# Spark Streaming

# Python and Spark

Spark Streaming is an extension of the core Spark API that enables scalable, high-throughput, fault-tolerant stream processing of live data streams.

# Python and Spark

Data can be ingested from many sources like Kafka, Flume, Kinesis, or TCP sockets, and can be processed using complex algorithms expressed with high-level functions like map, reduce, join and window.

# Python and Spark

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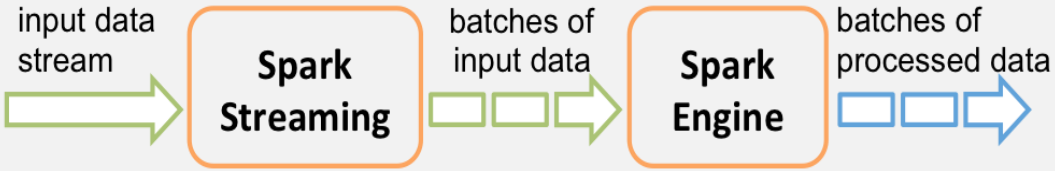
Internally, Spark Streaming receives live input data streams and divides the data into batches, which are then processed by the Spark engine to generate the final stream of results in batches.



# Python and Spark

- For this section we will first work through a simple streaming example.
- You will need to simultaneously use jupyter notebook and a terminal for this.
- This is easiest to follow through a local installation using Virtual Box.

# Python and Spark

- The various possible data sources (Kafka, Flume,Kinesis, etc…) can not realistically be shown in a single computer setting.
- If your place of work necessitates use of one of these sources, Spark provides full integration guides.

# Python and Spark

- Keep in mind not every source version is available with the Python API.
- Let's jump to the documentation to show you where you can find additional information on Spark Streaming!

# Spark Streaming Example Code Along