

Exercise 10E –Create CDS Based Data Model

SAP Partner Workshop



10 min

Description

In this exercise, you'll learn how:

- Create CDS Based Data Model.

Prerequisites

- You have completed the steps mentioned until Exercise 10D.

Target group

- Developers
- People interested in learning about development in ABAP env in SAP Cloud Platform with focus on RAP model.

Goal

The goal of this exercise is to create a CDS Based Data Model.

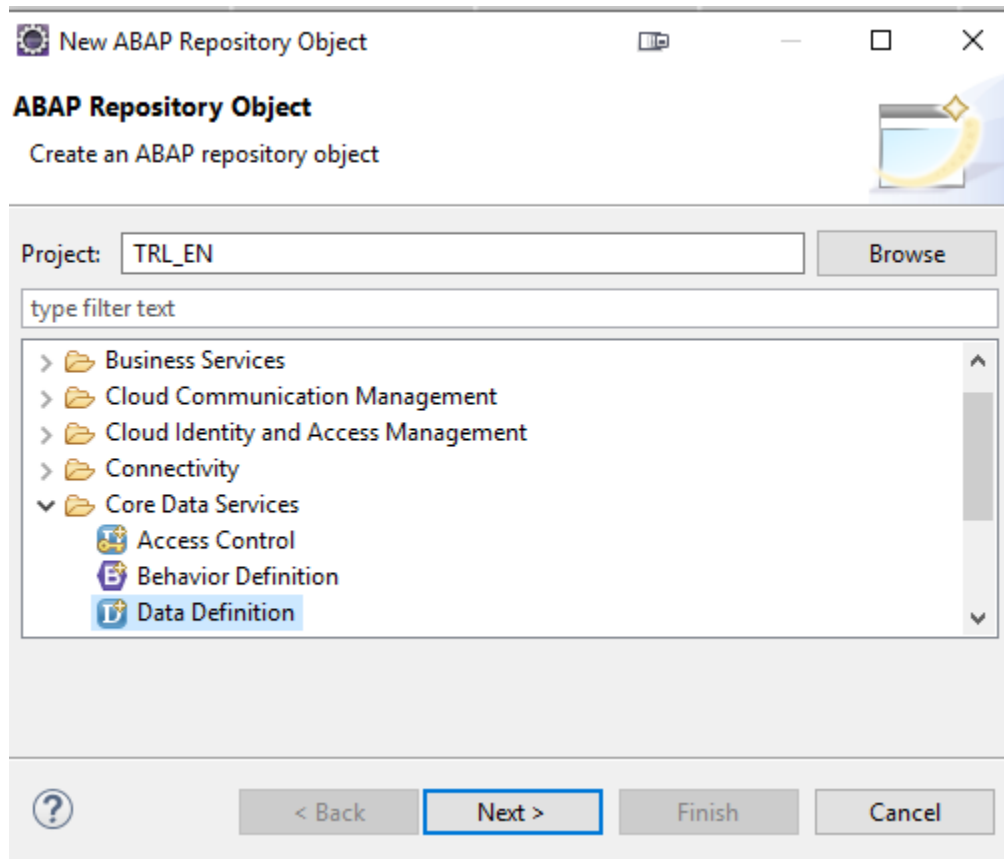
Right-click on your package ZTRAVEL_APP_XXX, select **New > Other ABAP Repository Object**.

The screenshot shows the Eclipse IDE interface with the following components:

- Project Explorer:** Displays a tree of packages including CC2_715_sapdisplay_en, CCQ_012_cvp_en, CCW_715_sapi032875_en, ER9_001_cvp_en, GA5_EN, and TRL_EN. The TRL_EN package is expanded, showing sub-packages like ZLOCAL and ZTRAVEL_APP_CVP.
- CDS Navigator:** Shows the selected package ZTRAVEL_APP_CVP9.
- Raw Data Table:** Displays 5 rows of data with columns: CLIENT, TRAVEL_ID, AGENCY_ID, CUSTOMER_ID, BEGIN_DATE, END_DATE, BOOKING_FEE, TOTAL_PRICE, CURRENCY_CODE, DESCRIPTION, OVERALL_STATUS, and CREATED_BY. The data represents travel bookings for various clients and agencies.
- Context Menu:** A right-click menu is open over the ZTRAVEL_APP_CVP9 package. The 'New' option is selected, leading to a sub-menu where 'Other ABAP Repository Object' is highlighted.
- Console:** At the bottom, a message reads: "Congratulations. Travel data inserted successfully! Enjoy your Trip".

