



 Windows Azure™

Windows Azure and the Cloud Computing Opportunity for Developers

Matt Valentine
Enterprise Solution Director
Microsoft Hong Kong
Matt.Valentine@Microsoft.com

The Transformation Of ICT



Cloud Computing

Big Data



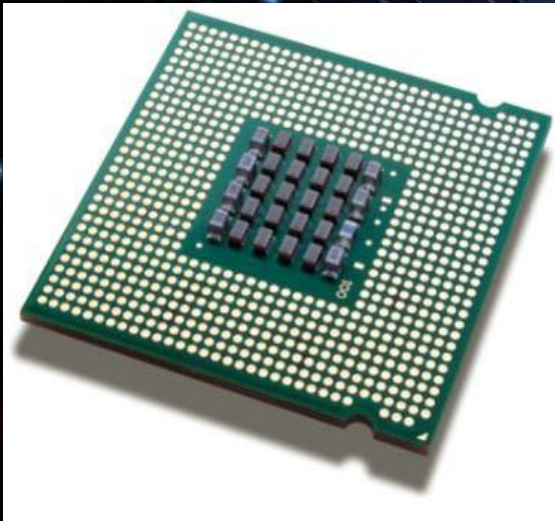
Application Development

72% of tech students believe that everything they see in SciFi films will turn real in their lifetime

The Digital Accelerators of Change

Processing Power

Computer processing power doubles every 18 months.



Storage Capacity

Digital data storage is doubling every 12 months

1 GB 20 YEARS AGO



Bandwidth

Digital bandwidth is doubling faster than processing power



Your cell phone has more computing power than NASA used to put a man on the moon in 1969

Enter Cloud Computing



Scale, optimization and shared resources drive cost savings.

Delivering applications and services over the internet using web and internet standards.



Scalable, elastic and flexible.
Pay as you go, and only for what you use

Xbox LIVE members now number 46 million, with over 2 million online concurrently

Today's Application Developers



Developing for devices and cloud services

Choose open standards, tools, frameworks and platforms



Continuously need to deliver high quality apps faster and cheaper.

Programming is a race to build idiot-proof apps, and the universe trying to produce better idiots

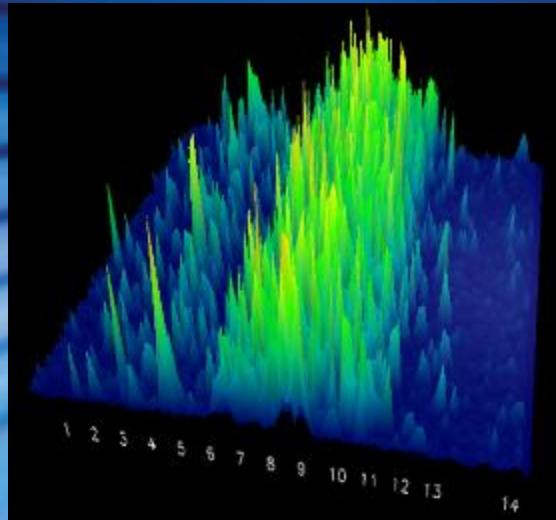
Enter Big Data



New data, patterns and models result in new hypothesis, information and knowledge



We can store everything, connect everything and compute anything



Help humans explore, visualize and understand massive amounts of data

As of 2012, about 2.5 exabytes of data are created each day, and that number is doubling every 40 months

Characteristics of Big Data



New data sources



Massive data volumes



Real-time and fast moving data

More video is uploaded to YouTube in 60 days than the three major US TV networks created in 60 years

Organizations that leverage the power of analytics in their decision-making and strategic planning processes, **outperform their competitors by up to 3 times.** – McKinsey

"By 2015 businesses that build a modern information management system will **outperform their peers financially by 20 percent.**" – Gartner

So, what can Big Data do for my business?

