

# OpenShift / Keycloak SSO / Kong

Nachmittag Session

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# Agenda

1. Authentication Basics
2. Keycloak SSO
3. Kong API Gateway
4. Advanced Topics

# Authentication Basics

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# Authentication vs. Authorization

## Authentication

Authentication is the process of ascertaining that somebody really is who he claims to be.

⇒ *login + password (who you are)*

## Authorization

Authorization refers to rules that determine who is allowed to do what.

⇒ *permissions (what you are allowed to do)*

- Single-Sign-On (SSO)
- OAuth & OpenID Connect (OIDC)
- JSON Web Token (JWT)
- Access Token & Refresh Token

# Keycloak SSO

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- Open Source
- Single-Sign-On / Identity Management
- Java
- JBoss / Wildfly

- Realms
- Clients
- User
- User Federation / Identity Provider
- Authentication Flow



- Roles / Client Roles
- Groups
- Scopes / Client Scopes

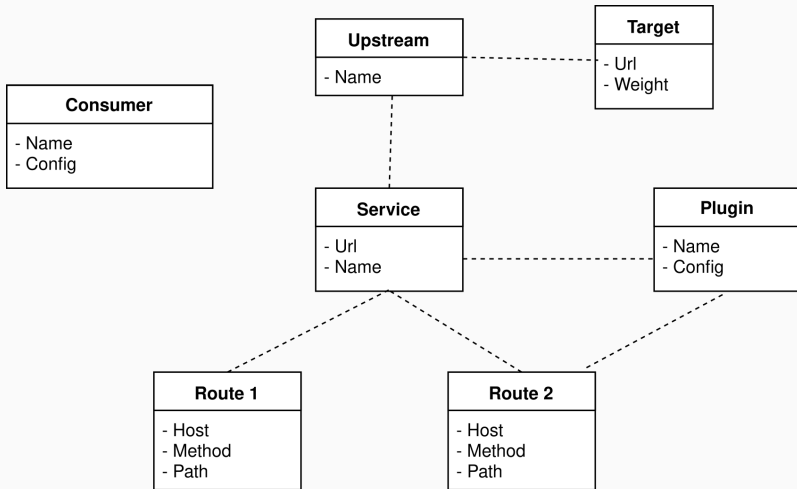
# Hands-On Keycloak

# Kong API Gateway

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- API Verwaltung
  - Analysiere & Modifiziere Requests
  - Plugins für erweiterte Funktionen
  - Open Source
- Nginx
  - Cassandra / PostgreSQL
  - Administration via REST

# Terminologie

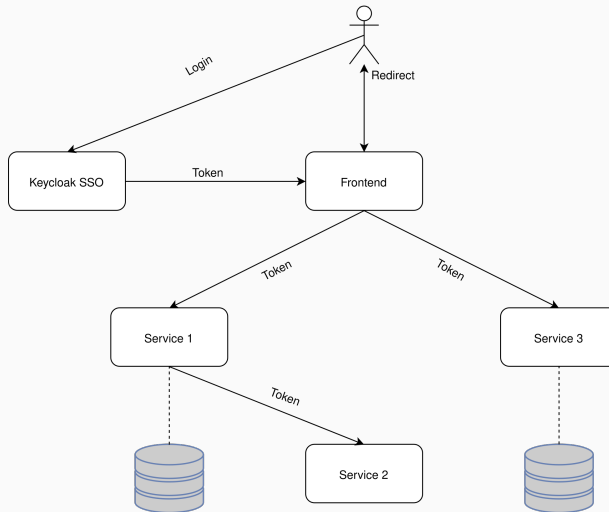


# Kong Load Balancing

- DNS based (SRV, A, CNAME)
- Round Robin / Ring Buffer
- Weighted

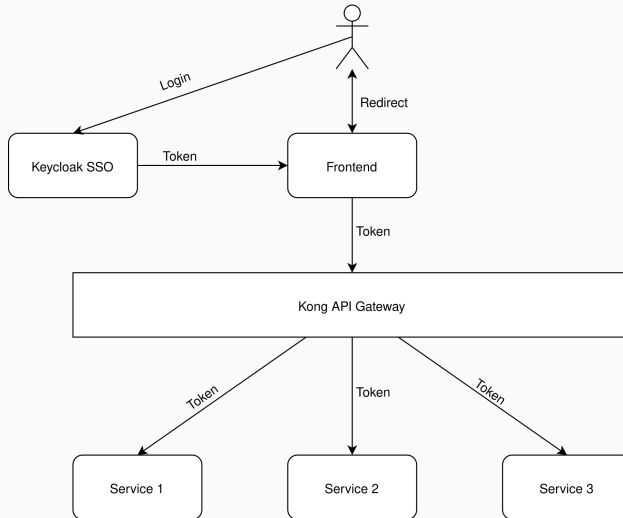
## Hands-On Kong

# Microservice Architektur





# Microservice Architektur (mit Kong)



# Integrated Prototype

## Advanced Topics

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- Databases
- Keycloak
- Kong

- Secure Kong Admin API
- Statelessness (PHP Session!!!)
- API Versioning
- Request Logging
- Cluster Backup