

# VMWARE ESXi 6.7 (BETA)

Installation Guide

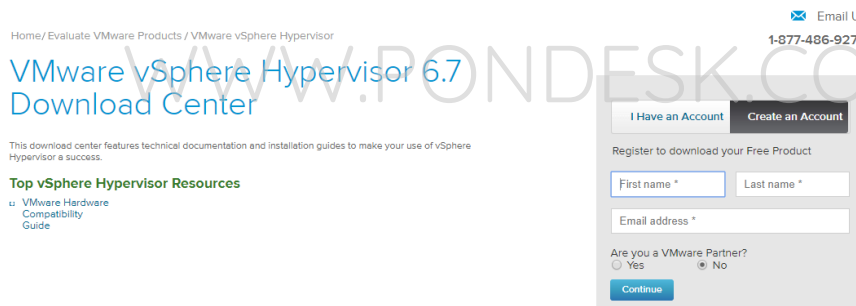
PICO PC<sup>®</sup>

# Installing VMware ESXi

## 1. Pre-requisites

Before proceeding to the installation, the intended user should know that in order to install VMware ESXi v6.7 on mini PC the following steps should be followed:

- VMware ESXi stable release version only
- VMware ESXi v6.7 to be downloaded from their website but first you need to register for the product which is free  
<https://my.vmware.com/en/web/vmware/evalcenter?p=free-esxi6>



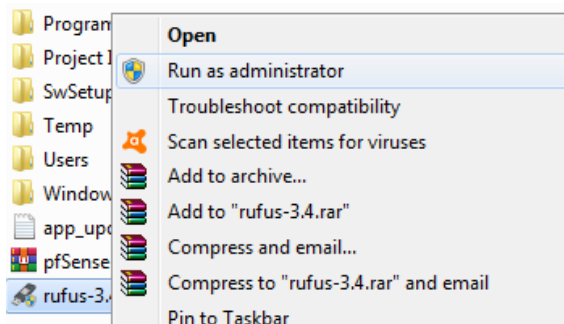
- USB flash drive 2.0 or 3.0
- Size 4 GB (minimum)
- Utility that helps create boot-able USBs for example, PowerISO or Rufus etc.
- Once you have downloaded the VMware ESXi image make sure to verify the integrity of the downloaded file.

## 2. Preparing for installation

- The installation image file downloaded previously must be transferred to the USB flash drive. The usual copying of image directly to the drive is not the answer.
- Appropriate utility is required to make the flash drive bootable.
- We'll be using Rufus which is a free utility to make bootable USB flash drives. You can also use other utilities as well.

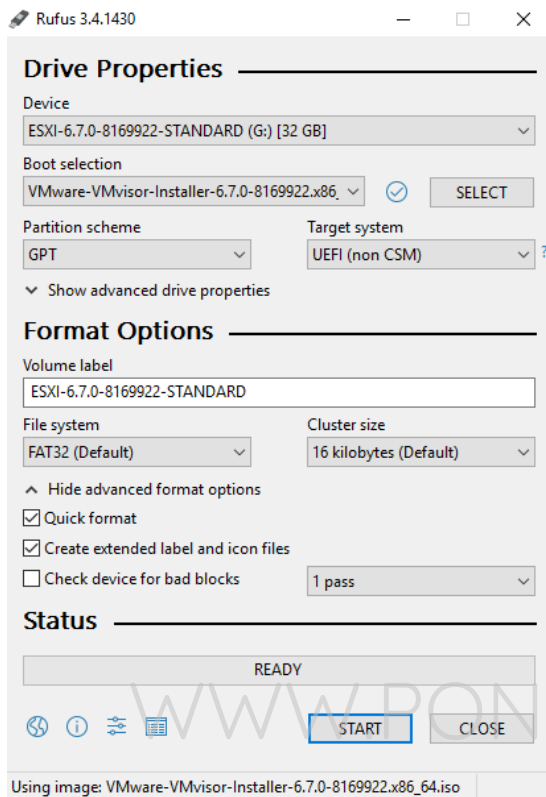
## 3. Writing the Image

- If you haven't downloaded Rufus utility to make the USB flash drive bootable then you can download from <https://rufus.ie>
- Make sure the USB flash drive is blank and formatted as once the image is written all previous contents will be deleted
- Run the program as administrator.
- Once you plug in the USB flash drive you will find that it has been detected by Rufus straightaway as shown:



- Now click on the “select” button and specify the VMWare ESXi v6.7 image file on the client PC.

- Once done you will find the VMware ESXi v6.7 image file name in the “boot selection” section.



- Now simply go ahead and click on “start”.
- Once underway it will show the status of the process in the form of progress bar with percentage. It will only take a minute or two to complete the process.
- Once the process is completed you are now ready to go.

#### 4. Installation

- Once you have plugged in the USB flash drive in one of the two ports in the back of the mini PC then simply power it up.
- Once you see the “Winston Marriot logo” then simply press **CTRL+S** and it will start the booting process.

