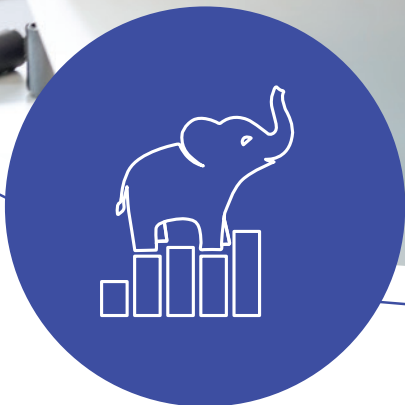


# BIG DATA HADOOP ARCHITECT



simpli|learn

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About the Course



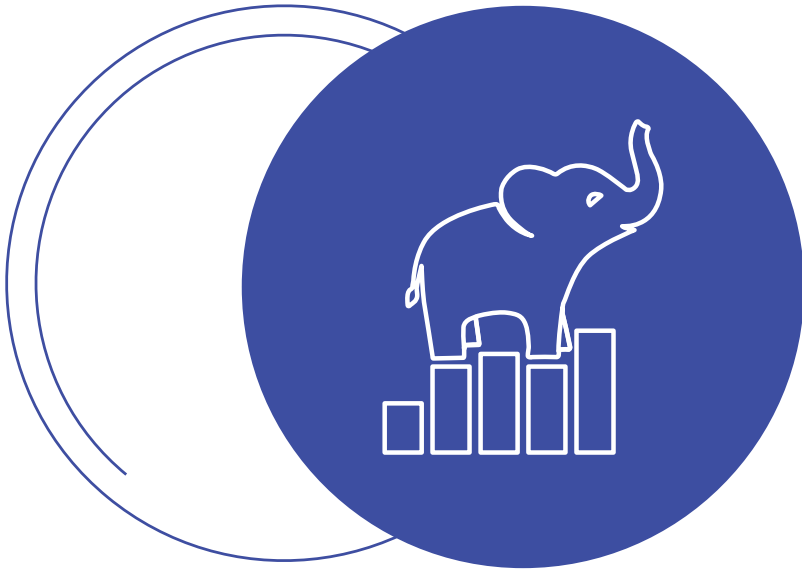
Key Features of Big Data Hadoop Architect Masters Program



Learning Path

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## About the Course

The Big Data Hadoop Architect is the perfect training program for an early entrant to the Big Data world. With a number of required skills required to be a big data specialist and a steep learning curve, this program ensures you get hands on training on the most in-demand big data technologies. The learning is complemented with projects on a cloud based environment, Cloudfab, for real world experience. The program covers hadoop, spark, NoSQL databases and other hadoop ecosystem components and makes sure you are ready for your next Big Data assignment.

*The Big Data Hadoop Architect is the perfect program for an early entrant to upskill and success in the Big Data world.*

