NETW211 Course Project Fundamentals of Cloud Computing

Developed by James Garlie

DeVry University: June 2022

Introduction

This presentation covers VM (Virtual Machine) Instances, Azure Vnet and Subnets, VM Security, Cloud Storage, and Cloud Monitoring

It begins with VM Instances where we deploy a VM in Azure, connect to it and then delete it. This is followed by creating a VNet with two Subnets. Then we move on to launching and configuring VMs, uploading and accessing a file, and cloud monitoring.

The presentation concludes with Challenges, Career Skills obtained, a Conclusion, and References.

Virtual Machine (VM) Instances

The next three slides show:

Deploying a VM in Azure;
 Connecting to it; and,
 Deleting it.

Deploying a VM in Azure

This screenshot shows the *NETW211VM* page with information such as the resource group name, subscription, public IP address, etc.

			DEVRY					
Home > CreateVm-MicrosoftWindo	owsSer	ver.WindowsServer-201-20220510155817 >						
♥ NETW211VM Virtual machine								
	«	\mathscr{S} Connect \lor \triangleright Start \subset Restart \square Stop 🔯 Capture 📋 Delete 🖒	Refresh 🚦 Open in mobile 🛛 CLI / PS 🔗 Feedback					
Overview	•	$ m \Lambda$ NETW211VM virtual machine agent status is not ready. Troubleshoot the issue $ m o$						
Activity log		∧ Essentials						
Access control (IAM)		Resource group (move) + NETW211-IG	Operating system · Windows					
🌔 Tags		Status : Running	Size : Standard B1s (1 vcpu, 1 GiB memory)					
Diagnose and solve problems		Location : East Asia	Public IP address : <u>20.239.171.14</u>					
ettings		Subscription (move) : Azure for Students	Virtual network/subnet : <u>NETW211-JG-vnet/default</u>					
2 Networking		Subscription ID : b8a15a49-0af0-4fbb-99d7-3062ae558e84	DNS name : <u>Not configured</u>					
S Connect		Tags (edit) : Click here to add tags						
Windows Admin Center (preview)		Properties Monitoring Capabilities (8) Recommendations Tutorials						
B Disks		👤 Virtual machine	🧟 Networking					
📮 Size		Computer name NETW211VM	Public IP address 20.239.171.14					
Security		Health state -	Public IP address (IPv6) -					
Advisor recommendations		Operating system Windows	Private IP address 10.0.0.4					
alian ana	-	Publisher MicrosoftWindowsServer	Private IP address (IPv6) -					

Connecting to the VM

This screenshot shows the *PROPERTIES for the NETW211VM* page, with the computer name, operating system version, hardware information, etc.

📰 Dashboard	PROPERTIES For NETW211VM			TASKS
Local Server All Servers File and Storage Services ▷	Computer name Workgroup	NETW211VM WORKGROUP	Last installed updates Windows Update Last checked for updates	Today at 10:10 PM Install updates automatically using Windows Update Today at 10:09 PM
	Windows Defender Firewall Remote management Remote Desktop NIC Teaming Ethernet	Private: On Enabled Enabled Disabled IPv4 address assigned by DHCP, IPv6 enabled	Windows Defender Antivirus Feedback & Diagnostics IE Enhanced Security Configuration Time zone Product ID	Real-Time Protection: On Settings On (UTC) Coordinated Universal Time 00430-00000-00000-AA981 (activated)
	Operating system version Hardware information	Microsoft Windows Server 2019 Datacenter Microsoft Corporation Virtual Machine	Processors Installed memory (RAM) Total disk space	Intel(R) Xeon(R) CPU E5-2673 v4 @ 2.30GHz 1 GB 130.45 GB

Deleting the VM

The two screenshots show the *Resource groups* page, with the *Azure for Students* subscription and the and the "No virtual machines display" message.