- You will be presented with the VMware ESXi installer screen.

```

Loading VMware ESXi
Loading /net_nlx4.v01
Loading /net_nx_n.v00
Loading /net_tg3.v00
Loading /net_vmxn.v00
Loading /ohci_usb.v00
Loading /qlnative.v00
Loading /rste.v00
Loading /sata_ahc.v00
Loading /sata_ata.v00
Loading /sata_sat.v00
Loading /sata_sat.v01
Loading /sata_sat.v02
Loading /sata_sat.v03
Loading /sata_sat.v04
Loading /scsi_aac.v00
Loading /scsi_adp.v00
Loading /scsi_aic.v00
Loading /scsi_bnx.v00
Loading /scsi_bnx.v01
Loading /scsi_fni.v00
Loading /scsi_hps.v00
Loading /scsi_ips.v00
Loading /scsi_lip.v00
Loading /scsi_neg.v00
Loading /scsi_neg.v01
Loading /scsi_neg.v02
Loading /scsi_npt.v00
Loading /scsi_npt.v01
Loading /scsi_npt.v02
Loading /scsi_qla.v00
Loading /scsi_qla.v01
Loading /uhci_usb.v00
Loading /xorg.v00
Loading /ingrb.tgz
Loading /state.tgz
Relocating modules and starting up the kernel...

```

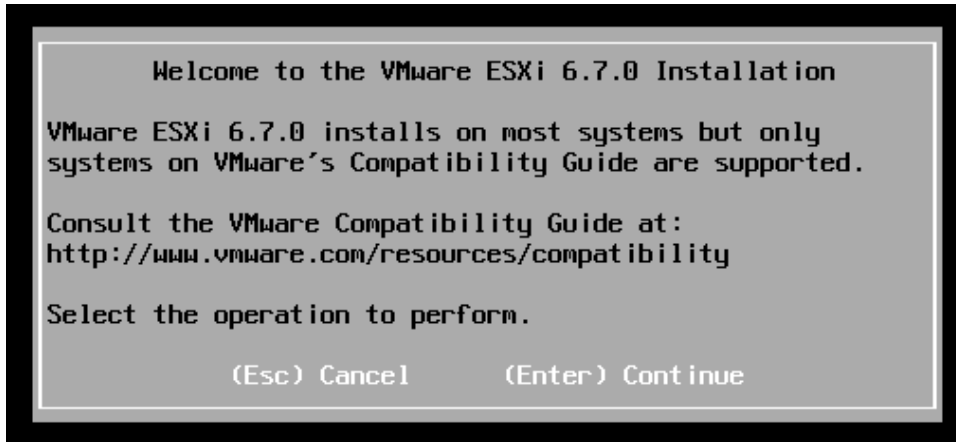
- Notice the line “**Relocating modules and starting up the kernel**”. You will notice that the installer gets stuck at this part. This happens when we use non-HCL (Hardware Compatibility List) hardware.
- There is a way to bypass this check all you need to do is to simply reboot the mini PC, reinitialize the boot sequence and once VMware ESXi is about start the sequence press “Shift+O” to append the boot options and type “ignoreHeadless=TRUE” this line then presses “Enter”.

```

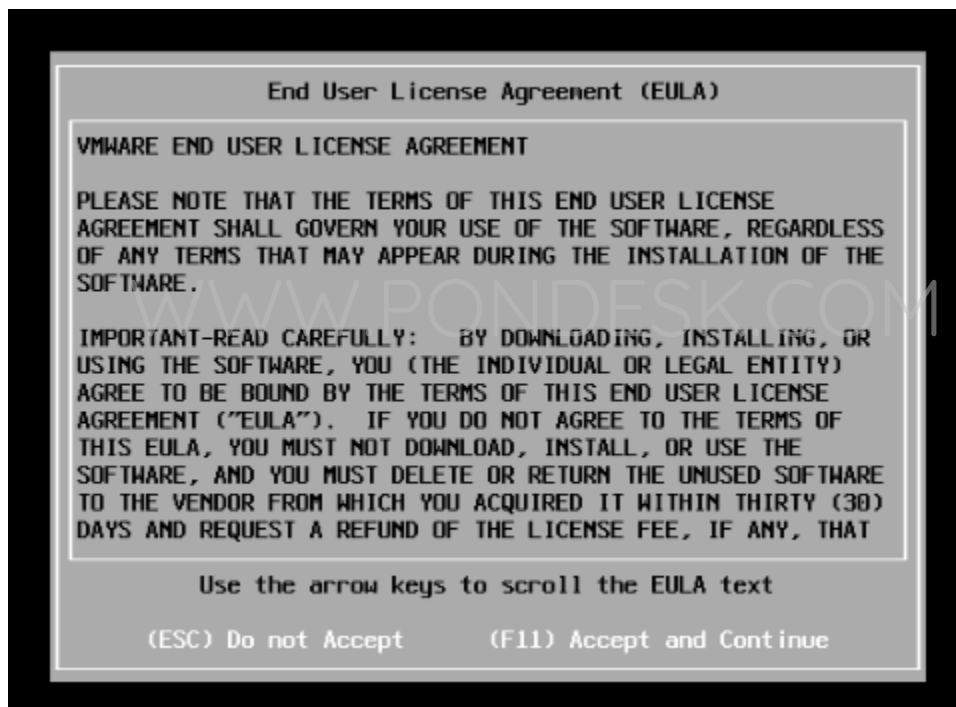
<ENTER>: Append options and boot <ESC>: Cancel
> ignoreHeadless=TRUE

