The Cloud: How We Got Here and How It Will Drive Business Innovation in the Future

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June 2019

Topics

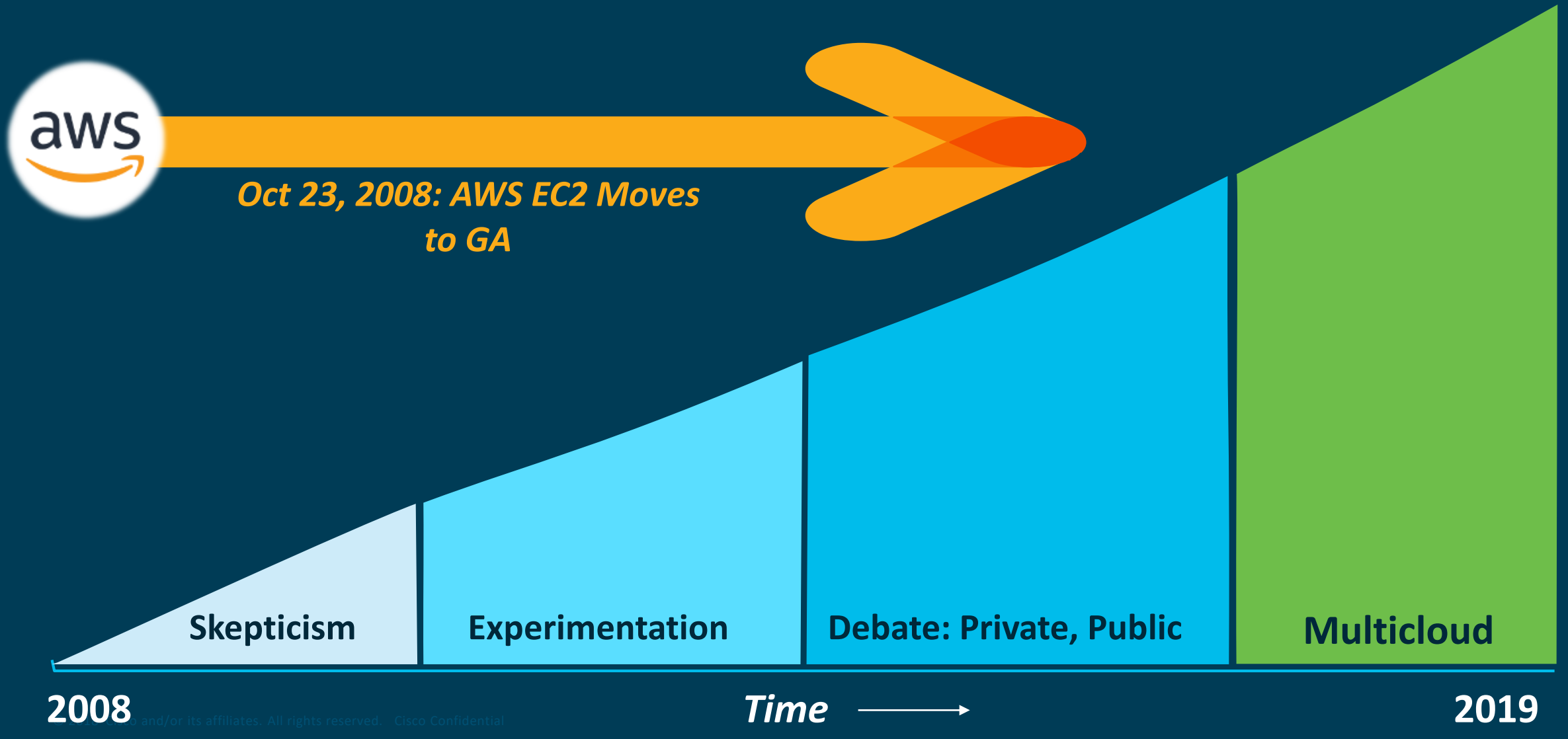
- How did we get to the Cloud?
- What are the Trends for the Cloud Going Forward?
- How has Cisco Aligned with these trends?

