



# Developing Rule Solutions with IBM Operational Decision Manager V8.8

**Guide to using course materials on the cloud**

**WB395 (Classroom)**

**ZB395 (Self-paced)**

**ERC 1.0**

## About this document

The exercises in this course are designed for the on-premises version of IBM Operational Decision Manager V8.8. This document explains how to run the exercises on the cloud.

You should review this document before you start the course.

This document was tested on the cloud on March 16, 2016.



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## Requirements

Before you try to use the course materials on your cloud environment, be sure to review the requirements that are listed here.

***Note:** Apart from the guidance in this document, no additional support is provided to help students resolve issues that they might encounter in their cloud environment. Full student support is offered on the regular course platform.*

### Getting an IBM ODM on Cloud account and permissions

To use the course materials with IBM ODM on Cloud, you must have an ODM on Cloud account. Contact your ODM on Cloud administrator to obtain an account.

Be sure to include in your request that **Release Manager** permissions are required for this course.

### Getting the lab materials

When you enroll in the course, you receive the notebook and exercise instructions based on the on-premises version of ODM.

A modified set of lab files is available for use with ODM on Cloud as file `WB395_ERC1.0_LABFILES_CLOUD.zip`. To obtain these lab files, send an email request to the following people:

- Tom Reed: [treed1@us.ibm.com](mailto:treed1@us.ibm.com)
- Tonya Teyssier: [teyssier@ca.ibm.com](mailto:teyssier@ca.ibm.com)
- June Yoshii: [jyoshii@us.ibm.com](mailto:jyoshii@us.ibm.com)

### Running the Miniloan application

During Exercise 1, when you use the Miniloan web application to test your rules, you must set it up by following the instructions provided in the IBM Knowledge Center.

[www.ibm.com/support/knowledgecenter/SS7J8H/com.ibm.odm.cloud.tutorial/topics/tsk\\_check\\_execution.html](http://www.ibm.com/support/knowledgecenter/SS7J8H/com.ibm.odm.cloud.tutorial/topics/tsk_check_execution.html)

As an alternative, you can try to access the application at <http://miniloan-cloud.mybluemix.net>.

## Activating your IBM ODM on Cloud account

Before you start, you must activate your cloud account and set up your environment.

- \_\_1. When you receive the invitation email, follow the link and instructions to activate your account.

## Welcome to IBM ODM on Cloud

IBM ODM on Cloud [noreply@odm.ibmcloud.com]

Sent: Tue 2/2/2016 5:09 AM

To:

**Administrator Joe** invites you to start using IBM Operational Decision Management on Cloud

[Click here to activate your account](#)



Or copy and paste this link into your browser

<https://www.bpm.ibmcloud.com/auth/activation.jsp?token=fad08d0d-5eb9-4756-92a9-76e99846d795>

"Use the link to validate your email address and activate your account. Then, you can access the service at

<https://vhost1000.bpm.ibmcloud.com>.

Use your email address as your login name.

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2. Follow the activation process to enter your login details.

The ODM on Cloud portal opens to the **Applications** tab.

## Downloading application files

To access Rule Designer and set up the Miniloan web application, download the required files from the Rule Designer section of the portal.

1. In the Rule Designer pane, click **Download**.



2. In the Rule Designer download page, download Rule Designer by clicking **ruledesignerforcloud.zip** and save the file to a local directory, such as C:\cloud\tools.
3. To set up the Miniloan web application, you also download **Sample projects** and **Web application**, and save these files to a local directory, such as C:\cloud\tools.