```

- Since in production environment servers designated for VMware ESXi are built on VMware ESXi HCL hardware hence this error is not observed and reported.
- Now there won't be any further hiccups during the installation but when you reboot VMware ESXi you will need to re-enter the command but we'll make sure that the change we make is persistent once we are in the actual VMware ESXi environment.
- The following screen will be displayed once the installer starts. Press “enter to continue”.



- Agree to the “terms and conditions” by pressing “F11”.



- Now the system will scan for available devices to work with.
- We are working with two identical 128 GB SSDs for this tutorial and install VMWare ESXi v6.7 on the primary drive and keep the secondary drive for installing VMs. This is recommended and a good practice for better performance and smooth operations.

- Once you specify and confirm the drive for VMware ESXi v6.7 installation you will be prompted to select the “keyboard layout”. Select “US default” and proceed.

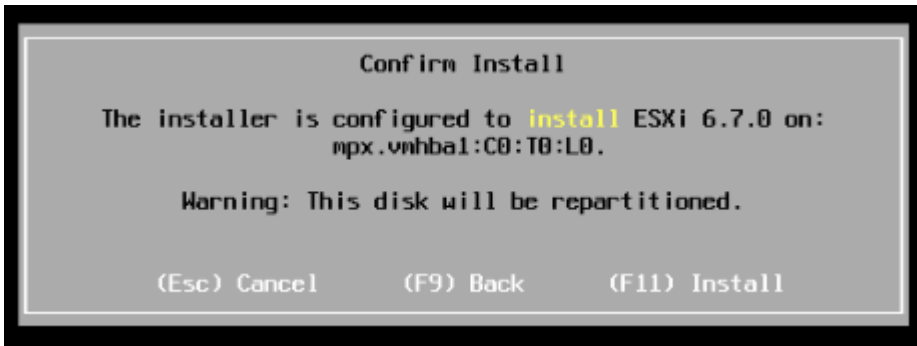


- Please specify the “root” password. Now unlike any other software where we can specify simple passwords for login but this doesn’t work for VMware ESXi 6.x due to its password policy. For password policy please refer to the URL and make sure to set a complex password and write it down for future references.

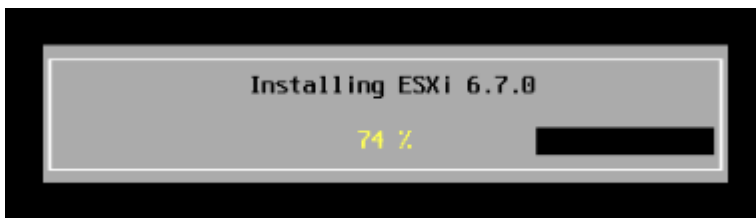
<https://docs.vmware.com/en/VMware-vSphere/6.5/com.vmware.vsphere.security.doc/GUID-DC96FFDB-F5F2-43EC-8C73-05ACDAE6BE43.html>



- Now you will be prompted to begin the installation. Press “F11” to proceed.



- The installation will take a couple of minutes to complete.

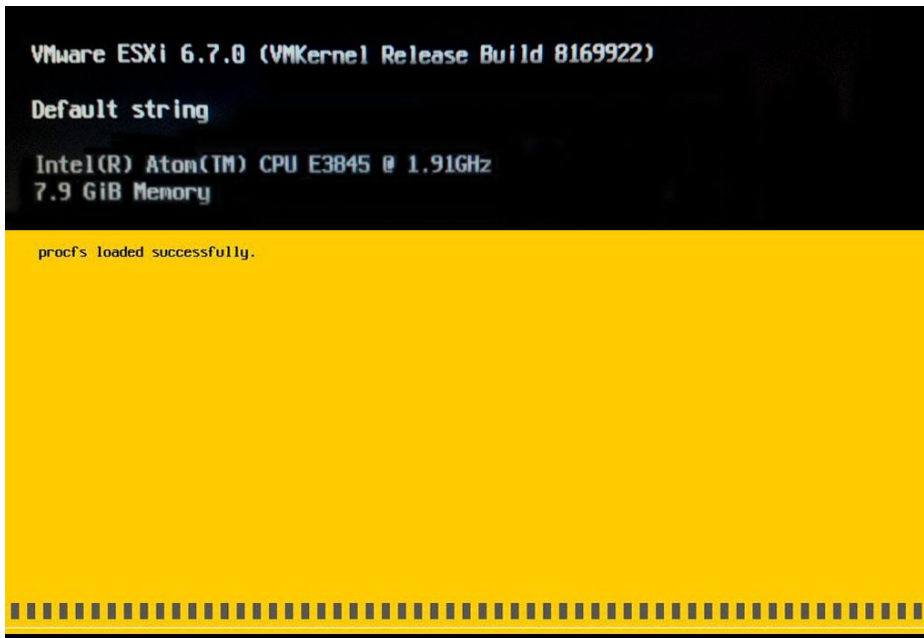


- Once the installation is finished you will be prompted to reboot. Remove the USB flash drive and proceed to reboot.



