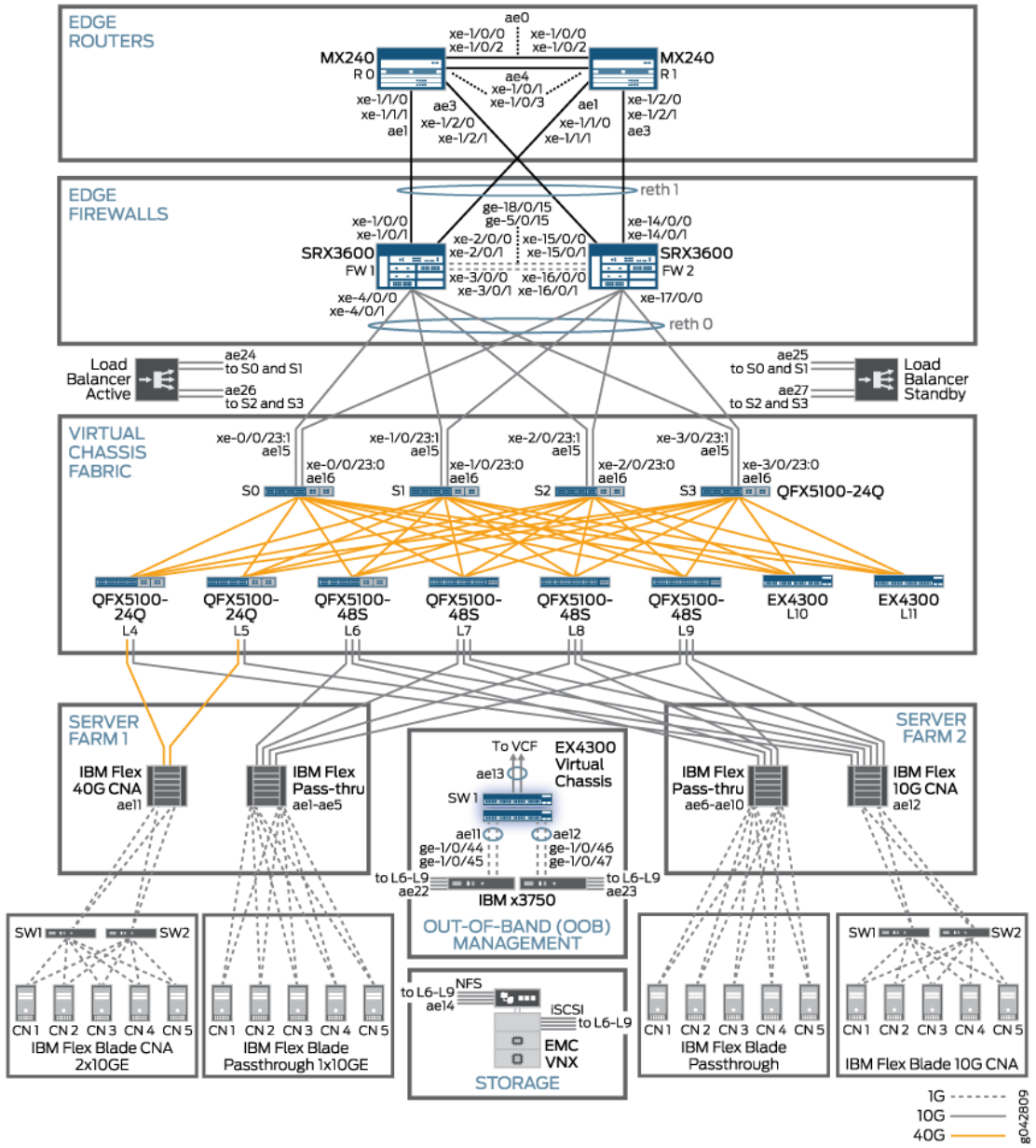
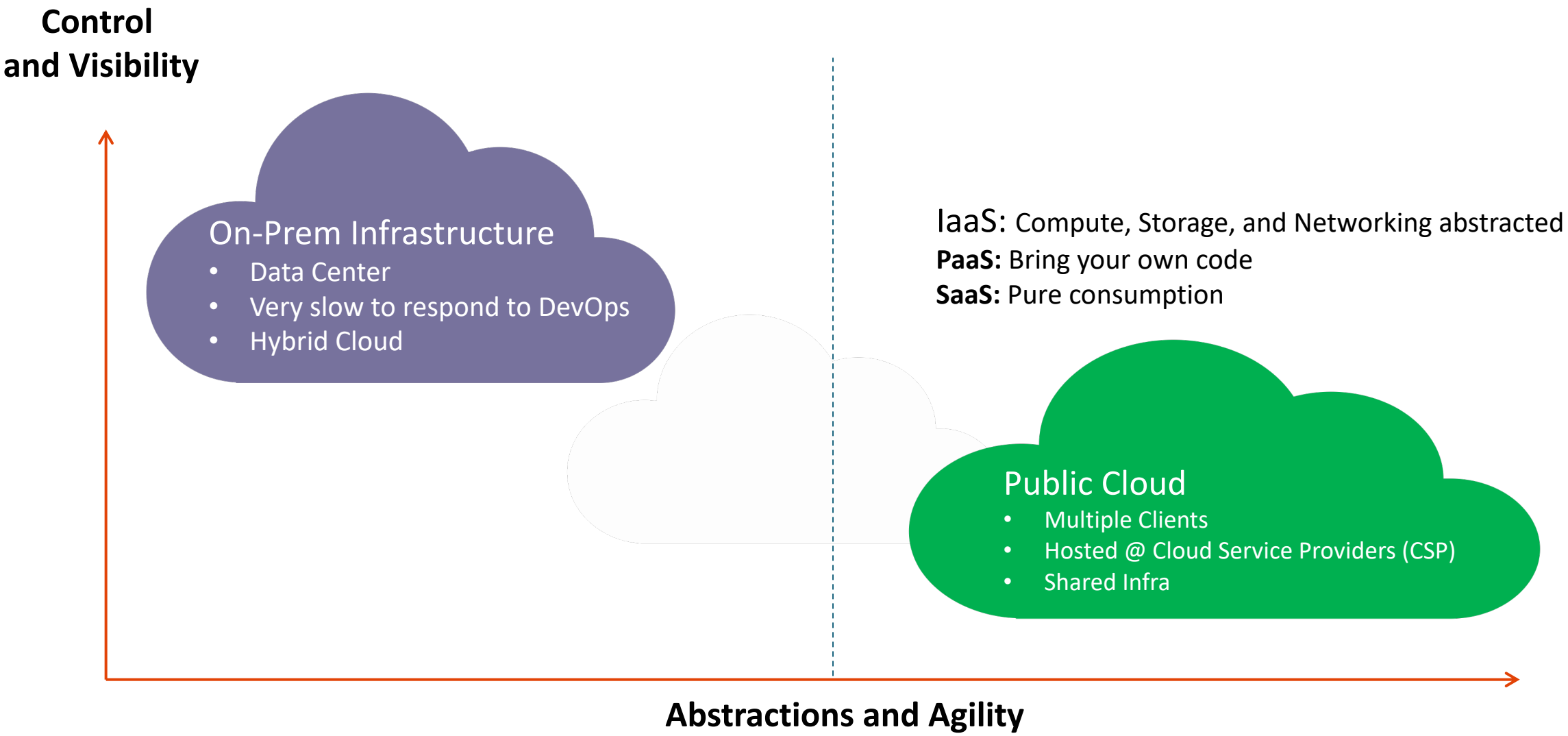
Introduction to Public Cloud Networking

