



# Red Hat CodeReady Studio 12.16

## Getting Started with CodeReady Studio Tools

Introduction to using Red Hat CodeReady Studio tools



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Introduction to using Red Hat CodeReady Studio tools

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## Abstract

This compilation of topics contains information on how to start using Red Hat CodeReady Studio Tools for efficient development.

## Table of Contents

<b>CHAPTER 1. GIT BASICS IN CODEREADY STUDIO</b> .....	<b>4</b>
1.1. SETTING UP GIT PERSPECTIVE	4
1.2. MANAGING REPOSITORIES IN GIT PERSPECTIVE	6
1.2.1. Creating a new Git repository	6
1.2.2. Adding an existing local Git repository	7
1.2.3. Cloning an existing Git repository	8
1.2.4. Adding a remote for the repository	10
1.3. MANAGING BRANCHES IN GIT PERSPECTIVE	15
1.3.1. Creating a new branch	15
1.3.2. Working in the branch	18
1.3.3. Submitting a pull request	19
1.4. COMMITTING AND PUSHING CHANGES	20
 <b>CHAPTER 2. MAVEN BASICS IN CODEREADY STUDIO</b> .....	 <b>22</b>
2.1. CREATING A NEW MAVEN PROJECT	22
2.2. IMPORTING EXISTING MAVEN PROJECTS	25
2.2.1. Importing an existing locally stored Maven project	26
2.2.2. Importing an existing remotely stored Maven project	28
2.3. CREATING A NEW MAVEN MODULE	30
2.4. ADDING A MAVEN DEPENDENCY TO A MAVEN PROJECT	33
2.5. ADDING MAVEN SUPPORT TO AN EXISTING NON-MAVEN PROJECT	35
2.6. ADDITIONAL RESOURCES	37
 <b>CHAPTER 3. APPLICATION DEPLOYMENT IN CODEREADY STUDIO</b> .....	 <b>38</b>
3.1. CONFIGURING A LOCAL SERVER	38
3.2. CONFIGURING A REMOTE SERVER	41
3.3. DEPLOYING AN APPLICATION	45
 <b>CHAPTER 4. JBOSS EAP AND JBOSS WFK BASICS IN CODEREADY STUDIO</b> .....	 <b>48</b>
4.1. CONFIGURING MAVEN REPOSITORIES	48
4.2. SETTING UP JBOSS EAP	51
 <b>CHAPTER 5. OPENSIFT BASICS IN CODEREADY STUDIO</b> .....	 <b>59</b>
5.1. SETTING UP OPENSIFT APPLICATION EXPLORER VIEW	59
5.2. CONNECTING TO THE OPENSIFT CLUSTER USING OPENSIFT APPLICATION EXPLORER	61
5.3. CREATING A NEW LAUNCHER PROJECT	62
5.4. CREATING A NEW PROJECT USING OPENSIFT APPLICATION EXPLORER	65
5.5. CREATING A NEW COMPONENT USING OPENSIFT APPLICATION EXPLORER	66
5.6. DEPLOYING A COMPONENT ON CLUSTER USING OPENSIFT APPLICATION EXPLORER	67
5.7. DEFINING AN EXTERNAL ACCESS URL USING OPENSIFT APPLICATION EXPLORER	68
5.8. DEBUGGING AN APPLICATION ON THE CLUSTER USING OPENSIFT APPLICATION EXPLORER	70
 <b>CHAPTER 6. QUARKUS TOOLS BASICS IN CODEREADY STUDIO</b> .....	 <b>72</b>
6.1. CREATING A NEW QUARKUS PROJECT	72
6.2. RUNNING A QUARKUS APPLICATION	75
6.3. DEBUGGING A QUARKUS APPLICATION	77
6.4. USING LANGUAGE SUPPORT IN CODEREADY STUDIO	78
6.4.1. Using Quarkus code completion	78
6.4.2. Enabling language support for MicroProfile	80
 <b>CHAPTER 7. HIBERNATE TOOLS BASICS IN CODEREADY STUDIO</b> .....	 <b>84</b>
7.1. CREATING A NEW JPA PROJECT	84
7.2. ADDING LIBRARIES	92

7.3. GENERATING ENTITIES	95
7.4. CREATING A HIBERNATE MAPPING FILE	97
7.5. CREATING A HIBERNATE CONFIGURATION FILE	100
7.6. CREATING A HIBERNATE CONSOLE CONFIGURATION FILE	103
7.7. EDITING HIBERNATE PROJECT CONFIGURATIONS	109
<b>CHAPTER 8. MOBILE WEB TOOLS BASICS IN CODEREADY STUDIO</b> .....	<b>115</b>
8.1. CREATING AN HTML5 PROJECT	115
8.2. ADDING A NEW HTML5 JQUERY MOBILE FILE	117
8.3. ADDING A NEW MOBILE PAGE	121



# CHAPTER 1. GIT BASICS IN CODEREADY STUDIO

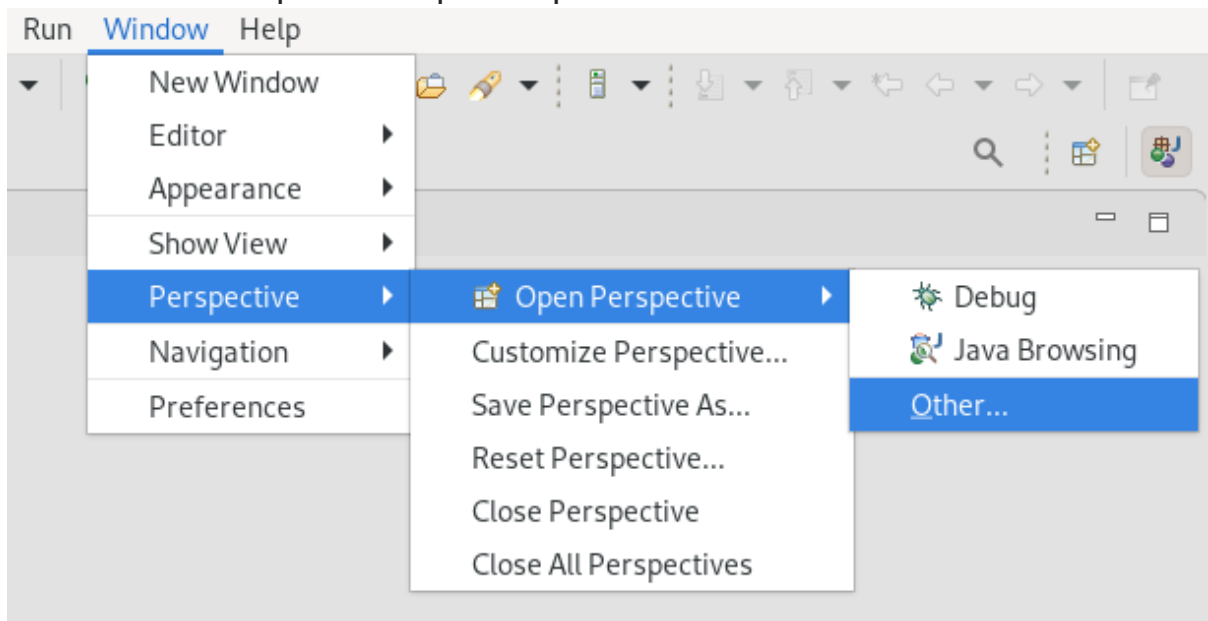
CodeReady Studio includes Git Perspective, which allows developers to manage their Git repositories from a graphical interface. The following section outlines the basic workflow of a Git project in Git Perspective and describes how to accomplish the most common Git-related tasks.

## 1.1. SETTING UP GIT PERSPECTIVE

The following section describes how to open Git Perspective in CodeReady Studio.

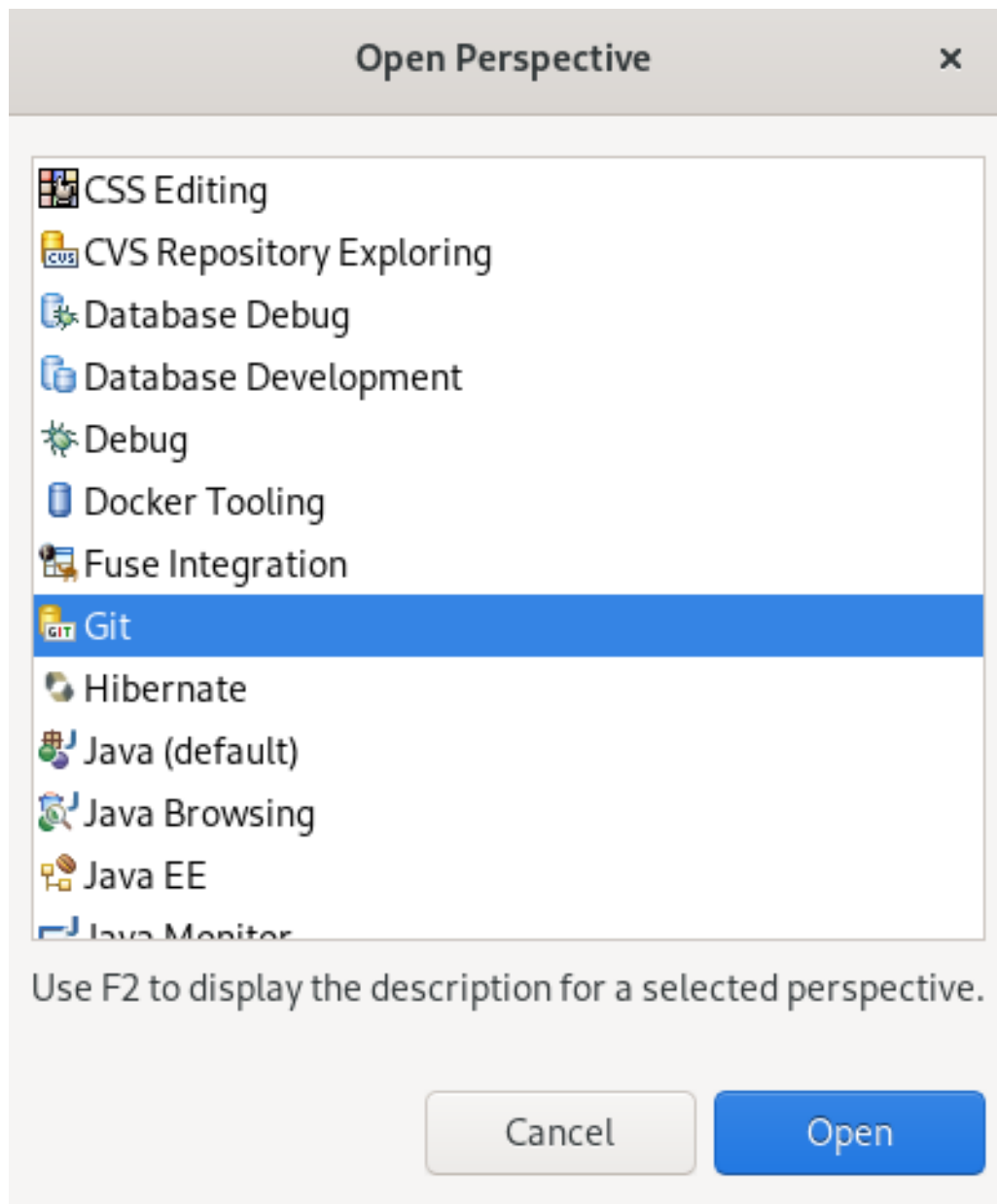
### Procedure

1. Start CodeReady Studio.
2. Click **Window** → **Perspective** → **Open Perspective** → **Other**.

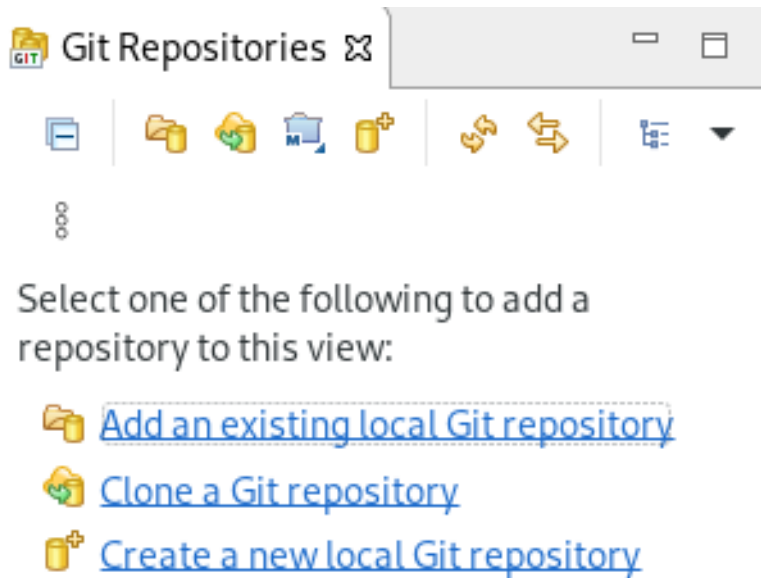


The **Open Perspective** window appears.





3. Select **Git**.
4. Click **Open**.  
The **Git Repositories** view appears.



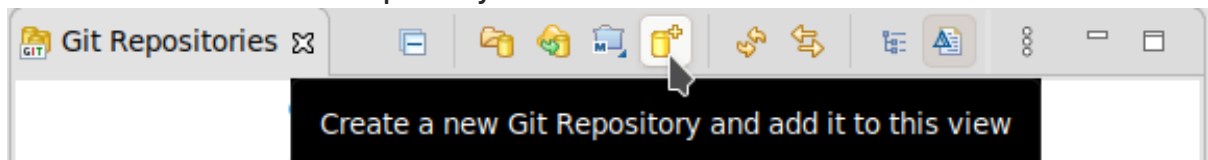
## 1.2. MANAGING REPOSITORIES IN GIT PERSPECTIVE

### 1.2.1. Creating a new Git repository

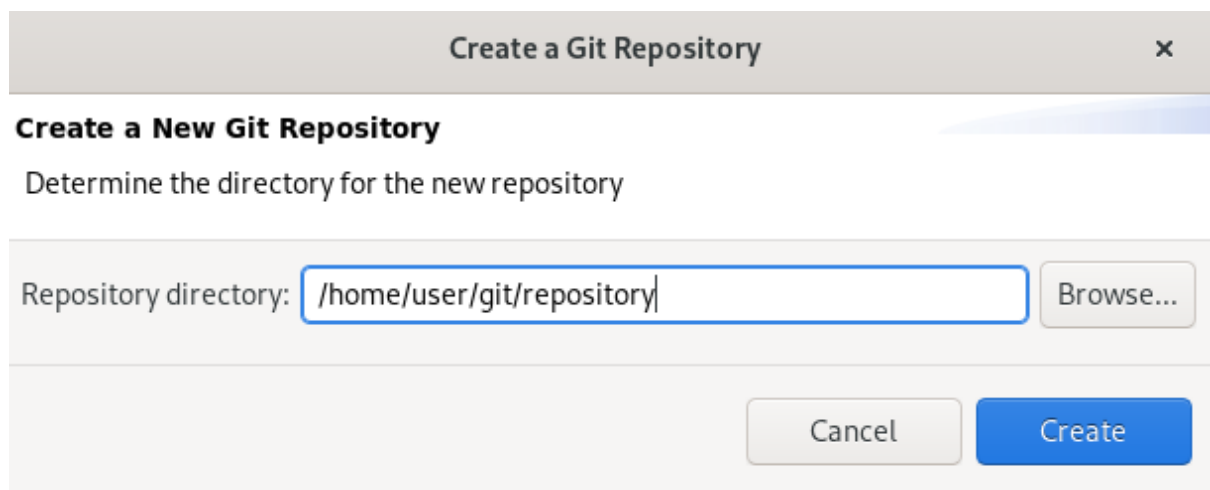
The following section describes how to use Git Perspective to create a new Git repository.

#### Procedure

1. Start CodeReady Studio.
2. Open **Git Perspective**.
3. Click the **Create a new Git Repository and add it to this view** icon.



The **Create a Git Repository** window appears.



Path to the default **Repository directory** is generated automatically. If you are satisfied with the default path, continue with the repository creation.

Optionally, you can select the **Create as bare repository** check box.

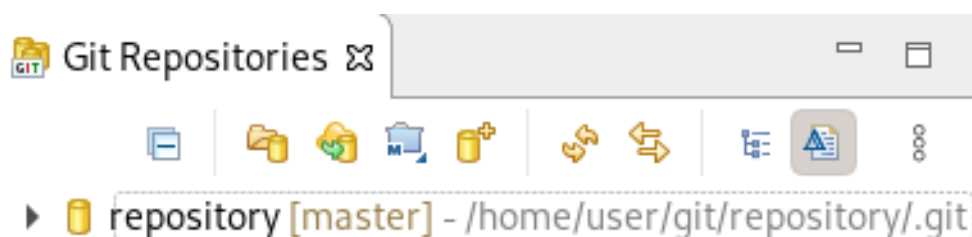


#### NOTE

Bare repositories are recommended for central repositories, not for development environments. They do not contain a working or checked out copy of any source files. This prevents editing files and committing changes. Additionally, they store the Git revision history for your repository in the root folder instead of a **.git** subfolder.

#### 4. Click **Create**.

A new Git repository is created on your local machine and is now listed in the **Git Repositories** view.

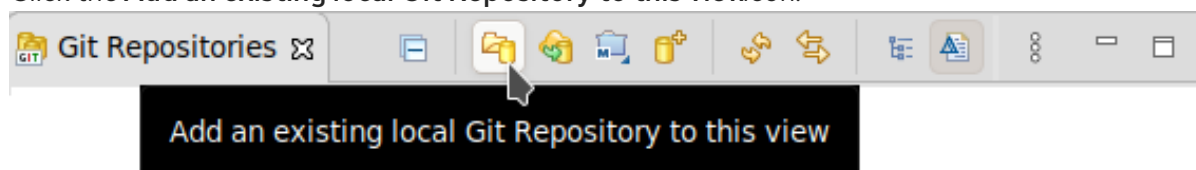


### 1.2.2. Adding an existing local Git repository

The following section describes how to use Git Perspective to add a local Git repository to the IDE.

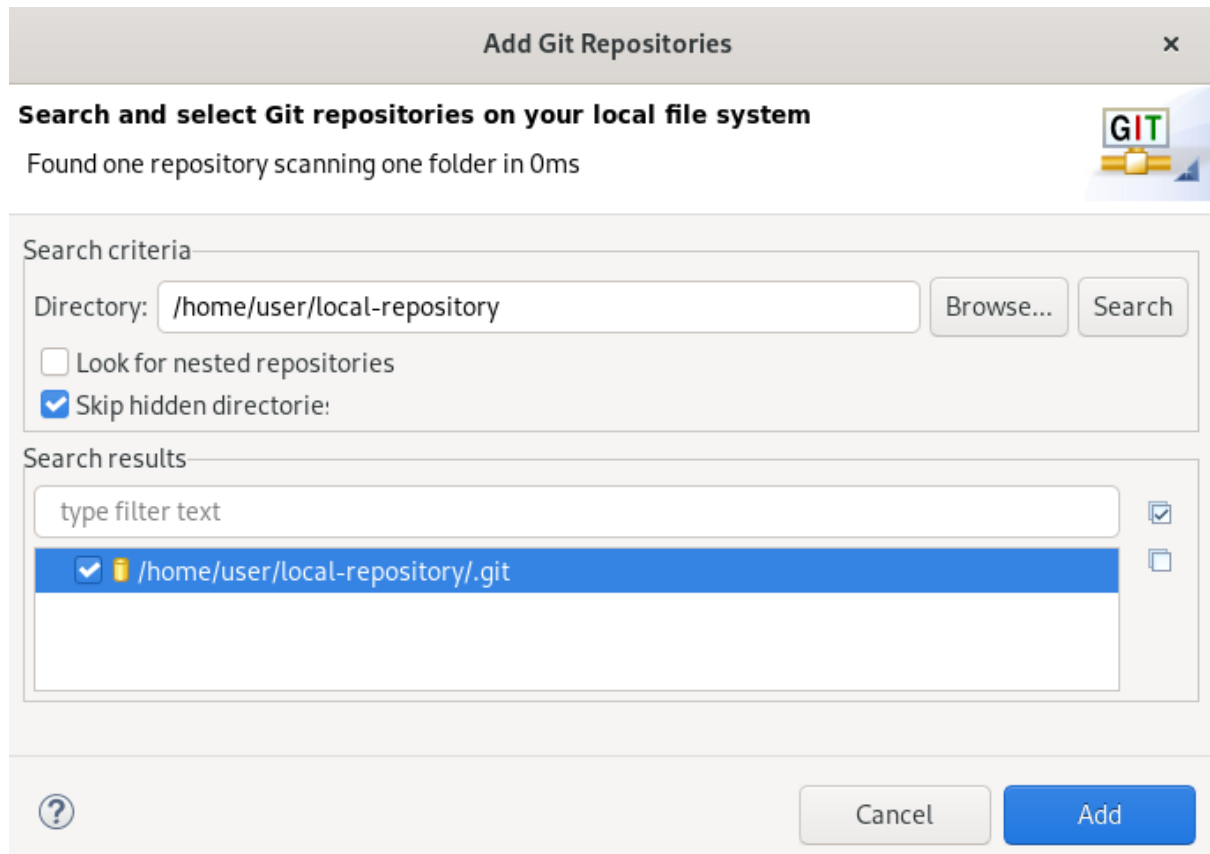
#### Procedure

1. Start CodeReady Studio.
2. Open **Git Perspective**.
3. Click the **Add an existing local Git Repository to this view** icon.



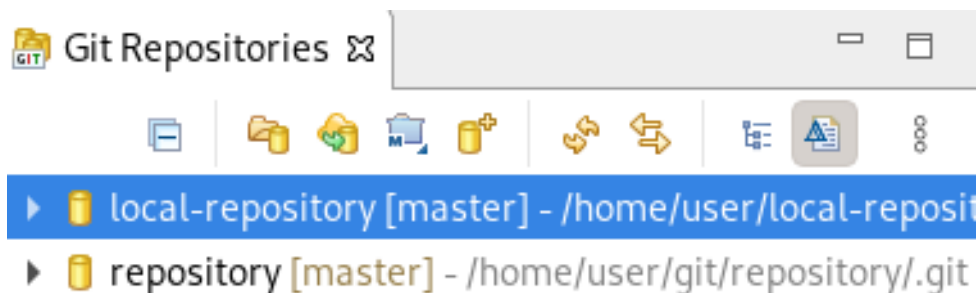
The **Add Git Repositories** window appears.

4. Click **Browse** to locate your local Git repository.



5. In the **Search results** field, select the check box with path to the **.git** file.
6. Click **Add**.

Your local repository is now listed in the **Git Repositories** view.

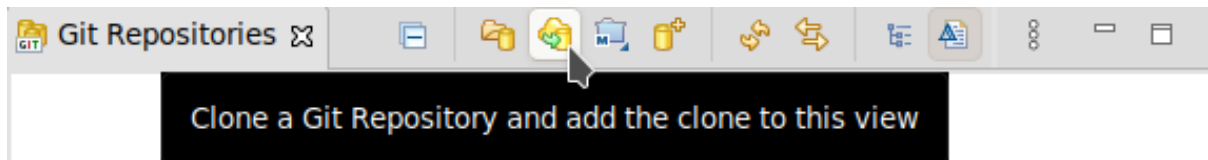


### 1.2.3. Cloning an existing Git repository

The following section describes how to use Git Perspective to create a local clone of a repository that already exists online (GitHub, GitLab).

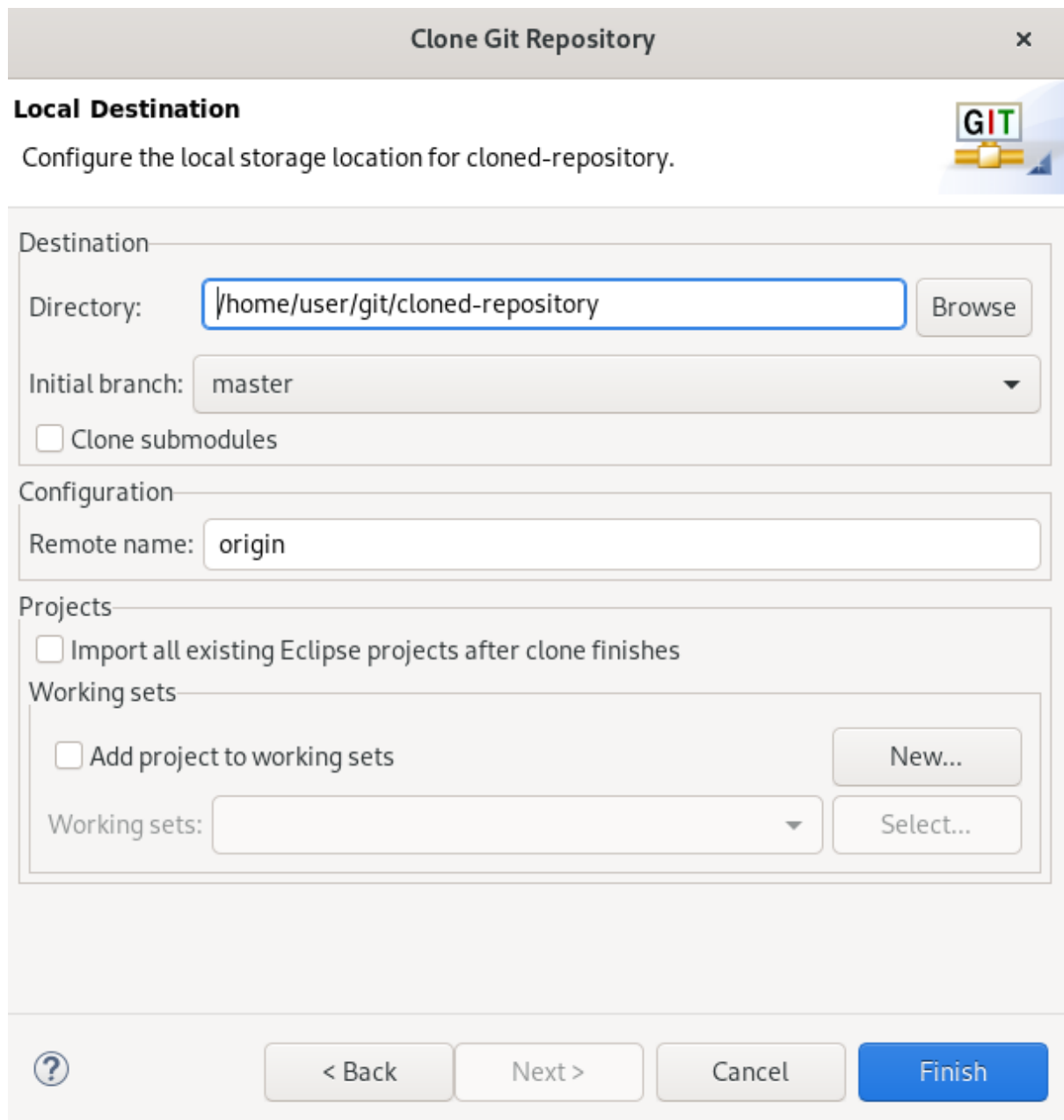
#### Procedure

1. Start CodeReady Studio.
2. Open **Git Perspective**.
3. Click the **Clone a Git Repository and add the clone to this view** icon.



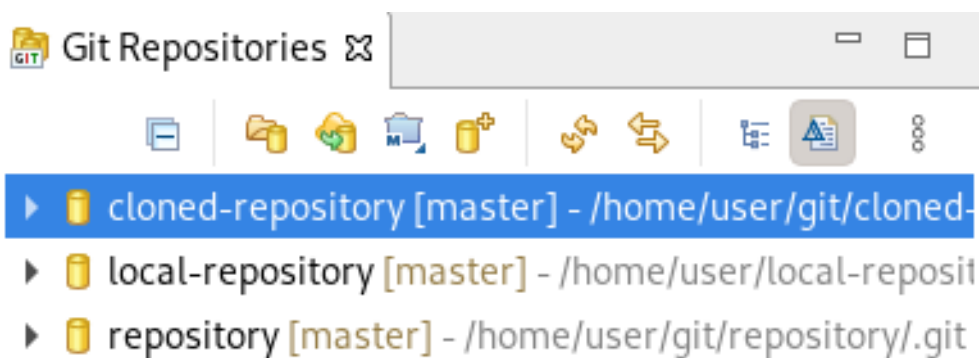
The **Clone Git Repository** window appears.

4. Add the address for the source repository to the **URI** field.  
The **Host** and **Repository path** fields are populated automatically.
5. Click **Next**.
6. Select the branches you want to clone.
7. Click **Next**.
8. Ensure that the **Directory** path and **Initial branch** are set correctly.



9. Click **Finish**.

Your cloned repository is now listed in the **Git Repositories** view of CodeReady Studio.



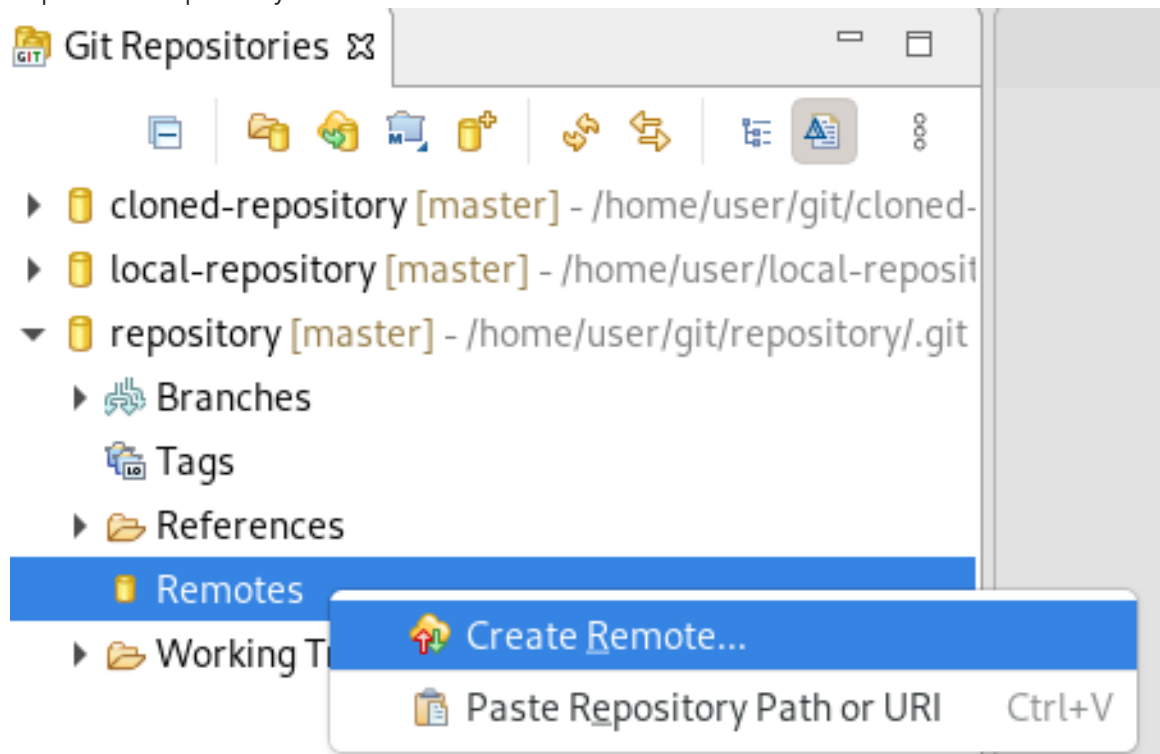
#### 1.2.4. Adding a remote for the repository

After setting up your repository in Git Perspective for the first time, add a remote for the repository. This is a one-time set up step for newly created or added repositories.

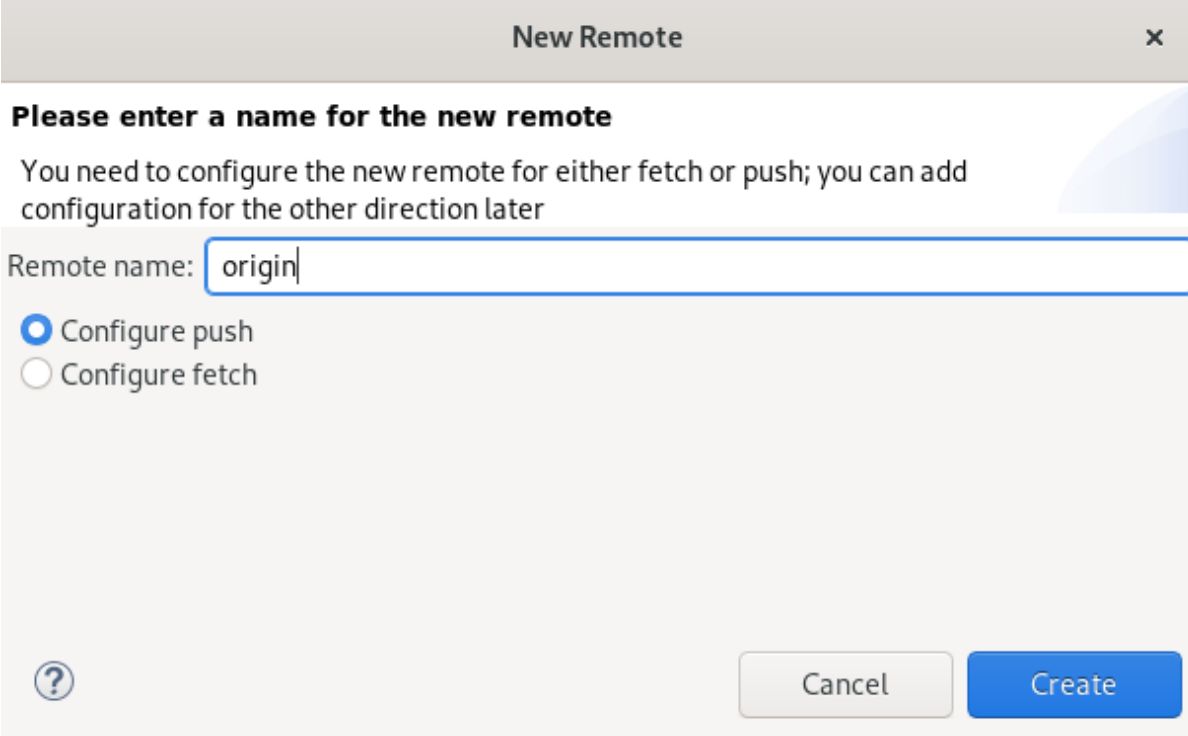
The following section describes how to use Git Perspective to set up the remote for your repository.

### Procedure

1. Start CodeReady Studio.
2. Open **Git Perspective**.
3. Expand the repository.



4. Right-click **Remotes** → **Create Remote**.  
The **New Remote** window appears.



**New Remote** ×

**Please enter a name for the new remote**

You need to configure the new remote for either fetch or push; you can add configuration for the other direction later

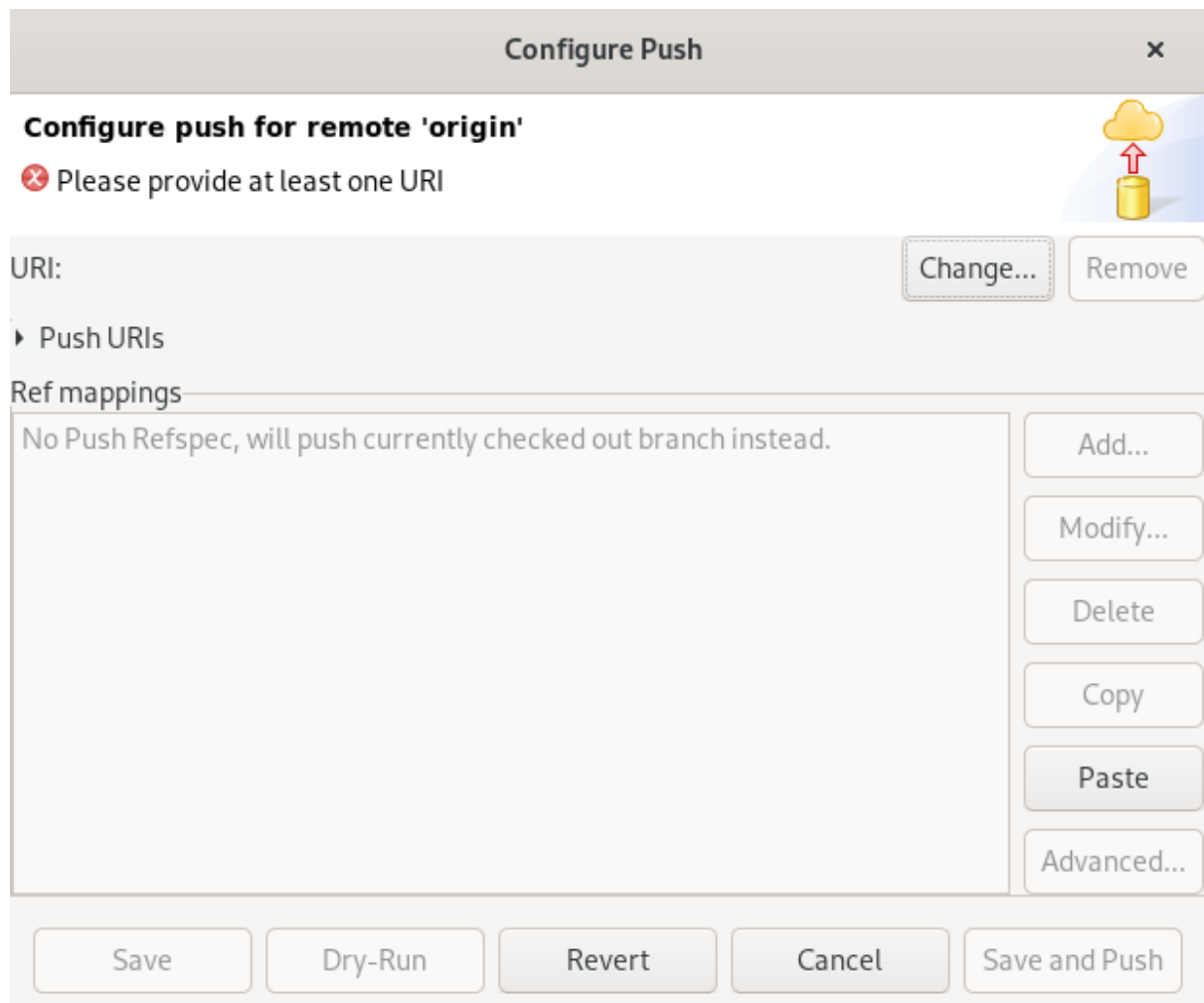
Remote name:

Configure push  
 Configure fetch

? Cancel Create


5. Name your remote.
6. Ensure that **Configure push** is selected.
7. Click **Create**.  
The **Configure Push** window appears.





8. Click **Change**.  
The **Select a URI** window appears.

**Select a URI** ×

**Source Git Repository** 

Enter the location of the source repository.

**Location**

URI:

Host:

Repository path:

**Connection**

Protocol:  ▼

Port:

**Authentication**

User:

Password:

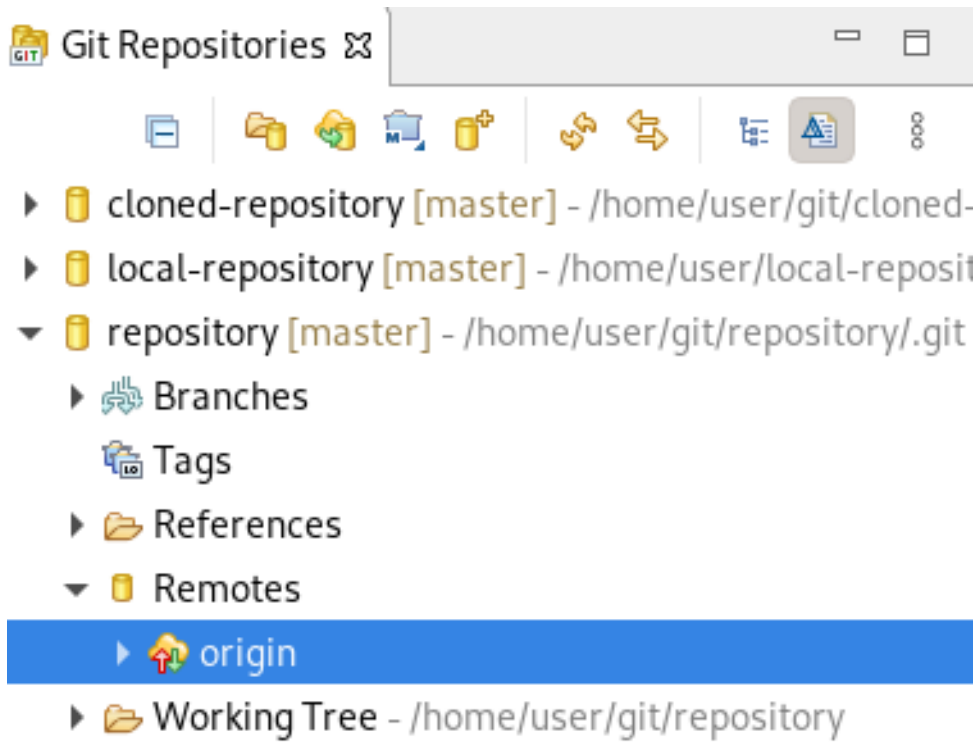
Store in Secure Store

9. Add the URI, username and password for the source repository.  
The **Host** and **Repository** path fields are populated automatically.

10. Click **Finish**.

11. Click **Save**.

Your newly added remote is now listed in there **Git Repositories** view in CodeReady Studio.



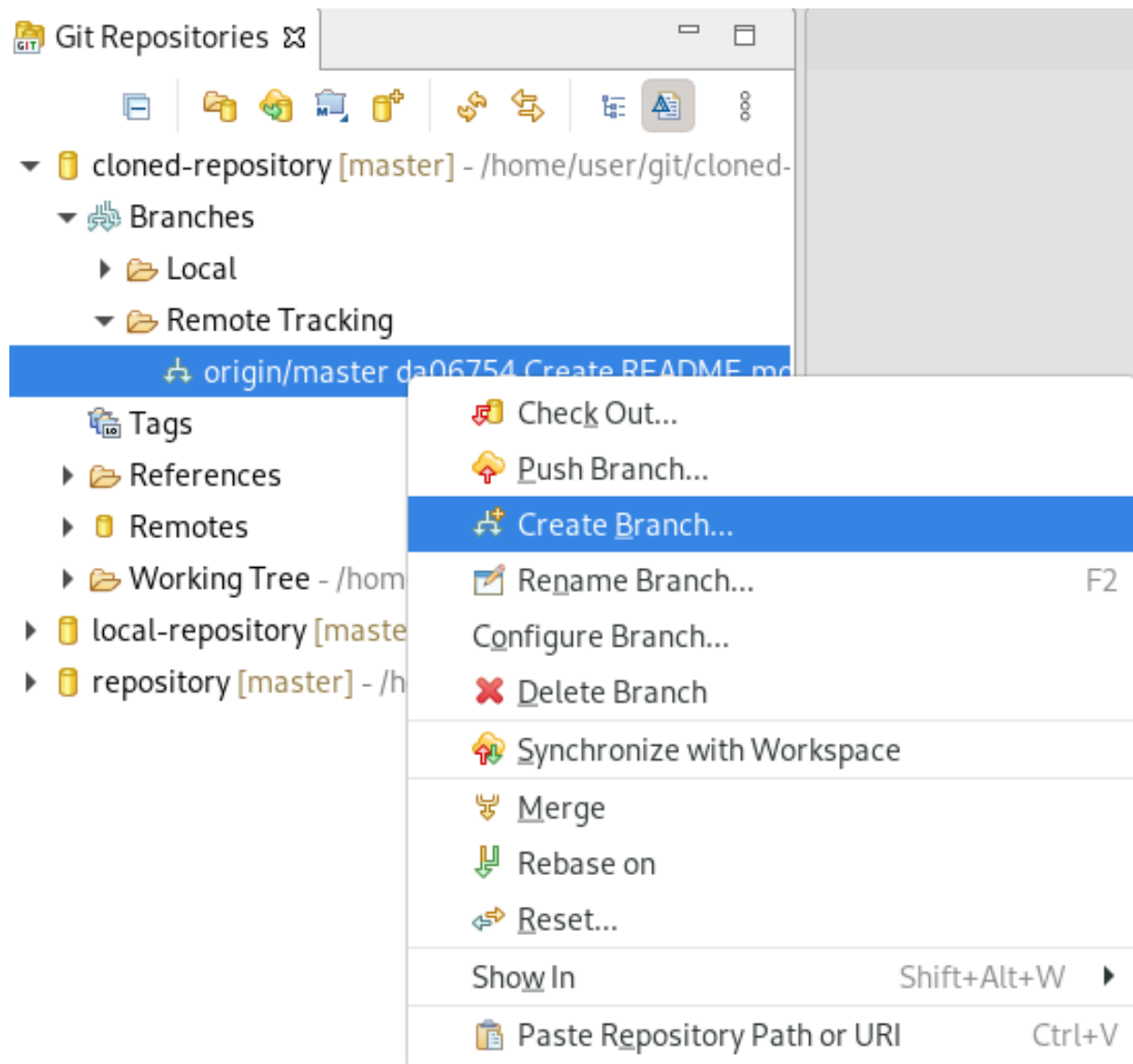
## 1.3. MANAGING BRANCHES IN GIT PERSPECTIVE

### 1.3.1. Creating a new branch

The following section describes how to use Git Perspective to create a new branch.

#### Procedure

1. Start CodeReady Studio.
2. Open **Git Perspective**.
3. Expand the repository to view all the remote branches.
4. Right-click **master** → **Create Branch**.



The **Create Branch** window appears.

**Create Branch** ×

**Create a new branch in repository cloned-repository**

**i** Local branch as upstream is not recommended, use remote branch

Source: master Select...

