

AZURE GENERALISED IMAGE

Generalizing or deprovisioning a VM is not necessary for creating an image in an Azure Compute Gallery unless you specifically want to create an image that has no machine specific information, like user accounts. Generalizing is still required when creating a managed image outside of a gallery.

Generalizing removes machine specific information so the image can be used to create multiple VMs. Once the VM has been generalized or deprovisioned, you need to let the platform know so that the boot sequence can be set correctly.

😊 TO BEGIN WITH THE LAB

STEP 1: GENERALIZING THE VM

1. Log in Azure Portal. Go to create resources.
2. Then create a Windows Virtual Machine.

Create a virtual machine

Project details

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

Subscription *	<input type="text" value="Free Trial"/>
Resource group *	<input type="text" value="app-grp"/> Create new

Instance details

Virtual machine name *	<input type="text" value="WindowsVm2"/>
Region *	<input type="text" value="(Asia Pacific) Central India"/>
Availability options	<input type="text" value="No infrastructure redundancy required"/>
Security type	<input type="text" value="Standard"/>
Image *	<input type="text" value="Windows Server 2022 Datacenter - x64 Gen2 (free services eligible)"/> 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	<input type="radio"/> Arm64 <input checked="" type="radio"/> x64
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Arm64 is not supported with the selected image.

Run with Azure Spot discount	<input type="checkbox"/>
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Size * ⓘ Standard_D2s_v3 - 2 vcpus, 8 GiB memory (₹5,503.70/month) ✓

[See all sizes](#)

Enable Hibernation (preview) ⓘ ⓘ To enable Hibernation, you must register your subscription. [Learn more](#) ↗

Administrator account

Authentication type ⓘ SSH public key Password

Username * ⓘ demouser ✓

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 * ⓘ HTTP (80), SSH (22) ✓

ⓘ All traffic from the internet will be blocked by default. You will be able to change inbound port rules in the VM > Networking page.

[Review + create](#)

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3. After the deployment of the machine go to resources.
4. Then you need to download the RDP file.
5. We need to log in to the virtual machine so that we can generalise it.

✓ Your deployment is complete



Deployment name: CreateVm-MicrosoftWindowsServer.WindowsSe...

Subscription: [Free Trial](#)

Resource group: app-grp

Start time: 12/29/2023, 1:46:23 PM

Correlation ID: 0405277b-6468-4f1e-8279-19f137f4c7b9



✓ Deployment details

✗ Next steps

[Setup auto-shutdown](#) Recommended

[Monitor VM health, performance and network dependencies](#) Recommended

[Run a script inside the virtual machine](#) Recommended

[Go to resource](#)

[Create another VM](#)

Refresh Troubleshoot More Options Feedback

Connecting using Public IP address | 20.204.83.178

Admin username : demouser
Port (change) : 3389 Check access ⓘ
Just-in-time policy : Unsupported by plan ⓘ

