

Exercise - Create a Windows virtual machine

- 10 minutes

In this lab you will create a new Windows VM and add a data disk to it, to make it ready for production. This VM will be configured as an FTP server, and will host a third-party application.

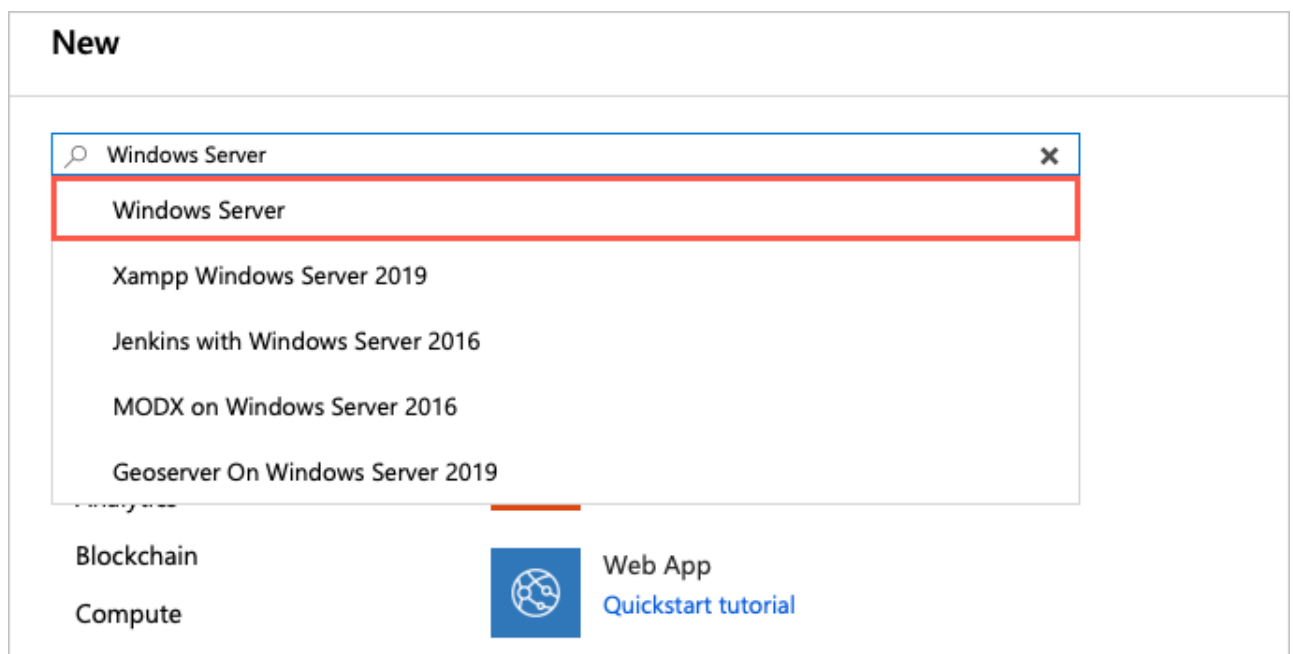
Login to the Azure Portal

1. Open the [Azure portal](#) in a browser.
2. Sign into Azure using the Microsoft account email address and password you created for this session.

