DevOpsSchool

Course curriculum · November 2026

LEVEL 04 OF 04 · ADVANCED

Rancher Advanced Training

Run Rancher at enterprise scale with Fleet GitOps, HA and DR, hardened security, RKE2 migration and edge and hosted clusters.

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	52 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/rancher/rancher-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 Rancher course path, you will be able to:

1

Manage Kubernetes with Rancher

Install Rancher and provision, import and manage Kubernetes clusters from one console.

2

Operate clusters day two

Back up, upgrade, monitor, log and troubleshoot Rancher and downstream clusters.

3

Scale securely with GitOps

Run HA, hardened, multi-cluster platforms with Fleet, policies and RKE2.

WHAT THE ADVANCED LEVEL ADDS

GitOps, HA, security, migration and multi-cluster scale

Hands-on: Build a GitOps multi-cluster platform. Stand up HA Rancher on RKE2, harden clusters with CIS scans and policies, and roll out applications to several clusters with Fleet.

WHO SHOULD ATTEND

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

BEFORE YOU START

- The Intermediate level, or equivalent hands-on experience.
- You can already: Back up, upgrade and troubleshoot Rancher and clusters, and operate monitoring, logging, projects, quotas and access control.
- 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

Rancher Advanced Training agenda

52 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: Rancher architecture, RKE, RKE2 and first install

Included from Foundation

1. Intro to Rancher: multi-cluster Kubernetes management, Rancher Prime vs community edition and current 2.x releases
2. Learning the Rancher architecture: Rancher server components, authentication proxy, cluster controllers and agents
3. Communication with downstream clusters: cattle-cluster-agent, node agents, tunnels and kubeconfig proxying
4. Architectural best practices: a dedicated management cluster, high availability, load balancer and DNS
5. Discovering RKE: RKE1 concepts and its end of life, RKE2 and K3s as the current Kubernetes distributions
6. Installing RKE: the rke binary, SSH and Docker requirements; installing RKE2 with the install script
7. Preparing nodes for Kubernetes: OS requirements, swap, kernel modules, firewall ports and container runtime
8. Creating the cluster configuration file: cluster.yml for RKE, config.yaml for RKE2 and node roles
9. Certificate options: Rancher self-signed, your own CA, and Let's Encrypt with cert-manager
10. Deploying Kubernetes: rke up or starting rke2-server and agents, then retrieving the kubeconfig
11. Installing Rancher with Docker: single-node install for development and evaluation
12. First login: bootstrap password, server URL, the Rancher dashboard and importing an existing cluster

DAY 2 — Essential: Rancher on Kubernetes, cluster provisioning and workloads

Included from Essential

13. Installing Rancher with Kubernetes: deploying into RKE or RKE2 with the Helm chart, cert-manager and TLS options
14. Designing and provisioning clusters: where will my cluster live (custom, hosted EKS/AKS/GKE, node driver or imported)
15. Cluster constraints: limitations within certain cluster types, node resource requirements, networking and port requirements
16. Cluster roles: etcd, control plane and worker roles and how to place them
17. Deploying a Kubernetes cluster: RKE configuration options and reusable, centrally managed cluster configurations
18. Node drivers and cloud credentials: machine pools, cloud providers and deploying a cluster from the UI
19. Deploying and managing workloads: deploy workloads, upgrade workloads and roll back workloads
20. Using persistent storage: provisioning storage classes, using persistent volume claims and Longhorn
21. Dynamic data: ConfigMaps, Secrets, certificates, registry credentials and resource naming
22. Service discovery and load balancing: services in Rancher, layer 4 versus layer 7, LoadBalancer services and Ingress
23. The Rancher application catalog: how it works, catalog scope, included global catalogs and Apps today
24. Custom catalogs: adding custom catalogs as Helm chart repositories and using catalog apps
25. Using the CLI tools: kubectl with Rancher-generated kubeconfig files and the Rancher CLI

DAY 3

Intermediate: Day-two operations, monitoring, projects and troubleshooting

Included from Intermediate

26. Day two operations for RKE: secure the installation files, backups and DR with etcd snapshots
27. RKE maintenance: upgrading Kubernetes, certificate management and rotation, adding and removing nodes
28. Rancher on Docker lifecycle: making backups, restoring from a backup and upgrading Rancher
29. Rancher on Kubernetes lifecycle: backups with the rancher-backup operator, restoring and upgrading Rancher with Helm
30. Editing clusters: editing cluster options and upgrading Kubernetes from Rancher
31. Monitoring: enabling advanced monitoring with rancher-monitoring and using the Grafana dashboards
32. Alerting: configuring notifiers and alerts with Alertmanager routes and PrometheusRules
33. Logging: configuring logging with the Logging operator, flows and outputs to Elasticsearch, Loki or Splunk
34. Namespaces and projects: namespace overview, projects as namespace groups and project security
35. Resource quotas and resource limits: project and namespace quotas and default container limits
36. Working inside a project: namespace management, project monitoring, project alerts and logging
37. Basic troubleshooting: what could go wrong, Rancher's API server, container runtime, node conditions and kubelet
38. Advanced troubleshooting: etcd health, control plane components, nginx-proxy and the container network (CNI)
39. Access control: authentication providers (LDAP, SAML, OIDC) and global, cluster and project roles

DAYS 4-5

Advanced: GitOps, HA, security, migration and multi-cluster scale

New at this level

40. GitOps with Fleet: GitRepo resources, bundles, cluster groups and multi-cluster rollouts
41. RKE1 to RKE2 migration: planning, moving workloads and replacing Rancher-managed clusters
42. High availability Rancher: a three-node RKE2 management cluster, external load balancer and DNS
43. Disaster recovery: etcd snapshots to S3, restoring Rancher to a new cluster and DR drills
44. Security hardening: CIS benchmark scans, hardened RKE2 profiles and Pod Security Admission
45. Policy and runtime security: Kubewarden admission policies and NeuVector container security
46. Multi-tenancy at scale: custom roles, project isolation with network policies and tenant onboarding
47. Scaling Rancher: managing many downstream clusters, agent tuning and API performance
48. Hosted Kubernetes: managing EKS, AKS and GKE lifecycle from Rancher
49. Edge clusters: K3s at the edge and Fleet for large fleets of small clusters
50. Virtualization: Harvester HCI integration with Rancher for VMs alongside containers
51. Final assessment, conclusion and next steps: reviewing every module and planning further learning
52. Capstone: build an HA, GitOps-managed, hardened multi-cluster platform with Rancher

PRACTICE

Hands-on labs

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

FOUNDATION

Install RKE2 and Rancher

Prepare Linux nodes, build an RKE2 cluster, install Rancher on it and import a second cluster into the Rancher dashboard.

ESSENTIAL

Provision a cluster and deploy an app

Provision a downstream cluster from Rancher, then deploy a web application with storage, secrets, an Ingress and a Helm chart from the catalog.

INTERMEDIATE

Operate a multi-team cluster

Create projects with quotas and roles for two teams, enable monitoring, alerts and logging, take an etcd snapshot and practise a restore.

ADVANCED

Build a GitOps multi-cluster platform

Stand up HA Rancher on RKE2, harden clusters with CIS scans and policies, and roll out applications to several clusters with Fleet.

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 Rancher 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 RANCHER 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/rancher/

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