

Introduction to MANTL



Marco Capuccini

Services layers

1. Software as a Service (SaaS)

- Docker microservices

1. Platform as a Service (PaaS)

- Microservices orchestration

1. Infrastructure as a Service (IaaS)

- Amazon EC2, Google Compute Engine, OpenStack...

Mesosphere (1)

A collection of frameworks that run on top of Mesos.

Docker containers orchestration:

1. Marathon (long-lasting services)
 - Scalability and fault tolerance
 - Jupyter, Galaxy etc...
1. Chronos (workflows)
 - Scalability and fault tolerance



Mesosphere (2)

Mesosphere does not say anything about:

- How the infrastructure should look like
- How to provide high-availability
- How to access the microservices
- How to deploy on your favorite IaaS provider
- ...

MANTL by Cisco Cloud

A modern platform for rapidly deploying globally distributed services

- Defines the infrastructure
- Docker orchestration through Mesosphere (and Kubernetes in the future)
- High-availability, scalability and fault tolerance
- Provides a way to deploy on your favourite IaaS provider



MANTL components

Rapid deployment

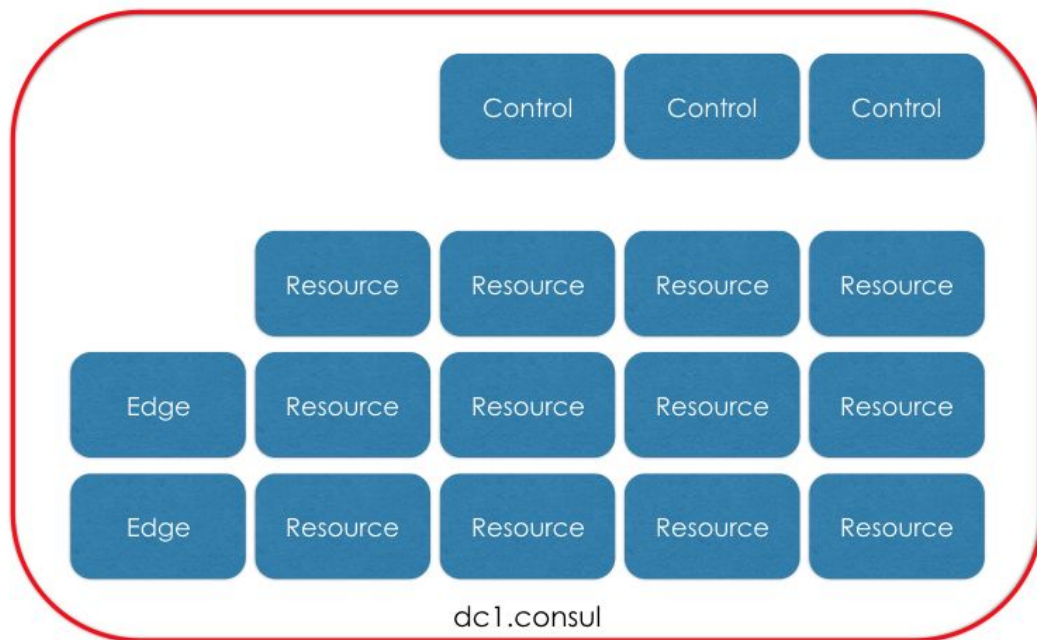
- **Terraform** for host cloud provisioning (it includes DNS settings)
- **Ansible** for VMs provisioning

Microservices orchestration

- **Mesos/Marathon/Chronos** for Docker container orchestration
- **Traefik** for service discovery
- **GlusterFS** distributed file system for sharing data among containers
- **Consul** for interconnecting multiple MANTL clusters

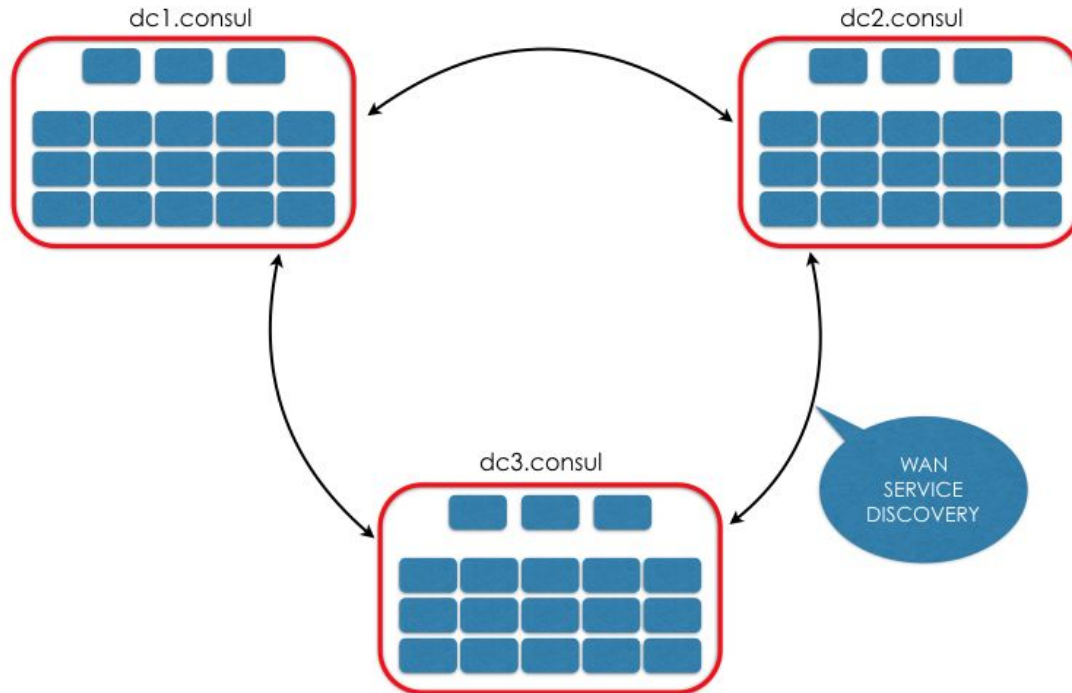
MANTL architecture (1)

Single Datacenter



MANTL architecture (2)

Multiple Datacenter



Live demo

Link to IaaS:

<https://console.cloud.google.com/compute/instances?project=phenomenal-1145>

Link to control node:

<https://control.demo.phenomenal.cloud/ui/>

Questions

