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BSSE 7A

Lab 1

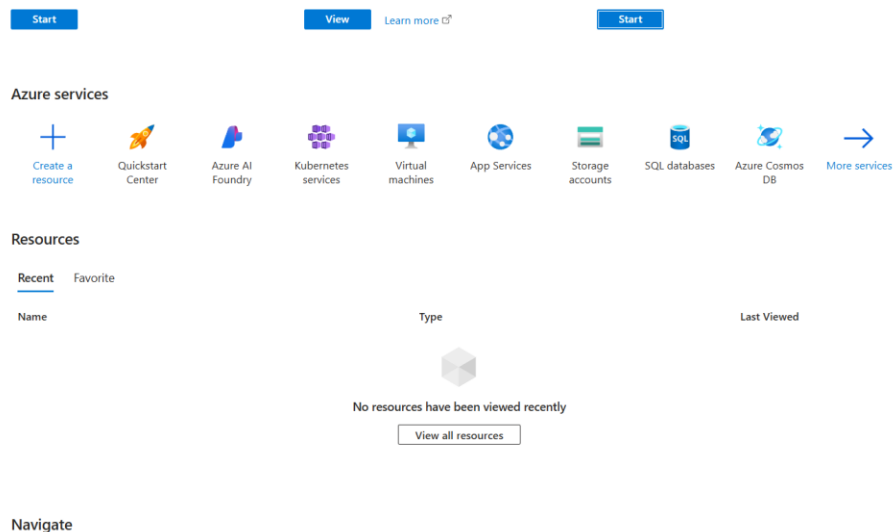
01- Create a virtual machine in the portal (10 min)

In this walkthrough, we will create a virtual machine in the Azure portal, connect to the virtual machine, install the web server role and test.


Note: Take time during this walk-through to click and read the Informational icons.

Task 1: Create the virtual machine

1- Sign-in to the Azure portal: <https://portal.azure.com>



2- From the All services blade in the Portal Menu, search for and select Virtual machines, and then click +Create and choose +Azure Virtual machine from the drop down.



Compute infrastructure | Virtual machines

Recommend VM

Search

Virtual machines

Get started

Overview

All resources

Infrastructure

Virtual machines

Virtual Machine Scale Set (VMSS)

Compute Fleet

Disks + images

Capacity + placement

Related services

Monitoring+Policy

Help

Create

Reservations

Manage view

Refresh

Virtual machine

Best for lower-traffic workloads, testing, or to control or highly customize apps, OS, or file system. If your workload or traffic starts to grow, a VM can later be attached to a Virtual Machine Scale Set (VMSS).

Virtual machine scale set (VMSS)

Built-in scaling, performance optimization, load balancing, and batch management for 1 to 1,000 VMs (no added cost). Include multiple VM sizes, zones, regions, and domains, along with discounted Spot VMs.

Presets

Create a pre-configured VM designed to optimize memory, capacity, or for general use. Deploy as-is, or customize as needed.

Hybrid, preconfigured, and high volume solutions

Explore pre-configured Starter kits for Linux and Windows, Azure Arc hybrid infrastructure solutions, and more.

Showing 1 - 0 of 0. Display count: auto

3- On the Basics tab, fill in the following information (leave the defaults for everything else):

Settings Values

Subscription Use default supplied

Resource group Create new resource group Virtual machine name myVM

Region (US) East US Availability options No infrastructure redundancy option

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

Subscription * ⓘ ▼

Resource group * ⓘ ▼

[Create new](#)

Instance details

Virtual machine name * ⓘ ✓

Region * ⓘ ▼

[Deploy to an Azure Extended Zone](#)

Availability options ⓘ ▼

4- Required Image Windows Server 2019 Datacenter - Gen2 Size Standard D2s v3

Administrator account username azureuser Administrator account password (type in carefully!) Pa\$Sw0rd1234 Inbound port rules - **Allow select ports ** Select inbound ports RDP (3389) and HTTP (80)

Administrator account

Username * ⓘ ✓

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 * ▼

⚠ This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

5- Switch to the Management tab, and in its Monitoring section, select the following setting: Settings Values Boot diagnostics Disable

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

Configure monitoring options for your VM.

Alerts

Enable recommended alert rules ⓘ ☐

Diagnostics

Boot diagnostics ⓘ ☐ Enable with managed storage account (recommended)
☐ Enable with custom storage account
☒ Disable

Enable OS guest diagnostics ⓘ ☐

Health

Enable application health monitoring ⓘ ☐

6- Leave the remaining values on the defaults and then click the Review + create button at the bottom of the page.

7- Once Validation is passed click the Create button. It can take anywhere from five to seven minutes to deploy the virtual machine

8- You will receive updates on the deployment page and via the Notifications area (the bell icon in the top menu bar)

CreateVm-MicrosoftWindowsServer.WindowsServer-202-20251106023727 | Overview ...