"How Big Data Is Changing the Whole Equation for Business" WSJ, March 8, 2013

75% of business leaders say more predictive analytics would **drive better decisions.** Almost one-third (32%) of respondents expect the impact would be transformational. - McKinsey

Top-performing companies are three times more likely than lower performers to be sophisticated users of analytics, and are two times more likely to say that their analytics use is a competitive differentiator - MIT Sloan School of Management

Marketers can make campaigns more effective and convert more customers.



Shippers are using sensors on trucks to find ways to speed up deliveries.



Hiring managers study how candidates answer questions to see if they'd be a good match.





Manufacturers can trawl through thousands of forum posts to figure out if customers will like a new feature on their product.

Big Data is about improving decision-making by becoming a data-driven organization.



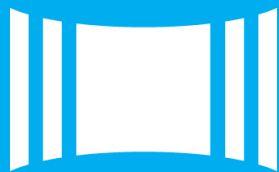
WINDOWS AZURE



Introducing Microsoft Windows Azure

- Windows Azure is Microsoft's Cloud Platform
- Hosted in Microsoft's data centers around the world
- Physical facilities:
 - Provides redundant platform services and failover
 - Broad compliance certifications (ISO/IEC 27001:2005, SSAE 16 / ISAE 3402)
 - State-of-the-art security and access control
 - <http://www.windowsazure.com/en-us/support/trust-center/>
- For developers, flexibility, choice and openness
- For Big Data, storage, analysis and distribution

Windows Azure



flexible



open



solid



99.95% monthly SLA



pay **only** for what you use



virtual machines

- ← Windows Server and Linux
- ← Flexible Workload Support
- ← Virtual Private Networking

