

Spark Simulation

A visual Spark simulation, composing a *Data Source*,
Spark Flow and *Data Sink*.

- Data Source: Cassandra, Hdfs, Kafka, Text
- Spark Flow: Transformations and Action
- Data Sink: Cassandra, Hdfs, Kafka, Text

Technologies

Scala

ScalaFX

Spark

Kafka

Cassandra

Cassandra-Spark Connector

Rationale

Spark engineers work with Scala.

Spark simulations can be built with ScalaFX, a JavaFX wrapper.

JavaFX includes Charts, 2D, 3D and Animations.

JavaFX apps and controls are decorated by CSS.

Third party JavaFX charts and components exist.

JavaFX includes a WebView component that allows for the rendering of Javascript content. For instance, D3 could be used to build an exotic chart.

Visual Spark

Executes and visualizes a *Source* ~> *Flow* ~> *Sink* pipeline as:

- Source: Kafka Topic Messages
- Flow: Time Series Chart
- Sink: Aggregate Pie Chart

via a ScalaFX application.

Play

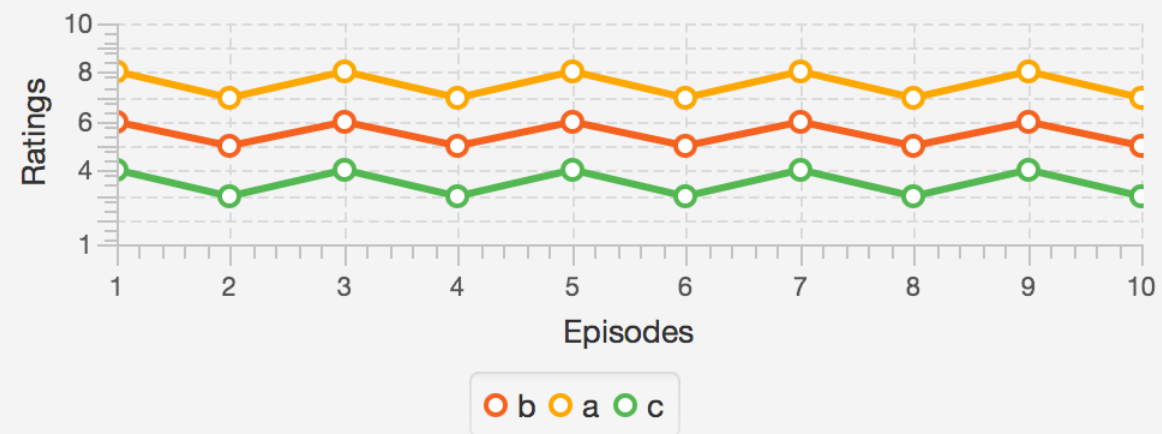
30 messages processed in 22 seconds.

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

Episode Ratings



Sink

Program Ratings

