Consul: Discover your Services

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Why are we talking about Consul?
Distributed Systems are the new normality
Problem Areas

Monitoring

Configuration

Service Discovery

Orchestration
What exactly is Service Discovery?
Static Configuration

Client

Konfig
10.11.12.13

Server
Semantic DNS

Client

Konfig
superservice.
domain.local

SuperService
DNS and Loadbalancer
Discovery via Registry
Using Consul for Service Discovery
How does this work?
Local agents everywhere
Server are cluster state aware
Communication between cluster nodes

Jim?

Jim is dead!

Jim is dead!

Jim is dead!

Jim is dead!

Jim is dead!
Interaction of agents
Complex example
Real World Use Case
DNS?
DNS? -> No
REST-API?
REST-API? -> No
Consul & HAProxy
Show case
DEMO
But there is more...
Features of Consul
Service registry

Consul
Consul

Service registry

DNS Server

Example on Github
Consul

Service registry

DNS Server

HTTP API

Example on Github
Consul

Service registry

DNS Server

HTTP API

Key Value Store
Consul

- Service registry
- DNS Server
- Locks
- HTTP API
- Key Value Store
- Example on Github
Consul

- Service registry
- Remote Execution
- DNS Server
- Locks
- HTTP API
- Key Value Store
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Consul

- Service registry
- DNS Server
- Remote Execution
- Locks
- HTTP API
- Key Value Store
- Watches & Events

Example on Github
Consul

- Service registry
- DNS Server
- Remote Execution
- Locks
- HTTP API
- Watches & Events
- Key Value Store
- Checks

Example on Github
Consul

- Multiple Datacenters
- Service registry
- Remote Execution
- DNS Server
- Locks
- Checks
- HTTP API
- Watches & Events
- Key Value Store
- Encryption and ACLs
Consul

Multiple Datacenters  Remote Execution
Service registry

DNS Server

Third party integrations

Locks

DNS Server

Checks

HTTP API

Key Value Store

Encryption and ACLs

Watches & Events
Summary
State of Consul
Difficulties today
The potential rises while using it
More on Consul

Getting started:
https://consul.io/intro/index.html

Documentation:
https://consul.io/docs/index.html

Our examples:
https://github.com/JoergM/consul-examples
Q & A