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Article

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## Apache Zeppelin + IRIS Quick Start

Apache Zeppelin it's a Multi-purpose notebook that allow you:

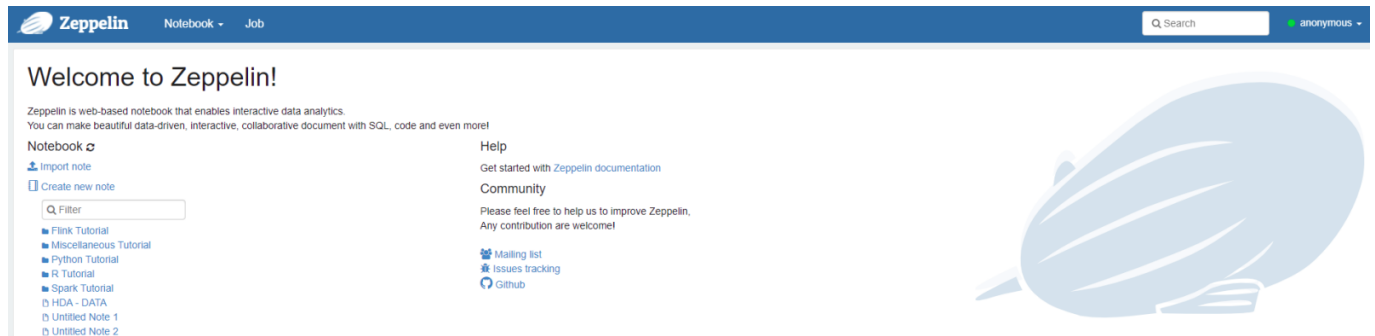
- Data Ingestion
- Data Discovery
- Data Analytics
- Data Visualization and Collaboration.

Apache Zeppelin interpreter concept allows any language/data-processing-backend to be plugged into Zeppelin. Currently Apache Zeppelin supports many interpreters such as Apache Spark, Apache Flink, Python, R, JDBC, Markdown and Shell.

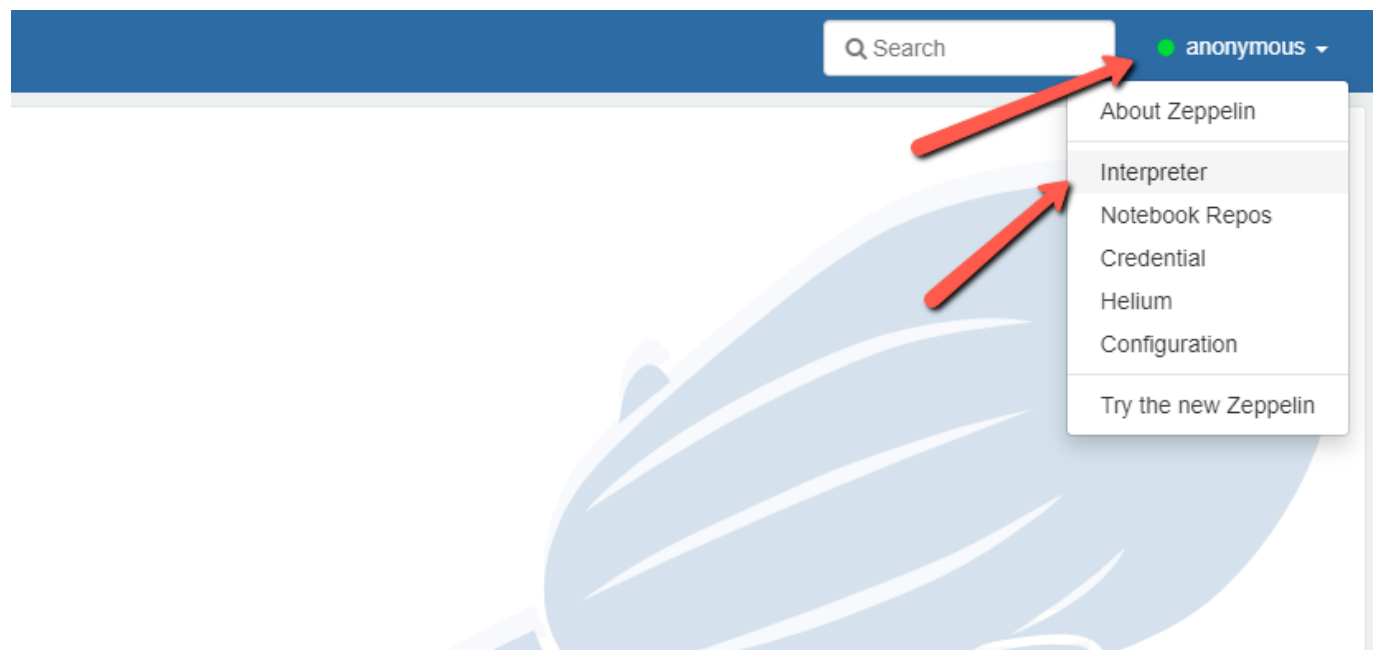
It provides you a safe environment to get insight of your data. You can take advantage of Zeppelin's highlights using both , JDBC and Spark IRIS native connectors.

