





Hybrid IT L2H2C



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Agenda

Hybrid Report 2017 (5min) Hybrid Networking (10min)

- Azure Connectivity VPN
- Azure Connectivity Express Route
- Network Performance (Demo)
- Network Security Groups (Demo)
- Wire Data (**Demo**)

Hybrid Management (20min)

- Service Map (Demo)
- Security Compliance (Demo)
- Management (Demo)
- Backup(**Demo**)
- Disaster Recovery
- Automation (Demo)

Identity (5min)

• AzureB2C

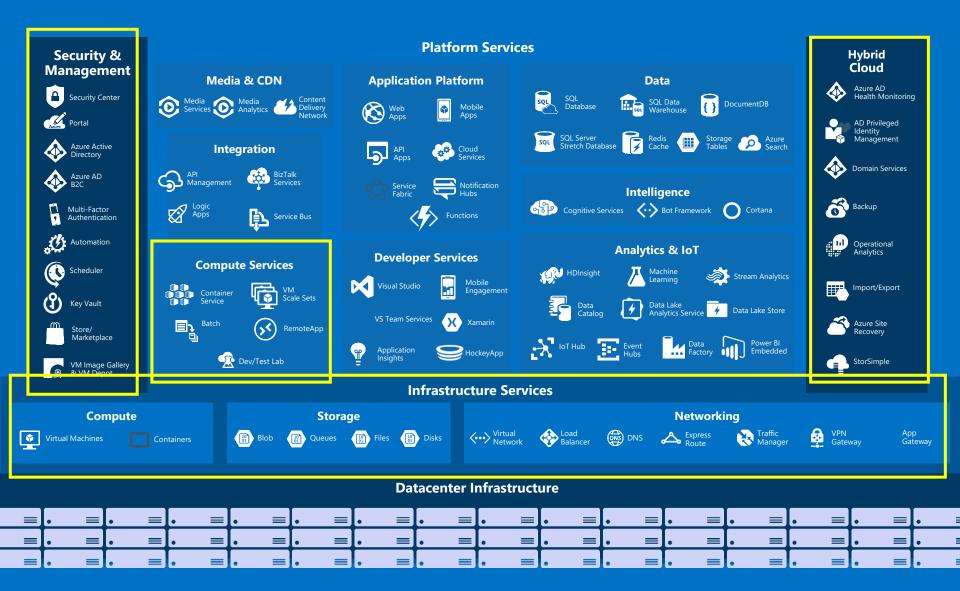
Citrix As A Service (10min)

- XenApp Essentials
- XenDesktop Essentials
- XenApp/XenDesktop Service

Azure Stack (5min)







Azure hybrid capability

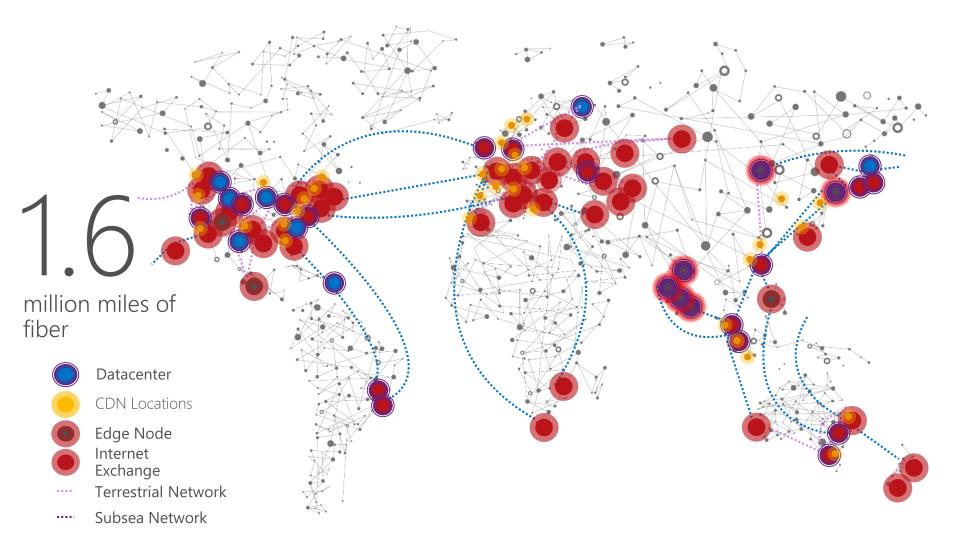
Hybrid Productivity	(\Rightarrow)	Office 365 + Office, Exchange, SharePoint
Hybrid Business Apps	(\rightarrow)	Dynamics 365 + Dynamics
Hybrid App Integration	(\rightarrow)	Azure Service Bus + BizTalk Server
Hybrid Identity	(\rightarrow)	Azure Active Directory + Active Directory
Hybrid Database	(ightarrow	Azure SQL Database + SQL Server
Hybrid Management	(\Rightarrow)	Operations Management Suite + System Center
Hybrid Backup & DR	(\Rightarrow)	Azure Backup + Azure Site Recovery
Hybrid Storage	\bigcirc	Azure Storage + STORSIMPLE
Hybrid Networking	\ominus	Azure ExpressRoute + VPN
Hybrid Platform	(\Rightarrow)	Azure + Azure Stack