## Rule Designer download

You have two options to install Rule Designer:

- For 64-bit Windows, download a stand-alone version of Rule Designer:  
[ruledesignerforcloud.zip](#)
- For [supported operating systems](#), including 64-bit Windows, install Rule Designer in an existing instance of [Eclipse 4.4 for Java EE Developers](#) by using the following update site: <http://vhost1000-ruledesigner-site.bpm.ibmcloud.com>

Download the following Miniloan Service tutorial files to help you get started with ODM on Cloud:

- [Sample project](#)
- [Web application](#)

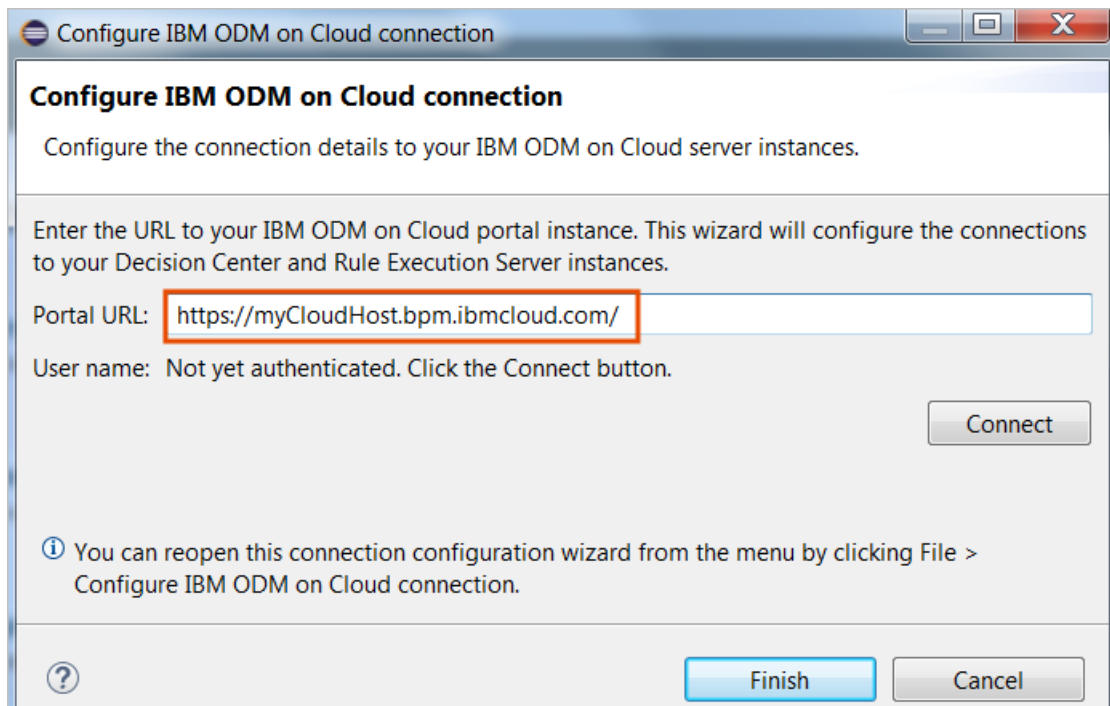
Close

\_\_\_4. Click **Close** to close the download page.

## Starting Rule Designer

### To start Rule Designer:

- \_\_\_1. Open the folder where you downloaded the files, extract the `ruledesignerforcloud.zip` file, and open the resulting directory to find the `eclipse\eclipse.exe` file.
- \_\_\_2. Double-click the `eclipse.exe` file to start Rule Designer.
- \_\_\_3. In the Workspace Launcher, accept the default workspace path and click **OK**.
- \_\_\_4. In the wizard that opens, replace `<myodmcloud>` with the host name for your IBM ODM on Cloud portal.  
In this example, the host name is changed to `myCloudHost`.



- \_\_\_5. Click **Connect** and provide your IBM ODM on Cloud credentials when prompted.  
The wizard configures the connections to your Decision Center and Rule Execution Server instances on the cloud.  
The message beside “User name” changes from “Not yet authenticated” to your user name.
- \_\_\_6. Click **Finish**.
- \_\_\_7. Close the Welcome page in Rule Designer.

## Exercises that use Rule Designer

The lab files for this course are provided in compressed file WB395\_ERC1.0\_LABFILES\_CLOUD.zip.

Extract this file to a local directory on the same workstation that you use to run Rule Designer, such as <odmcloudDir>\WB395\_ERC1.0\_LABFILES\_CLOUD, where <odmcloudDir> is the directory where you store the files that are used during this course.

