HashiCorp
Consul

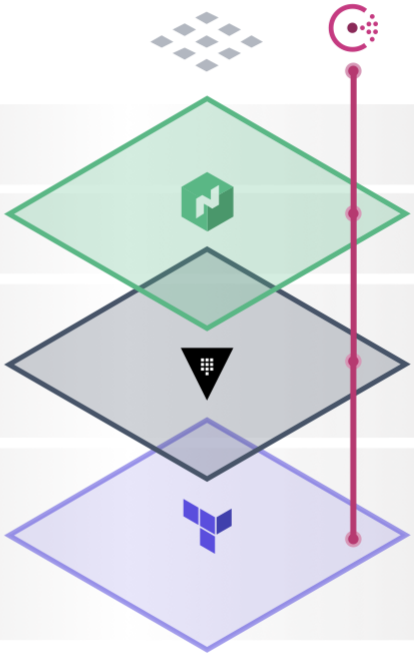
Consul Service Mesh

Distributed service networking layer to connect, secure, and configure services.

Presenter Name

Title, Affiliation
@socialmedia

HashiCorp Suite



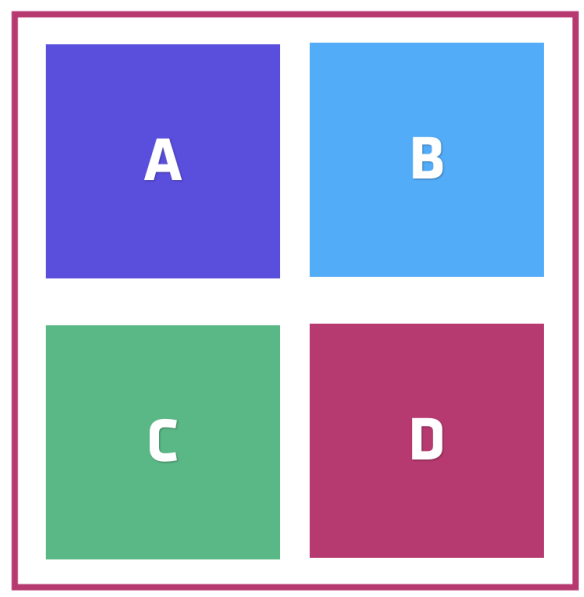
	OSS TOOL SUITE	PRODUCT SUITE
CONNECT Infrastructure & applications	Consul	Consul Enterprise
RUN Applications	Nomad	Nomad Enterprise
SECURE Infrastructure & applications	Vault	Vault Enterprise
PROVISION Infrastructure	Terraform Packer Vagrant	Terraform Enterprise
		FOR TEAMS

From Monoliths to Microservices

A trend toward dynamic infrastructure

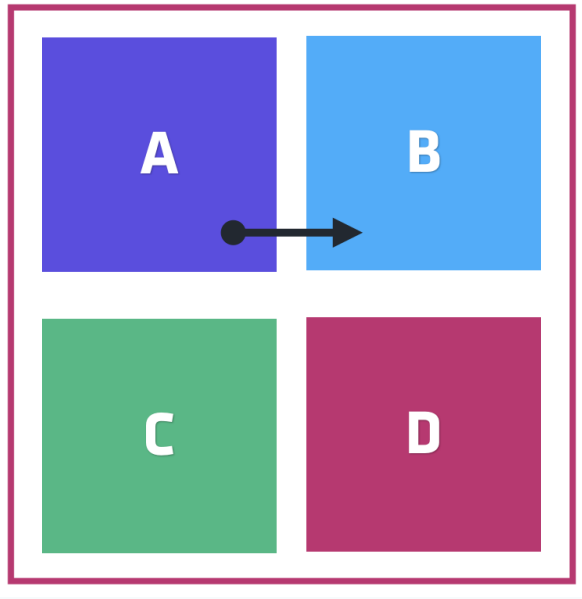
Monoliths: How do they even work?

Monolith



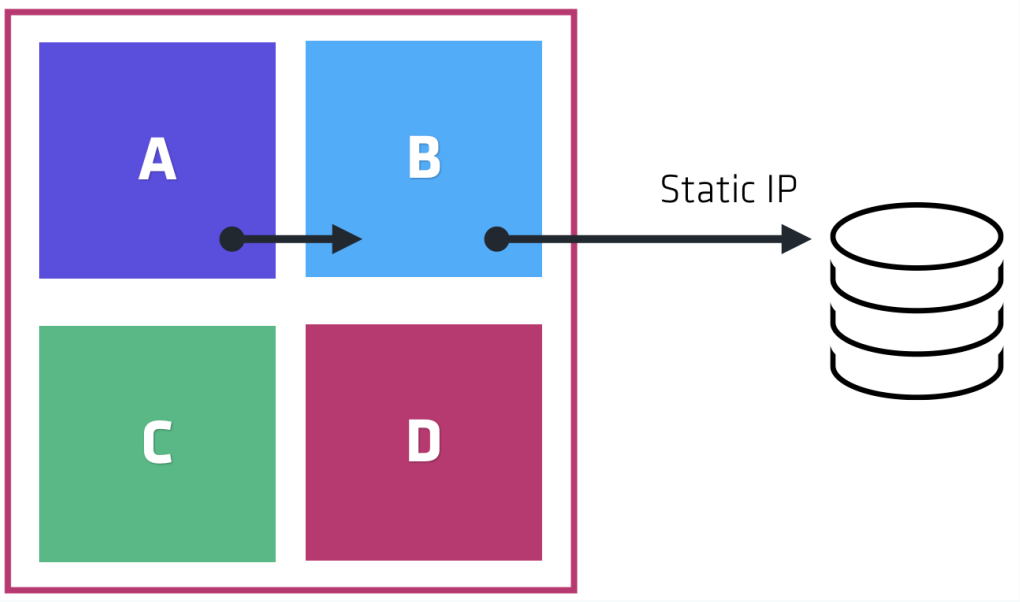
Many subsystems deployed as a single application.