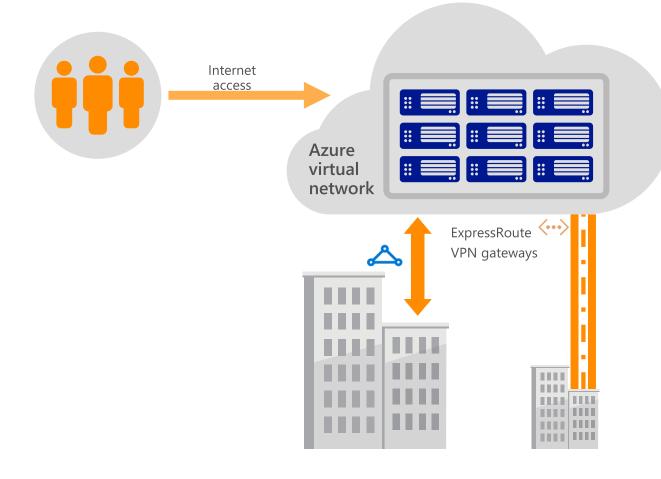


Hybrid Networking





Azure Networking



Virtual network

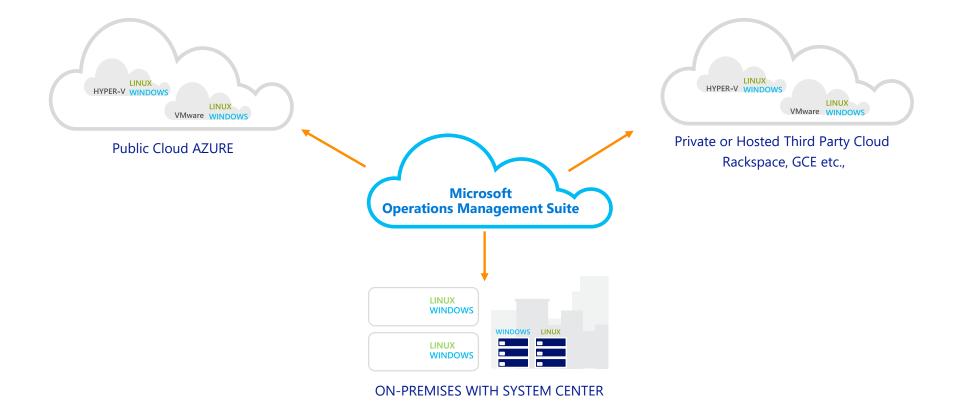
- Private IP addresses, Networklevel isolation
- Segment with subnets and security groups
- Control traffic flow with userdefined routes

Hybrid connectivity

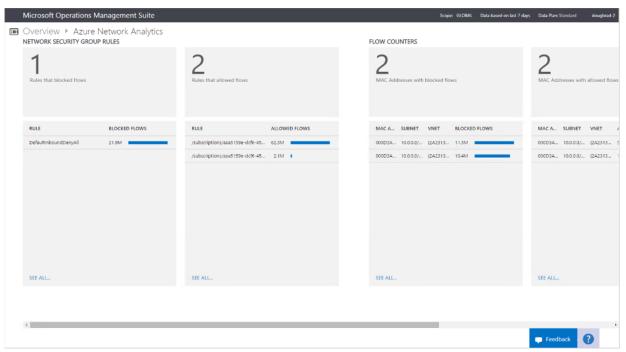
- Point-to-site for dev/test
- VPN gateways for secure site-to-site connectivity
- ExpressRoute for private enterprise grade connectivity
- Domain-join with on-premises



Operations Management Suite (OMS) Simplified guest and workload management anywhere (on-premises or in the cloud)



Network Analytics



• Troubleshoot issues across your Azure networks by providing visibility into the network security rules that have been allowing or blocking flows.