Most common

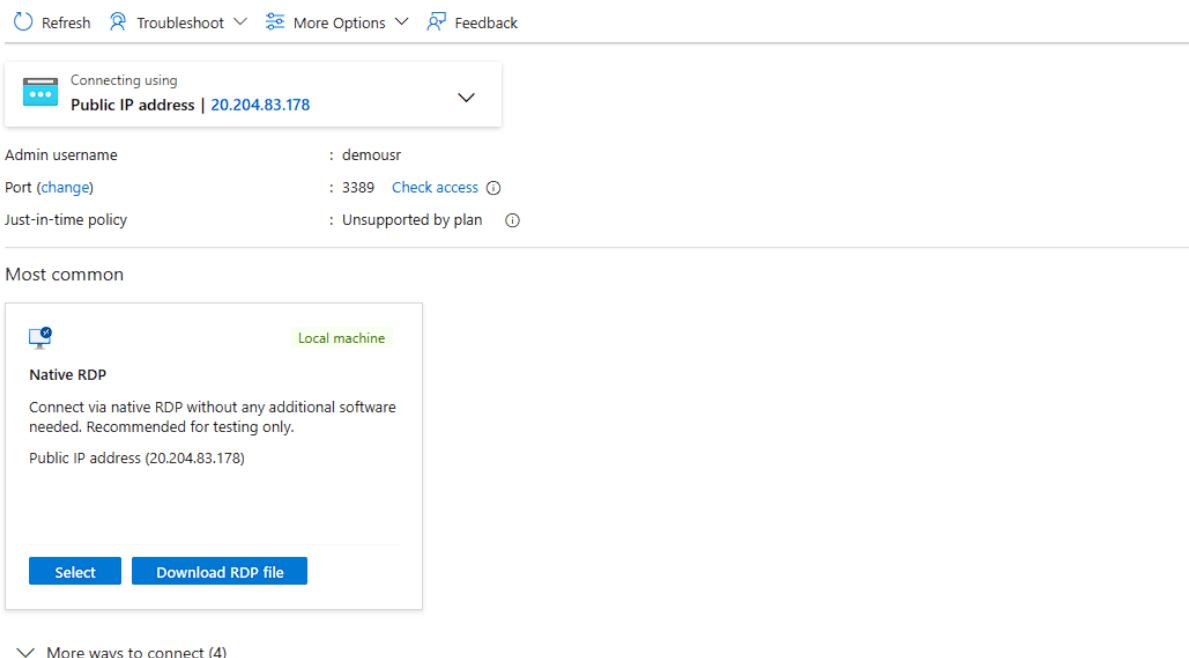
Native RDP Local machine

Connect via native RDP without any additional software needed. Recommended for testing only.

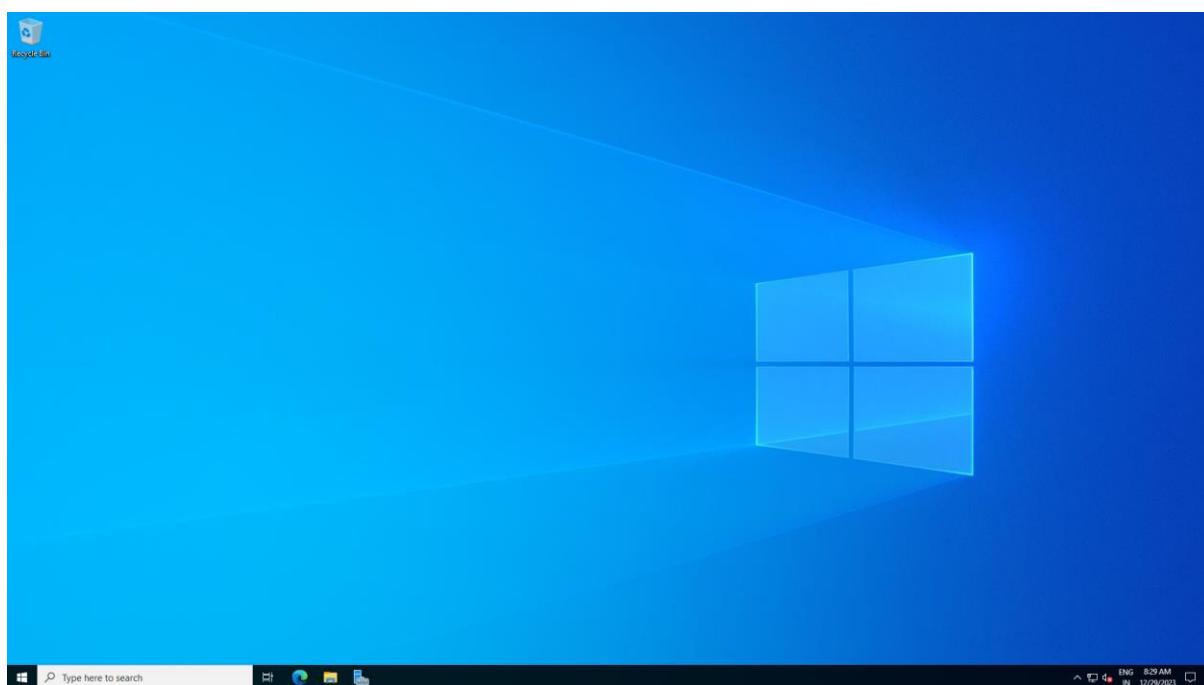
Public IP address (20.204.83.178)

Select Download RDP file

More ways to connect (4)



- Once you are in the VM, there are some steps that you need to follow in order to generalize the VM.



To generalize your Windows VM, follow these steps:

- Sign in to your Windows VM.
- Open a Command Prompt window as an administrator.
- Delete the panther directory (C:\Windows\Panther).
- Verify if CD/DVD-ROM is enabled. If it is disabled, the Windows VM will be stuck at out-of-box experience (OOBE).

