Yugandhar Microservice Platform

Development Environment Setup Guide for JEE Container (JEEC) Web Server

Yugandhar Microservice Platform - JEEC Release - V1.0.0
Date – 23/05/2018

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About Yugandhar Project

The Yugandhar Project is the umbrella project focused on building open source cloud ready solutions. The current offerings include Yugandhar Microservice Platform (MSP) and Yugandhar Open Master Data Management (MDM) Hub.

About Yugandhar Microservice Platform

Yugandhar Microservice Platform (also referred as Yugandhar MSP) provides framework for rapid development of your Microservice. This is an architecturally proven Springboot based application having all the basic components needed for a Microservice application to work which just needs to be extended as per your requirements.

Yugandhar Microservice platform codes with code generation templates for rapid development. Just design your data model and generate the code using Yugandhar templates, your base table services will be ready. To create the composite services, you may have to write custom code which would take minimal efforts. Your new Microservice would be ready in just few hours.

About this document

This document covers the system requirements for Yugandhar Microservice Platform.

System Requirements

Below are the System Requirements for setting up Development Environment

1. OS – Windows 7 enterprise addition, Service Pack 1 or later
2. 8GB RAM and 100 GB Storage
3. Eclipse Java EE IDE for Web Developers. Oxygen.3a Release (4.7.3a) or later
4. JBoss EAP 7.1.0 full runtime or later
5. apache-maven-3.5.0 or later
6. Java jdk 1.8 (jdk1.8.0_121) or later
7. Spring Boot 2.0.2.RELEASE
8. Hibernate Tools
9. Databases
    a. Oracle Database 11g Release 11.2.0.2.0 or later
    b. Oracle 12c
    c. MariaDB v10.3.x
10. Oracle SQL Developer/HeidiSQL
11. SOAPUI /postman or any other tool to test REST services

Note - Internet connectivity is needed to setup workspace. If internet is not available because of any reason then all the software and Maven jars needs to be manually downloaded which would be tedious task.

IMPORTANT NOTICE - Please read the licensing terms of all the above listed software before using for commercial as well as non-commercial purpose. Yugandhar team would not be responsible for licensing violations if any.

Software Download links

Eclipse

Eclipse Java EE IDE for Web Developers.

Version - Oxygen.3a Release (4.7.3a) or later

Download page - http://www.eclipse.org/downloads/

Red Hat JBoss Enterprise Application Platform

Red Hat JBoss Enterprise Application Platform

Version - JBoss EAP 7.1 full runtime or later

Download page - https://developers.redhat.com/products/eap/download/

Apache maven

Apache Maven comes integrated with Eclipse Neon but if you want to install standalone maven then you may download it from below path

Version - apache-maven-3.5.0 or later

Download Page - https://maven.apache.org/download.cgi

Database

Download the database as per your choice

Oracle

Download Oracle from Oracle download site
Version - Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64bit OR Oracle Database 12c
Download link - https://www.oracle.com/database

MariaDB

Version: MariaDB v10.3 or later
https://mariadb.org/

Java JDK

Download Java jdk 1.8 (jdk1.8.0_121) or later from below link

http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html

Hibernate Tools

You may choose to download the Hibernate Tools (Now renamed as JBoss Tools) from the link below. To install the plugin from eclipse market place using eclipse Menu → Help > Eclipse Marketplace... option.

http://tools.jboss.org/downloads/jbosstools/oxygen/4.5.1.Final.html#marketplace

Oracle SQL Developer

Download SQL developer to connect to database

http://www.oracle.com/technetwork/developer-tools/sql-developer/downloads/index.html

Heidi SQL

Heidi SQL comes packaged along with Maria DB installable; you may use the same to explore maria db.

Database drivers

- Oralce JDBC drivers: download ojdbc14.jar from below link http://www.oracle.com/technetwork/apps-tech/jdbc-10201-088211.html
- Oralce JDBC drivers: Oracle 11g and 12c driver for JDK7 and JDK8 ojdbc7.jar http://www.oracle.com/technetwork/database/features/jdbc/jdbc-drivers-12c-download-1958347.html
- **MariaDB drivers:** Download mariadb-java-client-2.2.3.jar from below location https://mariadb.com/downloads/connector

https://downloads.mariadb.com/Connectors/java/connector-java-2.2.3/mariadb-java-client-2.2.3.jar

Setup Database

Install either Oracle or mariaDB database as per requirement. Oracle 11g/12c/MariaDB 5.5.3 are supported. The step by step installation instructions for installing the Oracle 11g, 12c database and Oracle SQL Developer is out of scope of this document.

By Default Yugandhar Microservice Platform uses the schema YUG_MSP. If different user name (schema name) is needed then modify all the scripts with required schema name.

Oracle setup:

Oracle Install

Install the Oracle database using the instructions mentioned below.

Oracle 11g: https://docs.oracle.com/cd/E11882_01/nav/portal_11.htm

Oracle 12c: http://www.oracle.com/webfolder/technetwork/tutorials/obe/db/12c/r1/Windows_DB_Install_OBE/Installing_Oracle_Db12c_Windows.html

Yugandhar MSP schema setup for oracle

Download the scripts from github repository "resources\dbsetupscripts\oracle" location and execute the below scripts in sequence

Github repository link - https://github.com/yugandharproject/yugandhar-Microservice-platform

1. "1.yugmsp_ora_create_tablespaces_and_user.sql" – Needs DBA access
2. "2.yugmsp_ora_create_fullschema.sql" – execute through User YUG_MSP

Verify the logs and check that all the steps are executed correctly and REF_xxx as well as CONFIG_xxx tables are loaded with sample data. In Summary, below mentioned objects to the TABLES, Sequence and INDEXES are created in database

Table spaces –

MSP_DATATS – used for data and reference tables

MSP_INDXTS – used for Indexes

Profile:

YUGMSP_PROFILE - Used to create YUG_MSP user

User Schema:

YUG_MSP – Default user Schema used by Yugandhar Microservice Platform.

MariaDB setup:

MariaDB Install

Install MariaDB as per instructions mentioned in below links

https://mariadb.com/kb/en/library/getting-installing-and-upgrading-mariadb/

https://mariadb.com/products/get-started

Yugandhar MSP schema setup for MariaDB

Download the scripts from github repository resources\dbsetupscripts location and execute the below scripts in sequence

Github repository link - https://github.com/yugandharproject/yugandhar-Microservice-platform

Download the sqls from resources\dbsetupscripts path of the Yugandhar-Microservice-platform

1. "1.yugmsp_mariadb_createuser-and-database.sql" – login through root or DBA

Verify the logs and check that all the steps are executed correctly. Also verify that REF_xxx as well as CONFIG_xxx tables are loaded with sample data. In Summary, below mentioned objects to the TABLES, Sequence and INDEXES are created in database

Table spaces:

MSP_DATATS – used for data tables as well as reference tables

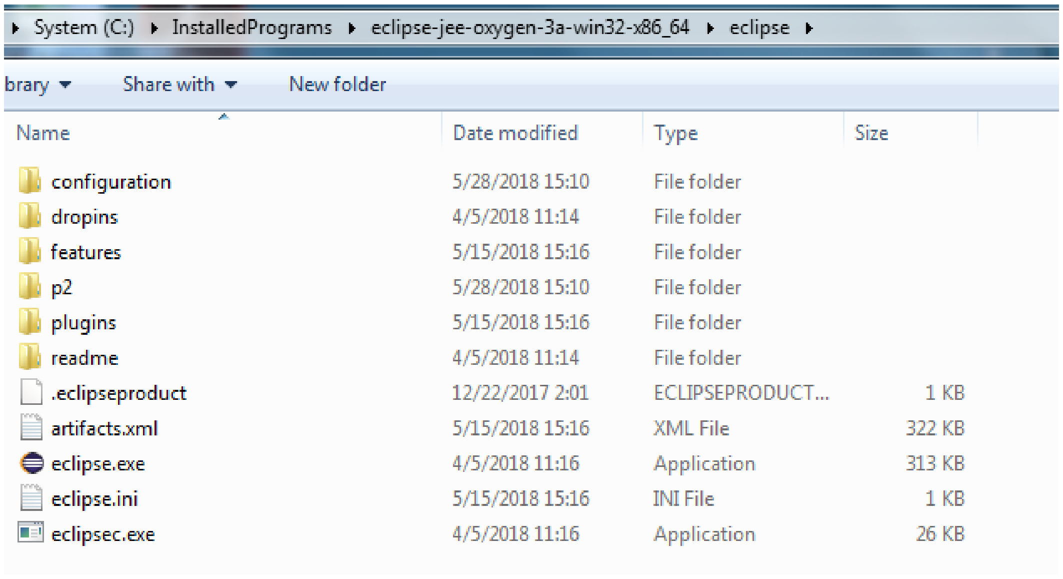
MSP_INDXTS – used for Indexes

DB User – YUG_MSP*: Default user used by Yugandhar Microservice Platform to connect to database.*

Database: *yug_msp database is created.*

Setup Workspace

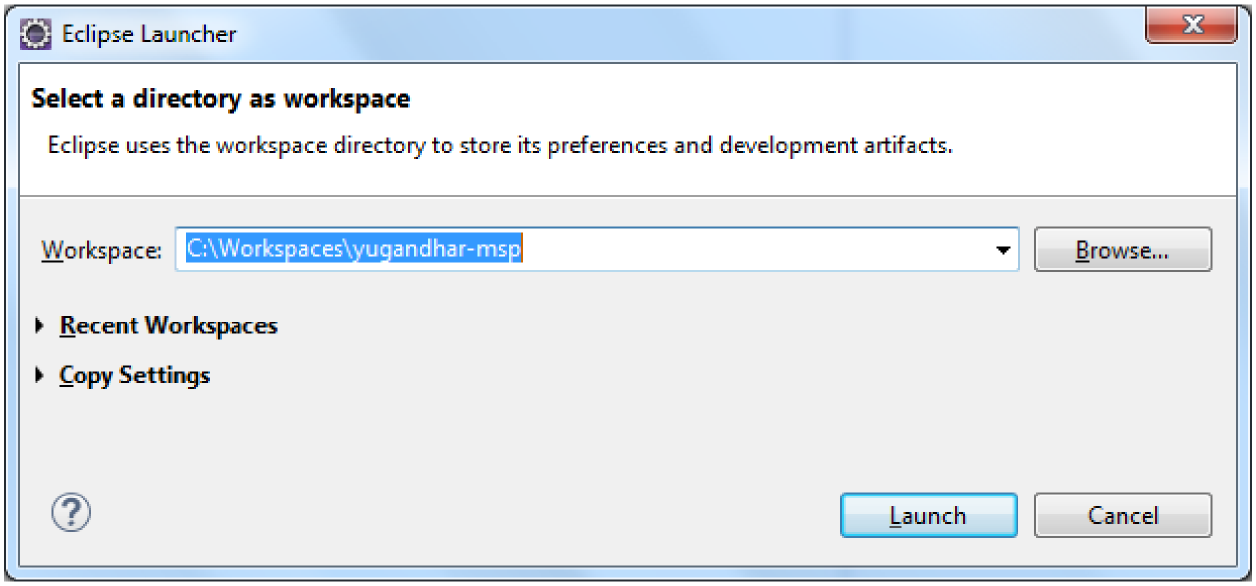
Extract the downloaded eclipse archive in any of the folder of your choice.


System (C:) ▸ InstalledPrograms ▸ eclipse-jee-oxygen-3a-win32-x86_64 ▸ eclipse ▸
brary Share with New folder

Name	Date modified	Type	Size
configuration	5/28/2018 15:10	File folder	
dropins	4/5/2018 11:14	File folder	
features	5/15/2018 15:16	File folder	
p2	5/28/2018 15:10	File folder	
plugins	5/15/2018 15:16	File folder	
readme	4/5/2018 11:14	File folder	
.eclipseproduct	12/22/2017 2:01	ECLIPSEPRODUCT...	1 KB
artifacts.xml	5/15/2018 15:16	XML File	322 KB
eclipse.exe	4/5/2018 11:16	Application	313 KB
eclipse.ini	5/15/2018 15:16	INI File	1 KB
eclipsec.exe	4/5/2018 11:16	Application	26 KB

The extracted folder would have above files, click on eclipse.exe to start the eclipse IDE.

The next window would ask you for the workspace location, provide the location as per your choice, for this documentation purpose we are creating workspace in C:\workspaces\yugandhar-msp folder.

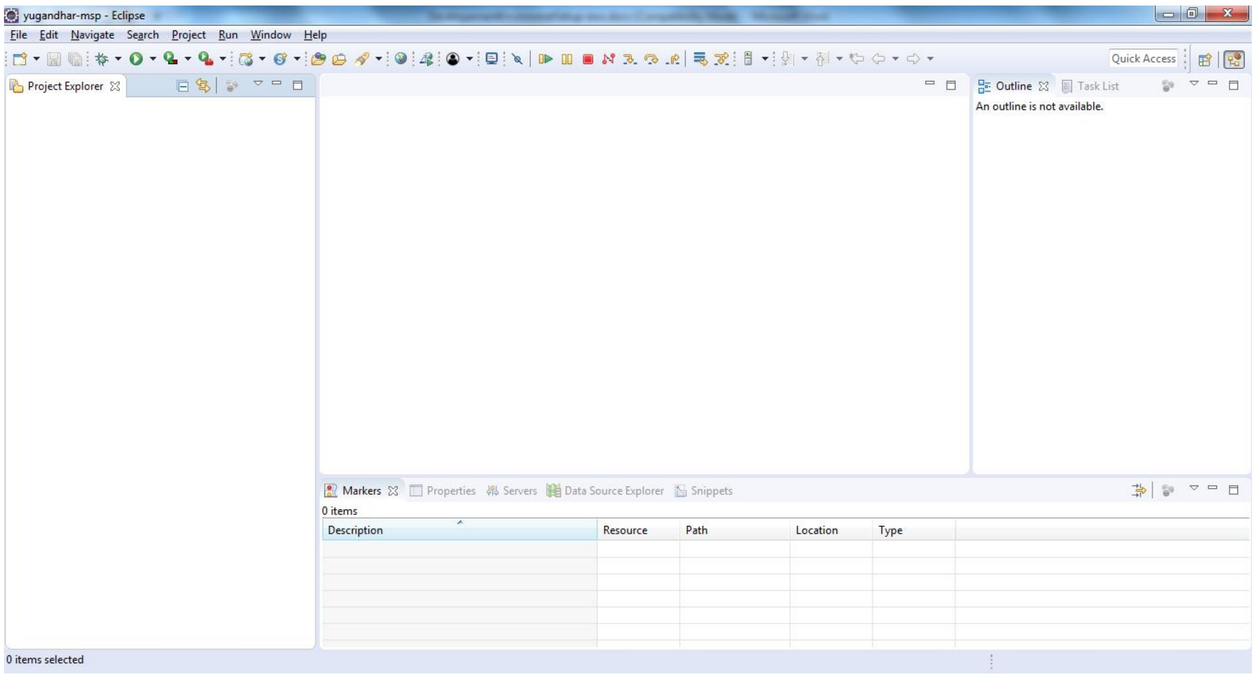

Eclipse Launcher

Select a directory as workspace

Eclipse uses the workspace directory to store its preferences and development artifacts.

Workspace: C:\Workspaces\yugandhar-msp

Your workspace is ready to be configured now.


yugandhar-msp - Eclipse
File Edit Navigate Search Project Run Window Help
Quick Access
Project Explorer
Outline
Task List
An outline is not available.
Markers
Properties
Servers
Data Source Explorer
Snippets
0 items
Description
Resource
Path
Location
Type
0 items selected

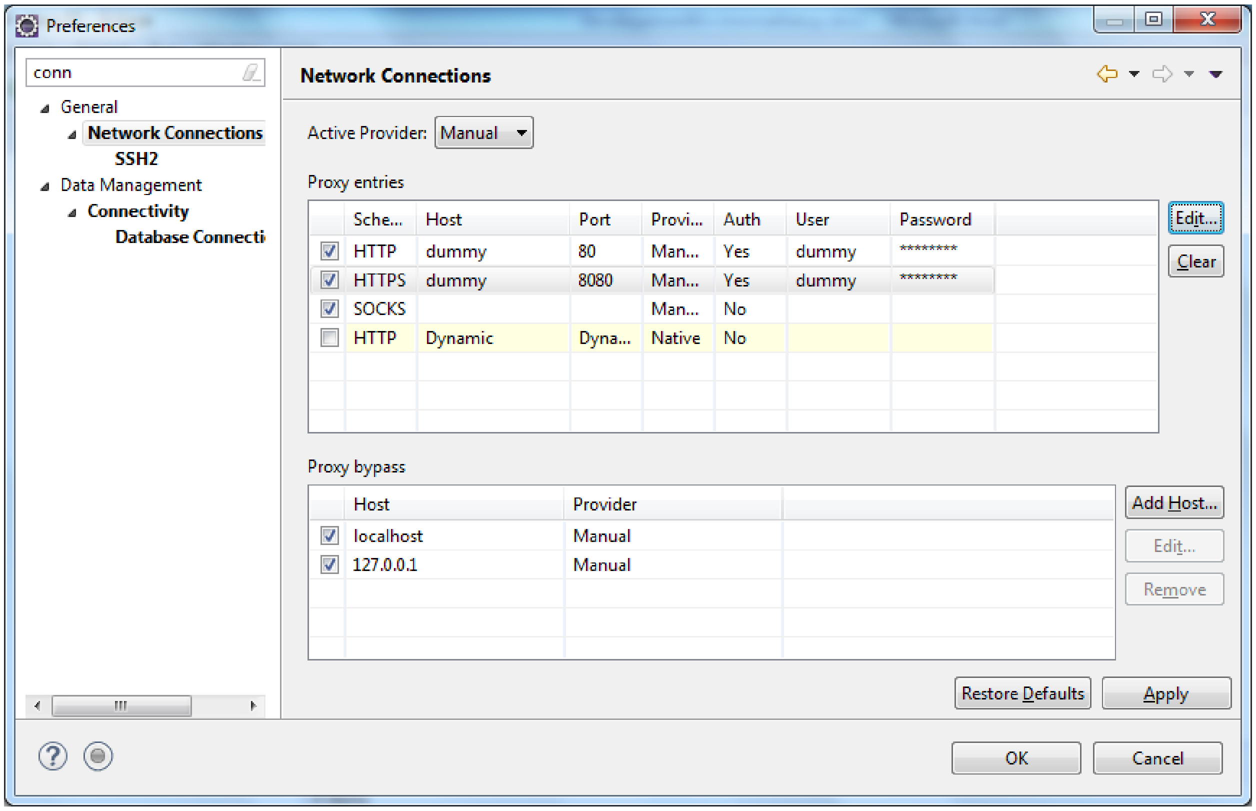
Setup up Network Connections

If you are behind firewall then you need to perform below steps. Those who have direct internet connection (without proxy) can skip the eclipse Network and Maven Settings step.

