DevOpsSchool

Course curriculum · November 2026

LEVEL 04 OF 04 · ADVANCED

# Performance Testing Advanced Training

Lead performance engineering for large systems: plan capacity, test at scale in cloud and Kubernetes, and build continuous performance governance.

| | | |
|---|---|---|
| LIVE ONLINE<br>**Max 8-10 hours** | CORPORATE (DAY-WISE)<br>**5 days · Days 1-5** | SELF-PACED VIDEO<br>**1-year LMS access** |
| BATCH SIZE<br>**Max 10 learners** | NEXT BATCHES<br>**1st of every month · weekends: first Saturday** | CERTIFICATE<br>**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 | 49 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/testing/performance-testing-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 Performance Testing course path, you will be able to:

1

### Design realistic load tests

Model production workloads and script correlated, data-driven tests in JMeter and k6.

2

### Diagnose performance bottlenecks

Correlate load results with metrics, traces and profiles to find and fix root causes.

3

### Engineer performance continuously

Run performance gates in CI/CD and plan capacity for scalable, resilient systems.

WHAT THE ADVANCED LEVEL ADDS

### Capacity planning, scale, resilience and performance engineering

**Hands-on:** Capstone: full performance campaign. Plan workloads from production data, run distributed load, stress and soak tests on a Kubernetes app with chaos faults, and deliver a capacity report.

WHO SHOULD ATTEND

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

BEFORE YOU START

- The Intermediate level, or equivalent hands-on experience.
- You can already: Correlate load results with server metrics, find bottlenecks in apps, databases and infrastructure, and run performance tests in CI.
- 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

# Performance Testing Advanced Training agenda

49 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: Performance concepts, test types and first JMeter script

Included from Foundation

1. Why performance testing: user experience, capacity, scalability and the cost of slow or failing releases
2. Test types: load, stress, spike, soak or endurance, volume, scalability and breakpoint tests
3. Core metrics: response time percentiles (p90, p95, p99), throughput, error rate, concurrency and Apdex
4. Little's Law and workload basics: arrival rate, think time, pacing and open versus closed workload models
5. Performance requirements: turning business goals into SLAs and SLOs with measurable thresholds
6. Test environment: production-like sizing, test data, isolation and monitoring the system under test
7. Tool landscape: Apache JMeter, Grafana k6, Gatling, Locust and cloud load services compared
8. Installing JMeter: Java requirements, GUI versus non-GUI mode, plugins manager and folder layout
9. JMeter building blocks: test plan, thread groups, HTTP requests, listeners, config elements, timers and pre or post processors
10. Recording a script: HTTP(S) Test Script Recorder, browser proxy setup and the JMeter root certificate
11. First run: running in non-GUI mode with jmeter -n -t -l and generating the HTML dashboard report
12. Reading results: aggregate report, response time over time, errors and spotting obvious bottlenecks

## DAY 2 — Essential: Realistic scripts, correlation, parameterisation and assertions

Included from Essential

13. Parameterisation: CSV Data Set Config, user variables, random and counter functions for unique test data
14. Correlation: extracting session IDs, CSRF tokens and OAuth tokens with Regular Expression, JSON and Boundary extractors
15. Assertions: response, JSON, duration and size assertions without overloading the load generator
16. Logic controllers: transaction, if, loop, while, throughput and once-only controllers for user journeys
17. Timers and pacing: constant, uniform random and constant throughput timers, think time from real analytics
18. Workload modelling: transaction mix from production logs, concurrency targets and ramp-up profiles
19. API performance testing: REST and GraphQL requests, headers, authentication and payload variation
20. Grafana k6 basics: JavaScript test scripts, virtual users, scenarios and executors such as ramping-arrival-rate
21. k6 checks and thresholds: pass and fail criteria on p95 latency and error rate in code
22. Gatling and Locust overview: simulation DSL, feeders and Python user classes for teams that prefer code
23. Script debugging: View Results Tree, debug post processor, logging and validating one user before scaling up
24. Test execution checklist: smoke run, baseline run, environment readiness and stakeholder sign-off

