



# Lab Manual- Administrating Azure Virtual Machine – Windows Admin Center

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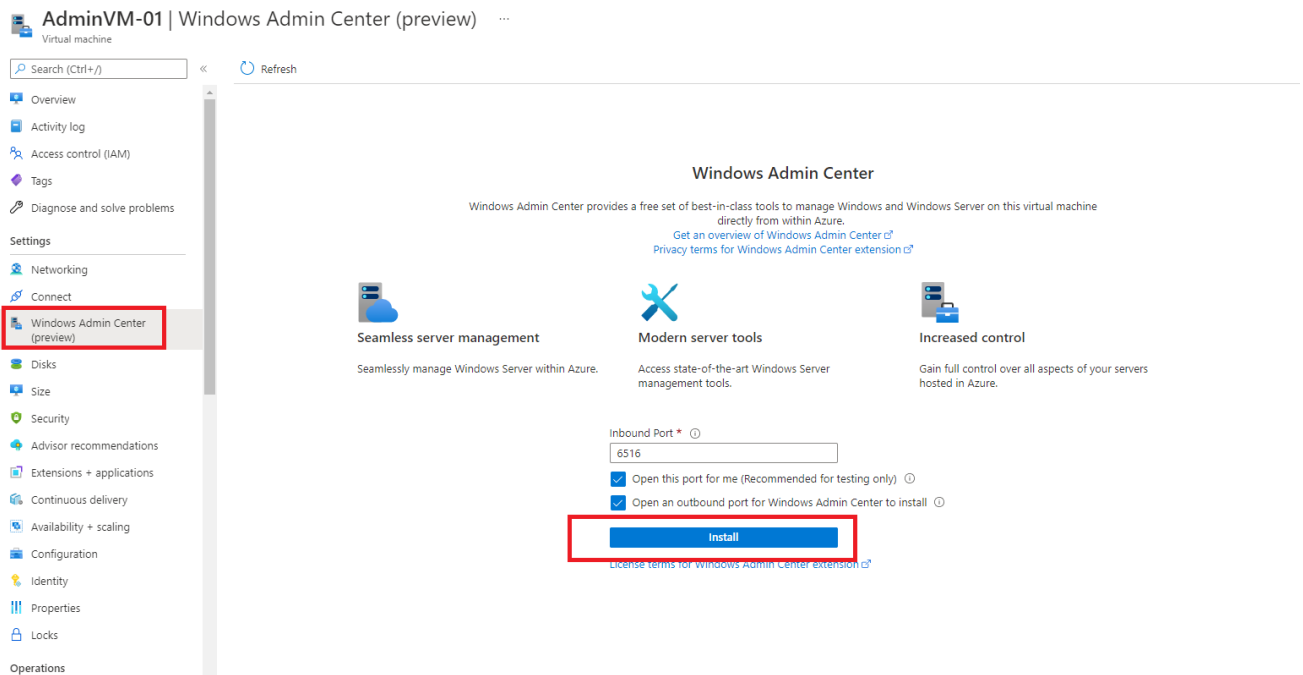
## 1. Objective

Windows Admin Center in the Azure portal provides the essential set of management tools for managing Windows Server in a single Azure VM:

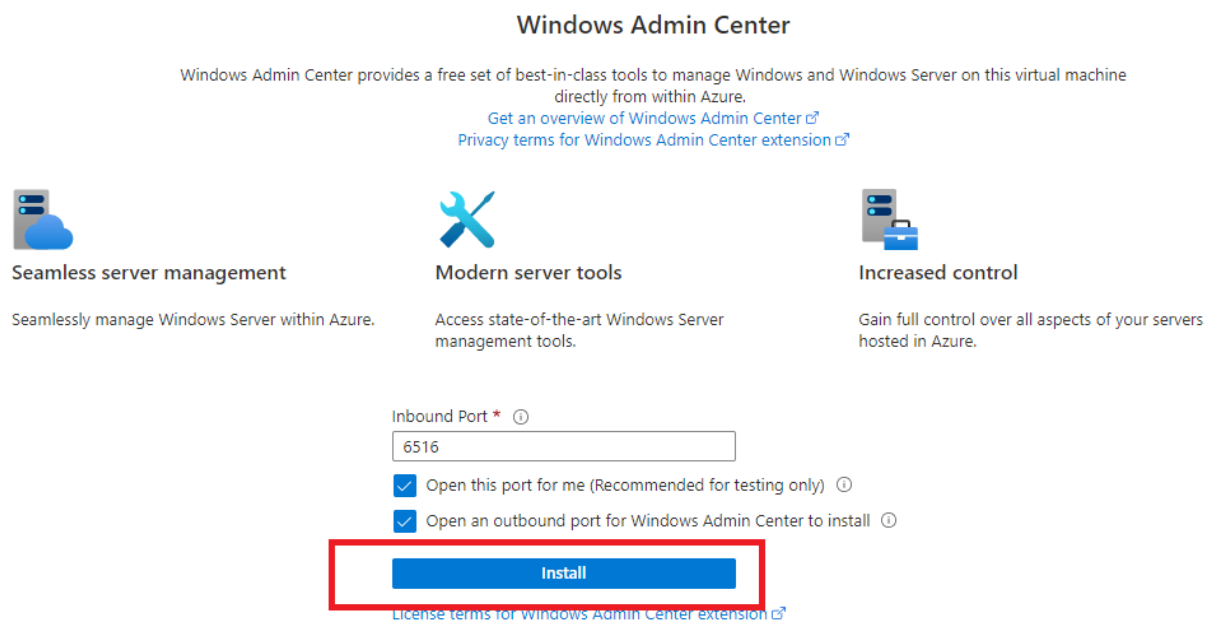
- Certificates
- Devices
- Events
- Files and file sharing
- Firewall
- Installed apps
- Local users and groups
- Performance Monitor
- PowerShell
- Processes
- Registry
- Remote Desktop
- Roles and features
- Scheduled tasks
- Services
- Storage
- Updates

