vCloud Air

Simone Brunozzi,

VP and Chief Technologist, vCloud Air

@simon

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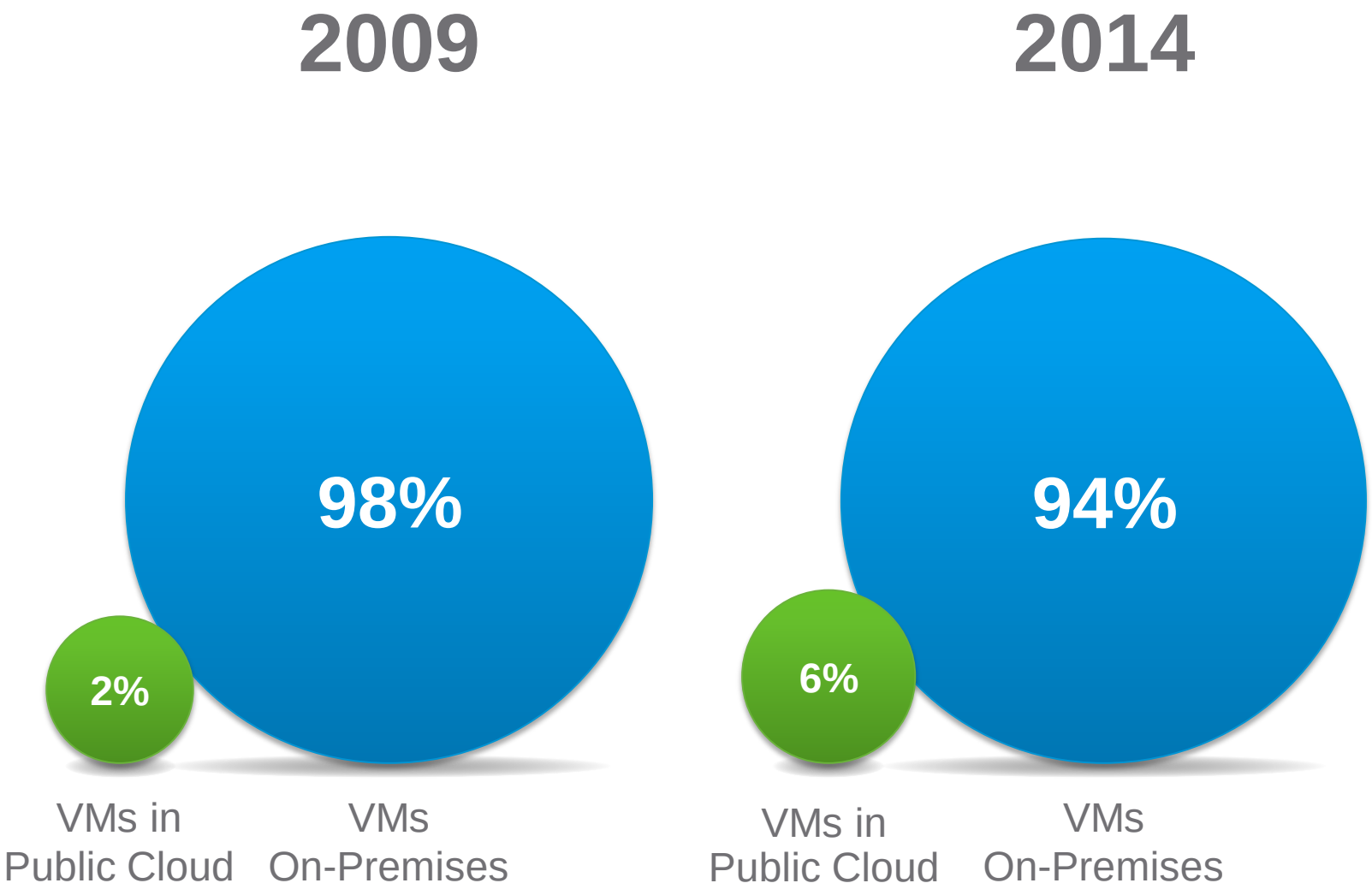
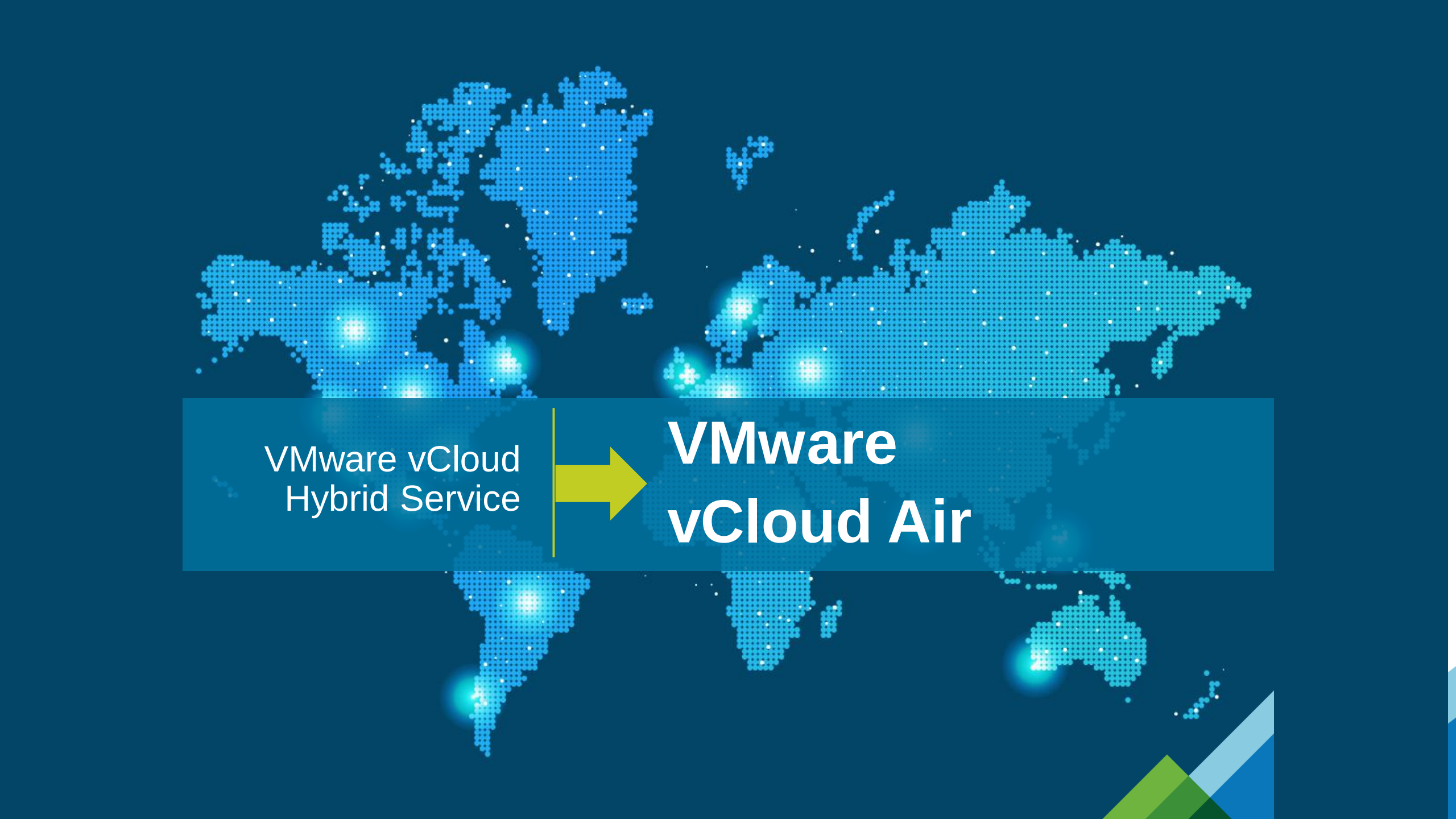
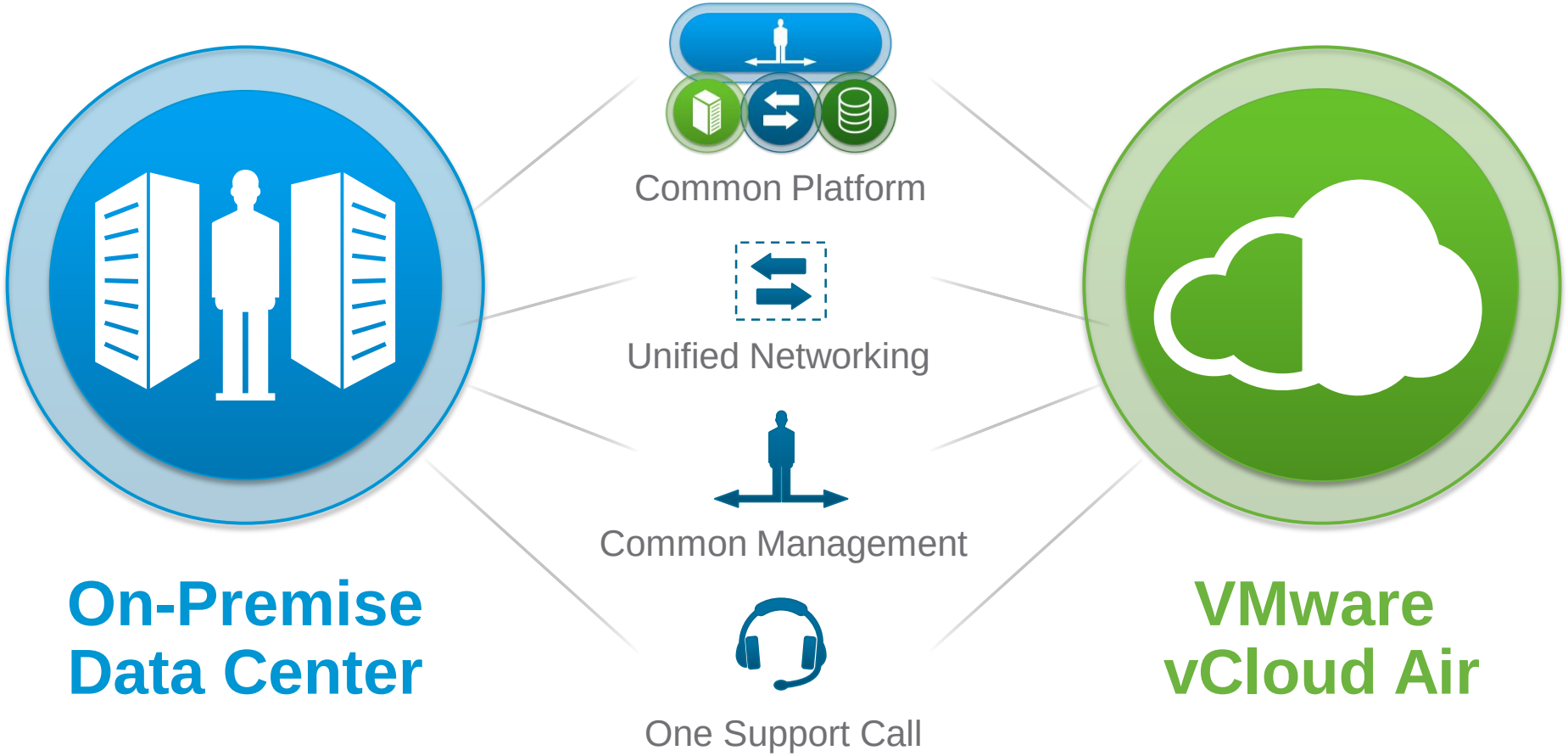
Cloud Computing! Exciting! But wait…