Branch name:

**Configure upstream for push and pull**

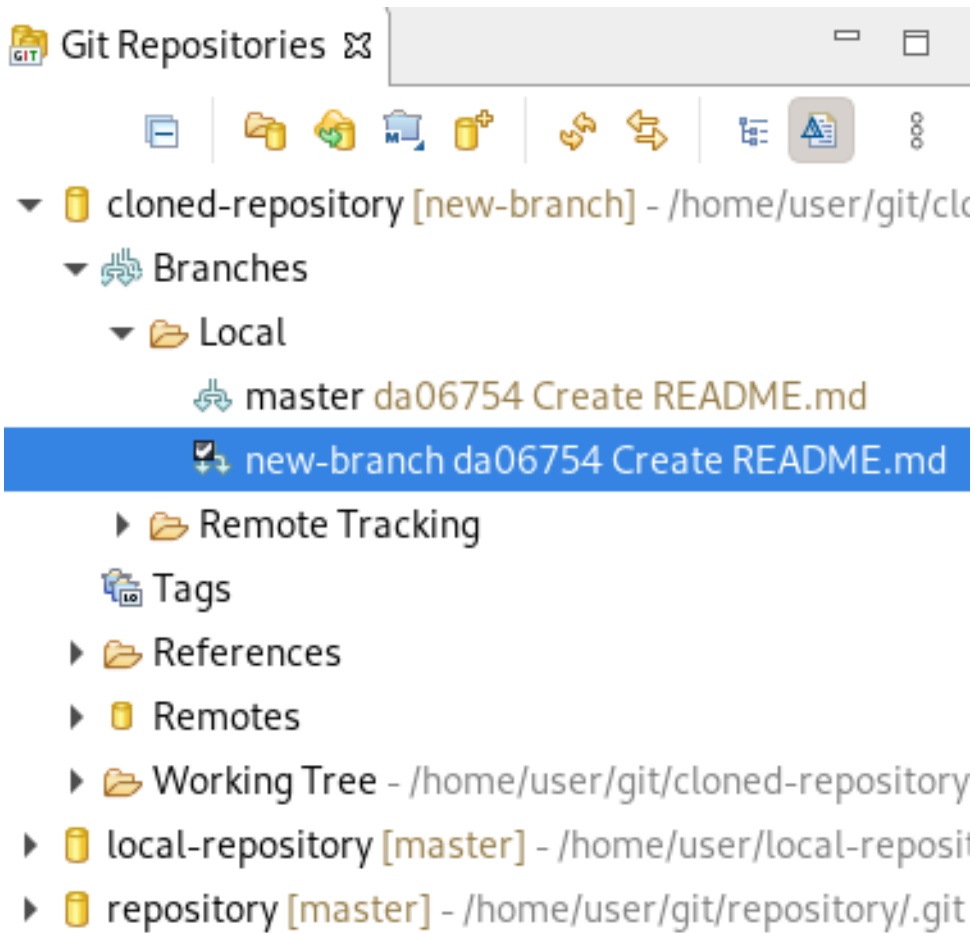
When pulling: Merge ▼

**Check out new branch**

? Cancel Finish

5. Click **Select** to pick the source of the new branch.
6. Name your branch.
7. Select the **Configure upstream for push and pull** and **Checkout new branch** check boxes.
8. In the **When pulling** field, select the appropriate option.
9. Click **Finish**.

Your newly added branch is now listed in the **Git Repositories** view in CodeReady Studio.

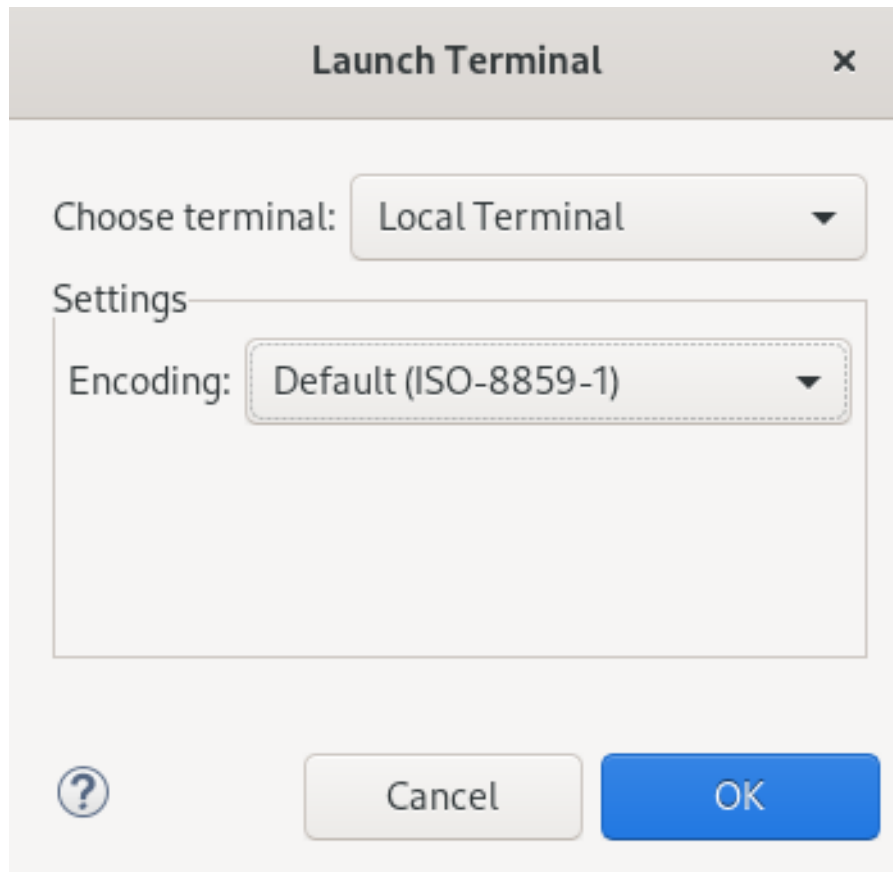


### 1.3.2. Working in the branch

The following section describes how to open a built-in terminal in Git Perspective.

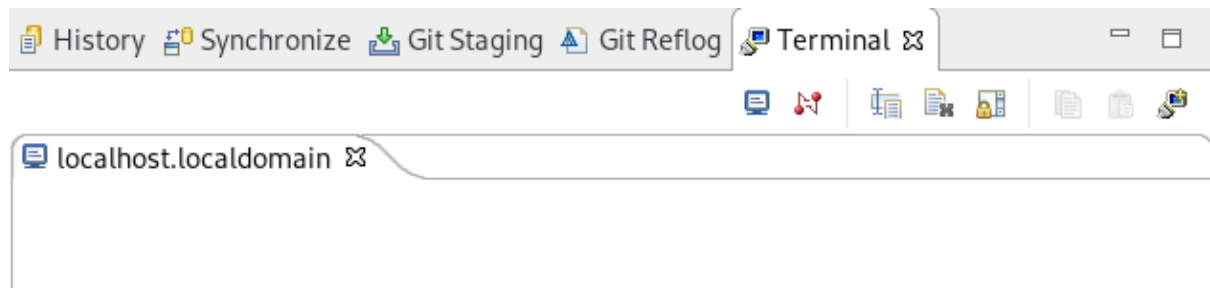
#### Procedure

1. Start CodeReady Studio.
2. Open **Git Perspective**.
3. Press **Shift+Ctrl+Alt+T**.  
The **Launch Terminal** window appears.



4. Choose **Local Terminal**.
5. Set **Encoding** to **Default (ISO-8859-1)**.
6. Click **OK**.

The **Terminal** window now displays the command-line terminal.



Note that by default the current working directory is the home directory of your current user.

### 1.3.3. Submitting a pull request

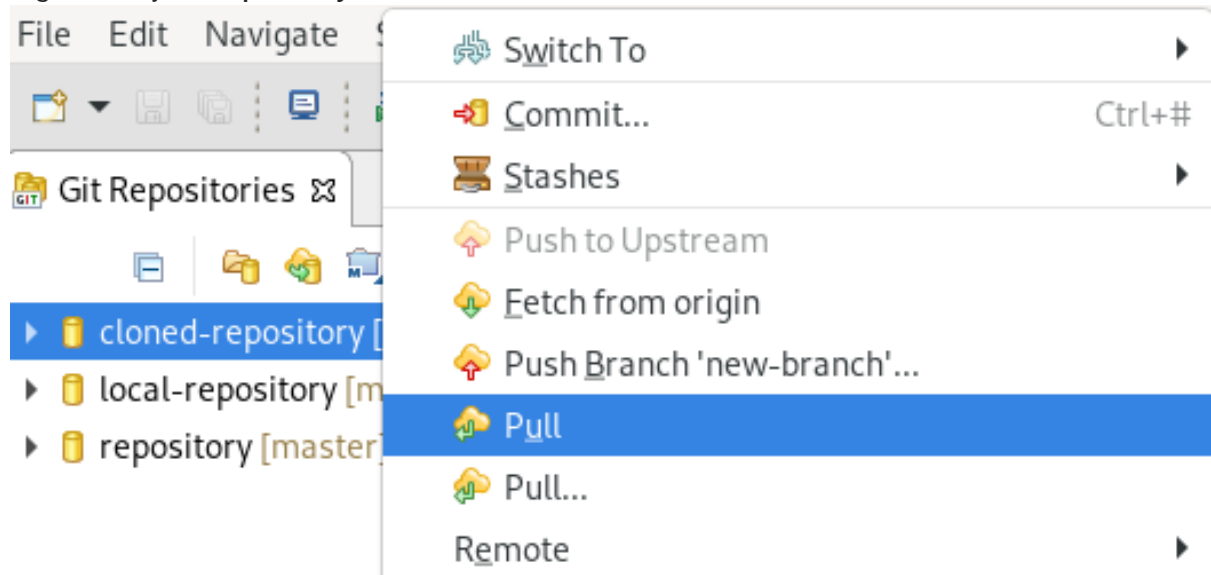
It is strongly recommended to update your local repository before merging your changes, especially when working in a shared repository.

The following section describes how to use Git Perspective to submit a pull request (PR).

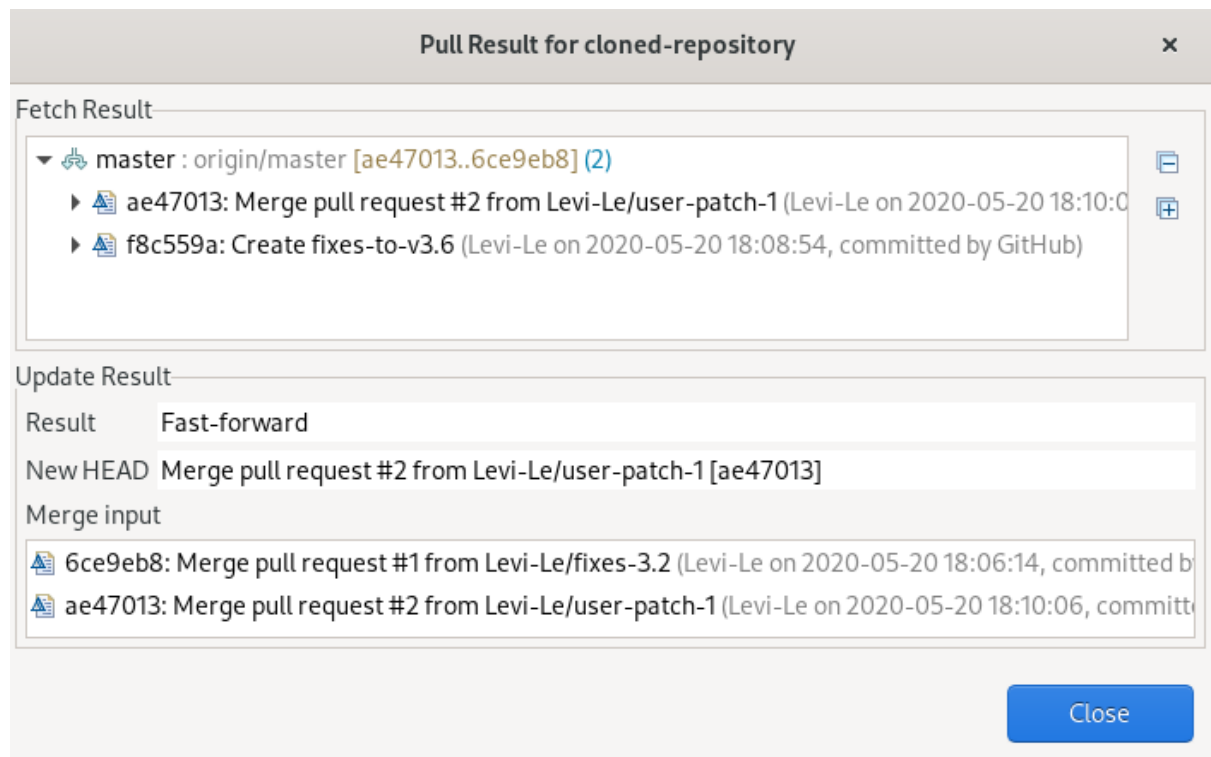
#### Procedure

1. Start CodeReady Studio.
2. Open **Git Perspective**.

3. Right-click your **repository** → **Pull**.



The **Pull Results** window appears.



4. Click **Close**.

Now the changes from the remote repository are merged into your local repository.

## 1.4. COMMITTING AND PUSHING CHANGES

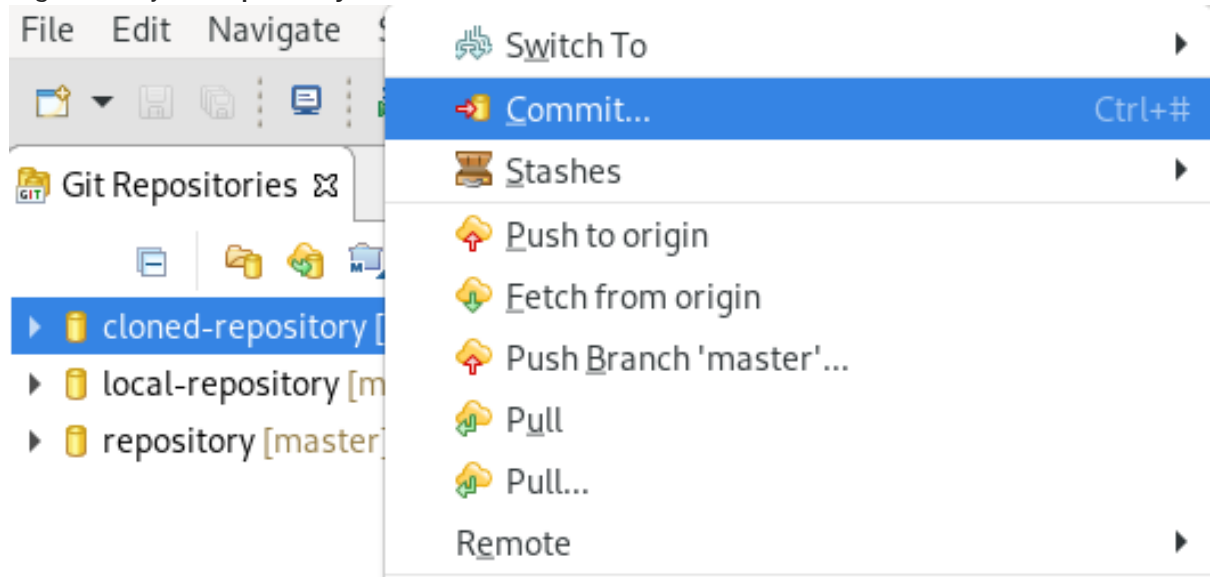
The following section describes how to commit and push changes in CodeReady Studio.

### Procedure

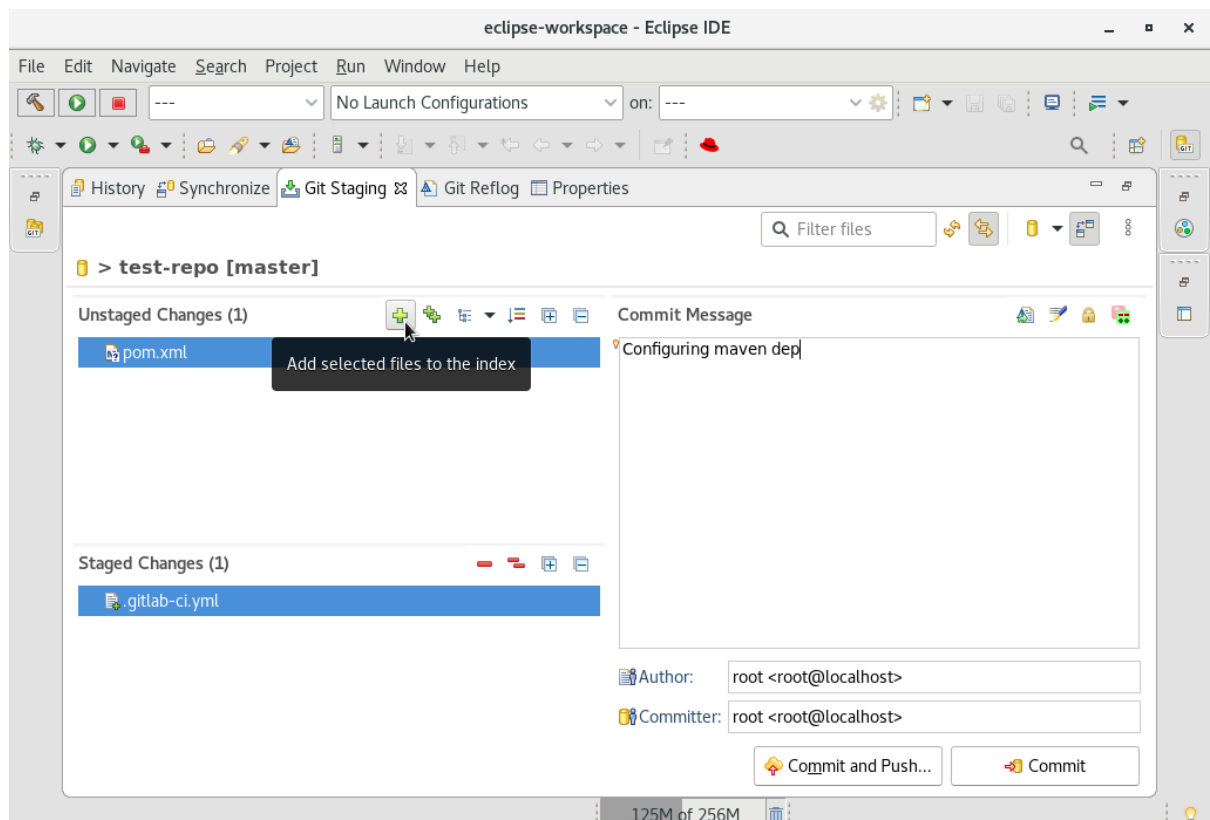
1. Start CodeReady Studio.
2. Open **Git Perspective**.



3. Right-click your repository → Commit.



The **Git Staging** view appears.



4. Select the changes you want to stage.
5. Click the **Add selected files to the index** icon to stage the changes.
6. Add a commit message to the **Commit Message** field.  
**Author** and **Committer** fields are populated automatically.
7. Click **Commit** to commit your changes, or **Commit and Push** to commit your changes and push them to the remote repository.

Note that when selecting the **Commit and Push** option you are prompted to enter the repository address, your access username and password for the repository.

## CHAPTER 2. MAVEN BASICS IN CODEREADY STUDIO

Maven provides a standardized build system for application development, and facilitates fetching dependencies from one or more repositories.

Root Maven projects can serve as aggregators for multiple Maven modules (sub-projects). For each module that is part of a maven project, a `<module>` entry is added to the project's **pom.xml** file. A **pom.xml** contains `<module>` entries and is often referred to as an **aggregator pom**.

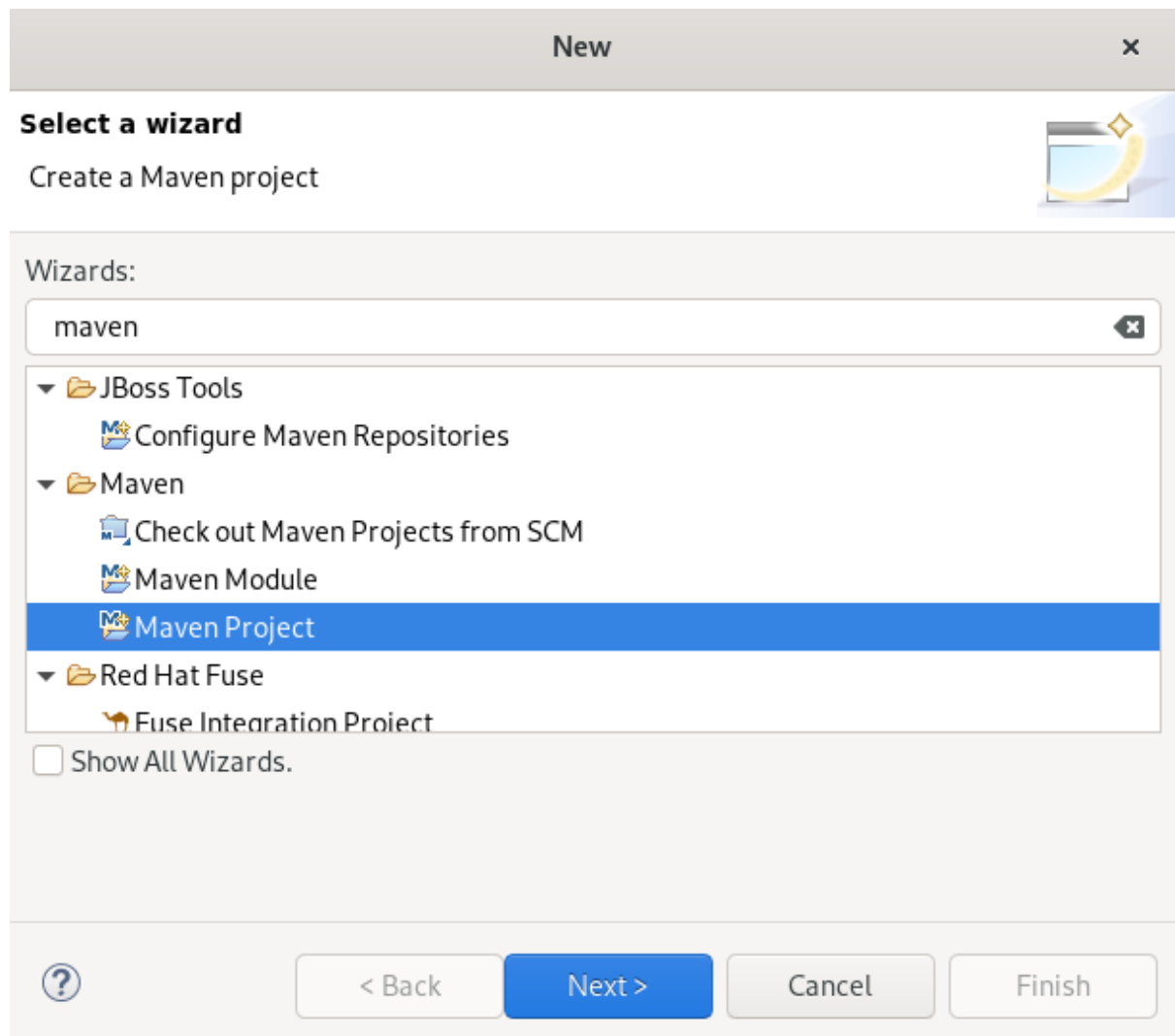
When modules are included into a project it is possible to execute Maven goals across all modules by a single command issued from the parent project directory.

### 2.1. CREATING A NEW MAVEN PROJECT

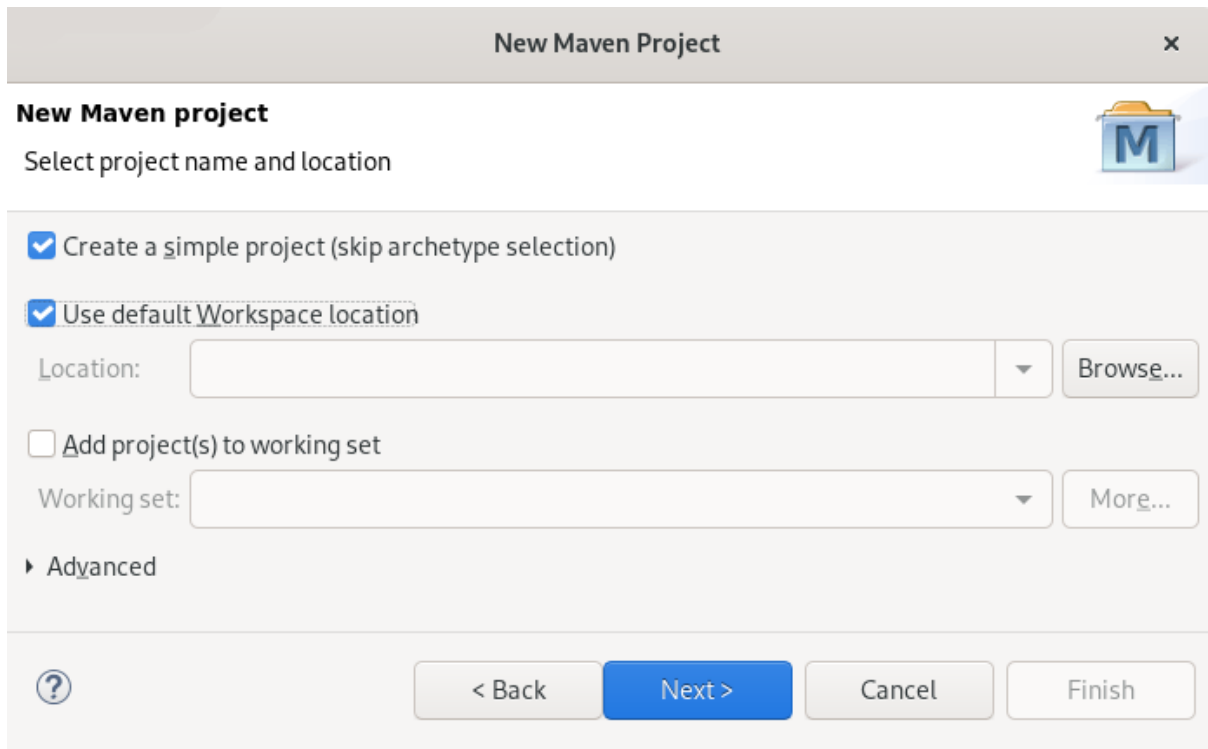
The following section describes how to create a new Maven project in CodeReady Studio. The instructions provided ensure that the packaging option is set to **pom**, which is a requirement for multi-module Maven projects. Alternatively, to create a standalone Maven project instead, set the packaging option to **jar** or **war**.

#### Procedure


1. Start CodeReady Studio.
2. Press **Ctrl+N**.  
The **Select a wizard** window appears.



3. Enter **Maven** in the **Wizards** field.
4. Select **Maven Projects**.
5. Click **Next**.  
The **New Maven Project** window appears.



**New Maven Project** ×

**New Maven project** 

Select project name and location

Create a **simple project** (skip archetype selection)


Use default **Workspace location**

Location:  ▼ Browse...

Add project(s) to working set

Working set:  ▼ More...

▶ **Advanced**

 < Back Next > Cancel Finish

6. Select the **Create a simple project** check box.



#### NOTE

By selecting the **Create a simple project** check box you are skipping the archetype selection and the project type is automatically set to Project Object Model (POM). To create a standalone project, clear the **Create a simple project** check box and follow the onscreen instructions.

7. Click **Browse** to select the workspace location.
8. Click **Next**.

9. Enter the group ID and the artificial ID.



#### NOTE

The values cannot include spaces or special characters. The only special characters allowed are periods (.), underscores (\_), and dashes (-). An example of a typical group ID or artificial ID is **org.company-name\_project-name**.

Optionally, you can name your project and add a description.

10. Set **Packaging** to **pom**.
11. Click **Finish**.

Your newly created Maven project is now listed in the CodeReady Studio view.

## 2.2. IMPORTING EXISTING MAVEN PROJECTS

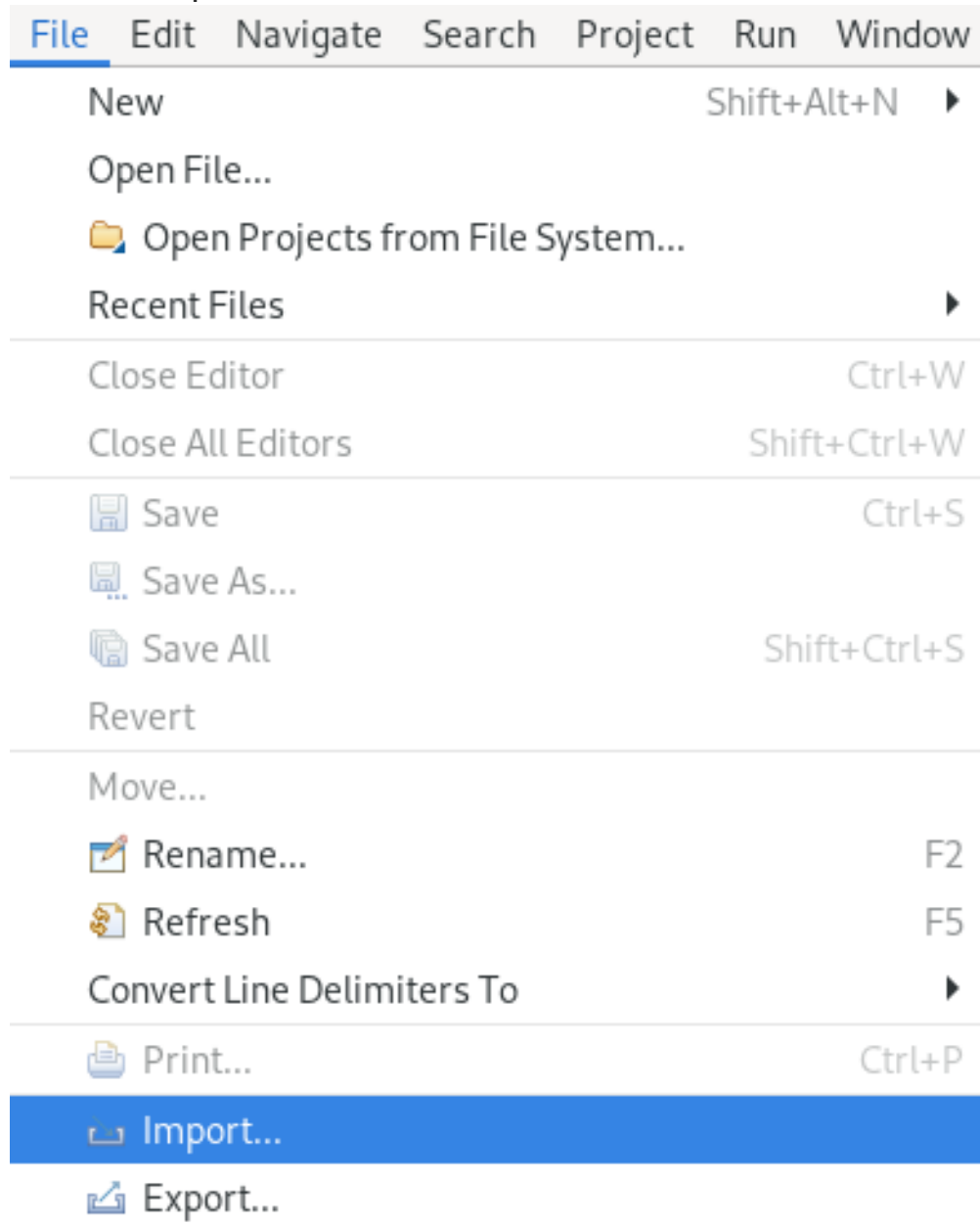
The following section describes how to import existing Maven projects into CodeReady Studio.

## 2.2.1. Importing an existing locally stored Maven project

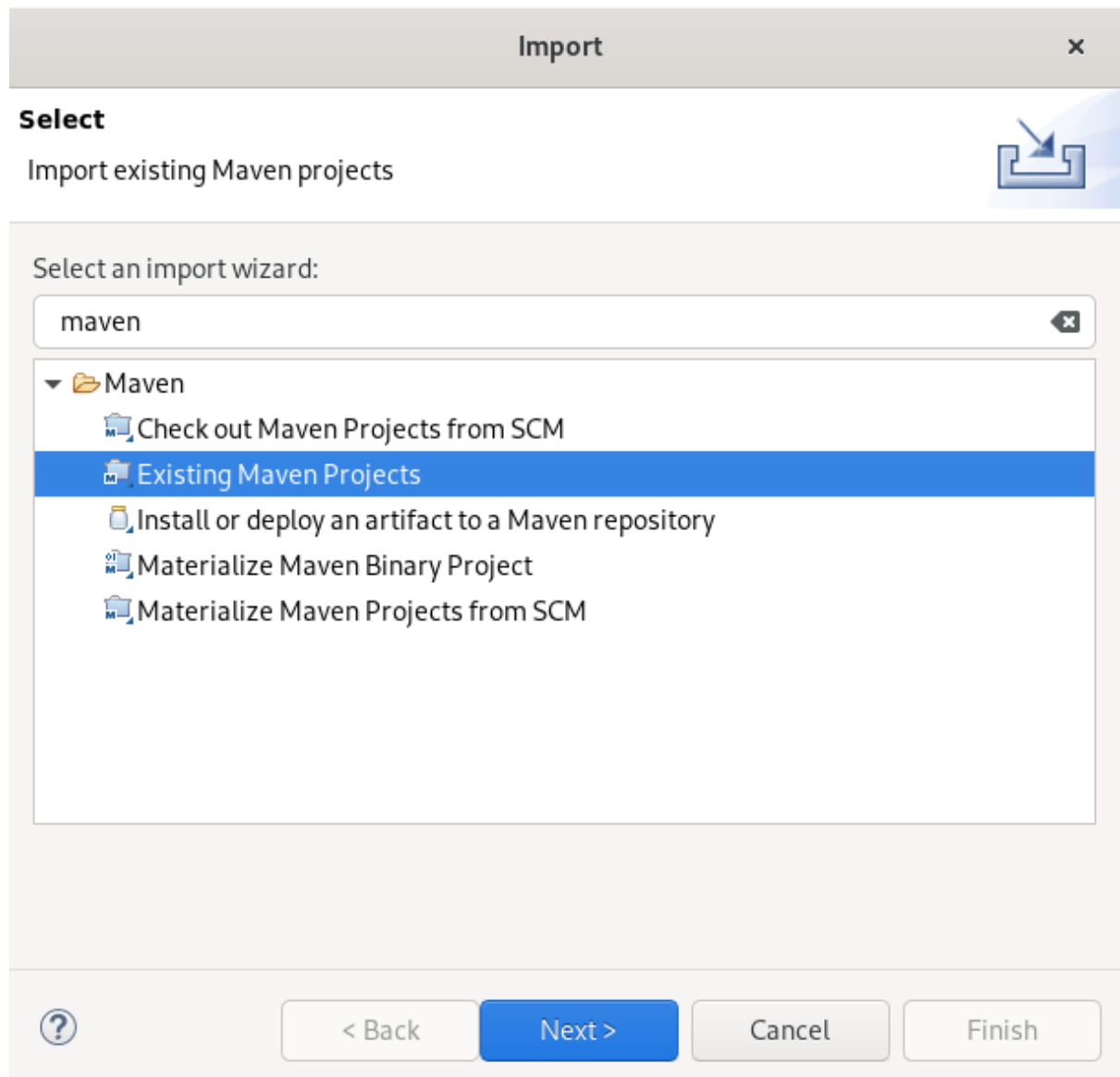
The following section describes how to import an existing locally stored Maven project into CodeReady Studio.

### Procedure

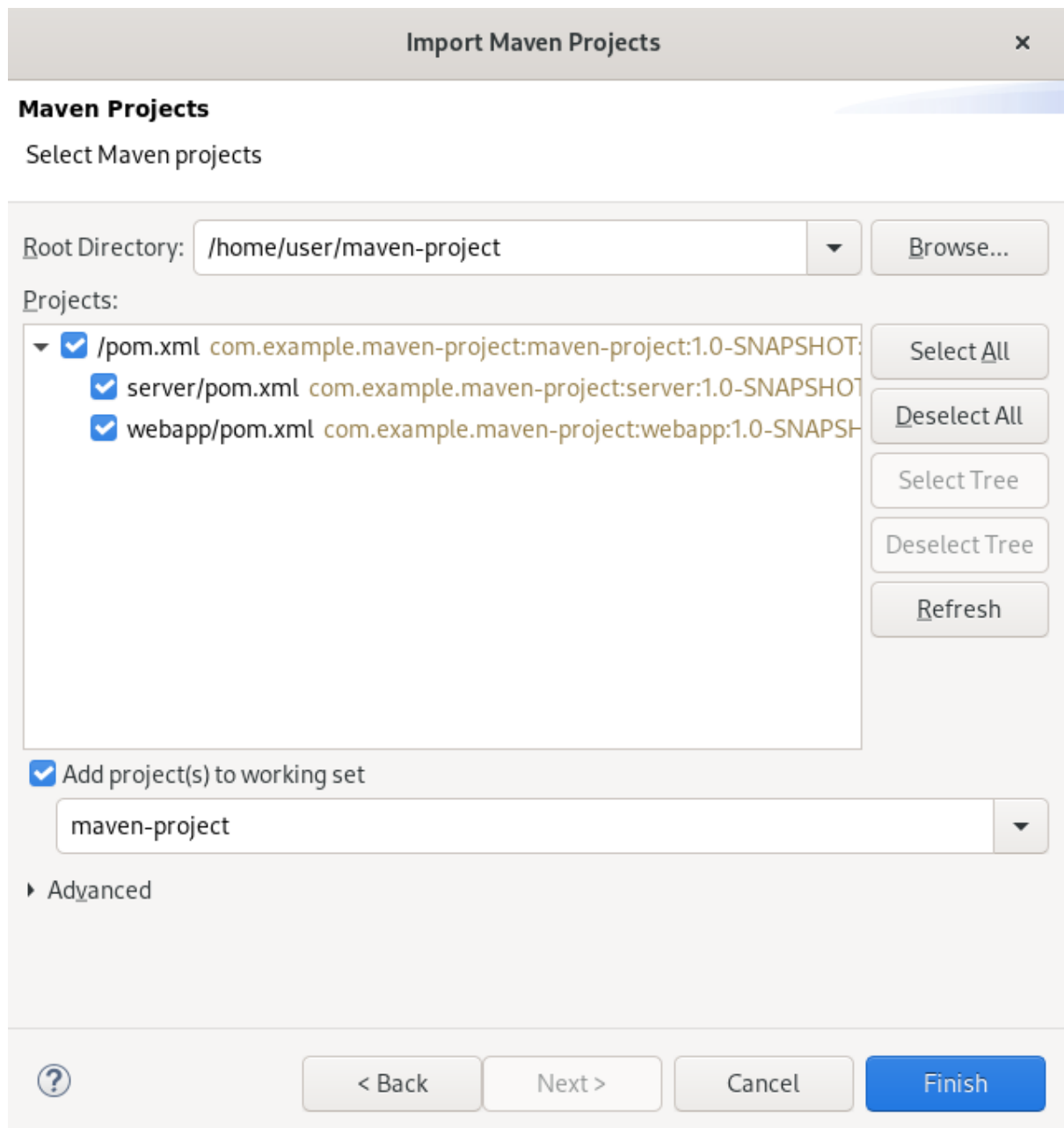
1. Start CodeReady Studio.
2. Click **File** → **Import**.



The **Import** window appears.



3. Enter **Maven** in the **Select an import wizard** field.
4. Select **Existing Maven Projects**
5. Click **Next**.  
The **Import Maven Project** window appears.



6. Click **Browse** to locate your Maven project.
7. Click **Finish**.

Your local Maven project is now listed in the CodeReady Studio view.

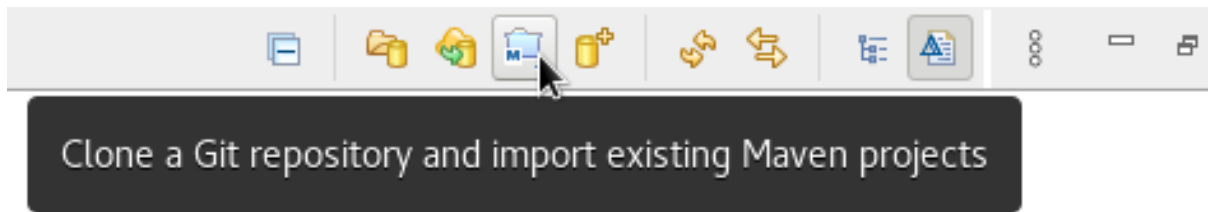
## 2.2.2. Importing an existing remotely stored Maven project

The following section describes how to import an existing remotely stored Maven project into CodeReady Studio.

### Procedure

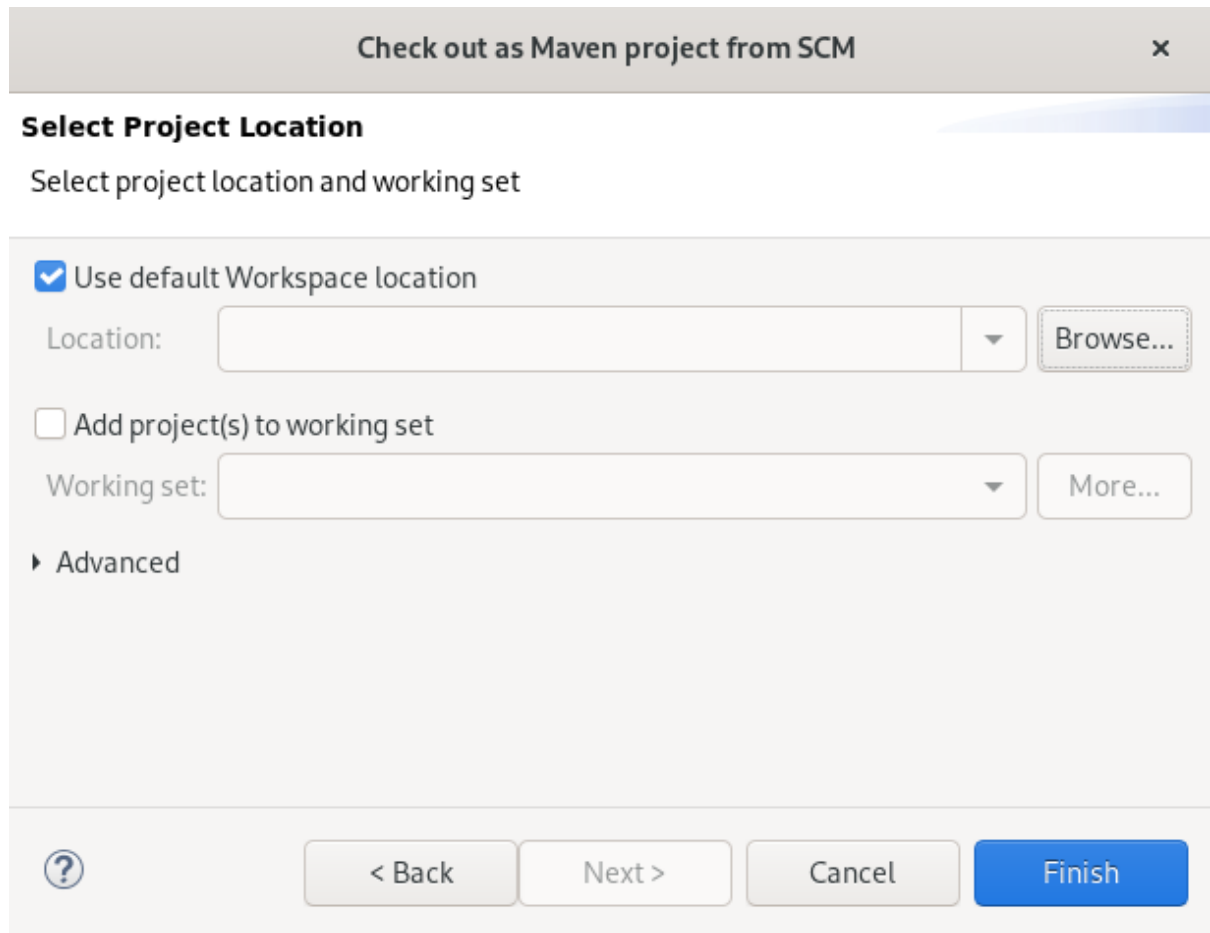
1. Start CodeReady Studio.
2. Open Git Perspective.
3. Click the **Clone a Git repository and import existing Maven projects** icon.





The **Check out as Maven project from SCM** window appears.

4. Add the address for the source repository to the **SCM URL** field.
5. Click **Next**.  
The **Select Project Location** window appears.



6. Click **Browse** to select the workspace location.
7. Click **Finish**.

Your remote Maven project is now listed in the **Git Perspective** view.