Wire Data

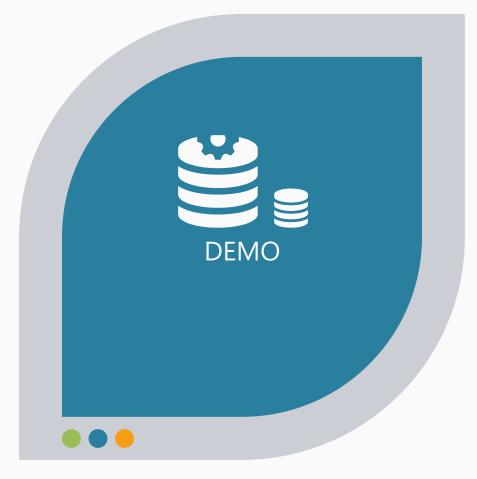
Perform an analysis of your network traffic.

- you can look into when certain computers (IP addresses/MAC addresses) communicated with each other
- for how long, and how much data was sent
- view metadata about network traffic

NETHORY	TRAFFIC INFORM	ATION (LAST 24 HOURS)						5
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	/-09.redmond.corp.mic		IPv6-N/A	5149M		Unknown	343256	
NEB-OM-8	35646.smx.net	1364M		1918M			3162M	
XINSH-ASI	JS redmond.corp.micro.	1077M .	10.91.32.0/22	766M .		RDP	2851M	
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Hybrid Networking Demo





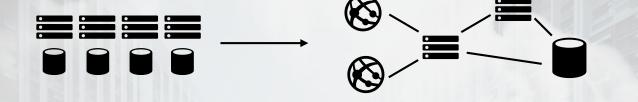




Hybrid Management



Understand where applications meet infrastructure



Discover

how infrastructure supports apps

Monitor

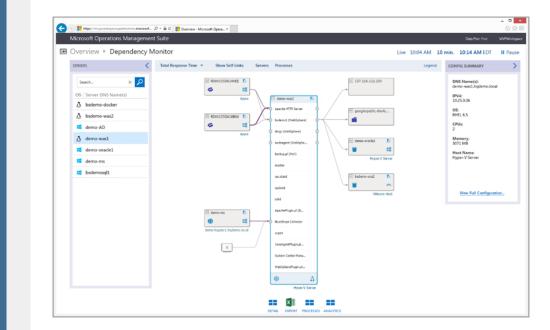
the whole distributed app in real time

Optimize

remediation of known issues

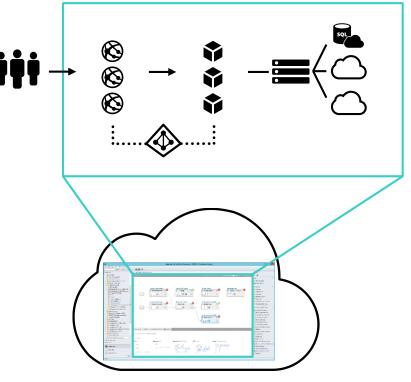
System dependency discovery

- Discover every connection with no pre-definition required
- Understand complex interactions no matter how short-lived
- See dependencies before and after migrations
- Mitigate complications of planned maintenance



Application discovery

- Dynamic maps
- Any platform, any environment
- System Center Operations
 Manager Integration



Operations Management Suite

End-to-end performance monitoring

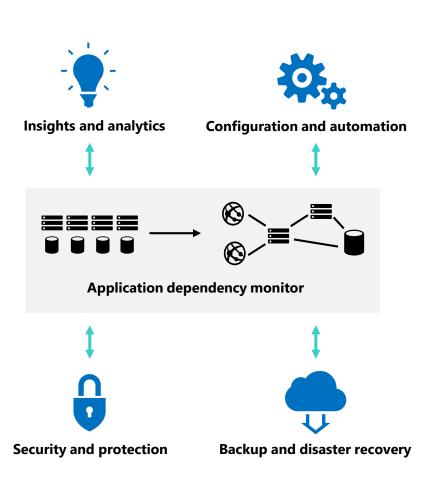
- Hop-by-hop performance monitoring
- Events and alerts filtered by application and system dependencies
- Integrated runbook tasks to accelerate remediation



Optimize at the application layer

App-centric:

- Automation and remediation
- Monitoring and root-cause analysis
- Security monitoring and assessment
- Backup and Site Recovery