CLIENT	TRAVEL_ID	AGENCY_ID	CUSTOMER_ID	BEGIN_DATE	END_DATE	BOOKING_FEE	TOTAL_PRICE	CURRENCY_CODE	DESCRIPTION	OVERALL_STATUS	CREATED_BY
100	00000001	070001	000077	2019-06-24	2019-06-28	60.00	1780.00	USD	Trip to Thailand Po...	A	CVP
100	00000002	070005	000005	2019-06-13	2019-07-16	55.00	1150.00	USD	Trip to TechED in Ba...	A	CVP
100	00000003	070010	000011	2019-06-10	2019-07-14	61.00	1800.00	USD	Trip to Sapphire in ...	X	CVP
100	00000004	070010	000011	2019-06-10	2019-07-14	120.00	2800.00	USD	Trip to DSAG Berlin	X	CVP
100	00000005	070010	000011	2019-06-10	2019-07-14	155.00	3500.00	USD	Trip to ASUG Orlando	A	CVP

Search on Core Data Services and Select Data Definition.



Click Next and Name and Description as follows.

- Name: ZI_TRAVEL_M_XXX
- Description: Data model for travel



New Data Definition



Data Definition

Create a data definition



Project: *

TRL_EN

Browse...

Package: *

ZTRAVEL_APP_CVP9

Browse...



Add to favorite packages

Name: *

ZI_TRAVEL_M_CVP9

Description: *

Data Model for Travel

Original Language:

EN



< Back

Next >

Finish

Cancel

Click on Next and Finish.

Replace the code generated with the following code.

```
@AbapCatalog.sqlViewName: 'ZVI_TRAVEL_M_XXX'
```

```
@AbapCatalog.compiler.compareFilter: true
```

```
@AbapCatalog.preserveKey: true
```

```
@AccessControl.authorizationCheck: #CHECK
```

```
@EndUserText.label: 'Travel data - XXX'
```

```
define root view ZI_TRAVEL_M_XXX
```

```
as select from ztravel_xxx as Travel
```

```
/* Associations */
```

```
association [0..1] to /DMO/I_Agency as _Agency on $projection.agency_id = _Agency.AgencyID
```

```
association [0..1] to /DMO/I_Customer as _Customer on $projection.customer_id = _Customer.CustomerID
```

```
association [0..1] to I_Currency as _Currency on $projection.currency_code = _Currency.Currency
```

```
{
```

```
key travel_id,
```

agency_id,
customer_id,
begin_date,
end_date,
@Semantics.amount.currencyCode: 'currency_code'
booking_fee,
@Semantics.amount.currencyCode: 'currency_code'
total_price,
@Semantics.currencyCode: true
currency_code,
overall_status,
description,

/*-- Admin data --*/

@Semantics.user.createdBy: true
created_by,
@Semantics.systemDateTime.createdAt: true

created_at,

@Semantics.user.lastChangedBy: true

last_changed_by,

@Semantics.systemDateTime.lastChangedAt: true

last_changed_at,

/* Public associations */

_Agency,

_Customer,

_Currency

}

Replace XXX with the actual name in the code copied.

An example:

```
@AbapCatalog.sqlViewName: 'ZVI_TRAVEL_MCV9'
@AbapCatalog.compiler.compareFilter: true
@AbapCatalog.preserveKey: true
@AccessControl.authorizationCheck: #CHECK
@EndUserText.label: 'Travel data - CVP9'
define root view ZI_TRAVEL_M_CVP9

  as select from ztravel_cvp9 as Travel

/* Associations */
association [0..1] to /DMO/I_Agency as _Agency on $projection.agency_id = _Agency.AgencyID
association [0..1] to /DMO/I_Customer as _Customer on $projection.customer_id = _Customer.CustomerID
association [0..1] to I_Currency as _Currency on $projection.currency_code = _Currency.Currency
{
  key travel_id,
  agency_id,
  customer_id,
  begin_date,
  end_date,
  @Semantics.amount.currencyCode: 'currency_code'
  booking_fee,
  @Semantics.amount.currencyCode: 'currency_code'
  total_price,
  @Semantics.currencyCode: true
  currency_code,
  overall_status,
  description,

/*-- Admin data --*/
  @Semantics.user.createdBy: true
  created_by,
  @Semantics.systemDateTime.createdAt: true
  created_at,
  @Semantics.user.lastChangedBy: true
  last_changed_by,
  @Semantics.systemDateTime.lastChangedAt: true
  last_changed_at,
```



```
/* Public associations */  
_Agency,  
_Customer,  
_Currency  
}
```

Save (Ctrl – S) and Activate (Ctrl-F3).