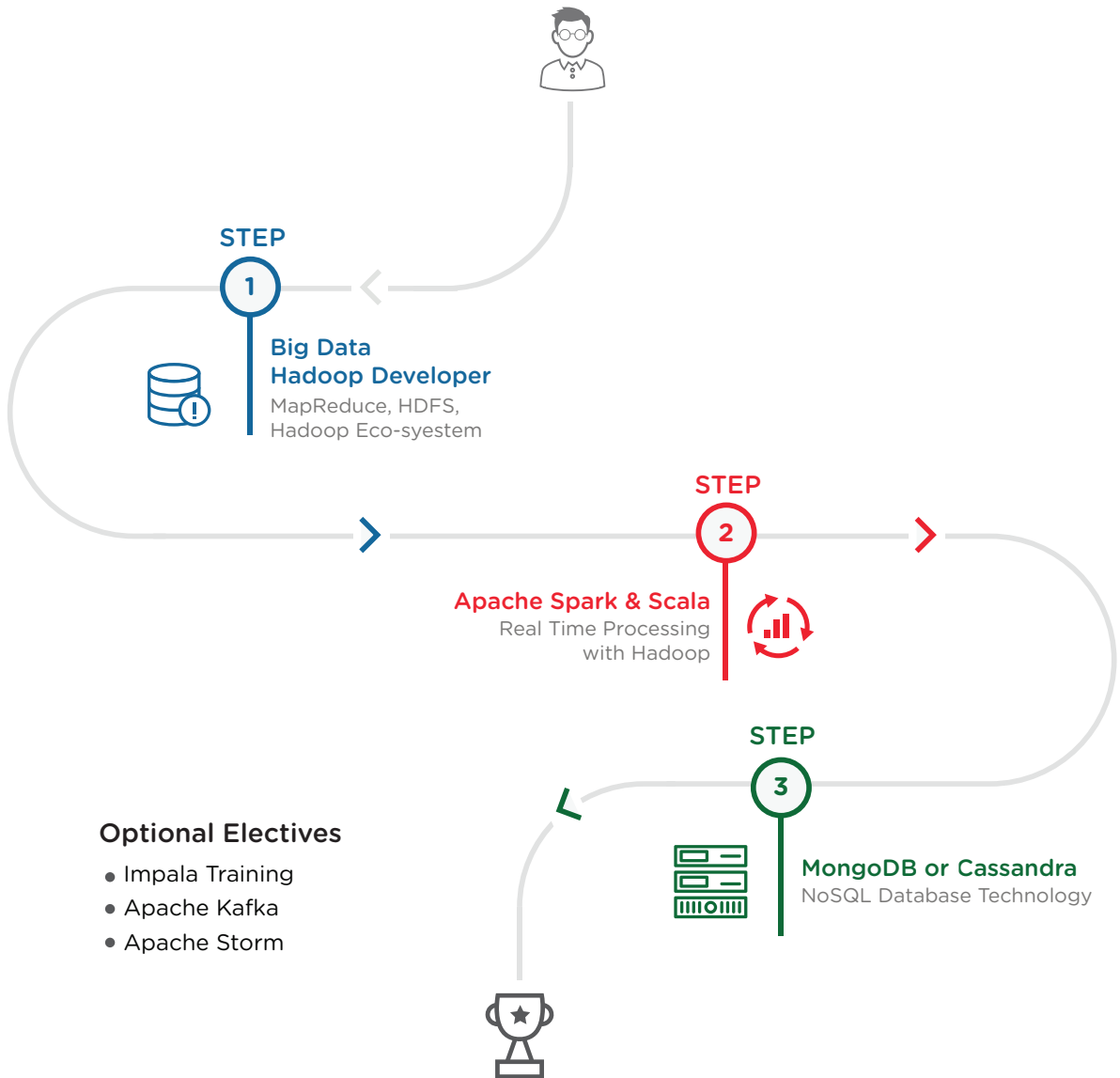


## Key Features

-  Industry Recommended Learning path
-  Access to 100+ hours of Instructor Led training
-  Over 150 hours of high quality E-learning
-  Hands on project execution on CloudLabs
-  Prepares you for the most in demand Cloudera CCA175 Certification
-  Industry recognized Simplilearn Masters Certificate on completion
-  10+ industry projects

# Learning Path

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## BIG DATA HADOOP ARCHITECT

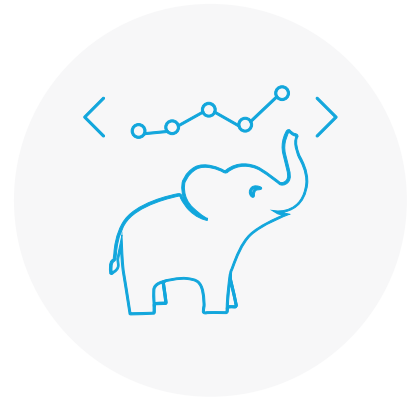
# STEP **1** 2 3

## Begin your big data journey

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### Apache Hadoop

This is a Cloudera aligned deep dive into Hadoop and all its ecosystem components including MapReduce, HDFS, Yarn, HBase, Impala, Sqoop and Flume. It also provides an introduction to Apache Spark which is a next step after Hadoop. After completing this program not only will you be ready to enter the Big Data domain but will also be able to clear the in demand Cloudera CCA175 certification.