## 2. Lab 1: Installing the Windows Admin Center extension package in the Azure VM through the Azure portal

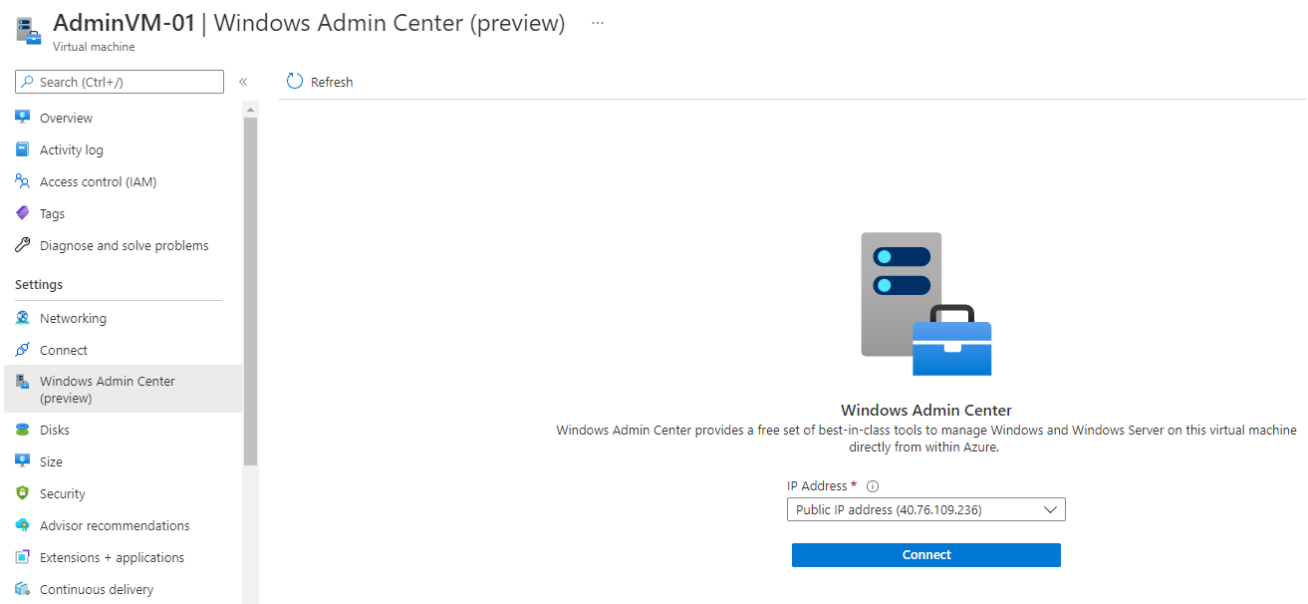
1. In the Virtual Machine setting, click Windows Admin Centre



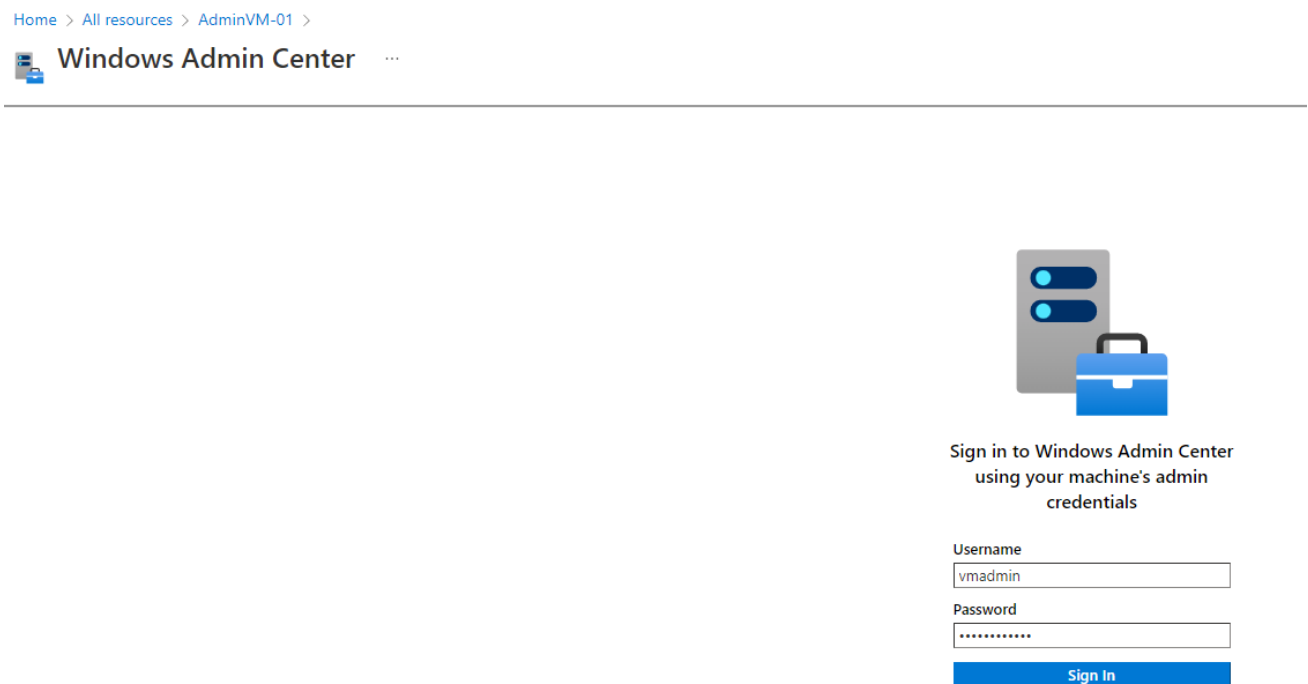
2. Select **Open this port for me** and click **install**