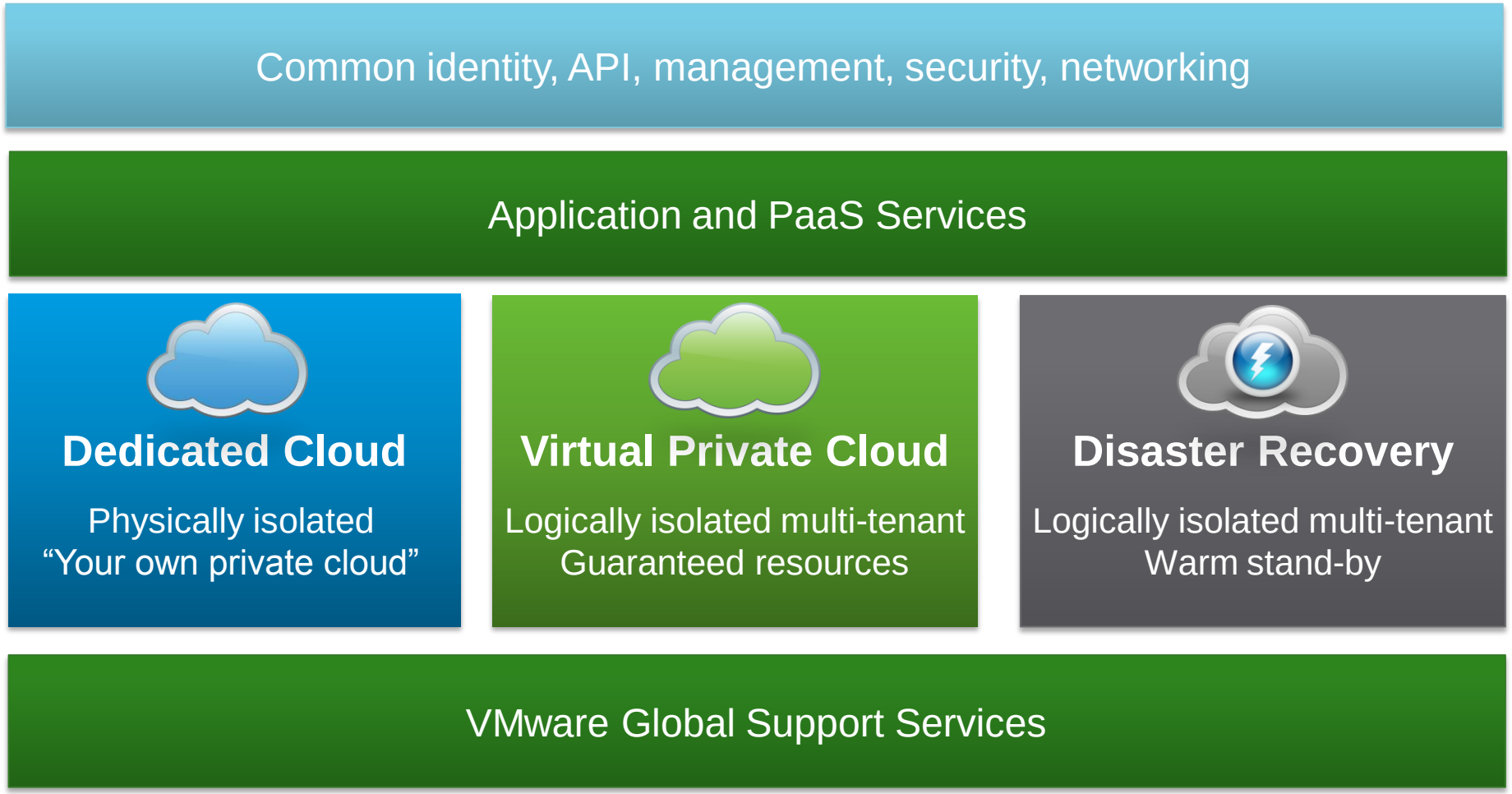
The Future Is Hybrid

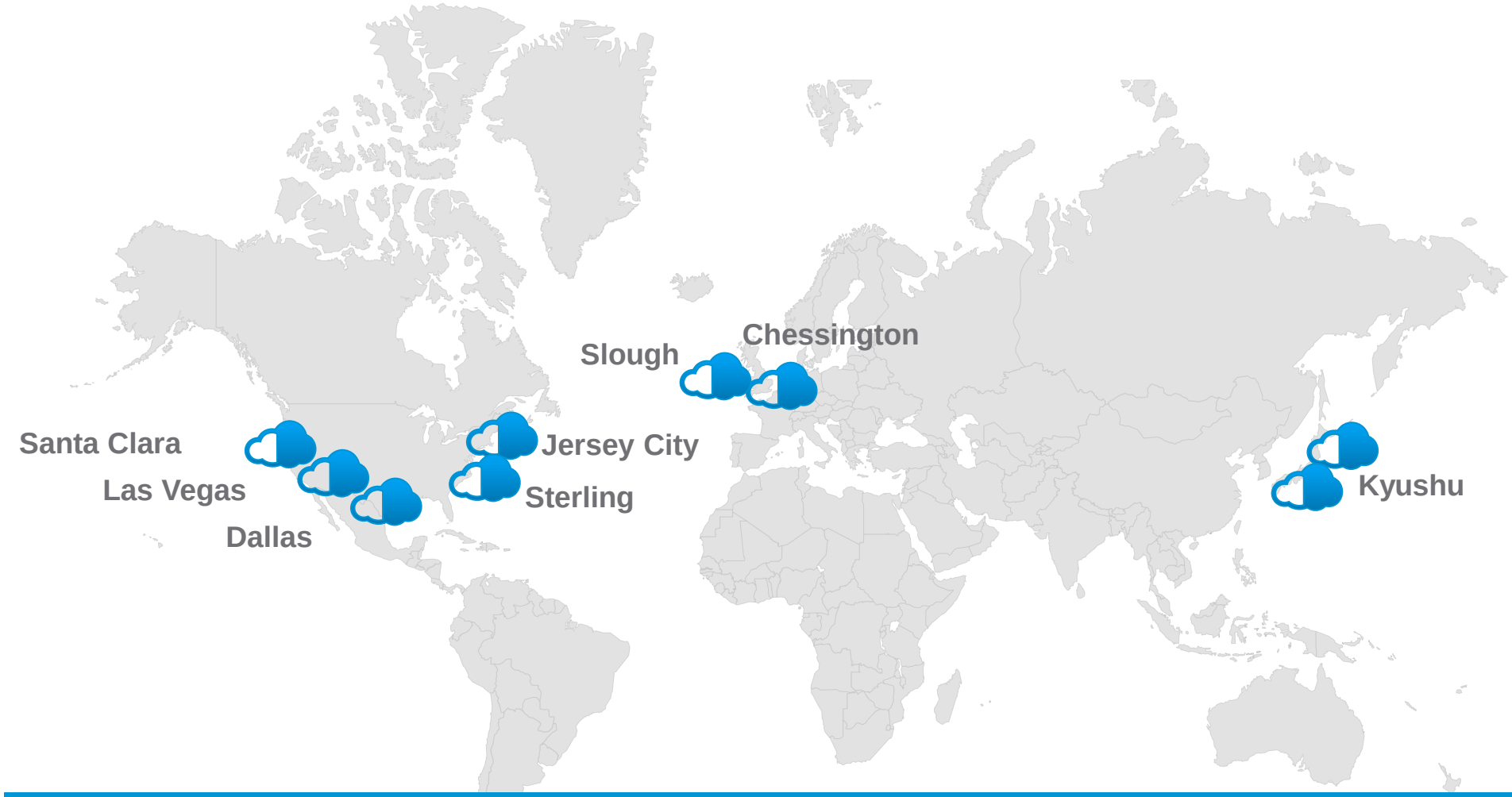

VMware vCloud
Hybrid Service
VMware
vCloud Air

VMware vCloud Air



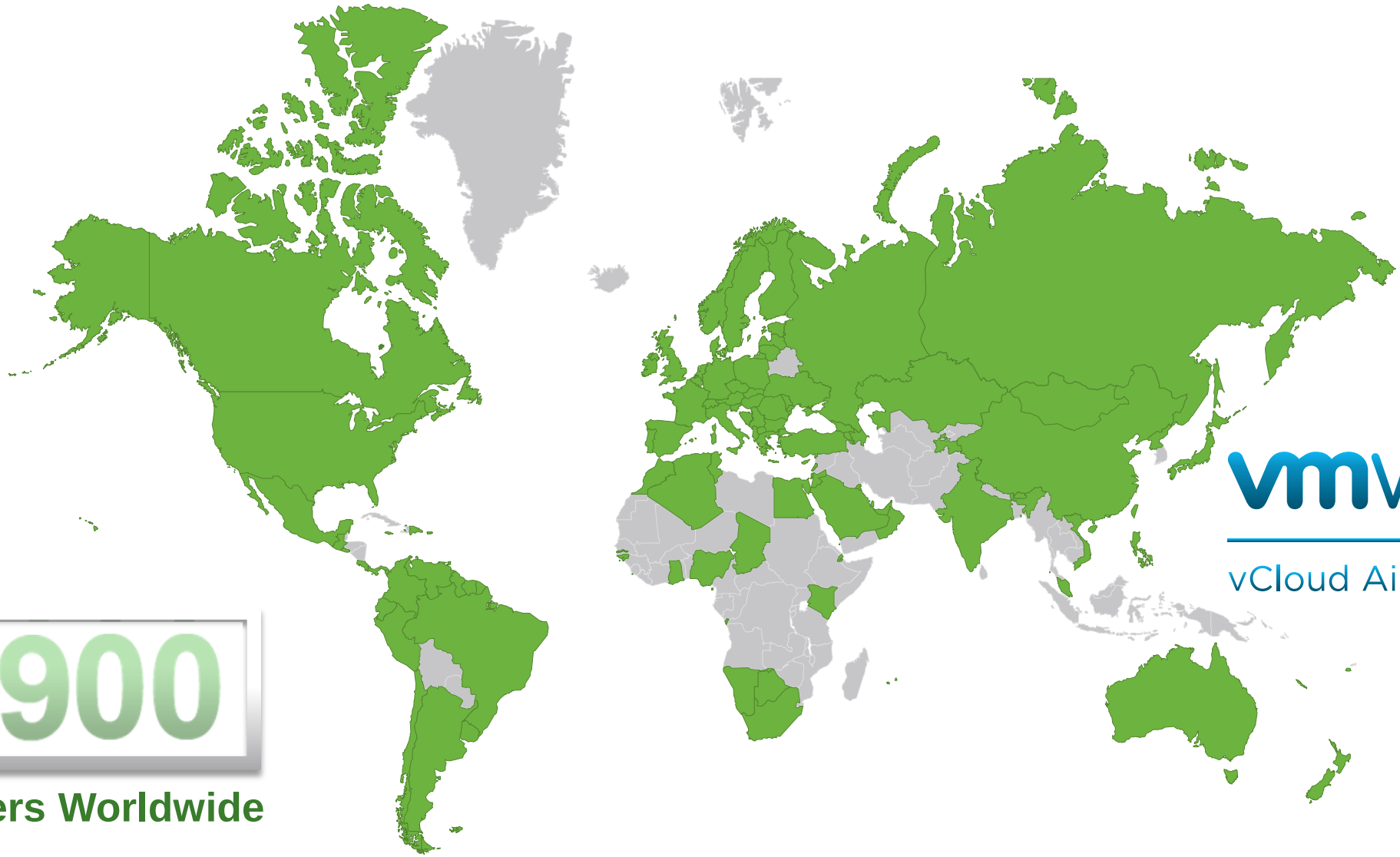
VMware vCloud Air





VMware vCloud® Air™

vmware®



3900

Partners Worldwide

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vCloud Air™ **Network**

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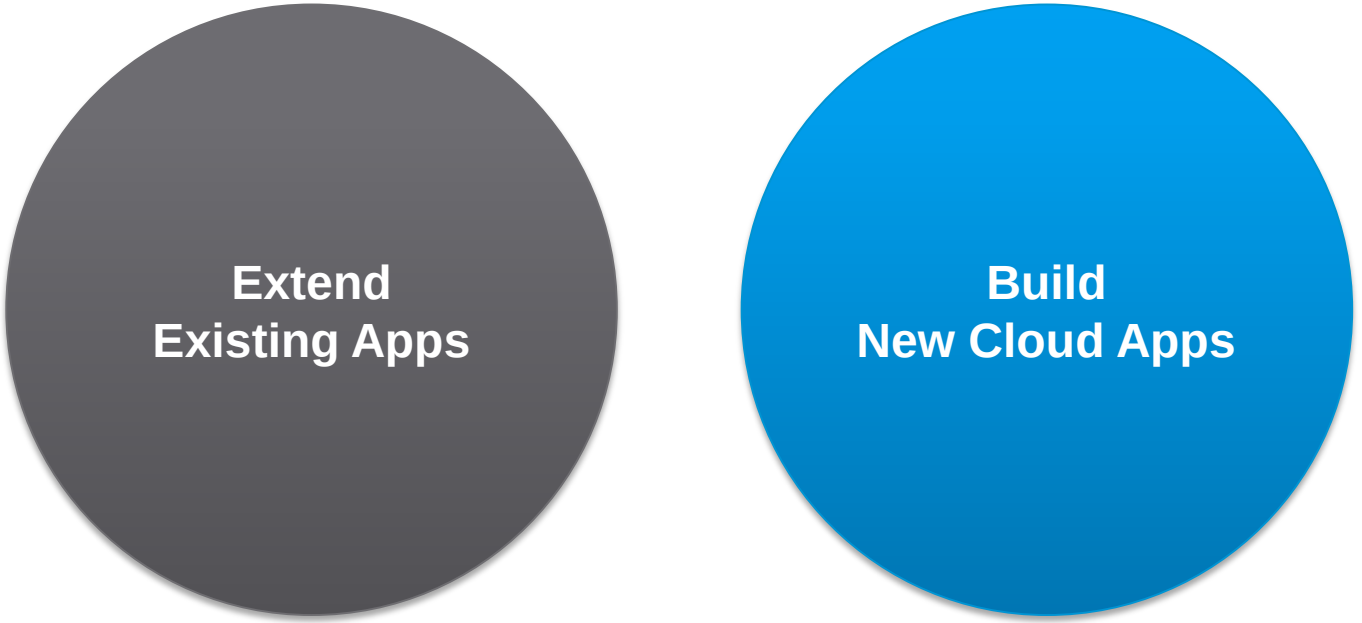
VMware Approach To IaaS

