DevOpsSchool

Course curriculum · November 2026

LEVEL 04 OF 04 · ADVANCED

Podman Advanced Training

Operate Podman at enterprise scale with multi-arch builds, hardened rootless policies, supply-chain controls and Docker migration.

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	47 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/podman/podman-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 Podman course path, you will be able to:

1

Run secure rootless containers

Build, run and troubleshoot rootless containers and pods with Podman, Buildah and Skopeo.

2

Operate containers with systemd

Manage container workloads as systemd services with Quadlet, auto-update and Kubernetes YAML.

3

Harden and migrate at scale

Apply image trust, SELinux and supply-chain controls and migrate Docker workloads to Podman.

WHAT THE ADVANCED LEVEL ADDS

Scale, hardening, multi-arch and migration

Hands-on: Deliver a hardened rootless platform. Build multi-arch signed images with a farm, enforce signatures with policy.json, and deploy the stack with Quadlet, health actions and auto-update.

WHO SHOULD ATTEND

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

BEFORE YOU START

- The Intermediate level, or equivalent hands-on experience.
- You can already: Run Podman workloads as systemd services with Quadlet, generate Kubernetes YAML, automate in CI and secure and troubleshoot containers.
- 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

Podman Advanced Training agenda

47 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: Podman architecture, install and rootless basics

Included from Foundation

1. Container fundamentals: images, containers, OCI specifications and how Podman differs from Docker (daemonless, fork-exec)
2. Podman architecture: libpod, conmon, crun or runc, netavark and aardvark-dns, containers/storage
3. Installation: Podman 5 on Fedora, RHEL, Ubuntu and Debian; podman machine and Podman Desktop on macOS and Windows
4. Rootless containers: user namespaces, /etc/subuid and /etc/subgid, rootless vs rootful trade-offs
5. Configuration files: containers.conf, registries.conf, storage.conf and unqualified-search registries
6. First container: podman run, ps, logs, exec, stop and rm with the -d, -it and --rm flags
7. Images: podman pull, images, inspect, tag, rmi and fully qualified names such as docker.io and quay.io
8. Port publishing: -p mappings, rootless ports below 1024 and the pasta rootless network backend
9. Docker compatibility: the podman-docker package, alias docker=podman and command differences
10. Getting help: podman info, podman version, podman system df and the podman man pages

DAY 2 — Essential: Images, volumes, networks, pods and registries

Included from Essential

11. Building images: Containerfile syntax, podman build, build arguments, multi-stage builds and .containerignore
12. Buildah: scripted builds with buildah from, run, copy and commit, and when to use it instead of podman build
13. Volumes and bind mounts: podman volume create, named volumes, -v vs --mount, SELinux :z and :Z labels
14. Networking: podman network create, DNS resolution between containers, bridge, host and none modes
15. Pods: podman pod create, the infra container, shared network namespace and adding containers to a pod
16. Environment and secrets: -e and --env-file, podman secret create and mounting secrets into containers
17. Registries: podman login, auth.json, pushing to Quay.io, Docker Hub or a private registry
18. Skopeo: inspecting remote images, copying images between registries without pulling, syncing repositories
19. Compose workflows: podman compose with docker-compose or podman-compose providers and their limits
20. Resource limits: --memory, --cpus and --pids-limit, monitoring with podman stats and podman top
21. Health checks and restarts: --health-cmd, intervals, podman healthcheck run and restart policies
22. Image hygiene: tags vs digests, podman image prune and system prune, reducing image size

DAY 3 — Intermediate: Quadlet, systemd, Kubernetes YAML and security

Included from Intermediate

23. Quadlet: .container, .pod, .volume, .network and .kube unit files under ~/.config/containers/systemd
24. Containers as services: systemctl --user, loginctl enable-linger, journald logs and dependency ordering
25. Automatic updates: podman auto-update, io.containers.autoupdate labels and automatic rollback
26. Kubernetes YAML: podman kube generate, podman kube play and play --down, ConfigMaps and volume claims
27. Podman REST API: podman.socket, the Docker-compatible API and DOCKER_HOST for tools such as Testcontainers
28. Remote management: podman system connection add, SSH connections and podman --remote

29. CI/CD integration: building and pushing images with rootless Podman or Buildah in GitLab CI, GitHub Actions and Jenkins
30. Security basics: SELinux confinement, seccomp, dropping capabilities, --read-only and no-new-privileges
31. User namespace options: --userns=keep-id, auto user namespaces and UID mapping for volume permissions
32. Image trust: policy.json, signing and verifying images with sigstore and podman image sign
33. Storage administration: overlay driver, fuse-overlayfs, graphroot location and storage cleanup
34. Troubleshooting: podman events, inspect, logs --follow, --log-level=debug, podman system reset and rootless errors

DAYS 4-5 **Advanced: Scale, hardening, multi-arch and migration** **New at this level**

35. Multi-architecture builds: --platform, podman manifest lists and distributed builds with podman farm build
36. Checkpoint and restore: CRIU-based podman container checkpoint and restore, migrating containers between hosts
37. Performance tuning: crun vs runc, storage driver choices, network backend performance and cgroup v2 controls
38. Rootless at scale: subordinate ID management for many users, systemd user slices and resource delegation
39. Security hardening: custom SELinux policies with udica, custom seccomp profiles and rootless-only policies
40. Supply chain security: SBOMs, image scanning with Trivy, and signature enforcement through policy.json
41. Image mode with bootc: building bootable operating system images from Containerfiles and updating hosts
42. Edge deployments: Quadlet services on edge devices, auto-update with rollback and offline registry mirrors
43. Registry governance: mirrors, blocked registries and short-name aliases in registries.conf, containers.conf drop-ins
44. Resilience: restart policies, --health-on-failure actions and load balancing pods behind a reverse proxy
45. Migration from Docker: converting Compose files to Quadlet or Kubernetes YAML, replacing the Docker socket in CI
46. Path to Kubernetes: moving pods from podman kube play to Kubernetes or OpenShift and the CRI-O relationship
47. Capstone: build, sign, scan and deploy a multi-container service with Quadlet on hardened rootless hosts

PRACTICE

Hands-on labs

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

FOUNDATION **Run a rootless web container**

Install Podman, run Nginx as an unprivileged user with a published port, then inspect its logs, processes and image metadata.

ESSENTIAL **Run a two-tier app in a pod**

Build a web application image, then run it with PostgreSQL in one pod using a named volume, a secret and a health check.

INTERMEDIATE **Run a self-updating Quadlet service**

Convert the pod into Quadlet units managed by systemd --user, enable podman auto-update with rollback and generate matching Kubernetes YAML.

ADVANCED

Deliver a hardened rootless platform

Build multi-arch signed images with a farm, enforce signatures with policy.json, and deploy the stack with Quadlet, health actions and auto-update.

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 Podman 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 PODMAN 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/podman/

ENROL OR RESERVE A SEAT
Podman Advanced Training

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