

WEEK 13: AZURE SIMULATIONS





Content Usage Parameters

Content refers to material including instructor guides, student guides, lab guides, lab or hands-on activities, computer programs, etc. designed for use in a training program

1

Content is subject to
copyright protection

2

Content may only be
leveraged by students
enrolled in the training
program

3

Students agree not to
reproduce, make
derivative works of,
distribute, publicly perform
and publicly display in any
form or medium outside of
the training program

4

Content is intended as
reference material only to
supplement the instructor-
led training

REVIEW: WEEK 12

- **Overview of Activities:** Brief rundown of all scenarios
 - **Group Formation:** Instructions for team creation and role assignments
 - **Scenario Walkthroughs:** Step-by-step instructions for each scenario
 - **Presentation Preparation:** Guidelines for presenting your findings
 - **Q&A and Feedback:** Final discussion and reflection session
- Week 1-2: Introduction to Cloud Technology
 - Week 3-5: Cloud Strategy and Architecture
 - Week 6-7: Use Cases and Real-World Applications
 - Week 8-9: Benefits and Value Proposition
 - Week 10-12: Challenges and Risks
 - **Week 13-14: Interactive Simulations and Practical Exercises**
 - Week 15: Course Review and Final Assessment

AGENDA

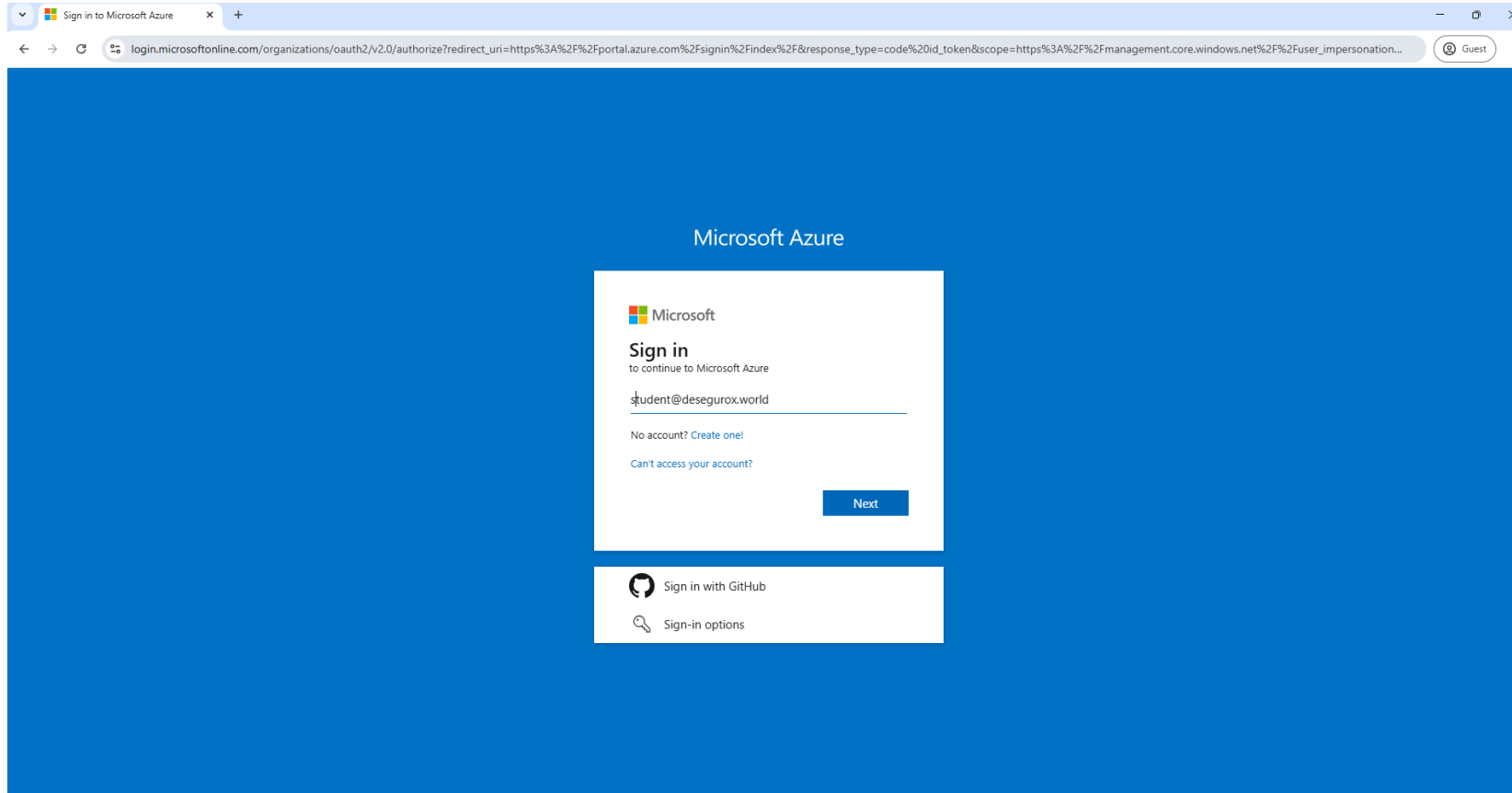
- Familiarize with the Azure Portal interface and navigation.
- Gain practical experience deploying fundamental Azure services.
- Understand the basic configuration options for Virtual Machines, Virtual Networks, and Storage Accounts.
- Learn how to monitor resource health and performance.
- Appreciate the interconnectedness of Azure services.
- Connect hands-on activities to strategic cloud decisions.

AZURE VMS



- Infrastructure as a Service (IaaS) offering.
- On-demand, scalable computing resources.
- Supports Linux, Windows Server, SQL Server, Oracle, IBM, SAP, etc.
- You manage the OS, applications, and configurations. Azure manages the underlying infrastructure

