

TRAINING OFFERING

# HORTONWORKS DATA PLATFORM (HDP®) OPERATIONS: SECURITY

3 DAYS   
ADVANCED ADMINISTRATOR

This course is designed for experienced administrators who will be implementing secure Hadoop clusters using authentication, authorization, auditing and data protection strategies and tools.

## PREREQUISITES

Students should be experienced in the management of Hadoop using Ambari and Linux environments. Completion of the Hadoop Administration I course is highly recommended.

## TARGET AUDIENCE

IT administrators and operators responsible for installing, configuring and supporting an Apache Hadoop 2.3 deployment in a Linux environment.

## FORMAT

50% Lecture/Discussion

50% Hands-on Labs

## COURSE OBJECTIVES

- Describe the 5 pillars of a secure environment
- List the reasons why a secure environment is needed
- Choose which security tool is best for specific use cases
- List security prerequisites
- Configure Ambari security
- Set up Ambari Views for controlled access
- Describe Kerberos use and architecture
- Install Kerberos
- Describe available partner security solutions
- Configure Ambari for Kerberos
- Configure Hadoop for Kerberos
- Enable Kerberos
- Install and Configure Apache Knox
- Install and Configure Apache Ranger
- Install and Configure Ranger Key Management Services
- User Ranger to Assure Secure Data Access
- Install and Configure Ranger Key Management Services

## LABS

- Setting up Active Directory/Operating System Integration
- Configuring Ambari for Non-Root
- Encrypting the Ambari Database and Passwords
- Setting up Ambari for LDAP/Active Directory Authentication
- Setting up HTTP/SSL Server for Ambari
- Setting up Two-Way SSL for Ambari Server and Agents
- Enabling SPNEGO Authentication for Hadoop
- Configuring Ambari Views for Kerberos

### **About Hortonworks**

Hortonworks is a leading innovator at creating, distributing and supporting enterprise-ready open data platforms. Our mission is to manage the world's data. We have a single-minded focus on driving innovation in open source communities such as Apache Hadoop, NiFi, and Spark. Our open Connected Data Platforms power Modern Data Applications that deliver actionable intelligence from all data: data-in-motion and data-at-rest. Along with our 1600+ partners, we provide the expertise, training and services that allows our customers to unlock the transformational value of data across any line of business. We are Powering the Future of Data™.

### Contact

For further information visit [www.hortonworks.com](http://www.hortonworks.com) +1 408 675-0983  
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## LABS CONTINUED

- Setting up Ambari for Kerberos
- Setting up/Enabling HDP for Kerberos
- Installing the Knox Service via Ambari
- Configuring the Knox Gateway
- Configuring Knox to Authenticate via Active Directory/LDAP
- Configuring Knox Topology to Connect to a Hadoop Cluster Service
- Installing the Ranger Service via Ambari
- Configuring Ranger Repository Manager, Policy Manager User Groups and Auditing
- Installing Ranger KMS via Ambari
- Configuring HDFS for Encryption
- Configuring Hive to Utilize Encrypted HDFS
- Using Ranger KMS Service
- Testing Secure Access with HDFS, Hive, Pig and Sqoop
- Enable Ranger KMS Audit

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