

DT260 – Modernize classic extensions for clean core in SAP Cloud ERP Private

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Agenda

Introduction

Exercise 1

- Modernize the Flight Evaluation application with ABAP Cloud

Exercise 2

- Create Fiori app for Flight Evaluation with ABAP Cloud and RAP

Exercise 3

- Analyze the Customer Dashboard application for clean core

Get Started



Introduction



What you will do in this hands-on workshop

Modernize legacy Flight Evaluation application with ABAP Cloud



SAP ABAP Program

Menu

Airli...	Connection	Booking	Customer		Customer Name	Meal	Flight	Service
LH	400	00000164	27	16.02.2025	SAP Canada Inc.	4	3	1
LH	400	00000167	656	16.02.2025	Georg Columbo	2	3	1
LH	400	00000280	2358	16.02.2025	Anna Barth	5	4	2
LH	400	00000364						0
LH	400	00000071						0
LH	400	00000072						0
LH	400	00000083						0
LH	400	00000086						0
LH	400	00000091						0
LH	400	00000112						0
LH	400	00000118						0
LH	400	00000119						0
LH	400	00000125						0
LH	400	00000153	4293	16.02.2025	Annermarie Vrsic	0	0	0
LH	400	00000157	4353	16.02.2025	Jean-Luc Vrsic	0	0	0
LH	400	00000158	3841	16.02.2025	Thilo Benjamin	0	0	0
LH	400	00000162	3472	16.02.2025	Anna Prinz	0	0	0

Enter Evaluation of Passenger

Meal Rating:

Flight Rating:

Service Rating:



Standard

Editing Status: Airline:

FlightEvals (434)

<input type="checkbox"/>	Airline	Connection	Fldate	Booking	Customer	Cust. Name	Meal Rating	Flight Rating	Service Rating	
<input type="checkbox"/>	AA	17	Feb 13, 2025	00000001	4461	Hendrik Buehler	★★★★★	★★★★★	★★★★★	>
<input type="checkbox"/>	AA	17	Feb 13, 2025	00000002	4512	Jean Pratt	★★★★★	★★★★★	★★★★★	>
<input type="checkbox"/>	AA	17	Feb 13, 2025	00000003	1417	Jean-Luc Miguel	★★★★★	★★★★★	★★★★★	>
<input type="checkbox"/>	AA	17	Feb 13, 2025	00000004	1417	Jean-Luc Miguel	★★★★★	★★★★★	★★★★★	>
<input type="checkbox"/>	AA	17	Feb 13, 2025	00000005	1417	Jean-Luc Miguel	★★★★★	★★★★★	★★★★★	>
<input type="checkbox"/>	AA	17	Feb 13, 2025	00000006	1417	Jean-Luc Miguel	★★★★★	★★★★★	★★★★★	>
<input type="checkbox"/>	AA	17	Feb 13, 2025	00000007	1417	Jean-Luc Miguel	★★★★★	★★★★★	★★★★★	>
<input type="checkbox"/>	AA	17	Feb 13, 2025	00000008	1417	Jean-Luc Miguel	★★★★★	★★★★★	★★★★★	>
<input type="checkbox"/>	AA	17	Feb 13, 2025	00000009	1417	Jean-Luc Miguel	★★★★★	★★★★★	★★★★★	>
<input type="checkbox"/>	AA	17	Feb 13, 2025	00000010	3739	Florian Goelke	★★★★★	★★★★★	★★★★★	>

