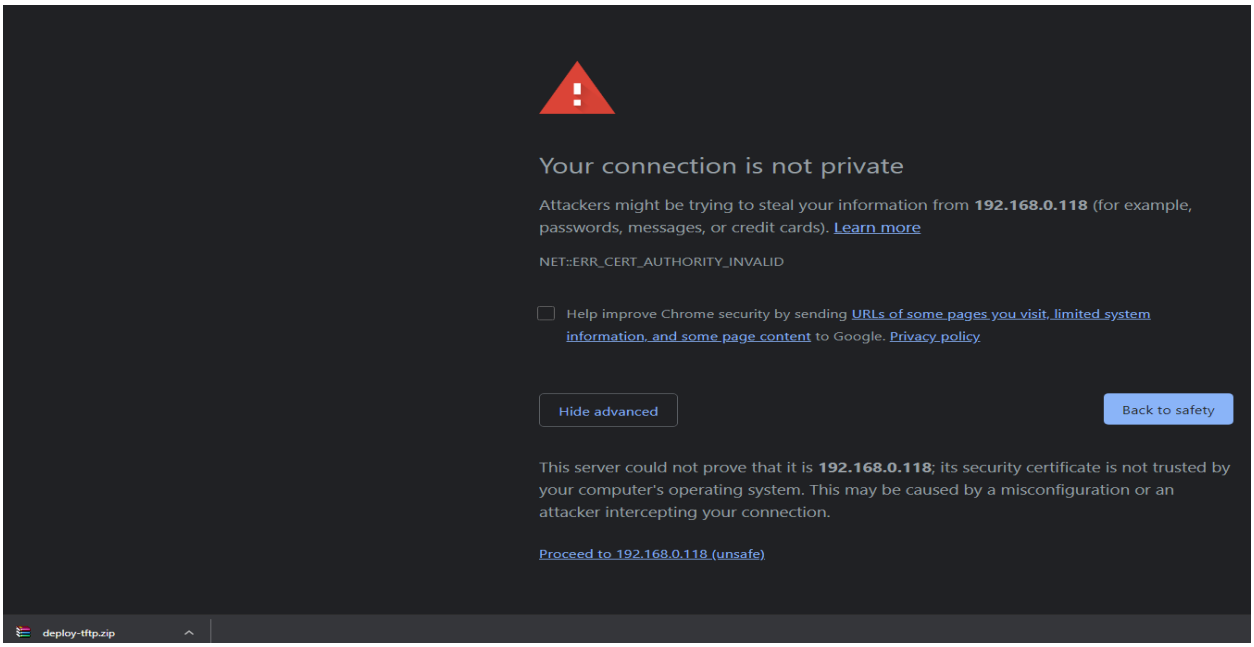
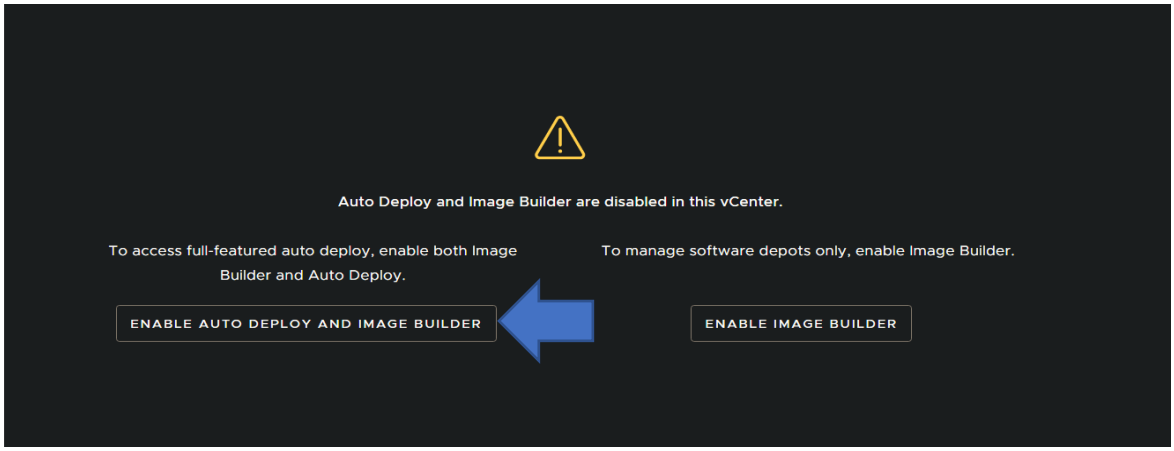
Activating and Configuring Auto Deploy in vCenter Server Appliance 7

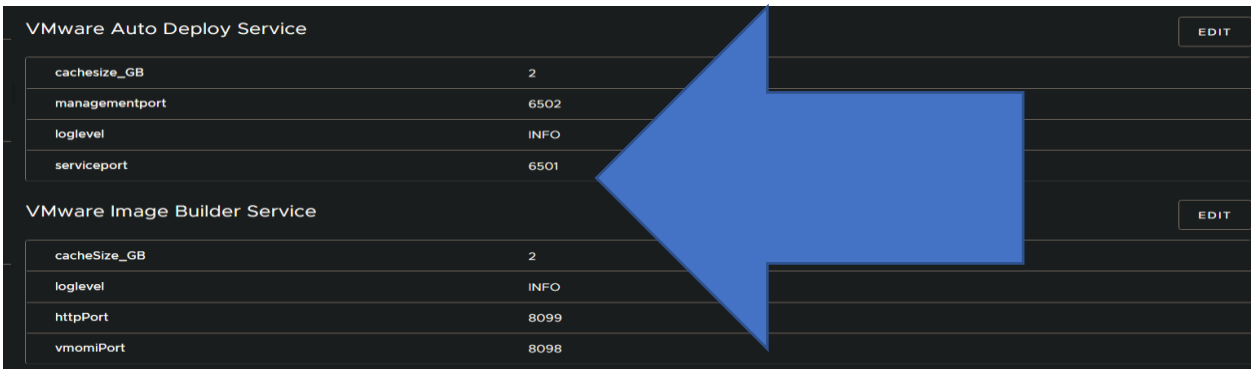
In this post we will go through the process of setting up Auto Deploy that will be used to deploy ESXi host through the network instead of using CD/DVD or USB stick. Please note you should be Administrator on vCenter to enable Auto Deploy, if not you will get error message. Now, I will connect to vCenter Appliance



