

Updated on 03/20/2026

Sign up

Apache Ranger Training

2 days (14 hours)

Overview

Apache Ranger is an open-source solution designed to secure data in Big Data environments. It allows you to define, manage, and control data access policies centrally.

Our Apache Ranger training will enable you to master permission management, the implementation of security rules, and access auditing.

You will be able to configure Ranger, integrate its plugins with tools such as HDFS, Hive, or HBase, and ensure compliance with regulatory requirements such as the GDPR.

Apache Ranger has established itself as a cornerstone of data governance, complementing tools such as Apache Atlas.

By the end of this training course, you will be able to effectively secure a Big Data environment and monitor access to sensitive data.

Like all our training courses, this one will introduce you to **the latest stable version** of the technology and its new features.

Objectives

- Understand the principles of data security
- Install and configure Apache Ranger
- Define effective access policies
- Ensure auditing and compliance
- Integrate Ranger into a Big Data ecosystem

Target Audience

- Big Data administrators
- Data engineers
- Security engineers
- Data architects

Prerequisites

- Basic knowledge of Big Data
- Understanding of Hadoop
- Basics of system administration

Our Apache Ranger training program

[Day 1 - Morning]

Fundamentals of Data Security with Apache Ranger

- Understanding Data Security Challenges in Big Data
- Apache Ranger's Position in the Hadoop Ecosystem
- Key concepts: policies, users, roles
- Ranger architecture and components
- Use Cases in Governance and Security

[Day 1 - Afternoon]

Installation and configuration of Apache Ranger

- Technical prerequisites and Hadoop environment
- Installing Ranger and its plugins
- Configuring services (HDFS, Hive, etc.)
- User management and authentication
- Getting started with the administration console
- Hands-on workshop: installing and configuring a secure service.

Security policy management

- Creating access control policies
- Role and permission management
- Data filtering and dynamic masking
- Securing access to sensitive data
- Governance best practices
- Hands-on workshop: Creating advanced security policies.

[Day 2 - Morning]

Integration with the Big Data ecosystem

- Integration with HDFS, Hive, and HBase
- Interaction with Apache Atlas
- Centralized access management
- Synchronization with LDAP / Active Directory
- Security architecture scenarios
- Hands-on workshop: Securing a Hadoop environment.

[Day 2 - Afternoon]

Audit, traceability, and compliance

- Analysis of audit logs
- Tracking user access and actions
- Compliance (GDPR, data security)
- Detection of anomalies and incidents
- Report analysis
- Hands-on workshop: audit analysis and detection of abnormal access.

Best practices and production deployment

- Production deployment strategies
- Performance and optimization
- Managing multi-cluster environments
- Automation and maintenance
- Real-world case studies
- Hands-on workshop: comprehensive, secure simulation.

Target Audience

This training is designed for both individuals and companies—large or small—seeking to train their teams in new advanced IT technologies or to acquire specific industry knowledge or modern methodologies.

Assessment upon enrollment

The pre-training assessment complies with Qualiopi quality standards. Upon final registration, the learner receives a self-assessment questionnaire that allows us to evaluate their estimated proficiency in various types of technologies, as well as their expectations and personal goals for the upcoming training, within the limits imposed by the selected format. This questionnaire also allows us to anticipate certain connection or internal security issues within the company (intra-company or virtual classroom) that could pose challenges for monitoring and ensuring the smooth running of the training session.

Teaching Methods

Practical Training: 60% practical, 40% theoretical. Training materials will be distributed in digital format to all participants.

Organization

The course alternates between theoretical input from the instructor, supported by examples and reflection sessions, and group work.

Assessment

At the end of the session, a multiple-choice questionnaire is used to verify that the skills have been properly acquired.

Certification

A certificate will be issued to each trainee who has completed the entire training program.