GW100

SAP Gateway - Building OData Services

COURSE OUTLINE

Course Version: 16
Course Duration:
About This Handbook

This handbook provides you with basic information for attending your virtual live classroom session.

Adobe Connect Support Information

Web and audio support is available by:

- Pressing *0 from within the audio-conferencing
- Calling the support hotline numbers listed below
- Emailing the PGi support hotline below

Global PGi Support Hotline for SAP Education (24/7)
Tel: +1 800-368-1945
Tel: +1 719-234-7915

Note: After dialing in, press option 2 for technical support. You will then be presented with two options – press 1 for Audio support, or press 2 for Web support.

Email: sapedsupport@premiereglobal.com

Setting up your Learning Environment

Ideally you want to be in a private room when participating in a synchronous (live) event. In reality, you may not be able to arrange that. Here are some tips for maximizing your learning environment:

- Create an inspirational office/studio to work in
- Use a comfortable chair
- Use well designed and functional computer peripherals
- Keep a log or journal of notes and ideas you can use for future sessions

Before your online class:

- Tell co-workers you will be in class (send e-mail)
- Post a sign indicating when you will be free again (when class is over)
- Use a headset instead of your computer speakers to minimize disruption of others
- Ignore people who try to get your attention
- Turn off the ringers / alerts on telephone, pager, and cell phone
- Turn off e-mail and instant message alerts
- Remove other distractions lying on your desktop
- Keep a glass of water at your desk

Teleconferencing ground rules:

- Use the mute button or press *6
- Do not place call on hold
• Use the “Raise hand” icon in the Attendee List: My Status to indicate you want to ask a question
• Identify yourself before speaking, when not called on
• Charge the batteries for your cordless handset
• If possible use a land line instead of your cell phone

Minimum Hardware Requirements
• PC with 1.4 GHz processor or higher (Windows) or 1.83 GHz process or higher (Mac OS). Minimum processor required for screen sharing. You may be asked to share your screen during hands-on exercise portions of the class.
• 17 inch or larger monitor is recommended, set at 1024 X 768. Larger monitor and 1024 X 768 setting will make presentation and system screens easier to read.
• Phone with Headset/Microphone or Speakerphone feature – to maximize student listening and comfort during presentation and demonstration portions of the course.

Software Requirement
A complete list of supported Operating Systems, browsers and additional requirements for Adobe® Acrobat® Connect™ can be found at: www.adobe.com/products/acrobatconnectpro/systemreqs

Sample Email to Notify Others You Are in a Virtual Class
This is a sample of an email you can send to your colleagues and manager when you are taking an online course.

Dear colleagues,

Today I will be participating in an online class from my desk. I will be online from approximately 9:30 a.m. to 5:30 a.m. EST. I would appreciate it if you would not disturb me during this time. If you have an immediate question, please contact Joe Smith at extension 123. If it can wait until after 11:00 a.m., please send me an email and I will follow up with you before the end of the business day. I appreciate your consideration.

Best regards,

Getting the Most Out of Your Session

Session Guidelines
• Turn off email, phones, instant messaging tools, and clear other distractions away from your training area.
• Participate and prepare to be called on by name.
• Use the “Raise Hand” icon if you have an immediate question or comment.
• Be patient waiting for a response to your chat messages.
• If you leave the program, please use the “Step Away” status icon in the Attendee List pod to let your instructor know when you leave and remember to clear it when you return.
Typographic Conventions

American English is the standard used in this handbook. The following typographic conventions are also used.

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Example text

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TARGET AUDIENCE
This course is intended for the following audiences:

- Application Consultant
- Developer
- Development Consultant
- Solution Architect
- System Architect
Lesson 1: Explaining SAP Gateway

Lesson Objectives
After completing this lesson, you will be able to:

- Describe the benefits of SAP Gateway and OData
- List SAP products that use SAP Gateway

Lesson 2: Describing SAP Gateway Deployment Options

Lesson Objectives
After completing this lesson, you will be able to:

- Describe SAP Gateway components
- Describe SAP Gateway deployment scenarios
Lesson 1: Explaining Representational State Transfer (REST)

Lesson Objectives
After completing this lesson, you will be able to:

- Describe Representational State Transfer (REST)

Lesson 2: Explaining Open Data Protocol (OData)

Lesson Objectives
After completing this lesson, you will be able to:

- Examine an OData service

Lesson 3: Performing OData Operations

Lesson Objectives
After completing this lesson, you will be able to:

- Perform OData read operations

Lesson 4: Performing OData Queries

Lesson Objectives
After completing this lesson, you will be able to:

- Perform OData queries
- Describe patterns for UI-centric applications

Lesson 5: Consuming OData Services

Lesson Objectives
After completing this lesson, you will be able to:

