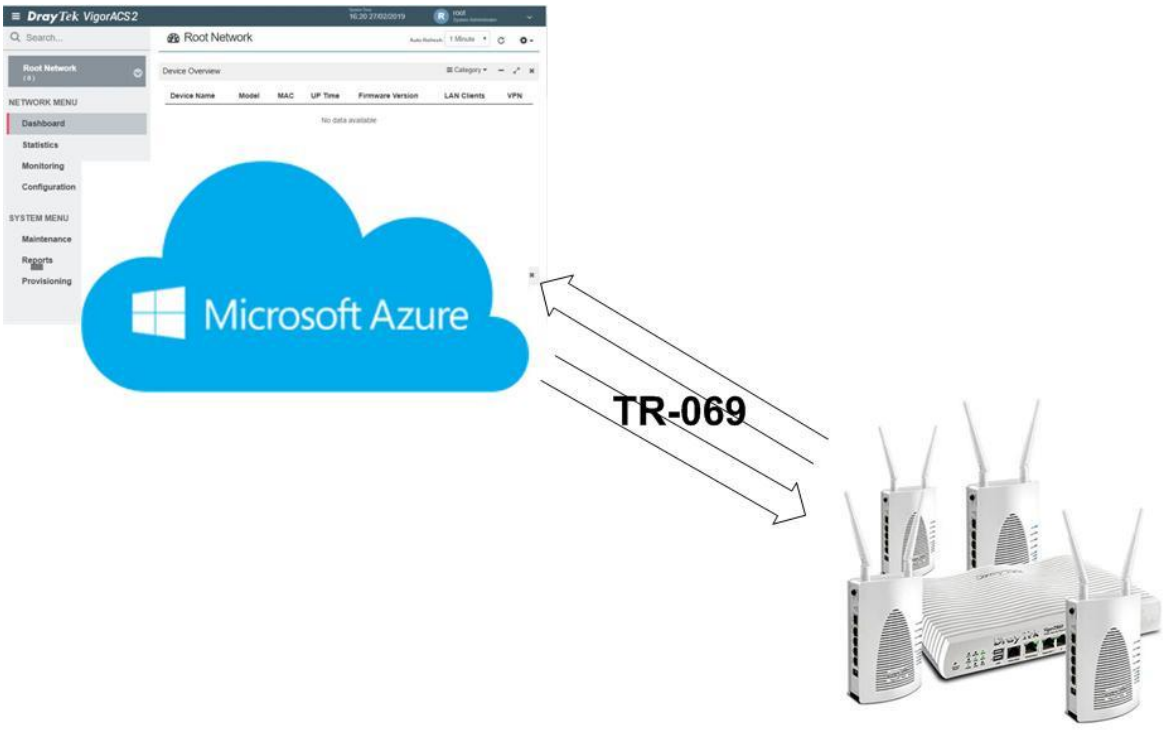
How to install Vigor ACS2 in Microsoft Azure

VigorACS 2 is a TR-069 based centralised management system for DrayTek's Vigor devices. It is a management tool that would help Network Engineers and Systems Integrators to configure, monitor and manage DrayTek devices remotely from the comfort of their offices or homes.

Microsoft Azure allows you to set up a cloud-based management system running VigorACS 2.

This guide shows you on how to install VigorACS 2 in Linux CentOS 7.6 using Microsoft Azure as our infrastructure server.



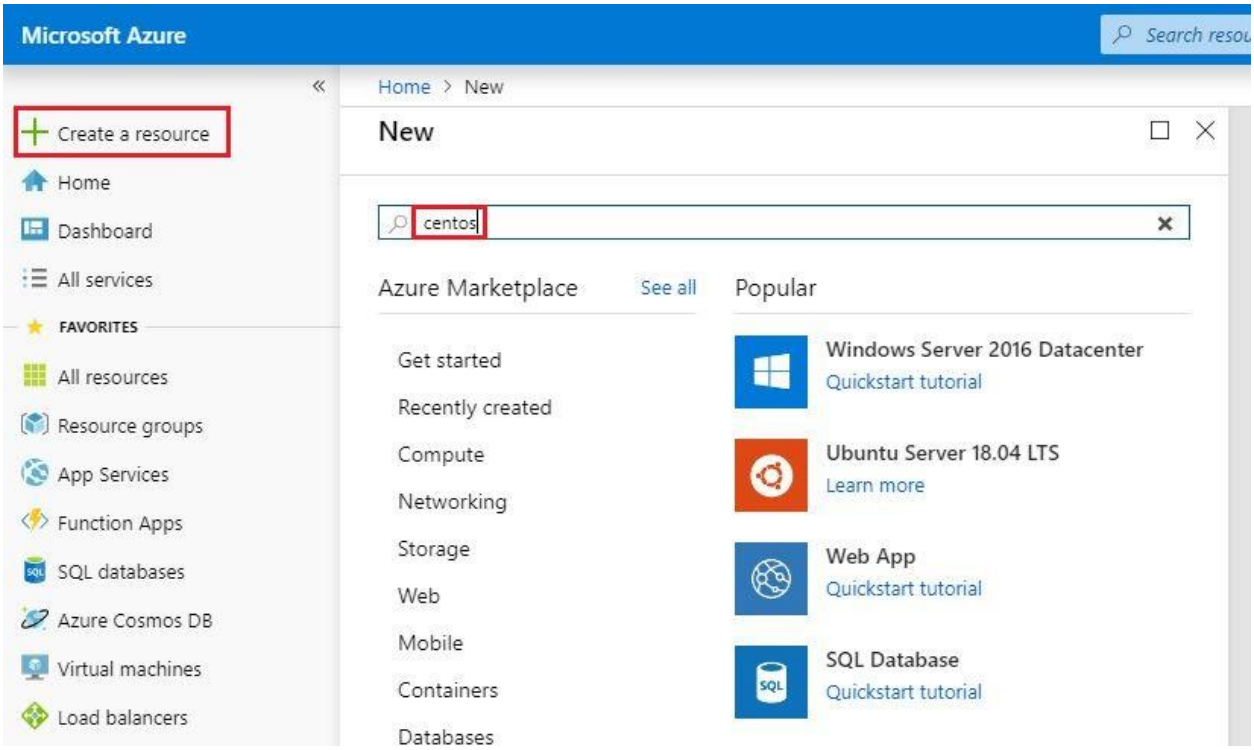
I. Accessing Microsoft Azure.

a. Go to ***https://portal.azure.com/#home***.

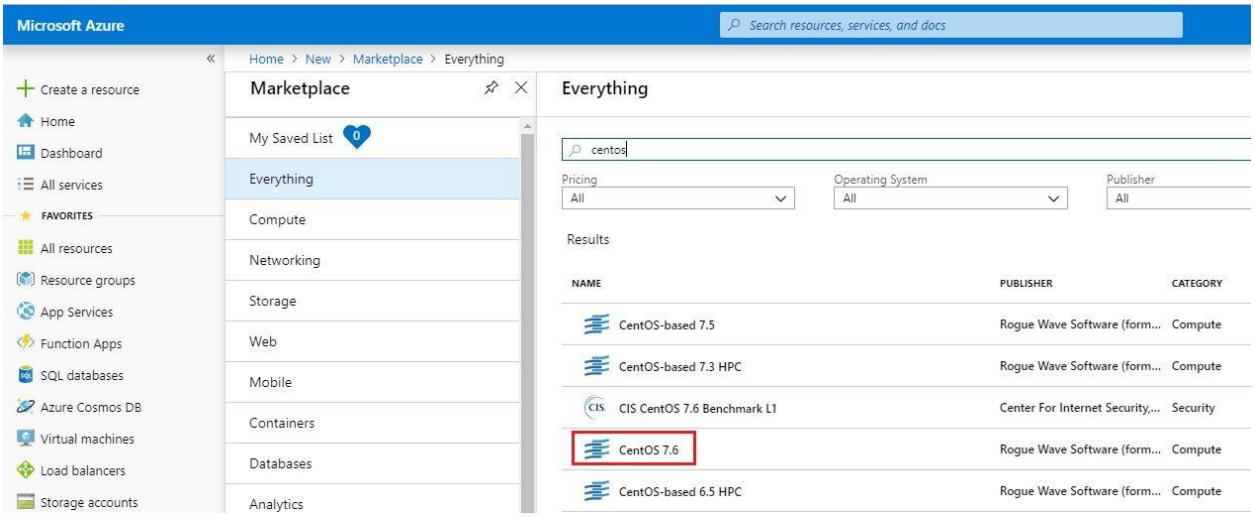
b. Login using your Microsoft Azure account.

II. Creating a Virtual Machine Instance.

a. Select ***"Create a resource"*** and search ***"centos"***.



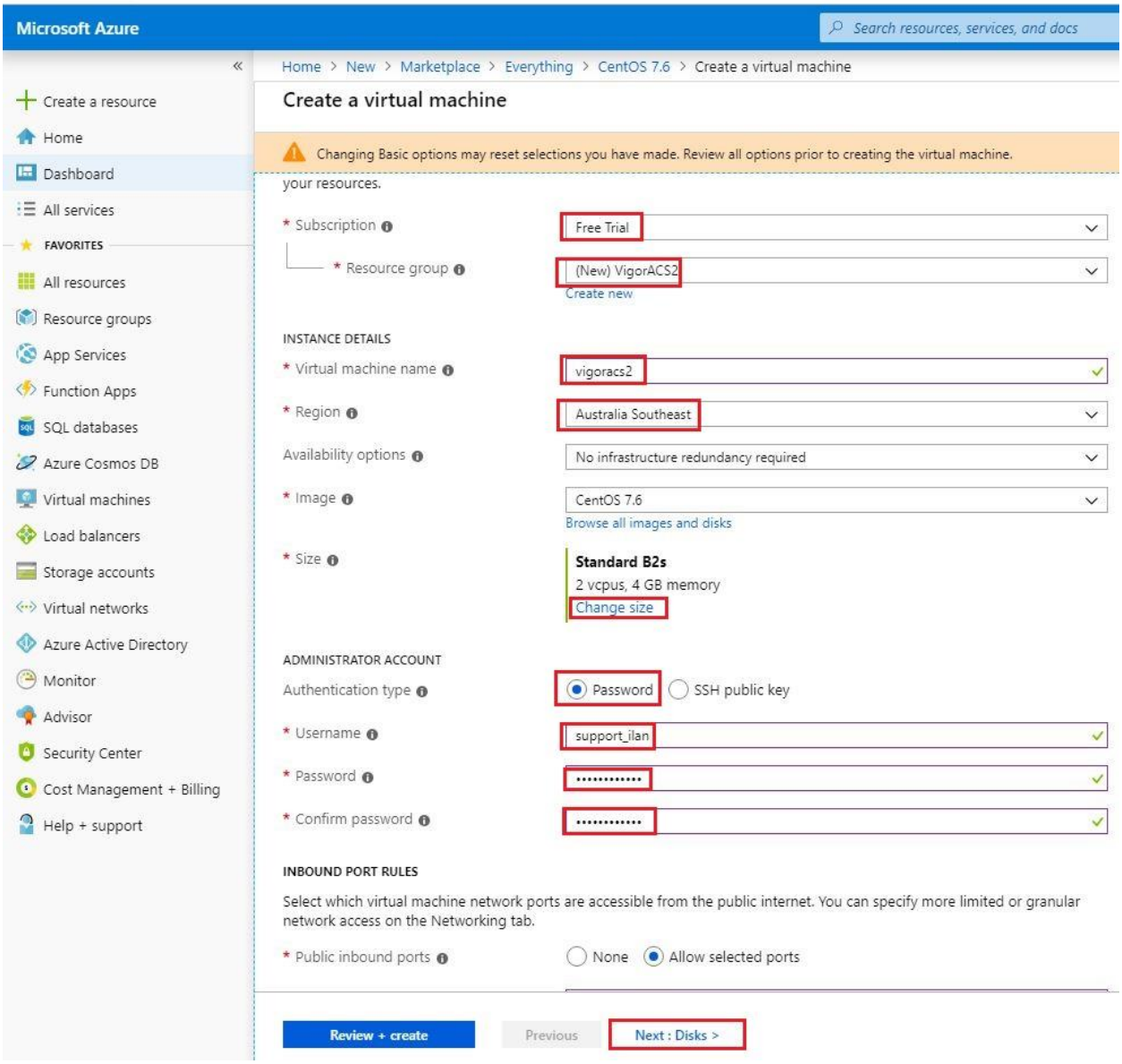
b. Select "***CentOS 7.6***".



