JUPITER PRIME

Consulting • Training • Advisory

جوبيتر برايم للاستشارات والتدريب

COURSE BROCHURE

# API Test Automation with Postman and REST Assured Training Course

17 – 21 October 2027
Muscat

# API Test Automation with Postman and REST Assured Training Course

**Ref:** 253_8054 **Date:** 17 – 21 October 2027 **Location:** Muscat **Fees:** 6500 GBP

API Test Automation with Postman and REST Assured is a 1-week training course for QA engineers, test automation engineers and backend developers who must prove that REST APIs behave correctly and securely before every release, and it ends with an automated API test suite running in a CI pipeline. Most new features now ship as APIs consumed by mobile apps and partners, so an untested endpoint can break many products at once. Jupiter Prime Training runs this course for testers who guard that interface.

## Why API Test Automation with Postman and REST Assured Matters Now

Three shifts make API testing central to delivery: release cycles measured in days, which leave no room for manual regression checks; distributed systems where one service change can silently break consumers it has never met; and security teams who expect broken authentication and data exposure to be caught before production rather than by a penetration test months later. Teams with automated API suites ship with confidence and catch contract breaks in minutes; teams without them discover failures through customer complaints. The course links its security tests to the Protect and Detect functions of the NIST Cybersecurity Framework 2.0 NIST CSF 2.0.

## Who Gains Most from API Test Automation with Postman and REST Assured

- QA engineers who design functional and regression tests for REST endpoints
- Test automation engineers who maintain frameworks and run suites in pipelines
- Backend developers who write tests alongside the services they build
- DevOps practitioners who wire test stages and quality gates into CI pipelines

A delivery squad that sends its testers and backend developers together gains most, because shared collections and Java tests then cover the same contracts from both sides.

## API Test Automation with Postman and REST Assured Capabilities

Participants leave able to turn API specifications into repeatable tests that run on every commit and flag defects early.

- Design Postman collections, environments and pre-request scripts for each API — QA leads and API owners
- Build REST Assured tests in Java with reusable request specifications — backend developers
- Apply schema validation and contract tests between providers and consumers — integration architects
- Test authentication, authorisation and input handling for security weaknesses — application security
- Specify Newman and CI pipeline stages with clear quality gates — release managers

## Key API Test Automation with Postman and REST Assured Terms

- Postman collection — A saved, ordered set of API requests with tests and scripts that can be run manually or automatically.
- Newman — The command-line runner for Postman collections, used to execute API tests inside build and deployment pipelines.
- REST Assured — A Java library for writing readable, code-based tests of REST APIs with fluent request and response checks.
- Contract testing — Verifying that an API provider and its consumers agree on request and response formats, so changes do not break integrations.
- Schema validation — Checking an API response against a defined structure, such as a JSON Schema, to catch missing or wrongly typed fields.
- Quality gate — A pipeline rule that stops a release when tests fail or coverage falls below an agreed level.

## API Test Automation with Postman and REST Assured Day by Day

### Day 1: REST Fundamentals and the Test Strategy

- HTTP Methods, Status Codes and Headers — What Each Test Must Assert
- OpenAPI Specifications — Source of Truth for Test Design
- API Test Pyramid — Balance of Unit, Contract and End-to-End Checks
- Test Data and Environment Isolation — Reliable and Repeatable Runs
- NIST CSF 2.0 Protect and Detect Functions — Role of API Testing

### Day 2: Building Tests in Postman

- Collections, Folders and Environments — Organising Suites by Service
- Pre-Request and Test Scripts in JavaScript — Dynamic Data and Assertions
- Chaining Requests with Variables — End-to-End Business Flows
- Data-Driven Runs with CSV and JSON Files — Broad Input Coverage
- Mock Servers and Examples — Testing Before Services Exist

### Day 3: Code-Based Testing with REST Assured

- REST Assured Given-When-Then Syntax — Readable Test Cases in Java
- Request and Response Specifications — Reuse Across the Suite
- JSON Path and Hamcrest Matchers — Precise Field Assertions
- JUnit and TestNG Integration — Test Organisation and Reporting
- Serialisation with POJOs — Type-Safe Payload Handling

### Day 4: Contracts, Security and Pipeline Automation

- JSON Schema Validation — Catching Structural Breaking Changes
- Consumer-Driven Contract Testing — Safe Changes Between Teams
- Authentication and Authorisation Tests — Tokens, Roles and Object Access
- Input Fuzzing and Error Handling Checks — Fintech and E-Commerce Cases
- Newman in CI Pipelines with Reports — Quality Gates on Every Commit

## Day 5: Practising the Automated API Test Suite

- Test Plan for a Sample Service Set — Coverage Targets and Priorities
- Postman Collection Build with Data-Driven Runs — Functional Coverage
- REST Assured Regression and Contract Tests — Code-Level Assurance
- Security Test Pack Execution — Defects Logged and Triaged
- Automated API Test Suite Completion — Collections, Java Tests and Pipeline Stage

## Applying API Test Automation with Postman and REST Assured After the Course

- Convert the most-used manual API checks into a Postman collection and run it through Newman in the existing CI pipeline
- Add JSON Schema validation and authorisation tests to the REST Assured suite for one externally exposed service

## API Test Automation with Postman and REST Assured Questions FAQ

### What is API test automation with Postman and REST Assured and why does it matter now?

API test automation with Postman and REST Assured is the practice of writing repeatable functional, contract and security tests for REST APIs. It matters now because fast release cycles and distributed services leave no time for manual checks before each deployment.

### Which roles gain most from API test automation with Postman and REST Assured training?

QA engineers, test automation engineers, backend developers and DevOps practitioners gain most. You benefit if you test or build REST services, maintain pipelines or need to catch breaking changes before consumers do.

### How does API test automation with Postman and REST Assured training differ from a UI test automation course?

It tests services directly at the API layer rather than through browser screens. You write faster, more stable tests for requests, responses, contracts and security, while UI courses focus on page interactions and visual flows.

### What do you bring back from API test automation with Postman and REST Assured training?

You bring back an automated test suite combining Postman collections and REST Assured tests, wired into a CI pipeline. It covers functional, contract and security checks you can extend to your own services.

## API Test Automation with Postman and REST Assured: The Way Forward

The automated API test suite first informs which quality gates block a release and which services gain contract tests next. Testers maintain its collections, developers extend its Java tests and release managers read its reports. After the first month in the pipeline, revisit flaky tests and test data, since unstable runs erode trust faster than missing coverage.