

mod08_ex04: Configuring the JDBC Interpreter for Hive

The purpose of this exercise is to configure Zeppelin interpreters for JDBC(Hive). Zeppelin is a notebook used as a data engineering tool. It has a number of connectors, called interpreters, to allow notebook paragraphs to connect to the shell, RDBMS, Hive/Impala, etc. This exercise will configure the interpreter for Hive. You must complete the following:

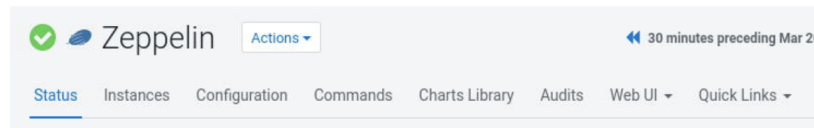
- Add the jdbc(hive) interpreter
- Configure the jdbc(hive) interpreter
- Use a notebook to validate the interpreters

Reference Information

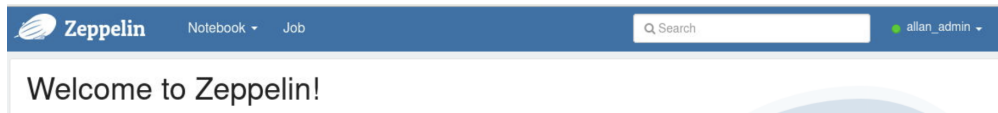
- TBD

1. Log into Zeppelin as the administrative user, allan_admin.

1.1 From Cloudera Manager Home, select Zeppelin. Select Web UI.

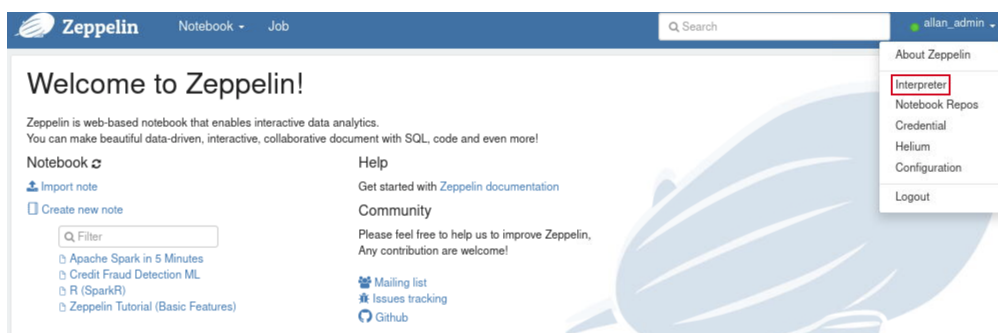


1.2 Log into Zeppelin as the administrative user, allan_admin.

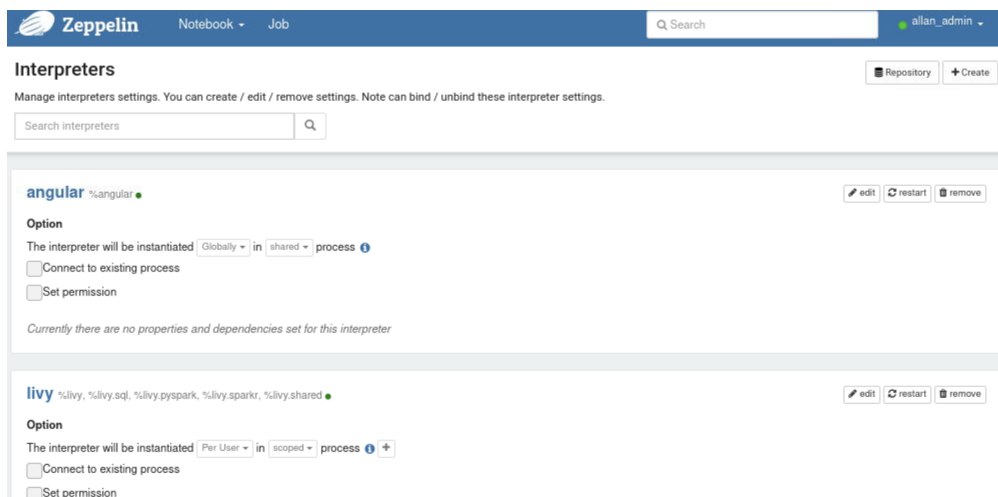


2. Create the jdbc interpreter for Zeppelin.

2.1 Select allan_admin. Select Interpreter.



2.2 The Interpreter page is used to manage and configure interpreters.



There are four interpreters installed.

