

# Hadoop Administrator



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### Session 1

#### a) Why Hadoop

Discussion about the drawbacks of traditional RDBMS and why Hadoop is better than traditional RDBMS.

#### b) Introduction to Hadoop

Discussion about HDFS Architecture. Namenode, Secondary Namenode, Resource Manager, Data node and Node manager.

### Session 2

#### a) Introduction to AWS Cloud

Brief discussion about cloud technologies in Industry.

Why cloud is better than baremetal and VM's. Discussion about various components which we are going to learn through the course duration ( AWS EC2, AWS S3, EMR, VPC, Snapshots, AMI, IAM)

#### b) Basic Networking concepts

Discussion about basic networking concepts that are going to be required in Hadoop.

#### c) Introduction to Linux

Discussion on why Linux skillset is important for Hadoop.

Overview of Linux and practising basic commands.

### Session 3

#### a) AWS Cloud (AWS EC2)

Hands on practise on AWS EC2. Deployment of an instance using AWS EC2 and connecting to that instance using terminal and putty.

#### b) Hands on Practise of Linux Concepts

When connected to the instance deployed through AWS Ec2, hands on practise of linux commands will be done to understand linux concepts.



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### Session 4

a) Single Node Architecture (Hadoop 1x)  
Deployment of Single Node Hadoop Cluster using command line interface and discussing hadoop daemons.  
Accessing Namenode UI, Resource Manager UI  
Running a mapreduce job.

### Session 5

a) Multi Node Architecture (Hadoop 1x)  
Deployment of Multi Node Hadoop Cluster using command line interface and discussing hadoop daemons.  
Setting up password less login architecture.  
Accessing Namenode UI, Resource Manager UI

### Session 6

a) AWS S3 and EMR  
Creating a S3 bucket and storing the data into it.  
Creating a cluster in EMR and processing the data stored in S3 bucket, after processing storing the result back into the S3 bucket.

### Session 7

a) Hadoop Eco-system (Hive, Flume, Sqoop and Pig)  
Installing, configuring and using Apache Hive on hadoop cluster.  
Installing, configuring and using Apache Pig on hadoop cluster.  
Installing, configuring and using Apache Flume on hadoop cluster.  
Installing, configuring and using Apache Sqoop on hadoop cluster.



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## Session 8

### a) Hadoop 2x

Why hadoop 2x is better than hadoop 1x

Discussion on Prerequisites of hadoop 2x

Deploying Single Node hadoop 2x cluster

## Session 9

Multi node hadoop 2x cluster, ( AWS: Snapshots and AMI)

Creating an image of hadoop 2x prerequisites on AWS cloud

Deploying hadoop 2x multi node architecture using that image.

## Session 10

### a) Hortonworks cluster

Deploying hortonworks cluster using Ambari

Performing basic admin tasks on Hortonworks cluster

### b) Cloudera cluster

Deploying Cloudera cluster using Cloudera Manager

Performing basic admin tasks on Cloudera cluster



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