Course : Jenkins, administration

Practical course - 2d - 14h00 - Ref. JKA
Price : 1960 CHF E.T.

Jenkins est un composant essentiel de la chaîne d'intégration continue et de la chaîne de déploiement continu. Cette formation permettra aux administrateurs systèmes d'installer et de configurer Jenkins dans leur entreprise pour mettre à disposition cet outil aux équipes de développement.

Teaching objectives

At the end of the training, the participant will be able to:

- ✔ Understand the principles of continuous integration
- ✔ Setting up a Jenkins cluster
- ✔ Choosing, installing and configuring useful Jenkins plug-ins
- ✔ Updating, backing up and restoring Jenkins

Intended audience
System administrators, developers.

Prerequisites
Savoir utiliser un shell Unix et connaître les commandes de base de Linux.

Practical details
Hands-on work
Alternating theory and practical work.

Course schedule

1 Continuous integration

- Definition and principles of continuous integration.
- Notions of software engineering.
- The software production chain.

Hands-on work
Draw a diagram of a typical software production line.

PARTICIPANTS
System administrators, developers.

PREREQUISITES
Savoir utiliser un shell Unix et connaître les commandes de base de Linux.

TRAINER QUALIFICATIONS
The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS
The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

2 Jenkins installation

- Install and start Jenkins for the first time.
- General Jenkins configuration.
- Plug-in installation.

Hands-on work
Install Jenkins on a virtual machine or Docker container.

3 Authentication and authorization

- Link to LDAP directory.
- Define user groups.
- Role creation.

Hands-on work
Create a Lightweight Directory Access Protocol (LDAP) user and test authentication in Jenkins.

4 Installing agents in the Jenkins cluster

- SSH key exchange.
- Strategy for distributing tools among agents.
- Cluster sizing.
- Disk space shared between instances.

Hands-on work
Configure a Jenkins agent on a remote machine using SSH.

5 Pipeline pooling

- Shared pipeline libraries.
- Library structure.
- Groovy pipeline syntax.
- Unit testing of libraries.

Hands-on work
Create a Groovy pipeline library containing reusable functions (for example, a function to send a Slack notification).

6 Backup strategy

- Anatomy of the $JENKINS_HOME directory.
- Choice of backup strategy.
- Definition of a disaster recovery plan for Jenkins.

Hands-on work
Set up a cron job to regularly back up the $JENKINS_HOME directory.

7 Git hosting plug-ins

- Automatic discovery of the GitLab or BitBucket tree structure.
- Setting up Build-on-push with GitLab or BitBucket.
- Creation/update of JIRA tickets during builds.

Hands-on work
Configure Jenkins to create or update JIRA tickets based on build results.

Dates and locations

REMOTE CLASS
2026 : 11 June, 24 Sep., 30 Nov.