

Introduction

The goal of the Liquibase Associate Certification Exam is to authenticate your technical ability beyond the fundamental mechanisms of Liquibase. It will provide you with an official, impartial, and proven validation of your Liquibase expertise.

Prerequisites

The exam questions are derived from content contained in the four intermediate-level courses with additional questions covering fundamental aspects of Liquibase.

To unlock the certification exam, you must have successfully completed the following courses:

- LB201 Liquibase Commands for Troubleshooting.
- LB202 Liquibase and the CI/CD Process.
- LB203 Managing Liquibase Changelogs.
- LB204 Common Liquibase Design Patterns.

These four courses are at **no charge** for users.

Certification Exam Specifics

The Liquibase Associate Certification Exam is a pass-or-fail, **120-minute** timed test consisting of **seventy** questions.

Types of Questions

This exam includes **five types** of questions:

- **Multiple choice** – a single correct answer.
- **Multiple responses** – two or more correct answers. The number of correct answers will be specified as part of the question.
- **Fill in the blank** – contains one or more dropdowns with possible answers to correctly complete the sentence.
- **Drag and drop** – correctly match a description to a topic using a drag and drop action.

- **Ordering** – place the available answers in the correct order.

Exam Behavior

You will have the ability to move to the next or previous question using the navigation arrows. Answering the questions as they are presented is recommended to avoid additional time to navigate back to skipped questions.

Two ways the test is submitted:

- All questions have been answered and the user selects the “Submit test” button.
- When the timer reaches 120 minutes the system will automatically submit the test.

If you submit the test before all questions are answered, the system will indicate which question numbers have been skipped.

Exam Credentials

Users who pass the exam will be issued a Liquibase Certified Associate badge from our credentialing tool Accredible and an exam certificate from Liquibase University. These credentials **do not expire**.

Exam Content

This course outline is not a definitive list of what the Certification Exam assesses. Certain concepts such as DevOps, the Software Development Life Cycle (SDLC), and the fundamentals of database testing may be incorporated within a question but not individually tested.

Exam candidates must be knowledgeable on the following topics:

Fundamentals of Liquibase

- The generateChangeLog and diff commands.
- The liquibase.properties file.
- The DATABASECHANGELOG and the DATABASECHANGELOGLOCK tables.
- Basic concepts of a changelog and changeset.

Liquibase Commands for Troubleshooting

- The update, history, and status commands.
- The rollback<tag> and rollbackCount commands.
- The validate and clearCheckSums commands.
- The include and includeAll commands.

- The listLocks and releaseLocks commands.

Liquibase and the CI/CD Process

- The changeLogSync command.
- The principles of CI/CD:
 - Working in small batches, optimizing processes, and building quality in.
- CI/CD best practices including automated database code validation.
- The purpose and benefits of source control.
- Liquibase and CI/CD best practices:
 - Keeping changelogs in the same repository as application code.
 - Organizing changelogs by release or object types.
 - Using branching naming standards.
 - Structuring the repository for Liquibase by release, db object, or using contexts.
- Purpose of branching.
- Working with branches including cloning a repository, merging branches, and committing changes from a local branch to the repository.
- Using pull requests.
- Using Liquibase in multiple environments:
 - Build, artifact, and deploy tasks in a CI/CD pipeline.
- Types of database testing.
- Determining test types and methods for the build and deploy stages.
- Build parameters and profiles.

Managing Liquibase Changelogs

- The different changelog components including headers, global preconditions, changesets, and changeset attributes.
- Organizing changelogs:
 - Using a master changelog.
 - A release strategy.
 - Source control management (SCM) design.
- Making changelogs portable using relative file paths.
- Grooming changelogs:
 - Understanding the risks.
 - How to reorganize, restructure, remove, and consolidate changesets.
- Benefits and uses of Change Types.
- Labels:

- The different label expressions, caveats when using labels, and the differences between using labels versus contexts.
- Contexts:
 - Context syntax, caveats when using contexts, and determining when to use contexts.
- Preconditions:
 - Uses of preconditions, precondition syntax, changelog versus changeset preconditions, and caveats when using preconditions.
- Using the runOnChange, runOrder, and runAlways attributes.
- Using tagDatabase, updateToTag, and comments.
- How to use labels, contexts, and preconditions to group changesets during a release cycle.
- Modifying deployed changesets.
- Modifying a changeset after a rollback and the pipeline considerations.
- Modifying a changeset without a rollback using the runOnChange attribute.
- Excluding changesets including placing changesets on hold and moving changesets to a different release.
- The reasons to archive a changelog and the risks involved.

Common Liquibase Design Patterns

- Exception handling.
- Detecting unintentional drift.
- Re-synchronizing pipeline environments when drift happens.
- Fundamentals of property substitution.
- Deploying changesets with different tablespace names.
- Deploying DML changes with environment-specific values.

Try to answer the questions in the order they are presented. If you submit the test BEFORE the 120-minute mark and there are unanswered questions, the system will prompt you to go back and answer the skipped questions.

If you have answered all questions and still have exam time, use the navigation arrows to move forward, or back, to re-check your given answers before submitting your test.