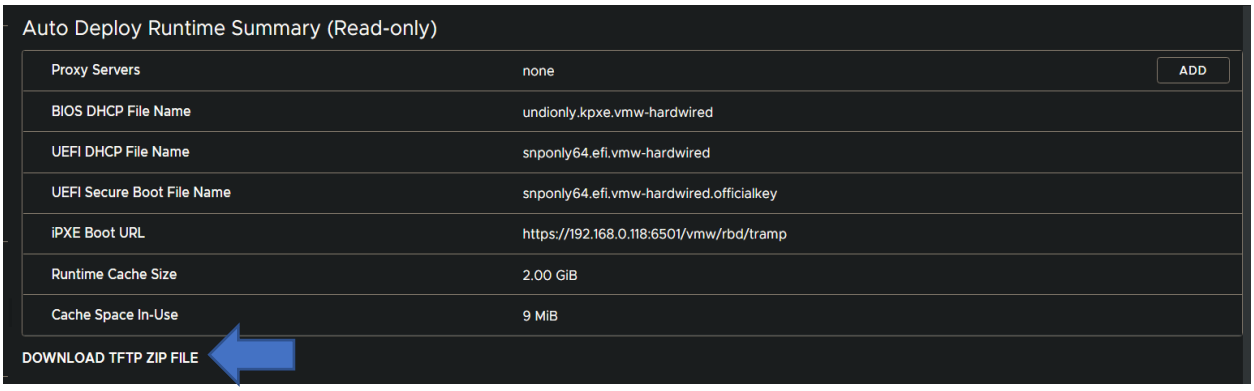
Menu – Click Auto Deploy – Click Enable Auto Deploy & Image Builder



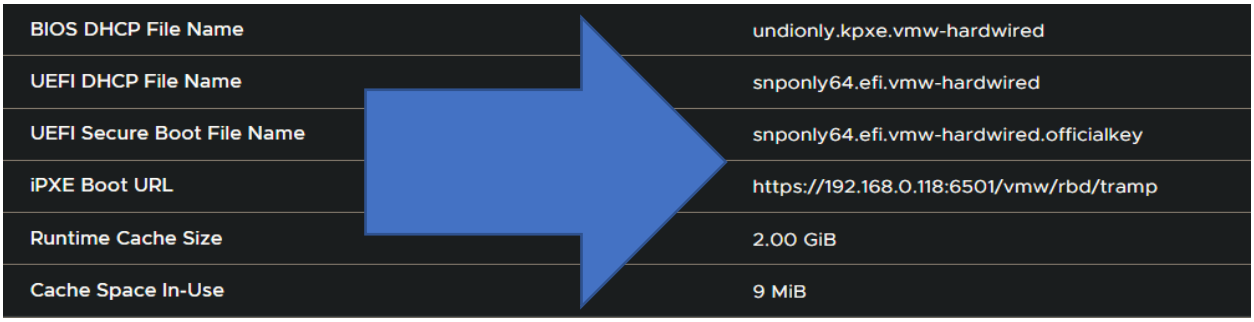
Now go to configure and check these settings. I have left them at their default.



Now download TFTP file and save the file on to your Domain Controller where my DHCP is running.

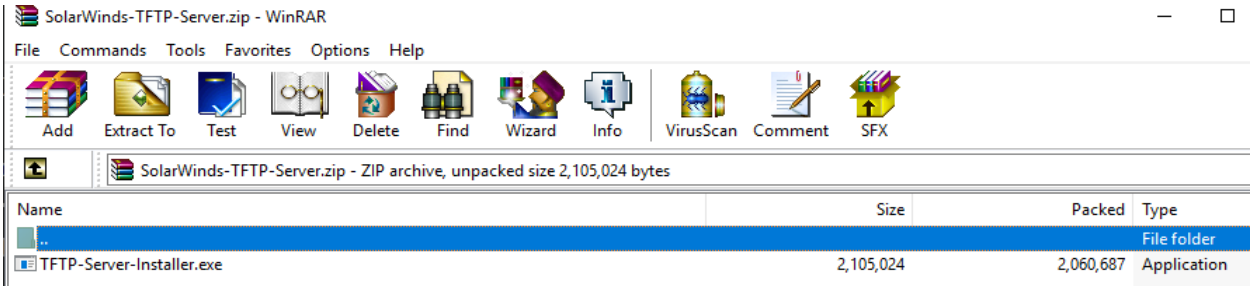


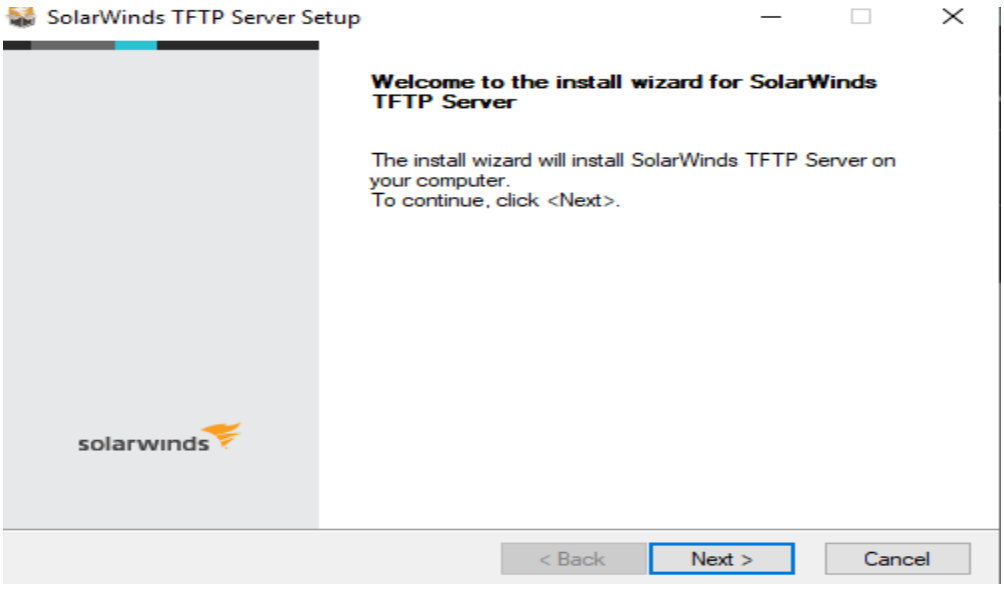
Make a note of this file as well. We will need it later for configuring.