Windows Azure Virtual Machines



demo



virtual machine portability

Windows Azure



Your Data Center



Windows Azure



Your Data Center



Windows Azure



Other Service Providers



Your Data Center



Windows Azure



Other Service Providers

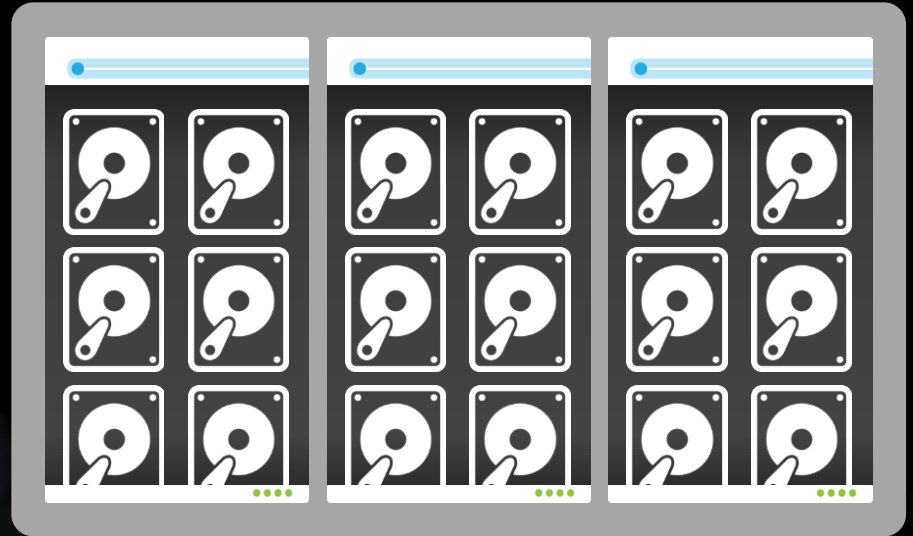


no lock-in

Your Data Center



VM with persistent drive



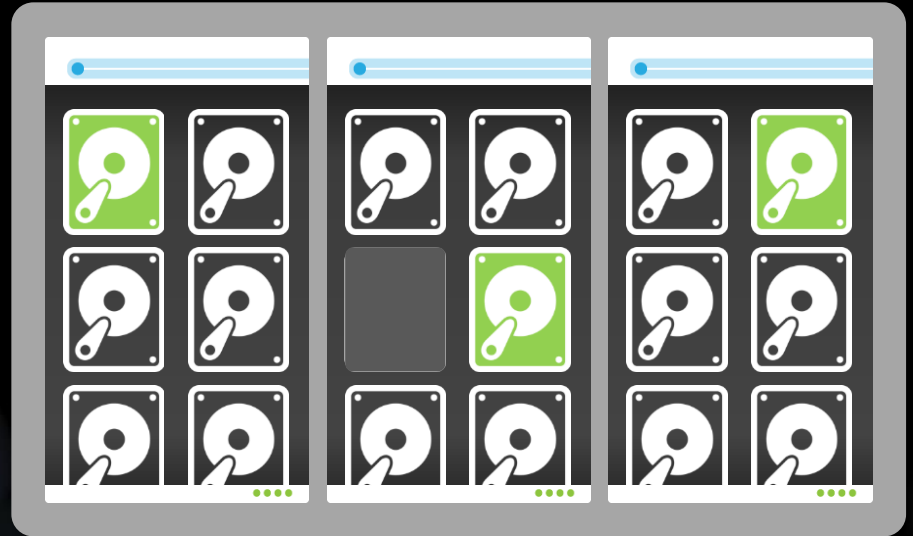
Windows Azure Storage

VM with persistent drive



Windows Azure Storage

VM with persistent drive



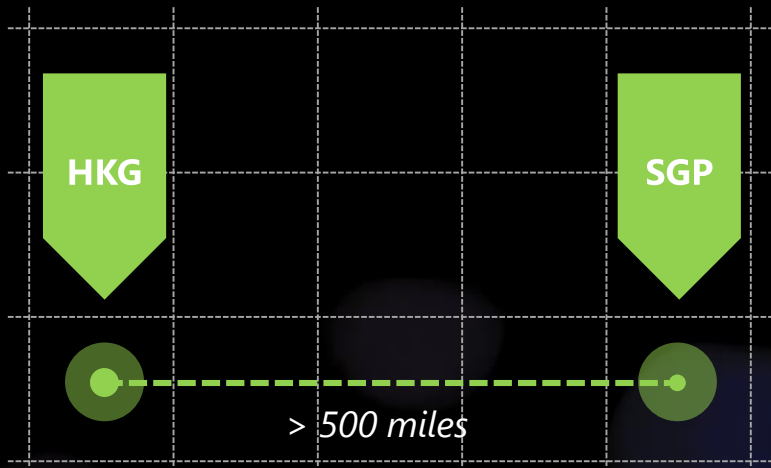
Windows Azure Storage

VM with persistent drive

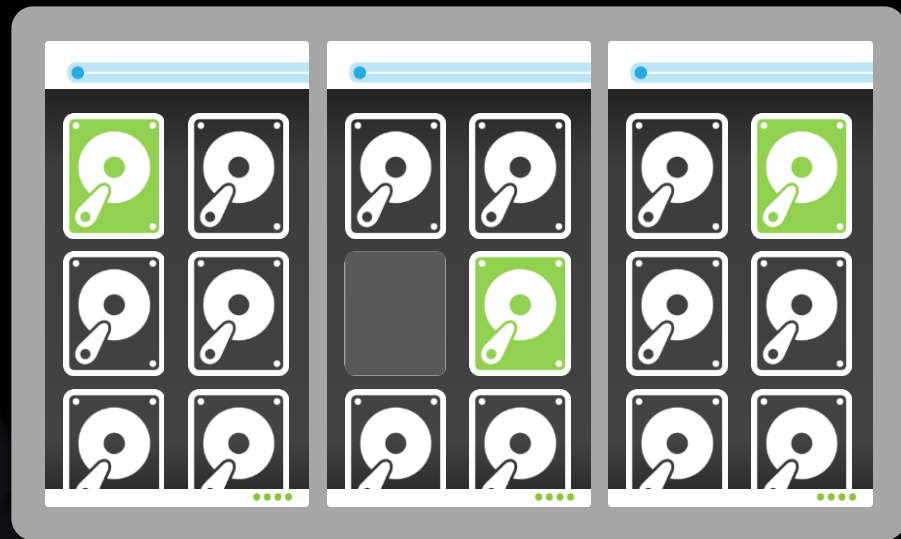
reliable and
always on



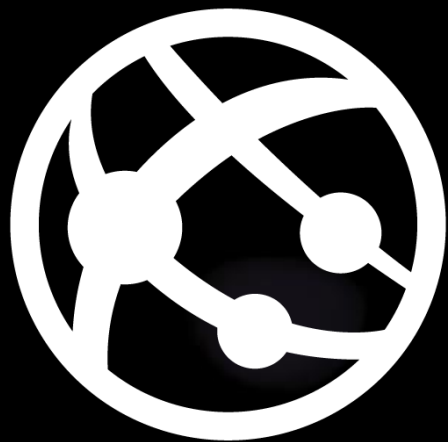
Windows Azure Storage



continuous storage
geo-replication



Windows Azure Storage



web sites

- ← Build with ASP.NET, Node.js or PHP
- ← Deploy in seconds with FTP, Git or TFS