3. It take few minutes and once done Click **Connect**



4. On the next screen, the wizard asks you the admin user credentials of the VM. The below screenshot shows this sign-in page. Type VM username and Password and click **Sign-in**



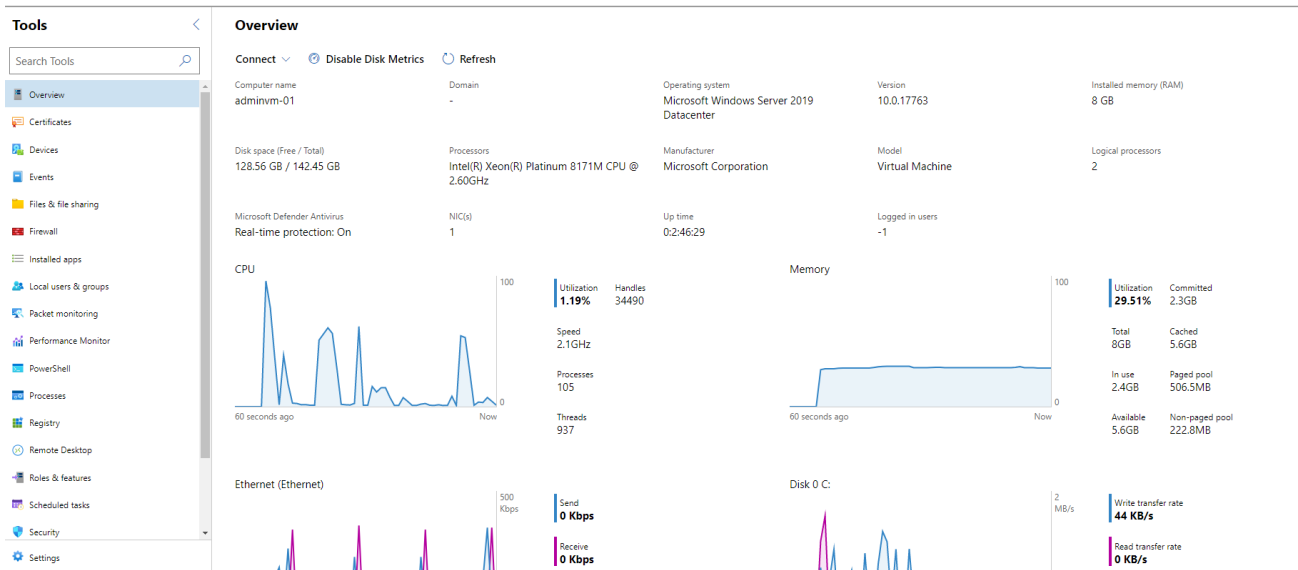
5. It take less than minute to initialize



## Windows Admin Center

Gathering environment info—this may take a few moments...

- Now, your VM is connected to the Windows Admin Center, and you can view various management tools on the left side. On clicking each tool, you will get the relevant details on the right side. Some of the screenshots shown below are given for example.



### 3. Lab 2: Explore Management Features of Admin Center

## 1. Overview

This page shows the complete details of the OS such as OS version, Installed RAM, Available Disk space, Processor details, CPU Utilization, Memory usage, and Ethernet activity. The below screenshot shows these parameters

Home > VembuDemoWindows2016 >

Windows Admin Center

**Tools**

Search Tools

Overview

Certificates

**Devices**

Events

Files & file sharing

Firewall

Installed apps

Local users & groups

Performance Monitor

PowerShell

Processes

Registry

Remote Desktop

Roles & features

Settings

**Devices**

⌵ Disable device ⌵ Update driver

Name	Status
> Computer	✓ Enabled: 1
> Disk drives	✓ Enabled: 2
> Display adapters	✓ Enabled: 1
> Human interface devices	✓ Enabled: 1
> Keyboards	✓ Enabled: 1
> Mice and other pointing devices	✓ Enabled: 1
> Monitors	✓ Enabled: 1
> Network adapters	✓ Enabled: 4
> Other devices	✗ Critical: 1
> Ports (COM & LPT)	✓ Enabled: 1
> Printer queues	✓ Enabled: 3
> Processors	✓ Enabled: 1
> Software devices	✓ Enabled: 4
> Storage controllers	✓ Enabled: 3
> Storage volumes	✓ Enabled: 5
> System devices	✓ Enabled: 23

**Properties**

## 2. Devices



Shows details of all the devices available in the VM. You can disable or update the driver of these devices from the Windows Admin center portal itself. You can expand each component and get the detailed properties of each device.

## Windows Admin Center ...

### Tools

- Overview
- Certificates
- Devices**
- Events
- Files & file sharing
- Firewall
- Installed apps
- Local users & groups
- Performance Monitor
- PowerShell
- Processes
- Registry
- Remote Desktop
- Roles & features
- Settings

### Devices

-  Disable device
-  Update driver

Name

- > Computer
- > Disk drives
- > Display adapters
- > Human interface devices
- > Keyboards
- > Mice and other pointing devices
- > Monitors
- > Network adapters
- > Other devices
- > Ports (COM & LPT)
- > Printer queues
- > Processors
- > Software devices
- > Storage controllers
- > Storage volumes
- > System devices

### Properties

### 3. Events

You can view the events generated by the Windows log & the Application and services log. You can choose each event and get a detailed description of the event. The below screenshot provides a sample event with a description.



