preserveKey: true,
  compiler.compareFilter: true
}
@VDM.viewType: #BASIC
@endUserText.label: 'Material'
@ObjectModel.representativeKey: 'Material'
@AccessControl.authorizationCheck: #CHECK
@Search.searchable: true
@ObjectModel.usageType.serviceQuality: #A
@ObjectModel.usageType.sizeCategory: #L
@ObjectModel.usageType.dataClass: #MASTER
@ClientHandling.algorithm: #SESSION_VARIABLE
@Metadata.allowExtensions: true
@Metadata.ignorePropagatedAnnotations: true
```

Create a new data definition (right-click from package \$tmp -> CDS -> Data Definitions-> new data definition).



Give it a name that starts with Z\_ and put the original cds view, **I\_Material** as the referenced object.

**Data Definition**  
Create a data definition

Project: \* S4H\_100\_drichert\_en Browse...

Package: \* \$TMP Browse...

☐ Add to favorite packages

Name: \* Z\_I\_MATERIAL\_3

Description: \* material from referenced object 2

Original Language: EN

Referenced Object: I\_Material Browse...

Click next, and next again (it's a local object so no transport request needed). The selected templates appear.

### Templates

Select one of the available templates.

☒ Use the selected template

Name	Description
View (creation)	
defineViewEntity	Define View Entity
defineRootViewEntity	Define Root View Entity
defineViewEntityWithToParentAssociation	Define View Entity with To-Parent Association
defineView	Define View (obsolete as of AS ABAP 7.57)
Projection View (creation)	
View Extend (creation)	
Hierarchy (creation)	

```
@AbapCatalog.sqlViewName: '${sql_view_name}'
@AbapCatalog.compiler.compareFilter: true
@AbapCatalog.preserveKey: true
@AccessControl.authorizationCheck: #NOT_REQUIRED
@EndUserText.label: '${ddl_source_description}'
@Metadata.ignorePropagatedAnnotations: true
define view ${ddl_source_name_editable} as select from ${data_source_name}
{
    ${data_source_elements}${cursor}
}
```

Keep the default and click Finish.

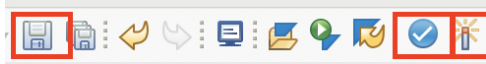
Add a name that starts with Z, not underscore, for example ZMATERIAL2

```
@AbapCatalog.sqlViewName: ''
@AbapCatalog.compiler.compareFil
```

Add these two lines after 'AccessControl'

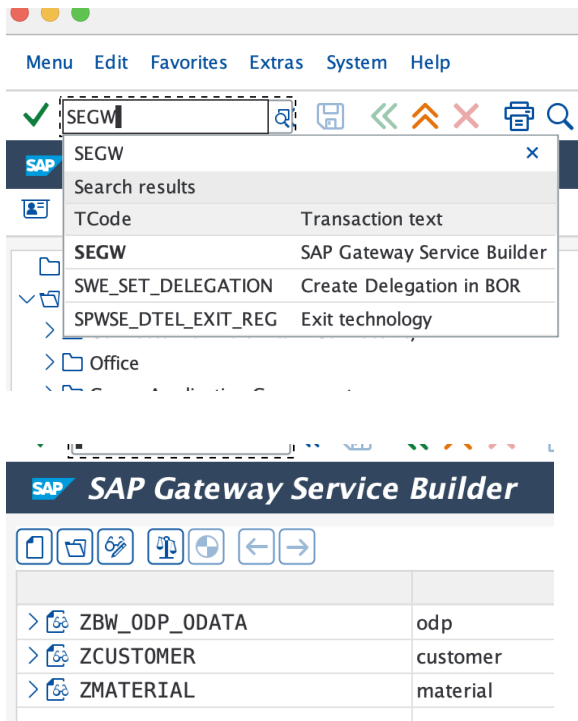
```
@Analytics: { dataCategory: #DIMENSION }
@Analytics.dataExtraction.enabled
```

Save, check and Activate:

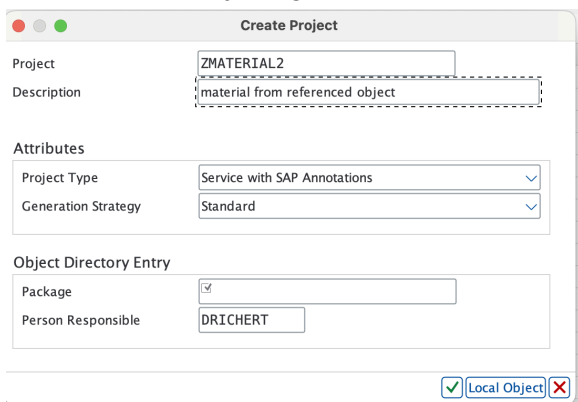


## Create project in Gateway Service Builder (SEGW):

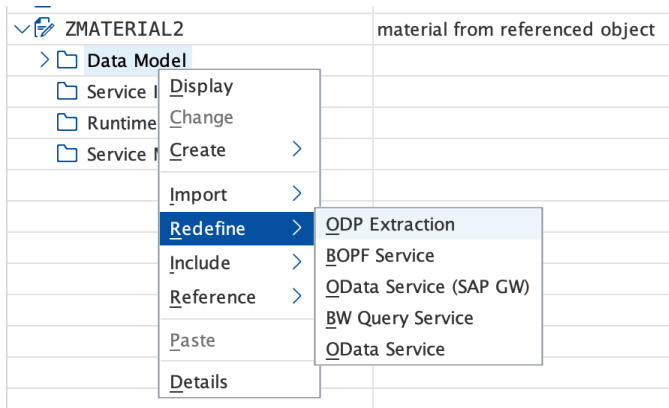
Open SAP GUI, and go to transaction SEGW:



Create a new project, give name, description and click Local Object:



Right-click on Data Model->Redefine->ODP Extraction.