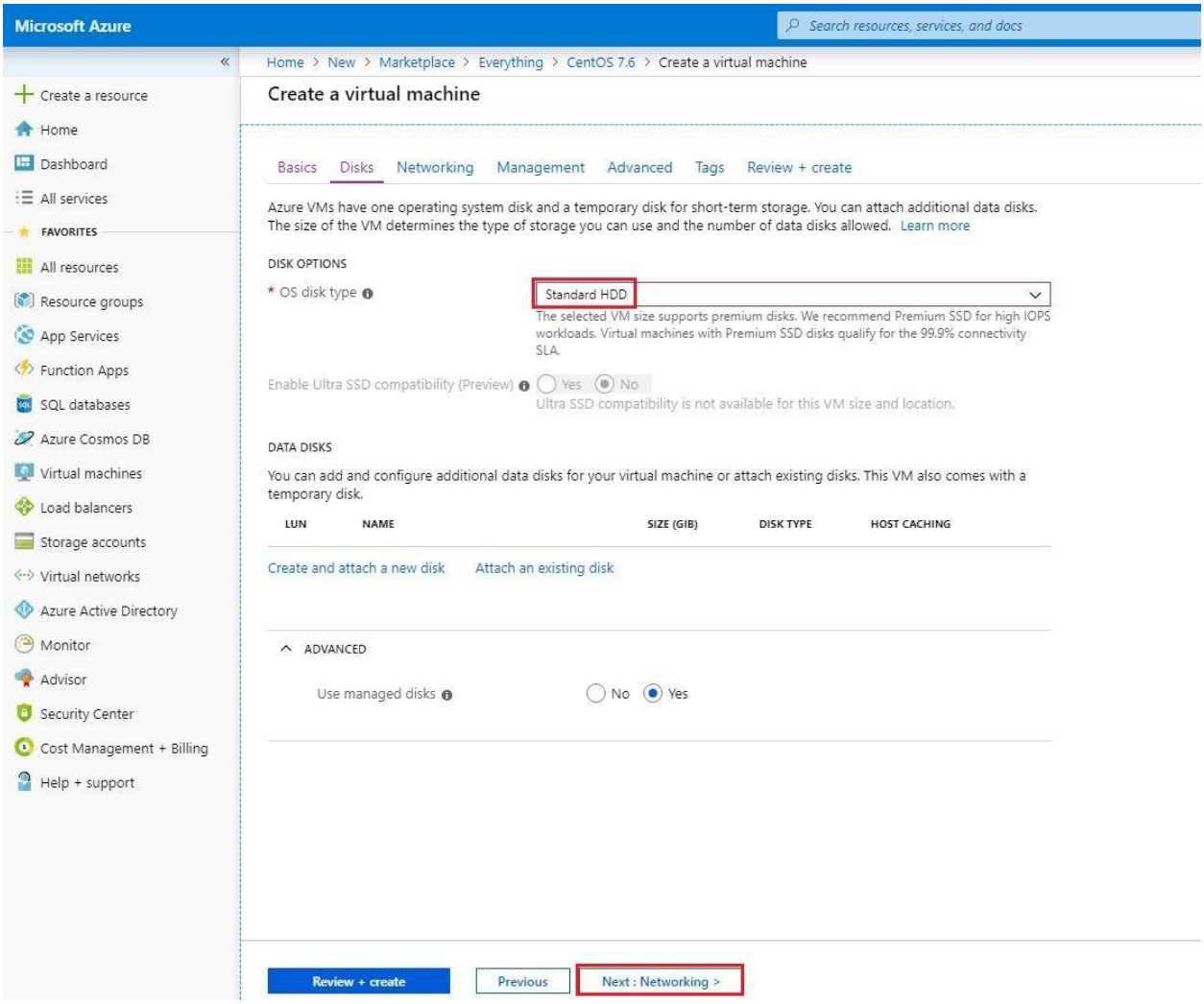
c. Enter the following below:
   - Subscription: ***Free Trial***
   - Resource group: ***VigorACS2***
   - Virtual machine name: ***vigoracs2***
   - Region: Australia Southeast

d. Select ***"Change size"*** to allocate vcpus and memory.

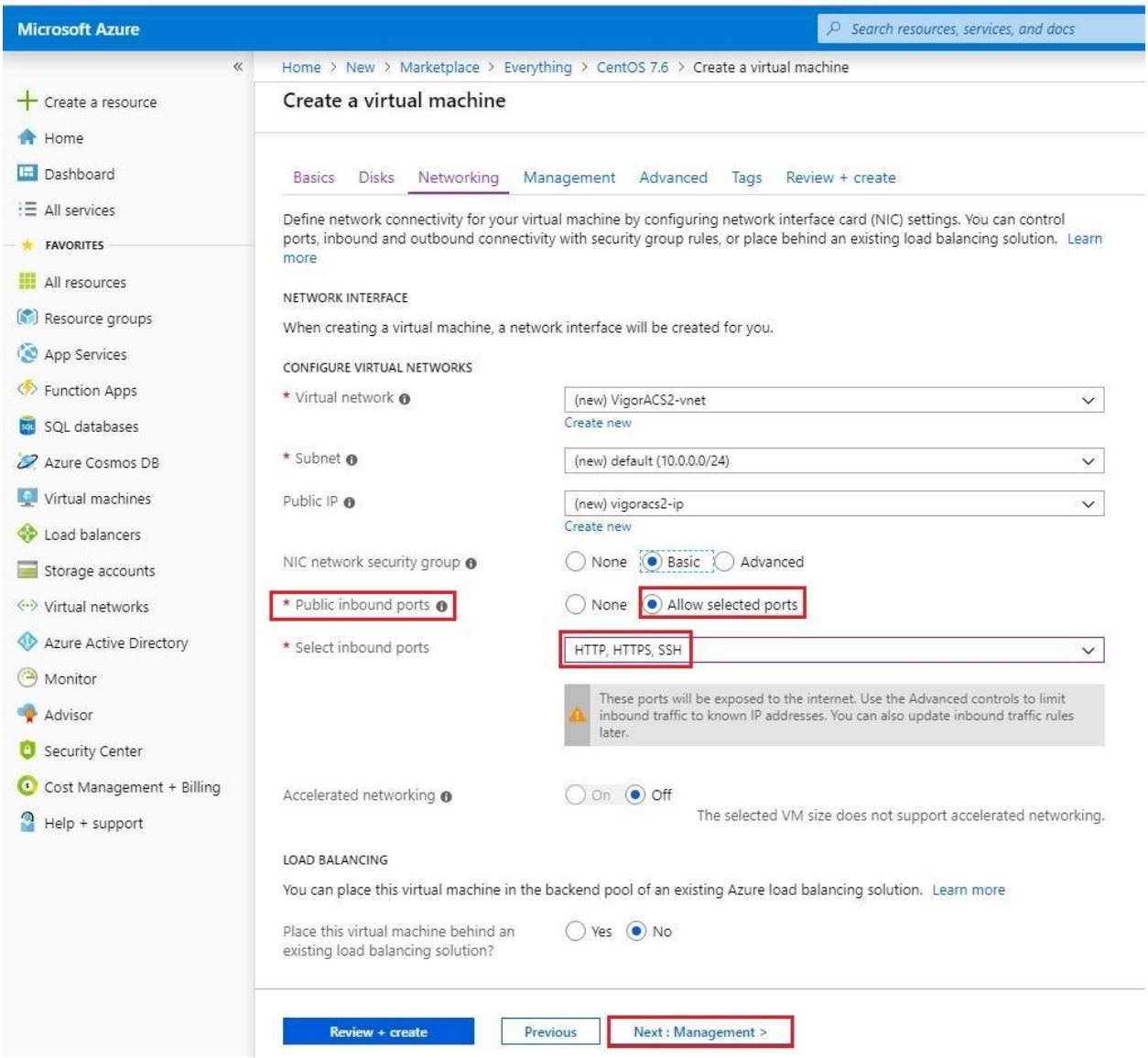
e. Select "***Password"*** and enter username/password, then select ***"Next:Disks"***.



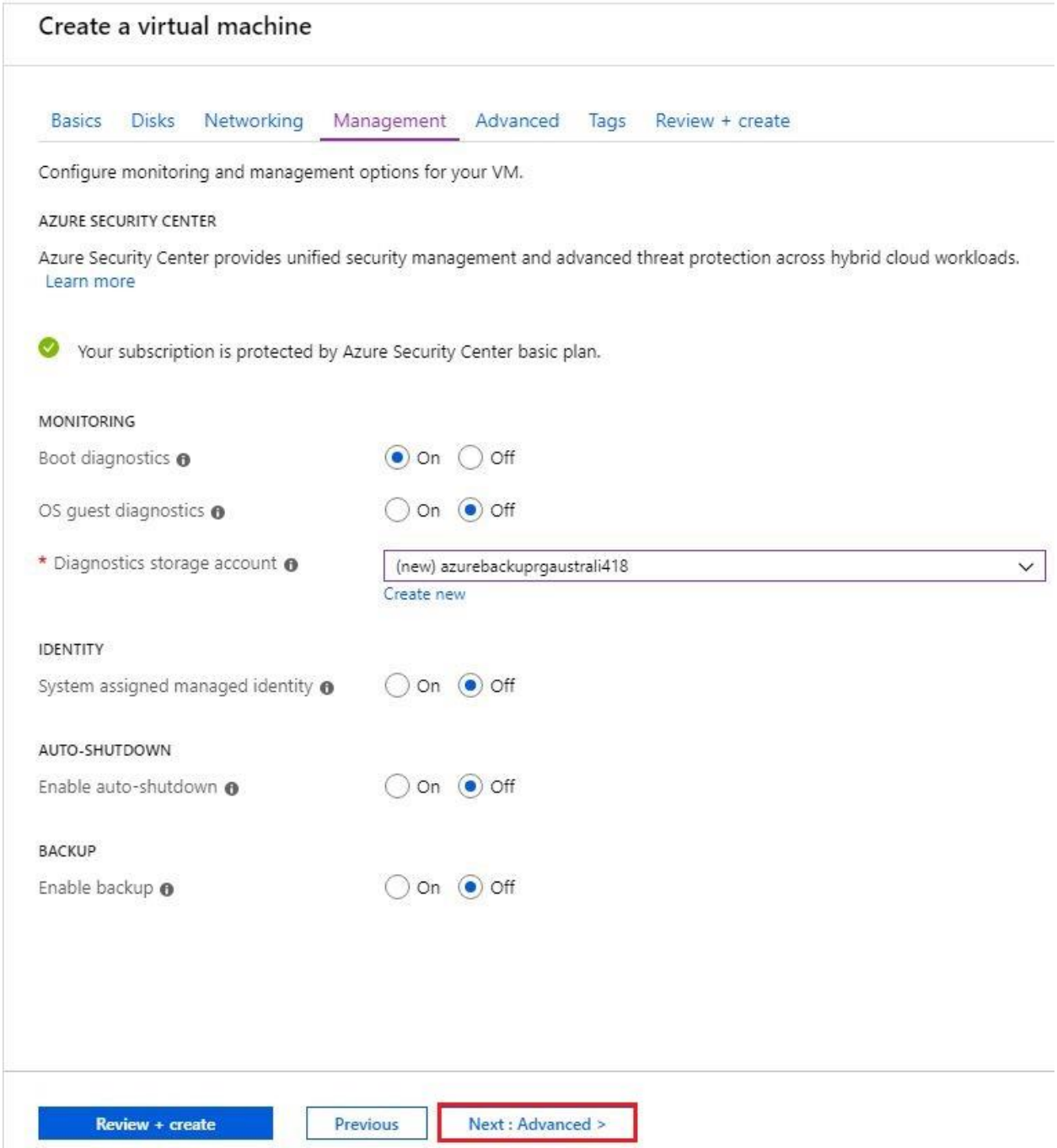
f. Select OS disk type as ***"Standard HDD"*** and click ***"Next:Networking"***.



g. Under ***"Public inbound ports"***, select ***"Allow selected ports"*** and choose ***HTTP***, ***HTTPS***, ***SSH*** and then ***"Next: Management"***.

