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Sign up

Kong API Gateway training: next-generation API management

3 days (21 hours)

Presentation

Our Kong API Gateway training will give you the expertise you need to harness Kong's advanced capabilities and create efficient, secure and scalable API solutions. Our program is designed to focus on Kong's unique features and functionality through next-generation API management.

The course will familiarize you with Kong's basic concepts, guiding you through the configuration of your environment and familiarizing you with Kong's core components. You'll also learn advanced techniques and security features such as [SSL/TLS](#). Concepts related to OAuth 2.0 and JWT will be taught, and you'll learn how to effectively manage traffic within your API ecosystem.

Our training will also cover the critical aspects of microservices architecture, showing you how to integrate Kong seamlessly for optimum performance.

Like all our training courses, it will be run on the [latest v3.8 version](#) of Kong API Gateway.

Objectives

- **Installing and configuring Kong API**
- Understanding Kong's role in API management
- Securing Kong API implementation

Target audience

- **Web developers**

- System engineers

Prerequisites

- Knowledge of Web technologies (HTTP, JSON)
- Knowledge of RESTful principles
- Programming experience

Kong API Gateway training program

Introduction to APIs

- Understanding APIs
- Management and overview
- Gateways
- Kong's role

Kong API installation

- Installation
- Environment configuration
- Kong API configuration
- Understanding architecture

Kong bases

- Create a first route
- Services
- Consumers
- Plugins

Routing

- Host-based routing
- Using expressions in routing
- Header management
- Methods management
- Strip_path option

Security

- SSL/TLS

- API key authentication
- OAuth 2.0
- JSON Web tokens (JWT)

Traffic management

- Flow limitation
- Queries and answers
- API restriction
- White list
- Upstream lead times

Plugins in Kong API

- Plugin ecosystem
- Custom plugins
- Logging plugins
- Caching

Kong Gateway: Integration with Kubernetes

- Ingress Controller
 - Single control for all traffic entering the Kubernetes cluster
- Proxy: exposure of Kubernetes application services (e.g. Deployments, ReplicaSets)

Microservices

- Service discovery
- Load balancing
- Version management

Monitoring

- Monitoring tools
- Log management
- Real-time analysis
- Alerts and notifications

Scaling with Kong API

- Integrating Kong into a cluster
- High availability
- Fault tolerance

- Refining performance
- Good scaling practices

Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer 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.