

# Cloudera Apache Hadoop Administration

**Duration: 4 Days****Prerequisites:**

- Basic understanding of Linux or Unix operating systems, including familiarity with command-line operations and simple scripting.
- Fundamental knowledge of computer networking concepts.
- Awareness of basic data management and database concepts.
- Some exposure to core system administration tasks such as managing users, configuring system settings, and installing software.
- An introductory level of knowledge about the Hadoop ecosystem and its components is helpful but not mandatory.

These prerequisites are designed to establish a foundation that will help learners more effectively absorb the course material and participate in hands-on exercises. It's important to note that no prior experience with Cloudera software is required to begin this training.

**Course Description:**

The Cloudera Apache Hadoop Administration course is an in-depth training program designed to equip learners with the skills and knowledge required to effectively manage and maintain Cloudera clusters. The curriculum covers the fundamentals of the Cloudera Enterprise Data Hub, including its installation, configuration, and management. Starting with Module 1, learners are introduced to the basics of Hadoop and the ecosystem. As they progress through the course, they will delve into Module 2, learning about the components and capabilities of the Cloudera Enterprise Data Hub. In Modules 3 to 5, students will gain hands-on experience with installing Cloudera Manager and CDH, configuring a Cloudera cluster, and understanding the intricacies of the Hadoop Distributed File System (HDFS). Further modules like Module 6 on HDFS data ingest and Module 7 focusing on Hive and Impala provide practical insights into data management. Module 8 and Module 9 introduce learners to YARN, MapReduce, and Apache Spark, which are pivotal for big data processing. Module 10 helps in planning a cluster, and Module 11 offers advanced configuration techniques. Module 12 is about managing resources, while Module 13 and Module 14 focus on cluster maintenance and monitoring, respectively. Module 15 helps learners develop troubleshooting skills, and Module 16 covers the installation and management of Hue. Finally, Module 17 addresses critical aspects of security within Hadoop clusters. This course will assist learners in acquiring the expertise required to manage Cloudera environments effectively, ensuring high performance, reliability, and security of big data solutions.

**Target Audience:**

The Cloudera Apache Hadoop Administration course is tailored for professionals seeking expertise in managing Hadoop clusters and big data solutions.

**Targeted Job Roles and Audience:**

- IT Systems Administrators
- Data Infrastructure Engineers
- Database Administrators with a focus on big data
- Cloud Systems Administrators interested in Hadoop
- Big Data Architects
- Data Engineers
- DevOps Engineers working with big data deployments
- Technical Operations Personnel
- Data Analytics Professionals
- IT Managers overseeing data management solutions
- Security Engineers responsible for data security and compliance
- Technical Consultants specializing in Hadoop and big data ecosystems
- Professionals preparing for the Cloudera Certified Administrator for Apache Hadoop (CCA) exam

**Course Outlines:****Pre-Chapter**

- Introduction
- The Cloud Enterprise Data Hub
- Installing Cloudera Manager and CDH
- Configuring a Cloudera Cluster
- Hadoop Distributed File System
- HDFS Data Ingest
- Hive and Impala
- YARN and MapReduce
- Apache Spark
- Planning your Cluster
- Advanced Cluster Configuration
- Managing Resources
- Cluster Maintenance
- Monitoring Clusters
- Cluster Troubleshooting
- Installing and Managing Hue
- Security
- Conclusion
- Apache Kudu
- Apache Kafka
- Object Storage in the Cloud

**Per-Day Training**

- Day 1: Complete all lectures and exercises for Chapter 1-5
- Day 2: Complete all lectures and exercises for Chapter 6-9
- Day 3: Complete all lectures and exercises for Chapter 11-13
- Day 4: Complete all lectures and exercises for Chapter 14-17

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