AMBIENT-IT

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Updated on 01/07/2024

Sign up

Jenkins training: Continuous Integration

3 days (21 hours)

Presentation

Jenkins is an open-source continuous integration and deployment (CI/CD) server. It automates build, test, release production and deployment tasks. Without any intervention, work published in configuration management tools (Git, SVN, etc.) is automatically tested, audited and deployed on an integration or even production platform.

In real time, the DevOps team (which integrates the Agile method) has access to an integration platform and can view all project metrics (test results, code quality, etc.). This not only boosts overall team productivity, but also makes for a much more pleasant working environment for project teams. The continuous integration and deployment server is the hallmark of the DevOps approach and agile development.

Like all our training courses, this one will use the latest stable version of the project (Jenkins 2.4 to date).

Objectives

- In-depth understanding of Jenkins
- Mastering Jenkins pipelines
- Automation and scripting with Groovy
- Jenkins Advanced Management
- Practical Application

Target audience

- System Administrators
- DevOps engineers
- Software developers
- Project Managers

Prerequisites

- Knowledge of Devops, Docker and Git
- Programming basics (basic concepts, compilation, testing and manual deployment)
- Test My Knowledge

Technical requirements

- Have Git installed
- Have administrator rights on your machine

Jenkins training program

Introduction to Jenkins

- An overview of Jenkins and its importance
- Jenkins installation and configuration
- Navigating and understanding the Jenkins interface

Creating Freestyle Jobs

- Creating and configuring freestyle projects
- Configuration of source code repositories (e.g. Git)
- Building and executing freestyle jobs
- Introduction to Jenkins plugins and basic integration

Introduction to Jenkins Pipelines

- Understanding the concept of Jenkins pipelines
- Overview of declarative and scripted pipelines
- Write simple pipelines using the visual editor

Jenkins Intermediate Pipelines

- Advanced pipeline concepts: stages, milestones and post-construction actions
- Using Jenkinsfile for the pipeline as code
- Parallel execution in pipelines
- Error management and notification in pipelines

Jenkins Advanced Topics

- Distributed Jenkins architecture: master-slave configuration
- Jenkins node management and scalability
- Best practices for security and access control at Jenkin

Practical Project Work

- Participants work on real projects or scenarios
- Application of concepts learned to solve practical problems
- Troubleshooting common Jenkins problems
- Question-and-answer session and feedback

Wrap-up and next steps

- Review of key concepts covered during training
- Discussion of best practices and tips
- Orientation to future learning and resources
- Collecting feedback and answering additional questions

Companies concerned

This training 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 training to come, 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 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.