- ← Start for free, scale up as your traffic grows

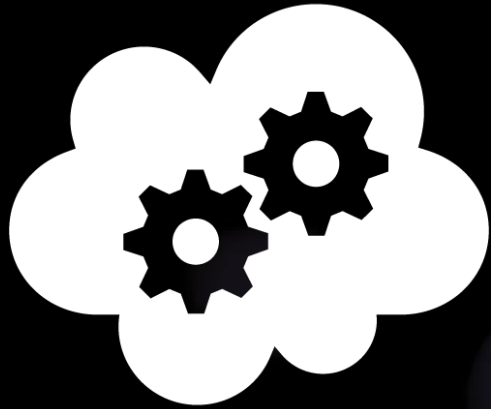
Windows Azure Web Sites



demo



focus on apps,
not infrastructure



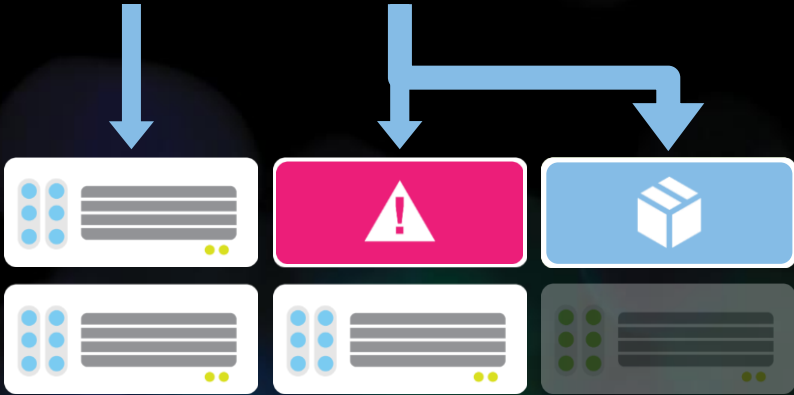
cloud services

- ← Build infinitely scalable apps and services
- ← Support rich multi-tier architectures
- ← Automated application management



Network Load Balancer

Windows Azure Datacenter





big data



database



storage



traffic

application building blocks



caching



messaging



identity



media



CDN



networking



Windows Azure

HOME PRICING DEVELOP MANAGE COMMUNITY SUPPORT ACCOUNT

overview .net node.js php java python downloads

Free trial

Developer Center

Windows Azure is an open cloud platform that enables you to quickly build, deploy and manage applications across a global network of Microsoft-managed datacenters.

You can build applications using any language, tool or framework.