ACCESSING AZURE PORTAL

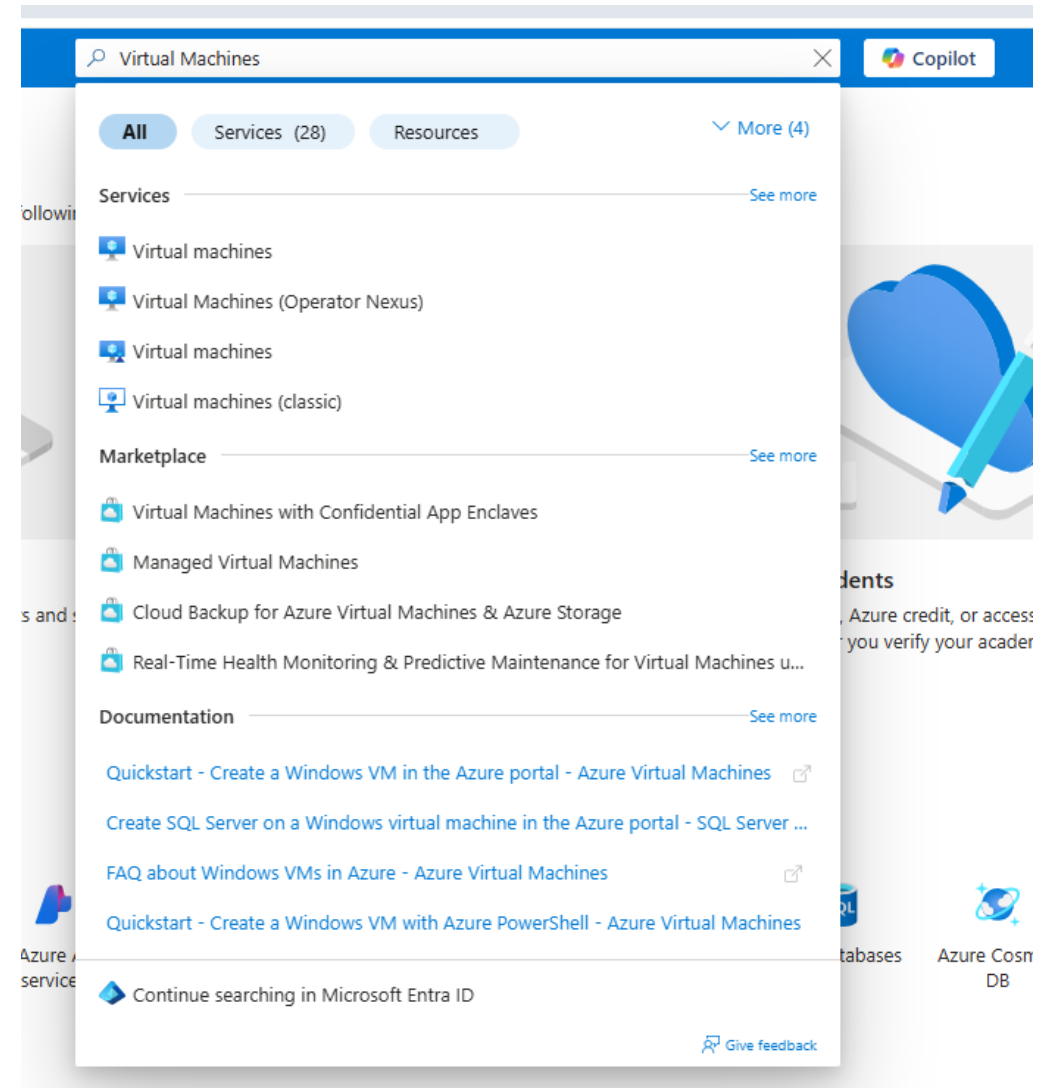


Steps:

- **Navigate:** Open your web browser and go to **portal.azure.com**.
- **Sign In:** Use the credentials provided.

FINDING VIRTUAL MACHINES SERVICE

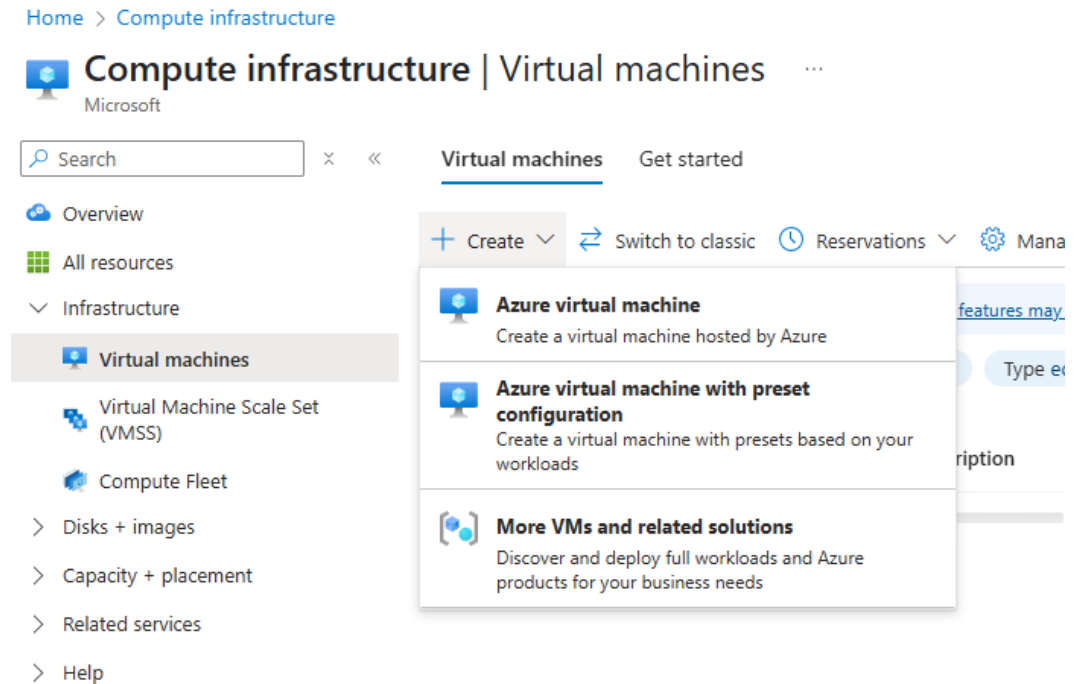
- I. **Search:** In the top search bar, type "Virtual machines".
- II. **Select:** Click on "Virtual machines" under the "Services" category.



CREATING A VIRTUAL MACHINE

Steps:

- I. Click Create: On the "Virtual machines" page, click on "+ Create" and then select "Azure virtual machine".
- II. Description: This action starts the VM deployment wizard.



VM – BASICS TAB

Basics Disks Networking **Management** Monitoring Advanced Tags Review + create

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization. [Learn more](#)

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ

Resource group * ⓘ [Create new](#)

Instance details

Virtual machine name * ⓘ ✓

Region * ⓘ

Subscription: Select your assigned Azure subscription. (Usually pre-selected)

Resource Group: Click "Create new", name it ExecLead-RG-Demo. (Or use an existing one if instructed)

Description: Resource Groups are containers for resources that share a common lifecycle, permissions, and policies.

Virtual machine name: Enter ExecLead-VM01.

Region: Select a region (e.g., (US) East US).

Description: The geographical location where your VM will be hosted.

VM – BASICS TAB: IMAGE, SIZE, ADMIN ACCOUNT

Availability options ⓘ No infrastructure redundancy required

Security type ⓘ Standard

Image * ⓘ Windows Server 2019 Datacenter - x64 Gen2
[See all images](#) | [Configure VM generation](#)
✔ This image is compatible with additional security features. [Click here to swap to the Trusted launch security type.](#)

VM architecture ⓘ
☐ Arm64
☒ x64
i Arm64 is not supported with the selected image.

Run with Azure Spot discount ⓘ ☐

Size * ⓘ Standard_B1s - 1 vcpu, 1 GiB memory (CA\$13.87/month)
[See all sizes](#)

Enable Hibernation ⓘ ☐
i Hibernation is not supported by the size that you have selected. Choose a size that is compatible with Hibernation to enable this feature. [Learn more](#)

Administrator account

Username * ⓘ azureuser ✔

Password * ✔

Confirm password * ✔

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports * ⓘ
☐ None
☒ Allow selected ports

Select inbound ports * ⓘ RDP (3389) ▼

⚠ This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

Availability options: Leave as "No infrastructure redundancy required" for this demo.

Image: Select "Windows Server 2019 Datacenter - Gen2".

❑ **Description:** The operating system template for your VM.

Size: Select a size (e.g., Standard_B1s - 1 vCPU, 1 GiB memory).

❑ **Description:** Defines CPU, RAM, and storage performance of the VM. Directly impacts cost.

Administrator account:

Username: azureuser

Password: Create a complex password (e.g., P@\$\$\$wOrd12345!) and confirm it. Remember this!

Inbound port rules: Select "Allow selected ports". Then check "RDP (3389)".

Description: Allows Remote Desktop Protocol connections for Windows VMs.

VM – DISKS TAB

- **OS disk type:** Select Standard SSD for a balance of cost and performance.
 - *Description:* Options include Standard HDD, Standard SSD, Premium SSD. Affects performance and cost.
- Leave other settings as default for this demo.

Basics Disks Networking Management Monitoring Advanced Tags Review + create

i The configuration of this virtual machine and its attached disk(s) may not allow for the disk(s) to utilize their full throughput performance. The current virtual machine size supports 23 MBps. The total for disk(s) attached to virtual machine 'ExecLead-VM01' is 100 MBps. You can change the virtual machine size to support additional disk(s) throughput. [Learn more](#)

Azure VMs have one operating system disk and a temporary disk for short-term storage. You can attach additional data disks. The size of the VM determines the type of storage you can use and the number of data disks allowed. [Learn more](#)

VM disk encryption

Azure disk storage encryption automatically encrypts your data stored on Azure managed disks (OS and data disks) at rest by default when persisting it to the cloud.

Encryption at host ☐

i Encryption at host is not registered for the selected subscription. [Learn more](#)

OS disk

OS disk size

OS disk type *

The selected VM size supports premium disks. We recommend Premium SSD for high IOPS workloads. Virtual machines with Premium SSD disks qualify for the 99.9% connectivity SLA.

Delete with VM ☒

Key management

Enable Ultra Disk compatibility ☐

Ultra disk is supported in Availability Zone(s) 1,2,3 for the selected VM size Standard_B1s.