- Now what you need to do is be aware of the “**Relocating modules and starting up the kernel**” prompt and in order to by pass this press “Shift+O” to append the boot options by typing “ignoreHeadless=TRUE” command to continue with the installation.





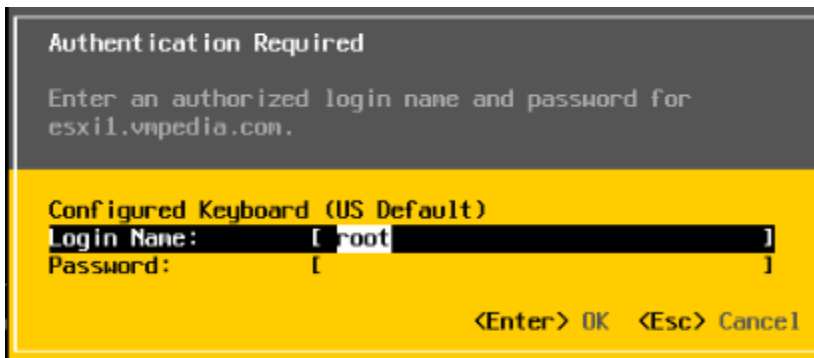
- Once the installation is completed you will be presented with the following screen.



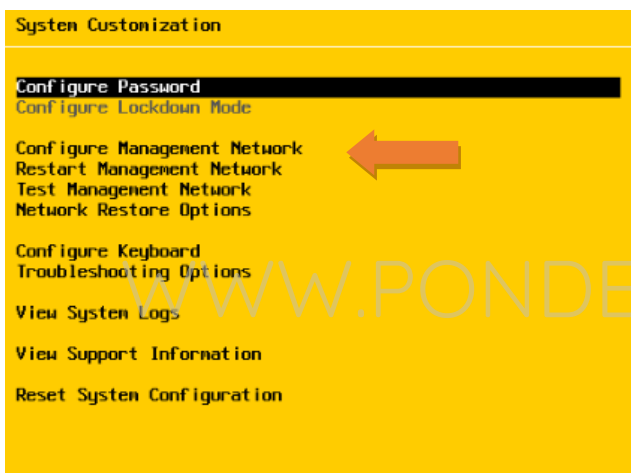
- You can now access the webGUI of VMware ESXi 6.7 from your browser.
- You can now configure IP address settings from DHCP to static by pressing "F2".



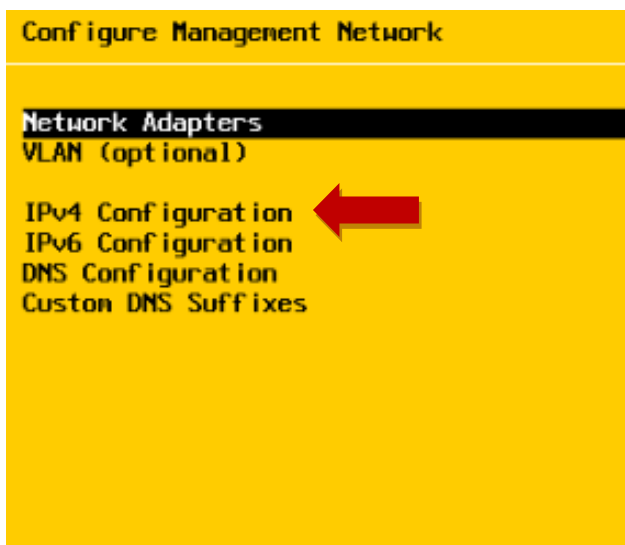
- You will be prompted to enter the root password.



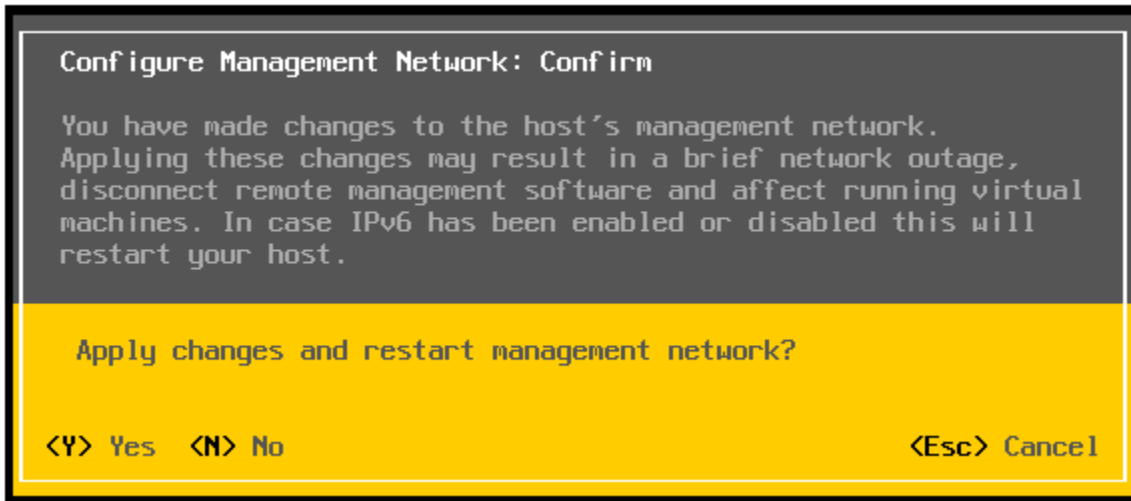
- Select "Configure Management Network" from the list of options.