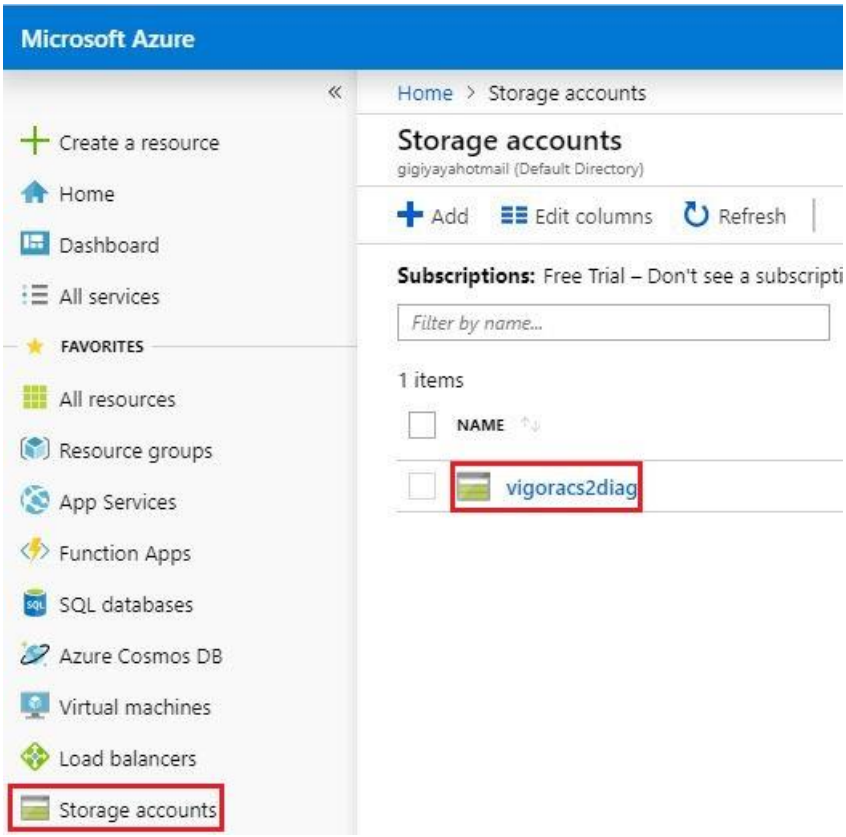


h. Leave everything in default settings and select ***"Next:Advance"***.

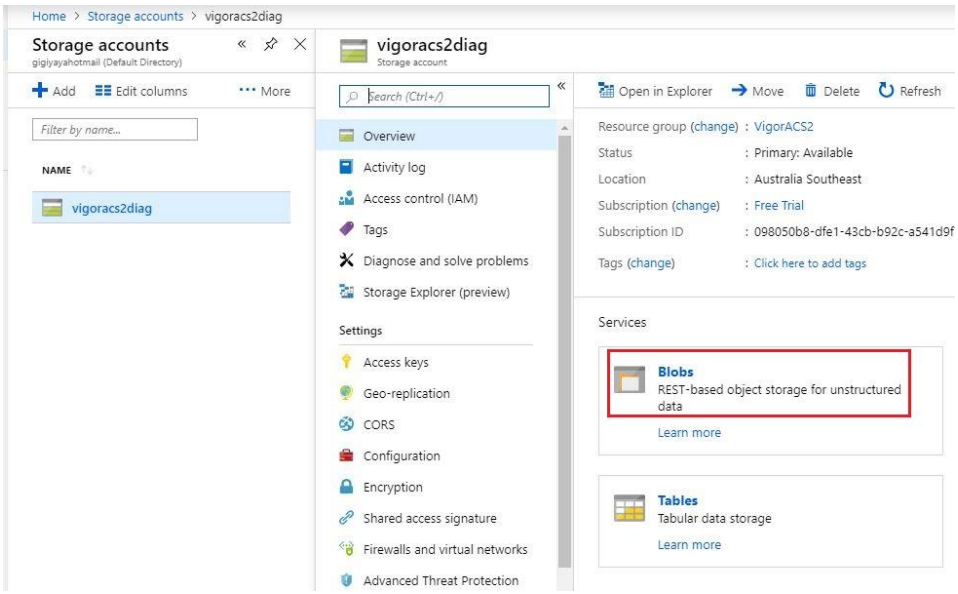


III. Creating a storage Blob in Microsoft Azure and upload Vigor ACS2 installer.

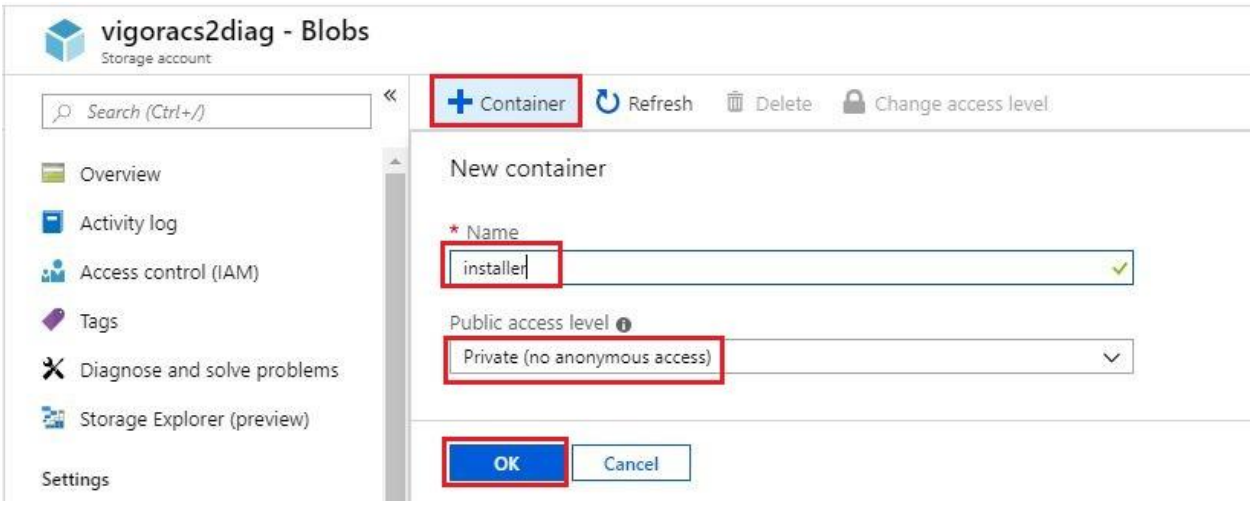
a. Go to ***Storage accounts>>vigoracs2diag***



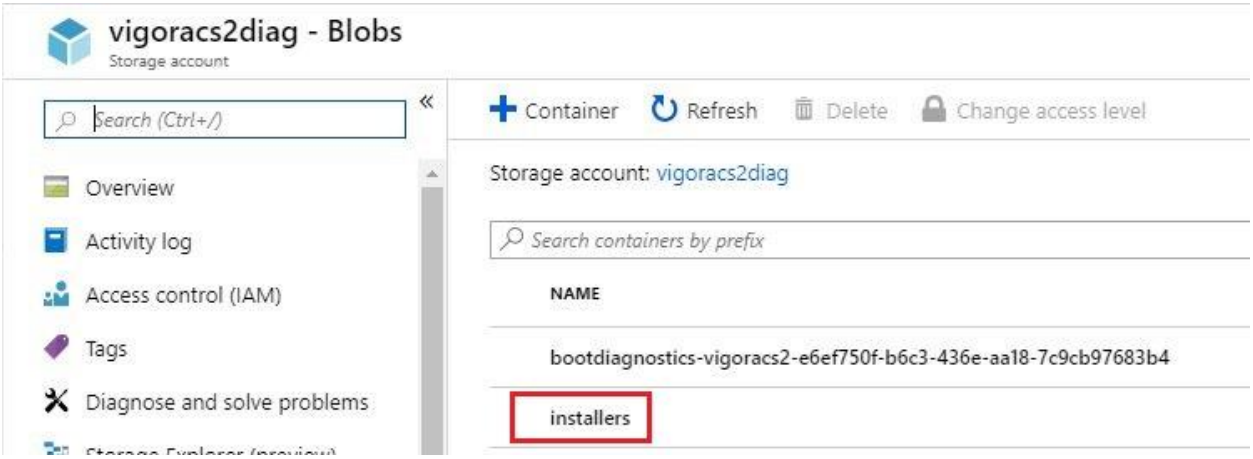
b. Select "***Blob***".



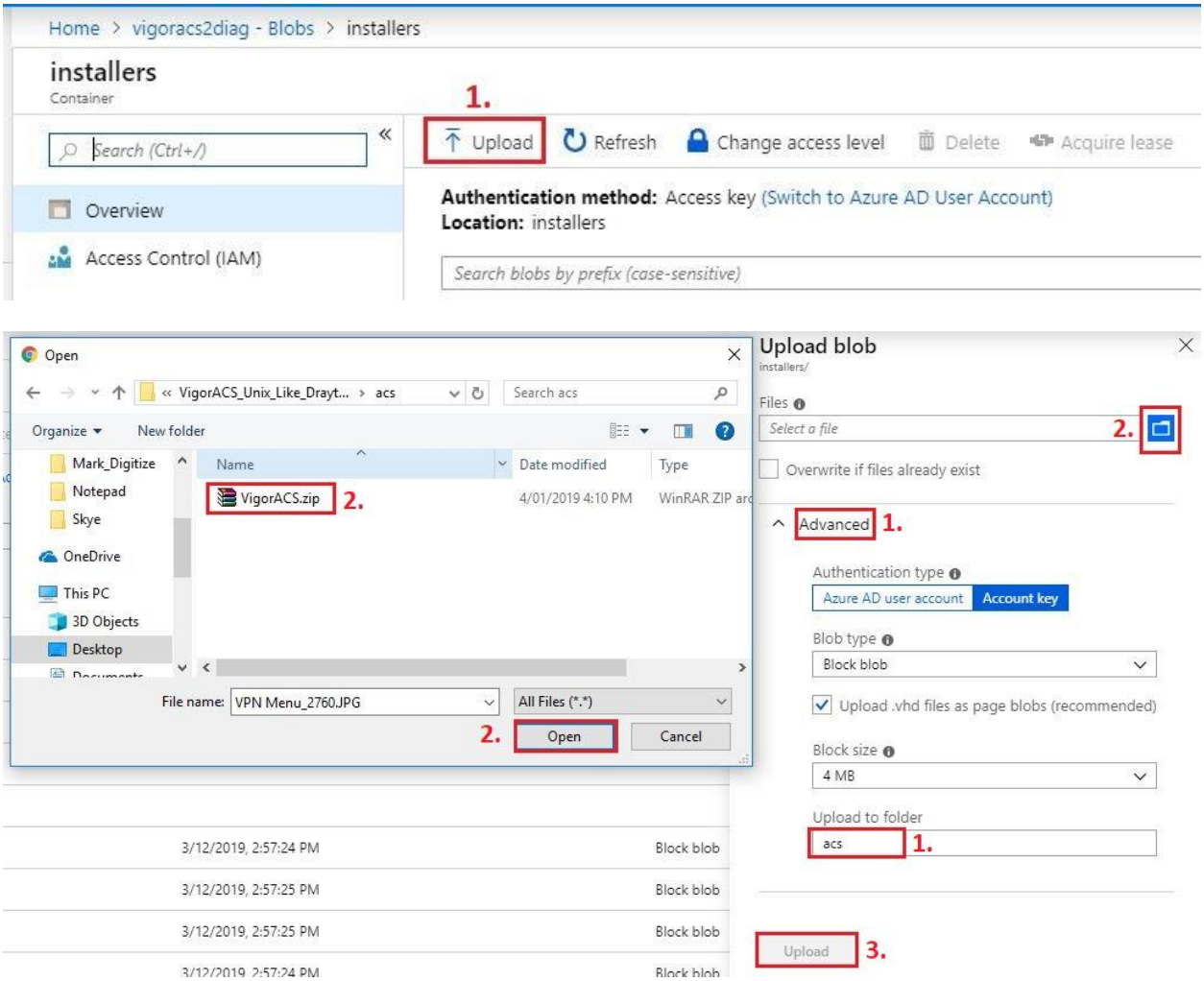
c. Select "***Container***", enter name as ***"installer"*** and select "***Private (no anonymous access)".***