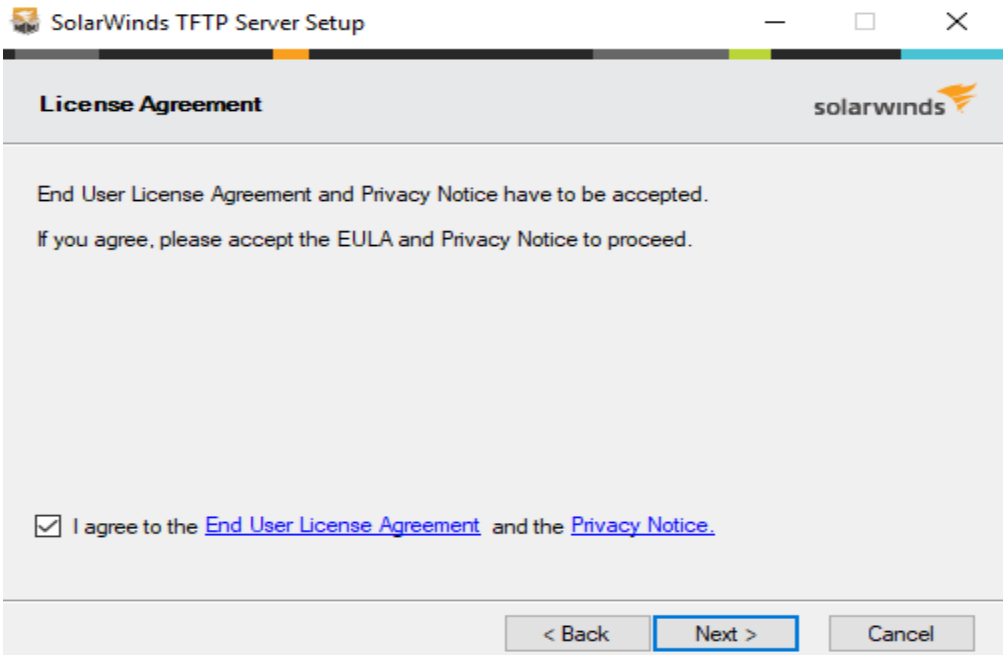


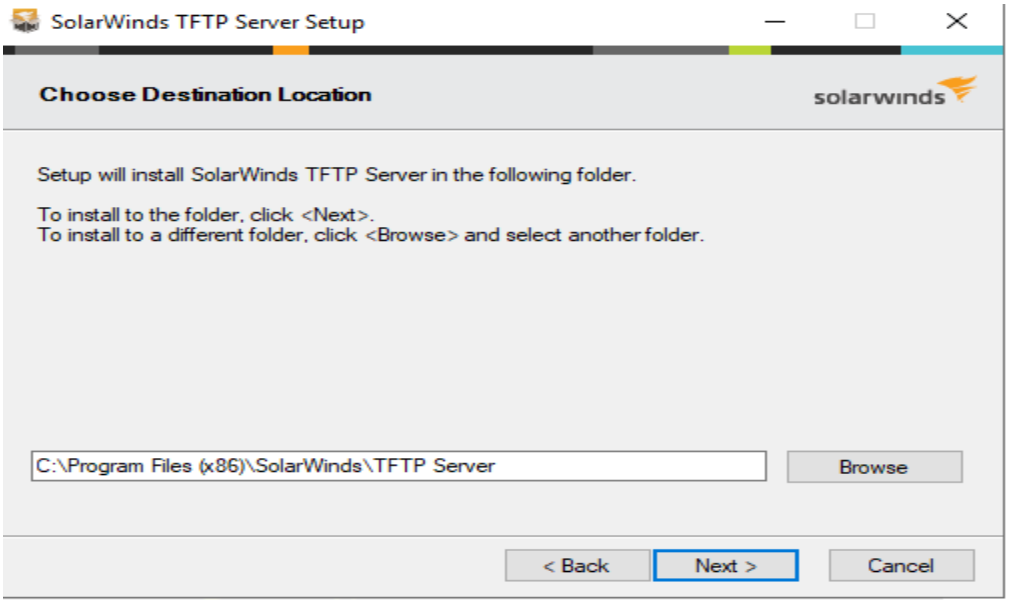
Now go to this link and download TFTP Server tool and install it on your DC

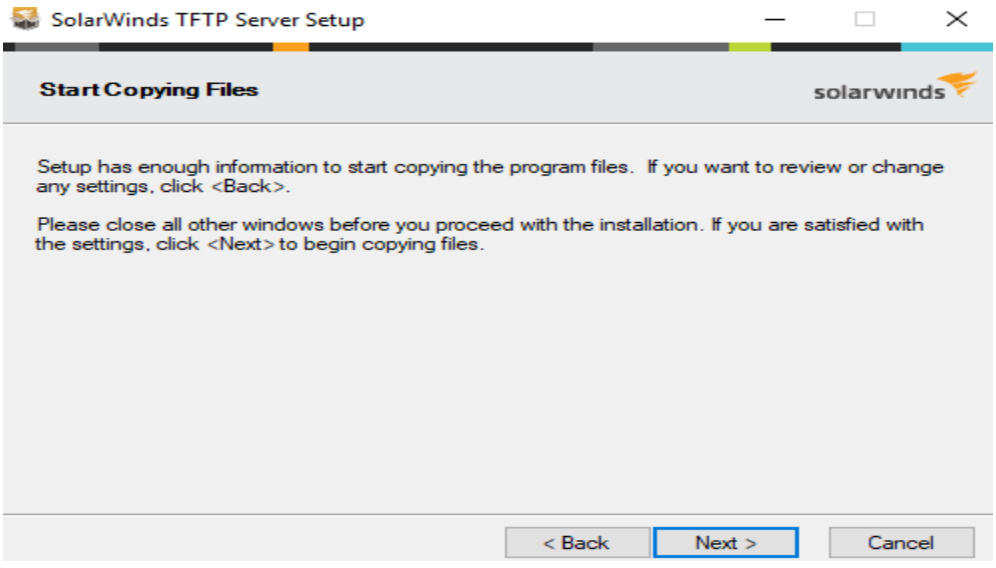
https://www.solarwinds.com/free-tools/free-tftp-server