Languages

- .net
- node.js
- java
- php
- python
- other

fundamentals

featured videos

Intro to Windows Azure

Understanding Cloud Storage

Meet Windows Azure

Watch Scott Guthrie and others in videos from the Meet Windows Azure event. Learn what the cloud provides, why you should care, and how you can take

multiple
languages

github [Signup and Pricing](#) [Explore GitHub](#) [Features](#) [Blog](#) [Login](#)

WindowsAzure (Windows Azure)

ORGANIZATION

URL <http://www.windowsazure.com>
Location Redmond, WA
Member Since Sep 20, 2011

7 Public Repos **34** Members

Public Repositories (7)

All Repositories Sources Forks Mirrors

azure-sdk-for-java Java 95 23
Windows Azure SDK for Java
Last updated 3 days ago
52 week participation

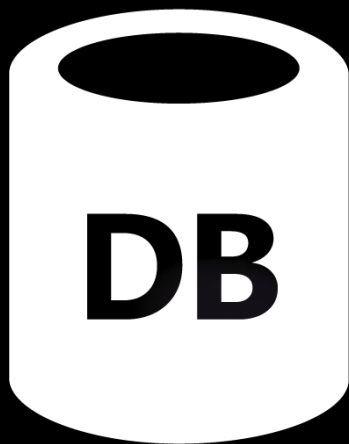
azure-sdk-for-net C# 219 29
Windows Azure SDK for .NET
Last updated 4 days ago
52 week participation

Organization Members (34)

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1 Public Repositories, 0 followers
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9 Public Repositories, 17 followers
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- cscrosati** (Christopher Scrosati)
0 Public Repositories, 0 followers
- davidfowl** (David Fowler)
24 Public Repositories, 257 followers

open
source

→ <http://github.com/windowsazure>



SQL database

- ← Relational SQL Server Engine in the Cloud
- ← Clustered for high availability
- ← Fully Managed Service
- ← SQL Reporting support

SQL database

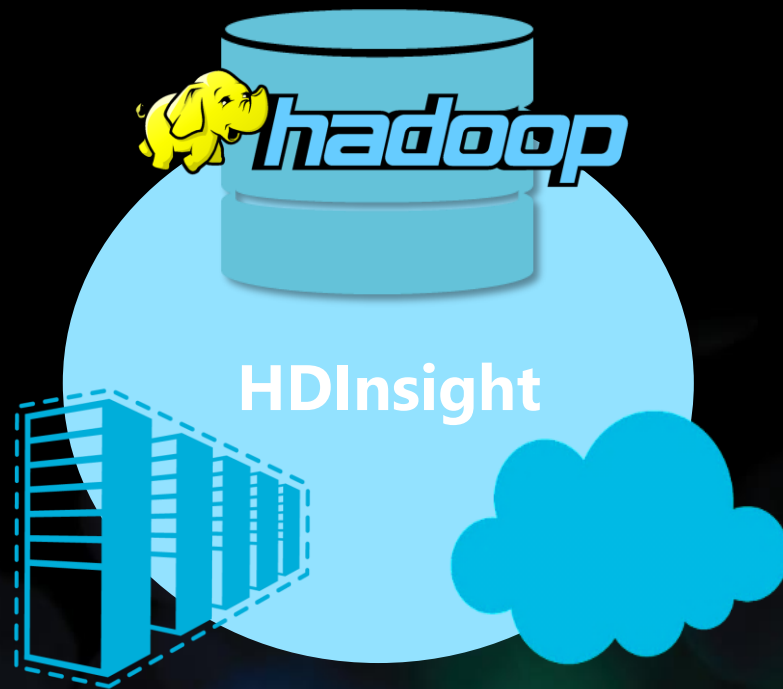


demo

Hadoop and Microsoft

Hadoop

- Open source framework from Apache
- Distributed app for large data sets
- Hadoop kernel, MapReduce & HDFS
- Optimized for unstructured data
- Batch oriented
- Petabytes of data