Eclipse network

Go to Windows -- > preferences → General → Network Connections

Change the Active Provider to manual and set the proxy host, port and user credentials as per your firewall settings. The below settings are dummy so should not be copied as-is. Click on apply and click OK.



Network Connections

Active Provider: Manual

Proxy entries

	Sche...	Host	Port	Provi...	Auth	User	Password
✓	HTTP	dummy	80	Man...	Yes	dummy	********
✓	HTTPS	dummy	8080	Man...	Yes	dummy	********
✓	SOCKS			Man...	No		
	HTTP	Dynamic	Dyna...	Native	No		

Proxy bypass

	Host	Provider
✓	localhost	Manual
✓	127.0.0.1	Manual

Maven Settings

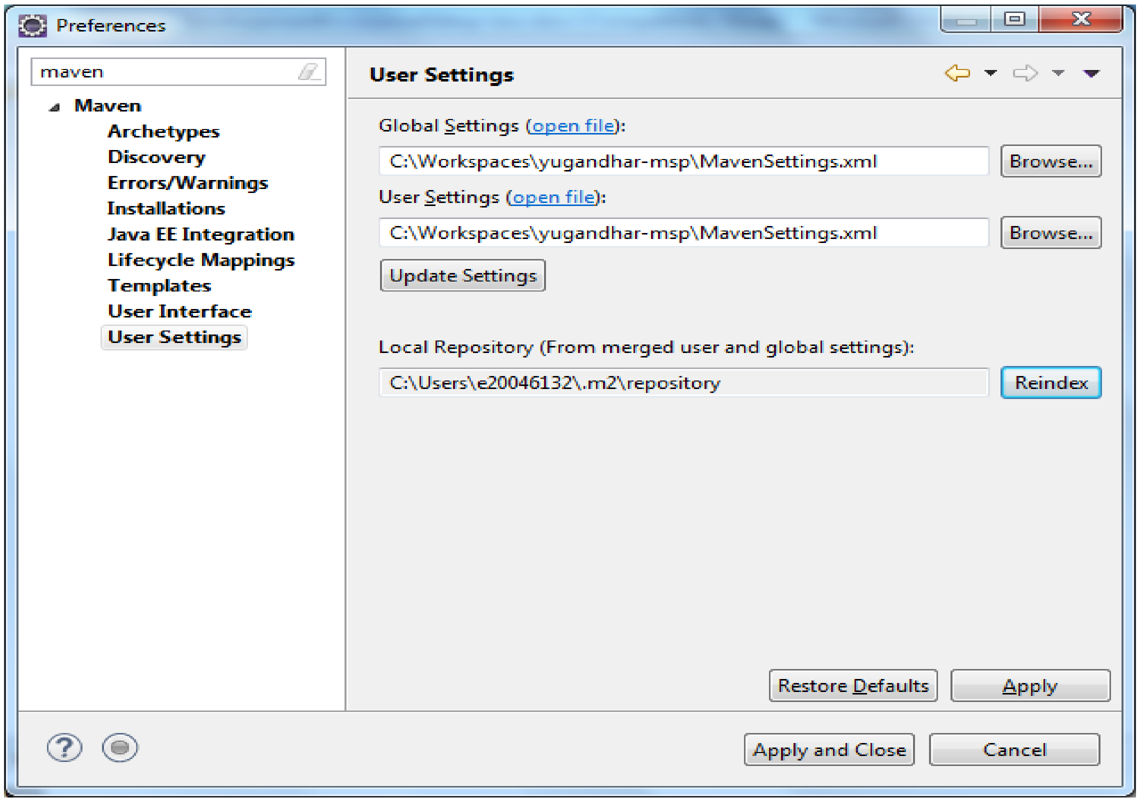
Create a simple text file named MavenSettings.xml in workspace having below content.

You may also download sample MavenSettings.xml from git hub resources/mavensettings folder.

```
<settings xmlns="http://maven.apache.org/SETTINGS/1.0.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/SETTINGS/1.0.0
                    http://maven.apache.org/xsd/settings-1.0.0.xsd">
  <localRepository>C:\Users\<UserName>\.m2\repository</localRepository>
  <interactiveMode/>
  <usePluginRegistry/>
  <offline/>
  <pluginGroups/>
  <servers/>
  <mirrors/>
  <proxies>
    <proxy>
      <id>myproxy</id>
      <active>true</active>
      <protocol>http</protocol>
      <host>dummy</host>
      <port> dummy </port>
      <username>dummy</username>
      <password>dummy</password>
      <nonProxyHosts>localhost,127.0.0.1</nonProxyHosts>
    </proxy>
  </proxies>
  <profiles/>
  <activeProfiles/>
</settings>
```

Note – Make sure to change the host, port, username and password as per your firewall settings. Also change the localRepository to users folder.

Now go to Eclipse Menu → windows → preferences → maven → User Settings → provide path of the file MavenSettings.xml in the local and global settings as shown in screenshot below



User Settings

Global Settings (open file):

C:\Workspaces\yugandhar-msp\MavenSettings.xml

User Settings (open file):

C:\Workspaces\yugandhar-msp\MavenSettings.xml

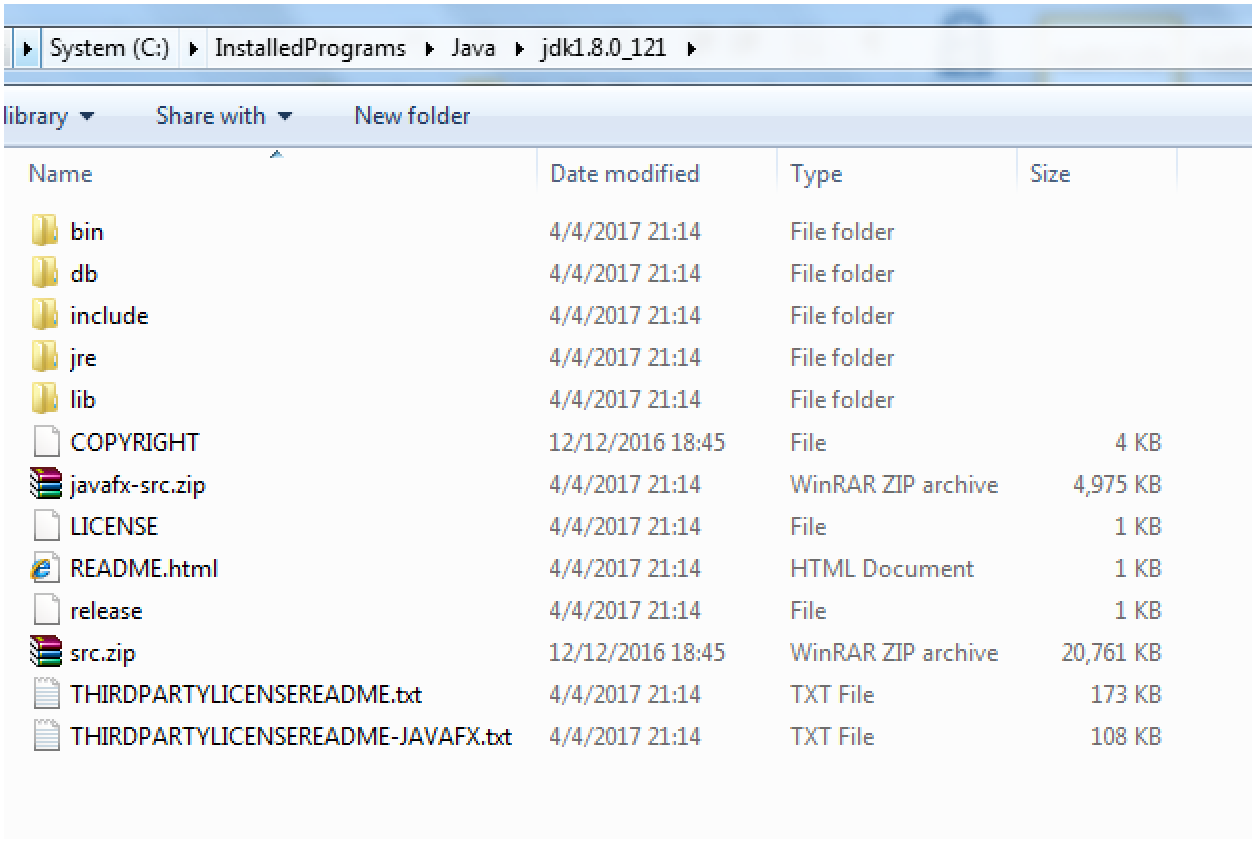
Local Repository (From merged user and global settings):

C:\Users\e20046132\.m2\repository

Set JDK Path

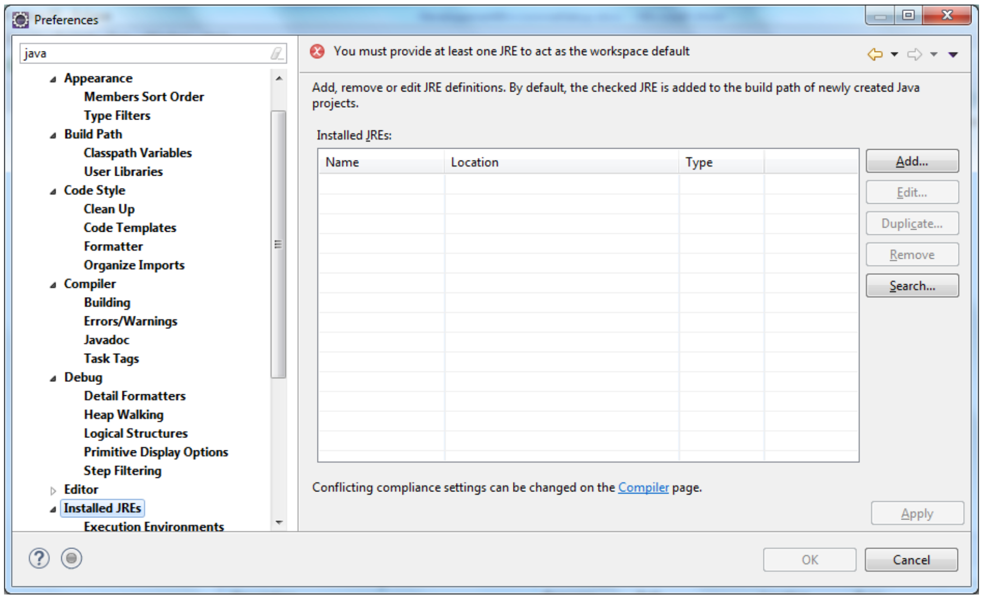
Extract the JDK in a folder of your choice, for the document purpose the jdk directory is

C:\InstalledPrograms\Java\jdk1.8.0_121. The directory should look something like below



Name	Date modified	Type	Size
bin	4/4/2017 21:14	File folder	
db	4/4/2017 21:14	File folder	
include	4/4/2017 21:14	File folder	
jre	4/4/2017 21:14	File folder	
lib	4/4/2017 21:14	File folder	
COPYRIGHT	12/12/2016 18:45	File	4 KB
javafx-src.zip	4/4/2017 21:14	WinRAR ZIP archive	4,975 KB
LICENSE	4/4/2017 21:14	File	1 KB
README.html	4/4/2017 21:14	HTML Document	1 KB
release	4/4/2017 21:14	File	1 KB
src.zip	12/12/2016 18:45	WinRAR ZIP archive	20,761 KB
THIRDPARTYLICENSEREADME.txt	4/4/2017 21:14	TXT File	173 KB
THIRDPARTYLICENSEREADME-JAVAFX.txt	4/4/2017 21:14	TXT File	108 KB

Go to eclipse Menu → Windows → Preferences → Java → Installed JREs



Preferences

java

- Appearance
  - Members Sort Order
  - Type Filters
- Build Path
  - Classpath Variables
  - User Libraries
- Code Style
  - Clean Up
  - Code Templates
  - Formatter
  - Organize Imports
- Compiler
  - Building
  - Errors/Warnings
  - Javadoc
  - Task Tags
- Debug
  - Detail Formatters
  - Heap Walking
  - Logical Structures
  - Primitive Display Options
  - Step Filtering
- Editor
- Installed JREs
  - Execution Environments

You must provide at least one JRE to act as the workspace default

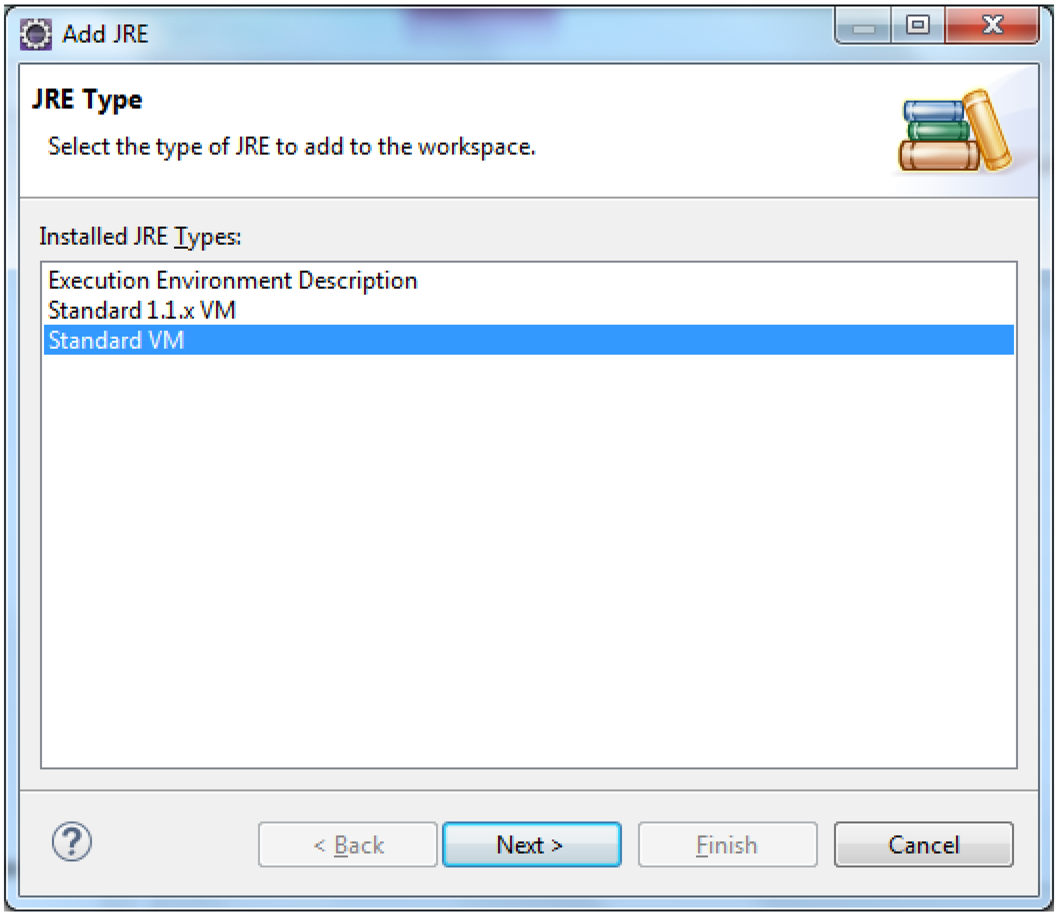
Add, remove or edit JRE definitions. By default, the checked JRE is added to the build path of newly created Java projects.

Installed JREs:

Name	Location	Type

Conflicting compliance settings can be changed on the Compiler page.

Click Add



Add JRE

JRE Type

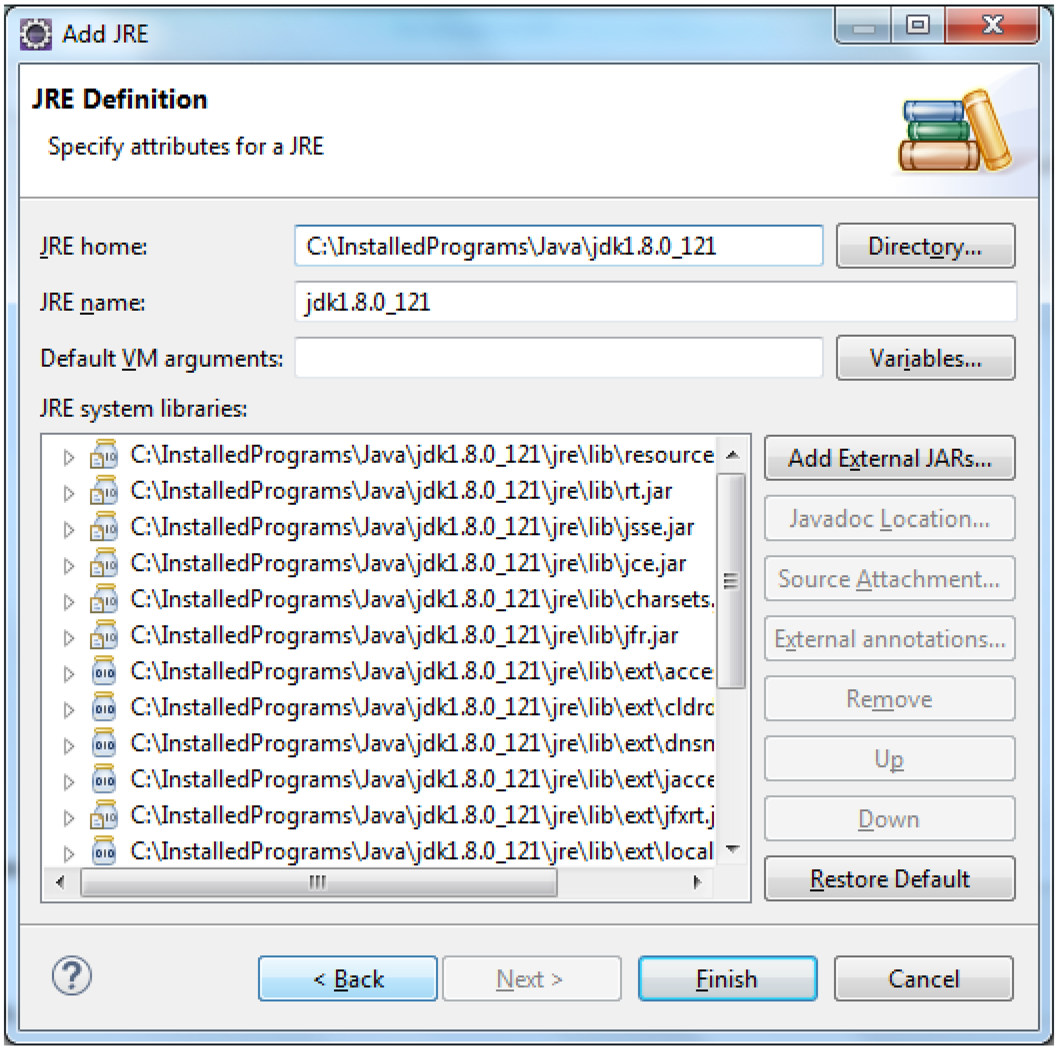
Select the type of JRE to add to the workspace.