## Tools

- Overview
- Certificates
- Devices
- Events**
- Files & file sharing
- Firewall
- Installed apps
- Local users & groups
- Performance Monitor
- PowerShell
- Processes
- Registry
- Remote Desktop
- Roles & features
- Settings

## Events

Administrative Logs

Windows Logs

Application

Security

System

ForwardedEvents

Setup

Applications and Services Logs

Hardware Events

&gt; Intel

Internet Explorer

Key Management Service



&gt; Microsoft

Microsoft-ServerManagementExperience

&gt; NIS

Windows Azure

Windows PowerShell

 Clear  Export

Level

Information

Information

Information

Information

Information

Information

Information

Information

Information

Error

Information

**Event 903, Microsoft-Windows-**[Description](#) [Details](#)

The Software Protection service has stopped.

## 4. File & File sharing

Users can view directories and files under each drive. Users can do all the file activities similar to file explorer in windows os. They can also do all the file-sharing activities under the File sharing tab. They can create a new share, delete a share and edit the share properties.

Home > VembuDemoWindows2016 >

Windows Admin Center

...

Tools

Search Tools

Overview

Certificates

Devices

Events

Files & file sharing

Firewall

Installed apps

Local users & groups

Performance Monitor

PowerShell

Processes

Registry

Remote Desktop

Roles & features

Settings

Files

File shares

Files

> Speech\_OneCore

> System

> System32

> SystemApps

> SystemResources

> SysWOW64

> TAPI

> Tasks

> Temp

> tracing

> twain\_32

> Vss

> Web

> WinSxS

> WindowsAzure

> Config

> Logs

> Packages

> SecAgent

C: > WindowsAzure > Logs

New Folder

Rename

Upload

Name

AggregateStatus

Plugins

AgentRuntime.log

ExtensionConfig2021.10.05-08.19.42.849.json

MonitoringAgent.log

MonitoringAgent.log.old.001

RuntimeEvents\_000002.etl

TransparentInstaller.log

WaAppAgent.log

WaAppAgentSupplementary.log

WaAppAgent\_000002.etl

WaSecAgent-startPoll.log

WaSecAgent-stopPoll.log

WindowsAzure-GuestAgent-Metrics\_2021\_10\_5...

## 5. Firewall

Users can set Incoming & Outgoing firewall rules for the Windows OS from this section. Users can enable, disable or modify the firewall rule from here by selecting each of the Incoming and Outgoing rules.

Home > VembuDemoWindows2016 >

Windows Admin Center

...