You should see the following list of folders:

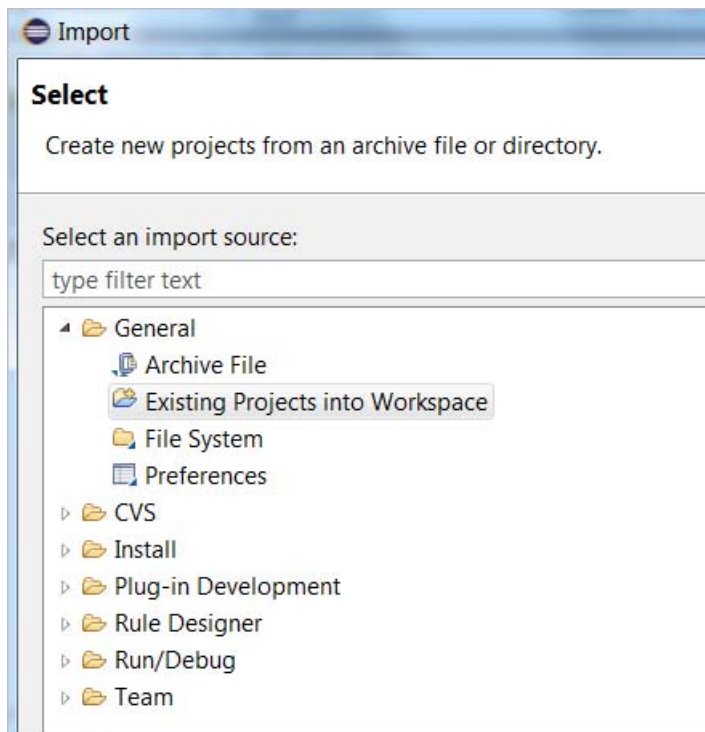
- LabfilesDir
  - o code
  - o workspaces
- training

For all exercises that use Rule Designer, you are prompted for a workspace path. You can create a new workspace by pointing to the <odmcloudDir>\WB395\_ERC1.0\_LABFILES\_CLOUD\LabfilesDir\workspaces\ directory and adding the name of your workspace folder, as in this example:

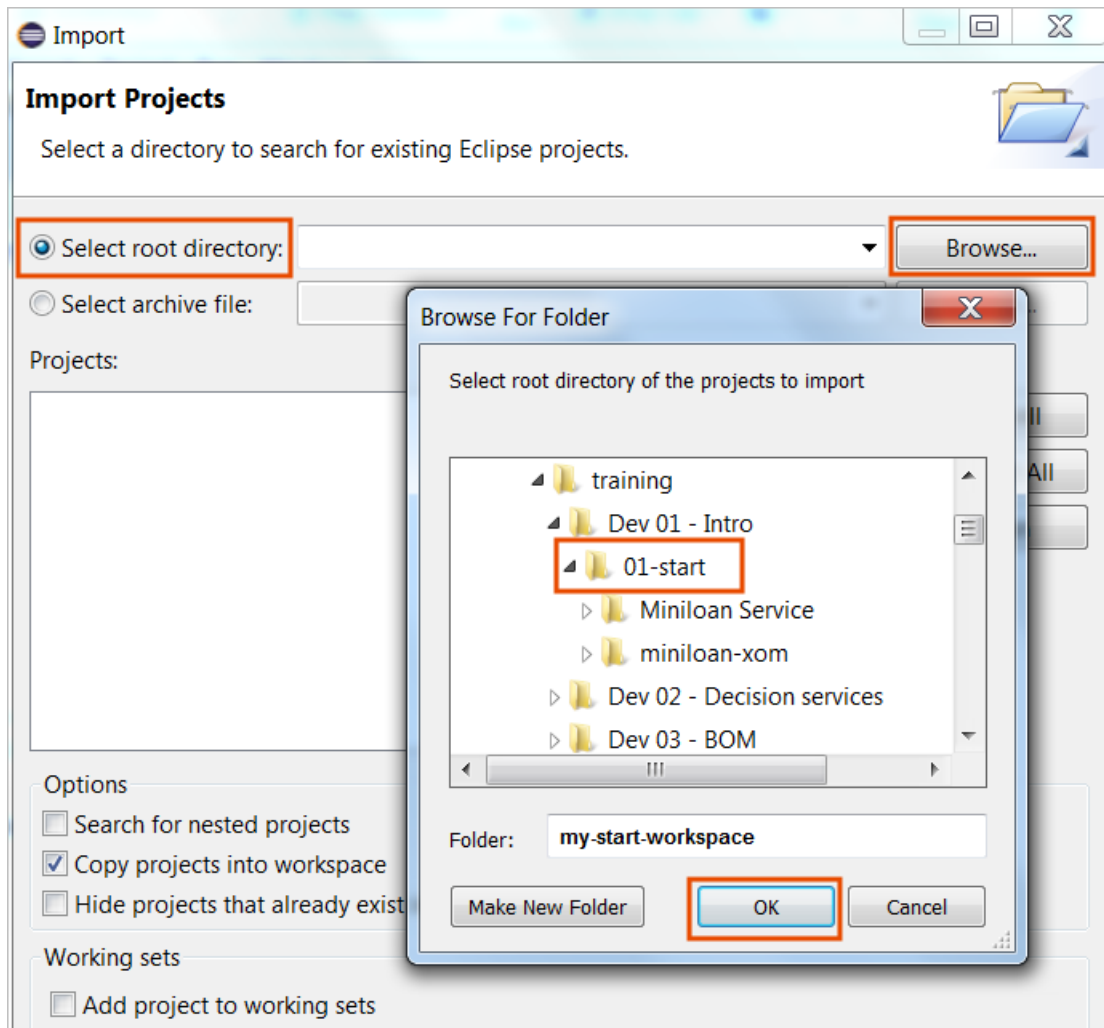
<odmcloudDir>\WB395\_ERC1.0\_LABFILES\_CLOUD\LabfilesDir\workspaces\ex1-intro