- Consume OData using SAP Web IDE
Lesson 1: Implementing a Gateway Service

Lesson Objectives
After completing this lesson, you will be able to:

- Explain the role of the SAP Gateway Service Builder
- Define a data model
- Implement a Gateway service
- Register and test a Gateway service
- Perform basic error handling

Lesson 2: Defining a Data Model

Lesson Objectives
After completing this lesson, you will be able to:

- Plan Gateway service development
- Define a data model based on ABAP Dictionary

Lesson 3: Implementing Read Operations

Lesson Objectives
After completing this lesson, you will be able to:

- Implement a query operation
- Implement a read operation

Lesson 4: Implementing Navigation

Lesson Objectives
After completing this lesson, you will be able to:

- Implement association and navigation

Lesson 5: Implementing Query Options
Lesson Objectives
After completing this lesson, you will be able to:

• Implement query options

Lesson 6: Implementing Change Operations

Lesson Objectives
After completing this lesson, you will be able to:

• Implement create, update, delete operations
Lesson 1: Operating the RFC/BOR Generator

Lesson Objectives
After completing this lesson, you will be able to:

- Define a data model based on an RFC/BOR interface
- Generate implementation for RFC/BOR operations

Lesson 2: Operating the Search Help Generator

Lesson Objectives
After completing this lesson, you will be able to:

- Implement the search help generator
Lesson 1: Redefining a Data Service

Lesson Objectives
After completing this lesson, you will be able to:

- Redefine a data service

Lesson 2: Redefining a Gateway Service

Lesson Objectives
After completing this lesson, you will be able to:

- Redefine Gateway services
Lesson 1: Explaining the SAP Fiori Programming Model

Lesson Objectives
After completing this lesson, you will be able to:

• Explain the SAP Fiori programming model

Lesson 2: Mapping CDS Views as Data Source

Lesson Objectives
After completing this lesson, you will be able to:

• Operate the CDS/SADL generator

Lesson 3: Referencing a Data Source

Lesson Objectives
After completing this lesson, you will be able to:

• Reference a data source

Lesson 4: Publishing a Gateway Service via CDS View Annotation

Lesson Objectives
After completing this lesson, you will be able to:

• Publish Gateway services via CDS view annotation
Lesson 1: Assigning Multiple Back-End Systems Support

Lesson Objectives
After completing this lesson, you will be able to:

- Assign multiple system aliases

Lesson 2: Configuring Routing Capabilities

Lesson Objectives
After completing this lesson, you will be able to:

- Configure routing

Lesson 3: Performing Multiple Origin Composition

Lesson Objectives
After completing this lesson, you will be able to:

- Perform multiple origin composition
Lesson 1: Implementing Function Imports

Lesson Objectives
After completing this lesson, you will be able to:

• Implement function imports

Lesson 2: Implementing Expand Operations

Lesson Objectives
After completing this lesson, you will be able to:

• Implement expand operations

Lesson 3: Implementing Deep Insert Operations

Lesson Objectives
After completing this lesson, you will be able to:

• Implement deep insert operations

Lesson 4: Handling ETags

Lesson Objectives
After completing this lesson, you will be able to:

• Handle ETags

Lesson 5: Processing Batch Requests

Lesson Objectives
After completing this lesson, you will be able to:

• Process batch requests

Lesson 6: Implementing Media Support

Lesson Objectives
After completing this lesson, you will be able to:

- Implement media support

Lesson 7: Explaining Offline Support

Lesson Objectives
After completing this lesson, you will be able to:

- Explain offline support

Lesson 8: Describing Server Side Caching

Lesson Objectives
After completing this lesson, you will be able to:

- Describe soft state
- Describe the soft state based query result cache
Lesson 1: Enabling Authentication
Lesson Objectives
After completing this lesson, you will be able to:
- Outline authentication options
- Outline authorization elements

Lesson 2: Managing Data Security
Lesson Objectives
After completing this lesson, you will be able to:
- Outline how to secure data

Lesson 3: Understanding Read Access Logging (RAL)
Lesson Objectives
After completing this lesson, you will be able to:
- Understand Read Access Logging (RAL)
Lesson 1: Explaining OData V4

Lesson Objectives
After completing this lesson, you will be able to:

• Compare OData V2 to V4

Lesson 2: Creating OData V4 Services

Lesson Objectives
After completing this lesson, you will be able to:

• Create OData V4 services

Lesson 3: Implementing OData V4 Services

Lesson Objectives
After completing this lesson, you will be able to:

• Implement OData V4 services
Lesson 1: Getting Further Information

Lesson Objectives
After completing this lesson, you will be able to:

- Get further information