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# Apache Phoenix training

2 days (14 hours)

## Presentation

Apache Phoenix will enable you to access your HBase data using SQL and JDBC. This reduces the amount of code needed to perform a query. Apache Phoenix leverages the full power of SQL and JDBC to support ACID transactions. Apache Phoenix is a relational database engine

open-source. It is fully integrated with other Hadoop products such as Spark, Hive, Pig, Flume and Map Reduce. In our Apache Phoenix training course, you'll learn how to manage tables, manipulate data, create transactions and Phoenix Query Server. Our Apache Phoenix training course will introduce you to the latest version of the engine: [Phoenix 4](#).

## Objectives

- Understanding the purpose and architecture of Apache Phoenix
- Create databases and tables
- Query and manipulate data
- Using Phoenix Query Server

## Target audience

- Architect
- Project managers
- Developers
- Database manager
- Data miners
- Data engineers

## Prerequisites

- Knowledge of databases
- Knowledge of SQL

# Apache Phoenix training program

## Introduction

- Introducing Hbase
- Introducing Apache Phoenix
- Tool architecture and its place in the Hadoop ecosystem
- Testing your application

## Manage tables

- Constraints
- Creating and deleting tables
- Salted tables
- Modifying tables with Alter Table
- Joins

## Handling data

- The different data formats
- The clauses
- Logic operators
- The various commands (SELECT, DESCRIBE, DELETE...)
- Using the Phoenix API
- Global and local indexes
- Creating UDFs

## Transacting with Phoenix

- Reminder of transaction properties and commands
- Integrating the transaction manager
- Multiversion concurrency control and Optimistic Concurrency Control
- How the transaction works

## Phoenix Query Server

- Phoenix Query Server overview
- Why use it?
- Installation

- Configuration

## 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 verifies the correct acquisition of skills.

## Sanction

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