For RFC Destination, choose your own host:

S4HCLNT100 Client 100

ODP Context: ABAP Core Data Services


ODP Name. Don't type this, use the search! This is because SAP adds a \$P to the end of the name. Search on the name you put in the single quotes in the definition above, 'ZMATERIAL2'


No. of hits: ... 1

ZMATERIAL2\$P material from referenced object

Double-click on it. It will return you to this screen:

RFC Destination	S4HCLNT100
ODP Context	ABAP Core Data Services
ODP Name	ZMATERIAL2\$P





ODP Name	Text
----------	------

Select Add ODP, and it will add the ODP to the list.

Next, add descriptions. Next. Local Object. Select all the artifacts.

▼ ZMATERIAL2_1_MDL			
▼ <input checked="" type="checkbox"/> AttrOfZMATERIAL2	Entity Type	AttrOfZMATERIAL2	
<input checked="" type="checkbox"/> MATERIAL	Key Property	MATERIAL	
<input checked="" type="checkbox"/> MATERIALTYPE	Property	MATERIALTYPE	
<input checked="" type="checkbox"/> MATERIALGROUP	Property	MATERIALGROUP	
<input checked="" type="checkbox"/> MATERIALBASEUNIT	Property	MATERIALBASEUNIT	
<input checked="" type="checkbox"/> MATERIALGROSSWEIGHT	Property	MATERIALGROSSWEIGHT	
<input checked="" type="checkbox"/> MATERIALNETWEIGHT	Property	MATERIALNETWEIGHT	
<input checked="" type="checkbox"/> MATERIALWEIGHTUNIT	Property	MATERIALWEIGHTUNIT	
<input checked="" type="checkbox"/> MATERIALMANUFACTURERNUMBER	Property	MATERIALMANUFACTURERNUMB...	
<input checked="" type="checkbox"/> MATERIALMANUFACTURERPARTNUM	Property	MATERIALMANUFACTURERPART...	
<input checked="" type="checkbox"/> AUTHORIZATIONGROUP	Property	AUTHORIZATIONGROUP	
<input checked="" type="checkbox"/> ISBATCHMANAGEMENTREQUIRED	Property	ISBATCHMANAGEMENTREQUIRED	
<input checked="" type="checkbox"/> CROSSPLANTCONFIGURABLEPRODUC	Property	CROSSPLANTCONFIGURABLEPRO...	
<input checked="" type="checkbox"/> PRODUCTCATEGORY	Property	PRODUCTCATEGORY	
<input checked="" type="checkbox"/> PRODUCTCHARACTERISTIC1	Property	PRODUCTCHARACTERISTIC1	
<input checked="" type="checkbox"/> PRODUCTCHARACTERISTIC2	Property	PRODUCTCHARACTERISTIC2	
<input checked="" type="checkbox"/> PRODUCTCHARACTERISTIC3	Property	PRODUCTCHARACTERISTIC3	
<input checked="" type="checkbox"/> PRODCHARC1INTERNALNUMBER	Property	PRODCHARC1INTERNALNUMBER	
<input checked="" type="checkbox"/> PRODCHARC2INTERNALNUMBER	Property	PRODCHARC2INTERNALNUMBER	
<input checked="" type="checkbox"/> PRODCHARC3INTERNALNUMBER	Property	PRODCHARC3INTERNALNUMBER	
<input checked="" type="checkbox"/> ODQ_CHANGEMODE	Property	ODQ_CHANGEMODE	
<input checked="" type="checkbox"/> ODO_ENTITYCNTR	Property	ODO_ENTITYCNTR	

Select Finish.

