

Devops Blind Spots

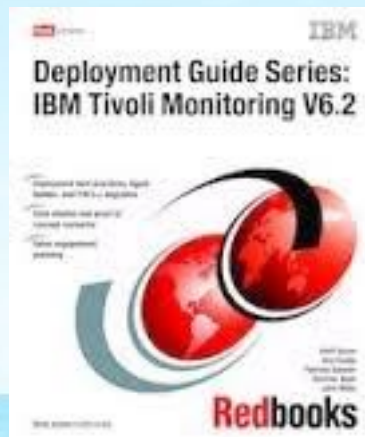


John Willis
@botchagalupe

DEVOPS
ENTERPRISE
SUMMIT



Who am I



Catastrophic Blind Spots



Devops Blind Spots

Compute

Storage

Network



Shorting the Gap



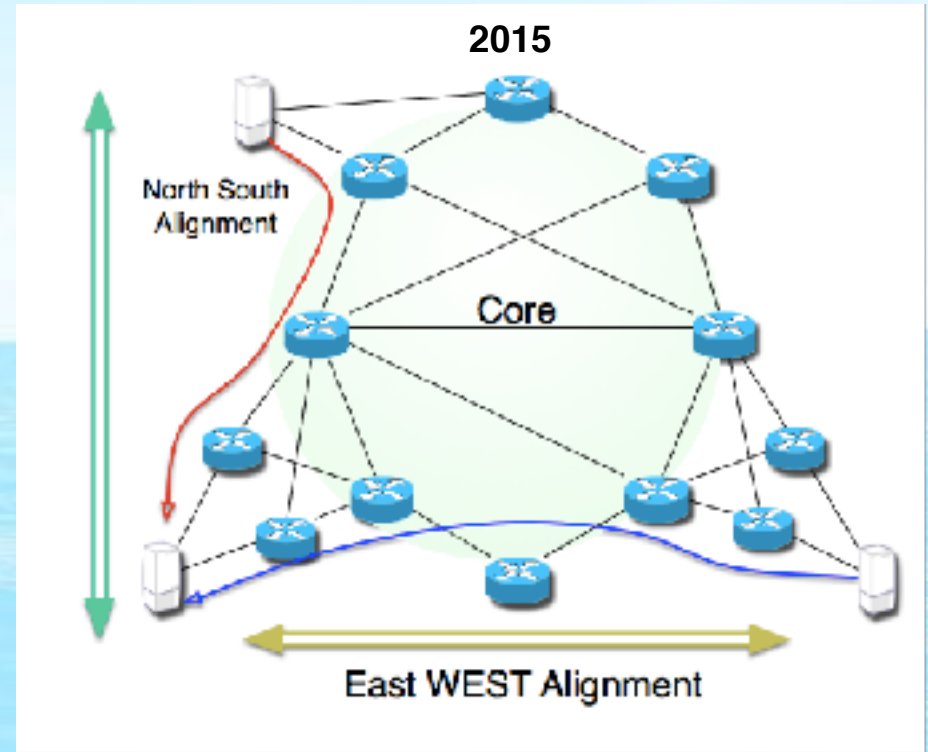
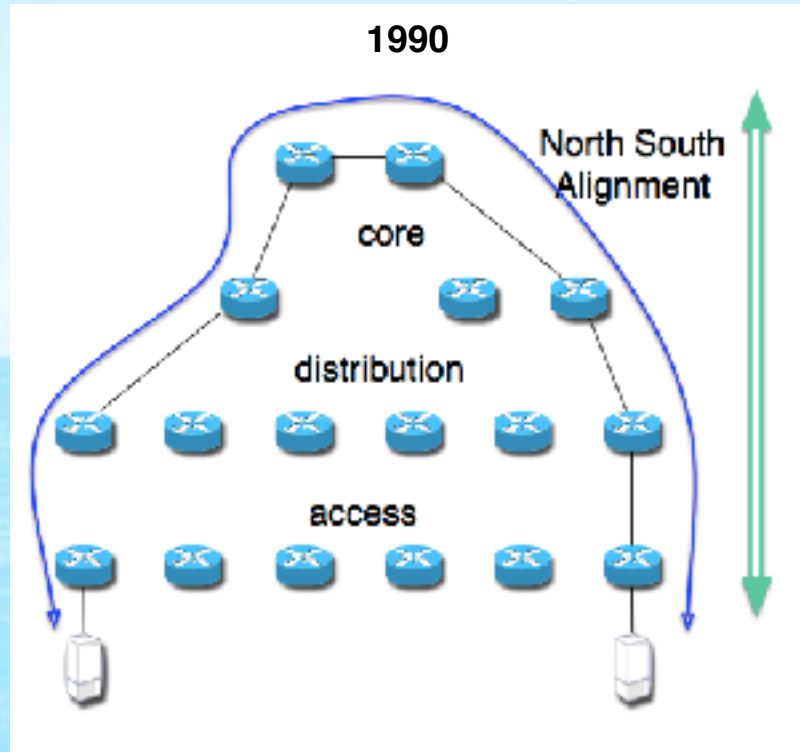
What Changed Compute