Deployment

Search x «

Delete Cancel Redeploy Download Refresh

Overview

Inputs

Outputs

Template

✓ Your deployment is complete

Deployment name : CreateVm-MicrosoftWindowsServer.WindowsServer-... Start time : 11/6/2025, 2:51:41 AM

Subscription : Azure subscription 1 Correlation ID : 4533c41a-cb6a-448a-96db-6504801f79cb

Resource group : myVM_group

> Deployment details

✓ Next steps

[Set up 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](#)

Give feedback

[Tell us about your experience with deployment](#)

Task 2: Connect to the virtual machine

In this task, we will connect to our new virtual machine using RDP (Remote Desktop Protocol).

1. Click on bell icon from the upper blue toolbar, and select 'Go to resource' when your deployment has succeeded.

Note: You could also use the Go to resource link on the deployment page.

Activity log

More events in the activity log →

Dismiss all ▾

✓

Deployment succeeded

✕

Deployment 'CreateVm-MicrosoftWindowsServer.WindowsServer-202-20251106023727' to resource group 'myVM_group' was successful.

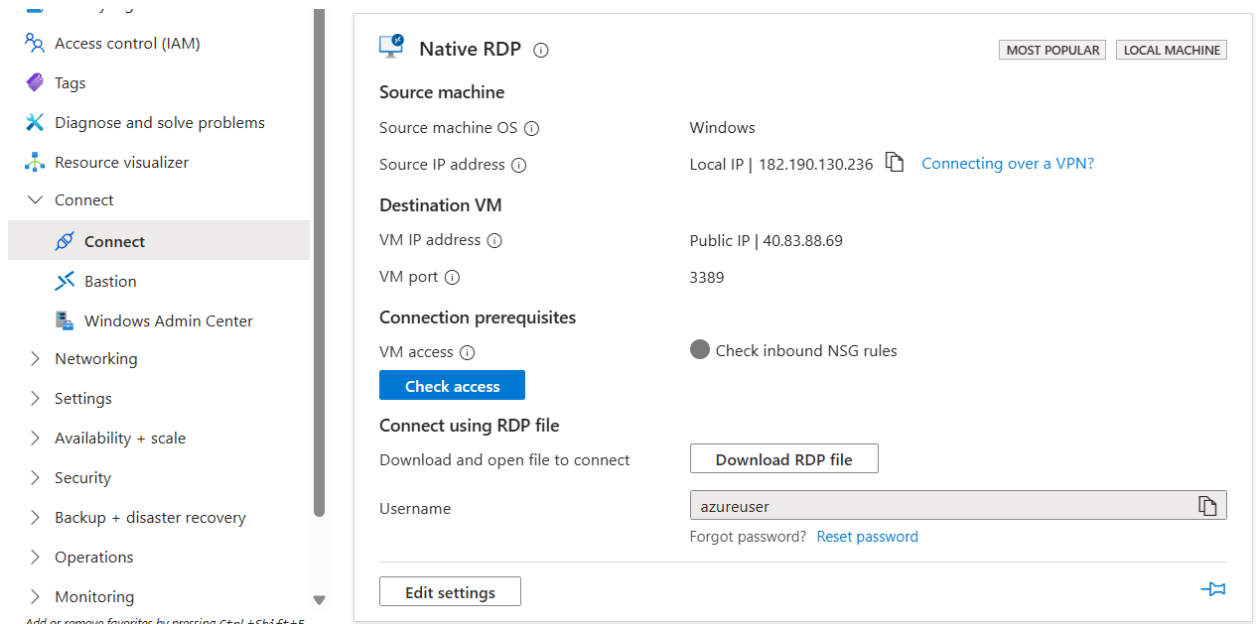
Go to resource

📌 Pin to dashboard

7 minutes ago

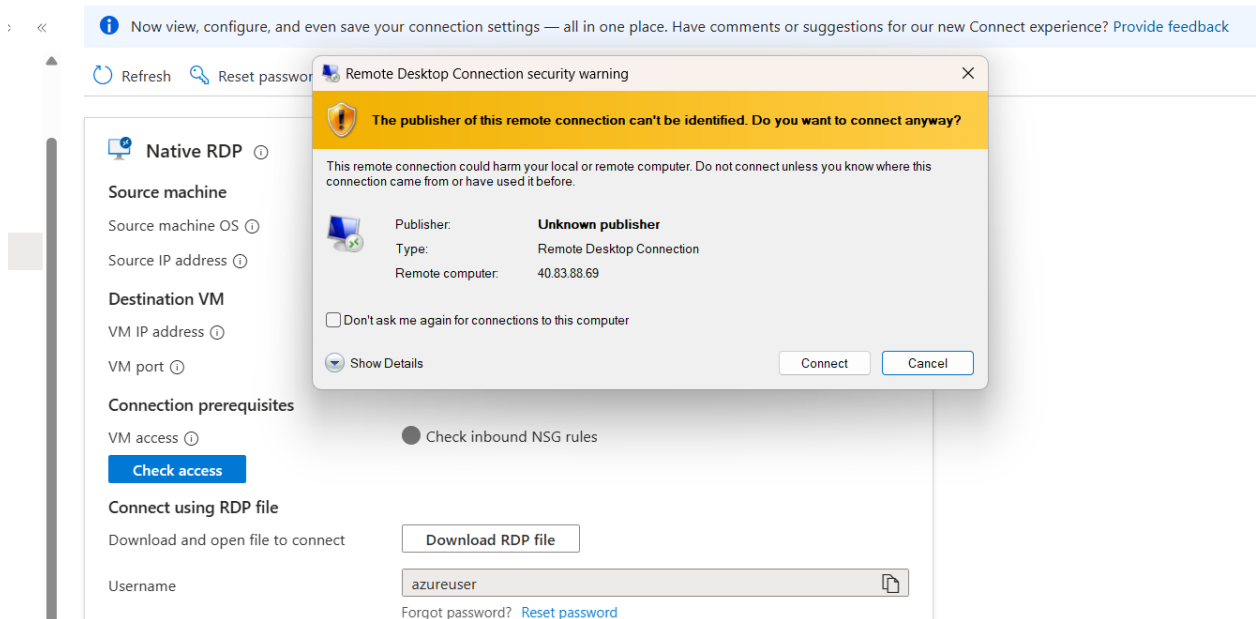
2. On the virtual machine Overview blade, click Connect button and choose RDP from the drop down.