## Importing lab files

1. Open Rule Designer by double-clicking `eclipse.exe` in the <odmcloudDir>\rulesdesignerforcloud\eclipse directory.
2. To import projects, use the **File > Import** menu, and click **General > Existing Projects into Workspace**.



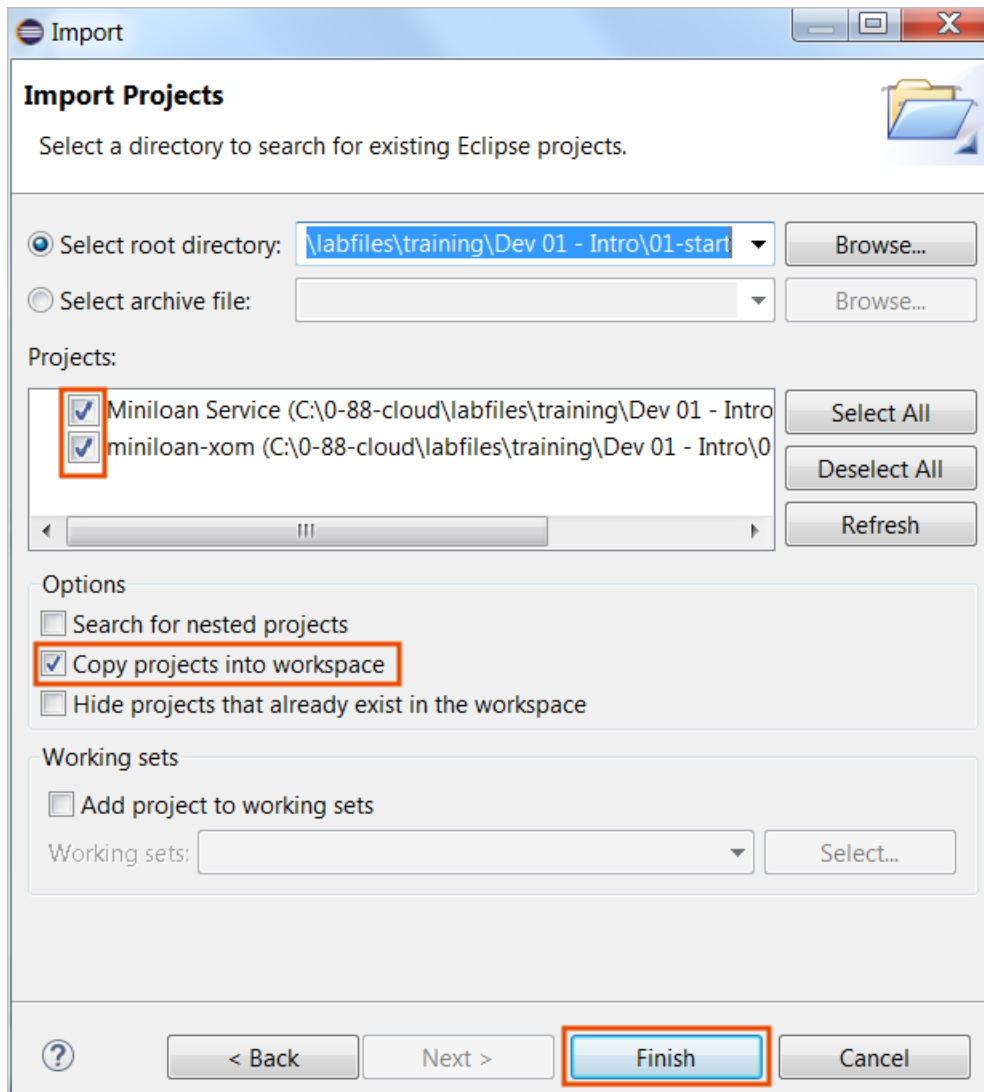
3. Choose **Select root directory** and click **Browse** to browse to the “start” project for the exercise, as in this example:  
<odmcloudDir>\labfiles\training\Dev 01 - Intro\01-start