FUNDAMENTALS

On-Prem Data Center Networks Control and Visibility



On-Prem Infrastructure vs Public Cloud



Public Cloud Basics

Public Cloud is just some one else's data center.
Your data center is/was not perfect and had issues.
Data Centers of Cloud Service Providers are no different.

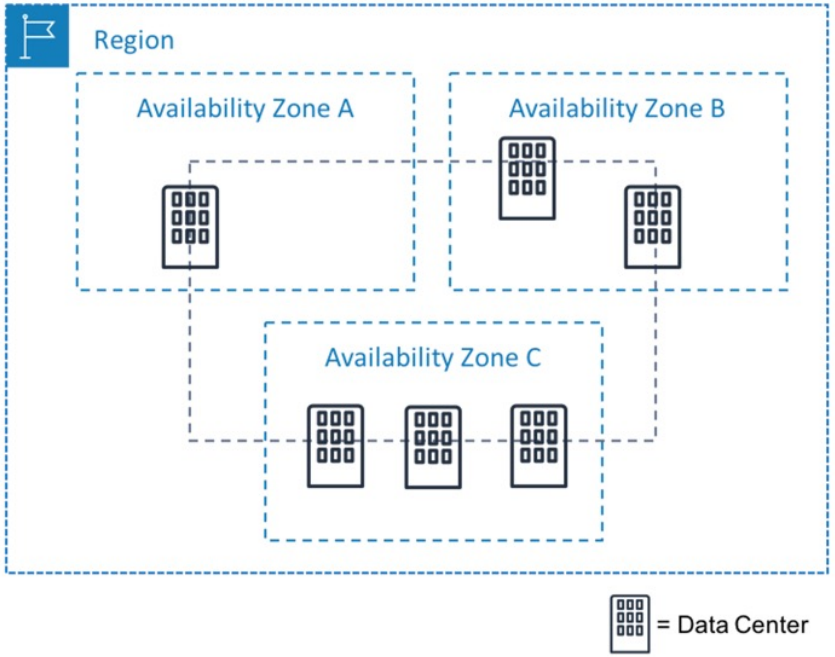
Except you have no visibility or control over it

Region

- Data Centers are grouped in geographic regions to provide **service** availability.
- Examples: US-West, US-East, Europe, Middle East, Australia etc.

Availability Zone (Data Center)

- Distinct locations within a region that are engineered to be isolated from failures
- Low-latency network connectivity to other Availability Zones in the same region
- Not all CSPs have regions with multiple Availability Zones
  - Fault Domains / Availability Domains offer multiple racks / power lines for redundancy
- AZs are randomized outside of an account



Important Services Common to Every CSP

Function	Comments
Identity and Access Management	Who can do What to Which resource
Service	Compute, Storage, Network, Database
Resource	Specific instances that you can create (aka *Constructs*)
Virtual Data Center	Collection of resources that you can create within a geography
Dedicated Connectivity	Private path connectivity from on-prem to CSP region

Networking Areas to Consider in Cloud

- Transit Networking
  - Hub-and-spoke Architecture
  - Intra-region, inter-region, inter-cloud
- Connecting to Data Center over private links
- Connecting to customers and one-off branches
- Connecting to fleet of branches
- Connecting to users
- Connecting resources to Internet
- Connecting to resources from Internet

Consistent routing, ensuring end-to-end network correctness

Next: AWS Networking 101