DevOpsSchool

Course curriculum · November 2026

LEVEL 02 OF 04 · ESSENTIAL

# Istio Essential Training

Route, shift and protect traffic with Istio and observe every request with metrics, traces and logs.

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|---|---|---|
| LIVE ONLINE<br>**Max 8-10 hours** | CORPORATE (DAY-WISE)<br>**2 days · Days 1-2** | 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 · This curriculum | 3 days · Next step | 5 days · Later |

## INSIDE THIS CURRICULUM


| | |
|---|---|
| What you will achieve | Outcomes and level focus |
| Who should attend | Audience and prerequisites |
| Agenda | 23 topics · Foundation to Essential |
| Hands-on labs | 2 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/istio/istio-essential-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 Istio course path, you will be able to:

1

### Control service traffic

Route, shift, mirror and protect traffic between microservices with Istio.

2

### Secure microservices by default

Apply mTLS, authorization and JWT authentication to build zero-trust service communication.

3

### Operate meshes at scale

Observe, troubleshoot, upgrade and extend Istio across multiple clusters in production.

WHAT THE ESSENTIAL LEVEL ADDS

### Traffic management, resilience and observability

**Hands-on:** Canary release with resilience testing. Shift traffic gradually to a new version, add retries, timeouts and circuit breaking, inject faults and observe the impact in Grafana and traces.

WHO SHOULD ATTEND

- Learners who know the basics of Istio and want to use it confidently every day.
- Professionals taking over Istio work on a live project.
- Teams agreeing on a common way of working with Istio.

BEFORE YOU START

- The Foundation level, or equivalent hands-on experience.
- You can already: Understand service mesh concepts and Istio's sidecar and ambient architectures, install Istio and mesh your first application.
- 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 ESSENTIAL

# Istio Essential Training agenda

23 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: Service mesh concepts, architecture and installation

Included from Foundation

1. Service mesh concepts: microservice networking challenges and what a mesh adds
2. Istio overview: a CNCF graduated mesh, its features and how it compares with Linkerd
3. Istio architecture: istiod control plane, Envoy proxies and the xDS configuration flow
4. Data plane modes: sidecar mode versus ambient mode with ztunnel and waypoint proxies
5. Prerequisites: a Kubernetes cluster with kind, minikube or a managed service and kubectl
6. Installing Istio: istioctl install with profiles, Helm charts and verifying with istioctl verify-install
7. Sidecar injection: namespace labels, automatic and manual injection and pod changes
8. Ambient enrolment: labelling namespaces for ambient mode and checking ztunnel
9. Bookinfo demo application: deploying it and exploring its services
10. Ingress: exposing an application with the Kubernetes Gateway API and Istio Gateway
11. First look at observability: installing Kiali, Prometheus and Grafana add-ons

## DAY 2 — Essential: Traffic management, resilience and observability

**New at this level**

12. VirtualService: host and path matching, header-based routing and rewrites
13. DestinationRule: subsets, load balancing policies and connection pool settings
14. Gateway API routing: HTTPRoute and GRPCRoute with Istio as the implementation
15. Traffic shifting: weighted canary releases and blue-green switching
16. Resilience: timeouts, retries and retry budgets
17. Circuit breaking and outlier detection: limits and ejecting unhealthy endpoints
18. Fault injection: delays and aborts for resilience testing
19. Traffic mirroring: shadowing live traffic to a new version
20. Egress control: ServiceEntry, outbound traffic policy and egress gateways
21. Metrics: Istio standard metrics in Prometheus and Grafana dashboards
22. Distributed tracing: trace propagation headers and Jaeger or Tempo integration
23. Access logs and the Telemetry API: configuring logging and metrics per workload

PRACTICE

# Hands-on labs

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

FOUNDATION

**Install Istio and mesh an app**

Install Istio on a kind cluster, enable sidecar injection, deploy the Bookinfo application, expose it through a gateway and view it in Kiali.

ESSENTIAL

**Canary release with resilience testing**

Shift traffic gradually to a new version, add retries, timeouts and circuit breaking, inject faults and observe the impact in Grafana and traces.

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 Istio levels, plus 20+ more courses and 50+ tools, at your own pace. | **INR 833/month** billed yearly at INR 9,996 |
| **Corporate (day-wise)** | 2 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 ISTIO 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/istio/


ENROL OR RESERVE A SEAT
**Istio Essential Training**

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**Next step after this level: Istio Intermediate Training** - Secure service-to-service traffic with mTLS and authorization policies, authenticate end users and troubleshoot the mesh.