Private Cloud and IT-as-a-Service with Cisco Unified Data Center

Gartner IT Infrastructure, Operations & Management Summit

Cisco Systems
Tomorrow’s IT—World of Many Clouds
Enabling Multiple IT Sourcing Models

Hybrid Cloud

Public Cloud Services

Private Cloud

Traditional Data Center
# Powering Cloud Computing

Infrastructure Capabilities Matter More Than Ever

<table>
<thead>
<tr>
<th>CLOUD REQUIREMENTS</th>
<th>IDEAL INFRASTRUCTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Cost Operations</td>
<td>• Simplified management</td>
</tr>
<tr>
<td></td>
<td>• Lower service provisioning cost</td>
</tr>
<tr>
<td>Infrastructure as a Service</td>
<td>• Integrated compute, network, and storage resources</td>
</tr>
<tr>
<td>Self Service Consumption Model</td>
<td>• Physical resources deployed through API’s and policies</td>
</tr>
<tr>
<td>Elastic Resource Allocation</td>
<td>• Rapid scalability of virtual and physical</td>
</tr>
<tr>
<td></td>
<td>• Automated deployment</td>
</tr>
<tr>
<td>Shared Pools of Resources</td>
<td>• Virtualization optimized</td>
</tr>
<tr>
<td></td>
<td>• Resource abstraction</td>
</tr>
</tbody>
</table>
Cisco Unified Data Center
The Platform for Delivering IT-as-a-Service

UNIFIED FABRIC
UNIFIED COMPUTING
UNIFIED MANAGEMENT
Legacy Management
Slow, Complex, Brittle, Expensive

Cloud Management
Fast, Simple, Flexible, Cost-Effective

Legacy IT

IT-as-a-Service
- Measured Service
- Rapid Elasticity
- On-Demand Self Service
- Broad Network Access
- Resource Pooling

Network
Compute
Storage
Unified Management for Cloud
IT-as-a-Service Requires a New Management Approach

Self-Service Portal and Orchestration

Infrastructure Resource Mgmt

Policy-Based Compute

Policy-Based Network

On-Demand, Self-Service Provisioning of IT Resources

Policy-Based, Model-Driven Approach Reduces TCO

Easiest to Use and Deploy, Delivers Faster Time to Value

Optimized for Cisco Architectures, Complements Existing IT Systems and Management Tools
Unified Management for Cloud
Automation and Orchestration Designed for IT-as-a-Service

Cisco Intelligent Automation for Cloud

Cisco Unified Computing System Manager
Cisco Network Services Manager

Unified Management Partner Ecosystem
Cisco Intelligent Automation for Cloud
IT Self-Service Storefront

Cisco Cloud Portal Example:
Cisco IT Deployment—CITEIS Virtual Data Center

Welcome to CITEIS VDC
Your Virtual Data Center
Cisco now offers the option to create your own Virtual Data Center. These services allow you to acquire the virtual resources you need for as long as you need them, with an abundance of supporting services, including additional network and storage capacity.

VDC
Sign up and manage a VDC
Sign your group up for resources in your own virtual data center.

Register yourself or your group for VDC services
Add units
Add network capacity
Add storage

Order new resources
Get new vApps, VMs, and related services.

Manage your resources
Extend leases, configure, delete, restore VMs...
Cisco Intelligent Automation for Cloud
Orchestration-Based Automation

Cisco Process Orchestrator Example:
Provision virtual data center (VDC)
Cisco Intelligent Automation for Cloud
Unified Management – Automated Self-Service Provisioning

FROM 8 WEEKS TO 15 MINUTES

Architect  Design  Where Can We Put It?  Procure  Install  Configure  Secure  Is It Ready?

Capacity On-Demand  Policy-Based Provisioning  Built-In Governance

Manual

© 2012 Cisco and/or its affiliates. All rights reserved.
CITEIS: Cisco IT’s Cloud Journey

Server Virtualization

Image Repository Service Catalog
Show / Chargeback
Change Management

OVF  OVA

PaaS
• Web Server
• Application Server
• Database Server
• Integration Services

Unified Infrastructure
Virtualization
Automation
Self-service
Multi-tenancy
Elasticity

Cisco IT Elastic Infrastructure Service (CITEIS)

Cisco Nexus
Cisco UCS x86
Cisco Intelligent Automation for Cloud
Logical Segmentation Control, Security and Fault Isolation

Cisco Intercloud Hybrid

*OVF = Open Virtualization Format
CITEIS: Solution Components

Cisco Intelligent Automation for Cloud
- Cisco Cloud Portal
  - Self-Service — Service Catalog
- Cisco Process Orchestrator
  - Automation Packs
  - Adapters
  - Provisioning — Integration

Resource Managers
- Cisco UCS Manager
  - System IP Address Mgmt — Host Mgmt
  - Remedy Incident Mgmt — Change Mgmt
  - VDC Resource Mgmt
    - vCloud — vSphere — vCenter
  - Active Directory Group Mgmt — Profile Mgmt
  - rPath Image Mgmt — PaaS Image Library
- Cisco Network Services Manager

Cisco UCS

Network Resources
CITEIS Deployment—Cost Analysis

Virtualization > Unified Computing > Cloud

Compute TCO ($/Qtr/OS instance)

- Legacy (rackmount); all physical
- Legacy; medium virtualization (54%)
- Current State 20/80% Legacy/UCS 82% Virtualization
- Target State 100% UCS/Cloud 90% virtualization

Delivery Time

- 2008: 6–8 Weeks
- 2010: 2–3 Weeks (Manual)
- 2012: 15 Minutes VM (2–9 Days E2E)
- Future: 15 Minutes (Self-Service)

© 2012 Cisco and/or its affiliates. All rights reserved. Cisco Confidential
Cisco Intelligent Automation for Cloud
Starter Edition
Introducing
Cisco Intelligent Automation for Cloud Starter Edition

Easy-to-Use End-Self-Service and Administrator Web Portal

Order VMs and Physical Servers with Automated Provisioning

A Starting Point for your Cloud Journey with Cisco UCS
Cisco Intelligent Automation for Cloud
Starter Edition – Features & Benefits

- Pre-Built Portal Content and Workflows to Accelerate Time to Cloud
- Deployment of Compute-as-a-Service on Cisco UCS to Improve Agility
- Self-Service Provisioning and Automation for both Virtual and Physical
- Control Over Resources and Consumption with Lifecycle Management
- Ability to Grow Deployment and Expand to New Use Cases with Upgrade Path

© 2012 Cisco and/or its affiliates. All rights reserved.
Thank you.