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# Introduction to Azure IaaS for IT Pros



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# Quick Poll

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Are you currently using Azure IaaS services?



# For Today

- 1 Services Azure Provides
- 2 ASM vs ARM – We will focus on ARM
- 3 Demo of setting up a new VM
- 4 Review ways to protect your VM
- 5 Our take on where Azure is heading



# Services Azure Provides



Storage



App Service



Active Directory



Virtual Machine



Site Recovery



Cloud Backup



# Azure Regions

Pick your region - <https://azure.microsoft.com/en-us/regions/>

Consider cost differences - <https://azure.microsoft.com/en-us/pricing/calculator/>

PRODUCTS	GLOBAL	EAST US	EAST US 2	CENTRAL US	NORTH CENTRAL US	SOUTH CENTRAL US	WEST CENTRAL US	WEST US	WEST US 2
MONITORING + MANAGEMENT									
Advisor	●								
Backup		●	●	●	●	●		●	<del>●</del>
Site Recovery		●	●	●	●	●		●	<del>●</del>



# ASM VS ARM

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## What is Azure Service Management (ASM)?

The classic (old) method for deploying and managing resources.

URL - [manage.windowsazure.com](https://manage.windowsazure.com)

### Disadvantages

- Each resource needs to be managed individually and created in the correct order
- To delete a solution, you have to delete each resource individually
- Cannot apply role-based access control (aside from subscription admin and subscription co-admin)



# ASM VS ARM

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## What is Azure Resource Manager (ARM)?

The new method for deploying and managing resources.

URL - [portal.azure.com](https://portal.azure.com)

### Advantages

- You can deploy, manage, and monitor all the services for your solution as a group
- SO much easier to configure resources. You also get easy access to the latest features like premium storage (SSD).
- You can apply role-based access control



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# Demo of ASM and ARM

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# Before you create anything...

- Choose your naming convention carefully – you can't rename resources!
- DON'T change the NIC configuration within the OS
- Understand how Azure VMs are stored
  - VHD NOT VHDX
  - 1 TB disk (page blob) limitation
  - Only charged for disk usage, not provision size



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# VM Setup Demo

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# Ways to Protect your VMs

Azure backup options - <http://tinyurl.com/jchn4az>

Component	Benefits	Limits	What is protected?	Where are backups stored?
Azure Backup (MARS) agent	<ul style="list-style-type: none"> <li>• Back up files and folders on physical or virtual Windows OS (VMs can be on-premises or in Azure)</li> <li>• No separate backup server required.</li> </ul>	<ul style="list-style-type: none"> <li>• Backup 3x per day</li> <li>• Not application aware; file, folder, and volume-level restore only,</li> <li>• No support for Linux.</li> </ul>	<ul style="list-style-type: none"> <li>• Files,</li> <li>• Folders</li> </ul>	Azure Backup vault
System Center DPM	<ul style="list-style-type: none"> <li>• Application-aware snapshots (VSS)</li> <li>• Full flexibility for when to take backups</li> <li>• Recovery granularity (all)</li> <li>• Can use Azure Backup vault</li> <li>• Linux support on Hyper-V and VMware VMs</li> <li>• Back up and restore VMware VMs using DPM 2012 R2</li> </ul>	Cannot back up Oracle workload.	<ul style="list-style-type: none"> <li>• Files,</li> <li>• Folders,</li> <li>• Volumes,</li> <li>• VMs,</li> <li>• Applications,</li> <li>• Workloads</li> </ul>	<ul style="list-style-type: none"> <li>• Azure Backup vault,</li> <li>• Locally attached disk,</li> <li>• Tape (on-premises only)</li> </ul>
Azure Backup Server	<ul style="list-style-type: none"> <li>• App aware snapshots (VSS)</li> <li>• Full flexibility for when to take backups</li> <li>• Recovery granularity (all)</li> <li>• Can use Azure Backup vault</li> <li>• Linux support on Hyper-V and VMware VMs</li> <li>• Back up and restore VMware VMs</li> <li>• Does not require a System Center license</li> </ul>	<ul style="list-style-type: none"> <li>• Cannot back up Oracle workload.</li> <li>• Always requires live Azure subscription</li> <li>• No support for tape backup</li> </ul>	<ul style="list-style-type: none"> <li>• Files,</li> <li>• Folders,</li> <li>• Volumes,</li> <li>• VMs,</li> <li>• Applications,</li> <li>• Workloads</li> </ul>	<ul style="list-style-type: none"> <li>• Azure Backup vault,</li> <li>• Locally attached disk</li> </ul>
Azure IaaS VM Backup	<ul style="list-style-type: none"> <li>• Native backups for Windows/Linux</li> <li>• No specific agent installation required</li> <li>• Fabric-level backup with no backup infrastructure needed</li> </ul>	<ul style="list-style-type: none"> <li>• Back up VMs once-a-day</li> <li>• Restore VMs only at disk level</li> <li>• Cannot back up on-premises</li> </ul>	<ul style="list-style-type: none"> <li>• VMs,</li> <li>• All disks (using PowerShell)</li> </ul>	Azure Backup vault <span style="float: right;">1</span>