The message appears that the project was checked with no errors.

Select the project and select  Generate runtime objects.

Model Provider Class

Class Name
ZCL\_ZMATERIAL2\_MPC\_EXT
Base Class Name
ZCL\_ZMATERIAL2\_MPC

Data Provider Class

☒ Generate Classes
Class Name
ZCL\_ZMATERIAL2\_DPC\_EXT
Base Class Name
ZCL\_ZMATERIAL2\_DPC

Service Registration

Technical Model Name
ZMATERIAL2\_MDL
Model Version
1
Technical Service Name
ZMATERIAL2\_SRV
Service Version
1

Service Extension

☐ Overwrite Base/Extended Service
Technical Service Name
Service Version
0

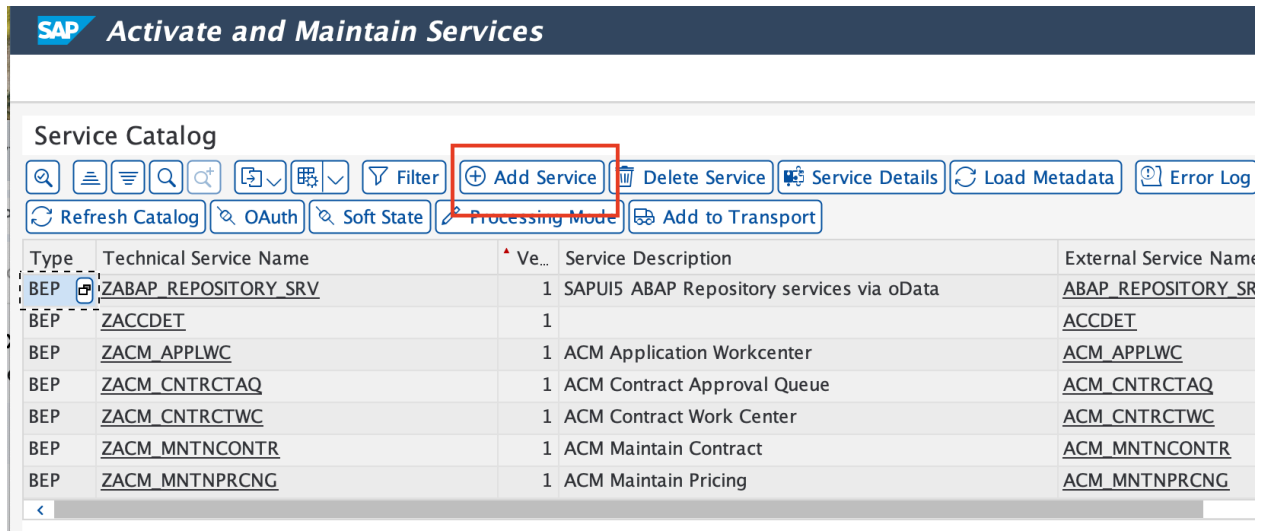
Select, Local Object.

The message appears that the runtime objects were generated successfully.

## Activate and Maintain Services (/IWFND/MAINT\_SERVICE)

Go to transaction /n/IWFND/MAINT\_SERVICE

1. Go to transaction /IWFND/MAINT\_SERVICE and click Add Service



2. Enter System Alias as LOCAL and click on Get Services button
3. Search the generated service, and select service:

The 'Add Service' dialog box is shown with the following fields:

**Service**

- Technical Service Name: Z\_BW\_ODATA\_0FI\_AR\_4\_SRV
- Service Version: 1
- Description: ODP ODATA 0FI\_AR\_4
- External Service Name: Z\_BW\_ODATA\_0FI\_AR\_4\_SRV
- Namespace:
- External Mapping ID:
- External Data Source Type: C

**Model**

- Technical Model Name: Z\_BW\_ODATA\_0FI\_AR\_4\_MDL
- Model Version: 1

**Creation Information**

- Package Assignment: \$TMP
- Local Object (button)
- OAuth enablement: ☐ Enable OAuth for Service

**ICF Node**

- ☒ SAP Gateway OData V2
- ☐ None

External name: Z\_BW\_ODATA\_0FI\_AR\_4\_1\_SRV and ZCUSTOMER\_1\_SRV



## Activate in Gateway Client (/IWFND/GW\_CLIENT)

4. Go to the SAP Gateway Client /IWFND/GW\_CLIENT
5. Enter the URL for the service:  
/sap/opu/odata/sap/Z\_BW\_ODATA\_0FI\_AR\_4\_1\_SRV/?\$format=xml  
and click execute.