d. Select ***"installers".***

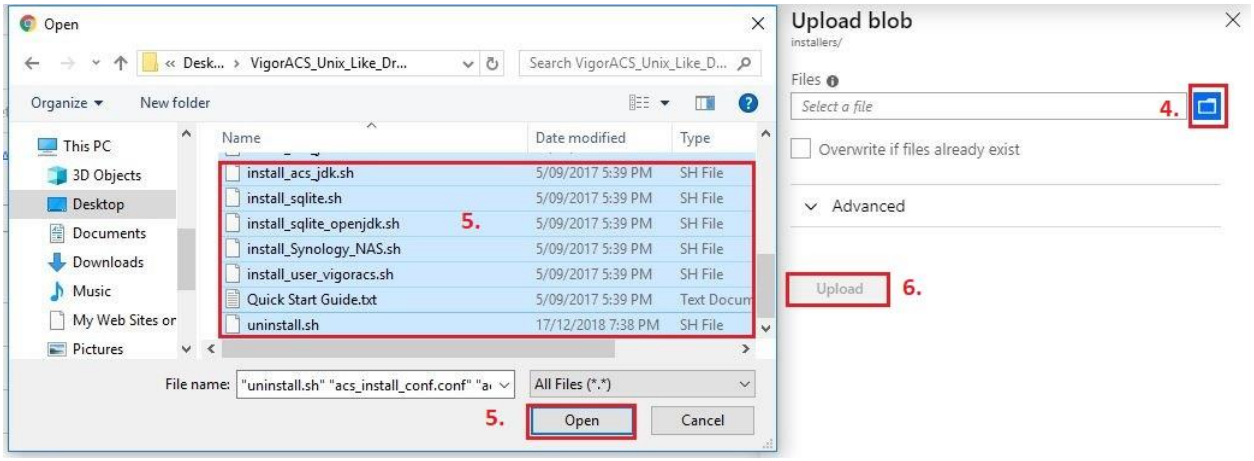


e. To upload the files inside a folder, we will need to create the same folder name in the Blob container.
    1. Select ***"Upload"***, ***"Advance"*** and enter the folder name ***"acs"***.
    2. Click the ***folder icon*** to browse the files to be uploaded. Select the file inside acs folder from your local computer and click ***"Open"***.
    3. Click ***"Upload"*** to create the folder ***"acs"*** and to save the files inside the folder.



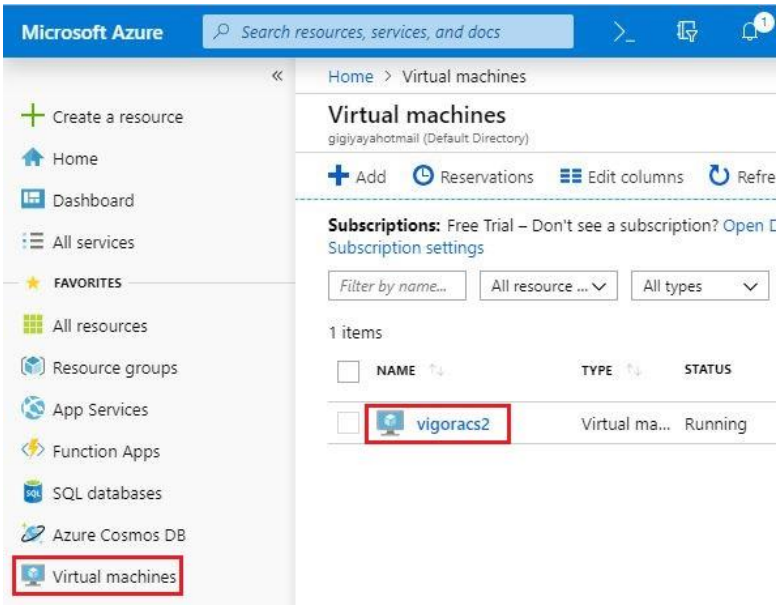
f. To upload files into the Microsoft Azure container:

4. Click the ***folder icon*** to browse the files to be uploaded.
5. Select the files and click ***"Open"***.
6. Click ***"Upload"***.

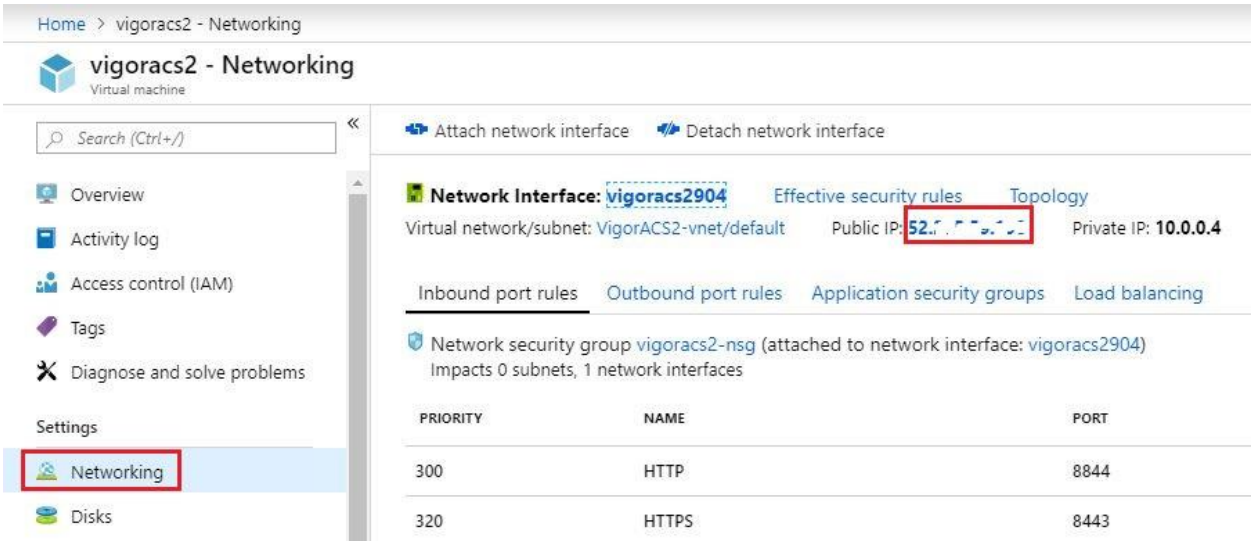


IV. Set the VM instance IP address to static.

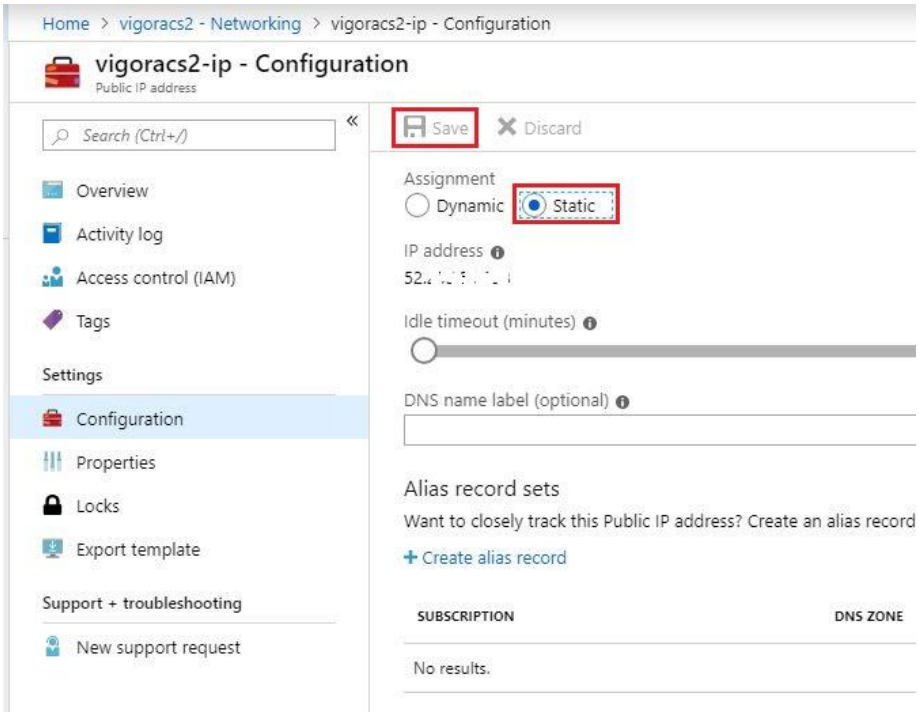
a. Go to ***Virtual machines*** and select ***vigoracs2.***



b. Select ***"Networking"*** and IP address ***52.x.x.x***.