■ Microsoft Azure	ces, services, and docs (G+/)		Σ	ĢQ	Ø	ଡ ଼ନ) jga DEVRY UI	arlie@my.devry. NIVERSITY (MYDEVR)	
Home > Resource groups >									
Resource groups « DeVry University (mydevryedu.onmicrosoft.com)	Azure for Students								
🕂 Create 🛛 🍪 Manage view 🗸 …		🕇 Upgrade 📋 Cancel subscription 🖉 Rena	me →	Change d	irectory	📯 Feedb	back		
Filter for any field	Overview	Subscription ID		Subso	ription na				
Name \uparrow_{\downarrow}	Activity log	b8a15a49-0at0-4tbb-99d7-3062ae558e84 Directory		<u>Azure</u> My ro	Azure for Students My role				
() NetworkWatcherRG	Access control (IAM)	DeVry University (mydevryedu.onmicrosoft.com)		Owne	er				
	Diagnose and solve problems	Active		Azure	Plan				
	Security	Parent management group 11e7ae31-02be-46bb-ab11-80c715b5c90a		Secur <u>Not a</u>	Secure Score <u>Not available</u>				
	🗲 Events								
	Cost Management	Spending rate and forecast		Cost	s by reso	urce			
■ Microsoft Azure 🔎 Search resource	es, services, and docs (G+/)		Þ	2 6	Q	© (୭ ନ	jgarlie@i	
Virtual machines ☆ … DeVry University (mydevryedu.onmicrosoft.com) + Create ∨ ₹ Switch to classic § Reservation Filter for any field	ations 🗸 🔅 Manage view 🗸 🖒 Refre	esh \downarrow Export to CSV $\%$ Open query $ $ \otimes	Assign ta	ags ▷	Start (Restari	t 🗌 Stop	🗊 Delete	
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Name ↑↓ Type ↑.	↓ Subscription ↑↓ F	Resource group ↑↓ Location ↑↓ S	Status 🔨	Ļ	O	perating s	system ↑↓	Size ↑↓	
•									
	No v Create a virtual machine that runs Lin	virtual machines to display	ace or use	e your ow	n				
	Learn	customized image.		. ,				چ و	

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Azure VNet and Subnets

The next six slides show:

- Creating a Vnet with two Subnets;
 Deploying VMs into Subnets
 Deploying VMs into Subnets, cont'd;
 Deploying VMs into Subnets, cont'd;
- 5) Connectivity between VMs; and,
- 6) Connectivity between VMs, cont'd

Creating a VNet with Two Subnets

1. With a /24 network prefix, how many **usable** IPv4 host addresses are there? Answer here:

Equals = 2 to the power of 8 which is 256. Then 256 -2 =254. So, the answer is 254

2. Why is the number of available IP addresses for Subnet0 (10.0.0/24) or Subnet1 (10.0.1.0/24) shown as 251?Answer here:

Because Azure reserves the difference for their own use.

References:

- 1. Professor Giomi in the Week 3 Project Video
- 2. https://asmed.com/microsoft-azure-vnet-vm-subnet-and-security-tutorial/

Deploying VMs into Subnets

This screenshot should show the *Properties* section of the *SubnetO-VM* page, showing the networking and size information of the VM.

\equiv Microsoft Azure	𝒫 Search resources, services, and docs (G+/)	<u>از</u> ج 🖉 😂 🕞 🔄 ا					
Home > CreateVm-MicrosoftWindowsServer.WindowsServer-201-20220517105042 >							
Subnet0-VM	\$ ² ···						
₽ Search (Ctrl+/)	🦳 « 🔗 Connect 🗸 ▷ Start 🦿 Restart 🔲 Stop 🕅 Capture 📋 Delete 🖒 I	Refresh 🔋 Open in mobile 🗟 CLI / PS 🔗 Feedback					
👤 Overview	Subnet0-VM virtual machine agent status is not ready. Troubleshoot the issue \rightarrow						
Activity log							
Access control (IAM)	Resource group (move) : NETW211-RG	Operating system : Windows					
🗳 Tags	Status : Running	Size : Standard B1s (1 vcpu, 1 GiB memory)					
Diagnose and solve problem	s Location : East Asia	Public IP address : <u>20.187.75.179</u>					
Settings	Subscription (move) : <u>Azure for Students</u>	Virtual network/subnet : <u>NETW211-RG-vnet/default</u>					
2 Networking	Subscription ID : b8a15a49-0af0-4fbb-99d7-3062ae558e84	DNS name : <u>Not configured</u>					
🖉 Connect	Tags (edit) : Click here to add tags						
Windows Admin Center (preview)	Properties Monitoring Capabilities (8) Recommendations Tutorials						
🛢 Disks	Virtual machine	🙊 Networking					
👤 Size	Computer name Subnet0-VM	Public IP address 20.187.75.179					
 Microsoft Defender for Cloud Advisor recommendations 	Health state -	Public IP address (IPv6) -					
	Operating system Windows	Private IP address 10.1.0.4					
	Publisher MicrosoftWindowsServer	Private IP address (IPv6) -					

Deploying VMs into Subnets cont'd

This screenshot shows the *Properties* section of the *Subnet1-VM* page, showing the networking and size information of the VM.