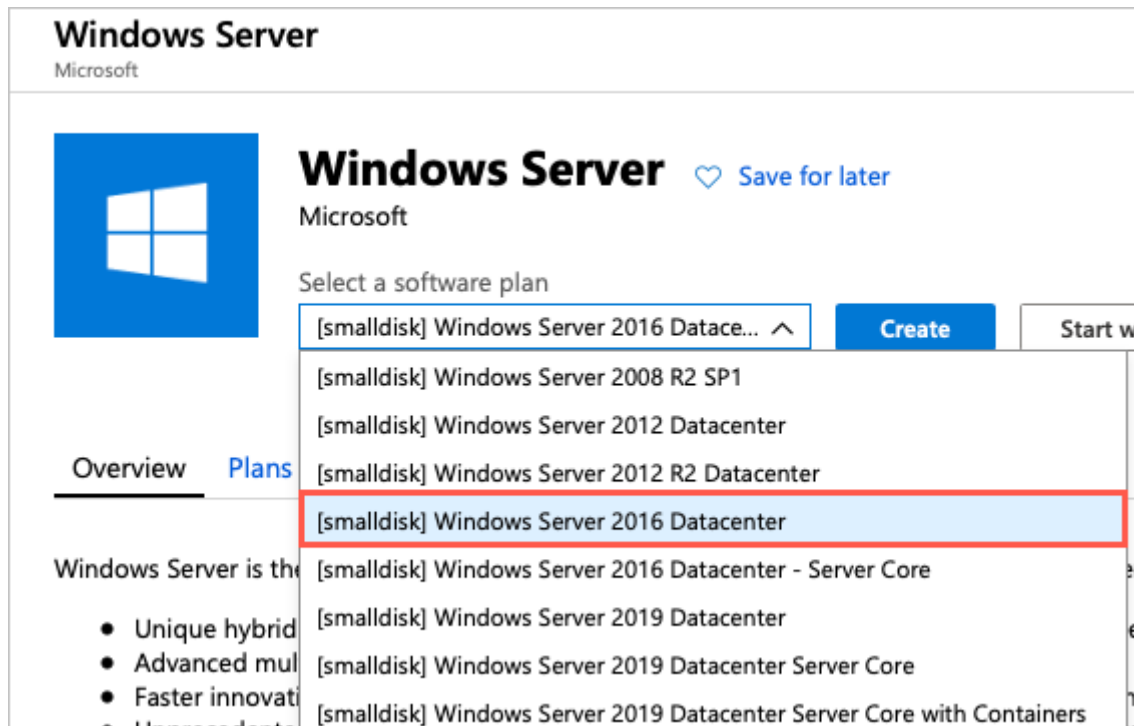
Create a new Windows virtual machine

We can create Windows VMs with the Azure portal, Azure CLI, or Azure PowerShell. The easiest approach is the portal because it walks you through the required information and provides hints and helpful messages during the creation of the VM.

1. Click **Create a resource** in the upper left corner of the Azure portal.
2. In the search box, enter **Windows Server 2016 Datacenter** and then click on the link with the same title in the presented list.



3. There are several Windows Server versions we can select from to create our VM. In the *Windows Server* image overview panel, click on the **Select a software plan** dropdown list and find the **Windows Server 2016 Datacenter** option.



4. Click the **Create** button to start configuring the VM.

Configure the VM settings

The VM creation experience in the portal is presented in a "wizard" format to walk you through all the configuration areas for the VM. Clicking the **Next** button will take you to the next configurable section. However, you can move between the sections at will with the tabs running across the top that identify each section.

Once you fill in all the required options (identified with red stars), you can skip the remainder of the wizard experience and start creating the VM through the **Review + Create** button at the bottom.

We'll start with the **Basics** section.

Configure basic VM settings

Note As you change settings and tab out of each free-text field, Azure will validate each value automatically and place a green check mark next to it when it's good. You can hover over error indicators to get more information on issues it discovers.

1. Select the **Subscription** you are using for this session.
2. For **Resource group**, click **Create new** and enter **labvms-eastus**.

Note - You will use **East US** for this lab, as future labs depend on it, so you will create a new resource group specifically for these labs.

3. In the **INSTANCE DETAILS** section, enter **test-win-vm1** for the name of the VM.
 - It's best practice to standardize your resource names so you can easily identify their purpose. Windows VM names are a bit limited - they must be between 1 and 15 characters, cannot contain non-ASCII or special characters, and must be unique in the current resource group.

4. Select **East US** for the **Region**, from the list.

Note - You **MUST** use **East US** for this lab, as future labs depend on it.

5. Leave **Availability options** as "None". This option is used to ensure the VM is highly available by grouping multiple VMs together a set to deal with planned or unplanned maintenance events or outages.
6. Ensure the image is set to "Windows Server 2016 Datacenter". You can open the drop-down list to see all the options available.
7. Under **Size** click **Select size** and select **DS1_v2**. The resulting dialog allows you to filter based on # of CPUs, Name, and Disk Type. Select "Standard DS1 v2" (normally the default) when you are done. That will give the VM 1 CPU and 3.5 GB of memory.

Tip You can also just slide the view to the left to get back to the VM settings as it opened a new window off to the right and slid the window over to view it.

8. In the **ADMINISTRATOR ACCOUNT** section, set the **Username** field to a username you will use to sign in to the VM.
9. In the **Password** field, enter a password that's at least 12 characters long. It must have three of the following: one lower case character, one uppercase character, one number, and one special character that is not " or '-'. Use something you will remember or write it down, you will need it later.
10. Confirm the **password**.
11. In the **INBOUND PORT RULES** section, open the list and choose *Allow selected ports*. Since this is a Windows VM, we want to be able to access the desktop using RDP. Scroll the list if necessary until you find RDP (3389) and select it. As the note in the UI indicates, we can also adjust the network ports after we create the VM.

12. Review the settings on the Basics tab before proceeding.

Home > New > Windows Server > Create a virtual machine

Create a virtual machine



[Basics](#) [Disks](#) [Networking](#) [Management](#) [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.