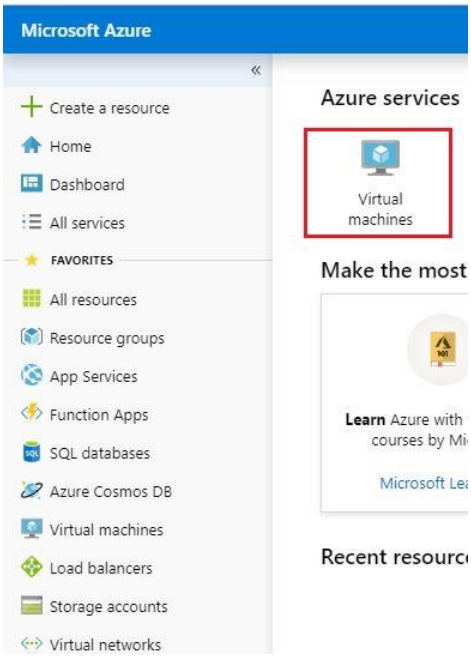


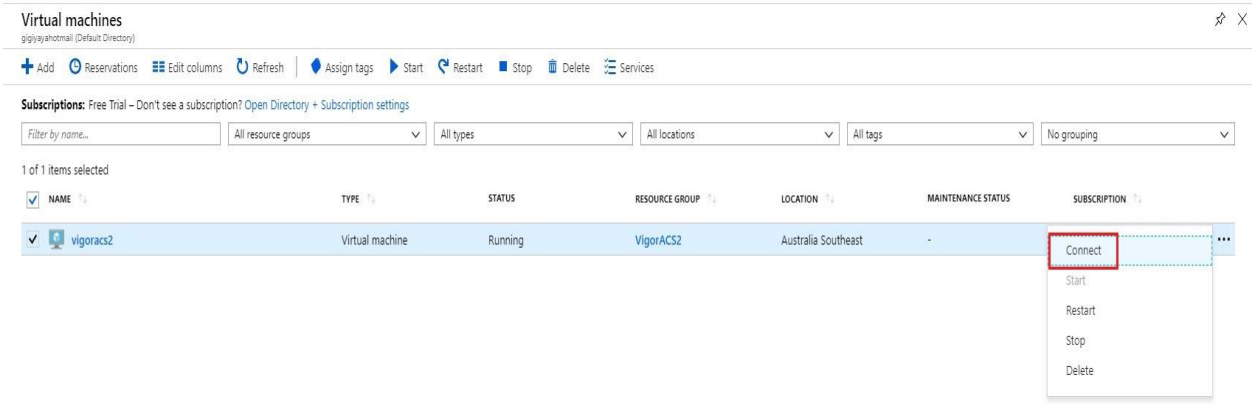
c. Select ***"Static"*** and ***"Save"***.



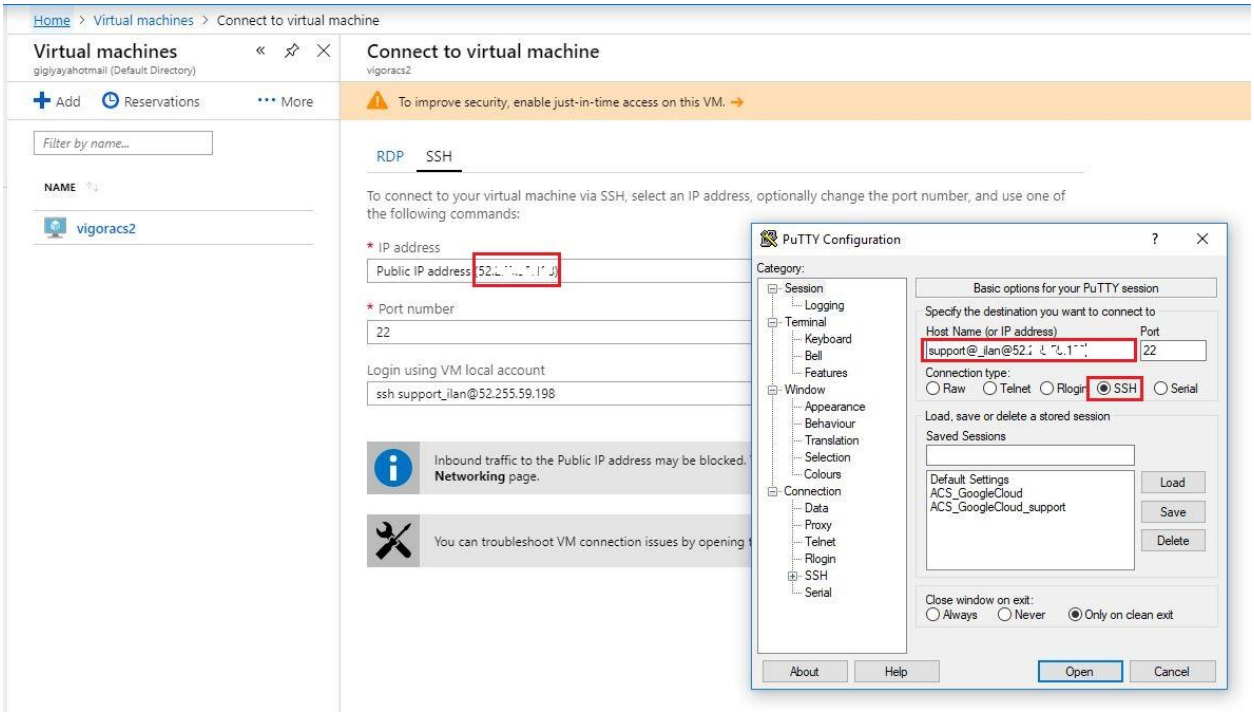
V. Manage the VM instance via SSH.

a. Go to ***Virtual machines*** and select ***Connect.***





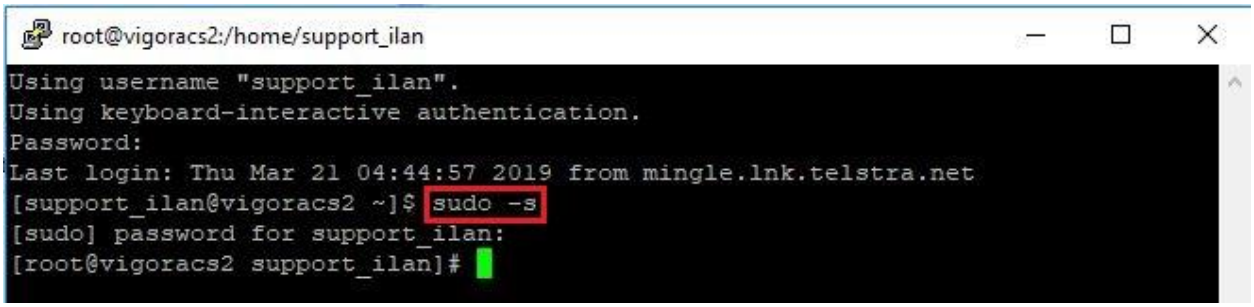
b. Copy the pubic IP address on your virtual machine and use Putty software to establish SSH connection.



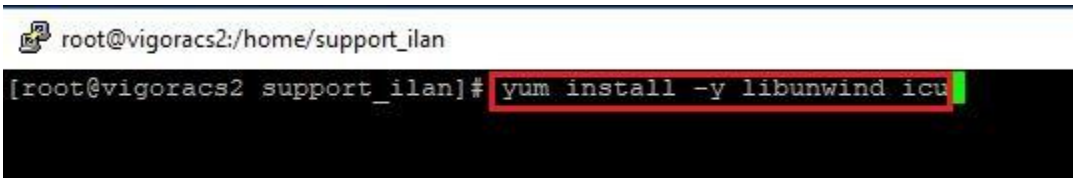
VI. Copy the Vigor ACS2 installer from the Blob container to the VM instance.

a. Install AzCopy Utility to Linux CentOS 7.6.

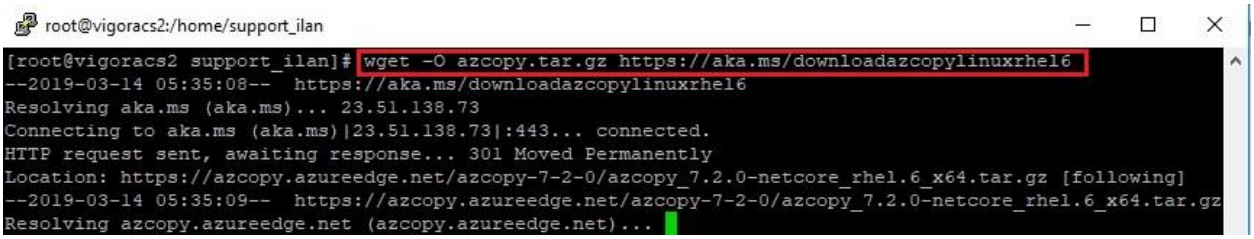
1. Change user to root by entering the command ***sudo –s***.

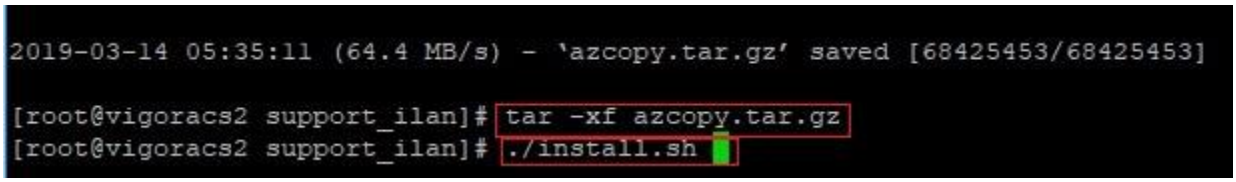


2. Install ICU and libunwind dependencies by entering the command below:
Yum install –y libunwind icu

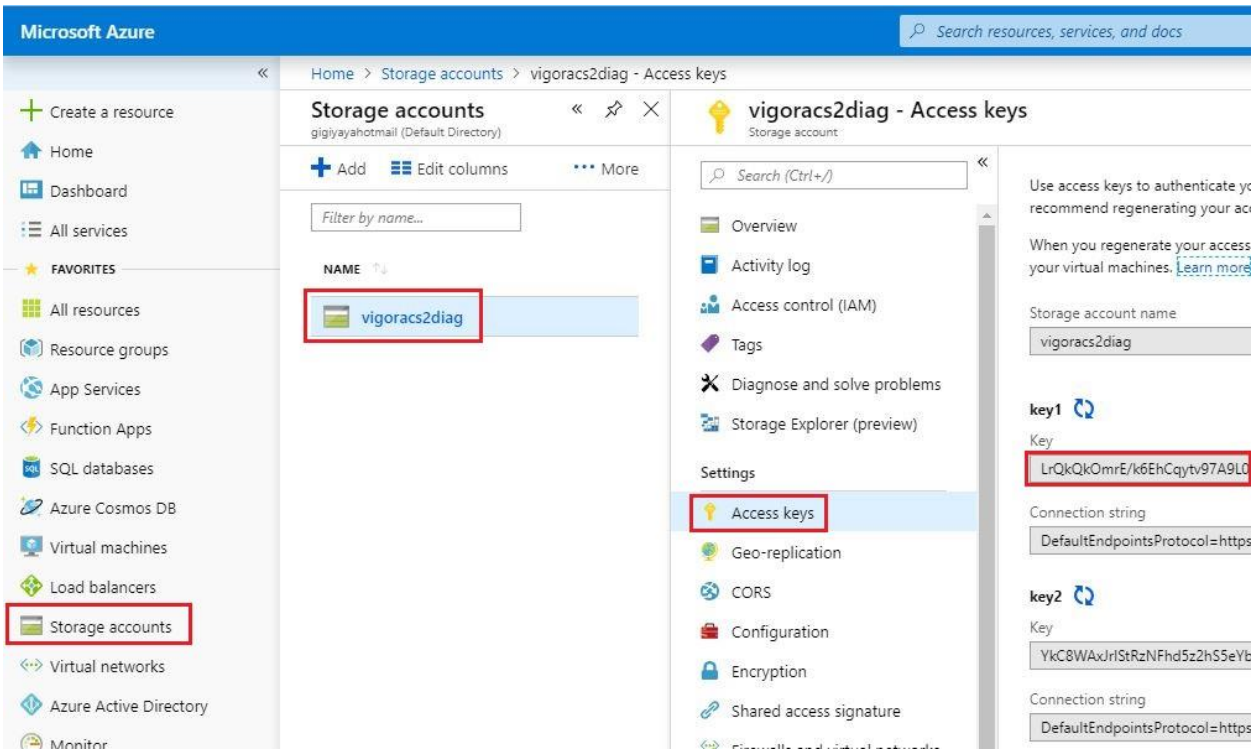


3. Download and extract Azcopy by entering the command below:
   Wget – O azcopy.tar.gz https://aka.ms/downloadazcopylinuxrhel6
   tar –xf axcopy.tar.gz
4. Install AzCopy using the command ***./install.sh***

