VMware – Building Many Bridges to the Cloud

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Agenda

- Cloud
  - Characteristics
  - Benefits
  - Challenges

- VMware and Cloud
Characteristics of Cloud

- Use pooled resources
- Own or rent
- Separate end user interface from service backend
- Choose not to own hardware and software
- Utility computing
- Pay upfront or pay as you go
Cloud is not about *where*, but *how* computing is done
3 Layers of Cloud Computing

- Software as a Service (SaaS)
- Platform as a Service (PaaS)
- Infrastructure as a Service (IaaS)
Benefits of Cloud

- Lower cost
- Improve efficiency
- Increase economy of scale
- Allow specialization and innovation
- Open a new era with exciting opportunities
- Provide access to technologies for the less privileged
Challenges of Cloud

- Privacy
- Security
- Open vs. proprietary
- Standards and interoperability
- Business model
- Individual freedom vs. government control
- (Un)equal access to technology
VMware is the Customer Proven Market Leader

- **Company Overview**
  - $2 billion in 2009 revenue
  - $634M + 35% YoY Growth in Q1 ‘10
  - Over $2 billion in cash
  - 25%+ operating margins
  - ~7,000 employees worldwide
  - 5th largest infrastructure software company in the world

- **Proven in the Trenches**
  - 170,000+ VMware customers
  - 100% of Fortune 100
  - 100% of Fortune Global 100
  - 96% of Fortune 1000
  - 96% of Fortune Global 500
VMware Leading the Industry Journey

- **1998**: VMware Workstation
  - Virtualization
- **2001**: VMware ESX
  - Server Virtualization
- **2003**: VMware Infrastructure
  - Virtual Resource Pools
- **2009**: VMware vSphere™
  - Complete Virtualization Platform
- **2010**: VMware Private & Public Cloud

- **2005**: Automate
- **2007**: Extend
## Virtualization & Cloud = Top Priorities for CIOs

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Source: Gartner CIO study, Q4 2009
Today’s IT – Complex, Inefficient, Inflexible

Where IT Energy Is Spent

- **5%** Infrastructure Investment
- **23%** Application Investment
- **42%** Infrastructure Maintenance
- **30%** Application Maintenance

**Cause**
- Overwhelming complexity
- Reliance on brittle infrastructure

**Effect**
- >70% of IT budgets just “maintaining” status quo
- <30% of IT budgets goes to innovation and competitive advantage

Business Agility Depends on IT Agility

- **Reduce the Complexity**
- **Dramatically Lower Costs**
- **Enable Flexible, Agile IT Service Delivery**

Source: VMware Fortune 100 Customers
Our Focus is to Transform IT

- Simplify the Complexity
- Dramatically Lower Costs
- Enabling Flexible, Agile IT Service Delivery
Virtualization + Automation = Lower Costs

Cost per VM hour
(2GB instance)

1. Increase utilization

2. Increase automation

Utilization
Flexible Cloud Deployment Models = Choice

**Enterprises**

- **Private Cloud**
  - Operated solely for an organization, typically within the firewall
  - Low total cost of ownership
  - Greater control over security, compliance, QoS
  - Easier integration
  - Support existing applications

- **Hybrid Cloud**
  - Composition of 2 or more interoperable clouds, enabling data and application portability
  - VMware focus to deliver the best of both worlds

- **Public Cloud**
  - Accessible over the Internet for general consumption
  - Low acquisition costs
  - Less administrative burden
  - On-demand capacity
  - Limited offerings

**Cloud Service Providers**
VMware’s Commitment to Open & Interoperable

vCloudAPI: First Cloud API Submitted to Open Industry Standards

APIs: Programmatic Access to Resources

Private Cloud

OVF

VM

Public Clouds

OVF: First Industry Standard Cloud Workload
VMware Open Cloud Infrastructure & Services

- Core IT Services via Virtual Appliances
  - VMware vCenter: Policy-based Management & Automation
  - VMware vSphere: Platform for Cloud Infrastructure
  - VMware View: Desktop Computing via Cloud
  - Application Platform for the Cloud
    - SpringSource
    - RabbitMQ
    - Redis
    - Gemstone
    - TBD...

- Other Clouds
  - vCloud Partners
  - Google
  - VMware Open Public Cloud
  - Public Cloud
  - Private Cloud

- VMware Open Cloud Infrastructure & Services
  - Zimbra

- IaaS
  - SaaS
  - PaaS
The Rise of a New Era in IT

Cloud Computing will transform the delivery of IT services
Thank you