Apache Storm

Course Summary

Description
This course will teach Apache Storm – a popular event processing framework – to students.

Objectives
After taking this course, students will know:
- Concepts & architecture
- How to install and configure
- Programming
- Logging & Metrics
- Designing Streaming systems

Topics
- Introduction to Streaming Systems
- Introduction to Storm
- Programming With Storm
- Topology Design
- Logging & Metrics
- Trident
- Designing and Tuning Storm Systems

Audience
This course is designed for Developers

Prerequisites
- Comfortable with Java programming language (programming exercises are in java)
- Comfortable in Linux environment (be able to navigate Linux command line, edit files using vi/nano)

Duration
Two Days
Apache Storm

Course Outline

I. Introduction to Streaming Systems
   A. Fast data
   B. Streaming architecture
   C. Lambda architecture
   D. Message queues
   E. Streaming processors

II. Introduction to Storm
    A. Architecture
    B. Sources / Sinks
    C. Tuples
    D. Spout
    E. Bolts
    F. Topologies

III. Programming With Storm
     A. Storm Java API
     B. Bolt / Spout / Topology APIs
     C. Lab: Programming Storm

IV. Topology Design
    A. Mapping fields
    B. Parsing fields in Bolts
    C. Scalability and Parallelism
    D. Executors and Tasks
    E. Creating robust topologies

V. Logging & Metrics
   A. Logging in Storm application
   B. Metrics: capturing and analyzing

VI. Trident
    A. Intro to Trident
    B. Trident operations

VII. Designing and Tuning Storm Systems
     A. Kafka & Storm
     B. Topology design
     C. Tuning Storm systems