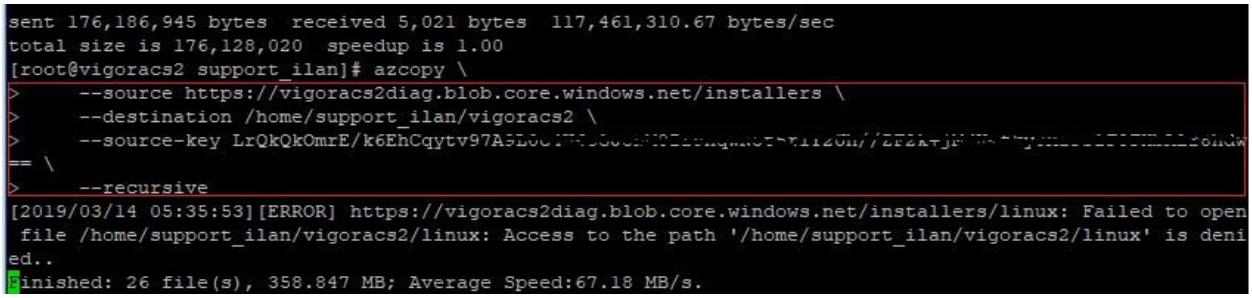




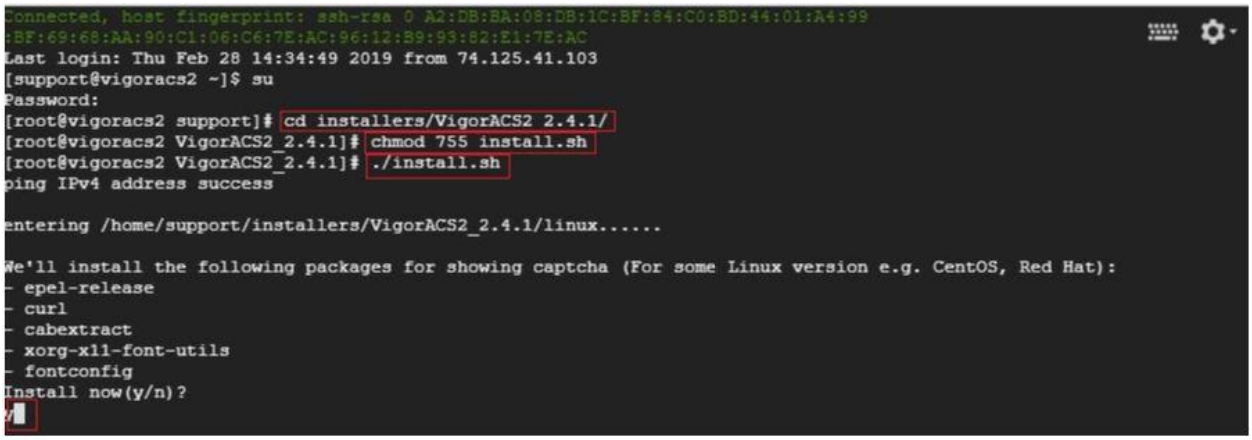
b. Copy the source key from your storage account.
   - Go to ***Storage Accounts>>vigoracs2diag>>Access keys***.
   - Copy source ***Key 1***.



c. Create an AzCopy script to copy the installer from the blob container to your VM instance, use the source key from the storage account.
Example script:
***azcopy ***
***--source https://vigoracs2diag.blob.core.windows.net/installers ***
***--destination /home/support_ilan/installers/Vigoracs2_2.4.1 ***
***--source-key LrQkQkOmrE/k6EhCqytv97AL0 ***
--recursive



VII. Installing dependencies, database and Vigor ACS2.
a. Enter the command "***cd installers/VigorACS2_2.4.1/***"
b. Allow root to execute install.sh file by entering the command "***chmod 755 install.sh***"
c. Enter command "***./install.sh***" to run the Vigor ACS2 installer.
d. Type "***y***" to proceed with the installation.



e. Install the following below:
- ***press 1 and enter*** to install mysql/mariadb
- ***press 3 and enter*** to install influxdb
- ***press 4 and enter*** to install or upgrade Java
- ***press 5 and enter*** to install VigorACS

```
 * base: centos.melbourneitmirror.net
 * epel: sg.fedora.ipserverone.com
 * extras: mirror.lagoon.nc
 * updates: mirror.ventraip.net.au
Package epel-release-7-11.noarch already installed and latest version
Nothing to do
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
 * base: centos.melbourneitmirror.net
 * epel: sg.fedora.ipserverone.com
 * extras: mirror.lagoon.nc
 * updates: mirror.ventraip.net.au
Package curl-7.29.0-51.el7.x86_64 already installed and latest version
Package cabextract-1.5-1.el7.x86_64 already installed and latest version
Package 1:xorg-x11-font-utils-7.5-21.el7.x86_64 already installed and latest version
Package fontconfig-2.13.0-4.3.el7.x86_64 already installed and latest version
Nothing to do
Loaded plugins: fastestmirror
msttcore-fonts-installer-2.6-1.noarch.rpm                                   |  29 kB  00:00:00
Examining /var/tmp/yum-root-5GQXzM/msttcore-fonts-installer-2.6-1.noarch.rpm: msttcore-fonts-installer-2.6-1.noarch
/var/tmp/yum-root-5GQXzM/msttcore-fonts-installer-2.6-1.noarch.rpm: does not update installed package.
Error: Nothing to do


You must restart this ACS Server manually to finish the installation process

Notice:
    * Installation ACS Server requires root privileges.
    * After installing the ACS server, need to configure the Firewall to Allow HTTP and HTTPS port

[1] Install mysql/mariadb
[2] Change root password and security configuration of mysql/mariadb ( Default root password is blank )
[3] Install influxdb
[4] Install or Upgrade java
[5] Install VigorACS ( It will build one mysql/mariadb database : tr069 )
[6] Upgrade VigorACS ( It will upgrade local tr069 database )

**********For Remote Database Only**********
[7] Redirect the database path of VigorACS to remote host ( It will not upgrade remote database )

[8] Exit
input select num :
```

f. Type "***y***" and ***press enter*** to continue creating ACS database.
g. Type "***1***" and ***press enter*** to select Local side database.
h. Type "***1***" and ***press enter*** to use ACS for Mysql.
i. ***Press enter*** to use blank password for MySQL/MariaDB.
j. Type "***y***" and ***press enter*** to test password for MySQL/MariaDB.

```
[Install VigorACS]

[Warning] It will clear the existing ACS database and create a new one.Do you want to continue? (y/n)
y
Do you want to use remote/local database? (1: Local side database, 2: Remote side database, Enter for Local side da
tabase)
1
Which Mysql do you want to use ? (1: ACS , 2: OS default, Enter for ACS mysql)
1
Starting vigoracsmysqld (via systemctl):                   [  OK  ]
Please keyin password of root of MySQL/MariaDB.

Do you want to test password now ?(y/n)
y

Access Database Success
Restarting influxdb (via systemctl):                       [  OK  ]
Start to install VigorACS....
Archive:  VigorACS.zip
   creating: VigorACS/server/default/deploy/ACSServerAPP.ear/
   creating: VigorACS/server/default/deploy/ACSServerAPP.ear/ACSServer.war/
```

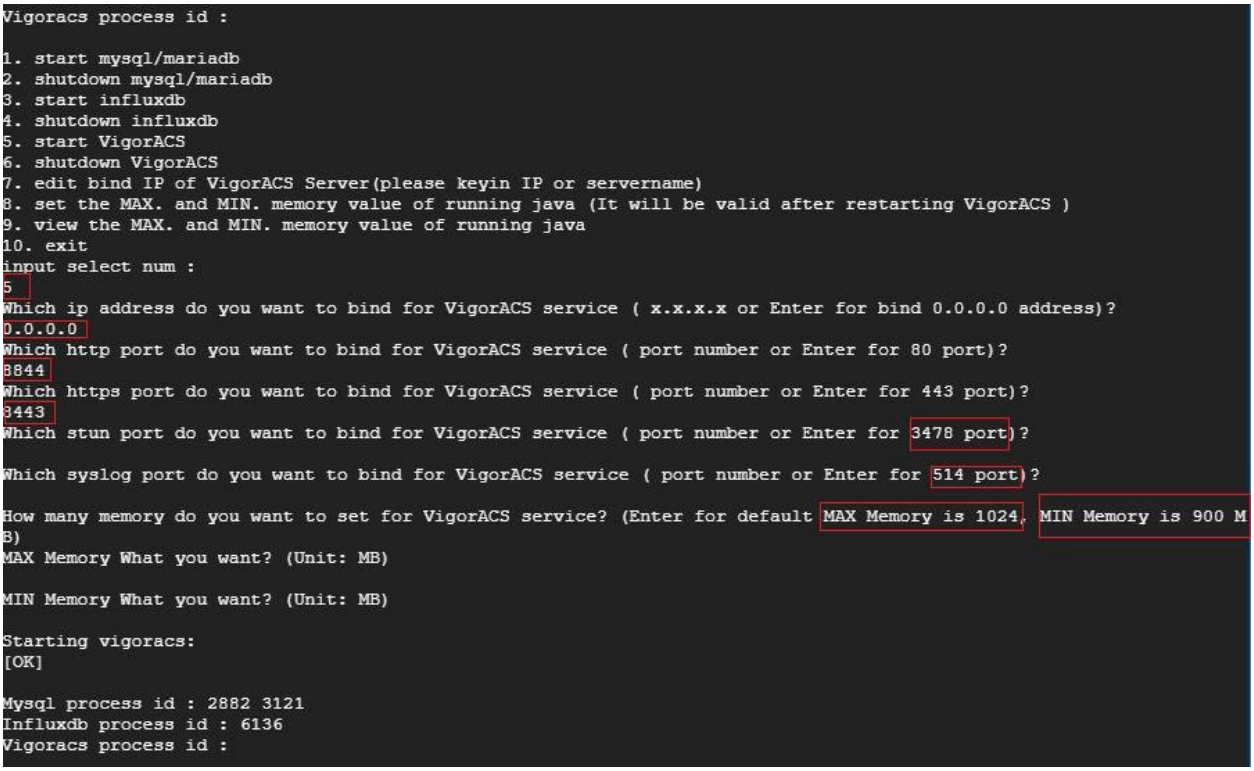
VIII. Starting database and ACS2.

a. Start mysql/mariadb, influxdb and VigorACS2.

