## MAPREDUCE - HADOOP ADMINISTRATION

http://www.tutorialspoint.com/map\_reduce/map\_reduce\_hadoop\_administration.htm Copyright © tutorialspoint.com

This chapter explains Hadoop administration which includes both HDFS and MapReduce administration.

- HDFS administration includes monitoring the HDFS file structure, locations, and the updated files.
- MapReduce administration includes monitoring the list of applications, configuration of nodes, application status, etc.

## **HDFS Monitoring**

HDFS *HadoopDistributedFileSystem* contains the user directories, input files, and output files. Use the MapReduce commands, **put** and **get**, for storing and retrieving.

After starting the Hadoop framework *daemons* by passing the command "start-all.sh" on "/\$HADOOP\_HOME/sbin", pass the following URL to the browser "http://localhost:50070". You should see the following screen on your browser.

The following screenshot shows how to browse the browse HDFS.

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The following screenshot show the file structure of HDFS. It shows the files in the "/user/hadoop" directory.

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The following screenshot shows the Datanode information in a cluster. Here you can find one node with its configurations and capacities.

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## MapReduce Job Monitoring

A MapReduce application is a collection of jobs Mapjob, Combiner, Partitioner, and Reducejob. It is mandatory to monitor and maintain the following –

- Configuration of datanode where the application is suitable.
- The number of datanodes and resources used per application.

To monitor all these things, it is imperative that we should have a user interface. After starting the Hadoop framework by passing the command "start-all.sh" on "/\$HADOOP\_HOME/sbin", pass the following URL to the browser "http://localhost:8080". You should see the following screen on your browser.

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In the above screenshot, the hand pointer is on the application ID. Just click on it to find the following screen on your browser. It describes the following -

- On which user the current application is running
- The application name
- Type of that application
- Current status, Final status
- Application started time, elapsed *completedtime*, if it is complete at the time of monitoring
- The history of this application, i.e., log information
- And finally, the node information, i.e., the nodes that participated in running the application.

The following screenshot shows the details of a particular application -

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The following screenshot describes the currently running nodes information. Here, the screenshot contains only one node. A hand pointer shows the localhost address of the running node.

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