DevOpsSchool

Course curriculum · November 2026

ADVANCED LEVEL

RPM Advance

Build RPMs reproducibly with mock, sign them, publish them to repositories and automate packaging in CI pipelines.

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**

Essential
2 days · Included

Intermediate
3 days · Included

Advanced
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/linux/rpm/rpm-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 RPM course path, you will be able to:

1

Manage RPM packages

Install, upgrade, query, verify and remove packages with rpm and dnf on RPM-based Linux.

2

Build your own RPMs

Write spec files and build source and binary RPMs that pass rpmlint checks.

3

Distribute packages securely

Sign packages, publish repositories and automate builds with mock and CI pipelines.

WHAT THE ADVANCED LEVEL ADDS

Mock builds, signing, repositories and pipelines

Hands-on: Build, sign and publish an RPM repository. Build a service package in mock for two distributions, sign it with GPG, publish it with createrepo_c and install it on client machines with gpgcheck enabled.

WHO SHOULD ATTEND

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

BEFORE YOU START

- The Intermediate level, or equivalent hands-on experience.
- You can already: Set up an rpmbuild environment, write a complete spec file and build source and binary RPMs for your own project.
- 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

RPM Advance 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: RPM concepts, install, remove and query

Included from Foundation

1. RPM concepts: the RPM Package Manager, .rpm files, source versus binary packages
2. Package naming: name-version-release.arch, noarch and architecture tags
3. The RPM database: what /var/lib/rpm tracks and why its consistency matters
4. RPM and its front ends: rpm versus dnf and yum, dependency resolution and repositories
5. Finding RPM packages: dnf search, dnf provides, repository metadata and vendor download sites
6. Installing: rpm -ivh, installing local files with dnf to resolve dependencies, --test dry runs
7. Uninstalling: rpm -e, dependency protection and dnf remove
8. Querying installed packages: rpm -qa, -qi, -ql, -qc and -qd
9. Querying ownership and dependencies: rpm -qf, -qR, --whatprovides and --whatrequires
10. Querying package files before install: rpm -qpi and rpm -qpl
11. Lab environment: practising on Fedora, RHEL, Rocky Linux or AlmaLinux

DAY 2 — Essential: Upgrades, verification, signatures and repositories

Included from Essential

12. Upgrading: rpm -Uvh, upgrade versus install and configuration files saved as .rpmnew or .rpmsave
13. Freshening: rpm -Fvh to update only packages that are already installed
14. Verifying: rpm -V and rpm -Va and reading the verification flags for size, mode, digest and time
15. Checking a package's signature: why GPG signing matters for the software supply chain
16. Importing keys: rpm --import and listing installed gpg-pubkey entries
17. Verifying the signature of packages: rpm -K and rpm --checksig, digests versus signatures
18. Practical and common examples of RPM usage: owning package of a file, --setperms, extracting with rpm2cpio
19. Custom queries: --queryformat, --last, --changelog and --scripts
20. Daily dnf usage: history, undo, repoquery, info and versionlock
21. Repository configuration: .repo files, gpgcheck, enabling and disabling repositories
22. Troubleshooting: dependency conflicts, a locked database and rpm --rebuilddb

DAY 3 — Intermediate: Building RPMs from spec files

Included from Intermediate

23. Create your RPM build environment: rpmdevtools, rpmdev-setuptree and the ~/rpmbuild tree
24. Create the tarball of your project: versioned top-level directory and naming conventions
25. Copy to the sources directory: roles of SOURCES, SPECS, BUILD, RPMS and SRPMS
26. Inside a .spec file: preamble tags Name, Version, Release, Summary, License, URL and Source0
27. Spec sections: %description, %prep with %autosetup, %build, %install, %files and %changelog
28. RPM macros: %{_bindir}, %{buildroot}, %{?dist}, rpm --eval and personal macro files
29. Build the source and the binary RPM: rpmbuild -bs, -bb and -ba
30. Building the package: reading build logs, fixing unpackaged files and missing BuildRequires

31. A complete hello.spec file: building a Hello World RPM end to end
32. Quality checks: running rpmlint and fixing its findings
33. Testing your package: install, query, verify and remove the built RPM

DAYS 4-5 **Advanced: Mock builds, signing, repositories and pipelines** — New at this level

34. The mock builds: clean chroot builds, per-distribution configs, mock -r and --rebuild
35. Dependencies: Requires, BuildRequires, Provides, Conflicts, Obsoletes and automatic dependency generation
36. Patches: Patch tags, %autosetup -p1 and maintaining downstream patches
37. Scriptlets: %pre, %post, %preun, %postun, triggers and systemd unit macros
38. Subpackages: -devel, -doc and noarch subpackages from one spec file
39. Signing packages: GPG keys, rpm --addsign and %_gpg_name in .rpmmacros
40. Building repositories: createrepo_c, repository metadata, HTTP hosting and client gpgcheck
41. Build services: COPR for community builds and Koji for enterprise build systems
42. CI/CD for RPMs: mock in containers, pipeline stages and publishing to Nexus, Artifactory or Pulp
43. Packaging guidelines: Fedora packaging guidelines, licensing and filesystem hierarchy locations
44. Debug packages: debuginfo and debugsource subpackages and reproducible build settings
45. Capstone: package a service with systemd units, sign it, publish a repository and install on clients

PRACTICE

Hands-on labs

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

FOUNDATION

Install, query and remove packages

Find and install a package and its dependencies, query its files, configuration and owner relationships, then remove it cleanly.

ESSENTIAL

Verify and upgrade a server safely

Import a vendor key, verify package signatures, detect a modified file with rpm -V, then upgrade and freshen packages while preserving local configuration.

INTERMEDIATE

Package a Hello World application

Create a tarball for a small C or script project, write hello.spec and build both the source RPM and the binary RPM, then install and verify it.

ADVANCED

Build, sign and publish an RPM repository

Build a service package in mock for two distributions, sign it with GPG, publish it with createrepo_c and install it on client machines with gpgcheck enabled.

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	Every available RPM level, 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 RPM 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/linux/rpm/

ENROL OR RESERVE A SEAT **RPM Advance**	WHATSAPP · INDIA **+91 99057 40781**
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