Data disks for ExecLead-VM01

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

LUN	Name	Size (GiB)	Disk type	Host caching	Delete with VM
-----	------	------------	-----------	--------------	----------------

Create and attach a new disk Attach an existing disk

VM – NETWORKING TAB

- **Virtual network:** A new VNet will be created by default based on your resource group name (e.g., ExecLead-RG-Demo-vnet). This is fine for the demo.
- **Subnet:** A default subnet will also be created.
- **Public IP:** A new Public IP will be created. This allows connection from the internet.
- **NIC network security group:** Select Basic.
- **Public inbound ports:** Confirm "Allow selected ports" is chosen and "RDP (3389)" is checked.

Basics Disks **Networking** Management Monitoring Advanced Tags Review + create

Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution. [Learn more](#)

Network interface

When creating a virtual machine, a network interface will be created for you.

Virtual network * ⓘ (new) ExecLead-VM01-vnet
[Create new](#)

Subnet * ⓘ (new) default (10.0.0.0/24)

Public IP ⓘ (new) ExecLead-VM01-ip
[Create new](#)

NIC network security group ⓘ
☐ None
☒ Basic
☐ Advanced

Public inbound ports * ⓘ
☐ None
☒ Allow selected ports

Select inbound ports * RDP (3389)

⚠ This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

Delete public IP and NIC when VM is deleted ⓘ ☐

Enable accelerated networking ⓘ ☐ The selected VM size does not support accelerated networking.

Load balancing

You can place this virtual machine in the backend pool of an existing Azure load balancing solution. [Learn more](#)

Load balancing options ⓘ
☒ None
☐ Azure load balancer
Supports all TCP/UDP network traffic, port-forwarding, and outbound flows.
☐ Application gateway
Web traffic load balancer for HTTP/HTTPS with URL-based routing, SSL termination, session persistence, and web application firewall.

VM – REVIEW + CREATE

- **Review Settings:** Azure will validate your configuration. If it passes, you'll see "Validation passed". Review the summary to ensure settings are as expected.
- **Create:** Click the "Create" button at the bottom.

Create a virtual machine ...

✓ Validation passed



Help me create a low cost VM

Help me create a VM optimized for high availability

Help me choose the right VM size for my workload

Basics Disks Networking Management Monitoring Advanced Tags Review + create

Price

1 X Standard B1s

by Microsoft

[Terms of use](#) | [Privacy policy](#)

Subscription credits apply ⓘ

0.0190 CAD/hr

[Pricing for other VM sizes](#)

TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the [Azure Marketplace Terms](#) for additional details.



You have set RDP port(s) open to the internet. This is only recommended for testing. If you want to change this setting, go back to Basics tab.

Basics

Subscription	Microsoft Azure Sponsorship
Resource group	ExecLead-RG-Demo
Virtual machine name	ExecLead-VM01
Region	East US
Availability options	No infrastructure redundancy required
Zone options	Self-selected zone
Security type	Standard
Image	Windows Server 2019 Datacenter - Gen2
VM architecture	x64
Size	Standard B1s (1 vcpu, 1 GiB memory)
Enable Hibernation	No
Username	azureuser
Public inbound ports	RDP
Already have a Windows license?	No
Azure Spot	No

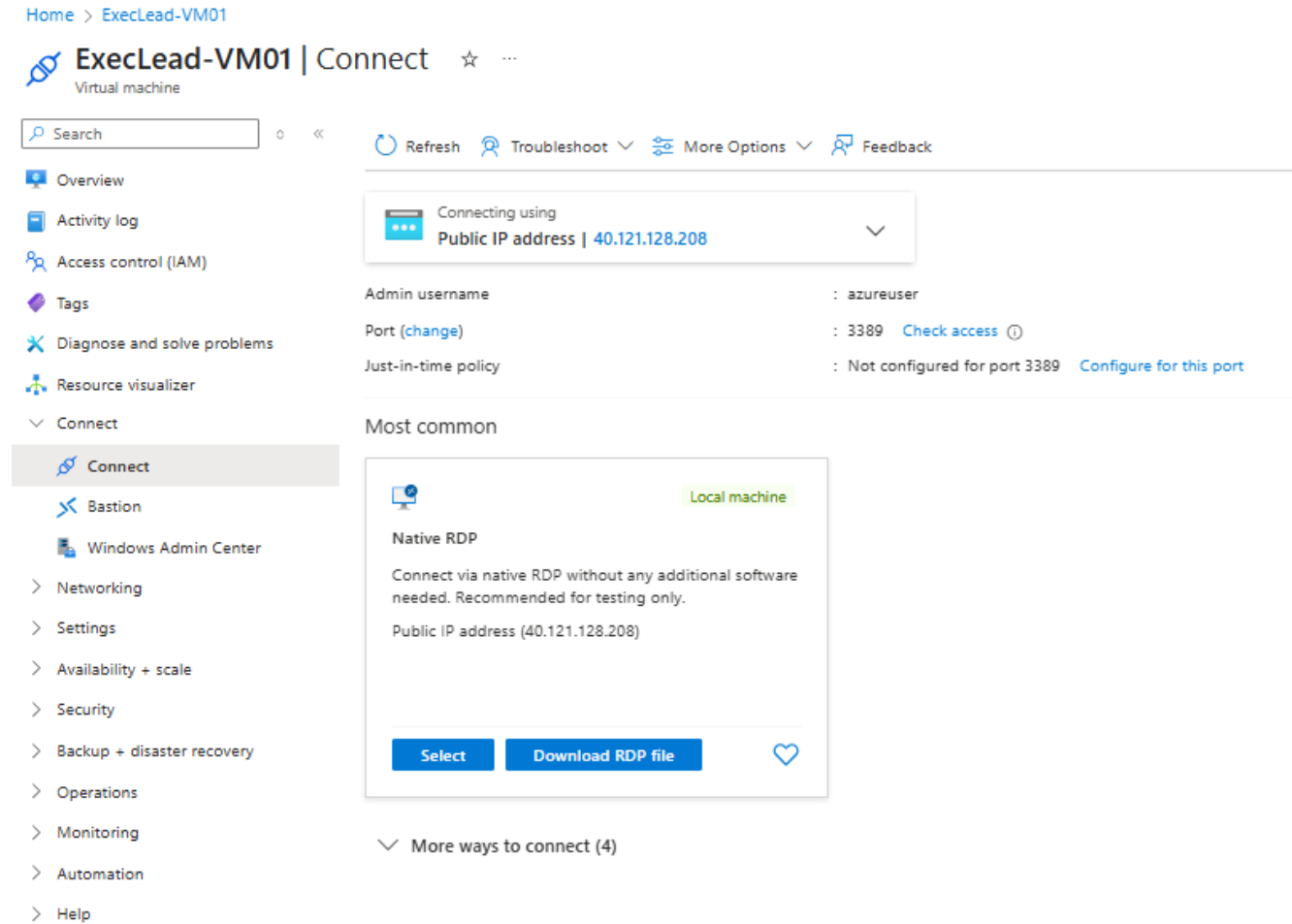
< Previous

Next >

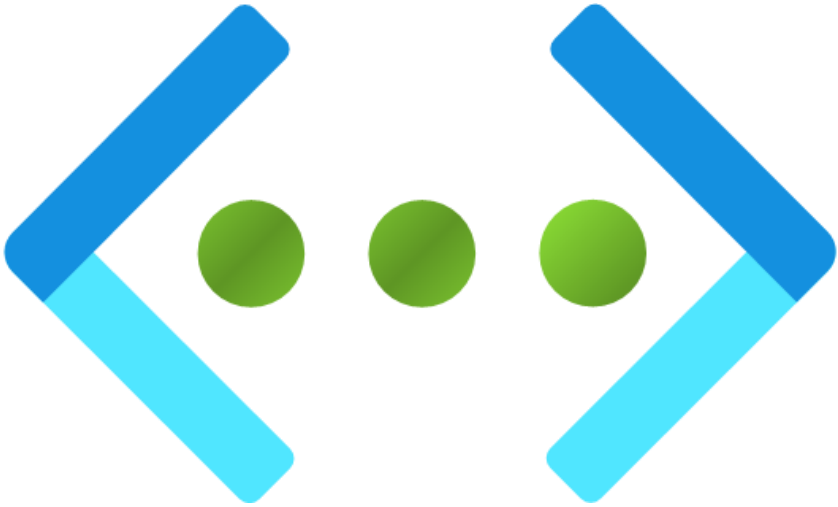
Create

VM – DEPLOYMENT & CONNECTION

- **Monitor Deployment:** You'll be taken to a deployment screen. Wait for it to complete ("Your deployment is complete").
- **Go to Resource:** Click "Go to resource".
- **Connect:** On the VM's "Overview" page, click "Connect" and select "RDP".
- **Download RDP File:** Download the RDP file.
- **Open RDP File:** Run the downloaded file, click "Connect", and enter the administrator credentials you created (e.g., azureuser and P@\$wOrd12345!).



