DevOpsSchool

Course curriculum · November 2026

LEVEL 04 OF 04 · ADVANCED

Tomcat Advanced Training

Run Tomcat in highly available, hardened production setups on VMs and Kubernetes and plan safe version upgrades.

LIVE ONLINE **Max 8-10 hours**	CORPORATE (DAY-WISE) **5 days · Days 1-5**	SELF-PACED VIDEO **1-year LMS access**
BATCH SIZE **Max 10 learners**	NEXT BATCHES **1st of every month · weekends: first Saturday**	CERTIFICATE **Verifiable certificate of completion**

Foundation	Essential	Intermediate	Advanced
1 day · Included	2 days · Included	3 days · Included	5 days · This curriculum

INSIDE THIS CURRICULUM

What you will achieve	Outcomes and level focus
Who should attend	Audience and prerequisites
Agenda	44 topics · Foundation to Advanced
Hands-on labs	4 labs
Formats and fees	Live, 1:1, self-paced, corporate
Trainer and reviews	Rajesh Kumar
Enrolment	Batches, payment, contacts

WHY DEVOPSSCHOOL

- Rated 4.6 on Google
- 1,500+ verifiable certificates issued in the public registry
- Trainer Rajesh Kumar: 20 years in industry
- Small batches: max 10 learners, every session recorded

Course page: www.devopsschool.com/courses/tomcat/tomcat-advance-training.html
Talk to us: WhatsApp +91 99057 40781 · +1 (469) 756-6329 · contact@DevOpsSchool.com · reply within 1 hour

OUTCOMES

What you will achieve

By the end of the Tomcat course path, you will be able to:

1

Deploy Java web apps

Build, configure and deploy Java web applications on Tomcat with data sources, authentication and HTTPS.

2

Operate Tomcat in production

Monitor, tune, containerise and automate Tomcat deployments through CI/CD and configuration management.

3

Run resilient Tomcat platforms

Design clustered, hardened Tomcat services on VMs and Kubernetes and upgrade them safely.

WHAT THE ADVANCED LEVEL ADDS

Clustering, Kubernetes, hardening and upgrades

Hands-on: Capstone: Tomcat on Kubernetes with autoscaling. Deploy a Tomcat application to Kubernetes with probes, autoscaling and TLS, run a load test and perform a zero-downtime rolling upgrade.

WHO SHOULD ATTEND

- Experienced Tomcat practitioners responsible for quality, security and scale.
- Senior engineers, architects and leads who design and troubleshoot Tomcat solutions.
- Teams making Tomcat an organisation-wide standard.

BEFORE YOU START

- The Intermediate level, or equivalent hands-on experience.
- You can already: Monitor and tune Tomcat, run it in containers and deploy to it automatically from a CI/CD pipeline.
- Basic computer skills and a laptop with a stable internet connection for the live sessions and labs.
- This curriculum includes every earlier level, so it is complete on its own.

AGENDA · FOUNDATION TO ADVANCED

Tomcat Advanced Training agenda

44 topics. Each level builds on the one before it, so this curriculum lists every earlier level in full. Days are for corporate (day-wise) delivery; live online batches cover the same agenda in max 8-10 hours.

DAY 1 — Foundation: Java web basics, Tomcat setup and first application

Included from Foundation

1. Java web fundamentals: HTTP requests, servlets, filters, listeners and the WAR file format
2. Where Tomcat fits: servlet container versus full Jakarta EE server and embedded Tomcat in Spring Boot
3. Release lines: Tomcat 9.0, 10.1 and 11.0, the javax to jakarta namespace change and supported Java versions
4. Component model: Server, Service, Connector, Engine, Host and Context and how a request is routed
5. Installing Tomcat: zip or tarball install, JAVA_HOME and a quick start on Windows, Linux or macOS
6. Folder structure: bin, conf, lib, logs, webapps, work and temp
7. Key configuration files: server.xml, web.xml, context.xml, tomcat-users.xml and catalina.properties
8. Building a first app: a servlet and JSP page packaged as a WAR with Maven
9. Deploying apps: webapps auto-deploy, exploded directories and the ROOT application
10. Manager and Host Manager: enabling access, roles and deploying through the browser
11. Reading logs: catalina, localhost and access logs for startup and deployment errors

DAY 2 — Essential: Application configuration, data sources and secure access

Included from Essential

12. Application configuration: context.xml, environment entries and externalised settings per environment
13. Database connectivity: JNDI DataSource, JDBC pool sizing, validation queries and driver placement
14. Authentication: BASIC, FORM and CLIENT-CERT login with Realms and security constraints in web.xml
15. Running as a service: Windows service configuration and a hardened systemd unit on Linux
16. HTTPS setup: certificates with keytool or PEM files, SSLHostConfig and redirecting HTTP to HTTPS
17. Connector settings: ports, NIO and NIO2, compression, HTTP/2 and AJP secret configuration
18. Virtual hosting: multiple Host elements, aliases and per-host application bases
19. Valves: AccessLogValve, RemoteAddrValve, RemoteIpValve and RewriteValve for common needs
20. Error handling: custom error pages and hiding version details in responses
21. Session basics: session timeout, cookie flags (Secure, HttpOnly, SameSite) and session tracking modes
22. Team workflow: promoting the same WAR from dev to test to production with environment-specific config