Monolith



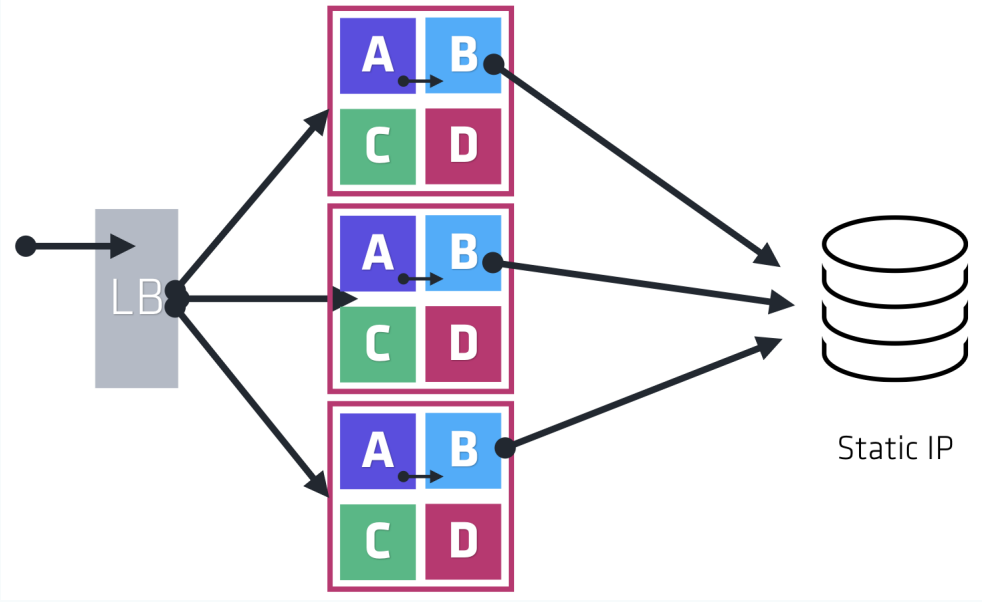
Subsystem calls stay within node. No network calls.

Monolith



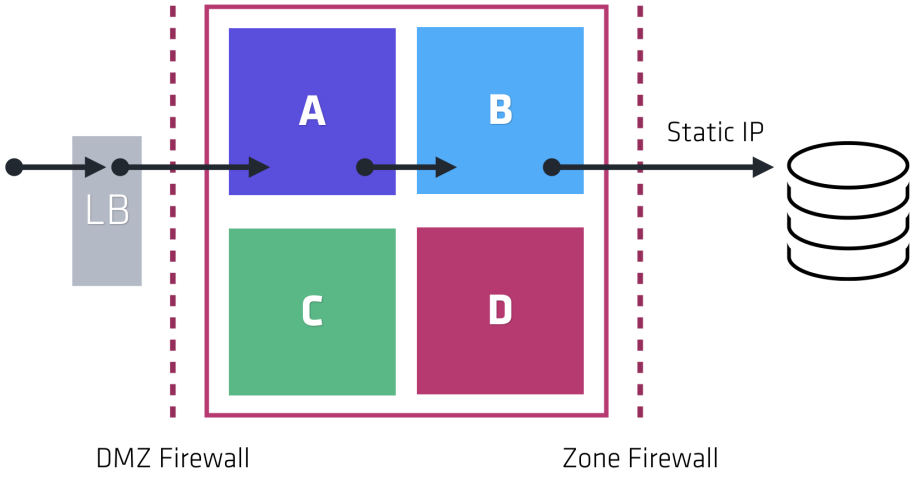
Static IP addressing typical for network calls.

Monolith



To scale, deploy many copies with load balancer.