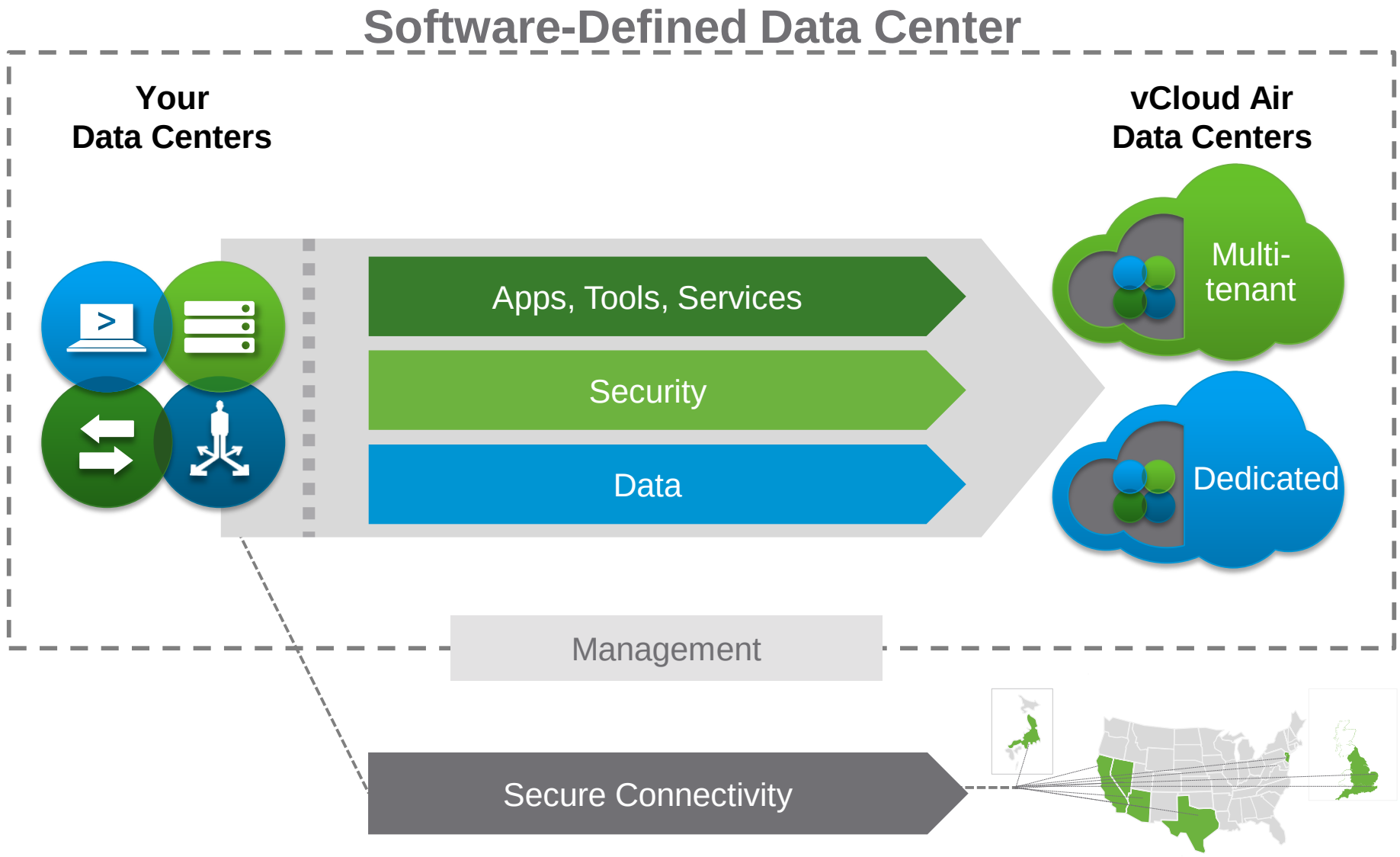


Build on investments in apps, data, people and process

Avoid information islands

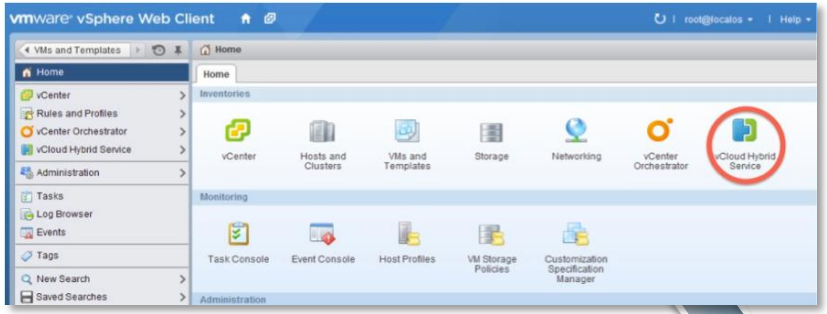
Write once, deploy anywhere

Hybrid Platform

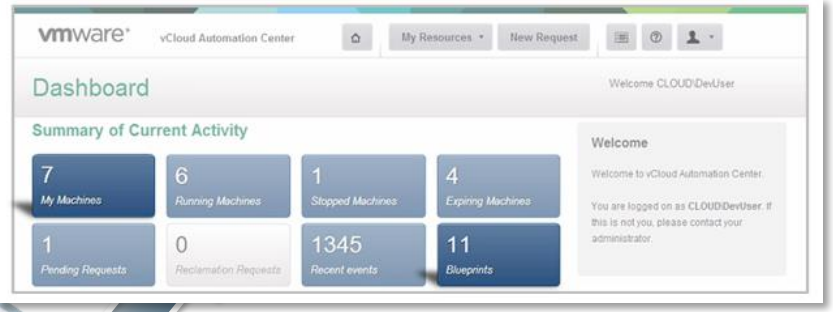


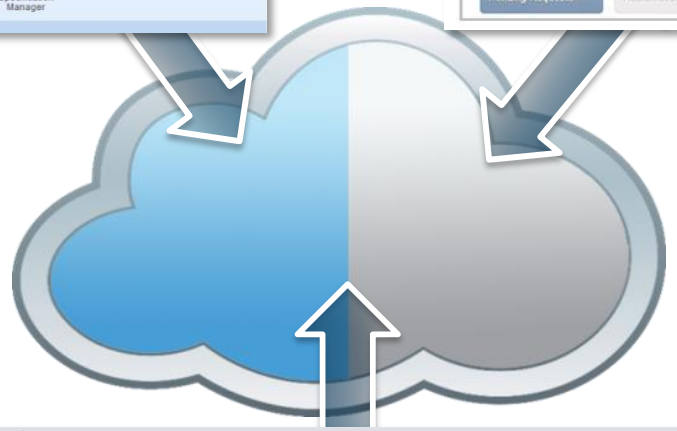
Common Hybrid Cloud Management

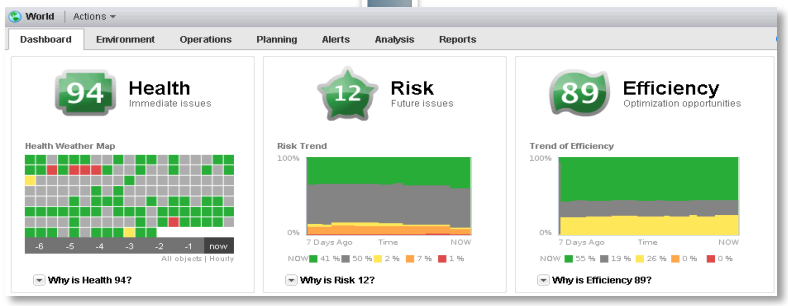
1. vSphere Clients (Windows and Web)



2. vCloud Automation Center (6.0)







3. vCenter Operations (Q1 2015)

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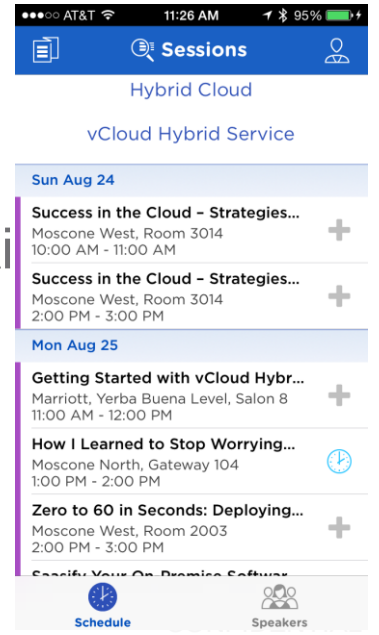
vCloud Air Examples

Inside out: Exchange migration

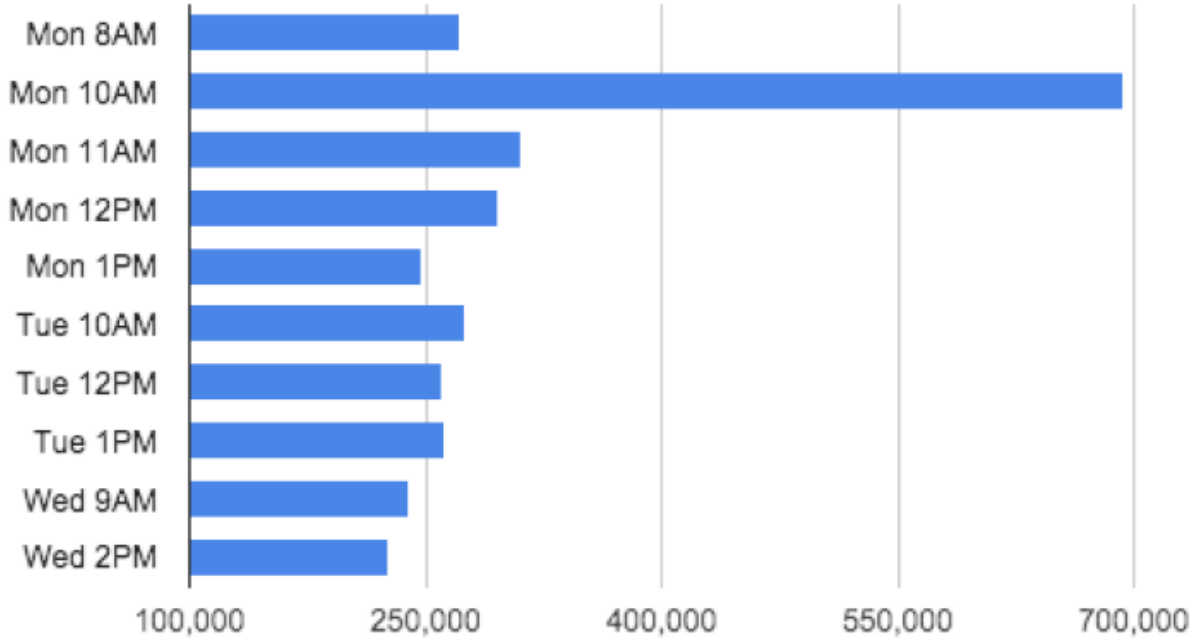
- Scaled out rapidly onto vCloud Air
- Integrated with existing AD, management
- Same environment on and off prem

Outside In: VMworld SF Mobile App

- Built from scratch on vCloud Air
- Integrates on-prem, off-prem, SaaS
  - MBaaS, app logic, database, cache (vCloud Ai
  - VMware customer identity store (on-prem)
  - Event management system (SaaS)
  - App performance, crash reporting (SaaS)
- Monitored using vCenter Ops

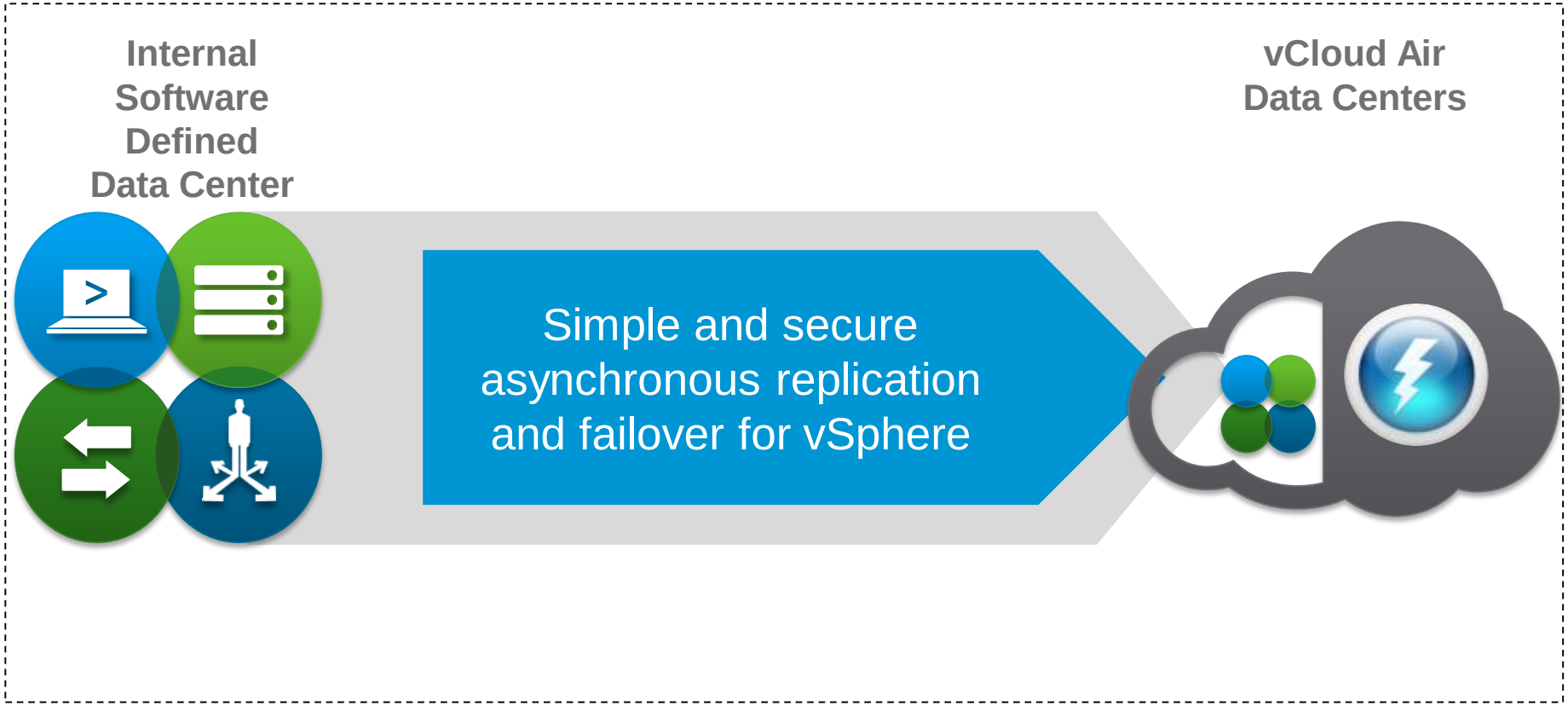


Responsiveness Was Key For Mobile App

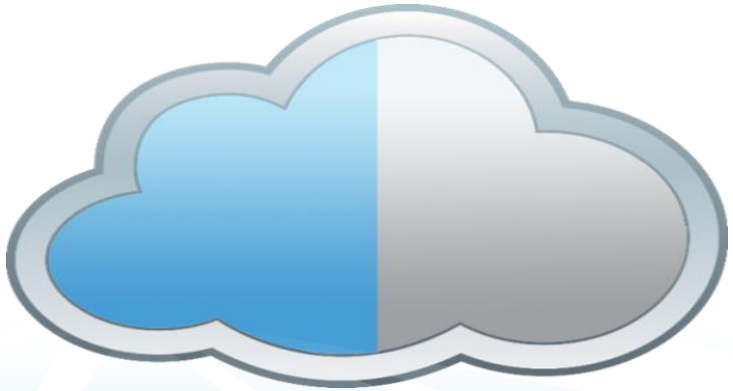


- 11,512 application users (IOS and Android)
- >8 million API calls from app to mobile back end over 7 days
- Peak load 2115 requests/sec 10.40am Monday 25 August

Disaster Recovery to the Hybrid Cloud



Why Customers Choose vCloud Air



Dev/Test	Extend Existing Apps	Disaster Recovery	Modernize Enterprise Applications	Next Generation Applications	White Glove Service
Test once, low cost per VM	Only cloud that makes this easy	Consistency, simplicity, price	Control speed of transition; reliability	Performance, reliability, flexibility	Confidence and Ease of Adoption

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Customer Traction and Momentum

Public Sector

SAIC

Commonwealth of Kentucky

Technology

SanDisk

NetApp

paloalto NETWORKS

SAS

Health Care

Cancer Research UK

Creative Solutions in Healthcare

Financial Services

UNUM

Digital River

Entertainment

betfair

San Francisco Ballet
Helgi Tomasson, Artistic Director

Retail

chico's

AVON
the company for women

Columbia

HDDS
Harley-Davidson Dealer Systems

nielsen

Telecommunications

Telefónica Energy

Green Mountain Power
Generating Possibilities Together

Education

The George Washington University
Washington, DC

MIT Media Lab

What's New?