Cost

Speed

Innovation

A Decade of Transition in the Cloud



It’s a multicloud world

evaluating or using public cloud

taken steps towards a hybrid cloud strategy

plan to use multiple clouds

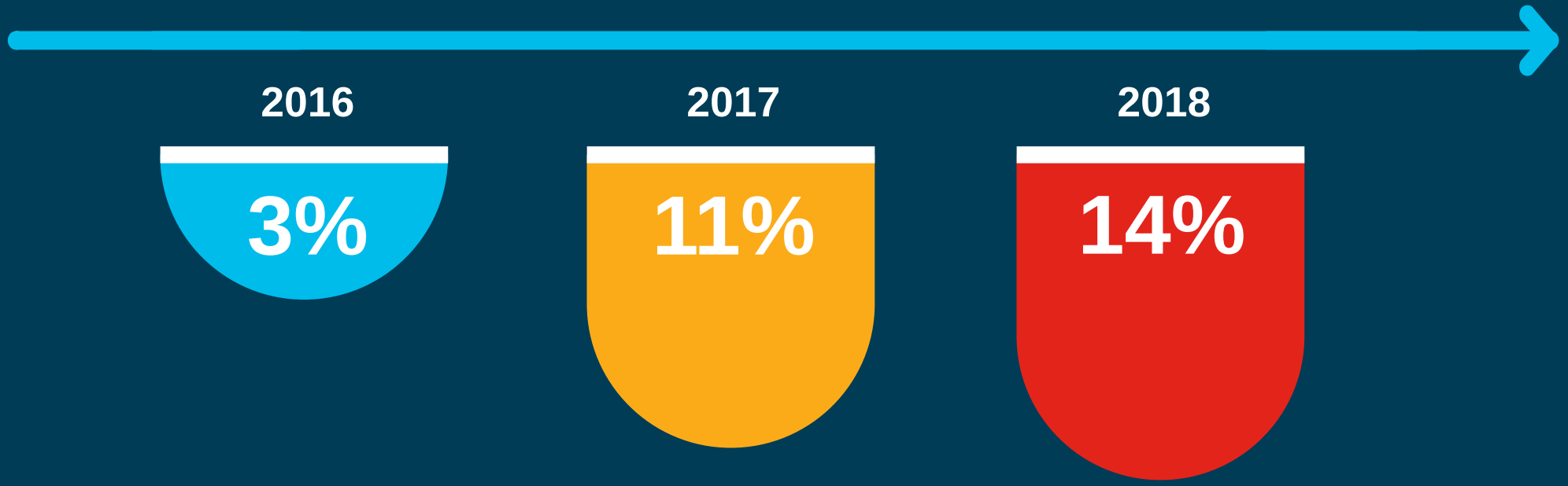
Among cloud users

Averages: All Clouds – 4, Public Clouds – 3.2, Private Clouds - 3

Source: IDC CloudView, May, 2018, n=5,740 worldwide respondents, unweighted

Cloud maturity is increasing but only 14% optimized