- ***press 1 and enter*** to start mysql/mariadb
- ***press 3 and enter*** to start influxdb
- ***press 5 and enter*** to start VigorACS

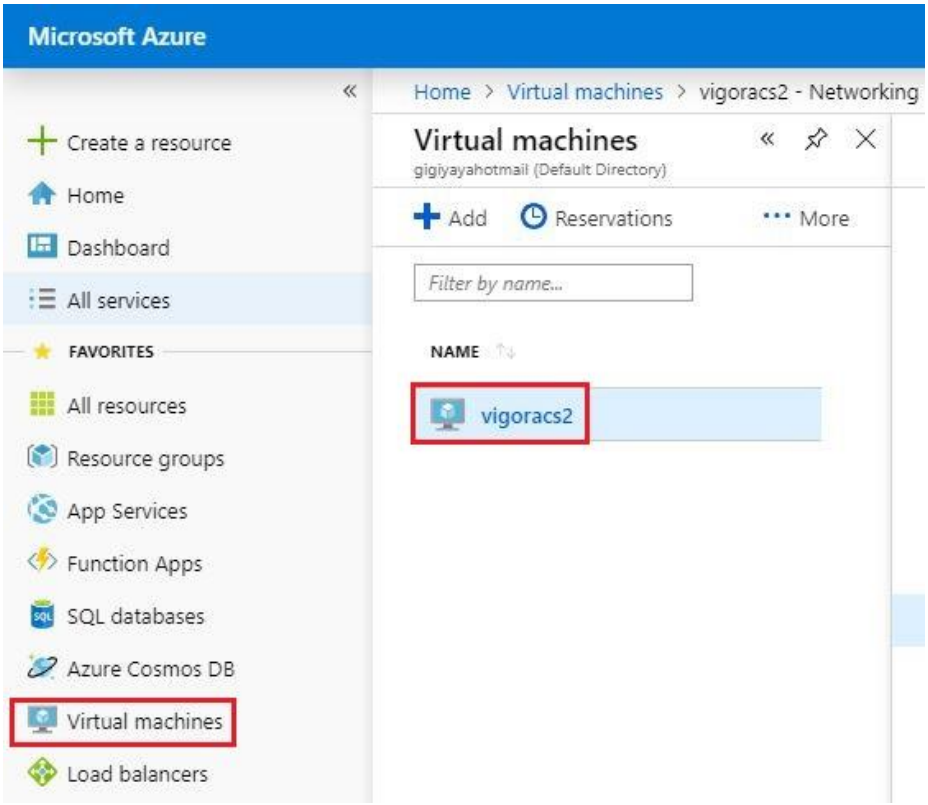
b. Enter the following bellow after selecting 5 (start VigorACS).

1. Bind IP to ***0.0.0.0***
2. Optional: enter http port ***8844*** instead of 80.
3. Optional: enter https port ***8443*** instead of 443.
4. ***Press enter*** to select default ports ***347*** and ***514*** for stun and syslog.
5. ***Press enter*** to accept default ***max memory*** and ***minimum memory***.

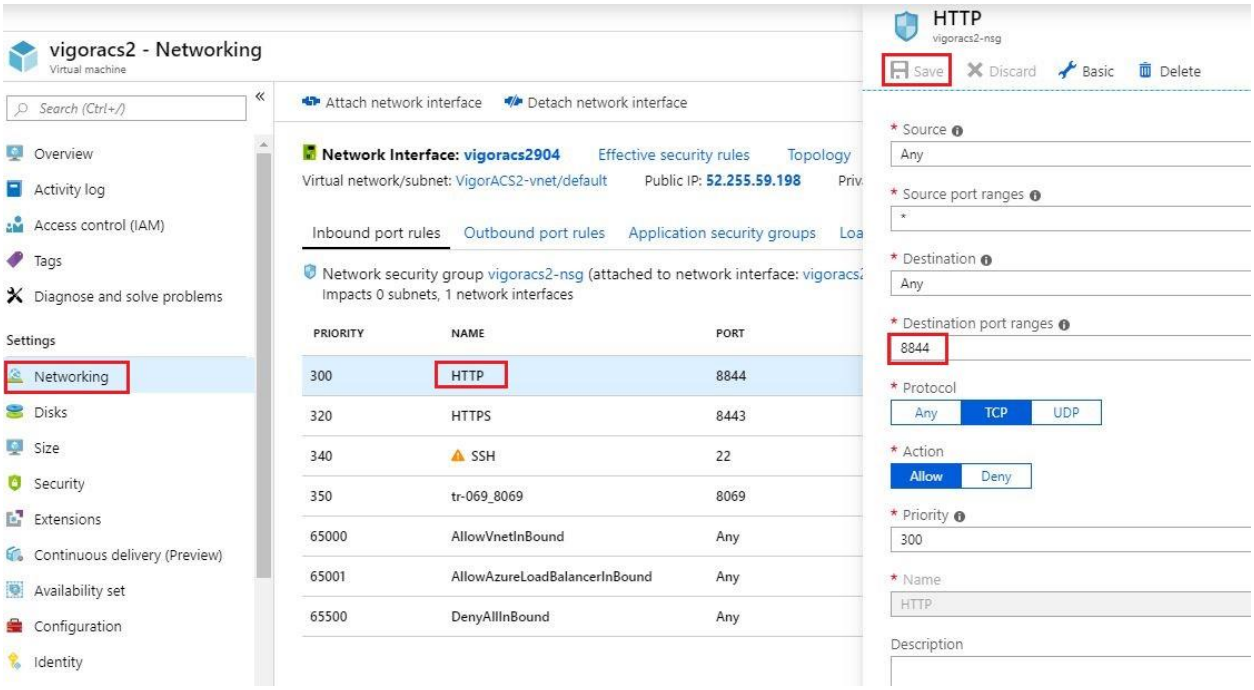


IX. Allowing and editing ports http, https and tr-069 in Microsoft Azure firewall.

a. Go to ***Virtual machines>>vigoracs2.***

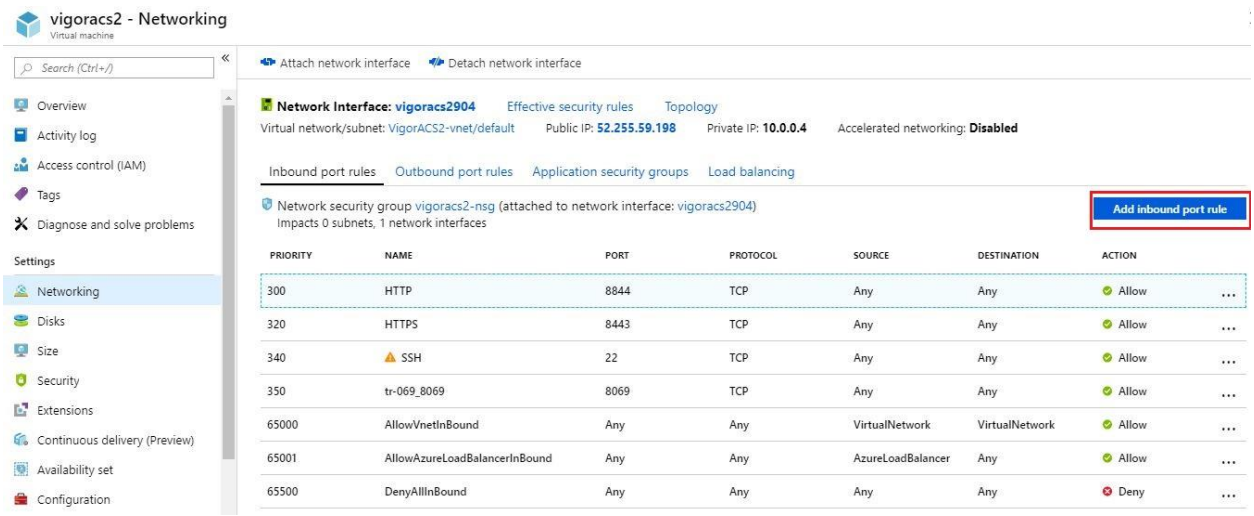


b. Select "***Networking, HTTP*** and enter ***"8844"*** for ***Destination port ranges***, then click ***"Save".***



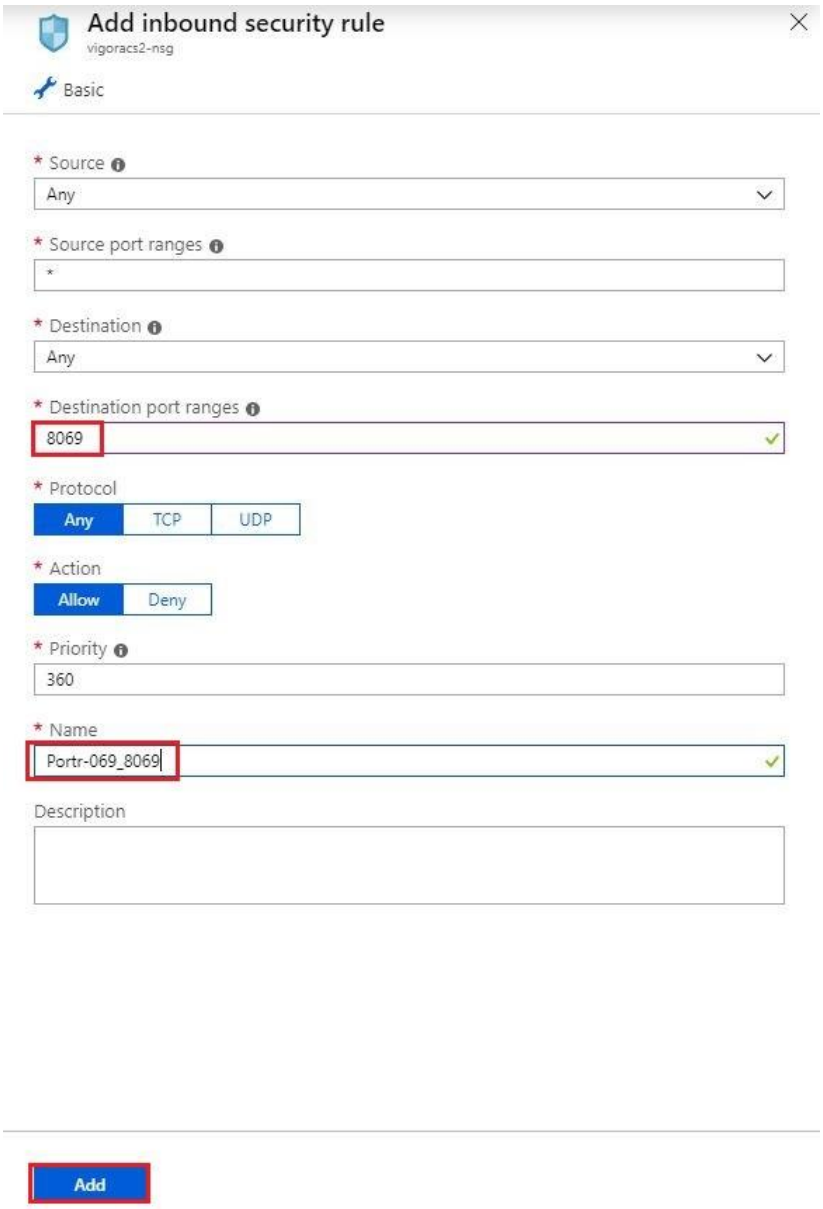
c. Do the same for the https, but enter port ***8443***.