Tools

Search Tools

Overview

Certificates

Devices

Events

Files & file sharing

Firewall

Installed apps

Local users & groups

Performance Monitor

PowerShell

Processes

Registry

Remote Desktop

Roles & features

Settings

Firewall

Overview

Incoming rules

Outgoing rules

+ New

Enable

Disable

Delete

Settings

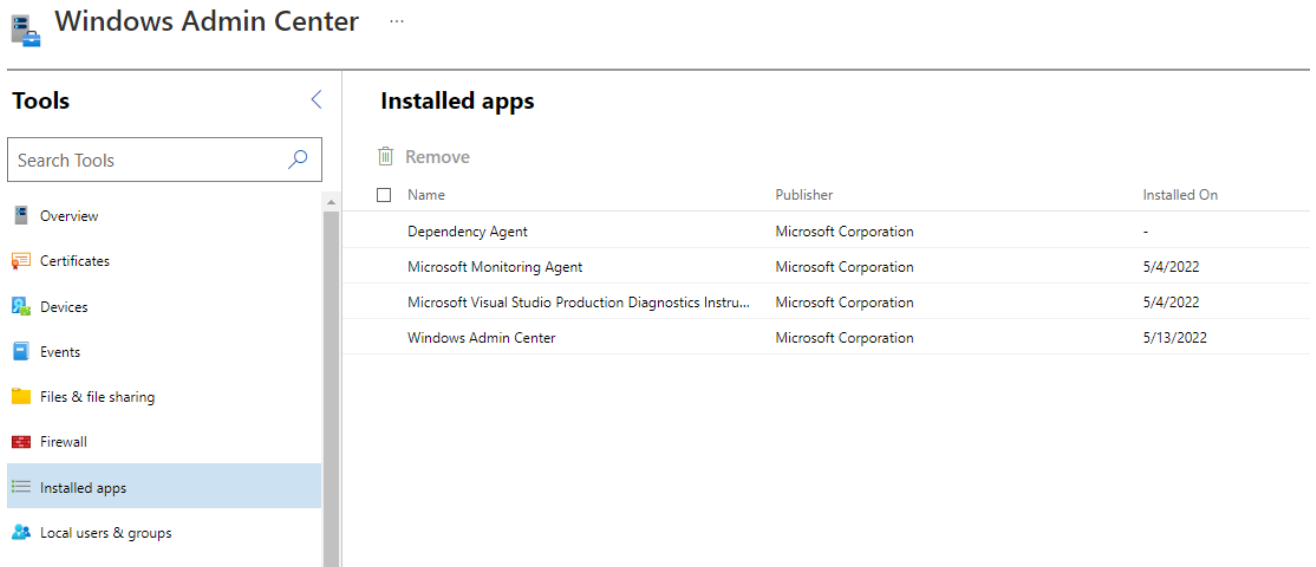
126 items

Search

Name	Action	Group	Status	Profile	Program	Protocol	Local port	Remote port
SmeInboundOpenException	✓ Allowed		Enabled	All	Any	TCP	6516	Any
@(Microsoft.Windows.CloudExperienceHost...	✓ Allowed	@(Microsoft.Windows.CloudExp...	Enabled	Domain, Private	Any	Any	Any	Any
Alloyn Router (TCP-In)	✓ Allowed	Alloyn Router	Enabled	Domain, Private	%SystemRoot%\sys...	TCP	9955	Any
Alloyn Router (UDP-In)	✓ Allowed	Alloyn Router	Enabled	Domain, Private	%SystemRoot%\sys...	UDP	Any	Any
BranchCache Content Retrieval (HTTP-In)	✓ Allowed	BranchCache - Content Retrieva...	Disabled	All	SYSTEM	TCP	80	Any
BranchCache Hosted Cache Server (HTTP-In)	✓ Allowed	BranchCache - Hosted Cache Sa...	Disabled	All	SYSTEM	TCP	80.443	Any
BranchCache Peer Discovery (WSD-In)	✓ Allowed	BranchCache - Peer Discovery (...)	Disabled	All	%systemroot%\syst...	UDP	3702	Any
Cast to Device streaming server (HTTP-Strea...	✓ Allowed	Cast to Device functionality	Enabled	Domain	System	TCP	10246	Any
Cast to Device streaming server (HTTP-Strea...	✓ Allowed	Cast to Device functionality	Enabled	Private	System	TCP	10246	Any
Cast to Device streaming server (HTTP-Strea...	✓ Allowed	Cast to Device functionality	Enabled	Public	System	TCP	10246	Any
Cast to Device streaming server (RTCP-Strea...	✓ Allowed	Cast to Device functionality	Enabled	Domain	%SystemRoot%\sys...	UDP	Any	Any
Cast to Device streaming server (RTCP-Strea...	✓ Allowed	Cast to Device functionality	Enabled	Private	%SystemRoot%\sys...	UDP	Any	Any
Cast to Device streaming server (RTCP-Strea...	✓ Allowed	Cast to Device functionality	Enabled	Public	%SystemRoot%\sys...	UDP	Any	Any
Cast to Device streaming server (RTSP-Strea...	✓ Allowed	Cast to Device functionality	Enabled	Domain	%SystemRoot%\sys...	TCP	23554.23555.23556	Any
Cast to Device streaming server (RTSP-Strea...	✓ Allowed	Cast to Device functionality	Enabled	Private	%SystemRoot%\sys...	TCP	23554.23555.23556	Any
Cast to Device streaming server (RTSP-Strea...	✓ Allowed	Cast to Device functionality	Enabled	Public	%SystemRoot%\sys...	TCP	23554.23555.23556	Any
Cast to Device SSDP Discovery (UDP-In)	✓ Allowed	Cast to Device functionality	Enabled	Public	%SystemRoot%\sys...	UDP	PlayToDiscovery	Any

## 6. Installed apps

This tab shows complete details of the installed application on the Windows OS. You can uninstall or remove the application from the OS here itself.



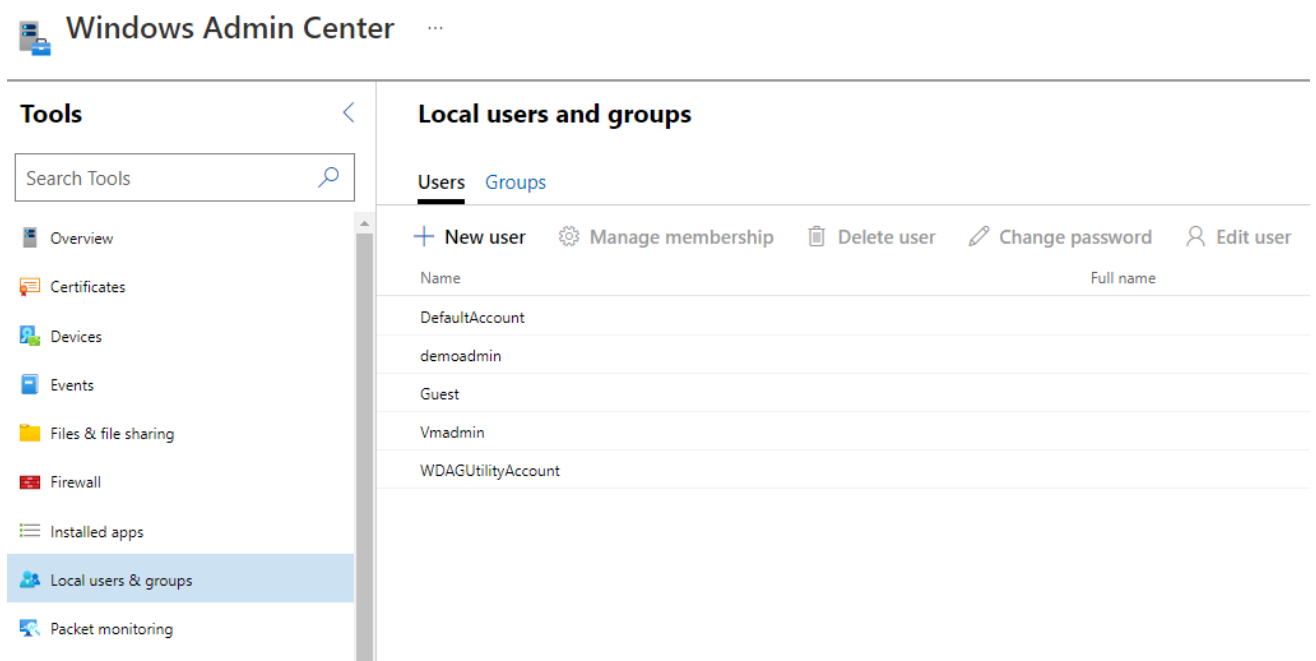
The screenshot shows the Windows Admin Center interface. On the left, the 'Tools' sidebar is visible with a search bar and a list of tools: Overview, Certificates, Devices, Events, Files & file sharing, Firewall, Installed apps (selected), and Local users & groups. The main panel is titled 'Installed apps' and features a 'Remove' button with a trash icon. Below this is a table listing installed applications.

