Training: Cloudera
ADMIN-332 Building Secure Cloudera Clusters

CLOUDERA Training Partner

TRAINING GOALS:

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

- This course teaches how to build secure Cloudera Private Cloud cluster that meet technical audit compliance, including reference architecture and all required security components, such as Auto-TLS, Kerberos, KMS w/ KTS, Ranger, and Atlas.

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).

CONSPECT:

- 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

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- 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
- 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
- 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

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- 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

REQUIREMENTS:

This immersion course is intended for Linux Administrators who are taking up roles as CDP Administrators. We recommend a minimum of 3 to 5 years of system administration experience in industry. Students must have proficiency in Linux CLI. Knowledge of Directory Services, Transport Layer Security, Kerberos, and SQL select statements is helpful. Prior experience with Cloudera products is expected, experience with CDH or HDP is sufficient. Students must have access to the Internet to reach Amazon Web Services.

Difficulty level



CERTIFICATE:

The participants will obtain certificates signed by Cloudera (course completion).

Upon completion of the course, attendees are encouraged to continue their study and register for the Cloudera Certified Administrator (CCA) exam
https://www.cloudera.com/about/training/certification/cdhhdp-certification/cca-admin.html

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.

TRAINER:

Certified Cloudera Instructor

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