Installed JRE Types:

- Execution Environment Description
- Standard 1.1.x VM
- Standard VM

Click Next

Provide the JDK folder name where JDK is extracted



JRE home: C:\InstalledPrograms\Java\jdk1.8.0_121

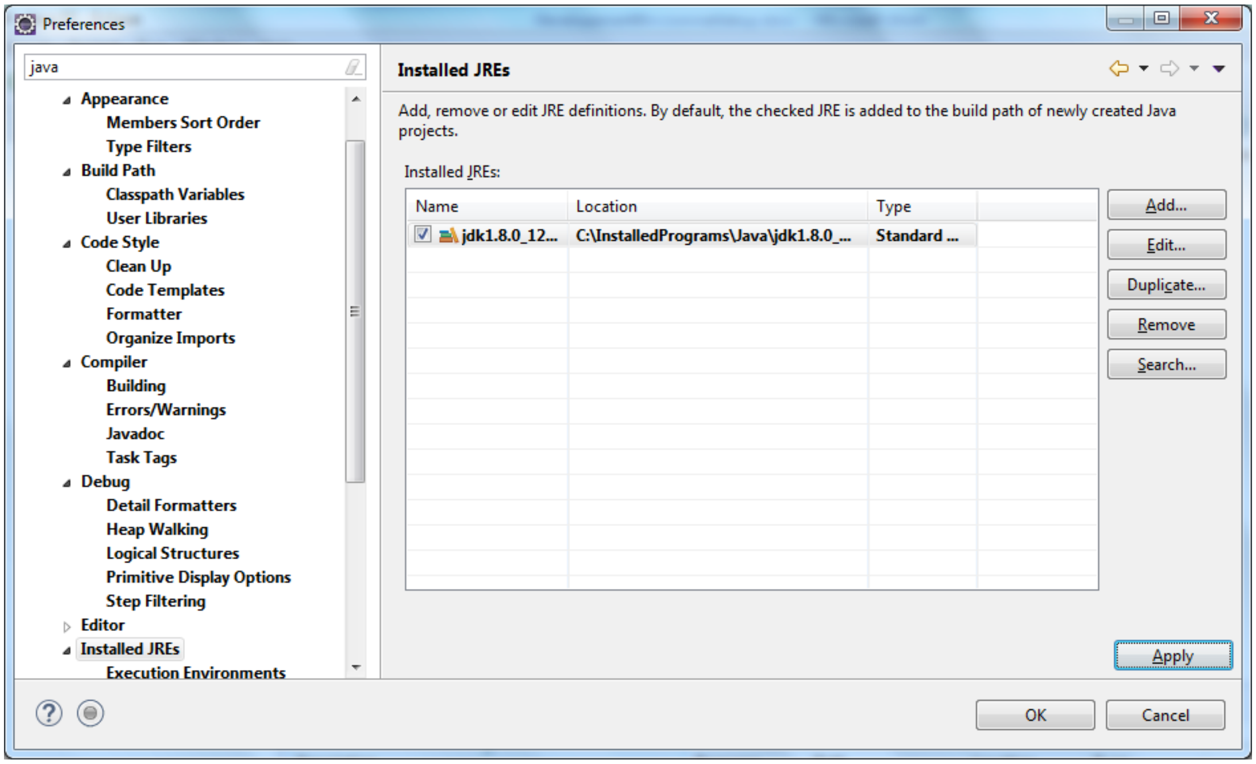
JRE name: jdk1.8.0_121

Default VM arguments:

JRE system libraries:

```
C:\InstalledPrograms\Java\jdk1.8.0_121\jre\lib\resource
C:\InstalledPrograms\Java\jdk1.8.0_121\jre\lib\rt.jar
C:\InstalledPrograms\Java\jdk1.8.0_121\jre\lib\jsse.jar
C:\InstalledPrograms\Java\jdk1.8.0_121\jre\lib\jce.jar
C:\InstalledPrograms\Java\jdk1.8.0_121\jre\lib\charsets.
C:\InstalledPrograms\Java\jdk1.8.0_121\jre\lib\jfr.jar
C:\InstalledPrograms\Java\jdk1.8.0_121\jre\lib\ext\acce
C:\InstalledPrograms\Java\jdk1.8.0_121\jre\lib\ext\cldrc
C:\InstalledPrograms\Java\jdk1.8.0_121\jre\lib\ext\dnsn
C:\InstalledPrograms\Java\jdk1.8.0_121\jre\lib\ext\jacce
C:\InstalledPrograms\Java\jdk1.8.0_121\jre\lib\ext\jfxrt.j
C:\InstalledPrograms\Java\jdk1.8.0_121\jre\lib\ext\local
```

Click finish


Preferences

java

- Appearance
  - Members Sort Order
  - Type Filters
- Build Path
  - Classpath Variables
  - User Libraries
- Code Style
  - Clean Up
  - Code Templates
  - Formatter
  - Organize Imports
- Compiler
  - Building
  - Errors/Warnings
  - Javadoc
  - Task Tags
- Debug
  - Detail Formatters
  - Heap Walking
  - Logical Structures
  - Primitive Display Options
  - Step Filtering
- Editor
- Installed JREs
  - Execution Environments

Installed JREs

Add, remove or edit JRE definitions. By default, the checked JRE is added to the build path of newly created Java projects.

Installed JREs:

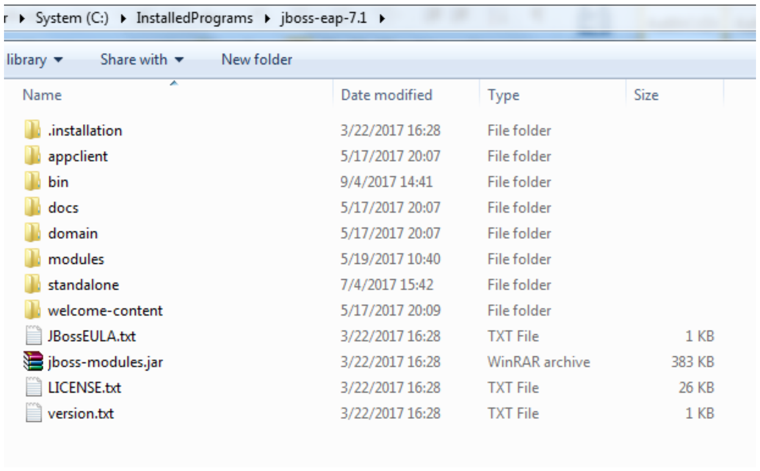
Name	Location	Type
✓ jdk1.8.0_12...	C:\InstalledPrograms\Java\jdk1.8.0_...	Standard ...

Check the textbox against recently added JDK, click Apply and OK.

Configure RedHat JBOSS EAP

Extract the downloaded RedHat Server to a directory of your choice like

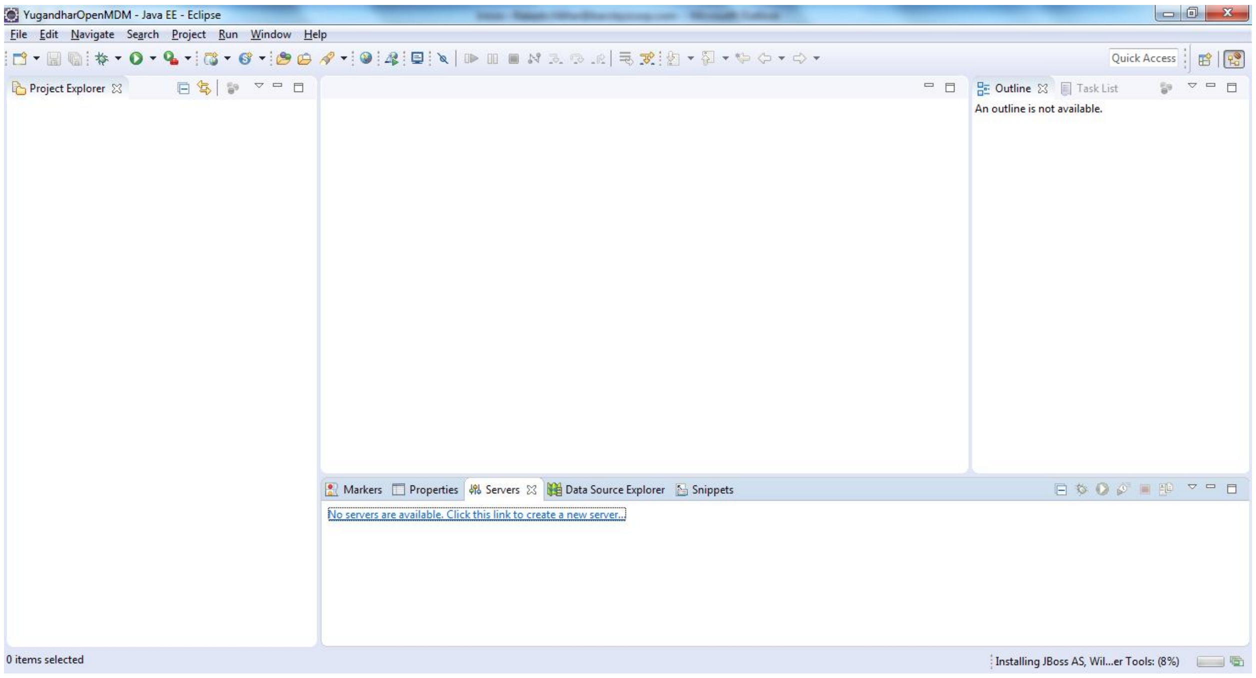
C:\InstalledPrograms\jboss-eap-7.1


System (C:) ▸ InstalledPrograms ▸ jboss-eap-7.1 ▸

library ▾ Share with ▾ New folder

Name	Date modified	Type	Size
.installation	3/22/2017 16:28	File folder	
appclient	5/17/2017 20:07	File folder	
bin	9/4/2017 14:41	File folder	
docs	5/17/2017 20:07	File folder	
domain	5/17/2017 20:07	File folder	
modules	5/19/2017 10:40	File folder	
standalone	7/4/2017 15:42	File folder	
welcome-content	5/17/2017 20:09	File folder	
JBossEULA.txt	3/22/2017 16:28	TXT File	1 KB
jboss-modules.jar	3/22/2017 16:28	WinRAR archive	383 KB
LICENSE.txt	3/22/2017 16:28	TXT File	26 KB
version.txt	3/22/2017 16:28	TXT File	1 KB

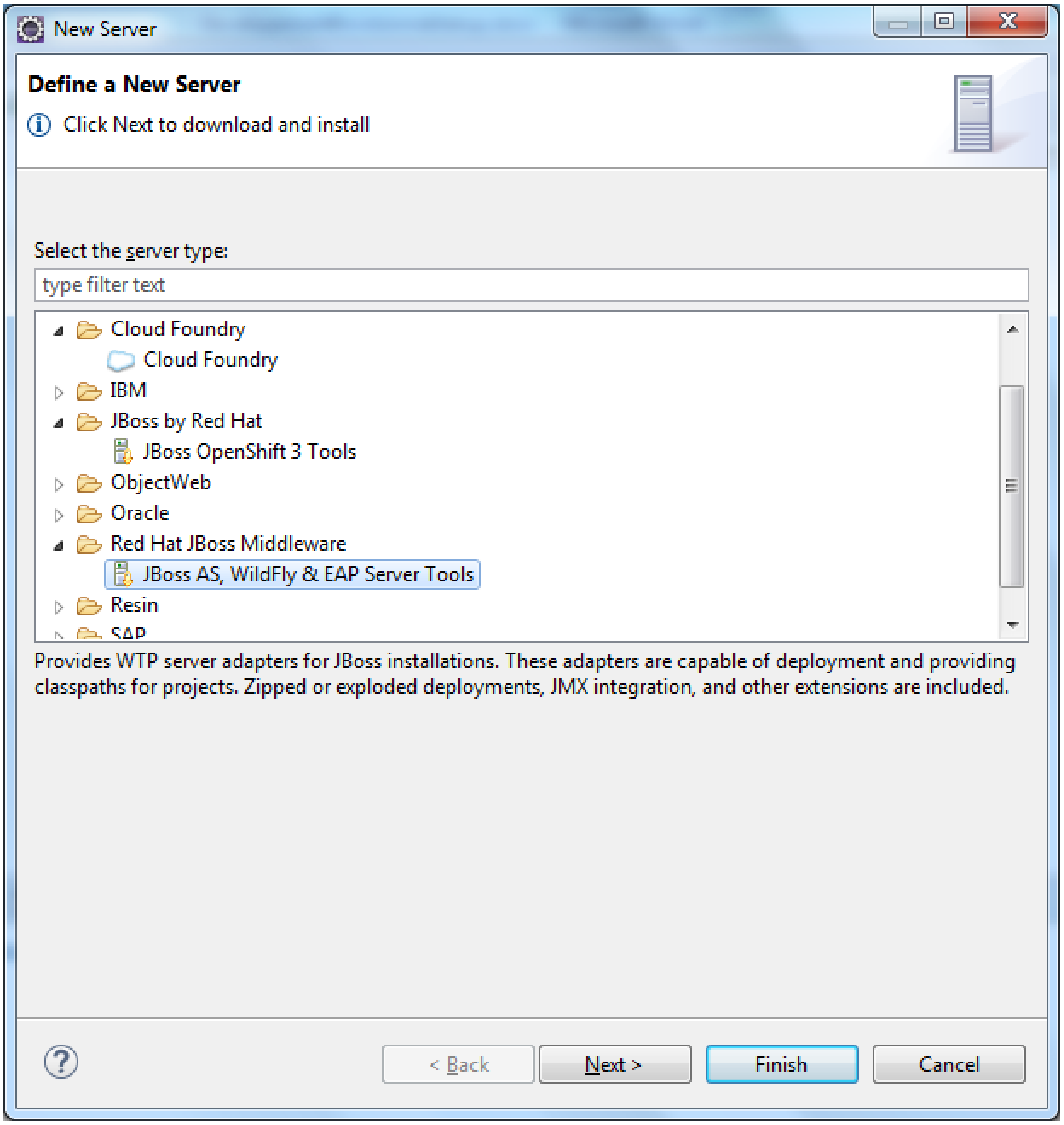
Go to eclipse 'Servers' tab and click on the link to create new Server.


YugandharOpenMDM - Java EE - Eclipse
File Edit Navigate Search Project Run Window Help
Quick Access
Project Explorer
Outline
Task List
An outline is not available.
Markers Properties Servers Data Source Explorer Snippets
0 items selected

No servers are available. Click this link to create a new server...

Installing JBoss AS, Wil...er Tools: (8%)

Click the Red Hat Jboss Middleware option as shown in below screenshot



New Server

Define a New Server

Click Next to download and install

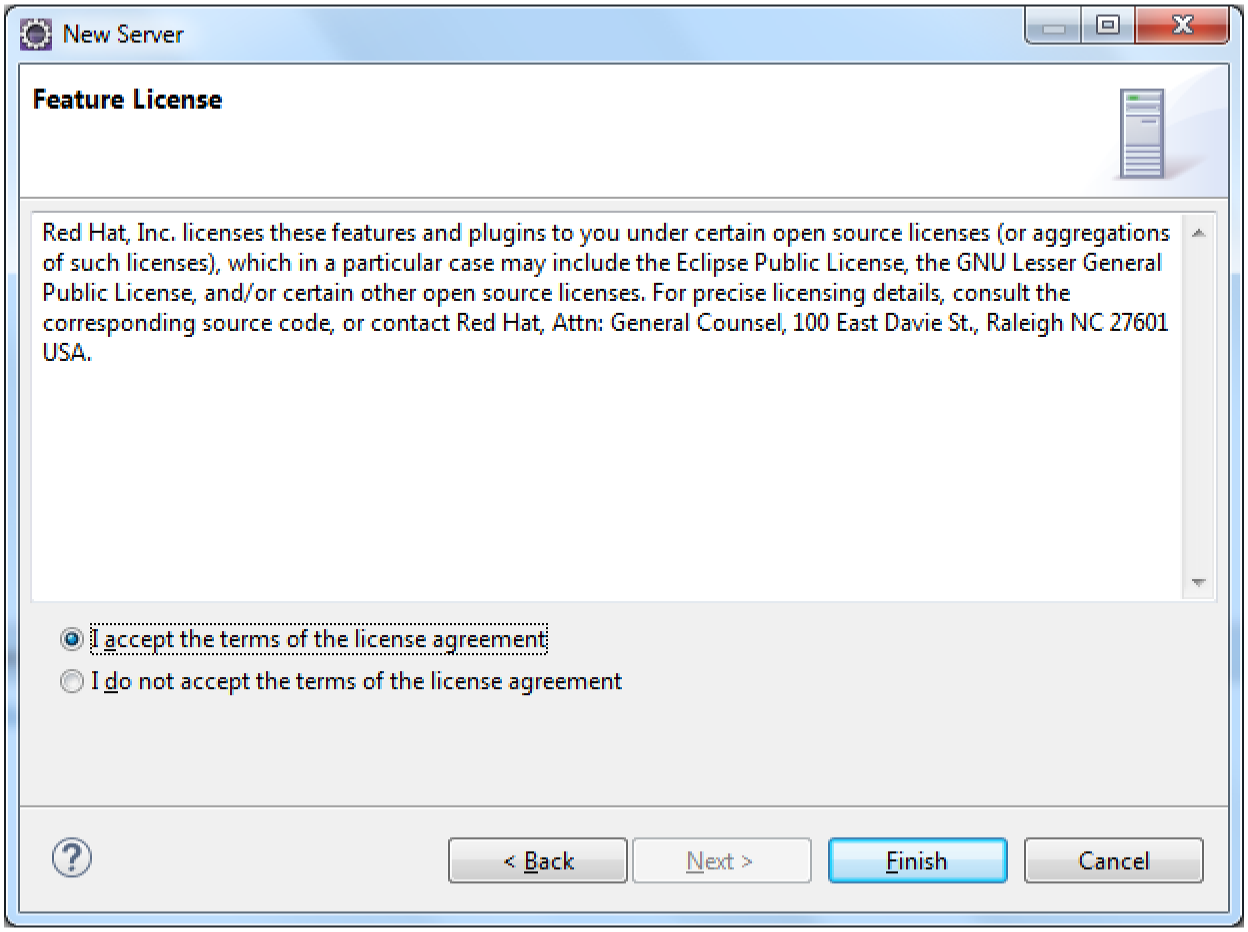
Select the server type:

type filter text

- Cloud Foundry
  - Cloud Foundry
- IBM
- JBoss by Red Hat
  - JBoss OpenShift 3 Tools
- ObjectWeb
- Oracle
- Red Hat JBoss Middleware
  - JBoss AS, WildFly & EAP Server Tools
- Resin
- SAP

Provides WTP server adapters for JBoss installations. These adapters are capable of deployment and providing classpaths for projects. Zipped or exploded deployments, JMX integration, and other extensions are included.