Holistic Security Posture

*

Cross-Platform





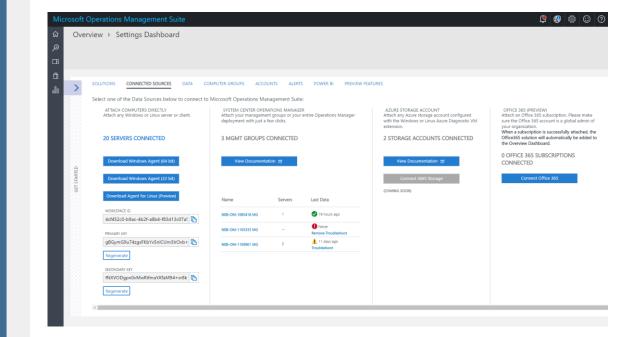
Ongoing Assessment

Audit

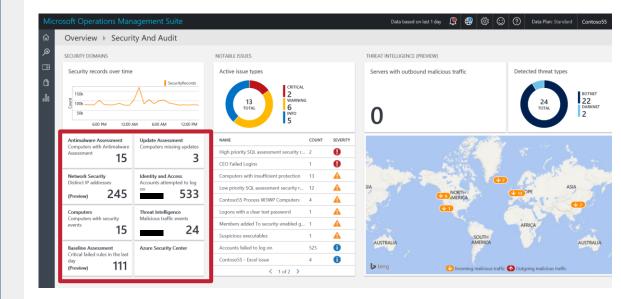
- Windows and Linux
- On premises, Azure, AWS
- Microsoft and 3rd party security solutions
- Actionable security insights network, identity, servers, ...
- Prioritized notable issues

- Central collection of all security data
- Export to Excel and PowerBl or via API for reporting
- Data retention

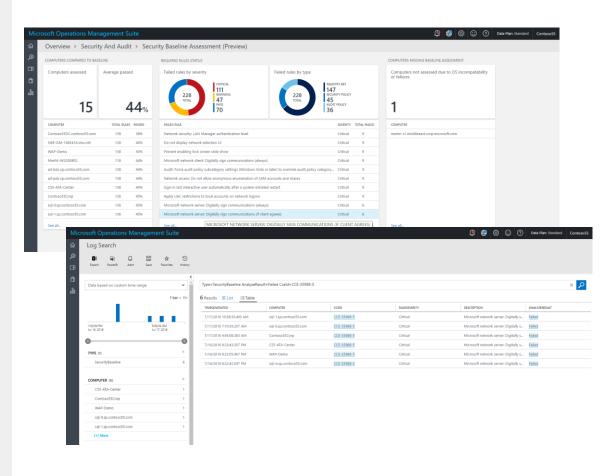
Collect security data from virtually any source



Gain insight into security domains across your IT environments



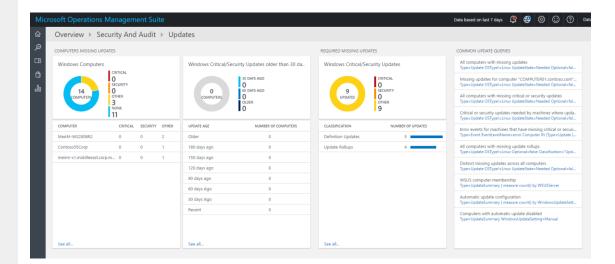
Assess the security of OS configurations against recommended baselines



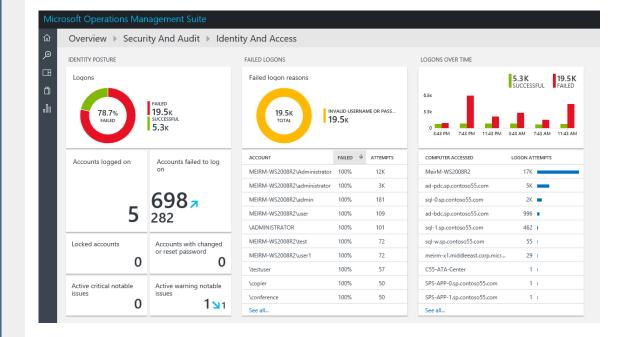
Validate that antimalware software is deployed and up to date

Overview > Sec	urity And	Audit	Upc	lates					
COMPUTERS MISSING UPD	ATES					REQUIRED MISSING UPD	ATES	COMMON UPDATE QUERIES	
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Contoso55Corp	0	0	1	180 days ago	0	Update Rollups	4	All computers with missing update rollups Type=Update OSType!=Linux Optional=false Classification	
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				60 days Ago	0			Type=UpdateSummary measure count() by WSUSServer	
				30 days Ago	0			Automatic update configuration Type=UpdateSummary measure count() by WindowsUpd	
				Recent	0			Computers with automatic update disabled Type=UpdateSummary WindowsUpdateSetting=Manual	
				See all					