VMware vCloud Air

DEVOPS SERVICES

Continuous Integration As a Service

DATABASE AS-A-SERVICE

MySQL, MS SQL, DB DR to Cloud

OBJECT STORAGE

EMC² ViPR

MOBILITY SERVICES

AirWatch, Pivotal CF Mobile

CLOUD MANAGEMENT

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What's New?

VMware vCloud Air

DEVOPS SERVICES

DATABASE AS-A-SERVICE

OBJECT STORAGE

MOBILITY SERVICES

CLOUD MANAGEMENT

COMPATIBILITY

COMPLIANCE

ISO • SOC • FISMA • PCI
HIPAA and HITECH • FedRamp

CHOICE

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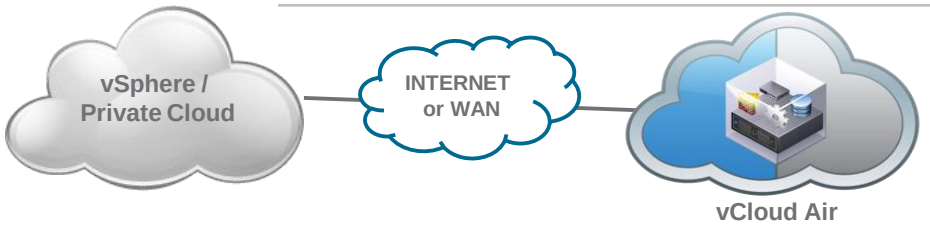
- Easy and immediate access
- Pay only for what you consume
- Agility and seamless management

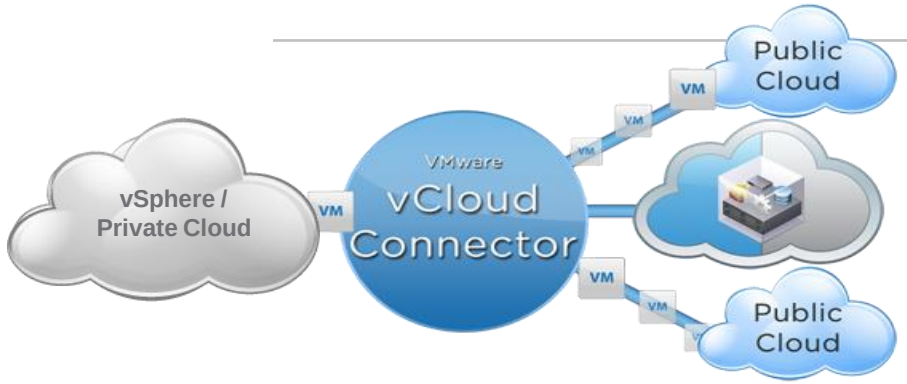
What can you do?

Simple Application Migration



Upload your own Virtual Machine

vCloud Air is compatible with vSphere and customers can do a straight import of an OVF file



vCloud Connector (vCC)

Main tool for customers migrating VMs/Apps/templates to and from vCloud Air & vCloud Government Service:

- Integrated into vSphere Client via Plugin
- Automated Catalog Synchronization

Offline Data Transfer

For migrating very large or a large number of VMs/vApps/templates copied at a time using a encrypted storage device shipped to customer

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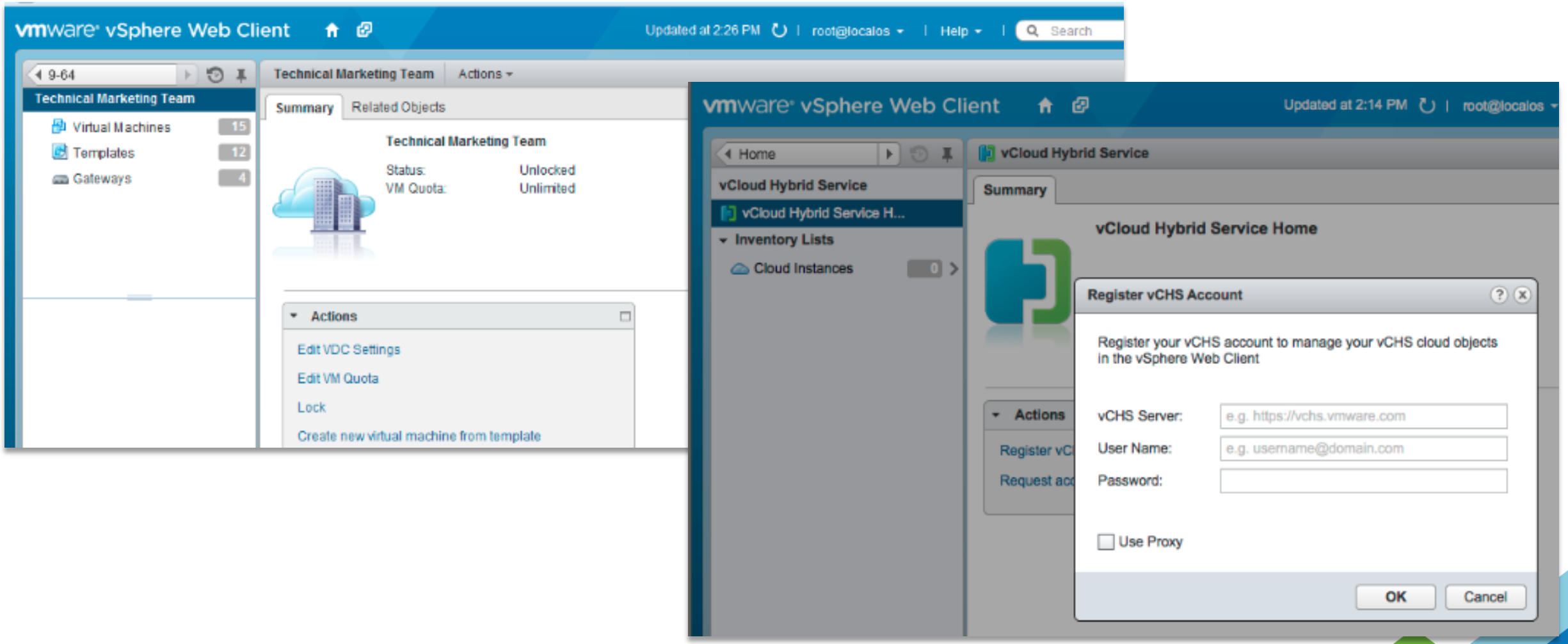
Manage vCloud Air from vSphere console

- The primary management console for VMware's 500,000 customers



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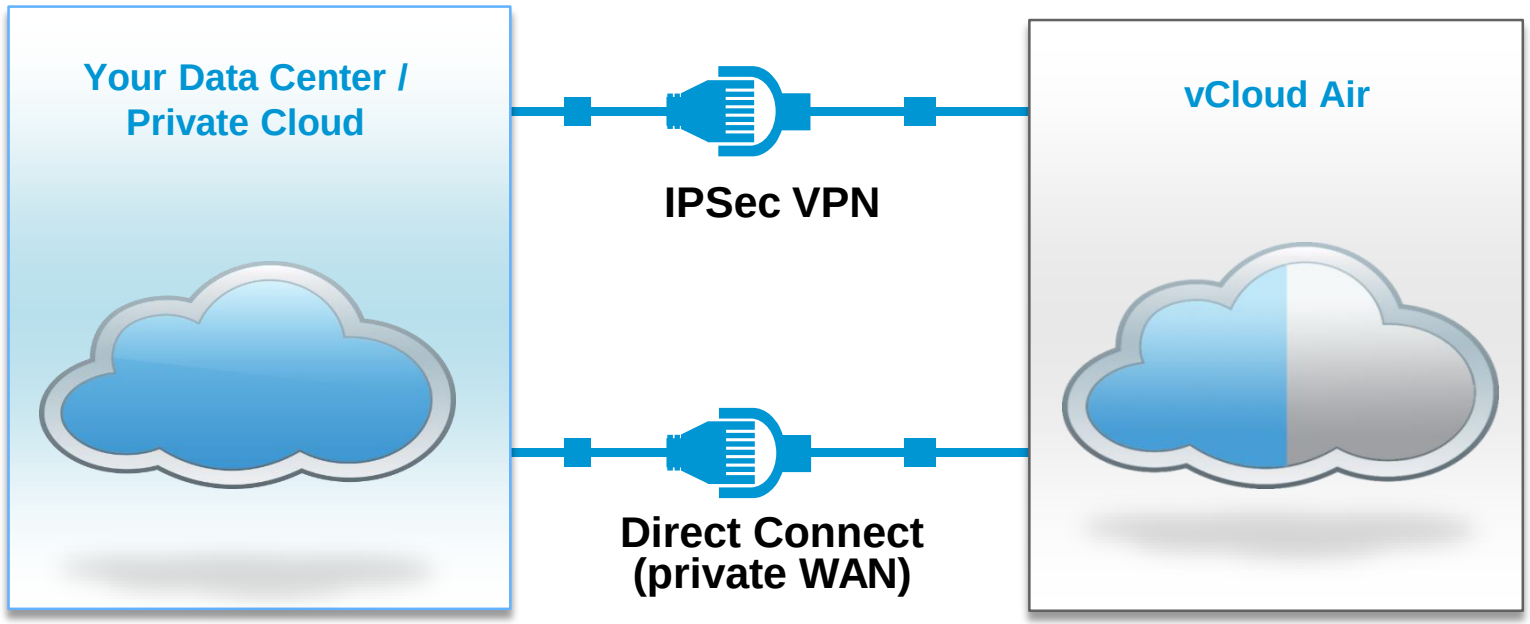
Seamless network integration