The root directories for each exercise are stored in the <odmcloudDir>\labfiles\training directory. For each exercise that requires you to import to Rule Designer, the root directory name is provided.

- \_\_\_4. Be sure to select **Copy projects into workspace** and select all the folders that are listed in the directory, and then click **Finish**.





The projects are copied to your workspace. You must select **Copy projects into workspace**; otherwise, you overwrite the projects in the root directory instead of copying those projects to your workspace folder.

### Fixing the missing XOM error

After you import the projects, you might see an error on rule projects because the `loan-xom` XOM is missing. The on-premises version of the training automatically imports the XOM from the `<odmcloudDir>\labfiles\training\shared` directory.

You can manually import the XOM by using the same method that you used to import the start projects, as described in **Importing lab files**.

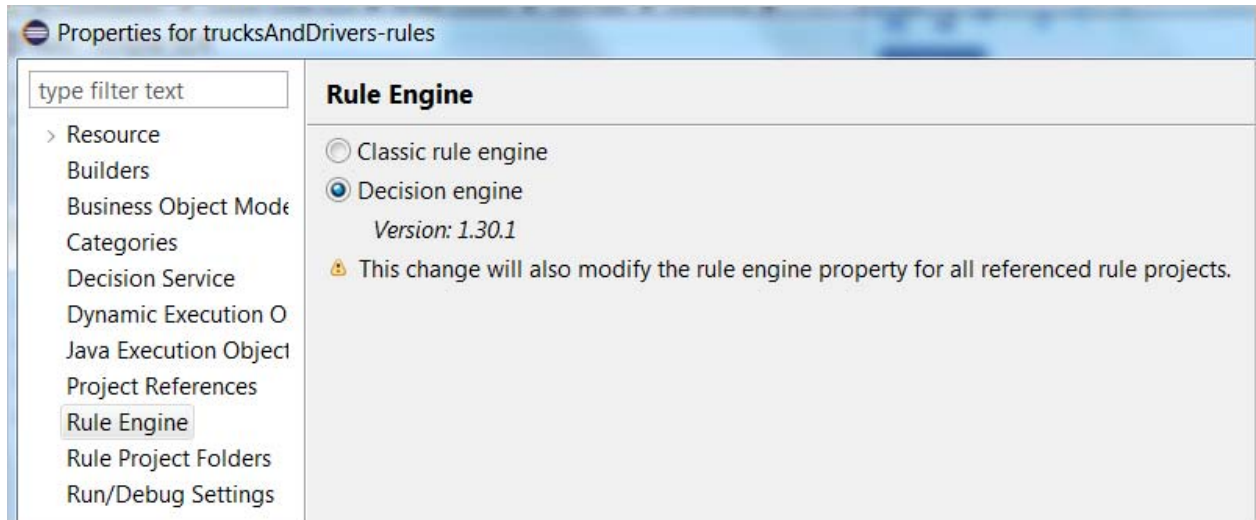
- \_\_1. For the **Select root directory** field, browse to `<odmcloudDir>\labfiles\training\shared`.
- \_\_2. Select the `loan-xom` project.
- \_\_3. Select **Copy projects into workspace** and click **Finish**.

