

Big Data Hadoop Course Contents

| | |
|----------|---|
| 1 | Introduction to Big Data and Hadoop |
| | Data explosion and the need for Big Data |
| | Concept of Big Data |
| | Basics of Hadoop |
| | History and milestones of Hadoop |
| 2 | Hadoop Architecture |
| | Use of Hadoop in commodity hardware |
| | Various configurations and services of Hadoop |
| | Difference between a regular and a Hadoop Distributed File System |
| | HDFS architecture |
| 3 | Hadoop Installation & Connection |
| | Install VirtualBox |
| | How to use Oracle Virtual Box to create a VM |
| | Hadoop installation on VM |
| | Run VM and connect to Hadoop |
| 4 | Hadoop environment and Commands |
| | Hadoop commands |
| | Examples and execution of command on environment. |
| 5 | Hadoop Map Reduce |
| | Map Reduce paradigm |
| | How Map Reduce works |
| | Hadoop MR2 & YARN |
| | YARN Architecture |
| 6 | Java Implementation |
| | Eclipse Hadoop project setup |
| | Implementation of Mapper |
| | implementation of Reducer |
| | Implementation of Driver |
| | examples |
| | Demo |
| | Hand on |

| | |
|----------|--|
| 7 | MapReduce Design Patterns |
| | Summarization Patterns |
| | Numerical summarizations |
| | Inverted index |
| | Counting with counters |
| | Filtering Patterns |
| | Filtering |
| | Bloom Filtering |
| | Top ten |
| | Distinct |
| | Data Organization Patterns |
| | Meta patterns |
| 8 | HCatalog |
| | Summarization Patterns |
| | Numerical summarizations |
| | Inverted index |
| | Counting with counters |
| | Filtering Patterns |
| 9 | Hive |
| | Built-in Operators |
| | Relational Operators |
| | Arithmetic Operators |
| | Logical Operators |
| | Complex Type Constructors |
| | Operators on Complex Types |
| | Built-in Functions |
| | Mathematical Functions |
| | Mathematical Functions and Operators for Decimal Datatypes |
| | Collection Functions |
| | Type Conversion Functions |
| | Date Functions |
| | Conditional Functions |
| | String Functions |
| | Built-in Aggregate Functions (UDAF) |
| | Built-in Table-Generating Functions (UDTF) |
| | explode |
| | posexplode |
| | json_tuple |
| | parse_url_tuple |

| 10 | Pig |
|-----------|---|
| | Introduction to Pig Latin |
| | Define a relation |
| | Write and Execute the Script |
| | Define a Relation with a Schema |
| | Define a new relation from an existing relation |
| | View the Data |
| | Select specific columns from a relation |
| | FOREACH statement |

| 11 | Additional Topics Placement Assistance |
|-----------|--|
| | Sqoop |
| | Schedule jobs using Oozie |
| | NoSQL Basics |
| | HBase Basics |
| | Preparation of Resume as per student's requirements. |
| | Discussion of Interview Questions |
| | Tips for cracking the certification if student is taking any certification |
| | Project Explanation |
| | Assistance to get interviews |