Name	Publisher	Installed On
Dependency Agent	Microsoft Corporation	-
Microsoft Monitoring Agent	Microsoft Corporation	5/4/2022
Microsoft Visual Studio Production Diagnostics Instru...	Microsoft Corporation	5/4/2022
Windows Admin Center	Microsoft Corporation	5/13/2022

## 7. Local Users and Groups

This will list all the available users (built-in and created users ) of the OS and the built-in groups. Here you can create a new user or group. Can edit or remove the user or group and can change the password for a particular user.

[Home](#) > [All resources](#) > [AdminVM-01](#) >

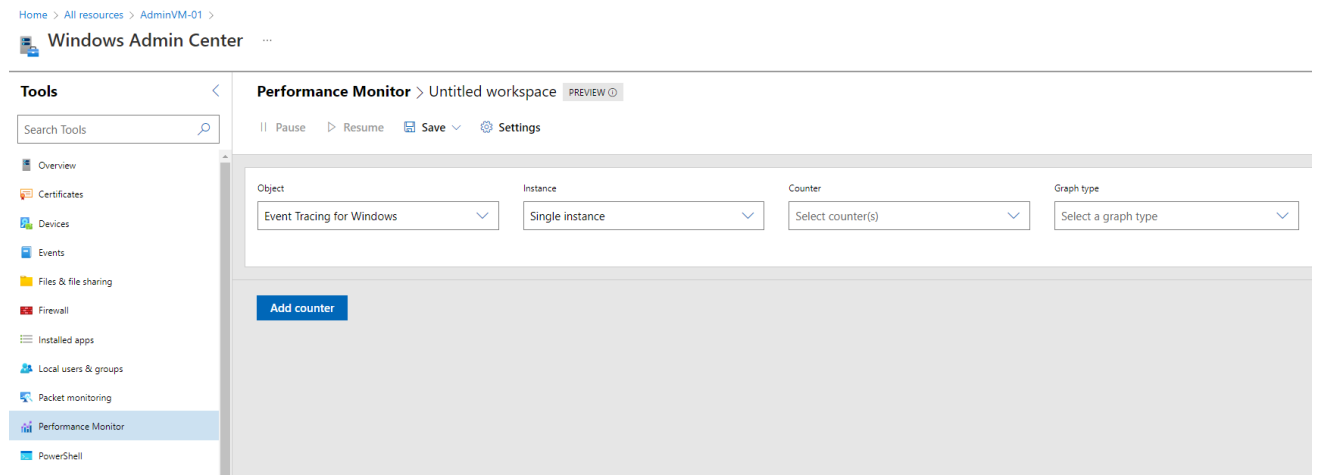


The screenshot shows the Windows Admin Center interface. On the left, the 'Tools' sidebar is visible with a search bar and a list of tools: Overview, Certificates, Devices, Events, Files & file sharing, Firewall, Installed apps, Local users & groups (selected), and Packet monitoring. The main panel is titled 'Local users and groups' and has two tabs: 'Users' (selected) and 'Groups'. Below the tabs are several action buttons: '+ New user', 'Manage membership' (gear icon), 'Delete user' (trash icon), 'Change password' (pencil icon), and 'Edit user' (person icon). Below these buttons is a table listing local users.

Name	Full name
DefaultAccount	
demoadmin	
Guest	
Vmadmin	
WDAGUtilityAccount	

## 8. Performance Monitor

Users can view and compare performance counters for the operating system, apps, or devices in real-time.



## 9. Powershell

Using this, you can connect the Powershell window of the Windows OS directly, and can execute any PowerShell cmdlets on the VM



## 10. Processes

Similar to task managers, you can view the running processes of the OS. You can start and end processes & find handles of each process.

Home > VembuDemoWindows2016 >

Windows Admin Center

**Tools**

Search Tools

- Overview
- Certificates
- Devices
- Events
- Files & file sharing
- Firewall
- Installed apps
- Local users & groups
- Performance Monitor
- PowerShell
- Processes**
- Registry
- Remote Desktop
- Relay R. Resources

**Processes**

Start Process End Process Create Process Dump Find Handles Select Columns 57 items Search