Microsoft Azure	℅ Search	resources, services, and do	isources, services, and docs (G+/) 🗵 🕼 🖓 🛞 🕐 🛱							jgarlie@ DEVRY UNIVERSI		
Home >												
Subnet1-VM	\$											
₽ Search (Ctrl+/)	«	🔊 Connect \lor \triangleright	Start 🤇 Restart 🗌 Stop 🕅	Capture 📋 Delet	e 🖒 Refresh [Open in mo	bile 💈	🖥 CLI / PS	📯 Feedb	ack		
👤 Overview	*	∧ Essentials										
Activity log		Resource group (<u>move</u>)	: <u>NETW211-RG</u>		Operati	ng system	: W	indows (Wind	lows Serve	r 2019 Datacenter)		
Access control (IAM)		Status	: Running		Size		: Sta	andard B1s (1	vcpu, 1 Gi	B memory)		
🗳 Tags		Location	: East Asia		Public I	o address	: <u>20</u>	.239.55.226				
Diagnose and solve problem	ns	Subscription (move)	Subscription (move) : <u>Azure for Students</u> Virtua				rtual network/subnet : <u>NETW211-RG-vnet/default</u>			<u>t</u>		
		Subscription ID	Subscription ID : b8a15a49-0af0-4fbb-99d7-3062ae558e84					DNS name : <u>Not configured</u>				
Settings		Tags (edit) : <u>Click here to add tags</u>										
🙎 Networking		Properties Menite	ving Canabilities (9) Decom	mandations Tu	toriala							
🖉 Connect		Properties	ining Capabilities (o) Recom	imendations ru	tonais							
🐁 Windows Admin Center		📮 Virtual machine			🧟 Ne	tworking						
(preview)		Computer name	Subnet1-VM		Pub	lic IP addres	s	20.239.55	226			
🛢 Disks		Health state	-		Put	lic IP addres	s (IPv6)	-				
🗜 Size		Operating system	n Windows (Windows Server 2	2019 Datacenter)	Priv	ate IP addre	ss	10.1.0.5				
Ø Microsoft Defender for Clou	ıd	Publisher	MicrosoftWindowsServer		Priv	ate IP addre	ss (IPv6)	-				
Advisor recommendations		Offer	WindowsServer		Virt	ual network/	subnet	NETW211	-RG-vnet/c	lefault		
-	-	Plan	2019-datacenter-gensecond	d	DN	S name		Configure				

Deploying VMs into Subnets cont'd

This screenshot shows the topology diagram of your VNet (*NETW211-VNet-Your Initials*) with two subnets (*SubnetO* and *Subnet1*) and one VM in each subnet (*SubnetO-VM* and *Subnet1-VM*).

NETW211-RG-vnet | Diagram 🖉 … 유 \times Virtual network Search (Ctrl+/) ↓ Download topology Virtual Network (i) * Private endpoints NETW211-RG-vnet \sim Properties A Locks Monitoring ۵ ک Alerts NETW211-RG-vnet Metrics $\langle \cdot \rangle$ Diagnostic settings default ₽ Logs 🕵 Connection monitor (classic) 🖧 Diagram subnet0-vm553 subnet1-vm957 Automation 🖧 Tasks (preview) Subnet0-VM-nsg Subnet0-VM-ip Subnet1-VM-nsg Subnet0-VM Subnet1-VM Subnet1-VI 😫 Export template

Verifying Connectivity between VMs

This screenshot shows the *ipconfig* and *ping* 10.1.0.5 results in the command prompt window, including the **SubnetO**-VM – 10.1.0.4 – Romote Desktop Connection window title.

