Windows Azure

Bringing Cloud to your Enterprise

Rich Seymour
Microsoft Education
Why consider the cloud?

Speed
Scale
Economics
Cloud innovation presents challenges for IT

- How do I integrate with my existing IT investments?
- What about my heterogeneous, complex IT landscape?
- What about security and compliance?
Enterprise needs

Integration

Heterogeneity

Security
Enterprise needs

Integrative

Windows Azure fundamentals

Languages

.NET
php
Java
nodeJS
python

CMS

WordPress
Joomla!
Drupal

Devices

Operating Systems

Windows
Linux
Enterprise needs

Windows Azure fundamentals

Heterogeneity

Open, Broad
Trustworthy
and Flexible

TRANSPARENCY

CMS

WordPress
Joomla!
Drupal

Devices

Android
Mobile
Desktop

Databases

SQL Server
Hadoop
Oracle

Operating Systems

Windows
Linux
Security

Trustworthy

TRANSPARENCY

ISO 27001
Cloud Security Alliance (STAR)
Industry standards

Yearly audits
Independently verified

$ Monthly SLAs

Regulatory compliance
Trust center

Real-time status
Service dashboard

Enterprise needs

Windows Azure fundamentals
Security

Trustworthy

Count on your existing relationship

- Attach to your EA
- Enterprise ready procurement

- 24x7x365 Enterprise-ready support

MCS, CSS, Partners
- Trusted advisors

Enterprise needs

Windows Azure fundamentals
Today, we manage 200+ global services, running 24x7

- 9.9 billion messages a day via Windows Live Messenger
- 600 million unique users monthly on Windows Live and MSN
- 1 Petabyte+ of updates served monthly Windows Update
- 5M LiveMeeting conference minutes per year
- 200 billion+ authentications through Windows Azure AD
Windows Azure delivers.

Integration
On-premises AND cloud

Heterogeneity
Open, Broad, Flexible

Security
Trustworthy

Enterprise ready by design.
Windows Azure

App Services
- Mobile services
- Websites
- Integration
- HPC
- Analytics

Data Services
- SQL database
- HDInsight
- Table
- Blob storage

Infrastructure Services
- Virtual machines
- Virtual network
- VPN
- Traffic manager
- CDN

Apps
- Caching
- Identity
Store, backup, recover your data
Develop, test, run your apps
Extend your infrastructure
Reach where your datacenter won’t

Scenarios to get started with Windows Azure
Store, backup, recover your data

SAN storage cost = 4x Cloud storage
(source: Forrester)
Store, backup, recover your data

Windows Azure Storage

10 Trillion Objects

“Azure Blob storage has taken a significant step ahead of last year’s leader Amazon S3, to take the top spot”
– Nasuni 2013 Cloud Storage Report
Store, backup, recover your data

Windows Azure Storage

Highly durable and scalable
Multiple copies of your data
Finanically backed SLAs
Storage for objects, tables, drives
Supports REST APIs
Store, backup, recover your data
Store, backup, recover your data

Import/Export *(preview)*

Fast data transfer to Azure
Encrypted data transfer
Efficient recovery
Store, backup, recover your data

Simple and fast on-ramp to Azure
Active data instantly available locally
Archives less used data to Windows Azure
Recover data from any internet connection
Reduce enterprise storage TCO by 60-80%
Store, backup, recover

Microsoft SQL Server
Backup and restore database to the cloud

SQL Server Management Studio

Direct URL backup to Azure Storage

Restore in Azure Virtual Machine

Benefits
Reliable off-site data backup for SQL images
Easily restore databases using VMs
Store, backup, recover your data

Windows Azure Backup

Backup datacenter data to Windows using System Center Data Protection Manager
Backup and recover files/folders from Windows Server 2012 SP1

Benefits
Reliable offsite data protection
Simple, familiar, integrated
Efficient backup and recovery
Easy set up
Store, backup, recover your data