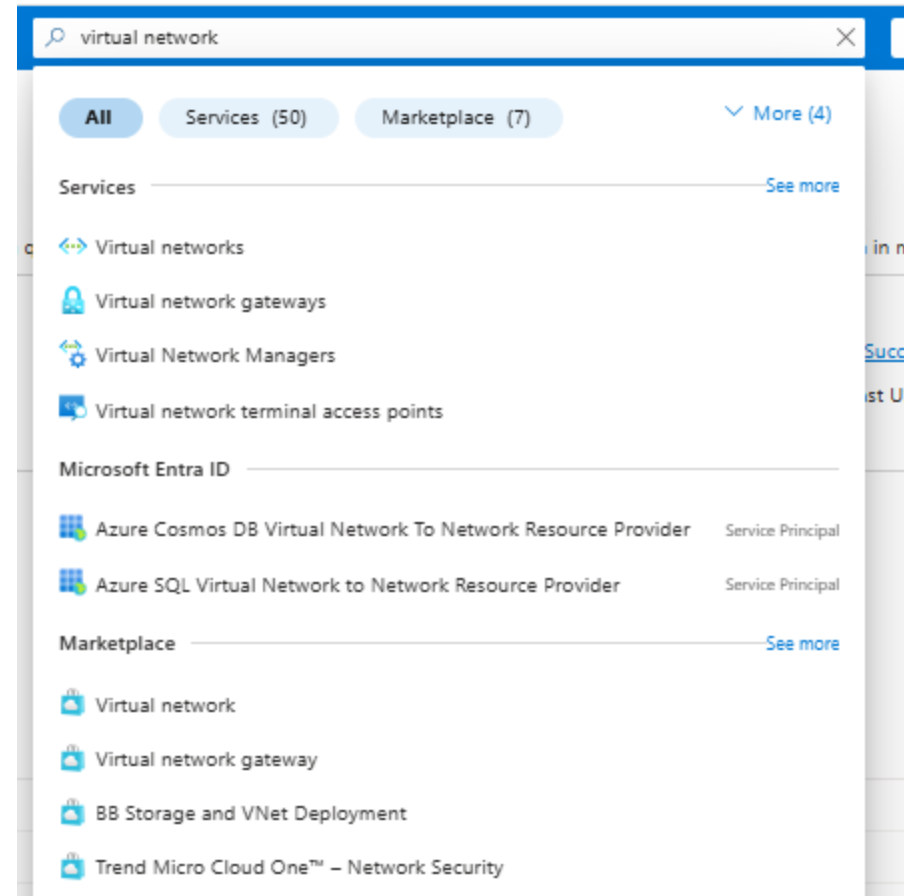
AZURE VIRTUAL NETWORKS (VNETS)



- Your private network in Azure.
- Enables Azure resources to securely communicate with each other, the internet, and on-premises networks.
- Provides isolation, segmentation (subnets), routing, and filtering (NSGs).
- Fundamental for network architecture and security.

FINDING THE VNET SERVICE

- Navigate: In the Azure Portal search bar, type "Virtual networks".
- Select: Click on "Virtual networks" under "Services".



CREATING THE VNET SERVICE

Basics Security IP addresses Tags Review + create

Azure Virtual Network (VNet) is the fundamental building block for your private network in Azure. VNet enables many types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other, the internet, and on-premises networks. VNet is similar to a traditional network that you'd operate in your own data center, but brings with it additional benefits of Azure's infrastructure such as scale, availability, and isolation.

[Learn more.](#)

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription *

Microsoft Azure Sponsorship

Resource group *

ExecLead-RG-Demo

[Create new](#)

Instance details

Virtual network name *

ExecLead-VNet02

Region * ⓘ

(US) East US

[Deploy to an Azure Extended Zone](#)

- Click "+ Create".
- **Subscription:** Select your subscription.
- **Resource Group:** Select the ExecLead-RG-Demo Resource Group we created earlier.
- **Name:** Enter ExecLead-VNet02.
- **Region:** Select the same region as your VM (e.g., (US) East US).

DEFINING IP ADDRESSES

- **IPv4 address space:** Enter 10.1.0.0/16.
- **Description:** The overall private IP range for this VNet. /16 provides ~65,000 addresses.
- **Subnets:**
 - Click "+ Add subnet".
- **Subnet name:** Frontend-Subnet
- **Subnet address range:** 10.1.1.0/24 (/24 provides ~250 addresses)
- Click "Add".
- **(Optional) Add another subnet:** Backend-Subnet with range 10.1.2.0/24.

Add a subnet

Select an address space and configure your subnet. You can customize a default subnet or select from subnet templates if you plan to add select services later. [Learn more](#)

Subnet purpose ? Default

Name * ? Frontend-Subnet

IPv4

Include an IPv4 address space ☒

IPv4 address range ? 10.1.0.0/16
10.1.0.0 - 10.1.255.255

Starting address * ? 10.1.1.0

Size ? /24 (256 addresses)

Subnet address range ? 10.1.1.0 - 10.1.1.255

IPv6

Include an IPv6 address space ☐ This virtual network has no IPv6 address ranges.

Private subnet

Private subnets enhance security by not providing default outbound access. To enable outbound connectivity for virtual machines to access the internet, it is necessary to explicitly grant outbound access. A NAT gateway is the recommended way to provide outbound connectivity for virtual machines in the subnet. [Learn more](#)

Enable private subnet (no default outbound access) ☐

Security

Simplify internet access for virtual machines by using a network address translation gateway. Filter subnet traffic using a network security group. [Learn more](#)

NAT gateway ? None
[Create new](#)

! A NAT gateway is recommended for outbound internet access from subnets. Edit the subnet to add a NAT gateway. [Learn more](#)

Network security group ? None
[Create new](#)

Route table None

Service Endpoints

Create service endpoint policies to allow traffic to specific azure resources from your virtual network over service endpoints. [Learn more](#)

Services Remove service endpoint

Add Cancel [Give feedback](#)

REVIEW + CREATE VIRTUAL NETWORK

- **Security Tab (Optional):** Briefly show the options for BastionHost, DDoS Protection, Firewall. We will NOT enable these for this demo to keep it simple and control costs.
 - **Description:** These are advanced security services.
- Click "Review + create".
- **Validation:** Wait for "Validation passed".
- Click "Create"

Basics Security IP addresses Tags Review + create

Enhance the security of your virtual network with these additional paid security services. [Learn more](#)

Virtual network encryption

Enable Virtual network encryption to encrypt traffic traveling within the virtual network. Virtual machines must have accelerated networking enabled. Traffic to public IP addresses is not encrypted. [Learn more](#)

Virtual network encryption ☐

Azure Bastion

Azure Bastion is a paid service that provides secure RDP/SSH connectivity to your virtual machines over TLS. When you connect via Azure Bastion, your virtual machines do not need a public IP address. [Learn more](#)

Enable Azure Bastion ☐

Azure Firewall

Azure Firewall is a managed cloud-based network security service that protects your Azure Virtual Network resources. [Learn more](#)

Enable Azure Firewall ☐

Azure DDoS Network Protection

Azure DDoS Network Protection is a paid service that offers enhanced DDoS mitigation capabilities via adaptive tuning, attack notification, and telemetry to protect against the impacts of a DDoS attack for all protected resources within this virtual network. [Learn more](#)

Enable Azure DDoS Network Protection ☐

[Previous](#) [Next](#) [Review + create](#)