- Disaggregation of Hardware/Software
- Web Scale and Open Source
- Public Cloud Computing
- Software Eating the World

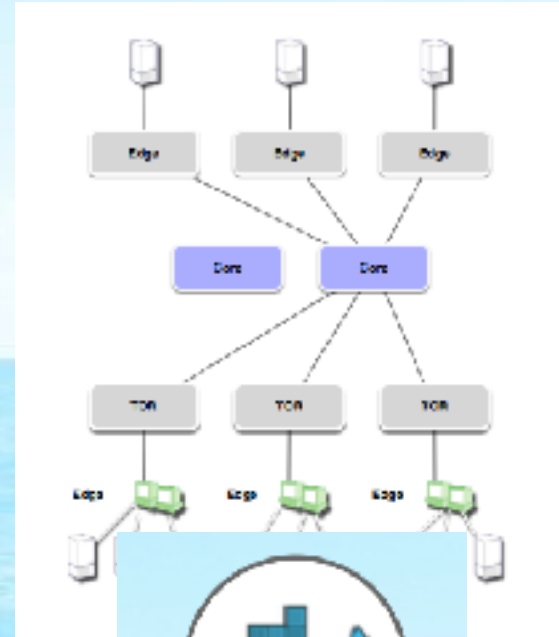
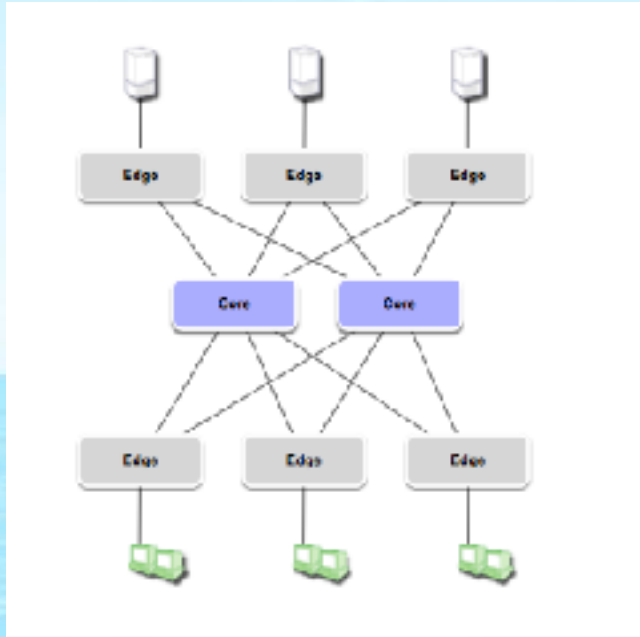
What is Changing Networks

- Disaggregation of Hardware/Software
- Web Scale and Open Source
- Private Cloud Computing
- Software Eating the World