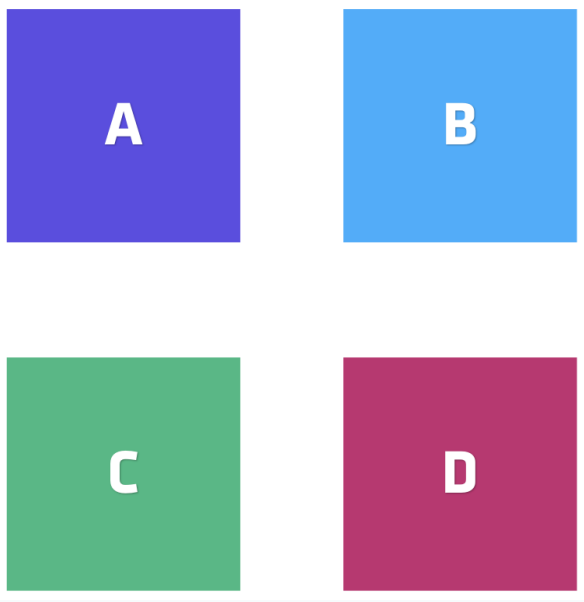
Monolith



Firewalls for security.

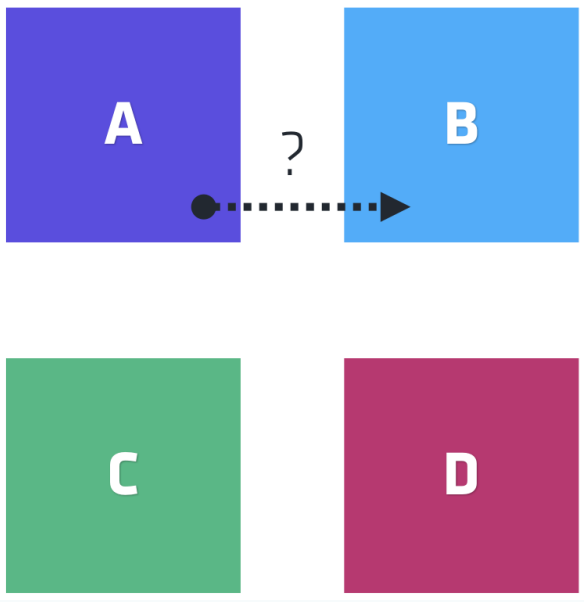
What about Microservices?

Microservices



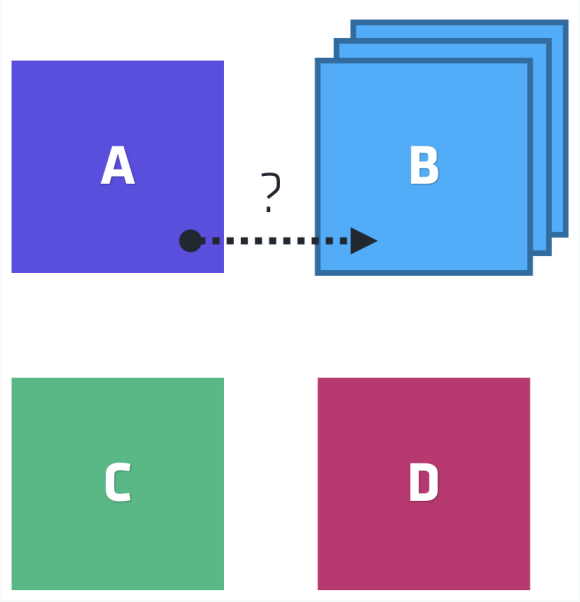
Subsystems now deployed separately. More agile.

Microservices



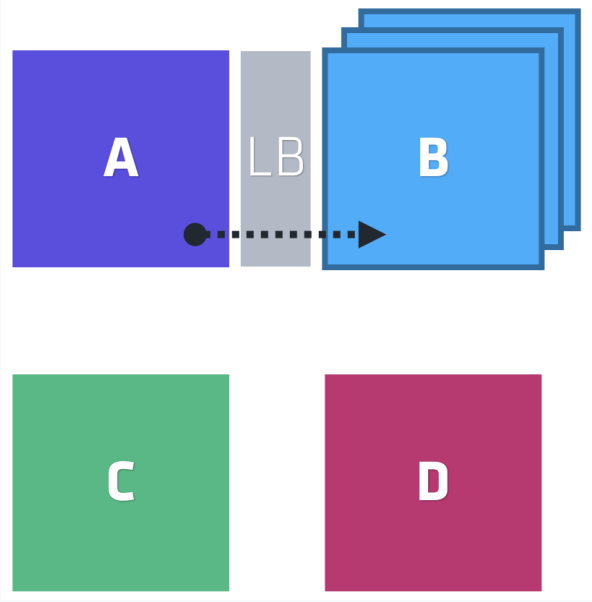
Agility comes with new operational challenges.

Microservices



e.g., Static addressing difficult to scale with multiplicity of instances.

Microservices



Load balancer anti-pattern.

Additional challenges

Clouds & Containers

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- Dynamic IP Addresses

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- Higher Failure Rate

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- Dynamic IP Addresses
- Higher Failure Rate
- Ephemeral Infrastructure

Additional challenges

Clouds & Containers

- Dynamic IP Addresses
- Higher Failure Rate
- Ephemeral Infrastructure
- Complex Network Topology

Code Sample

```
service {
  name = "redis"
  port = 8000
  tags = ["global"]
```