

Prep

- Create a “Parking Lot” for questions
- Log into Portal
- Pull up Azure PowerShell



© SQLintersection. All rights reserved.
<http://www.SQLintersection.com>

Get Started With SQL Server in Azure



Section 1 - 30 minutes

Jes Borland
Sr SQL Engineer, Concurrency



Download scripts & slides

- <https://github.com/grrlgeek/azure-sql-server>



© SQLintersection. All rights reserved.
<http://www.SQLintersection.com>

Why Azure?

Rapidity

You can build resources so quickly. No more need for requisitioning new hardware, SAN space, licensing, etc.

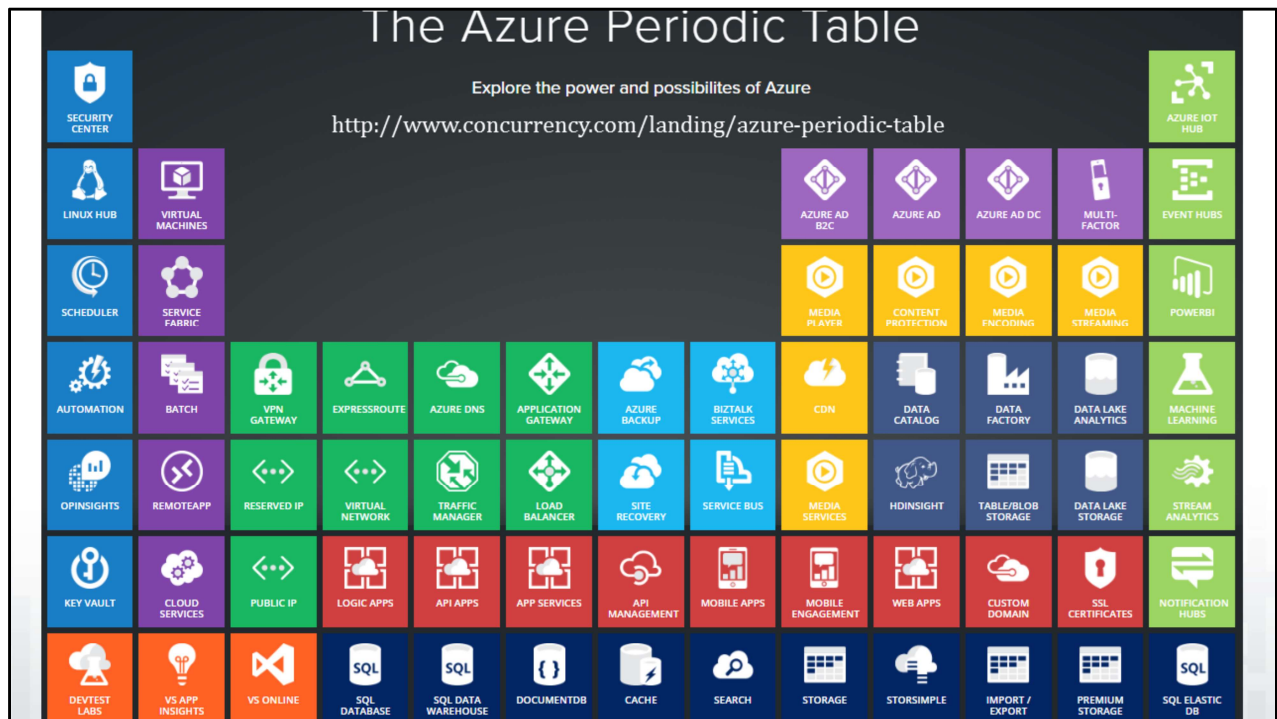
DBAs: your users know this, too – are they using this without your knowledge?

Resiliency

Built-in redundancy. You don't need two data centers, now.

Resources

It's far, far more than just VMs in "the cloud"



<http://www.concurrency.com/landing/azure-periodic-table>

Azure fundamentals

Regions

- **Currently, there are 26 regions**

- US
- Europe
- Asia
- Japan
- Brazil
- Australia
- India
- China
- Canada



© SQLIntersection. All rights reserved.
<http://www.SQLIntersection.com>

What do those data centers look like?