This is a Quick Start Guide just to put you on the track.

- 1.- Download and save Zeppelin from the official web site --> ([Here](#))
- 2.- Unpackage the distro in the installation folder (your election)
- 3.- You will need install a JDK (if you don't have it)
- 4.- When JDK is Installed you can run Zeppelin `#bash> sudo ./<zeppelinpath>/bin/zeppelin-daemon.sh start` (This is a Linux / Unix based install ... but there is a bash file for the Windows based systems.)
- 5.- Once it's running you can use it through the browser `http://[serverip]:8080`
- 6.- If everything was OK you should see this screen



- 7.- Now it's necessary to setup the interpreters



8.- Let's config Spark Connector (for using the full potencial of IRIS + Zeppelin i.e. with Scala or R)

**Interpreters** Repository Create

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

Spark

**spark** %spark, %sql, %pyspark, %ipyspark, %r, %sir, %shiny, %kotlin

**Option**

The interpreter will be instantiated Globally In shared process

☐ Connect to existing process

☐ Set permission

**Properties**

Name	Value	Description
SPARK_HOME		Location of spark distribution

8.1 In the "Artifacts" section include routes to jdbc and IRIS spark connector

.. warning = 1, fig.retina = 2

zeppelin.kotl.in.shortenTypes true Show short types instead of full, e.g. List<String>

**Dependencies**

Artifact	Exclude
/opt/intersystems/iris/dev/java/lib/JDK18/intersystems-jdbc-3.2.0.jar	
/opt/intersystems/iris/dev/java/lib/JDK18/intersystems-spark-3.2.0.jar	

9.- Now let's configure the JDBC Interpreter , in default url you must set jdbc:IRIS://<youririsserver>:<port>/<namespace> , also your default user and default password, finally default.driver is com.intersystems.jdbc.IRISDriver

**jdbc %jdbc**

**Option**

The interpreter will be instantiated: Globally | in | shared | process

☐ Connect to existing process

☐ Set permission

**Properties**

Name	Value	Description	Action
default.url	<input type="text" value="jdbc:IRIS://127.0.0.1:1972/USER"/>	The URL for JDBC.	<input type="button" value="x"/>
default.user	<input type="text" value="_SYSTEM"/>	The JDBC user name	<input type="button" value="x"/>
default.password	<input type="password" value="*****"/>	The JDBC user password	<input type="button" value="x"/>
default.driver	<input type="text" value="com.intersystems.jdbc.IRISDriver"/>	JDBC Driver Name	<input type="button" value="x"/>
default.completer.ttlInSeconds	<input type="text" value="120"/>	Time to live sql completer in seconds (-1 to update everytime, 0 to disable update)	<input type="button" value="x"/>

## 9.1 We continue configuring the JDBC IRIS dependencies

**Dependencies**

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

Artifact	Exclude
<input type="text" value="/opt/intersystems/iris/dev/java/lib/JDK18/intersystems-jdbc-3.2.0.jar"/>	<input type="text" value="(Optional) comma separated groupid:artifactid list"/>
<input type="text" value="groupid:artifactid:version or local file path"/>	<input type="text" value="(Optional) comma separated groupid:artifactid list"/>

