

## Configuration Management System Advanced (CMS350-202205)

ID CMS350-202205 Price 3,000.— €(excl. tax) Duration 4 days

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### Course Overview

This four-day course enables students to understand advanced concepts and acquire Universal CMDB (UCMDB) development skills. Advanced topics are discussed and implementation methods and techniques are demonstrated using hands-on exercises. Jython, Java, and Web Services are introduced in the context of UCMDB.

The hands-on lab environment uses UCMDB version 2022.05

### Who should attend

This course is recommended for:

- Those in charge of Configuration Management and the documentation and storage of business services and their related assets and relationships
- Project managers, application modelers, discovery engineers, and UCMDB implementation consultants
- Integration specialists implementing data federation across the different business silo and software product families

### Prerequisites

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

- Successful completion of UCMDB120 UCMDB 2020.x Essentials and UD120 Universal
- Discovery 2020.x Essentials
- At least 6 months experience with UCMDB & Universal Discovery

- Prior experience with a scripting language such as Python, Perl, etc.

### Course Objectives

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

- Integrate multiple Configuration Management Databases (CMDBs) and explain the integration components and process
- Develop new adapters: discovery and integration
- Use UCMDB data in your adapters
- Develop your own Jython scripts for your adapter
- Develop your own Generic database adapter and federate data into UCMDB or populate UCMDB with data
- Develop your own Java integration adapter
- Use the UCMDB API for Java adapters
- Develop your own XML push adapters
- Explain the Web Services push adapter
- Develop Java code using the UCMDB API
- Use the UCMDB Java API for querying and populating the UCMDB
- Develop your own Web Services client
- Use the UCMDB Web Service API for querying and populating the UCMDB
- Use the UCMDB REST API

### Course Content

- Module 1: Course Overview
- Module 2: CMS End-to-end Scenario
- Module 3: Integrations
- Module 4: Adapter Development and Writing
- Module 5: Developing Jython Adapters
- Module 6: Developing Generic DB Adapters
- Module 7: Developing Java Adapters
- Module 8: Developing Generic Push Adapters
- Module 9: Using Data Flow Management API
- Module 10: Using Data Flow Management API
- Module 11: Using the CMDB Web API
- Module 12: Use REST API
- Appendix A: Working with Python

## Detailed Course Outline

### Module 1: Course Overview

### Module 2: CMS End-to-end Scenario

Define CMDB and Configuration Management System (CMS) Describe the relationships between Service Asset and Configuration Management (SACM), Information Technology Asset Management (ITAM), and CMS List CMS use cases Explain different integration methods Explain the different ways to consume data

### Module 3: Integrations

Identify UCMDB integrations Define the integration types Define integration point, adapter, and job Use the Integration Studio to setup integrations Integrate UCMDB and Service Manager Integrate multiple UCMDBs Use the Visual Mapping Tool

### Module 4: Adapter Development and Writing

Explain the need for development writing Describe the Adapter development lifecycle List the Adapter components List the ways to access the CMDB data Explain the differences between adapter types Name the best practice in Adapter development Describe remote process execution

### Module 5: Developing Jython Adapters

Explain Python and Jython Describe Python basics Explain the Jython adapter structure Explain the ObjectStateHolder Describe a framework instance Name OOTB UCMDB libraries

### Module 6: Developing Generic DB Adapters

Describe the Generic Database Adapter (GDBA) Describe Java Hibernate Name the preparation for adapter steps Recognize the mapping tags List the differences between Federation and Population List GDBA limitations

### Module 7: Developing Java Adapters

Describe Java adapters Describe the Federation Framework List the federation framework capabilities Use Java adapter resources Recognize Java adapter structure Use Java adapter coding Use logging and debugging

### Module 8: Developing Generic Push Adapters

Describe the Generic push Adapter Differentiate between XML and the Web Services push adapter Prepare the push adapter Use push adapter Jython Script writing Use the differential synchronization technique List Generic push adapter best practices

### Module 9: Using Data Flow Management API

List Data Flow Management (DFM) API use cases Describe the DFM API Use the DFM API documentation and access the Web Services Description Language (WSDL) file Describe the DFM code general structure Use DFM code examples

### Module 10: Using Data Flow Management API

Name UCMDB API use cases Describe the UCMDB API Describe the UCMDB API flow Use the UCMDB API general structure Use UCMDB API code samples

### Module 11: Using the CMDB Web API

Name uses for the Web Services API Describe the UCMDB Web Services API Access the Web Services API Use the UCMDB API general structure Explain UCMDB update using Web Services Use code samples

### Module 12: Use REST API

Name uses for the REST API Describe the UCMDB REST API Access the REST API Use the REST API

### Appendix A: Working with Python

Work with Strings Work with Lists Control Flow Syntax Describe Advance Programming Work on Regular Expression

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