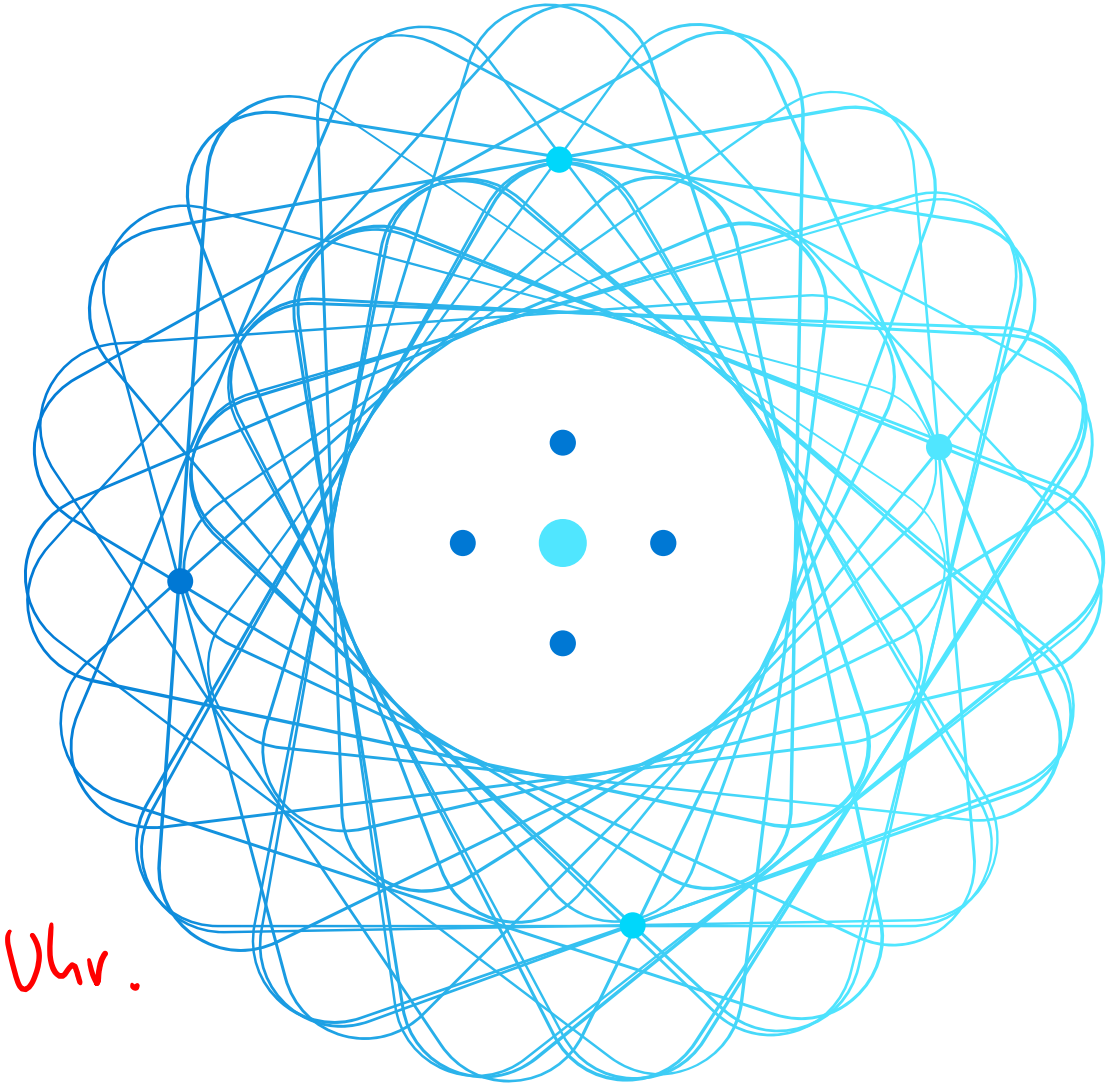
Microsoft Azure

Guten Morgen!

AZ-801

Configuring Windows Server Hybrid Advanced Services

Seminar startet um 8^{00} Uhr.



Course Outline

Set-WinUserLanguageList de-de

LP Number	Learning Path	Coverage
1	Secure Windows Server on-premises and hybrid infrastructures	Windows Server security
1	Secure Windows Server on-premises and hybrid infrastructures	Implementing security solutions in hybrid scenarios
2	Implement Windows Server high availability	Implementing Windows Server high availability
3	Implement disaster recovery in Windows Server on-premises and hybrid environments	Disaster recovery in Windows Server
3	Implement disaster recovery in Windows Server on-premises and hybrid environments	Implementing recovery services in hybrid scenarios
4	Migrate servers and workloads in on-premises and hybrid environments	Upgrade and migrate in Windows Server
4	Migrate servers and workloads in on-premises and hybrid environments	Implementing migration in hybrid scenarios
5	Monitor and troubleshoot Windows Server environments	Server and performance monitoring in Windows Server
5	Monitor and troubleshoot Windows Server environments	Implementing operational monitoring in hybrid scenarios

Learning Path 1: Secure Windows Server on-premises and hybrid infrastructures

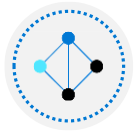
(Implementing security solutions in hybrid scenarios)

- Implement Windows Server IaaS VM network security
- Audit the security of Windows Server IaaS Virtual Machines
- Manage Azure updates
- Create and implement application allowlists with adaptive application control
- Configure BitLocker disk encryption for Windows IaaS Virtual Machines
- Implement change tracking and file integrity monitoring for Windows IaaS VMs
- Lab 02

FW
NSG
Windows FW -

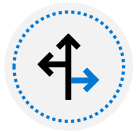
Module 5: Implement Windows Server IaaS VM network security

Implement Windows Server IaaS VM network security



Implement network security groups

Security rules for network security groups



Application security groups

Implement adaptive network hardening

Implement Azure Firewall and Windows IaaS VMs

Choose the appropriate filtering solution

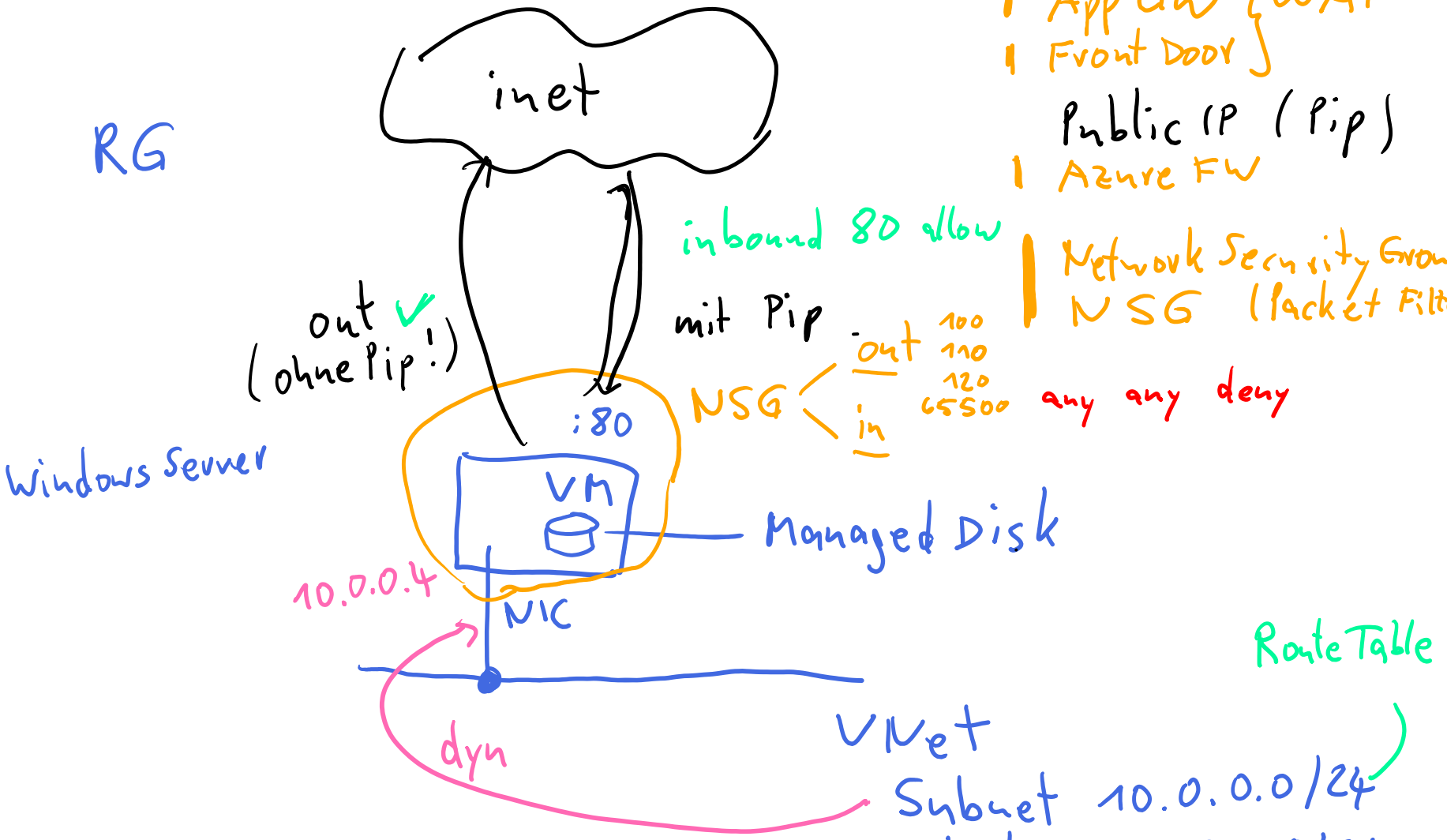
Capture network traffic with network watcher

Knowledge check and resources

Resource

SKU

RG



Implement network security groups

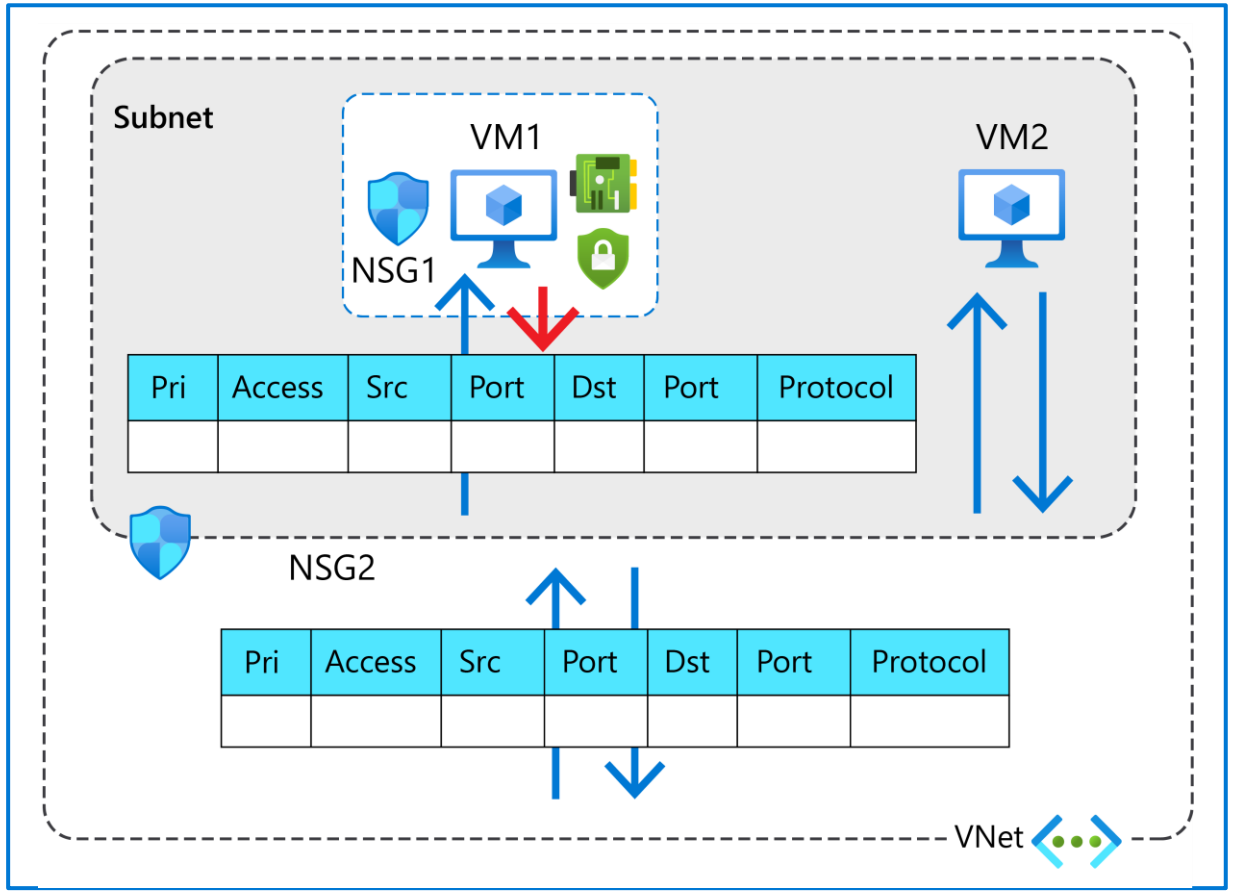
Network Watcher
(Test-NetConnection -Port 80)

Network security groups (NSG) filters inbound and outbound network traffic

Configuring the security rules for a NSG allows you to control network traffic by allowing or denying specific traffic types.

NSG to applied to the ***subnet*** (NSG2) and ***network interface*** (NSG1).

You can reduce administrative effort by applying the same NSG to many resources



Security rules for network security groups

Property	Meaning
Name	A unique name within the network security group.
Priority	A number between 100 and 4096. **Lower numbers have a higher priority and are processed first**.
Source or destination	Any, or an individual IP address, classless inter-domain routing (CIDR) block, service tag, or application security group.
Protocol	Transmission Control Protocol (TCP), User Datagram Protocol (UDP), Internet Control Message Protocol (ICMP), or Any.
Direction	Whether the rule applies to inbound, or outbound traffic.
Port range	An individual port or range of ports. You can also use a wildcard (*).
Action	Allow or deny the traffic.
Description	Optional property for describing the purpose of the rule.