- angular is a data visualization tool
- livy is used to connect to a Livy server for submitting a Spark job.
- md is used for MarkDown language within a paragraph
- sh is used for shell access

2.3 On the Interpreters page click + Create. In the Interpreter Name type "jdbc". In the Interpreter group pull down select jdbc.

Zeppelin Notebook Job Search allan_admin

Interpreters Repository + Create

Manage interpreters settings. You can create / edit / remove settings. Note can bind / unbind these interpreter settings.

Search interpreters

Create new interpreter

Interpreter Name
jdbc

Interpreter group
jdbc
angular
jdbc
livy
md
sh

Global in shared process

3. Configure the jdbc interpreter for Hive.

3.1 Select the option default.splitQueries.

default.precode	
default.splitQueries	<input checked="" type="checkbox"/>
default.statementPrecode	

3.2 Configure the Hive properties. Scroll to the bottom of the jdbc interpreter. In the properties name enter "hive.driver". In the value enter "org.apache.hive.jdbc.HiveDriver". Click the + sign. CAUTION Do not enter as an artifact.

zeppelin.jdbc.principal		x
hive.driver	org.apache.hive.jdbc.HiveDriver	textarea +

```
hive.driver = org.apache.hive.jdbc.HiveDriver
```

3.3 Configure all of the Hive properties for the jdbc interpreter.

hive.driver	org.apache.hive.jdbc.HiveDriver
hive.password	
hive.proxy.user.property	hive.server2.proxy.user
hive.splitQueries	true
hive.url	jdbc:hive2://master-2.example.com:10000/default
hive.user	hive

```
hive.driver = org.apache.hive.jdbc.HiveDriver

hive.user = hive

hive.password =

hive.proxy.user.property = hive.server2.proxy.user

hive.splitQueries = true

hive.url = jdbc:hive2://master-2.example.com:10000/default
```

3.4 Click Save.

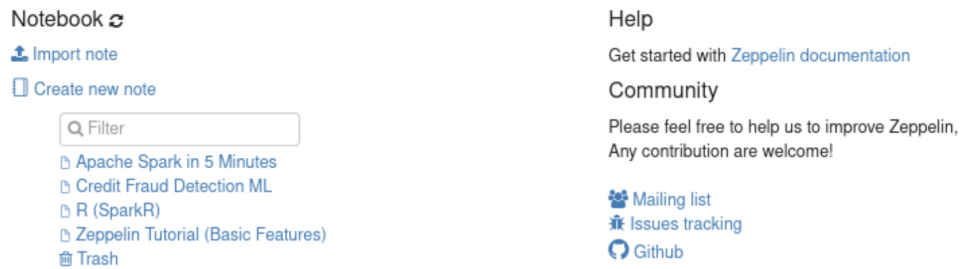
Dependencies
 These dependencies will be added to classpath when interpreter process starts.

artifact	exclude
<input type="text" value="groupid:artifactid:version or local file path"/>	<input type="text" value="[(Optional) comma separated groupid:artifactid list"/>

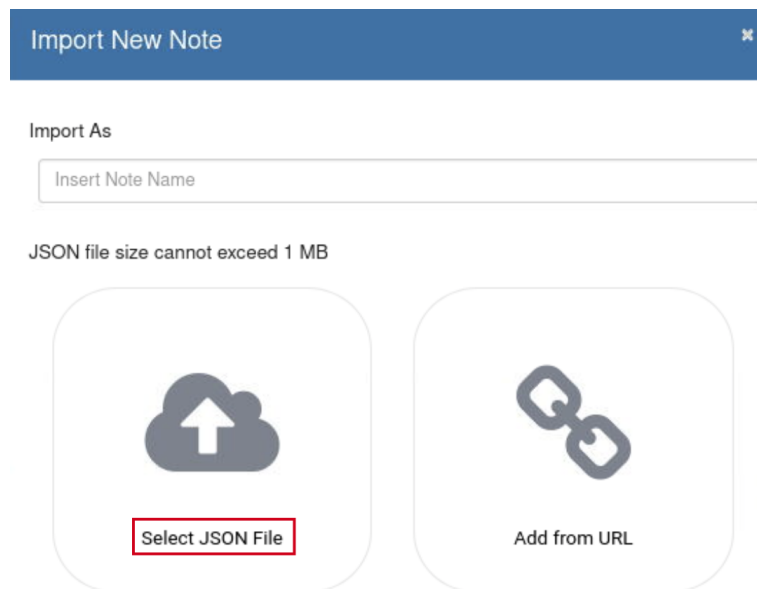
3.5 Scroll to the top of the jdbc interpreter. Select Restart. Select Do you want to restart the interpreter? Click OK.

