

Developing Decision Services in IBM Operational Decision Manager – I

WB406 (Classroom)

ZB406 (Self-paced)

Course description

This course teaches developers to how to design and develop decision services with IBM Operational Decision Manager 8.11.1.

The course begins with an overview of Operational Decision Manager, which is composed of two main environments: Decision Server for technical users and Decision Center for business users. The course outlines the collaboration between development and business teams during project development.

Through hands-on exercises, you learn how to design decision services and implement object models in Rule Designer. You learn how to support business users by setting up the rule authoring environment. Finally, you enable rule testing and simulation so business users can ensure that their rulesets produce the correct outcome.

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:

* Describe the benefits of implementing a decision management solution with Operational Decision Manager
* Identify the key user roles that are involved in designing and developing a decision management solution, and the tasks that are associated with each role
* Describe the development process of building a business rule application and the collaboration between business and development teams
* Set up the Business Object Model (BOM) and vocabulary for rule authoring
* Implement the Execution Object Model (XOM) that enables ruleset execution
* Orchestrate rule execution through ruleflows
* Set up and customize rule validation for business users to ensure that rulesets produce the expected outcome

Prerequisites

* Experience with the Java programming language and object-oriented concepts
* Basic knowledge of Extensible Markup Language (XML)

Duration

2 days

Skill level

Intermediate

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| Classroom (ILT) setup requirements | |
| Processor | Intel Xeon CPU E7-2860 @ 2.50GHz 2 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 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. Introducing IBM Operational Decision Manager  Duration: 1 hour and 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:   * Explain the purpose of decision management * Describe how the Operational Decision Manager architecture supports business and technical user roles and tasks * Map the various roles that are involved in a decision management solution to roles in your organization * Identify the need for governance |

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| Exercise 1. Operational Decision Manager in action  Duration: 2 hours | |
| Overview | In this exercise, you see how the Operational Decision Manager modules work together to provide comprehensive decision management across the business and development environments. |
| Learning objectives | After completing this exercise, you should be able to:   * Explain the general workflow in Operational Decision Manager for working with business rule projects * Identify the Operational Decision Manager tasks that apply to your role in your organization |

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| Unit 2. Developing decision services  Duration: 1 hour | |
| Overview | This unit teaches you how to get started with development of decision services. |
| Learning objectives | After completing this unit, you should be able to:   * Identify the development tasks in building a decision management application * Describe how to set up a decision service in Rule Designer * Share and synchronize decision services between the business and development environments |

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| Exercise 2. Setting up decision services  Duration: 1 hour and 45 minutes | |
| Overview | In this exercise, you learn how to set up decision services in Rule Designer. |
| Learning objectives | After completing this exercise, you should be able to:   * Create main and standard decision service projects * Set up the decision service to reference the execution object model (XOM) * Generate a business object model (BOM) and a default vocabulary * Create a decision operation * Define ruleset variables and ruleset parameters * Create rule packages * Synchronize decision services with Decision Center |

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| Unit 3. Programming with business rules  Duration: 45 minutes | |
| Overview | This unit describes how the rule engine works and rule execution modes. |
| Learning objectives | After completing this unit, you should be able to:   * Describe rule execution * Explain rule execution modes and execution principles |

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| Unit 4. Orchestrating ruleset execution  Duration: 45 minutes | |
| Overview | This unit describes how to orchestrate rule execution through ruleflows. You also learn about rule engine execution modes. |
| Learning objectives | After completing this unit, you should be able to:   * Design ruleflows to organize the execution of the rule artifacts in a ruleset * Configure how rules are selected for execution at run time * Explain rule engine execution modes |

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| Exercise 3. Working with ruleflows  Duration: 45 minutes | |
| Overview | In this exercise, you learn how to create a ruleflow. |
| Learning objectives | After completing this exercise, you should be able to:   * Describe the parts of a ruleflow * Create a ruleflow * Orchestrate rule selection and execution through the ruleflow |

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| Unit 5. Developing object models  Duration: 45 minutes | |
| Overview | In this unit, you learn how to design the object models upon which rules are written and executed, and how to create the vocabulary that is required to author business rules. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the association between the BOM and the vocabulary that is used in rules * Define the XOM * Work with BOM-to-XOM mapping * Use refactoring tools to maintain consistency between the BOM and XOM |

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| Exercise 4. Working with the BOM  Duration: 45 minutes | |
| Overview | This exercise describes how to create a BOM from a XOM. |
| Learning objectives | After completing this exercise, you should be able to:   * Generate a BOM from an existing XOM * Verbalize the BOM with natural-language vocabulary |

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| Exercise 5. Refactoring  Duration: 45 minutes | |
| Overview | This exercise describes how to manage inconsistencies within the project as the XOM, BOM, and vocabulary evolve. |
| Learning objectives | After completing this exercise, you should be able to:   * Refactor vocabulary changes * Manage inconsistency issues after updating the XOM and BOM |

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| Unit 6. Authoring rules  Duration: 1 hour and 30 minutes | |
| Overview | This unit teaches you how to author rule artifacts that implement the business logic and policies of a business rule application. |
| Learning objectives | After completing this unit, you should be able to:   * Describe rule languages * Use the various rule editors to author rule artifacts * Define the objects that rule artifacts manipulate |

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| Exercise 6. Exploring action rules  Duration: 30 minutes | |
| Overview | In this exercise, you learn how to write action rules. |
| Learning objectives | After completing this exercise, you should be able to:   * Identify the parts of an action rule * Explain the difference between using automatic variables or rule variables |

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| Exercise 7. Authoring action rules  Duration: 45 minutes | |
| Overview | In this exercise, you learn how to author action rules. |
| Learning objectives | After completing this exercise, you should be able to:   * Use the Intellirule editor and Guided editor to author action rules * Use rule variables, automatic variables, and parameters in rule statements |

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| Exercise 8. Authoring decision tables  Duration: 45 minutes | |
| Overview | In this exercise, you learn how to author decision tables. |
| Learning objectives | After completing this exercise, you should be able to:   * Use the decision table editor to create a decision table |

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| Unit 7. Enabling tests and simulations  Duration: 1 hour | |
| Overview | This unit teaches you how to enable business users to run tests and simulations. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the basic features of testing and simulation * Collaborate with business users to set up testing and simulation |

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| Exercise 9. Enabling rule validation  Duration: 1 hour and 15 minutes | |
| Overview | This exercise teaches you how to set up testing and simulation functionality for business users. |
| Learning objectives | After completing this exercise, you should be able to:   * Validate the BOM and generate scenario file templates * Customize scenario file templates * Validate remote testing conditions for business users in the Business console |

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| Unit 8. Course summary  Duration: 30 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 |

For more information

To learn more about this course and other related offerings, and to schedule training, see **ibm.com**/training

To learn more about validating your technical skills with IBM certification, see **ibm.com**/certify