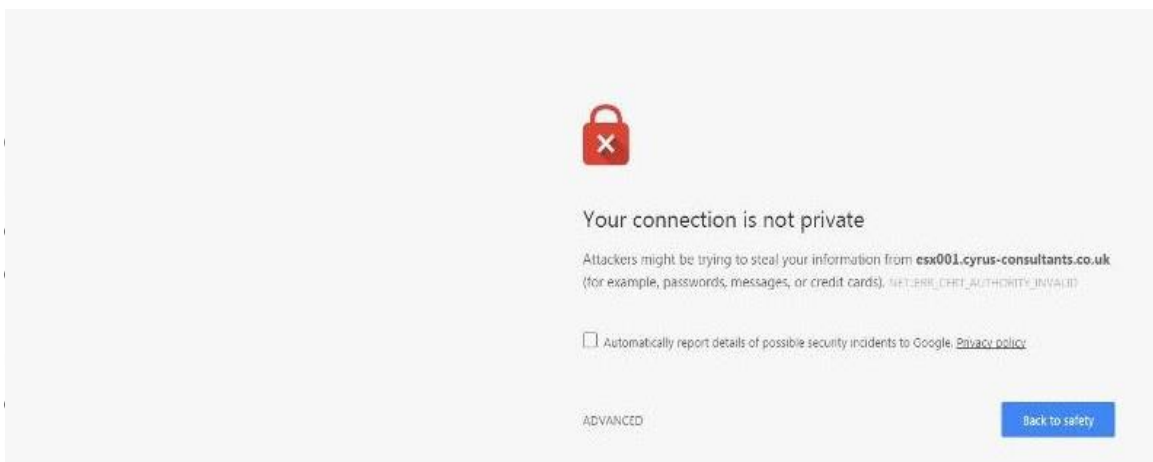
- You can now configure static IP address.



- Once you have configured static IP you will be prompted to restart the network manager.



- Once you are done then you can now simply access VMware ESXi v6.7 webGUI.
- Open your web browser and type in the URL <http://192.168.x.x> to access the webGUI.



have an exception for the self signed certificate you will be presented with the login screen. Use the username and password to login.



- Once logged in you will be presented with the VMware's Customer Experience Improvement Program (CEIP). Put a checkmark and proceed.



- Afterwards you will land on the VMware ESXi dashboard.

localhost.domain.name

Get vCenter Server | Create/Register VM | Shut down | Reboot | Refresh | Actions

**localhost.domain.name**  
 Version: 6.7.0 (Build 8169922)  
 State: Normal (not connected to any vCenter Server)  
 Uptime: 0.17 days

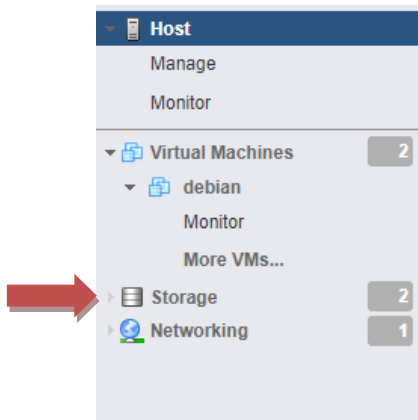
CPU: FREE: 7.6 GHz, USED: 23 MHz, CAPACITY: 7.7 GHz  
 MEMORY: FREE: 6.77 GB, USED: 1.13 GB, CAPACITY: 7.89 GB  
 STORAGE: FREE: 428.1 GB, USED: 59.65 GB, CAPACITY: 487.75 GB

Hardware	
Manufacturer	Default string
Model	Default string
CPU	4 CPUs x Intel(R) Atom(TM) CPU E3845 @ 1.91GHz
Memory	7.89 GB

Configuration	
Image profile	ESXi-6.7.0-8169922-standard (VMware, Inc.)
vSphere HA state	Not configured
vMotion	Not supported

