



Cooking
~~Juggling~~ **Microservices with
Consul and Spring**

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OpenSlava 2016



configuration
registry
discovery
health



Hashicorp Consul

- run an agent
- use the REST API
- observe GUI

http://___:8600/ui



SERVICES

NODES

KEY/VALUE

ACL

DC1 ▾



Filter by name

any status ▾

EXPAND

consul

1 passing

consul

TAGS

No tags

NODES

whitehall 127.0.0.1

1 passing

Serf Health Status serfHealth

passing



Key-Value Store

nested directories

arbitrary values

distributed/scalable



SERVICES

NODES

KEY/VALUE

ACL

DC1 ▾



CONFIG/OPENSJAVA-DEMO/ +

- spring.datasource.password
- spring.datasource.url
- spring.datasource.username
- version**

config/openslava-demo/version

2016.1

UPDATE **CANCEL** **DELETE KEY**



Spring Boot + Consul

pom.xml >
spring-cloud-starter-consul-all



integrate into

```
private Environment env
```

or

```
@Value("${app.version}")  
private String version
```



Service Registry



```
@SpringBootApplication  
@EnableDiscoveryClient  
public class Configuration
```


http://___:8600/ui



SERVICES

NODES

KEY/VALUE

ACL

DC1 ▾



Filter by name

any status ▾

EXPAND

consul

1 passing

elasticsearch

1 passing

mysql

1 passing

openslava-demo

1 passing

rabbitmq

1 passing

openslava-demo

TAGS

No tags

NODES

whitehall 127.0.0.1

1 passing

Serf Health Status serfHealth

passing



Discovery via Consul DNS

bind | dnsmasq |
resolver



```
ping openslava-demo.service.consul
```

```
dig @127.0.0.1
```

```
-p 8600
```

```
openslava-demo.service.consul
```

```
ANY
```




Health Checks

TCP | HTTP | script
with intervals
with TTL



@EnableDiscoveryClient
integrate with /health



SERVICES

NODES

KEY/VALUE

ACL

DC1 ▾



Filter by name

any status ▾

EXPAND

	consul	1 passing
	elasticsearch	1 passing
	mysql	1 passing
	openslava-demo	1 failing
	rabbitmq	1 passing

openslava-demo

TAGS

No tags

NODES

	whitehall 127.0.0.1	1 failing
	Serf Health Status serfHealth	passing
	Service 'openslava-demo' check service:openslava-demo	critical



- deployment environments
- load balancing
- config reloading
- Docker integration



Thanks!