

## Flow Development using OO Studio (OO220-202211)

ID OO220-202211 Preis 3.200,- € (exkl. MwSt.) Dauer 4 Tage

### Wichtige Hinweise für die Buchung von Open-Text-Trainings

Bitte beachten Sie, dass für die Teilnahme an einem Open-Text-Training Vorkasse zu leisten ist. Eine Teilnahme an einem Training ist für 12 Monate nach Kursbuchung möglich. Stornierungen sind ausgeschlossen. Weitere Informationen entnehmen Sie bitte unseren [Allgemeinen Geschäftsbedingungen](#).

### Kursüberblick

This four-day course introduces students to the essential concepts and usage of the Operations Orchestration (OO) software. OO is part of the Operations Bridge, Data Center Automation, Hybrid Cloud Management X and Service Management Automation X.

In particular, the course covers how to use OO Studio as a flow development tool. It introduces students to the essential concepts and usage of the Studio along with some advanced features.

Other topics in the course include using the source control management (SCM) system, which is a useful tool for groups of flow authors to work collaboratively on projects. This course also covers creating operations and subflows using OO Studio. Furthermore, you learn about using XML and JSON operations. In addition, this course shows you how to use integration content to facilitate integrations with other products like Operations Bridge Manager (OBM).

The execution order internal to OO is explained in detail. This course further focuses on advanced topics including using scriptlets, using PowerShell and Representational State Transfer (REST) to interact with OO Central, and using semaphores.

The course consists of focused, task-oriented lectures, text, and a series of detailed hands-on labs to teach the course material to the students. The hands-on labs for this course use version 2022.11 of the OO software.

### Zielgruppe

This course is intended for:

- Workflow developers
- System Administrators
- Automation Operators
- DevOps integrators
- Other personnel responsible for the implementation of OO

### Voraussetzungen

Be successful in this course, you should have the following prerequisites or knowledge:

- Networking terms and concepts
- Web browsers and Telnet or SSH connection methods
- Different operating system environments

### Kursziele

Upon successful completion of this course, you should be able to:

- Run and manage automated workflows using Operations Orchestration (OO)
- Perform a wide range of system administration, monitoring, and management tasks using OO Central
- Author, maintain, document, and package new automated workflows using the OO Studio application
- Test and debug the flows locally and remotely
- Work with Looping and Iteration operations
- Apply parallel processing methods to your flows in OO
- Use responses, rules, and transitions to control flow run
- Use XML operations and XML filters for processing XML content in OO
- Work with JavaScript Object Notation (JSON) operations
- Describe how OO executes workflows in terms of component execution order
- Execute scriptlet methods in OO to manage flow data and flow execution
- Summarize the concepts related to semaphores and how to use them in OO
- Describe the use of the Source Control Management (SCM) tool and perform advanced tasks
- Describe and use Representational State Transfer (REST) calls

- Write flows for OBM Integration
- Run and manage automated workflows using Designer

## Kursinhalt

- Module 1: Course Overview
- Module 2: Introduction to Operations Orchestration
- Module 3: Introduction to Flow Authoring,
- Module 4: Flow Management with OO Central
- Module 5: Inputs
- Module 6: Results and Filters
- Module 7: Operations, Responses, Transitions, and Subflows
- Module 8: Looping and Iteration Operations
- Module 9: Parallel Processing
- Module 10: Using XML and JSON Operations
- Module 11: Using Integration Content
- Module 12: Working with OO Wizards
- Module 13: Scriptlets
- Module 14: Execution Order
- Module 15: Using Semaphores
- Module 16: Remote Debugging
- Module 17: Using Source Control Management (SCM)
- Module 18: Using OO Workflow Designer
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## Detaillierter Kursinhalt

### Module 1: Course Overview

### Module 2: Introduction to Operations Orchestration

- Describe OO and its key benefits
- Explain the system and functional architecture of OO
- Identify role-based privileges in OO
- Discuss the key capabilities of OO
- Describe collaborative development in OO
- Define content packs, operations, and projects
- Explain the improvements in OO

### Module 3: Introduction to Flow Authoring

- Describe the OO Studio flow authoring environment
- Explain the components of the OO Studio application
- Explain a flow and describe the main components of a flow
- Explain the differences between:
  - A flow and an operation in OO
  - An operation and a step in OO
- Author a simple flow
- Test the flow in the OO Studio Debugger
- Modify a flow and test the modified flow
- Explain the purpose of OO Studio Debugger

- Explore the panes in the Debugger window

### Module 4: Flow Management with OO Central

- Explain the role of OO Central in deploying automated workflows
- Describe the OO Central UI
- Deploy projects and dependencies
- Run flows, monitor progress, and evaluate results
- Set flow permissions
- View the dashboard and reports
- Visualize a deployed workflow
- Enable authentication and add local users
- Set the security banner

### Module 5: Inputs

- Explain inputs and flow variables
- Explain local and global variables
- Define inputs in the Inspector window
- Use input data flow options
- Add, remove, replace, and disable inputs
- Create and assign system properties to inputs
- Use login credentials with a stored system account
- Create and use a selection list as an input
- Validate an input using a created system evaluator
- Work with flow inputs

### Module 6: Results and Filters

- Explain how to use results to create flow variables that contain operation outputs
- Use the Step Inspector window's Results tab to add results to steps
- Use the Filter Inspector window to filter a result so only the data required by the flow is assigned to a result flow variable
- Use assignment actions to specify which action is taken for assigning the final result

### Module 7: Operations, Responses, Transitions, and Subflows

- Explain how operations and subflows are used as steps in a flow
- Create new operations
- Modify operation properties
- Define responses and response rules
- Explain transition properties
- Use subflows in a parent flow
- Explain best practices for working with subflows
- Assign step results in a subflow to output fields for use in the parent flow
- Work with the Properties editor of a subflow
- Explain how operations and subflows are used as steps in

