# Oracle Big Data Fundamentals

In the Oracle Big Data Fundamentals course, learn to use Oracle's Integrated Big Data Solution to acquire, process, integrate and analyze big data. In this course, you will be introduced to Oracle Big Data Cloud Service.

**Learn To:**

- Define Big Data.
- Describe Oracle's Integrated Big Data Solution and its components.
- Define the Hadoop Ecosystem and Cloudera's Distribution Including Apache Hadoop (CDH).
- Use the Hadoop Distributed File System (HDFS)to store, distribute, and replicate data across the nodes in the Hadoop cluster.
- Acquire big data using the HDFS Command Line Interface, Flume, and Oracle NoSQL Database.
- Use MapReduce and YARN for distributed processing of the data stored in the Hadoop cluster.
- Process big data using MapReduce, YARN, Hive, Pig, Oracle XQuery for Hadoop, Solr, and Spark.
- Integrate big data and warehouse data using Scoop, Oracle Big Data Connectors, Copy to BDA, Oracle Big Data SQL, Oracle Data Integrator, and Oracle GoldenGate.
- Analyze big data using Oracle Big Data SQL, Oracle Advanced Analytics technologies, and Oracle Big Data Discovery.
- Use and manage Oracle Big Data Appliance.
- Secure your data.
- Understand Oracle Big Data Cloud Service: Key Features & Benefits.

**Benefits To You**

Increase your Big Data technology portfolio by learning to use a wide range of big data acquisition, processing, integration, and analysis techniques. In addition, you learn about Oracle’s engineered systems for Big Data, which provide a variety of data integration and analysis capabilities. Analysis options include Oracle Big Data SQL, Oracle Data Mining, Oracle R Enterprise, and Oracle Big Data Discovery.

Benefit from a hands-on, case-study approach while learning about Oracle’s Integrated Big Data Solution.

## Audience

- Administrator
- Database Administrator
- Developer

## Objectives

- Review Oracle’s Big Data Management Architecture and Engineered Systems
- Define Big Data
- Identify Big Data Use Cases
- Define the Hadoop ecosystem and its components
- Examine MapReduce programs and balance MapReduce jobs
- Use Oracle NoSQL Database
- Use Oracle XQuery for Hadoop
- Understand Oracle Big Data Cloud Service: Key Features & Benefits
- Install, use, and administer the Oracle Big Data Appliance
- Provide data security and enable resource management
- Examine MapReduce programs and balance MapReduce jobs
- Use the Oracle BigDataLite Virtual Machine

## Topics

- Introduction
- Big Data and the Oracle Information Management System
- Using Oracle Big Data Lite Virtual Machine
- Introduction to the Big Data Ecosystem
- Introduction to the Hadoop Distributed File System (HDFS)
- Acquire Data using CLI, Fuse-DFS, and Flume
- Using and Administering Oracle NoSQL Database
- Introduction to MapReduce
- Using YARN to Manage Resources
- Overview of Apache Hive and Apache Pig
- Overview of Cloudera Impala, Solr, and Apache Spark
- Using Oracle XQuery for Hadoop
- Options for Integrating Your Big Data
- Using Oracle Big Data SQL
- Using Oracle Advanced Analytics
- Introducing Oracle Big Data Discovery
- Using the Oracle Big Data Appliance (BDA)
- Managing the Oracle Big Data Appliance
- Balancing MapReduce Jobs
- Securing Your Data on the BDA
- Introduction to Oracle Big Data Cloud Service (BDCS)