Windows Azure
HDInsight Service

Microsoft HD Insight

- Includes Hadoop
- Engineering for Windows
- Integrated Security, Management & Virtualization
- Can use Excel, PowerPivot and Powerview

The Microsoft Data Platform



Enterprise Applications and Services



SQL Server



Traditional

On-premises
Non-Virtualized

SQL Server
In Virtual Machine



Private Cloud

On/off-premises
Virtualized

SQL Server in
Windows Azure
Virtual Machines



Public Cloud

Hosted
Virtual
Machines

Windows Azure
SQL Database



Public Cloud

Relational
Database-as-
a-service

Windows Azure
HDInsight



Public Cloud

Hadoop-as-
a-service

Windows Azure
Marketplace



Public Cloud

Online data
Marketplace
service

Data Visualization



demo

Windows Azure Momentum



Customer Quotes

"[The Boeing 737 Explained tool on Windows Azure] makes this the best thing that customers can see, next to actually walking around and through a real aircraft."

- Diana Klug, Director of Marketing, Boeing Commercial Airplanes



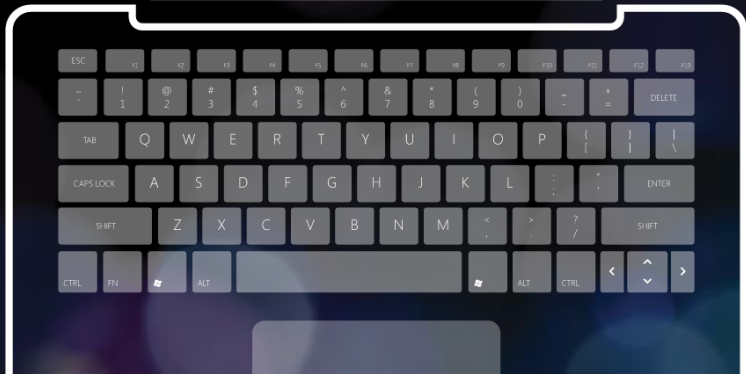
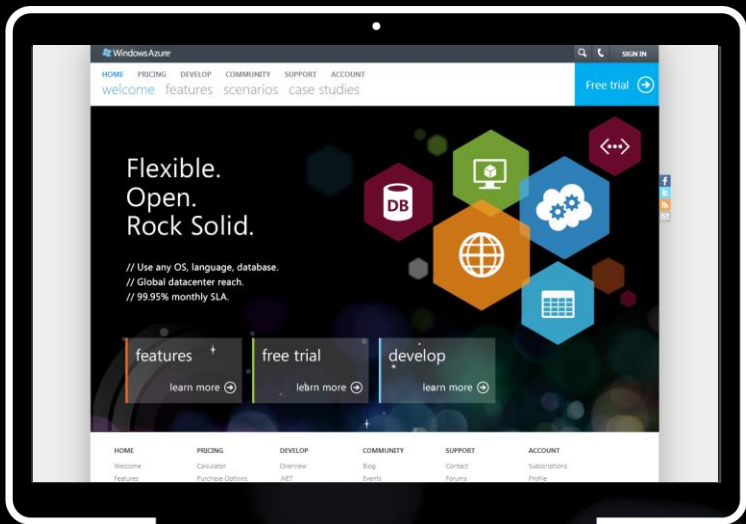
"With Windows Azure, we don't have to worry about data center infrastructure. Microsoft takes care of ... maintenance tasks so we can focus on what we do best—designing innovative mailing solutions."

- Paul Aronson, Director of Engineering, Pitney Bowes

"What's most exciting about bringing Windows Azure into the Intuit Partner Platform is that developers now have a best-in-class 'platform as a service' to both build applications and deliver them to market."

- Alex Chriss, Director, Intuit Partner Platform, Intuit





start now.

<http://WindowsAzure.com>



Microsoft®

Matt.Valentine@microsoft.com