🔜 Administrator: Command Prompt

Microsoft Windows [Version 10.0.17763.2928] (c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\myaccount>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

Connection-specific DNS Suffix . : wxpnya41l3wutm3zjnioq4s4ka.hx.internal.cloudapp.net Link-local IPv6 Address : fe80::c50b:4e25:8be6:d8cc%4 IPv4 Address. : 10.1.0.5 Subnet Mask : 255.255.255.0 Default Gateway : 10.1.0.1

C:\Users\myaccount>ping 10.1.0.4

Pinging 10.1.0.4 with 32 bytes of data: Reply from 10.1.0.4: bytes=32 time=2ms TTL=128 Reply from 10.1.0.4: bytes=32 time=5ms TTL=128 Reply from 10.1.0.4: bytes=32 time=1ms TTL=128 Reply from 10.1.0.4: bytes=32 time=1ms TTL=128

Ping statistics for 10.1.0.4: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 5ms, Average = 2ms

C:\Users\myaccount>

Verifying Connectivity between VMs cont'd

This screenshot shows the *ipconfig* and *ping* 10.1.0.4 results in the command prompt window, including the **Subnet1**-VM – 10.1.0.5 – Romote Desktop Connection window title.

Administrator: Command Prompt Microsoft Windows [Version 10.0.17763.2928] (c) 2018 Microsoft Corporation. All rights reserved. C:\Users\myaccount>ipconfig Windows IP Configuration Ethernet adapter Ethernet: Connection-specific DNS Suffix . : wxpnya41l3wutm3zjnioq4s4ka.hx.internal.cloudapp.net Link-local IPv6 Address : fe80::d5a6:e7b8:916b:4fd3%4 C:\Users\myaccount>ping 10.1.0.5 Pinging 10.1.0.5 with 32 bytes of data: Reply from 10.1.0.5: bytes=32 time=1ms TTL=128 Ping statistics for 10.1.0.5: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 1ms, Average = 1ms C:\Users\myaccount>_

Azure VM Security

The next four slides show:

1) Launching a VM;

- 2) Connecting to a VM via SSH;
- 3) Configuring an NSG; and,
- 4) Configuring an NSG, cont'd.

Launching a VM

This screenshot shows the *NETW211-VM-Your Initials* page, with information such as the resource group name, subscription, public IP address, etc.



Connecting to the VM via SSH

This screenshot shows the *azureuser@NETW211-VM-My Initials* window showing the IPv4 address of the VM in the Azure cloud.

azureuser@NETW211-VM-JG: ~ HOME URL="https://www.ubuntu.com/" SUPPORT_URL="https://help.ubuntu.com/" BUG REPORT URL="https://bugs.launchpad.net/ubuntu/" PRIVACY POLICY URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy" VERSION CODENAME=focal UBUNTU CODENAME=focal azureuser@NETW211-VM-JG:~\$ ping -c 4 www.facebook.com PING star-mini.c10r.facebook.com (31.13.75.35) 56(84) bytes of data. 64 bytes from edge-star-mini-shv-02-hkt1.facebook.com (31.13.75.35): icmp seq=1 ttl=54 time=1.16 ms 64 bytes from edge-star-mini-shv-02-hkt1.facebook.com (31.13.75.35): icmp seq=2 ttl=54 time=1.60 ms 64 bytes from edge-star-mini-shv-02-hkt1.facebook.com (31.13.75.35): icmp seq=3 ttl=54 time=2.65 ms 64 bytes from edge-star-mini-shv-02-hkt1.facebook.com (31.13.75.35): icmp seq=4 ttl=54 time=1.38 ms -- star-mini.c10r.facebook.com ping statistics --packets transmitted, 4 received, 0% packet loss, time 3005ms rtt min/avg/max/mdev = 1.161/1.697/2.653/0.572 ms zureuser@NETW211-VM-JG:~\$ ip addr 1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000 link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00 inet 127.0.0.1/8 scope host lo valid lft forever preferred lft forever inet6 ::1/128 scope host valid lft forever preferred lft forever 2: eth0: <BROADCAST,MULTICAST,UP,LOWER UP> mtu 1500 qdisc mq state UP group default qlen 1000 link/ether 00:22:48:17:30:a8 brd ff:ff:ff:ff:ff:ff inet 10.0.0.4/24 brd 10.0.0.255 scope global eth0 valid lft forever preferred lft forever inet6 fe80::222:48ff:fe17:30a8/64 scope link valid lft forever preferred lft forever zureuser@NETW211-VM-JG:~\$ 🗕

Configuring an NSG

This screenshot shows the Inbound port rules section with the newly added Allow_Ping rule.