d. To add tr-069 port, select ***"Add inbound port rule".***



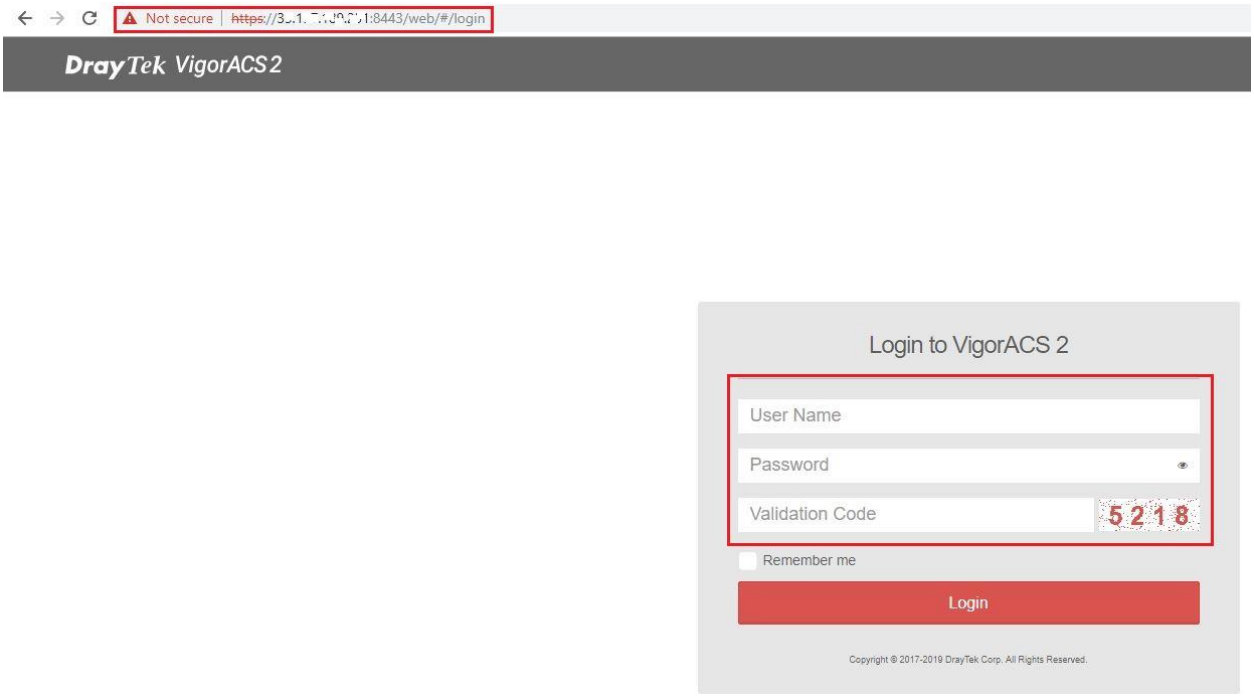
e. Enter the following below and click ***"Add".***

- Destination port ranges: ***8069***
- Name: ***tr-069_8069***

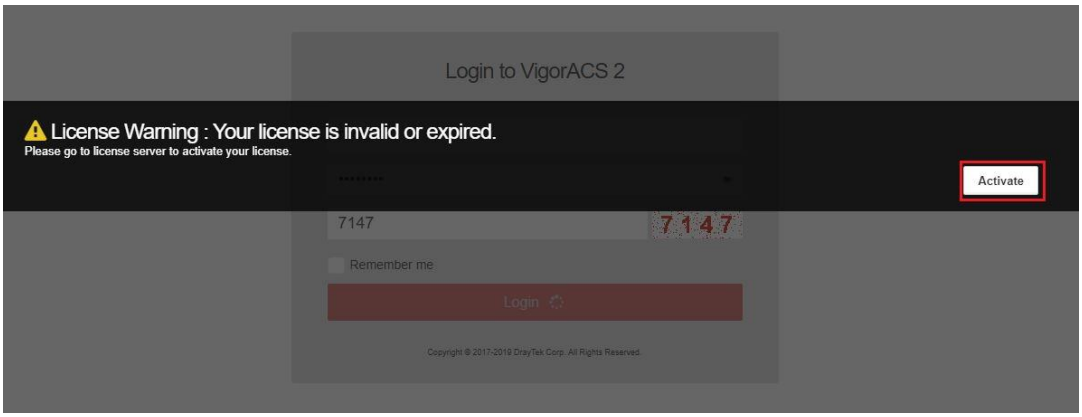


X. Accessing the Vigor ACS2 web interface and activating the trial license.

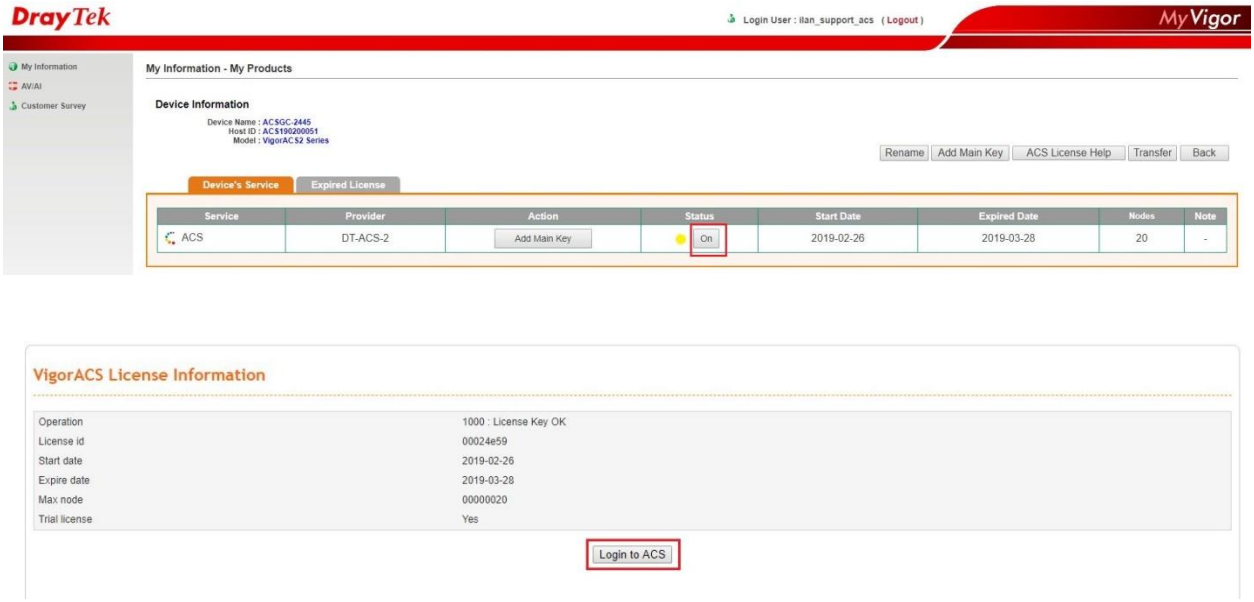
a. Type the ***public IP address***, ***port number*** and enter ***username*** as" ***root"*** and ***password*** as "***admin123"***.



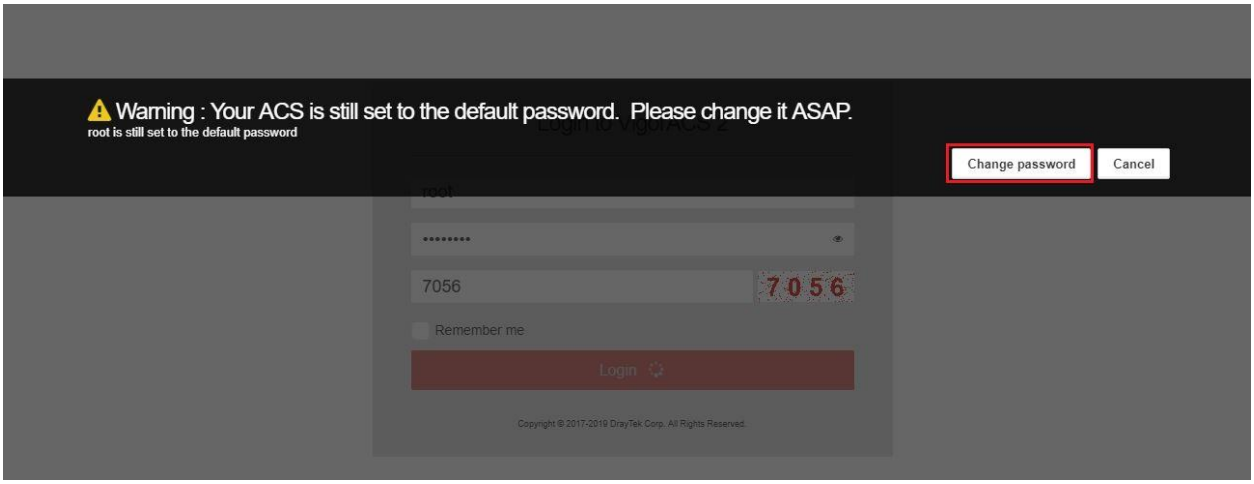
b. After selecting "***Activate***" the VigorACS2 will redirect us to the ***MyVigor*** website to register our VigorACS and activate the 30 days trial license.



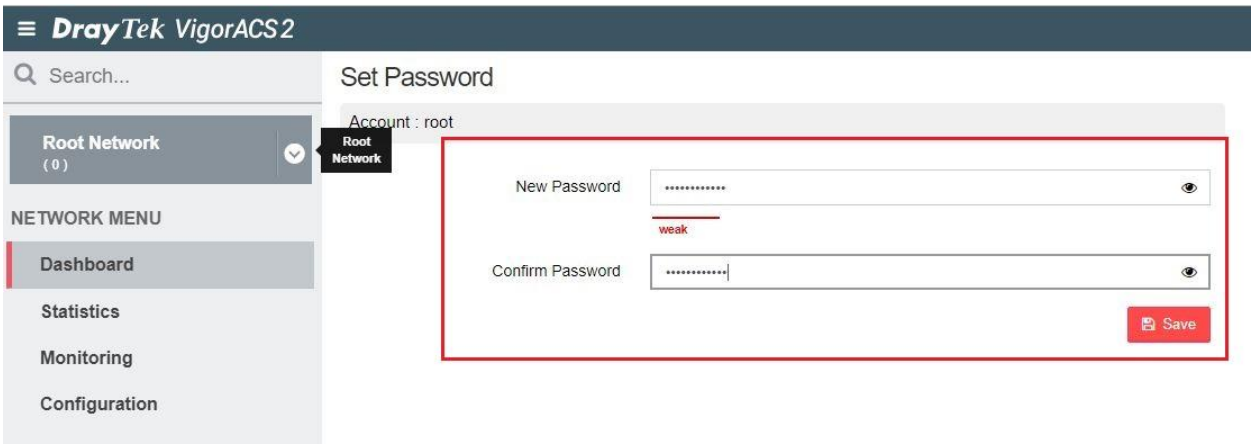
c. Select "***On***" under Status and "***Login to ACS***".



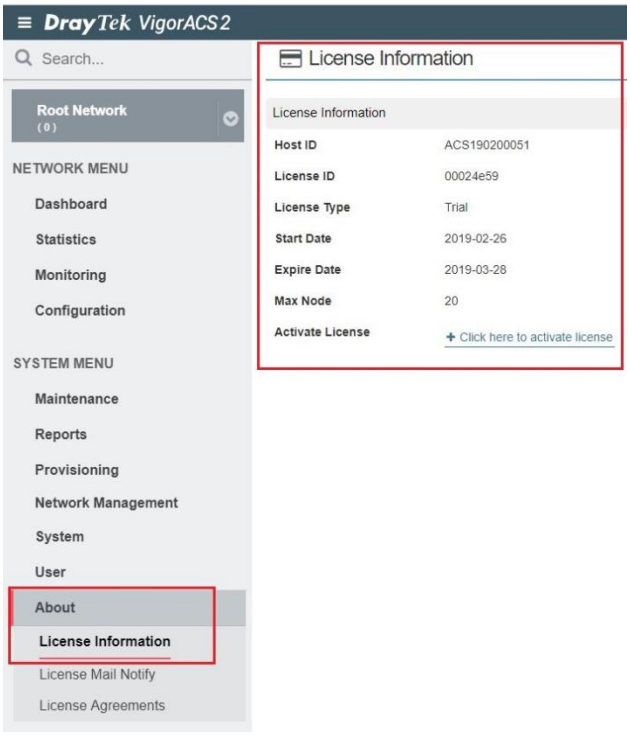
d. Select "***Change password***" for security purposes.



e. ***Enter new password*** and confirm new password.



f. Go to "***About***", to verify the License information on VigorACS2.



XI. Change the time zone to ***AEDT (Australian Eastern Daylight Time)***.

a. Enter the command "***date***" to verify the time zone.
b. Enter the command "***mv /etc/localtime /etc/localtime.bak***".
c. Enter the command "***ln –s /usr/share/zoneinfo/Australia/NSW /etc/localtime***".
d. Enter again the command "***date***" to verify the time zone – should be set to ***AEDT***.