- Edge Gateway = advanced Layer 3 Switch with Routing, Load Balancing, VPN, Multi-Interface
- Integrated L4-7 services for Firewall/NAT, IPSec VPN, Load Balancers, VXLAN gateways
- 3rd party appliance: F5, RSA, Cisco, Riverbed

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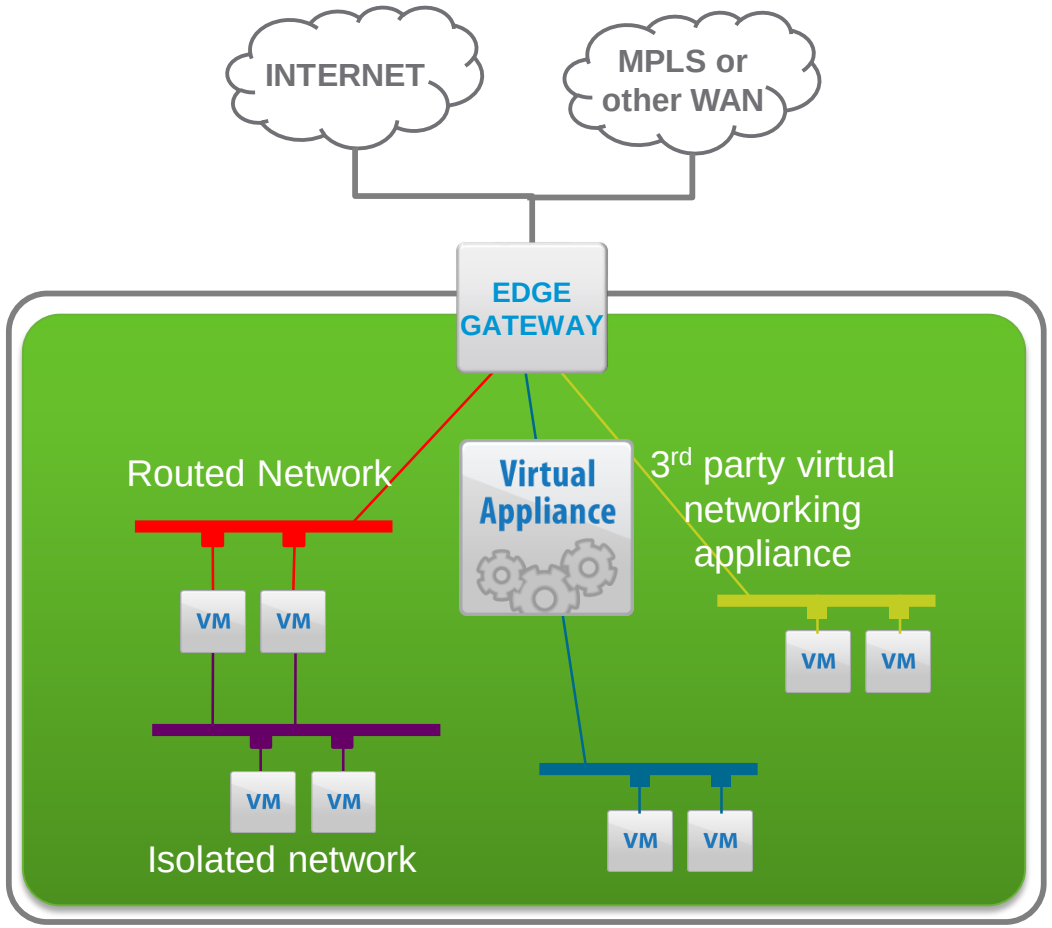
SDN allows unmatched networking flexibility



- Create routed and fully isolated networks (up to 9, + 1 for external port)
- Software-defined networking services included at no extra cost:
  - Routing and bridging
  - Firewall
  - NAT
  - Load Balancer with health monitoring
  - IPSec VPN
  - DHCP
- Bring-Your-Own 3rd Party Appliances:
  - F5, RSA, Cisco, Riverbed, others

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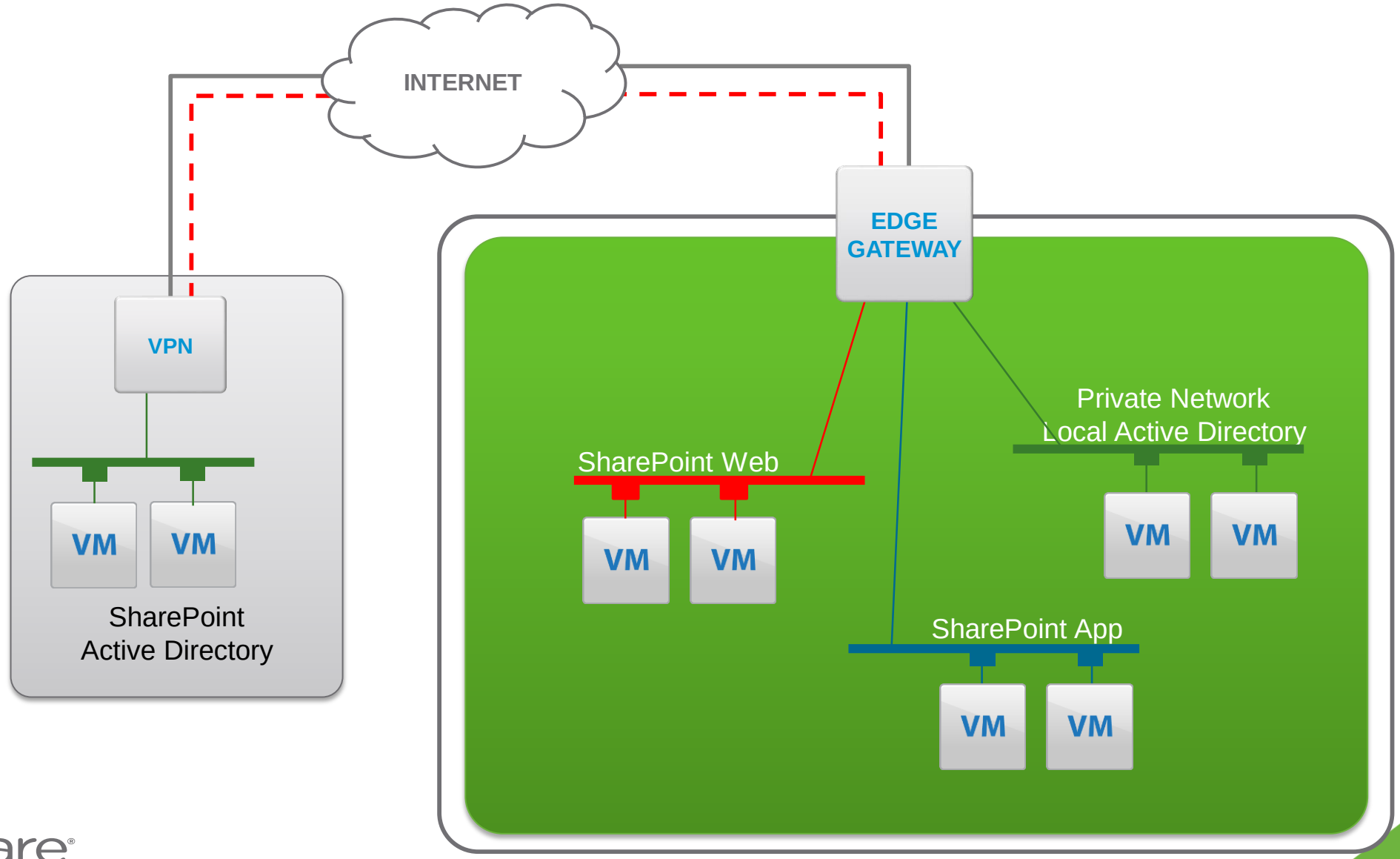
Example: Hybrid SharePoint deployment



