BLACKBIRD FOR TRAINING

Kong Gateway Operations

13 – 17 December 2026
Online



Kong Gateway Operations

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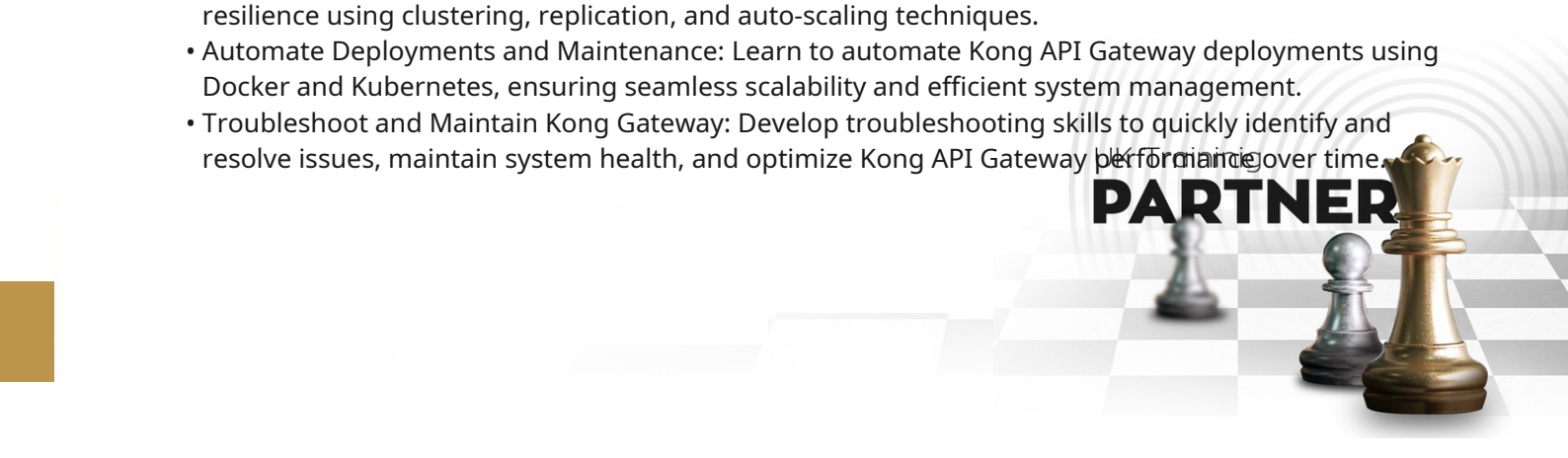
Introduction

Welcome to the Kong Gateway Operations course, a comprehensive and advanced training program tailored to equip you with the skills required to effectively operate and manage Kong API Gateway. Whether you're a developer, DevOps engineer, or system administrator, this course is designed to deepen your understanding of Kong Gateway foundations, giving you the tools needed to optimize API performance and ensure secure, scalable deployments.

This training blends theoretical concepts with hands-on practice, providing a solid grasp of what Kong Gateway is, how it functions in modern API ecosystems, and how to implement API Gateway security best practices. By the end of this program, you'll be fully prepared to manage Kong API Gateway performance, ensuring efficient API management and robust security.

Course Objectives

- Understand the Fundamentals of Kong Gateway: Gain a thorough understanding of Kong Gateway architecture, its components, and integration within modern API infrastructures. Learn how Kong API Gateway supports seamless API management and enhances performance.
- Configure and Deploy Kong API Gateway: Master the installation, configuration, and deployment of Kong Gateway in various environments, from on-premises servers to cloud platforms. Learn how to set up pipelines for efficient deployment and management.
- Manage API Lifecycle: Discover best practices for managing the full API lifecycle using Kong API Gateway, including API design, versioning, authentication, and rate-limiting policies.
- Optimize Load Balancing and Traffic Management: Delve into advanced load balancing techniques and traffic management tools to ensure smooth and efficient API operations. Explore routing strategies, health checks, and circuit-breaking features for optimal Kong Gateway performance.
- Strengthen API Gateway Security: Learn to implement API Gateway security policies and understand the security benefits of using Kong API Gateway. Topics include OAuth 2.0, JWT, and SSL/TLS encryption to protect APIs against potential threats.
- Monitor and Analyze API Performance: Master Kong API Gateway monitoring tools to track real-time performance metrics and optimize resource allocation. Understand how to leverage logging and analytics for better operational insights.
- Ensure High Availability and Scalability: Configure Kong Gateway for high availability, scalability, and resilience using clustering, replication, and auto-scaling techniques.
- Automate Deployments and Maintenance: Learn to automate Kong API Gateway deployments using Docker and Kubernetes, ensuring seamless scalability and efficient system management.
- Troubleshoot and Maintain Kong Gateway: Develop troubleshooting skills to quickly identify and resolve issues, maintain system health, and optimize Kong API Gateway performance over time.



Course Outlines

Day 1: Introduction to Kong Gateway

- Overview of API gateways and their role in modern architecture
- Understanding what is Kong Gateway and its key features
- Installing and configuring Kong API Gateway for the first time
- Setting up Kong Gateway foundations and basic deployment pipelines

Day 2: API Lifecycle Management

- Best practices for API design, versioning, and lifecycle management
- Implementing API authentication and authorization using Kong API Gateway security features
- Rate-limiting and traffic control policies for robust API management

Day 3: Load Balancing and Traffic Management

- Understanding load balancing algorithms and traffic routing in Kong Gateway
- Configuring health checks and circuit-breaking strategies for optimal Kong Gateway performance
- Advanced traffic management techniques for improving uptime and reliability

Day 4: API Gateway Security and Monitoring

- Implementing API Gateway security best practices including encryption SSL/TLS and OAuth 2.0
- Setting up Kong API Gateway monitoring tools for real-time analytics and performance tracking
- Logging and audit trails to ensure API Gateway security compliance

Day 5: Scalability, Automation, and Maintenance

- Scaling Kong Gateway for high availability in production environments
- Automating deployments with Docker and Kubernetes for efficient operations
- Troubleshooting common issues and performing routine maintenance to ensure long-term Kong API Gateway performance
- Preparing for Kong API Gateway certification and advanced deployment scenarios



Why Attend This Course: Wins & Losses!

- Master Kong API Gateway Operations: Gain deep insights into Kong Gateway architecture, deployment, and optimization techniques, ensuring smooth API operations.
- Enhance API Gateway Security: Learn how to implement industry-standard API Gateway security policies, protecting your APIs from threats while maintaining performance.
- Achieve Certification: Prepare for Kong API Gateway certification with hands-on training that builds the skills necessary for real-world API management challenges.
- Optimize Performance and Scalability: Learn how to monitor, troubleshoot, and enhance Kong Gateway performance for maximum efficiency and uptime.

Conclusion

By the end of this course, you'll have mastered the advanced techniques required to deploy, manage, and optimize Kong API Gateway in various environments. With a strong focus on API Gateway security, monitoring, and performance optimization, this training not only prepares you for Kong API Gateway certification but also empowers you to maintain secure, scalable, and high-performing APIs.

Whether you're looking to deepen your understanding of what is Kong Gateway or aiming to streamline your API infrastructure, this course provides the tools and expertise you need to succeed in the evolving world of API management.