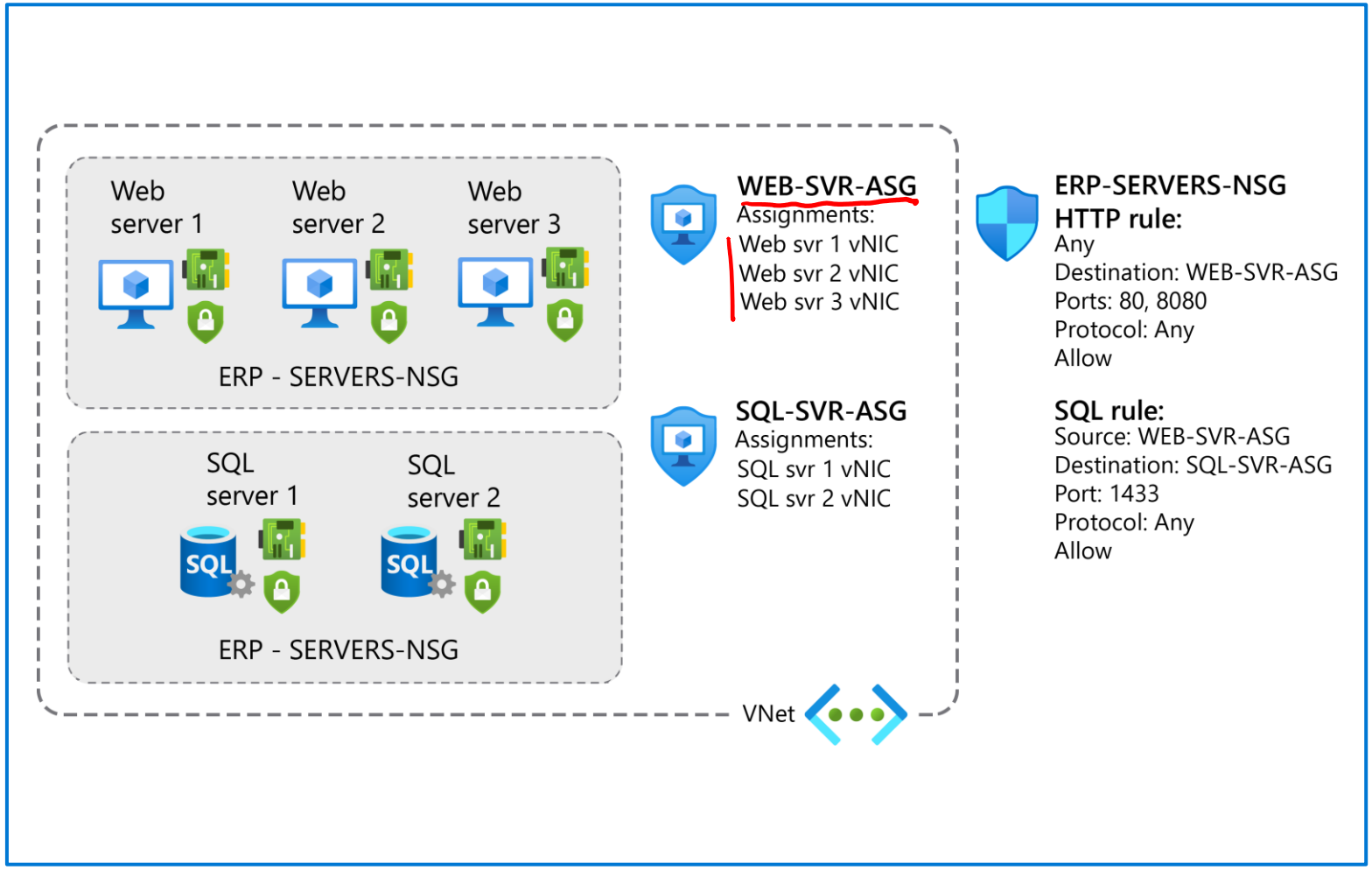
Application security groups

An application security group (ASG) enables you to group network interfaces together.

ASG enables you to group network interfaces together. You can then use that ASG as a source or destination rule within an NSG.

Without ASGs, you'd need to create a *separate rule for each* VM.

For example, Contoso has a number of front-end servers in a VNet. IT staff decide to implement NSGs and ASGs to secure the network resources.



Implement adaptive network hardening

How it works

Reviewing Adaptive Network Hardening alerts and rules

Applying Adaptive Network Hardening recommendations

Implement Azure Firewall and Windows IaaS VMs

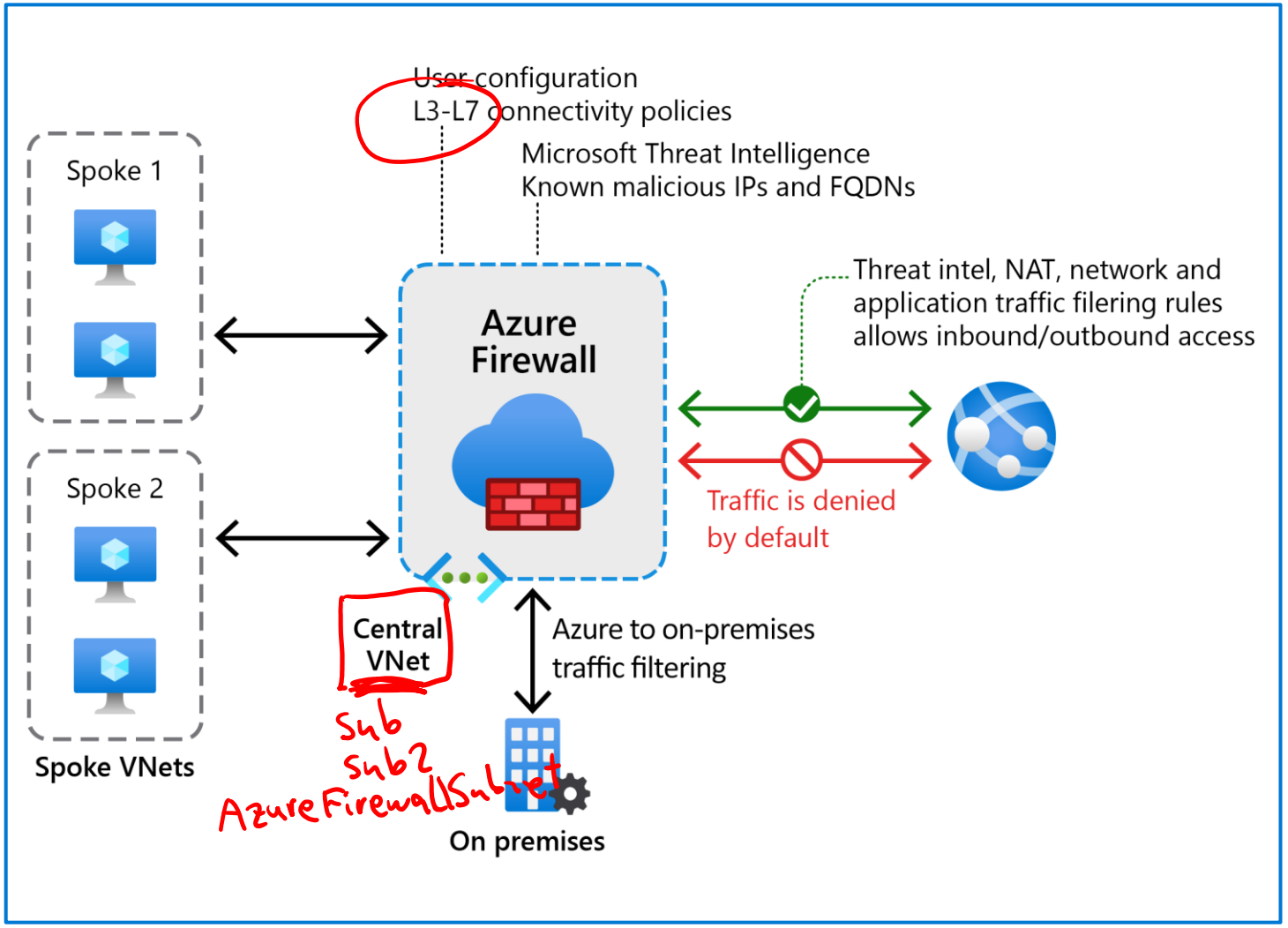
Basic
Standard
Premium

Azure Firewall is a cloud-based network security service.

Azure Firewall is a stateful firewall as a service.

Azure Firewall allows managing and controlling outbound network access is critical part of organization is network security plan.

Use network address translation rules to manage inbound network access with Azure Firewall.



Implement Windows firewall with Windows Server IaaS VMs

What is Windows Defender Firewall with Advanced Security?

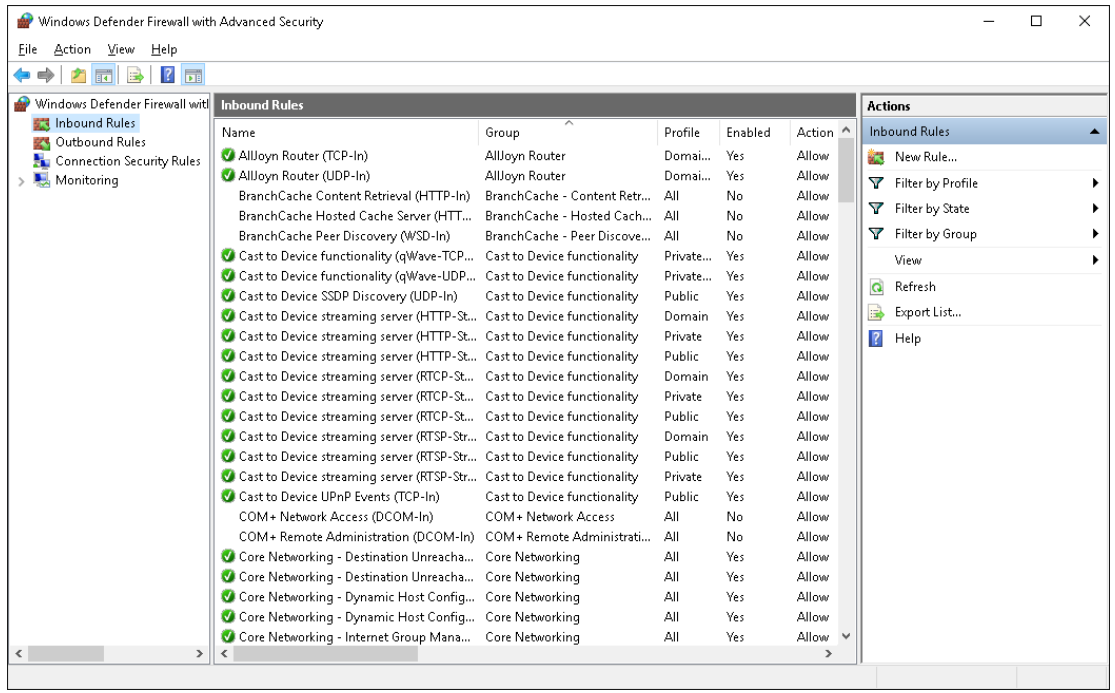
- **Windows Defender Firewall** with Advanced Security is a host-based firewall for enhancing the security of Windows Server.
- **Windows Defender Firewall** with Advanced Security is more than just a simple firewall, because it includes features such as firewall profiles and connection security rules.

Configuring Windows Defender Firewall rules

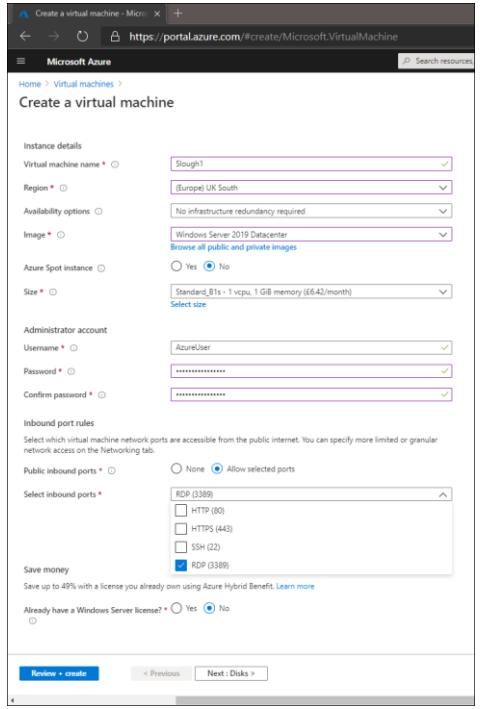
- Rules comprise a collection of criteria that define which traffic you will allow, block, or secure with the firewall.
- Inbound,Outbound,Connection security
- Inbound and outbound rule types
- Program rules, Port rules, Predefined rules, Custom rules

Implement Windows firewall with Windows Server IaaS VMs

Administering Windows Defender Firewall



Creating firewall rules when creating a VM in Azure



Choose the appropriate filtering solution

You can use the following filtering options:

- NAT rules
- Network rules
- Applications rules

Direction	Rule types	Description
Outbound connectivity	Network rules and applications rules	If you configure both network rules and application rules, network rules are applied in priority order before application rules.
Inbound connectivity	Network address translation (NAT) rules	You can enable inbound internet connectivity by configuring Destination Network Address Translation (DNAT). NAT rules are applied in priority before the network rules.

Demonstration – Deploy and configure Azure firewall

Set up a network and deploy Azure Firewall .

Create a default route

Configure an application rules and network rules

Test the firewall settings

Capture network traffic with network watcher

ping
tracert

What is Azure Network Watcher?

Monitoring 、Diagnosing

Reviewing metrics、

Managing logs

Monitoring

Use Azure Network Watcher to monitor communications between VMs and endpoints.

Diagnosing

Network Watcher provides a number of useful diagnostics capabilities.

Reviewing metrics

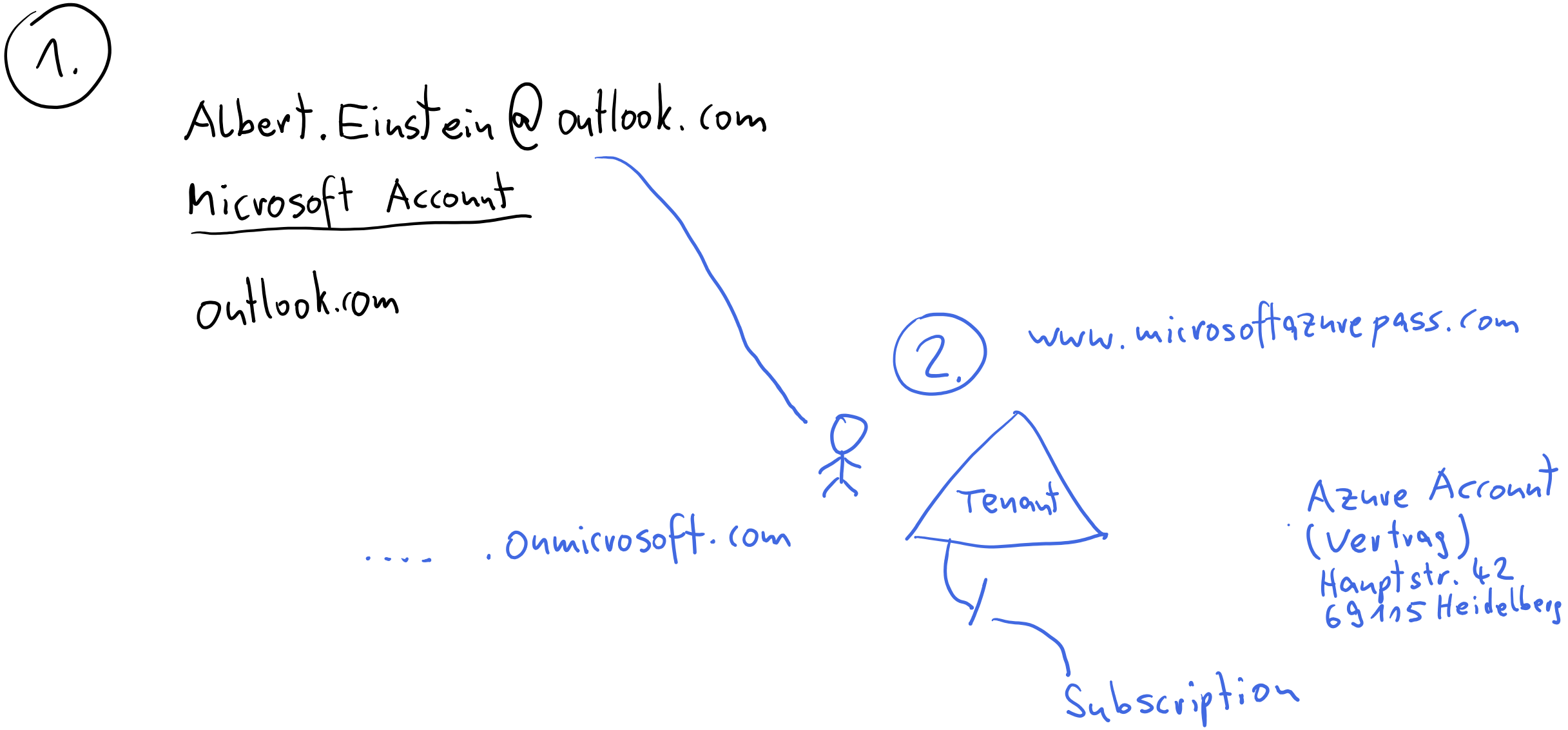
There are limits to the number of network resources that can be created. After these limits are reached, no more resources can be created.

Managing logs

NSGs deny or allow network traffic to a network interface in a VM. The NSG flow log capability enables you to capture information about traffic.

