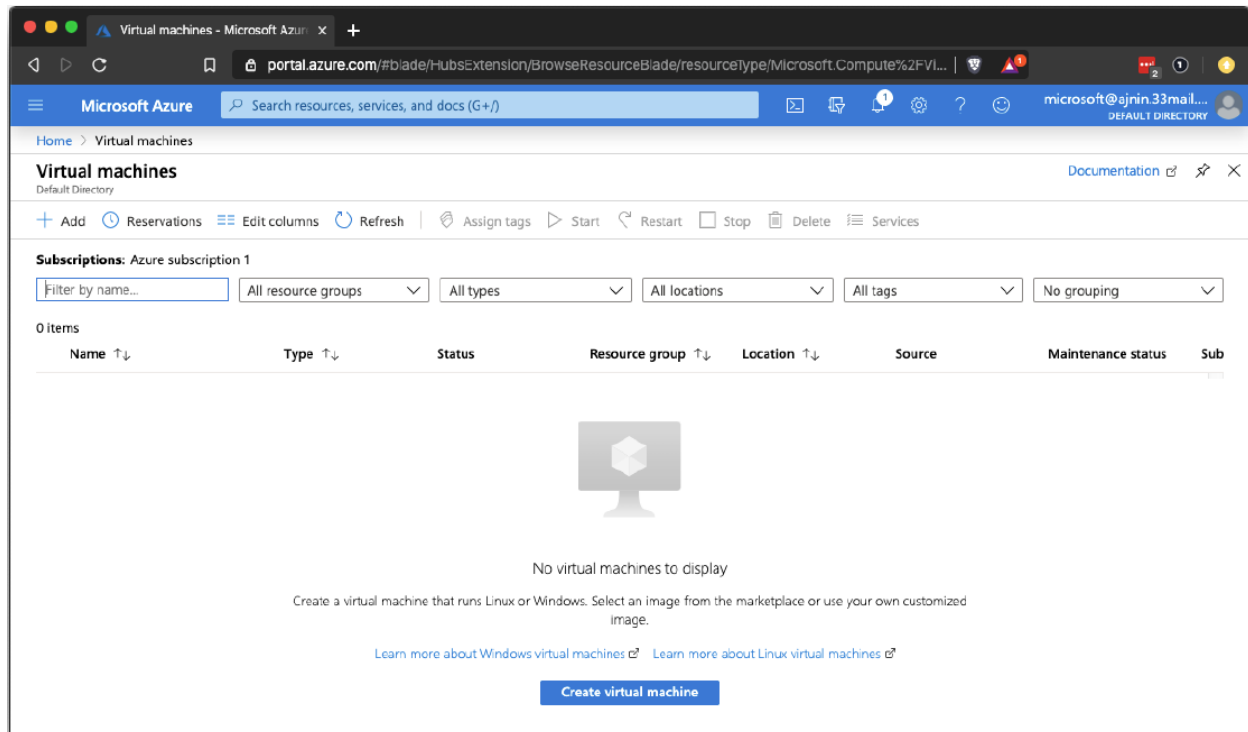


## Create Jumpbox VM:

Open your Azure portal and search for "virtual machines."

Use the **+ Add** button or the **Create virtual machine** button to create a new VM.



Use the following settings for this VM:

Resource group: Choose the same resource group that you created for the Red Team.

- Virtual machine name: Use the name "Jump Box Provisioner."
- Region: Use the same region that you used for your other resources.
- Note that availability of VM's in Azure could cause you to change the region where your VM's are created.
- The goal is to create 3 machines in the same resource group attached to the same security group. If you cannot add 3 machines to the resource group and security group that you have, a new resource group and security group may need to be created in **another region**.

Availability options: We will use this setting for other machines. For our jump box, we will leave this on the default setting.

Image: Choose the Ubuntu Server 18.04 option.

Choose the VM option that has:

- Whose offering is Standard - B1s
- 1 CPU
- 1 RAM

For SSH, use the following settings:

- Authentication type: SSH public key.
- Username: Create any username you like.
- SSH public key: Paste the public key string that you copied earlier.
- Public inbound ports: Ignore this setting. It will be overwritten when you choose your security group.

For SSH, use the following settings:

- Authentication type: SSH public key.
- Username: Create any username you like.
- SSH public key: Paste the public key string that you copied earlier.
- Public inbound ports: Ignore this setting. It will be overwritten when you choose your security group.
- Select inbound ports: Ignore this setting. It will be overwritten when you choose your security group.