Windows (C:)

File	Home	Share	View
← → ↶ ↷ This PC > Windows (C:)			
Quick access			
Desktop			
Downloads			
Documents			
Pictures			
This PC			
Network			
Name	Date modified	Type	Size
Packages	12/29/2023 8:17 AM	File folder	
PerfLogs	5/8/2021 8:20 AM	File folder	
Program Files	12/2/2023 1:23 PM	File folder	
Program Files (x86)	12/2/2023 1:23 PM	File folder	
Temp	12/2/2023 1:34 PM	File folder	
Users	12/29/2023 8:27 AM	File folder	
Windows	12/29/2023 7:54 AM	File folder	
WindowsAzure	12/29/2023 8:17 AM	File folder	

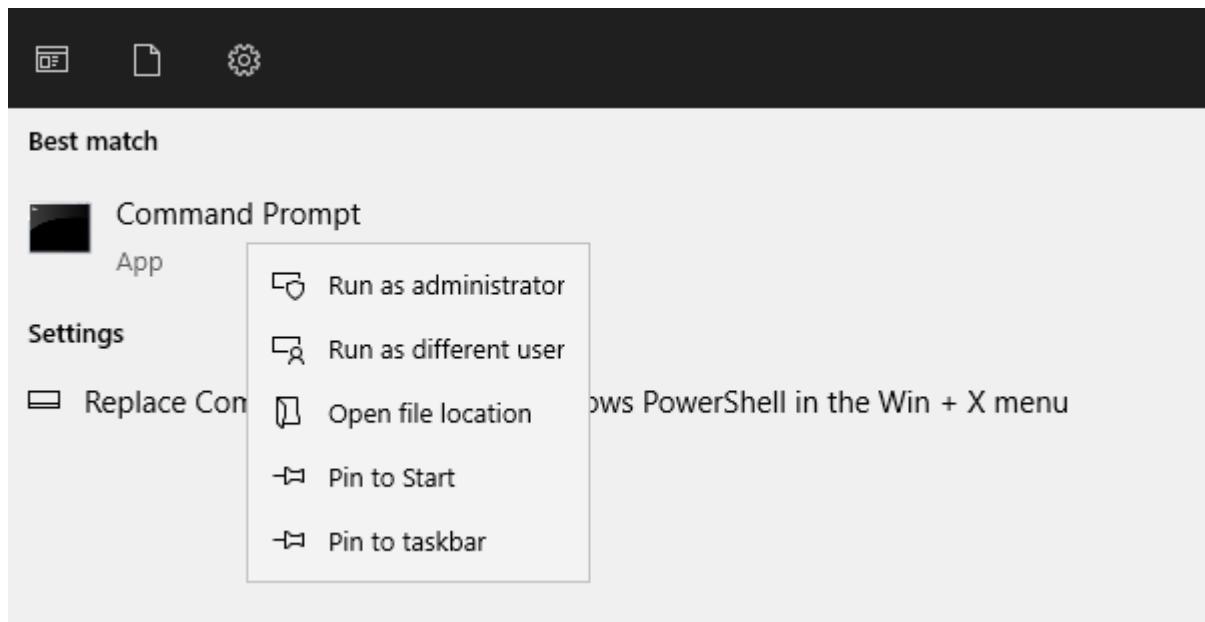
Windows

File	Home	Share	View
← → ↶ ↷ This PC > Windows (C:) > Windows >			
Quick access			
Desktop			
Downloads			
Documents			
Pictures			
This PC			
Network			
Name	Date modified	Type	Size
MICROSOFT\	12/29/2023 8:21 AM	File folder	
Migration	5/8/2021 8:20 AM	File folder	
ModemLogs	5/8/2021 8:20 AM	File folder	
OCR	5/8/2021 9:37 AM	File folder	
OEM	12/29/2023 7:54 AM	File folder	
Offline Web Pages	5/8/2021 8:20 AM	File folder	
Panther	12/29/2023 8:16 AM	File folder	
Performance	5/8/2021 8:20 AM	File folder	
PLA	5/8/2021 8:34 AM	File folder	
PolicyDefinitions	12/2/2023 12:41 PM	File folder	
Prefetch	12/2/2023 1:17 PM	File folder	
RECOVERY	12/29/2023 8:20 AM	File folder	

11. Then change the directory to **%windir%\system32\sysprep**, and then run.
12. After this command you need to run this one.

