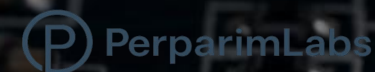




Manage Security Updates with Azure Update Manager

Centralized OS Update Control for Azure & Hybrid Environments

#PerparimLabs #AzureUpdateManager #SC100 #MicrosoftAzure
#AzureSecurity #CloudSecurity

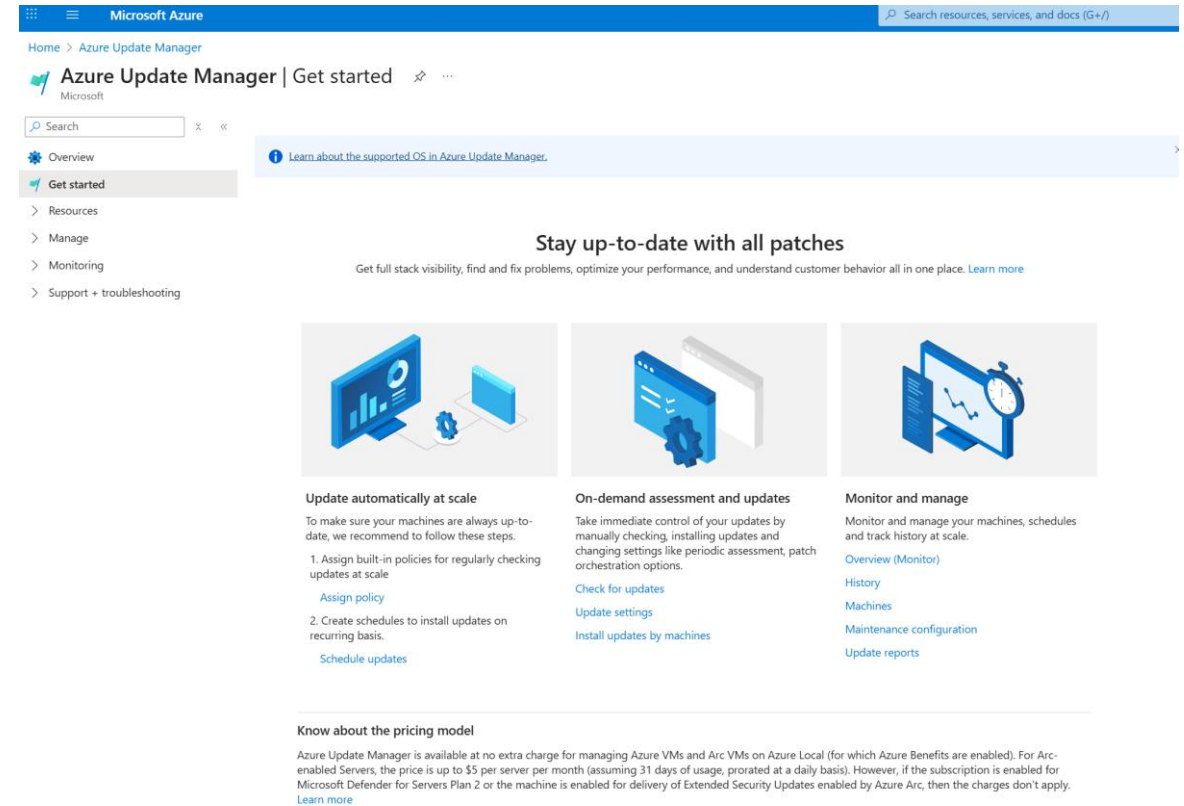


Problem Statement

- Keeping VMs updated is a critical security task — whether in Azure or on-prem.
Azure Update Manager provides a centralized, policy-driven way to manage updates without extra agents or complex onboarding.

What is Azure Update Manager?

- Replaces the older Automation + Log Analytics update method.
- Works for **Azure VMs & Arc-enabled servers** (hybrid/on-prem).
- No agent onboarding for Azure VMs.
- Supports **Windows & Linux** OS updates.



Lab Objective

- **Goal:**

Deploy a VM, enable Azure Update Manager, assign a policy for periodic updates, and clean up resources.

Create Resource Group

- **Step 1:** Create resource group Azure-RG in **East US**.

All lab resources will be inside this group for easy cleanup.

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

Home >

Resource groups

CloudMate Architects (cloudmatearchitects.onmicrosoft.com)

Identify inactive resource groups using ARG. What are the different statuses available for resource groups? List resource groups modified recently using ARG.