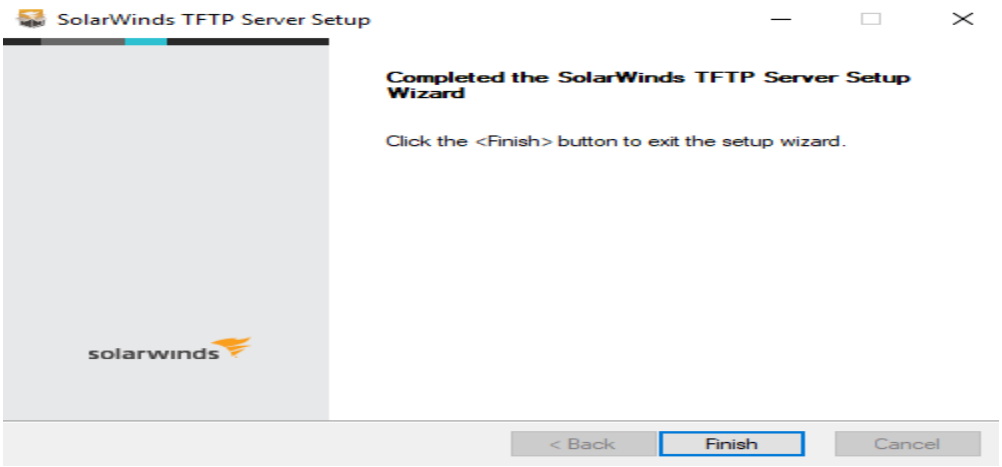




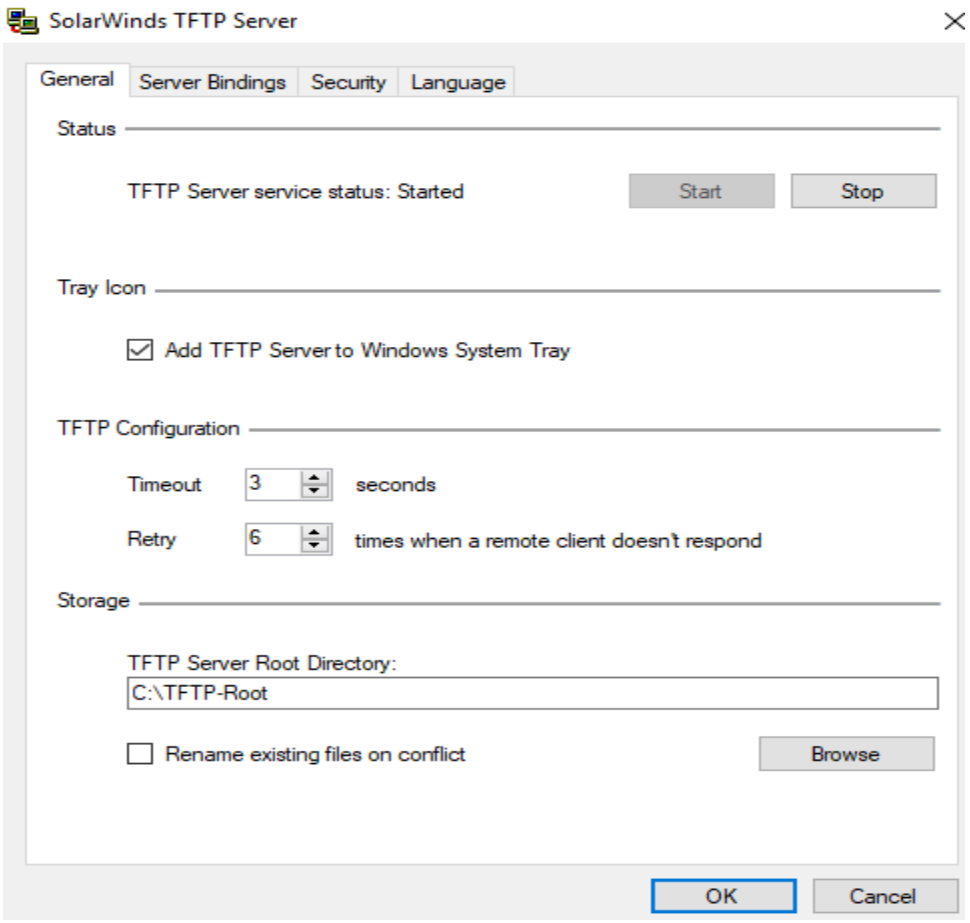

SolarWinds TFTP Server Setup
License Agreement
solarwinds
End User License Agreement and Privacy Notice have to be accepted.
If you agree, please accept the EULA and Privacy Notice to proceed.
I agree to the End User License Agreement and the Privacy Notice.
< Back
Next >
Cancel