## 2.3. CREATING A NEW MAVEN MODULE

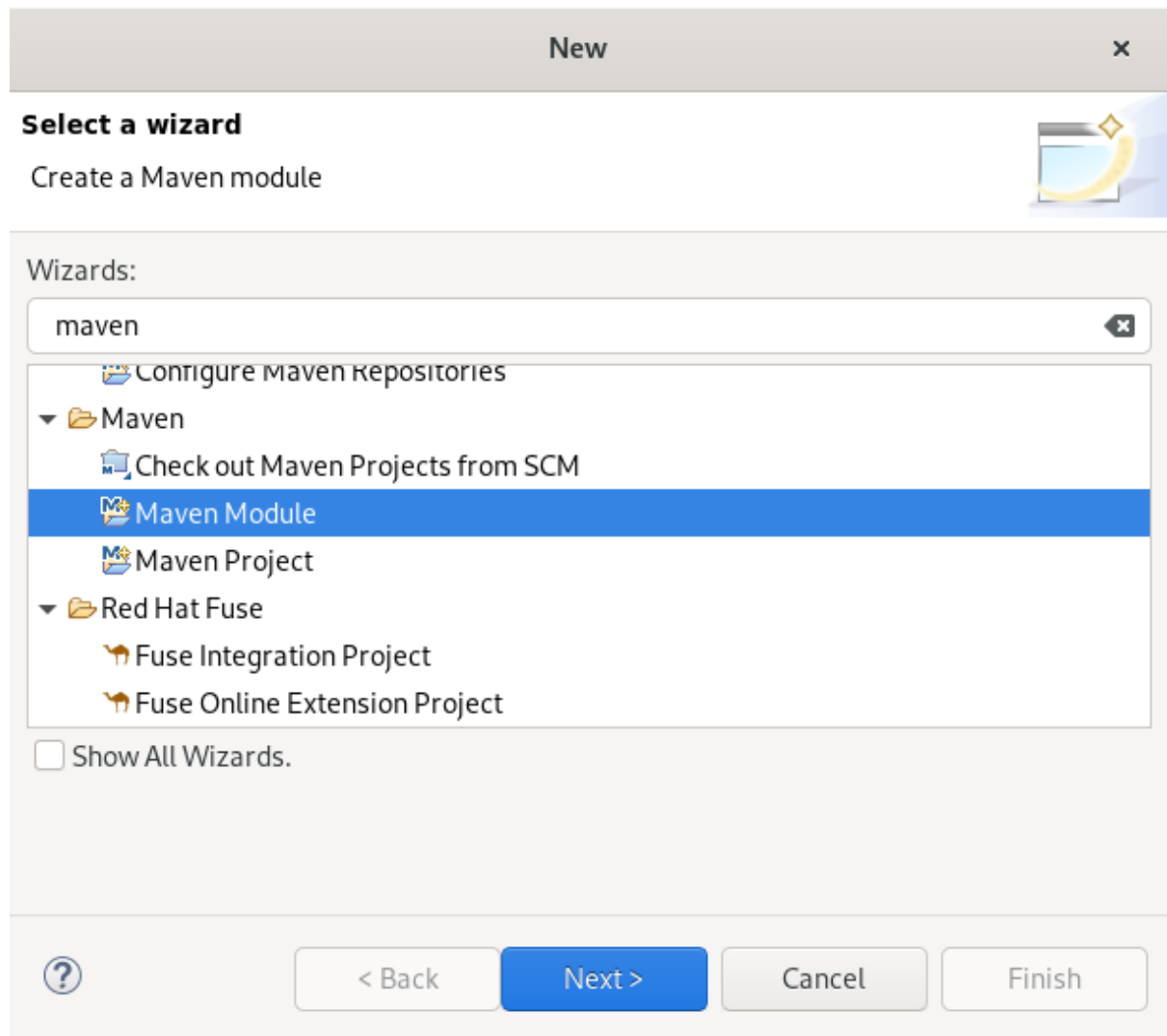
The following section describes how to create a new Maven module.

### Prerequisites

- An existing Maven project.  
For more information on how to create a Maven project, see [Section 2.1, "Creating a new Maven project"](#).

### Procedure

1. Start CodeReady Studio.
2. Press **Ctrl+N**.  
The **Select a wizard** window appears.



3. Enter **Maven** in the **Wizards** field.
4. Select **Maven Module**.
5. Click the **Next** button.  
The **New Maven Module** window appears.

6. Select the **Create a simple project** check box.




#### NOTE

By selecting the **Create a simple project** check box you are skipping the archetype selection and the project type is automatically set to Project Object Model (POM). To create a standalone module, clear the **Create a simple project** check box and follow the onscreen instructions.

7. Name your module.
8. Click **Browse** to select the parent project.
9. Click **Next**.  
The **Configure Project** window appears.

New Maven Module ✕

**New Maven Module** 

Configure project

**Artifact**

Group Id:

Artifact Id:

Version:

Packaging:

Name:

Description:


**Parent Project**

Group Id:

Artifact Id:

Version:

▶ **Advanced**

? 
< Back
Next >
Cancel
Finish

10. Set **Packaging** to **pom**.  
Optionally, you can name your module and add a description.
11. Click **Finish**.

Your newly created Maven module is now listed in the CodeReady Studio view.

## 2.4. ADDING A MAVEN DEPENDENCY TO A MAVEN PROJECT

The following section describes how to add a Maven dependency to a Maven project in CodeReady Studio.

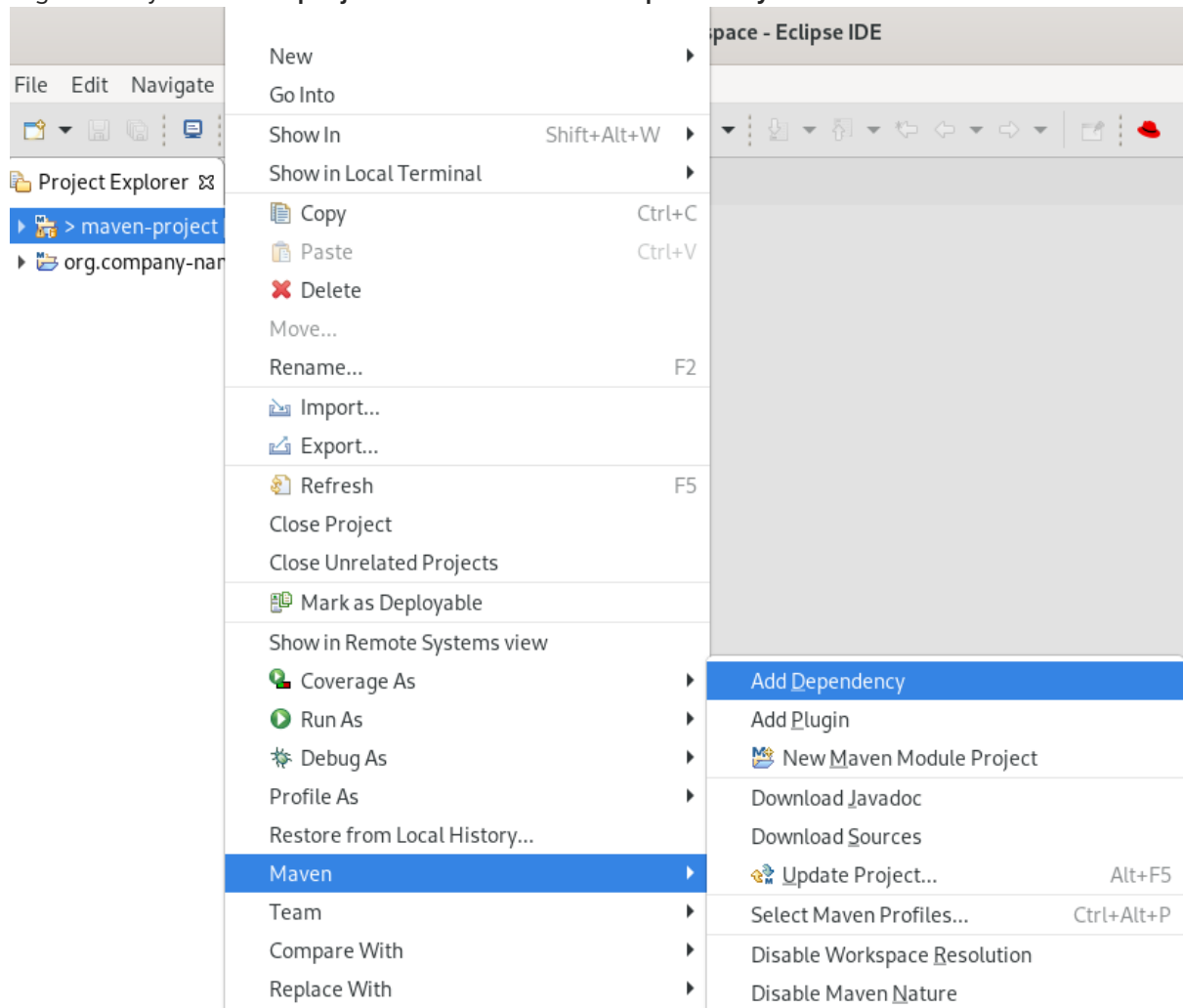
### Prerequisites

- An existing Maven project.  
For more information on how to create a Maven project, see [Section 2.1, “Creating a new Maven project”](#).

### Procedure

1. Start CodeReady Studio.

- Open Project Explorer.
- Right-click your Maven project → Maven → Add Dependency.



The **Add Dependency** window appears.

**Add Dependency** ✕

Group Id: \*

Artifact Id: \*

Version:  Scope:  ▾

---

Enter groupId, artifactId or sha1 prefix or pattern (\*):

⚠ Index downloads are disabled, search results may be incomplete.

Search Results:

▶ 📦 org.company-name\_project-name org.company-name\_project

Cancel
OK

4. Enter the group ID or the artificial ID in the **Enter groupId, artificialId or sha1 prefix or pattern** field.  
The fields above are populated automatically.
5. Click **OK**.

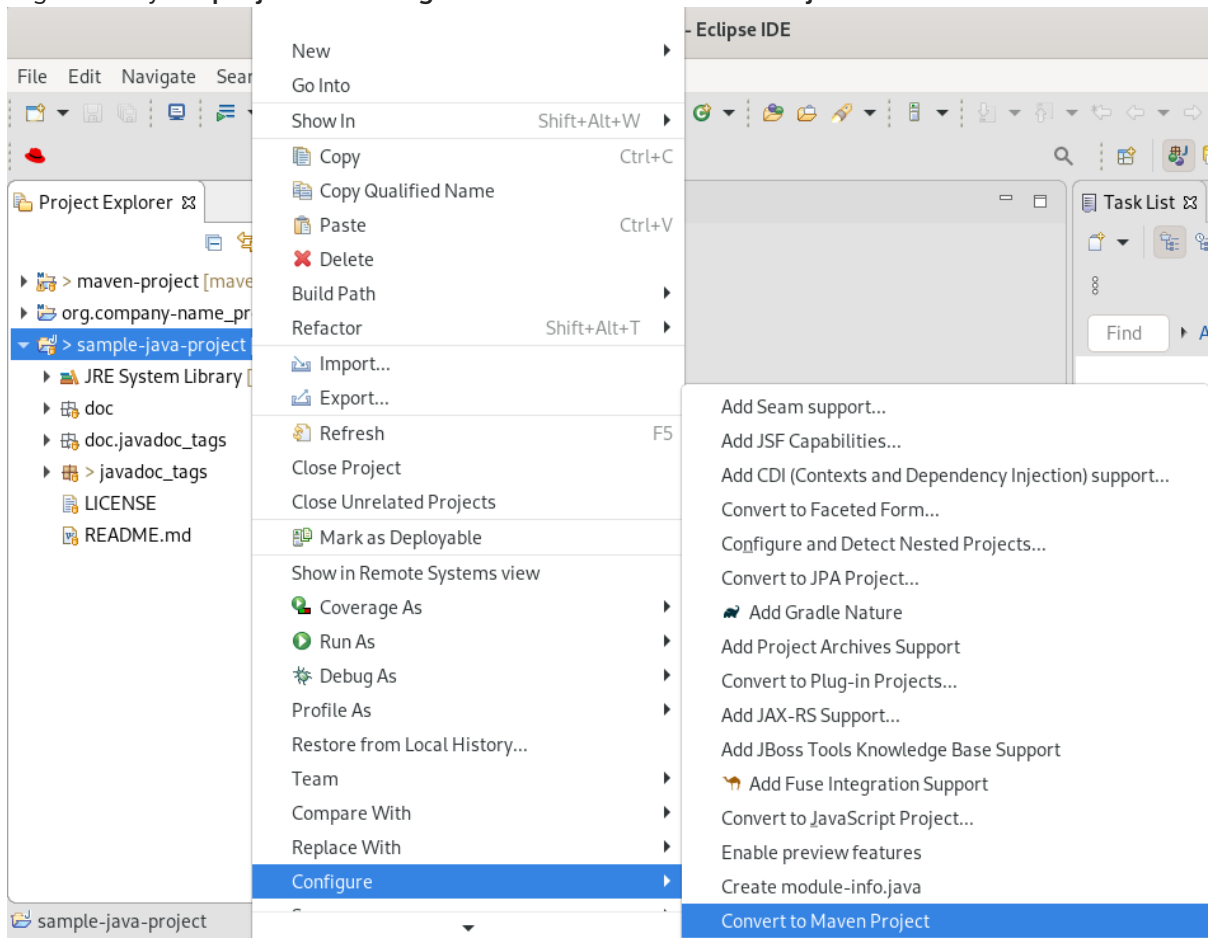
The dependency is now added to the **pom.xml** file of your project.

## 2.5. ADDING MAVEN SUPPORT TO AN EXISTING NON-MAVEN PROJECT

The following section describes how to add Maven support to an application created without Maven support.

1. Start CodeReady Studio.

2. Open Project Explorer.
3. Right-click your project → **Configure** → **Convert to Maven Project**



The **Create a new POM** window appears.



Create new POM ✕

**Maven POM**

This wizard creates a new POM (pom.xml) descriptor for Maven.

Project:

Artifact

Group Id:  ▼

Artifact Id:  ▼

Version:  ▼

Packaging:  ▼

Name:  ▼

Description:

?CancelFinish

All fields are populated automatically. If you want to change the group ID or the Artificial ID, note that the values cannot include spaces or special characters. The only special characters allowed are periods (.), underscores (\_), and dashes (-).

4. Click **Finish**.

Your newly generated **pom.xml** file appears in the CodeReady Studio view.

## 2.6. ADDITIONAL RESOURCES

- For more information on how to use Maven, see the [JBoss Community Archive](#) .

## CHAPTER 3. APPLICATION DEPLOYMENT IN CODEREADY STUDIO

In order to deploy applications to a server from within the IDE you must configure the IDE with information about the server. For a local server this information includes the following:

- A server runtime environment with details about the server location, runtime JRE, and configuration files
- A server adapter with management settings for the server runtime environment, including access parameters, launch arguments, and publishing options

JBoss Server Tools enables you to efficiently configure a local server ready for use with the IDE using Runtime Detection. As demonstrated here, this feature is useful for quickly configuring a server for deploying and testing an application.

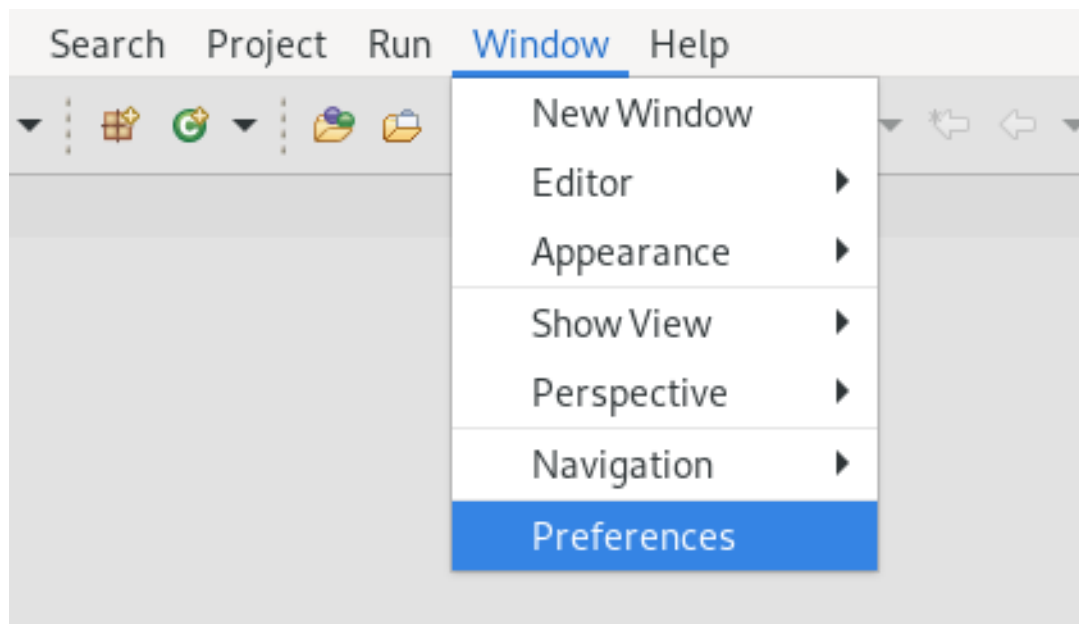
### 3.1. CONFIGURING A LOCAL SERVER

Runtime Detection searches a given local system path to locate certain types of runtime servers. For any servers found, Runtime Detection automatically generates both a default server runtime environment and a default server adapter. These items can be used for immediate application deployment as is or they can be customized to meet your requirements.

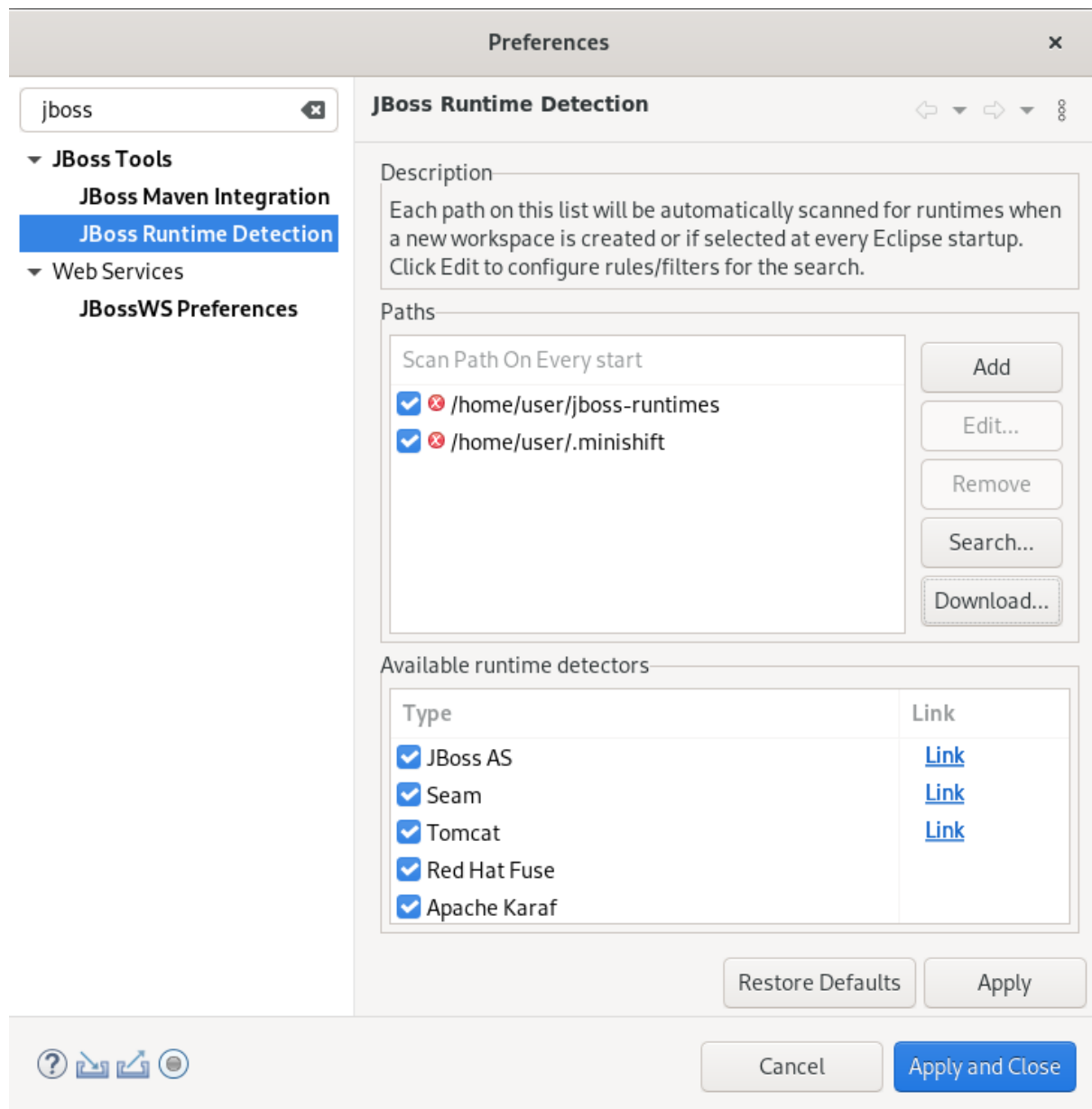
The following section describes how to configure a local server in CodeReady Studio.

#### Procedure

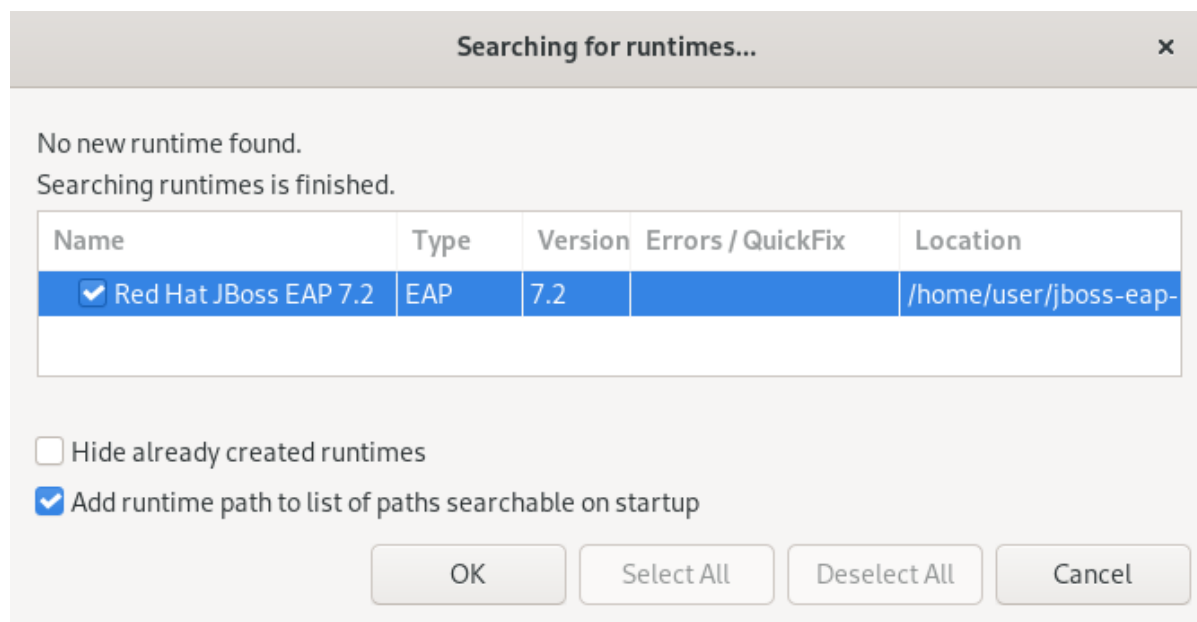
1. Start CodeReady Studio.
2. Click **Window** → **Preferences**.



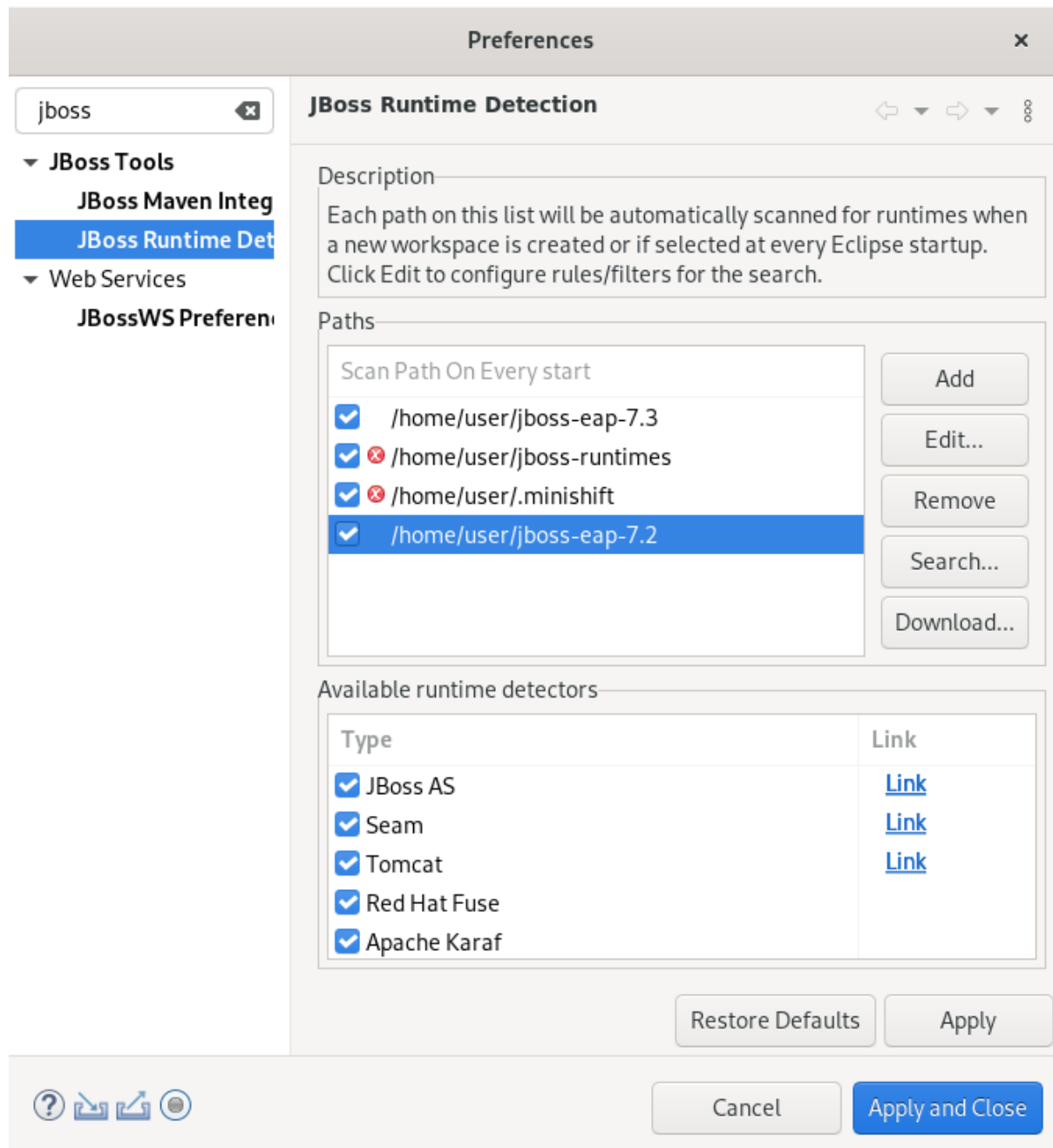
The **Preferences** window appears.



3. Enter **JBoss** in the search field.
4. Select **JBoss Runtime Detection**.
5. Click the **Add** button.
6. Locate the directory containing the runtime server.
7. Click **Open**.  
The **Searching for runtimes** window appears.



8. Click **OK**.
9. Select the path to the runtime server directory check box.



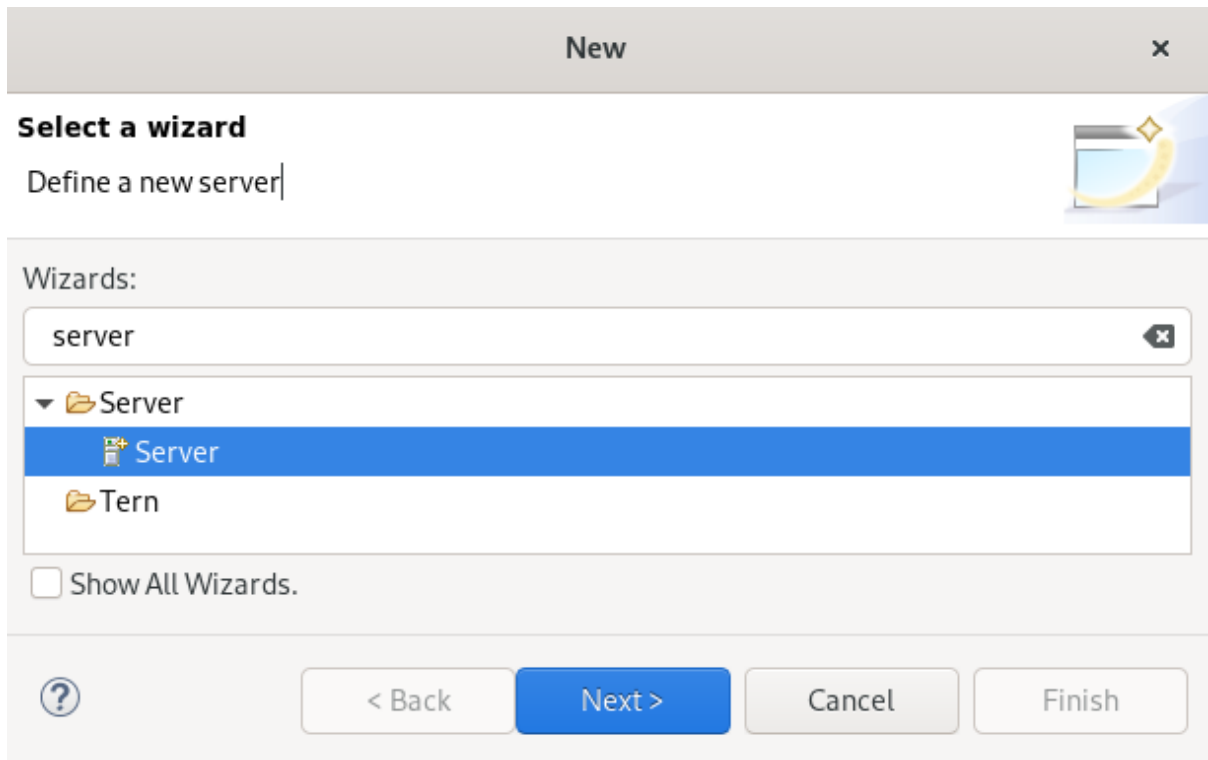
10. Click **Apply and Close**.

## 3.2. CONFIGURING A REMOTE SERVER

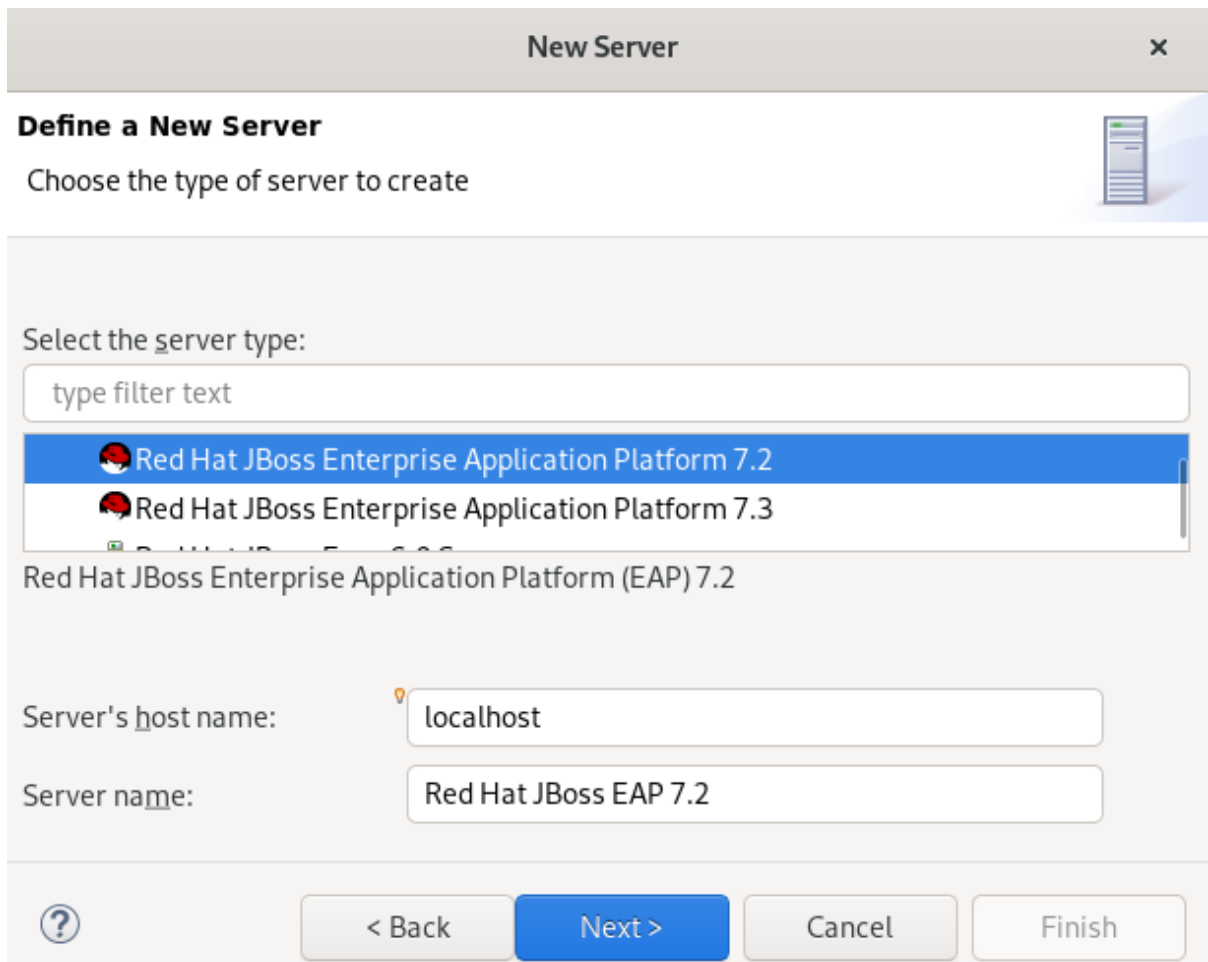
The following section describes how to configure a remote server in CodeReady Studio.

### Procedure

1. Start CodeReady Studio.
2. Press **Ctrl+N**.  
The **Select a wizard** window appears.



3. Enter **Server** in the search field.
4. Select **Server**.
5. Click the **Next** button.  
The **Define a New Server** window appears.



6. Select the appropriate server type.
7. Click **Next**.  
The **Create a new Server Adapter** window appears.

**New Server** ×

**Create a new Server Adapter** **RED HAT' JBOSS' MIDDLEWARE**

Red Hat JBoss Enterprise Application Platform (EAP) 7.2

A Server Adapter manages starting and stopping instances of your server. It manages command line arguments and keeps track of which modules have been deployed.

The server is:  Local  
 Remote

Controlled by:  Filesystem and shell operations  
 Management Operations

Server lifecycle is externally managed.

The selected profile does not require a runtime, though some features (ex: JMX) may not be available without one.

Assign a runtime to this server

Create new runtime (next page) ▼

?
< Back
Next >
Cancel
Finish

8. Select the **Remote** check box.
9. Select the appropriate **Controlled by** option.
10. Select the **Server lifecycle externally managed** check box.
11. Select the **Assign a runtime to the server** check box.
12. Click **Next**.  
The **JBoss Runtime** window appears.

**New Server** [x]

**JBoss Runtime** RED HAT JBOSS MIDDLEWARE

Red Hat JBoss Enterprise Application Platform (EAP) 7.2

A JBoss Server runtime references a JBoss installation directory. It can be used to set up classpaths for projects which depend on this runtime, as well as by a "server" which will be able to start and stop instances of JBoss.

Name: JBoss EAP 7.2 Runtime

Home Directory: /var/home/user/jboss-eap-7.2 [Download and install runtime...](#) Browse...

Runtime JRE:

Execution Environment: JavaSE-1.8 Environments...

Alternate JRE: java-1.8.0-openjdk-1.8.0.252.b09-1.fc32.x86\_64 Installed JREs...

Server base directory: standalone Browse...

Configuration file: standalone.xml Browse...

[?] < Back Next > Cancel Finish

13. Click **Browse** in the **Home Directory** field to locate the runtime server.

14. Click **Next**.

The **Remote System Integration** window appears.

**New Server** [x]

**Remote System Integration** JBoss by Red Hat

Please set the properties required for connecting to a remote system.

Host: Local New Host...

[Open Remote System Explorer View...](#)

Remote Runtime Details:

Remote Server Home: /var/home/user/jboss-eap-7.2 Browse...

Remote Server Base Directory: standalone Browse...

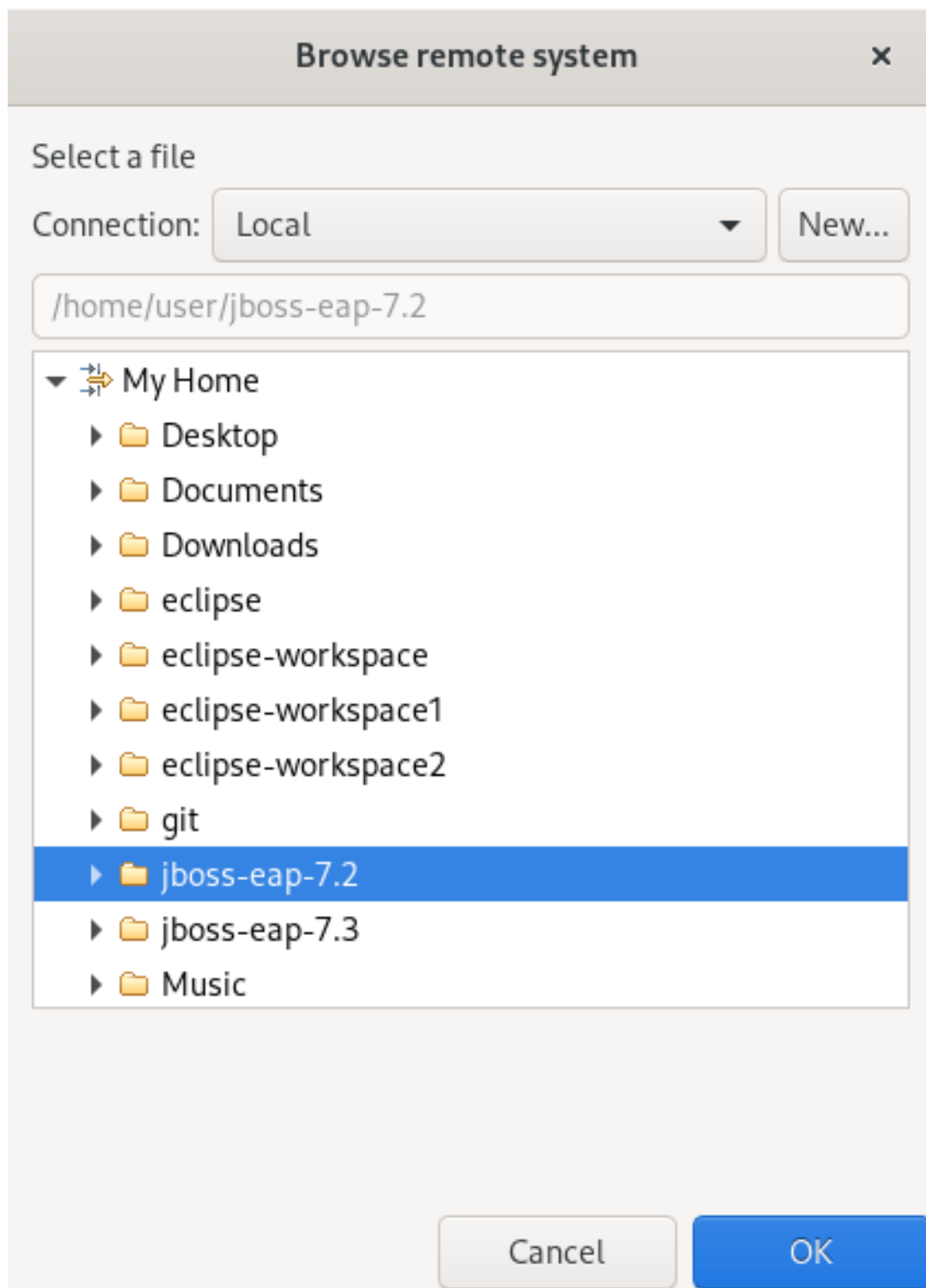
Remote Server Configuration File: standalone.xml Browse...

[?] < Back Next > Cancel Finish

15. Click **Browse** in the **Remote Server Home** field.

The **Browse remote system** window appears.





16. Specify the path to the directory that contains the remote server.

17. Click **Finish**.

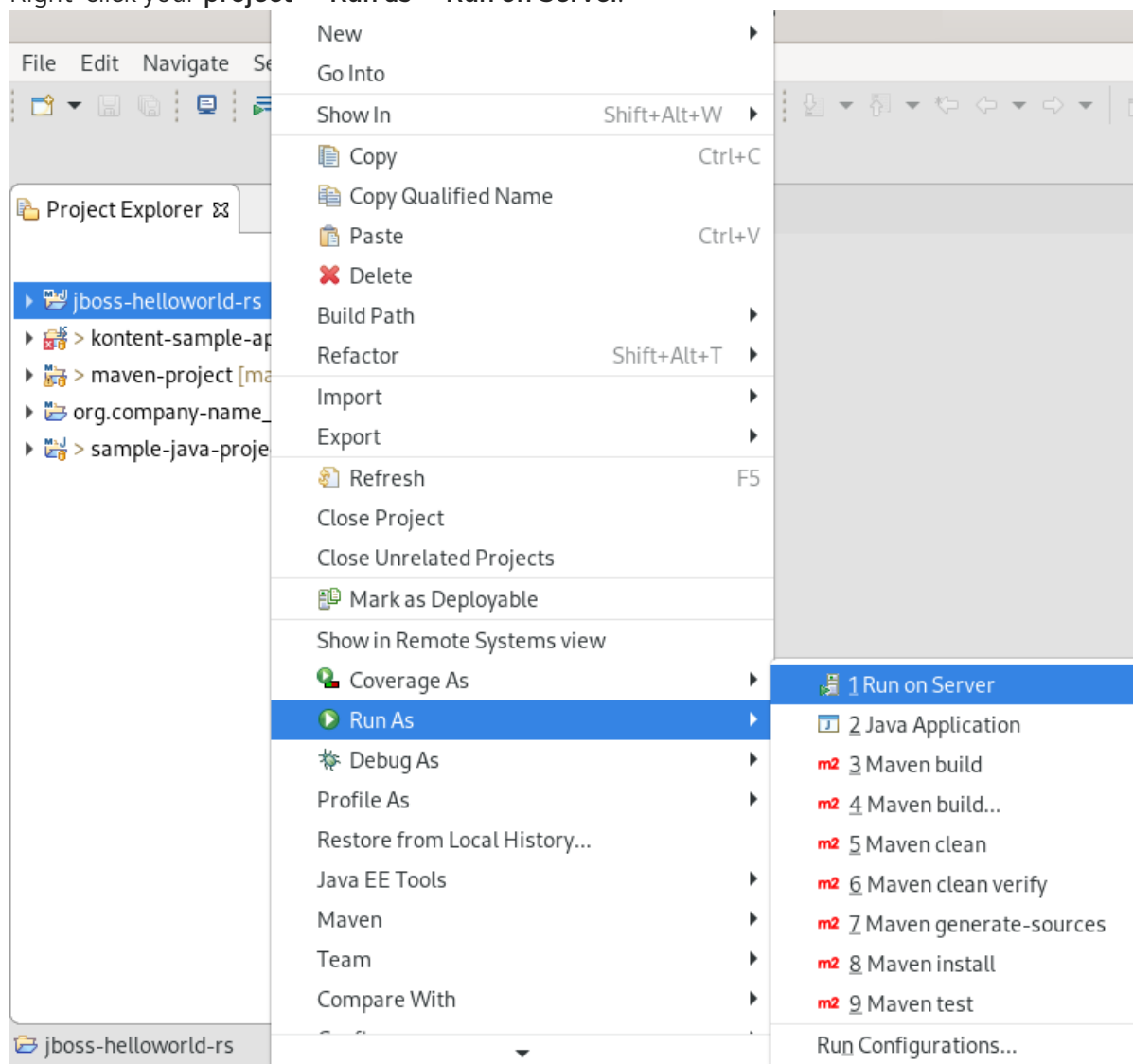
### 3.3. DEPLOYING AN APPLICATION

After configuring the local server, you can deploy applications to the server from the IDE using the server adapter. The server adapter enables runtime communication between the server and the IDE for easy deployment of applications and server management.