Percentage of customers with optimized cloud strategies



Source: IDC CloudView, 2016-2017-1018

The reality is anything but simple

Multiple public cloud services

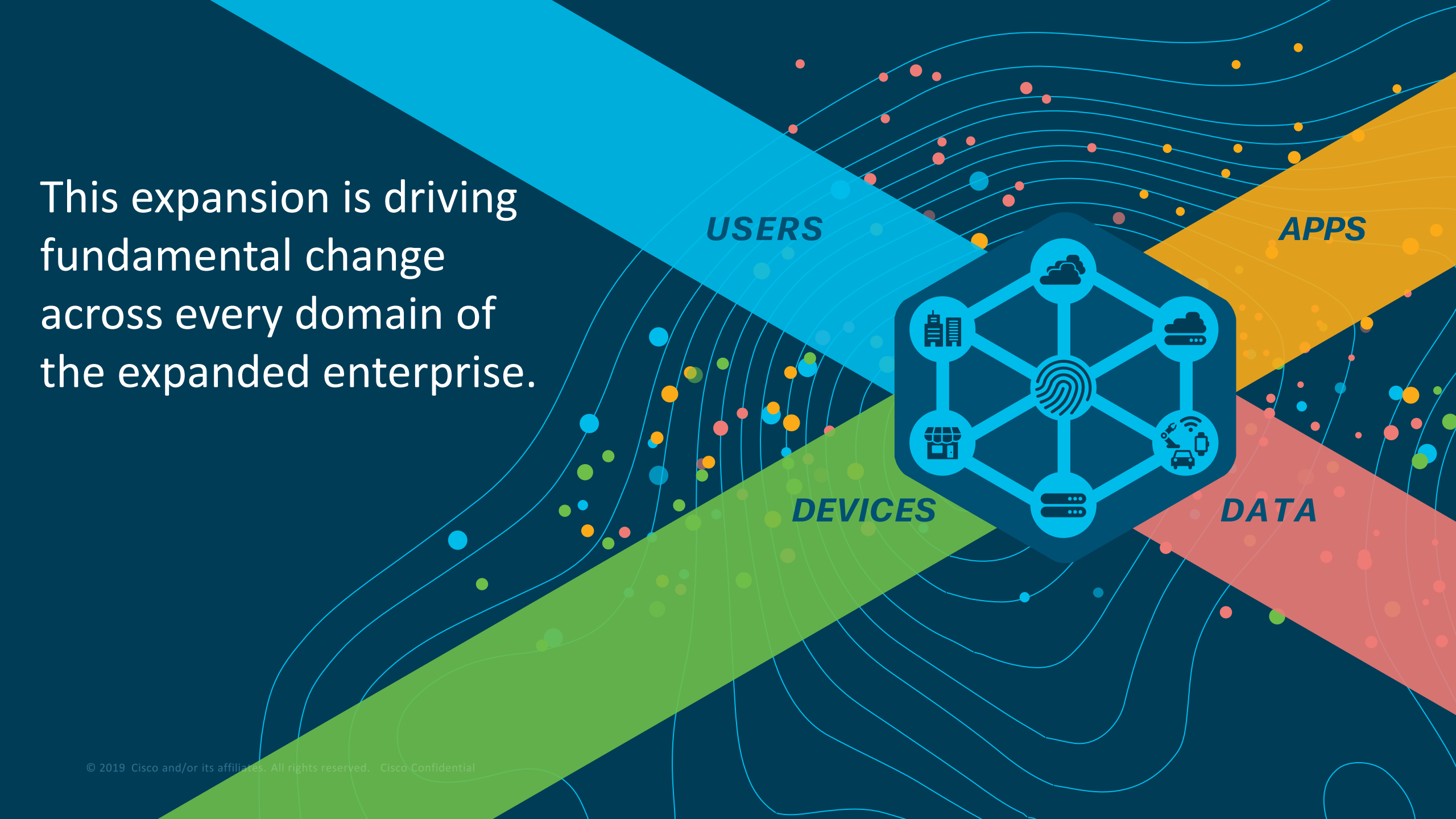
SaaS adoption rising

Private data centers still crucial

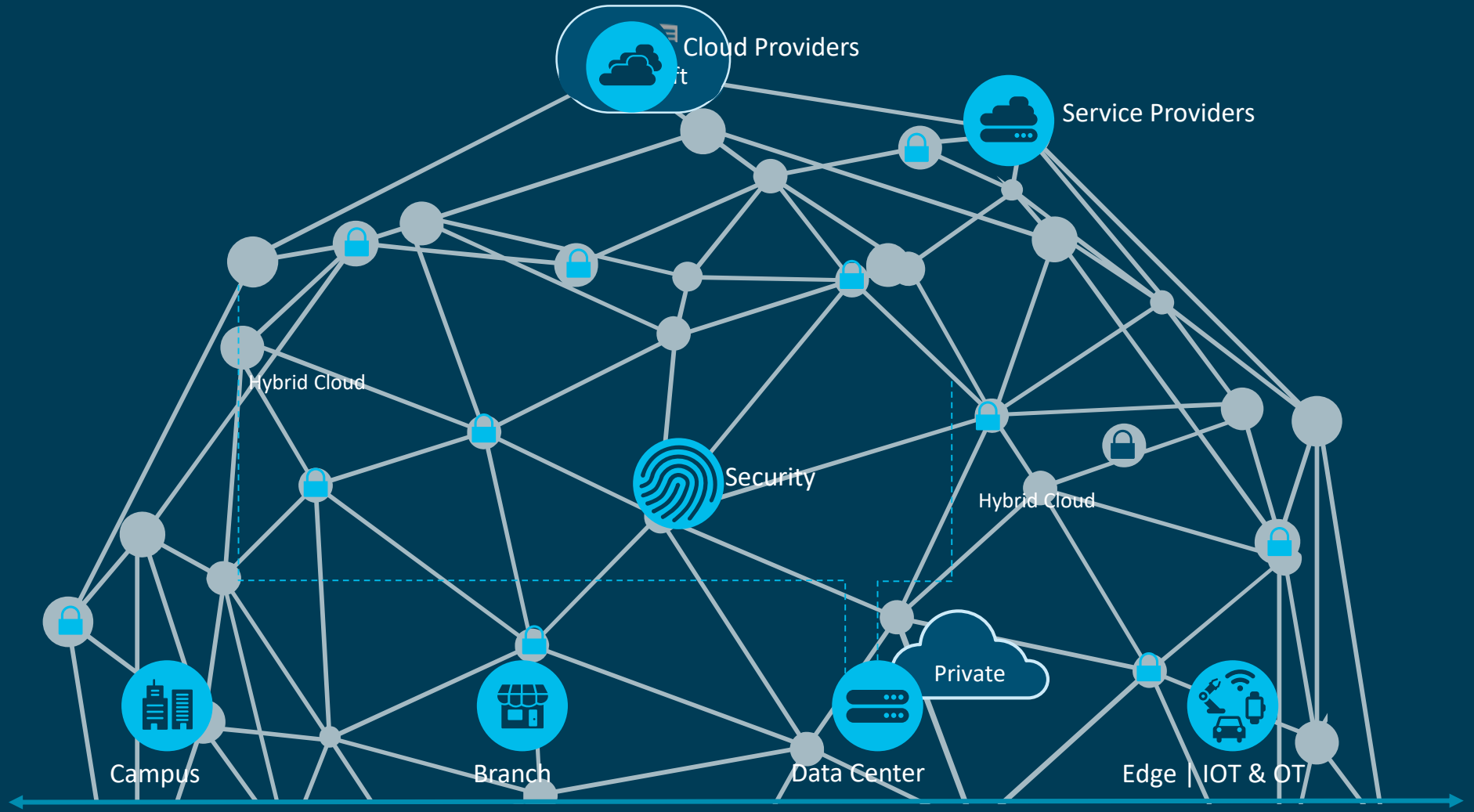
New data protection regulations

IoT exploding

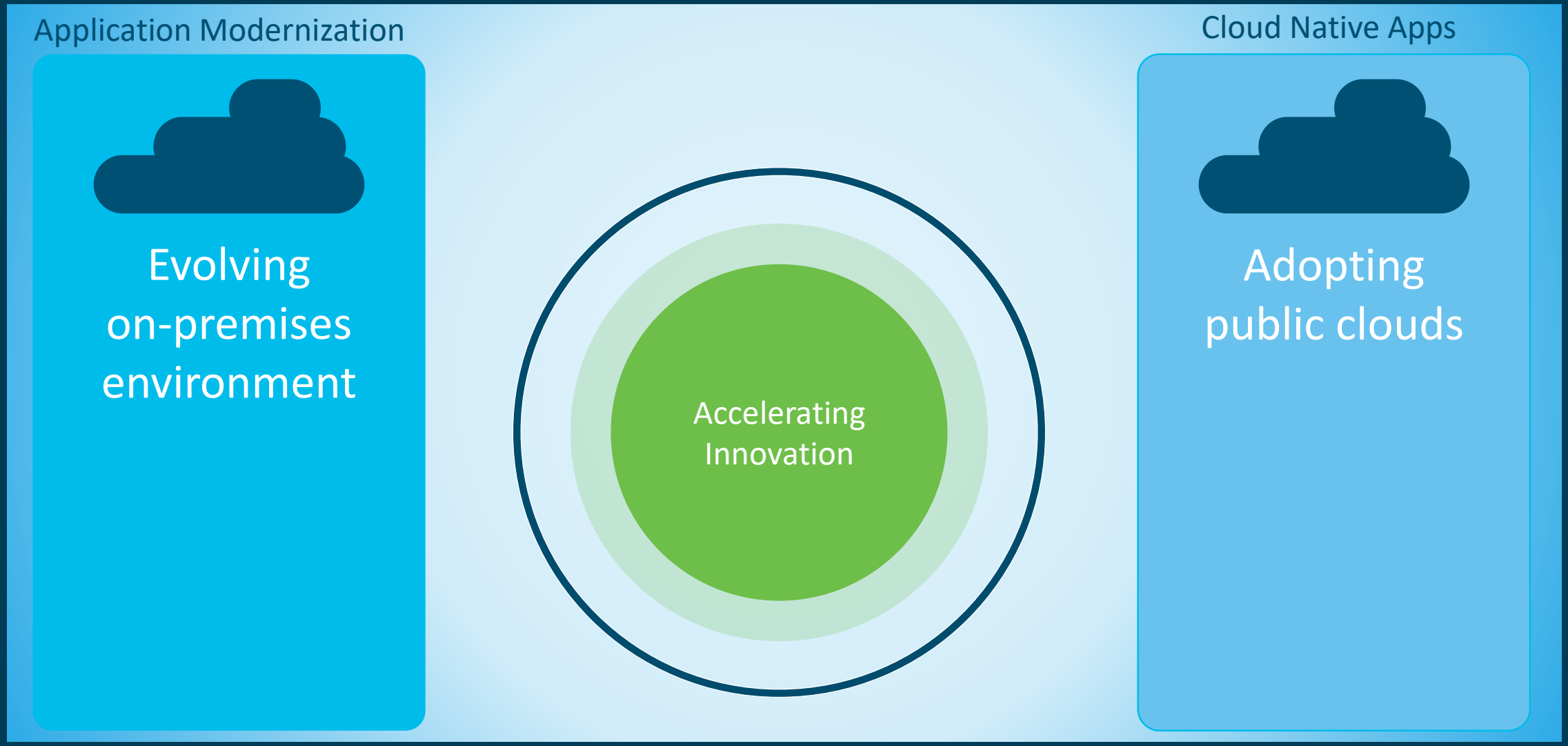
This expansion is driving fundamental change across every domain of the expanded enterprise.