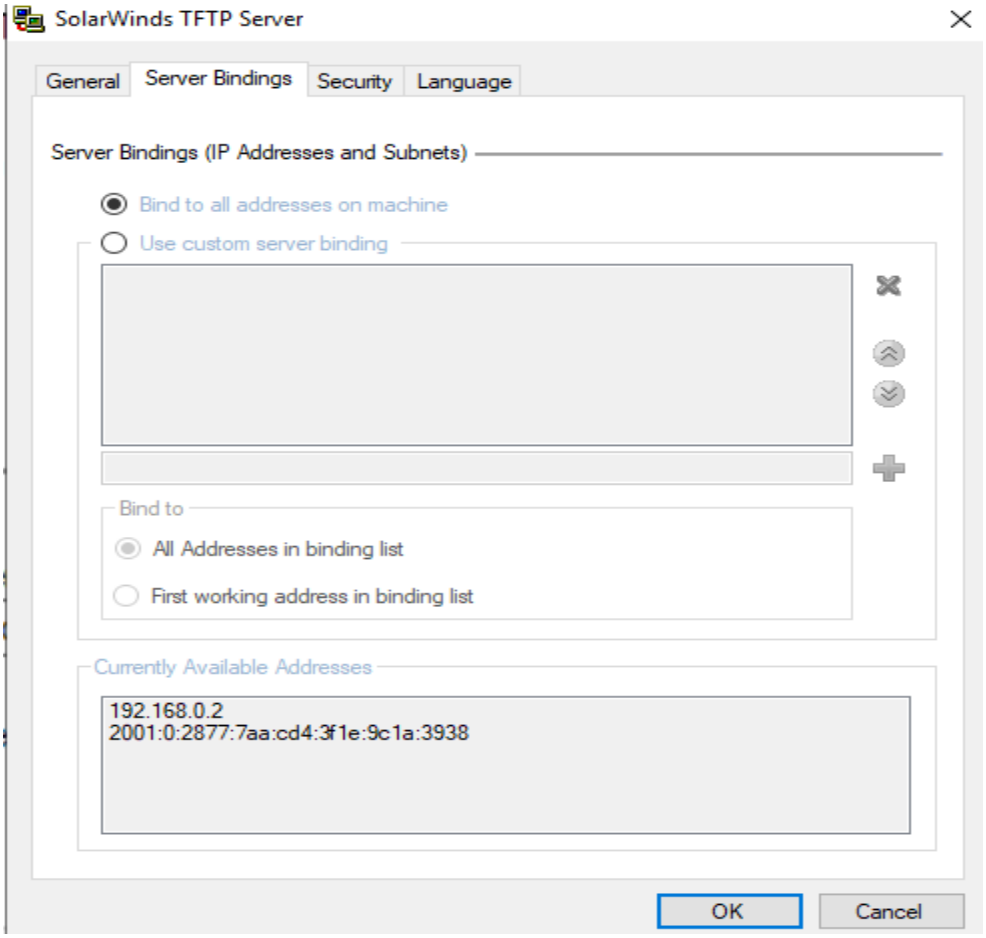

SolarWinds TFTP Server Setup
Choose Destination Location
solarwinds
Setup will install SolarWinds TFTP Server in the following folder.
To install to the folder, click <Next>.
To install to a different folder, click <Browse> and select another folder.
C:\Program Files (x86)\SolarWinds\TFTP Server
Browse
< Back
Next >
Cancel

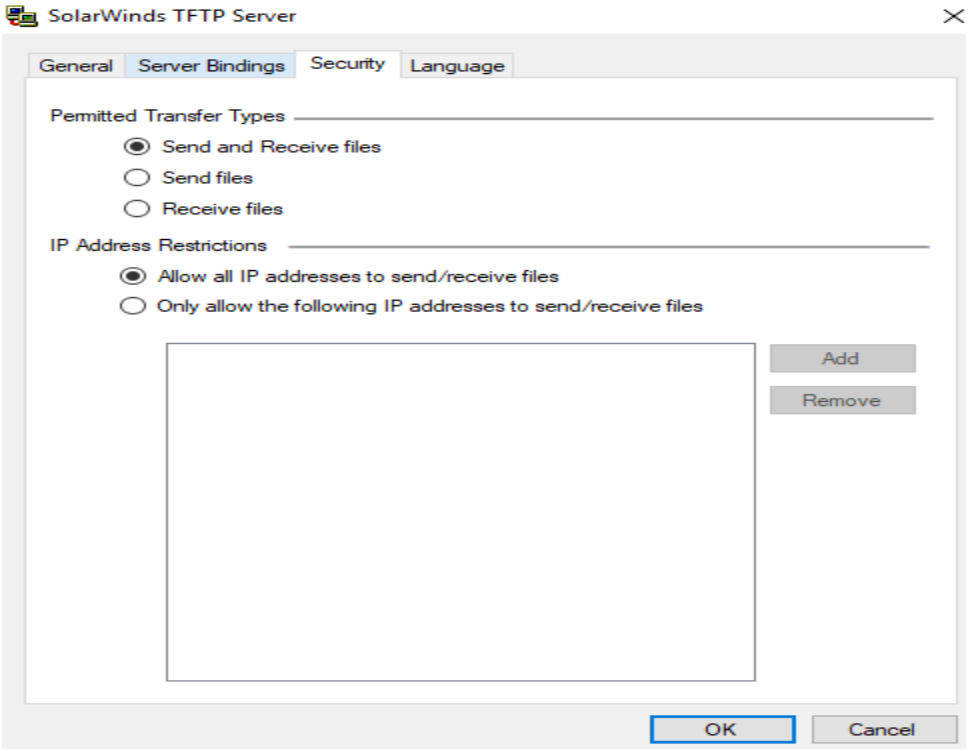

SolarWinds TFTP Server Setup
Start Copying Files
solarwinds
Setup has enough information to start copying the program files. If you want to review or change any settings, click <Back>.
Please close all other windows before you proceed with the installation. If you are satisfied with the settings, click <Next> to begin copying files.
< Back
Next >
Cancel