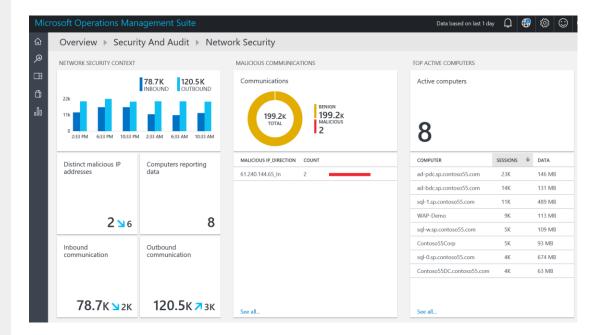
Ensure that systems have the latest security and critical updates eployed



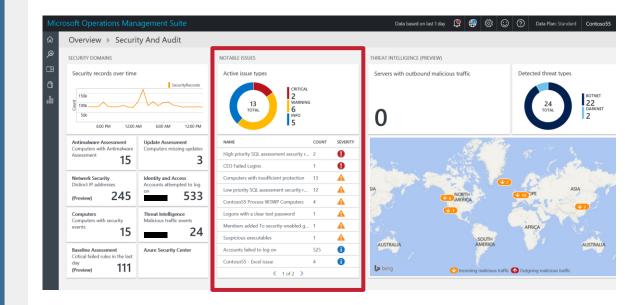
Monitor login activity for unusual access or password changes



View network communicatio n to known malicious IPs and changes in traffic patterns



Built-in and custom notable issues highlight vulnerabilities and threats



Get context into notable issues to jump start research and investigation

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	a many						
Data based on last 7 days 🔹 👻 1 bar x 6 hs	Type=Update UpdateState=Needed Optional=fa 4 Results 4 Computers		Approved! = fail	e measure count() by Computer			×P
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TYPE (I) ×	Operation system Microsoft Windows Server 2012 R2 Datacenter	Security events		Accounts logged on			
Update 95	Microsoft windows server 2012 A2 Datacenter	EVENT	COUNT	ACCOUNT	COUNT		
	Antimalware protection status Not Reporting	5058 - Key file operation.	31K	CONTOSOCLIENT/Test	11		
COMPUTER (4) ×		5061 - Cryptographic operation.	316	Window Manager\/DWM-4	6		
NorthWestDomain.NorthWest.com 30	Threats status Unknown	4625 - An account failed to log	6K	See all			
contosoClient.NorthWest.com 29		4688 - A new process has been	6K				
fabrikamClient/NorthWest.com 29	Malicious IPs	4672 - Special privileges assigne					
John-Japtop 7	42	4624 - An account was success!	3K				
TITLE (30) ×	Classification of updates.	5059 - Key migration operation. 4634 - An account was logged o					
Cumulative Security Update for Internet Explorer 114	11 SECURITY	4648 - A logon was attempted u					
Security Update for Windows Server 2012 R2 (KB31 4	214 82	4776 - The domain controller at	8				
Security Update for Windows Server 2012 R2 (K831 4	121	See all.					
Security Update for Windows Server 2012 R2 (KB31 4							
Security Update for Windows Server 2012 R2 (KB31 4							
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PRODUCT (I) ×							
Windows Server 2012 R2 95							
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Simple management

- Choose your scenario
- Choose the retention
- Enable Backup

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Recovery Services vaults Microsoft - PREVIEW		Contoso-vault Recovery Services vault - PREV			Backup	
+ ≣≣ Č Add Columns Refresh			Delete			
Filter by name		Essentials ^				
					Scenario	
3 subscriptions	~	Resource group Contoso-web-app Status	Backup items/Azur 0 Backup manageme		Selected	•
NAME		Active	0	and Servers		
a Contoso-vault		Location West US Subscription name	Replicated items 0		2 Backup Policy Selected	~
		BCDR Black-belt Lab				
		Subscription ID 02229208-b8c8-4a52-bdd5-77	52d9bb1d8a		3 Items to backup Selected	~
				All settings →	J. C. C. C. C. C.	
		Monitoring		Add tiles 🕀		
		Site Recovery Health				
		Unhealthy serv 0				
		Events 0				
		Backup		Add tiles 🕀		
		Backup Items	Backup Jobs	Backup Usage		
		Azure Virtual Machines	Azure virtual mach 1	Cloud - LRS 0 B		
		File-Folders		Cloud - GRS 0 B		
		Site Recovery		Add tiles 🕀		
		Replicated items	Recovery plans	Site Recovery jobs		
				Failed 0		
		0	•	Waiting for input 0		
		0 💿	U	In progress 0		
			Add a group 🕀		Enable Backup	

