

CJE: Jenkins CI/CD

Design, build and run reliable CI/CD pipelines in Jenkins — from first job to shared libraries at scale.

DURATION

5 days · 40 hours

LEVEL

Intermediate

CURRICULUM

14 modules · 10 labs

DELIVERY

Live online, Onsite,
Corporate

Course overview

Jenkins remains one of the most widely used automation servers in Indian and Gulf IT teams, often running hundreds of pipelines built up over years. Knowing how to design those pipelines well — and how to keep the server secure and maintainable — is a valuable, practical skill. This five-day course builds it step by step.

Days one and two establish the foundations: continuous integration and delivery concepts, installing and configuring Jenkins, jobs and builds, plugins, credentials, and distributed builds with agents. You will then write declarative pipelines in a Jenkinsfile, using stages, parallel branches, post conditions, parameters, input steps and artefact handling.

Days three and four cover pipelines at scale: shared libraries, multibranch and organisation folders, integration with Git hosting, test and code-quality reporting, container-based builds, and dynamic agents on Kubernetes. You will also secure the controller with authentication, authorisation strategies and credential best practice, and manage configuration as code.

Day five brings everything together in a delivery project: a pipeline that builds, tests, scans, packages and deploys a sample application, followed by an exam readiness session.

This course is aligned to the Certified Jenkins Engineer (CJE) exam domains. Exam availability and delivery have changed over time, so please confirm current status with the provider before booking; the skills apply whether or not you sit the exam.

Highlights

- 40 hours of live, trainer-led sessions
- Your own Jenkins controller and agents for labs
- Declarative and scripted pipelines as code
- Shared libraries, containers and Kubernetes agents
- End-to-end delivery project on the final day

What's included

- Personal Jenkins controller and agents
- Declarative pipelines from day two
- Shared library design and testing
- Container and Kubernetes build agents
- Security and configuration as code
- End-to-end delivery project
- Course completion certificate from Ace Skills Consulting
- Post-training doubt support

Who this course is for

Who should attend

- Build and release engineers
- DevOps engineers maintaining Jenkins
- Developers who own their CI pipelines
- System administrators supporting CI/CD platforms

Prerequisites

- Comfort with Linux and the command line
- Working knowledge of Git
- Basic experience building software in any language

Detailed curriculum — 5 days, 40 hours, 14 modules, 10 hands-on labs

Day 1 CI/CD Concepts and Jenkins Setup

8 hours

1.1 Continuous delivery concepts

- CI, CD and continuous deployment
- Build artefacts and versioning
- Pipeline stages and feedback loops
- Where Jenkins fits in a toolchain

1.2 Installing Jenkins

- Installation options
- Plugins and update management
- Initial configuration
- System and global tool configuration

LAB Install Jenkins and configure tools · 40 min

1.3 Jobs and builds

- Freestyle jobs
- Build parameters
- Notifications
- Build triggers and SCM polling
- Artefacts and fingerprints

LAB Build and test a Java app from Git · 45 min

Day 2 Pipelines as Code

8 hours

2.1 Pipeline basics

- Declarative vs scripted syntax
- Environment variables and credentials
- Agents, stages and steps
- Post conditions

LAB Write a first Jenkinsfile · 40 min

2.2 Pipeline control

- Parallel stages
- Input and approvals
- Stashing and archiving
- when conditions
- Timeouts and retries

LAB Parallel test stages with a manual approval gate · 50 min

2.3 Distributed builds

- Controller and agent architecture
- Labels and executors
- Static and cloud agents

LAB Add an SSH agent and route builds by label · 35 min

Day 3 Pipelines at Scale

8 hours

3.1 Multibranch and organisations

- Multibranch pipelines
- Pull request builds
- Organisation folders
- Webhooks

LAB Multibranch pipeline with PR builds · 45 min

3.2 Shared libraries

- Library structure
- Versioning libraries
- Global variables and custom steps
- Testing library code

LAB Create and consume a shared library · 55 min

3.3 Quality and reporting

- Test reports
- Static analysis integration
- Code coverage
- Quality gates

Day 4 Containers, Security and Administration

8 hours

4.1 Containerised builds

- Docker agents
- Kubernetes dynamic agents
- Building and pushing images
- Pod templates

LAB Run builds in Kubernetes pod agents · 50 min

4.2 Security

- Authentication and authorisation strategies
- Credential scoping
- Matrix and role-based permissions
- Script approval and sandboxing

4.3 Administration

- Configuration as code
- Monitoring and logs
- Backup and restore
- Upgrades and plugin hygiene

LAB Rebuild a controller from configuration as code · 45 min

Day 5 Delivery Project and Exam Readiness

8 hours

5.1 Delivery project

- Build, test, scan, package and deploy
- Rollback strategy
- Environment promotion
- Pipeline review

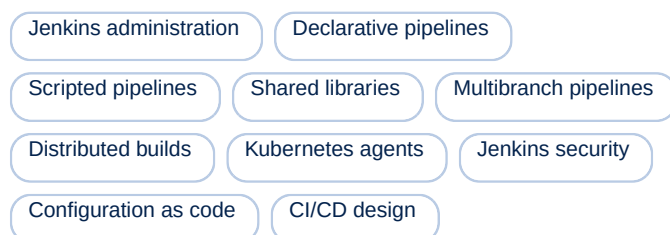
LAB End-to-end delivery pipeline for a sample app · 120 min

5.2 Exam readiness

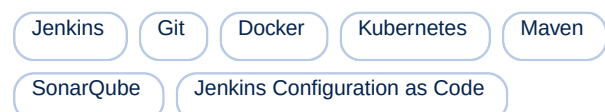
- Domain review
- Practice questions with review
- Question styles

Skills and tools

Skills you will build



Tools used in class



Certification exam

This course is aligned to the exam below and prepares you for it. The exam itself is booked and taken with the vendor.

Exam	Certified Jenkins Engineer (CJE)
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Exam code	CJE
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Exam skill areas covered

Building reusable Jenkins concepts
Building reusable pipelines

Exam details are pending verification. Confirm the current exam code, format and fee on the official vendor page before booking.

Frequently asked questions

Is the Jenkins certification still offered?

Availability has changed over time, so we confirm the current exam status with you before enrolment. The course stands on its own as practical Jenkins training.

Do I need to know Java?

No. Pipelines use a Groovy-based syntax that we teach from scratch, and sample apps are provided.

Will I get my own Jenkins server?

Yes. Each learner works on a personal controller with agents for all labs.

Does the course cover GitHub Actions or GitLab CI?

It focuses on Jenkins, but we discuss how Jenkins integrates with Git hosting platforms and where other CI tools fit.

Book a batch or talk to an advisor

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