Create an Azure Network Watcher instance

When you create or update a VNet in your Azure subscription, Network Watcher is automatically enabled.



Demonstration – Log network traffic to and from a VM

Enable Network Watcher.

Register Insights provider

Enable NSG flow log

Download and view flow log

Knowledge Check and Resources – Implement Windows Server IaaS VM network security

Knowledge Check	Microsoft Learn Modules (docs.microsoft.com/Learn)
	Implement Windows Server IaaS VM network security

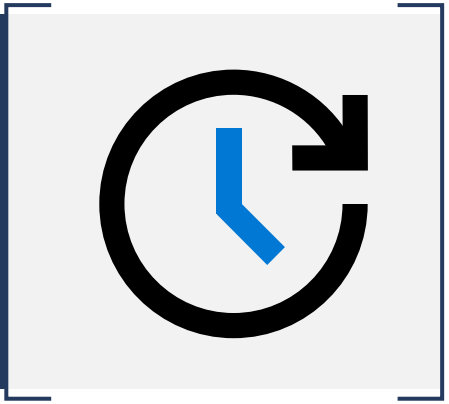
Azure Policies
Azure Monitor

Defender for Cloud (früher Azure Security Center)
AI
ASC

42%

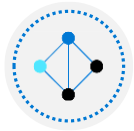
Recommendations — free plan (30 days free)

Module 2: Audit the security of Windows Server IaaS Virtual Machines



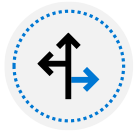
Microsoft Sentinel
SIEM

Audit the security of Windows Server IaaS Virtual Machines



Describe Azure Security Center

Enable Azure Security Center in hybrid environments



Audit your VM's regulatory compliance

Implement and assess security policies

Demonstration – Protect your resources with Azure Security Center

What is Azure Sentinel?

Implement SIEM and SOAR solutions in Azure Sentinel

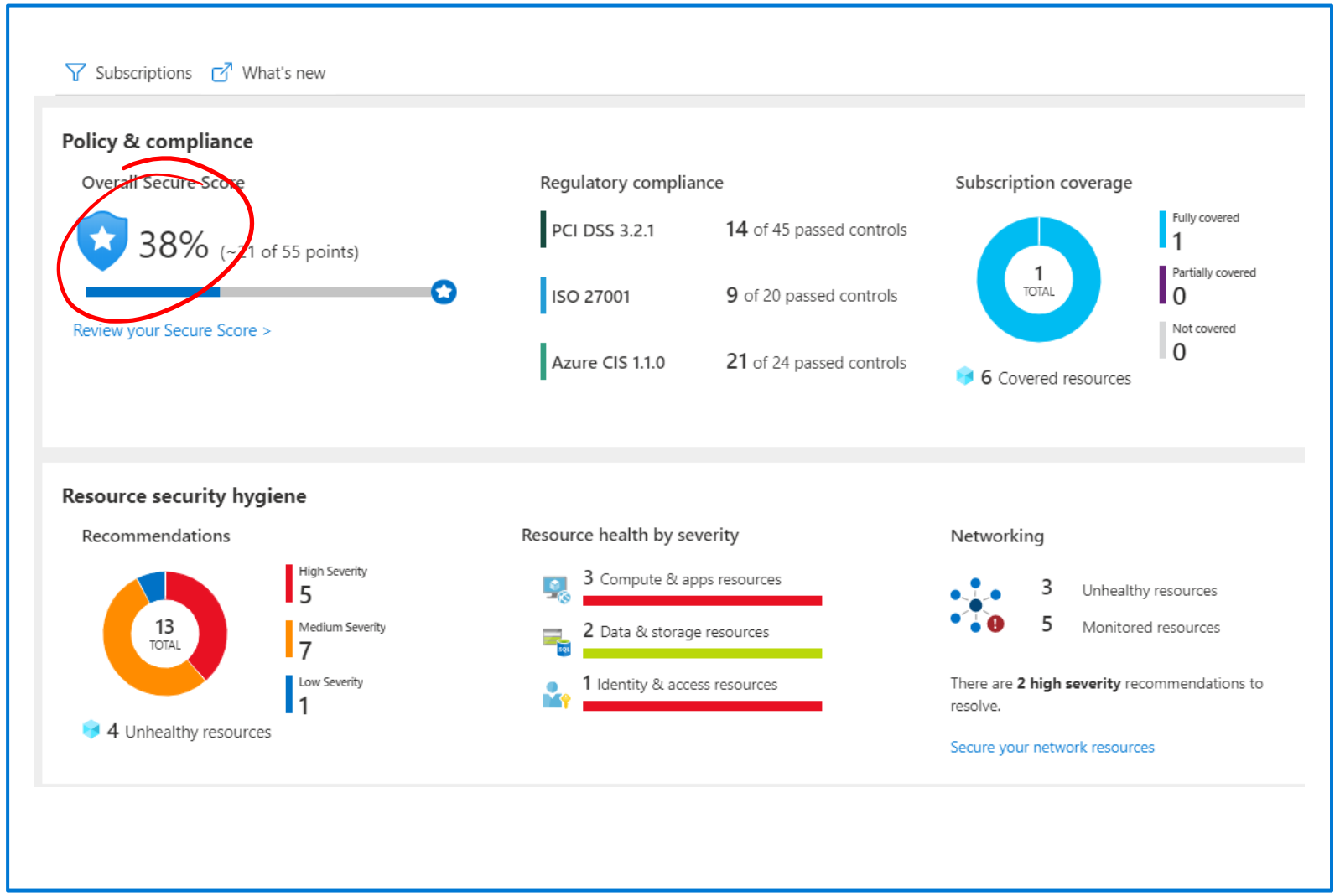
Knowledge check and resources

Defender for Cloud

What is Azure Security Center?

With Security Center capabilities, you can:

- Improve your security position. In addition to security best practices, you can also track compliance against regulatory standards.
- Protect your environment.
- Protect your data. Security Center can also perform automatic data classification in your Azure SQL databases.

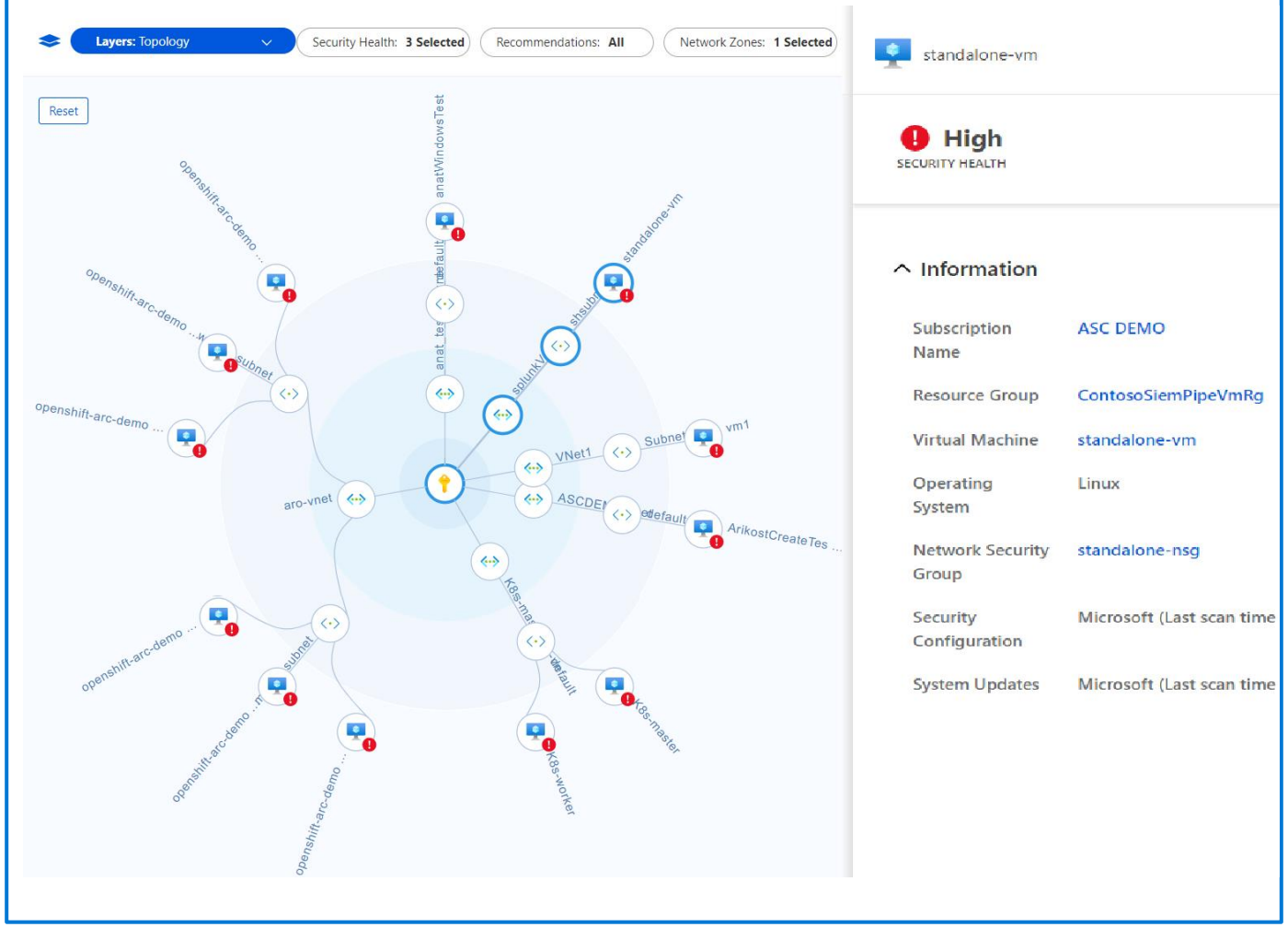


Security Center feature coverage for VMs

- Microsoft Intune Endpoint Protection assessment
- Missing operating system patches assessment, VM behavioral analytics and security alerts
- Security misconfigurations assessment 、
- Disk encryption assessment, File integrity monitoring, Fileless security alerts, Defender ATP
- Network security assessment, Network map, Network-based security alerts
- Native vulnerability assessment, Third-party vulnerability assessment
- Adaptive application controls
- Regulatory compliance dashboard and reports
- Adaptive network controls, Adaptive network hardening
- Just-in-time (JIT) VM access

NSG

Network map: view of the topology map with security health



Enable Azure Security Center in hybrid environments

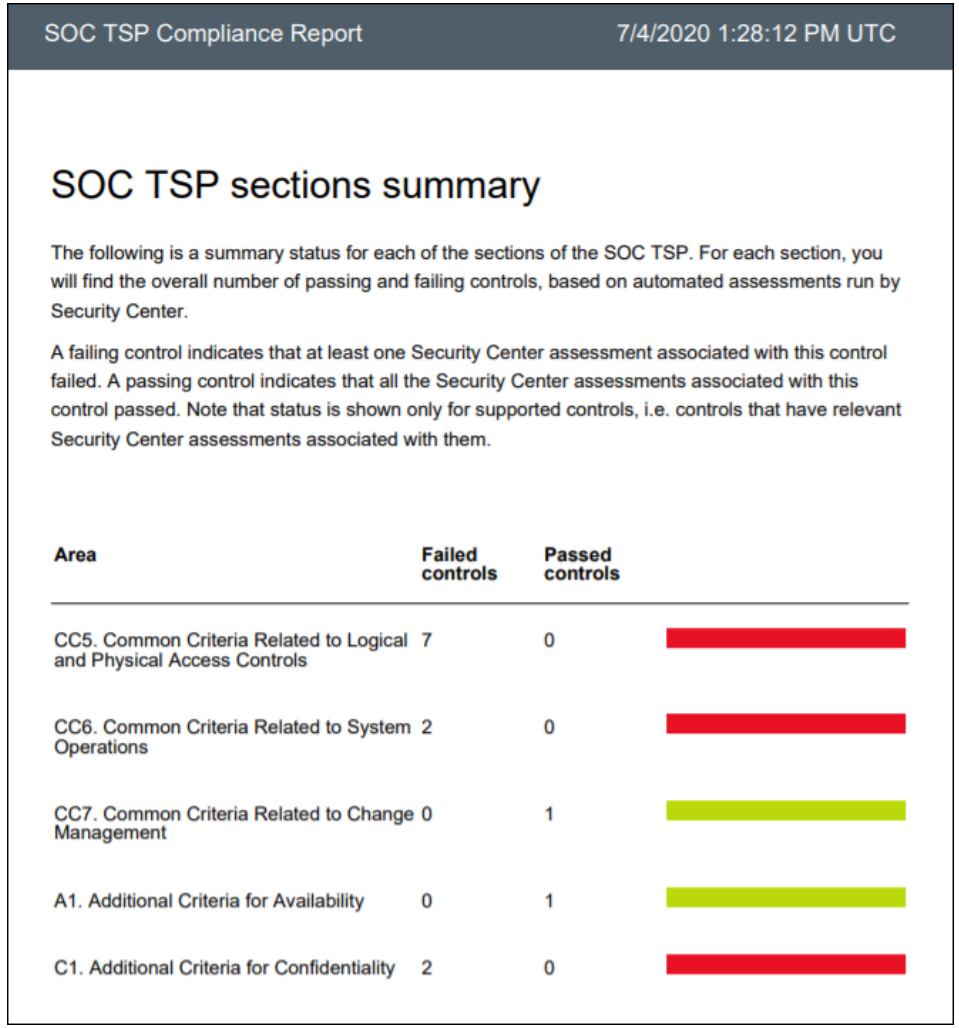
Enable the Security Center Standard pricing tier

Enable automatic provisioning

Onboard your on-premises servers and computers

Audit your VM's regulatory compliance

Compliance standard	Description
PCI DSS 3.2.1	The **Payment Card Industry** Data Security Standard (PCI DSS) addresses security issues for organizations that manage credit card payments and is intended to reduce card fraud.
ISO 27001	Part of the **International Standards Organization** (ISO) 27000 family of standards, 27001 defines a system that can bring management to IT systems.
Azure CIS 1.1.0	The **Center for Internet Security** (CIS) is an organization involved in developing best practice for securing It system.
SOC TSP	The **Service Organization Controls** (SOC) framework is a standard for controls that focuses on safeguarding the confidentiality and privacy of information stored and processed in the cloud.


SOC TSP Compliance Report 7/4/2020 1:28:12 PM UTC

SOC TSP sections summary

The following is a summary status for each of the sections of the SOC TSP. For each section, you will find the overall number of passing and failing controls, based on automated assessments run by Security Center.

A failing control indicates that at least one Security Center assessment associated with this control failed. A passing control indicates that all the Security Center assessments associated with this control passed. Note that status is shown only for supported controls, i.e. controls that have relevant Security Center assessments associated with them.

Area	Failed controls	Passed controls
CC5. Common Criteria Related to Logical and Physical Access Controls	7	0
CC6. Common Criteria Related to System Operations	2	0
CC7. Common Criteria Related to Change Management	0	1
A1. Additional Criteria for Availability	0	1
C1. Additional Criteria for Confidentiality	2	0

Implement and assess security policies

Remediate security recommendations

- It's important to do more than just review how your organization compares with security and compliance standards.
- You should also seek to tighten your security to try and meet those standards.
- To access and apply security recommendations, in the Azure portal, in Security Center, select the Overall Secure Score tile.

Run a vulnerability assessment against your Windows Server IaaS VM

- You can use Security Center to perform a vulnerability assessment on your VMs.
- First, however, you must install a vulnerability assessment solution on the required resources.