The expanded enterprise in a multicloud world



Bridging environments drives innovation & results



Optimizing the multicloud environment

Security

Data, apps, devices across on prem, colo, public & SaaS

Cost

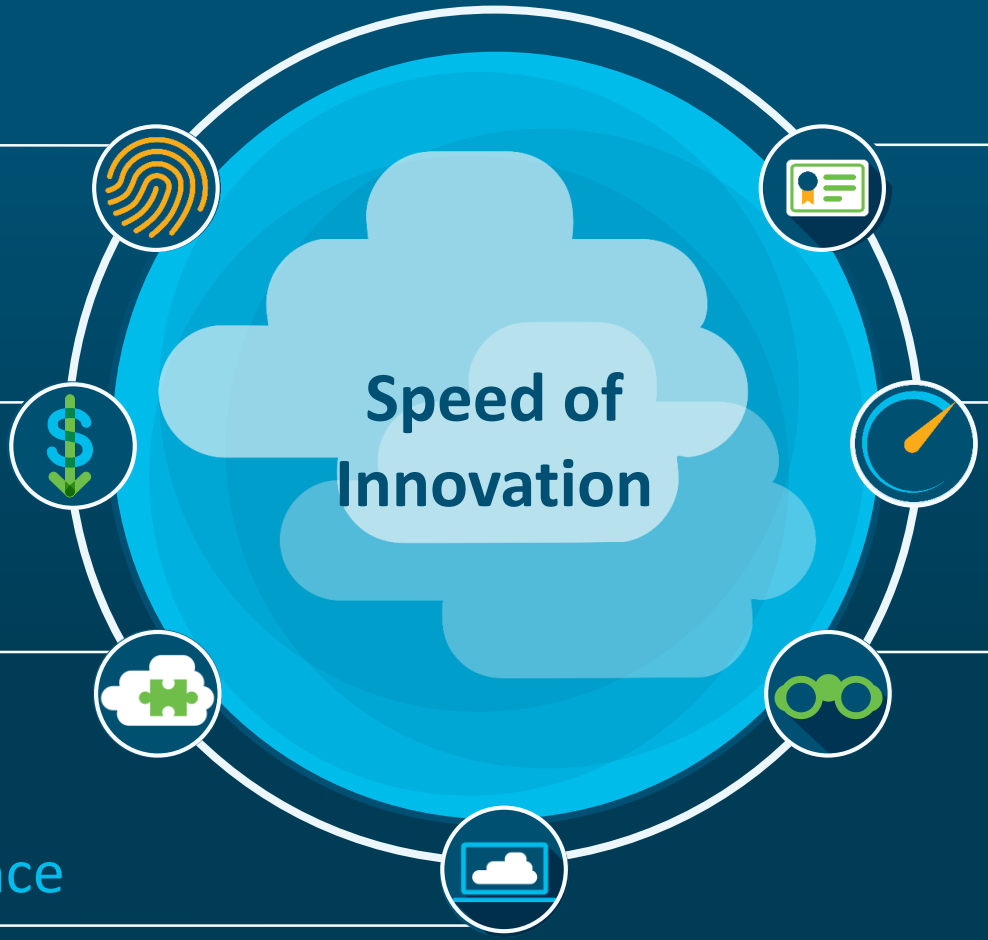
Workload, network, storage, & services visibility across environment to optimize usage

Simplicity

Reducing the number of tools or using a single resource for multiple environments

User experience

Optimal experience for SaaS applications like O365, Google Cloud, & Salesforce.com



Compliance

Applying policy across the full breadth of the multicloud environment.

Performance

Network performance, traffic optimization, app development/deployment

Visibility

Insights into security and application performance across multiple public and private clouds

Accelerate Innovation

On-premises environment

Campus

Branch

DC/Colo

IoT/Edge

Need to work as one

Best of both worlds

Security

Compliance

Cost

Performance

Simplicity

Visibility

User experience

Public clouds & SaaS

Where do we go with the Cloud ?