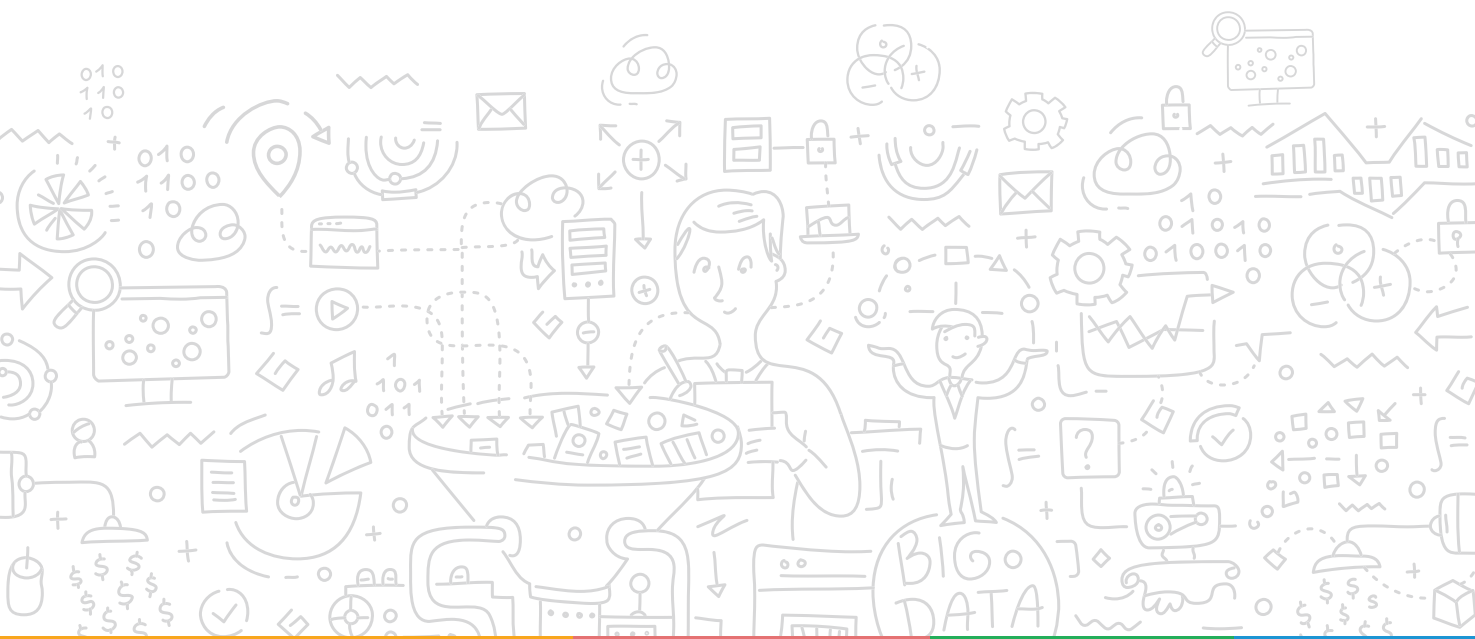


### Key Learning Objectives

- ✔ "Master the concepts of the Hadoop framework and its deployment in a cluster environment
- ✔ Understand how the Hadoop ecosystem fits in with the data processing lifecycle
- ✔ Learn to write complex MapReduce programs
- ✔ Describe how to ingest data using Sqoop and Flume
- ✔ Get introduced to Apache Spark and its components
- ✔ List the best practices for data storage
- ✔ Explain how to model structured data as tables with Impala and Hive"

## Course Curriculum

- ✓ "Introduction to Bigdata and Hadoop Ecosystem
- ✓ HDFS and Hadoop Architecture
- ✓ MapReduce and Sqoop
- ✓ Basics of Impala and Hive
- ✓ Working with Impala and Hive
- ✓ Type of Data Formats
- ✓ Advance HIVE concept and Data File Partitioning
- ✓ Apache Flume and HBase
- ✓ Apache Pig
- ✓ Basics of Apache Spark, RDDs in Spark and Applications



# STEP 1 2 3

## Harness the power of real time processing

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### Apache Spark

The Apache Spark and Scala training is a deep dive into Spark which is a very fast in-memory big data processing engine. Spark is quickly becoming the big-data technology of choice after Hadoop due to its real time applications and streaming ability. This course ensures you are not restricted to Hadoop and gain experience on the most in demand big data technology.



### Key Learning Objectives

- ✔ "Get clear understanding of the limitations of MapReduce and role of Spark in overcoming these limitations
- ✔ Understand fundamentals of Scala Programming Language and it's features
- ✔ Explain & master the process of installing Spark as a standalone cluster
- ✔ Expertise in using RDD for creating applications in Spark
- ✔ Mastering SQL queries using SparkSQL
- ✔ Gain thorough understanding of Spark Streaming features
- ✔ Master & describe the features of Spark ML Programming and GraphX Programming"



## Course Curriculum

- ✔ "Introduction to Spark
- ✔ Introduction to Programming in Scala
- ✔ Using RDD for Creating Applications in Spark
- ✔ Running SQL queries Using SparkSQL
- ✔ Spark Streaming
- ✔ Spark ML Programming
- ✔ Spark GraphX Programming"



