

# 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.

### TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

### TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

### ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

## 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.