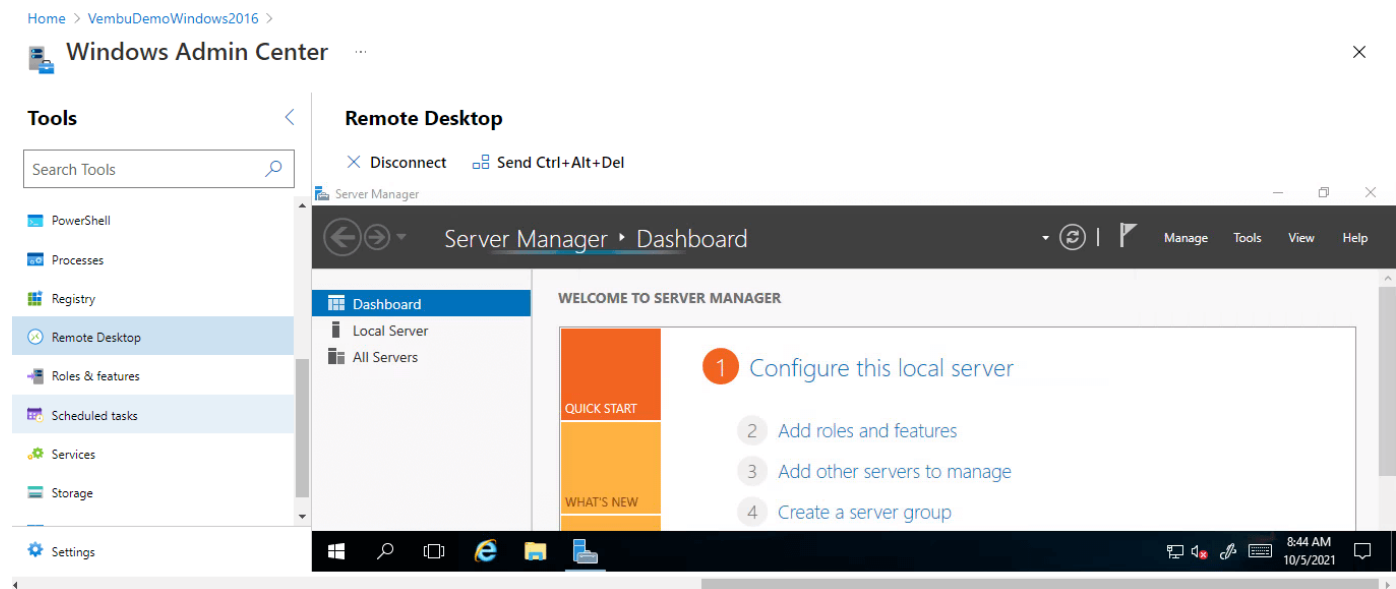
Name	PID	Description	Status	CPU	Username	Working Set (Memory)
System Idle Process	0	Percentage of time the processor is idle	Running	99%	SYSTEM	4 KB
System Interrupts	1	Deferred procedure calls and interrupt	Running	0%	SYSTEM	0 B
System	4	NT Kernel & System	Running	0%	SYSTEM	140 KB
WdSecAgentProv.exe	232	security-Dsmc master (8d62230294) M	Running	0%	SYSTEM	623 MB
smss.exe	256	Windows Session Manager	Running	0%	SYSTEM	1.18 MB
svchost.exe	344	Host Process for Windows Services	Running	0%	NETWORK SERVICE	22.98 MB
csrss.exe	352	Client Server Runtime Process	Running	0%	SYSTEM	4.36 MB
csrss.exe	420	Client Server Runtime Process	Running	0%	SYSTEM	3.94 MB
wininit.exe	436	Windows Start-Up Application	Running	0%	SYSTEM	4.96 MB
winlogon.exe	468	Windows Logon Application	Running	0%	SYSTEM	8.21 MB
services.exe	532	Services and Controller app	Running	0%	SYSTEM	7.17 MB
lsass.exe	544	Local Security Authority Process	Running	0%	SYSTEM	17.3 MB
svchost.exe	620	Host Process for Windows Services	Running	0%	SYSTEM	19.11 MB
TabTip32.exe	668	Touch Keyboard and Handwriting Panel	Running	0%	gopal	5.97 MB
svchost.exe	672	Host Process for Windows Services	Running	0%	NETWORK SERVICE	10.29 MB
mdm.exe	680	Microsoft Distributed Transaction Coord	Running	0%	NETWORK SERVICE	9.61 MB
svchost.exe	716	Host Process for Windows Services	Running	0%	SYSTEM	7.35 MB

## 11. Registry

Similar to the Regedit tool in windows, here you can traverse all the registry keys and can update the registry key value.

