

Power of Choice Microsoft Cloud Computing

Zane Adam
General Manager

Internal cloud

Scale-out cloud

Software as a service

Hybrid computing

Global cloud

Cloud computing

Grid computing

Service platform

Utility computing

Online services

Infrastructure as a service

Hosted cloud

Cloud platform

Cloud services

Platform as a service

Private cloud

On demand

Public cloud



How Does Microsoft Define Cloud?

WHAT

WHO

Private Cloud



- Customer Runs
- Customer Manages
- Within the Firewall

- System Integrators
- Hosters
- Microsoft, VMware, IBM

- Externally Run
- Externally Managed
- Outside the Firewall

- Hosters
- Microsoft, Google, Amazon, Salesforce

Public Cloud



What Attributes Define Cloud?

Capabilities & Requirements

- Self-Service
- Service-Oriented
- Scale Out
- Elastic
- Failure Resilient
- Model-Driven
- Consumption based charge

Why Clouds? Why Now?



Manage Costs

Shift from capital expenditures to operational expenditures



Greater Resource Agility

Respond to business demands more effectively



Greater Business Agility

Focus on solving business problems, not on infrastructure issues



Smaller Carbon Footprint

Reduction in physical resources required on-premises

Adapting to Market: Datacenter Evolution

Traditional Datacenter

Virtualized Datacenter

Private Cloud

Public Cloud

- Well-known, stable and secure
- Utilization <15%

- Utilization Increases to >50%
- Management Costs Decrease

- Management Costs Decrease Significantly
- IT as a Service
- Chargeback

- Capacity on Demand
- Global Reach



Our Vision For Cloud Services

SERVERS



SERVICES

**CUSTOMER
DATACENTER**

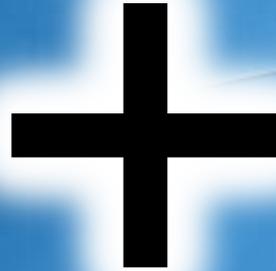
**HOSTER
DATACENTER**

**MICROSOFT
DATACENTER**

Software + Services



- Best of both worlds
- User in control
 - Deployment choices for IT



- Extending tools and platform to cloud
- Experience across multiple devices
 - Best-in-class SLAs and IT governance



Microsoft Cloud Computing Continuum

Private

Public



Microsoft
SharePoint Server
Microsoft
Exchange
Microsoft Dynamics



Software
as a
Service
(SaaS)

Microsoft Online Services
Microsoft
SharePoint Services
Microsoft
Office Live

Microsoft
SQL Server
Microsoft
Visual Studio
Microsoft
.NET

IT as a Service



Platform as
a Service
(PaaS)

Windows Azure
SQL Azure
Live Services
Microsoft
.NET Services

Microsoft
System Center
Windows Server



Infrastructure
as a Service
(IaaS)

Microsoft
System Center
Windows Server

Microsoft Dynamic Data Center Toolkit
For Enterprises

Microsoft Dynamic Data Center Toolkit
For Hosters

Microsoft Online Services

- World-class software
- Delivered as a subscription service
- Hosted by Microsoft and sold with partners

Microsoft®
SharePoint® Online

Microsoft®
Exchange Online

 Microsoft®
Office Communications Online

 Microsoft®
Office Live Meeting

 Microsoft Dynamics® CRM Online

Microsoft®
Exchange
Hosted Services

Windows® Azure™

- Scalable, available hosting platform
- Rich developer experience
- Model-driven service lifecycle management
- Enterprise-ready and hobbyist-friendly



SERVICES

SERVICES

Available
Now



Beta at PDC
Ship in 2010



Beta in 2010



Microsoft's Private Cloud

Building a Private Cloud Foundation

Vision: Deliver a tools that allows hosters & enterprises to dynamically pool, allocate and manage resources to enable IT *Infrastructure as a Service*

Dynamic Data Center Toolkit for Hosters (DDTK-H)

Available now and free of charge!



- Step-by-step instructions that you can use to build an instantly scalable virtualized infrastructure guidance
- Sample code and best practices

Dynamic Data Center Toolkit for Enterprises (DDTK-E)

Available free of charge in first half of 2010



- Familiar tools that are compatible with existing applications
- An architectural roadmap, deployment guidance and best practices

Dynamic Datacenter Toolkit for Hosters

Tools for creating managed services and hosted
Cloud offerings

- On-demand VM provisioning
- Sample portal helps provide hoster's customers an integrated control and view of services



End-to-end prescriptive guidance for creating
cloud services, managed hosting

Who's Using the DDTK-H Now?

14 Hosters deploying services by using the Dynamic Data Center Toolkit since launch at Microsoft Hosting Summit in March 2009, with 45 more in the deployment pipeline.

Microsoft Cuts Broad Cloud Pact with Taiwan's No. 1 Teleco

The pair Monday signed a memorandum of understanding to develop SaaS, PaaS and IaaS

Reliance Communications launches 'Cloud Computing' solutions in India on Microsoft Platform

Customer Momentum

Order Delivery Time Reduced By 50%. Support Costs Decreased By 75%.

Consolidation Ratios Increased By 10%. Zero Maintenance Downtime.

- Ryan Jones, Virtualization Product Manager, MaximumASP

Microsoft's Dynamic Data Center Toolkit for Hosters is keeping us relevant in the market. *It helps in real-time provisioning & modification of resources.*

- Randall Robinson, CIO & GM Operations, RackForce

*KIDC Korea is Asia's largest internet data center company. By adopting Microsoft's cloud infrastructure, the company was **able to switch from a conventional, server-hosting-based service to an added-value, managed hosting service.***

- Cho Geun-Suk, Infrastructure Business Team Manager, LGDacom KIDC

Dynamic Data Center Toolkit for Enterprises

VISION

Partner-extensible toolkit that enables datacenters to dynamically pool, allocate, and manage resources to enable IT as a service.

WHAT IS IT?

A turnkey solution providing:

- Customer/business unit on-boarding
- Automation and guidance
- Dynamic provisioning engine
- Self service portal
- Batch creation of VM's



Will Ship In First Half Of 2010

Demo

Microsoft Private Cloud Infrastructure Roadmap

TODAY

- Dynamic Datacenter Toolkit for Hosters
- Dynamic Datacenter Toolkit for Enterprises (H1 FY10)
- Windows Server 2008/Hyper-V R2
- Microsoft Hyper-V Server 2008 R2
- System Center Virtual Machine Manager 2008 R2
- System Center Operations Manager 2007 R2

UP NEXT

- Dynamic Datacenter Toolkit for hosters v2
- Dynamic Datacenter Toolkit for Enterprise v2
- Private Cloud Federation

FUTURE

- Windows Server vNext/Hyper-V vNext
- System Center vNext
- Dynamic Datacenter Toolkit vNext
- Azure Interoperability

Summary

- The Power of Choice
- Start building the foundation for Private Cloud
 - Dynamic Datacenter Toolkit for Hosters
 - Dynamic Datacenter Toolkit for Enterprise
- Stay informed
 - <http://www.microsoft.com/privatecloud>
 - <http://blogs.technet.com/ddcalliance>
 - <http://mscloud.tw>

Thank You!