

Updated 07/27/2023

Sign up

Hadoop training: HBase, implementation and administration

2 days (14 hours)

Presentation

HBase is a non-relational, column-oriented database system, providing real-time read/write access to large datasets.

[HBase was](#) created as a column-oriented data storage model. It enables massive amounts of data to be stored in the form of an array of billions of rows and millions of columns. HBase offers you a fault-tolerant solution for storing sparse data sets.

Unlike relational database systems, HBase does not support SQL. In fact, HBase applications are written in Java, like a typical Apache MapReduce application. HBase supports writing applications in Apache Avro, REST and Thrift.

Our Hadoop: HBase training course gives you a detailed understanding of the architecture and operation of HBase. You'll learn about NoSQL and the Hadoop ecosystem. You'll learn how to create HBase tables, [install HBase](#) on a cluster and perform read/write operations.

At the end of this course, you'll know how to install and implement a distributed data configuration using the HBase solution.

As with all our training courses, this one will introduce you to the latest version of [HBase 2.4](#).

Objectives

- Understanding the Hadoop ecosystem

- Understanding HBase and its architecture
- Distribute data with a distributed file system (HDFS)
- How to install the system
- Setting up a distributed configuration

Target audience

- Project managers
- Directors
- Big Data developers

Prerequisites

Good knowledge of Hadoop and database fundamentals

Hadoop training program: Hbase, implementation and administration

Introduction to HBase

- What is HBase?
- HBase structure components
- Main features
- The difference between RDBMS and HBase
- Connecting to HBase using Java API
- Case studies

Installation

- System installation
- Choose packages
- Distributed installation
- Configuration in .xml file

NoSQL

- Introduction to NoSQL
- The main types
- Use cases
- Characteristics of NoSQL databases

How HBase works

- How HBase works on HDFS
- Deploying the different models
- Operation pre-training
- Hive integration with HBase
 - Creating a table Inserting data
 - Setting up a distributed configuration

Architecture

- Master/slave architecture
- Installing HBase on a cluster
 - HMaster and RegionServers
- HBase cluster and its components
- Data storage distribution
- Coordinate the execution of activities
- Perform read/write operations

HBase tables

- HBase table modeling rules
- Shell and tables
- HBase API and HBase shell
- Handling tables with shell
- Data recovery
- Group columns

Further information

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire is used to check correct acquisition.

skills.

Sanction

A certificate will be issued to each trainee who completes the course.