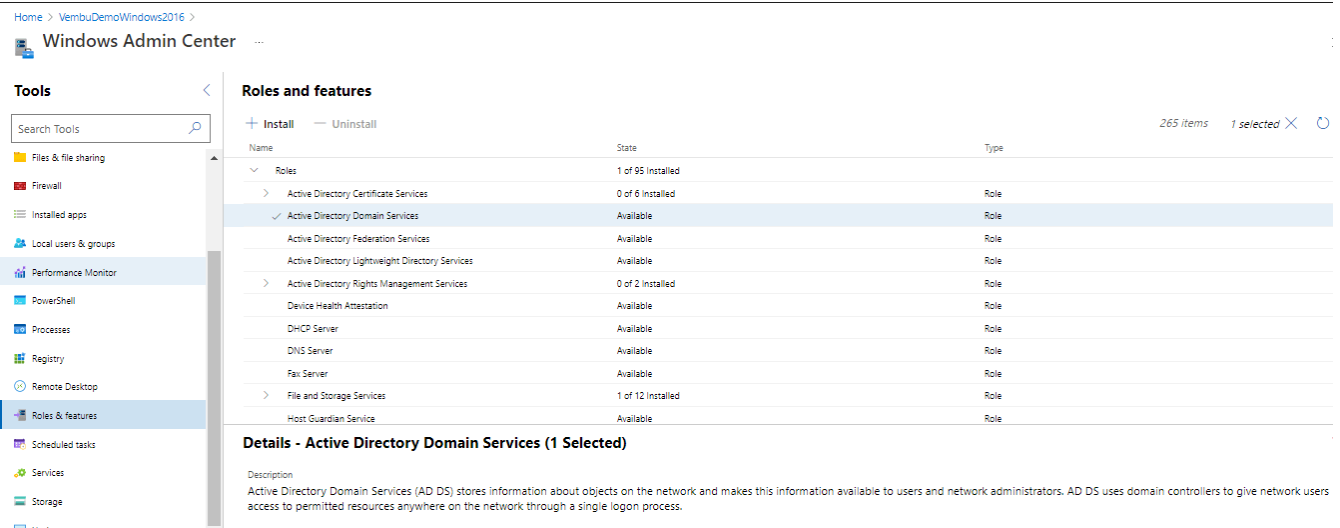
## 12. Remote Desktop

Users can directly connect the server using RDP protocol after providing the admin user credentials.



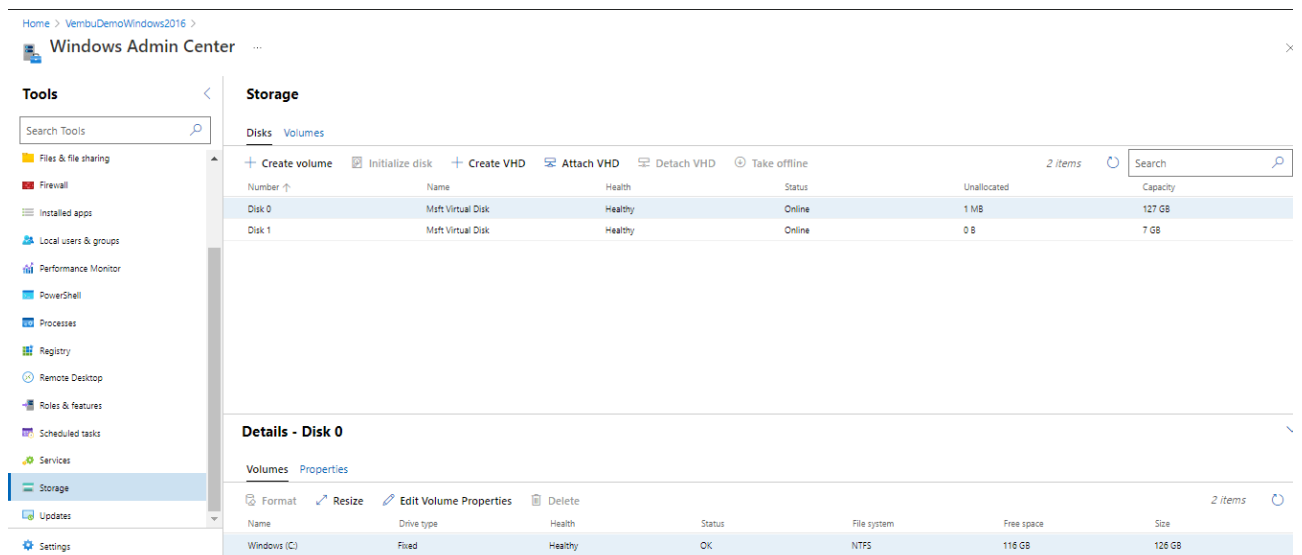
## 13. Roles and features

Users can install & uninstall roles and features for the OS.



## 14. Storage

Users can perform all the disk and storage operations. One can create volume, create, attach and detach VHD, can format and resize the disk volumes, etc.



## 15. Updates

Shows available updates and updated history. Users can initiate installing Windows security updates and patches from here.

## Windows Admin Center

### Tools

Search Tools

- Files & file sharing
- Firewall
- Installed apps
- Local users & groups
- Performance Monitor
- PowerShell
- Processes
- Registry
- Remote Desktop
- Roles & features
- Scheduled tasks
- Services
- Storage
- Updates**

### Update

Available updates [Update history](#)

Updates are available. Last checked: 10/5/2021, 4:10 PM

[Settings](#) [Check online for updates from Microsoft Update](#)

☐ Update title


Update for Windows Defender Antivirus antimalware platform - KB4052623 (Version 4.18.2001.10)

Security Update for Windows Server 2016 for x64-based Systems (KB4535680)

2021-01 Update for Windows Server 2016 for x64-based Systems (KB4589210)

Windows Malicious Software Removal Tool x64 - v5.93 (KB890830)

Security Intelligence Update for Microsoft Defender Antivirus - KB2267602 (Version 1.349.1983.0)

 The remote server may require a restart after installing updates.

## 16. Settings

Here users can configure file share SMB server, Environment variables, and Power configuration for the Windows OS.

### Settings

General

File shares (SMB server)

Environment variables

Power configuration

**Remote Desktop**

### Remote Desktop

Choose an option and then specify who can connect.

☐ Don't allow remote connections to this computer

☒ Allow remote connections to this computer

☒ Allow connections only from computers running Remote Desktop with Network Level Authentication (recommended)

## 4. Conclusion:

Windows Admin Center in Azure unlocks incredible capabilities for the Azure portal by providing the user with an interface to manage Windows Server virtual machines.

By default, the Azure portal provides a singular view for virtual machine management and the essential elements to manage the infrastructure. With the addition of Windows Admin Center in Azure, we have supplemented this great management experience with additional opportunities such as an enhanced view of virtual machine usage, performance monitoring, viewing of events, and much more.

Also, it is pretty much easy to install the Windows Admin Center extender package on Azure Windows VMs and can manage the resources instantly.