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Updated 06/19/2025

Sign up

Gravitee.io training

3 days (21 hours)

Presentation

Master Gravitee.io to manage, secure and monitor your REST APIs and Kafka events in a single, unified platform. Learn how to deploy a high-performance API gateway, design advanced security policies, monitor your flows, and automate everything with GitOps.

Our Gravitee.io training course will help you get to grips with this powerful open-source solution, ideal for orchestrating synchronous APIs and event-driven flows within a modern architecture.

You'll learn how to secure your APIs via JWT, OAuth2 or IP filtering, create tariffed plans, and expose Kafka flows as if they were classic APIs - with fine-grained management of subscriptions and quotas.

You'll be able to configure observability, set up real-time alerts, and pilot your deployments via CI/CD, Docker or Terraform, all within a complete GitOps logic.

As with all our training courses, it will be run on my latest version of the tool: APIM 4.7.

Objectives

- Understanding Gravitee.io's architecture and key components
- Design, secure and publish REST APIs using policies, subscription plans and a customizable developer portal
- Expose and protect event streams as if they were traditional APIs
- Monitor API activity and events with integrated logs, dashboards and alert systems
- Automate the API lifecycle with GitOps, CLI, Infrastructure as Code and CI/CD integration
- Understanding API-first and event-driven architectures

Target audience

- Developers
- Data Scientists
- Architects
- System administrators
- DevOps

Prerequisites

- Basic knowledge of REST APIs
- Knowledge of a modern development language (Java, Python, Scala)
- Understanding the concepts of messaging and data flow processing

Gravitee.io training program

Introduction to Gravitee.io

- General architecture
- Comparison with Kong, Apigee, WSO2
- REST API exhibition
- Securing a Kafka flow
- Developer portal management
- Docker, Kubernetes, ZIP installation
- Basic configuration (env, ports, logs)

Securing APIs with Gravitee

- User management, roles and permissions
- SSO integration: OAuth2, SAML, LDAP
- Multifactor authentication
- JWT, OAuth2, Basic Auth
- Role-based access control (RBAC)
- IP filtering, CORS, HSTS
- Allocation of quotas, rate-limiting

API design and publication

- Swagger/OpenAPI import
- Visual designer (Drag & Drop)
- Automatic documentation
- Configuring backend endpoints
- Templating responses
- Setting up a developer portal
- Page design, branding
- Automated subscription process

Event management and event APIs

- APIs vs. events: differences and complementarity
- Gravitee Event Native Gateway (Kafka, MQTT, WebSocket)
- CloudEvents format
- Cluster connection
- Declaration of topics, real-time transformations
- Securing event-driven flows such as REST APIs
- Analysis of transited events
- JSON/XML payload mapping
- Event tests and replay

Observability & Monitoring

- Access and error logs
- Latency, throughput and error rate monitoring
- Customized logs
- Create customized dashboards
- Triggering threshold alerts
- Integration with Grafana, Prometheus, Elasticsearch
- History of admin actions
- CSV/JSON exports
- Log retention policy

CI/CD for Gravitee

- GitOps integration: YAML + API Management
- Gravitee CLI & REST API
- Deployment via pipelines (GitLab, Jenkins, etc.)

Infrastructure as Code

- Gateway deployment with Helm
- Creating APIs and plans with Terraform
- Best practices in versioning

Agent Mesh & AI

- Definition and challenges
- Gravitee as middleware for autonomous agents
- Inter-agent query filtering
- Behavioral monitoring
- Logs and content verification

Companies concerned

This course is aimed at both individuals and companies, large or small,

wishing to train its teams in a new advanced IT technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.