10.- It's Done! now we can use Zeppelin + IRIS

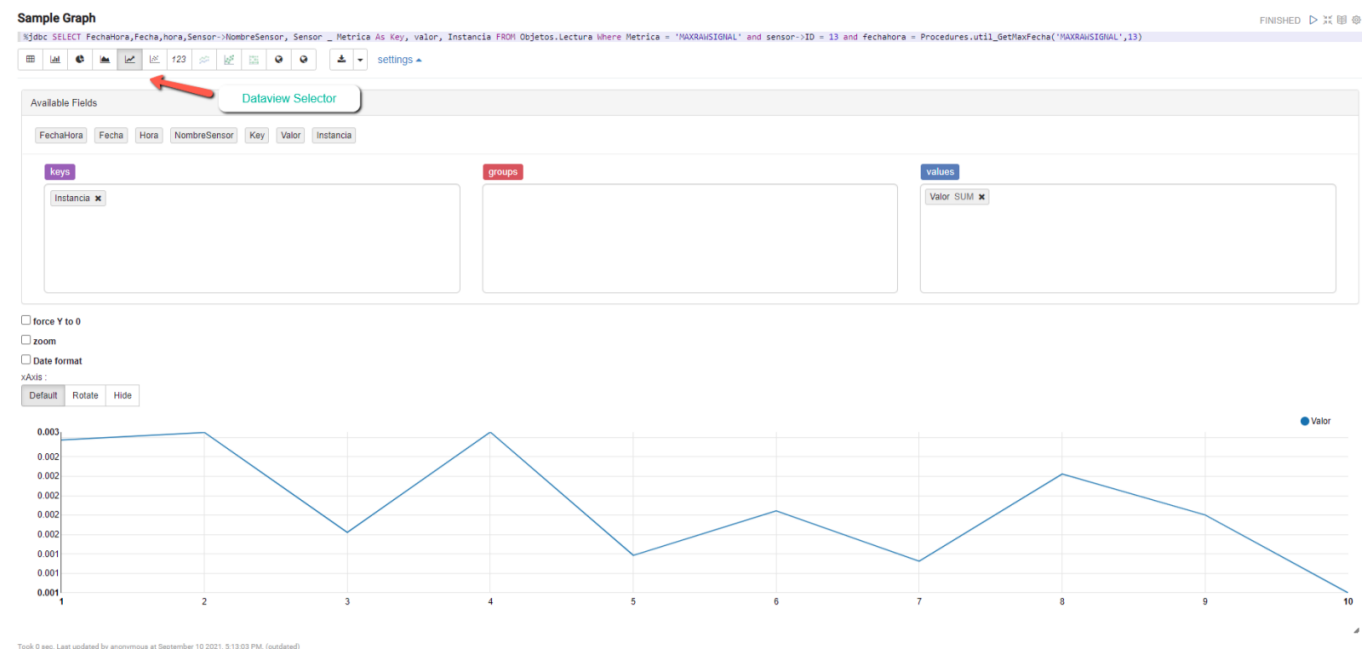
Let's use JDBC interpreter as a quick example