- a flow
- Create new operations
- Modify operation properties
- Define responses and response rules
- Explain transition properties
- Use subflows in a parent flow
- Explain best practices for working with subflows
- Assign step results in a subflow to output fields for use in the parent flow
- Work with the Properties editor of a subflow

## Module 8: Looping and Iteration Operations

- Explain how OO handles iterations and related tasks, such as list compilation
- Perform looping, iteration, and related tasks for the content in the OO library
- Author a flow that uses iteration and list compilation
- Create a flow that uses the counter operation

## Module 9: Parallel Processing

- Explain the implementation of the following multiprocessing methods in your flows:
  - Multi-instance step
  - Non-blocking step
  - Parallel-splitstep
- Describe how to handle flow data in multi-processing operations
- Create flows that use a multi-instance step
- Create flows that use a parallel-split step

## Module 10: Using XML and JSON Operations

- List and describe the operations and filters available in OO for working with XML
- Explain how to use iterative operations to compile data extracted from XML documents
- Build a flow that validates and parses an XML document
- Use XML filters to extract data from an XML document
- Build a flow that validates, and parses XML data returned from a web service Simple Object Access Protocol (SOAP) inquiry
- Use XSL Transform to represent XML as HTML
- Describe the concepts of JavaScript Object Notation (JSON)
- Work with JSON in OO
- Module 11: Using Integration Content
- Describe the integration of content pack structures
- Explain about OO-OBM Integration
- Write flows for OBM
- Monitor the Operations Agent

## Module 12: Working with OO Wizards

- Explain the benefits and requirements of the PowerShell wizard
- Configure the PowerShell wizard and import flows
- Verify and debug the generated flows
- Explain how OO uses RESTful services
- Use the REST wizard to convert a Web Application Description Language (WADL) file into OO operations
- Explain how the imported content works
- Describe useful operations to treat and manipulate the content
- imported using REST wizards

## Module 13: Scriptlets

- Describe scriptlets and their use in OO
- Execute OO scriptlet methods to manage flow data and flow execution
- Analyze sample flows that use scriptlets
- Execute scriptlets in flows

## Module 14: Execution Order

- Describe how OO executes workflows in terms of the component execution order
- Describe how OO assigns execution priority to the various component types

## Module 15: Using Semaphores

- Summarize the concept of semaphores and how to use semaphores in OO
- Describe sample flows

## Module 16: Remote Debugging

- Explain the need for and benefits of remote debugging
- Configure remote debugging:
- Explain the prerequisites for remote debugging
- Explain the remote debugging lifecycle
- Explain the permissions for remote debugging
- Add or edit OO Central server connections
- Configure the proxy settings for debugging on a remote OO Central environment
- Rerun a flow

## Module 17: Using Source Control Management (SCM)

- Use the Source Control Management (SCM) tool
- Perform advanced tasks that you might encounter when projects and items are shared among multiple authors.

## Module 18: Using OO Workflow Designer



- Explore the OO Workflow Designer
- Create and debug a flow using OO Workflow Designer

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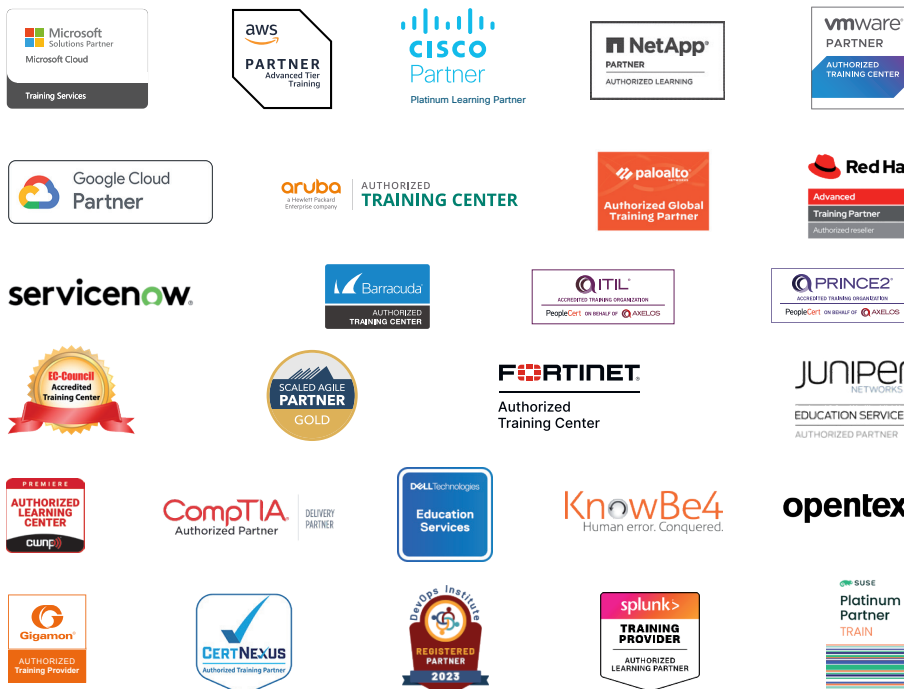
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## Trainingsmethoden

- ✓ Klassenraumtraining
- ✓ Instructor-Led Online Training
- ✓ FLEX Classroom – Klassenraum und ILO kombiniert
- ✓ Onsite & Customized Training
- ✓ E-Learning
- ✓ Blended & Hybrid Learning
- ✓ Mobiles Lernen

## Technologien und Lösungen

- ✓ Digitale Transformation
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- ✓ Cloud
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