## Fixing the rule engine error

After you import the projects, you might see an error on rule projects because the projects use the classic rule engine instead of the decision engine. The classic rule engine is not supported on the cloud.

### To fix the rule engine error:

- \_\_\_1. Right-click the rule project and select **Properties**. (If the workspace contains several rule projects, select the **main** rule project first.)
- \_\_\_2. Click **Rule Engine**, choose **Decision Engine**, and then click **OK**.



If the workspace contains several rule projects, the change to the main rule project also modifies referenced rule projects.

- \_\_\_3. Repeat the rule engine fix for any other projects in your workspace that also have this error.

## Exercise 1: Operational Decision Manager in action

### Section 1: Running the Miniloan server application

- \_\_\_1. In a browser window, try the Miniloan application in its initial state by opening to the URL where the Miniloan application is hosted, as in this example:

`http://miniloan-cloud.mybluemix.net`

- \_\_\_2. Ensure that Server Information details include the correct host name, your cloud user name, and password.

- **Server Hostname:** `<yourhostname>.bpm.ibmcloud.com`  
where `<yourhostname>` is the host name for your cloud instance
- **Ruleset Path:** `/MiniloanService/MiniloanServiceRuleset`
- **User ID:** `<your_userid>`  
where `<your_userid>` is the email or user name that you use to access the cloud
- **User Password:** `<your password>`

The screenshot shows the 'Getting Started - Miniloan Server Application' interface. It features a 'Miniloan Validation' section with two main input areas: 'Borrower Information' and 'Loan Information'. Below these is a 'Server Information' section, which is highlighted with a red border. The 'Server Information' section contains fields for 'Server Hostname', 'Ruleset Path', 'User ID', and 'User Password'. Below the 'Server Information' section is a 'Select environment:' dropdown menu set to 'Development' and a 'Validate Loan' button.

Borrower Information		Loan Information	
Name:	Joe	Amount:	500000
Yearly Income:	80000	Duration (months):	240
Credit Score:	600	Yearly Interest Rate:	0.05

Server Information	
Server Hostname:	yourhostname.bpm.ibmcloud.com
Ruleset Path:	/MiniloanService/MiniloanRuleset
User ID:	your_username
User Password:	••••••••

Select environment:  
Development ▼  
Validate Loan

- \_\_\_3. In the **Select environment** list, choose **Development**.

- \_\_\_4. Click **Validate Loan**. The loan should be rejected.

The screenshot shows the 'Validate Loan' button and the resulting rejection message. The message is displayed in a red box with the text 'The loan is rejected.' Below this is a 'Messages:' section with the text 'Debt to income ratio is too high.'

Validate Loan

**The loan is rejected.**

Messages:  
Debt to income ratio is too high.

## Section 7: Exploring the development environments in Rule Designer

This part of the exercise uses files that are installed in directory <odmcloudDir>\labfiles\training\Dev 01 - Intro.

### Exercise 2: Setting up decision services

This exercise uses files that are installed in directory <odmcloudDir>\labfiles\training\Dev 02 - Decision services.

## Section 3: Creating the main rule project for the decision service

Step 2b. When you create your decision service, give it a unique name by appending your initials, such as myloan-rules-tt.

## Section 8: Importing a decision service from Decision Center

This section can be done only if another decision service was already published and exists on your cloud instance.