Demonstration – Protect your resources with Azure Security Center

Access to Security center

Explore Policy and Compliance

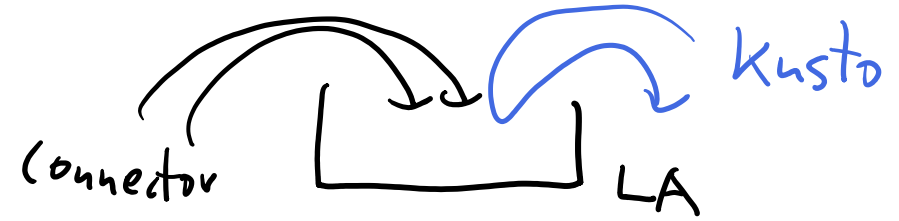
Select Windows Server VM

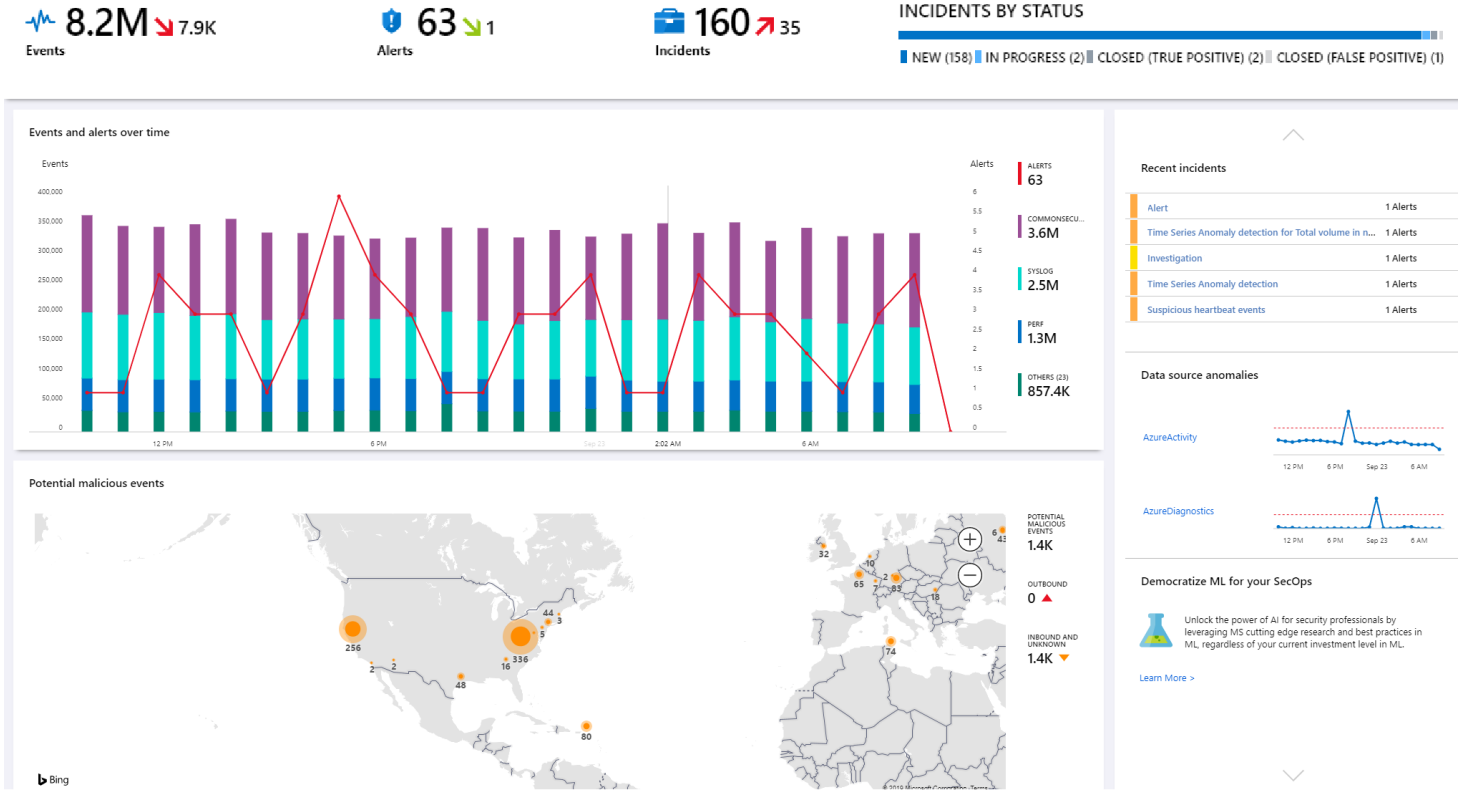
Install Endpoint protection and enable JIT

What is Azure Sentinel?

Sentinel meets the needs of both SIEM and SOAR solutions through:

- Collecting data across cloud-based and on-premises users, devices, apps, and infrastructure.
- Using AI to identify suspicious activity.
- Detecting threats with fewer false positives.
- Responding to incidents quickly and automatically.





Splunk SC-100

Implement SIEM and SOAR solutions in Azure Sentinel

What is SIEM?

SIEM solutions store and analyze log data that comes from external sources.

To implement SIEM functionality in Sentinel:

- Enable Azure Sentinel.
- Create a data connection.
- Create a custom rule that generates an alert.

What is SOAR?

SOAR solutions enable you to manage or orchestrate analysis of data that you have collected about security threats.

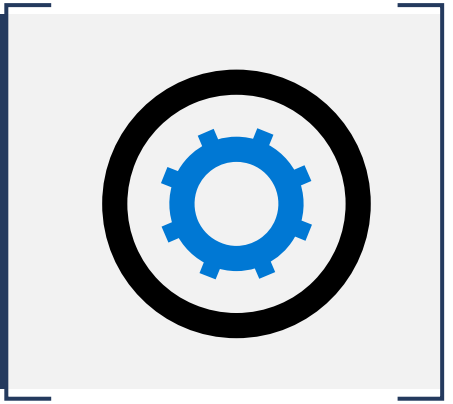
Use the following best practices to implement SOAR in Sentinel:

- When you create analytics rules that raise alerts, also configure them to create incidents.
- Use the incidents to manage the investigation and response process.
- Group related alerts into an incident.

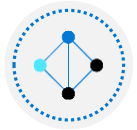
Knowledge Check and Resources – Audit the security of Windows Server IaaS Virtual Machines

Knowledge Check	Microsoft Learn Modules (docs.microsoft.com/Learn)
	Audit the security of Windows Server IaaS Virtual Machines

Module 3: Manage Azure updates



Manage Azure updates



Describe Azure updates

Enable Update Management

Deploy updates

Review an update assessment

Manage updates for your Azure VMs

Knowledge check and resources

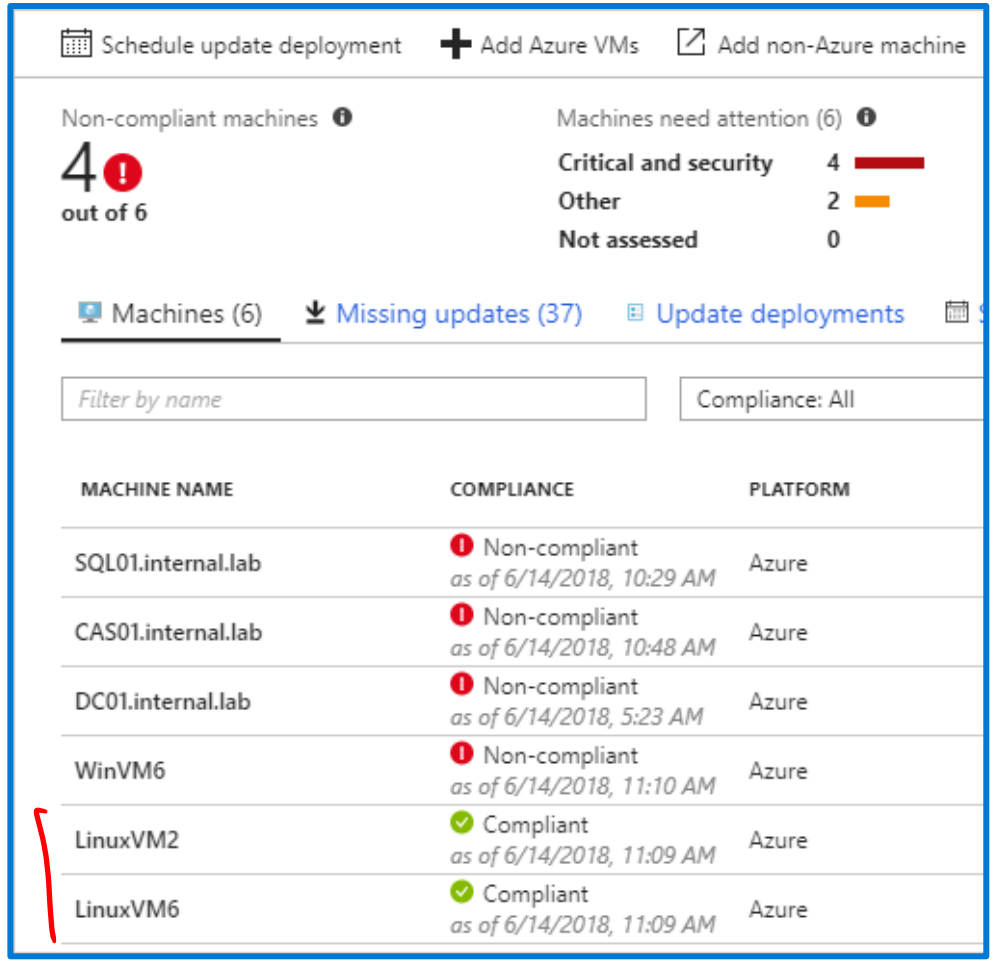
Automation Account

- Tracking
- Ps Script
- DSC
- Update Mgmt

Azure Automation and Update Management

Update Management features helps to update Azure VMs:

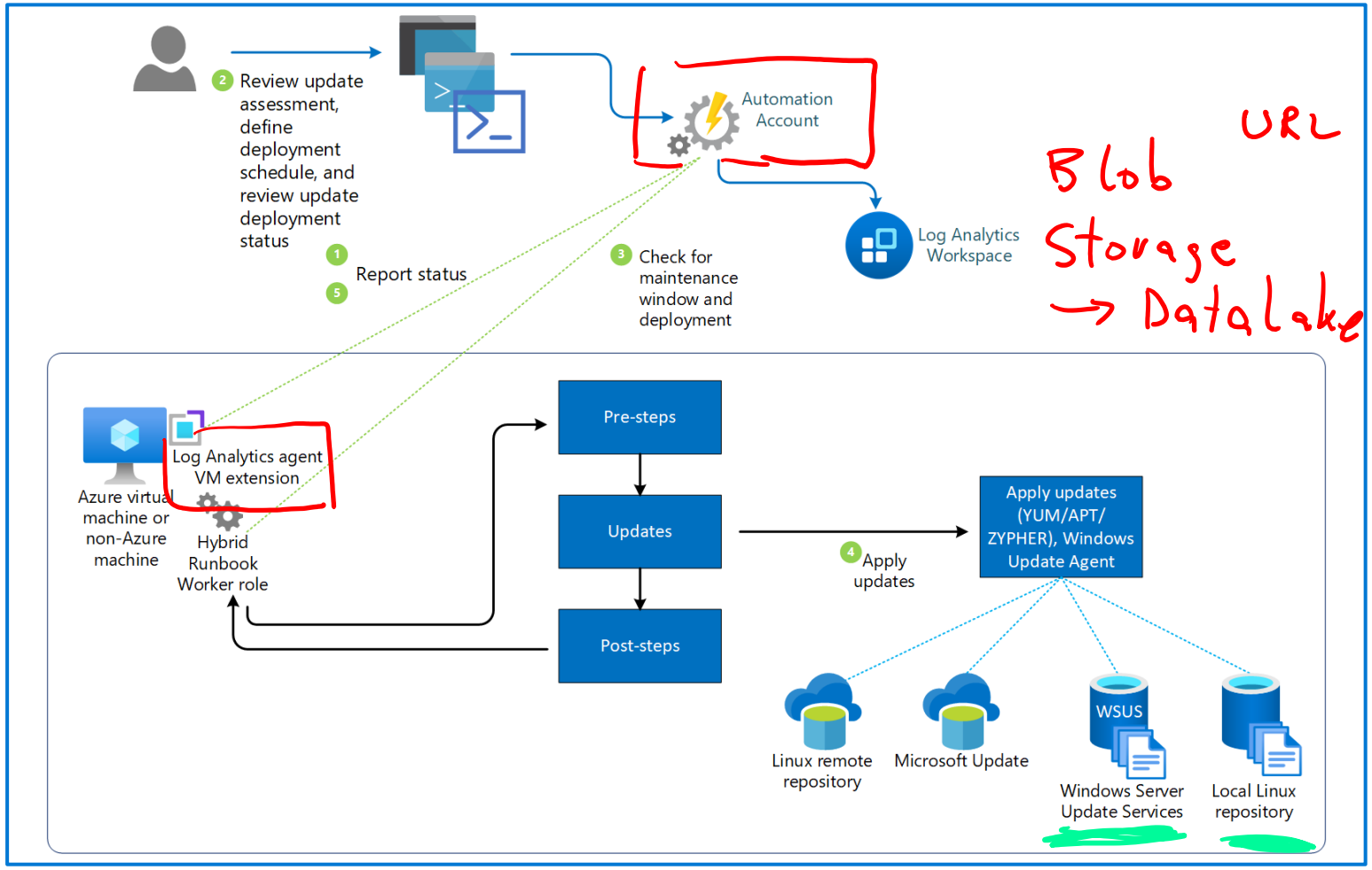
Feature	How it can help
Review the status of updates on your VMs	The service includes a cloud-based console where you can review the status of updates across your Azure organization and for a specific VM.
Configure dynamic groups of VMs to target	It also allows you to define a query based on a computer group. A computer group is a group of computers that are defined based on another query or imported from another source such as WSUS or Microsoft Endpoint Configuration Manager.
Search the Azure Monitor logs	Update Management collects records from the Azure Monitor Logs.



Azure Update Management

Steps for implementing Azure Update Management:

- Create an Azure Automation account
- Enable Update Management
- Onboard your azure/on-premises servers
- Select the machines to manage
- Schedule updates



Interaction with Windows Update

Azure Automation Update Management relies on the Windows Update client to download and install Windows updates.

You can manage many of these settings by:

- Using Local Group Policy Editor
- Using Group Policy
- Using Windows PowerShell
- Editing the Registry directly

Update Management respects many of the settings specified to control the Windows Update client.

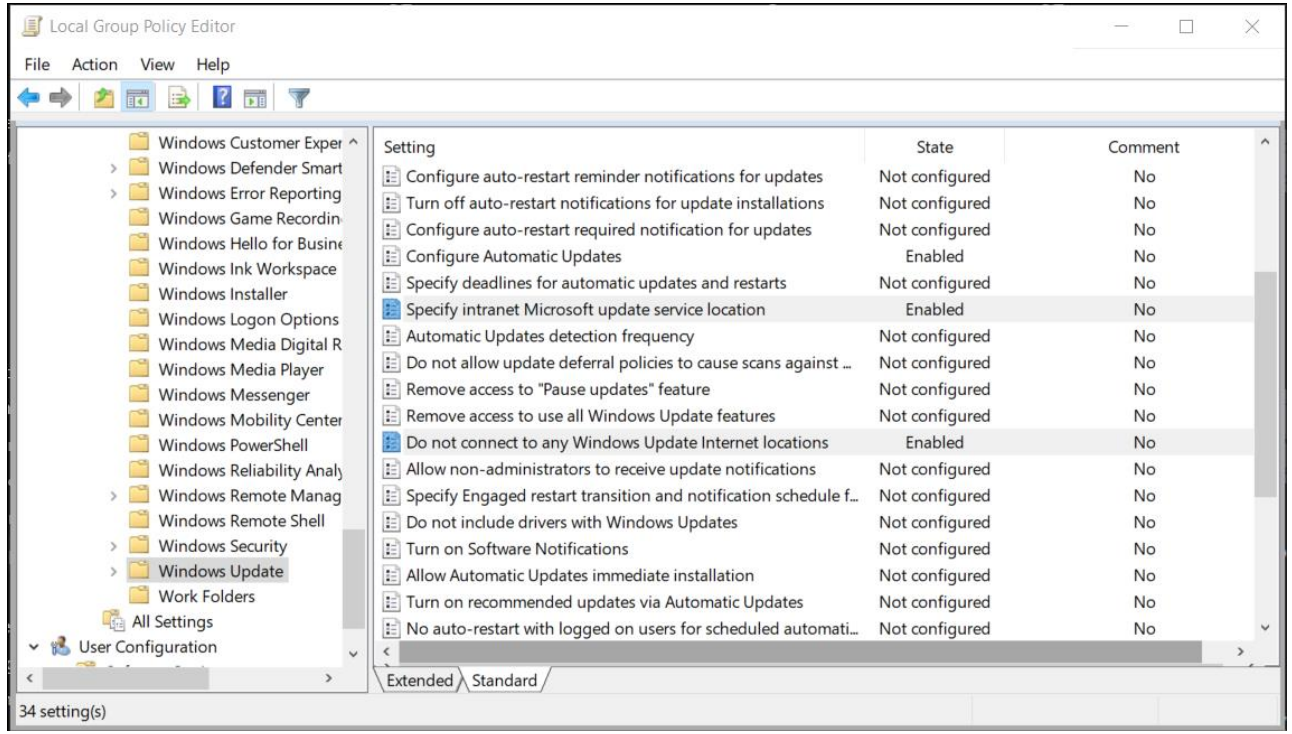
Configure WSUS for managing updates

- WSUS improves the security of the by applying security updates to Microsoft products and third-party products.
- It provides the infrastructure to download, test, and approve security updates. Applying security updates quickly helps prevent security incidents.
- Update Management in Azure supports WSUS settings.