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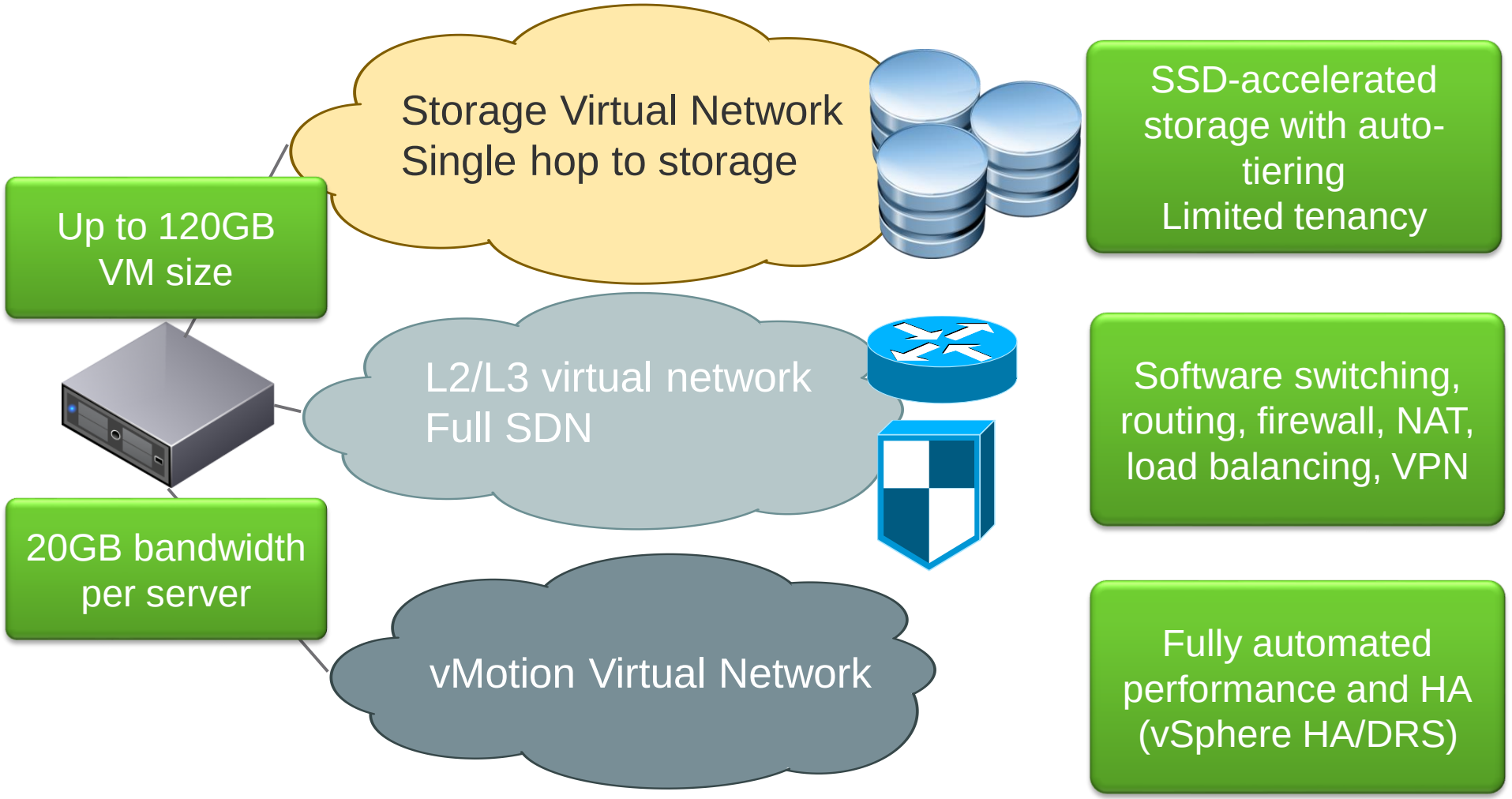
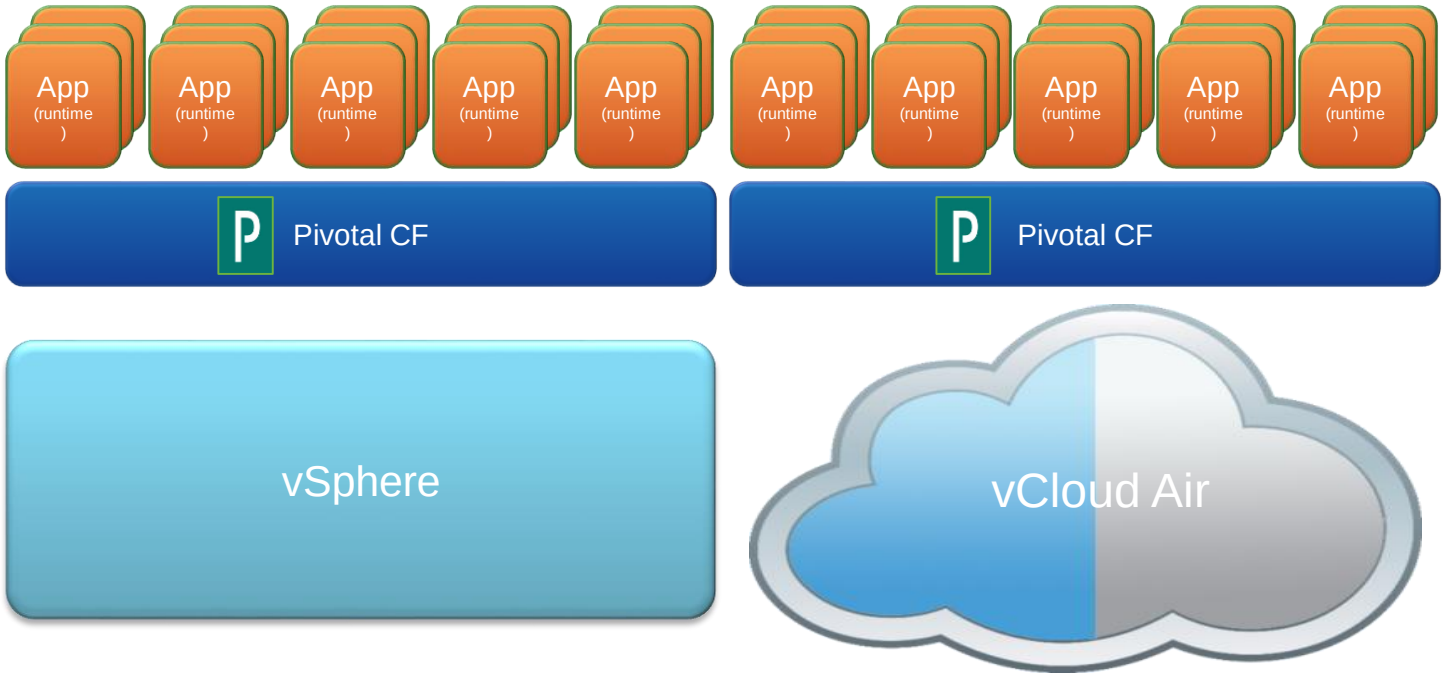
High performance architecture



PaaS: Pivotal CF



- Pivotal CF v1.2 supports vSphere, vCloud Director and vCloud Air
  - Run the same PaaS on and off premises
  - Write once, deploy anywhere

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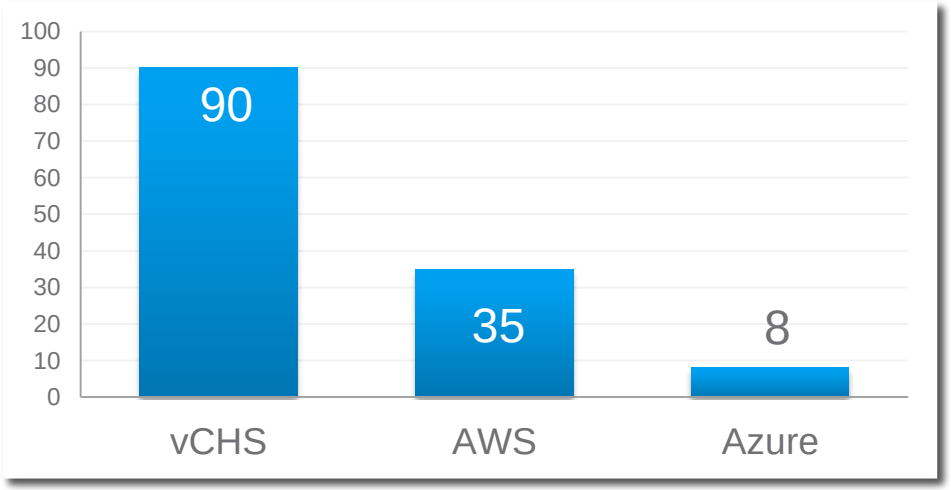
More Apps, More Operating Systems Supported

- Support more versions of Windows than Azure
- Support more versions of Linux than AWS
- 2,200+ ISV applications supported – 2x AWS

- Low-touch cloud migration
  - No rewriting, no reconfiguration, no additional tools or training needed
  - Same security, availability and performance levels

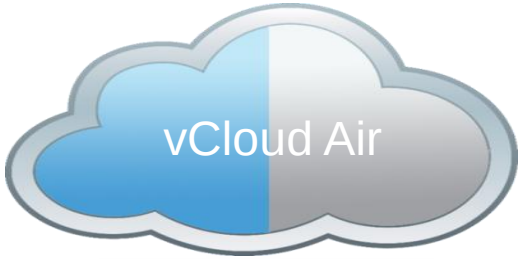
2x more operating systems supported vs AWS and Azure combined



2,200+ ISVs Support 5,000+ Apps on VMware, including:

- Top 10 Healthcare Apps
- Top 10 Finance Apps
- Top 5 Telecom Apps
- Four of Top 5 Retail Apps

vCloud Air: Radically different approach to reliability



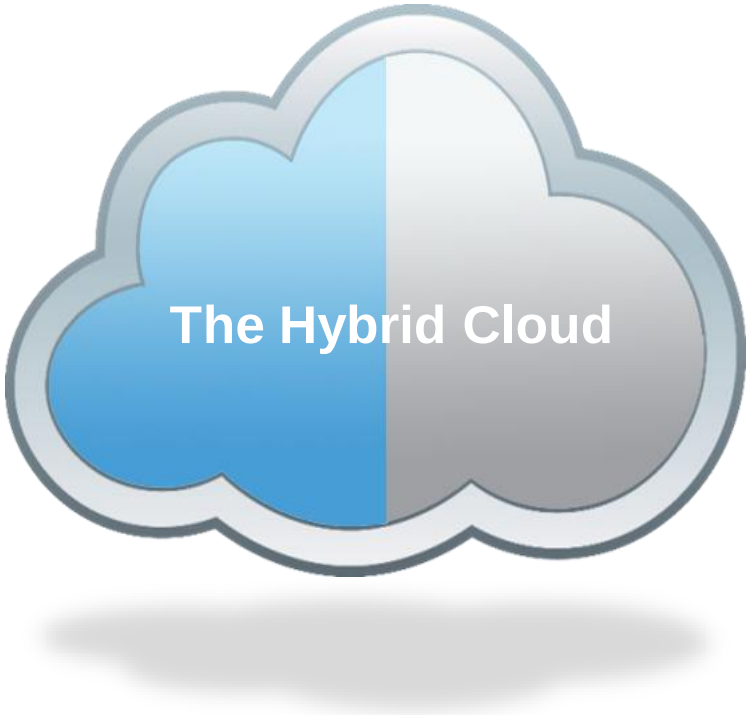
- Fully redundant VMs
- Fast automatic VM restart
- Automatic performance optimization
- No downtime maintenance

- Buy 2x unreliable VMs and try to sync
- Buy monitoring, restart VMs yourself
- Buy 2x VMs, do tests, kill poor performers
- Guaranteed downtime

