Create a Linux virtual machine in the Azure portal

Objectives:

- Create virtual machine (ubuntu)
- Connect to the virtual machine
- Install web server
- Browse the web server
- Clean up resources

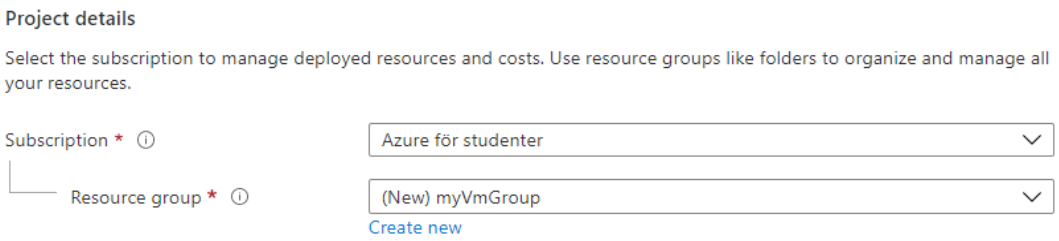
Sign in to Azure

Sign in to the Azure portal

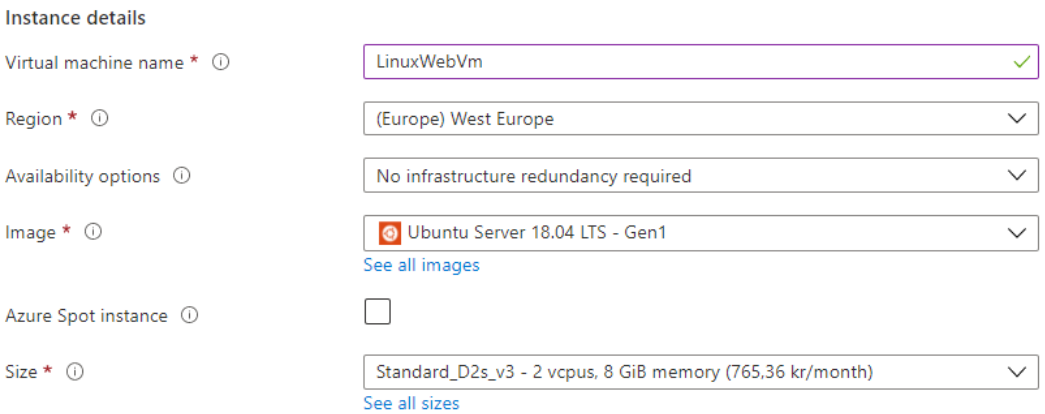
Create virtual machine

Simple Virtual Machine deployment. There are dozens of settings when creating a vm, in this session we will change the bare minimum.

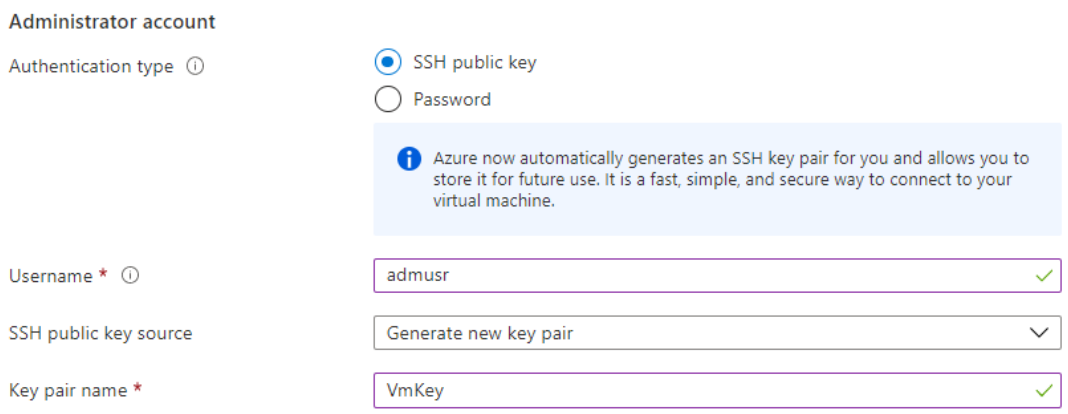
1. Type **virtual machine** I the **search bar**.
2. Under **Services**, select **Virtual machines.**
3. On the Virtual machines blade, select **Add** and **Virtual machine.**
4. Under **Basics -> Project details** make sure the correct Subscription is selected and choose to **Create new** resources group. Name it myVmGroup.



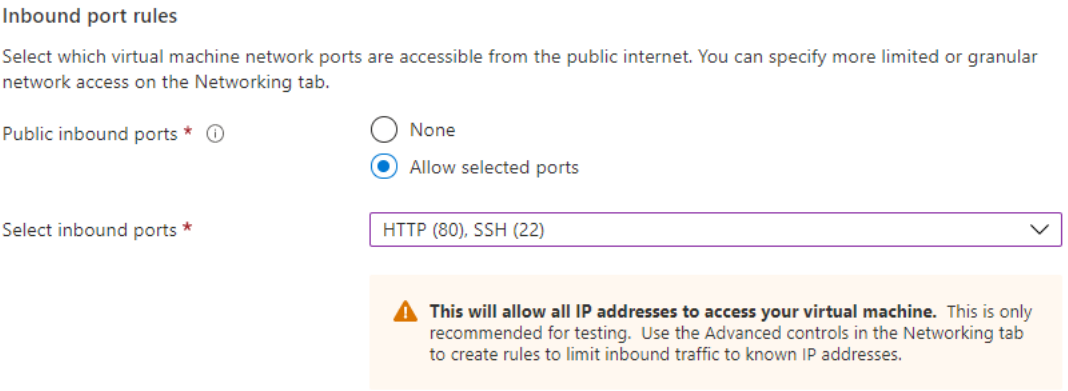
5. Under **Basics -> Instance details** name the machine LinuxWebVm, choose the “best” region for your purpose and choose the Ubuntu image to use. Leave the other defaults.



