DevOpsSchool

Course curriculum · November 2026

LEVEL 04 OF 04 · ADVANCED

Typescript With Nestjs Advanced Training

Document, test, harden and deploy NestJS services with OpenAPI, Jest, microservice transports and production-grade practices.

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	51 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/typescript/typescript-with-nestjs-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 Typescript With Nestjs course path, you will be able to:

1

Write solid TypeScript

Use types, classes, interfaces, modules and advanced type features to write maintainable code.

2

Build NestJS APIs

Build REST APIs with controllers, services, DTO validation, TypeORM and dependency injection.

3

Ship production services

Secure, document, test and deploy NestJS applications with OpenAPI, Jest and containers.

WHAT THE ADVANCED LEVEL ADDS

OpenAPI, testing, microservices and production readiness

Hands-on: Capstone: production-ready NestJS service. Ship the course API with Swagger docs, unit and e2e tests in CI, rate limiting, health checks and a Docker image deployed to Kubernetes.

WHO SHOULD ATTEND

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

BEFORE YOU START

- The Intermediate level, or equivalent hands-on experience.
- You can already: Configure NestJS apps per environment and use filters, guards, interceptors, pipes and JWT auth to build secure, consistent APIs.
- 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

Typescript With Nestjs Advanced Training agenda

51 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: TypeScript language, typing, classes and modules

Included from Foundation

1. Getting started with TypeScript: why use it, key features, syntax, keywords and code hierarchy
2. Tooling and framework options: TypeScript Playground, Visual Studio, Web Essentials, Sublime Text, tsc and Node.js
3. Hello World: compiling a first program, creating a class and a basic tsconfig.json
4. Grammar, declarations and annotations: let and const, type annotations and type inference
5. Static and dynamic typing: compile time versus run time checks, the any type and primitives
6. Ambient declarations: declare statements, .d.ts type definition files and @types packages
7. Applying types: objects, functions, arrow functions, debugging with source maps and function interfaces
8. Classes: defining classes, property limitations with access modifiers and readonly, casting and definition files
9. Extending types and interfaces: inheritance, using interfaces and extending an interface
10. Internal modules: identifying a module, creating internal modules, accessibility and IIFE, named modules
11. Organising modules: extending modules, importing shortcuts, organising and separating internal modules
12. External modules: dependency resolution, module dependencies, AMD imports of modules and third-party libraries, ES modules today

DAY 2 Essential: NestJS REST APIs, TypeORM and dependency injection

Included from Essential

13. Getting started with NestJS: introduction, installing the Nest CLI, what is inside an application and the course project
14. Development workflow: running NestJS in development mode and calling endpoints with Insomnia
15. Controllers: a basic controller, route parameters, request body and payload handling and response status codes
16. CRUD operations: handling update and delete requests and pagination with query parameters
17. Services and errors: creating a basic service and sending user-friendly error messages with HttpException
18. Feature modules: encompassing a business domain in modules with clear imports and exports
19. Data Transfer Objects: introduction to DTOs and validating input with class-validator and ValidationPipe
20. Request safety: handling malicious request data with whitelisting and auto-transforming payloads to DTO instances
21. Database setup: installing Docker and running PostgreSQL for local development
22. TypeORM basics: the TypeORM module, creating an entity and using a repository to access the database
23. Relations: relating two entities, retrieving entities with relations and cascading inserts and updates
24. Data access patterns: pagination, transactions, indexes on entities and setting up migrations
25. Dependency injection: how DI works, module encapsulation and value, class, factory and non-class token providers
26. Advanced providers: async providers, dynamic modules, provider scope and request-scoped providers in depth

DAY 3 Intermediate: Configuration, guards, interceptors, pipes and authentication

Included from Intermediate

27. Config Module: introducing @nestjs/config and loading custom environment file paths
28. Schema validation: validating environment variables at startup with Joi

29. Config Service: injecting ConfigService and reading typed configuration values
30. Custom configuration files: configuration namespaces and partial registration per feature module
31. Async configuration: asynchronously configuring dynamic modules such as TypeORM with forRootAsync
32. More building blocks: exception filters, guards, interceptors and pipes and binding them globally or per route
33. Exception filters: catching exceptions and returning a consistent error response format
34. Guards: protecting routes with guards, for example an API key or role check
35. Metadata: SetMetadata, Reflector and custom decorators to build generic guards or interceptors
36. Interceptors: adding pointcuts, transforming responses and handling timeouts with RxJS operators
37. Custom pipes: parsing and validating parameters with your own pipe classes
38. Authentication: JWT login with @nestjs/jwt and Passport strategies and protecting routes
39. Middleware and logging: functional middleware, the built-in Logger and request logging

DAYS 4-5 **Advanced: OpenAPI, testing, microservices and production readiness** New at this level

40. Generating the OpenAPI specification: introducing the Swagger module and enabling the CLI plugin
41. API documentation: decorating model properties, adding example responses and using tags to group resources
42. Testing with Jest: introduction, getting started with test suites and adding unit tests with mocked providers
43. End-to-end tests: diving into e2e tests, creating the first test and implementing test logic with Supertest
44. Advanced TypeScript: generics, utility types, mapped and conditional types and strict compiler options
45. Microservices: @nestjs/microservices with TCP, Redis, NATS, Kafka or RabbitMQ transports
46. Performance: Fastify adapter, caching with the cache manager and query optimisation
47. Security hardening: Helmet, CORS, rate limiting with @nestjs/throttler and secrets handling
48. Observability: health checks with @nestjs/terminus, structured logs and OpenTelemetry tracing
49. Production deployment: multi-stage Docker builds, graceful shutdown hooks and Kubernetes deployment
50. Monorepos and CI: Nest CLI workspaces, linting, test coverage gates and pipeline automation
51. Capstone: a documented, tested and containerised NestJS service with authentication and messaging

PRACTICE

Hands-on labs

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

FOUNDATION **Build a typed TypeScript utility library**

Create a small TypeScript project with classes, interfaces and modules, compile it with tsc and debug it in Node.js using source maps.

ESSENTIAL **Build a NestJS REST API with PostgreSQL**

Create a NestJS CRUD API with validated DTOs, TypeORM entities and relations, migrations and paginated queries against PostgreSQL in Docker.

INTERMEDIATE **Secure the API with guards and JWT**

Add environment-validated configuration, JWT authentication, a role guard driven by metadata and a timeout interceptor to the course API.

ADVANCED

Capstone: production-ready NestJS service

Ship the course API with Swagger docs, unit and e2e tests in CI, rate limiting, health checks and a Docker image deployed to Kubernetes.

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 Typescript With Nestjs 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 TYPESCRIPT WITH NESTJS 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/typescript/

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Typescript With Nestjs Advanced Training

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