Airline: AA

Connection: 17

Fldate: Feb 13, 2025

Booking: 00000005

Customer: 1417

Cust. Name: Christine Domenech

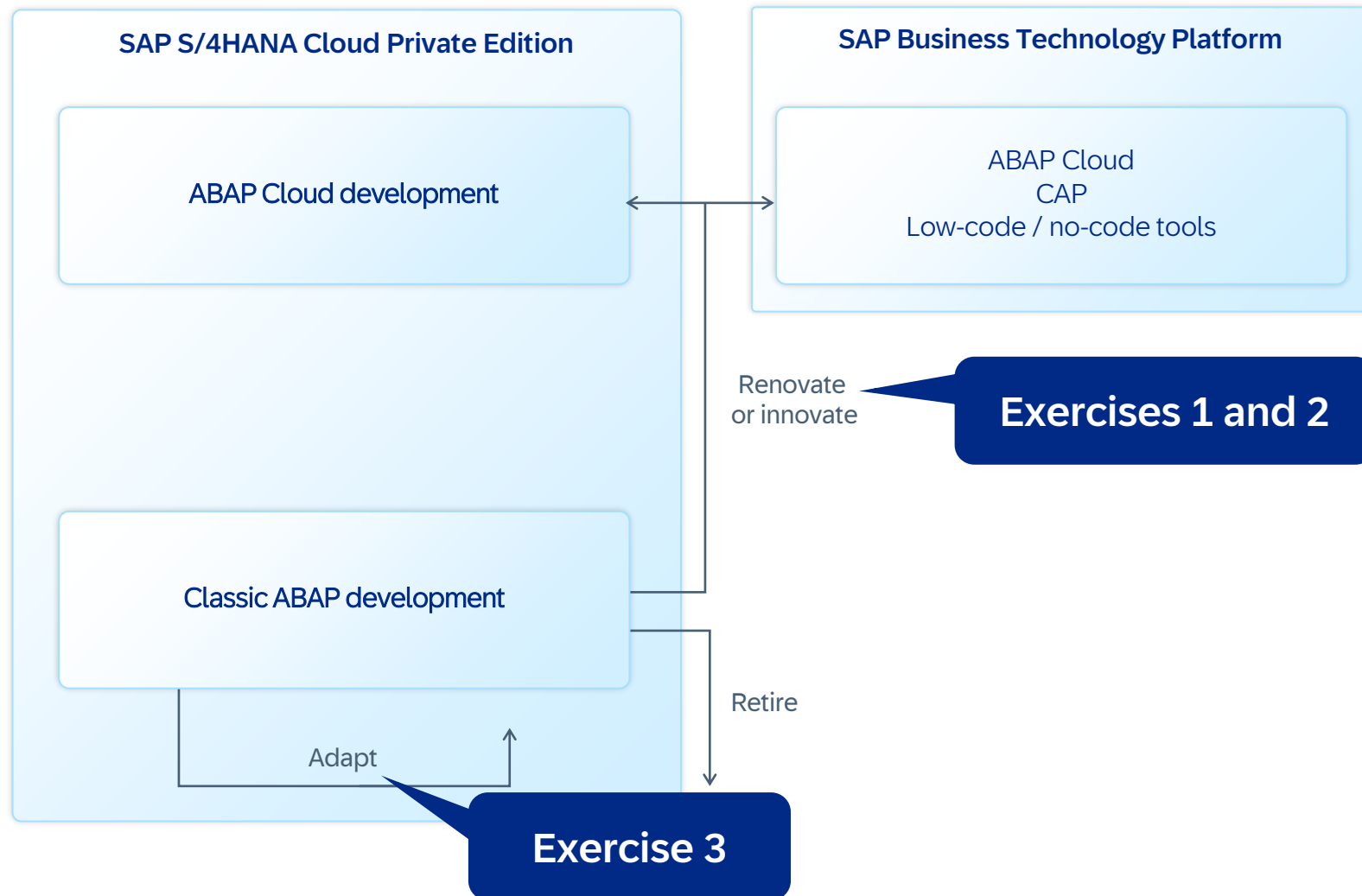
Meal Rating: ★★★★★

Flight Rating: ★★★★★

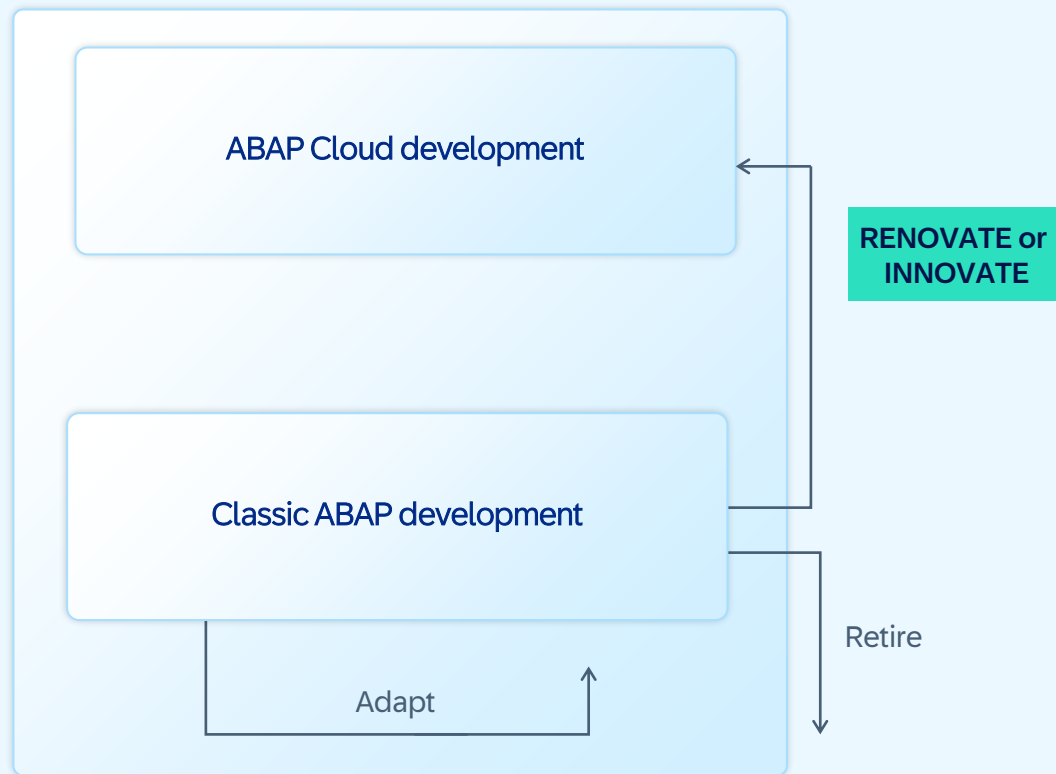
Service Rating: ★★★★★

Clean core extensibility for SAP Cloud ERP Private

Stepwise cloud transformation



Exercise 1



How to adapt custom code for ABAP Cloud in SAP Cloud ERP Private

Use ABAP development tools for Eclipse for custom code analysis and adaptation