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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 \* ⓘ Azure subscription 1

Resource group \* ⓘ Red-Team [Create new](#)

### Instance details

Virtual machine name \* ⓘ Jump-Box-Provisioner ✓

Region \* ⓘ (US) Central US

Availability options ⓘ No infrastructure redundancy required

Image \* ⓘ Ubuntu Server 18.04 LTS [Browse all public and private images](#)

Size \* ⓘ **Standard B1s**  
1 vcpu, 1 GiB memory (\$9.30/month) [Change size](#)

### Administrator account

Authentication type ⓘ ☐ Password ☒ SSH public key

Username \* ⓘ RedAdmin ✓

SSH public key \* ⓘ 

X8JvbmjkPbvjdPGmUQkUOwJOfto1M4dh7Czb9t5BkhLwu6Zs3UgYpE/Emypc/  
+Tc80  
IblJbdmFUBkESuHoBjUd7HePDg3DCsU138RdSxIR

[Learn more about creating and using SSH keys in Azure](#) ✓

### 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 \* SSH (22)

⚠ 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.

Move to the **Networking** tab and set the following settings:

- Virtual network: Choose the VNet you created for the Red Team.
- Subnet: Choose the subnet that you created earlier.

- Public IP: Choose `Create new` and choose `Static` under Assignment in the side
- panel. Give the IP Address a unique name.

## Create public IP address ×

Name \*

SKU ⓘ

☒ Basic ☐ Standard

Assignment

☐ Dynamic ☒ Static

- NIC network security group: Choose the Advanced option so we can specify our custom security group.
- Configure network security group: Choose your Red Team network security group.
- Accelerated networking: Keep as the default setting (Off).
- In the Networking settings, take note of the VM URL. You may use it later.
- Load balancing: Keep as the default setting (No).

Create a virtual machine - Microsoft

portal.azure.com/#create/Microsoft.VirtualMachine

Microsoft Azure

Search resources, services, and docs (G+)

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Create a virtual machine

BasicsDisksNetworkingManagementAdvancedTagsReview + create

Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution.  
[Learn more](#)

Network interface

When creating a virtual machine, a network interface will be created for you.

Virtual network \*

RedNet

Create new

Subnet \*

RedNetBase (10.0.0.0/24)

Manage subnet configuration

Public IP

(new) Jump-Box-Provisioner

Create new

NIC network security group 

☐ None

☐ Basic

☒ Advanced

Configure network security group \*

RedTeamSG

Create new

Accelerated networking 

☐ On

☒ Off

The selected VM size does not support accelerated networking.

Load balancing

You can place this virtual machine in the backend pool of an existing Azure load balancing solution. [Learn more](#)

Place this virtual machine behind an existing load balancing solution? 

☐ Yes

☒ No

Review + create

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Click on **Review + create**.

Create a virtual machine - Microsoft

portal.azure.com/#create/Microsoft.VirtualMachine

Microsoft Azure Search resources, services, and docs (G+)

Home > Virtual machines > Create a virtual machine

## Create a virtual machine

✓ Validation passed

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

### PRODUCT DETAILS

Standard B1s  
by Microsoft  
[Terms of use](#) | [Privacy policy](#)

Subscription credits apply ⓘ  
**0.0125 USD/hr**  
[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.

### Basics

Subscription	Azure subscription 1
Resource group	Red-Team
Virtual machine name	Jump-Box-Provisioner
Region	(US) Central US
Availability options	No infrastructure redundancy required
Authentication type	SSH public key
Username	RedAdmin

### Disks

OS disk size	Default size (30 GiB)
OS disk type	Premium SSD
Use managed disks	Yes
Use ephemeral OS disk	No

### Networking

Virtual network	RedNet
Subnet	RedNetBase (10.0.0.0/24)
Public IP	(new) Red-Team-Web-VM-1-ip
NIC network security group	RedTeamSG
Accelerated networking	Off
Place this virtual machine behind an existing load balancing solution?	No

### Management

Boot diagnostics	On
OS guest diagnostics	Off
Azure Security Center	Basic (free)
Diagnostics storage account	(new) redteamdiag821

**Create**    < Previous    Next >    [Download a template for automation](#)

Finalize all your settings and create the VM by clicking on the Create button.

### VM's 2 and 3 - Web VM's:

Create 2 more new VMs. Keep the following in mind when configuring these VM's: - Each VM should be named "Web-1" and "Web-2"

- These VM's need to be in the same resource group you are using for all other resources.

- The VM's should be located in the same region as your resource group and security group.
- Note that availability of VM's in Azure could cause you to change the region where your VM's are created.
- The goal is to create 3 machines in the same resource group attached to the same security group. If you cannot add 3 machines to the resource group and security group that you have, a new resource group and security group may need to be created in another region.
- The administrative username should make sense for this scenario. You should use the same admin name for all 3 machines. Make sure to take a note of this name as you will need it to login later.
- You will need to create a new SSH key for remote connections.
  - **Note:** Windows users should use GitBash to create ssh keys and ssh connections.
- Choose the VM option that has:
  - Whose offering is Standard - B1ms
  - 1 CPU
  - 2 RAM

**Note:** These web machines should have 2 GB of RAM and the Jump-Box only needs 1 GB. All 3 machines should only have 1 vCPU because the free Azure account only allows 4 vCPU's in total per region.