AZURE STORAGE ACCOUNTS



Blob Storage



File Storage



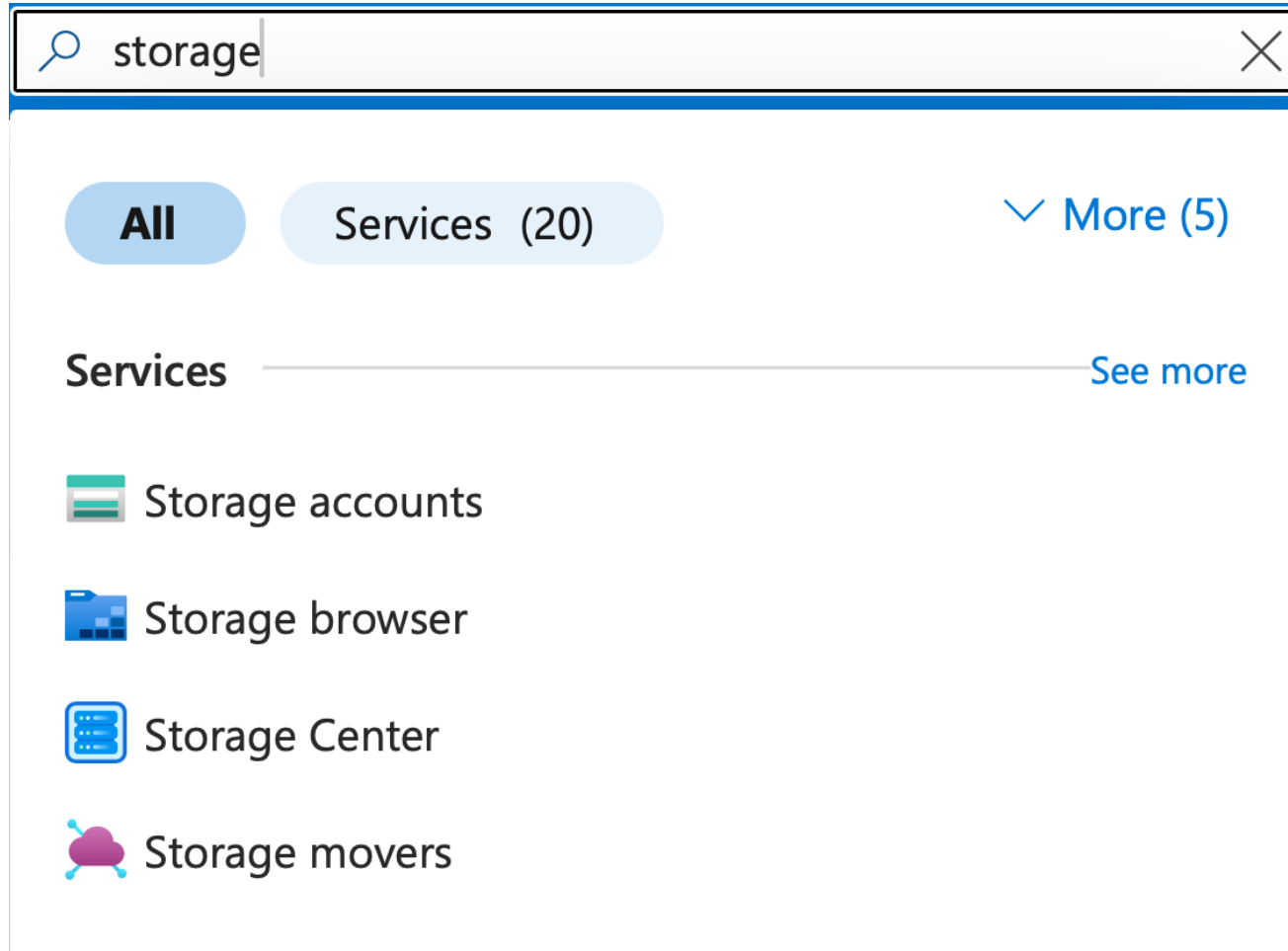
Table Storage



Queue Storage

- Provides scalable, secure, and highly available cloud storage.
- Supports various data types:
 - Blobs: Object storage for unstructured data (documents, videos, backups).
 - Files: Managed file shares (SMB protocol).
 - Queues: Messaging for decoupling applications.
 - Tables: NoSQL key-value store.
- Multiple redundancy options (LRS, GRS, RA-GRS, ZRS).

FINDING THE STORAGE ACCOUNT SERVICE



Steps:

- Navigate: In the Azure Portal search bar, type "Storage accounts".
- Select: Click on "Storage accounts" under "Services".

STORAGE ACCOUNT – BASICS TAB

Click "+ Create".

Subscription: Select your subscription.

Resource Group: Select ExecLead-RG-Demo.

Storage account name: Enter a globally unique name (lowercase letters and numbers only, e.g., execleadstorage + your initials + random numbers like execleadstoragejohndoe123).

Region: Select the same region (e.g., (US) East US).

Performance: Select Standard. (Premium is for low-latency workloads like VM disks).

Redundancy: Select Locally-redundant storage (LRS).

Description: Lowest cost, protects against disk/node failure within one datacenter.

Create a storage account ...

Basics Advanced Networking Data protection Encryption Tags Review + create

Azure Storage is a Microsoft-managed service providing cloud storage that is highly available, secure, durable, scalable, and redundant. Azure Storage includes Azure Blobs (objects), Azure Data Lake Storage Gen2, Azure Files, Azure Queues, and Azure Tables. The cost of your storage account depends on the usage and the options you choose below. [Learn more about Azure storage accounts](#)

Project details

Select the subscription in which to create the new storage account. Choose a new or existing resource group to organize and manage your storage account together with other resources.

Subscription *

Resource group * [Create new](#)

Instance details

Storage account name *

Region * [Deploy to an Azure Extended Zone](#)

Primary service

Performance * ☒ Standard: Recommended for most scenarios (general-purpose v2 account)
☐ Premium: Recommended for scenarios that require low latency.

Redundancy *

STORAGE ACCOUNT – ADVANCED + REVIEW TAB

Advanced Tab (Optional): Briefly show "Blob access tier (default)" is Hot.

❑ **Description:** Hot tier for frequently accessed data.

Cool/Archive for less frequent, lower cost.

Skip "Networking", "Data protection", "Encryption", "Tags" for this basic demo.

Click "Review + create".

Validation: Wait for "Validation passed".

Click "Create".

The screenshot shows the 'Advanced' tab of the Azure Storage Account configuration page. The 'Security' section is expanded, showing settings for REST API operations, anonymous access, and key access. The 'Access protocols' section shows SFTP and network file system settings. The 'Blob storage' section shows the 'Access tier' set to 'Hot'. The 'Azure Files' section shows 'Enable large file shares' checked. The 'Review + create' button is visible at the bottom right.

Basics **Advanced** Networking Data protection Encryption Tags Review + create

Security
Configure security settings that impact your storage account.

Require secure transfer for REST API operations ☒

Allow enabling anonymous access on individual containers ☐

Enable storage account key access ☒

Default to Microsoft Entra authorization in the Azure portal ☐

Minimum TLS version

Permitted scope for copy operations (preview)

Hierarchical Namespace
Hierarchical namespace, complemented by Data Lake Storage Gen2 endpoint, enables file and directory semantics, accelerates big data analytics workloads, and enables access control lists (ACLs) [Learn more](#)

Enable hierarchical namespace ☐

Access protocols
Blob and Data Lake Gen2 endpoints are provisioned by default [Learn more](#)

Enable SFTP ☐
SFTP can only be enabled for hierarchical namespace accounts

Enable network file system v3 ☐
To enable NFS v3 'hierarchical namespace' must be enabled. [Learn more about NFS v3](#)

Blob storage

Allow cross-tenant replication ☐

Access tier ☒ Hot: Optimized for frequently accessed data and everyday usage scenarios
☐ Cool: Optimized for infrequently accessed data and backup scenarios
☐ Cold: Optimized for rarely accessed data and backup scenarios