Develop, test, run your apps

Extend your infrastructure

Reach where your datacenter won’t

Scenarios to get started with Windows Azure
Develop, test, run your apps

Test and development on-premises
- Limited hardware budget
- Limited software licensing
- Resource contention with VMs
- Compromised developer agility
- Realistic scale tests often challenging

Your Datacenter

Developers
- Use VMs

Your Datacenter

VMs in test/dev environment

IT Admin
- Provision VMs
Develop, test, run your apps

Test and development using Windows Azure

- Cost effective (pay for what you use)
- Improved developer agility with platform services
- Ready to use gallery of images
- Ship tested in realistic scale scenarios
- Use existing development tools & languages
- Access on-premise resources if necessary
Develop, test, run your apps

Deploy anywhere with no lock-in

Start VMs and app development in Azure

Easy VM portability
If it runs on Hyper-V, it runs in Windows Azure
Extend your infrastructure

Develop, test, run your apps

Store, backup, recover your data

Reach where your datacenter won’t

Scenarios to get started with Windows Azure
Identity as the control point

- Windows Server Active Directory
- Windows Azure AD
- Microsoft apps (Microsoft Dynamics CRM, Office 365, Windows Intune)
- 3rd party clouds/hosting (Custom LOB apps, ISV/CSV apps)
- PCs and devices
- Consumer identity providers
Extend your infrastructure
Windows Azure Infrastructure Services

Virtual Network as your Datacenter extension
Create Subnets, Private IP addresses
Bring your own DNS
Domain join your VMs
Logical isolation with control over network
Create Subnets, Private IP addresses
Bring your own DNS
Extend your infrastructure

Private network connectivity

Private, secure, fast connectivity *(Coming soon)*

Windows Azure as a node on customers MPLS VPN

Directly connect to Windows Azure at peering exchange location

[Diagram showing network connectivity between customer datacenter, public internet, Windows Azure datacenter, and various network components including VPNs, carrier-provided MPLS (AT&T), and peering exchange location (Equinix).]
Extend your infrastructure

Use scalable on-demand virtual machines in Windows Azure for:

- Microsoft apps - SharePoint, SQL, Biztalk, Active Directory
- 3rd party apps – Oracle, Linux
- Apps with public web front ends or DMZ
- Apps with variable traffic, spiky workloads
- Development & Test environments

Consistent virtualization platform across Hyper-V and Windows Azure

Manage both your datacenter and Windows Azure with System Center 2012
Store, backup, recover your data
Develop, test, run your apps
Extend your infrastructure
Reach where your datacenter won’t
Reach where your datacenter won’t

Websites with global reach
Build websites with global scale
Built-in support for open web frameworks
Managed by Microsoft
Improve performance with Traffic Manager
Reach where your datacenter won’t

Windows Azure Mobile Services
Turnkey backend for Mobile apps

Extend internal web apps to mobile devices
Quickly build and deploy consumer facing apps
Land your app on any platform or device
Reach where your datacenter won’t

Partner integration

Integrate with partner IT systems
Use a highly available, scalable messaging infrastructure with **ServiceBus** and **Biztalk services**
Connected Vehicles

- 1M connected vehicles by 2020
- Uses Windows Azure to connect in-cab telemetry data with messaging & analytics framework
- Enables new level of chargeable premium services for business growth for Scania
Telenor

Dev/Test Environment for SharePoint 2013

→ Leveraged 48+ Virtual Machines
→ Connected 3 regional Data Center deployments
→ Fully automated and manageable via script and remote System Center
Sochi Olympics 2014

2014 Winter Olympics

→ 150+M visitors per day

→ Microsoft built sochi2014.com

→ Highly scalable and needed to serve a global audience

→ Constant updates on news, photos, information, and scores/schedules
Delta Airlines

Delivering fluid experiences that transcend time, place, context, and device

- Employee engagement
- Cashless cabin
- In-flight entertainment
- Electronic flight bag
NBC Sports

Delivering the best viewing experience to sports fans on any device.

→ On-demand and Live streaming content to second screen devices

→ One stop shop experience in creating a seamless viewing experience from TV to the second screen

→ Project Management, CMS integration and premier support
Thank you