# Installation of Hadoop

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## **Topics**

- Hadoop operational modes
- Hadoop installation options

## Hadoop Operational Modes

### **Hadoop Operational Modes**

- Local (Standalone) operation
  - All Hadoop deamons (NameNode, DataNode, JobTracker, Task Tracker) are running on a single Java process (JVM)
  - Uses local file system for storage
- Pseudo-distributed operation (test & development)
  - Each Hadoop daemon runs in a separate Java process (JVM) but physically on a single machine
- Fully-distributed operation (production)
  - > Each Hadoop daemon runs on a different machine
  - The power of Hadoop parallel processing, scalability, automatic replication management, fault-tolerance, data consistency, workflow management – gets realized only in this mode

## Hadoop Installation Options

## **Installation Options of Hadoop**

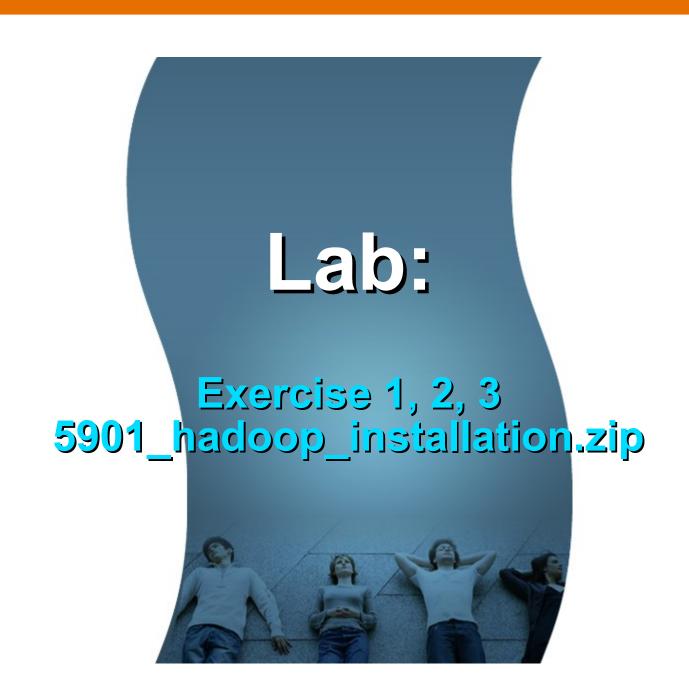
- VM Image
  - All Hadoop technologies pre-installed and pre-configured via VM for out of the box Hadoop experience
  - > Typically single node cluster configuration
  - > Pseudo-distributed operational mode
  - > Two options: Cloudera QuickStart VM, Hortonworks Sandbox
  - Easiest way to get started with Hadoop
- Hadoop package
  - A single package that contains most Hadoop technologies
- Manual installation
  - You download each Hadoop technology individually and do manual installation and configuration for each

### **Hadoop Distributions**

- Apache Hadoop
  - http://hadoop.apache.org/
- Cloudera
  - > http://cloudera.com/
  - > The most popular distribution
  - > Integrated with many popular Hadoop ecosystem technologies
- Hortonworks
  - http://hortonworks.com
- MapR
  - http://mapr.com

#### Cloudera QuickStart VM

- CDH 5.3.x
  - Cloudera Manager does not get started automatically
  - > Requires more memory for Cloudera Manager
  - > Adds Hadoop Spark support
- CDH 4.7.x
  - Cloudera Manager does get started automatically
  - We are going to use CDH 4.7.x for our lab please be assured there will not any negative learning experience!



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