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# How to migrate your VM to Azure

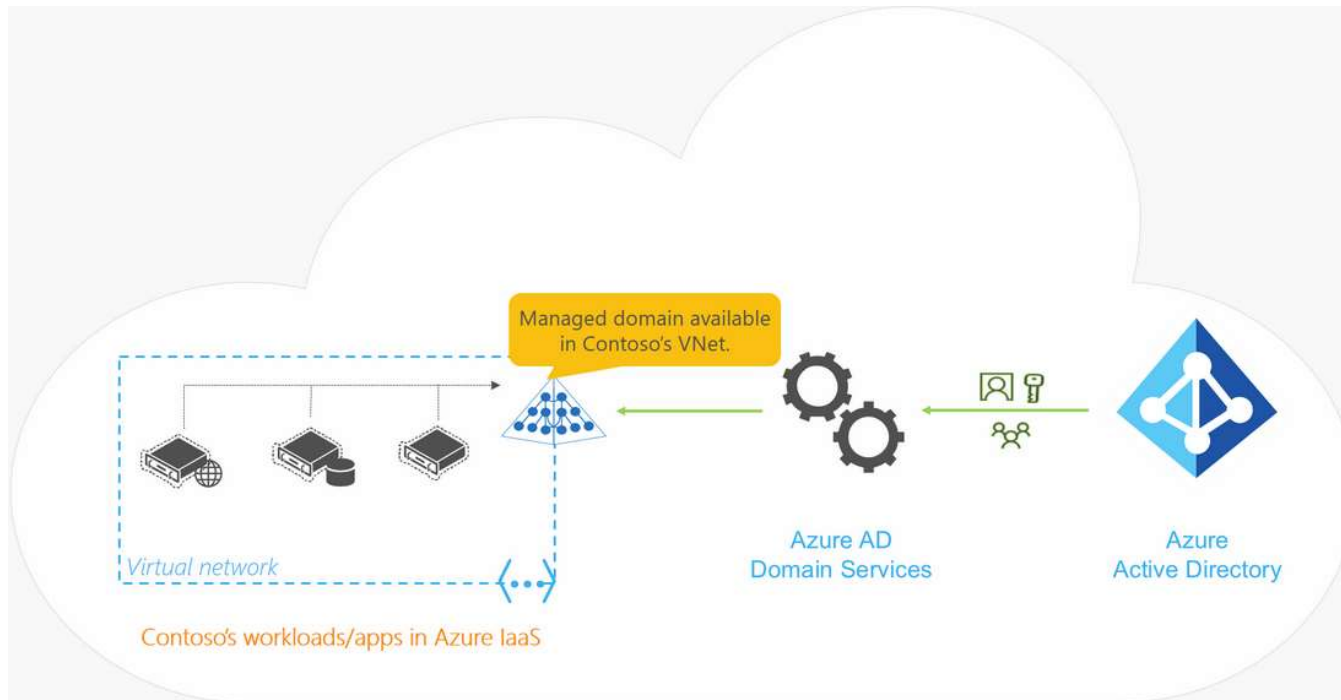
Use Azure Site Recovery to replicate and failover your VM - <http://tinyurl.com/kuu99ev>

Ensure you install the Azure VM Agent - <http://tinyurl.com/llccpkw>



# Where is Azure Headed

Azure recently released Azure Active Directory Domain Services.



With hosted email, domain services, files and apps how many servers do your clients need on-prem?



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# Training Resources

## Microsoft Virtual Academy

Intro to Microsoft Azure – <https://tinyurl.com/k8dau9l>

IaaS Deep Dive Jump Start – <https://tinyurl.com/mn96op2>





Questions?

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