Blurring Between Datacenter and Cloud

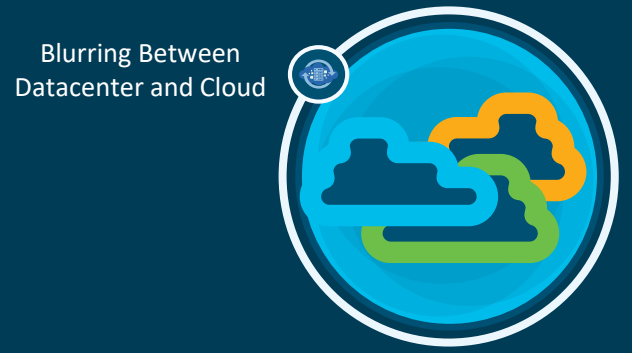
Re-Think Application Migration to the Cloud

New Applications Technologies go Mainstream

Data Transparency

The Cloud Moves to the Datacenter

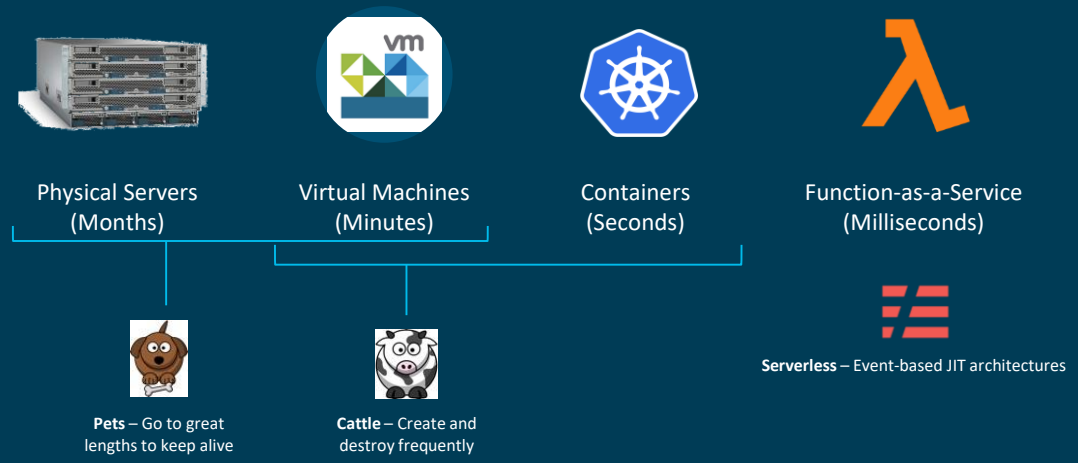
Blurring Between Datacenter and Cloud



- No Longer Silo'd
  - Optimize Cost, Performance, Access to Services, 'Stretched' Configurations
  - Support Hybrid Use Cases e.g. HA/DR, CICD
- Functionality that Spans Environments
  - Management, Security, Analytics
- Policy-based Governance
  - e.g Access, Placement, Scaling

New Applications Technologies go Mainstream

- Kubernetes Graduates from Developer-Heavy to Production
  - Must Support ITOps and SecOps - Work with Non-Containerized Dependencies
- Application Technologies Continue Abstraction from Infrastructure
- Virtualization to Microservices to Serverless…



The Cloud Moves to the Datacenter

- Realization that Some Applications Belong in the Datacenter – Some Repatriated
  - Security
  - Data Gravity
  - Regulatory Compliance
  - Price - Performance
  - Latency…

The Cloud Moves to the Datacenter

- Cloud Providers Capitalize
  - AWS OutPosts
  - Google Anthos
  - AzureStack
  - Self-Hosted and Mangaed Service

Anthos

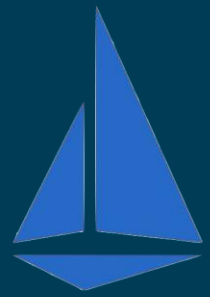
Re-Think Application Migration to the Cloud

Re-Think Application Migration to the Cloud

- Applications and the Early Cloud
  - Refactor
  - Lift and Shift
  - New Applications

- Today – Right Placement
  - Business Criteria – Not IT Constraints

kubernetes

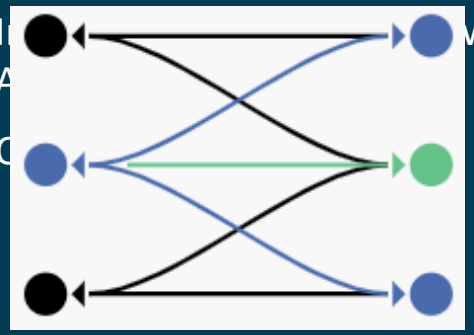


ISTIO

- New Technologies Support Extending Legacy with Cloud Services
  - Service Mesh

Service Mesh

Connect



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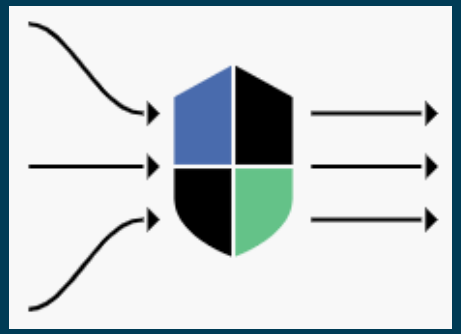
Secure

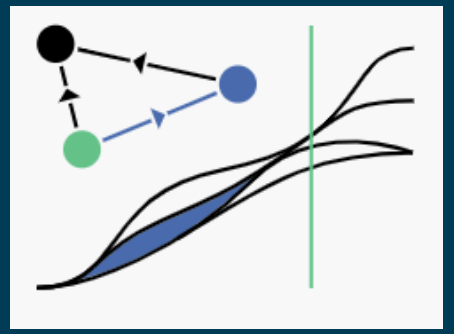
- Automatically secure services through managed automation
- Encrypted communication between services

Control



- Apply & enforce policy
- Fair resource distribution (among consumers)

Observe



- See what's happening via rich automatic tracing, monitoring and logging of all services