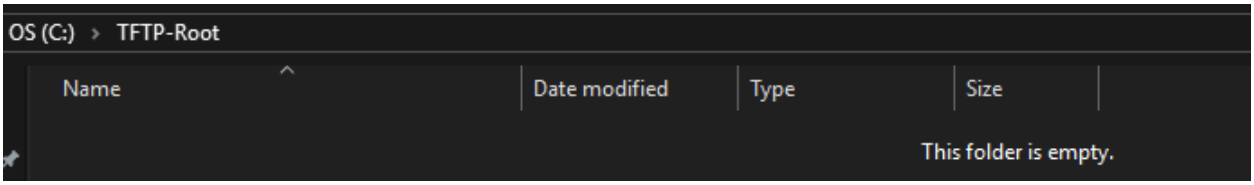
Click File – Configure

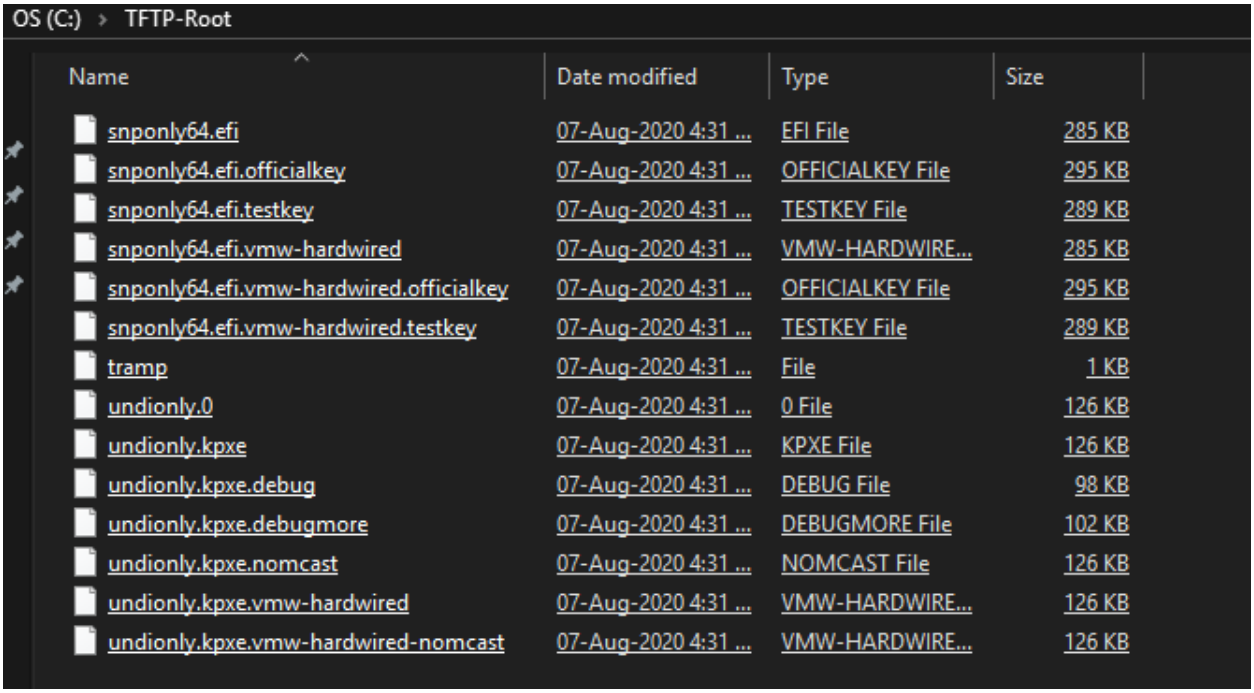



SolarWinds TFTP Server
General
Server Bindings
Security
Language
Server Bindings (IP Addresses and Subnets)
Bind to all addresses on machine
Use custom server binding
Bind to
All Addresses in binding list
First working address in binding list
Currently Available Addresses
192.168.0.2
2001:0:2877:7aa:cd4:3f1e:9c1a:3938
OK
Cancel

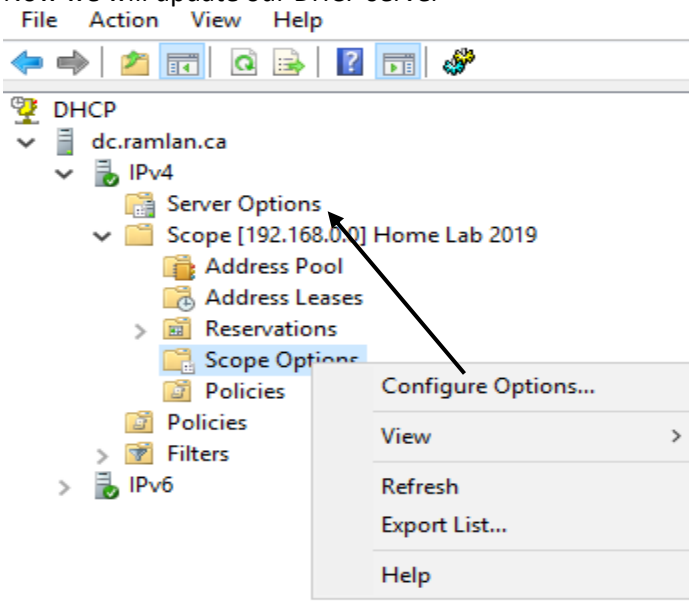

SolarWinds TFTP Server
General
Server Bindings
Security
Language
Permitted Transfer Types
Send and Receive files
Send files
Receive files
IP Address Restrictions
Allow all IP addresses to send/receive files
Only allow the following IP addresses to send/receive files
Add
Remove
OK
Cancel

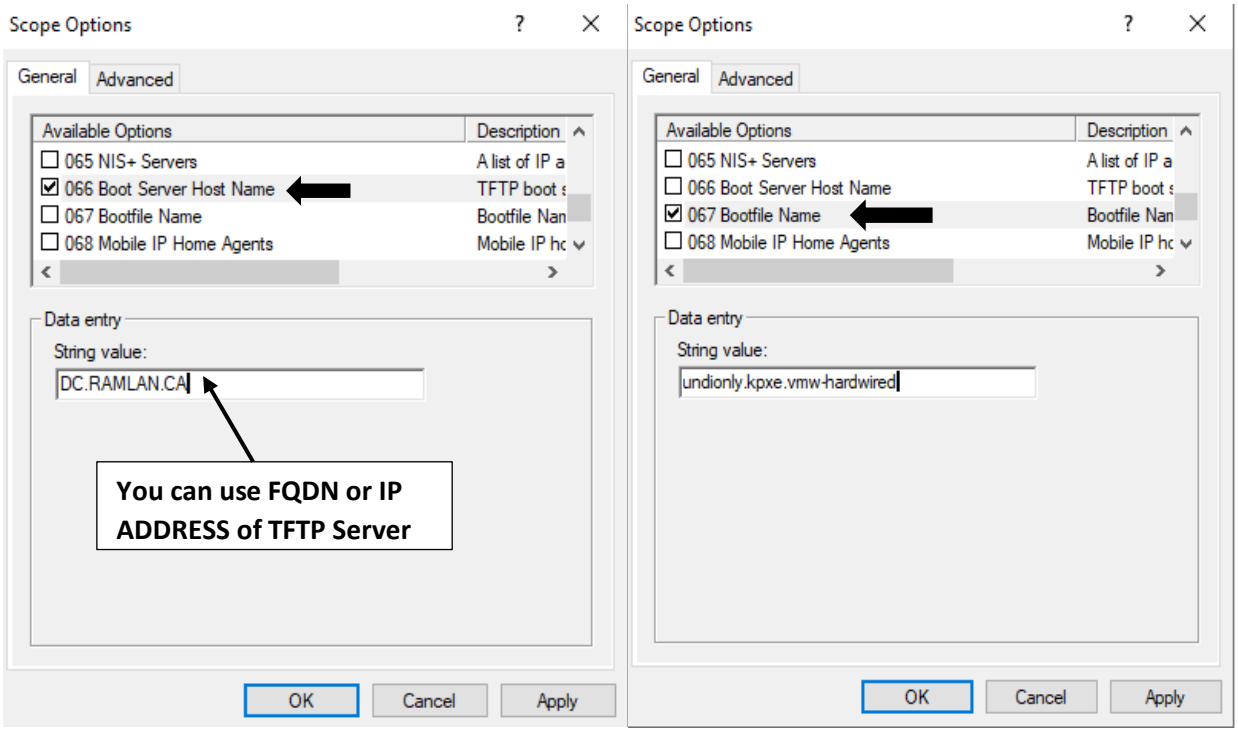
Now we have to unzip TFTP Boot Zip file (which we downloaded from Auto Deploy – Configure menu in previous step) to TFTP Root Directory. Your configuration should look like this.