### Exercise 3: Working with the BOM

This exercise uses files that are installed in directory <odmcloudDir>\labfiles\training\Dev 03 - BOM.

### Exercise 4: Refactoring

This exercise uses files that are installed in directory <odmcloudDir>\labfiles\training\Dev 04 - Refactoring.

After you import the projects, you see an error on the rule project. To fix the error, follow the steps in [Fixing the rule engine error](#).

### Exercise 5: Working with ruleflows

This exercise uses files that are installed in directory <odmcloudDir>\labfiles\training\Dev 05 - Ruleflows.

After you import the projects, you see an error on the rule project. To fix the error, follow the steps in [Fixing the rule engine error](#).

You can ignore other warnings on the project.

### Exercise 6: Exploring action rules

This exercise uses files that are installed in directory <odmcloudDir>\labfiles\training\Dev 06 - Exploring rules.

You can ignore any warnings on the project.

### Exercise 7: Authoring action rules

This exercise uses files that are installed in directory <odmcloudDir>\labfiles\training\Dev 07 - Authoring rules.

After you import the projects, you see an error on the rule projects. To fix the error, follow the steps in [Fixing the rule engine error](#).

### Exercise 8: Authoring decision tables and trees

This exercise uses files that are installed in directory <odmcloudDir>\labfiles\training\Dev 08 - Authoring decision tables and trees.

After you import the projects, you see an error on the rule projects. To fix the error, follow the steps in [Fixing the rule engine error](#).

### Exercise 9: Working with static domains

This exercise uses files that are installed in directory <odmcloudDir>\labfiles\training\Dev 09 - Static domains.

You can ignore any warnings on the project.

### Exercise 10: Working with dynamic domains

This exercise uses files that are installed in directory <odmcloudDir>\labfiles\training\Dev 10 - Dynamic domains.

You can ignore other warnings on the project.

### Exercise 11: Queries

This exercise uses files that are installed in directory <odmcloudDir>\labfiles\training\Dev 11 - Queries.

After you import the projects, you see an error on the rule project. To fix the error, follow the steps in [Fixing the rule engine error](#).

### Exercise 12: Executing rules locally

This exercise uses files that are installed in directory <odmcloudDir>\labfiles\training\Dev 12 - Executing rules locally.

After you import the projects, you see an error on the rule project. To fix the error, follow the steps in [Fixing the rule engine error](#).

### Exercise 13: Debugging a ruleset

This exercise is not supported on the cloud. It requires you to use the tutorial project that is delivered with the on-premises version of ODM. ODM on Cloud does not include samples or tutorial projects.

### Exercise 14: Enabling tests and simulations

This exercise is not supported on the cloud.

### Exercise 15: Managing deployment

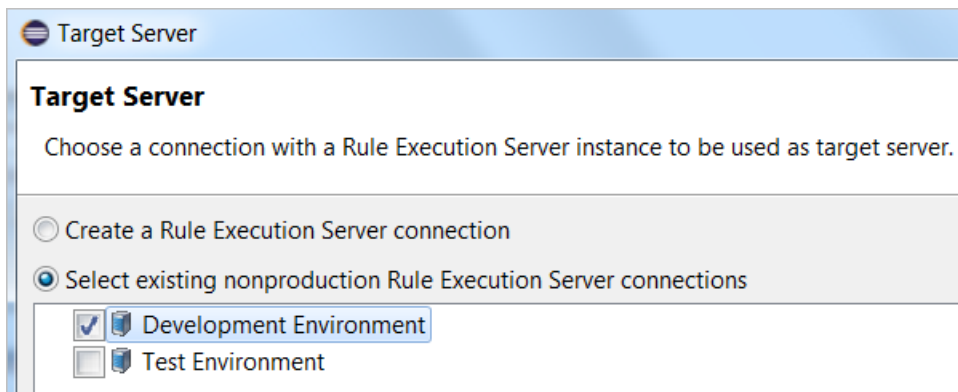
This exercise uses files that are installed in directory <odmcloudDir>\labfiles\training\Dev 15 - Managing deployment.

After you import the projects, you see an error on the rule project. To fix the error, follow the steps in [Fixing the rule engine error](#).

