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CDP Admin: Building Secure Clusters

Overview

This four-day hands-on course for Cloudera Data Platform (CDP) administrators teaches the skills and practices needed to configure solutions that meet the most demanding technical security audit standards. The course is built around a recommended project plan for CDP administrators. The first project stage is implementation of Perimeter Security by installing host level security and Kerberos. The second project stage protects data by implementing Transport Layer Security via Auto-TLS and data encryption using Key Management System and Key Trustee Server (KMS/KTS). The third project stage controls access for users and data using Ranger and Atlas. The fourth stage teaches visibility practices for auditing of systems, users, and data usage. The final project stage analyzes applications in terms of vulnerabilities and introduces CDP practices for risk management in a fully secured Cloudera Data Platform. This course is primarily hands-on, consisting of 70% lab exercise and 30% lecture.

What you'll learn

In this course, you will come to understand:

- The CDP "Secure by Design" models, architecture, and tools
- Project planning for implementing a fully secured CDP
- CDP administrator recommended best practices for security
- How to create encryption zones and security zones for data isolation
- Advanced access control policies and how to use data lineage tools

Book the course

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What to expect

This course is intended for Linux administrators who are tasked with administering CDP. We recommend a minimum of 3 to 5 years of system administration experience. Students must have proficiency in Linux CLI and should be familiar with Linux shell scripts.

Knowledge of Transport Layer Security, Kerberos, and SQL *select* statements is helpful. Students must have access to the internet to reach Amazon Web Services (AWS).

Course Details

CDP Secure by Design

CDP Security Models

Architecture for CDP Security

Project Planning for Securing CDP

Roles and Responsibilities

Project Plan Stages

Connecting to Directory Services

Architecture for Identity Management

Comparing Directory Services

Connecting to Lightweight Directory
Access Protocol

Hardening Networks and Hosts

CDP Requirements for Networks

CDP Requirements for Hosts

Protecting Data in Motion

Architecture for Transport Layer Security

Deploying TLS using Auto-TLS

Managing CDP services within TLS

Managing Authentication with Kerberos

Architecture for Kerberos

Deploying Kerberos

Managing CDP services within Kerberos

Creating Single Sign-On with Knox Gateway

Architecture for Knox Gateway

Deploying Knox Gateway SSO

Managing Authorization with Ranger

Creating resource policies

Creating masking policies

Creating Row Level Filtering policies

Classifying Data with Atlas

Classifying Data with Tags

Creating Ranger Tag Policies

Creating Ranger Masking Policies

Auditing CDP

Auditing access on hosts

Auditing users with Ranger

Auditing lineage with Atlas

Bringing Applications Aboard CDP

Creating multi-tenant environments

Achieving Compliance

Threat and Risk Modeling for CDP

Regulatory Compliance

Deploying Authorization

Architecture for Apache Ranger

Deploying Ranger

Architecture for Atlas

Deploying Atlas

Protecting Data at Rest

Architecture for HDFS encryption

Deploying Key Management System with
Key Trustee Server

Creating and managing encryption zones



"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/cdhwdp/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

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