What are Microservices?
What are Microservices?

- Split up the application into single services based on business capabilities
- Communicating with lightweight mechanisms e.g. REST over HTTP (SOAP isn’t lightweight!)
- Each Microservice is running in its own process
What are the Benefits?

- Scalability
- Fault-tolerance
- Polyglot Development
- Organisational Alignment
- Small Code Bases
- Independent Deployment
The Challenges of Microservice Architectures

- Monitoring
- Decomposition
- Distributed Data
- Transactions
- Distributed State
- Shared Code
- Versioning
- Failure Handling
- Security
- Service Discovery
- Testing
- ...
Service Discovery
Service Discovery?
Service Discovery - Different Views

Infrastructure View

- one central registry
- already available

Application View

- one registry per application
- portable infrastructure
- allows application specific features
Eureka

- Part of Netflix OSS
- Single purpose registry
- REST-interface

- Comes with a Java client
- Very good integration into Spring
- Allows client side load balancing via Ribbon

Demo Time!
Consumer-Driven Contracts
Difficulties with Testing Microservices

- Commit Stage
- Testing
- Production

- V2
- V2
- V2

- V2
- V2
- V2
Difficulties with Testing Microservices
Solution: Consumer Contracts!
Solution: Consumer-Driven Contract Testing
Thank you for listening!

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