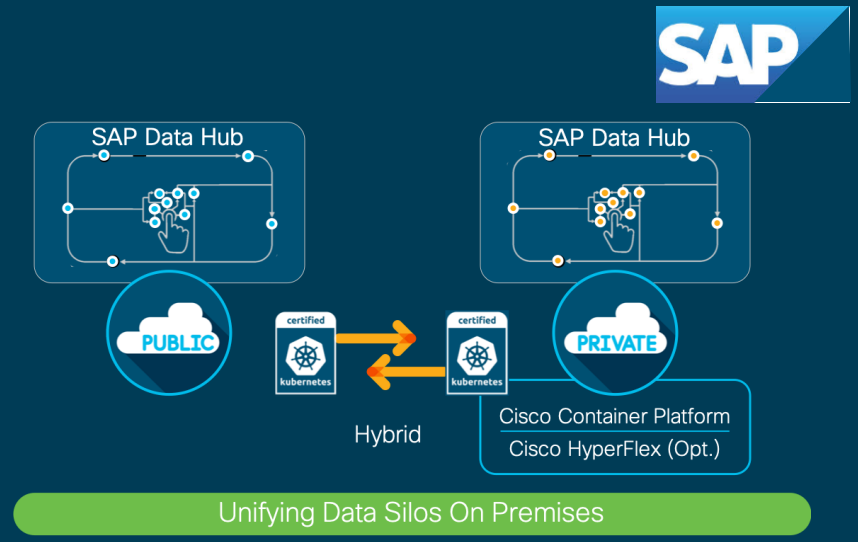
Data Transparency

Data Transparency

- Good Deal of New Technologies Focus on Advancements in Applications

- Second Issue is Data
  - Distributed Pools/Lakes
  - Hard/Expensive to Move to the Cloud – Data Gravity, Security, Compliance, Latency etc.

- New Solutions Enable Distributed Applications to Access Distributed Data



Expanding
into the cloud is
changing everything


Cloud is driving our growth

Our multicloud vision

Enable Customers to Securely Deploy and Manage Existing and New Applications Across One to Many Datacenters and Clouds

Example multicloud use cases

Deploy & Manage Applications on the Cloud
Private, Public, Hybrid, Multicloud

Cloud Governance

IT as a Service

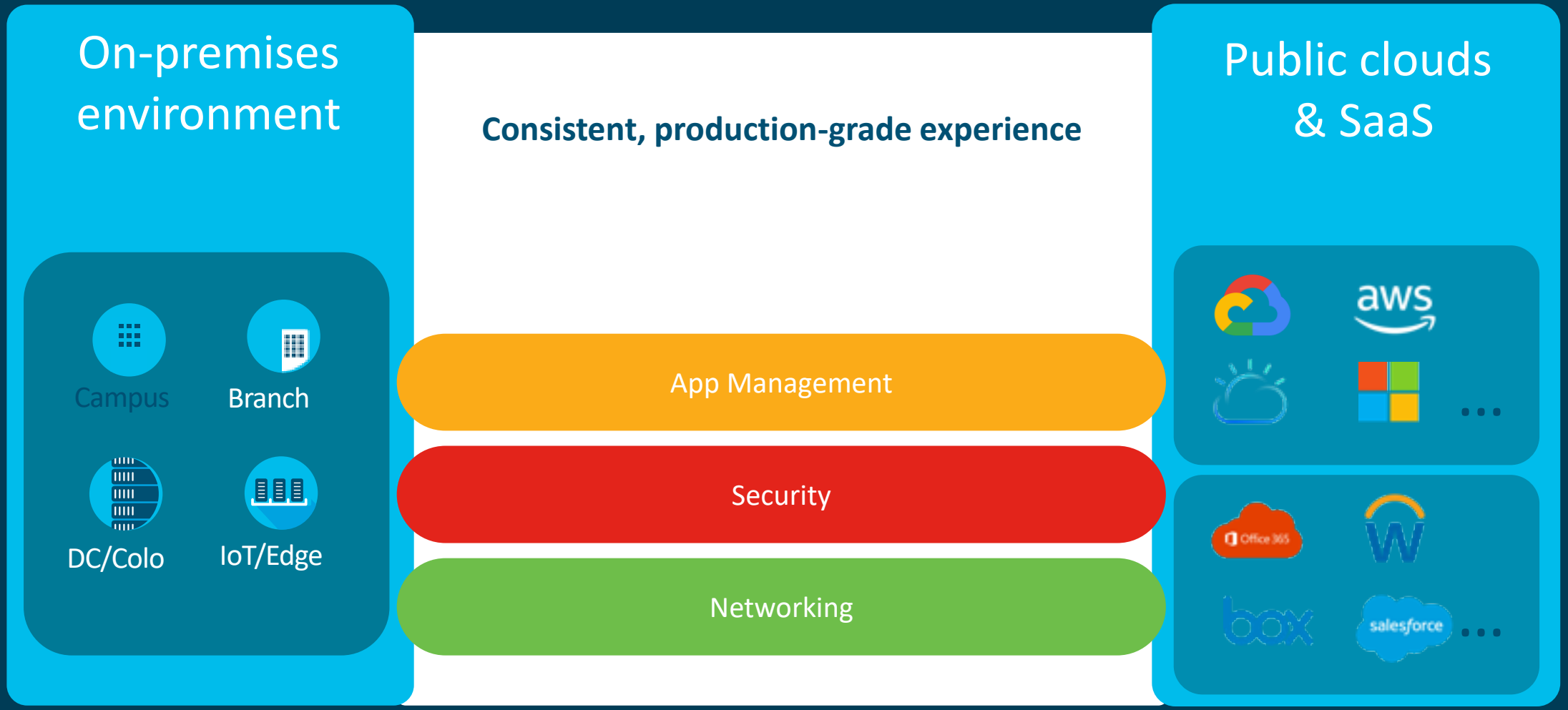
Cloud-based HA/DR

Develop Applications on/with the Cloud (DevOps)