## DAY 3 — Intermediate: Monitoring, bottleneck analysis, CI integration and distributed runs

Included from Intermediate

25. Live results: JMeter Backend Listener and k6 outputs to InfluxDB or Prometheus with Grafana dashboards
26. Server-side monitoring: CPU, memory, disk, network, thread pools and connection pools during the test
27. APM correlation: tracing slow transactions with OpenTelemetry, Grafana Tempo, Dynatrace, New Relic or AppDynamics
28. JVM and runtime analysis: garbage collection logs, heap usage, thread dumps and profilers such as async-profiler

29. Database bottlenecks: slow query logs, execution plans, missing indexes, lock contention and connection limits
30. Front-end performance: Core Web Vitals, Lighthouse, WebPageTest and browser-level tests with k6 browser
31. Distributed load generation: JMeter remote servers, k6 on Kubernetes with the k6 Operator, network and clock checks
32. Performance tests in CI/CD: Jenkins, GitHub Actions or GitLab CI jobs with threshold-based quality gates
33. Result comparison: baselines, run-to-run variance, regression detection and trend reports
34. Testing microservices: service virtualisation with WireMock, mocks for third-party APIs, testing one service at a time
35. Messaging and protocol tests: Kafka, JDBC, WebSocket and gRPC load with plugins and extensions
36. Troubleshooting test issues: load generator saturation, coordinated omission, caching effects and noisy environments
37. Reporting: executive summary, findings with evidence, risk rating and tuning recommendations

**DAYS 4-5** **Advanced: Capacity planning, scale, resilience and performance engineering** **New at this level**

38. Performance engineering lifecycle: requirements, design reviews, early component tests and production feedback
39. Capacity planning: queueing basics, utilisation laws, modelling growth and headroom from test data
40. Large-scale load: cloud load generation across regions, Grafana Cloud k6 or Azure Load Testing, cost control
41. Kubernetes performance: HPA and cluster autoscaler behaviour, pod limits, throttling and scale-out tests
42. Scalability testing: horizontal versus vertical scaling, finding the breaking point and saturation curves
43. Resilience under load: chaos experiments with failed nodes, latency injection and dependency outages during tests
44. Caching and CDN strategy: cache hit ratios, cache stampedes, CDN offload and edge performance validation
45. Production testing: canary analysis, shadow traffic, synthetic monitoring and safe tests in production
46. SLO-driven governance: performance budgets per service, error budgets and release gates
47. Tuning playbooks: web servers, application thread pools, JVM flags, database configuration and OS network settings
48. Performance test framework at scale: reusable libraries, test data services and a shared results warehouse
49. Capstone: plan, run and report a full performance campaign for a multi-service application

PRACTICE

## Hands-on labs

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

FOUNDATION

### Record and run a first load test

Record a login-and-browse journey with the JMeter recorder, run it for 20 virtual users in non-GUI mode and read the HTML dashboard.

ESSENTIAL

### Data-driven API load test in k6

Script an authenticated API journey in JMeter and in k6 with CSV test data, token correlation and thresholds, then compare baseline results.

INTERMEDIATE

### Find and fix a bottleneck

Run a stress test with live Grafana dashboards and traces, locate a slow database query or exhausted pool, fix it and prove the improvement in CI.

ADVANCED

**Capstone: full performance campaign**

Plan workloads from production data, run distributed load, stress and soak tests on a Kubernetes app with chaos faults, and deliver a capacity report.

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 Performance Testing 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 PERFORMANCE TESTING 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/testing/

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WHATSAPP · INDIA
**+91 99057 40781**

WHATSAPP · USA
**+1 (469) 756-6329**

EMAIL
**contact@DevOpsSchool.com**