Azure Files

Enable large file shares ☒

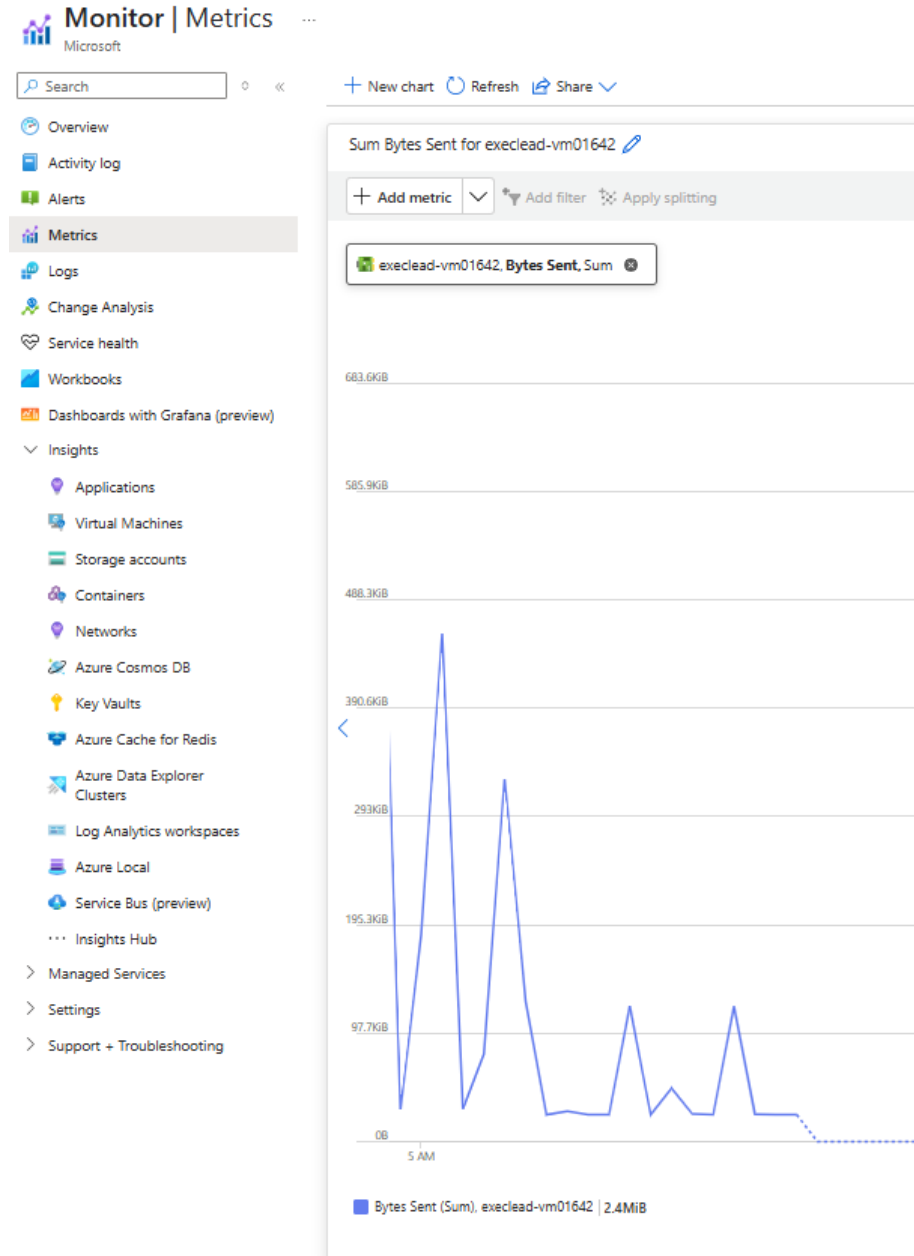
Previous Next **Review + create**

AZURE MONITOR

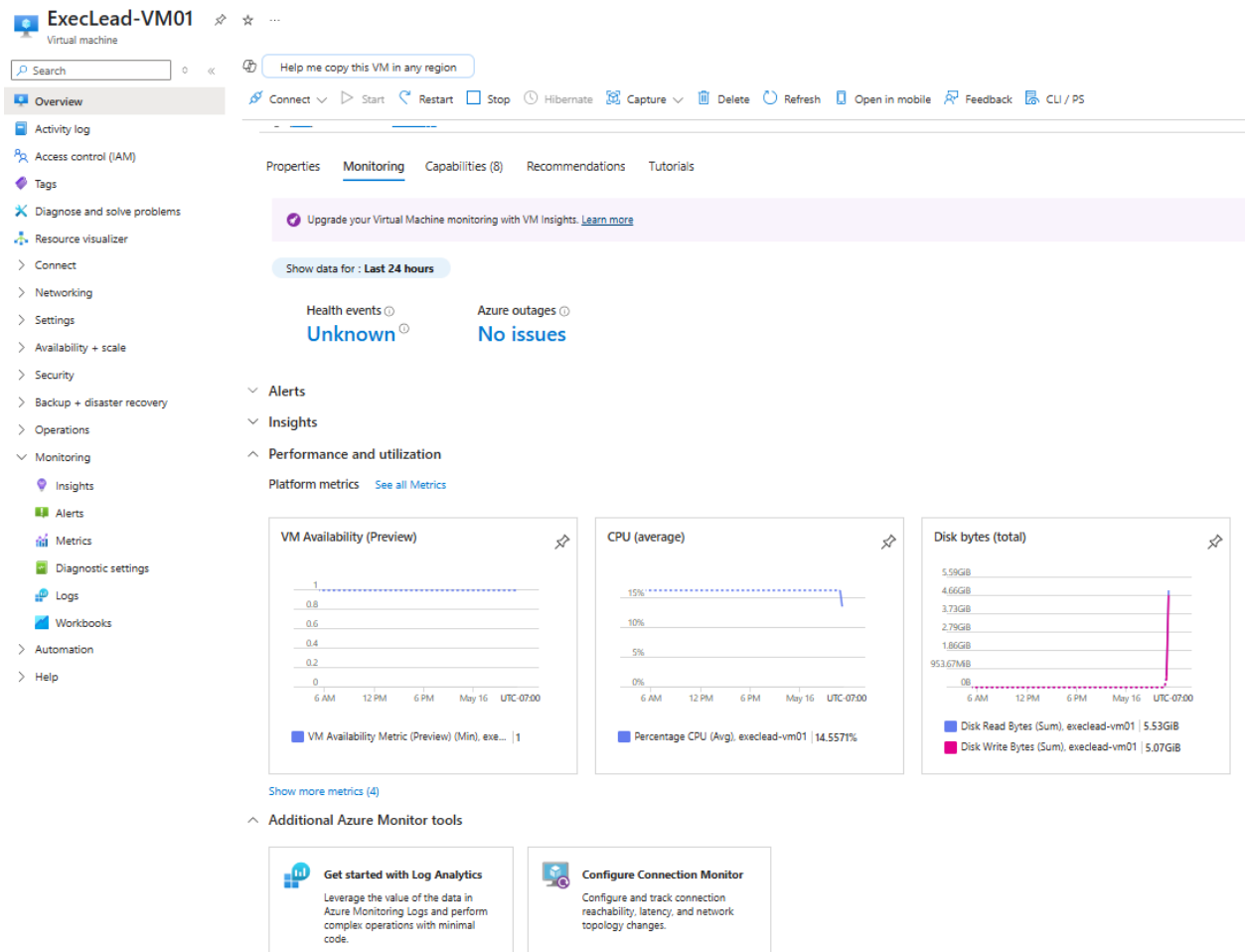
- ❑ Comprehensive monitoring solution for Azure resources and hybrid environments.
- ❑ Collects, analyzes, and acts on telemetry data.

Key capabilities:

- **Metrics:** Numerical performance data.
- **Logs:** Activity logs, diagnostic logs, application logs.
- **Alerts:** Proactive notifications for critical conditions.
- **Dashboards & Workbooks:** Visualization of data.
- **Insights:** Curated monitoring experiences for specific services.