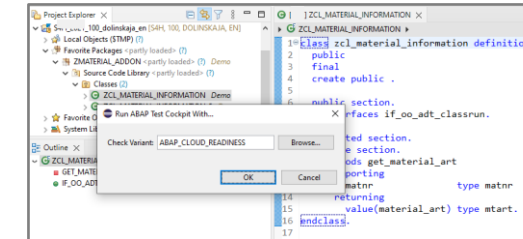
Run ABAP Test Cockpit with ABAP_CLOUD_READINESS check variant

Adapt to ABAP Cloud usage

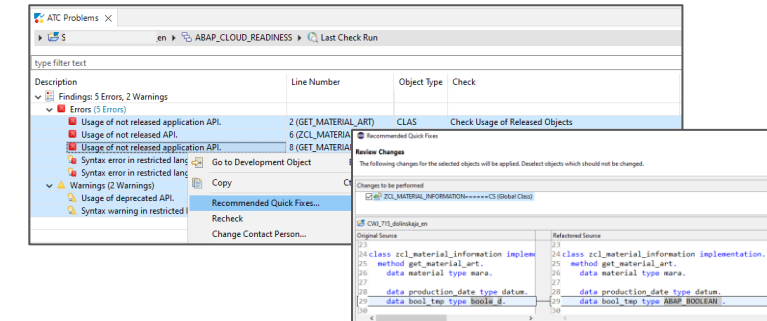
- Use mass-enabled Quick Fixes in ABAP development tools for Eclipse
- Use released objects and object types
- Use successor released SAP APIs displayed in the details of ATC analysis results
- For missing released APIs implement your custom wrappers

/ Check out [How to make your custom code cloud-ready and upgrade-stable](#)