* To restrict machines to the internal update service, set *Do not connect to any Windows Update Internet locations*.

GPO

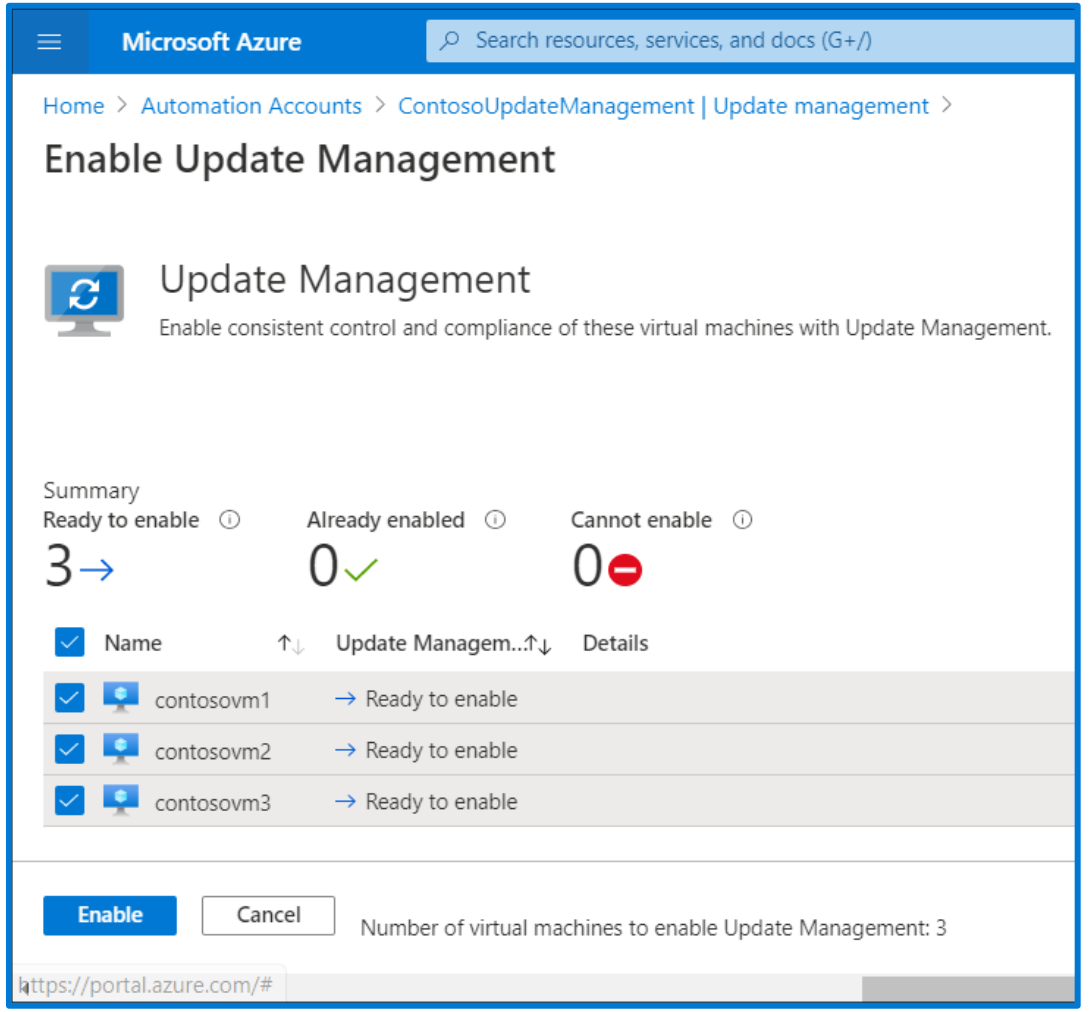
Specify intranet Microsoft Update service location in Group Policy*



Enable update management

- Create an Automation account
- Enable Update Management
- Onboard Azure VMs
- Onboard your servers
- Onboard on-premises servers
- Schedule updates

You can manually add your on-premises servers to Update Management in Automation by install the Log Analytics.

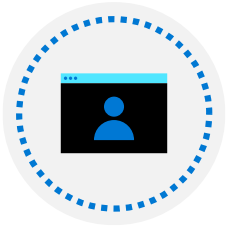


Deploy updates

Setting	Your action
Name	Enter the name of the update deployment.
Operating system	Choose either Windows or Linux.
Groups to update	Select the groups to update.
Machines to update	Select from a list of available machines.
Update classifications	Select from the following list: Critical updates, Security updates, Update rollups, Feature packs, Service packs, Definition updates, Tools, and Updates.
Include/exclude updates	Enter the knowledge base (KB) ID of any updates you want to exclude, or specifically include.
Schedule settings	Specify the start date and time, the time zone, and the recurrence values.
Pre-scripts + Post-scripts	Pre-scripts and Post-scripts are tasks that can be automatically executed before or after an update deployment runs.
Maintenance window (minutes)	Set the maintenance window in minutes.
Reboot options	Choose one from the following list: Reboot if required, Never reboot, Always reboot, and Only reboot - will not install updates.

Demonstration – View update assessments

Create an automation account



Enable Update Management on VMs

Create Custom Configuration

Enable auto-update management

Demonstration – Manage updates for your Azure VMs

View update assessment

Configure action groups and alerts

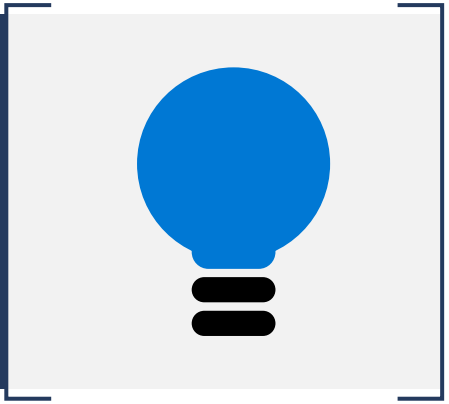
Schedule an update deployment

Check deployment status

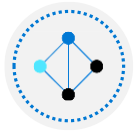
Knowledge Check and Resources – Manage Azure updates

Knowledge Check	Microsoft Learn Modules (docs.microsoft.com/Learn)
	Manage Azure updates

Module 4: Create and implement application allowlists with adaptive application control

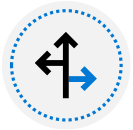


Adaptive application control



Describe adaptive application control

Enable adaptive application control



Configure a new application control policy

Move a VM from one group to another

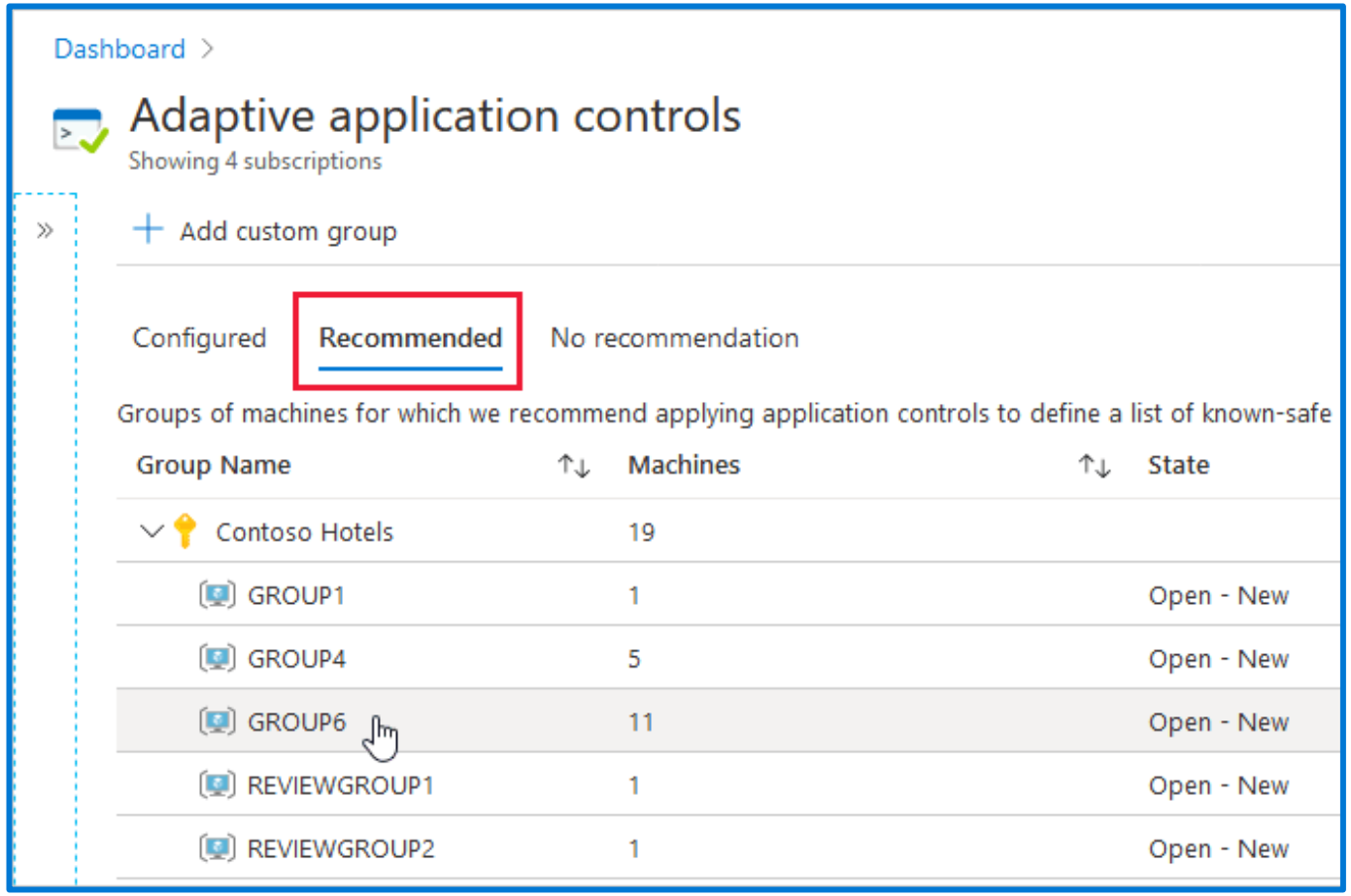
Knowledge check and resources

Describe adaptive application control

Adaptive application control uses machine learning to analyze the applications running on your VMs.

By using Adaptive application controls, you can:

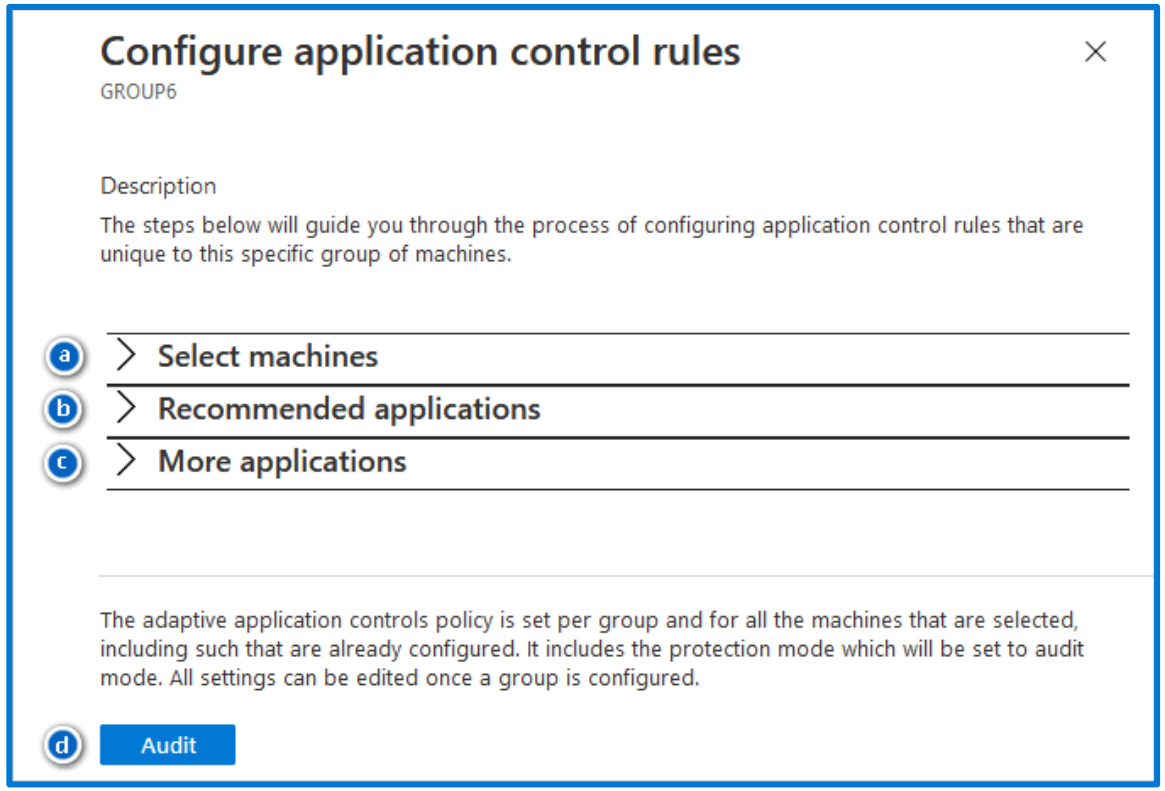
- Block attempts to run potentially malicious applications.
- Receive alerts when adaptive application control blocks an application.
- Comply with your organization's requirements that you use only licensed software.
- Avoid using unwanted software, including old or unsupported apps.
- Prevent specific software tools from running.
- Enable IT to control access to sensitive data.



