

# Install and Configure MySQL JDBC Driver on JBoss Wildfly

MySQL offers standard database driver connectivity for using MySQL with applications and tools that are compatible with industry standards ODBC and JDBC. Any system that works with ODBC or JDBC can use MySQL.

To learn more about the different MySQL connectors available, please visit <https://dev.mysql.com/downloads/connector/>

In this tutorial, we will install MySQL JDBC driver on Wildfly application server. We will be using Wildfly 17.0.1.Final for this tutorial.

## Step 1 — Download and Extract MySQL Connector/J

The MySQL Connector/J is the official JDBC driver for MySQL. For the purpose of this tutorial, we will download the 8.0 version. MySQL Connector/J 8.0 is compatible with all MySQL versions starting with MySQL 5.5.

Download MySQL Connector/J 8.0 at ‘*/opt*’ directory using below commands:

```
$ sudo cd /opt
```

```
$ sudo wget https://dev.mysql.com/get/Downloads/Connector-J/mysql-connector-java-8.0.17.tar.gz
```

Extract the tarball using below command:

```
$ sudo tar -xvzf mysql-connector-java-8.0.17.tar.gz
```

## Step 2 — Setup MySQL JDBC Driver as a Wildfly Module

We need to setup MySQL JDBC driver as a Wildfly module so that it gets loaded once Wildfly starts.

To do this, we need to first create a module package directory (***com/mysql/main***) for our MySQL JDBC driver under ***WILDFLY\_HOME/modules/system/layers/base***

Here ***WILDLFY\_HOME*** is the directory where Wildfly is installed.

```
$ sudo mkdir -p WILDFLY_HOME/modules/system/layers/base/com/mysql/main
```

Inside the ***/opt/mysql-connector-java-8.0.17.tar.gz/*** directory that we extracted, there is a jar file by the name ***mysql-connector-java-8.0.17.jar***. This jar file contains the required classes for the MySQL JDBC driver.

Copy this jar file to ***WILDFLY\_HOME/modules/system/layers/base/com/mysql/main/*** directory.

Now create a module description file under ***WILDFLY\_HOME/modules/system/layers/base/com/mysql/main/*** directory by the name ***module.xml***.

```
$ sudo nano module.xml
```

Copy below contents in ***module.xml***.

```
<module xmlns="urn:jboss:module:1.5" name="com.mysql">
  <resources>
    <resource-root path="mysql-connector-java-8.0.17.jar" />
  </resources>
  <dependencies>
    <module name="javax.api"/>
    <module name="javax.transaction.api"/>
  </dependencies>
</module>
```

Save and exit the file.

We now need to start/restart our Wildfly server so that our MySQL module is picked up and available.

**Step 3 — Configure MySQL JDBC Driver**

To configure a MySQL JDBC driver, access the Wildfly management console and go to ***Configuration -> Subsystems -> Datasources & Drivers -> JDBC Drivers***

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Datasources & Drivers

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JDBC Driver

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JDBC Drivers

Before your application can connect to a datasource, your datasource vendor's JDBC drivers need to be installed. You can choose between two different ways to install JDBC drivers:

Modules

To install a JDBC driver as a module you need to create a file path structure under the `WILDFLY_HOME/modules`, copy the JDBC driver JAR into the `main/` subdirectory and create a `module.xml` file.

Once the JDBC driver is available as a module you can use this section to add, modify and remove driver configurations.

Deployments

You can deploy JDBC drivers just like any other deployment. This means that you can deploy them across multiple servers in a server group, if you use a managed domain. Any JDBC 4-compliant driver will automatically be recognized and installed into the system by name and version.

In domain mode drivers deployed as applications will only show up in this section if there are running servers which match the selected profile.

Click on the ‘+’ icon and enter the following details.

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Add JDBC Driver

Help

Driver Name \*

Driver Module Name \*

Module Slot

Driver Class Name

Driver Datasource Class N...

Driver XA Datasource Clas...

mysql

com.mysql

com.mysql.cj.jdbc.Driver

com.mysql.cj.jdbc.MySQLXADataSource

Required fields are marked with \*

Cancel

Add

Drivers

your application can connect to a datasource, your datasource JDBC drivers need to be installed. You can choose between two ways to install JDBC drivers:

a JDBC driver as a module you need to create a file path under the `WILDFLY_HOME/modules`, copy the JDBC driver JAR into a subdirectory and create a `module.xml` file.

JDBC driver is available as a module you can use this section to create and remove driver configurations.

### Deployments

Deploy JDBC drivers just like any other deployment. This means you can deploy them across multiple servers in a server group, if you have a managed domain. Any JDBC 4-compliant driver will automatically be detected and installed into the system by name and version.

When mode drivers deployed as applications will only show up in this section if there are running servers which match the selected profile.

Click on **Add** and our MySQL driver is successfully added.

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Configuration

Subsystems (30)

Subsystems >Interfaces >Socket Bindings >Paths >System Properties

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Datasources & Drivers

JDBC Driver

+

↺

Filter by: driver name or provider type

h2

mysqlRemove

mysql

✓

JDBC Driver **mysql** successfully added.

✕

The JDBC driver is provided by module `com.mysql`.

Main Attributes

Driver Class Name:

com.mysql.cj.jdbc.Driver

Driver Datasource Class Name:

Driver XA Datasource Class Name:

com.mysql.cj.jdbc.MySQLXADataSource

Driver Version:

8.0

JDBC Compliant:

false

Once the MySQL JDBC driver is installed and configured, we can set up a data source to verify that our MySQL JDBC driver is properly working.

To do this, access the Wildfly management console and go to **Configuration -> Subsystems -> Datasources & Drivers -> Datasources**

Click on the ‘+’ icon and create a new non-XA data source.

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Configuration

Subsystems

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Subsystem (30)

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Datasources & Drivers

Datasources

JDBC Drivers

Datasource

Filter by: name, xa, .../disabled, deployn

ExampleDS

Datasources

The two general types of resources are referred to as datasources and XA datasources.

- Non-XA datasources** are used for applications which do not use transactions, or applications which use transactions with a single database.
- XA datasources** are used by applications whose transactions are distributed across multiple databases. XA datasources introduce additional overhead.

Enter the required database connection details and go to **Test Connection** tab. Click on **Test Connection** button and if everything is configured properly you should get the following.

HAL Management Console

HomepageDeployments

Configuration

Subsystems>

Interfaces>

Socket Bindings>

Paths

System Properties

Add Datasource

Choose Template

Attributes

JDBC Driver

Connection

Test Connection

Review

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5

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Test Connection Successful

Successfully tested connection for datasource **MySQLDS**.

Cancel

< Back

Next >

Activate  
Go to Set

This concludes our tutorial on installing MySQL JDBC driver on Wildfly.