Creating a VM instance on Oracle cloud

1. From home, click Compute -> instances
2. New page opens, on left side, under 'List Scope', choose Compartment (by default, root)

   Compartment is like scope, the instances are created inside a compartment, and you can apply a rule/setting to a compartment, which in turn will be applicable to all instances in the compartment.
3. You can also choose 'Availability domain'

   It specifies where your VM is located. For my trail account, I can see only one domain.
4. Then click 'Create Instance' button on the same page.
5. New page opens.
6. Parameters needed to be specified for a new instance:
   a. Name
   b. Image (Operating System that we want to run on the instance), Oracle cloud gives us a list of images, I chose Ubuntu 18.04. We will stick with a Linux distribution for our Hadoop cluster, since it is easier.
   c. Now some specific details of the instance, like memory, number of cores, boot volume, private/public ip address. With my trial account, I was not able to change the default options.
   d. Method to access the instance remotely. For linux-based instances, ssh-key pair is used.

      This means that we create a key-pair with a public key encryption algorithm like RSA. One of this is the public key and the other is the private key, the public key needs to be uploaded to the remote instance into the directory ~/.ssh in a file called 'authorized_keys'. The corresponding private key is to be provided to connect to the instance remotely.

      I used putty-gen on my windows machine to create a key pair. I pasted the public key on to the ssh-keys area. I saved the private key in my windows machine. Please see the steps on this page to configure remote access to a Linux VM using Putty on your Windows machine. The same page has options for setting up and connecting to remote VM from a Linux machine.
      https://docs.oracle.com/en/cloud/paas/event-hub-cloud/admin-guide/connecting-node-using-putty-windows.html)
7. The public IP address/port number, username (for ubuntu machines on Oracle Cloud, it is **ubuntu**) and ssh private key needs to be specified. The session can be saved for ease of access later.
8. Oracle Cloud provides advanced options for networking and management. I left them to default for the time being.
9. Once logged in to remote instance, here are some basic commands to try on our instance's linux terminal:

   sudo (to run a command with administrator/root user privileges)

   sudo su – (change to root user)

   pwd (shows the current path)

ls (lists all the files in the directory)
ls -a (lists hidden files too)
cd (to move to a directory)
mkdir and rmdir (create and delete a empty directory)
rm (delete a file)
rm -r (delete a directory having files)
touch (create a new file)
cp (copy a file)
mv (move a file)
cat (display the contents of a file)
nano, vi (commands to edit the contents of a file)
df (displays the available disk space)
uname (displays information about the Linux distribution)
apt-get update (update all repos before installing a new package)
apt-get install (install a new package)
chmod (to change permissions of a file, option 755 gives root permissions to the file, +x makes its executable by root)
hostname (displays the name of the host)
ping (to check connectivity to a server)
sudo reboot (to restart the computer)
sudo halt (to shut down the computer)

There are many resources available online for familiarizing basic Linux terminal commands.

10. This finishes the process of creating a VM on Oracle Cloud.