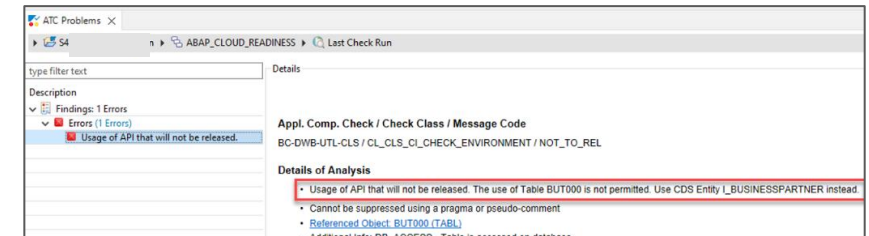
Run ATC with ABAP_CLOUD_READINESS



Apply quick fixes

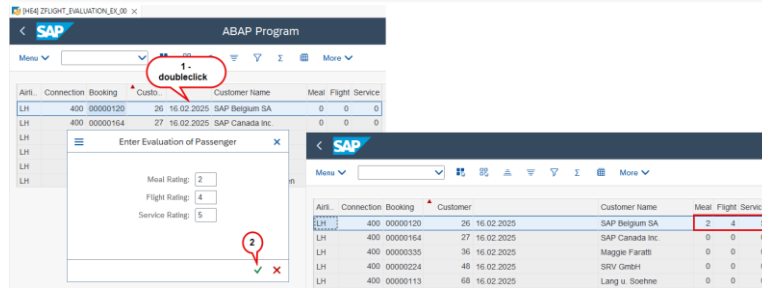


Use successor released SAP API

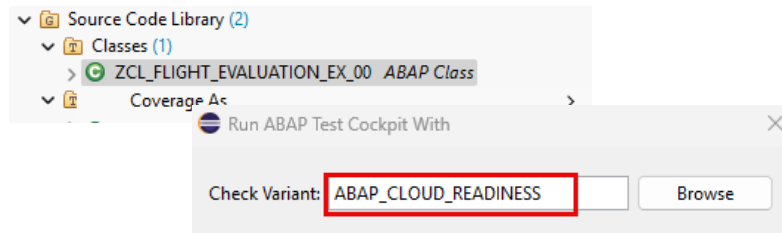


Exercise 1: Modernize the Flight Evaluation application with ABAP Cloud

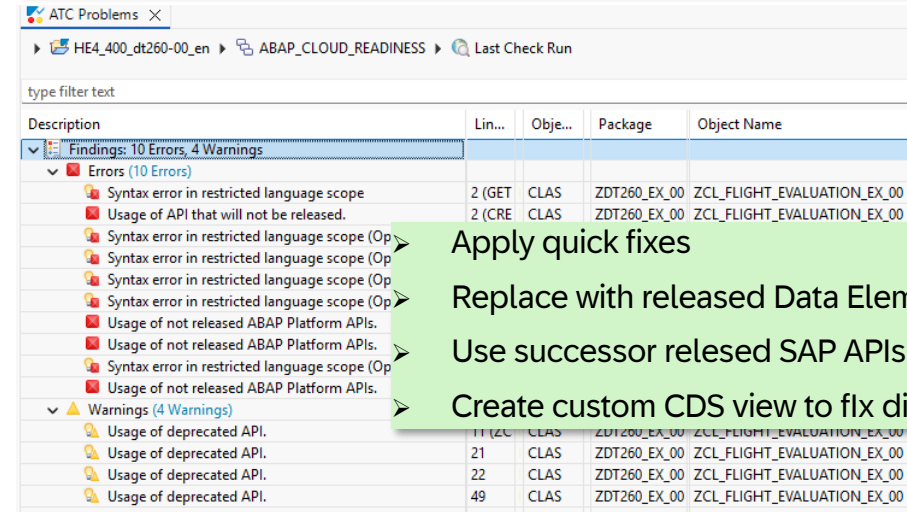
1 - Get to know Flight Evaluation application



2 - Check application logic for ABAP Cloud with ABAP test cockpit



3 – Adjust ABAP Cloud related issues



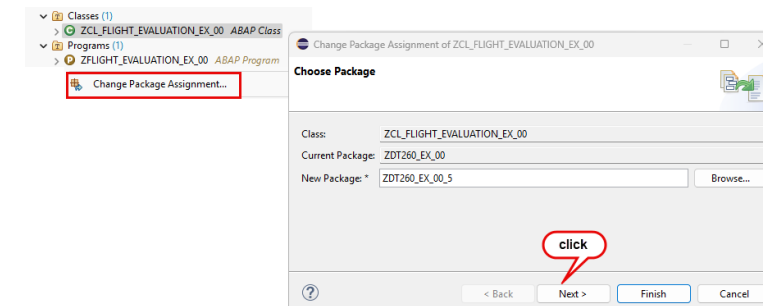
Apply quick fixes

Replace with released Data Element

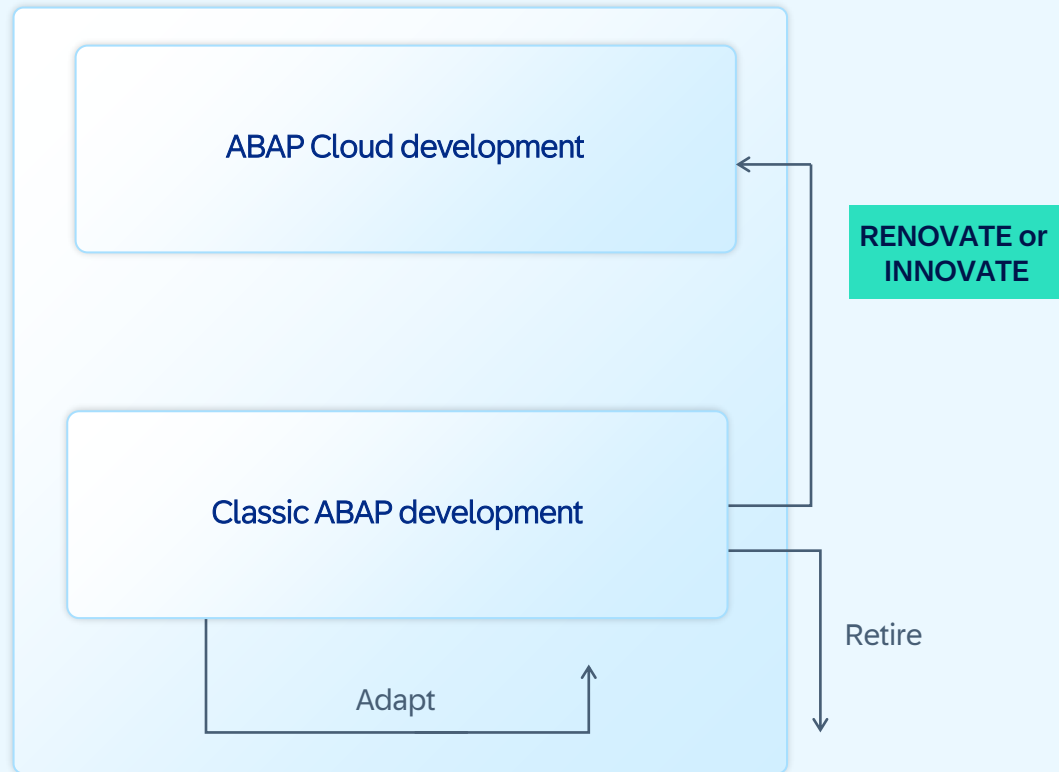
Use successor released SAP APIs

Create custom CDS view to fix direct access to SAP tables

4 – Switch ABAP language version to ABAP Cloud and move the code to ABAP Cloud development package