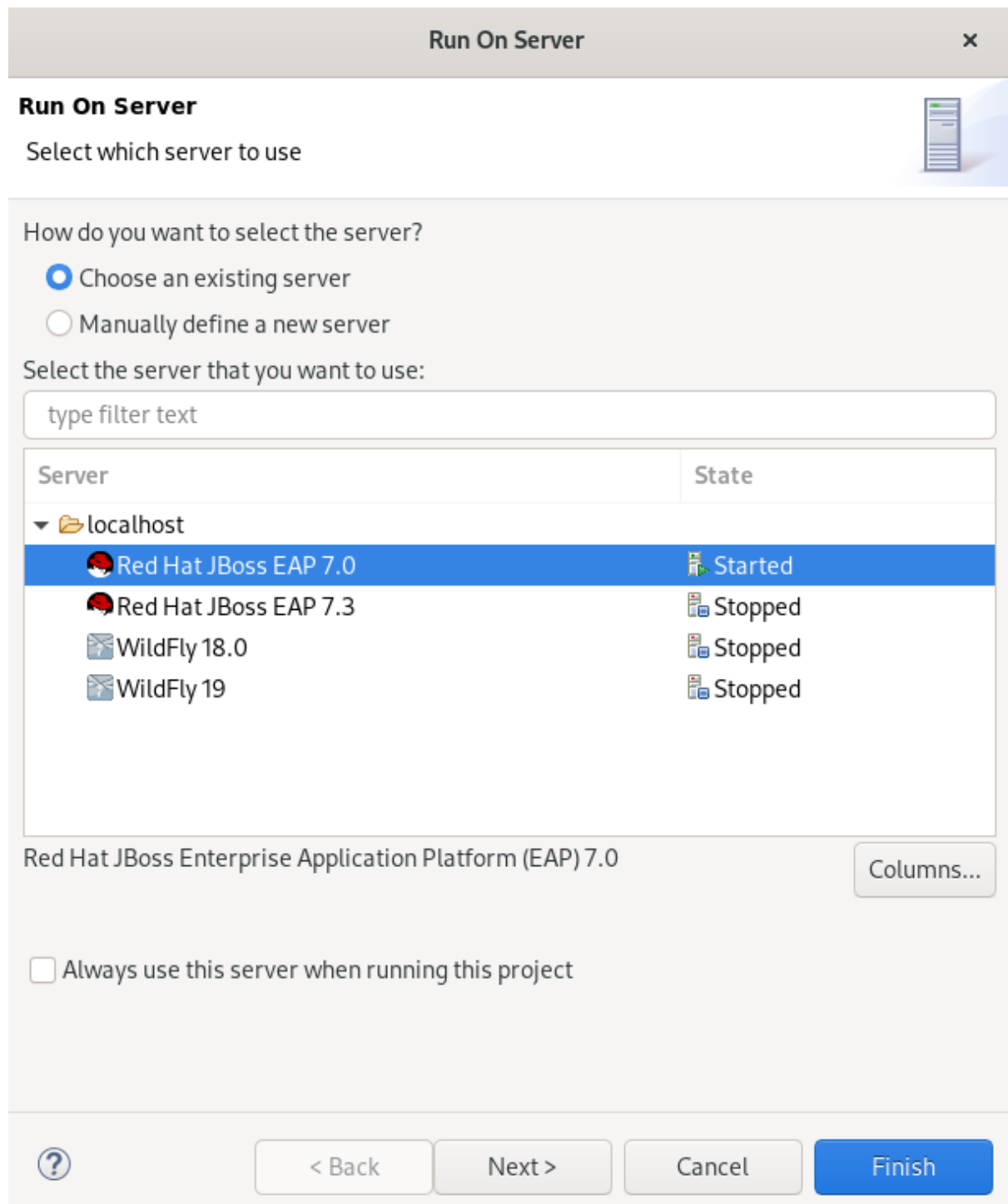
The following section describes how to deploy an application to the server in CodeReady Studio.

## Procedure

1. Start CodeReady Studio.
2. Right-click your **project** → **Run as** → **Run on Server**.



The **Run on Server** window appears.



3. Select the **Choose an existing server** check box.
4. Select the server for deployment.
5. Click **Finish**.

Your application opens in the internal CodeReady Studio web browser.

## CHAPTER 4. JBOSS EAP AND JBOSS WFK BASICS IN CODEREADY STUDIO

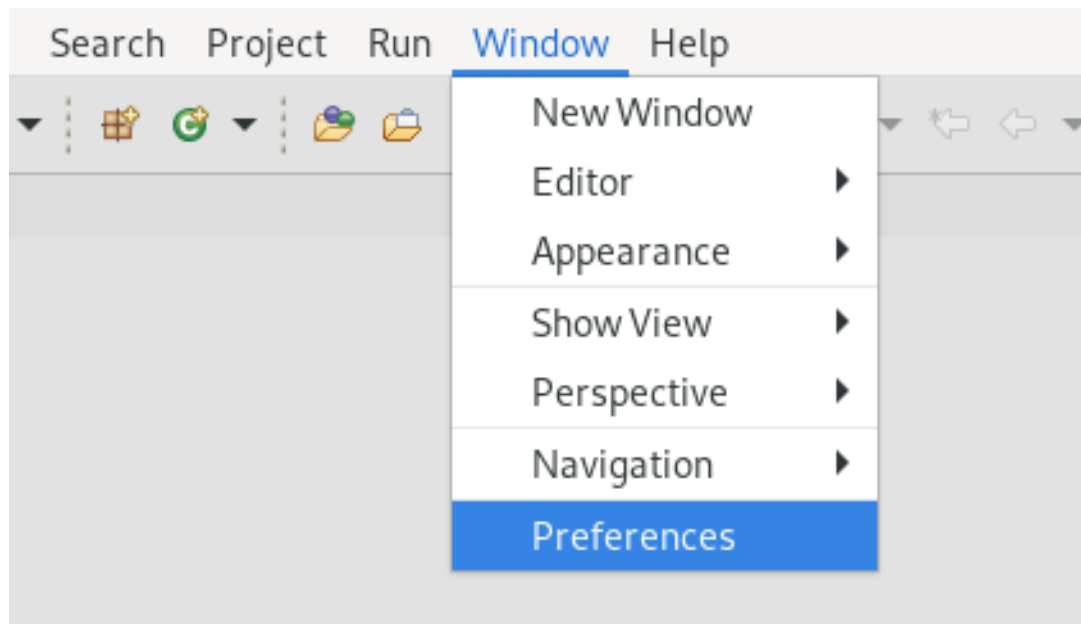
Eclipse IDE supports application development and deployment with Red Hat JBoss Enterprise Application Platform (JBoss EAP) and Red Hat JBoss Web Framework Kit (JBoss WFK). However, you need to configure Maven repositories first. This configuration is essential for using the enterprise versions of the example Maven projects provided in Red Hat Central. These projects are intended for deployment to JBoss EAP and require IDE access to JBoss EAP and JBoss WFK repositories.

### 4.1. CONFIGURING MAVEN REPOSITORIES

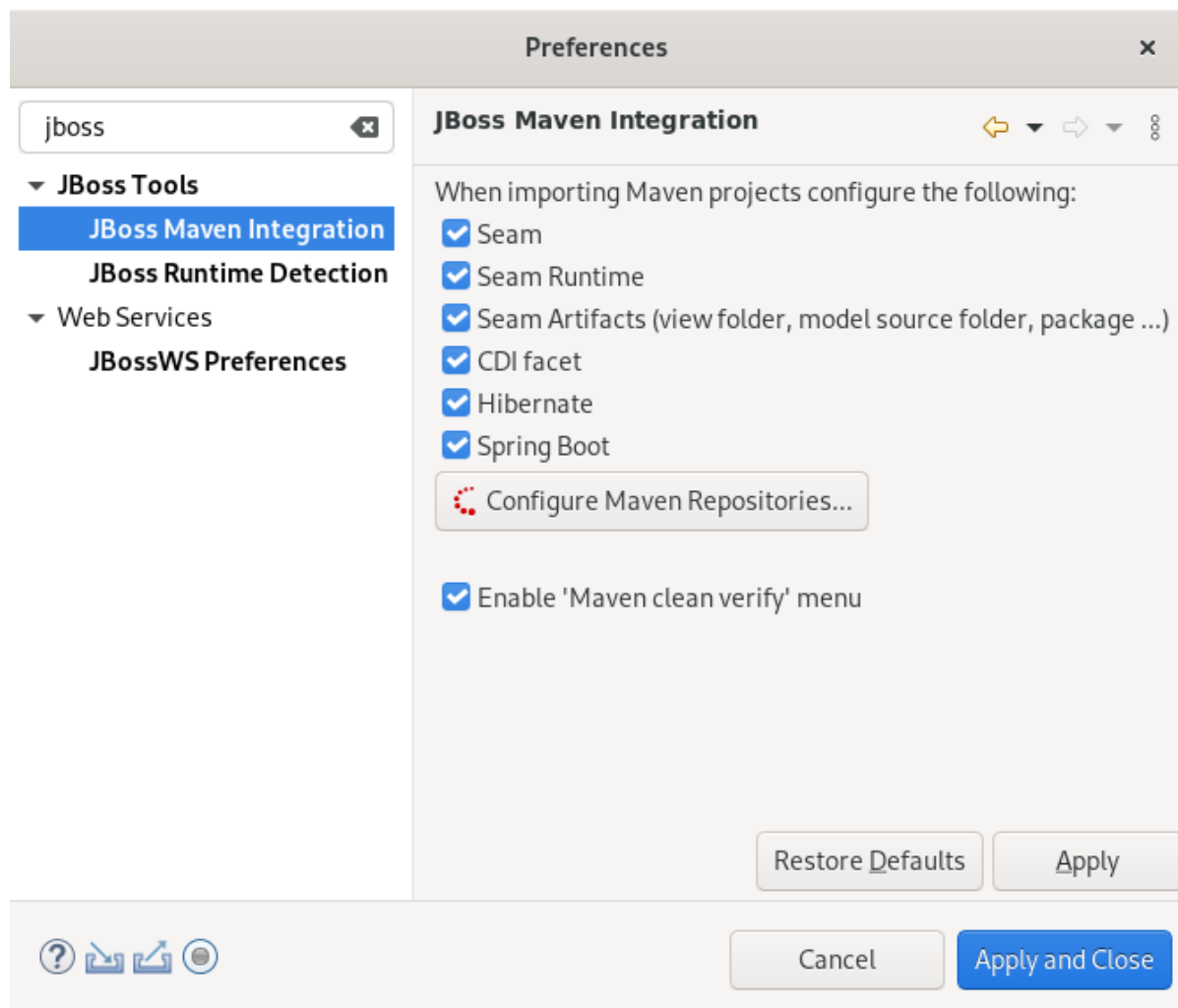
The following section describes how to configure Maven repositories.

#### Procedure

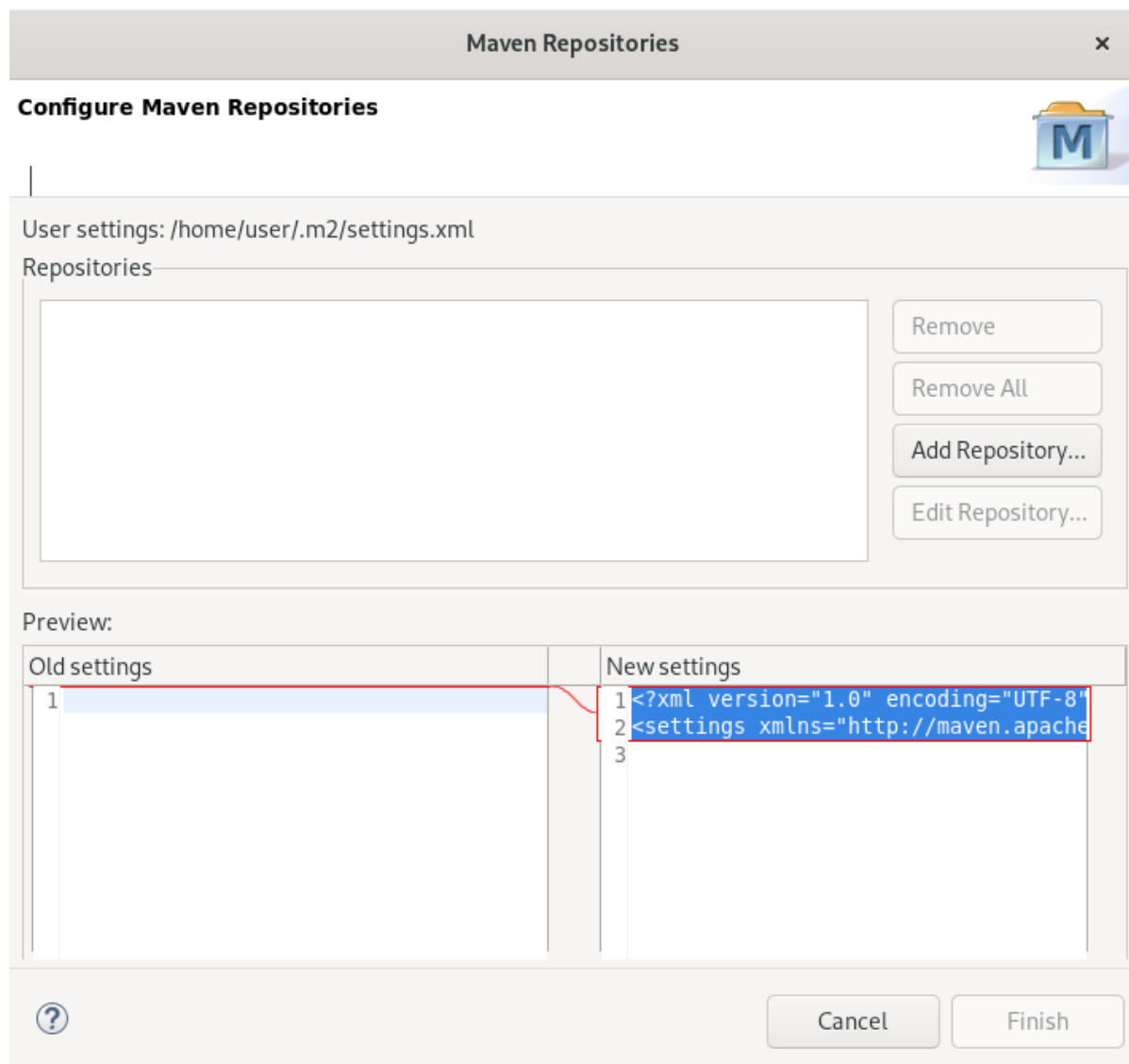
1. Start CodeReady Studio.
2. Click **Window** → **Preferences**.



The **Preferences** window appears.



3. Enter **JBoss** in the search field.
4. Select **JBoss Maven Integration**.
5. Click **Configure Maven Repositories**.  
The **Configure Maven Repositories** window appears.



6. Click **Add Repository**.  
The **Add Maven Repository** window appears.

7. Click the down-arrow in the **Profile ID** field.
8. Select the **redhat-ga-repository**.  
Other fields are populated automatically.
9. Click **OK**.
10. Click **Finish**.  
The **Confirm File Update** window appears.
11. Click the **Yes**.
12. Click **Apply and Close**.

#### Additional resources

- For more information on Maven repositories, see [Maven: Getting Started - Developers](#).

## 4.2. SETTING UP JBOSS EAP

To set up JBoss EAP in Eclipse IDE, you must direct the IDE to the local or remote runtime servers. This establishes a communication channel between the IDE and the JBoss EAP server for efficient deployment and server management workflows.

The following section describes how to install JBoss EAP in CodeReady Studio.

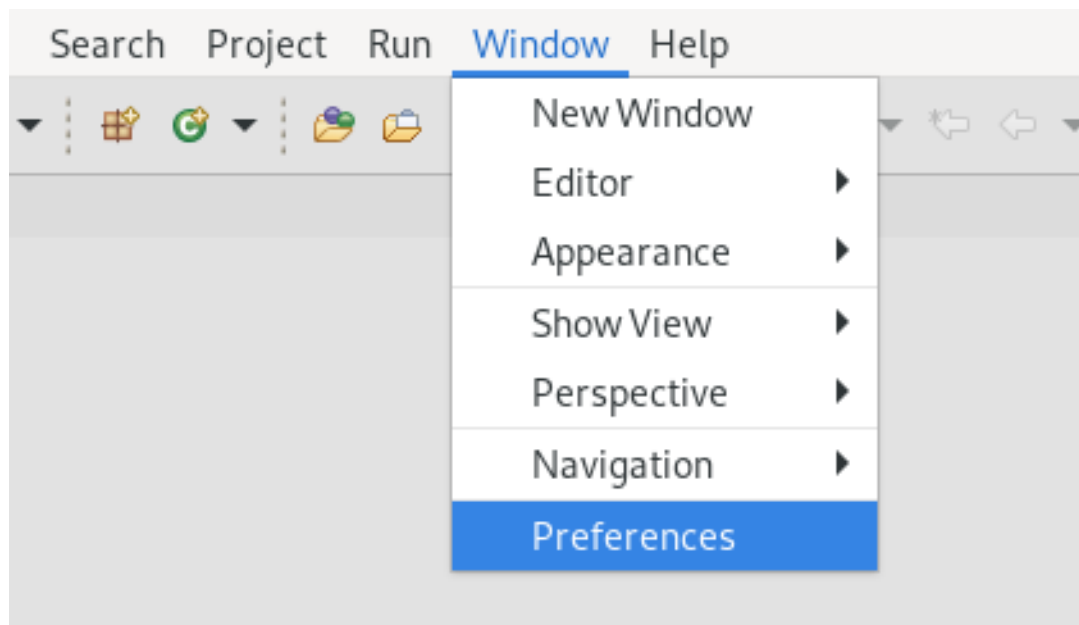
#### Prerequisites

- Configured Maven repositories.

For more information on how to configure Maven repositories, see [Section 4.1, “Configuring Maven repositories”](#).

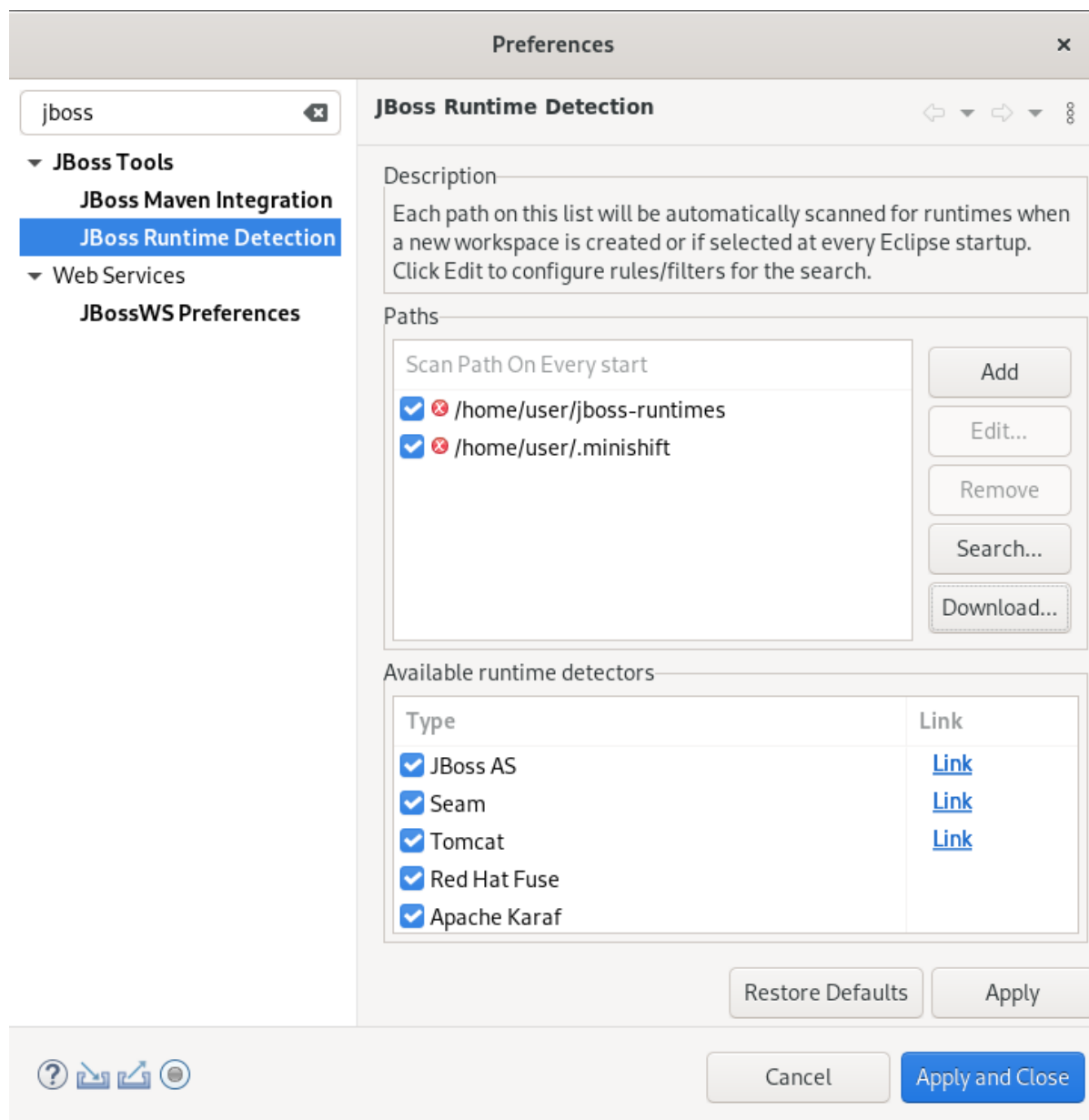
### Procedure

1. Start CodeReady Studio.
2. Click **Window** → **Preferences**.



The **Preferences** window appears.





3. Enter **JBoss** in the search field.
4. Select **JBoss Runtime Detection**.
5. Click **Download**.  
The **Download Runtimes** window appears.

✕
Download Runtimes

**Download Runtimes**

Please select a runtime to download and install.

Name	Version
Red Hat JBoss EAP 6.0.0	6.0.0
Red Hat JBoss EAP 6.0.1	6.0.1
Red Hat JBoss EAP 6.1.0	6.1.0
Red Hat JBoss EAP 6.2.0	6.2.0
Red Hat JBoss EAP 6.3.0	6.3.0
Red Hat JBoss EAP 6.4.0	6.4.0
Red Hat JBoss EAP 7.0.0	7.0.0
Red Hat JBoss EAP 7.1.0	7.1.0
Red Hat JBoss EAP 7.2.0	7.2.0
Red Hat JBoss EAP 7.3.0	7.3.0

Selected Runtime Details

Project URL: <https://developers.redhat.com/products/eap>

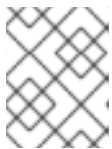
Download URL: <https://www.jboss.org/download-manager/jdf/file/jboss-eap-7.3.0.zip>

Registration required. Downloads require accepting the terms and conditions of the JBoss Developer Program, which provides \$0 subscriptions for development use only.

?

< Back
Next >
Cancel
Finish

6. Select the appropriate JBoss EAP version.



#### NOTE

If you select the JBoss EAP version 6.0.x or earlier, follow the on-screen instructions. If you select a later version, follow the instructions below.

7. Click **Next**.  
The **Credentials** window appears.

here'. There are three input fields: 'Domain:' with a dropdown menu showing 'access.redhat.com', 'Username:' with an empty field and an 'Add...' button, and 'Password:' with an empty field. At the bottom, there is a help icon, a '< Back' button, a 'Next >' button, a 'Cancel' button, and a 'Finish' button."/>

8. Click **Add**.
9. Enter your **access.redhat.com** username and password.
10. Click **OK**.
11. Click **Next**.  
Review the license agreement, if satisfied, accept the license and click **Next** to continue with the installation.

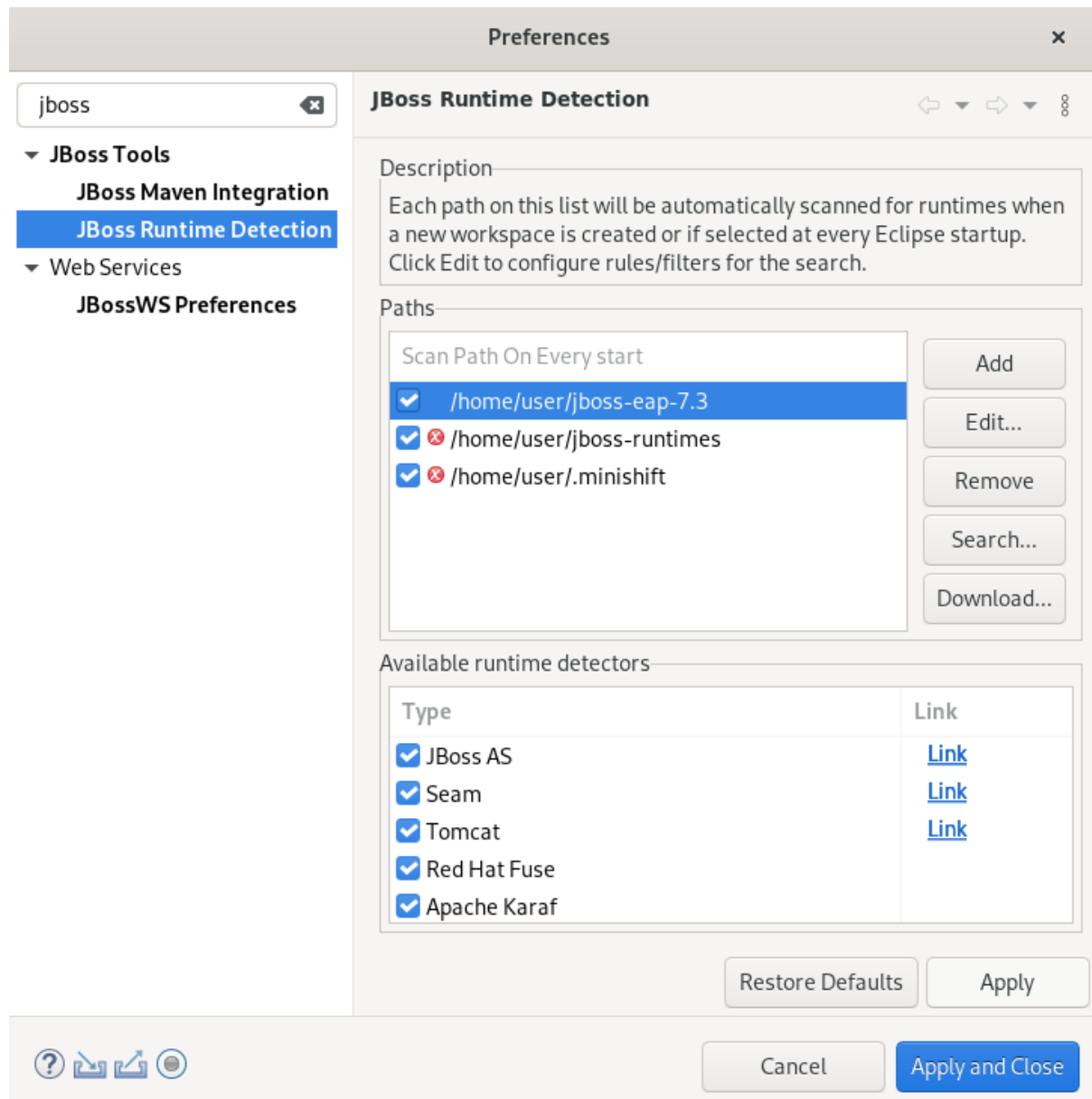
The **Download Runtimes** window appears.

12. Click **Browse** to select the **Install folder**.
13. Click **Browse** to select the **Download folder**.

- Click **Finish**.

Note that downloading and installing the Runtime might take a while.

The **JBoss Runtime Detection** window appears.

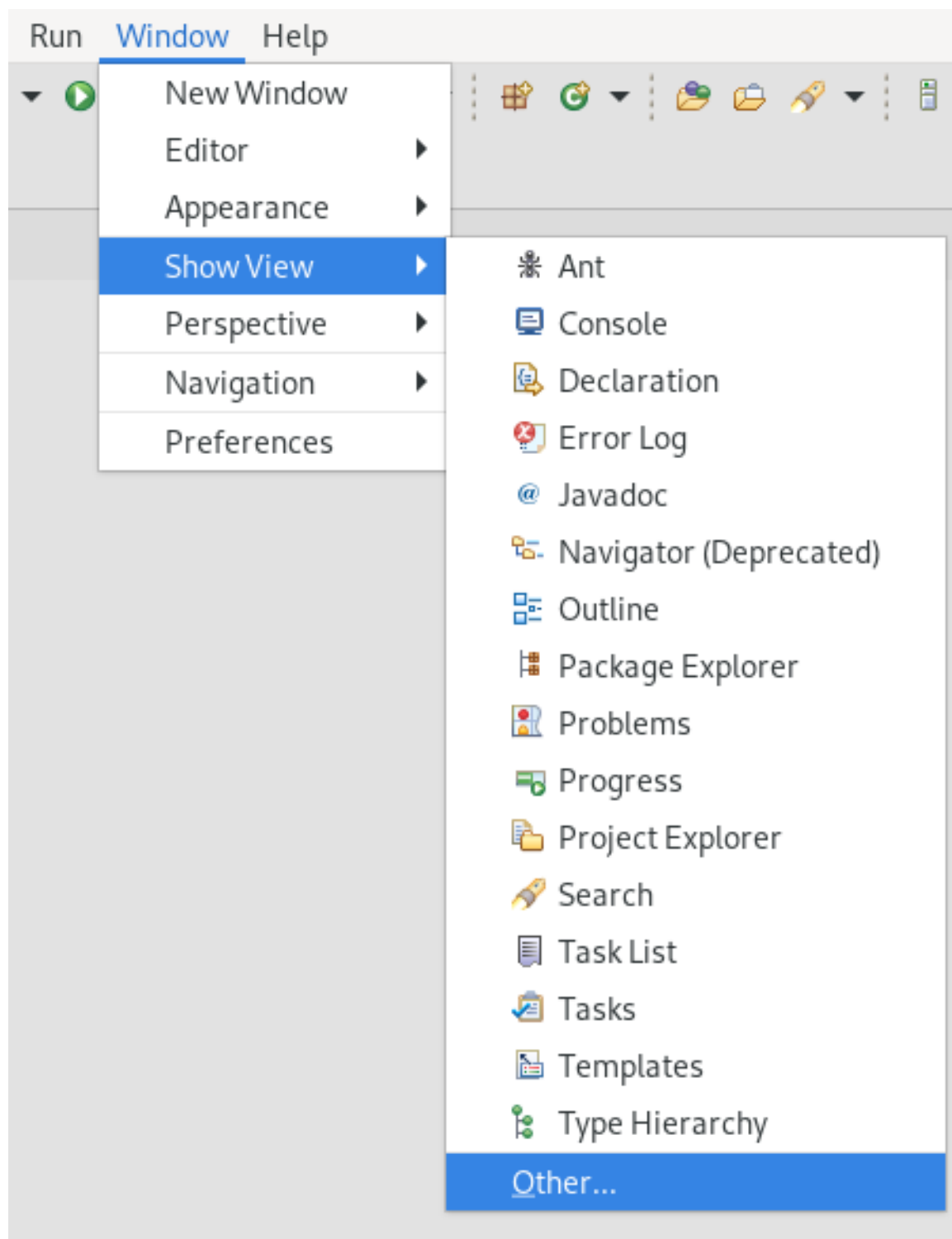


- Select the path to the JBoss EAP installation file check box.

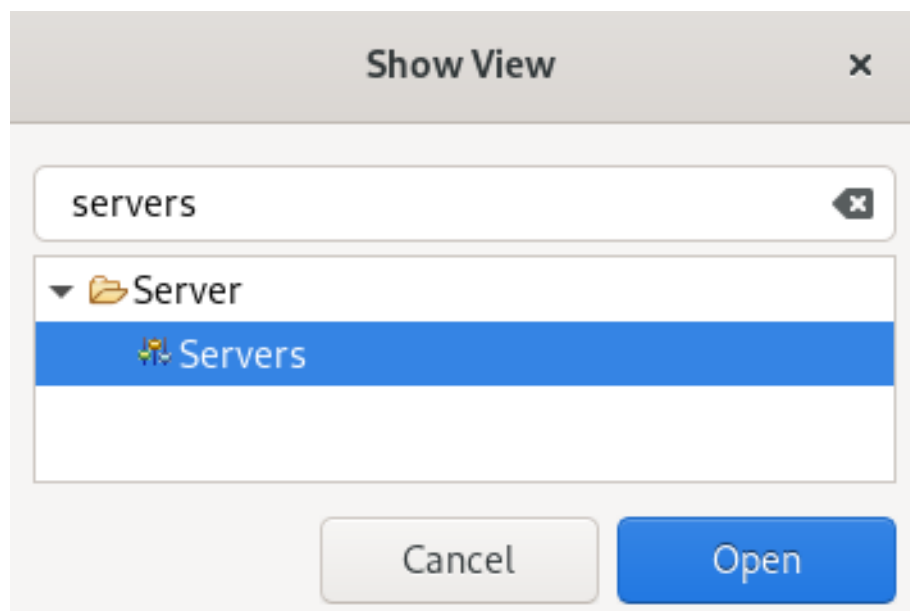
- Click **Apply and Close**.

### Verification steps

- Click **Window** → **Show View** → **Other**.

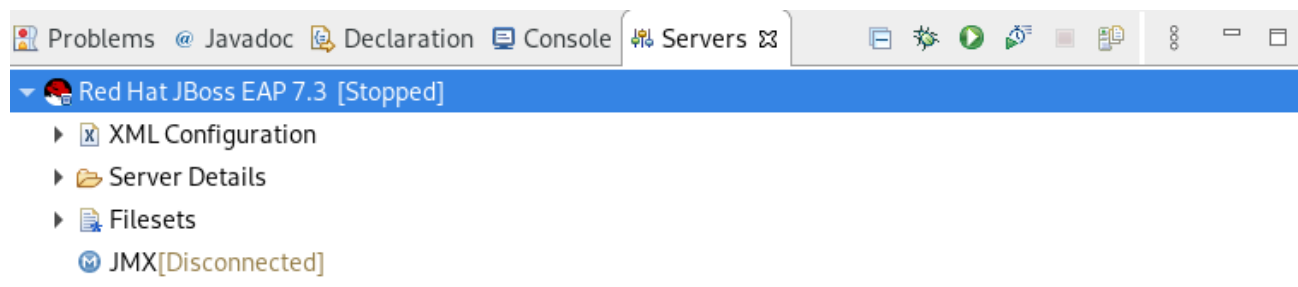


The **Show View** window appears.



2. Type **Servers** in the search field.
3. Select **Servers**.
4. Click **Open**.  
The **Servers** view appears.

Your newly added JBoss EAP is now listed in the **Servers** view.



## CHAPTER 5. OPENSIFT BASICS IN CODEREADY STUDIO

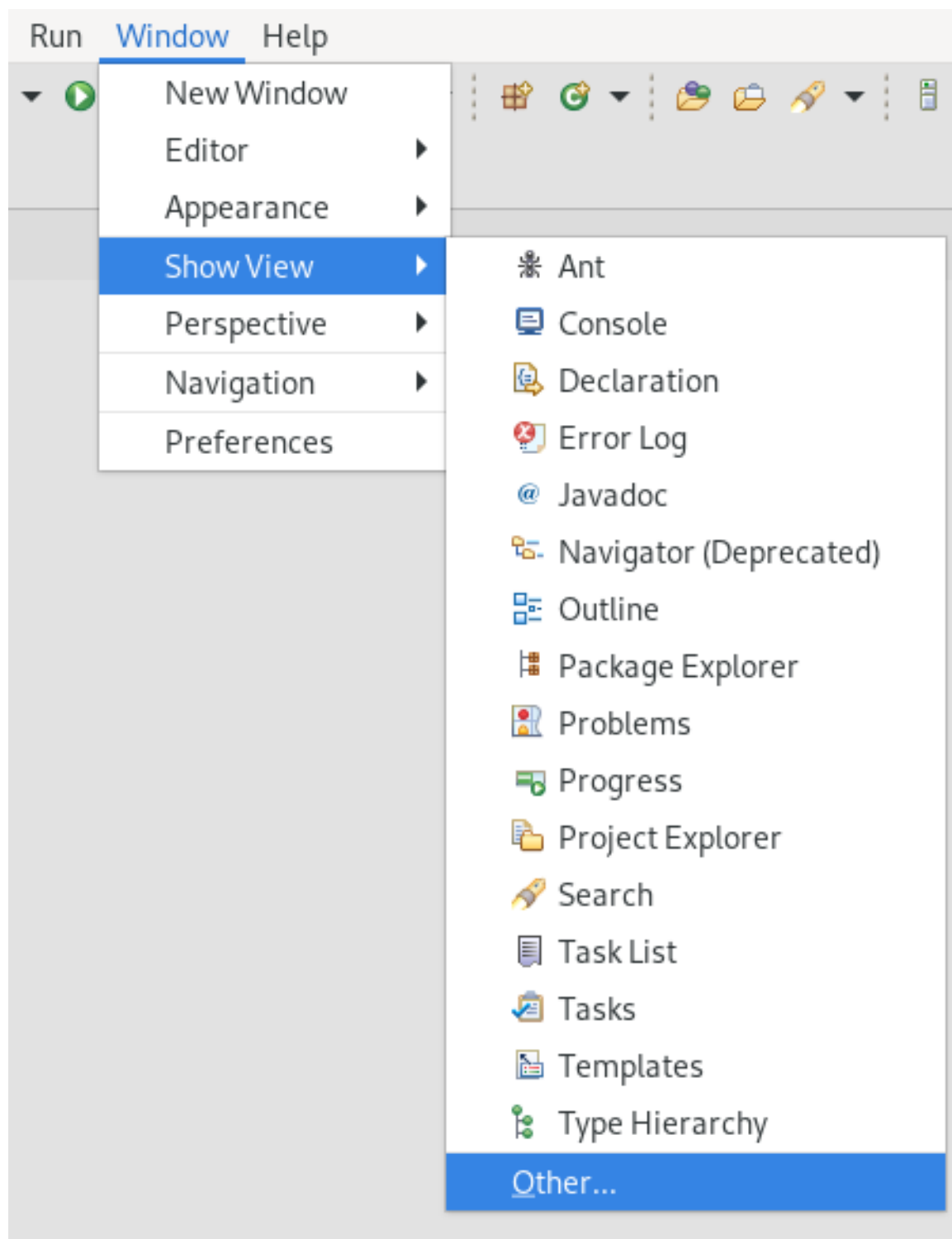
CodeReady Studio includes OpenShift Application Explorer view, which provides a simplified user experience allowing easy and rapid feedback through the inner loop as well as debugging.

### 5.1. SETTING UP OPENSIFT APPLICATION EXPLORER VIEW

The following section describes how to open OpenShift Application Explorer in CodeReady Studio.

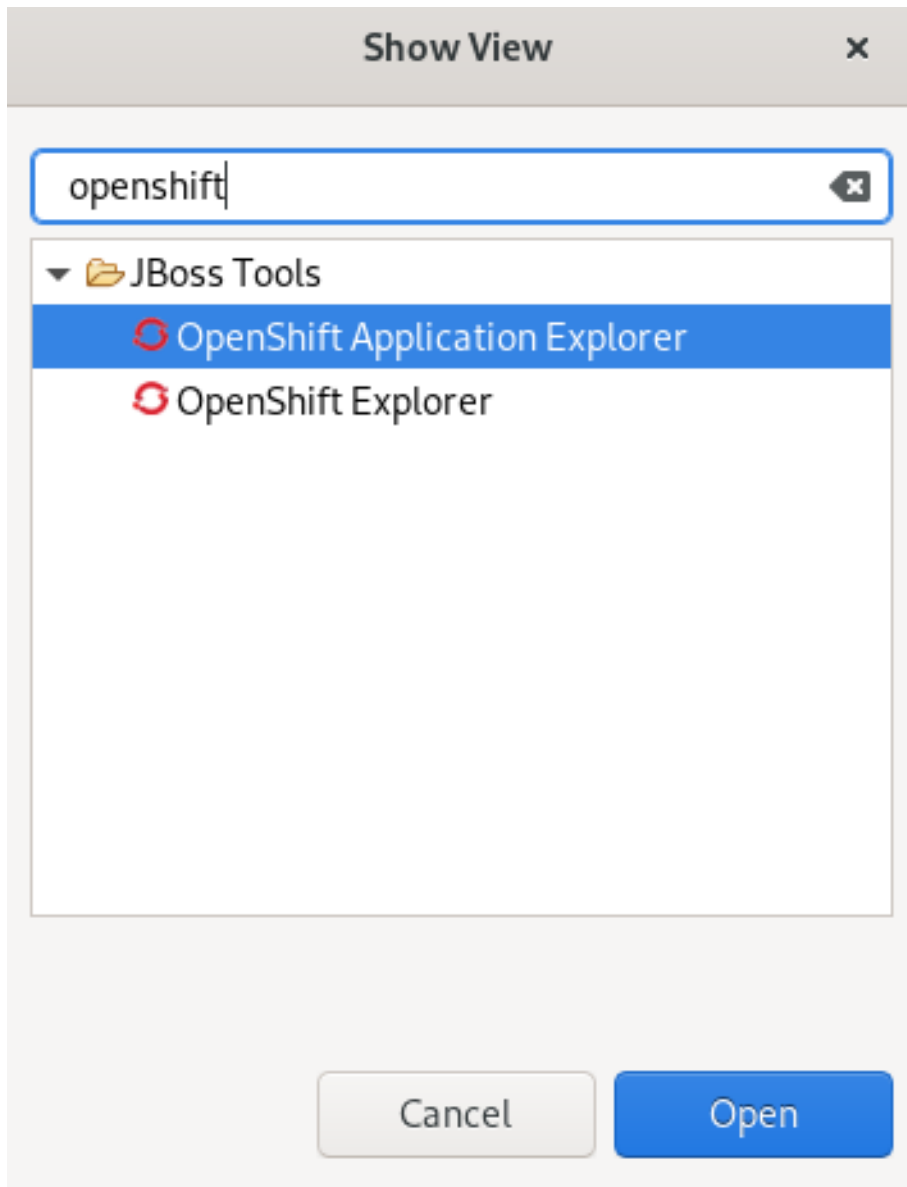
#### Procedure

1. Start CodeReady Studio.
2. Click **Window** → **Show View** → **Other**.

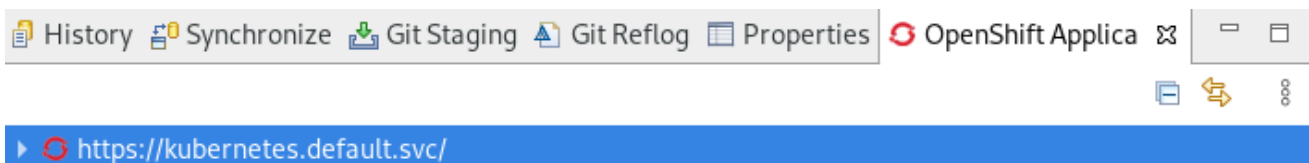


The **Show View** window appears.





3. Enter **OpenShift** in the search field.
4. Select **OpenShift Application Explorer**.
5. Click **Open**.  
The **OpenShift Application Explorer** view appears.

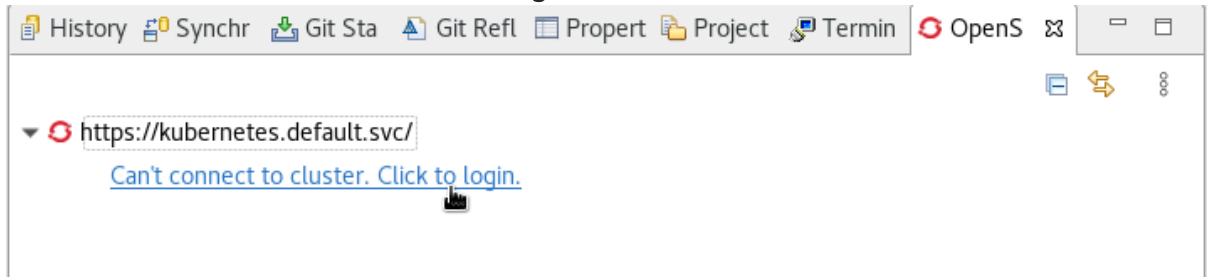


## 5.2. CONNECTING TO THE OPENSIFT CLUSTER USING OPENSIFT APPLICATION EXPLORER

The following section describes how to login to the OpenShift cluster in CodeReady Studio using OpenShift Application Explorer.

### Procedure

1. Start CodeReady Studio.
2. Open **OpenShift Application Explorer**.
3. Click **Can't connect to cluster. Click to login**



The **Login** window appears.

 A screenshot of the 'Login' dialog box. The title bar says 'Login' with a close button. Below the title bar, it says 'Sign in to OpenShift' with the OpenShift logo. A red error icon and text state 'User and password or token must be provided'. The dialog contains four input fields: 'URL:' with 'https://kubernetes.default.svc/' entered, 'Username:', 'Password:', and 'Token:'. At the bottom, there is a help icon (question mark), a 'Cancel' button, and a 'Finish' button.

4. Enter your login credentials.
5. Click the **Finish** button.

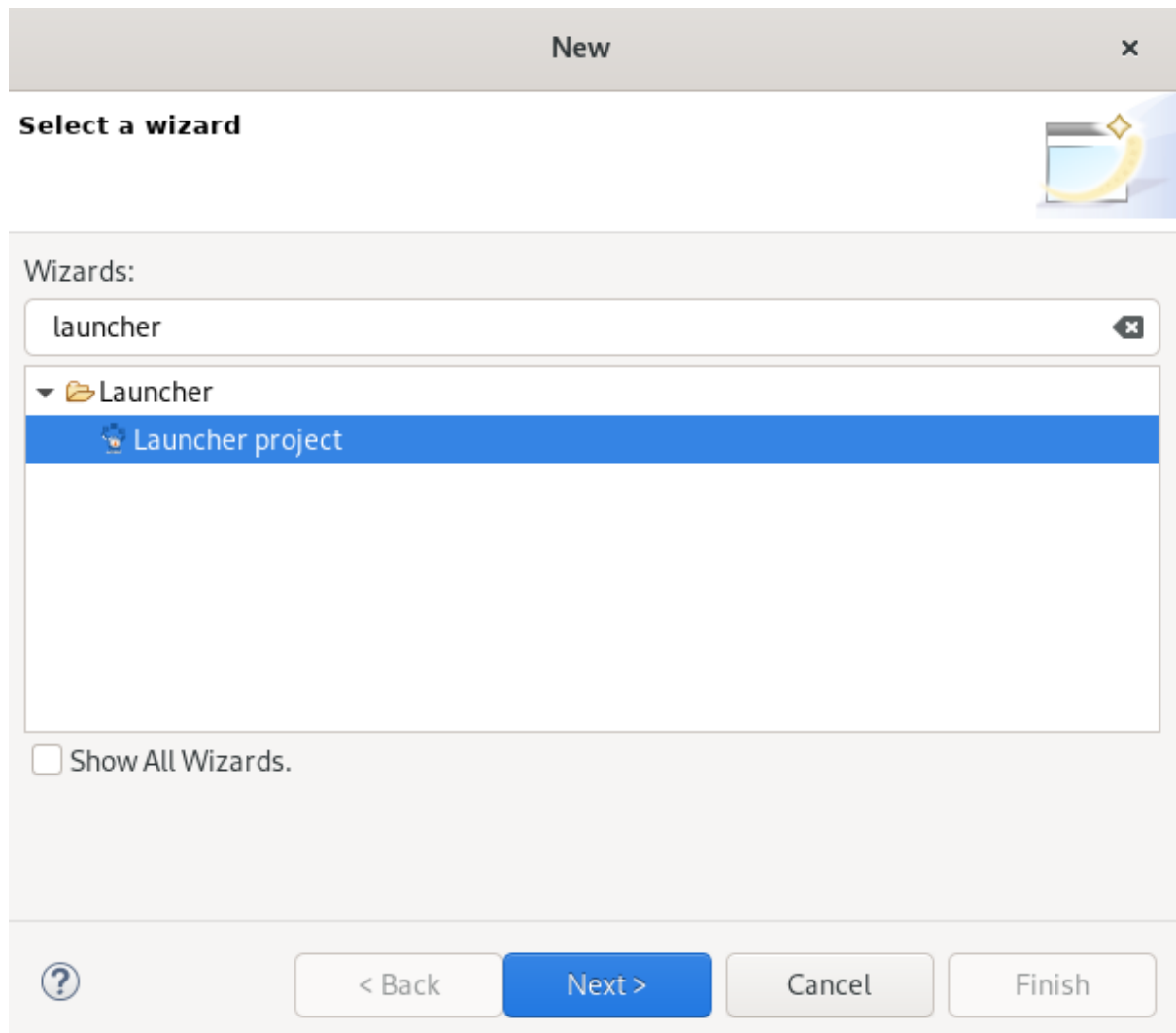
Your projects now appear in the **OpenShift Application Explorer** view.

