DevOpsSchool

Course curriculum · November 2026

LEVEL 04 OF 04 · ADVANCED

Rook Advanced Training

Run Rook Ceph at enterprise scale with external clusters, mirroring and multi-site DR, performance tuning and multi-tenant governance.

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	45 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/rook/rook-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 Rook course path, you will be able to:

1

Deploy cloud-native storage

Deploy Rook and Ceph on Kubernetes and provide block, file and object storage to workloads.

2

Operate Ceph on Kubernetes

Monitor, upgrade, secure and troubleshoot Rook Ceph clusters with confidence.

3

Design resilient storage platforms

Build mirrored, multi-site and tuned Rook Ceph platforms for production applications.

WHAT THE ADVANCED LEVEL ADDS

DR, multi-site, performance and production scale

Hands-on: Build a DR-ready storage platform. Deploy two Rook Ceph clusters, configure RBD mirroring and multi-site object storage, then fail an application over and back.

WHO SHOULD ATTEND

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

BEFORE YOU START

- The Intermediate level, or equivalent hands-on experience.
- You can already: Monitor, upgrade, secure and troubleshoot Rook Ceph clusters, manage disks and pools, and tune them for reliable production use.
- 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

Rook Advanced Training agenda

45 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: Kubernetes storage, Ceph and Rook architecture and install

Included from Foundation

1. Kubernetes storage fundamentals: volumes, PersistentVolumes, PersistentVolumeClaims, StorageClasses and CSI
2. Why Rook: cloud-native storage orchestration, the CNCF graduated project and supported Ceph releases
3. Ceph architecture: MON, MGR, OSD, MDS and RGW daemons, RADOS and the CRUSH map
4. Ceph data placement: pools, placement groups, replication and failure domains
5. Rook architecture: the Rook operator, custom resources, Ceph CSI drivers and the reconciliation loop
6. Prerequisites: raw disks or partitions, LVM, kernel rbd module, node resources and supported Kubernetes versions
7. Deploying the operator: crds.yaml, common.yaml and operator.yaml or the rook-ceph Helm chart
8. Creating a CephCluster: cluster.yaml settings for mons, mgr, storage nodes and device selection
9. Test vs production clusters: cluster-test.yaml for single-node labs and production layouts
10. The Rook toolbox: ceph status, ceph osd tree, ceph df and health checks
11. The Ceph dashboard: enabling and exposing it, logging in and reading cluster health

DAY 2 — Essential: Block, file and object storage for workloads

Included from Essential

12. Block storage: CephBlockPool, the RBD StorageClass and ReadWriteOnce volumes for databases
13. Shared filesystem: CephFilesystem, MDS settings, the CephFS StorageClass and ReadWriteMany volumes
14. Object storage: CephObjectStore, RGW gateways and S3-compatible access
15. Object buckets: ObjectBucketClaim, bucket StorageClass and CephObjectStoreUser credentials
16. Snapshots and clones: VolumeSnapshotClass, snapshots, restores and PVC cloning
17. Volume expansion: allowVolumeExpansion and resizing PVCs online
18. Stateful workloads: StatefulSets with Rook volumes for PostgreSQL, MySQL and message queues
19. Device selection: useAllDevices, deviceFilter, per-node device lists and metadata devices
20. Helm deployment: rook-ceph and rook-ceph-cluster charts and values files
21. Placement and resources: node affinity, tolerations and resource requests for Ceph daemons
22. Day-to-day checks: pool usage, PG states and storage capacity with ceph df and the dashboard

DAY 3 — Intermediate: Monitoring, upgrades, security, tuning and troubleshooting

Included from Intermediate

23. Monitoring: Prometheus ServiceMonitor for Ceph metrics, Rook alert rules and Grafana dashboards
24. Upgrades: upgrading Rook operator versions and Ceph releases safely, checking compatibility
25. OSD management: adding OSDs, removing OSDs and replacing failed disks
26. Pool design: replicated vs erasure-coded pools, failure domains and CRUSH rules
27. Encryption: OSD encryption at rest with KMS or Vault and msgr2 encryption in transit
28. Access control: Kubernetes RBAC for Rook resources, CSI secrets and Ceph client keys
29. Object storage administration: users, quotas, bucket policies and lifecycle rules
30. Networking: host networking, Multus for separate public and cluster networks, and ports

31. CSI configuration: provisioner and plugin settings, CSI logs and topology-aware provisioning
32. Troubleshooting with the kubectl rook-ceph plugin: health detail, debug mode and mon recovery
33. Troubleshooting common issues: stuck PGs, slow ops, full OSDs, unmountable volumes and pods stuck terminating

DAYS 4-5 **Advanced: DR, multi-site, performance and production scale** — **New at this level**

34. External cluster mode: connecting Rook to an existing Ceph cluster outside Kubernetes
35. RBD mirroring: CephRBDMirror, journal vs snapshot mirroring and failover between clusters
36. CephFS mirroring: snapshot-based replication of shared filesystems to a peer cluster
37. Multi-site object storage: realms, zone groups and zones for geo-replicated S3
38. Backup and disaster recovery: Velero with CSI snapshots, restore drills, RPO and RTO
39. Stretch clusters: arbiter mons and two-zone layouts for site resilience
40. Performance tuning: BlueStore settings, NVMe and multiple OSDs per device, PG autoscaler and benchmarking with rados bench and fio
41. Scaling: growing to many nodes and OSDs, rebalancing and capacity planning
42. Multi-tenancy: RADOS namespaces, CephFS subvolume groups and per-tenant StorageClasses
43. Production hardening: resource limits, pod disruption budgets, node maintenance and operator HA
44. Migration: moving workloads from other storage to Rook and upgrading legacy clusters
45. Capstone: design a resilient, monitored Rook Ceph platform with DR for stateful applications

PRACTICE

Hands-on labs

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

FOUNDATION

Deploy a Rook Ceph cluster

Install the Rook operator on a three-node Kubernetes cluster, create a CephCluster on raw disks and check its health from the toolbox and dashboard.

ESSENTIAL

Serve block, file and object storage

Run a PostgreSQL StatefulSet on RBD, a shared CephFS volume for several pods, and an S3 bucket claimed with an ObjectBucketClaim.

INTERMEDIATE

Run a disk failure drill

Add monitoring and alerts, encrypt OSDs, then simulate a failed disk, replace the OSD and verify data recovery and PG health.

ADVANCED

Build a DR-ready storage platform

Deploy two Rook Ceph clusters, configure RBD mirroring and multi-site object storage, then fail an application over and back.

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 Rook 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 ROOK 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/rook/

ENROL OR RESERVE A SEAT
Rook Advanced Training

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