+ Create Manage view Refresh Export to CSV Open query Assign tags

You are viewing a new version of Browse experience. Click here to access the old experience.

Filter for any field... Subscription equals all Location equals all Add filter

	Name ↑	Subscription	Location
<input type="checkbox"/>	Azure-RG	Azure subscription 1	East US

Create Demo VM

Step 2: Create a quick Windows Server 2022 VM.

- Name: vm-demo-manager
- User: LPadmin
- Password: (secure)
- Keep RDP enabled
- Set Auto-shutdown

Microsoft Azure

Home > All resources > Create a resource >

Create a virtual machine

Help me create a low cost VM

Help me choose the right VM size for my workload

Help me create a low cost VM

Help me choose the right VM size for my workload

Validation passed

BasicsDisksNetworkingManagementMonitoringAdvancedTagsReview + create

Price

1 X Standard D2s v3 by Microsoft

Subscription credits apply

0.1880 USD/hr

Terms of use | Privacy policy

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	Azure subscription 1
Resource group	Azure-RG
Virtual machine name	vm-demo-manager
Region	East US
Availability options	No infrastructure redundancy required
Zone options	Self-selected zone
Security type	Trusted launch virtual machines
Enable secure boot	Yes
Enable vTPM	Yes
Integrity monitoring	No
Image	Windows Server 2022 Datacenter: Azure Edition - Gen2
VM architecture	x64
Size	Standard D2s v3 (2 vcpus, 8 GiB memory)
Enable Hibernation	No
Username	LPadmin
Public inbound ports	RDP
Already have a Windows license?	No
Azure Spot	No

Disks

OS disk size	Image default
OS disk type	Standard HDD LRS

Microsoft Azure

Home > All resources > Create a resource >

Create a virtual machine

Help me create a low cost VM

Help me choose the right VM size for my workload

Help me create a low cost VM

Help me choose the right VM size for my workload

Validation passed

Disks

OS disk size	Image default
OS disk type	Standard HDD LRS
Use managed disks	Yes
Delete OS disk with VM	Enabled
Ephemeral OS disk	No

Networking

Virtual network	(new) vm-demo-manager-vnet
Subnet	(new) default (10.0.0.0/24)
Public IP	(new) vm-demo-manager-ip
Accelerated networking	On
Place this virtual machine behind an existing load balancing solution?	No
Delete public IP and NIC when VM is deleted	Disabled

Management

Microsoft Defender for Cloud	Basic (free)
System assigned managed identity	Off
Login with Microsoft Entra ID	Off
Auto-shutdown	On
Backup	Disabled
Site Recovery	Disabled
Enable periodic assessment	Off
Enable hotpatch	Off
Patch orchestration options	OS-orchestrated patching: patches will be installed by OS

Monitoring

Alerts	Off
Boot diagnostics	Off
Enable OS guest diagnostics	Off
Enable application health monitoring	Off

Advanced

Extensions	None
VM applications	None
Cloud init	No
User data	No
Disk controller type	SCSI
Proximity placement group	None
Capacity reservation group	None

< Previous

Next >


Create

< Previous

Next >

Create

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#MicrosoftAzure #AzureSecurity #CloudSecurity

 PerparimLabs

Guest OS Update Options (VM Creation)

- Azure lets you choose OS update handling during VM creation — Azure Orchestrated, Automatic by OS, or Manual.

Microsoft Azure

Home > All resources > Create a resource >

Create a virtual machine

Help me create a low cost VM Help me choose the right VM size for my workload Help me create a VM opt

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

Configure management options for your VM.

Microsoft Defender for Cloud

Microsoft Defender for Cloud provides unified security management and advanced threat protection across hybrid cloud workloads. [Learn more](#)

✔ Your subscription is protected by Foundational Cloud Security Posture Management Free Plan.

Identity

Enable system assigned managed identity ☐

Microsoft Entra ID

Login with Microsoft Entra ID ☐

RBAC role assignment of Virtual Machine Administrator Login or Virtual Machine User Login is required when using Microsoft Entra ID login. [Learn more](#)

Auto-shutdown

Enable auto-shutdown ☒

Shutdown time 7:00:00 PM

Time zone (UTC-05:00) Eastern Time (US & Canada)

Notification before shutdown ☒

Email * padmin@cloudmatearchitects.onmicrosoft.com

Backup

Enable backup ☐

Site Recovery

Enable Disaster Recovery ☐

Guest OS updates

Enable periodic assessment ☐

Enable hotpatch ☐

Patch orchestration options

Automatic by OS (Windows Automatic Updates)
Best for scenarios where interrupting workloads for patching isn't an issue.