EXPLORING VM METRICS



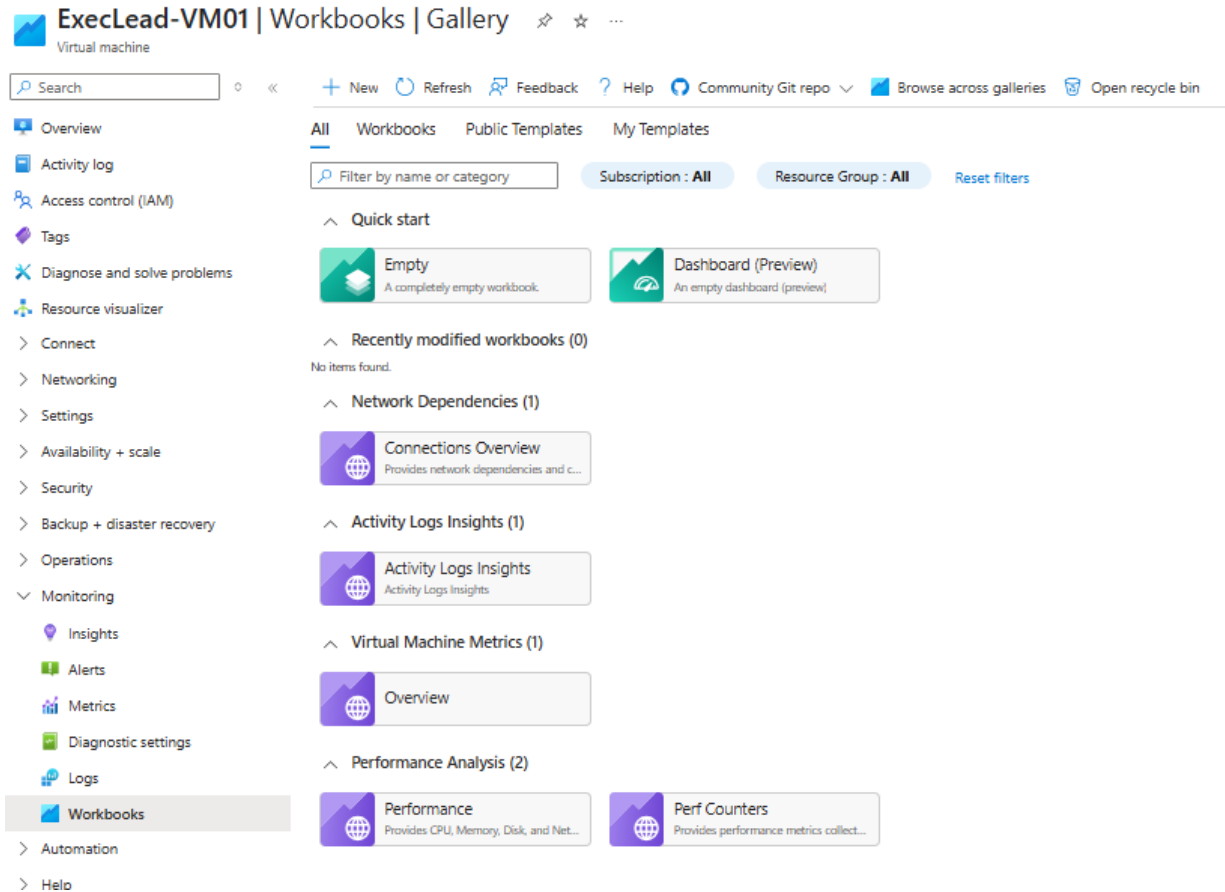
❑ **Overview Page:** The VM's "Overview" page by default shows some key metrics like CPU, Network, Disk.

❑ **Metrics Blade:** For more detail, in the left-hand menu for the VM, scroll down to the "Monitoring" section and click on "Metrics".

❑ **Add Metric:** Select a metric like Percentage CPU. Observe the chart.

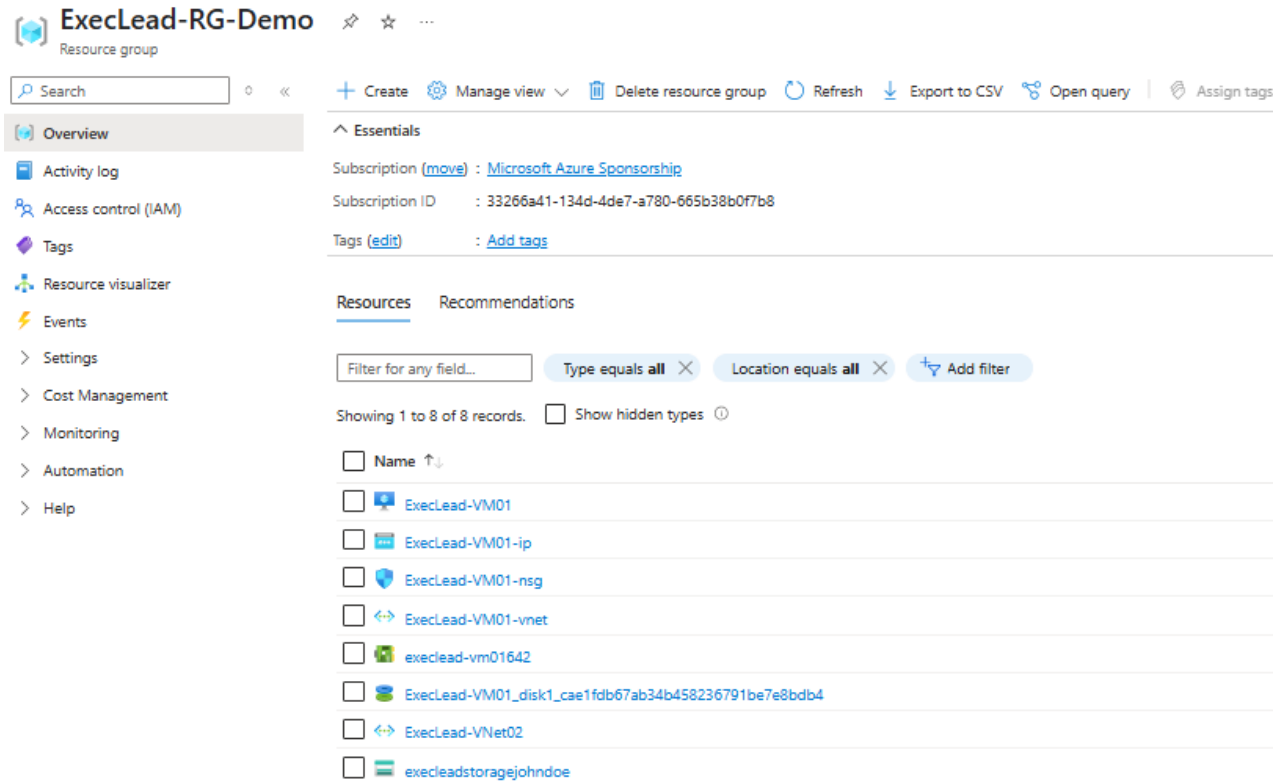
❑ **Add more metrics:** Try adding Network In Total or Disk Read Bytes.

EXPLORING VM METRICS – ACTIVITY LOG



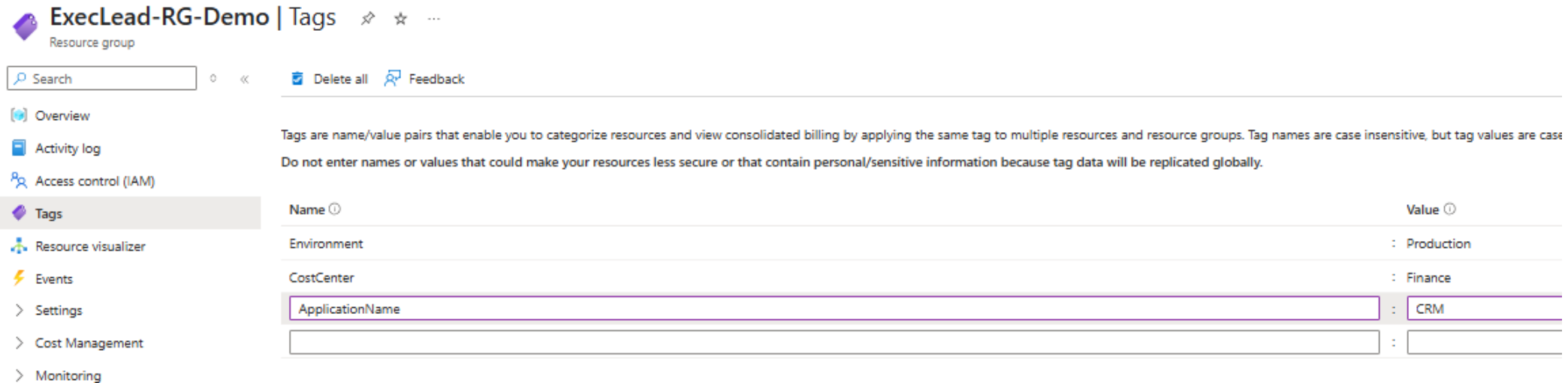
- ❑ **Navigate:** In the left-hand menu for the VM, under "Monitoring" (or sometimes higher up), click on "Workbooks" then select "Activity log Insights".
- ❑ **Review Events:** Observe the list of operations performed on this VM (e.g., Create, Start, Update).
- ❑ The Activity Log shows all control-plane operations performed on a resource. It's an audit trail.

