KONG

FWPM MIS
Michael Böhrer
21.11.24

What is KONG API Gateway?

- Open Source API Gateway and Microservices Management Layer
- Acts as a reverse proxy and load balancer
- sits between clients and your services
- handles cross-cutting concerns (security, monitoring, etc.)

Why use KONG?

- Scalable and high-performance (built on NGINX)
- Plugin architecture for easy extensibility
- Support for multiple protocols (REST, gRPC, WebSockets)
- Cloud-native and platform-agnostic
- Available both open-source and enterprise editions

Key Benefits

- Centralised authentication and security
- Traffic control and load balancing
- Request/response transformation
- Monitoring and analytics
- Service discovery
- Rate limiting and caching

Architecture Overview
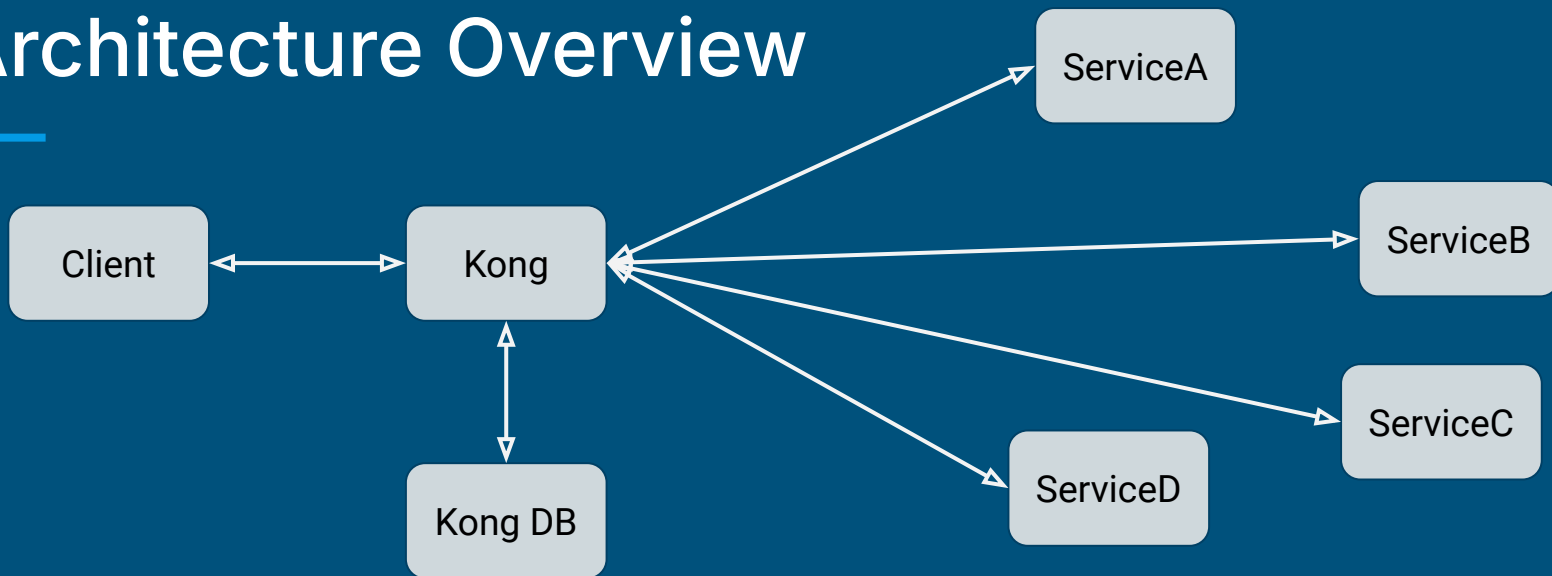
- Stateless nodes for horizontal scaling
- supports both DB-less and DB-backed modes
- Compatible with PostgresQL or Cassandra

Core Concepts

- Services
- Routes
- Plugins
- Consumers
- Admin API

```yaml
services:

  - host: node-api
    name: node-api-auth
    port: 3001
    protocol: http
    plugins:
      - name: jwt
        enabled: true
        config:
          key_claim_name: iss
          claims_to_verify:
            - exp
          secret_is_base64: false
          run_on_preflight: true
    routes:
      - name: node-auth
        paths:
          - /node/protected
        strip_path: false
        methods:
          - GET
```

(Some) Alternatives

- KrakenD
- Tyk
- Traefik
- AWS API Gateway
- Azure API Gateway
- Gravitee.io