Azure-orchestrated
Orchestrates patches across availability sets. Best for workload availability.

Manual updates
Turns off Windows Automatic Updates. Install patches manually or pick a different solution.

Image default
Uses the image's default patch option.

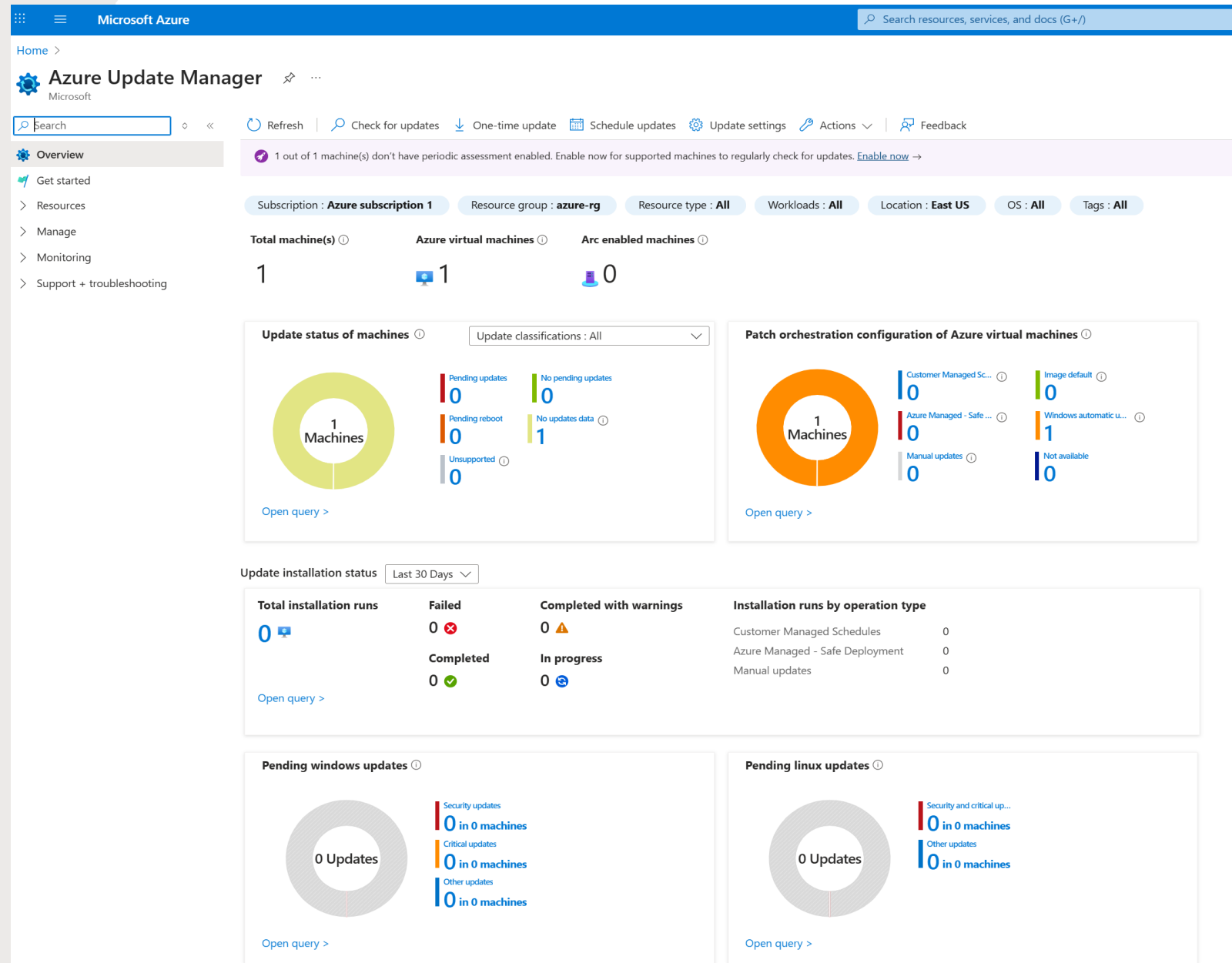
Automatic by OS (Windows Automatic Updates)

Some patch orchestration options are not available for this image. [Learn more](#)

< Previous Next : Monitoring > Review + create

Open Azure Update Manager

- **Step 3: Open Azure Update Manager** and see your VM detected automatically.