Click Next. It may take some time to process after which will ask to accept the licensing terms. Accept the license and click Finish.

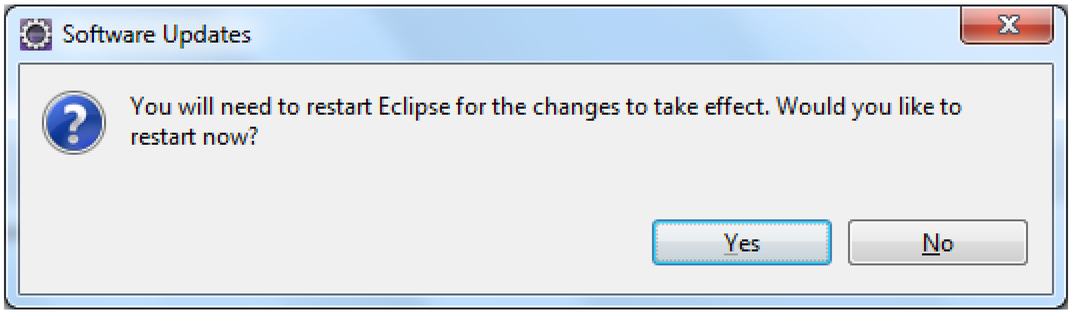


Feature License

Red Hat, Inc. licenses these features and plugins to you under certain open source licenses (or aggregations of such licenses), which in a particular case may include the Eclipse Public License, the GNU Lesser General Public License, and/or certain other open source licenses. For precise licensing details, consult the corresponding source code, or contact Red Hat, Attn: General Counsel, 100 East Davie St., Raleigh NC 27601 USA.

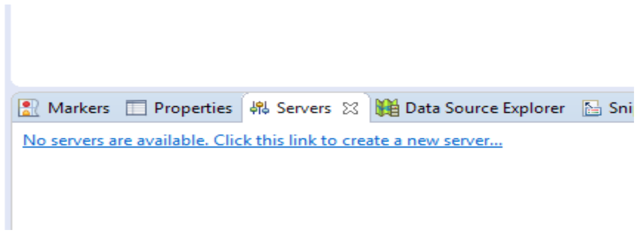
[✓ I accept the terms of the license agreement]
I do not accept the terms of the license agreement

Eclipse will automatically download and install the JBoss Tools which may take some time based on the speed of your internet connection. The eclipse IDE needs to be restarted after this step so that JBoss EAP tools are available in eclipse.



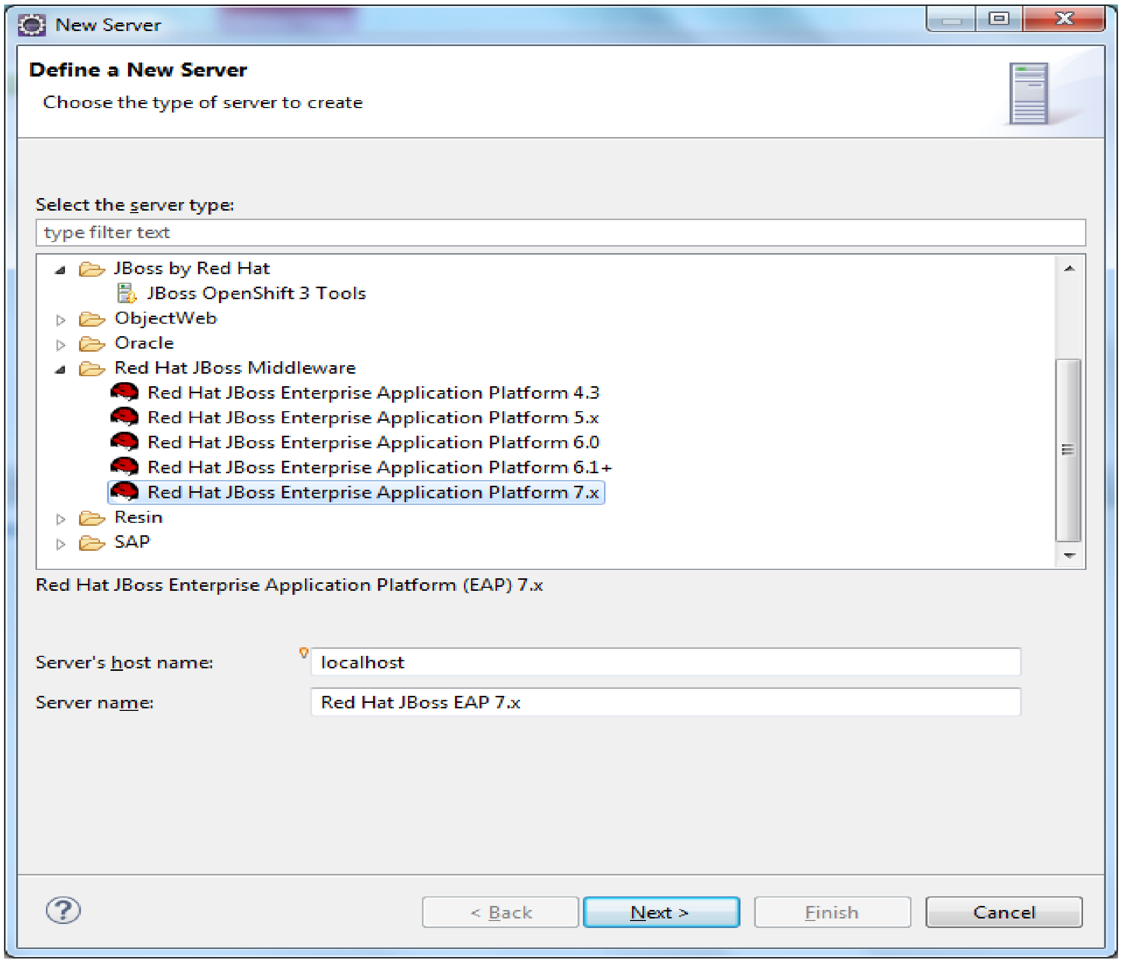
You will need to restart Eclipse for the changes to take effect. Would you like to restart now?

Click on the Server Tab and Create new server link



No servers are available. Click this link to create a new server...

You would now see Red Hat JBoss Enterprise Application Platform 7.x as an option now. Click on the same and click Next



Define a New Server

Choose the type of server to create

Select the server type:

type filter text

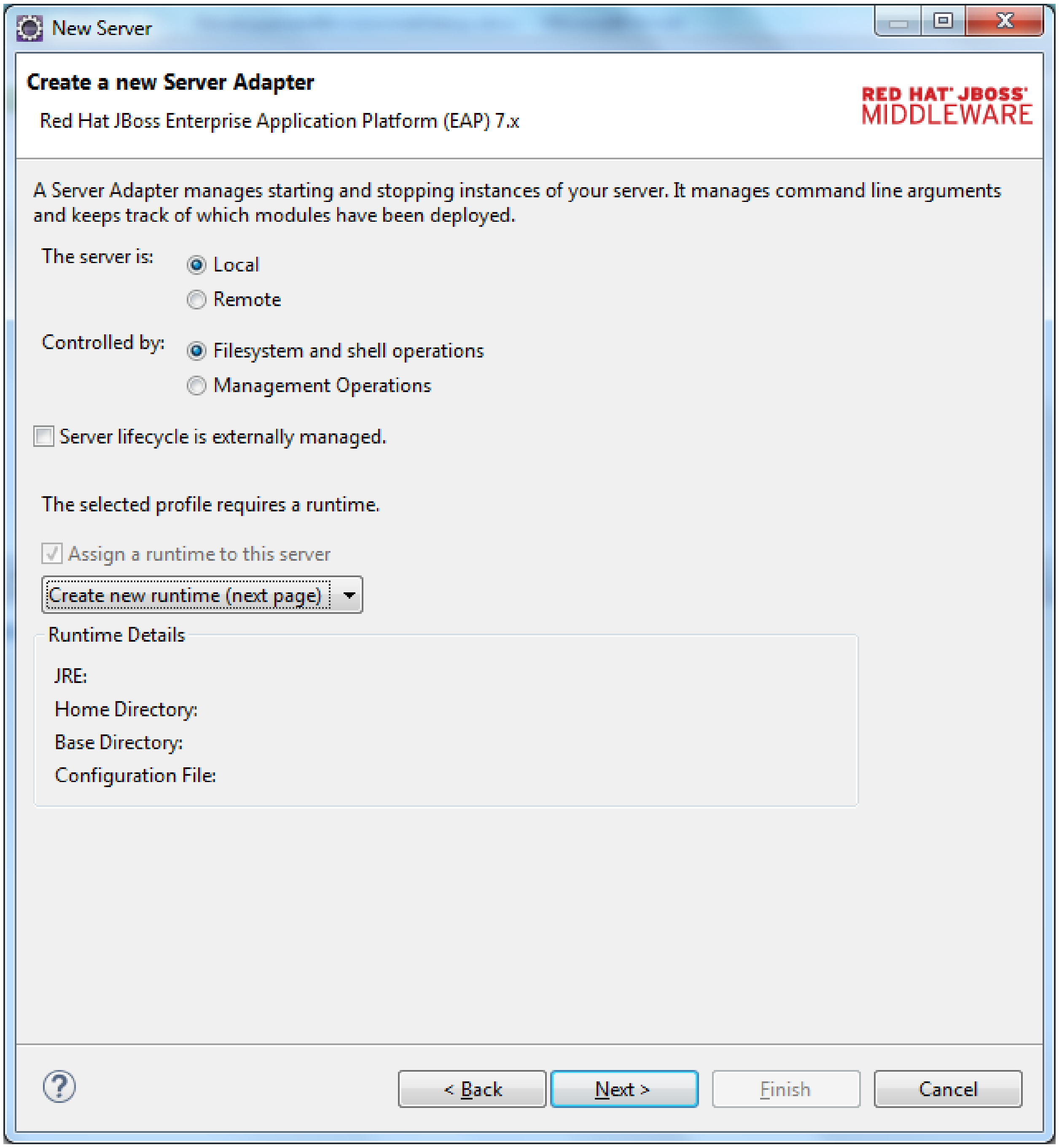
- JBoss by Red Hat
  - JBoss OpenShift 3 Tools
- ObjectWeb
- Oracle
- Red Hat JBoss Middleware
  - Red Hat JBoss Enterprise Application Platform 4.3
  - Red Hat JBoss Enterprise Application Platform 5.x
  - Red Hat JBoss Enterprise Application Platform 6.0
  - Red Hat JBoss Enterprise Application Platform 6.1+
  - Red Hat JBoss Enterprise Application Platform 7.x
- Resin
- SAP

Red Hat JBoss Enterprise Application Platform (EAP) 7.x

Server's host name: localhost

Server name: Red Hat JBoss EAP 7.x

Click Next



Create a new Server Adapter

Red Hat JBoss Enterprise Application Platform (EAP) 7.x

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 requires a runtime.

☑ Assign a runtime to this server

Create new runtime (next page)

Runtime Details

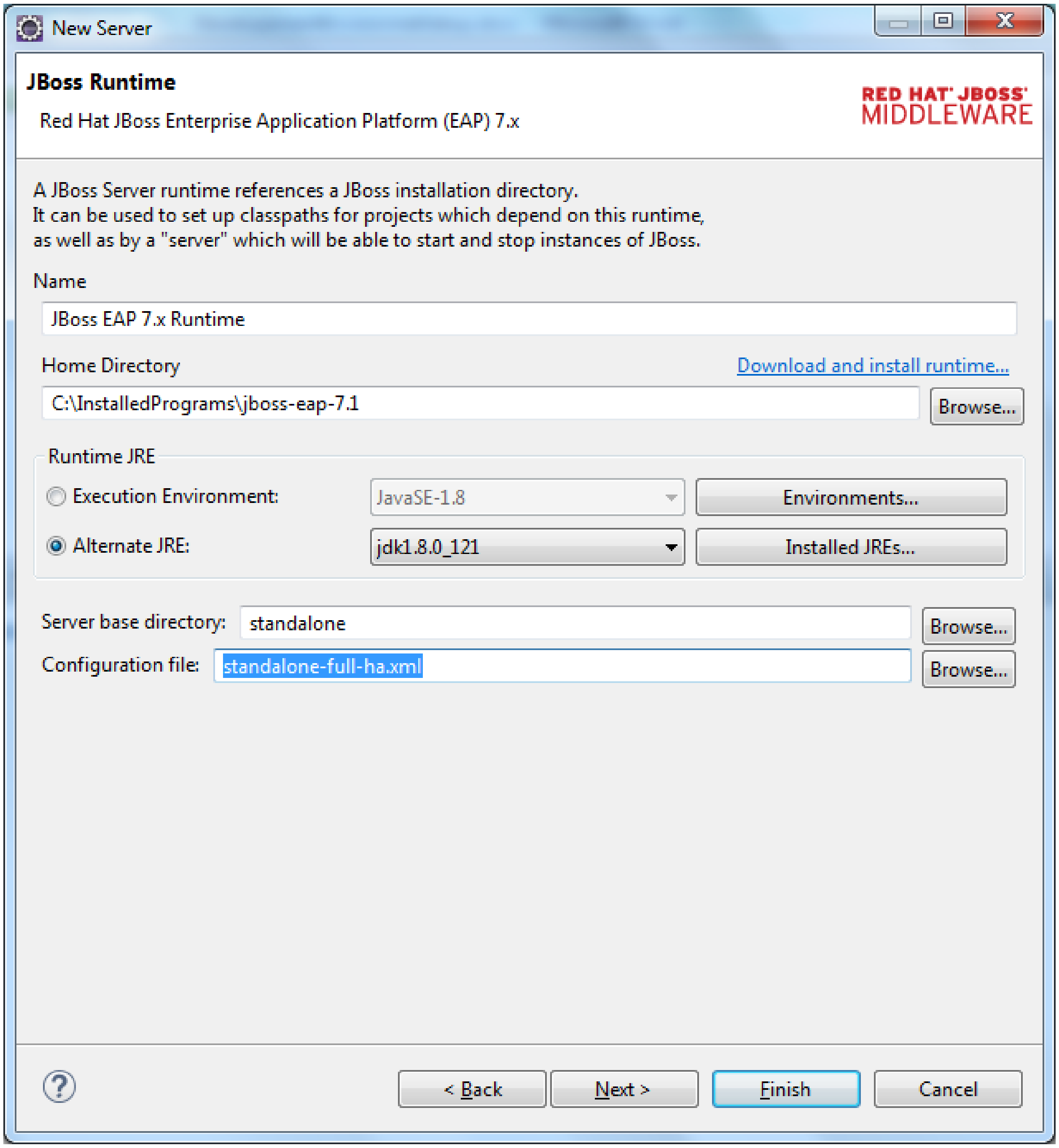
JRE:

Home Directory:

Base Directory:

Configuration File:

Provide the directory where we have extracted Jboss archive. Also provide the JRE we added in previous steps. Also choose the Configuration file as standalone-full-ha.xml.


New Server

JBoss Runtime

Red Hat JBoss Enterprise Application Platform (EAP) 7.x

RED HAT JBOSS MIDDLEWARE

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.x Runtime

Home Directory: C:\InstalledPrograms\jboss-eap-7.1

Download and install runtime...

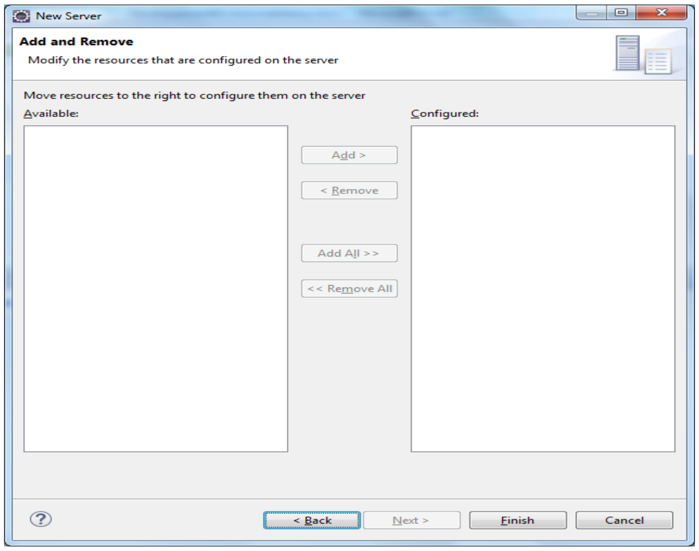
Runtime JRE

- Execution Environment: JavaSE-1.8
- [✓ Alternate JRE: jdk1.8.0_121]

Server base directory: standalone

Configuration file: standalone-full-ha.xml

Click Next and Finish


New Server
Add and Remove
Modify the resources that are configured on the server
Move resources to the right to configure them on the server
Available:
Configured:
Add >
< Remove
Add All >>
<< Remove All
< Back
Next >
Finish
Cancel

You would see the added server in the Servers Tab now. You may click on the start button and check that server is started without errors. Check the logs in Console View and after verification stop the server.

a. Set the JBoss server port

Modify the below property to set the desired port, for yugandhar msp default port is set to 8091

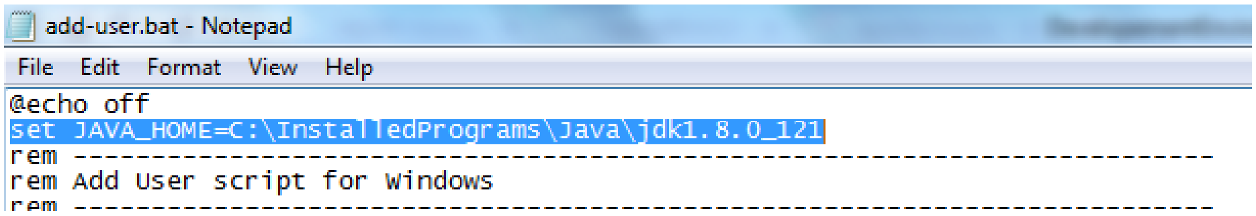
```
<socket-binding name="http" port="${jboss.http.port:8091}"/>
```

b. Add User to Access JBoss Management Console

Go to directory where jboss is installed e.g. C:\InstalledPrograms\jboss-eap-7.1.0\bin

Edit the add-user.bat file to set java home, add the jdk home path where you extracted the JDK