sysprep.exe /generalize /shutdown

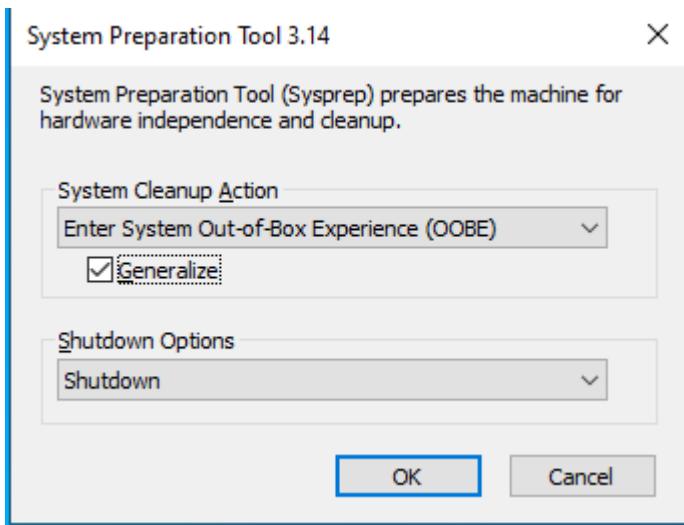
13. For this open you command prompt in the virtual machine then run this.



```
appvm - 20.204.83.178:3389 - Remote Desktop Connection
C:\Users\demouser>cd %windir%\system32\sysprep
```

```
appvm - 20.204.83.178:3389 - Remote Desktop Connection
Administrator: Command Prompt
Microsoft Windows [Version 10.0.20348.2159]
(c) Microsoft Corporation. All rights reserved.

C:\Users\demouser>cd %windir%\system32\sysprep
C:\Windows\System32\Sysprep>sysprep.exe /generalize /shutdown
```



STEP 1: CREATE GENERALIZE IMAGE

1. Once your machine is shut down. Now go back to Portal and open overview of the virtual machine.
2. In the overview click on capture to create a generalize image out of the virtual machine.

Connect ▾ Start Restart Stop Hibernate (preview) Capture Delete Refresh Open in mobile Feedback CLI / PS

Create an image

Basics Tags Review + create

Create an image from this virtual machine that can be used to deploy additional virtual machines and virtual machine scale sets. With a shared image, you can easily replicate the image to Azure regions around the world and manage versions of the image. Certain information from the virtual machine will be carried forward to the image including OS type, VM generation, plan, and publishing details. [Learn more](#)

Project details

Subscription

Free Trial

Resource group *

app-grp

Instance details

Region

(Asia Pacific) Central India

Share image to Azure compute gallery ⓘ

Yes, share it to a gallery as a VM image version.

No, capture only a managed image.

Automatically delete this virtual machine
after creating the image ⓘ



Gallery details

Target Azure compute gallery * ⓘ

(new) generalimage

[Create new](#)

Operating system state ⓘ

Generalized: VMs created from this image require hostname, admin user, and other VM related setup to be completed on first boot

Specialized: VMs created from this image are completely configured and do not require parameters such as hostname and admin user/password

Create a VM image definition

X

VM image definition name *	<input type="text" value="defimage"/> ✓
OS type	<input type="radio"/> Linux <input checked="" type="radio"/> Windows
VM generation	<input type="radio"/> Gen 1 <input checked="" type="radio"/> Gen 2
Security type	<input type="text" value="Standard"/>
VM architecture	<input checked="" type="radio"/> x64 <input type="radio"/> Arm64
Higher storage performance with NVMe (preview)	<input type="checkbox"/>
Hibernation supported (preview)	<input type="checkbox"/>
Accelerated networking	<input checked="" type="checkbox"/>
Publisher *	<input type="text" value="MicrosoftWindowsServer"/>
Offer *	<input type="text" value="WindowsServer"/>
SKU *	<input type="text" value="2022-datacenter-g2"/>

▼ Publishing options (Optional)

Target VM image definition * ⓘ

Create new

Version details

Version number * ⓘ	1.0.0	<input checked="" type="checkbox"/>
Exclude from latest ⓘ	<input type="checkbox"/>	
End of life date ⓘ	10/01/2024	<input type="button" value="Calendar"/>
Shallow replication ⓘ	<input type="checkbox"/>	

Replication

A VM image version can be replicated to different regions depending on what makes sense for your organization. One example is to always replicate the latest image in multiple regions while all older versions are only available in 1 region. This can help save on storage costs for VM image versions.

Default storage sku ⓘ	Zone-redundant	<input type="checkbox"/>
Default replica count * ⓘ	1	
Target regions		
(Asia Pacific) Central India	1	Zone-redundant
(US) East US	1	Zone-redundant

Review + create
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3. Now go to review page and create your image.
4. Once the image is deployed, go to resources.