One-Time Update (Preview Only)

- Azure Update Manager allows triggering immediate updates for selected VMs — ideal for urgent patching. In this step, we only preview the update wizard without running the deployment.

This screenshot shows the 'Install one-time updates' wizard in the Azure portal, specifically the 'Machines' step. The interface includes a top navigation bar with 'Microsoft Azure' and a search bar. Below the navigation bar, the 'Azure Update Manager' section is visible, with a sidebar containing 'Overview', 'Get started', 'Resources', 'Manage', 'Monitoring', and 'Support + troubleshooting'. The main content area is titled 'Install one-time updates' and 'Azure Update Manager'. It features a progress indicator with three steps: 'Machines' (selected), 'Updates', and 'Properties'. The 'Machines' step includes a 'Select resources/machines to install updates' instruction and a 'Learn more' link. A red box highlights the '+ Add machine' button. Below this, there is a 'Machine Name' input field and a 'No results.' message. On the left, there is a 'Update status of machines' section with a donut chart showing '1 Machines' and a table with columns for 'Pending updates', 'No pending updates', 'Pending reboot', 'No updates data', and 'Unsupported'. The table shows 0 pending updates, 0 no pending updates, 0 pending reboot, 1 no updates data, and 0 unsupported. A 'Patch orchestration control' section is also visible on the right.

This screenshot shows the 'Install one-time updates' wizard in the Azure portal, specifically the 'Updates' step. The interface includes a top navigation bar with 'Microsoft Azure' and a search bar. Below the navigation bar, the 'Azure Update Manager' section is visible, with a sidebar containing 'Overview', 'Get started', 'Resources', 'Manage', 'Monitoring', and 'Support + troubleshooting'. The main content area is titled 'Install one-time updates' and 'Azure Update Manager'. It features a progress indicator with three steps: 'Machines', 'Updates' (selected), and 'Properties'. The 'Updates' step includes a 'Select resources' section with a 'Refresh' button and a 'Note' about adding up to 100 machines. Below this, there is a table showing 'Showing 1 of 1 records' with columns for 'Name', 'Update status', and 'ESU'. The table shows one record for 'vm-demo-manager' with 'No updates data' and 'N/A'. A red box highlights the 'Add machine' button. Below the table, there is a 'Preview of selected updates to install' section with a 'Windows updates to install (0)' message. At the bottom, there are 'Add' and 'Cancel' buttons, and a status bar indicating 'Machines: 1 selected machines'.

Microsoft Azure

Home > Azure Update Manager

Azure Update Manager | Get started

Search

Overview

Get started

Resources

Manage

Monitoring

Support + troubleshooting

Learn about the supported OS in Azure Update Manager.

Get full stack visibility, find and fix problems



Update automatically at scale

To make sure your machines are always up-to-date, we recommend to follow these steps.

1. Assign built-in policies for regularly checking updates at scale
2. Create schedules to install updates on recurring basis.

Schedule updates

Microsoft Azure

Home > Azure Update Manager | Get started

Policy definition

Initiative definition

Refresh

Search

Filter by name or ID...

Scope : Azure subscription 1

Definition type : Policy definition

Name

- Configure periodic checking for missing system updates on azure Arc-enabled servers
- Machines should be configured to periodically check for missing system updates
- Schedule recurring updates using Azure Update Manager
- Set prerequisite for Scheduling recurring updates on Azure virtual machines.
- Configure periodic checking for missing system updates on azure virtual machines**

Assign Update Policy

Step 4: Assign a policy for periodic update checks.

- Scope: vm-demo-manager
- Apply to all VMs in this group

Microsoft Azure

Home > Azure Update Manager | Get started

Configure periodic checking for missing system updates on azure virtual machines

Assign policy

Policy definition

Assign policy

Edit definition

Duplicate definition

Select version (preview)

Delete definition

Basics

Parameters

Remediation

Non-compliance messages

Review + create

Name

Version (preview)

Description

Available Effects

Category

Definition

Assignments (0)

Parameters (5)

Scope

Policy definition

Version (preview)

Overrides

Assignment name

Description

Policy enforcement

Enabled

Scope

Subscription

Azure subscription 1

Resource Group

Azure-RG

Configure periodic checking for missing system updates on azure virtual machines

4.9.0

Configure auto-assessment (every 24 hours) for OS updates on azure virtual machines

Modify

Azure Update Manager

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Policy Details

- Azure Policies make it easy to enforce update compliance across many VMs at once.