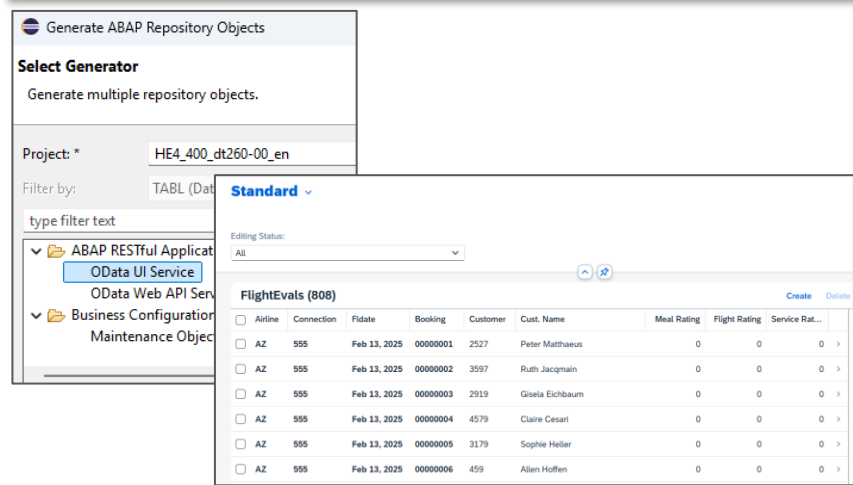


Exercise 2

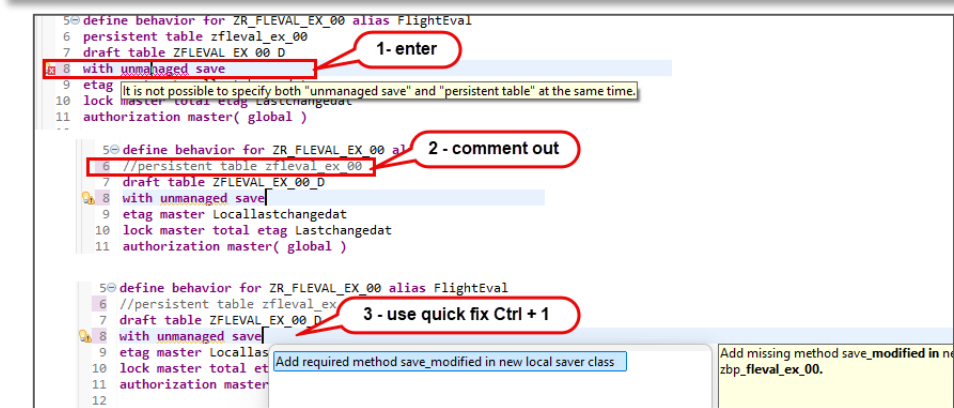


Exercise 2: Create SAP Fiori application for Flight Evaluation with ABAP Cloud and RAP

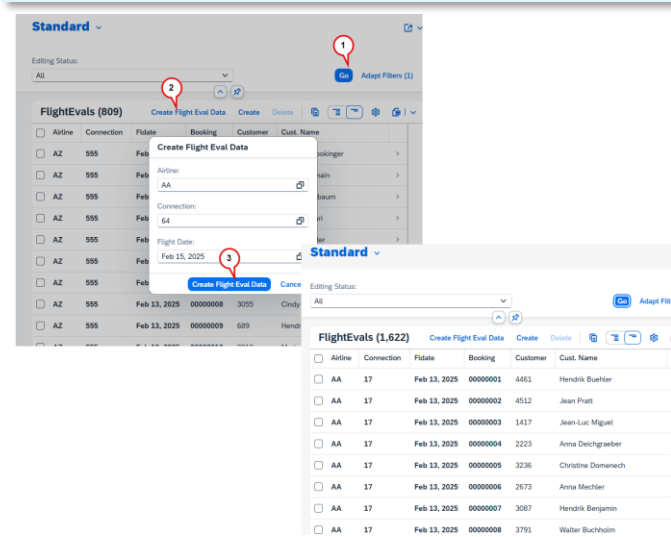
1 – Generate RAP application for Flight Evaluation



