

Introduction to ABAP in the Cloud

Unit 3: ABAP RESTful Programming Model





ABAP RESTful Programming Model

Overview

ABAP Platform ≤ 7.5

CLASSIC ABAP PROGRAMMING

Best Practice
Freestyle
ABAP Programming

ABAP Platform ≥ 7.5

ABAP PROGRAMMING MODEL FOR SAP FIORI

SEGW / @OData Referenced Data Source

Core Data Services (CDS)

CDS-Based BOPF SAP BTP, ABAP Environment SAP S/4HANA ≥ 1909

ABAP RESTful APPLICATION PROGRAMMING MODEL

Business Service

Core Data Services Behavior
Definition &
Implementation

© 2021 SAP SE or an SAP affiliate company. All rights reserved. I PUBLIC

ABAP RESTful Programming Model

Programming model: the mission

... for the development of

SAP Fiori apps and
Web APIs
Other scenarios in ecosystem
(e.g. Cloud Migration Cockpit, ...)

... for customers and partners in SAP S/4HANA

... for SAP internal development in SAP S/4HANA

... for customers and partners in SAP BTP, ABAP environment

... supporting the product qualities

User experience: SAP Fiori and SAP HANA

Cloud: scalability

ABAP assets: non-functional

PROVIDE A PROGRAMMING MODEL ...

... offering an end-to-end experience

Tools: standardized development flow

Languages: CDS and ABAP

Frameworks for optimized development efficiency

Documentation: best practices & development guides

... and being flexible

Out-of-the-box extensibility & verticalization Break-outs for non-standardized implementations Reuse in "freestyle" development scenarios

© 2021 SAP SE or an SAP affiliate company. All rights reserved. I PUBLIC

The golden rules



ABAP Development Tools in Eclipse for all development tasks

Developer onboarding

End-to-end development flow



Language: ABAP and CDS

Standard implementation tasks via typed APIs supporting auto-completion, element info, static code checks



Frameworks

Take over technical implementation tasks
Business logic added in code exits on protocol-agnostic layers

© 2021 SAP SE or an SAP affiliate company. All rights reserved. I PUBLIC

ABAP RESTful Programming Model – the big picture

SERVICE CONSUMPTION

SAP Fiori UI
Consume OData UI services

Web API
Consume OData Web APIs



SERVICE BINDING - Bind to protocol version and scenario



SERVICE DEFINITION – Define scope to be exposed

BUSINESS SERVICES PROVISIONING





CDS: Projection views



BDEF: Behavior projection



ABAP: Behavior implementation

DATA
MODELING &
BEHAVIOR

BUSINESS OBJECTS



CDS: Data modeling



BDEF: Behavior definition



ABAP: Behavior implementation

QUERIES



CDS: Data modeling

© 2021 SAP SE or an SAP affiliate company. All rights reserved. | PUBLIC

Thank you.

Contact information:

open@sap.com





Follow all of SAP











www.sap.com/contactsap

© 2021 SAP SE or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company.

The information contained herein may be changed without prior notice. Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors. National product specifications may vary.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

In particular, SAP SE or its affiliated companies have no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation, and SAP SE's or its affiliated companies' strategy and possible future developments, products, and/or platforms, directions, and functionality are all subject to change and may be changed by SAP SE or its affiliated companies at any time for any reason without notice. The information in this document is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, and they should not be relied upon in making purchasing decisions.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. All other product and service names mentioned are the trademarks of their respective companies.

See www.sap.com/trademark for additional trademark information and notices.