1.0.0 (generalimage/defimage/1.0.0) ⚡ ☆ ...

VM image version

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Tasks (preview)

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Support + Troubleshooting

+ Create VM + Create VMSS Delete Refresh Give feedback

Essentials

Resource group (move) : app-grp
Status : Succeeded
Location : centralindia
Subscription (move) : Free Trial
Subscription ID : 9acac69d-f5ab-4d7e-9feb-ac0e3ea4372f

Azure compute gallery : generalimage
VM image definition : defimage
Replication status : Completed
Replication mode : Full
Confidential OS disk encr... : -
Encryption type : Platform-managed key
End of life date : 2024-01-09
Exclude from latest : No
Storage account type : Standard HDD LRS

Tags (edit) : Add tags

5. Now you need to create a virtual machine out of this image.

6. For that click on the Create VM option.
7. Choose your resource group. Then give it a name.
8. Then select rest of the options as shown below.

[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](#)

 This subscription may not be eligible to deploy VMs of certain sizes in certain regions.

Project details

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

Subscription * 	<input type="text" value="Free Trial"/>	
Resource group * 	<input type="text" value="app-grp"/>	
	Create new	

Instance details

Virtual machine name * 	<input type="text" value="newvm"/> 
Region * 	<input type="text" value="(Asia Pacific) Central India"/>
Availability options 	<input type="text" value="No infrastructure redundancy required"/>
Security type 	<input type="text" value="Standard"/>
Image * 	<input type="text" value="generalimage/defimage/1.0.0 - x64 Gen2"/>  See all images Configure VM generation
VM architecture 	<input type="radio"/> Arm64 <input checked="" type="radio"/> x64 <div style="margin-top: 10px;"> Arm64 is not supported with the selected image.</div>

Size * ⓘ Standard_D2s_v3 - 2 vcpus, 8 GiB memory (₹11,294.05/month) ▾

[See all sizes](#)

Enable Hibernation (preview) ⓘ ⓘ To enable Hibernation, you must register your subscription. [Learn more](#) ↗

Administrator account

Username * ⓘ appusr ✓

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 * ⓘ HTTP (80), RDP (3389) ▾

ⓘ All traffic from the internet will be blocked by default. You will be able to change inbound port rules in the VM > Networking page.

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- Once it is created and deployed you can go resources and you can see your virtual machine.

✓ Your deployment is complete

 Deployment name : CreateVm-1.0.0-20231229143012
 Subscription : [Free Trial](#)
 Resource group : [app-grp](#)

Start time : 12/29/2023, 2:31:17 PM
 Correlation ID : 1ff541bb-226f-4f7b-9abf-a2400fd113ec

> Deployment details

✓ Next steps

newvm Virtual machine

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Access control (IAM)

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Bastion

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Connect Start Restart Hibernate (preview) Capture Delete Refresh Open in mobile Feedback CLI / PS

JSON View

Essentials

Resource group (move) : app-pm
Status : Resource group assigned
Location : centralindia
Subscription (move) : Free Trial
Subscription ID : 9acac69d-f5ab-4d7e-9feb-ac0e3ea4372f

Tags (edit) : Add tags

Operating system : Windows (Windows Server 2022 Datacenter)
Size : Standard D2s v3 (2 vcpus, 8 GiB memory)
Public IP address : 20.219.35.98
Virtual network/subnet : appvm-vnet/default
DNS name : Not configured
Health state : -

Properties

Virtual machine

Computer name	newvm
Operating system	Windows (Windows Server 2022 Datacenter)
Image publisher	MicrosoftWindowsServer
Image offer	WindowsServer
Image plan	2022-datacenter-g2
VM image definition	defimage
VM generation	V2
VM architecture	x64
Agent status	Ready
Agent version	2.7.41491.1095
Hibernation	Disabled
Host group	-
Host	-
Proximity placement group	-
Colocation status	N/A
Capacity reservation group	-

Networking

Public IP address	20.219.35.98 (Network interface newvm602)
Public IP address (IPv6)	-
Private IP address	10.0.0.5
Private IP address (IPv6)	-
Virtual network/subnet	appvm-vnet/default
DNS name	Configure

Size

Size	Standard D2s v3
vCPUs	2
RAM	8 GiB

Disk

OS disk	newvm_OsDisk_1_70562c05f66430a88086847fb05fd9
Encryption at host	Disabled
Azure disk encryption	Not enabled
Ephemeral OS disk	N/A

NOW DELETE ALL YOUR RESOURCES.