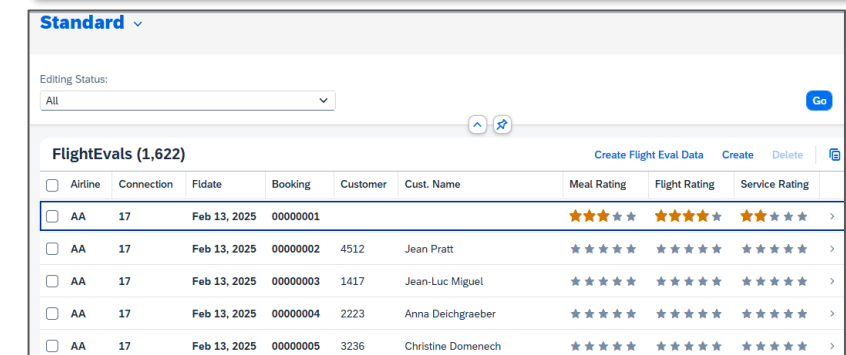
2 – Add the functionality to enter flight rating for a customer



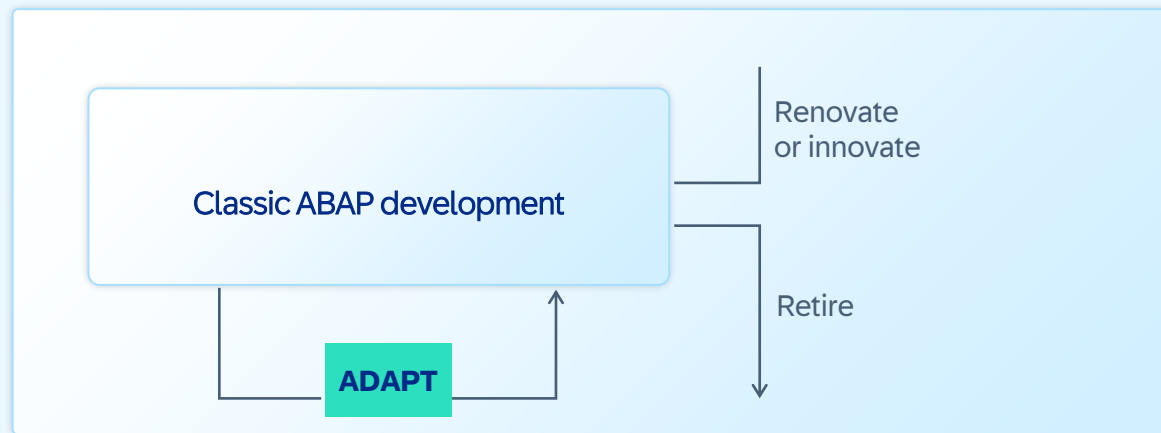
3 – Add the functionality to add new flight evaluation data



4 – Change visualisation to star rating of flights



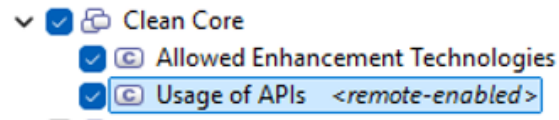
Exercise 3



How to adapt custom code for clean core in SAP Cloud ERP Private

Use ABAP development tools for Eclipse for custom code analysis and adaptation

Run ABAP Test Cockpit with check variant including clean core checks

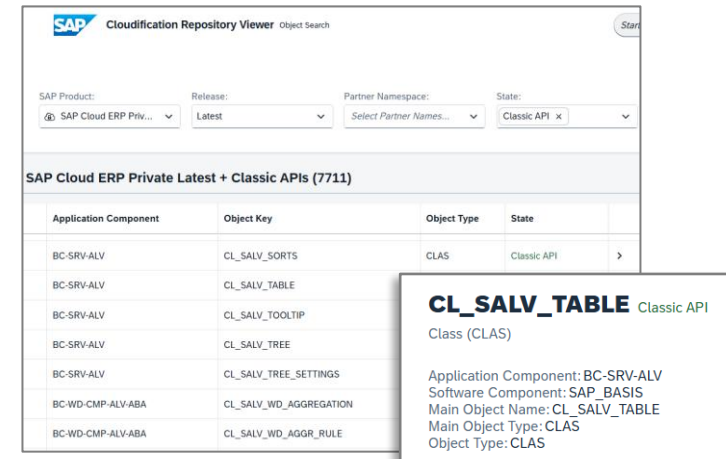


Usage of APIs check

- is based on usage guidelines for SAP APIs
- uses [classic APIs](#) (e.g., CL_SALV_TABLE) provided as JSON file on GitHub

/ Learn more : [ATC recommendations for governance of clean core development](#)