DAY 3 — Intermediate: Monitoring, performance, containers and CI/CD

Included from Intermediate

23. Thread and connection tuning: executors, maxThreads, maxConnections, acceptCount and keep-alive settings
24. Memory and GC: heap and metaspace sizing, G1 or ZGC and GC logs for diagnosis
25. Monitoring: JMX MBeans, the JMX proxy servlet and Prometheus metrics with Grafana dashboards
26. Logging improvements: JULI configuration, rotation, JSON logs and shipping to ELK or Loki
27. Diagnostics: thread dumps, heap dumps, slow request detection with StuckThreadDetectionValve
28. Front-end proxies: Apache HTTP Server with mod_proxy or Nginx in front of Tomcat
29. Containers: official Tomcat images, layering a WAR into a Dockerfile and runtime configuration
30. CI/CD deployment: Jenkins or GitHub Actions deploying via the Manager text API or image rollout

31. Configuration management: Ansible roles for repeatable installs and configuration drift control
32. Multiple instances: separate CATALINA_BASE per application for isolation and independent restarts
33. Security operations: tracking Tomcat CVEs, updating point releases and auditing open ports

DAYS 4-5 **Advanced: Clustering, Kubernetes, hardening and upgrades** — **New at this level**

34. Clustering: SimpleTcpCluster, static and multicast membership and cluster-wide deployment
35. Session strategy: DeltaManager, BackupManager, sticky sessions with jvmRoute and stateless alternatives
36. Load balancing: Nginx or HAProxy upstreams, health checks and graceful draining of nodes
37. Kubernetes deployment: Deployments, probes, ConfigMaps, Secrets and cloud membership for clustering
38. Scaling on Kubernetes: Horizontal Pod Autoscaler, resource requests and JVM container awareness
39. Hardening: CIS Apache Tomcat Benchmark checks, non-root runtime, minimal webapps and locked-down Manager
40. TLS at scale: certificate rotation, OpenSSL-backed TLS with Tomcat Native and mutual TLS
41. Java 21 features: virtual thread executors and their effect on blocking workloads
42. Upgrades and migration: Jakarta EE migration tool, testing upgrades from 9.0 to 10.1 and 11.0
43. Disaster recovery: backing up configuration, immutable images and rebuild runbooks
44. Capstone: a hardened, autoscaled Tomcat service on Kubernetes with monitoring and rollback

PRACTICE

Hands-on labs

You build these yourself during the course, guided by the trainer.

FOUNDATION

Build and deploy a servlet application

Create a small servlet and JSP application with Maven, package it as a WAR and deploy it to a local Tomcat through the Manager application.

ESSENTIAL

Connect an app to a database securely

Configure a JNDI connection pool to PostgreSQL, protect the application with FORM login and serve it over HTTPS with HTTP redirected.

INTERMEDIATE

Containerise and auto-deploy a Tomcat app

Build a Docker image that bundles a WAR with tuned Tomcat settings, deploy it from a CI pipeline and add Prometheus metrics with a Grafana dashboard.

ADVANCED

Capstone: Tomcat on Kubernetes with autoscaling

Deploy a Tomcat application to Kubernetes with probes, autoscaling and TLS, run a load test and perform a zero-downtime rolling upgrade.

HOW YOU CAN LEARN

Formats and fees

The same agenda in four formats. Fees are in Indian rupees as of November 2026; the course page shows them in your currency.

FORMAT	DURATION	WHAT YOU GET	FEE
Live & interactive (online)	Max 8-10 hours	Instructor-led public batch of max 10 learners with demos, labs, Q&A and assignment review. Weekday batches start on the 1st of every month, weekend batches on the first Saturday of every month.	**INR 34,999**
1:1 live training (online)	Max 8-10 hours, one-to-one	The same agenda, taught one-to-one by the trainer. Starts immediately, without waiting for the next batch; sessions planned around your working hours, at your pace.	**INR 99,999**
Self-paced video	1-year LMS access	All four Tomcat levels, plus 20+ more courses and 50+ tools, at your own pace.	**INR 833/month** billed yearly at INR 9,996
Corporate (day-wise)	5 days for this level	A private batch for your team, on demand. Foundation 1 day, Essential 2, Intermediate 3, Advanced 5 (cumulative).	**Quote on request**

ASSESSMENT AND CERTIFICATE

Your progress is checked through hands-on labs and assignments at every level. On completion you receive a DevOpsSchool certificate of completion with a unique credential ID that anyone can verify at devopsschool.com/certificates.

INCLUDED WITH EVERY LIVE BATCH

- Every live session is recorded and stays in your LMS for a year.
- Can't attend your batch? Move to next month's batch.
- Free demo class before you pay.
- Free 10-15 minute call with an advisor or the trainer to check the course fits you.

YOUR TRAINER

Learn from Rajesh Kumar

Principal Architect, trainer and mentor in DevOps, SRE, DevSecOps and platform engineering, with 20 years across 8+ software MNCs, including Staff DevOps/SRE Engineer for a leading Japanese mobile-payment platform and Principal DevOps Architect and Manager in Europe.

Profile: www.rajeshkumar.xyz · Videos: youtube.com/@TheDevOpsSchool

20 years in industry	**200+** corporate trainings
10,000+ engineers mentored	**70+** organisations coached

REVIEWS

What learners say

Rated 4.6 on Google · more reviews at devopsschool.com/testimonials and in our video testimonials.

> “Rajesh is very good trainer. Rajesh was able to resolve our queries and question effectively. We really liked the hands-on examples covered during this training program.”
>
> Indrayani, India

> “The training was very useful and interactive. Rajesh helped develop the confidence of all.”
>
> Abhinav Gupta, Pune

START YOUR TOMCAT TRAINING

Join the next batch

Weekday batches start on the 1st of every month and weekend batches on the first Saturday of every month, with max 10 learners each. 1:1 training can start immediately; corporate batches run on demand. We reply within 1 hour.

Pay by UPI, credit and debit cards, net banking or PayPal. Before you pay, read our refund policy. All levels of this course: www.devopsschool.com/courses/tomcat/

ENROL OR RESERVE A SEAT
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