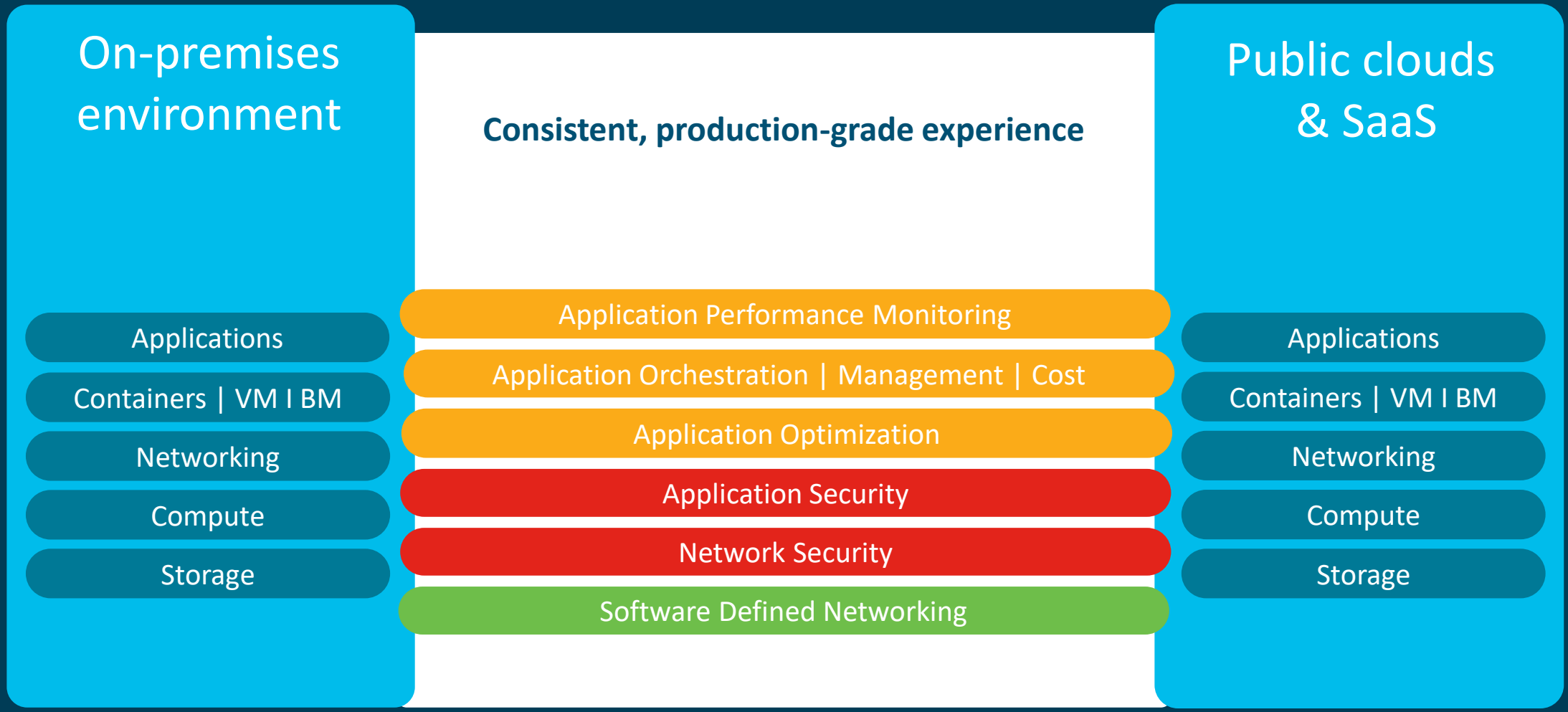
Secure Multicloud Networking

Consistent Network Policy

Cisco multicloud approach



Multicloud capabilities

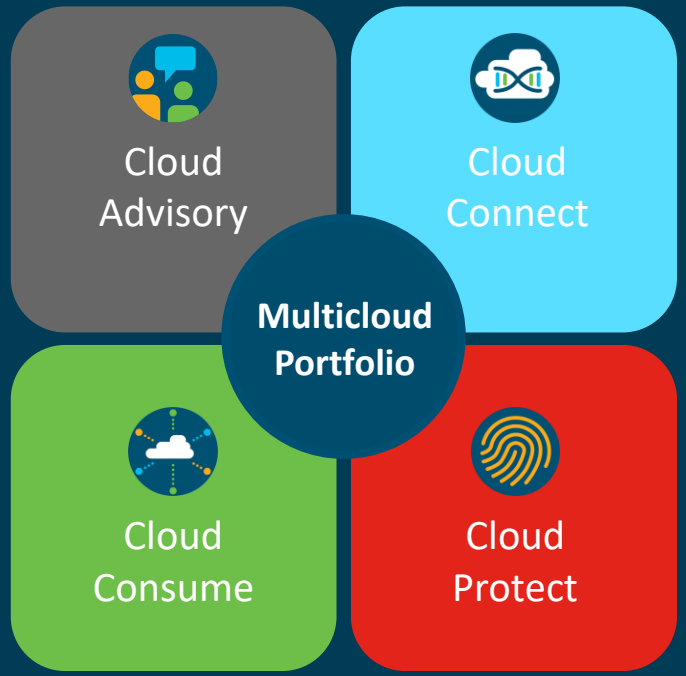


Cisco Multicloud Portfolio

Application Modernization

Cloud
Native Apps

Evolving
on-premises
environment



Adopting
public cloud

Start with the essential solutions and services

Cisco Multicloud Portfolio

Cloud Advisory

Advisory Services

- Cloud Migration
- Cloud Connect
- Cloud Protect
- Cloud Consume

(Delivered by AS/Cisco Partners)