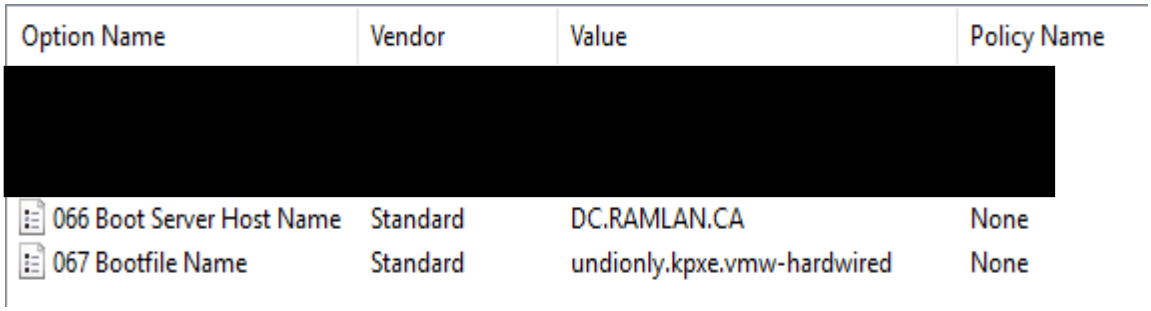




Now we will update our DHCP server

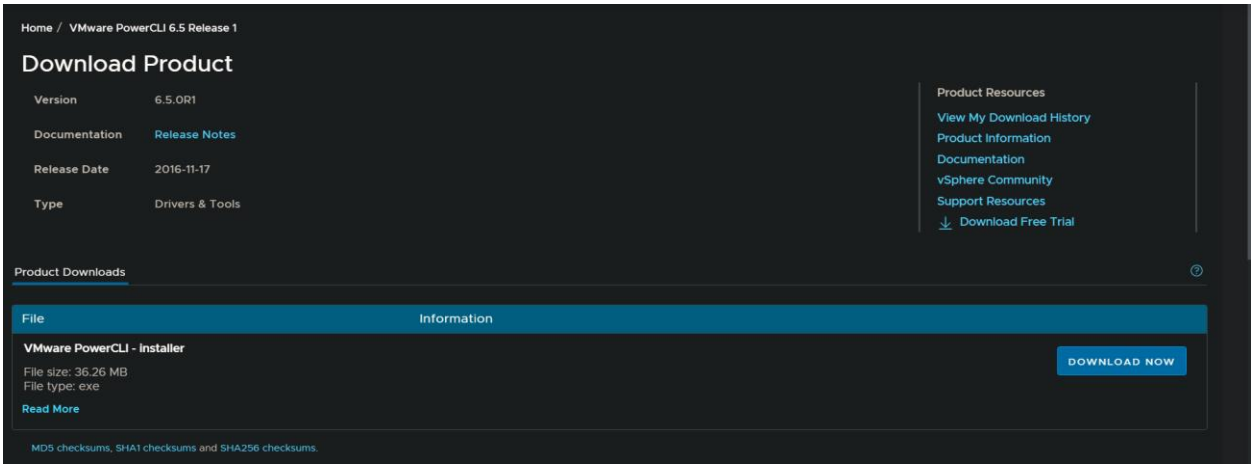






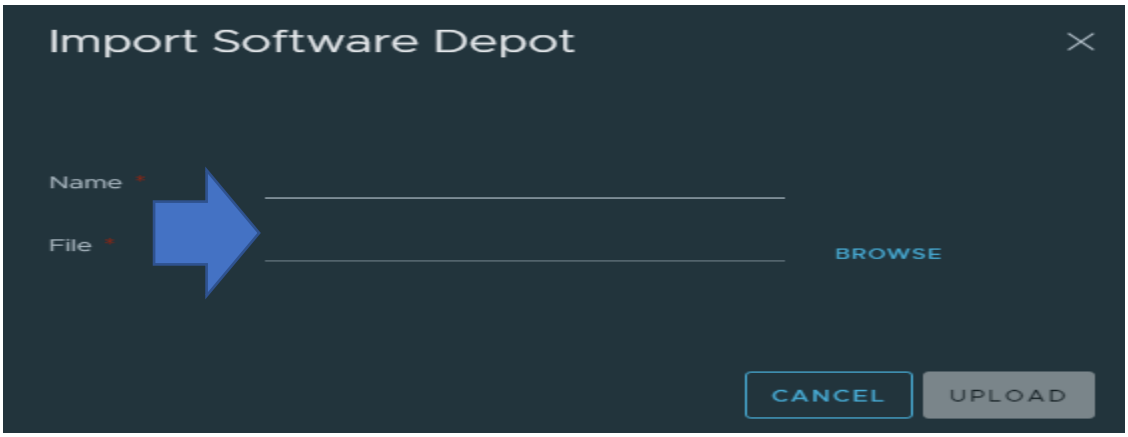
Additionally, from Server Options you can define options 005,006,012,015 and 042. These values will be then applicable on all scopes which you create on this DHCP server. If you want these values to be local to each scope, then define them under Scope Options only.

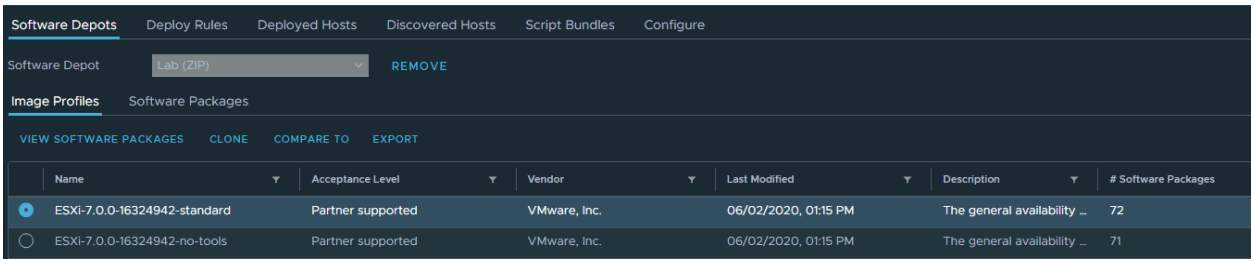
You can install PowerCLI on workstation, if you want to configure Auto Deploy using command line. I plan to use GUI.