#### Section 1.2: Creating a deployment configuration

Step 3: When asked to provide a name for your RuleApp, give it a unique name by appending your name or initials, such as loan-deploy-`tt`.

Step 7b and c: When asked to define a target server, choose **Select existing nonproduction Rule Execution Server connections** and **Development Environment**.



The target server is automatically defined for your cloud development instance of Rule Execution Server.

#### Section 2.1: Deploying the RuleApp

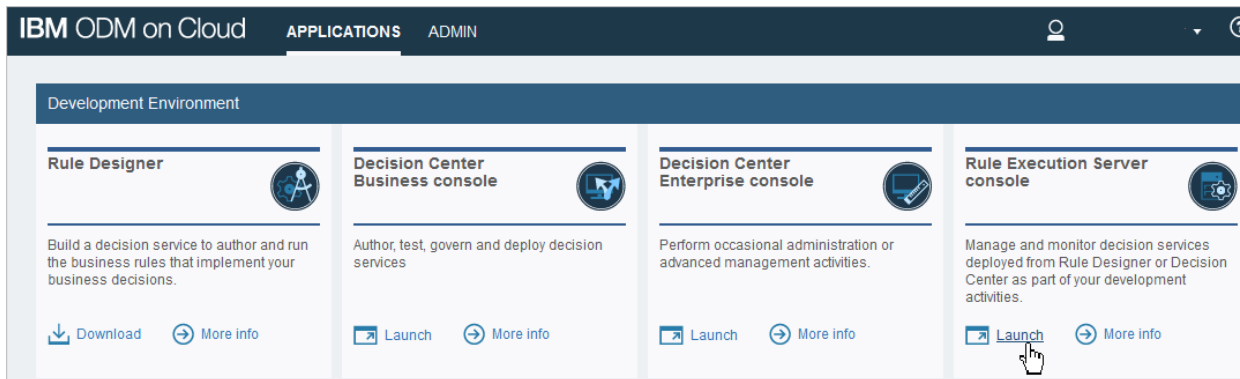
Step 4: On the Credentials page, click **Connect** to provide your credentials to your cloud environment.

## Exercise 16: Exploring the rule Execution Server console

This exercise uses the project files that you deployed during Exercise 15, which are installed in directory `<odmcloudDir>\labfiles\training\Dev 15 - Managing deployment`.

Do not switch workspaces for this exercise.

To start the correct Rule Execution Server console, in the **Development Environment** of the cloud portal, click **Launch** in the Rule Execution Server console area.



## Section 4: Exploring the Diagnostics and Server Info tabs

This section is not supported on the cloud.

## Section 5: Exploring the REST API tab

This section is not supported on the cloud.

## Section 6.2: Managing RuleApps and rulesets

In step 1.e, when prompted to add a ruleset, browse to the workspace that you used during Exercise 15, and in the **loan-rules\output** folder, choose the `loan_rulesRuleset.dsar` file.

## Section 7: Testing a deployed ruleset

This section is not supported on the cloud.

## Exercise 17: Executing rules with Rule Execution Server in Java EE

This exercise is not supported on the cloud.

## Exercise 18: Executing rules as a hosted transparent decision service (HTDS)

This exercise uses files that are installed in directory `<odmcloudDir>\labfiles\training\Dev 18 - HTDS`.

### Section 1.2: Deploying the RuleApp

In Step 2, when prompted to define the target server, define the Rule Execution Server instance in the Development Environment of your cloud environment.

Before saving the deployment configuration in step 3, you can also rename the RuleApp to a unique name by appending your name or initials, such as `my_deployment_tt`.

In Step 4c, on the credentials page, click **Connect** and follow the instructions to provide your login credentials to your instance of Rule Execution Server console.

### Section 2.1: Open the WSDL in Rule Designer

This section is not supported on the cloud.

## Exercise 19: Auditing ruleset execution through Decision Warehouse

This exercise is not supported on the cloud.

## Exercise 20: Working with the REST API

This exercise uses project files that you deployed during Exercise 18.

### Section 2: Using REST services to deploy and execute rules

This section is not supported on the cloud.