To verify the data, right click on the code editor, Open with -> Data Preview.

eclipse-workspace - Data Definition ZI_TRAVEL_M_CVP9 [TRL] - active - TRL_EN - Eclipse IDE

File Edit Source Code Navigate Search Project Run Window Help

Project Explorer CDS Navigator

- CC2_715_sapdisplay_en [CC2, 715, _SAPDISPLAY, EN]
- CCQ_012_cvp_en [CCQ, 012, CVP, EN]
- CCW_715_sapi032875_en [CCW, 715, _SAPI032875, EN]
- ER9_001_cvp_en [ER9, 001, CVP, EN]
- GA5_EN [GA5, 100, CB00000000653, EN]
- TRL_EN [TRL, 100, CB00000000437, EN]
- Favorite Packages (2,419)
 - ZLOCAL (2,419) Generated Package for ZLOCAL
 - ZTRAVEL_APP_CVP (15) Travel App in SCP ABAP PA
 - ZTRAVEL_APP_CVP9 (4) Package for travel Fiori APP
- Released Objects (561)

```
1 @AbapCatalog.sqlViewName: 'ZVI_TRAVEL_M_CVP9'
2 @AbapCatalog.compiler.compareFilter: true
3 @AbapCatalog.preserveKey: true
4 @AccessControl.authorizationCheck: #CHECK
5 @EndUserText.label: 'Travel data - CVP9'
6 define root view ZI_TRAVEL_M_CVP9
7
8   as select from ztravel_cvp9 as Travel
9
10  /* Associations */
11  association [0..1] to /DMO/I_Agency as _Agency on $projection.agency_id = _Agency.AgencyID
12  association [0..1] to /DMO/I_Customer as _Customer on $projection.customer_id = _Customer.CustomerID
13  association [0..1] to I_Currency as _Currency on $projection.currency_code = _Currency.Currency
14  {
15    key travel_id,
16    agency_id,
17    customer_id,
18    begin_date,
19    end_date,
20    @Semantics.amount.currencyCode: 'currency_code'
21    booking_fee,
22    @Semantics.amount.currencyCode: 'currency_code'
23    total_price,
24    @Semantics.currencyCode: true
25    currency_code,
26    overall_status,
27    description,
28
29    /*-- Admin data --*/
30    @Semantics.user.createdBy: true
31    created_by,
32    @Semantics.systemDateTime.createdAt: true
33    created_at,
34    @Semantics.user.lastChangedBy: true
35    last_changed_by,
36    @Semantics.systemDateTime.lastChangedAt: true
37    last_changed_at,
38
39    /* Public associations */
40    _Agency,
41    _Customer,
42    _Currency
43  }
```

Outline

- ZI_TRAVEL_M_CVP9
 - select
 - from
 - Travel (ztravel_cvp9)
 - associations
 - elements
 - travel_id
 - agency_id
 - customer_id
 - begin_date
 - end_date
 - booking_fee
 - total_price
 - currency_code
 - overall_status
 - description
 - created_by
 - created_at
 - last_changed_by
 - last_changed_at
 - _Agency
 - Customer

ABAP Console

Read-Only Smart Insert 32:47

Remove from Context Ctrl+Alt+Shift+Down

12:43 PM 11/4/2019

Undo Ctrl+Z

Revert File

Save Ctrl+S

Open ABAP Type Hierarchy F4

Quick Type Hierarchy Ctrl+T

Navigate To F3

Navigate To Target Alt+Shift+T

Show SQL CREATE Statement

Open in Project Ctrl+Alt+P

Open With

Show In Alt+Shift+W

Quick Outline Ctrl+O

Cut Ctrl+X

Copy Ctrl+C

Paste Ctrl+V

Get Where-used List Ctrl+Shift+G

Rename... Alt+Shift+R

Change Package Assignment

Quick Fix Ctrl+I

Source Code Alt+Shift+S

Activate Ctrl+F3

Toggle between Active and Inactive Version

Unlock Ctrl+U

Share Link for Selection...

Coverage As

Coverage As

Run As

Debug As

Profile As

Team

Compare With Ctrl+Alt+C

Replace With

Validate

Preferences...

Data Preview

Activation Graph

Dictionary Log

Active Annotations

Annotation Propagation

Dependency Analyzer

Graphical Editor

Raw Data										
Filter pattern		5 rows retrieved - 19 ms							SQL Console	
travel_id	agency_id	customer_id	begin_date	end_date	booking_fee	total_price	currency_code	overall_status	description	
00000001	070001	000077	2019-06-24	2019-06-28	60.00	1780.00	USD	A	Trip to Thailand ...	
00000002	070005	000005	2019-06-13	2019-07-16	55.00	1150.00	USD	A	Trip to TechED in...	
00000003	070010	000011	2019-06-10	2019-07-14	61.00	1800.00	USD	X	Trip to Sapphire i...	
00000004	070010	000011	2019-06-10	2019-07-14	120.00	2800.00	USD	X	Trip to DSAG Berlin	
00000005	070010	000011	2019-06-10	2019-07-14	155.00	3500.00	USD	A	Trip to ASUG Orl...	