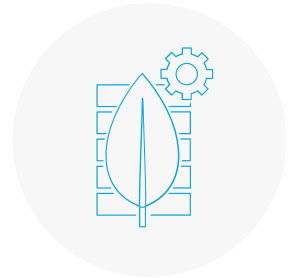
# STEP 1 2 3

## Store and query big data

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### NoSQL Databases

The third and final step to a big data architect is knowledge of a NoSQL database. These databases work with dynamic schema which increases flexibility and scalability. They have been developed keeping big data uses in mind and are good for handling large amounts of non-uniform data. MongoDB is the most used NoSQL Database and another popular option is Cassandra. Hence this is the final skill required for a big data architect



### MongoDB - Key Learning Objectives

- ✓ Develop an expertise in writing Java and Node JS applications using MongoDB
- ✓ Master the skills of Replication and Sharding of data in MongoDB to optimize read / write performance
- ✓ Perform installation, configuration and maintenance of MongoDB environment
- ✓ Get hands-on experience in creating and managing different types of indexes in MongoDB for query execution
- ✓ Develop skillsets in processing huge amounts of data using MongoDB tools
- ✓ Proficiently store unstructured data in MongoDB
- ✓ Gain proficiency in MongoDB configuration, backup methods as well as monitoring and operational strategies
- ✓ Acquire in-depth understanding of managing DB Notes, replica set & Master-Slave concepts

## Apache Cassandra - Key Learning Objectives

- ✓ Describe the need for big data and NoSQL
- ✓ Explain the fundamental concepts of Cassandra
- ✓ Describe the architecture of Cassandra
- ✓ Demonstrate data model creation in Cassandra
- ✓ Use Cassandra database interfaces
- ✓ Demonstrate Cassandra database configuration"

## Course Curriculum

### MongoDB Developer and Administrator

- ✓ NoSQL Database Introduction
- ✓ MongoDB - A Database for the Modern Web
- ✓ CRUD Operations in MongoDB
- ✓ Indexing and Aggregation
- ✓ Replication and Sharding
- ✓ Developing Java and Node JS Application with MongoDB
- ✓ Administration of MongoDB Cluster Operations

### Apache Cassandra

- ✓ Overview Big Data and NoSQL Databaases
- ✓ Introduction to Cassandra
- ✓ Cassandra Architecture
- ✓ Cassandra Installation and Configuration
- ✓ Cassandra Data Model
- ✓ Cassandra Interfaces
- ✓ Cassandra Advanced Architecture
- ✓ Apache Ecosystem around Cassandra"

# Other Electives:

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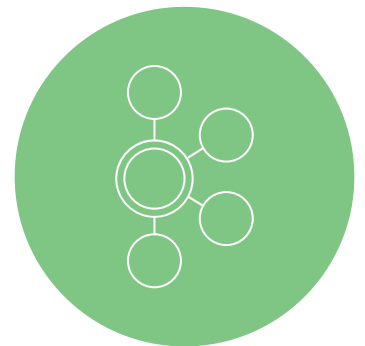
## Impala

This training enables you to master Apache Impala is an open source, MPP database for Hadoop. It enables users to query the data stored in HDFS and Apache HBase using SQL queries and does not require any form of data transformation.



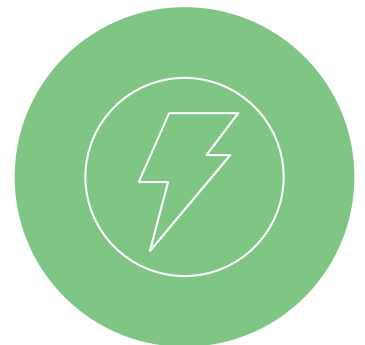
## Apache Kafka

This course introduces you to Apache Kafka which is an important high-performance real-time messaging system that can process millions of messages per second. It provides a distributed and partitioned messaging system and is highly fault tolerant.



## Apache Storm

Apache Storm Certification Training from Simplilearn enables you to can handle stream processing with big data technology of Apache Storm. This is one of the most popular stream processing engine beside Spark Sptreaming.



# Advisory Board Members:

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Named by Onalytica as one of the 3 most influential people in Big Data, Ronald is an author for a number of leading Big Data & Data Science websites, including Dataflog, Data Science Central, and The Guardian. He is also a renowned speaker at industry events.

**Ronald Van Loon**

[Big Data Expert, Director Adversitement](#)



Sina has over 10 years of experience in Big Data. He's worked as a Platinum Level Big Data trainer and as a Big Data Architect at Bell Labs. He is passionate about building a Big Data education ecosystem, and has written a number of magazine articles and journal publications about the field.

**Sina Jamshidi**

[Big Data Lead at Bell Labs](#)





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