Course : Tomcat, administering a Java EE Web server

Practical course - 3d - 21h00 - Ref. TOC
Price : 2150 CHF E.T.

★★★⯪ 3,8 / 5

Mastering and optimizing the functionalities of the Tomcat servlet and JSP container can be a complex task. You'll learn how to install, administer and integrate it with the Apache server. We'll show you how to configure, deploy and secure your applications and ensure their connection to the DBs.

Teaching objectives

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

- ✓ Installing and configuring a Tomcat server
- ✓ Deploying Java EE applications
- ✓ Setting up a database connection pool
- ✓ Optimizing Tomcat server performance
- ✓ Securing a Tomcat server and its resources

Intended audience
System administrators, operators and integrators.

Prerequisites
Basic knowledge of Web technologies, Java/Web architecture (JSP/Servlet) and servers.

Practical details
Hands-on work
Participants will be able to implement the various techniques covered on Linux and Windows platforms.

Course schedule

1   Java EE application context

- Apache projects. Tomcat distributions.
- Java EE, Servlet, JSP and components: architecture.

PARTICIPANTS
System administrators, operators and integrators.

PREREQUISITES
Basic knowledge of Web technologies, Java/Web architecture (JSP/Servlet) and servers.

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 Installation

- JVM installation and configuration.
- Server installation. Options.
- Install and compile Tomcat with Ant.
- Tomcat components: directories, engine, connectors...

Hands-on work
Tomcat installation and basic configuration.

3 Configuration

- Configurations: components, users, deployment, access control, Web application.
- Configuration tools. Automation with Ant.
- Query filtering (the "Valves"), logging. Single Sign On. Realms.
- Configuring session persistence. JNDI resources: JDBC and Mail.
- Analysis of Java class loading.

Hands-on work
Configuration of a supplied application.

4 Connectors

- HTTP 1.0 and 1.1 and Coyote connector.
- Using Tomcat with a Reverse Proxy.
- Integration with IIS and Apache.
- Integration via mod_proxy (HTTP and AJP).
- Integration via mod_jk.
- Optimization. Load distribution.
- JDBC connectors: alternatives and configuration.

Hands-on work
Access to the supplied application via a Web server and connection to a database.

5 Security

- Principles. Securing the file system. Permissions. Java Security Manager and Tomcat.
- Realms": message digest, roles, files, JDBC.
- The SSL protocol.

Hands-on work
Application security.

6 Logging

- JULI, configuration logging.properties.
- Log4J project. Outputs: console, file, syslog...
- Logger. Log levels. Log reading.
- Configuration via XML or Java.
- Replace JULI with Log4J.

Hands-on work
Implementation and configuration of application logging.

⑦ Performance and testing

- Configuration "standalone" or with Web server.
- JVM, memory usage.
- Scaling.
- Load testing with JMeter.
- Server load and application load.
- JMX monitoring.

Hands-on work
Draw up a test plan for the application.

Dates and locations

REMOTE CLASS
2026 : 3 June, 16 Sep., 16 Dec.