VMware Cloud on AWS
A Closer Look

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Speed is the New Currency
Cloud Computing

We are in the 3rd fundamental structural transition in the history of IT.
Hybrid is the Preferred Operating Model

Source: "Rightscale 2016 State of Cloud Report, n=1049"
Key Drivers for Adopting Cloud

- Agility/Speed: 66%
- Improve Quality of Service: 12%
- Business Alignment: 10%
- Defend IT: 7%
- Reduce Costs: 5%

Your IT Landscape Will Shift and Transform

Gartner estimates 20% of all workloads will run in-Cloud in 2020.
Private Cloud Focuses on Removing Silos
Clouds as the New Silos?

On-Premises Datacenter

On-Prem App

Amazon App

Azure App

Google App

On-Premises Datacenter

Amazon Web Services

Microsoft Azure

Google Cloud Platform Live

vmware

vmware
Common Challenges with Public Cloud Adoption

Moving workloads to public cloud is faced with the following challenges:

- Operational Consistency
- Existing Skillsets & Tools
- Control, Manage, Secure
- Enterprise-class App SLA
- Compatibility with Apps
Building and Operating the Cloud is Often the Bottleneck
Same Set of Challenges per Silo

Consumer Challenge: Different teams, different technology stacks, different security & compliance

- VMware
  - On-Premises Datacenter
  - Google Cloud Platform Live

- Amazon Web Services
- Microsoft Azure
Partnering to Deliver a Game-Changing Solution
VMware Cloud on AWS

vRealize Suite, vSphere Integrated Containers, ISV Ecosystem

Operational Management

- vCenter

Customer Data Center

AWS Global Infrastructure

VMware Cloud™ on AWS

- vCenter
- vSphere
- vSAN
- NSX

- ESXi on Dedicated Hardware
- Support for VMs and Containers
- vSAN on Flash and EBS Storage
- Replication and DR Orchestration
- NSX Spanning on-premises and Cloud
- Advanced Networking & Security Services

Native AWS Services

- Amazon EC2
- Amazon S3
- Amazon RDS
- AWS IoT
- AWS Direct Connect
- AWS IAM

VMware vSphere-based service running on the AWS Cloud
VMC Consumes
Next Generation Elastic Bare Metal
AWS Infrastructure
vSphere Does Not Run Nested
Dedicated Hardware for a Single Customer
Deploy SDDC Across the Globe
Run Your Apps and Workloads Anywhere

Scenario 1: Maintain and Expand
- Maintain
- Expand
- Private Cloud
- Public Cloud

Scenario 2: Consolidate and Migrate
- Consolidate
- Migrate
- Private Cloud
- Public Cloud

Scenario 3: Workload Flexibility
- Flex as needed
- Private Cloud
- Public Cloud

Customer has the choice to run workloads across On-Premises DC and Cloud

Running VMware Cloud Foundation Gives You Ultimate Cloud Flexibility and Freedom
VMC is Sold as a Service

‘As a Service’ Model means:
- VMware Manages Hypervisor and Management Components
- AWS Manages Physical Resources
- Customer Manages VMs
- Customer Decides How Many VMs to Run on vSphere

Some Restrictions Apply:
- No Root ESXi Access
- No VIB Installations
- No VDS Configuration Access
- No Direct Management VM and Network Edge Access
Use Your Existing Skill & Toolset
vCenter is the Management Plane

- No Introduction of a New Management Tool
- No Mixed Inventory, vCenter per Site
- External PSC Runs In-Cloud
Well-Known Multi-Cloud Management Tooling

vRealize Operations Dashboards
Capacity Planning Challenges
Hosts are Ephemeral
Elastic Data Center Network Overview

Management Pool
- vCenter Server, PSC, NSX Manager
- NSX Edge Gateway (MGW)
- NSX Logical Switch for Management VMs
- Firewall and VPN for Security

Compute Pools
- NSX Edge Gateway (CGW)
- NSX Logical Switch for Workload VMs
- Firewall and VPN for Security
- NAT to Connect VMs to the Internet
Policy Driven Network Management

- Consistent Network Overlay (VXLAN)
- Cross-Cloud Micro-Segmentation (Policy Stretching)
- Seamless Workload Mobility (vMotion In & Out)
Hybrid Cloud Connectivity Options

- IPSEC VPN to Existing Network Architecture
- L2 VPN - Bespoke NSX Edge
- L2 VPN - Full NSX Deployed in On-Premises Data Center
- Cross-Center NSX with AWS Direct Connect
No NSX in your current VMware environment?

No Problem…

Deploy a stand-alone NSX appliance into your existing vSphere environment to extend the VMware Cloud on AWS environment to your premises.
Provision VMware Cloud VPC

The full VMware Cloud on AWS stack will be auto provisioned and configured at launch into a **single tenant** AWS account (owned and operated by VMware).
A Customer-owned AWS account is created and/or assigned to interoperate with the VMware Cloud VPC.
Connect Data Center to Customer VPC

Private connectivity is established from the On-prem DC to the Customer VPC
Link VMware Cloud VPC and Customer VPC

Link the VMware Cloud VPC and the Customer VPC using private VPC endpoints.
Deploy and Consume Native AWS Services

- **Deploy** and **Consume Native AWS Services**
- **Customer VPC**
- **VMware Cloud VPC**
- **AWS Direct Connect**
- **VMware Cloud Endpoints**
- **VPC subnet**
- **Private Managed AWS Services**
- **Customer Instances**
- **VPC subnet**
- **Customer VPC**
- **AWS Lambda**
- **CloudFront**
- **Amazon S3**
- **Regional AWS Services**
- **Amazon DC**
- **VMware Cloud VPC**

**vSphere Environment**

**Non-vSphere Environment**

**Customer Data Center**
Operating in the Hybrid Ecosystem: X-vMotion

vMotion from Site-to-VMware Cloud

vSphere Environment

Non-vSphere Environment

Customer VPC

Private Managed AWS Services

Private VIF

Public VIF

AWS Direct Connect

VPC

VMware Cloud Endpoints

VPC subnet

AWS Lambda

CloudFront

Amazon S3

Regional AWS Services

Etc...

Amazon DC

VMware Cloud VPC

Customer Data Center
VMC is an **Extension** of a Powerful & Mature Production Operational Model and Ecosystem
Thank You!