

Apache Tomcat Server

Learn to install, secure and scale Apache Tomcat, from SSL and virtual hosts to clustering, load balancing and performance tuning.

3 Days

8 HOURS A DAY

8

MODULES

23

TOPICS

16

HANDS-ON LABS

COURSE OVERVIEW

This course covers installing and configuring Apache Tomcat, followed by securing it with SSL certificates and setting up virtual hosts. It then addresses high availability through clustering and load balancing with NGINX and Apache Mod_Jk, alongside session management techniques such as sticky sessions and session replication. The course also covers configuring custom error pages and logging, and concludes with performance tuning topics including monitoring, connector optimisation, memory management and HTTP response compression.

WHO THIS COURSE IS FOR

System Administrators

Server Administrators

Application Administrators

DevOps Engineers

Infrastructure Engineers

LEARNING OBJECTIVES

- Install and configure Apache Tomcat server
- Enable SSL by generating and applying certificates
- Configure virtual hosts within Tomcat
- Set up clustering for high availability
- Configure load balancing using NGINX and Apache Mod_Jk
- Apply sticky sessions and session replication for session management
- Configure custom error pages and Tomcat logging
- Optimise performance through connector tuning and memory management

8 Modules, 23 Topics

01

2 Labs

Introduction to Tomcat and Installation

TOPICS

Overview of Tomcat · Installation and Configuration of Tomcat

02

Lab

Tomcat Security and SSL Configuration

TOPICS

Security Overview · Enable SSL - Generating Certificate · Enabling SSL

03

Lab

Virtual Hosts

TOPICS

Introduction to Virtual Host · Configuring Virtual Host

04

Lab

HA Clustering

TOPICS

- Scaling Traffic and High Availability using Clustering
- Cluster Setup

05

3 Labs

Load Balancing

TOPICS

- Load Balancing Tomcat using NGINX
- Setting up Apache and Mod_Jk Connector
- Distributing Traffic with Apache Load Balancer

06

2 Labs

Session Management and Connection Pooling

TOPICS

- Sticky Sessions Introduction
- Configuring Sticky Sessions on NGINX and Apache LB
- Session Replication Introduction
- Configuring Session Replication

07

2 Labs

Custom Error Page and Tomcat Logging

TOPICS

Configuring Custom Error Page · Configuring Tomcat Logging

08

4 Labs

Performance Tuning and Optimization

TOPICS

Performance Tuning Overview · Setting Up Monitoring · Connectors and Executor Thread Optimization · Memory Optimization - Heap and Metaspace · Enable HTTP Response Compression

HANDS-ON LABS

Practise What You Learn

#	MODULE	ACTIVITY
01	Introduction to Tomcat and Installation	■ Installing Apache Tomcat ■ Login with Manager App
02	Tomcat Security and SSL Configuration	SSL configuration
03	Virtual Hosts	Configuring Virtual Host
04	HA Clustering	HA Clustering setup
05	Load Balancing	■ Load Balancing Tomcat using NGINX ■ Setting up Apache and Mod_Jk ■ Distributing Traffic with Apache Load Balancer
06	Session Management and Connection Pooling	■ Configuring Sticky Sessions on NGINX and Apache LB ■ Configuring Session Replication
07	Custom Error Page and Tomcat Logging	■ Configuring Custom Error Page ■ Configuring Tomcat Logging

#	MODULE	ACTIVITY
08	Performance Tuning and Optimization	■ Setting Up Monitoring ■ Connectors and Executor Thread Optimization ■ increase the JVM heap size in tomcat server ■ Enable HTTP Response Compression

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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