Enable adaptive application control (1 of 2)

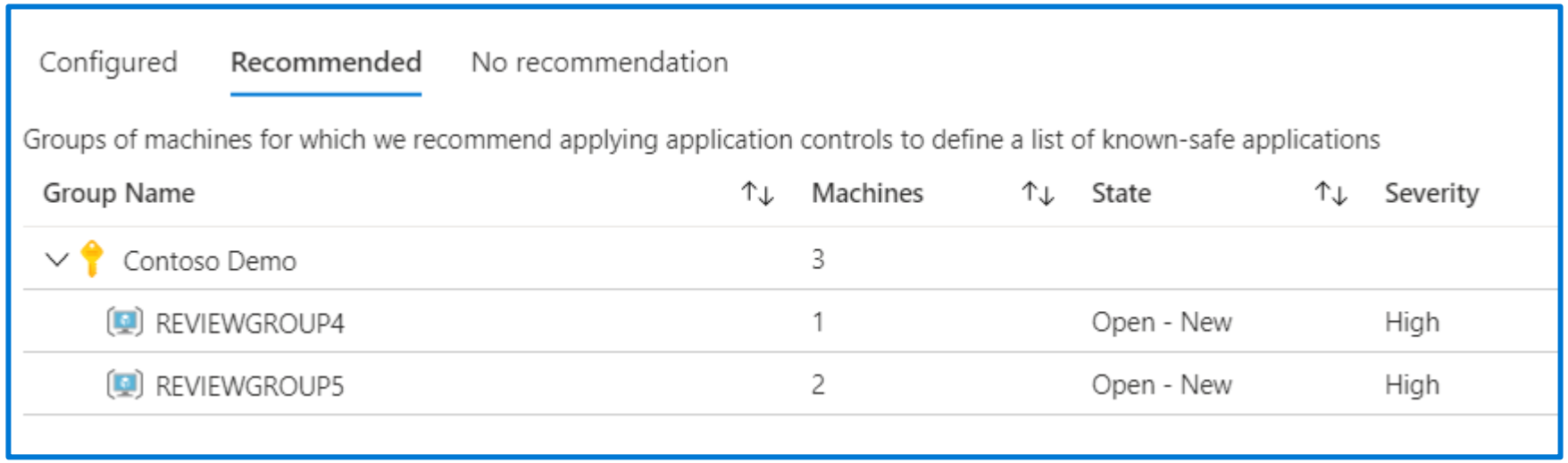
Use the following procedure to begin the process of implementing adaptive application control:

- In the Azure portal, open Security Center.
- In the navigation pane, in the ADVANCED CLOUD DEFENSE section, select Adaptive application controls.
- In the Adaptive application controls blade, expand How does it work?



Enable adaptive application control (2 of 2)

Tab	Description
Configured	This is a list of groups containing the VMs that are already configured with application control.
Recommended	This tab offers a list of groups for which application control is recommended. Security Center uses machine learning to identify VMs that are good candidates for application control based on whether the VMs consistently run the same applications.
No recommendation	This is a list of groups containing VMs without any application control recommendations—for example, VMs on which applications are always changing and haven't reached a steady state.



Configure a new application control policy

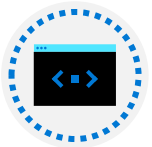
Select the **Recommended** tab for a list of groups with application control recommendations

After selecting a group, review the **Configure application control rules** blade.

In the **Select Machines** section, review the list of recommended VMs, and deselect those to which you don't want to apply an application allow policy.

Within the Recommended applications section are two sections as described in the following table.

Review the applications in each list and clear the check boxes of those that you don't want to apply. The following table describes the information that the lists contain.

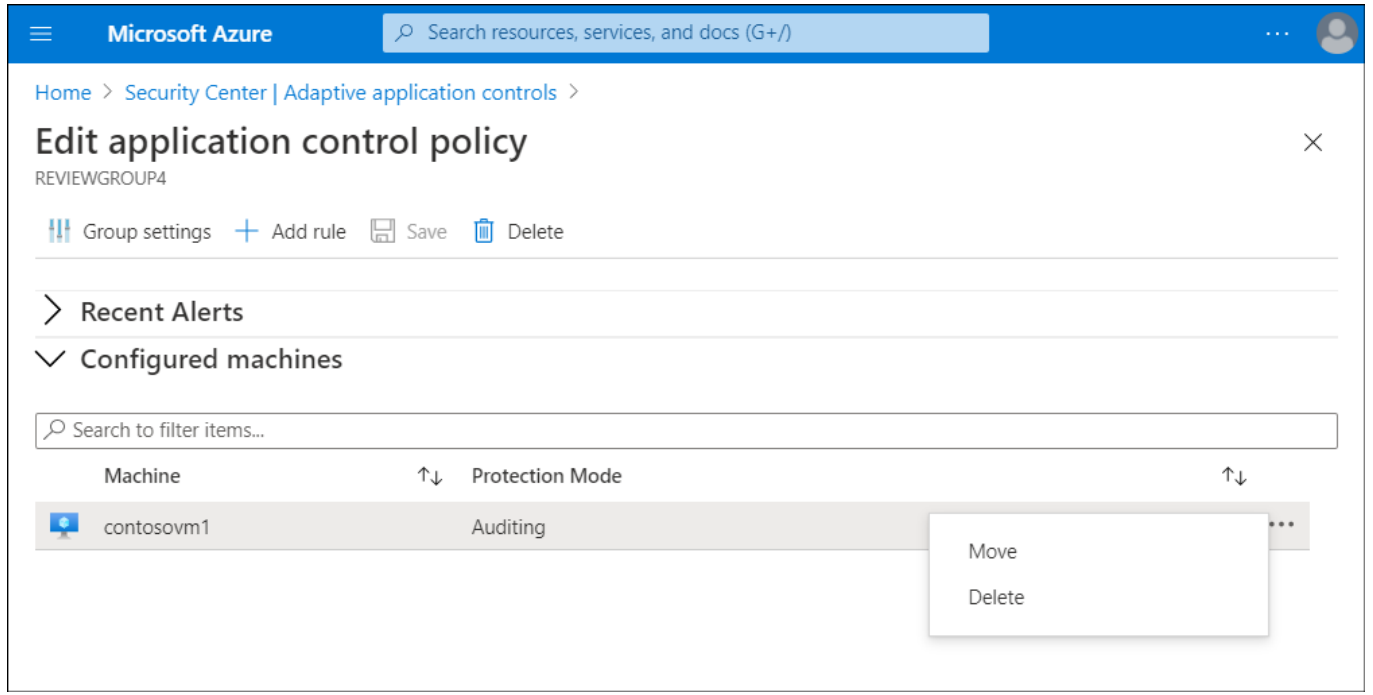


After you complete your selections, select **Audit**.

Move a VM from one group to another

To move a VM from one group to another, perform the following procedure:

- From Adaptive application controls blade, on the Configured tab, select the group which the VM currently belongs to.
- Select Configured machines.
- Select the ellipsis, and then select Move.
- In the Move computer to different group window, select the group to move the VM to, select Move Computer, and then select Save.

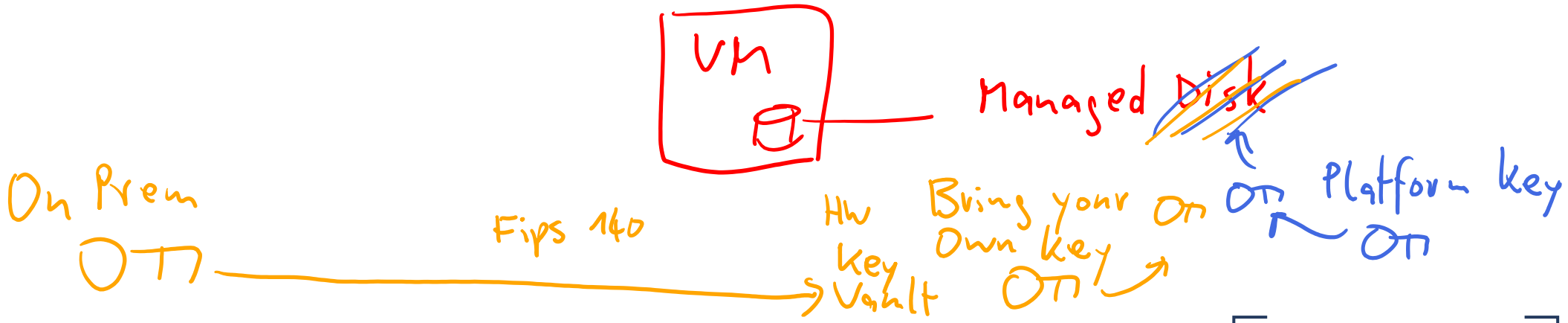


Knowledge Check and Resources – Adaptive application control

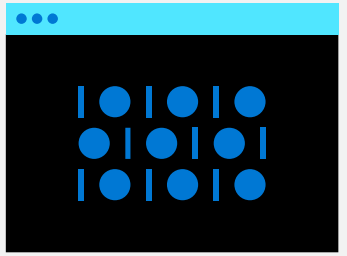
Knowledge Check

Microsoft Learn Modules (docs.microsoft.com/Learn)

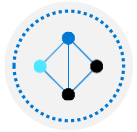
Create and implement application allowlists with adaptive application control



Module 5: Configure BitLocker disk encryption for Windows IaaS Virtual Machines

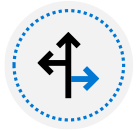


BitLocker disk encryption for Windows IaaS VMs



Describe Azure Disk Encryption and server-side encryption

Configure Key Vault for Azure Disk Encryption



Encrypt Azure IaaS Virtual Machine hard disks

Back up your Azure Disk Encryption–protected VMs

Restore your Azure Disk Encryption–protected VMs

Decrypt a disk

Knowledge check and resources

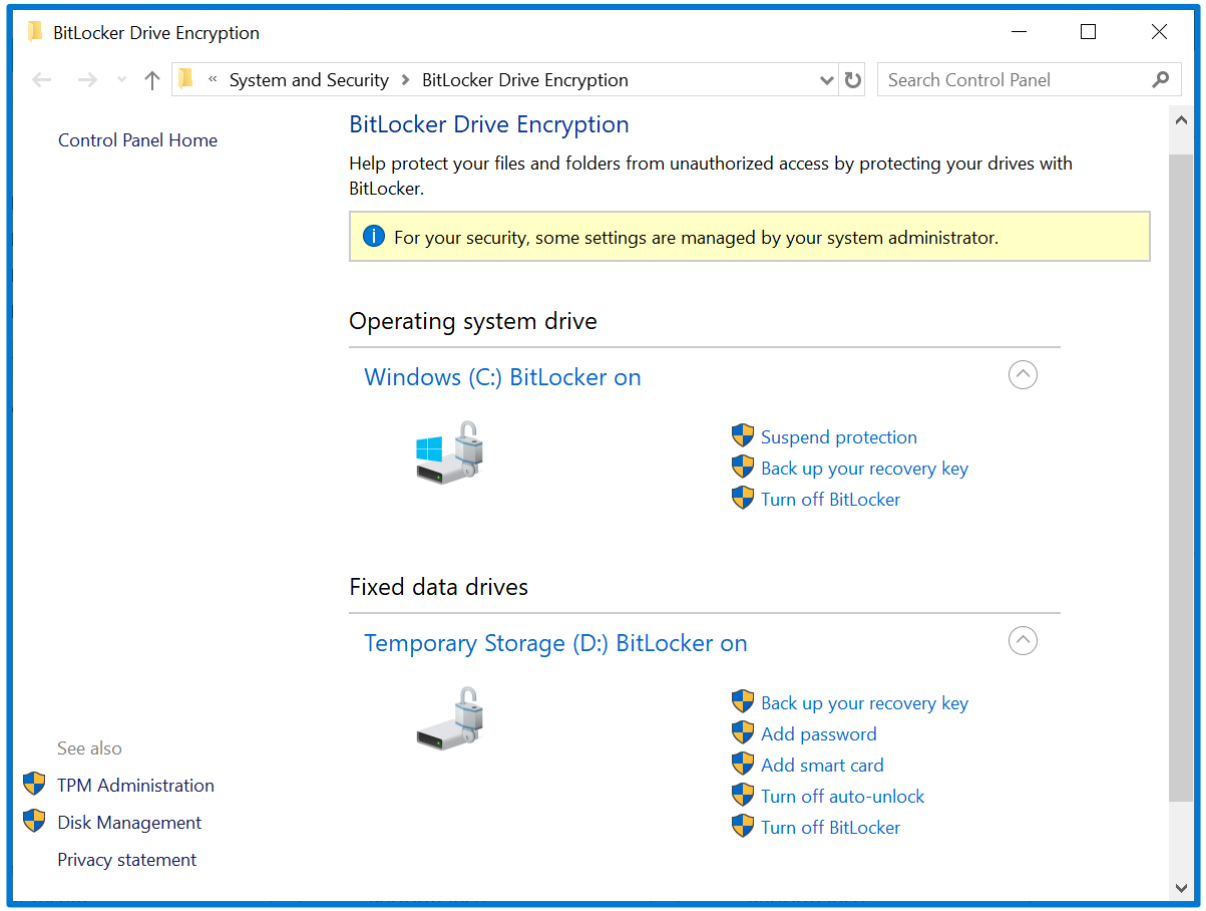
Describe Azure Disk Encryption and server-side encryption

Azure Disk Encryption:

- For Windows, Azure Disk Encryption uses BitLocker Drive Encryption.
- For Linux, Azure Disk Encryption uses DM-Crypt.

Server-side encryption of Azure-managed disks:

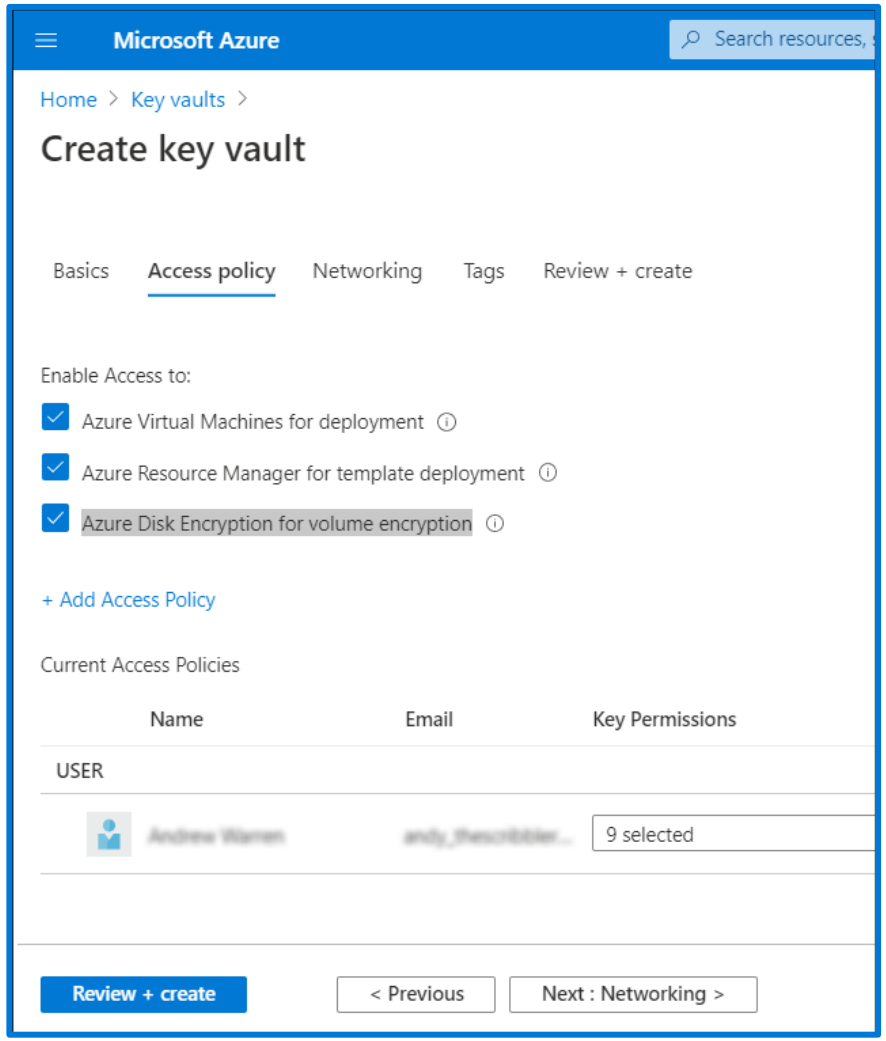
- Supports Generation 2 Azure VMs and all existing Azure VM sizes
- It is automatic



Configure Key Vault for Azure Disk Encryption

There are three steps required to configure a key vault:

1. **Create a resource group.** This is an optional step. You can create a resource group to host your key vault or use one which already exists.
2. **Create a key vault and allow KeyVault to be used for Disk Encryption.**
3. **Set the key vault advanced access policies**. Azure requires access to the encryption keys or secrets in your key vault. This enables Azure to make them available to the VM for starting and decrypting the volumes.