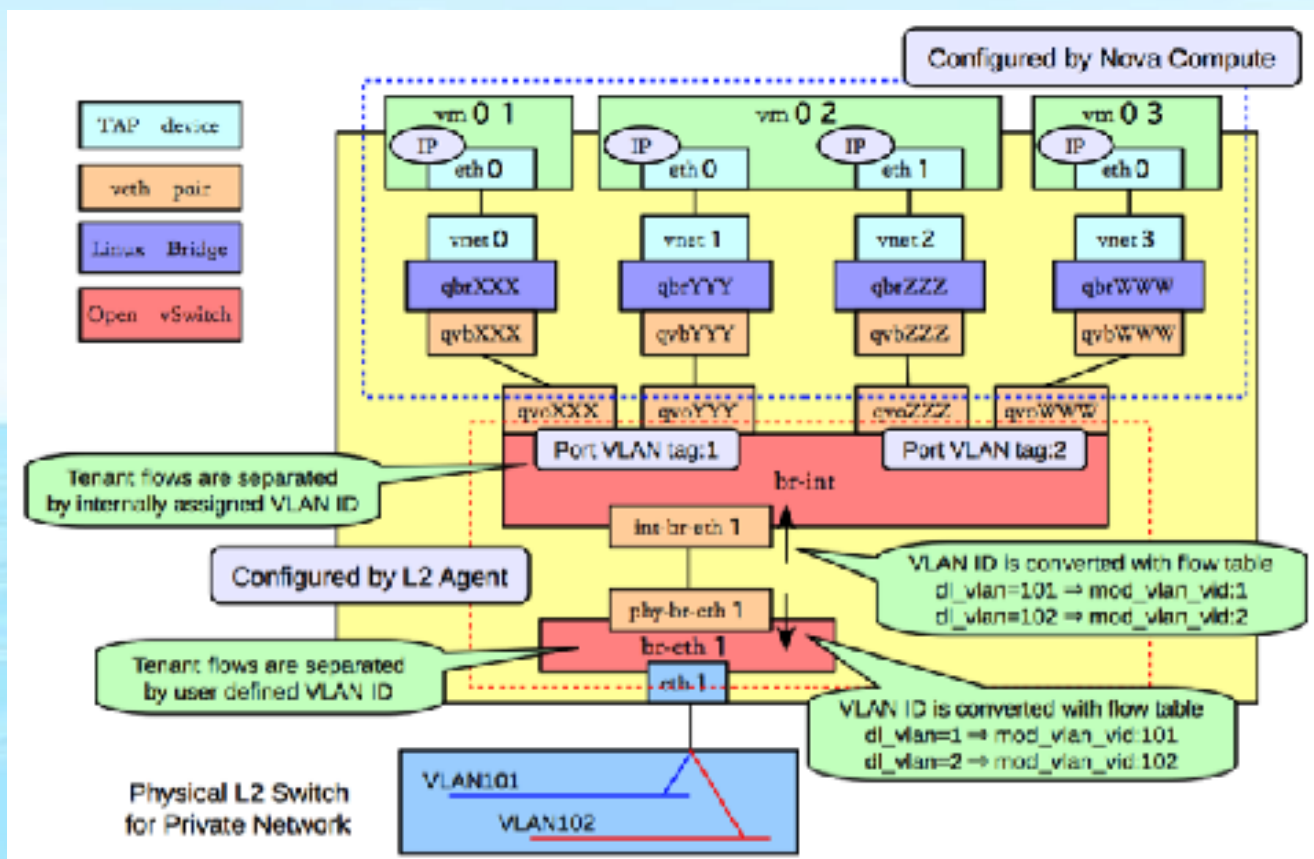
Changing Traffic Patterns



The Moving Edge



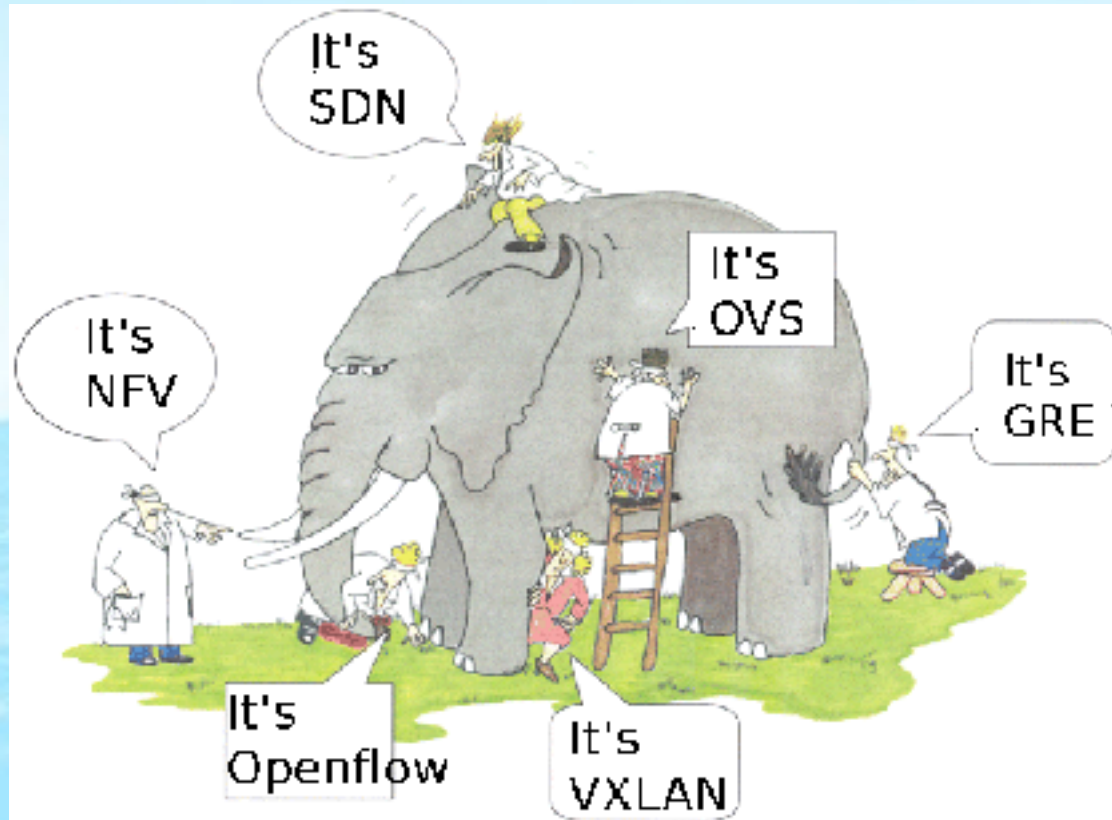
Your Host is the Edge



Linux Based Switches

- Arista (EOS)
- Juniper (JunOS)
- Cisco (Insieme)
- Cumulus Networks
- Bare Metal Switches
- Open Compute Project