Note: The following directions tell you how to connect to your VM from a Windows computer. On a Mac, you need an RDP client such as this Remote Desktop Client from the Mac App Store and on a Linux computer you can use an open source RDP client.



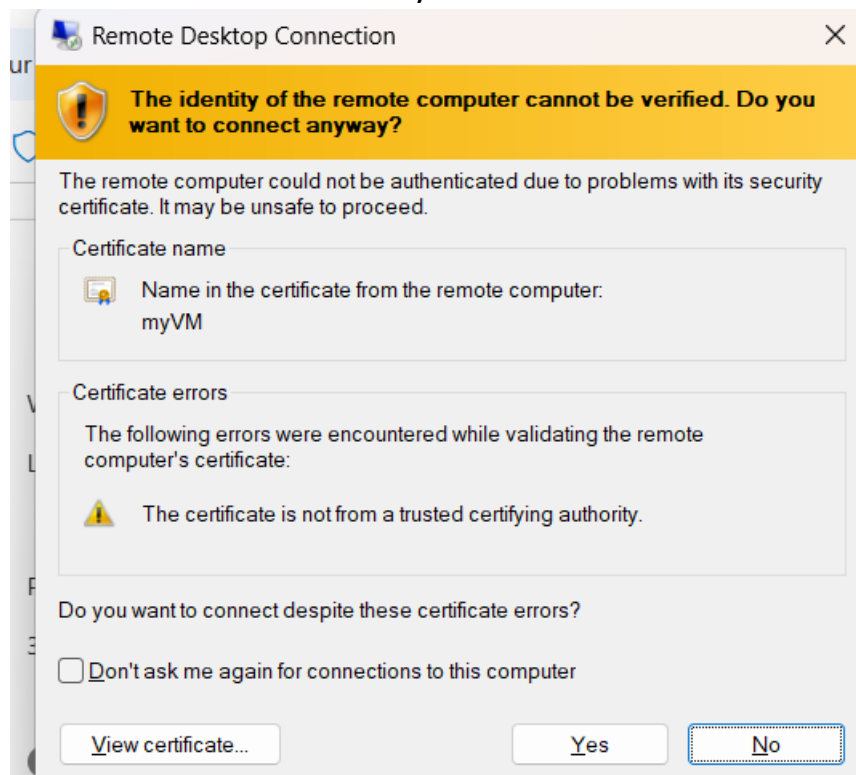
3. On the Connect to virtual machine page, keep the default options to connect with the public IP address over port 3389 and click Download RDP File. A file will download on the bottom left of your screen.

4. Open the downloaded RDP file (located on the bottom left of your lab machine) and click Connect when prompted.



5. In the Windows Security window, sign in using the Admin Credentials you used when creating your VM azureuser and the password Pa\$\$w0rd1234.

6. You may receive a warning certificate during the sign-in process. Click Yes or to create the connection and connect to your deployed VM. You should connect successfully.



Task 3: Install the web server role and test

In this task, install the Web Server role on the server on the Virtual Machine you just created and ensure the default IIS welcome page will be displayed.

1. In the newly opened virtual machine, launch PowerShell by searching PowerShell in the search bar, when found right click Windows PowerShell to Run as administrator

```
C:\Users\azureuser>Install-WindowsFeature -name Web-Server -IncludeManagementTools
```


2. In PowerShell, install the Web-Server feature on the virtual machine by running the following command. (Paste in the command and hit ENTER for the installment to begin).

Code: `Install-WindowsFeature -name Web-Server – IncludeManagementTools`

```
Success Restart Needed Exit Code      Feature Result
-----
True      Yes           NoChangeNeeded {}

PS C:\Users\azureuser> |
```

3. Back in the portal, navigate back to the Overview blade of myVM and, use the Click to clipboard button to copy the public IP address of myVM, then open a new browser tab, paste the public IP address into the URL text box, and press the Enter key to browse to it.

4. The default IIS Web Server welcome page will be displayed.

