

Developing Decision Services in IBM Operational Decision Manager–II

WB407 (Classroom)

ZB407 (Self-paced)

Course description

This is the second course in a two-part series that teaches developers how to use IBM Operational Decision Manager 8.11.1 to develop and integrate decision services.

After a brief review of the first course in this series, you learn how to support business users by customizing rule vocabulary with categories and domains. You work with queries and rule extractors for deployment, and debug tools to ensure the business logic is error free. You work extensively with Rule Execution Server as you learn how to manage ruleset deployment and execution. You also learn how Operational Decision Manager features support decision governance so that it can be implemented in your organization.

The lab environment for this course uses Windows Server 2019 Standard.

For information about other related courses, see the IBM Training website:

**ibm.com**/training

General information

Delivery method

Classroom or self-paced virtual classroom (SPVC)

Course level

ERC 1.0

Product and version

IBM Operational Decision Manager version 8.11.1

Audience

This course is designed for developers.

Learning objectives

After completing this course, you should be able to:

* Customize the Business Object Model (BOM) and vocabulary for rule authoring
* Debug business rule applications to ensure that the implemented business logic is error-free
* Package and deploy decision services to test and production environments
* Integrate decision services for managed execution within an enterprise environment
* Monitor and audit execution of decision services
* Apply governance principles to decision management

Prerequisites

* Experience with the Java programming language and object-oriented concepts
* Knowledge of Java Platform, Enterprise Edition (Java EE)
* Basic knowledge of Extensible Markup Language (XML)
* Basic knowledge of the REST API and RESTful architecture
* Completion of WB406: *Developing Rule Solutions in IBM Operational Decision Manager–I*

Duration

2 days

Skill level

Intermediate

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| Classroom (ILT) setup requirements | |
| Processor | Intel Xeon Platinum 8260 CPU @ 2.40GHz 4 CPU |
| GB RAM | 16 |
| GB free disk space | 120 |
| Network requirements | None |
| Other requirements | None |

Notes

The following unit and exercise durations are estimates, and might not reflect every class experience. If the course is customized or abbreviated, the duration of unchanged units will probably increase.

This is the second course in a 2-part series for developers. Before taking this course, students should complete part 1:

* WB406:*Developing Decision Services in IBM Operational Decision Manager--I*

This course is an update of the following previous course:

* WB404: *Developing Rule Solutions in IBM Operational Decision Manager V8.10.5*

Course agenda

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| Course introduction  Duration: 30 minutes |

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| Unit 1. Review: IBM Operational Decision Manager  Duration: 15 minutes | |
| Overview | This unit introduces IBM Operational Decision Manager and describes the advantages of implementing a decision management solution in your organization. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the Operational Decision Manager architecture * Identify which user roles are involved in a decision management solution |

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| Unit 2. Customizing rule vocabulary with categories and domains  Duration: 1 hour | |
| Overview | This unit teaches you how to work with categories and domains to customize rule vocabulary. |
| Learning objectives | After completing this unit, you should be able to:   * Simplify rule authoring by using categories * Define domains |

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| Exercise 1. Working with static domains  Duration: 45 minutes | |
| Overview | In this exercise, you learn how to simplify rule authoring by defining static domains in the BOM. |
| Learning objectives | After completing this exercise, you should be able to:   * Create various types of static domains * Use domains in rules |

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| Exercise 2. Working with dynamic domains  Duration: 1 hour and 30 minutes | |
| Overview | In this exercise, you learn how to define and use dynamic domains with Microsoft Excel spreadsheets. |
| Learning objectives | After completing this exercise, you should be able to:   * Create dynamic domains in Microsoft Excel spreadsheets * Update and use dynamic domains in rules * Access and update dynamic domains in Decision Center * Synchronize dynamic domains between Rule Designer and Decision Center |

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| Unit 3. Working with queries  Duration: 45 minutes | |
| Overview | This unit explains how to use search and query tools with rule artifacts. |
| Learning objectives | After completing this unit, you should be able to:   * Use search features and queries to identify rules according to specific criteria * Define semantic queries according to rule behavior * Use queries to create ruleset extractors |

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| Exercise 3. Working with searches and queries  Duration: 30 minutes | |
| Overview | This exercise teaches you how to define queries and rule extractors on rule projects. You also learn how to synchronize queries between Rule Designer and Decision Center. |
| Learning objectives | After completing this exercise, you should be able to:   * Search for rule artifacts and find rules according to their dependencies * Define and run queries and apply actions on query results * Synchronize queries between Rule Designer and Decision Center |