System Information

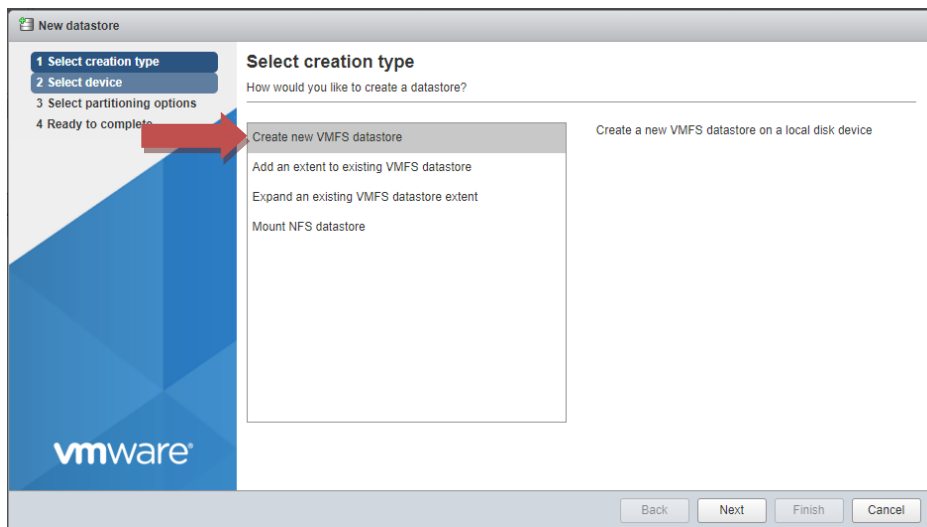
- Now we need to mount our secondary drive. For this we need to create a new “Datastore”.



- Now select “New Datastore”.

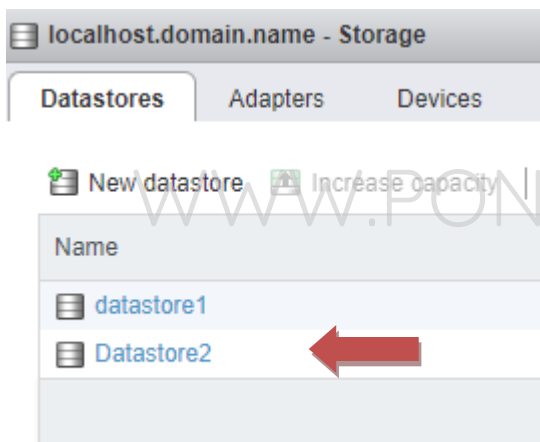


- Select “Create new datastore” then select “Next”.

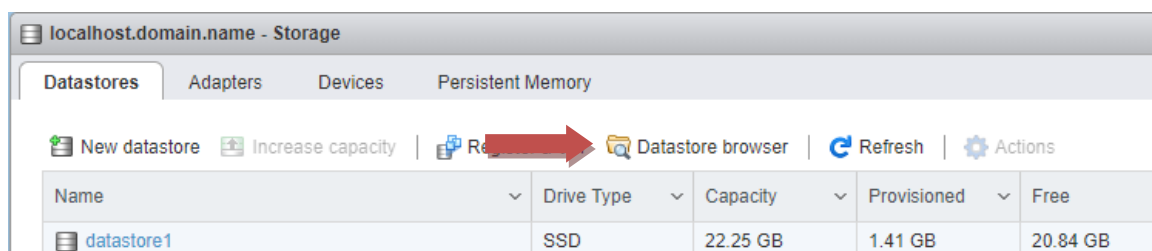


- Select the secondary drive.

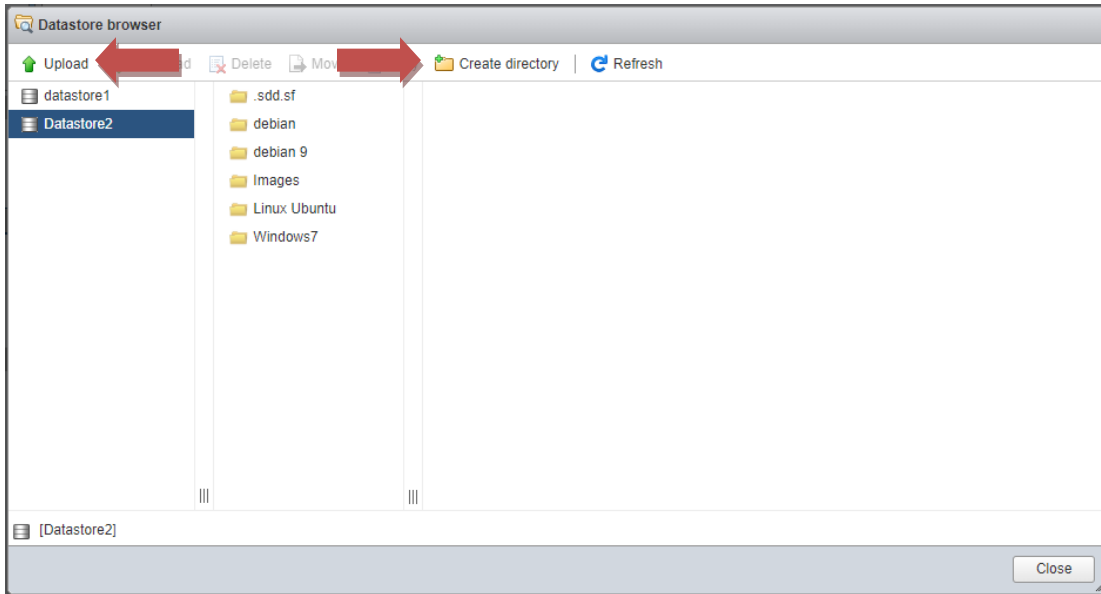
- Specify the “name” for the datastore and select the available drive below the name textbox. Select “Next”.
- Select “VMFS6” as the datastore version.
- Define configuration details for the datastore.
- Specify partition configuration. Either avail “use all partitions” or “use free space”.
- The task is completed.
- Below mentioned screenshot shows the newly created datastore namely “datastore2”.