#PerparimLabs #AzureUpdateManager #SC100
#MicrosoftAzure #AzureSecurity #CloudSecurity

Microsoft Azure

[Home](#) > [Azure Update Manager | Get started](#) > > [Configure periodic checking for missing system updates on azure virtual machines](#) >

Assign policy

Basics

Parameters

Remediation

Non-compliance messages

Review + create

Basics

Scope

Exclusions

Policy definition

Assignment name

Version (preview)

Description

Policy enforcement

Assigned by

Azure subscription 1/Azure-RG

--

Configure periodic checking for missing system updates on azure virtual machines

Configure periodic checking for missing system updates on azure virtual machines

4.9.*

--

Default

Perparim Abdullahu

Advanced

Resource selectors

Overrides

No selectors associated with this assignment.

No overrides associated with this assignment.

Parameters

Parameters

No parameter changes detected.

Remediation

Create a Managed Identity

Type of Managed Identity

System assigned identity location

Create a remediation task

Yes

System assigned managed identity

eastus

No

Non-compliance messages

Non-compliance messages

No non-compliance messages associated with this assignment.

Previous

Next

Create

One-Time Update (Final Deployment)

After assigning the update policy, we can also run a full one-time update deployment to immediately patch the VM.
This step confirms update orchestration works end-to-end.

Microsoft Azure

Search resources, services, and docs (G+/I)

Copilot

Home > Azure Update Manager

Azure Update Manager | Machines

Search

Edit columns Refresh Check for updates One-time update Schedule updates Update settings Actions Open query Export to CSV Feedback

Overview

Get started

Resources

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Azure Local

Manage

Pending updates

History

Maintenance configuration

Policy

Monitoring

Reports

New alert rule (Preview)

Support + troubleshooting

1 out of 1 machine(s) don't have periodic assessment enabled. Enable now for supported machines to regularly check for updates. [Enable now](#) →

Filter by name

Subscription: **Azure subscription 1** Resource group: **azure-rg** Resource type: **All** Workloads: **All** Location: **East US** OS: **All** Update classifications: **All** Patch orchestration: **All** Periodic assessment: **All** Hotpatch status: **All**

Status: **2 selected** ESU status: **All** Tags: **All**

Total machine(s)	No updates data	No pending updates	Pending updates	Pending reboot	Unsupported
1	1	0	0	0	0

Showing 1 of 1 records

No grouping

Name	Update status	ESU Status	Operating system	Resource type	Patch orchestration	Periodic assessment	Associated schedules	Status
vm-demo-manager	No updates data	N/A	Windows	Azure virtual machine	Windows automatic update	No	-	VM running

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Cleanup

Step 6: Delete the resource group to free up resources and costs.

The screenshot shows the Microsoft Azure portal interface. The main content area displays the 'Azure-RG' resource group details, including its subscription, location (East US), and a list of resources. The 'Delete a resource group' dialog box is open on the right side of the screen. The dialog box contains the following information:

- Delete a resource group**
- The following resource group and all its dependent resources will be permanently deleted.
- Resource group to be deleted**: Azure-RG
- Dependent resources to be deleted (7)**: All dependent resources, including hidden types, are shown.
- A table listing the dependent resources:

Name	Resource type
shutdown-computevm-vm-demo-manager	Microsoft.DevTestLab/schedules
vm-demo-manager	Virtual machine
vm-demo-manager-ip	Public IP address
vm-demo-manager-nsg	Network security group
vm-demo-manager-vnet	Virtual network
vm-demo-manager428	Network interface
vm-demo-manager_OsDisk_1_b084f7f41c9f4617820ddba1d3382e4c	Disk

At the bottom of the dialog box, there is a checkbox for 'Apply force delete for selected Virtual machines and Virtual machine scale sets' and a text input field for 'Enter resource group name to confirm deletion *'. The input field contains the text 'Azure-RG'. There are 'Delete' and 'Cancel' buttons at the bottom right of the dialog box.

#PerparimLabs #AzureUpdateManager #SC100
#MicrosoftAzure #AzureSecurity #CloudSecurity

Key Takeaways



Centralized OS update control for Azure & hybrid servers.



Policy-driven compliance.



Works for Windows & Linux.



No extra agents for Azure VMs.