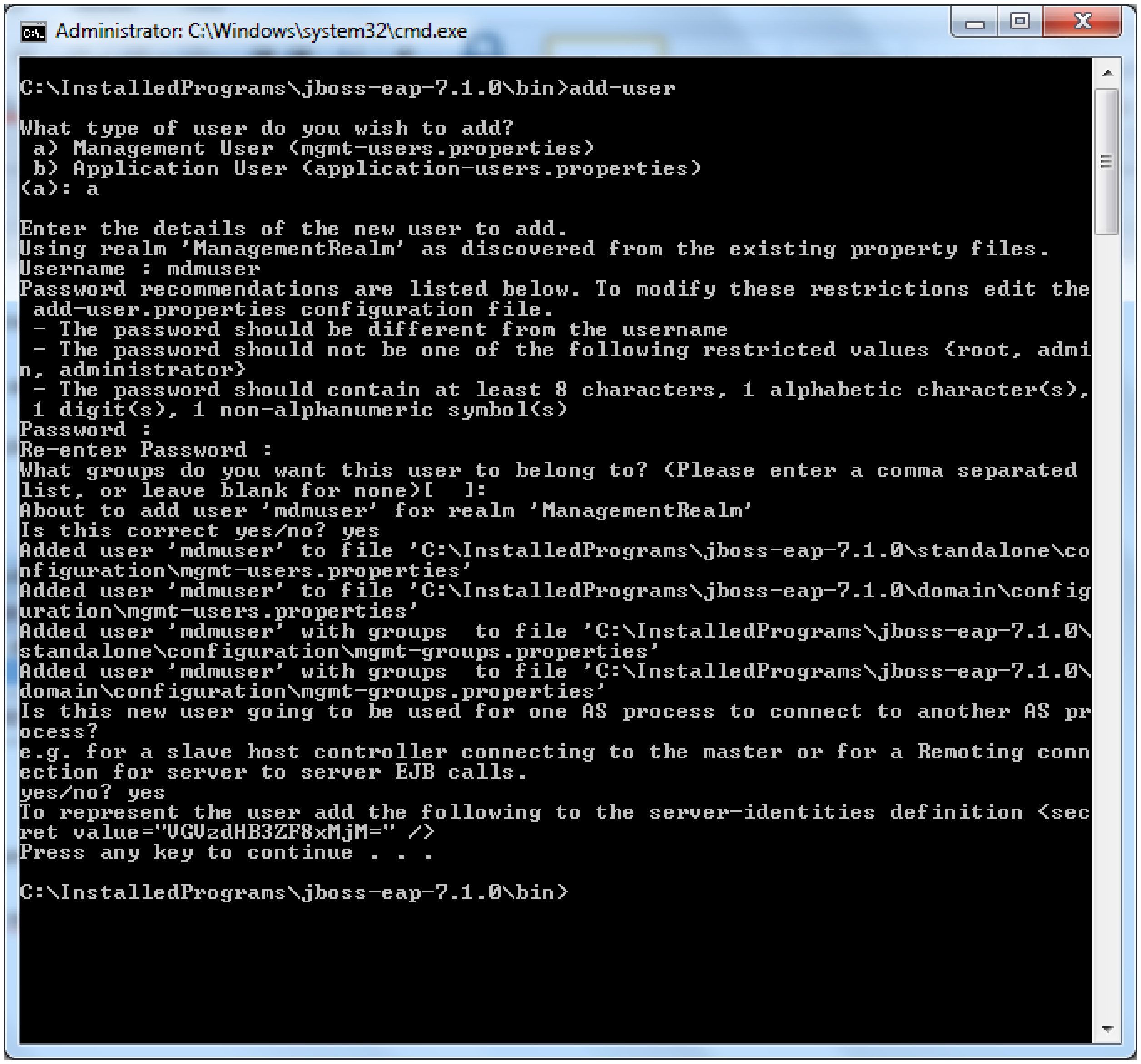
e.g. set JAVA_HOME=C:\InstalledPrograms\Java\jdk1.8.0_121



```
@echo off
set JAVA_HOME=C:\InstalledPrograms\Java\jdk1.8.0_121
rem -------------------------------------------------------------------------
rem Add User script for Windows
rem -------------------------------------------------------------------------
```

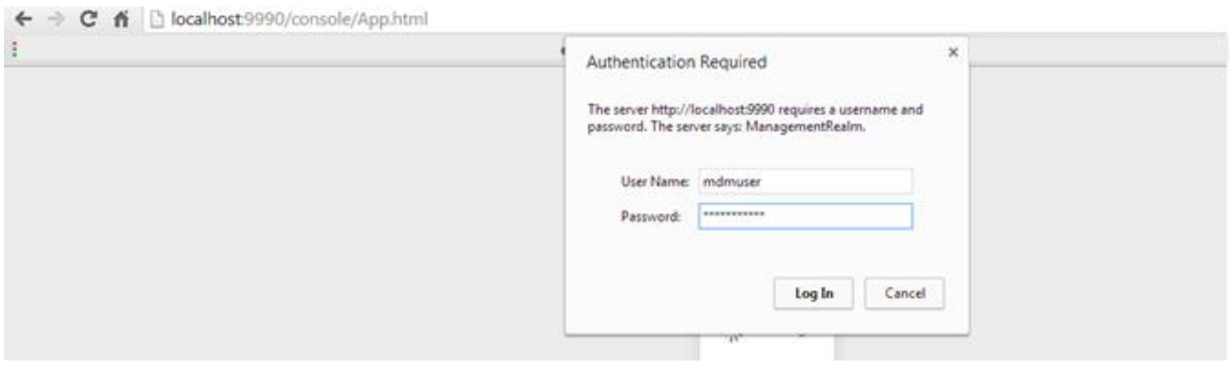
Go to command prompt and add the user by running add-user.bat file

Provide mspuser / Testpwd_123 as username and password (Password may be different of your choice)



```
C:\InstalledPrograms\jboss-eap-7.1.0\bin>add-user

What type of user do you wish to add?
 a) Management User (mgmt-users.properties)
 b) Application User (application-users.properties)
(a): a

Enter the details of the new user to add.
Using realm 'ManagementRealm' as discovered from the existing property files.
Username : mdmuser
Password recommendations are listed below. To modify these restrictions edit the
 add-user.properties configuration file.
 - The password should be different from the username
 - The password should not be one of the following restricted values {root, admi
n, administrator}
 - The password should contain at least 8 characters, 1 alphabetic character(s),
 1 digit(s), 1 non-alphanumeric symbol(s)
Password :
Re-enter Password :
What groups do you want this user to belong to? (Please enter a comma separated
list, or leave blank for none)[  ]:
About to add user 'mdmuser' for realm 'ManagementRealm'
Is this correct yes/no? yes
Added user 'mdmuser' to file 'C:\InstalledPrograms\jboss-eap-7.1.0\standalone\co
nfiguration\mgmt-users.properties'
Added user 'mdmuser' to file 'C:\InstalledPrograms\jboss-eap-7.1.0\domain\config
uration\mgmt-users.properties'
Added user 'mdmuser' with groups  to file 'C:\InstalledPrograms\jboss-eap-7.1.0\
standalone\configuration\mgmt-groups.properties'
Added user 'mdmuser' with groups  to file 'C:\InstalledPrograms\jboss-eap-7.1.0\
domain\configuration\mgmt-groups.properties'
Is this new user going to be used for one AS process to connect to another AS pr
ocess?
e.g. for a slave host controller connecting to the master or for a Remoting conn
ection for server to server EJB calls.
yes/no? yes
To represent the user add the following to the server-identities definition <sec
ret value="VGVzdHB3ZF8xMjM=" />
Press any key to continue . . .

C:\InstalledPrograms\jboss-eap-7.1.0\bin>
```

Type the url http://localhost:9990/ to login to console and provide username and password


localhost:9990/console/App.html

Authentication Required

The server http://localhost:9990 requires a username and password. The server says: ManagementRealm.

User Name: mdmuser

Password: ***********

c. Create JBoss Datasource and Active MQ Queues

Yugandhar Microservice Platform needs JBoss based datasource to connected to Oracle database. The JNDI name of the datasource needs to be provided in application.properties file. We need to create either of the below Data source and uncomment the related data source in the properties

```
#spring.datasource.jndi-name=java:/YUGMSP_XAOracle11gDS
#spring.datasource.jndi-name=java:/YUGMSP_XAOracle12cDS
#spring.datasource.jndi-name=java:/YUGMSP_XAMariaDBDS
```

Configure Oracle drivers

Note- Either configure Oracle or MariaDB, no need to configure both databases.

To create Oracle data source in JBoss, You need to manually make some changes on the file system. Also make sure that ojdbc7.jar is downloaded on your system from oracle distribution site.

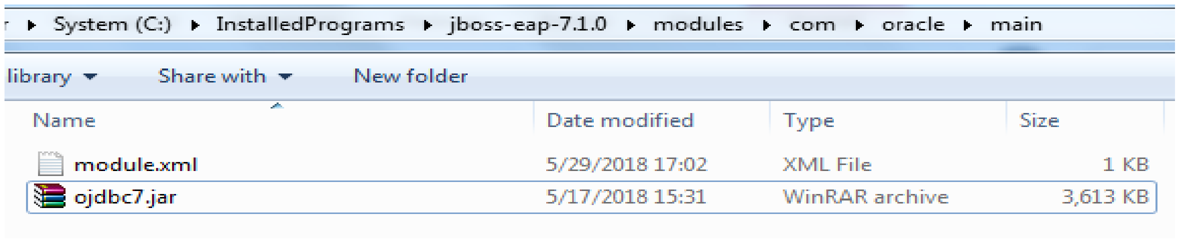
You may take help from the jboss sample configuration file provided in the <github Repository/resources\jbossconfig folder

1. Create a new module for oracle driver.

    i. Create a folder hierarchy with path $JBOSS_HOME/modules.

    ii. $JBOSS_HOME/modules/com/oracle/main

    iii. Copy ojdbc7.jar to $JBOSS_HOME/modules/com/oracle/main folder



▸ System (C:) ▸ InstalledPrograms ▸ jboss-eap-7.1.0 ▸ modules ▸ com ▸ oracle ▸ main

Name	Date modified	Type	Size
module.xml	5/29/2018 17:02	XML File	1 KB
ojdbc7.jar	5/17/2018 15:31	WinRAR archive	3,613 KB

iv. Create module.xml file.

v. Add the following content:

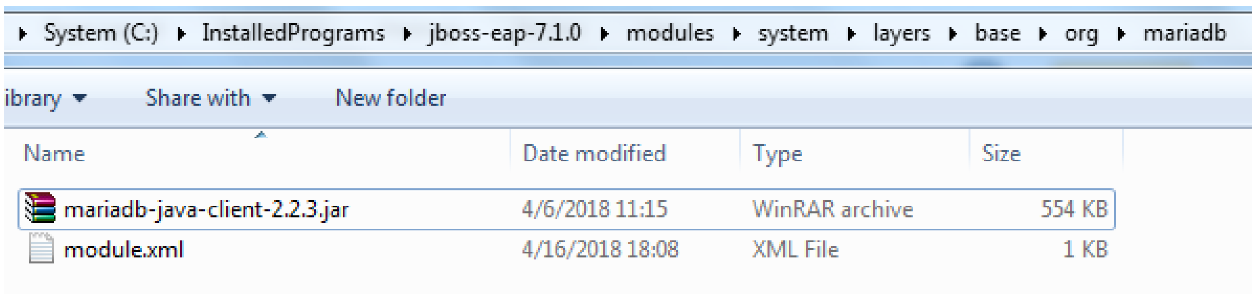
```
<?xml version="1.0" ?>
<module xmlns="urn:jboss:module:1.1" name="com.oracle">
    <properties>
       <property name="jboss.api" value="unsupported" />
   </properties>
    <resources>
       <resource-root path="ojdbc7.jar"/>
   </resources>
    <dependencies>
       <module name="javax.api" />
       <module name="javax.transaction.api" />
       <module name="javax.servlet.api" optional="true" />
   </dependencies>
</module>
```

Configure MariaDB drivers

2. Create a new module for MariaDB driver.

i. Create a folder hierarchy with path $JBOSS_HOME/modules\system\layers\base\org\mariadb

ii. Copy mariadb-java-client-2.2.3.jar to $JBOSS_HOME/modules\system\layers\base\org\mariadb folder



▸ System (C:) ▸ InstalledPrograms ▸ jboss-eap-7.1.0 ▸ modules ▸ system ▸ layers ▸ base ▸ org ▸ mariadb

Name	Date modified	Type	Size
mariadb-java-client-2.2.3.jar	4/6/2018 11:15	WinRAR archive	554 KB
module.xml	4/16/2018 18:08	XML File	1 KB

iii. Create module.xml file.

iv. Add the following content:

```
<?xml version="1.0" ?>
<module xmlns="urn:jboss:module:1.1" name="org.mariadb">
    <properties>
            <property name="jboss.api" value="unsupported" />
    </properties>
    <resources>
            <resource-root path="mariadb-java-client-2.2.3.jar"/>
    </resources>
    <dependencies>
            <module name="javax.api"/>
            <module name="javax.transaction.api"/>
            <module name="javax.servlet.api" optional="true" />
    </dependencies>
</module>
```

Configure datasources in Jboss configuration file

Configure data source in $JBOSS_HOME/standalone/configuration/ standalone-full-ha.xml

Add only one of the below configuration in <datasources> tag as per your database type, change the host and port as per database configuration.

Database	Data Source property to enable	Data Source configuration
MariaDB	spring.datasource.jndi-name=java:/YUGMSP_XAMariaDBDS	<xa-datasource jndi-name="java:/YUGMSP_XAMariaDBDS" pool-name="YUGMSP_XAMariaDBDS" enabled="true" use-ccm="false" stat enabled="true"> <xa-datasource-property name="ServerName"> databasehostname </xa-datasource-property> <xa-datasource-property name="DatabaseName"> YUG_MSP </xa-datasource-property> <driver>mariadb</driver> <xa-pool> <min-pool-size>10</min-pool-size> <initial-pool-size>10</initial-pool-size> <max-pool-size>200</max-pool-size> <allow-multiple-users>false</allow-multiple-users> </xa-pool> <security> <security-domain>YUGMSP_XAMariaDBDS_UserSecurityDomain</security-dom </security> <validation> <valid-connection-checker class-name="org.jboss.jca.adapters.jdbc.extensions.mysql.MySQLValidConn <validate-on-match>true</validate-on-match> <background-validation>false</background-validatio <exception-sorter class-name="org.jboss.jca.adapters.jdbc.extensions.mysql.MySQLExceptior

		`</validation>` `</xa-datasource>`
Oracle 11g	spring.datasource.jndi-name=java:/YUGMSP_XAOracle11gDS	`<xa-datasource jndi-name="java:/YUGMSP_XAOracle11gDS" pool-name="YUGMSP_XAOracle11gDS" enabled="true" use-ccm="false" st enabled="true">` `<xa-datasource-property name="URL">` `jdbc:oracle:thin:@<hostname>:<postname>/service` `</xa-datasource-property>` `<driver>oracle</driver>` `<xa-pool>` `<min-pool-size>10</min-pool-size>` `<initial-pool-size>10</initial-pool-size>` `<max-pool-size>200</max-pool-size>` `<allow-multiple-users>false</allow-multiple-users>` `<is-same-rm-override>false</is-same-rm-override>` `<no-tx-separate-pools>true</no-tx-separate-pools>` `</xa-pool>` `<security>` `<security-domain>YUGMSP_XAOracle11gDS_UserSecurityDomain</security-do` `</security>` `<validation>` `<valid-connection-checker class-name="org.jboss.jca.adapters.jdbc.extensions.oracle.OracleValidConn` `<background-validation>true</background-validatio` `<stale-connection-checker class-name="org.jboss.jca.adapters.jdbc.extensions.oracle.OracleStaleConn` `<exception-sorter class-name="org.jboss.jca.adapters.jdbc.extensions.oracle.OracleException` `</validation>` `</xa-datasource>`
Oracle 12c	spring.datasource.jndi-name=java:/YUGMSP_XAOracle12cDS	`<xa-datasource jndi-name="java:/YUGMSP_XAOracle12cDS" pool-name="YUGMSP_XAOracle12cDS" enabled="true" use-ccm="false" st enabled="true">` `<xa-datasource-property name="URL">` `jdbc:oracle:thin:@ <hostname>:<postname>/servic` `</xa-datasource-property>` `<driver>oracle</driver>` `<xa-pool>` `<min-pool-size>10</min-pool-size>` `<initial-pool-size>10</initial-pool-size>` `<max-pool-size>200</max-pool-size>` `<is-same-rm-override>false</is-same-rm-override>` `<no-tx-separate-pools>true</no-tx-separate-pools>` `</xa-pool>` `<security>` `<security-domain>YUGMSP_XAOracle12cDS_UserSecurityDomain</security-do` `</security>` `<validation>` `<valid-connection-checker class-name="org.jboss.jca.adapters.jdbc.extensions.oracle.OracleValidConn` `<background-validation>true</background-validatio` `<stale-connection-checker class-name="org.jboss.jca.adapters.jdbc.extensions.oracle.OracleStaleConn` `<exception-sorter class-name="org.jboss.jca.adapters.jdbc.extensions.oracle.OracleException` `</validation>`

		</xa-datasource>

Add the drivers in drivers section

Database type	Driver
MariaDB	<driver name="oracle" module="com.oracle"> <xa-datasource-class>oracle.jdbc.xa.client.OracleXADataSource</xa-datasource-class> </driver>

Oracle11g/12c	<driver name="mariadb" module="org.mariadb">
	      <driver-class>org.mariadb.jdbc.Driver</driver-class>
	       <xa-datasource-class>org.mariadb.jdbc.MariaDbDataSource</xa-datasource-class>
	 </driver>

Add one of the security domain as per your database configuration

Database	Security configuration

MariaDB	<security-domain name="YUGMSP_XAMariaDBDS_UserSecurityDomain" cache-type="default">
	    <authentication>
	        <login-module code="org.picketbox.datasource.security.SecureIdentityLoginModule" flag="required">
	            <module-option name="username" value="YUG_MSP"/>
	            <module-option name="password" value="-46069be03ea6548a"/>
	            <module-option name="managedConnectionFactoryName" value="jboss.jca:service=LocalTxCM,name=YUGMSP_XAMariaDBDS"/>
	        </login-module>
	    </authentication>
	</security-domain>

Oracle 11g	<security-domain name="YUGMSP_XAOracle11gDS_UserSecurityDomain" cache-type="default">
	    <authentication>
	        <login-module code="org.picketbox.datasource.security.SecureIdentityLoginModule" flag="required">
	            <module-option name="username" value="YUG_MSP"/>
	            <module-option name="password" value="-46069be03ea6548a"/>
	            <module-option name="managedConnectionFactoryName" value="jboss.jca:service=LocalTxCM,name=YUGMSP_XAOracle11gDS"/>
	        </login-module>
	    </authentication>
	</security-domain>

Oracle 12c	<security-domain name="YUGMSP_XAOracle12cDS_UserSecurityDomain" cache-type="default">
	    <authentication>
	        <login-module code="org.picketbox.datasource.security.SecureIdentityLoginModule" flag="required">
	            <module-option name="username" value="YUG_MSP"/>
	            <module-option name="password" value="-46069be03ea6548a"/>
	            <module-option name="managedConnectionFactoryName" value="jboss.jca:service=LocalTxCM,name=YUGMSP_XAOracle12cDS"/>

```
        </login-module>
    </authentication>
</security-domain>
```

Encrypt the database password in the security domain is done through picket box. You may use the below command to encrypt the password.

```
java -cp
$JBOSS_HOME\modules\system\layers\base\org\picketbox\main\picketbox-5.0.2.Final-redhat-1.jar
org.picketbox.datasource.security.SecureIdentityLoginModule <password String to encrypt>
```

Change the jar name and version as per the jar available in your jboss modules.