1.- Back in to the Zeppelin's landing page. and create a new notebook

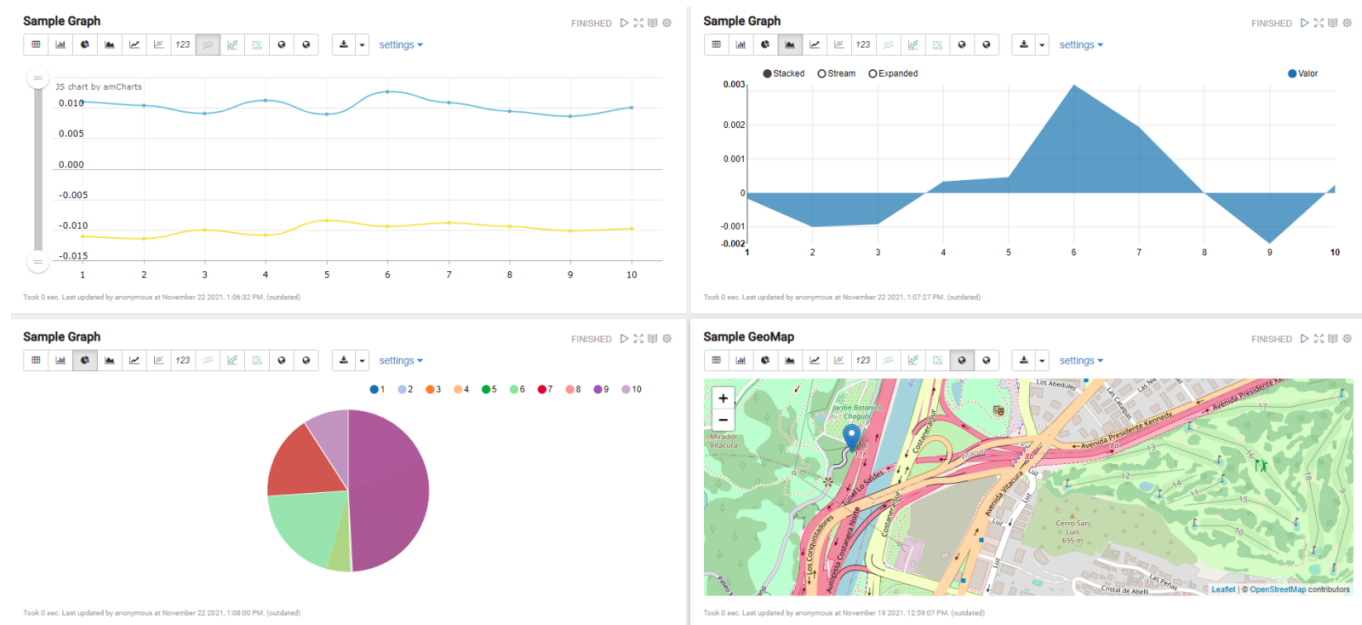
2.- in the new Notebook create a new Paragraph, in the case of using the jdbc interpreter, the sentence must start as %jdbc

ID	Fecha	FechaHora	Hora	Instancia	Metrica	Normal	Sensor	TimeStamp	Valor
694	2021-10-20	2021-10-20 10:08:58	10:14:43	1	MAXRAWSIGNAL	0	1	2021-10-20 10:14:43	0.0345013412482877
695	2021-10-20	2021-10-20 10:08:58	10:14:43	2	MAXRAWSIGNAL	0	1	2021-10-20 10:14:43	0.0414682582222305
696	2021-10-20	2021-10-20 10:08:58	10:14:43	3	MAXRAWSIGNAL	0	1	2021-10-20 10:14:43	0.0384286397412818
697	2021-10-20	2021-10-20 10:08:58	10:14:43	4	MAXRAWSIGNAL	0	1	2021-10-20 10:14:43	0.04566805881944
698	2021-10-20	2021-10-20 10:08:58	10:14:43	5	MAXRAWSIGNAL	0	1	2021-10-20 10:14:43	0.0376177569007237
699	2021-10-20	2021-10-20 10:08:58	10:14:43	6	MAXRAWSIGNAL	0	1	2021-10-20 10:14:43	0.049532216221435
700	2021-10-20	2021-10-20 10:08:58	10:14:43	7	MAXRAWSIGNAL	0	1	2021-10-20 10:14:43	0.0413417687568154
701	2021-10-20	2021-10-20 10:08:58	10:14:43	8	MAXRAWSIGNAL	0	1	2021-10-20 10:14:43	0.0413510287301842

You will get your data as a table by default, but quickly you can toggle to a graph just changing and setting the view



You can combine different queries , views and layouts to easily get really powerfull dashboards



I really hope that information was useful and feel free to share it or improve it.

[#InterSystems IRIS](#)

Source URL: <https://community.intersystems.com/post/apache-zeppelin-iris-quick-start>