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| Unit 4. Debugging rulesets  Duration: 45 minutes | |
| Overview | In this unit, you learn how to verify that the implemented business logic is free of errors. |
| Learning objectives | After completing this unit, you should be able to:   * Use launch configurations to run and debug rulesets * Work with automatic exception handling * Work with Rule Designer debugging tools |

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| Exercise 4. Debugging a ruleset  Duration: 2 hours | |
| Overview | This exercise walks you through the steps of debugging a ruleset in Rule Designer. |
| Learning objectives | After completing this exercise, you should be able to:   * Use automatic exception handling * Set breakpoints in rules, decision tables, and ruleflows * Run a debugging session |

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| Unit 5. Managing deployment  Duration: 1 hour | |
| Overview | This unit teaches you how to deploy and manage rule artifacts for execution in Rule Execution Server. It also covers how to use Ant tasks and the Build Command Maven plug-in for RuleApp management. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the principles for managing RuleApp and XOM deployment * Prepare deployment configurations * Build and deploy RuleApps outside of Rule Designer |

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| Exercise 5. Managing deployment  Duration: 1 hour | |
| Overview | This exercise teaches you how to deploy rules and XOMs for managed execution with Rule Execution Server. |
| Learning objectives | After completing this exercise, you should be able to:   * Define a RuleApp and ruleset properties * Use deployment configurations to deploy decision services * Deploy the XOM for its management in Rule Execution Server * Build and deploy rulesets in the Decision Center API console |

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| Unit 6. Executing rules with Rule Execution Server  Duration: 1 hour and 30 minutes | |
| Overview | This unit explains how to create client applications that request the managed execution of business rules with Rule Execution Server. It also covers the various enterprise environments in which Rule Execution Server can run. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the Rule Execution Server architecture * Describe the platforms in which Rule Execution Server can be deployed * Explain the APIs that are used to create client applications that request ruleset execution with Rule Execution Server |

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| Exercise 6. Exploring the Rule Execution Server console  Duration: 45 minutes | |
| Overview | This exercise teaches you how to work with the Rule Execution Server console. |
| Learning objectives | After completing this exercise, you should be able to:   * Work with Rule Execution Server console tools * Manage RuleApps and rulesets through the Rule Execution Server console |

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| Unit 7. Working with transparent decision services  Duration: 45 minutes | |
| Overview | This unit teaches you how to work with transparent decision services and use the REST service for ruleset execution. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the options for using transparent decision services * Describe the REST service for ruleset execution * Expose a decision service as an API |

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| Exercise 7. Executing rules using the REST service  Duration: 30 minutes | |
| Overview | This exercise teaches you how to retrieve HTDS description files and test ruleset execution by using the REST service. |
| Learning objectives | After completing this exercise, you should be able to:   * Retrieve HTDS description files * Test ruleset execution by using the REST service |

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| Unit 8. Auditing and monitoring ruleset execution  Duration: 1 hour | |
| Overview | In this unit, you learn how to audit and monitor ruleset execution with Decision Warehouse. |
| Learning objectives | After completing this unit, you should be able to:   * Audit the execution of rulesets with Decision Warehouse * Monitor ruleset execution with the Rule Execution Server console |

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| Exercise 8. Auditing ruleset execution through Decision Warehouse  Duration: 45 minutes | |
| Overview | This exercise describes how to enable monitoring of ruleset execution and how to audit execution traces in Decision Warehouse. |
| Learning objectives | After completing this exercise, you should be able to:   * Enable monitoring for ruleset execution * Retrieve decision traces through Decision Warehouse * Optimize Decision Warehouse * Delete trace data from Decision Warehouse |

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| Unit 9. Applying decision governance  Duration: 45 minutes | |
| Overview | In this unit, you learn how to identify governance issues and use Operational Decision Manager features to support decision governance. |
| Learning objectives | After completing this unit, you should be able to:   * Explain governance issues and good practices * Identify Operational Decision Manager features that support decision governance * Describe how to implement the decision governance framework |

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| Unit 10. Course summary  Duration: 15 minutes | |
| Overview | This unit summarizes the course and provides information for future study. |
| Learning objectives | After completing this unit, you should be able to:   * Explain how the course met its learning objectives * Identify IBM credentials that are related to this course * Locate resources for further study and skill development |