**Important:** Make sure both of these VM's are in the same availability Set. Under Availability Options, select 'Availability Set'. Click on 'Create New' under the Availability set. Give it an appropriate name. After creating it on the first VM, choose it for the second VM.

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## Create a virtual machine

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[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.

**Project details**

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

Subscription \* ⓘ Azure subscription 1

Resource group \* ⓘ RedTeam  
[Create new](#)

**Instance details**

Virtual machine name \* ⓘ Web-1 ✓

Region \* ⓘ (US) East US

Availability options ⓘ Availability set

Availability set \* ⓘ No existing availability sets in current resource group and location.  
[Create new](#)

Image \* ⓘ Ubuntu Server 18.04 LTS  
[Browse all public and private images](#)

Size \* ⓘ **Standard B1ms**  
1 vcpu, 2 GiB memory (\$15.11/month)  
[Change size](#)

**Administrator account**

Authentication type ⓘ ☒ SSH public key ☐ Password

Username \* ⓘ sysadmin ✓

SSH public key \* ⓘ  
VaQ56ydxDY7w3BQvURbU9rUmuJU15uWTKJjqE9EzNYyinMTv24s3wH-bevuK  
6tDHTPSOJNNP  
geJRZRCdgs/BOGjsyrCK+ +99  
[Learn more about creating and using SSH keys in Azure](#)

**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.

Review + create
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### Create new

Group two or more VMs in an availability set to ensure that at least one is available during planned or unplanned maintenance events.  
[Learn more](#)

Name \* RedTeamAS

Fault domains ⓘ 2

Update domains ⓘ 5

Use managed disks ⓘ  
☐ No (Classic) ☒ Yes (Aligned)

OK

In the Networking tab and set the following settings:

- Virtual network: Choose the VNet you created for the Red Team.
- Subnet: Choose the subnet that you created earlier.
- Public IP: NONE! Make sure these web VM's do not have a public IP address.



## Create a virtual machine



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



Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution. [Learn more](#)


### Network interface


When creating a virtual machine, a network interface will be created for you.


Virtual network \*  rednet   
[Create new](#)

Subnet \*  default (10.0.0.0/24)   
[Manage subnet configuration](#)

Public IP  None   
[Create new](#)

NIC network security group  ☐ None ☐ Basic ☒ Advanced

Configure network security group \* Red5G   
[Create new](#)

Accelerated networking  ☐ On ☒ Off

The selected VM size does not support accelerated networking.

### Load balancing

You can place this virtual machine in the backend pool of an existing Azure load balancing solution. [Learn more](#)

Place this virtual machine behind an existing load balancing solution? ☐ Yes ☒ No

- NIC network security group: Choose the Advanced option so we can specify our custom security group.
- Configure network security group: Choose your Red Team network security group.
- Accelerated networking: Keep as the default setting (Off).
- In the Networking settings, take note of the VM URL. You may use it later.
- Load balancing: Keep as the default setting (No).

**NOTE:** Notice that these machines will not be accessible at this time because our security group is blocking all traffic. We will configure access to these machines in a later activity.

Below is an example of how to create/view ssh keys- note this key must be generated from the local machine:

```
cyber@2Us-MacBook-Pro ~ % ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/Users/cyber/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in id_rsa.
Your public key has been saved in id_rsa.pub.
The key fingerprint is:
SHA256:r3aBFU50/SiQbbzhqXY+fOIivRFdMFt37AvLJifC/0 cyber@2Us-MacBook-
Pro.local
The randomart image is:
+---[RSA 2048]-----+
| .. . ... |
| o. =..+ |
| o .o *=+ |
| o +oB+ |
| So o .*o. |
| ..+...+ . |
| o+++.+ |
```



```
| ..00=+* o|  
| ... ..=E=.|  
+----[SHA256]-----+
```

Run `cat ~/.ssh/id_rsa.pub` to display your `id_rsa.pub` key:

```
cyber@2Us-MacBook-Pro ~ % cat ~/.ssh/id_rsa.pub  
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQDGG6dBJ6ibhgM09U+kn/5NE7cGc4CNH  
WXein0f+MciKElDalf76nVgFvJQEImMhAGrtRRJDAd6itlPyBpurSyNOByU6LX7G16Df  
GQKzQns6+n9BheiVLLY9dtodp8oAXdVEGles5EslflPrTrjijVZa9lxGe34DtrjijExWM  
6hBb0Kvw1kU4worPblINx+ghDv+3pdrkUXMsQAht/fLdtP/EBwgSXKYCu/
```

ssh [sysadmin@13.77.182.22](mailto:sysadmin@13.77.182.22) to jumpbox