Service Provider - Cloud Automation and Extensibility with VMware

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rhipe
Agenda

1 Introduction
2 Sample Framework and Solution Architecture
3 The role of vCloud Director
4 vRealize Orchestrator
5 Summary
Agenda

1. Introduction
2. Sample Framework and Solution Architecture
3. The role of vCloud Director
4. vRealize Orchestrator
5. Summary
## Standardise to Automate

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<tr>
<th></th>
<th>Unique</th>
<th>Semi-Unique</th>
<th>Standard</th>
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<td><strong>Repeatability</strong></td>
<td>Not repeatable</td>
<td>Semi-repeatable</td>
<td>Repeatable</td>
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<td><strong>Automation</strong></td>
<td>Can’t be automated</td>
<td>Partially Automated</td>
<td>Automated</td>
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<td><strong>Scale</strong></td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
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<tr>
<td><strong>Cost</strong></td>
<td>High</td>
<td>Medium</td>
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VMware based clouds (Infrastructure)

- vSphere based Clouds, manually managed
- vCloud Director Managed Cloud. Some customer self-service
- Third Party Orchestrator over vSphere based virtual infrastructure
Cloud Orchestration Tools – vCAN bundle
What is driving automation?

- Cost Reduction
- Operation Efficiency
- Improve Customer Experience
- Ability to offer XaaS with exiting resources
- Staff to focus on more value added activities
- Emergence of SDDC
- Reduce Human Error during configuration
- Address Scalability issues
- Staff to focus on more value added activities

Automation
Recommendations

- Select a cloud service-oriented approach (CMP) over a generalist approach (ITPA tool) if your organization wants to add cloud computing services.

- Determine orchestration tool selection criteria based on orchestration and connector requirements, dependencies and overlaps with existing tools.
# Agenda

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What about a Customer Facing Portal?

Customer Facing

Operations Team facing – UI to kick off processes to automated on boarding of XaaS

Workflow Engine

vCloud
Director

Operations UI

vRealize Orchestrator

Cloud Business Process Automation and Portal

Customer Facing
Cloud Services Design – A sample

Cirrus here refers to an imaginary customer.
# Agenda

1. Introduction
2. Sample Framework and Solution Architecture
3. **The role of vCloud Director**
4. vRealize Orchestrator and Advanced Service Designer
5. Summary
Enabling Hybrid Clouds for Service Providers

End User Computing

Desktop

Mobile

Virtual Workspace

Applications

Traditional

Modern

SaaS

Policy-based Management & Automation

Cloud Automation

Cloud Operations

Cloud Business

Software-Defined Data Center

vCloud Director – SP Suite

Virtualized Infrastructure - Abstract & Pool

Compute Abstraction = Server Virtualization

Network Abstraction = Virtual Networking

Storage Abstraction = Software-Defined Storage

Private Cloud

Public Cloud

Hybrid Cloud

VMware & vCloud Service Providers

Physical Hardware

Compute

Network

Storage

CONFIDENTIAL

4
vCloud Director
Vision Statement

Enable Service Providers
to build differentiated cloud services
that are inherently hybrid aware and
the best fit for enterprise-class
organizations.
VMware vCloud Director
Key High Level Features and Benefits

- Deliver complete infrastructure as virtual datacenters
- Enable infrastructure to be consumed in a matter of minutes
- Policy driven multi-tenant approach
- Logically group users into Organizations
- Third party integration to allow access to key capabilities
- Tight integration with other VMware products
vCloud Director – First Principles

• Same code base and features as vCloud Air

• vCD as the platform for dedicated, shared and On-Demand compute

• Enable service provider partners to deliver value-added services just like vCloud Air

• 6 – 9 month release cadence

• No further UI development, new features are enabled via APIs.

• Four Partners to provide future UI for vCloud Director – Ensim, Parallels, OnApp and AirVM
How Do You Use vCloud Director

• Public Cloud (Standardised Offering on Multi-tenant Infrastructure)
• Dedicated Cloud (Standardised Offering on Dedicated Cloud)
• Managed Services for Cloud (Custom offerings on top of Cloud)
• Managed Hosting (Customised Infrastructure and Application Hosting)
• Consulting & Professional Services.
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vRealize Orchestrator Overview

**Features**

- Integrate VMware solutions into your IT environment and processes
- Reduce IT OpEx and total cost of ownership of VMware solutions
- Automate your cloud and accelerate transition to “IT as a Service” model

**Platform**

- Drag-&-drop design
  - Create powerful workflows easily by drop-&-dragging pre-built actions

- Cloud scalability
  - Execute hundreds of workflows in parallel to meet Cloud scale

- Flexible triggers
  - Launch workflows from the vSphere Web Client, vCAC, web browser, schedule, event, and API

- Automate VMware
  - 100% coverage of vSphere and vCloud Director APIs
  - Unmatched VMware content

- Included with vCenter Server
  - Included with vSphere at no extra cost
  - Installed with vCenter
Technical Benefits

Same plug-ins/workflows can be used for:

- vCAC fabric integration
- Day-2 operations
- vSphere task automation
- Automated remediation for vCOPs
Thousands of out of the box workflows & actions

VMware Applications

- vCenter Server 4.0, 4.1, 5.0, 5.1 & 5.5
- vCloud Director 1.0, 1.5, 5.1 & 5.5
- vRealize Automation 5.1, 5.2 & 6.0
- vCenter Update Manager 4.1, 5.0 & 5.1
- vCenter Chargeback 2.0
- vCenter Configuration Manager 5.5 & 5.7
- vCenter Operations Manager Pakage
- vCenter Orchestrator Multinode 5.0, 5.1 & 5.5
- vSphere Auto Deploy
- VMware Service Manager 9.1
- VMware Service Elasticity
- VMware Hadoop as a Service
- VMware View 6.0

Partner Applications

- Bluecat Networks
- BMC Atrium CMDB & Remedy
- Cisco UCS Manager
- EMC Unified Infrastructure Manager
- EMC ViPR
- Egenera PAN Manager
- F5 Networks
- Infoblox NIOS
- Microsoft Active Directory
- Microsoft Windows PowerShell
- NetApp WFA
- Radware vDirect
- ServiceNow
- Up.time Software

Standard Protocols

- AMQP / RabbitMQ
- Email (POP3/IMAP and SMTP)
- HTTP-REST
- JDBC
- SOAP
- SNMP v1, v2c and v3
- SQL
- SSH
- Telnet
- XML

Recent Additions

- Amazon EC2
- Chef
- Hitachi Unified Compute Platform
- HP ServiceManager
- Microsoft Azure
- OpenStack
- Puppet
- SaltStack
- VMware vCloud Hybrid Services
- VMware vCNS and NSX
- VMware Site Recovery Manager
- VMware View
- AD Multi-Domain Support
Where to get the Plugins?

- Officially released Plugins:
  
  http://solutionexchange.vmware.com (hit the “TRY” button)
  https://www.vmware.com/support/pubs/vco_plugins_pubs.html

- Technical Previews (public)
  
What do I need and where to get help to execute this project?

1. VMware Education Services
   • Custom Automation Training dedicated to Service Providers. The course will utilize the tools mentioned in this presentation.
2. VMware Partner University Online Training
3. VMware Hands-On-Labs
4. VMware Education Services - vCenter Orchestrator Training
5. VMware Professional Services

Register your interest with

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Thank You