## 5.3. CREATING A NEW LAUNCHER PROJECT

The following section describes how to create a new launcher project in CodeReady Studio.

### Procedure

1. Start CodeReady Studio.
2. Press **Ctrl+N**.  
The **Select a wizard** window appears.




3. Enter **Launcher** in the search field.
4. Select **Launcher project**.
5. Click **Next**.  
The **New Launcher project** window appears.

New Launcher project ✕

**Generate a project based on mission and runtime.**

Generate an Eclipse project by specifying a mission and runtime variant.



Launcher will generate an application for you. By picking a mission you determine what this application will do. The runtime then picks the software stack that's used to implement this aim.

Mission:

Map business operations to a remote procedure call endpoint over HTTP using a REST framework

Runtime:

Runs a Node.js HTTP application

---

Project name:

Use default location

Location:

---

Maven Artifact:

Artifact id:

Group id:

Version:

?

< Back
Next >
Cancel
Finish

6. Set your preferred **Mission**.
7. Set your preferred **Runtime**.
8. Name your project.
9. Select the location for your project.
10. Click the **Finish** button.

Note that the process of resolving dependencies might take some time to complete.

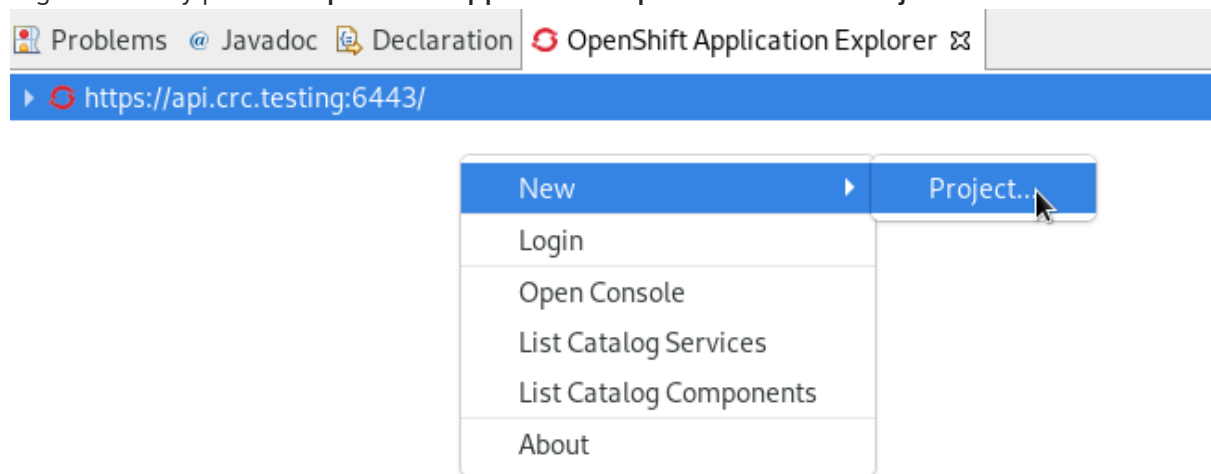
Your newly created launcher project is now listed in the **Project Explorer** view.

## 5.4. CREATING A NEW PROJECT USING OPENSIFT APPLICATION EXPLORER

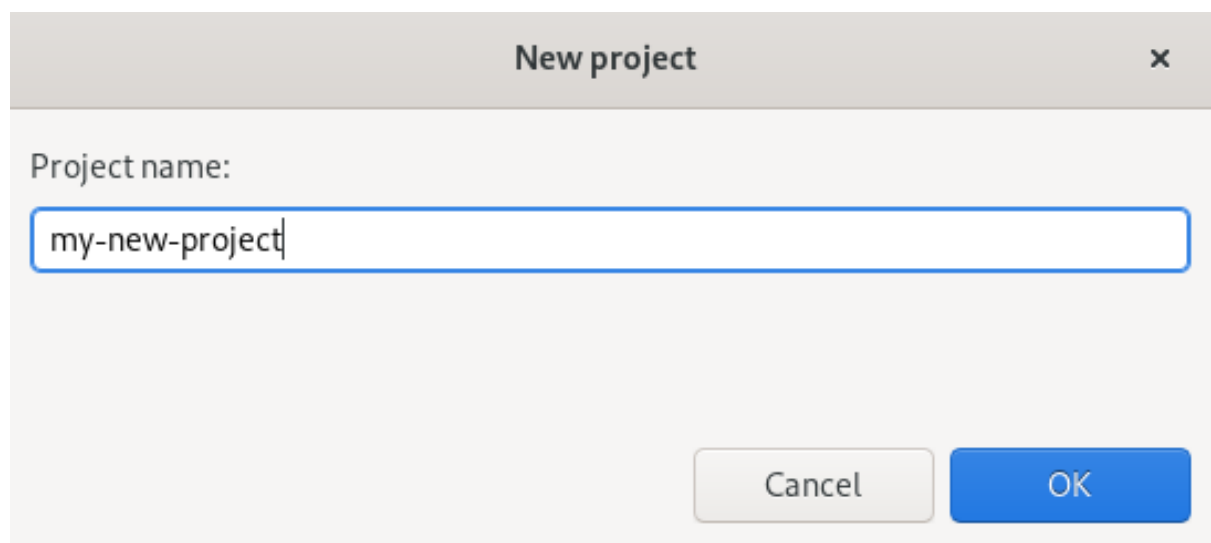
The following section describes how to create a new project using OpenShift Application Explorer in CodeReady Studio.

### Procedure

1. Start CodeReady Studio.
2. Start **OpenShift Application Explorer**.
3. Right-click any place in **OpenShift Application Explorer** → **New** → **Project**.



The **New project** window appears.



4. Name your project.
5. Click **OK**.

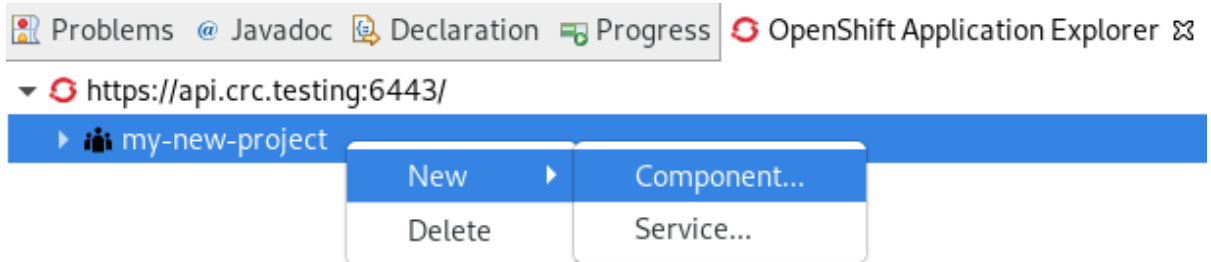
Your newly created project is now listed in the **OpenShift Application Explorer** view.

## 5.5. CREATING A NEW COMPONENT USING OPENSIFT APPLICATION EXPLORER

The following section describes how to create a new component using OpenShift Application Explorer in CodeReady Studio.

### Procedure

1. Start CodeReady Studio.
2. Start **OpenShift Application Explorer**.
3. Right-click the target **Project** → **New** → **Component**.




The **Create component** window appears.

Create component ✕

**Sign in to OpenShift**

Please sign in to your OpenShift server.



**OPENSIFT**

Name:

Eclipse Project:

Component type:  ▼

Component version:  ▼

Application:

Push after create:

?

4. Name your project.
5. Click **Browse** to select the **Eclipse Project**.
6. Set your preferred **Component type**.
7. Set your preferred **Component version**.
8. Name your application.
9. Clear the **Push after create** check box.
10. Click **Finish**.  
The **Console** view appears, displaying the validation process.

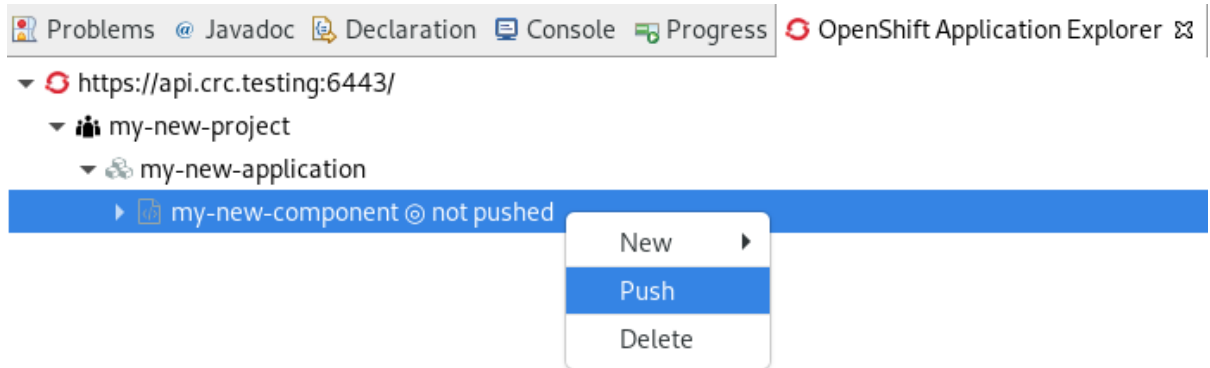
Your newly created component is now listed in the **OpenShift Application Explorer** view under your project.

## 5.6. DEPLOYING A COMPONENT ON CLUSTER USING OPENSIFT APPLICATION EXPLORER

The following section describes how to deploy a component on cluster using OpenShift Application Explorer in CodeReady Studio.

### Procedure

1. Start CodeReady Studio.
2. Start **OpenShift Application Explorer**.
3. Expand your project.
4. Expand your application.
5. Right-click your **component** → **Push**.



The **Console** view appears, displaying the process of file synchronization.

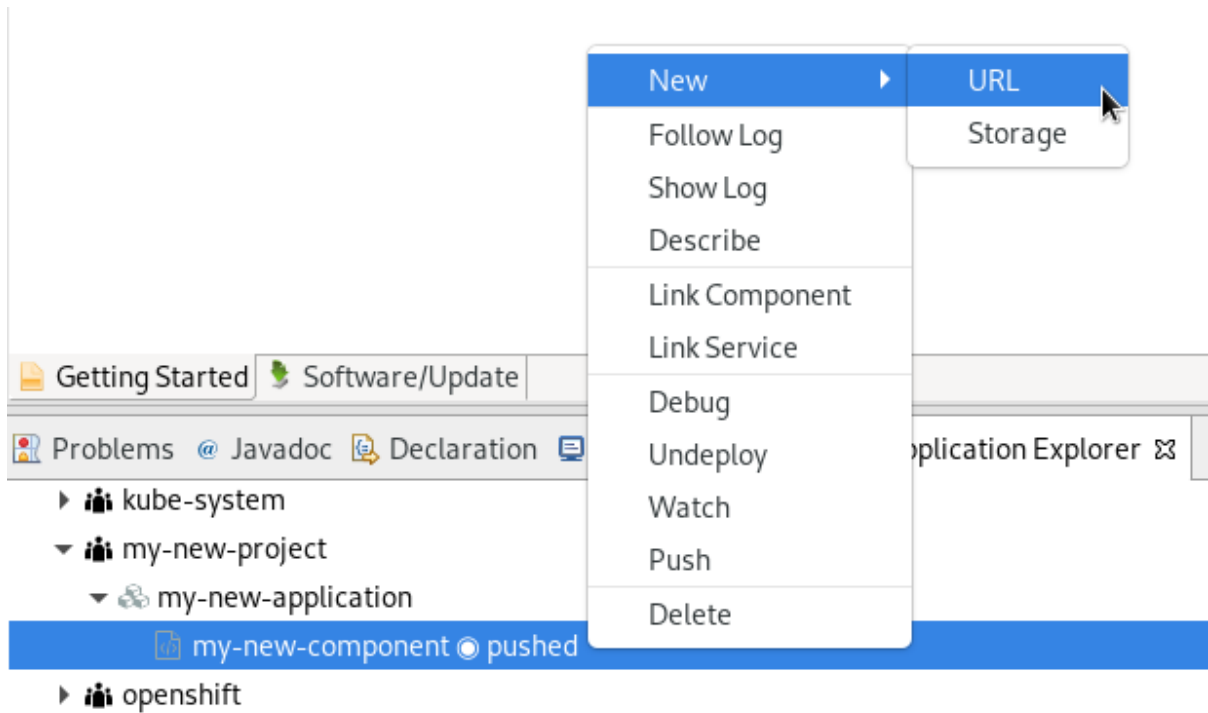
## 5.7. DEFINING AN EXTERNAL ACCESS URL USING OPENSIFT APPLICATION EXPLORER

The following section describes how to define an external access URL using OpenShift Application Explorer in CodeReady Studio.

### Procedure

1. Start CodeReady Studio.
2. Start **OpenShift Application Explorer**.
3. Expand your project.
4. Expand your application.
5. Right-click your **component** → **New** → **URL**.



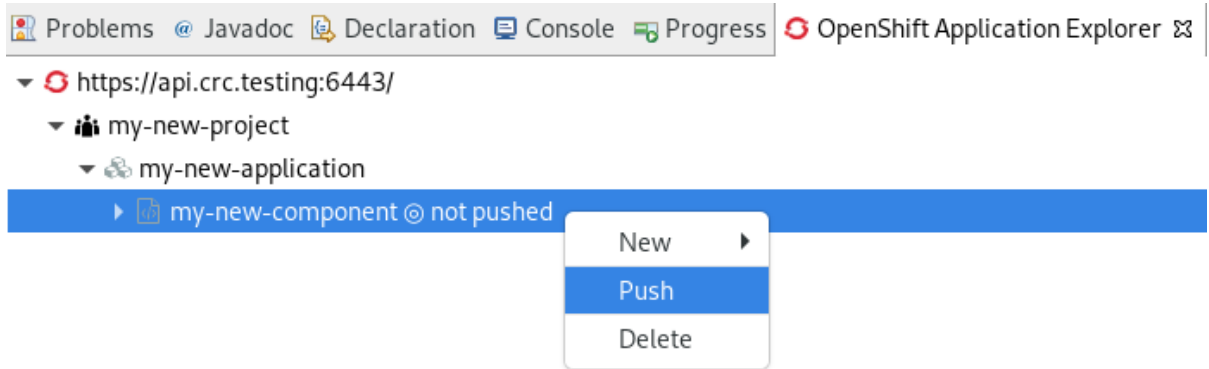


The **Create URL** window appears.

 A screenshot of the 'Create url' dialog box. The title bar says 'Create url' with a close button. Below the title bar, there is a red OpenShift logo and the text 'Create url' followed by instructions: 'Specify a name for the url, choose a port to bind to and select a secure (https) scheme or not.' The dialog contains three input fields: 'Name:' with the text 'my-new-url', 'Port:' with the value '8080', and 'Secure:' with an unchecked checkbox. At the bottom, there are three buttons: a help button (question mark in a circle), a 'Cancel' button, and a 'Finish' button.

6. Name your URL.
7. Set **Port** value to **8080**.
8. Click **Finish**.  
The **Console** view appears, displaying the process of URL creation.

- In **OpenShift Application Explorer**, right-click your **component** → **Push**.



The **Console** view appears, displaying the process of file synchronization.

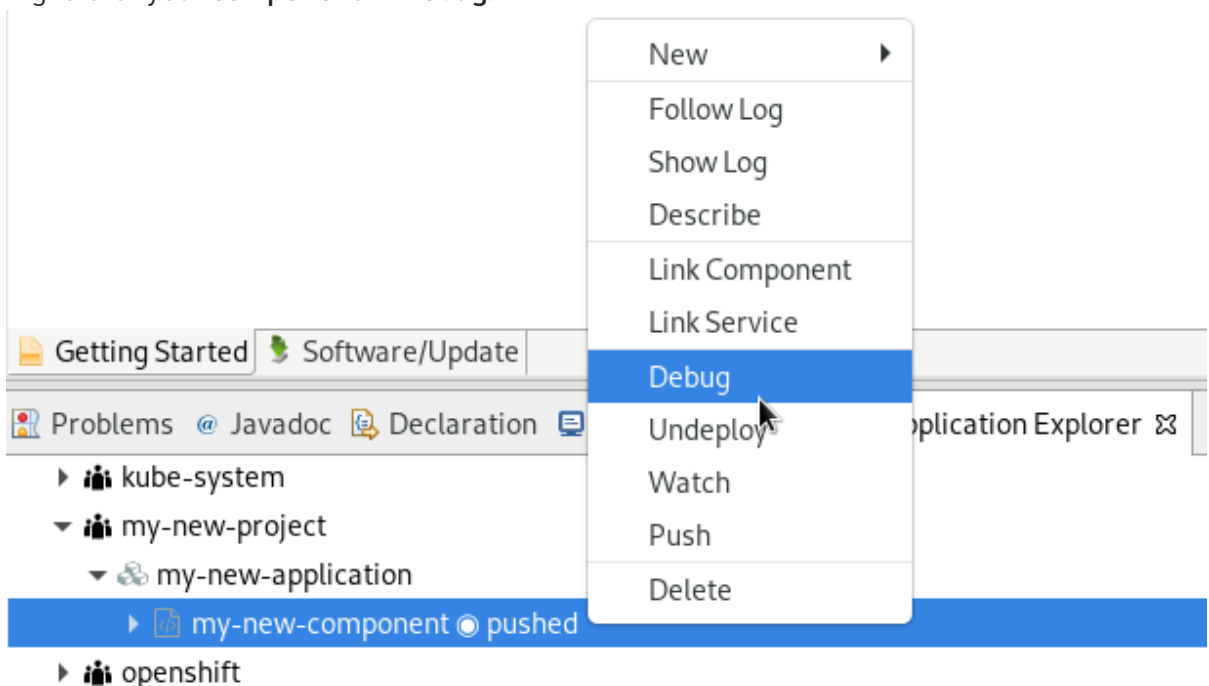
Your newly created URL is now listed in the **OpenShift Application Explorer** view under your component.

## 5.8. DEBUGGING AN APPLICATION ON THE CLUSTER USING OPENSIFT APPLICATION EXPLORER

The following section describes how to debug a component using OpenShift Application Explorer in CodeReady Studio.

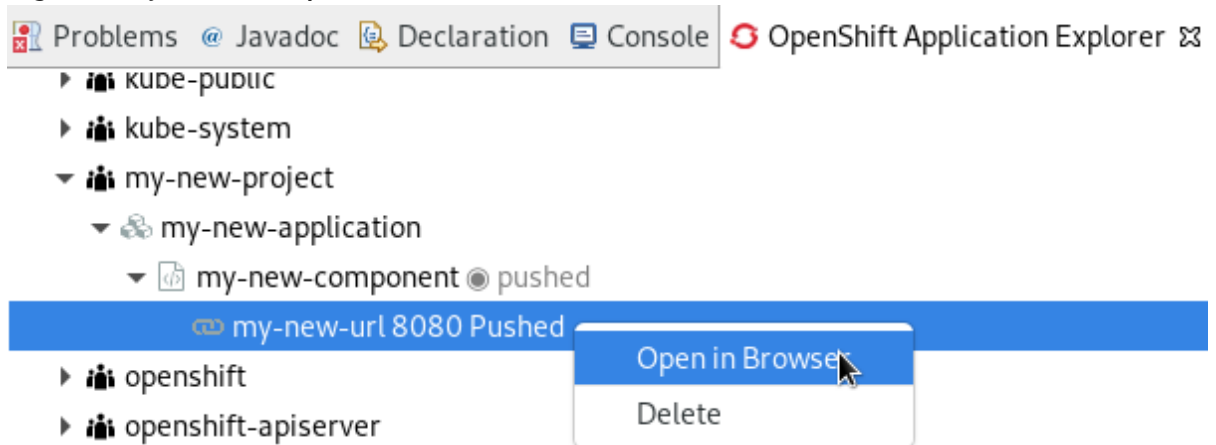
### Procedure

- Start CodeReady Studio.
- Start **OpenShift Application Explorer**.
- Expand your project.
- Expand your application.
- Right-click your **component** → **Debug**.



The **Console** view appears.

6. In **OpenShift Application Explorer**, expand your component.
7. Right-click your **url** → **Open in Browser**.



The **Confirm Perspective Switch** window appears.

8. Click **Switch**.  
The **Debug Perspective** window appears displaying the debugging process.

## CHAPTER 6. QUARKUS TOOLS BASICS IN CODEREADY STUDIO

Quarkus is a Kubernetes-Native full-stack Java framework aimed to optimize work with Java virtual machines. Quarkus provides tools for Quarkus application developers, helping them to reduce the size of Java applications and container image footprint, eliminate programming baggage, and reduce the amount of memory required.

### Prerequisites

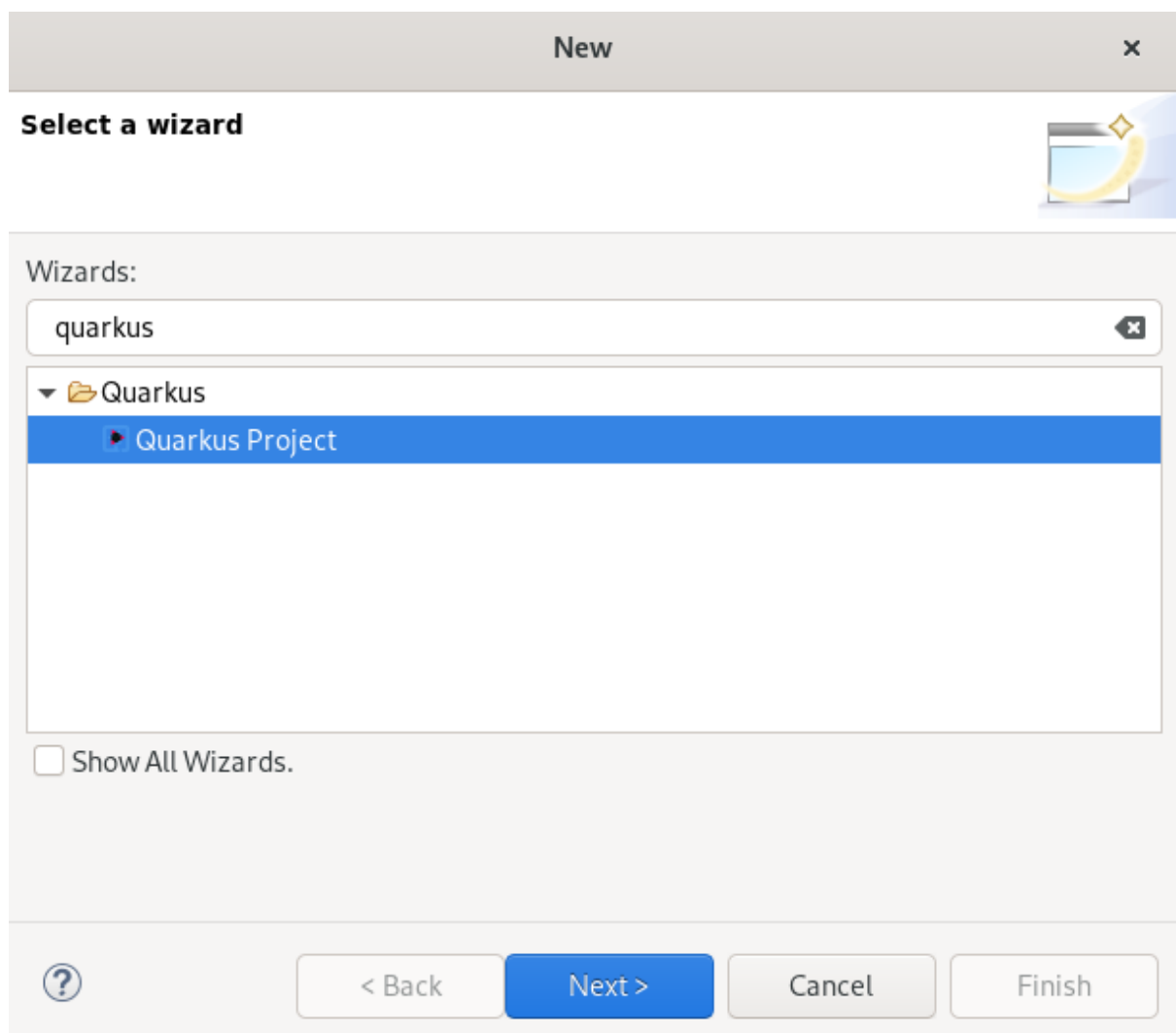
- Ensure that you have the latest version of JBoss Tools installed. For more information, see [JBoss Tools](#).

### 6.1. CREATING A NEW QUARKUS PROJECT

The following section describes how to create a new Quarkus project in CodeReady Studio.

#### Procedure

1. Start CodeReady Studio.
2. Press **Ctrl+N**.  
The **Select a wizard** window appears.



3. Enter **Quarkus** in the search field.
4. Select **Quarkus Project**.
5. Click **Next**.  
The **New Quarkus project** window appears.

**New Quarkus project** x

**Project type**

Select the code.quarkus.io endpoint and project type

code.quarkus.io will generate an application for you. Select the project type according to your favorite build tool. Then select the Quarkus dependencies you plan to use in your application.

Project type: Maven

Project name: my-quarkus-project

Use default location

Location: /home/user/eclipse-workspace/my-quarkus-project


? < Back Next > Cancel Finish

6. Select the appropriate project type.
7. Name your project.
8. Select the location for your project.
9. Click **Next**.  
The **Project type** window appears.

New Quarkus project ✕

### Project type

Select the code.quarkus.io endpoint and project type



Maven Artifact:

Artifact id:

Group id:

Version:

REST:

Class name:

Path:

?

< Back
Next >
Cancel
Finish

10. Ensure that the default values are correct.


11. Click **Next**.

The **Quarkus extensions** window appears.

New Quarkus project ✕

### Quarkus extensions

Select the Quarkus extensions for your project



Clicking on a category will display the extensions in the middle column. Double clicking on an extension will add/remove the extension from the selected extensions list. The current selected extensions are displayed in the third column.

Categories	Extensions	Selected
Web	RESTEasy JAX-RS (Included)	RESTEasy JAX-RS (Included)
Data	RESTEasy JSON-B	RESTEasy Qute (Experimental)
Messaging	RESTEasy Jackson	
Core	Hibernate Validator	
Reactive	REST Client	
Cloud	REST Client JAXB	
Observability	REST Client JSON-B	
Security	REST Client Jackson	
Integration	REST resources for Hibernate ORM with Panache (Experimental)	
Business Automation	RESTEasy JAXB	
Serialization	RESTEasy Mutiny (Preview)	
Miscellaneous	RESTEasy Qute (Experimental)	
Compatibility	Reactive Routes	
Alternative languages	SmallRye GraphQL (Preview)	
	SmallRye JWT	
	SmallRye OpenAPI	
	Undertow Servlet	
	Undertow WebSockets	
	gRPC (Experimental)	

Quute Templating integration for RESTEasy. [Click to open guide](#)

?

< Back
Next >
Cancel
Finish

12. Select the appropriate **Categories** for your projects.  
The available extensions for the selected category are displayed in the **Extensions** column.
13. Select the appropriate **Extensions** for your projects.  
Double-click on the extension to select or deselect it. The selected extensions appear in the **Selected** column.
14. Click **Finish**.

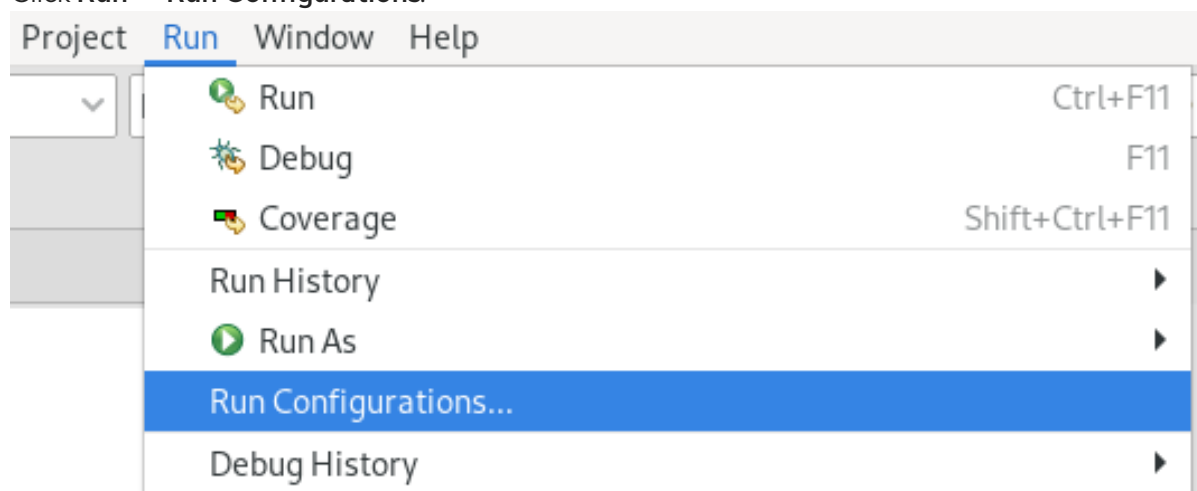
Your newly created Quarkus project is now listed in the **Project Explorer** view.

## 6.2. RUNNING A QUARKUS APPLICATION

The following section describes how to run a Quarkus application in CodeReady Studio.

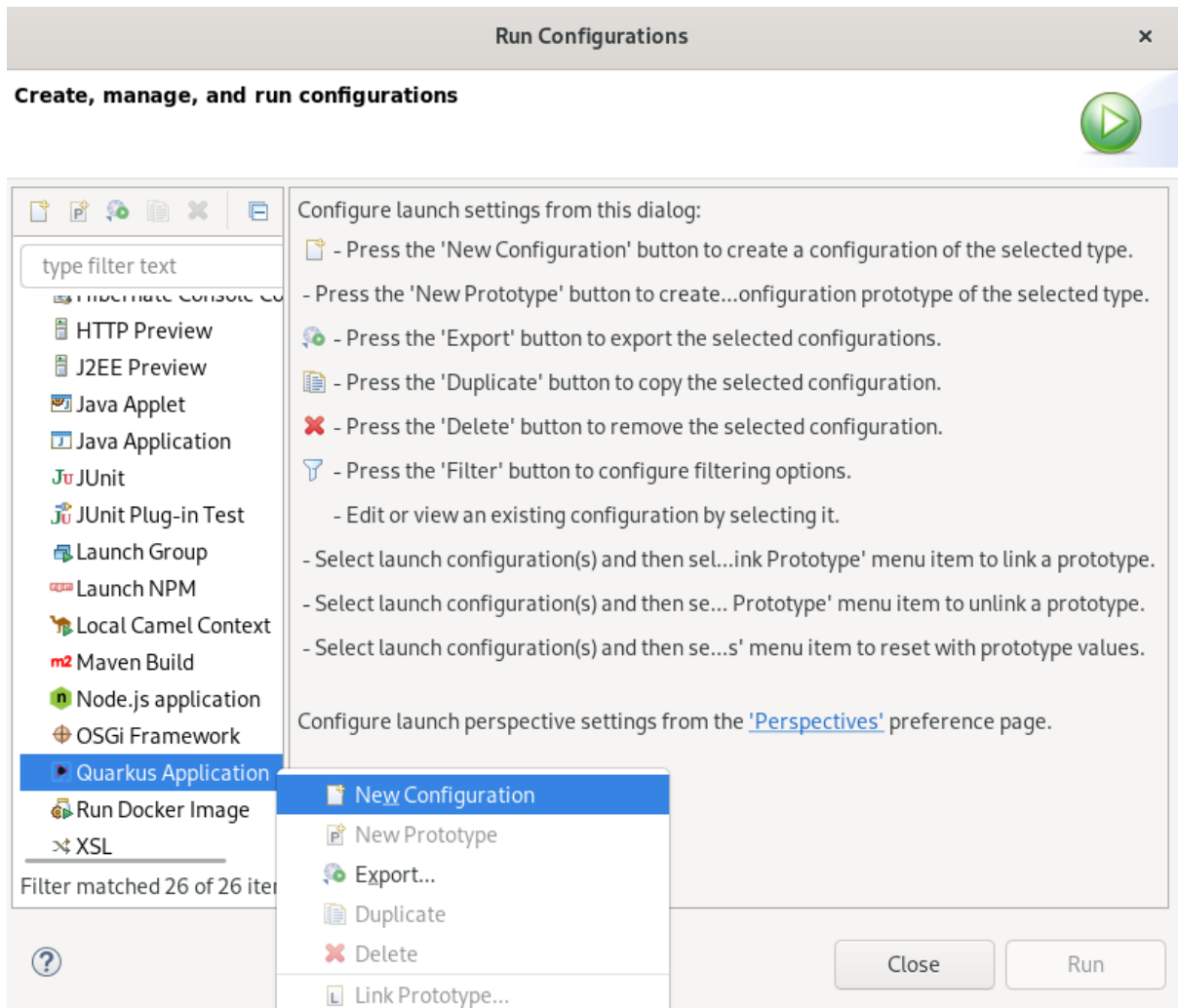
### Procedure

1. Start CodeReady Studio.
2. Click **Run** → **Run Configurations**.

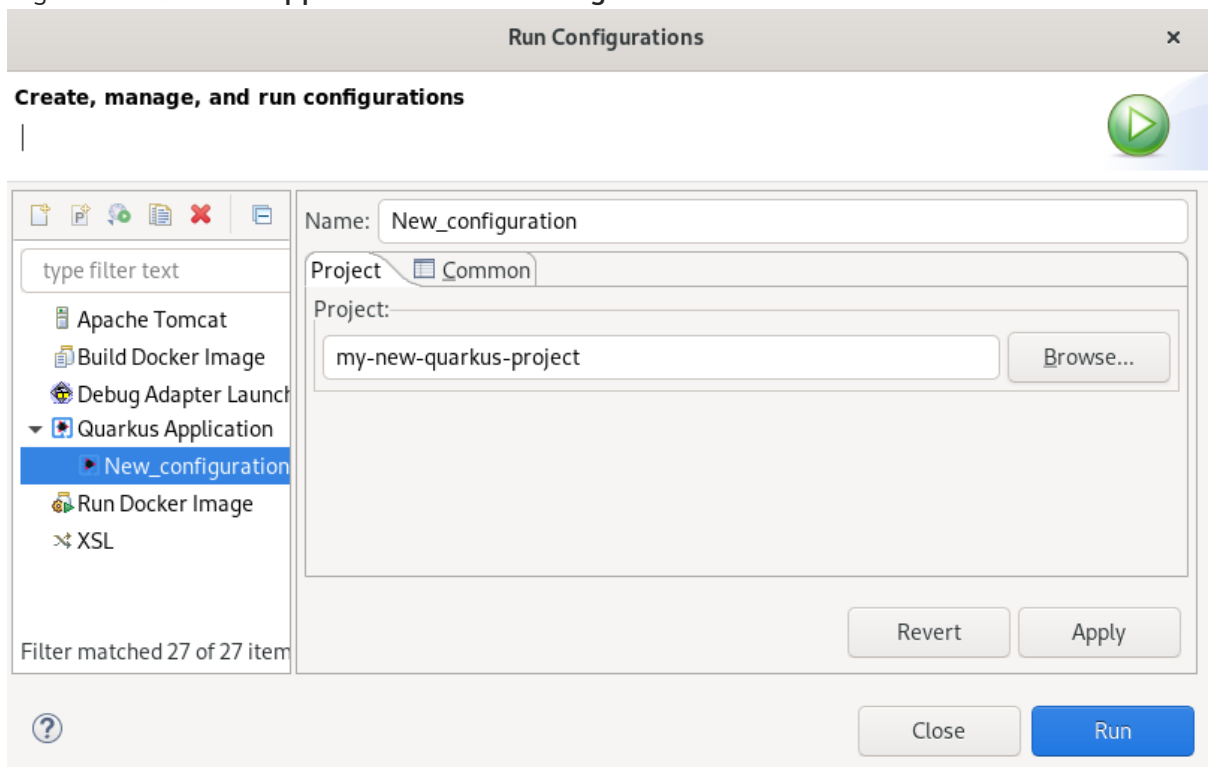


The **Run Configurations** window appears.

3. Scroll down to **Quarkus Application**.



4. Right-click **Quarkus Application** → **New Configuration**.



5. Name your configuration.
6. Click **Browse** to locate your project.



7. Click **Apply**.
8. Click **Run**.  
The **Console** view appears.

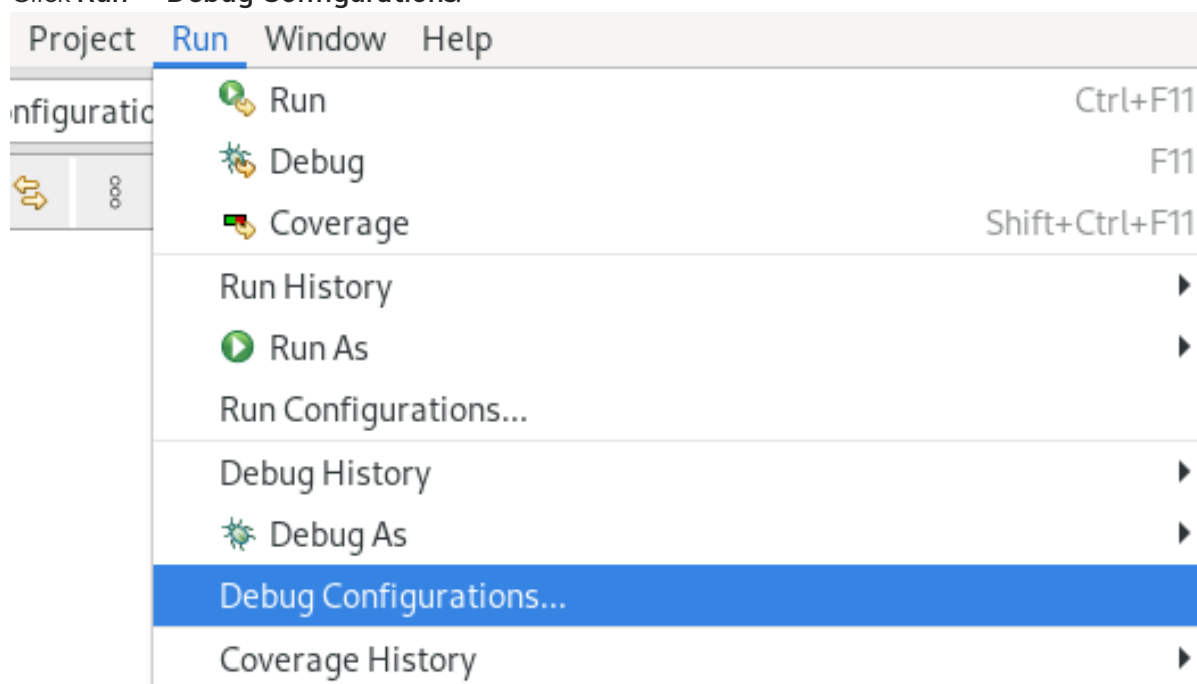
Your application will start after the built process.

## 6.3. DEBUGGING A QUARKUS APPLICATION

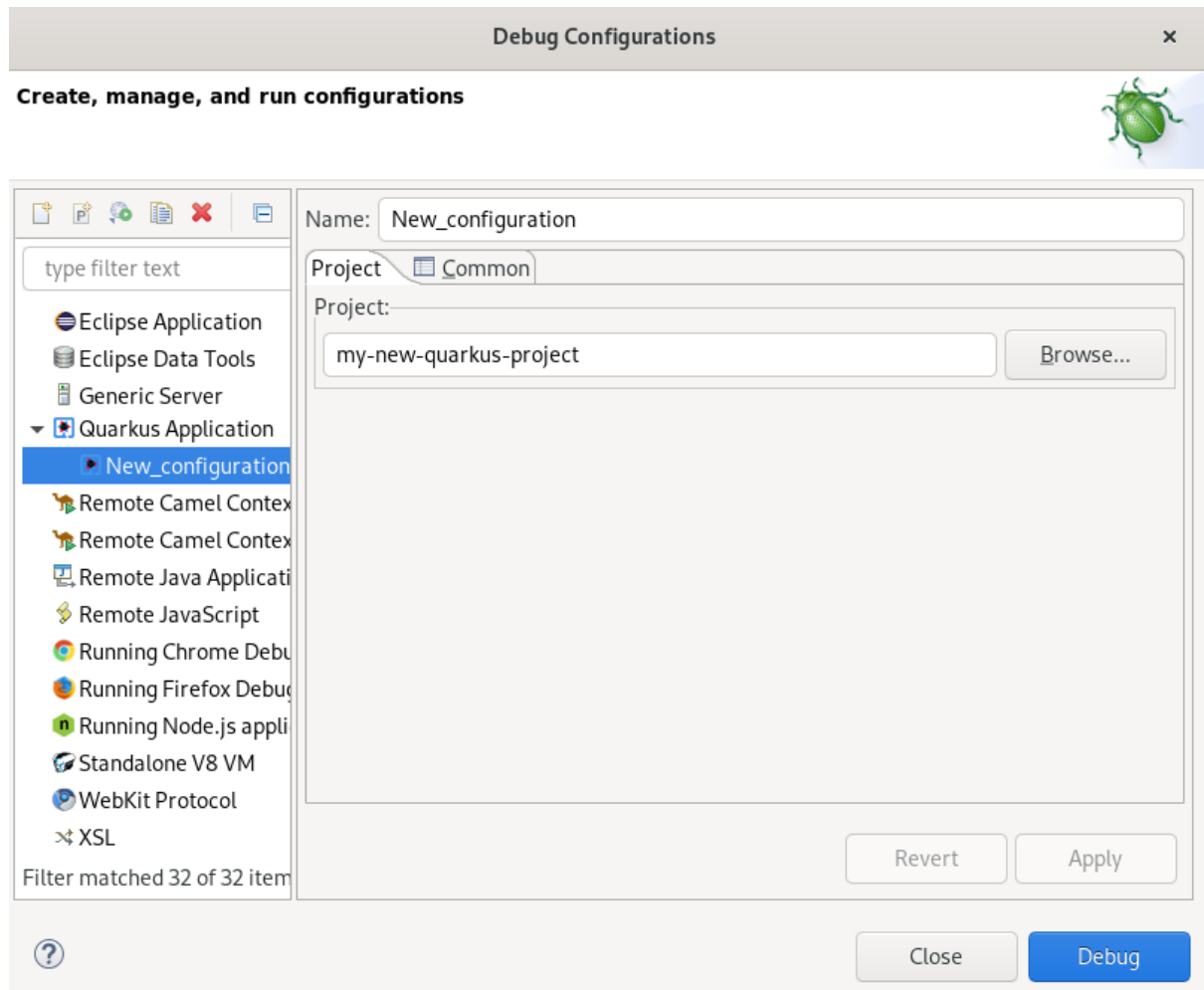
The following section describes how to debug a Quarkus application in CodeReady Studio.

### Procedure

1. Start CodeReady Studio.
2. Click **Run** → **Debug Configurations**.



The **Debug Configurations** window appears.



3. Expand your **Quarkus Application**.
4. Select your configuration.
5. Click **Debug**.  
The **Console** view appears.

Your Quarkus application starts and connects to a remote JVM debug configuration. If you set breakpoints in your application source files, the execution automatically stops after reaching the breakpoint.

## 6.4. USING LANGUAGE SUPPORT IN CODEREADY STUDIO

Every Quarkus application is configured through an **application.properties** configuration file. The content of this configuration file is dependent of the set of Quarkus extensions that your application is using.

Quarkus Tools includes content assist which provides code completion, validation, and documentation. Code completion allows you to quickly complete statements in your code. Multiple choices are available to you via popups.

This language support is now available for Kubernetes, OpenShift, S2i, Docker properties, MicroProfile REST Client properties, and MicroProfile Health artifacts.