Looking for classic VMs? [Create VM from Azure Marketplace](#)



Project details



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



* Subscription  Free Trial 



* Resource group  (New) labvms-eastus 
[Create new](#)


Instance details

* Virtual machine name  test-win-vm1 



* Region  (US) East US 



Availability options  No infrastructure redundancy required 



* Image  [smalldisk] Windows Server 2016 Datacenter 
[Browse all public and private images](#)

* Size  **Standard DS1 v2**
1 vcpu, 3.5 GiB memory
[Change size](#)

Administrator account


* Username  azadmin 



* Password  

* Confirm password  

Inbound port rules

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

* Public inbound ports  ☐ None ☒ Allow selected ports

* Select inbound ports  RDP 

Configure Disks for the VM

1. Click **Next** to move to the Disks section.

Home > New > Windows Server > Create a virtual machine

Create a virtual machine

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

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

Disk options

* OS disk type ? Premium SSD ▼

Enable Ultra Disk compatibility (Preview) ? ☐ Yes ☒ No

Ultra Disk compatibility is not available for this VM size and location.

Data disks

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

LUN	NAME	SIZE (GiB)	DISK TYPE	HOST CACHING
Create and attach a new disk Attach an existing disk				

▼ Advanced

2. Confirm that "Premium SSD" is selected for the **OS disk type**.

Create a data disk

Recall we will get an OS disk (C:) and Temporary disk (D:). Let's add a data disk as well.

1. Click the **Create and attach a new disk** link in the **DATA DISKS** section, then click **Change size**, select **32 GiB**, and click **OK**.

Select a disk size ✕

Browse available disk sizes and their features.

Account type ⓘ
Premium SSD ▼

SIZE	DISK TIER	MAX IOPS	MAX THROUGHPUT
32 GiB	P4	120	25
64 GiB	P6	240	50
128 GiB	P10	500	100
256 GiB	P15	1100	125
512 GiB	P20	2300	150
1024 GiB	P30	5000	200
2048 GiB	P40	7500	250
4096 GiB	P50	7500	250
8192 GiB	P60	16000	500
16384 GiB	P70	18000	750
32767 GiB	P80	20000	900

Create a custom size

Enter the size of the disk you would like to create. You will be charged the same rate for your provisioned disk, regardless of how much of the disk space is being used. For example, a 200 GiB disk is provisioned on a 256 GiB disk, so you would be billed for the 256 GiB provisioned.

* Custom disk size (GiB)
32 ✓

OK

2. You can take the rest of the defaults: Premium SSD, 32 GB, and None (empty disk); although notice that here is where we could use a snapshot, or Storage Blob to create a VHD.
3. Confirm the **Size** is **32 GiB** and click **OK** to create the disk and go back to the **DATA DISKS** section.

Home > New > Windows Server > Create a virtual machine > Create a new disk

Create a new disk

Create a new disk to store applications and data on your VM. Disk pricing varies based on factors including disk size, storage type, and number of transactions. [Learn more about Azure Managed Disks](#)

* Name

* Source type

* Size

32 GiB
Premium SSD
[Change size](#)

OK

4. There should now be a new disk in the first row.

Home > New > Windows Server > Create a virtual machine

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Disk options

* OS disk type

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LUN	NAME	SIZE (GiB)	DISK TYPE	HOST CACHING
<input type="text" value="0"/>	test-win-vm1_DataDisk_0	32	Premium SSD	<input type="text" value="None"/>

[Create and attach a new disk](#) [Attach an existing disk](#)

Advanced

Configure Management

1. On the **Management** tab, under **Monitoring**, switch **Boot diagnostics** to **Off**.

Create a virtual machine

[Basics](#) [Disks](#) [Networking](#) [Management](#) [Advanced](#) [Tags](#) [Review + create](#)

Configure monitoring and management options for your VM.

Azure Security Center

Azure Security Center provides unified security management and advanced threat protection across hybrid cloud workloads. [Learn more](#)

✔ Your subscription is protected by Azure Security Center basic plan.

Monitoring

Boot diagnostics ⓘ ☐ On ☒ Off

OS guest diagnostics ⓘ ☐ On ☒ Off

Identity

System assigned managed identity ⓘ ☐ On ☒ Off

Azure Active Directory

Login with AAD credentials (Preview) ⓘ ☐ On ☒ Off

⚠ This preview capability is not for production use. When you sign in, verify the name of the app on the sign-in screen is "Azure Linux VM sign in" and the IP address of the target VM is correct.

Auto-shutdown

Enable auto-shutdown ⓘ ☐ On ☒ Off

Backup

Enable backup ⓘ ☐ On ☒ Off

Finish configuring the VM and create the image

The rest of the options have reasonable defaults and there's no need to change any of them. You can explore the other tabs if you like. The individual options have an ⓘ icon next to them that will show a help bubble to explain the option. This is a great way to learn about the various options you can use to configure the VM.

1. Click the **Review + create** button at the bottom of the panel.
2. The system will validate your options and give you details about the VM being created.
3. Click **Create** to create and deploy the VM. The Azure dashboard will show the VM that's being deployed. This may take several minutes.

Congratulations! With a few steps, you deployed a VM that runs Windows.