3. Disable default JPA in jboss 7.1 by removing below entry altogether

```
<subsystem xmlns="urn:jboss:domain:jpa:1.1">
    <jpa default-datasource="" default-extended-persistence-inheritance="DEEP"/>
</subsystem>
```

4. Create ActiveMQ server and JMS Queues

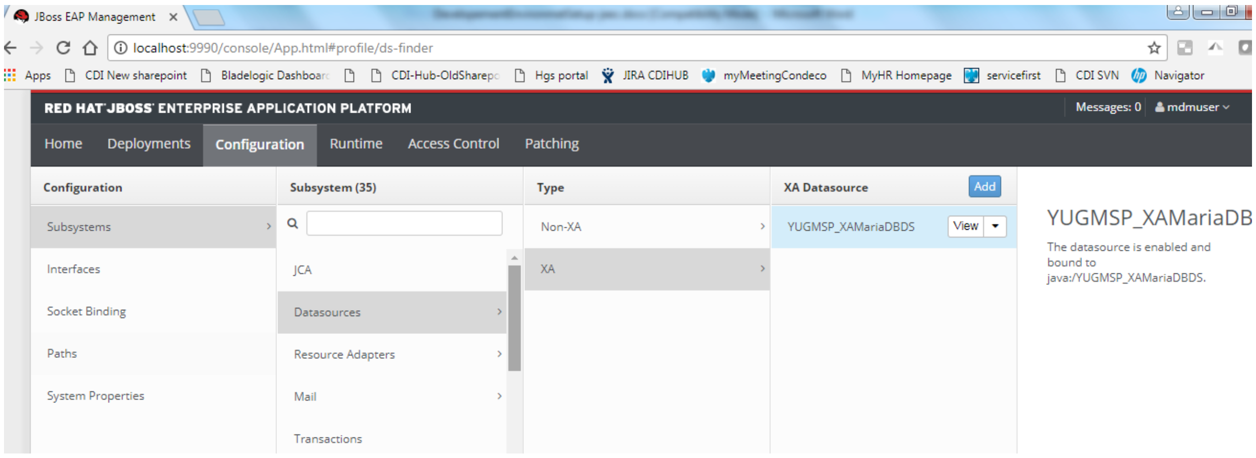
   Add the below entries in Active MQ subsystem inside below tag <subsystem xmlns="urn:jboss:domain:messaging-activemq:2.0">

```
<server name="Yug">
            <security enabled="false"/>
            <management address="jms.queue.activemq.management1"/>
            <statistics enabled="true"/>
            <security-setting name="#">
                <role name="guest" send="true" consume="true" manage="true"/>
            </security-setting>
            <address-setting name="#" dead-letter-address="jms.queue.DLQ" expiry-
address="jms.queue.ExpiryQueue"/>
            <remote-connector name="yugConnectorRemote" socket-binding="http"/>
            <in-vm-connector name="yugConnectorInvm" server-id="0"/>
            <jms-queue name="YUG.DEFAULT.RESPONSE"
entries="java:jboss/com/yugandhar/default/responseQueue"/>
            <jms-queue name="YUG.DEFAULT.REQUEST"
entries="java:jboss/com/yugandhar/default/requestQueue"/>
            <pooled-connection-factory name="YugandharDefaultPooledConnectionFactory"
entries="java:jboss/com/yugandhar/DefaultPooledConnectionFactory"
connectors="yugConnectorInvm" statistics-enabled="true"/>
        </server>
```

Verify the Datasource

Login to jboss console using using the user created in 'add User to Access JBoss Console' step.

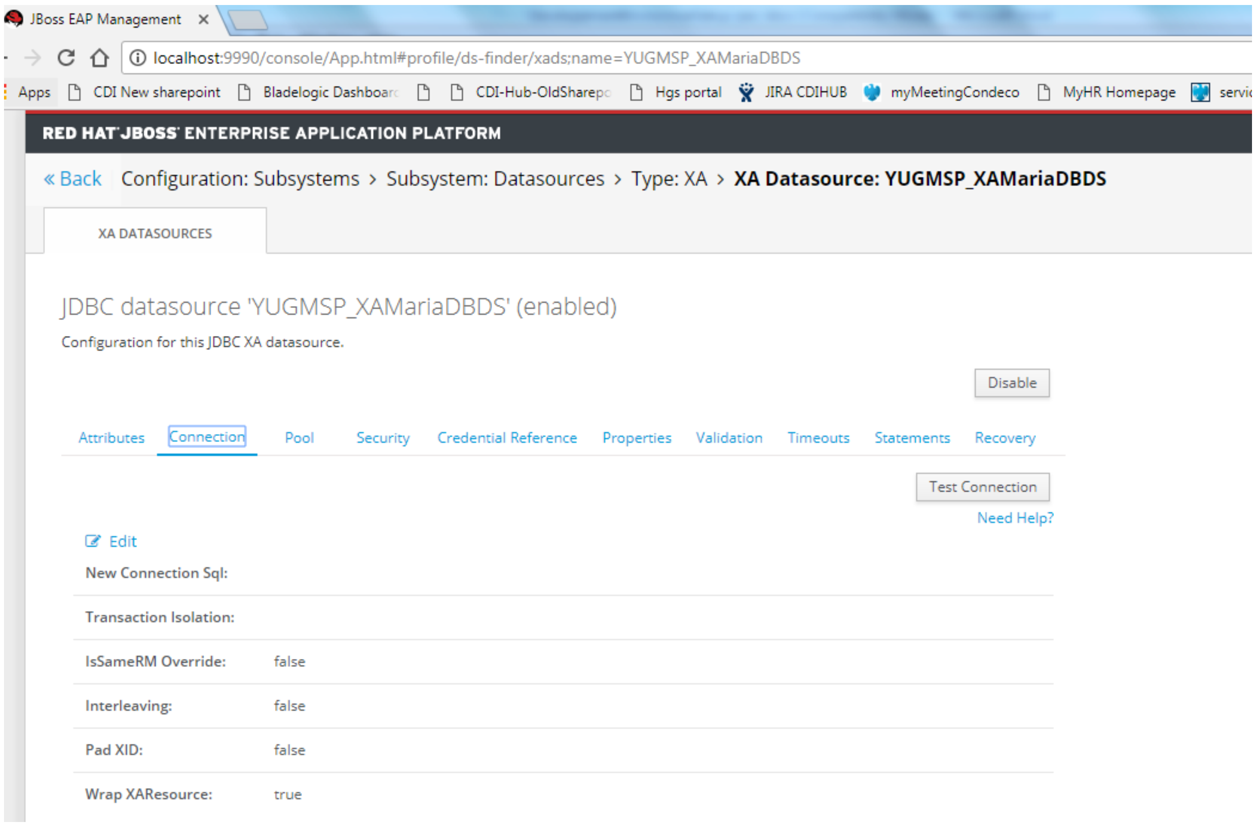
Navigate to datasources



YUGMSP_XAMariaDB

The datasource is enabled and bound to java:/YUGMSP_XAMariaDBDS.

Click View and then navigate to Connection tab.


JBoss EAP Management

localhost:9990/console/App.html#profile/ds-finder/xads;name=YUGMSP_XAMariaDBDS

RED HAT JBOSS ENTERPRISE APPLICATION PLATFORM

« Back Configuration: Subsystems > Subsystem: Datasources > Type: XA > **XA Datasource: YUGMSP_XAMariaDBDS**

XA DATASOURCES

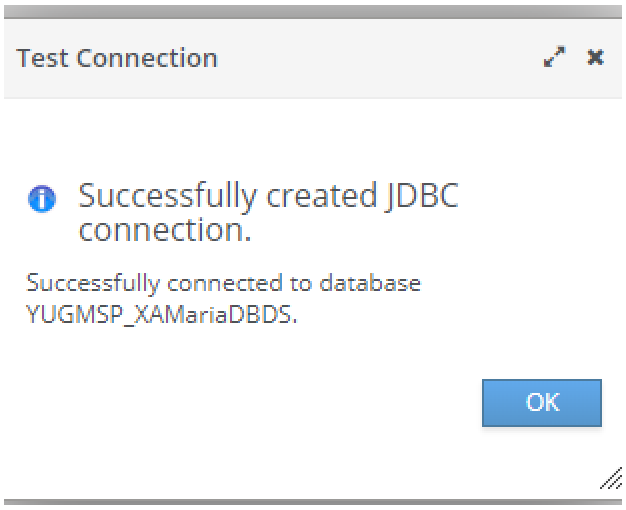
JDBC datasource 'YUGMSP_XAMariaDBDS' (enabled)

Configuration for this JDBC XA datasource.

Attributes | Connection | Pool | Security | Credential Reference | Properties | Validation | Timeouts | Statements | Recovery

New Connection Sql:	
Transaction Isolation:	
IsSameRM Override:	false
Interleaving:	false
Pad XID:	false
Wrap XAResource:	true

Click on the test connection and verify that the connection is successful


Test Connection

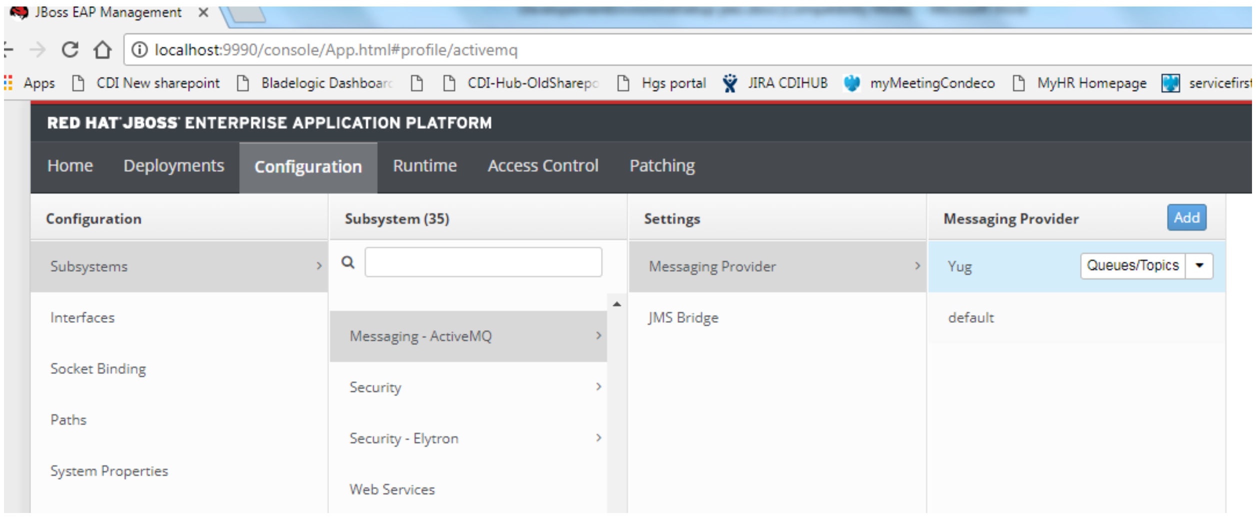
Successfully created JDBC connection.

Successfully connected to database YUGMSP_XAMariaDBDS.

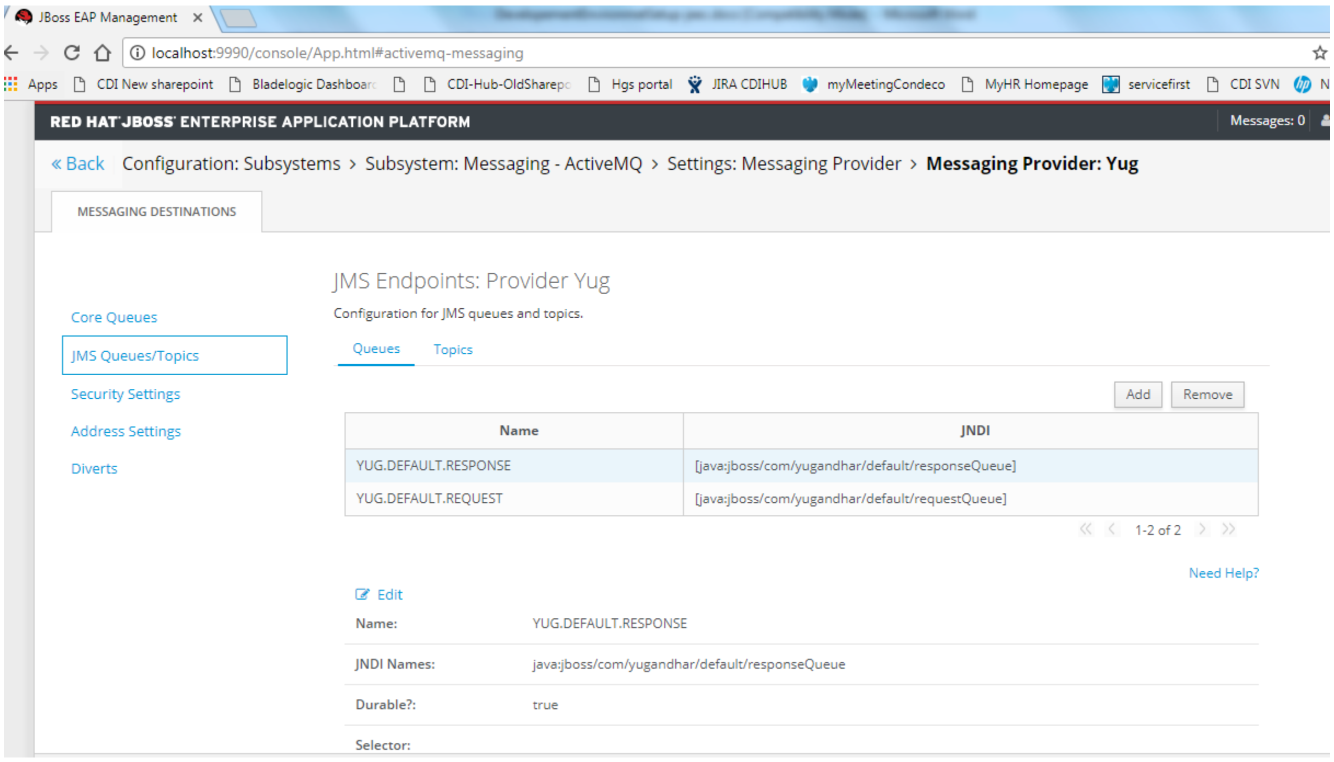
OK

Verify ActiveMQ

Navigate to ActiveMQ subsystem → Yug, click Queues/Topics



You should see the Active MQs as shown in below image


JBoss EAP Management
localhost:9990/console/App.html#activemq-messaging
RED HAT JBOSS ENTERPRISE APPLICATION PLATFORM
Messages: 0
« Back
Configuration: Subsystems > Subsystem: Messaging - ActiveMQ > Settings: Messaging Provider > Messaging Provider: Yug
MESSAGING DESTINATIONS
Core Queues
JMS Queues/Topics
Security Settings
Address Settings
Diverts
Queues
Topics
Add
Remove
1-2 of 2
Need Help?
Edit

JMS Endpoints: Provider Yug

Configuration for JMS queues and topics.

