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Sign up

Liquibase Certified Associate training

ALL-IN-ONE: EXAM INCLUDED IN PRICE

2 days (14 hours)

Presentation

Master all aspects of Liquibase with this comprehensive, structured and practice-oriented training course. Liquibase Certified Associate certification gives you the keys to automating and securing your database deployments in modern environments.

You'll start by discovering the fundamentals of Liquibase: its philosophy, how it works, changelogs and change execution. The aim is to understand the lifecycle of schema changes, master XML, YAML or SQL formats, and exploit contexts, labels and preconditions.

You'll learn how to structure reliable, reversible and traceable changeSets, use key commands such as update, rollback and diff, and manage errors, versioning and auditing via DATABASECHANGELOG.

One section is dedicated to CI/CD integration: automated deployments, continuous verification, multi-environment management, with case studies on Jenkins, GitLab CI and Spring Boot.

As with all our training courses, this one will be presented with the latest updates for the Liquibase Certified Associate certification.

Objectives

- Understand Liquibase architecture, how it works and its role in database version management
- Design, structure and maintain robust changelogs in XML, YAML, SQL or JSON, adapted to different environments
- master execution, rollback, preconditions, diff generation and state analysis to manage schema evolution reliably

- Be able to integrate Liquibase into a CI/CD pipeline, with tools such as Jenkins, GitLab CI or Spring Boot, to automate deployments
- Apply best practices in collaboration, security, validation and traceability of changes to achieve Liquibase Certified Associate certification.

Target audience

- Back-end developers
- Full-stack developers
- CI/CD engineers

Prerequisites

- Basic knowledge of SQL

Liquibase Certified Associate training program

Introduction to Liquibase

- Open-source database versioning tool
- Infrastructure-as-Code applied to database schema
- Used in DevOps environments for automation
- Version control for databases
- Reproducible deployments
- Compatible with multiple database types
- Continuous deployment
- Multi-environment migration
- Collaboration between developers and DBAs

Liquibase architecture and operation

- changelog files
- DATABASECHANGELOG table
- CLI commands or integration via Maven/Gradle
- Supported formats: XML, YAML, JSON, SQL
- Main nodes: changeSet, preConditions, include, property
- ID, author, checksum and tracking
- CLI
- Integration with Maven/Gradle
- Spring Boot and other frameworks

Creating and managing ChangeSets

- id, author, changes
- Atomicity of a changeSet
- Use of contexts and labels
- createTable, addColumn, dropTable, insert, update, etc.
- Custom SQL via sql and sqlFile
- dbms, tableExists, columnExists, etc.
- Behaviors : HALT, CONTINUE, MARK_RAN
- Variables and property
- External parameter files

Changelog execution

- update, rollback, status, diff, tag
- Dry-run
- Contexts
- Labels and selection filters
- automatic or customized rollback
- Use of validCheckSums
- Error handling and logs

Analysis and differences between databases

- Comparison between two databases or between a database and a changelog
- Use to detect discrepancies
- Automatic generation from an existing database
- Best practices for initial audit

CI/CD integration

- Integration with Jenkins, GitLab CI, GitHub Actions, etc.
- Execution in build, deploy and test phases
- Isolation of changelogs by branch or feature
- Automated verification
- Liquibase plugin for Maven
- Liquibase plugin for Gradle
- Spring Boot: spring.liquibase.

Security, Audit and Collaboration

- History of applied changes
- Track author, ID, checksum, date applied
- Checksum verification
- Recalculation of checksums
- Conflict management strategies
- Naming conventions
- Use of Git branches and PRs

Preparing for certification

- Concepts covered
- Technical requirements and format
- True/False, multiple choice, expected command output
- Reviewing CLI commands
- Mastering preconditions and rollbacks
- Be comfortable reading YAML/XML changelogs

Final practical workshop

- Creation of a complete Liquibase project
- Database initialization, deployment, rollback
- Integration with Git + Jenkins
- Automatic validation of target database

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.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the forthcoming course, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical training: 60% hands-on, 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 that skills have been correctly acquired.

Certification

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