Competitive Advantages

amazon web services™

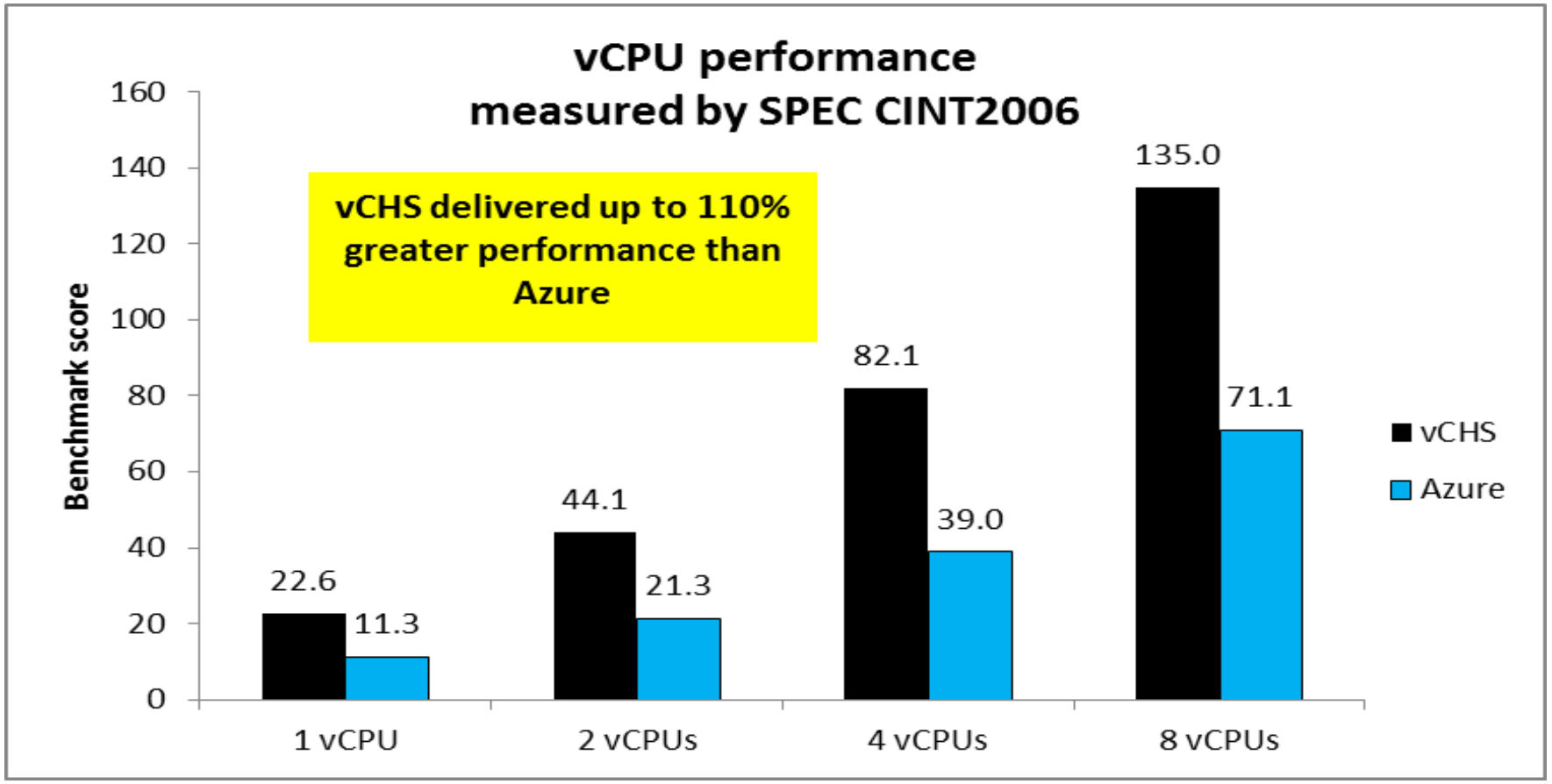
vCloud Air runs your apps
without conversion,
on highly reliable infrastructure
with
>3x faster storage



Windows Azure™

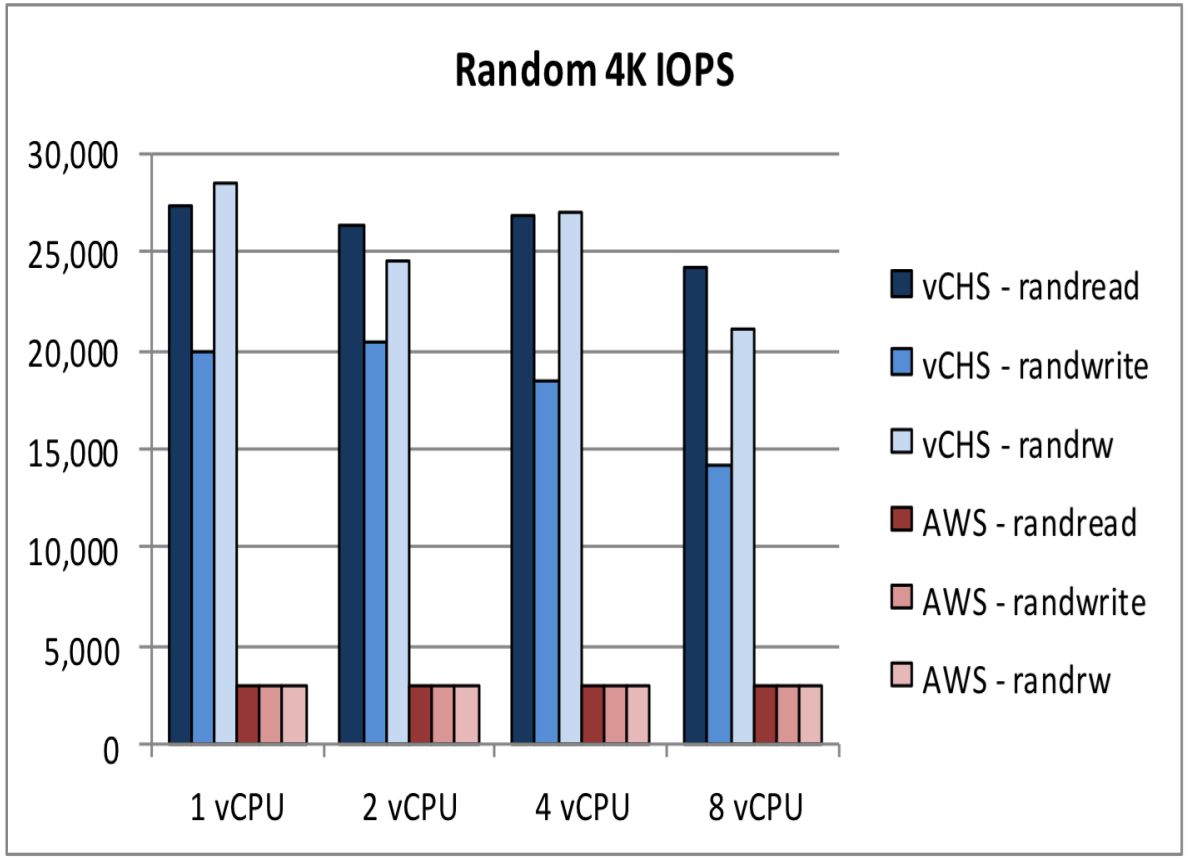
vCloud Air runs Windows
2x faster than Azure,
runs more versions of
Windows, and supports more
Microsoft apps

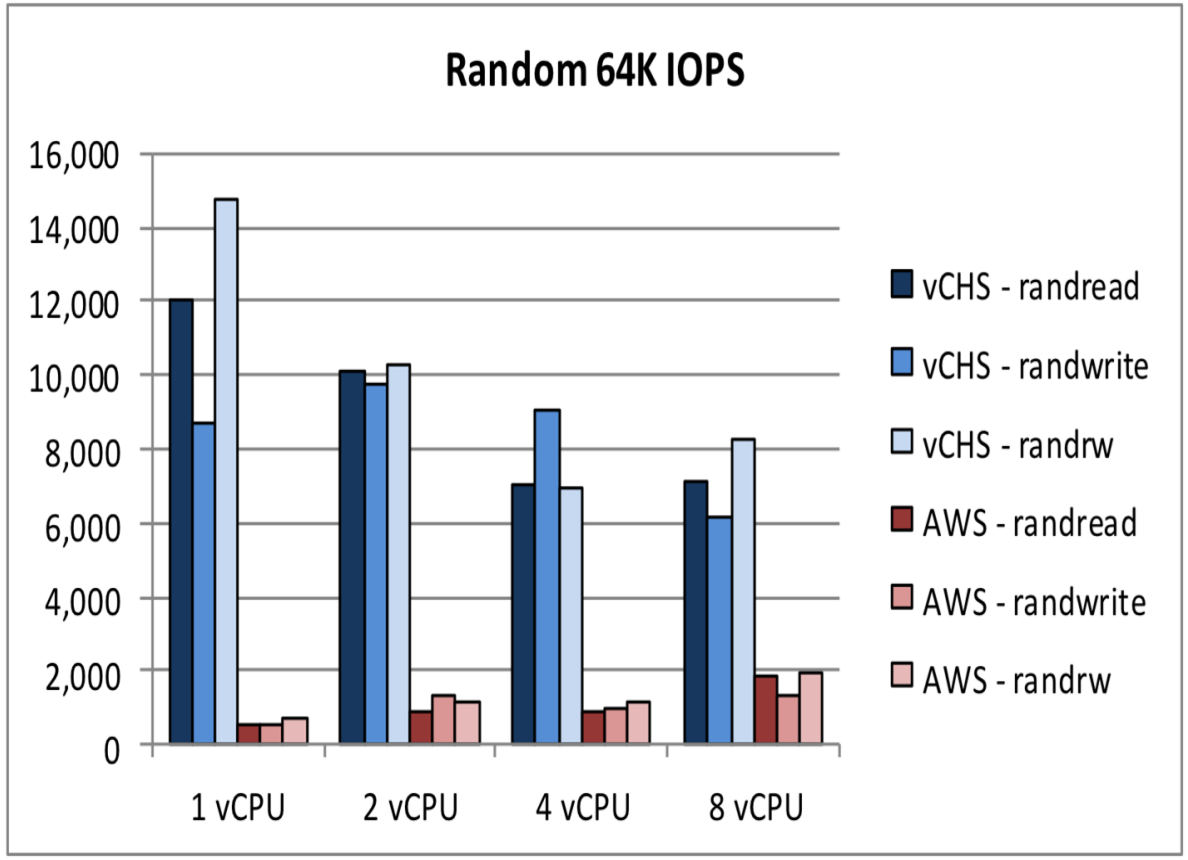
2x the CPU performance of Azure



Source: Principled Technologies “SPEC CPU 2006” performance benchmark report

More Than 3x Disk Performance of AWS





Source: Principled Technologies “fio” performance benchmark report

Secure and Compliant

Hybrid Service

ISO 27001:2005

SOC 1 Type 2 (SSAE 16)
SOC 2 Type 1
SOC 2 Type 2

HIPAA and HITECH Security Rule

Government Service

FedRAMP Provisional Authority to Operate

Supports US International Traffic in Arms Regulations (ITAR)

Federal Information Processing Standard (FIPS) 140-2

Federal Information Security Management Act

Industry Leadership in First 9 Months

451 Research

"VMware's "hybrid" cloud exhibits rapid expansion and has an ambitious roadmap"

RIGHTSCALE® CLOUD MANAGEMENT

#2 in enterprise public cloud usage

vmware®

Grazie!!!

Simone Brunozzi,
VP and Chief Technologist, vCloud Air
@**simon**

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