OMS Site Recovery technology

SaaS-based disaster recovery

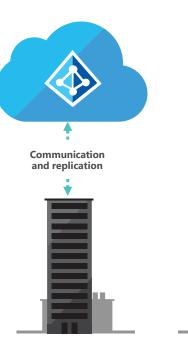


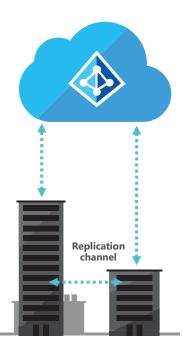
- Automated replication and policy-based protection
- One-click orchestrated recovery
- Seamless integration with Azure services

- Remote health monitoring
- Multi-tier, application-consistent recoveries
- No-impact DR testing

Simplified deployment

- Quick and easy
- Recovery on your terms
- SaaS-based offering





Enterprise-grade protection

- Customizable policies
- Application aware
- Multi-VM consistency

SOURCE (CONFIGURATION SERVER)	VM4ASREV2A	
TARGET	Microsoft Azure	
replication settings		
MULTI VM CONSISTENCY	ON OFF	
RPO THRESHOLD		30 MINUTES
RECOVERY POINT RETENTION		24 HOURS
APPLICATION CONSISTENT SNAPSHO FREQUENCY	1	60 MINUTES

Test without

- Non-disruptive testing
- Verify recovery plans
- Gain peace of mind

pod5-recovery (test failover)

JOB PROPERTIES

ME	STATUS	START TIME	DURATION	P
Prerequisites check for the recovery pl	✓ Completed	3/3/2016 2:58:22 PM	1 MINUTE	
Create the test environment	 Completed 	3/3/2016 2:58:28 PM	1 MINUTE	
Recovery plan failover	** In progress	3/3/2016 2:58:37 PM		
Complete testing				
Clean up the test virtual machines				
Clean up the test environment				
Finalizing test failover				
Finalizing the recovery plan				
	Create the test environment Recovery plan failover Group 1: Start (1) Complete testing Clean up the test virtual machines Clean up the test environment Finalizing test failover	Prerequisites check for the recovery pl Completed Create the test environment Create the test environment Finalizing test failover	Prerequisites check for the recovery pl Completed 3/3/2016 2:58:22 PM Create the test environment Completed 3/3/2016 2:58:28 PM Recovery plan failover ** In progress 3/3/2016 2:58:37 PM Group 1: Start (1) Complete testing Clean up the test virtual machines Clean up the test environment Finalizing test failover Finalizing test failover	Prerequisites check for the recovery pl Completed 3/3/2016 2:58:22 PM 1 MINUTE Create the test environment Completed 3/3/2016 2:58:28 PM 1 MINUTE Recovery plan failover ** In progress 3/3/2016 2:58:37 PM 1 MINUTE Group 1: Start (1)

Extend your solution

- Utilize integrated Azure services
- Add automated scripting using Automation
- Connect via ExpressRoute

Add script on recovery side

Add an Azure runbook from an Automation account to run after 'All groups failover' starts.

SCRIPT NAME

POD2 DR Remote Desktop

FAILOVER TO AZURE SCRIPT

AZURE AUTOMATION ACCOUNT

Pod2Automation

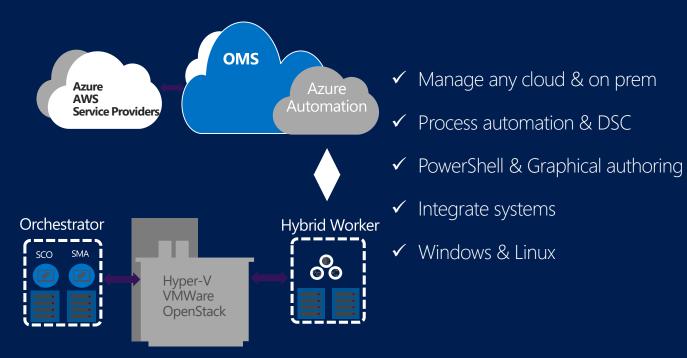
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AZURE RUNBOOK SCRIPT

OpenRemoteDesktopPort 🗸 💿

Azure Automation



Key Features

PowerShell & PS Workflow Engines

- Use your existing PS scripts
- Checkpoint/Parallel if needed

Runbooks, Modules

- Author PS, PSWF, Graphical runbooks
- Gallery Runbooks, modules
- Extensibility, integration