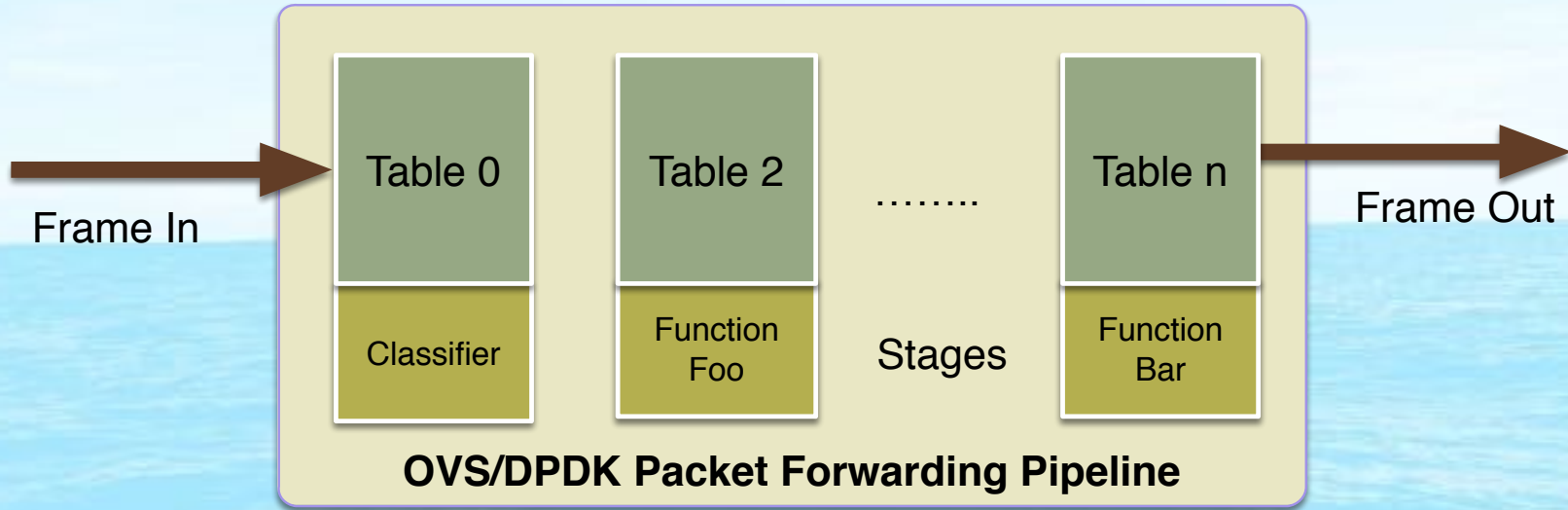
SDN - The Elephant in the Room



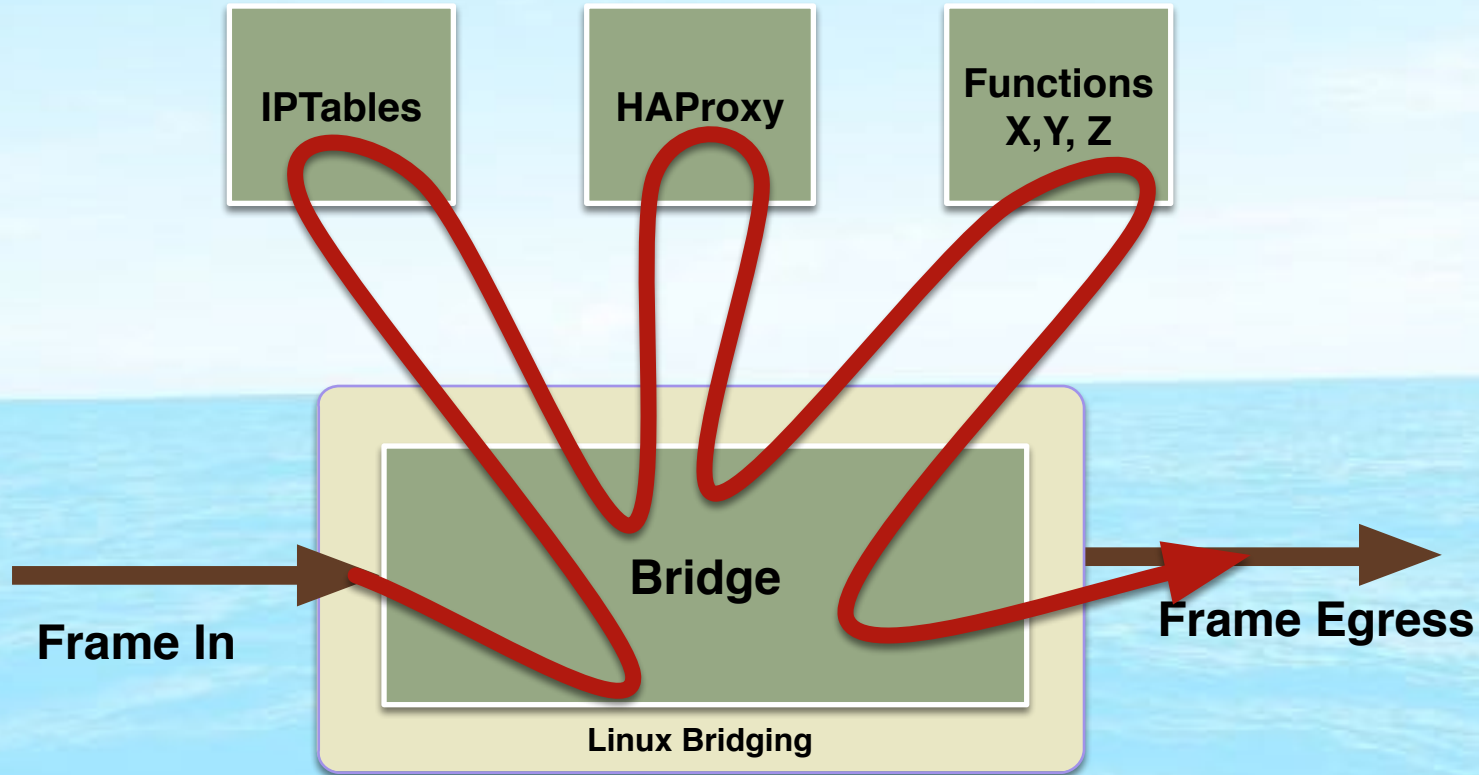
Software Defined Networking



Programmable Data Paths



As Opposed to This



Composable Infrastructure

Composability is a system design principle that deals with the inter-relationships of components. A highly composable system provides recombinant components that can be selected and assembled in various combinations to satisfy specific user requirements.

Wikipedia

Consumable Composable Infrastructure

The task:

Read a file of text, determine the n most frequently used words, and print out a sorted list of those words along with their frequencies.

McIlroy's shell script

```
1 tr -cs A-Za-z '\n' |
2 tr A-Z a-z |
3 sort |
4 uniq -c |
5 sort -rn |
6 sed ${1}q
```