### 6.4.1. Using Quarkus code completion

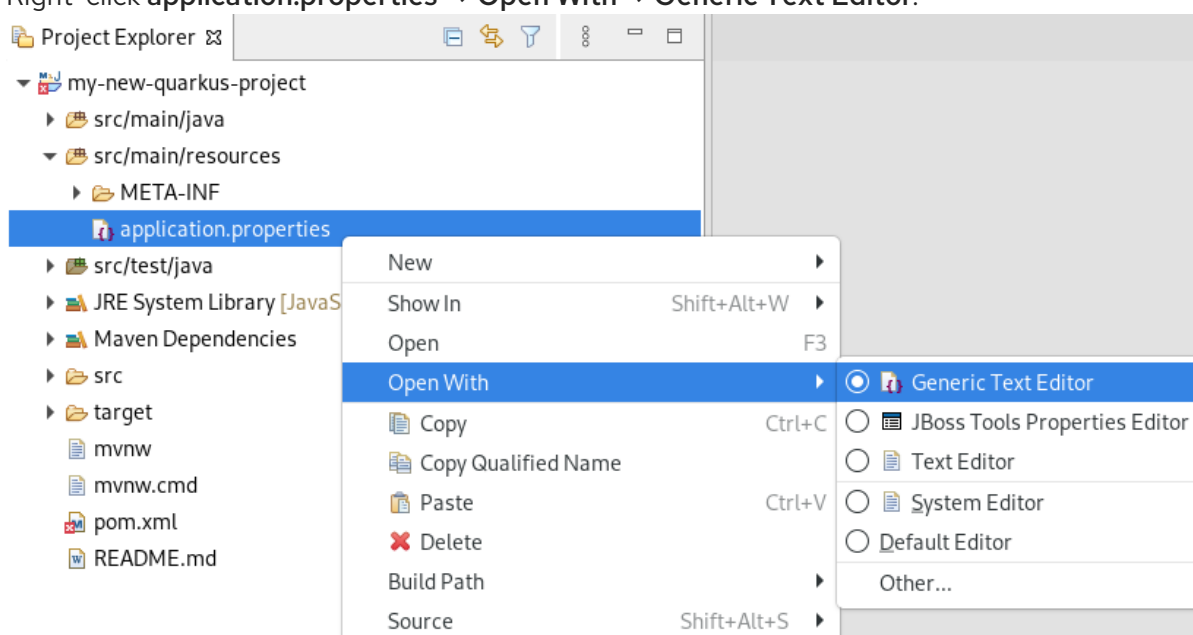
The following section describes how to use Quarkus **application.properties** content assist in CodeReady Studio.

## Prerequisites

- An existing Quarkus project.  
For more information on how to create a Quarkus project, see [Section 6.1, “Creating a new Quarkus project”](#)

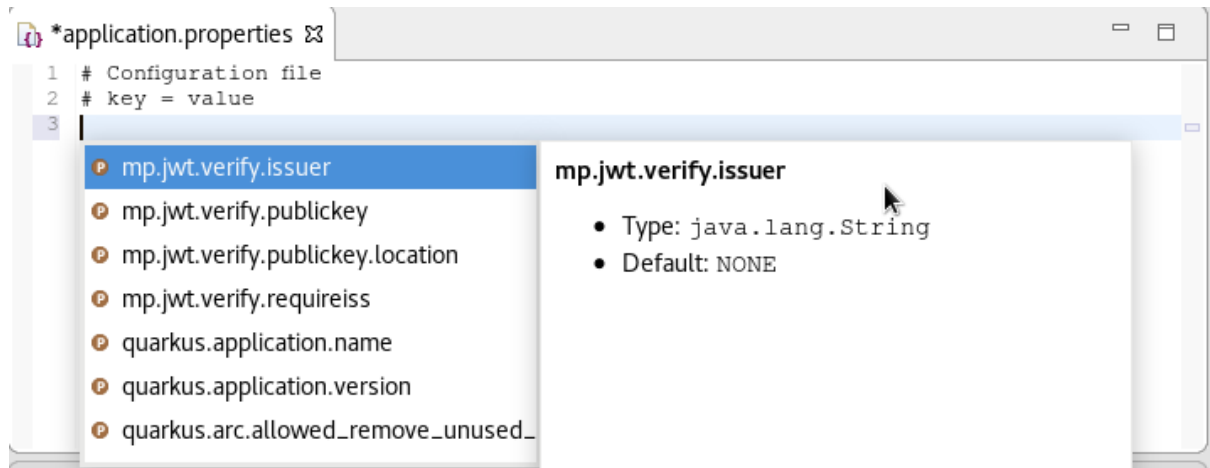
## Procedure

1. Start CodeReady Studio.
2. Start **Project Explorer**.
3. Expand your **Quarkus project** → **src** → **main** → **resources**.
4. Right-click **application.properties** → **Open With** → **Generic Text Editor**.

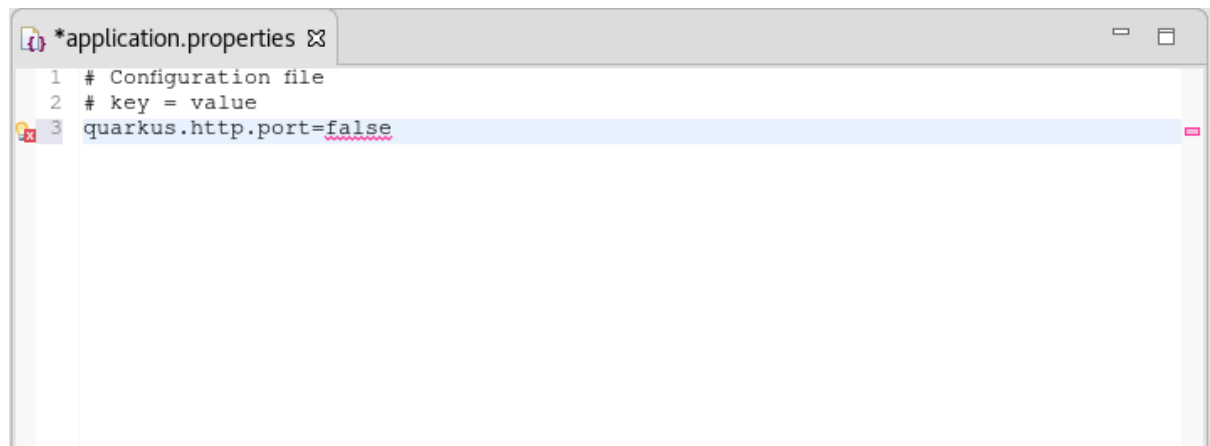


The **Text Editor** window appears.

5. Navigate to an empty line.
6. Press **Ctrl+Space** to invoke code completion.  
The code completion suggestions appear. Hover the mouse over the suggestions to display documentation.



If you enter a wrong value, the editor underlines the error with a red wavy line.



### Additional resources

- Language support for MicroProfile REST Client properties and MicroProfile Health artifacts need to be enabled separately. For more information, see [Section 6.4.2, "Enabling language support for MicroProfile"](#).

## 6.4.2. Enabling language support for MicroProfile

The following section describes how to enable language support for MicroProfile REST Client properties.

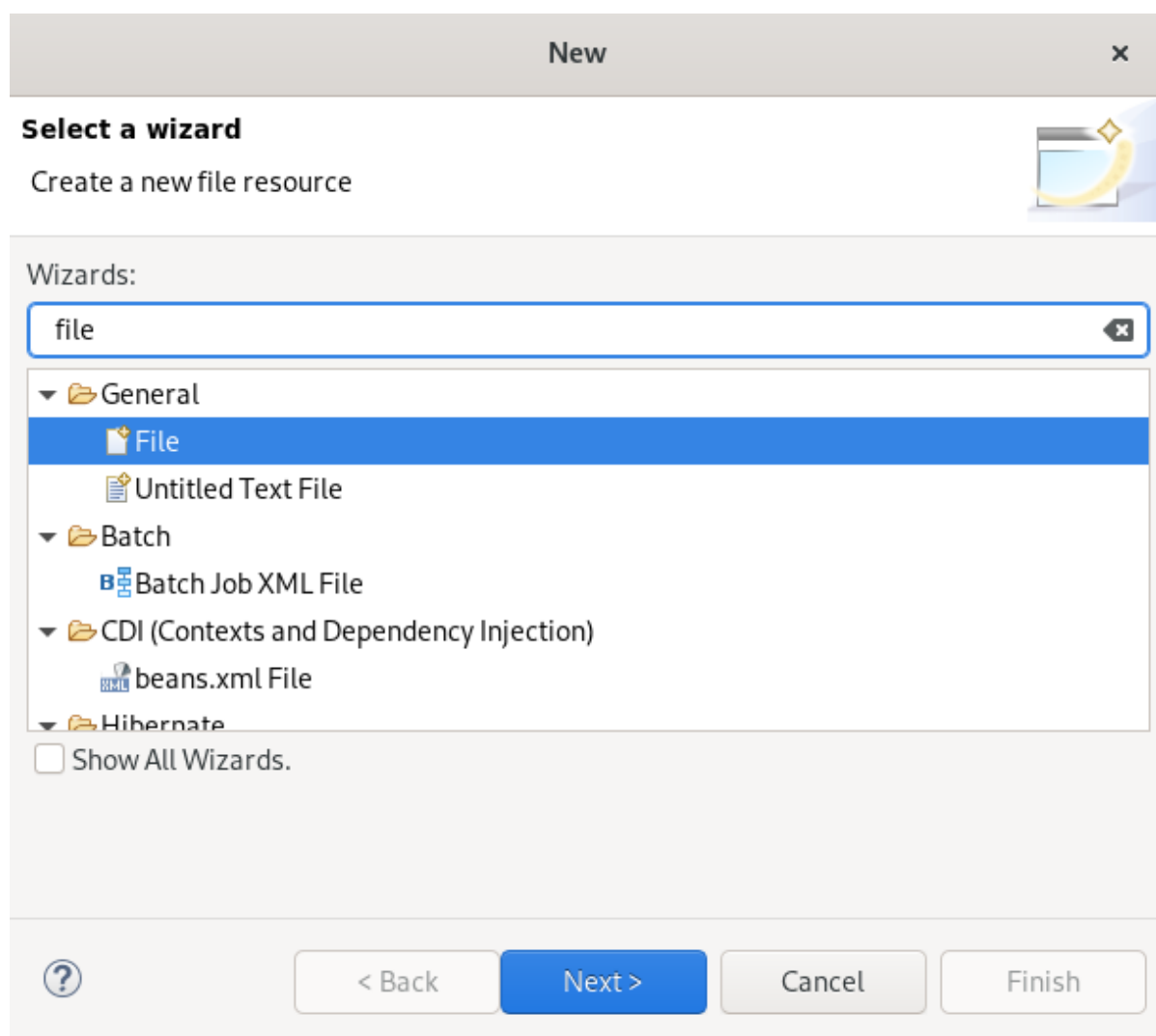
### Prerequisites

- An existing Quarkus project.  
For more information on how to create a Quarkus project, see [Section 6.1, "Creating a new Quarkus project"](#)

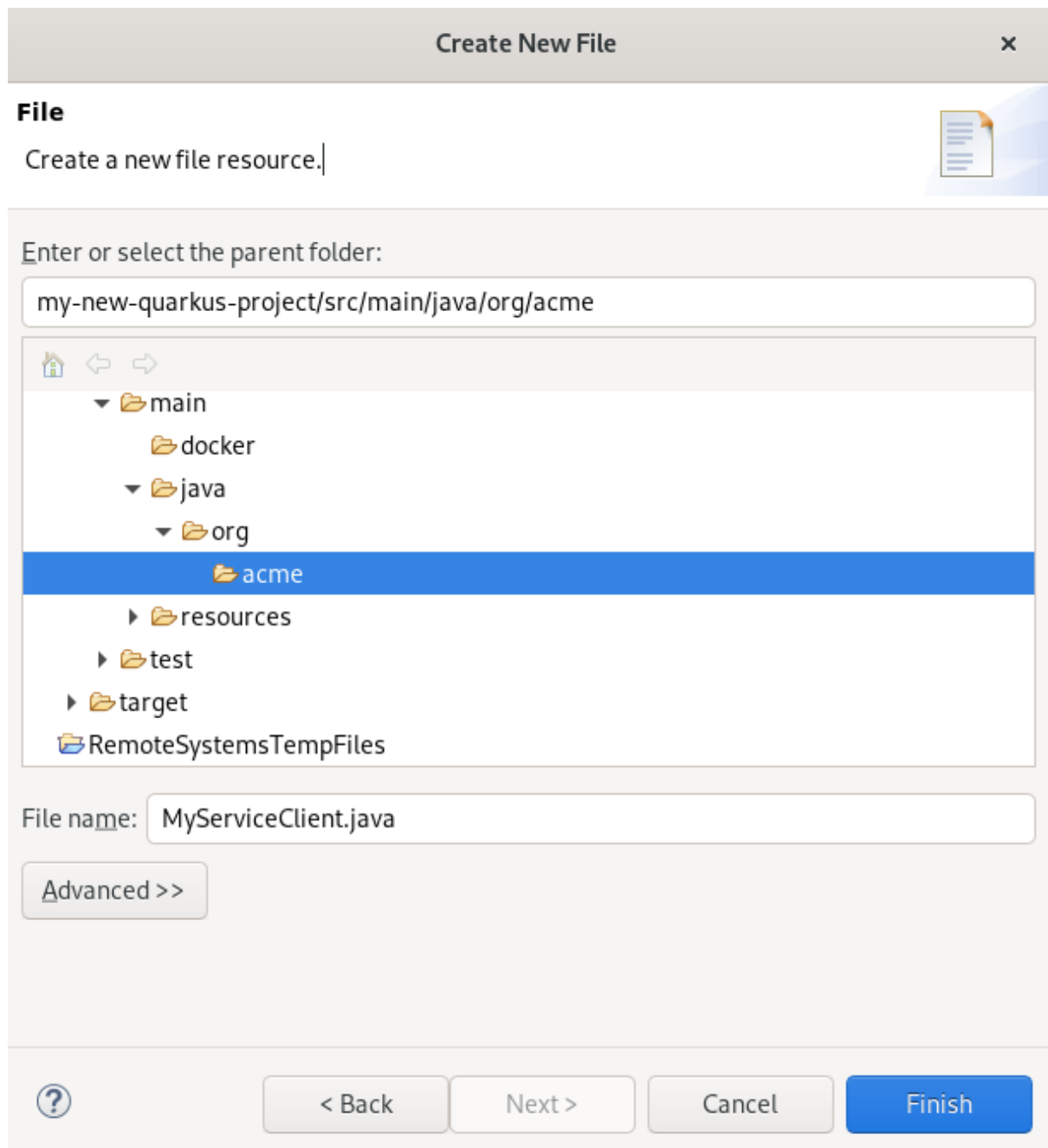
### Procedure

1. Start CodeReady Studio.
2. Start **Project Explorer**.
3. Expand your **Quarkus project** → `src/main/java`.
4. Right-click `org.acme` → **New** → **Other**.

The **Select wizard** window appears.



5. Enter **file** in the search field.
6. Select **File**.
7. Click the **Next** button.  
The **Create a new file resource** window appears.



8. Name your new file.
9. Click **Finish**.
10. Paste the following content into your newly created file:

```
package org.acme;

import javax.ws.rs.GET;
import javax.ws.rs.Path;
import javax.ws.rs.core.Response;

import org.eclipse.microprofile.rest.client.inject.RegisterRestClient;

@RegisterRestClient
public interface MyServiceClient {
    @GET
```

```
    @Path("/greet")  
    Response greet();  
}
```

11. Press **Ctrl+S** to save the changes.

Note that you can adjust the language support by changing the configuration key for the client from **@RegisterRestClient** to **@RegisterRestClient(configKey = "myclient")**. The language support will be adjusted accordingly.

### Additional resources

- For more information on how to use language support, see [Section 6.4.1, "Using Quarkus code completion"](#).

## CHAPTER 7. HIBERNATE TOOLS BASICS IN CODEREADY STUDIO

Hibernate Tools is a collection of tools for projects related to Hibernate version 5 and earlier. The tools provide Eclipse plugins for reverse engineering, code generation, visualization, and interaction with Hibernate.

### Prerequisites

1. Download the [h2 version of the Sakila database](#).
2. Navigate to the directory that contains the **runh2.sh** file.
3. Execute the **runh2.sh** file:

```
█ $ ./runh2.sh
```

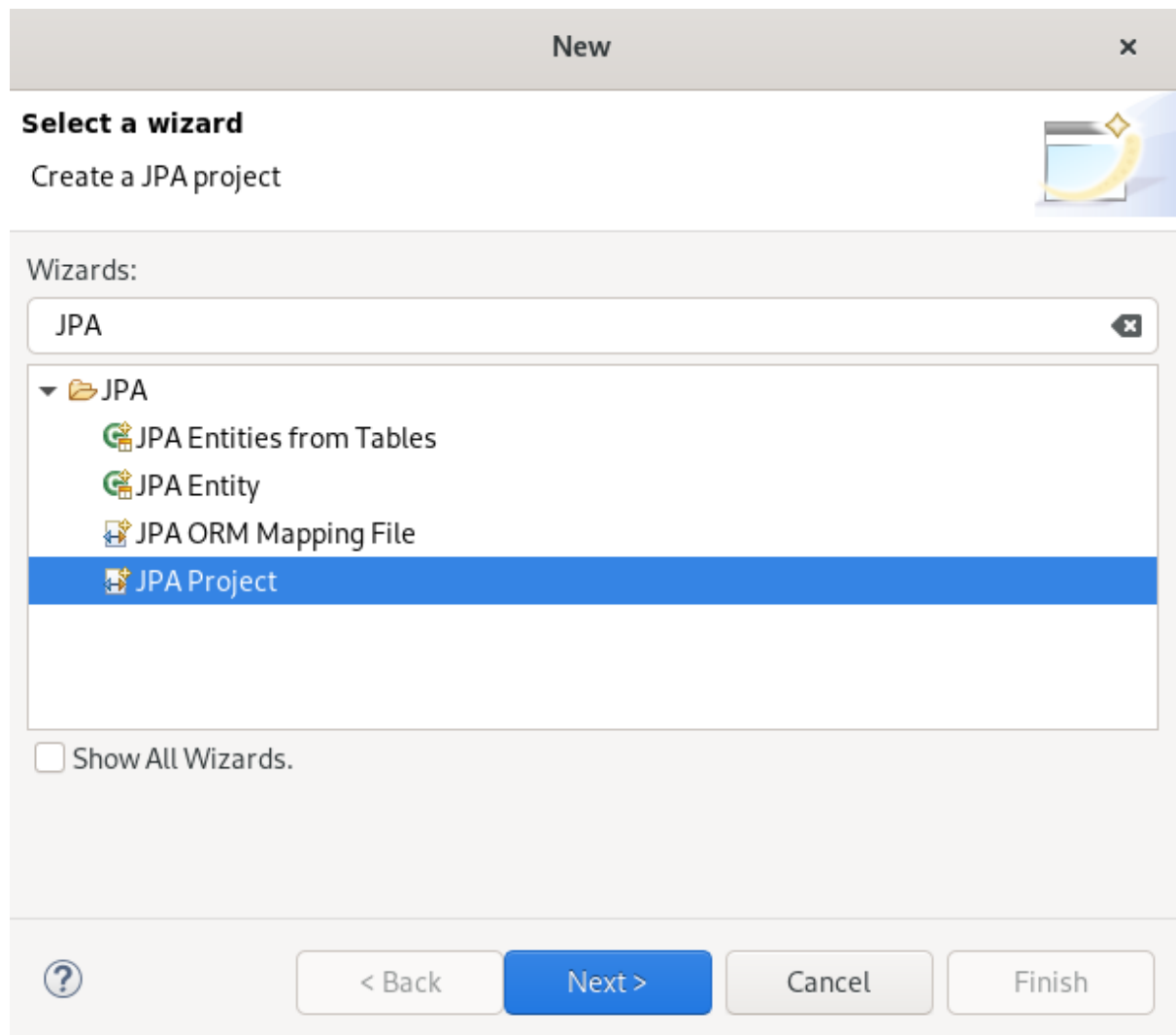
### 7.1. CREATING A NEW JPA PROJECT

The following section describes how to create a new JPA project in CodeReady Studio. The section assumes you completed the steps listed in the prerequisites section.

#### Procedure

1. Start CodeReady Studio.
2. Press **Ctrl+N**.  
The **Select a Wizard** window appears.






3. Enter **JPA** in the search field.
4. Select **JPA Project**.
5. Click **Next**.  
The **New JPA Project** window appears.

New JPA Project ✕

### JPA Project

Configure JPA project settings. 

Project name:

Project location

Use default location

Location:  Browse...

Target runtime

New Runtime...

JPA version

Configuration

Modify...

Hint: Get started quickly by selecting one of the pre-defined project configurations.

EAR membership

Add project to an EAR

EAR project name:  New Project ...

Working sets

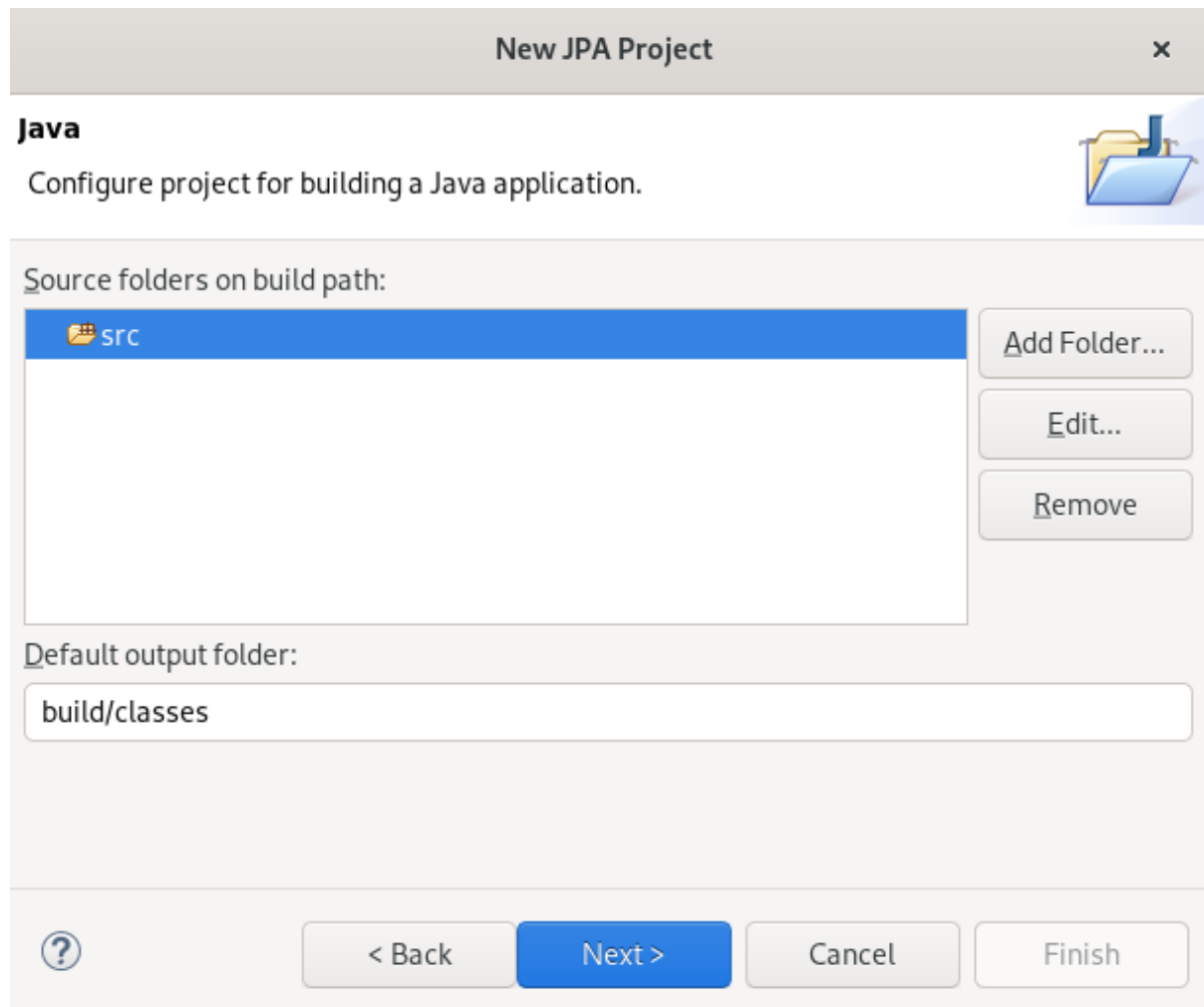
Add project to working sets New...

Working sets:  Select...

? Help
< Back
Next >
Cancel
Finish

6. Name your project.
7. Select the location for your project.
8. Click the down-arrow in the **Target runtime** field to select the runtime server.


9. Set the **JPA version** to 2.1.
10. Click **Next**.  
The **Java** window appears.




11. Select the source folder.
12. Click **Next**.  
The **JPA Facet** window appears.

New JPA Project ✕

### JPA Facet



 Library configuration is disabled. The user may need to configure further classpath changes later.

Platform

▼
Hibernate (JPA 2.1)

JPA implementation

Type: Disable Library Configuration ▼

The JPA facet requires a JPA implementation library to be present on the project classpath. By disabling library configuration, the user takes on the responsibility of ensuring that the classpath is configured appropriately via alternate means.

Connection

▼
<None>


[Add connection...](#)  
Connect

13. Click the down-arrow in the **Platform** field and select **Hibernate (JPA 2.1)**.
14. Add user libraries or set the **JPA Implementation Type** to **Disable Library Configuration**. For more information on how to set up user libraries, see [Section 7.2, "Adding libraries"](#).
15. Click **Add connection**.  
The **Connection Profile** window appears.

New Connection Profile ✕


### Connection Profile

Create a Generic JDBC connection profile.



Connection Profile Types:


▼
generic

 Generic JDBC

Name:

sakila

Description (optional):



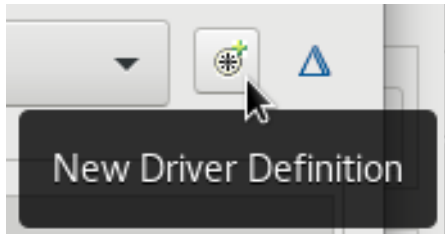
< Back

Next >

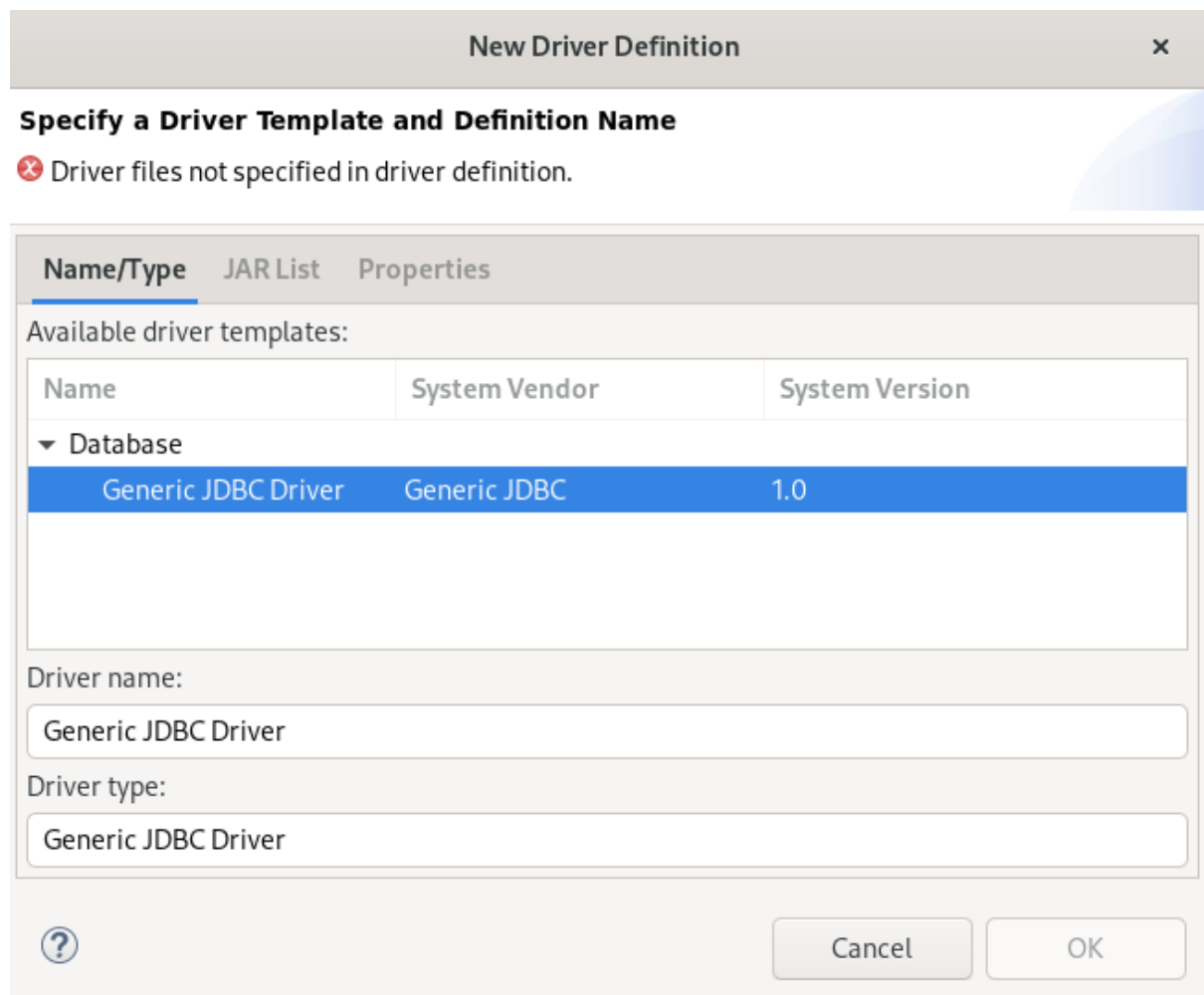
Cancel

Finish

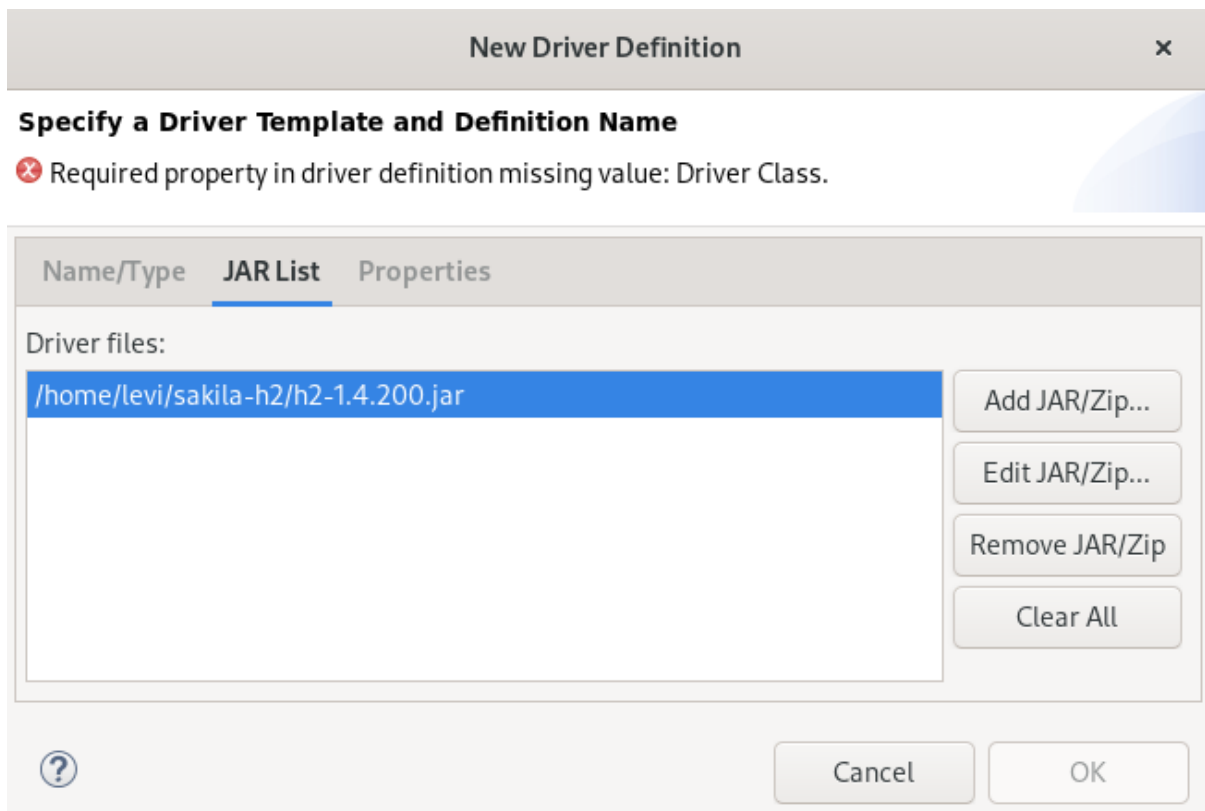
16. Enter **Generic** in the search field.
17. Select **Generic JDBC**.
18. Enter **sakila** in the **Name** field.
19. Click **Next**.  
The **Specify a Driver and Connection Details** window appears.
20. Click the **New Driver Definition** icon.



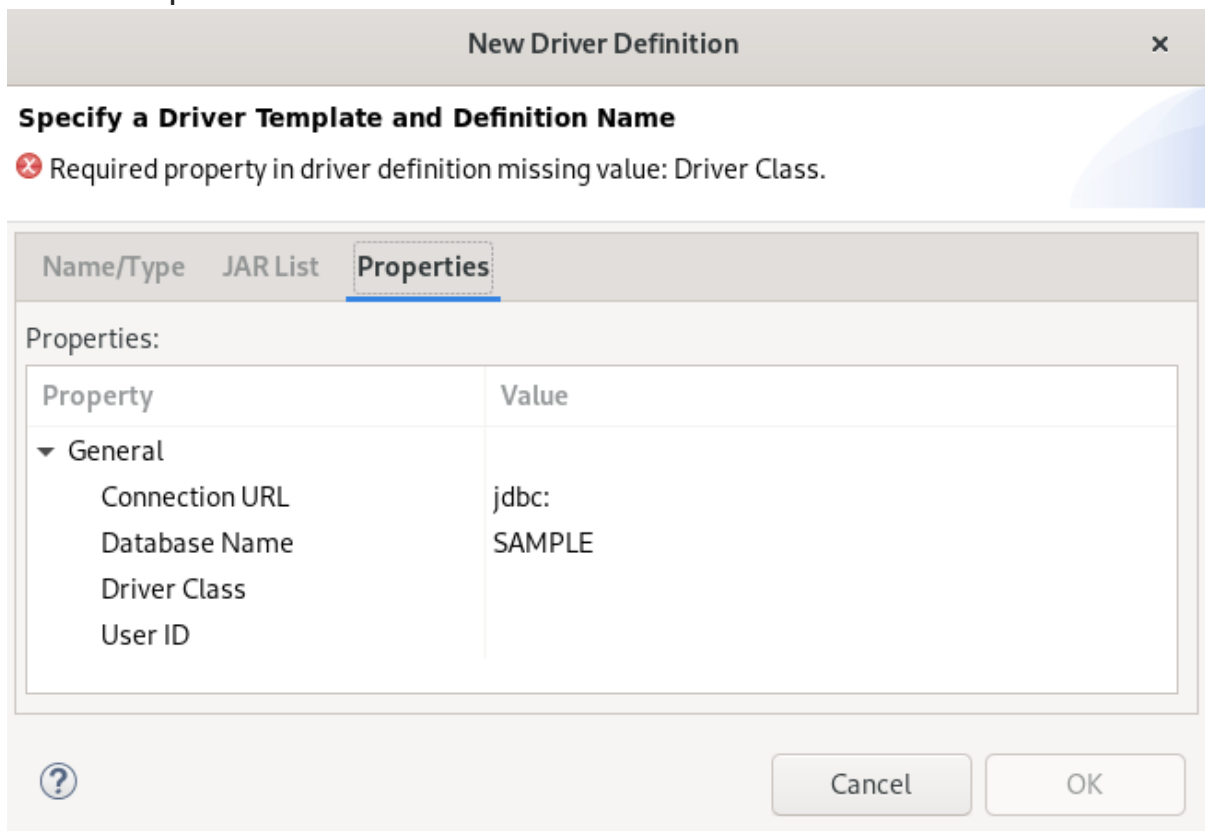
The **New Driver Definition** window appears.



21. Select the **Generic JDBC Driver**.
22. Click the **JAR List** tab.

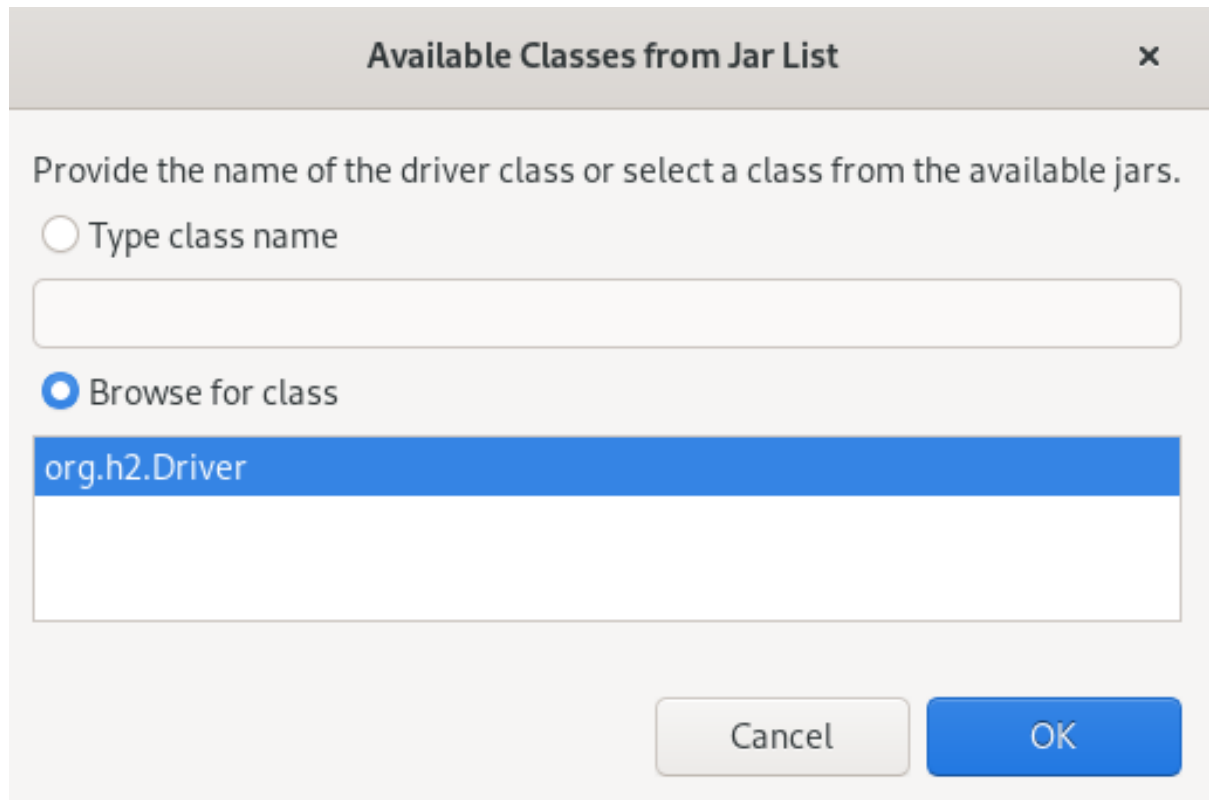


23. Click the **Add JAR/Zip** button.
24. Select the **.jar** file for the Sakila database.
25. Click the **Properties** tab.

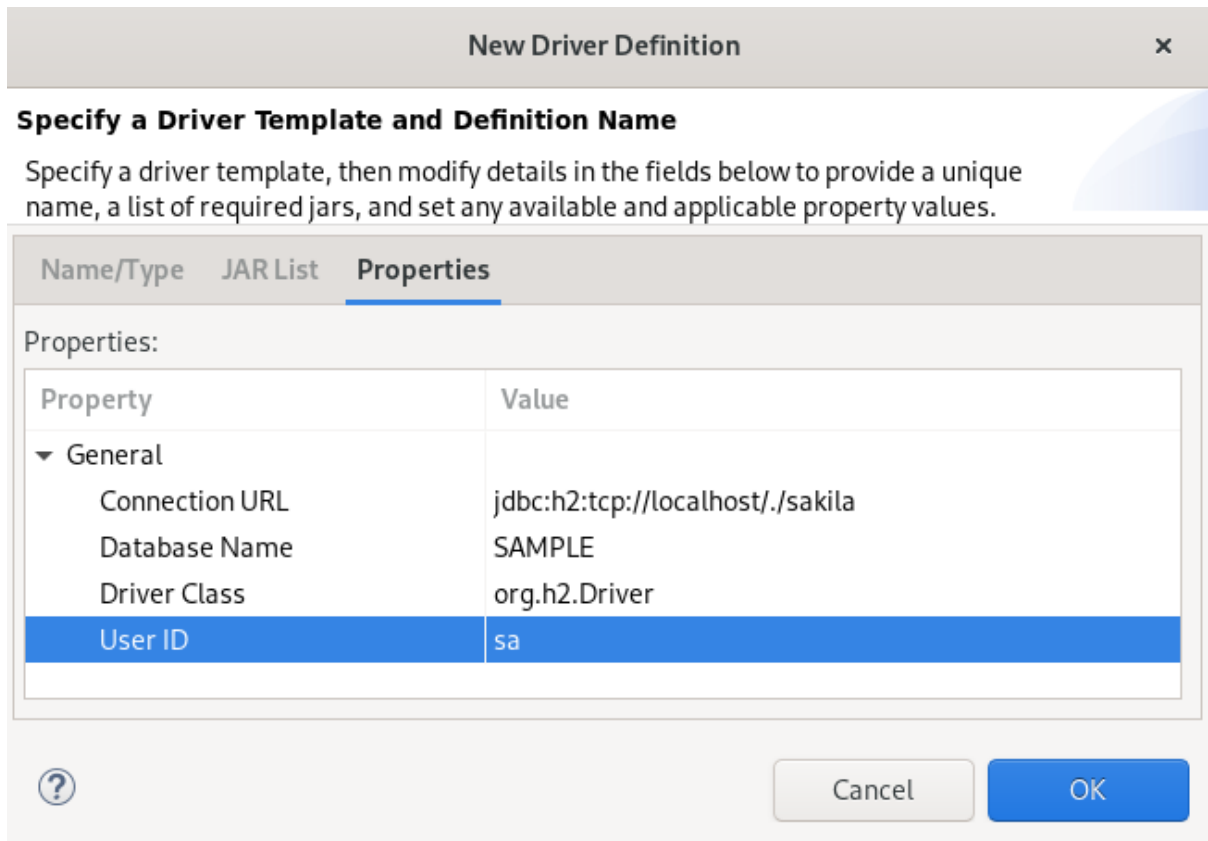


26. Add **jdbc:h2:tcp://localhost/./sakila** to the **Connection URL** field.
27. Click the **Driver Class** field.

28. Click the three dots icon at the end of the **Driver Class** field.  
The **Available Classes from Jar List** window appears.



29. Select the **Browse the Class** option.
30. Select **org.h2.Driver**.
31. Click **OK**.
32. Enter **sa** in the **User ID** field.



33. Click **OK** → **Finish** → **Finish**.

Your newly created JPA project is now listed in the **Project Explorer**.

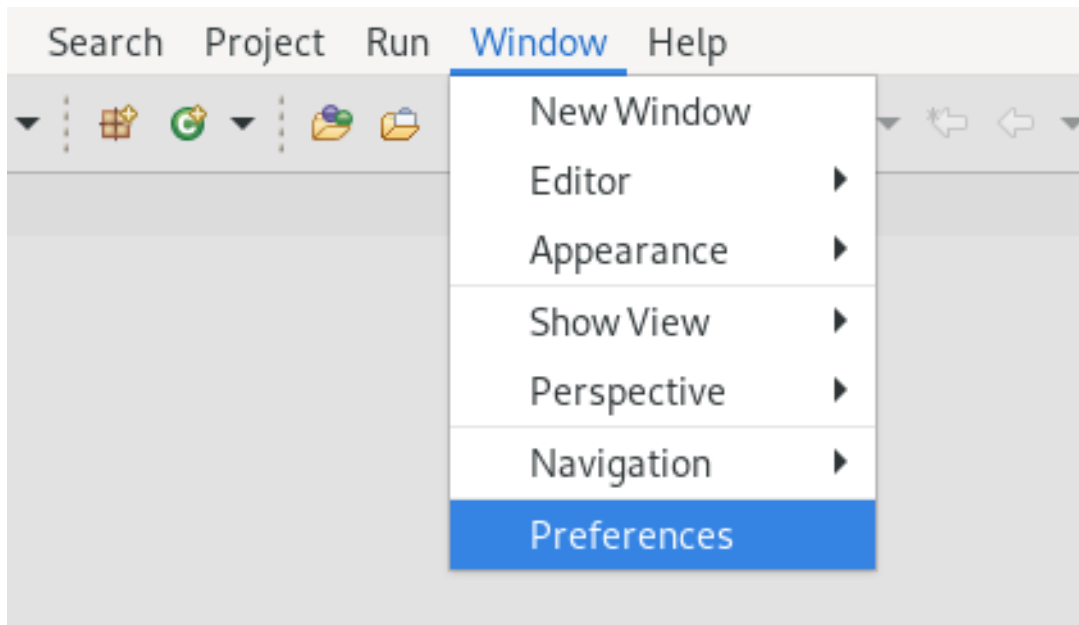
## 7.2. ADDING LIBRARIES

The following section describes how to add libraries to your Hibernate project in CodeReady Studio.

