API Test Automation with REST Assured

Automate reliable, maintainable REST API tests in Java with REST Assured and CI.

DURATION	FORMAT	LEVEL	LABS
45 hours	Onsite, online or hybrid	Intermediate	Cloud sandbox included

About this programme

A hands-on programme for building API test automation in Java: REST and HTTP fundamentals, REST Assured's given-when-then syntax, JSON and XML validation, authentication, reusable specifications and a framework integrated with TestNG, reporting and CI/CD.

Who it is for: QA engineers, SDETs and Java developers

What your team will be able to do

- Explain REST, HTTP methods, status codes and where API tests fit
- Write readable REST Assured tests with given-when-then
- Validate complex JSON and XML with JsonPath, XmlPath and Hamcrest
- Test secured APIs with Basic, OAuth2 and bearer-token authentication
- Build a reusable API test framework with reporting and CI/CD

Before you start

- Basic Java
- Understanding of HTTP and REST APIs

Course outline

1. API testing fundamentals

- APIs and their role in modern applications
- Why API testing matters in the SDLC
- REST: endpoints, HTTP methods, status codes, headers and bodies
- REST Assured compared with other API testing tools

2. Set-up and configuration

- JDK, Maven or Gradle, and IDE set-up
- Adding REST Assured with TestNG or JUnit
- Global configuration: base URI, base path, authentication and headers

3. Core REST Assured

- Given-when-then syntax
- GET, POST, PUT, PATCH and DELETE requests
- Validating status codes, headers, content type and body
- Parsing JSON and XML with JsonPath and XmlPath

4. Advanced techniques

- Data-driven tests with parameterisation
- Serialisation and deserialisation of Java objects
- Basic, OAuth2 and bearer-token authentication
- File uploads and downloads, sessions and cookies
- Logging, filters, reusable specifications and Hamcrest matchers

5. Frameworks and integration

- Integrating with TestNG, JUnit and Cucumber
- Reporting with Allure or ExtentReports
- Running tests in Jenkins or GitLab CI/CD
- Framework design, test data management and maintainable tests
- Debugging, and an introduction to load and security checks

Sample schedule

6 days onsite, or 12 half-day sessions online. We fit days and session lengths to your team's calendar.

Day 1	8 h	API testing fundamentals
Day 2	8 h	API testing fundamentals (continued); Set-up and configuration; Core REST Assured
Day 3	8 h	Core REST Assured (continued)
Day 4	8 h	Advanced techniques
Day 5	8 h	Advanced techniques (continued); Frameworks and integration
Day 6	5 h	Frameworks and integration (continued)

Assessment and certification

How learning is checked

- A short knowledge check on day one and again at the end, so you can see each person's progress
- Graded hands-on labs in every module, reviewed by the trainer
- A final exercise that applies the programme to a problem like your team's own

Certificate and exams

- Participants who complete the programme receive a Cognitive Networks AI certificate of completion.

Formats and cohort size

- Onsite: At your office or a venue you choose, in full days.
- Online, live: Instructor-led over video, usually in half-day sessions so people can keep up with work.
- Hybrid: Some days in a room together, the rest online. Useful when a team works across cities.

Cohort size: 15 to 25 people per trainer. Larger teams run as parallel cohorts on the same outline, so everyone learns the same thing.

Pricing: We quote per cohort, based on duration, format and number of cohorts. There is no per-seat price list: tell us your team and we send a proposal within one business day.

Bring this programme to your team

Request a proposal at cognitivenetworks.ai/contact?programme=rest-assured-api-testing

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