Day in the Life of a VMware Cloud Admin with Interactive Demo

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Agenda

The Existing ICT Enterprise Operating Model

The New Cloud Operating Model
  The Operations and Automation Framework

Demonstrating the New Model
  Policy Driven Deployment & Dynamic Autoscaling
  Infrastructure as Code & Cloud Agnostic Blue/Green Deployment
The Existing ICT Operating Model

When life was simple...
## The Existing ICT Operating Model – Admin of the Past

### What’s the problem with Enterprise IT? – Business view

<table>
<thead>
<tr>
<th>Unhelpful</th>
<th>Expensive</th>
<th>Rigid</th>
<th>Broken</th>
<th>Late</th>
<th>No</th>
<th>Painful</th>
<th>Slow</th>
<th>Performance</th>
<th>Cost</th>
</tr>
</thead>
</table>

- Management through Consoles
  - All changes performed by administrators manually
  - Time consuming and error prone
  - Consoles have a large blast radius for mistakes to inflict high damage

- Per Application Deployment Process
  - “Everything is a project in IT”
  - All workloads are designed into the environment
  - Workload deployment is done manually and can take weeks or months

- Single Cloud Environment
  - Most operational processes built around a single cloud provider
  - Additional cloud providers require separate teams and skill sets
  - Inconsistent processes and tools between environments creates lock-in

- Static Lifecycle Environments
  - Application SDLC environments are static and permanent
  - Environments drift in configuration overtime slowing releases
  - Workloads are running 24x7 at a large expense to the business

### Enterprise IT Reality

- Integration complexity
- Endless growth of infrastructure
- Struggle to maintain configuration control
- Build / Run transition challenges
- Vendor provided technology roadmaps drive change programs
- Lock In
- Poor understanding of technology dependencies
The Cloud Operating Model

The model of the future... Today.
The Cloud Operating Model

What’s the problem with Enterprise IT? – Business view

Infrastructure as Code
- Re-usable and standardised configuration
- Automated service delivery
- Intellectual property retention
- Version controlled

Policy Driven Deployment
- Placement determined by policy
- Metered consumption
- Continuous delivery enabled

Cloud Agnostic
- Cloud Choice – flexible consumption
- Agnostic blueprints
- Network configuration

Dynamic
- Just in time environment provisioning
- Reduced pressure on finite DC resources
- Controlled Change
- No configuration drift

Enterprise IT Reality
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VMware Framework

Consumers
- Persona based Service Definitions
- Service Requests Interactive / API
- DevOps

Automation Framework
- Cloud Assembly
- Service Broker
- Harbor
- Code Stream

vRealize Automation and Tanzu

Foundation Services
- Compute
  - vSphere
- Storage
  - vSAN
- Network
  - NSX

VMware Cloud Foundation – Private Cloud

Public Clouds
- Azure
- AWS
- VMC on AWS
- GCP

ITSM Processes
- Incident / Problem
- Change & Release
- Security & Risk

Operational Framework
- vRealize Operations
- vRealize Network Insight
- vRealize Log Insight

#vFORUMAU
vCenter: Enabled the central management of many servers required pre-existing network and storage from external teams.

First step into application blueprinting and native cloud provisioning. Use of NSX and Cloud started to consolidate skill sets more centrally as storage, networking, cloud and applications start to become services.

Lab Manager enabled the first step into automatic provisioning of VM's and network still required other teams to be involved.

Enabling complete consolidation of infrastructure teams. Close relationship to application teams and developers. Cloud-agnostic Infrastructure as Code, self-driving datacenter, focus on automation of the entire lifecycle of machines, containers and services.
Operations Framework

vRealize Operations
Intent driven continuous performance optimisation
Efficient Capacity Management
Intelligent Remediation
Integrated compliance & configuration

vRealize Network Insight
Plan applications security
Optimize and Troubleshoot
Virtual and Physical Networks
Manage and Scale NSX

vRealize Log Insight
Plan applications security
Optimize and Troubleshoot
Virtual and Physical Networks
Manage and Scale NSX

Problem Resolution and Health
Performance Optimisation
Capacity, Demand and Cost Management
Configuration Compliance
Automation Framework

MARKETPLACE
Get BP designs & images from the Marketplace

BUILDING BLOCKS
Build designs from scratch using rich set of building blocks

Service Catalogue

Blueprint
- Cloud Agnostic
- Declarative
- Human readable YAML

Environment on Demand

INTEGRATIONS

Environments on Demand

Private Cloud

Public Cloud

#vFORUMAU
Policy Driven Deployment &
Dynamic Autoscaling

Demonstration
Self-driving operations
Consistent operations for consistent infrastructure

- Performance Optimization
- Capacity & Cost Optimization
- SDDC Configuration Compliance
- Intelligent Remediation

AIOps Engine

Discover, Collect and Persist
Application Topology and Dependency mapping
Metrics, Events, Configurations, Logs

Multi-Cloud Visibility
Continuous Optimization

SDDC (VCF)  EDGE  VCPP  VMC  PUBLIC CLOUD
Declarative provisioning & lifecycle
Iteratively update a deployment through code

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Build designs from scratch using rich set of building blocks

BLUEPRINT
(Declarative topology with YAML IaC)

DEPLOYMENT
(Provisioned app instance)

Cloud zones
Network profiles
Storage profiles
Image mappings
Flavor mappings

DEPLOY

UPDATE

v1

v2

DEPLOYMENT

Edge
Data Center
Managed Data Center
Public Cloud

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Stop! #demoTime
#vFORUMAU
Infrastructure as Code & Cloud Agnostic Blue/Green Deployment

Demonstration
Cloud-agnostic IaC

Infra workload on any cloud

CLOUD SPECIFIC

- Cloud.vSphere.Machine
- Cloud.AWS.EC2.Instance
- Cloud.GCP.Machine

CLOUD ZONES

- Datacenter/Cluster
  - env:prod

- Region/Availability Zone
  - env:dev
  - env:test
  - env:stg

CLOUD ACCOUNTS

- Cloud.Azure
- Cloud.GCP
- Cloud.vSphere
Delivery with DevOps
vRealize Automation 8

- Intuitive visual pipeline designer
- Pipeline as code
- Triggered by GitLab, Github checkins,
- Integrated with Jenkins, Bamboo, Email(SMTP), Slack, vRO, Cloud Assembly, Kubernetes, Jira, Microsoft TFS, Custom Integrations(Docker)
- Pipeline analytics
- Smart pipeline templates
- Kubernetes integration
- Project scoped endpoints
Stop! #demoTime
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Thank You!
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