Assets

- Secure, global store for variables, credentials, ...
- Schedules

Jobs

- Troubleshoot/audit via job history

PowerShell DSC

- Configurations, Pull service
- Node Management & Reporting

Hybrid Runbook Workers

- Install on any machine
- Secure, only outbound ports

Webhooks

- URL to start runbook remotely
- Integration



Authoring

- Graphical runbooks
 - New type of graphical runbook based on native PowerShell
 - Improvements to graphical authoring and runbook capabilities
- PowerShell ISE add-on
 - Author textual runbooks (PowerShell, PowerShell Workflow)
 - Continued improvements in response to feedback
- Start-AzureRmAutomationRunbook cmdlet
 - Added Wait and MaxWaitSeconds parameters
 - Parent runbook can now wait for child runbook to finish and send back output
 - Enables any runbook type to call any runbook type and get back results
- More Gallery runbooks
 - We continue to add useful runbooks to the gallery

Graphical authoring

- Graphical PowerShell runbook
 - New type of graphical runbook based on native PowerShell
 - All advantages of native PowerShell over PowerShell Workflow
 - Starts fast, full objects
- Graphical authoring improvements
 - Object output properties available at design time
 - Canvas restyle for readability
 - Warnings for common design requirements
 - Error links & convert exception to error (coming soon)
- Graphical runbook SDK update
 - Release latest version of the public-preview SDK

ሕ	${\it Graphical Power Shell Work flow Runbook}$
A	GraphicalRunbook
λ	PowerShellRunbook
2	PowerShellWorkflowRunbook

Select data

Get-AzureRmVM

- Output (PSVirtualMachine)
- Output (PSVirtualMachineInstanceView)
 - BootDiagnostics (BootDiagnosticsInstanceView)
 BootDiagnosticsText (String)
 - Disks (IList)

DisksText (String)

- Extensions (IList)
- ExtensionsText (String)

Name (String)

PlatformFaultDomain (Nullable)

Remediate VM alert with Automation runbook

- Integrate Automation in Azure
 - Seamlessly use Automation to manage Azure resources
- Trigger runbook from VM alert
 - Configure VM alert to start a runbook when alert triggers
 - Microsoft runbook or user runbook
 - Alert context passed to runbook
- Account creation as needed
 - Create Automation account and Run As credentials as needed for user
 - Make it seamless to get going with alert remediation

Add an alert rule 🛛 🗕 🗢 🗕 🗕 🗕	Configure Runboo — E Alert rule
40%	* Run runbook Enabled Disabled
20%	
0% 6 PM Jul 24 6 AM 12 PM	* Runbook source ① Standard User
* Condition	* Runbook
greater than 🗸	Choose a runbook
* Threshold O	Choose a runbook Restart VM
95 🗸	Stop VM Scale Up VM
* Period 🛛	Scale Down VM Remove VM
Over the last 10 minutes 🗸 🗸	
Email owners, contributors, and readers Additional administrator email(s)	
Add email addresses separated by semicolons	
Webhook 🛛	
HTTP or HTTPS endpoint to route alerts to	
Learn more about configuring webhooks	
Take Action 0	
Run a runbook from this alert	





Azure AD B2C



Improve your connection with customers

A consumer identity and access management system needs to be:



Consumer-centric and flexible

- Every customer experience needs to be a positive one
- Customizable consumer interactions
- Choice of social & local accounts



Secure and reliable

- Multiple levels of security controls
- Security reporting
- High availability—SLA



Ready for every business

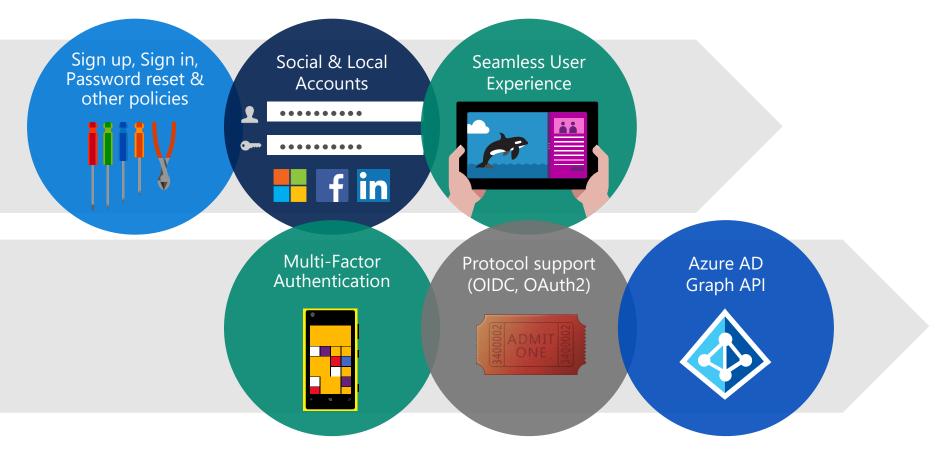
- Cost-effective
- Scalable
- Global



Faster speed to market

- Standards-based
- Innovative
- Flexible policy framework

Azure Active Directory B2C





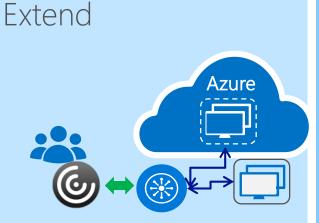


Citrix on Azure

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Virtual Apps and Desktops With Citrix