6. Under **Basics -> Administrator account**, select **SSH public key**.
7. In **Username** type admusr
8. For **SSH public key source**, leave default to **Generate new key pair** and name the key VmKey.



9. **Basics Inbound port rules -> Public inbound ports**, choose **Allow selected** ports and then select **SSH (22)** and **HTTP (80)** from the drop down.



10. Leave the remaining defaults and then select **Review + create** at the bottom of the page.
11. On the **Create a virtual machine** blade you can now see the details of the vm you are about to create, when ready select **Create.**
12. When the **Generate new key pair** window appears select **Download private key and create resource**. You will need this key later.
13. When the deployment is finished, select **Go to resources**.
14. On the page for your new VM, select the **public IP Address** and copy it to your clipboard.

Connect to the virtual machine

Depending on your system (OS), there are different ways to connect to your virtual machine. Preferable choose one you are comfortable width to create an SSH connection to the VM.

1. In Windows you can use the PowerShell prompt or a Bash (windows subsystem for linux). If your on a MAC or on a Linux machine open a Bash prompt.

2. At your prompt open a SSH connection. Replace path to .pem file with path to where the key file is located and replace the IP address with the address to your VM.

Console
ssh -i .\Downloads\VmKey.pem admusr@20.101.128.140

Install web server

To see your VM in action, install NGINX web server. From your SSH session, update your package sources and install NGINX.

Console
sudo apt-get -y update sudo apt-get -y install nginx

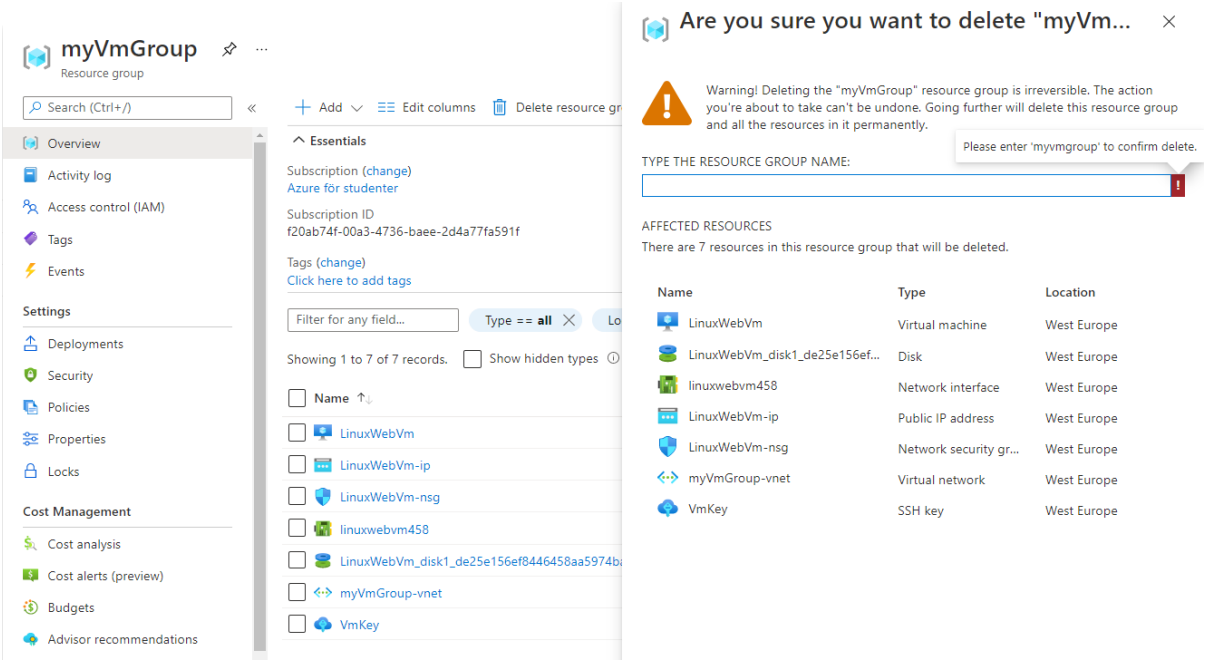
When done type **exit** to leave the SSH session.

View the web server in action

Use a browser to view the default NGINX welcome page. Type the public IP address if the VM as the web address.

Clean up resources

When no longer needed, you can delete the resource group, the virtual machine and all related resources. To do so select the resource group for the vm and select **Delete resource group**, then confirm with the name of the resource group to delete.



Further reading, tips and useful links:

- Linux (Ubuntu) subsystem for windows: https://ubuntu.com/wsl
- Unprotected private key file error: https://99robots.com/how-to-fix-permission-error-ssh-amazon-ec2-instance/
- Create and manage SSH keys for authentication to a Linux VM in Azure: https://docs.microsoft.com/en-us/azure/virtual-machines/linux/create-ssh-keys-detailed
- Secure web server with TLS\SSL: https://docs.microsoft.com/en-us/azure/virtual-machines/linux/tutorial-secure-web-server