Encrypt Azure IaaS Virtual Machine hard disks

Cloud Shell

Azure Portal

1. On the Virtual machine blade, in the navigation pane, in the Settings section, select **Disks**.
2. On the Disks blade, select **Encryption**.
3. Select the **Select a key vault and key for encryption** link.
4. To create a key, in the Key section, select **Create new**.
5. Enter a Name for the key, specify the Key Type and RSA Key Size, and then select **Create**.
6. On the Select key from Azure Key Vault blade, select a version from the Version drop-down list (or create a new version), and then select `**Select**`.

Use Azure CLI to encrypt a VM

Bash

```
az vm encryption enable \
  -g ContosoResourceGroup  \
  --name ContosoVM1  \
  --disk-encryption-keyvault ContosoADEKeyVault
```

Use PowerShell to encrypt a VM

PowerShell Backtick

```
$KeyVault = Get-AzKeyVault `
  -VaultName ContosoADEKeyVault `
  -ResourceGroupName ContosoResourceGroup

Set-AzVMDiskEncryptionExtension `
  -ResourceGroupName MyResourceGroup `
  -VMName ContosoVM1 `
  -DiskEncryptionKeyVaultUrl $KeyVault.VaultUri `
  -DiskEncryptionKeyVaultId $KeyVault.ResourceId
```

Back up your Azure Disk Encryption–protected VMs

On the **Recovery Services Vault** blade, select **Backup**.

On the **Backup Goal** blade, specify the location of your workload.

On the **Backup** blade, in the Policy section, select a **backup policy**

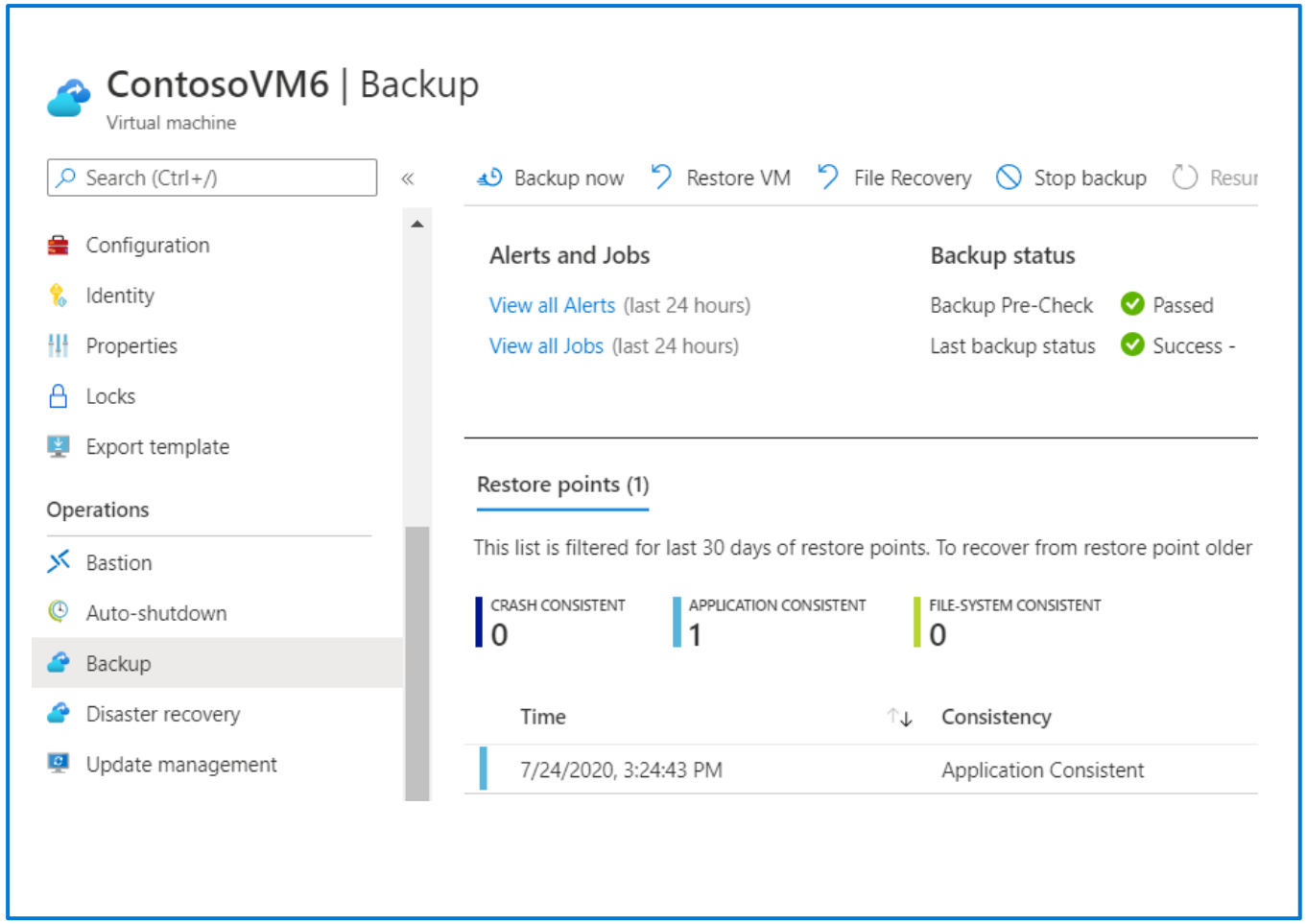
In the **Virtual Machines** section, select **Add**.

In the **Select virtual machine** blade, select the encrypted VMs, and then select OK.

On the **Backup** blade, select Enable **Backup**.

On the **Backup Goal** blade, select **Backup**.

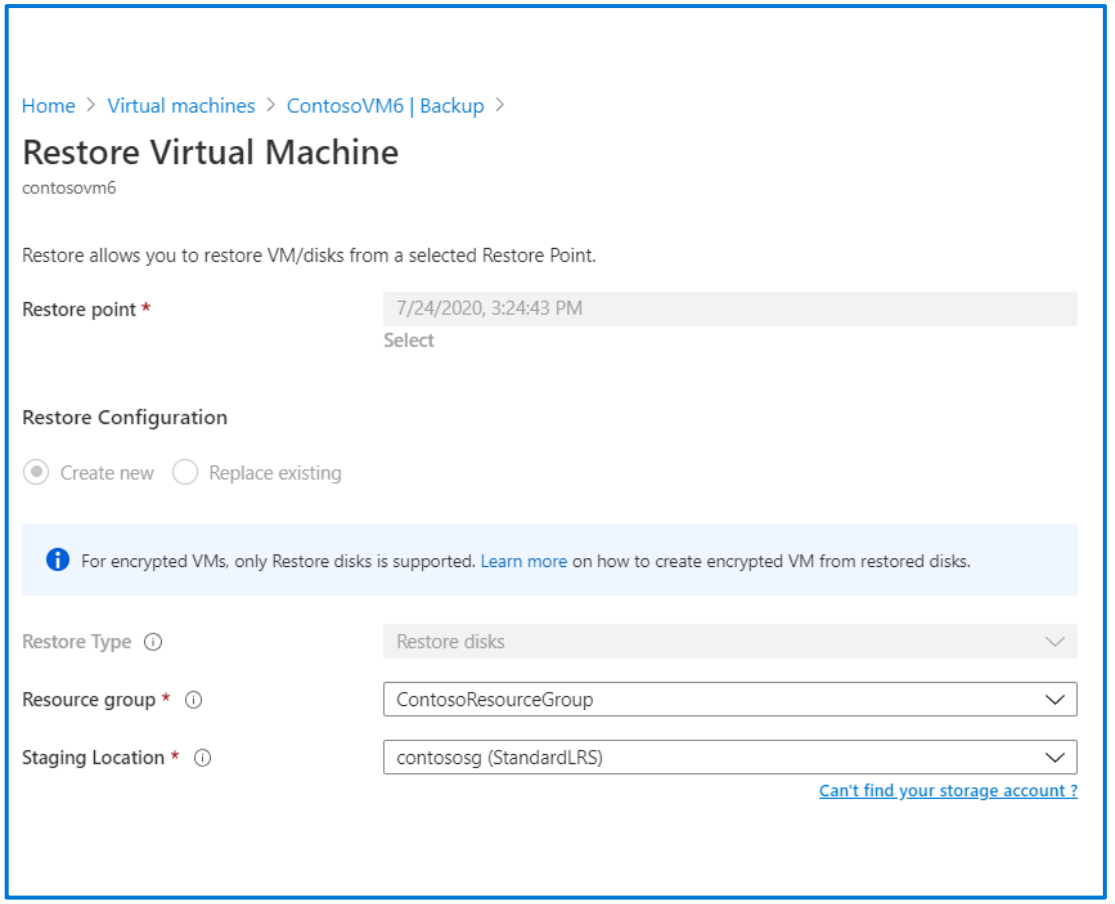
You can force a manual backup of a protected VM by selecting that VM on the Virtual machines blade in the Azure portal.



Restore your Azure Disk Encryption–protected VMs

Use the following procedure to restore the VM:

1. In the Azure portal, on the **Virtual machines** blade, select the VM you want to recover.
2. On the **Backup** blade, in the **Operations** section, select **Backup**, and then review the available Restore points.
3. In the **Restore points** section, select the appropriate restore point, and then select the ellipsis button.
4. Select **Restore VM**.
5. Select a **Staging** location, and then select **Restore**.



Decrypt a disk

You can decrypt a disk by using either the Azure CLI, PowerShell, or the Azure portal.

Use Azure CLI

```
az vmss encryption disable --resource-group ContosoResourceGroup \
    --name ContosoVM6
```

Use PowerShell

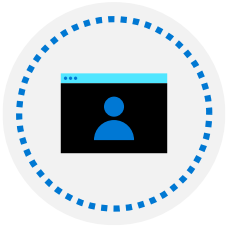
```
Disable-AzVMDiskEncryption -ResourceGroupName ContosoResourceGroup `
  -VMName ContosoVM6
```

Use the Azure portal

1. In the Azure portal, navigate to your **VMs**, and then select the appropriate VM.
2. On the **Virtual machine** blade, in the navigation pane, in the **Settings** section, select **Disks**.
3. On the Disks blade, select **Encryption**.
4. On the Encryption blade, from the Disks to encrypt list, select **None**, and then select **Save**.

Demonstration – Create and encrypt a Windows VM (Azure CLI)

Prepare Cloud Shell to run Azure CLI commands



Provision KeyVault with enabled Disk Encryption

Enable Encryption for disk of the VM from Azure CLI

Check Result

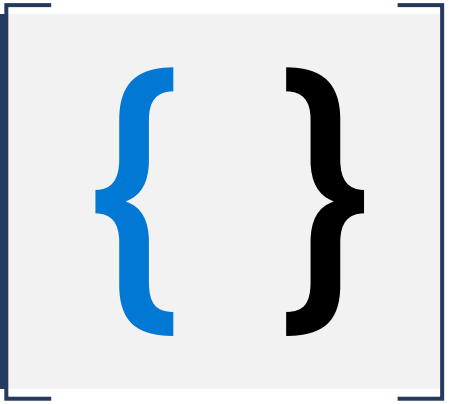
Knowledge Check and Resources – Configure BitLocker disk encryption for Windows IaaS Virtual Machines

Knowledge Check

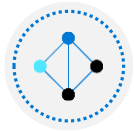
Microsoft Learn Modules (docs.microsoft.com/Learn)

Configure BitLocker disk encryption for Windows IaaS Virtual Machines

Module 6: Implement change tracking and file integrity monitoring for Windows IaaS VMs

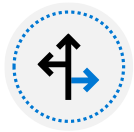


Implement change tracking and file integrity monitoring for Windows IaaS VMs



Implement Change Tracking and Inventory

Requirements for Change Tracking and Inventory



Enable Change Tracking and Inventory

Manage Change Tracking and Inventory

Manage tracked files

Implement File Integrity Monitoring

Configure File Integrity Monitoring

Knowledge check and resources

Implement Change Tracking and Inventory

Change Tracking and Inventory is a feature that allowed to track changes in both VMs and server infrastructure.

- The following Linux components can be tracked:
  - Linux daemons
  - Linux software (packages)
  - Linux files
- The following Windows Server components can be tracked:
  - Windows software
  - Windows files
  - Windows registry keys
  - Microsoft services

Change Tracking and Inventory does not support, or has the following limitations:

- Recursion for Windows registry tracking
- Network file systems
- Different installation methods
- *.exe files stored on Windows
- The Max File Size column and values are unused in the current implementation.
- If you are tracking file changes, it is limited to a file size of 5 MB or less.
- If you try to collect more than 2500 files in a 30-minute collection cycle, Change Tracking and Inventory performance might be degraded.

Requirements for Change Tracking and Inventory

1. Automation account

2. Supported operating systems

- Windows Server 2012 , 2016, 2019, Win 8.1 & 10

3. Azure region requirements

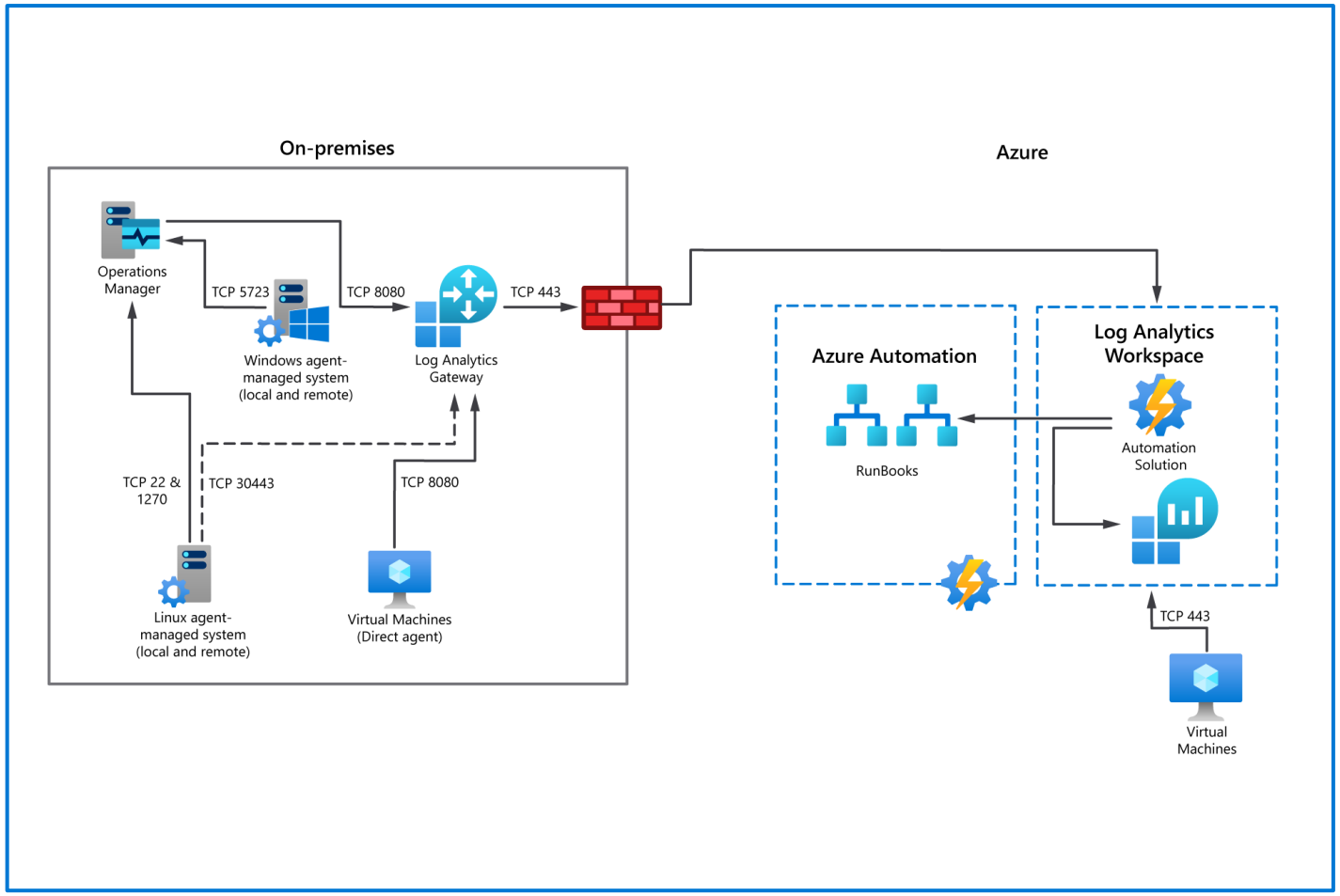
- Only certain regions are supported

4. Firewall requirements

- requires access through your firewall to certain resources

5. Network requirements

- number of network requirements based on the requirement for Log Analytics and Windows/Linux agents

