Spark

In this presentation, I will show you one apprach to building a local Spark application that consumes, transforms and stores data for just-in-time visual analysis.

Stream

Core to our application is the concept of a stream, composing a *Source ~> Flow ~> Sink*.

Stream components might include:

- Source ~ Cassandra, Hdfs, Kafka, Text, …
- Flow ~ Spark Transformations and Actions
- Sink ~ Cassandra, Hdfs, Kafka, Text, …

Technologies

This application is built with these technologies:

- Scala
- ScalaFX
- Spark
- Kafka
- Cassandra
- Cassandra-Spark Connector
- Zookeeper

Visuals

Visuals are built with ScalaFX, a JavaFX wrapper. JavaFX features include:

- Charts, 2D, 3D and Animations.
- CSS styling for all components.
- Third party components.
- WebView component for Javascript content, such as D3.

Visual Spark

Visual Spark is a ScalaFX application that executes and visualizes a *Kafka Source ~> Spark Flow ~> Casandra Sink* stream.

The next slide contains a screen shot of Visual Spark after executing and visualizing a stream.

Visual Spark

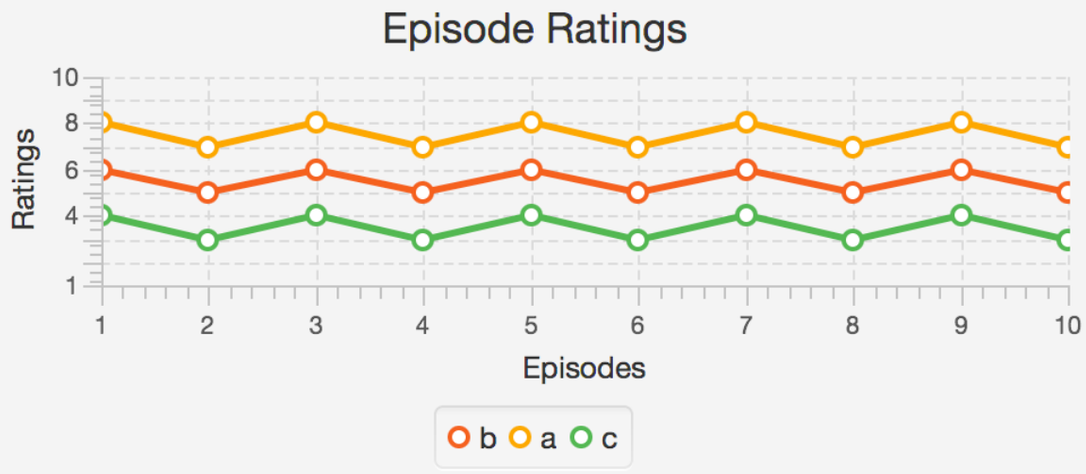
Play

30 messages processed in 22 seconds.

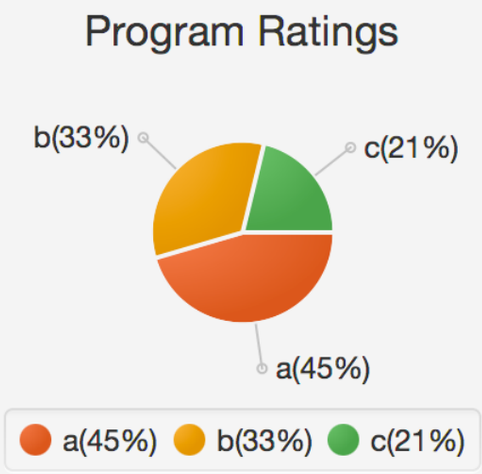
Source

Program	Season	Episode	Rating
a	1	1	8
a	1	2	7
a	1	3	8
a	1	4	7
a	1	5	8
a	1	6	7
a	1	7	8
a	1	8	7

Flow



Sink



Next

Next let's examine the project source code and view a demo.*

* For details, please see: github.com/objektwerks