≡ Microsoft Azure 🔎 Sea	arch resources, services, and do	ocs (G+/)				2 © Ø Á	jgarlie@my.devry
Home > NETW211-VM-JG							
NETW211-VM-JG Virtual machine	Networking						
	Attach network inte	erface 🖉 Detach network	interface 🔗 Feedbac	k			
👤 Overview	▲ IP configuration ()						
Activity log	ipconfig1 (Primary)	\checkmark					
Access control (IAM)	Network Interface	e: netw211-vm-jg671	Effective security rule	s Troubleshoot VM	l connection issues	Topology	
🗳 Tags	Virtual network/subne	t: NETW211-RG-JG-vnet/defa	ult NIC Public IP: 1	04.208.80.12 NIC Pr	ivate IP: 10.0.0.4 A	ccelerated networking	g: Disabled
Diagnose and solve problems	Inbound port rules Outbound port rules Application security groups Load balancing						
Settings	Network security	/ group NETW211-VM-JG-n	nsg (attached to netwo	rk interface: netw211-v	/m-jg671)		Add inbound port rule
2 Networking	Impacts 0 subnets	s, 1 network interfaces					
🖉 Connect	Priority	Name	Port	Protocol	Source	Destination	Action
a Disks	300	▲ SSH	22	ТСР	Any	Any	Allow
📮 Size	310	Allow_ping	Any	ICMP	Any	Any	Allow
Ø Microsoft Defender for Cloud	65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
Advisor recommendations	65001	AllowAzureLoadBalan	Any	Any	AzureLoadBalancer	Any	Allow
Extensions + applications	65500	DenyAllInBound	Any	Any	Any	Any	8 Deny
🐔 Continuous delivery	•						
₽ Type here to search	0	H 💽 🧮	💼 🔕 🤹	1			ලි 👄 🖾 🧖 ባን) 11:19 AN 5/24/202

Configuring an NSG cont'd

This screenshot shows the successful ping result from your local computer to the VM in the Azure cloud.

Command Prompt

Microsoft Windows [Version 10.0.19043.1706] (c) Microsoft Corporation. All rights reserved. C:\Users\16123>ping 104.208.80.12 Pinging 104.208.80.12 with 32 bytes of data: Reply from 104.208.80.12: bytes=32 time=198ms TTL=44 Reply from 104.208.80.12: bytes=32 time=196ms TTL=44 Reply from 104.208.80.12: bytes=32 time=197ms TTL=44 Reply from 104.208.80.12: bytes=32 time=199ms TTL=44 Ping statistics for 104.208.80.12: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 196ms, Maximum = 199ms, Average = 197ms C:\Users\16123>ping 104.208.80.12 Pinging 104.208.80.12 with 32 bytes of data: Reply from 104.208.80.12: bytes=32 time=197ms TTL=44 Reply from 104.208.80.12: bytes=32 time=197ms TTL=44 Reply from 104.208.80.12: bytes=32 time=198ms TTL=44 Reply from 104.208.80.12: bytes=32 time=199ms TTL=44 Ping statistics for 104.208.80.12: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 197ms, Maximum = 199ms, Average = 197ms

C:\Users\16123>

Cloud Storage

The next four slides show:

- 1) Uploading and Accessing a File;
- 2) Questions;
- 3) Creating Blob Snapshots; and,
- 4) Enabling Blob Versioning.

Uploading and Accessing a File

This screenshot shows the browser window with the image uploaded from your local computer and the URL on top of the window.



Questions

What does the access tier setting do?

Data stored in the cloud grows at an exponential pace. To manage costs for your expanding storage needs, it can be helpful to organize your data based on how frequently it will be accessed and how long it will be retained. Azure storage offers different access tiers so that you can store your blob data in the most cost-effective manner based on how it's being used. Azure Storage access tiers include:

What are the Azure blob storage access tiers?

•Hot tier - An online tier optimized for storing data that is accessed or modified frequently. The Hot tier has the highest storage costs, but the lowest access costs.

•Cool tier - An online tier optimized for storing data that is infrequently accessed or modified. Data in the Cool tier should be stored for a minimum of 30 days. The Cool tier has lower storage costs and higher access costs compared to the Hot tier.

•Archive tier - An offline tier optimized for storing data that is rarely accessed, and that has flexible latency requirements, on the order of hours. Data in the Archive tier should be stored for a minimum of 180 days.

References:

1. Professor Giomi

2. https://docs.microsoft.com/en-us/azure/storage/blobs/access-tiers-overview

Creating Blob Snapshots

This screenshot shows the browser window with the *"This is the original version. –My Initials"* message and the URL on top of the window





Enabling Blob Versioning

This screenshot shows the browser window with the "This is the first revised version. –My Initials" message and the URL on top of the window.