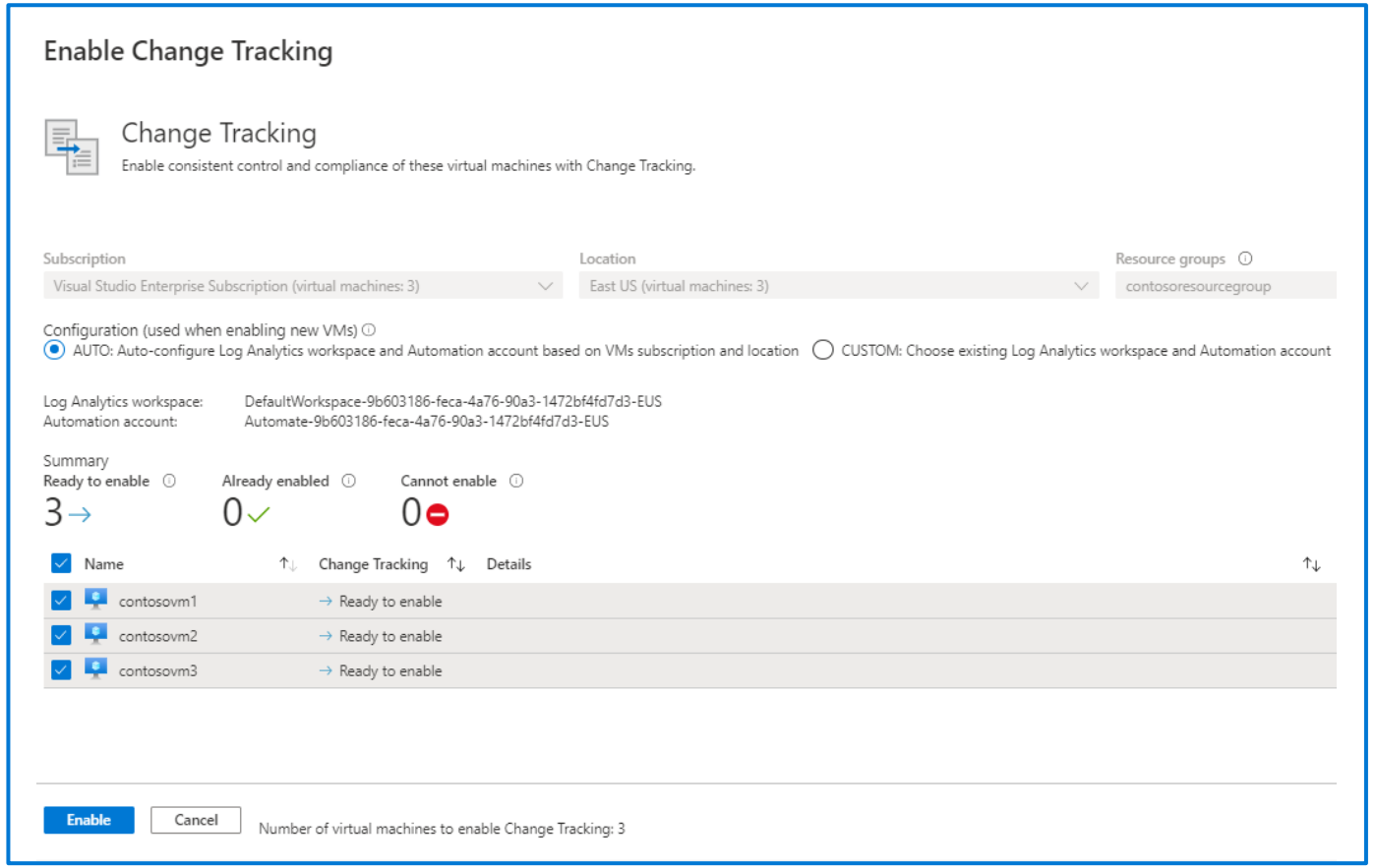


Enable Change Tracking and Inventory

You can enable Change Tracking and Inventory in a number of ways:

- By using the Azure portal
- By using an Azure VM
- From an Automation account
- From a runbook

The setup can take up to 15 minutes to complete.



Manage Change Tracking and Inventory

How to modify Change Tracking and Inventory settings?

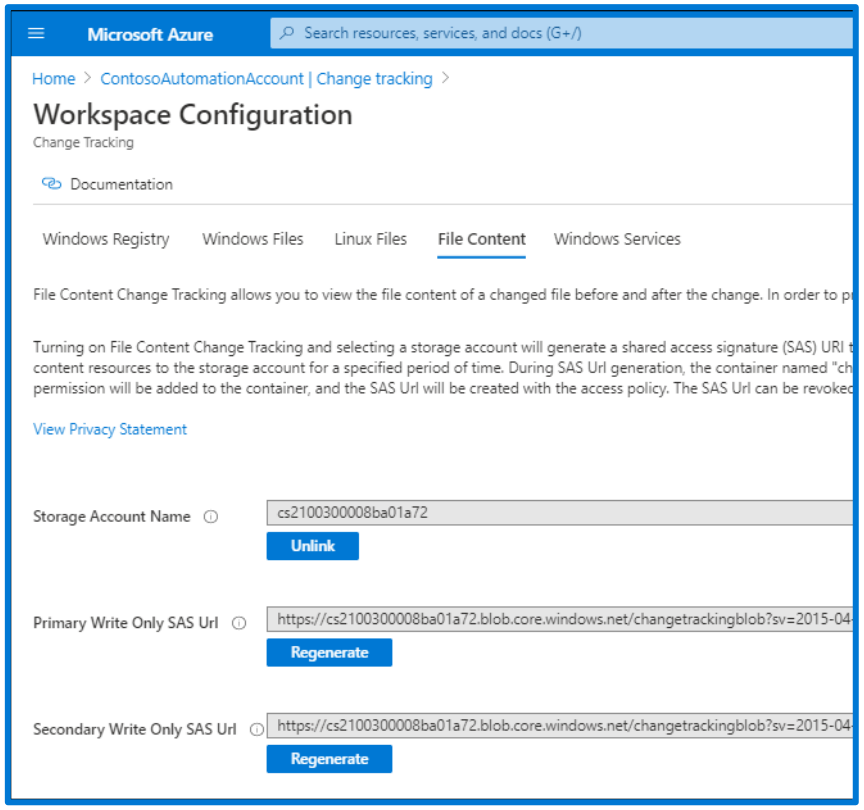
How to track Windows files?

How to track Windows Registry changes?

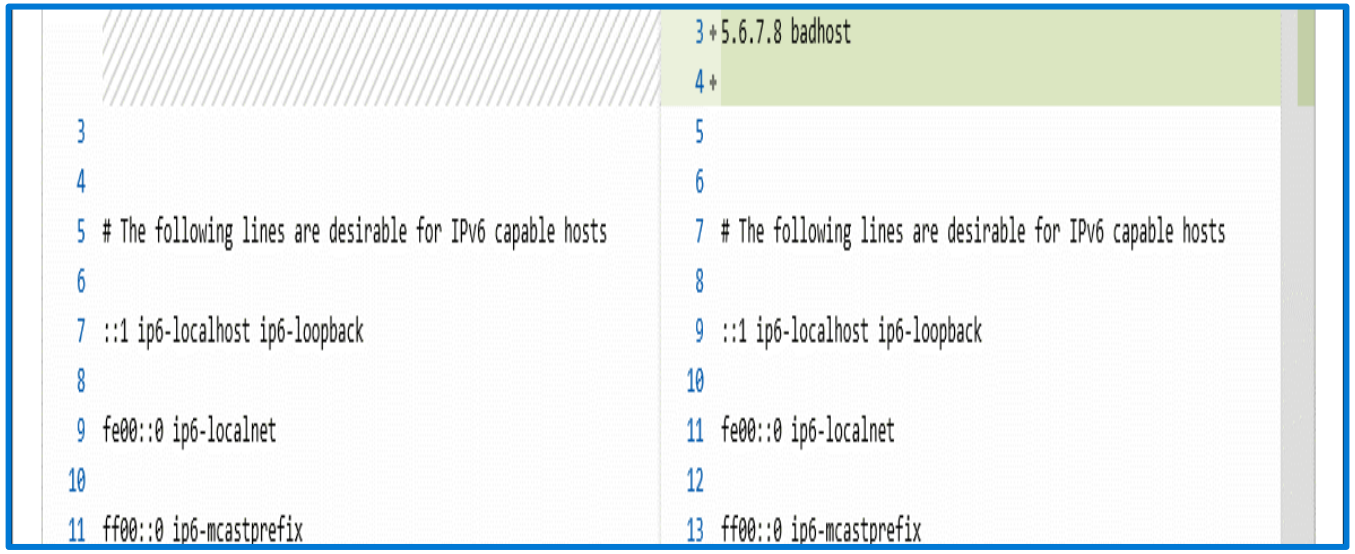
How to search logs for change records?

Manage tracked files

Enable file content tracking requires configuration of a storage account



Review the contents of a tracked file in a side-by-side layout



Events automatically display on the timeline

Implement File Integrity Monitoring

What is File Integrity Monitoring?

- known as change monitoring, examines files and registries of operating system, application software, and others for changes that might indicate an attack.

Enable File Integrity Monitoring

- You should upgrade the required workspace before enabling File Integrity Monitoring

Configure File Integrity Monitoring

- To review any changes in detail, select the appropriate VM. The logs detail displays. On this page, you can review the changes. You can also modify the query used to return the list of changes to suit your requirements.

Disable File Integrity Monitoring

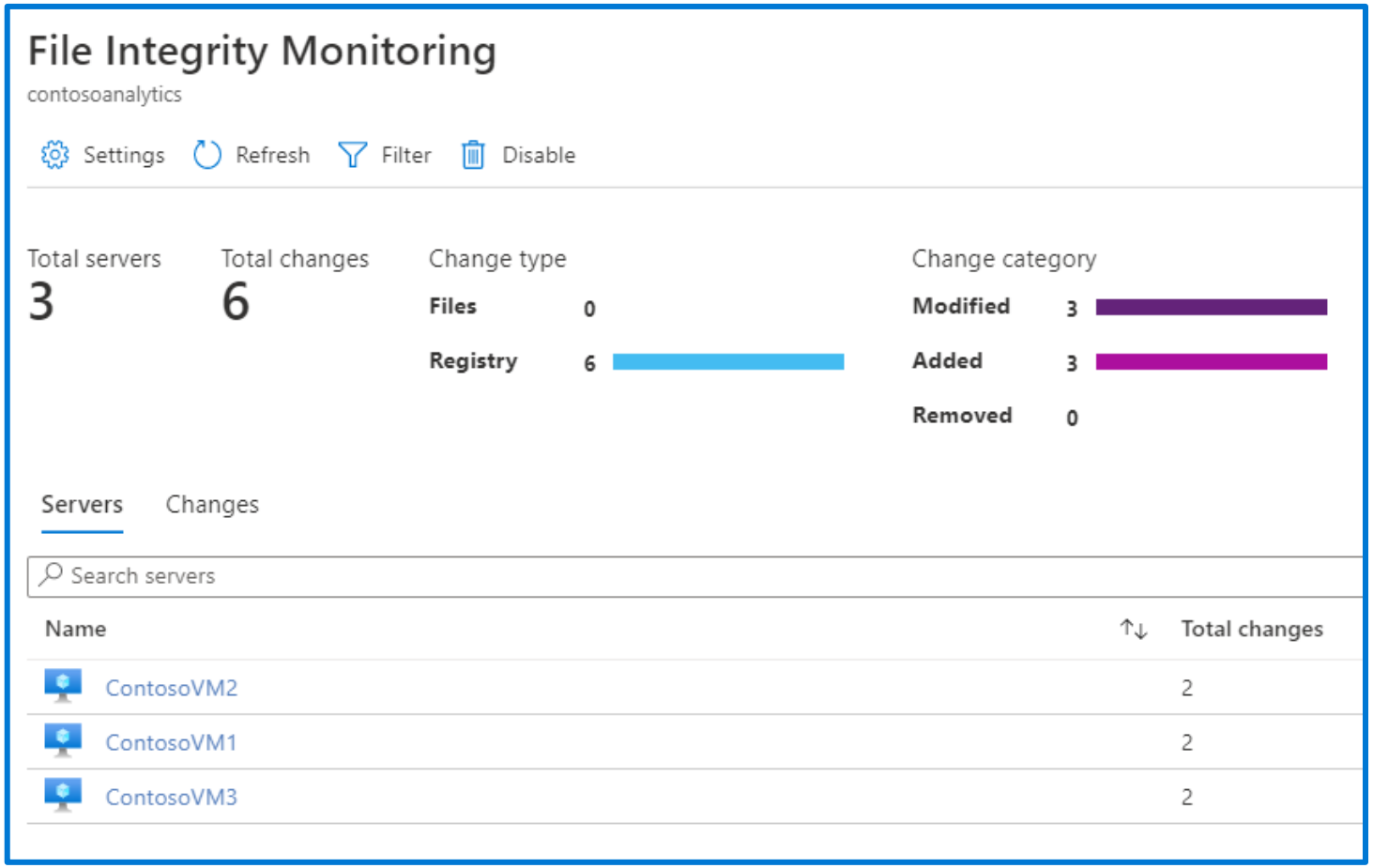
- If you no longer want to use File Integrity Monitoring, you can disable it.

Configure File Integrity Monitoring

On File Integrity Monitoring **dashboard**, the following information is provided:

- Total number of changes that occurred in the last week
- Total number of computers and VMs reporting to the workspace
- Geographic location of the workspace
- Azure subscription that the workspace is under

You can Enable and Disable File Integrity



Demonstration – Use File Integrity Monitoring

Explore File Integrity Monitoring dashboard

Enable File Integrity and edit monitored entities

Implement folder and path monitoring using wildcards

Disable monitored entities and File Integrity Monitoring

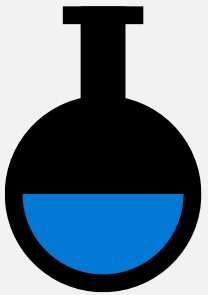
Knowledge Check and Resources – Implement change tracking and file integrity monitoring for Windows IaaS VMs

Knowledge Check

Microsoft Learn Modules (docs.microsoft.com/Learn)

Implement change tracking and file integrity monitoring for Windows IaaS VMs

Lab 02



Lab 02 – Using Microsoft Defender for Cloud in hybrid scenarios

Lab scenario

To identify Microsoft Azure security-related integration features with which you can further enhance your on-premises and cloud security environment, you have decided to onboard Windows servers in your proof-of-concept environment into Microsoft Defender for Cloud. You also want to integrate on-premises servers and Azure VMs running Windows Server with Azure Automation-based solutions, including Inventory, Change tracking, and Update management.

Objectives

- Create an Azure Log Analytics workspace and an Azure Automation account.
- Configure Microsoft Defender for Cloud.
- Provision Azure VMs running Windows Server.
- Onboard on-premises Windows Server into Microsoft Defender for Cloud and Azure Automation.
- Verify the hybrid capabilities of Microsoft Defender for Cloud and Azure Automation solutions.

End of presentation