XenApp and XenDesktop management on-premises

Virtual app and desktops workloads on-premises and Azure

Managed by IT

Host



XenApp and XenDesktop management on Azure

Virtual app and desktops workloads on Azure

Managed by IT

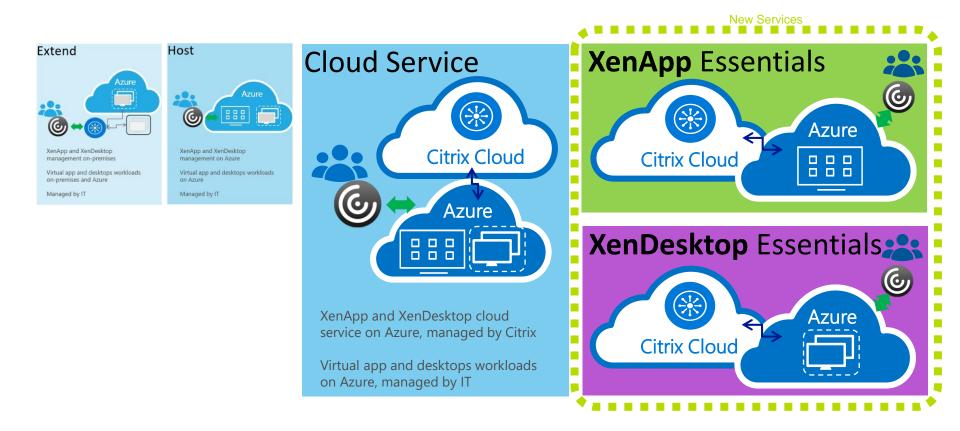
Cloud Service



XenApp and XenDesktop cloud service on Azure, managed by Citrix

Virtual app and desktops workloads on Azure, managed by IT

Virtual Apps and Desktops With Citrix



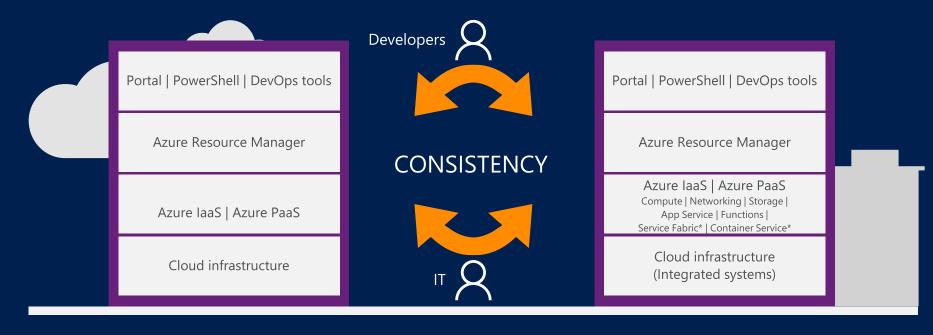




Azure Stack



Hybrid application innovation with Azure and Azure Stack Truly consistent hybrid cloud platform



Microsoft Azure

Microsoft Azure Stack On-premises

Azure laaS available on-premises: beyond traditional virtualization

Virtual Machines (VM) VM Scale Sets	Containers with Docker	Networking	Storage
Rapid deployment with automated scaling	Linux and Windows Server containers	Virtual network, load balancer, VPN gateway	Blobs, tables, queues

Above services will be available at GA. We will deliver additional Azure services through frequent updates to Azure Stack.

Azure PaaS available on-premises: Fully managed platforms for high productivity development

Azure App Service	Azure Functions	Azure Service Fabric	Azure Container Service	Cloud Foundry
Web, Mobile, and API apps	Serverless Computing	Always-on, scalable distributed applications	Robust container management	Open source platform

Azure Service Fabric and Azure Container Service will be available post-GA. Other services will be available at GA. We will deliver additional Azure services through frequent updates to Azure Stack.

One Azure Ecosystem

Work with the tools and technologies you want across Azure and Azure Stack



Azure Stack without modification



https://aka.ms/cc9cf1

Thank You