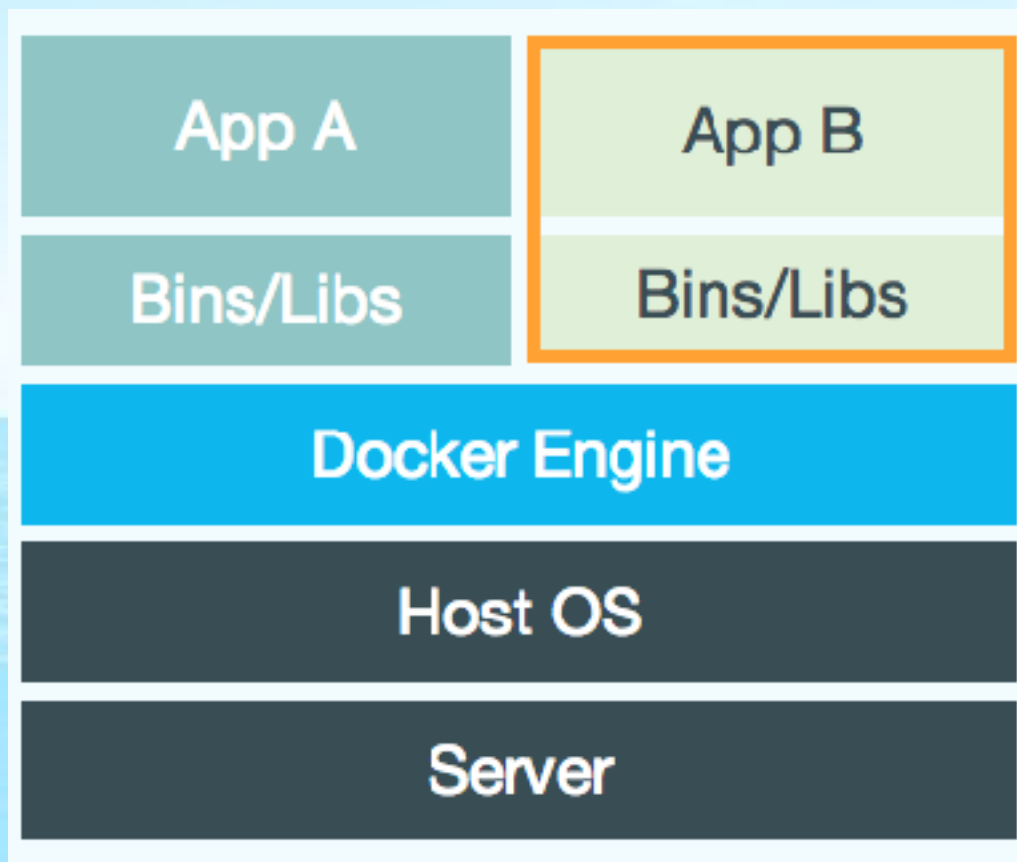
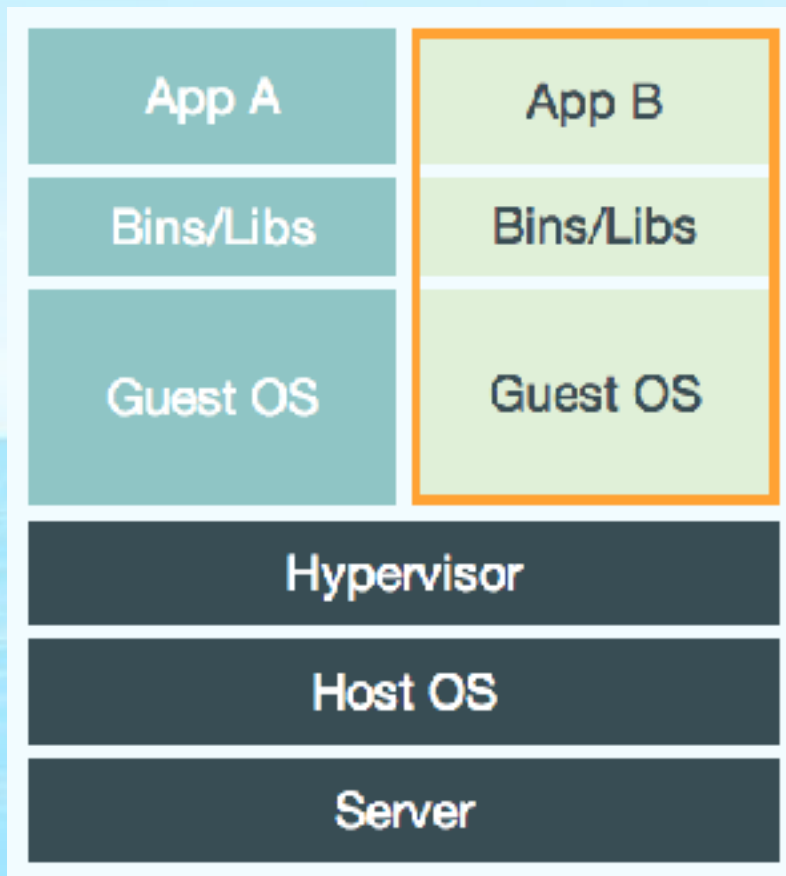
Consumable Composable Infrastructure

- Bare Metal (8 weeks)
- Virtualization (2 weeks)
- IaaS (2 minutes)
- PaaS (1 minutes)
- Containers (500 ms)

Consumable Composable Infrastructure

- Docker
- Commoditized Containers
- Portable Images
- Using a Git Like Workflow

Docker



Adjustments Required



Devops and Networking

- Rethink Configuration Management
- Ready State Networks
- SDLC for Network Configuration
- Transparent to Developers

Devops and Networking

- Embedded Netops
- Value Stream Mapping
- Adopting a Pull Ideology
- Netops at Hack Days
- Let Netops Have Fun Too

HELP!