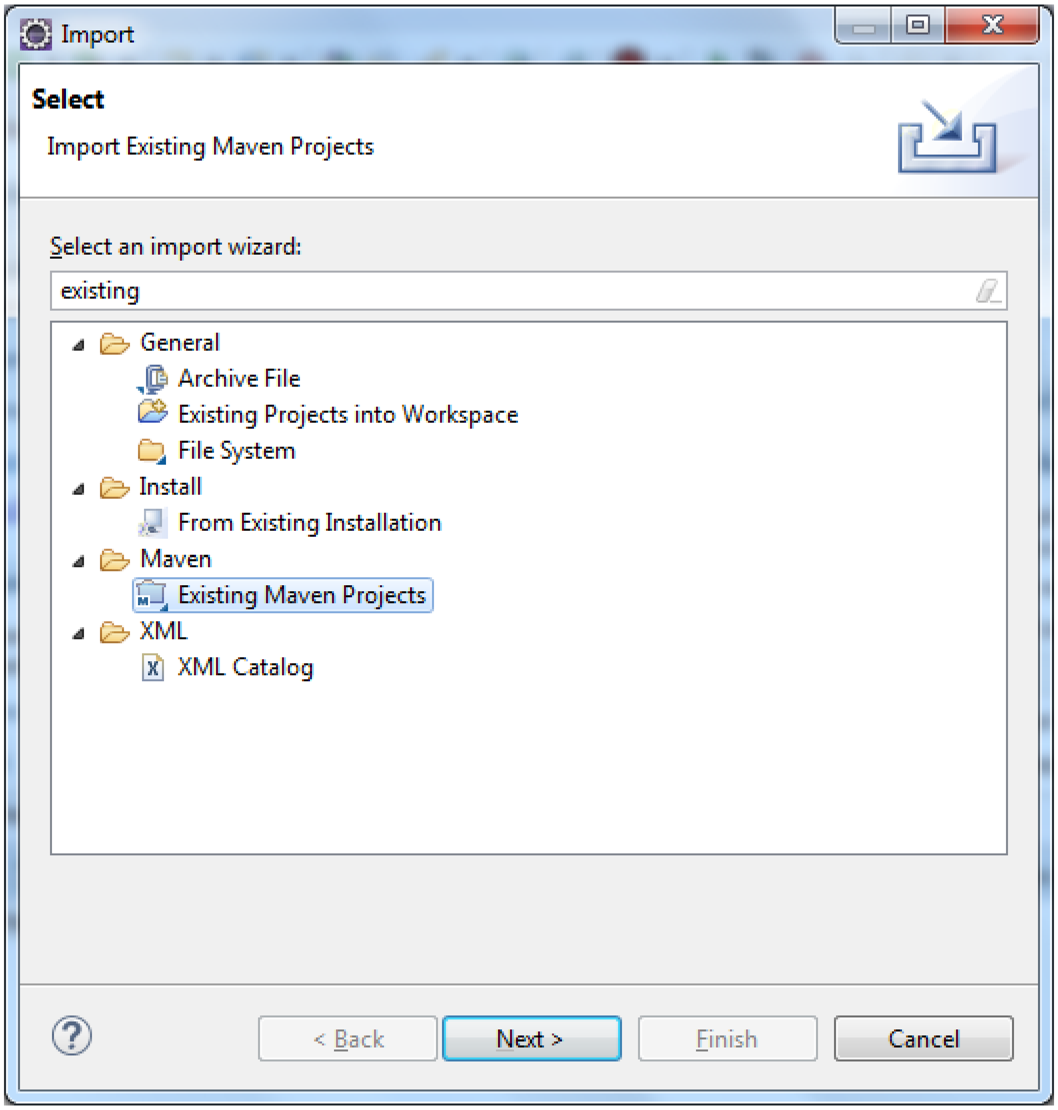
Name	JNDI
YUG.DEFAULT.RESPONSE	[java:jboss/com/yugandhar/default/responseQueue]
YUG.DEFAULT.REQUEST	[java:jboss/com/yugandhar/default/requestQueue]

Name:	YUG.DEFAULT.RESPONSE
JNDI Names:	java:jboss/com/yugandhar/default/responseQueue
Durable?:	true
Selector:	

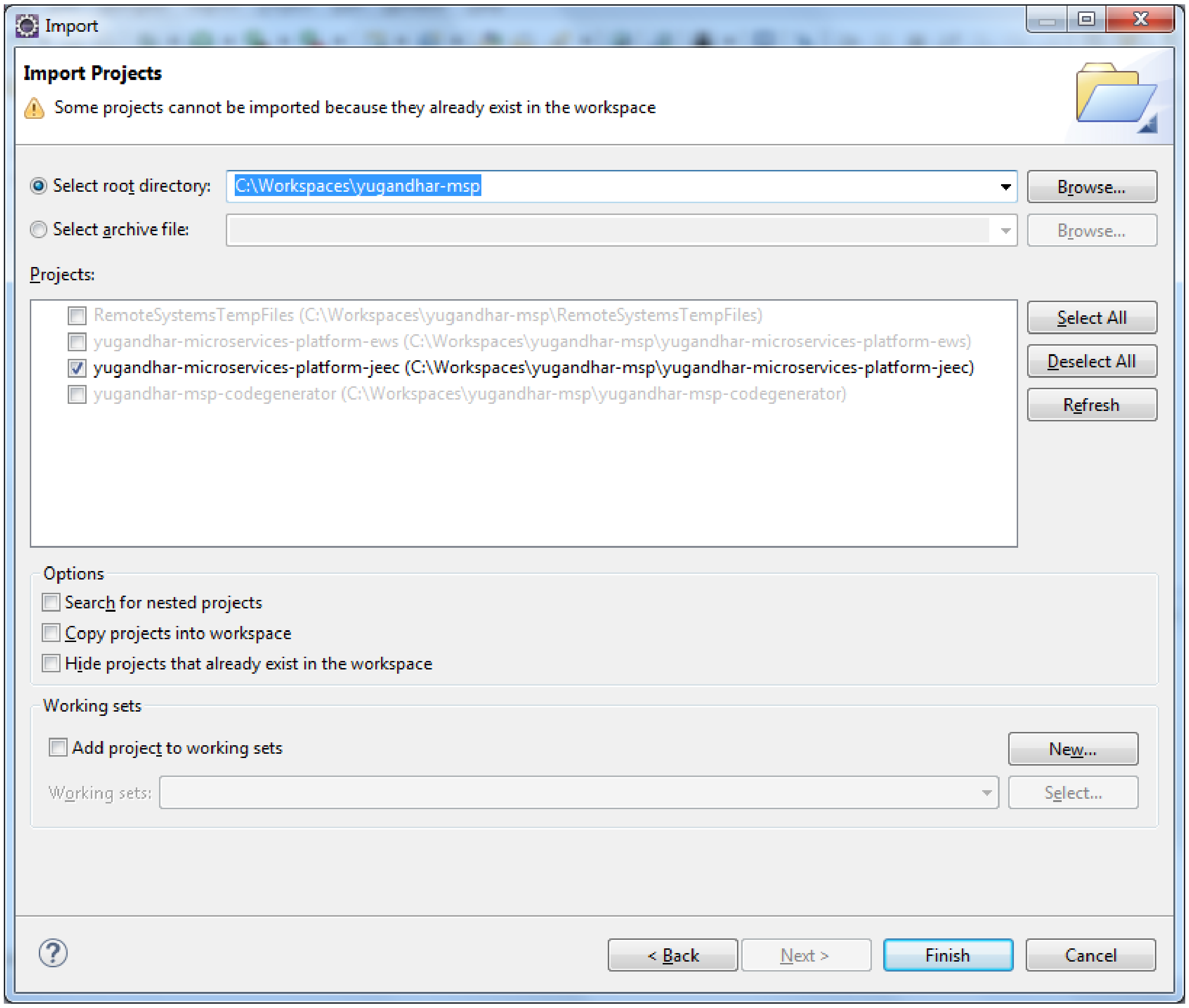
Import Yugandhar msp java projects in the workspace

Download the yugandhar-Microservice-platform-jeec from the github repository, extract it in the workspace directory (e.g. C:\Workspaces\yugandhar-msp) and import in Workspace

Go to File → Import Menu → Existing Maven Projects →



Click on Next Button



Some projects cannot be imported because they already exist in the workspace

Select root directory: C:\Workspaces\yugandhar-msp

Select archive file:

Projects:

- [ ] RemoteSystemsTempFiles (C:\Workspaces\yugandhar-msp\RemoteSystemsTempFiles)
- [ ] yugandhar-microservices-platform-ews (C:\Workspaces\yugandhar-msp\yugandhar-microservices-platform-ews)
- [x] yugandhar-microservices-platform-jeec (C:\Workspaces\yugandhar-msp\yugandhar-microservices-platform-jeec)
- [ ] yugandhar-msp-codegenerator (C:\Workspaces\yugandhar-msp\yugandhar-msp-codegenerator)

Options

- [ ] Search for nested projects
- [ ] Copy projects into workspace
- [ ] Hide projects that already exist in the workspace

Working sets

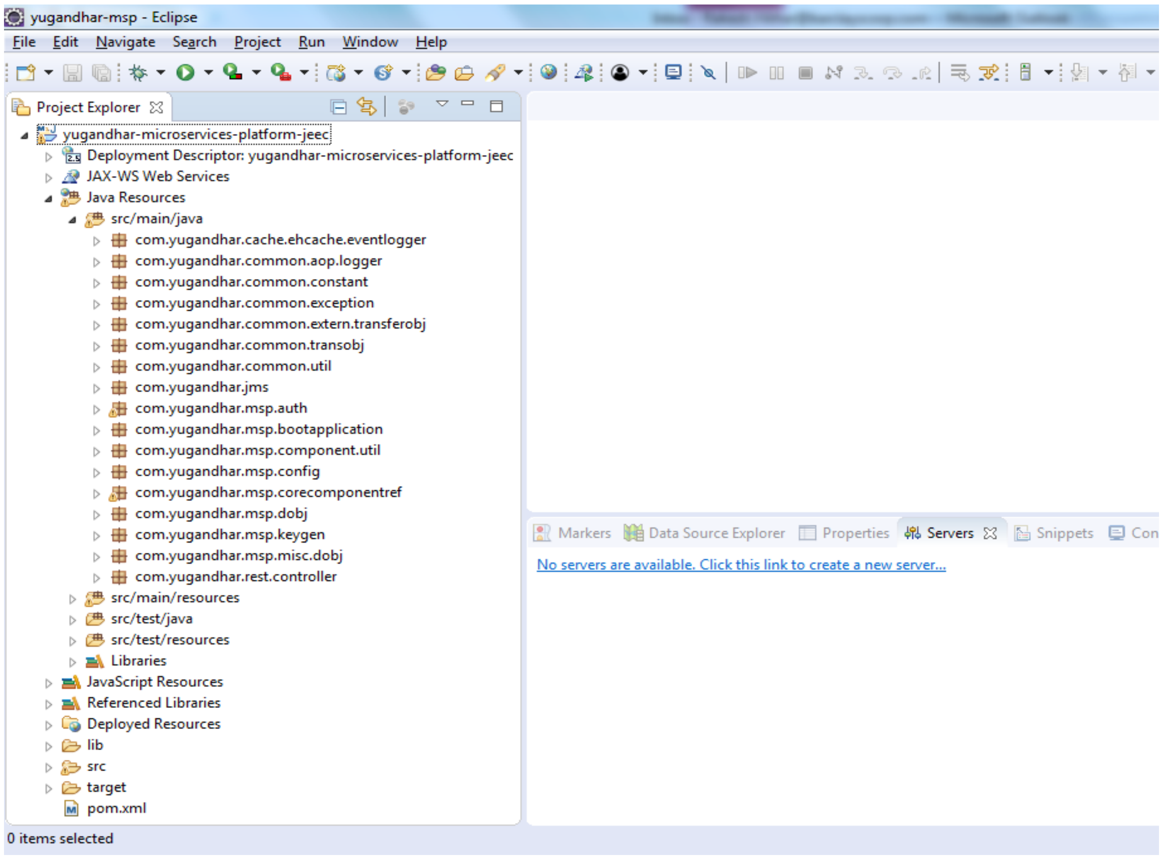
- [ ] Add project to working sets

Working sets:

Select the yugandhar-Microservice-platform-jeec project and click Finish.

It may take some time as eclipse will download the maven jars automatically and build the project. You may track the progress in ‘Progress’ tab.

Make sure that your workspace is error free


yugandhar-microservices-platform-jeec
- Deployment Descriptor: yugandhar-microservices-platform-jeec
- JAX-WS Web Services
- Java Resources
  - src/main/java
    - com.yugandhar.cache.ehcache.eventlogger
    - com.yugandhar.common.aop.logger
    - com.yugandhar.common.constant
    - com.yugandhar.common.exception
    - com.yugandhar.common.extern.transferobj
    - com.yugandhar.common.transobj
    - com.yugandhar.common.util
    - com.yugandhar.jms
    - com.yugandhar.msp.auth
    - com.yugandhar.msp.bootapplication
    - com.yugandhar.msp.component.util
    - com.yugandhar.msp.config
    - com.yugandhar.msp.corecomponentref
    - com.yugandhar.msp.dobj
    - com.yugandhar.msp.keygen
    - com.yugandhar.msp.misc.dobj
    - com.yugandhar.rest.controller
  - src/main/resources
  - src/test/java
  - src/test/resources
  - Libraries
- JavaScript Resources
- Referenced Libraries
- Deployed Resources
- lib
- src
- target
- pom.xml

No servers are available. Click this link to create a new server...

0 items selected

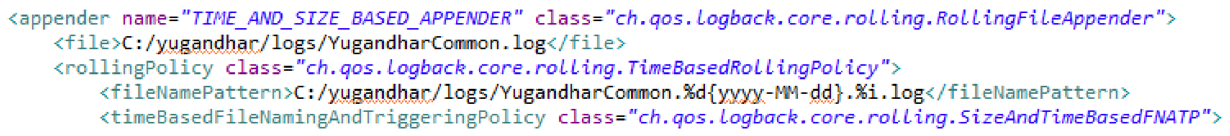
Make datasource jndi name changes

Set the spring.datasource.jndi-name property in application.properties as per your database. For sample here the mariaDB jndi is enabled.

```
#JNDI for the data sources
#spring.datasource.jndi-name=java:/YUGMSP_XAOracle11gDS
#spring.datasource.jndi-name=java:/YUGMSP_XAOracle12cDS
spring.datasource.jndi-name=java:/YUGMSP_XAMariaDBDS
```

Make Logging changes

Microservice platform does the logging to default folder C:/Yugandhar/logs so create this folder or change the log directory to the directory of your choice in /yugandhar-Microservice-platform-jeec/src/main/resources/yugandhar_logback.xml



```
<appender name="TIME_AND_SIZE_BASED_APPENDER" class="ch.qos.logback.core.rolling.RollingFileAppender">
    <file>C:/yugandhar/logs/YugandharCommon.log</file>
    <rollingPolicy class="ch.qos.logback.core.rolling.TimeBasedRollingPolicy">
        <fileNamePattern>C:/yugandhar/logs/YugandharCommon.%d{yyyy-MM-dd}.%i.log</fileNamePattern>
        <timeBasedFileNamingAndTriggeringPolicy class="ch.qos.logback.core.rolling.SizeAndTimeBasedFNATP">
```

Properties file changes

There are below two properties files in the Microservice platform

application.properties

The application properties file covers the below properties

- **Springboot trace:** enable/disable the trace
- **Server port:** set the port number for the tomcat server
- **JPA:** If the generated ddl needs to be logged the enable the property spring.jpa.show-sql. By default this is enabled.
- **mariaDB specific settings:**
  #Enable both the below properties for mysql/MariaDB, if you are using oracle then comment both the properties.
  #spring.jpa.properties.hibernate.globally_quoted_identifiers=true
  #spring.jpa.database-platform=org.hibernate.dialect.MariaDB53Dialect
  Note- "spring.jpa.properties.hibernate.globally_quoted_identifiers= true" with Oracle database may result in errors.
- **Oracle specific settings:**
  Oracle Specifc configuration, use 10g dialect for Oracle 11g database else use 12c
  #spring.jpa.database-platform=org.hibernate.dialect.Oracle10gDialect
  #spring.jpa.database-platform=org.hibernate.dialect.Oracle12cDialect

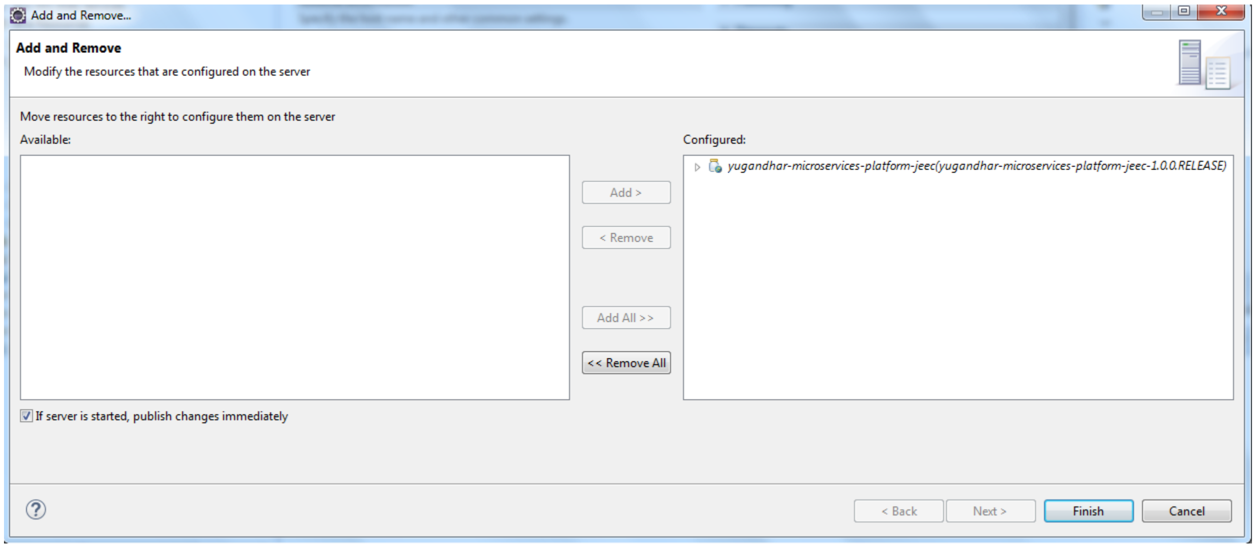
- **Logging:** Logback configuration
- **JTA:** Narayana JTA of JBoss is used
- **Ehcache:** ehcache properties
- **Json:** json parser related properties
- **Active mq:** By default the JBoss embedded Active MQ is used, modify the properties as needed.
- **Actuator:** spring boot actuator properties
- **Eureka integration:** Eureka integration properties, by default it's disabled.

yugandhar-msp.properties

The yugandhar-msp.properties file is custom properties file not used by JEEC version.

Running the application

Right click the jboss server in the Servers tab and add the MSP application, click finish.



Add and Remove...

Add and Remove

Modify the resources that are configured on the server

Move resources to the right to configure them on the server

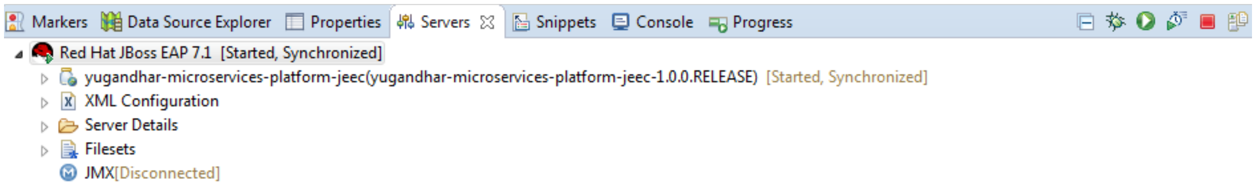
Available:

Configured:

yugandhar-microservices-platform-jeec(yugandhar-microservices-platform-jeec-1.0.0.RELEASE)

[✓] If server is started, publish changes immediately

Check the logs lines below to verify the application is started.



Red Hat JBoss EAP 7.1 [Started, Synchronized]
yugandhar-microservices-platform-jeec(yugandhar-microservices-platform-jeec-1.0.0.RELEASE) [Started, Synchronized]
XML Configuration
Server Details
Filesets
JMX[Disconnected]

TEST With SOAPUI

Test JSON message

The rest url is as below.

http://localhost:8091//yugandhar-Microservice-platform-jeec-1.0.0.RELEASE/rest/YugandharRequestProcessor

Yugandhar MSP uses the port 8091 as default; you may change it through application.properties file.