6. Code 200 means there were no errors.

The screenshot shows the SAP Gateway Client interface. At the top, there are navigation buttons: Execute, Select, Service Administration, Service Implementation, Switch User, Entity Set, and Add URI Option. Below these, the HTTP Method is set to GET, and the Request URI is /sap/opu/odata/sap/Z\_BW\_ODATA\_0FI\_AR\_4\_1\_SRV/?\$format=xml. The Protocol is set to HTTP. The Test Group and Test Case fields are empty. The HTTP Request section shows a table with Header Name and Value. The HTTP Response section shows a table with Header Name and Value, and a processing time of 1403 ms. The response headers are: ~status\_code: 200, ~status\_reason: OK, sap-processing-info: ODataBEP=, crp=, RAL=, st=, MedCacheHub=, codeployed=, softstate=, cache-control: no-store, no-cache, must-revalidate, max-age=0, post-check=0, pre-check=0, content-length: 1120, and content-type: application/xml.

7. To view the complete metadata of the service, use the url
8. [https://privatelink.sap2snow.com/sap/opu/odata/sap/Z\\_BW\\_ODATA\\_0FI\\_AR\\_4\\_1\\_SRV/\\$metadata](https://privatelink.sap2snow.com/sap/opu/odata/sap/Z_BW_ODATA_0FI_AR_4_1_SRV/$metadata)

The screenshot shows a web browser displaying the XML metadata for the service. The address bar shows the URL: https://privatelink.sap2snow.com/sap/opu/odata/sap/Z\_BW\_ODATA\_0FI\_AR\_4\_1\_SRV/\$metadata. The browser interface includes a Policy button, a search bar, and a list of tabs. The XML content is displayed below the browser interface. The XML starts with an Edmx element, followed by a Schema element. The Schema element contains an EntityType element named 'Entity0f0FI\_AR\_4'. The EntityType element contains a Key element with five properties: BUKRS, FISCER, BELNR, BUZEI, and UPOSZ. Each property is defined with its name, type (Edm.String), nullability, and maximum length. The XML also includes various SAP-specific annotations such as 'sap:aggregation-role', 'sap:creatable', 'sap:updatable', 'sap:filterable', and 'sap:label'.

Other URLs:

[https://privatelink.sap2snow.com/sap/opu/odata/sap/ZMATERIAL\\_SRV/\\$metadata](https://privatelink.sap2snow.com/sap/opu/odata/sap/ZMATERIAL_SRV/$metadata)

[https://privatelink.sap2snow.com/sap/opu/odata/sap/ZCUSTOMER\\_1\\_SRV/\\$metadata](https://privatelink.sap2snow.com/sap/opu/odata/sap/ZCUSTOMER_1_SRV/$metadata)

## Create Data Flow in AWS Glue

1. In AWS Glue create a connection to your s/4HANA system, create a dataflow with source as SAP ODATA, search for ZMATERIAL, choose the service and entity.

**s4tos3** Last modified on 5/8/2025, 4:40:14 PM **Actions** **S**

**Visual** Script Job details Runs Data quality Scheduler

**Data source - SAP OData**  
SAP OData

**Application service path**  
/sap/opu/odata/iwfnd/catalogs/service;v=2

**Port number**  
443

**Client number**  
100

**Logon language**  
en

**IAM service role**  
arn:aws:iam::631484165566:role/SAPAWSGlueRole

**Service Name**  
Select your SAP OData entity.  
**Z\_BW\_ODATA\_OFI\_AR\_4\_1\_SRV\_0001**  
Service Collection

**Entity Set**  
Select your SAP OData entity.  
**EntityOfOfI\_AR\_4**  
Entity Set

**Full transfer**  
This option transfers all records, including new and existing records.

**Incremental transfer**  
The selected ODP entity supports SAP ODP-based changed records through delta tokens.

**Fields - optional**  
Select a list of fields. All fields will be selected by default.  
**Choose fields**

**Data preview (200)** Info **READY** ⓘ

**End session** **Previewing 50 of 84 fields**

**Filter sample dataset**

bukrs	fscper	belnr
1710	2017010	0100000177
1710	2018003	0100000764
1710	2017010	1400000000
1710	2017010	1400000001

Choose S3 bucket as the target.

2. Click Run to run the job

## CDS View Documentation

[CDS View Documentation for S/4HANA 2023 FP00](#)