- Now you are ready to create, store virtual machines and upload ISO images for OS(s).
- To get started simply select “Datastore Browser”.



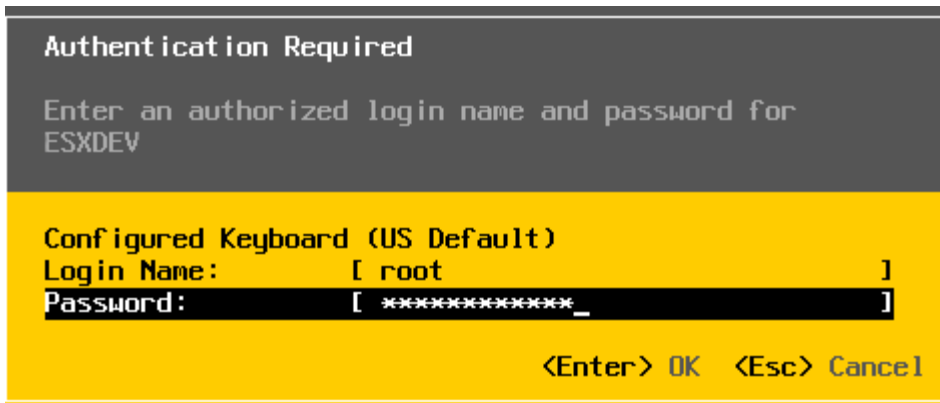
- Now select “Datastore2” and you see the “upload” option. By selecting it and creating new folder you can easily upload ISO image files to create virtual machines in minutes.



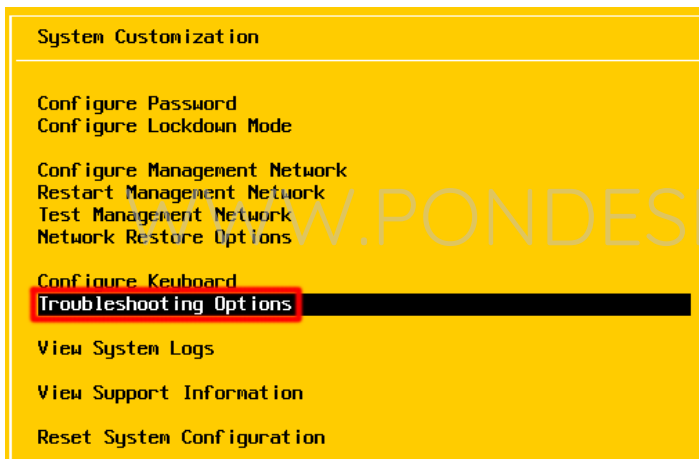
- Now we are ready to permanently resolve the **Relocating modules and starting up the kernel** issue so that whenever you need to reboot in real time environment no problems are faced.
- In order to begin we need to enable SSH and ESXi Shell from the “Direct Console User Interface” or “DCUI”.
- Now connect a monitor to your mini PC and you will be presented with the below mentioned screen. Press “F2”.



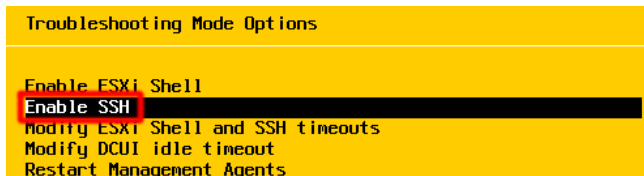
- You will be prompted to enter the root password.



- Now select “Troubleshooting Options”.



- Select “Enable SSH”.