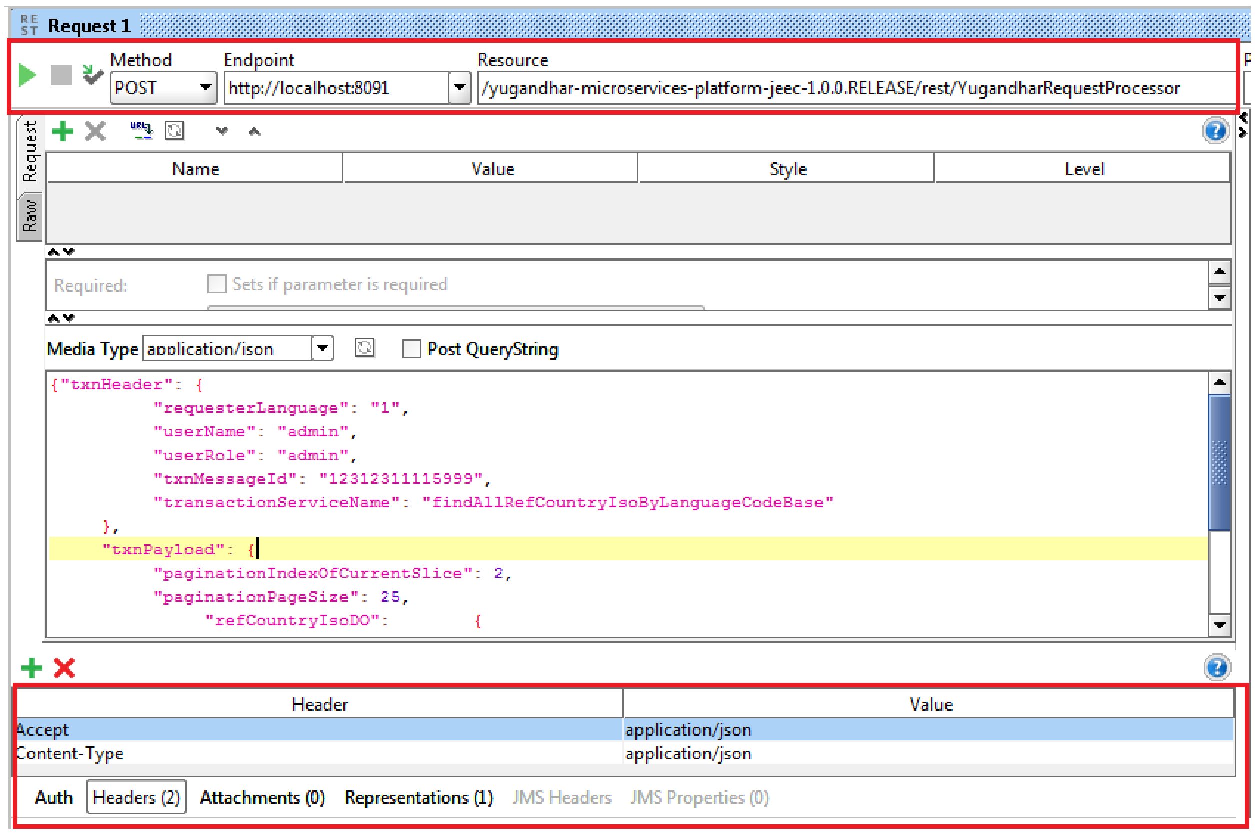
Sample json message

```
{"txnHeader": {
                 "requesterLanguage": "1",
                 "userName": "admin",
                 "userRole": "admin",
                 "txnMessageId": "12312311115999",
                 "transactionServiceName": "findAllRefCountryIsoByLanguageCodeBase"
         },
         "txnPayload": {
                 "paginationIndexOfCurrentSlice": 2,
                 "paginationPageSize": 25,
                         "refCountryIsoDO":       {
                 "configLanguageCodeKey": "1"
     }

         }

}
```

For the soap xml message, add the below headers for the request xmls

Header	Value	use
Accept	application/json	This header tells yugandhar rest controller that the response must be sent in json format.
Content-Type	application/json	This header tells yugandhar rest controller that the request message is of type json

Create 'New REST service from URI' in the soapui project, and execute it with attached json message


Request 1

Method: POST
Endpoint: http://localhost:8091
Resource: /yugandhar-microservices-platform-jeec-1.0.0.RELEASE/rest/YugandharRequestProcessor

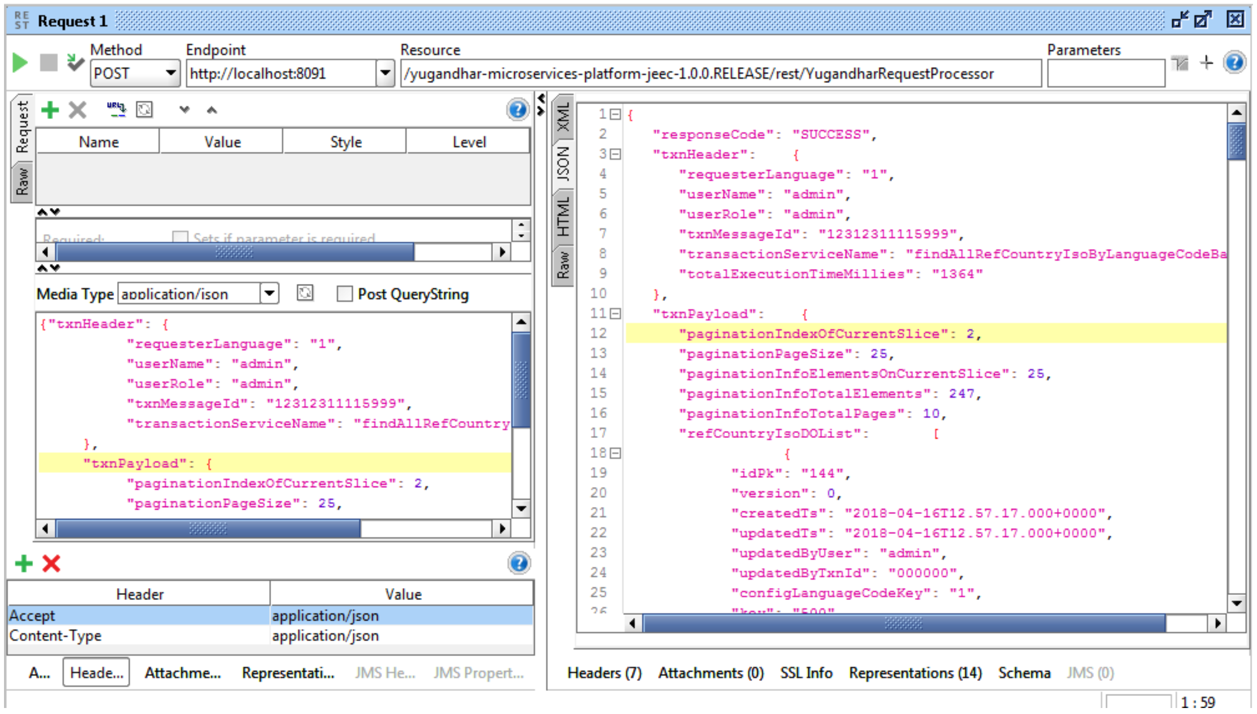
Media Type: application/json

```
{"txnHeader": {
          "requesterLanguage": "1",
          "userName": "admin",
          "userRole": "admin",
          "txnMessageId": "12312311115999",
          "transactionServiceName": "findAllRefCountryIsoByLanguageCodeBase"
     },
     "txnPayload": {
          "paginationIndexOfCurrentSlice": 2,
          "paginationPageSize": 25,
               "refCountryIsoDO":        {
```

Header	Value
Accept	application/json
Content-Type	application/json

Auth | Headers (2) | Attachments (0) | Representations (1) | JMS Headers | JMS Properties (0)

Check the response as SUCCESS


Request 1

Method: POST
Endpoint: http://localhost:8091
Resource: /yugandhar-microservices-platform-jeec-1.0.0.RELEASE/rest/YugandharRequestProcessor

Media Type: application/json

```
{"txnHeader": {
          "requesterLanguage": "1",
          "userName": "admin",
          "userRole": "admin",
          "txnMessageId": "12312311115999",
          "transactionServiceName": "findAllRefCountry
     },
     "txnPayload": {
          "paginationIndexOfCurrentSlice": 2,
          "paginationPageSize": 25,
```

Header	Value
Accept	application/json
Content-Type	application/json

```
{
   "responseCode": "SUCCESS",
   "txnHeader":    {
      "requesterLanguage": "1",
      "userName": "admin",
      "userRole": "admin",
      "txnMessageId": "12312311115999",
      "transactionServiceName": "findAllRefCountryIsoByLanguageCodeBa
      "totalExecutionTimeMillies": "1364"
   },
   "txnPayload":    {
      "paginationIndexOfCurrentSlice": 2,
      "paginationPageSize": 25,
      "paginationInfoElementsOnCurrentSlice": 25,
      "paginationInfoTotalElements": 247,
      "paginationInfoTotalPages": 10,
      "refCountryIsoDOList":       [
               {
            "idPk": "144",
            "version": 0,
            "createdTs": "2018-04-16T12.57.17.000+0000",
            "updatedTs": "2018-04-16T12.57.17.000+0000",
            "updatedByUser": "admin",
            "updatedByTxnId": "000000",
            "configLanguageCodeKey": "1",
```

Headers (7) | Attachments (0) | SSL Info | Representations (14) | Schema | JMS (0)

Test XML message

The rest url is as below.

http://localhost:8091/rest/YugandharRequestProcessor

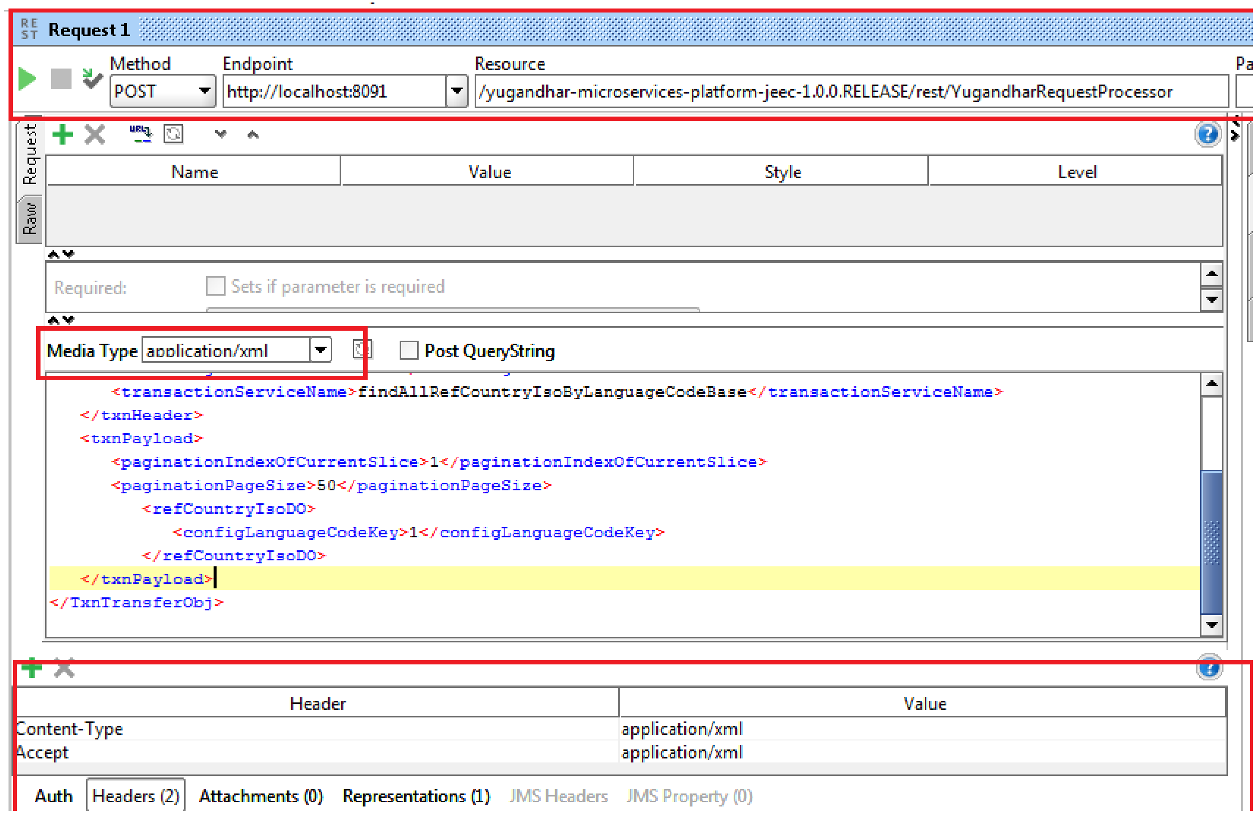
Yugandhar MSP uses the port 8091 as default; you may change it through application.properties file.

For the soap xml message, add the below headers for the request xmls

Header	Value	use
Accept	application/xml	This header tells yugandhar rest controller that the response must be sent in xml format.
Content-Type	application/xml	This header tells yugandhar rest controller that the request message is of type xml

Sample XML message:

```
<TxnTransferObj>
  <txnHeader>
    <requesterLanguage>1</requesterLanguage>
    <userName>admin</userName>
    <userRole>admin</userRole>
    <txnMessageId>12312311115999</txnMessageId>

<transactionServiceName>findAllRefCountryIsoByLanguageCodeBase</transactionServiceN
ame>
  </txnHeader>
  <txnPayload>
    <paginationIndexOfCurrentSlice>1</paginationIndexOfCurrentSlice>
    <paginationPageSize>50</paginationPageSize>
      <refCountryIsoDO>
        <configLanguageCodeKey>1</configLanguageCodeKey>
      </refCountryIsoDO>
  </txnPayload>
</TxnTransferObj>
```



Request 1

Method: POST
Endpoint: http://localhost:8091
Resource: /yugandhar-microservices-platform-jeec-1.0.0.RELEASE/rest/YugandharRequestProcessor

Name	Value	Style	Level

Required: Sets if parameter is required

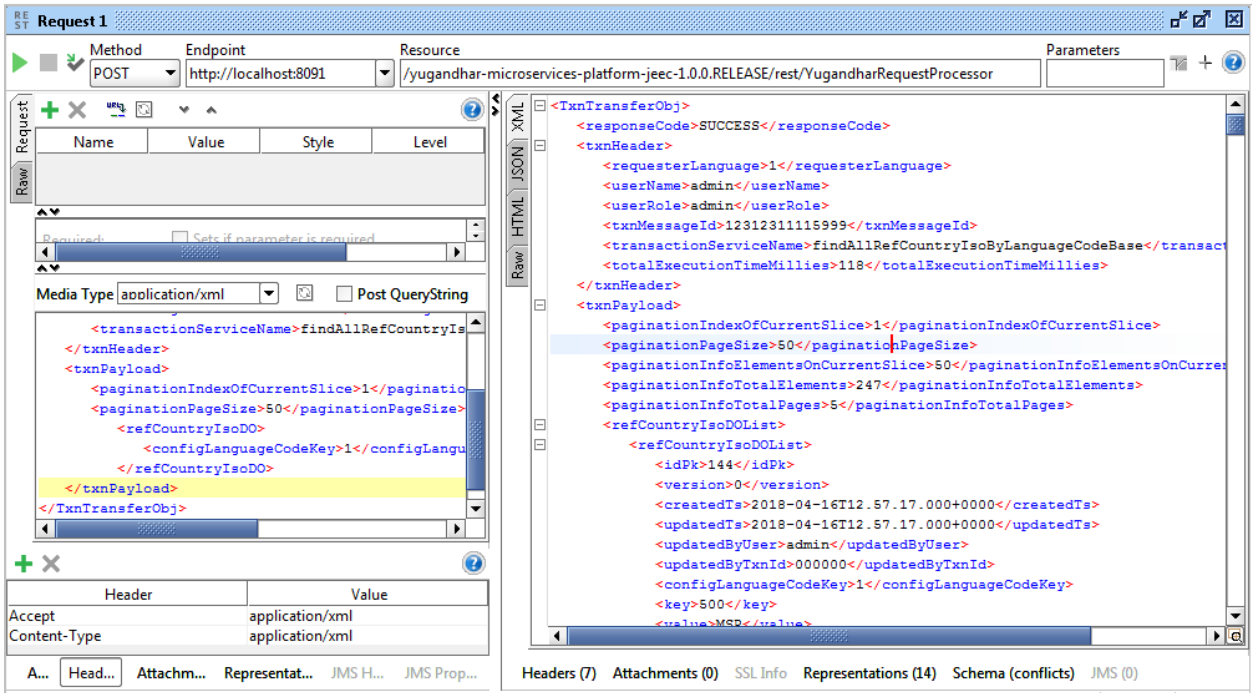
Media Type: application/xml
Post QueryString

```
      <transactionServiceName>findAllRefCountryIsoByLanguageCodeBase</transactionServiceName>
   </txnHeader>
   <txnPayload>
      <paginationIndexOfCurrentSlice>1</paginationIndexOfCurrentSlice>
      <paginationPageSize>50</paginationPageSize>
         <refCountryIsoDO>
            <configLanguageCodeKey>1</configLanguageCodeKey>
         </refCountryIsoDO>
   </txnPayload>
</TxnTransferObj>
```

Header	Value
Content-Type	application/xml
Accept	application/xml

Auth | Headers (2) | Attachments (0) | Representations (1) | JMS Headers | JMS Property (0)

Check the success response.



Method: POST
Endpoint: http://localhost:8091
Resource: /yugandhar-microservices-platform-jeec-1.0.0.RELEASE/rest/YugandharRequestProcessor

Media Type: application/xml

```
      <transactionServiceName>findAllRefCountryIs
   </txnHeader>
   <txnPayload>
      <paginationIndexOfCurrentSlice>1</paginatio
      <paginationPageSize>50</paginationPageSize>
         <refCountryIsoDO>
            <configLanguageCodeKey>1</configLangu
         </refCountryIsoDO>
   </txnPayload>
</TxnTransferObj>
```

Header	Value
Accept	application/xml
Content-Type	application/xml

```
<TxnTransferObj>
   <responseCode>SUCCESS</responseCode>
   <txnHeader>
      <requesterLanguage>1</requesterLanguage>
      <userName>admin</userName>
      <userRole>admin</userRole>
      <txnMessageId>12312311115999</txnMessageId>
      <transactionServiceName>findAllRefCountryIsoByLanguageCodeBase</transact
      <totalExecutionTimeMillies>118</totalExecutionTimeMillies>
   </txnHeader>
   <txnPayload>
      <paginationIndexOfCurrentSlice>1</paginationIndexOfCurrentSlice>
      <paginationPageSize>50</paginationPageSize>
      <paginationInfoElementsOnCurrentSlice>50</paginationInfoElementsOnCurre
      <paginationInfoTotalElements>247</paginationInfoTotalElements>
      <paginationInfoTotalPages>5</paginationInfoTotalPages>
      <refCountryIsoDOList>
         <refCountryIsoDOList>
            <idPk>144</idPk>
            <version>0</version>
            <createdTs>2018-04-16T12.57.17.000+0000</createdTs>
            <updatedTs>2018-04-16T12.57.17.000+0000</updatedTs>
            <updatedByUser>admin</updatedByUser>
            <updatedByTxnId>000000</updatedByTxnId>
            <configLanguageCodeKey>1</configLanguageCodeKey>
            <key>500</key>
            <value>MSR</value>
```

This certifies your workspace. Go ahead with Development and customization guide, API Transaction reference guide as well as Code generation guide to understand more.