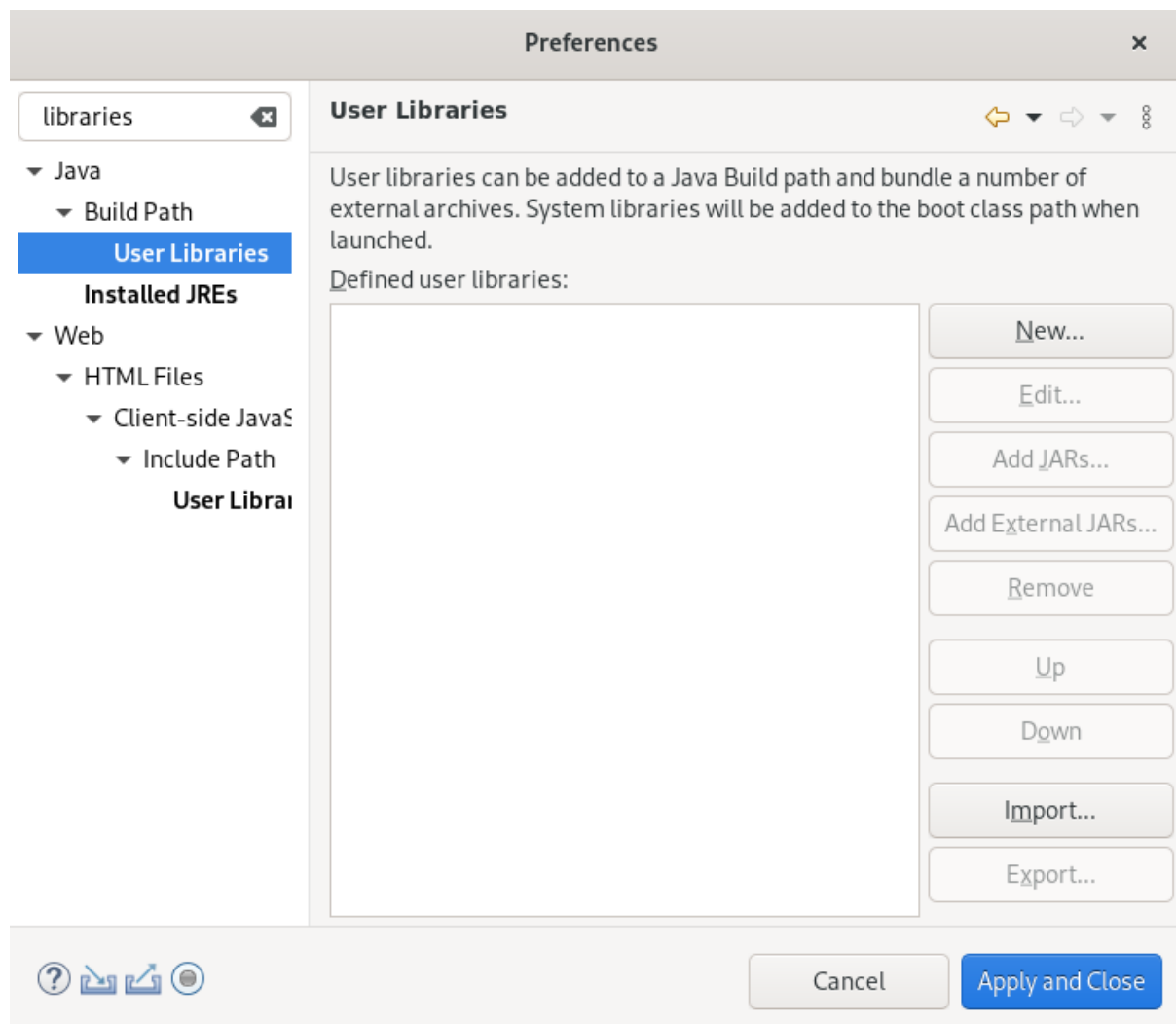
### Procedure

1. Download [Hibernate ORM](#).
2. Extract the files.
3. Start CodeReady Studio.
4. Click **Window** → **Preferences**.





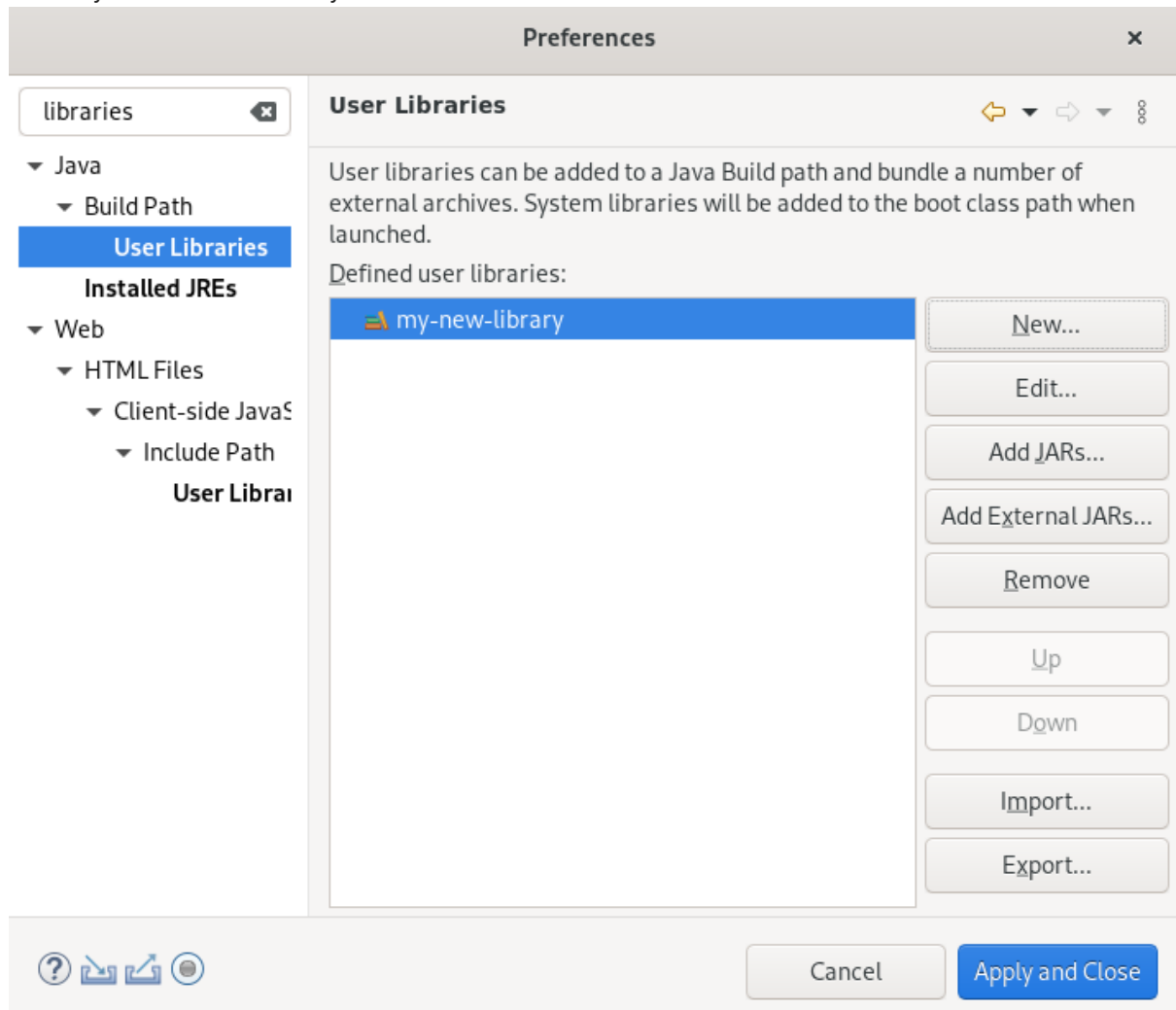
The **Preferences** window appears.



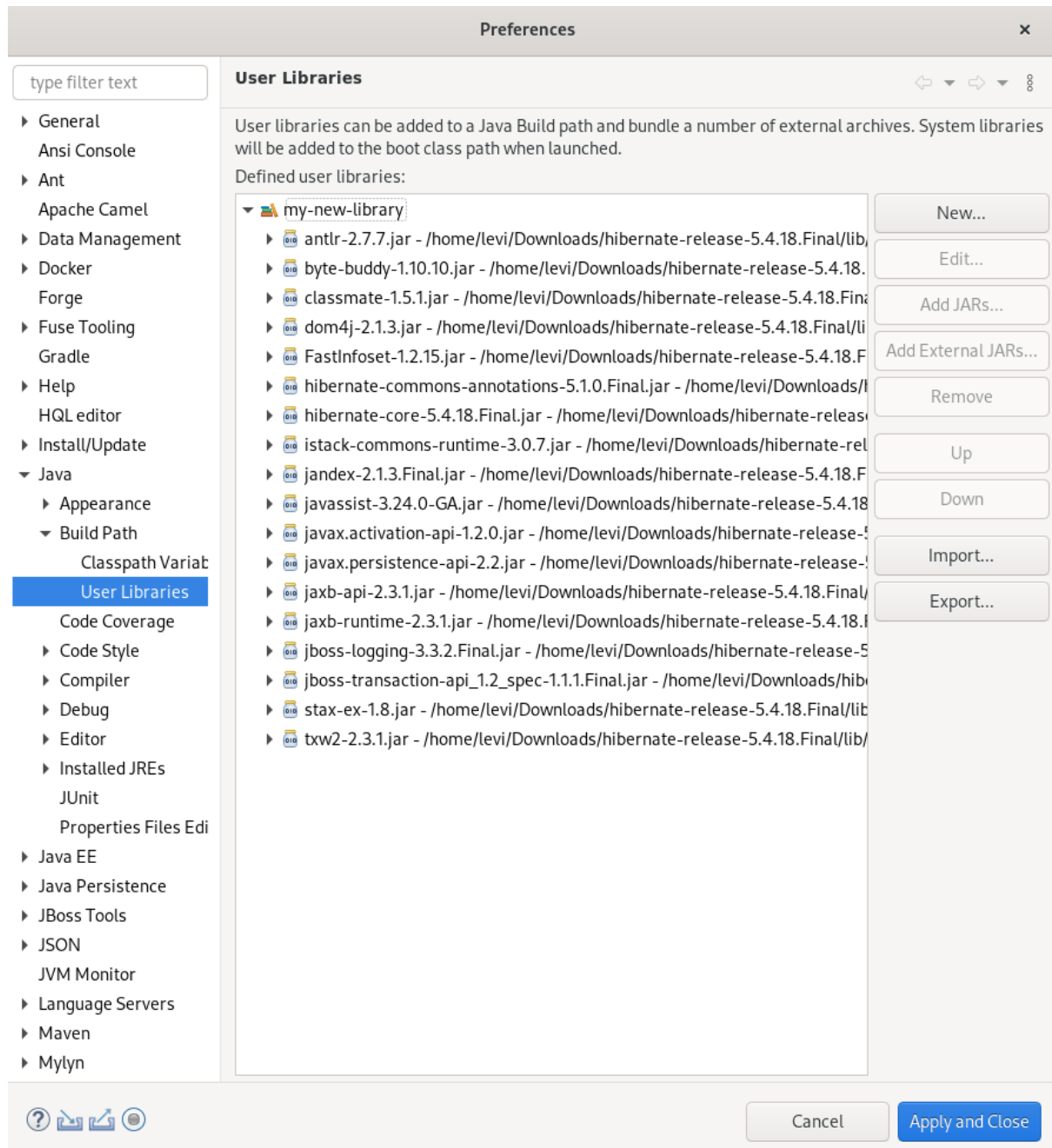
5. Enter **Libraries** in the search field.
6. Select **User Libraries** under **Java**.
7. Click the **New** button.

The **New User Library** window appears.

8. Name your user library.
9. Click **OK**.
10. Select your new user library.



11. Click the **Add External JARs** button.
12. Select the directory you extracted the **Hibernate ORM** file into.
13. Navigate to the **/lib/required/** directory.
14. Select the **.jar** files.
15. Click **Open**.  
Selected **.jar** files appear under your user library.



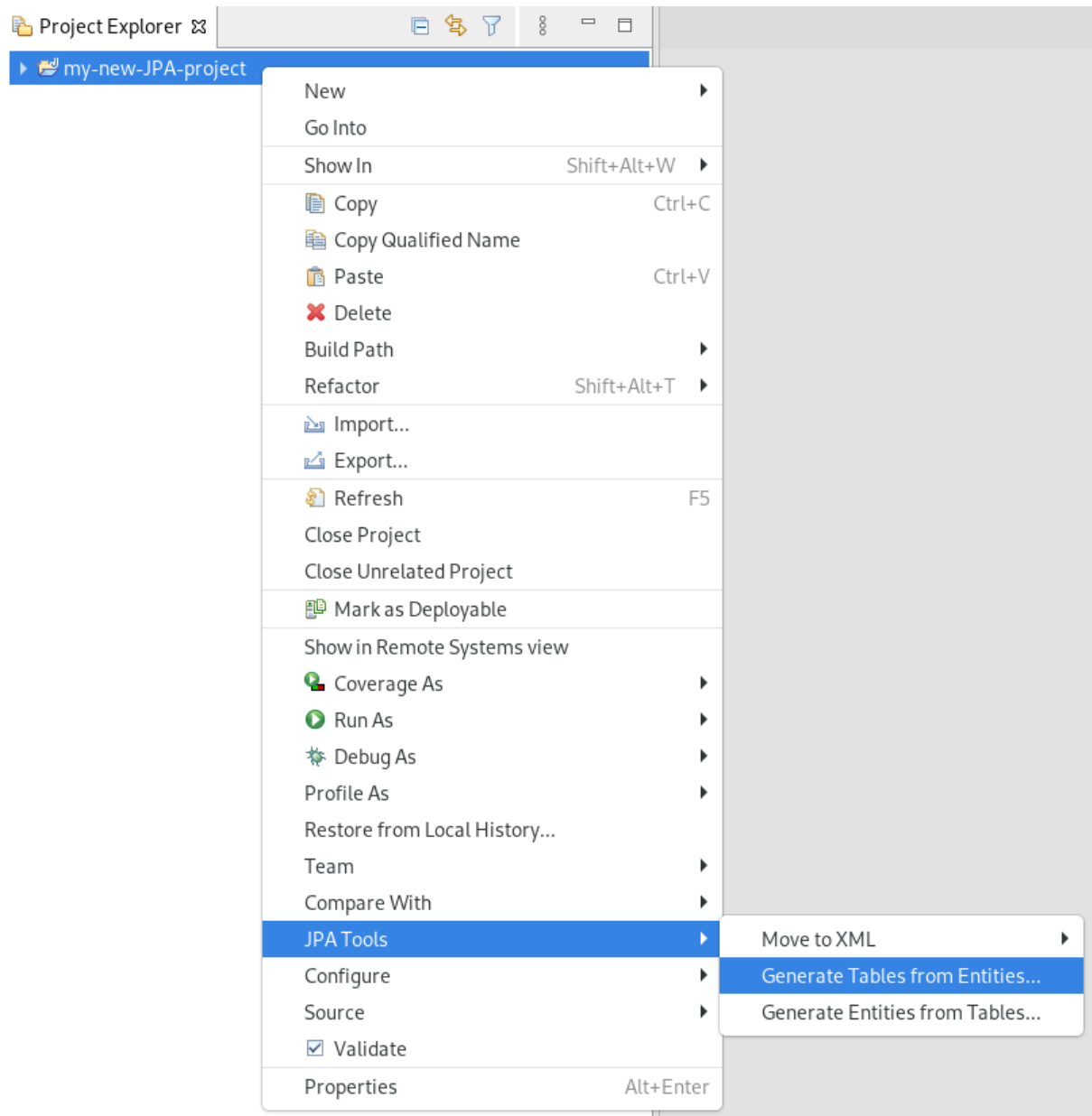
16. Click **Apply and Close**.

## 7.3. GENERATING ENTITIES

The following section describes how to generate entities for your Hibernate project in CodeReady Studio.

### Procedure

1. Start CodeReady Studio.
2. Open **Project Explorer**.
3. Right-click your **JPA project** → **JPA Tools** → **Generate Tables from Entities**.



The **Generate Tables from Entities** window appears.

4. Select the **Use Console Configuration** check box.
5. Click **Finish**.

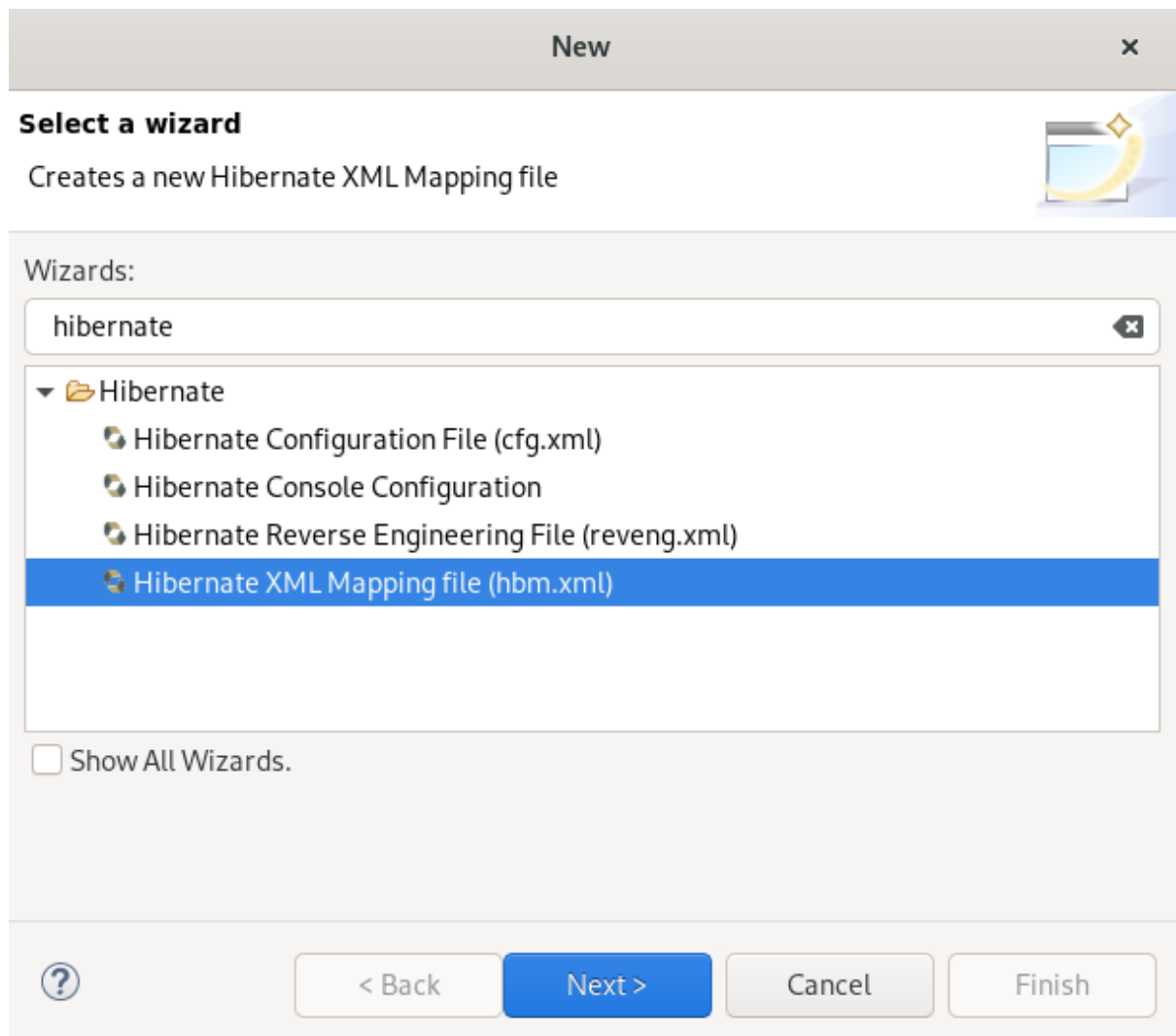
## 7.4. CREATING A HIBERNATE MAPPING FILE

Hibernate mapping files specify how your objects relate to the database tables.

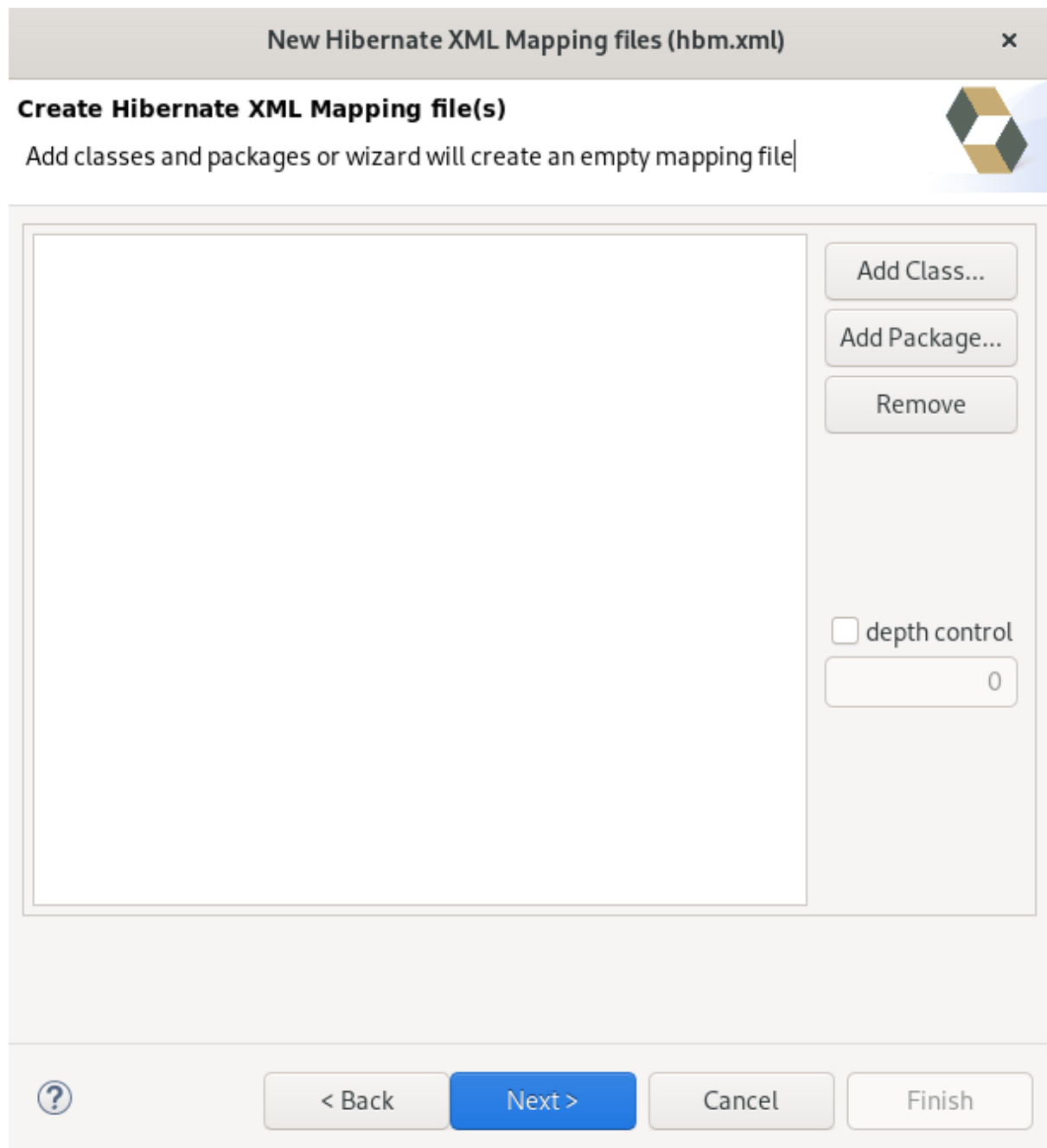
The following section describes how to create a Hibernate mapping file in CodeReady Studio.

### Procedure

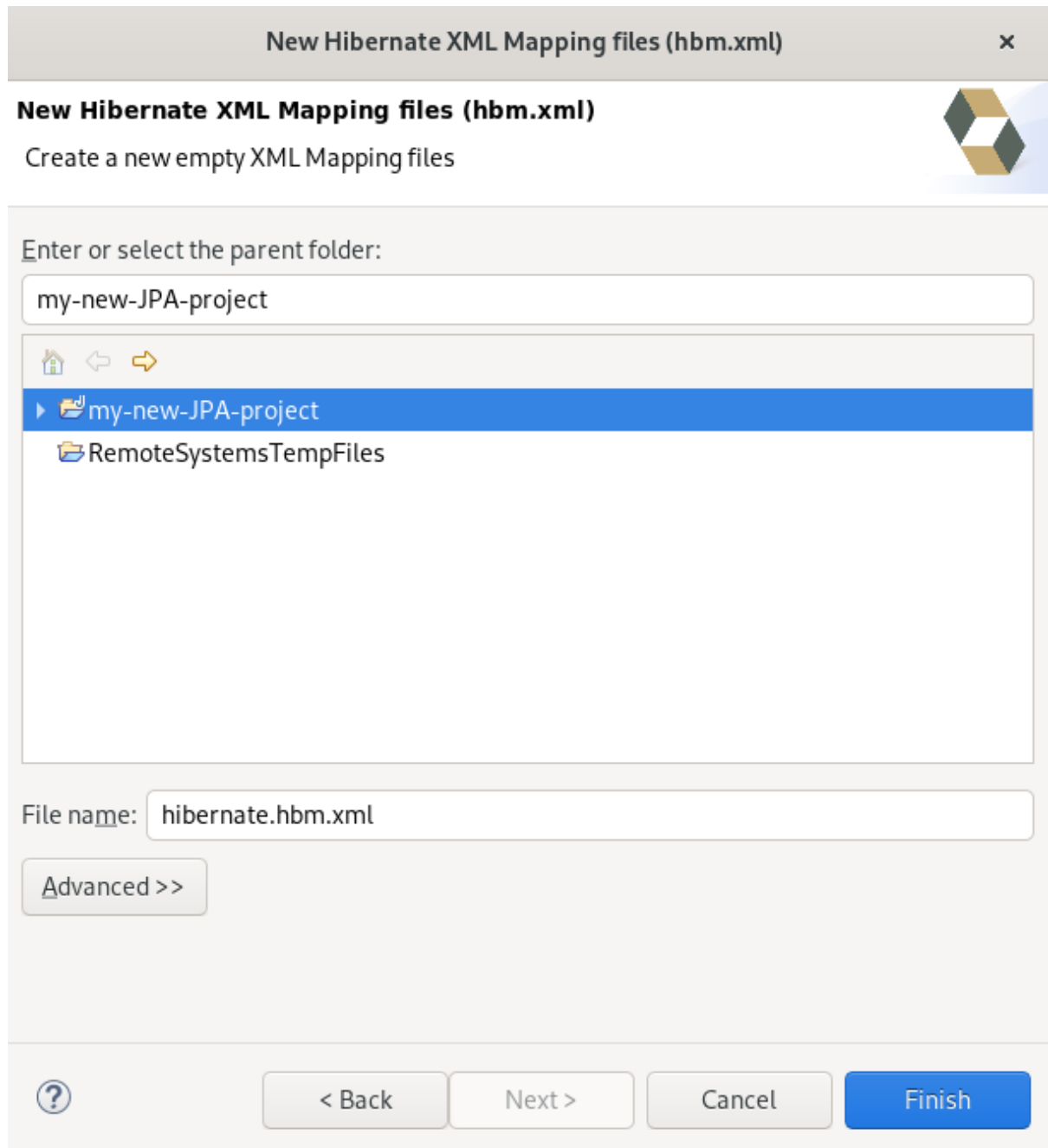
1. Start CodeReady Studio.
2. Press **Ctrl+N**.  
The **Select a wizard** window appears.



3. Enter **Hibernate** in the search field.
4. Select **Hibernate XML Mapping file (hbm.xml)**
5. Click **Next**.  
The **Create Hibernate XML Mapping file** window appears.



6. Click the **Add Class** button to add classes.
7. Click the **Add Package** button to add packages.  
Alternatively, you can create an empty **.hbm.xml** file by not selecting any packages or classes.
8. Select the **depth control** check box to define the dependency depth used when choosing classes.
9. Click **Next**.  
The **New Hibernate XML Mapping files** window appears.



10. Select the parent directory.
11. Name your **.hbm.xml** file .
12. Click **Finish**.

## 7.5. CREATING A HIBERNATE CONFIGURATION FILE

For reverse engineering, prototype queries, or Hibernate Core usage, a **hibernate.properties** or a **hibernate.cfg.xml** file is required. CodeReady Studio provides a wizard to generate the **hibernate.cfg.xml** file.

The following section describes how to create a Hibernate configuration file in CodeReady Studio.

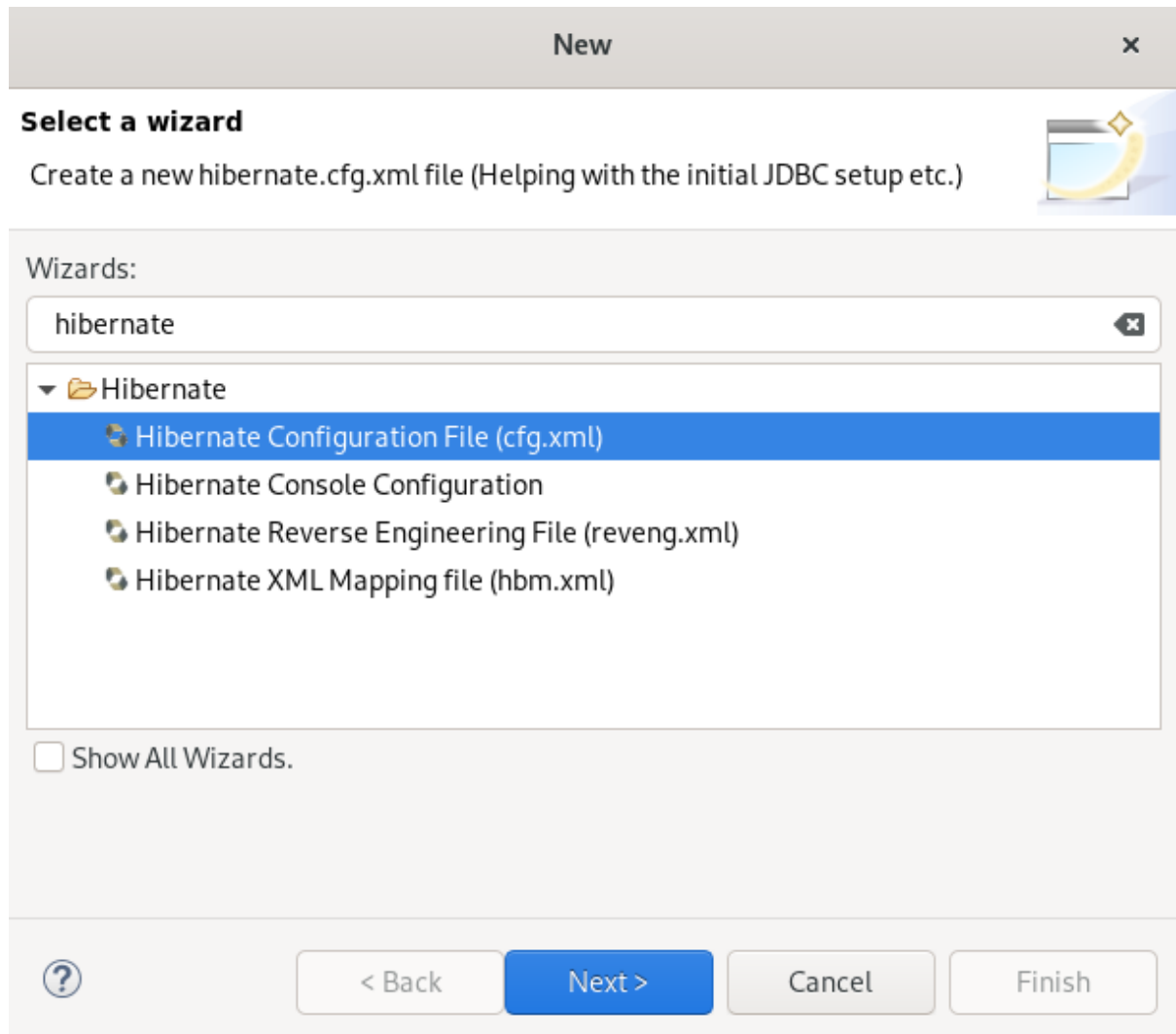
### Procedure

1. Start CodeReady Studio.

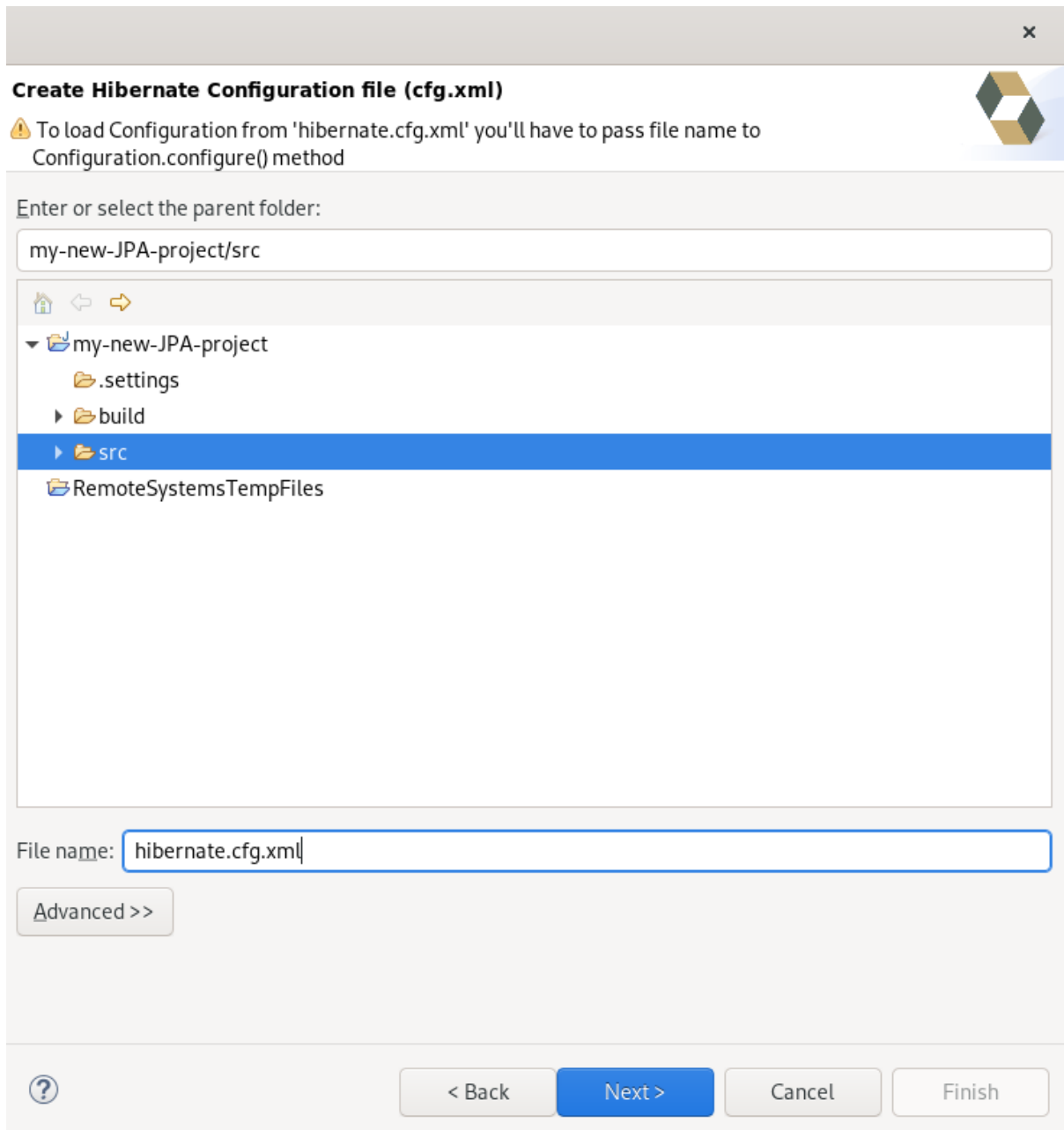


2. Press **Ctrl+N**.

The **Select a wizard** window appears.



3. Enter **Hibernate** in the search field.
4. Select **Hibernate Configuration file (cfg.xml)**.
5. Click **Next**.  
The **Create Hibernate Configuration file (cfg.xml)** window appears.



6. Select the parent directory.
7. Click **Next**.  
The **Hibernate Configuration File (cfg.xml)** window appears.

**Hibernate Configuration File (cfg.xml)**

This wizard creates a new configuration file to use with Hibernate.

Container:

File name:

Hibernate version:

Session factory name:

[Get values from Connection](#)

Database dialect:

Driver class:

Connection URL:

Default Schema:

Default Catalog:

Username:

Password:

Create a console configuration

8. Click the down-arrow in the **Database dialect** field to select the database.
9. Click the down-arrow in the **Driver class** field to select the driver.
10. Click the down-arrow in the **Connection URL** field to select the URL.
11. Click **Finish**.

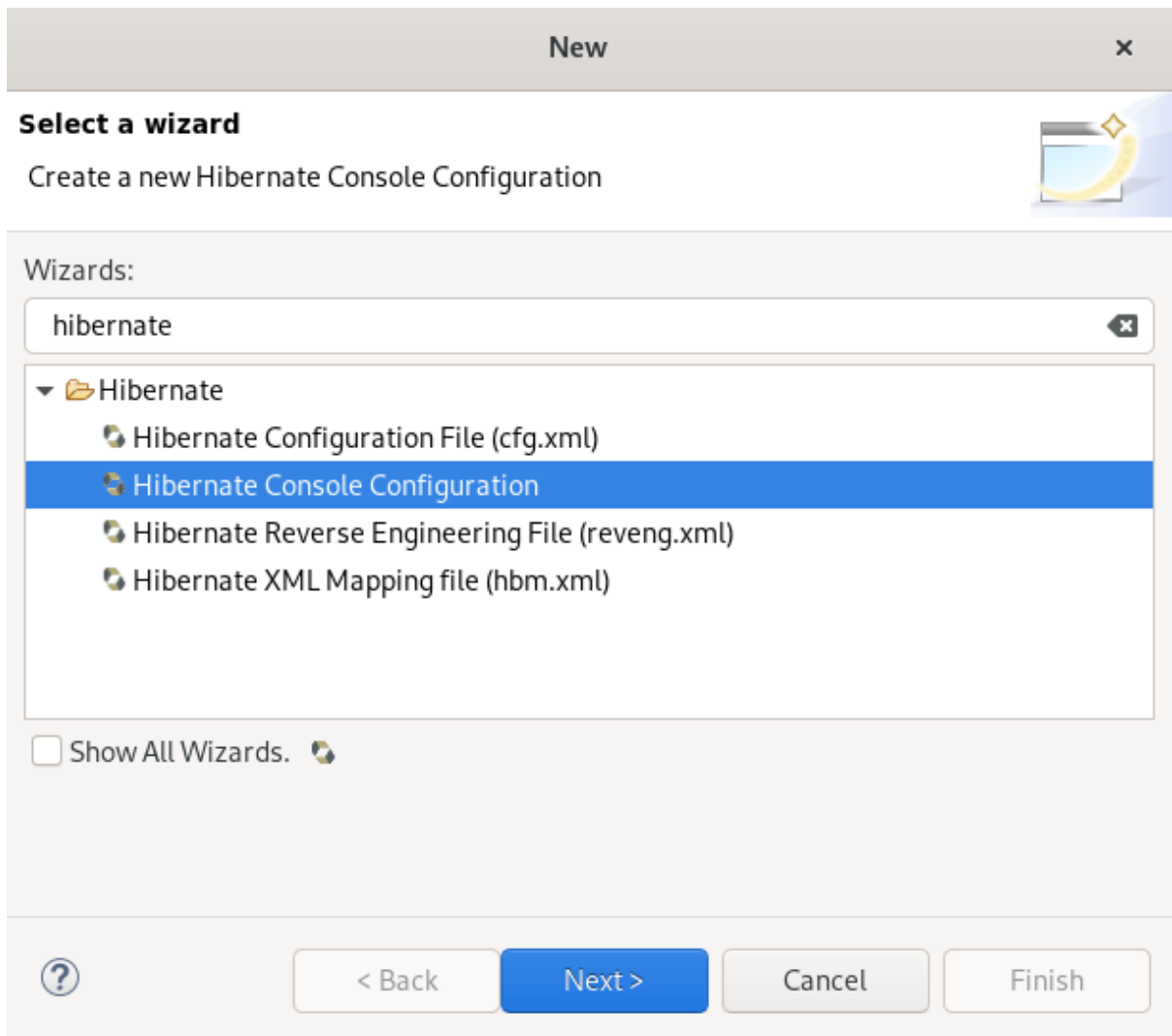
## 7.6. CREATING A HIBERNATE CONSOLE CONFIGURATION FILE

A Console configuration file describes how the Hibernate plugin configures Hibernate. It also describes the configuration files and classpaths needed to load the POJOs, JDBC drivers, and so on. It is required to make use of query prototyping, reverse engineering and code generation. You can have multiple console configurations per project, however, one configuration is sufficient.

The following section describes how to create a Hibernate console configuration file in CodeReady Studio.

### Procedure

1. Start CodeReady Studio.
2. Press **Ctrl+N**.  
The **Select a wizard** window appears.



3. Enter **Hibernate** in the search field.
4. Select **Hibernate Console Configuration**.
5. Click **Next**.  
The **Create Hibernate Console Configuration** window appears.

**Create Hibernate Console Configuration**

Unable to create requested service [org.hibernate.engine.jdbc.env.spi.JdbcEnvironment]

Name: my-new-console-config

Main Options Classpath Mappings Common

Type:  
 Core  Annotations (jdk 1.5+)  JPA (jdk 1.5+)

Hibernate Version: 5.4

Project:  
 my-new-JPA-project Browse...

Database connection:  
 [Hibernate configured connection] New... Edit...

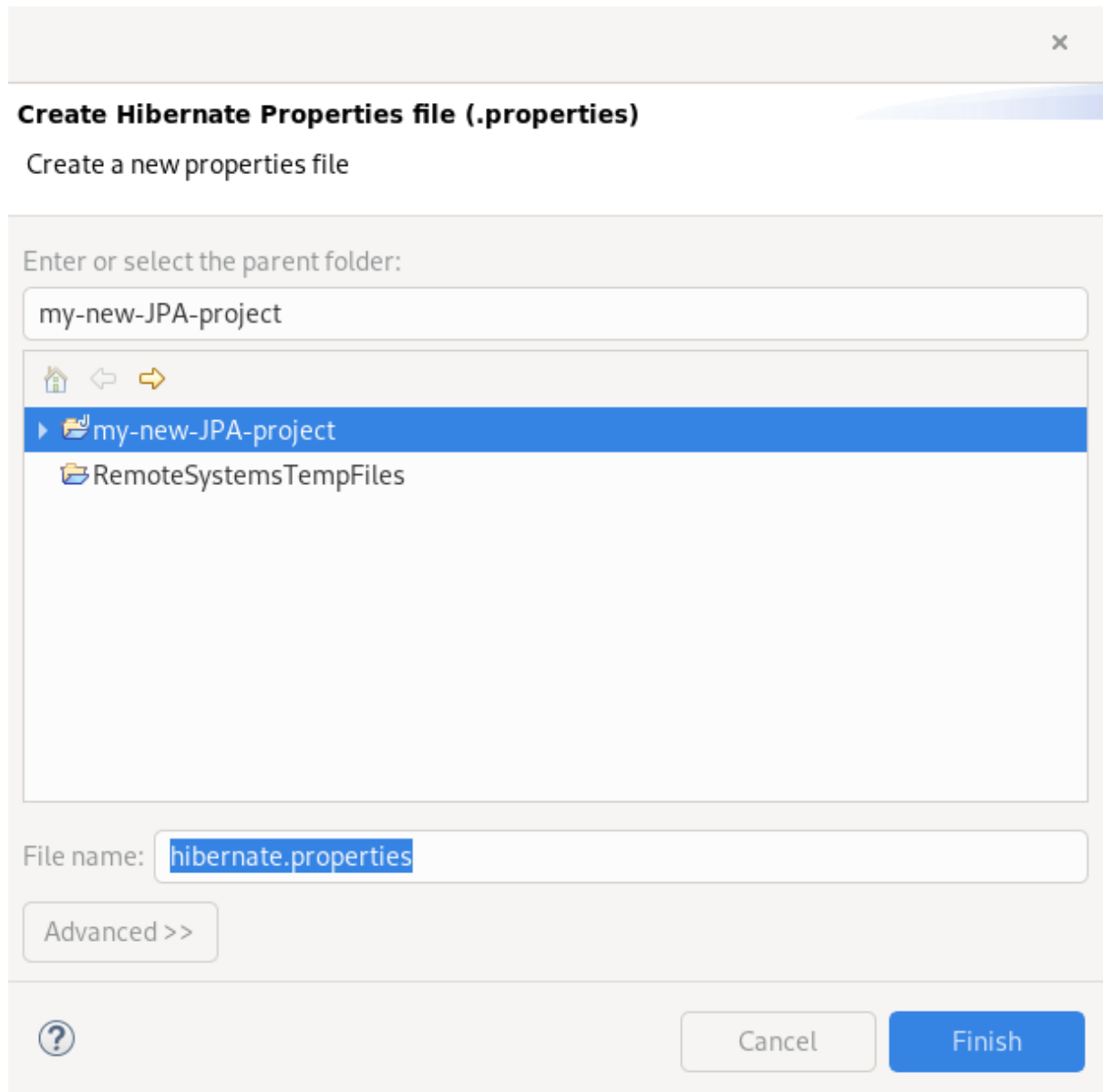
Property file:  
 Setup...

Configuration file:  
 Setup...