Cloudification Repository Viewer: Classic APIs list



Application Component	Object Key	Object Type	State
BC-SRV-ALV	CL_SALV_SORTS	CLAS	Classic API
BC-SRV-ALV	CL_SALV_TABLE	CLAS	Classic API
BC-SRV-ALV	CL_SALV_TOOLTIP	CLAS	Classic API
BC-SRV-ALV	CL_SALV_TREE	CLAS	Classic API
BC-SRV-ALV	CL_SALV_TREE_SETTINGS	CLAS	Classic API
BC-WD-CMP-ALV-ABA	CL_SALV_WD_AGGREGATION	CLAS	Classic API
BC-WD-CMP-ALV-ABA	CL_SALV_WD_AGGR_RULE	CLAS	Classic API

CL_SALV_TABLE Classic API
Class (CLAS)
Application Component: BC-SRV-ALV
Software Component: SAP_BASIS
Main Object Name: CL_SALV_TABLE
Main Object Type: CLAS
Object Type: CLAS

Usage of APIs: Check behavior

- No ATC finding**
 - Usage of released API
- Priority 3 (Info)**
 - Usage of classic API
- Priority 2 (Warning)**
 - Usage of internal APIs (not classified API)
 - SQL read access to SAP database table
 - SUBMIT statement on programs
- Priority 1 (Error)**
 - Usage of "no API" (with successor if available)
 - SQL write access to SAP database table
 - PERFORM statements on external subroutines

Exercise 3: Analyze the Customer Dashboard application for clean core

1 – Analyze Customer Dashboard application for ABAP Cloud

ATC Problems X

HE4_400_dt260-00_en ABAP_CLOUD_READINESS Last Check Run

type filter text

Description Findings: 16 Errors

Check

Details

Appl. Comp. Check / Check Class / Message Code
BC-DWB-CEX / CL_CLS_CI_CHECK_ENVIRONMENT / 1

Details of Analysis

- Usage of not released ABAP Platform APIs. The use of Class CL_SALV_TABLE is not permitted.
- Cannot be suppressed using a pragma or pseudo-comment
- Referenced Object: CL_SALV_TABLE / CLAS
- Referenced Application Component: BC-SRV-ALV
- Referenced Package: SALV_OM_OBJECTS
- Referenced Software Component: SAP_BASIS

3 – Get to know Cloudification Repository Viewer

Cloudification Repository Viewer

SAP Product: SAP Cloud ERP Private Latest - Classic APIs (78)

Application Component	Object Key	Object Type	State
BC-SRV-ALV	CL_SALV_SORTS	CLASS	Classic API
BC-SRV-ALV	CL_SALV_TABLE	CLASS	Classic API
BC-SRV-ALV	CL_SALV_TOOL_TIP	CLASS	Classic API
BC-SRV-ALV	CL_SALV_TREE	CLASS	Classic API
BC-SRV-ALV	CL_SALV_TREE_SETTINGS	CLASS	Classic API
BC-SRV-ALV	CL_SALV_ACCESS_ERROR	CLASS	Classic API
BC-SRV-ALV	CL_SALV_DATA_ERROR	CLASS	Classic API
BC-SRV-ALV	CL_SALV_ERROR	CLASS	Classic API

CL_SALV_TABLE (Classic API)

Application Component: BC-SRV-ALV
Software Component: SAP_BASIS
Main Object Name: CL_SALV_TABLE
Main Object Type: CLASS
Object Type: CLASS

2 – Analyze Customer Dashboard application for clean core

ATC Problems X

HE4_400_dt260-00_en ZDT260_CLEAN_CORE_DEVELOPMENT Last Check Run

type filter text

Description Findings: 2 Errors, 2 Warnings, 3 Infos

Check Package

Description	Check	Package
Updating DDIC database tables or DDIC table views is not allowed	Usage of APIs	ZDT260_FLIGHT_EVALUATION
Usage of API that must not be used	Usage of APIs	ZDT260_FLIGHT_EVALUATION
Reading from DDIC database tables or DDIC table views is not recommended	Usage of APIs	ZDT260_FLIGHT_EVALUATION
Usage of internal API	Usage of APIs	ZDT260_FLIGHT_EVALUATION
Usage of classic API	Usage of APIs	ZDT260_FLIGHT_EVALUATION
Usage of classic API	Usage of APIs	ZDT260_FLIGHT_EVALUATION
Usage of classic API	Usage of APIs	ZDT260_FLIGHT_EVALUATION

