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# Administrator Training: CDP Private Cloud Base

## Overview

Cloudera's four-day administrator training course for CDP Private Cloud Base provides participants with a comprehensive understanding of all the steps necessary to operate and maintain on-premises clusters using Cloudera Manager. From installation and configuration through load balancing and tuning, this Cloudera training course is the best preparation for the real-world challenges faced by administrators who run CDP Private Cloud Base.

## What you'll learn

Through instructor-led discussion and interactive, hands-on exercises, you will learn how to:

- Install Cloudera Manager
- Use Cloudera Manager to install a CDP Private Cloud Base cluster
- Configure and monitor the cluster using Cloudera Manager
- Understand, evaluate, and select the most appropriate data storage option
- Optimize cluster performance
- Perform routine cluster maintenance tasks
- Detect, troubleshoot, and repair problems with the cluster

## What to expect

This course is best suited to systems administrators who have at least basic Linux experience. Prior knowledge of CDP, nor earlier platforms such as Cloudera's CDH or Hortonworks HDP, is not required.

## Book the course

How would you like to train?



How would you like to train?



# Course Details

## **Cloudera Data Platform**

- Industry Trends for Big Data
- The Challenge to Become Data-Driven
- The Enterprise Data Cloud
- CDP Overview
- CDP Form Factors

## **CDP Private Cloud Base Installation**

- Installation Overview
- Cloudera Manager Installation
- CDP Runtime Overview
- Cloudera Manager Introduction

## **Cluster Configuration**

- Overview
- Configuration Settings
- Modifying Service Configurations
- Configuration Files
- Managing Role Instances
- Adding New Services
- Adding and Removing Hosts

## **Data Storage**

- Overview
- HDFS Topology and Roles
- HDFS Performance and Fault Tolerance
- HDFS and Hadoop Security Overview

Working with HDFS

HBase Overview

Kudu Overview

Cloud Storage Overview

## **Data Ingest**

Data Ingest Overview

File Formats

Ingesting Data using File Transfer or REST Interfaces

Importing Data from Relational Databases with Apache Sqoop

Ingesting Data Using NiFi

Best Practices for Importing Data

## **Data Flow**

Overview of Cloudera Flow Management and NiFi

NiFi Architecture

Cloudera Edge Flow Management and MiNiFi

Controller Services

Apache Kafka Overview

Apache Kafka Cluster Architecture

Apache Kafka Command Line Tools

## **Data Access and Discovery**

Apache Hive

Apache Impala

Apache Impala Tuning

Search Overview

Hue Overview

Managing and Configuring Hue

Hue Authentication and Authorization

CDSW Overview

## **Data Compute**

YARN Overview

Running Applications on YARN

Viewing YARN Applications

YARN Application Logs

MapReduce Applications

YARN Memory and CPU Settings

Tez Overview

Hive on Tez

ACID for Hive

Spark Overview

How Spark Applications Run on YARN

Monitoring Spark Applications

Phoenix Overview

## **Managing Resources**

Configuring cgroups with CPU Scheduling

The Capacity Scheduler

Managing Queues

Impala Query Scheduling

## **Planning Your Cluster**

General Planning Considerations

Choosing the Right Hardware

Network Considerations

CDP Private Cloud Considerations

Configuring Nodes

## **Advanced Cluster Configuration**

Configuring Service Ports

Tuning HDFS and MapReduce

Managing Cluster Growth

Erasur Coding

Enabling HDFS High Availability

## **Cluster Maintenance**

Checking HDFS Status

Copying Data Between Clusters

Rebalancing Data in HDFS

HDFS Directory Snapshots

Host Maintenance

Upgrading a Cluster

## **Cluster Monitoring**

Cloudera Manager Monitoring Features

Health Tests

Events and Alerts

Charts and Reports

Monitoring Recommendations

## **Cluster Troubleshooting**

Overview

Troubleshooting Tools

Misconfiguration Examples

## **Security**

Data Governance with SDX

Hadoop Security Concepts

Hadoop Authentication Using Kerberos

Hadoop Authorization

Hadoop Encryption

Securing a Hadoop Cluster

Apache Ranger

Apache Atlas

Backup and Recovery

## **Private Cloud / Public Cloud**

CDP Overview

Private Cloud Capabilities

Public Cloud Capabilities

What is Kubernetes?

WXM Overview

Auto-scaling



"Administrator training gave me an excellent jumpstart on acquiring the knowledge I needed to address my customers' big data and cloud challenges."

**Canonical**

## Learn more

### **Administrator Certification**

Upon completion of the course, attendees are encouraged to continue their study and register for the **Cloudera Certified Administrator (CCA)** (</about/training/certification/cdhhdp-certification/cca-admin.html>) exam. Certification is a great differentiator. It helps establish you as a leader in the field, providing employers and customers with tangible evidence of your skills and expertise.

**Get certified** (</about/training/certification.html>)

### **Advance your career**

Cloudera Administrators are among the most in-demand roles. Check out some of the job opportunities currently listed that match the professional profile, many of which seek CCA qualification.

**Job opportunities**

### **Private training**

We also provide private training at your site, at your pace, and tailored to your needs.

**Onsite request** (</about/training/private-training.html>)

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