

HDFS Master Slave Architecture

Advantages and Disadvantages of Hadoop

Apache Hive

Components and Architecture of Hive

Data Model of Hive

Apache Pig

Pig Latin



Parser

Optimizer

Compiler

Execution Engine

Data Model in Pig

Scalar Data Types

Integer, Long, Float, Double, chararray,
bytearray

Complex Data Types

Maps: Key Value Pairs

```
['name'#'Jane', 'Age'#35]
```

Tuple: Multiple fields

```
(37, 17, 'Jane', 'Krish', 23)
```

Bags: Multiple Tuples

$\{('Jane', 35), ('Sally', 27), ('John', 33)\}$

Pig includes the concept of a data element being null

If a schema for the data is available, Pig will make use of it, but if no schema is available, Pig will still process the data making the best guesses it can based on how the script treats the data.

To create a new directory

```
hdfs dfs -mkdir <path to directory>
```

```
hdfs dfs -mkdir /mydir
```

```
hdfs dfs -mkdir /mydir/newdir
```

mylar

newbie

To send a file from Local File System to HDFS

```
hdfs dfs -put <source path> <destination path>
```

```
hdfs dfs -put /home/bigdata/samplefile.txt /mydir
```

To list the contents of directory:

```
hdfs dfs -ls <path to directory>
```

```
hdfs dfs -ls /mydir
```

To see the contents of a file:

```
hdfs dfs -cat <path to file>
```

```
hdfs dfs -cat /mydir/samplefile.txt
```

To send a file from HDFS to Local File System

```
hdfs dfs -get <source path> <destination path>
```

```
hdfs dfs -get /mydir/samplefile.txt /home/bigdata/result.txt
```

To delete a directory

```
hdfs dfs -rm -r <path to directory>
```

```
hdfs dfs -rm -r /mydir
```

```
hadoop jar <path to jar file> -mapper <path  
to mapper file> -reducer <path to reducer  
file> -input <path to input data> -output  
<path to output directory>
```