- Microsoft Datacenter Tour:
https://www.youtube.com/watch?v=zXsoygN_v7A
- Datacenter Infrastructure – Fact Sheets, Whitepapers:
<https://www.microsoft.com/en-us/cloud-platform/global-datacenters>



© SQLIntersection. All rights reserved.
<http://www.SQLIntersection.com>

How you pay for it

- Free trial - One month, up to \$200
- Visual Studio/MSDN subscriptions
- Enterprise Agreements
- Resellers
- Prepaid subscriptions - 12 months, 5% discount
- Pay as you go with a credit card
- Find out more at <https://azure.microsoft.com/en-us/pricing/>



© SQLintersection. All rights reserved.
<http://www.SQLintersection.com>

Compliance

- HIPAA/HITECH
- PCI DSS Level 1
- ISO 27001
- ISO 27018
- Azure Trust Center: <https://azure.microsoft.com/en-us/support/trust-center/compliance/>



© SQLIntersection. All rights reserved.
<http://www.SQLIntersection.com>

Secure cross-premises connectivity

- **Point-to-site VPN**
 - Configured on *each* client
 - Doesn't require a compatible VPN device
 - Doesn't require an internet-facing IPv4 IP address
- **Site-to-site VPN**
 - Configure compatible VPN device with Azure VPN Gateway
 - VPN device must have an Internet-facing IPv4 IP address
- **Express Route**
 - "More reliability, faster speeds, lower latencies and higher security"
 - More money
 - Limited locations and service providers
- **Channel 9: Azure Network Infrastructure** <https://channel9.msdn.com/Blogs/Azure-and-the-Modern-Data-Center/Azure-Network-Infrastructure>



© SQLIntersection. All rights reserved.
<http://www.SQLIntersection.com>

<https://azure.microsoft.com/en-us/documentation/articles/vpn-gateway-cross-premises-options/>

Express Route: <https://azure.microsoft.com/en-us/documentation/articles/expressroute-introduction/>

Networking Inside Azure

- **Virtual Networks (VNets)**
 - VNets are isolated from each other. Want them to talk? Set up a VPN.
 - VNet peering is in preview
 - ...but VMs in the same VNet can communicate on private IPs.
- **Can divide into subnets**
- **Can put behind load balancer**
- **Set up a VNet before any VMs or services**
- **MVA: Azure Networking Fundamentals for IT Pros**
https://mva.microsoft.com/en-US/training-courses/azure-networking-fundamentals-for-it-pros-8917?l=R70kv0B3_6104984382



© SQLintersection. All rights reserved.
<http://www.SQLintersection.com>

Demo

Go to Virtual networks (classic) and show TRAzureNet74 – gateway

Virtual Network Overview: <https://azure.microsoft.com/en-us/documentation/articles/virtual-networks-overview/>

Network Security Groups (NSGs)

- **Reduce communication between resources in two subnets**
 - Simpler is better



© SQLintersection. All rights reserved.
<http://www.SQLintersection.com>

What are you paying for?

- Network (VPN Gateways, Public IP Address, Express Route)
- Compute (VMs)
- Licensing (SQL Server)
- Storage (disks)
- Throughput (SQL Database)
- Automation
- Data Out



© SQLIntersection. All rights reserved.
<http://www.SQLIntersection.com>

Management

▪ Portal

- Classic Portal
- Portal
- You can't manage all features from either one: <https://azure.microsoft.com/en-us/features/azure-portal/availability/>



▪ PowerShell

- Learn it and love it
- Download and install <https://azure.microsoft.com/en-us/documentation/articles/powershell-install-configure/>
- Cmdlet Reference <https://msdn.microsoft.com/en-us/library/azure/14.aspx>



© SQLIntersection. All rights reserved.
<http://www.SQLIntersection.com>

Demo 1 : log into <http://portal.azure.com>

Demo 2: download and install Azure PowerShell. Run commands.