Cloud Monitoring

The next four slides show:

- 1) Setting up an Action Group and Notifications;
- 2) Setting up Alert Rules;
- 3) Testing Alerts; and,
- 4) Testing Alerts, contd.

Setting up an Action Group and Notifications

This screenshot shows the "VM-Status-Change" action group on the *Manage actions* page.

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Home > Monitor >						
Action groups						\times
+ Create ≡≡ Columns 🕻	<mark>) Refresh</mark>	action group (preview)				
Subscription : Azure for Stud	dents Resource group : All					
Showing 1 to 1 of 1 records.						
Search action groups						
\square Action group name \uparrow_{\downarrow}	Short name ↑↓	Resource group \uparrow_{\downarrow}	Subscription	Status	Actions	
VM-Status-Change	VM-Status	netw211-rg-8021	Azure for Students	Enabled	1 Email	

Setting up Alert Rules

This screenshot shows the Alert rules window showing the VM-Deallocate and VM-Restart rules.

_	Microsoft Arura	O Search recourses convices and	docs (C+A				<u>√</u> 5 €	s @	전 iga	rlie@my.devry.edu
—	WICTOSOTT AZUTE	Search resources, services, and	1 docs (G+7)			KT ALA	ι, ····	~ ()	DEVRY UN	NIVERSITY (MYDEVRYE 🤎
Hom	e > NETW211-VM-JG >									
Ale	ert rules									×
+	Create ≡≣ Columns Č) Refresh 🞍 Export to CSV 🛛	🗊 Delete 🖒 En	able 🗌 Disable						
و حر	Search	Target resource type : all	Scope : NETW	211-VM-JG Subscription : all	Signal type : all	Severity : all	St	atus : Ena	bled	
Show	ving 1 to 3 of 3 Alert rules									
51104	ing 1 to 5 of 5 Alert fules.								No grouping	~
	Name ↑↓	Condition	Severity \uparrow_{\downarrow}	Scope	Target resource type	Signa	l type ↑,	ŀ	Status ↑↓	
	VM-Deallocate	Category=Administrative, O	4 - Verbose	NETW211-VM-JG	Virtual machine	Activit	ty log		🕑 Enabled	•••
	VM-Restart	Category=Administrative, O	4 - Verbose	NETW211-VM-JG	Virtual machine	Activit	ty log		🕑 Enabled	
							/			

Testing Alerts

This screenshot shows the 'VM-Restart' was activated email message with the date and time of the alert.

Important notice: Azure Monitor alert VM-Restart was activated

Some content in this message has been blocked because the sender isn't in your Safe senders list.
 I trust content from azure-noreply@microsoft.com. | Show blocked content



Microsoft Azure <azure-noreply@microsoft.com>



To: Garlie, James

Wed 6/8/2022 11:07 AM

Azure Monitor alert 'VM-Restart' was activated for 'NETW211-VM-JG' at June 8, 2022 17:05 UTC

You're receiving this notification as a member of the VM-Status action group because an Azure Monitor alert was activated.

Activity log alert	VM-Restart
Time	June 8, 2022 17:05 UTC
Category	Administrative
Operation name	Microsoft.Compute/virtualMachines/restart/action

Testing Alerts cont'd

This screenshot shows the 'VM-Deallocate' was activated email message with the date and time of the alert.



Microsoft Azure <azure-noreply@microsoft.com> To: Garlie, James



Wed 6/8/2022 11:11 A

Azure Monitor alert 'VM-Deallocate' was activated for 'NETW211-VM-JG' at June 8, 2022 17:09 UTC

You're receiving this notification as a member of the VM-Status action group because an Azure Monitor alert was activated.



Challenges

Challenges included: Identifying the proper login procedures Learning how to work with Azure Uploading the proper programs Testing the additions at each stage

Career Skills

I learned how to:

Further work with Azure

Verify Connectivity

How to create testing alerts

Further developed basic and advanced computer skills

Conclusion

I found this class; learning how to use Azure, including deploying VM (Virtual Machine) Instances, Azure Vnet and Subnets, VM Security, Cloud Storage, and Cloud Monitoring to be very educational.

I feel this project will help me in the future.

References

1. Professor Giomi in each weeks Project Videos

2. <u>https://asmed.com/microsoft-azure-vnet-vm-subnet-and-security-tutorial/</u>

3. <u>https://docs.microsoft.com/en-us/azure/storage/blobs/access-tiers-overview</u>