4 – Understand clean core checks

ATC Problems X

HE4_400_dt260-00_en ZDT260_CLEAN_CORE_DEVELOPMENT Last Check Run

type filter text

Description Findings: 2 Errors, 2 Warnings, 3 Infos

Check Package

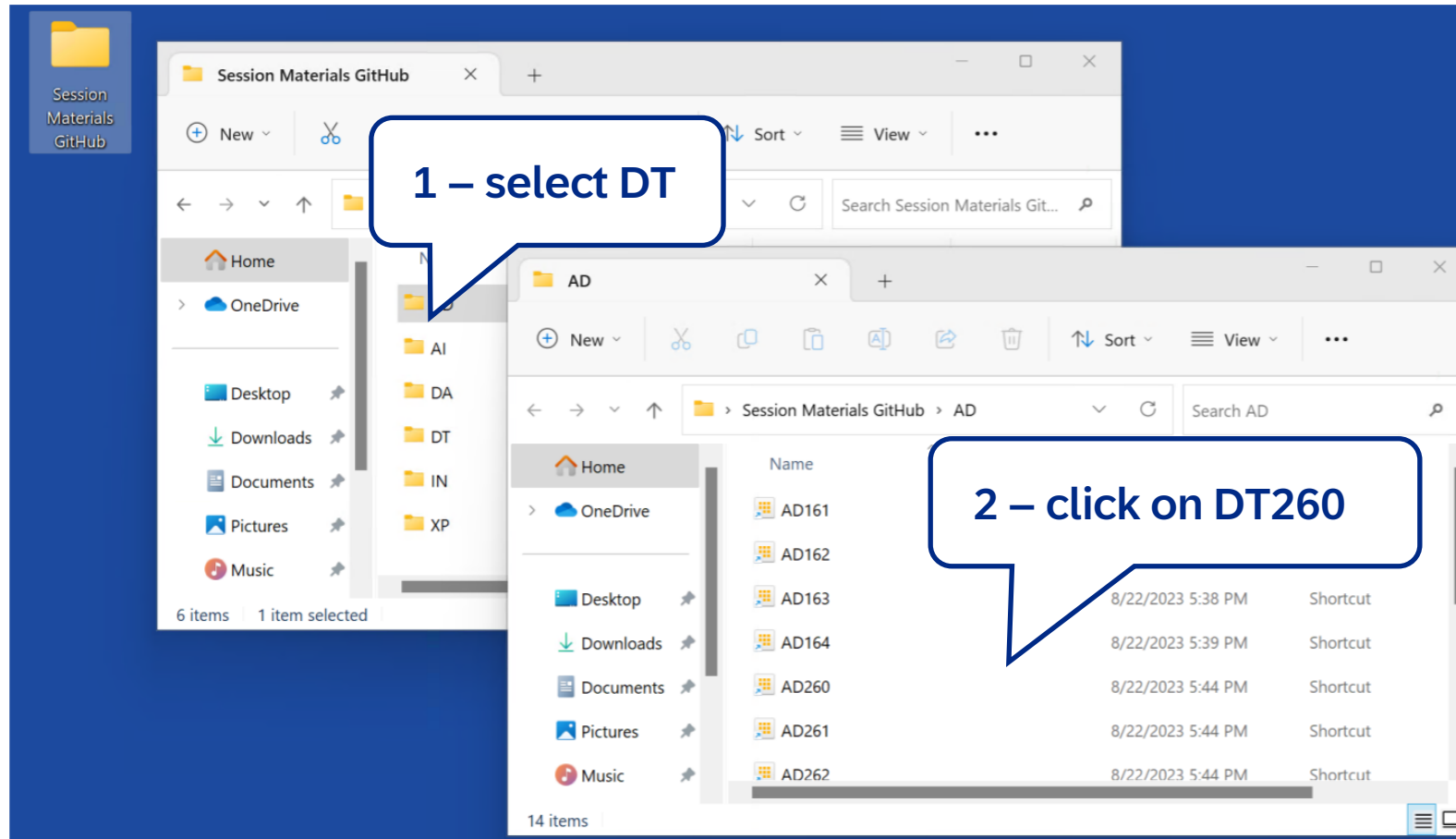
Description	Check	Package
Updating DDIC database tables or DDIC table views is not allowed	Usage of APIs	ZDT260_FLIGHT_EVALUATION
Usage of API that must not be used	Usage of APIs	ZDT260_FLIGHT_EVALUATION
Reading from DDIC database tables or DDIC table views is not recommended	Usage of APIs	ZDT260_FLIGHT_EVALUATION
Usage of internal API	Usage of APIs	ZDT260_FLIGHT_EVALUATION
Usage of classic API	Usage of APIs	ZDT260_FLIGHT_EVALUATION
Usage of classic API	Usage of APIs	ZDT260_FLIGHT_EVALUATION
Usage of classic API	Usage of APIs	ZDT260_FLIGHT_EVALUATION

Get started



How to access session materials

GitHub access from SAP TechEd client



Get Started

ABAP development tools for Eclipse	Accessible via the Desktop Shortcut („Eclipse“)
ABAP system access	System: HE4 (already configured in SAP Logon) Client: 400 User: DT260-## (## is your group number) Password: Welcome1!
ABAP packages	ZDT260_EX_## (Standard ABAP) ZDT260_EX_##_5 (ABAP Cloud) ZDT260_FLIGHT_EVALUATION
Solution ABAP package	ZDT260_SOLUTION_5

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Thank you!