4. Import a Zeppelin notebook.

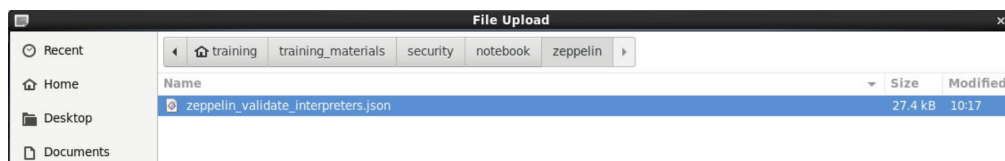
4.1 Click on Zeppelin. On Zeppelin Welcome click on Import notebook.



4.2 Select JSON File.



4.3 Navigate to training/training_materials/security/notebook/zeppelin. Select zeppelin_validate_interpreters.json. Click Open.



5. Run a Zeppelin notebook.

5.1 On the Zeppelin Welcome page select the zeppelin folder, select validate_interpreters.

Welcome to Zeppelin!

Zeppelin is web-based notebook that enables interactive data science. You can make beautiful data-driven, interactive, collaborative notebooks.

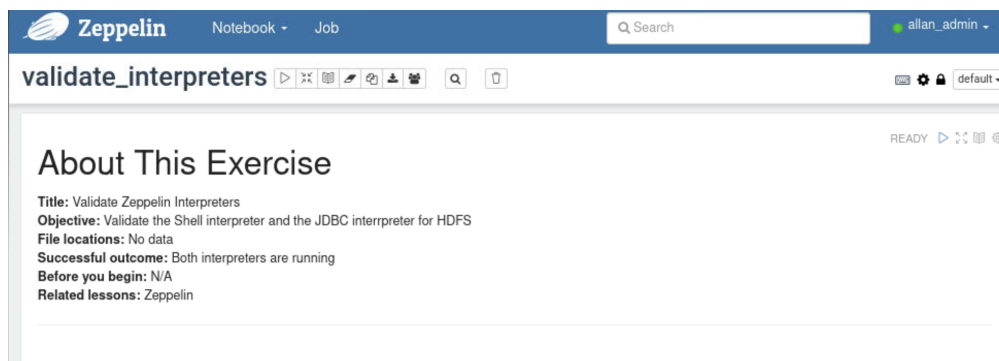
Notebook 

 Import note

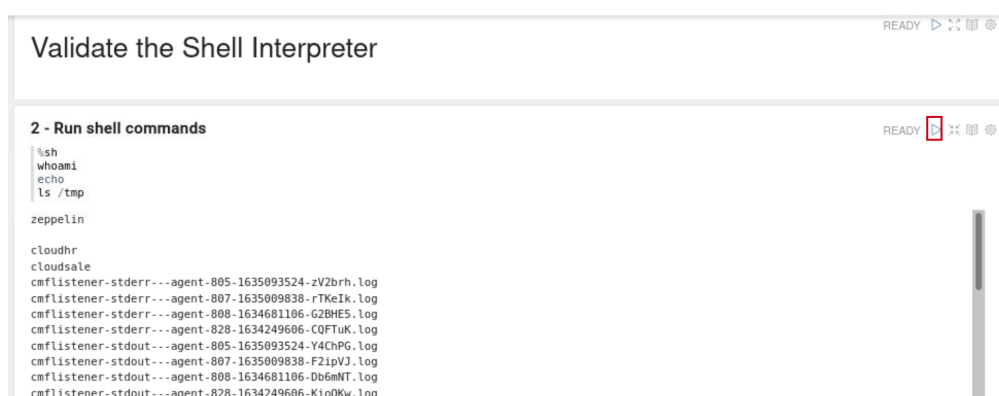
 Create new note

- zeppelin
 - validate_interpreters
 - Apache Spark in 5 Minutes
 - Credit Fraud Detection ML
 - R (SparkR)
 - Zeppelin Tutorial (Basic Features)

5.2 The notebook opens. Read About This Exercise.



5.3 Zeppelin notebooks contain paragraphs.



Numbered paragraphs can be run by clicking on the run arrowhead. Follow the steps in this exercise to validate and to learn about the Zeppelin shell and jdbc(hive) interpreter.

5.4 On the Firefox browser close Zeppelin.

6. Return to Cloudera Manager Home.