Cloud Connect

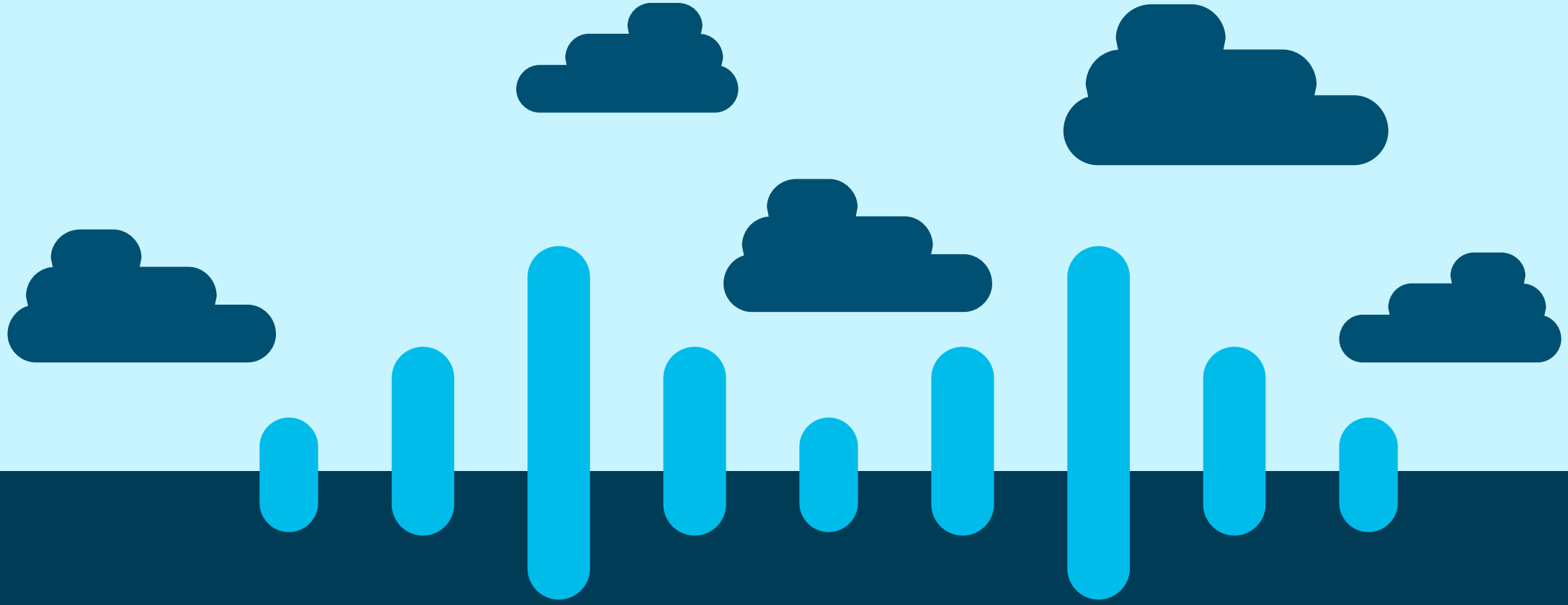
- CSR 1000v
- vEdge + Umbrella*
- Meraki vMX

Cloud Protect

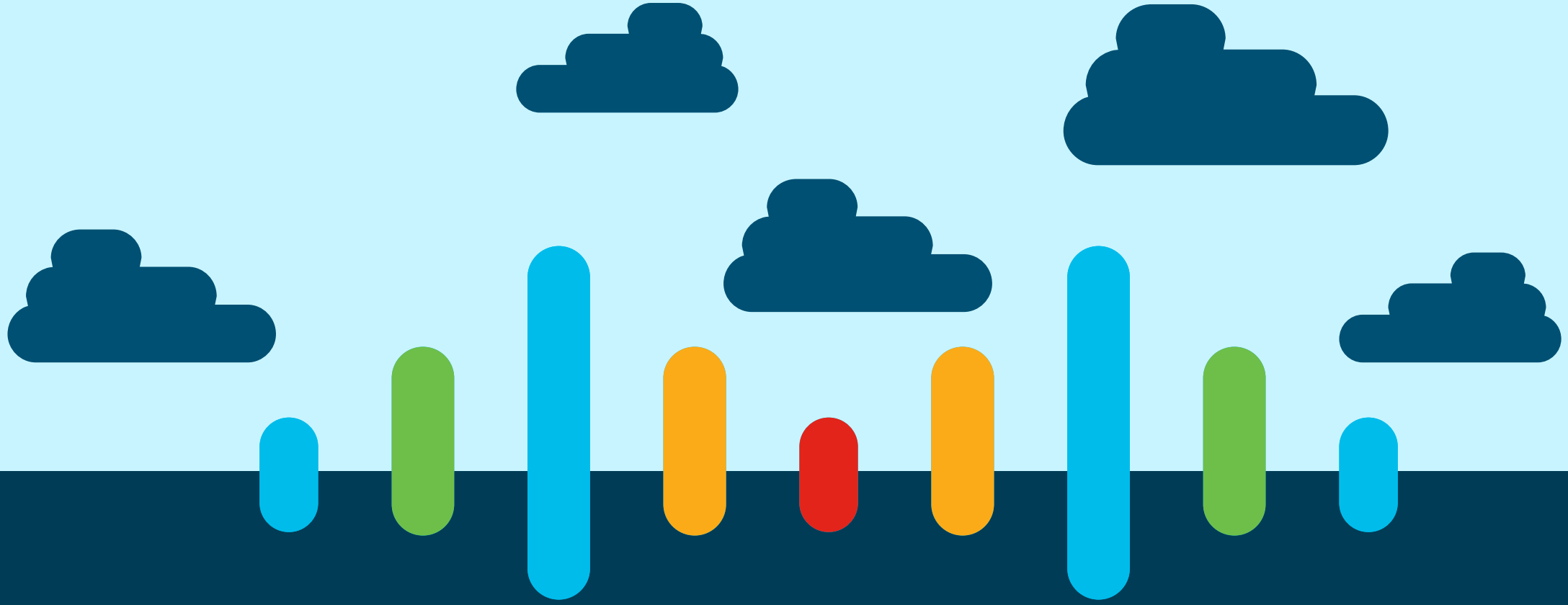
- Umbrella
- AMP for Endpoints
- Meraki Systems Manager
- Cloudlock
- Tetration SaaS
- Stealthwatch Cloud

Cloud Consume

- CloudCenter
- AppDynamics
- Container Platform



From expanding into the cloud to unleashing it’s full potential…



there's a **bridge**

Thank You…