MANAGING RESOURCE GROUPS



- ❑ All resources we created (ExecLead-VM01, ExecLead-VNet02, execleadstorage..., NICs, IPs, Disks) are in ExecLead-RG-Demo.
- ❑ Logical container for grouping related resources for an application or project.
- ❑ Simplifies management, billing, and access control.
- ❑ Deleting a Resource Group deletes all resources within it.

MANAGING RESOURCES: TAGGING



The screenshot shows the 'Tags' page in the Azure portal for a resource group named 'ExecLead-RG-Demo'. The left sidebar contains a navigation menu with options: Overview, Activity log, Access control (IAM), Tags (selected), Resource visualizer, Events, Settings, Cost Management, and Monitoring. The main content area has a search bar, 'Delete all', and 'Feedback' buttons. Below these, a text box explains that tags are name/value pairs used for categorizing resources and consolidated billing, noting that tag names are case-insensitive while values are case-sensitive. A table below shows existing tags: 'Environment' with value 'Production' and 'CostCenter' with value 'Finance'. A new tag is being added with the name 'ApplicationName' and value 'CRM'. An empty row is also visible at the bottom of the table.

Name	Value
Environment	Production
CostCenter	Finance
ApplicationName	CRM

❑ Tags are key/value pairs applied to Azure resources.

Used for:

- Organizing resources across Resource Groups.
- Cost tracking and billing reports (filter by tag).
- Automation (scripts can act on tagged resources).
- Applying policies.

❑ Example: Environment:Production, Owner:jane.doe@company.com, Project:Alpha.

SETTING UP A BASIC ALERT (CONCEPTUAL)

Create an alert rule ...

Scope Condition Actions Details Tags Review + create

Configure when the alert rule should trigger by selecting a signal and defining its logic.

Signal name * ⓘ Percentage CPU See all signals

Alert logic

ⓘ We have set the condition configuration automatically based on popular settings for this metric. Please review and make changes as needed.

Threshold type ⓘ ☒ Static ☐ Dynamic

Aggregation type ⓘ Average

Value is ⓘ Greater than

Threshold * ⓘ 80 %

When to evaluate

Check every ⓘ 1 minute

Lookback period ⓘ 5 minutes

+ Add condition

Azure Monitor allows proactive alerting.

- ❑ Condition: Define a threshold (e.g., CPU > 80% for 5 mins).
- ❑ Action Group: Define what happens when the alert fires (e.g., send an email, SMS, trigger an Azure Function).
- ❑ Navigate to Azure Monitor -> Alerts -> + Create alert rule.
- ❑ Select a resource (e.g., your VM), define condition, create/select action group.
- ❑ Description: Alerts notify you of important conditions, enabling quick response.

POP QUIZ:

In the simulation, RDP port 3389 was opened to "Any" source for the Windows VM. From a leadership perspective overseeing a production environment, what is the most significant risk associated with this configuration that you would want your team to mitigate?

- A. Increased data egress costs due to RDP traffic.
- B. High exposure to internet-based brute-force attacks and potential unauthorized access.
- C. The VM will not be able to communicate with other services in its Virtual Network.
- D. It prevents the use of Azure Monitor for tracking VM performance.



POP QUIZ:

In the simulation, RDP port 3389 was opened to "Any" source for the Windows VM. From a leadership perspective overseeing a production environment, what is the most significant risk associated with this configuration that you would want your team to mitigate?

- A. Increased data egress costs due to RDP traffic.
- B. High exposure to internet-based brute-force attacks and potential unauthorized access.**
- C. The VM will not be able to communicate with other services in its Virtual Network.
- D. It prevents the use of Azure Monitor for tracking VM performance.



POP QUIZ:

The course outline emphasizes the importance of tagging resources (e.g., Environment:Training, CostCenter:ITDept). Even though it was briefly mentioned in the simulation, what is the *most* significant benefit of implementing a consistent tagging strategy?

- A. Tags enable accurate cost allocation, improved financial reporting, and showback/chargeback to departments.
- B. Tags automatically apply security patches to tagged resources.
- C. Tags significantly increase the performance of the tagged resources.
- D. Tags are required for resources to communicate with each other across different regions



POP QUIZ:

The course outline emphasizes the importance of tagging resources (e.g., Environment:Training, CostCenter:ITDept). Even though it was briefly mentioned in the simulation, what is the *most* significant benefit of implementing a consistent tagging strategy?

- A. Tags enable accurate cost allocation, improved financial reporting, and showback/chargeback to departments.
- B. Tags automatically apply security patches to tagged resources.
- C. Tags significantly increase the performance of the tagged resources.
- D. Tags are required for resources to communicate with each other across different regions



POP QUIZ:

The simulation involved creating all resources (VM, VNet, Storage Account) within a single Resource Group named ExecLead-RG-Demo. What is the primary strategic advantage of this approach for managing the lifecycle of these *temporary demo* resources?

- A. It automatically load balances traffic across the resources within the group.
- B. It simplifies the process of deleting all associated demo resources simultaneously, preventing orphaned resources and costs.
- C. It provides enhanced network isolation by default between the resources in the group.
- D. It reduces the individual cost of each resource when grouped together.



POP QUIZ:

The simulation involved creating all resources (VM, VNet, Storage Account) within a single Resource Group named ExecLead-RG-Demo. What is the primary strategic advantage of this approach for managing the lifecycle of these *temporary demo* resources?

- A. It automatically load balances traffic across the resources within the group.
- B. It simplifies the process of deleting all associated demo resources simultaneously, preventing orphaned resources and costs.**
- C. It provides enhanced network isolation by default between the resources in the group.
- D. It reduces the individual cost of each resource when grouped together.



REFLECTION



Task: Individually write down one key insight from today's session

Focus: Reflect on how integrated risk management can be applied in your role

Discussion: Share your insight with a partner or small group

Documentation: Record your reflection in your personal action plan worksheet

Outcome: Strengthen your personal commitment to continuous improvement

COURSE REVIEW

- Tangible Understanding: Gained a feel for how cloud resources are provisioned and configured.
 - Strategic Implications of Choices: VM size, region, storage redundancy, network design – all have cost, performance, and security impacts.
 - Agility & Speed: Witnessed how quickly infrastructure can be deployed.
 - Importance of Governance: Resource Groups, Tagging, and RBAC are essential for control and cost management.
 - Monitoring is Key: Azure Monitor provides visibility for operational excellence, security, and cost optimization.
 - Security is Pervasive: Security considerations (NSGs, RDP access, Bastion, Firewalls) are present at every step.
- Week 1-2: Introduction to Cloud Technology
 - Week 3-5: Cloud Strategy and Architecture
 - Week 6-7: Use Cases and Real-World Applications
 - Week 8-9: Benefits and Value Proposition
 - Week 10-12: Challenges and Risks
 - Week 13-14: Interactive Simulations and Practical Exercises
 - Week 15: Course Review and Final Assessment

NEXT WEEK: SIMULATIONS

Next week, we shift from the whiteboard to the Azure Portal with guided hands-on labs. You'll deploy core Azure services like virtual machines and web apps—not just to click buttons, but to understand the architecture and rationale behind each configuration. We'll walk through virtual networking and storage account setups, focusing on best practices for both security and performance.

Then we'll introduce Azure Monitor and related tools to help you track costs, usage, and performance in real time. For governance, we'll touch on resource policies—how organizations can enforce rules at scale.

Q&A AND OPEN DISCUSSION



THANK
YOU