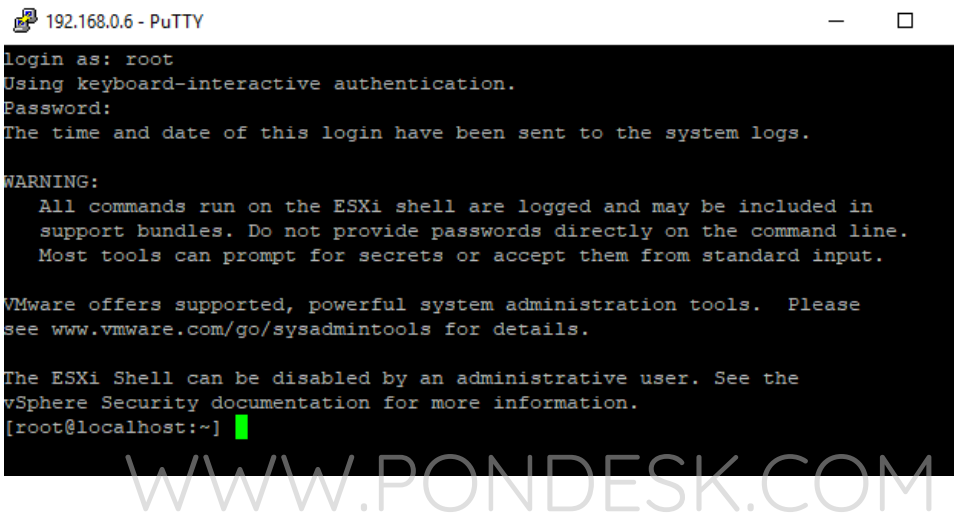
- Do the same for “ESXi Shell”.
- You can see the confirmation once SSH is enabled.



#### Troubleshooting Mode Options

```
Enable ESXi Shell
Disable SSH
Modify ESXi Shell and SSH timeouts
Modify DCUI idle timeout
Restart Management Agents
```

- Now SSH into the ESXi server using “Putty”.



```
192.168.0.6 - PuTTY
login as: root
Using keyboard-interactive authentication.
Password:
The time and date of this login have been sent to the system logs.

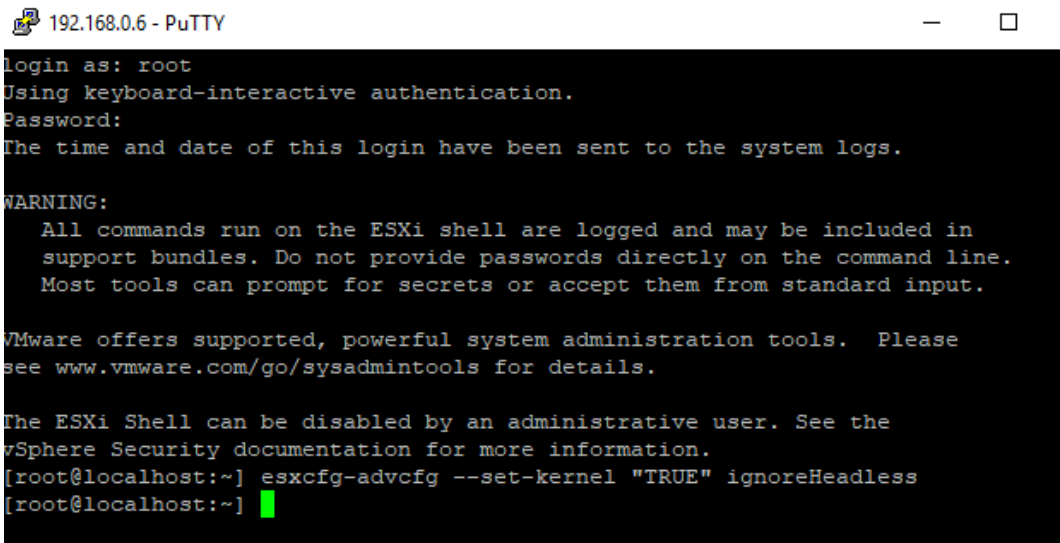
WARNING:
  All commands run on the ESXi shell are logged and may be included in
  support bundles. Do not provide passwords directly on the command line.
  Most tools can prompt for secrets or accept them from standard input.

VMware offers supported, powerful system administration tools. Please
see www.vmware.com/go/sysadmintools for details.

The ESXi Shell can be disabled by an administrative user. See the
vSphere Security documentation for more information.
[root@localhost:~] █
```

- Now you need to enter the following command to save the make the configuration persistent.

```
esxcfg-advcfg --set-kernel "TRUE" ignoreHeadless
```



```
192.168.0.6 - PuTTY
login as: root
Using keyboard-interactive authentication.
Password:
The time and date of this login have been sent to the system logs.

WARNING:
  All commands run on the ESXi shell are logged and may be included in
  support bundles. Do not provide passwords directly on the command line.
  Most tools can prompt for secrets or accept them from standard input.

VMware offers supported, powerful system administration tools. Please
see www.vmware.com/go/sysadmintools for details.

The ESXi Shell can be disabled by an administrative user. See the
vSphere Security documentation for more information.
[root@localhost:~] esxcfg-advcfg --set-kernel "TRUE" ignoreHeadless
[root@localhost:~] █
```

- Now we need to verify whether this command has worked or not. The first thing to do is to verify via another command and then see the result by doing a reboot.

```
[root@localhost:~] esxcfg-advcfg -j ignoreHeadless  
ignoreHeadless = TRUE  
[root@localhost:~] █
```

- The result “ignoreHeadless = TRUE” in the second line shows that the configuration has been saved successfully. Now when you reboot you won’t face the problem anymore.

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**THANK YOU**

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