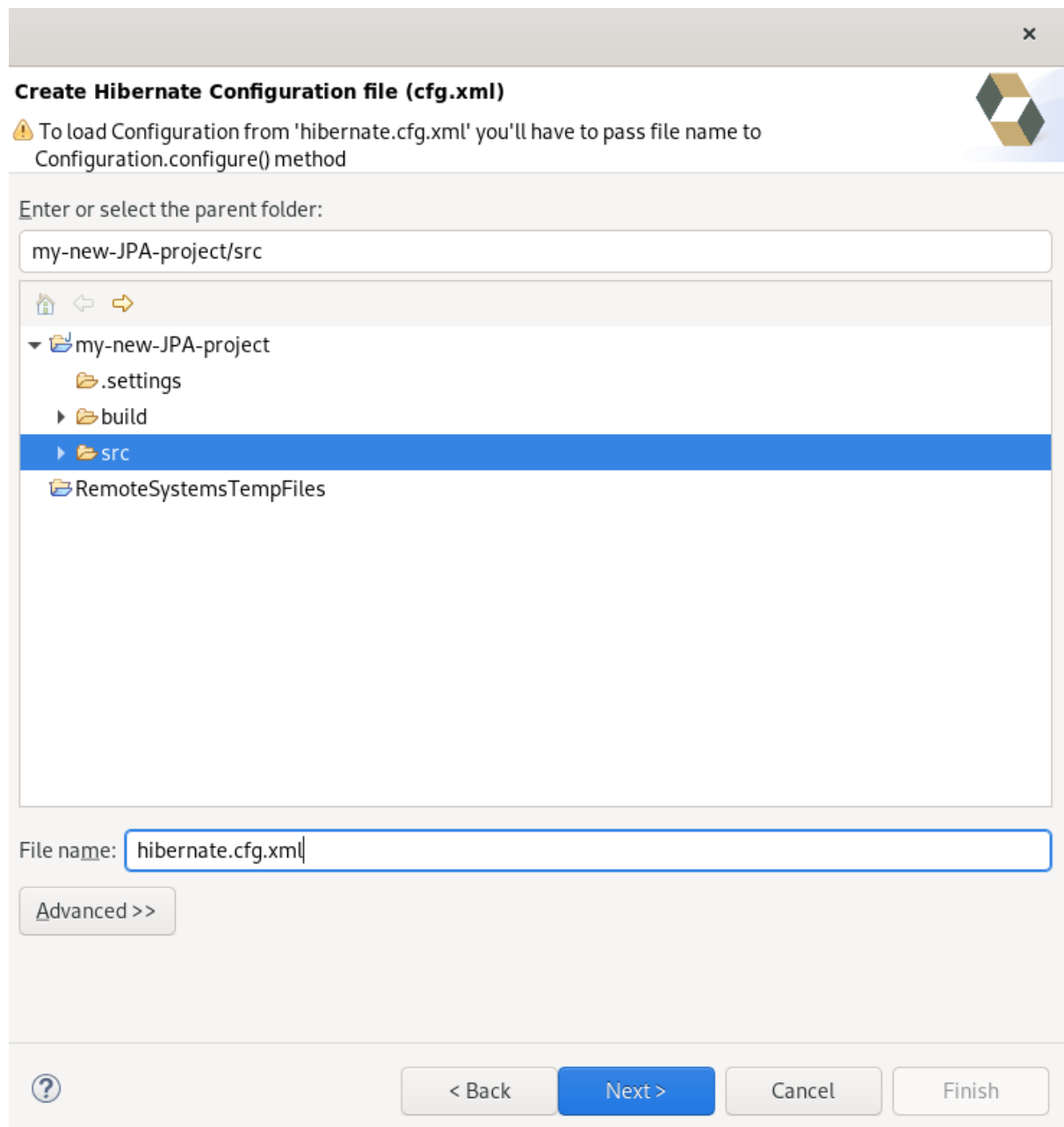
Persistence unit:  
 Browse...

? < Back Next > Cancel Finish

6. Name your configuration file .
7. Ensure that the **Type** is set to **Core**.
8. Select the **Hibernate version**.
9. Click **Browse** to locate your project.
10. Click **New** to configure a new **Database connection**.  
The **New Connection Profile** window appears.
11. Select the **Database Connection** or create a new one.
12. Click **Setup** to setup the **Property file**.  
The **Setup property file** window appears.
13. Click **Create new**.  
The **Create Hibernate Properties file (.properties)** window appears.



14. Select the parent directory.
15. Name your **.properties** file.
16. Click **Finish**.
17. Click **Setup** to setup the **Configuration file**.
18. Select the path to the target **.cfg.xml** file.  
The **Setup configuration file** window appears.
19. Click **Create new**.  
The **Create Hibernate Configuration file (cfg.xml)** window appears.



20. Select the parent directory.

21. Click **Next**.

The **Hibernate Configuration File (cfg.xml)** window appears.

**Hibernate Configuration File (cfg.xml)**

This wizard creates a new configuration file to use with Hibernate.

Container: /my-new-JPA-project/src

File name: hibernate.cfg.xml

Hibernate version: 5.4

Session factory name:

[Get values from Connection](#)

Database dialect: MySQL

Driver class: org.gjt.mm.mysql.Driver

Connection URL: jdbc:mysql://<hostname>/<database>

Default Schema:

Default Catalog:

Username:

Password:

Create a console configuration

[?](#) < Back Next > Cancel Finish

22. Click the down-arrow in the **Database dialect** field to select the database.
23. Click the down-arrow in the **Driver class** field to select the driver.
24. Click the down-arrow in the **Connection URL** field to select the URL.
25. Click **Finish**.



**Create Hibernate Console Configuration**

This wizard allows you to create a configuration for Hibernate Console.

Name:

Main
  Options
  Classpath
  Mappings
  Common

Type:

Core
  Annotations (jdk 1.5+)
  JPA (jdk 1.5+)

Hibernate Version:

Project:

Database connection:

Property file:

Configuration file:

Persistence unit:

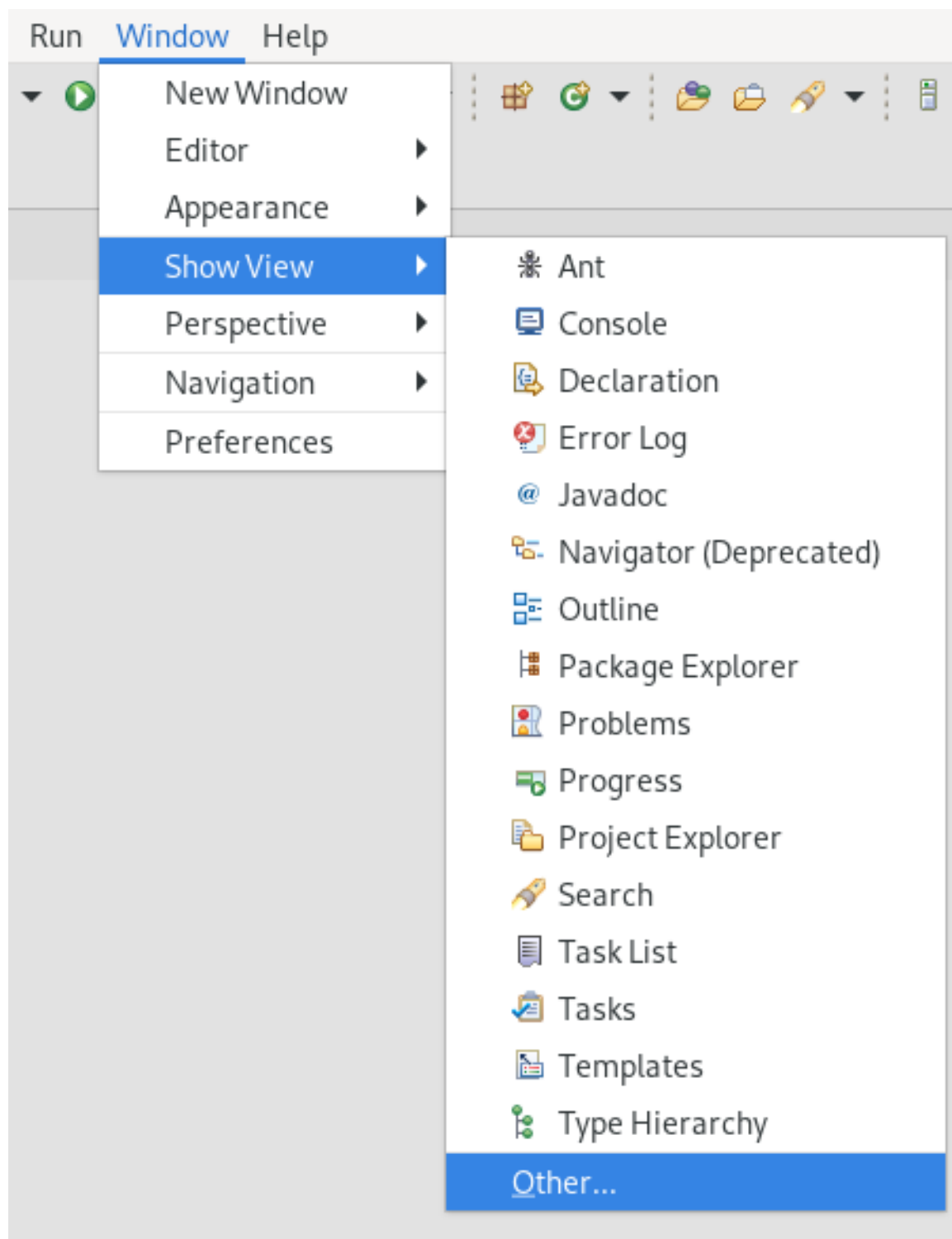
26. Click **Finish**.

## 7.7. EDITING HIBERNATE PROJECT CONFIGURATIONS

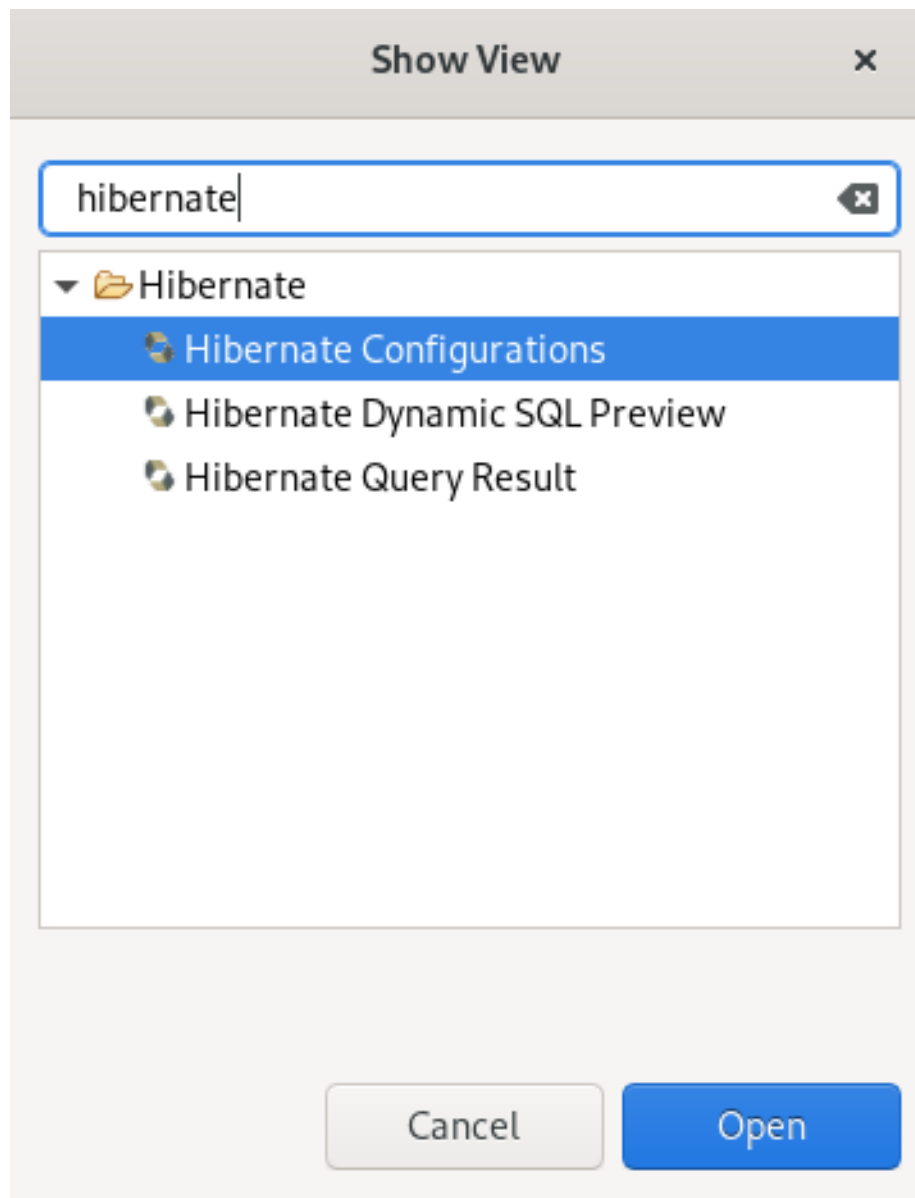
The following section describes how to edit configurations for the Hibernate project in CodeReady Studio.

### Procedure

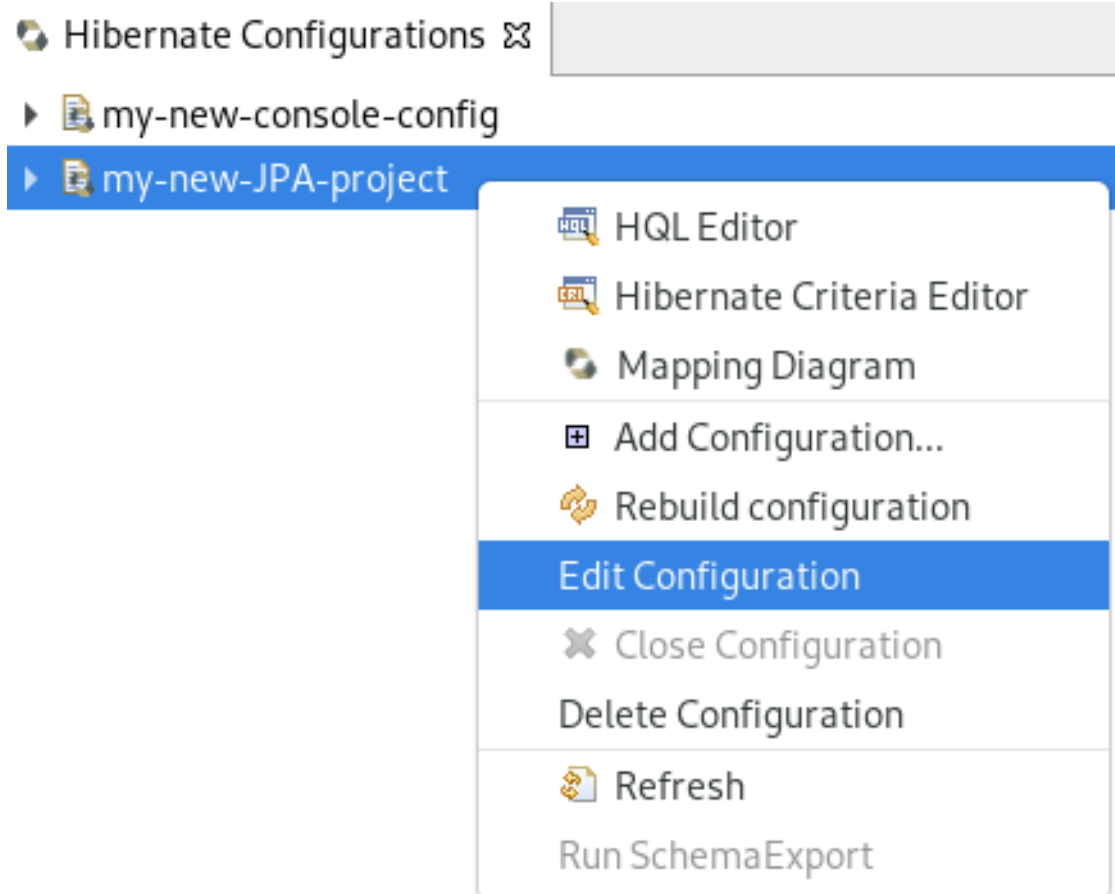
1. Start CodeReady Studio.
2. Click **Window** → **Show View** → **Other**.



The **Show View** window appears.



3. Enter **Hibernate** in the search field.
4. Select **Hibernate Configurations**.
5. Click **Open**.  
The **Hibernate Configurations** view appears.



6. Right-click your **project** → **Edit Configuration**.  
The **Edit Configuration** window appears.

Edit Configuration ✕

### Edit launch configuration properties

Select or configure a Console Configuration

Name:

🏠 Main 📄 Options 📁 Classpath 📌 Mappings 📄 Common

Type:

Core
  Annotations (jdk 1.5+)
  JPA (jdk 1.5+)

Hibernate Version:  ▼

Project:

Browse...

Database connection:

▼ New... Edit...

Property file:

Setup...

Configuration file:

Setup...

Persistence unit:

Browse...

Revert
Apply

Cancel
OK

7. Edit the configurations.
8. Click **Apply**.

9. Click **OK**.

## CHAPTER 8. MOBILE WEB TOOLS BASICS IN CODEREADY STUDIO

Mobile Web Tools provide an **HTML5 Project** wizard that enables you to create web applications optimized for mobile devices. The **HTML5 Project** wizard is a useful starting point for creating all new HTML5 web applications in the IDE. The wizard generates a sample ready-to-deploy HTML5 mobile application with REST resources from a Maven archetype.

You can customize the application using the built-in editor, deploy and view the application with the built-in browser.

The IDE provides the **Mobile Web** palette that allows the user to make interactive web applications. This palette offers a wide range of features including drag-and-drop widgets for adding common web interface framework features such as HTML5, jQuery Mobile, and Ionic tags to html files. It also contains widgets like **Panels**, **Pages**, **Lists**, **Buttons** to make the applications more user friendly and efficient.

### Prerequisites

- A configured server.  
For information on configuring a local runtime server and deploying applications to it, see [Section 3.1, "Configuring a local server"](#).

The IDE must be configured for any servers to which you want to deploy your application, including the location and type of the application server and any custom configuration or management settings. The following sections assume you completed the configuration in advance, but that step can also be completed at deployment.

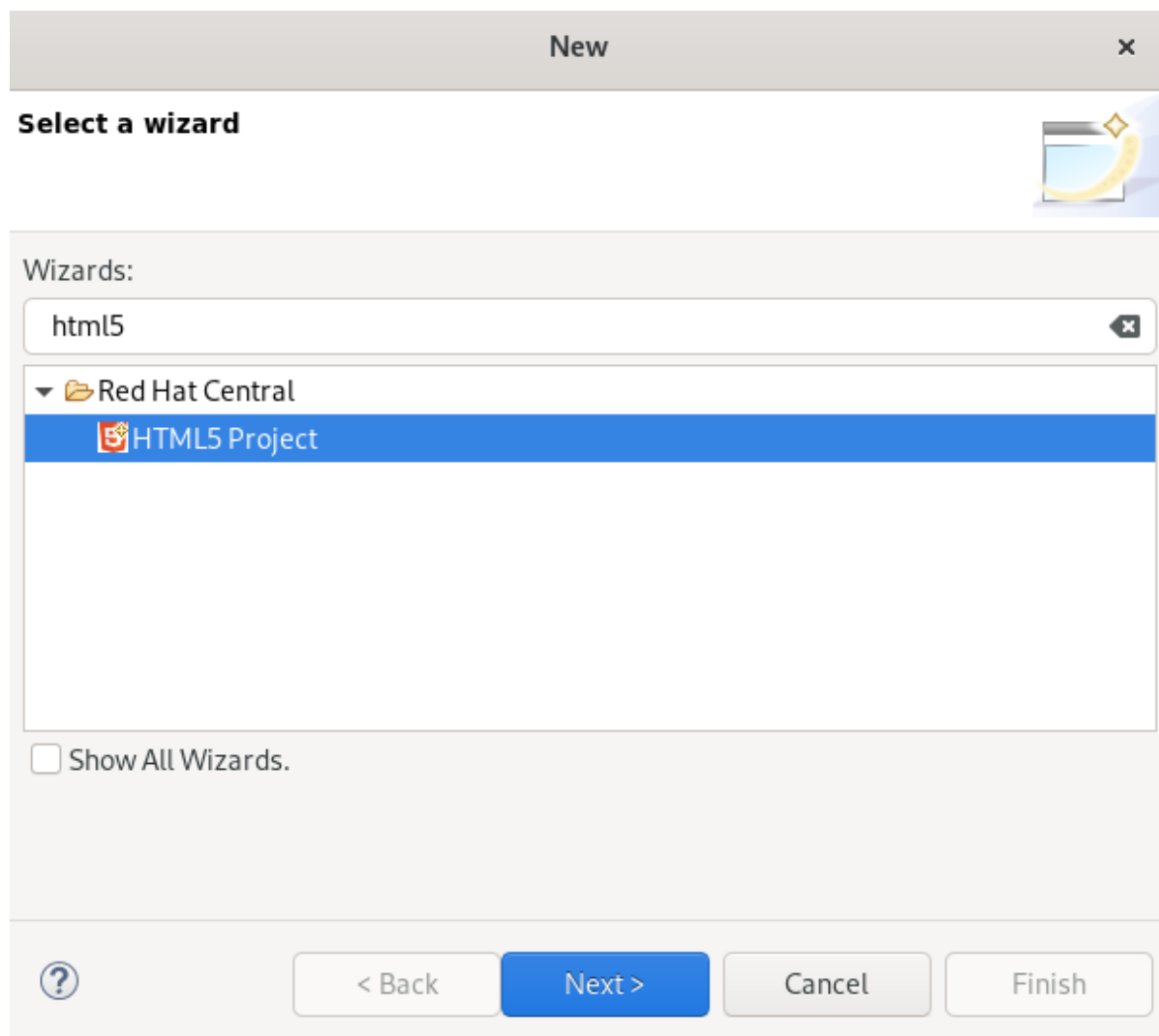
## 8.1. CREATING AN HTML5 PROJECT

The **HTML5 Project** wizard generates a sample project based on a Maven archetype and the project and application identifiers provided by you. The Maven archetype version is indicated in the **Description** field on the first page of the wizard. You can change the version, and therefore the project look and dependencies, by selecting either an enterprise or non-enterprise target runtime within the wizard.

The following section describes how to create an HTML5 project in CodeReady Studio.

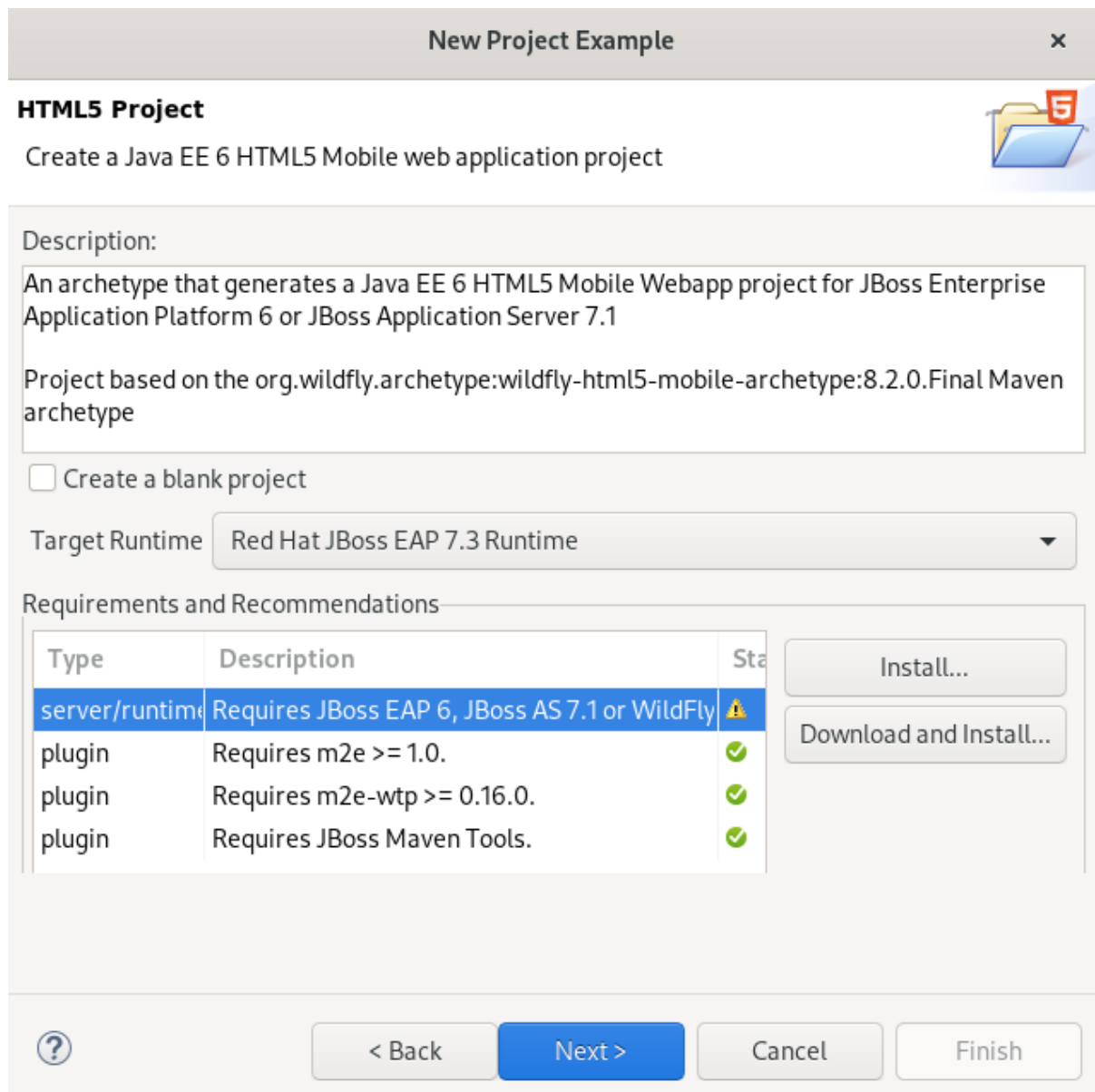
### Procedure

1. Start CodeReady Studio.
2. Press **Ctrl+N**.  
The **Select a wizard** window appears.



3. Enter **HTML5** in the search field.
4. Select **HTML5 Project**.
5. Click **Next**.  
The **New Project Example** window appears.





6. Click the down-arrow in the **Target Runtime** field.
7. Select the server.
8. Click **Next**.
9. Name your project and your package.
10. Select the location for your project.
11. Click **Finish**.  
Note that it might take some time for the project to generate.

The **New Project Example** window appears.

12. Click **Finish**.

Your newly created project is now listed in the **Project Explorer** view.

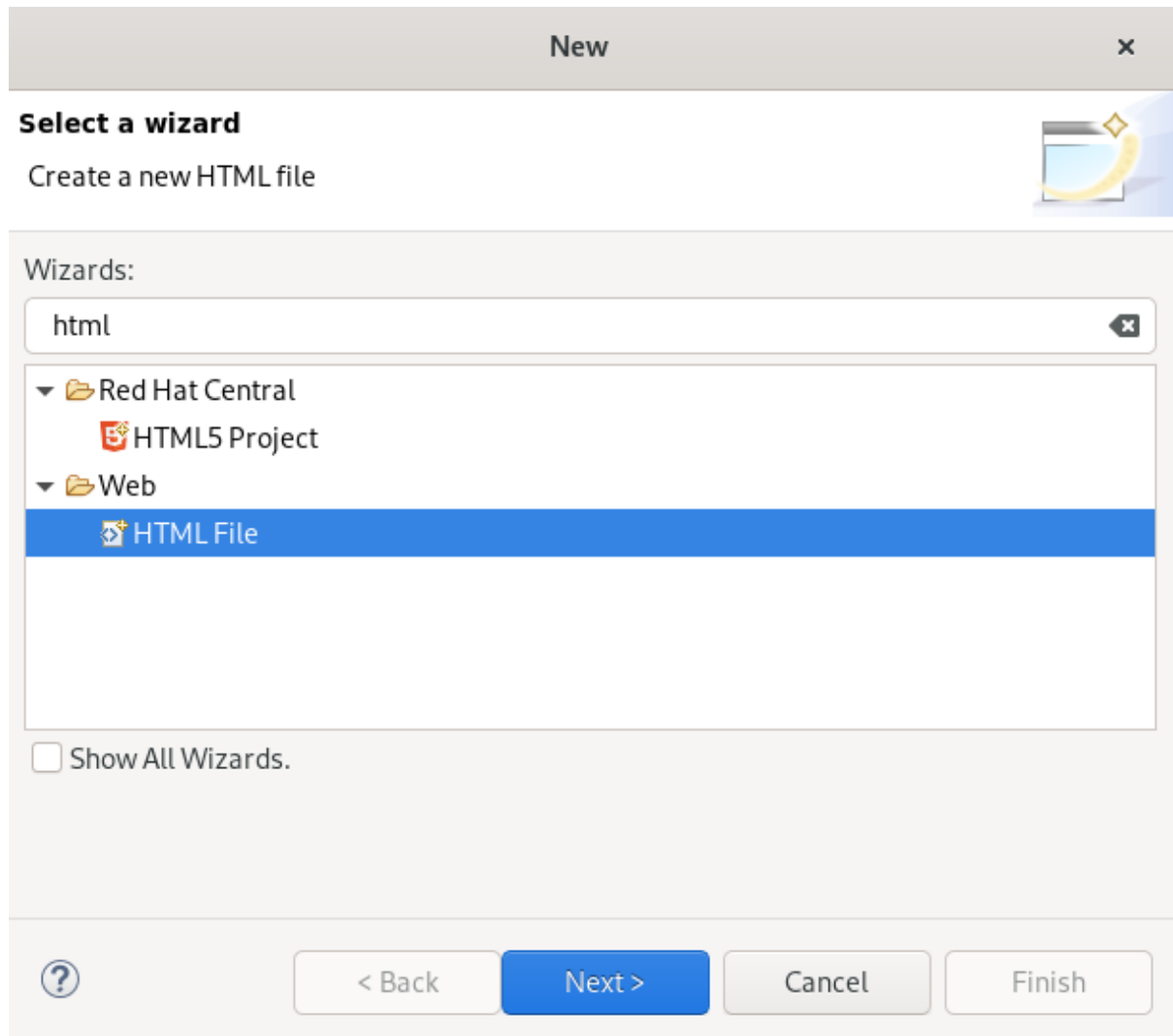
## 8.2. ADDING A NEW HTML5 JQUERY MOBILE FILE

The HTML5 **jQuery Mobile** file template consists of JavaScript and CSS library references that are inserted in the file's HTML header. The template also inserts a skeleton of the **jQuery Mobile** page and **listview** widgets in the file's HTML body.

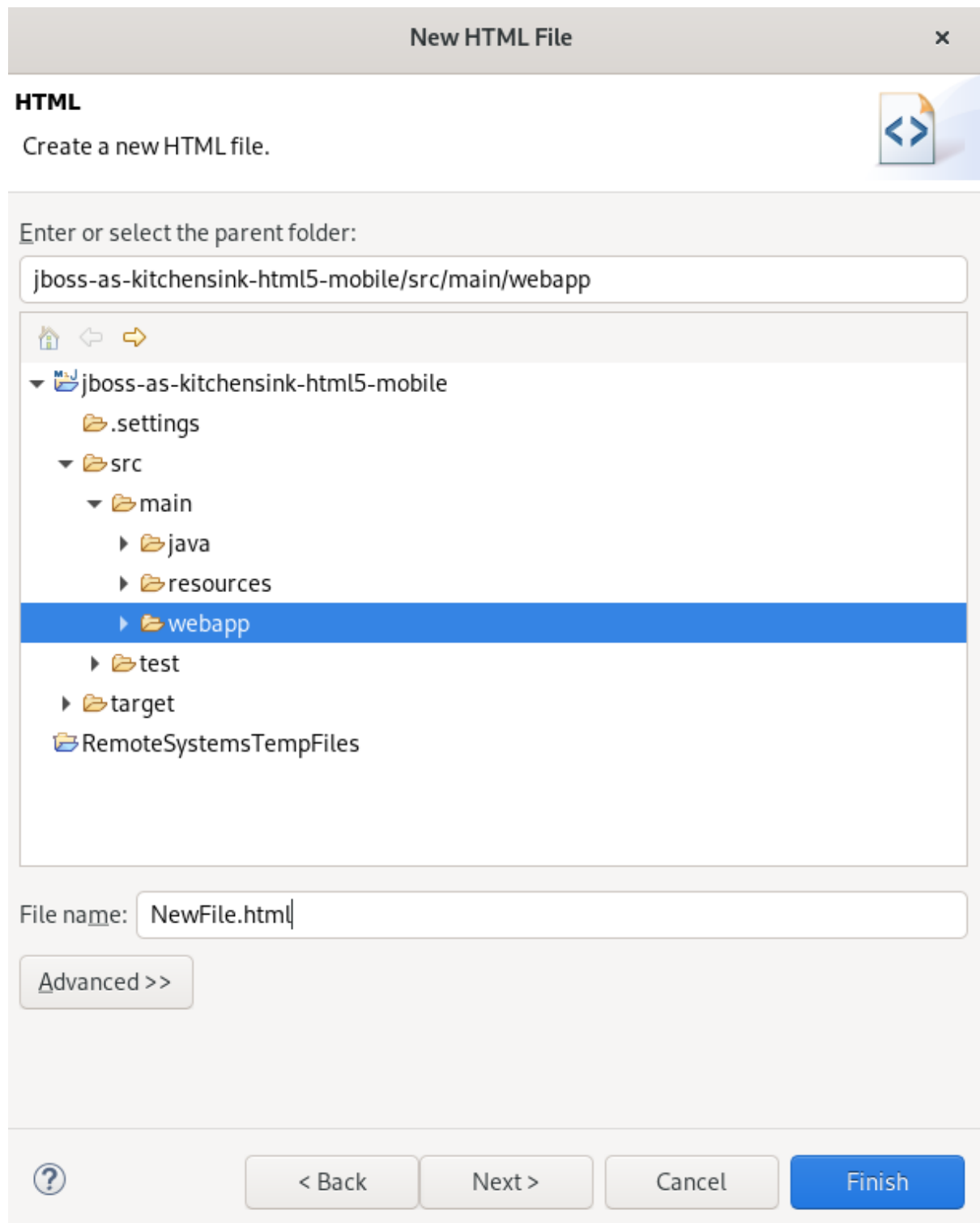
The following section describes how to add a new HTML5 jQuery Mobile file to an existing project.

### Procedure

1. Start CodeReady Studio.
2. Press **Ctrl+N**.  
The **Select a wizard** window appears.



3. Enter **HTML** in the search field.
4. Select **HTML File**.
5. Click **Next**.  
The **New HTML File** window appears.




6. Select the location for your file.
7. Name your file.
8. Click **Next**.  
The **Select HTML Template** window appears.

New HTML File ✕

### Select HTML Template

Select a template as initial content in the HTML page.



Use HTML Template

Templates:

Name	Description
Facelets XHTML Page	Facelets XHTML Page Template
HTML5 jQuery Mobile Page (1.3)	HTML5 jQuery Mobile 1.3 Template
HTML5 jQuery Mobile Page (1.4)	HTML5 jQuery Mobile 1.4 Template
New Facelet Composition Page	Creates a new Facelet page for use with a tem
New Facelet Footer	Creates a footer for use with the Facelet templ
New Facelet Header	Creates a header for use with the Facelet temp
New Facelet Template	Creates a basic header/content/footer Facelet
New HTML File (4.01 frameset)	html 4.01 frameset
New HTML File (4.01 strict)	html 4.01 strict
New HTML File (4.01 transitional)	html 4.01 transitional
New HTML File (5)	html 5
New XHTML File (1.0 frameset)	xhtml 1.0 frameset
New XHTML File (1.0 strict)	xhtml 1.0 strict
New XHTML File (1.0 transitional)	xhtml 1.0 transitional

Preview:

```

<!DOCTYPE html>
<html>
<head>
  <title>jQuery Mobile Template</title>
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
  <meta name="viewport"
    content="width=device-width, initial-scale=1" />

```

Templates are 'New HTML' templates found in the [HTML Templates](#) preference page.

?

< Back
Next >
Cancel
Finish

9. Select a template.

10. Click **Finish**.

The newly created HTML file is now displayed in the CodeReady Studio editor.

## 8.3. ADDING A NEW MOBILE PAGE

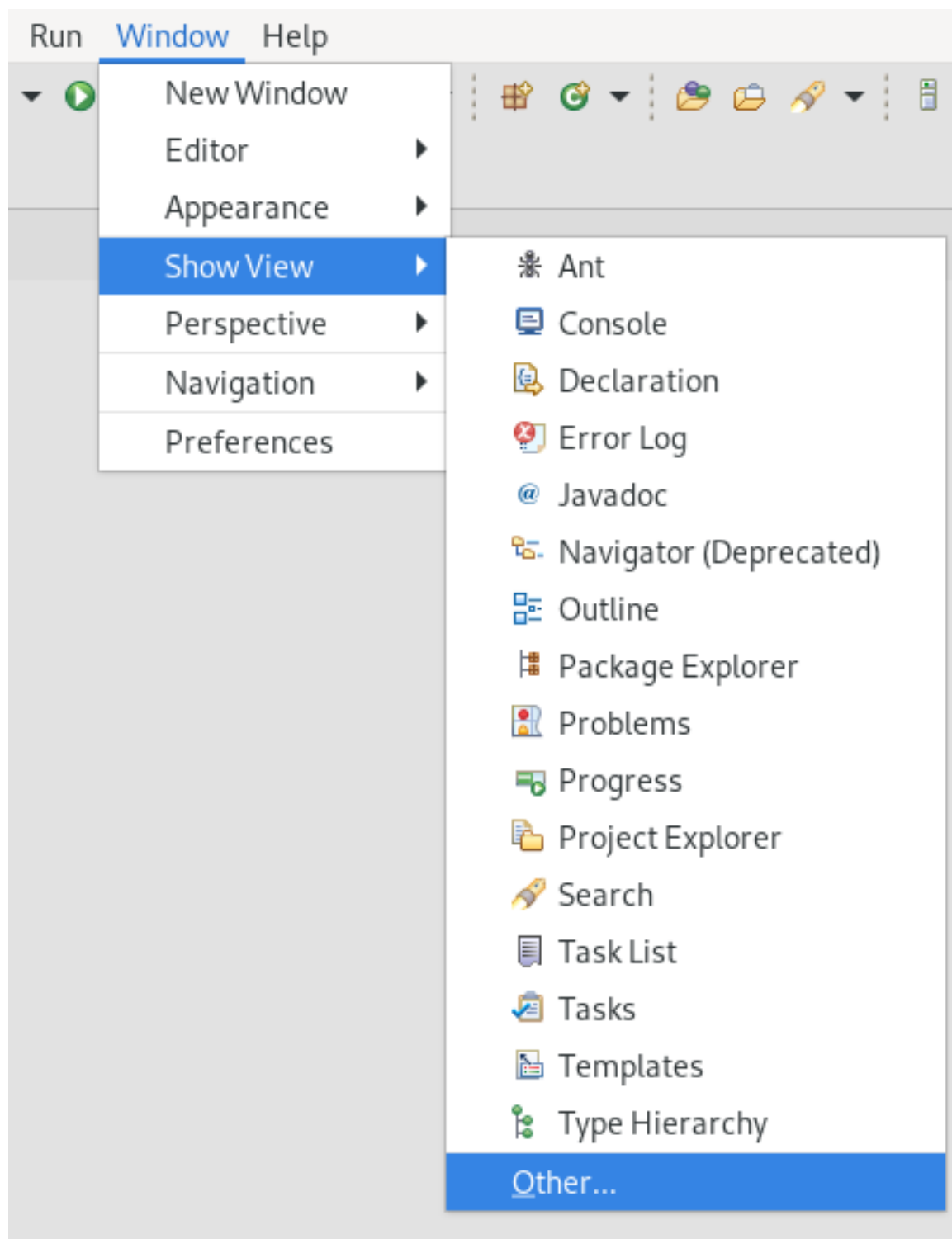
The following section describes how to add a new jQuery Mobile Page to an existing web application.

### Prerequisites

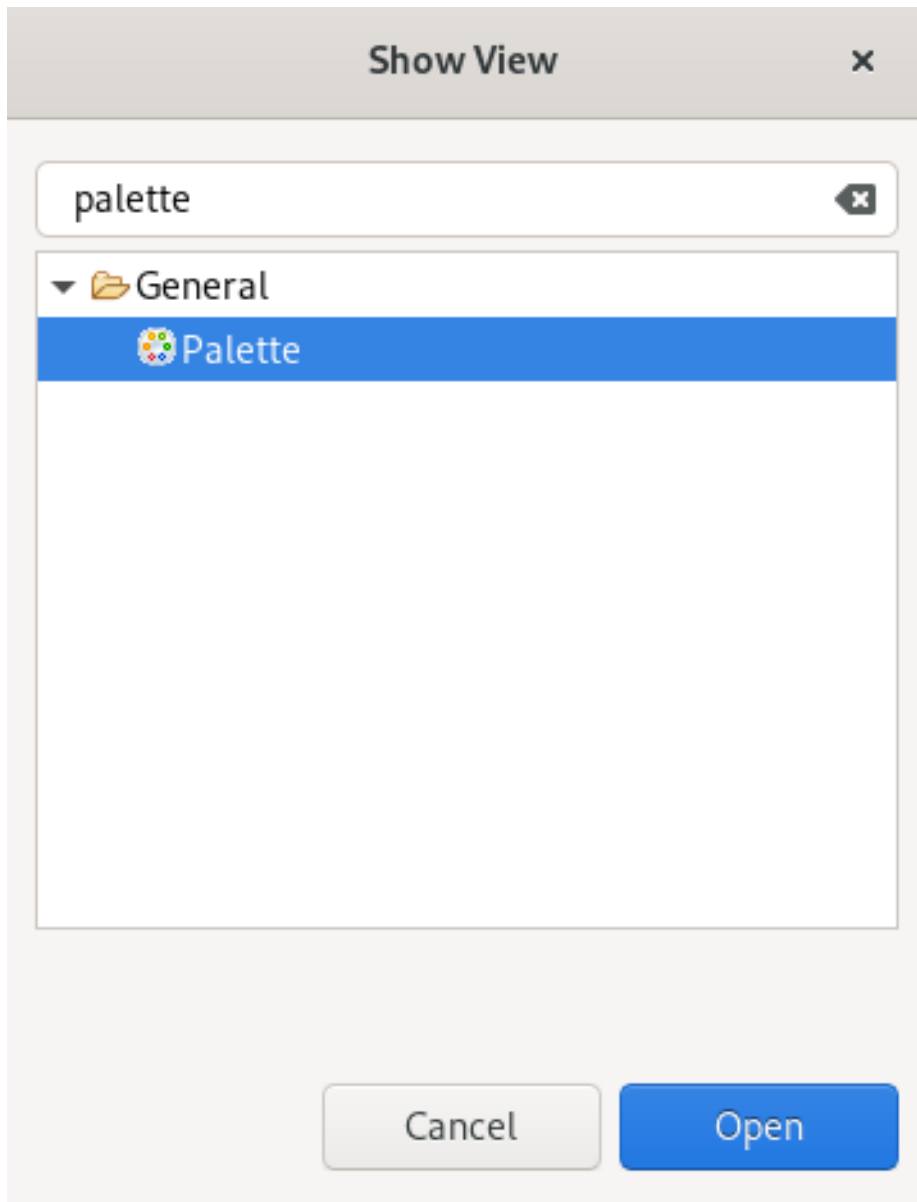
- An HTML5 project.  
For more information on how to create an HTML5 project, see [Section 8.1, “Creating an HTML5 Project”](#).

### Procedure

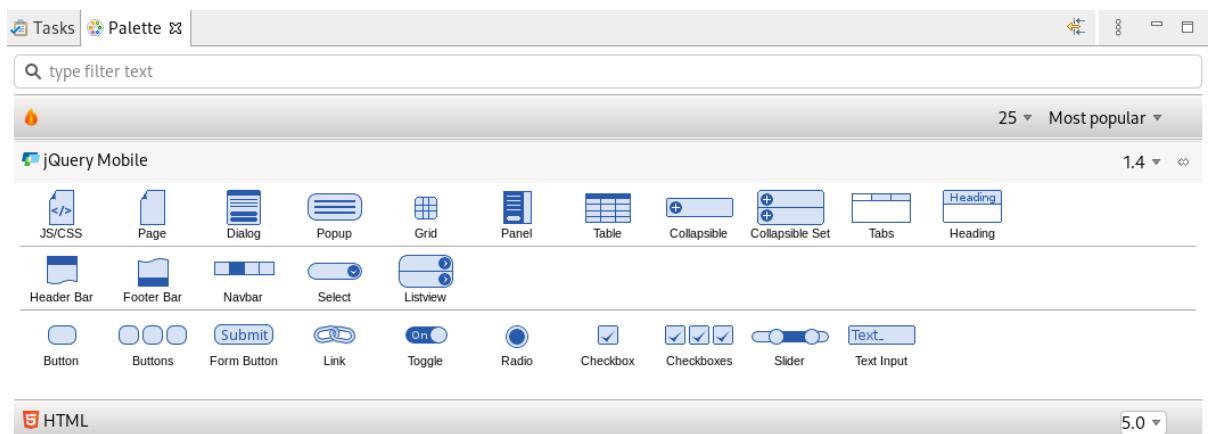
1. Start CodeReady Studio.
2. Click **Window** → **Show view** → **Other**.



The **Show View** window appears.



3. Enter **Palette** in the search field.
4. Select **Palette**.
5. Click **Open**.  
The **Palette** view appears.



6. Click the **Page** icon.

The **Insert Tag** window appears.

7. Name the **Header**.
8. Name the **Footer**.
9. Click **Finish**.

Your newly added page is now displayed in the CodeReady Studio editor.

Note that the same workflow is used to customize the pages of your web application with widget selection from the **Palette** view.