# Creating Virtual Machines

In this lab, you will explore the Virtual Machine instance options and create several VMs with different characteristics.

## Task 1.Login to cloud using Qwiklabs credentials

## Task 2. Create a utility VM

1.Set your default project so you don't have to supply the --project flag with each command:

gcloud config set project [ provide your PROJECT\_ID]

2.Create the instance

gcloud compute instances create my-vm-1 --zone=us-central1-c --machine-type=n1-standard-1 --subnet=default --no-address --maintenance-policy=MIGRATE --image=debian-10-buster-v20200910 --image-project=debian-cloud --boot-disk-size=10GB --boot-disk-type=pd-standard --boot-disk-device-name=my-vm-1

3.Explore the VM details

1. View Details

gcloud compute instances describe my-vm-1

1. View Logging(Stack Driver)

gcloud logging logs list

1. CPU Platform

gcloud compute zones describe [ZONE]

1. availability policy

## Task 2. Create a Windows VM

gcloud compute instances create vm-windows --zone=europe-west2-a --machine-type=n1-standard-1 --subnet=default --network-tier=PREMIUM --maintenance-policy=MIGRATE --image=windows-server-2016-dc-core-v20200908 --image-project=windows-cloud --boot-disk-size=100GB --boot-disk-type=pd-ssd --boot-disk-device-name=vm-windows

gcloud compute firewall-rules create default-allow-http --direction=INGRESS --priority=1000 --network=default --action=ALLOW --rules=tcp:80 --source-ranges=0.0.0.0/0 --target-tags=http-server

gcloud compute firewall-rules create default-allow-https --direction=INGRESS --priority=1000 --network=default --action=ALLOW --rules=tcp:443 --source-ranges=0.0.0.0/0 --target-tags=https-server

### Set the password for the VM

gcloud compute reset-windows-password *vm-windows*

You will be presented with a confirmation prompt; this will need to be accepted by entering **Y** and/or pressing **Enter**. It can be rejected by entering **N**, then pressing **Enter**.

## Task 3: Create a custom VM

gcloud compute instances create custom-vm --zone=us-west1-b --machine-type=custom-6-32768 --subnet=default --network-tier=PREMIUM --maintenance-policy=MIGRATE --image=debian-10-buster-v20200910 --image-project=debian-cloud --boot-disk-size=10GB --boot-disk-type=pd-standard --boot-disk-device-name=custom-vm

### Connect via SSH to your custom VM

1. For the custom VM you just created, **SSH into the vm**

gcloud compute ssh --zone us-west1-bcustom-vm

1. To see information about unused and used memory and swap space on your custom VM, run the following command:

free

1. To see details about the RAM installed on your VM, run the following command:

sudo dmidecode -t 17

1. To verify the number of processors, run the following command:

nproc

1. To see details about the CPUs installed on your VM, run the following command:

lscpu

1. To exit the SSH terminal, run the following command:

Exit

## Task 5 : End the lab