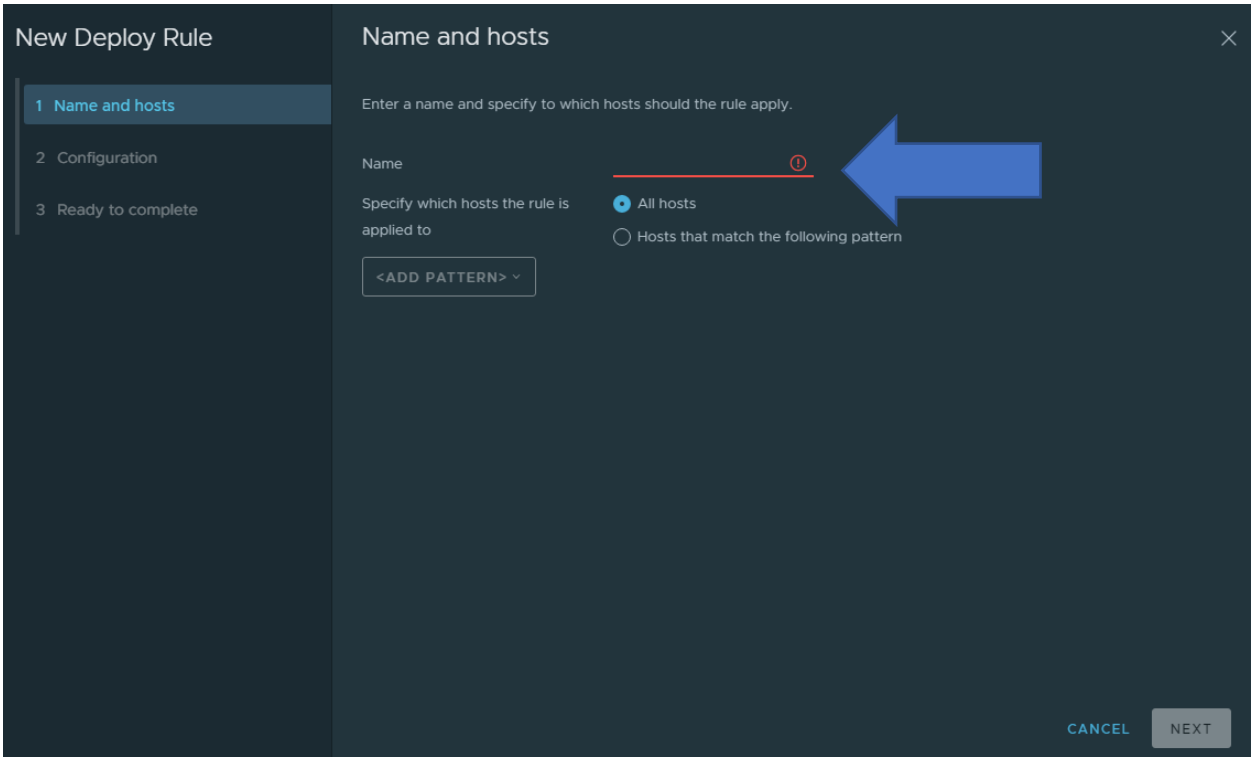
Now we will upload ESXi image to vCenter Server Appliance using GUI. I have downloaded offline bundle from vmware site - **VMWare-ESXi-7.0.0-16324942-depot.zip**.

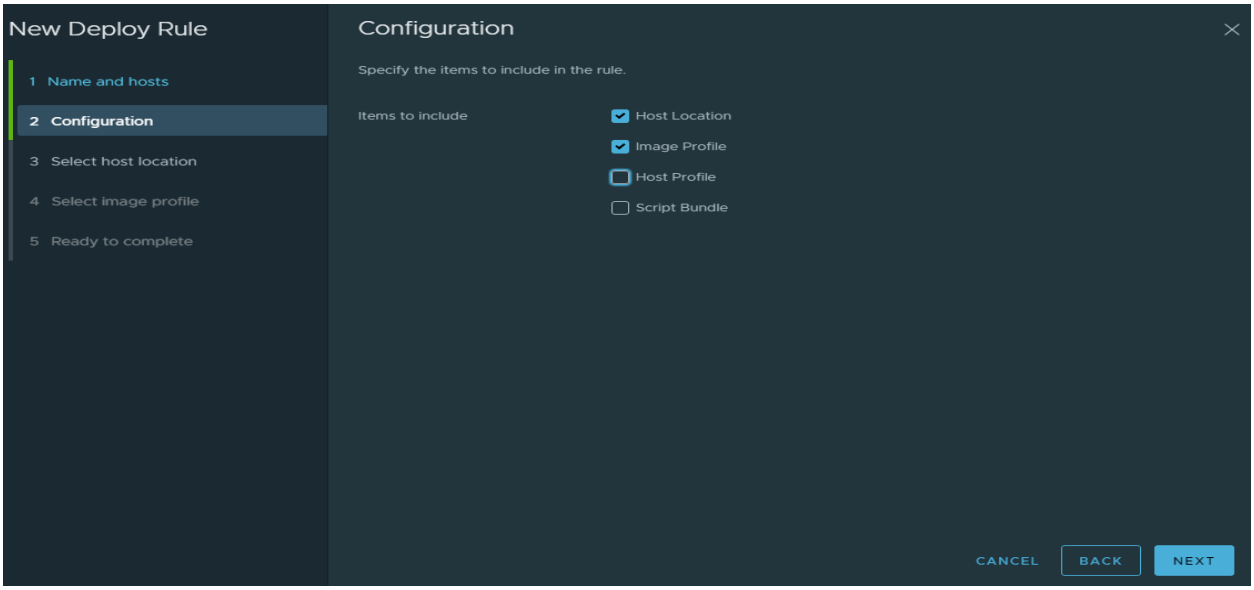
To add Offline Bundle to the Software Depot – Click Import – Provide Name and Select the zip file is and click upload.

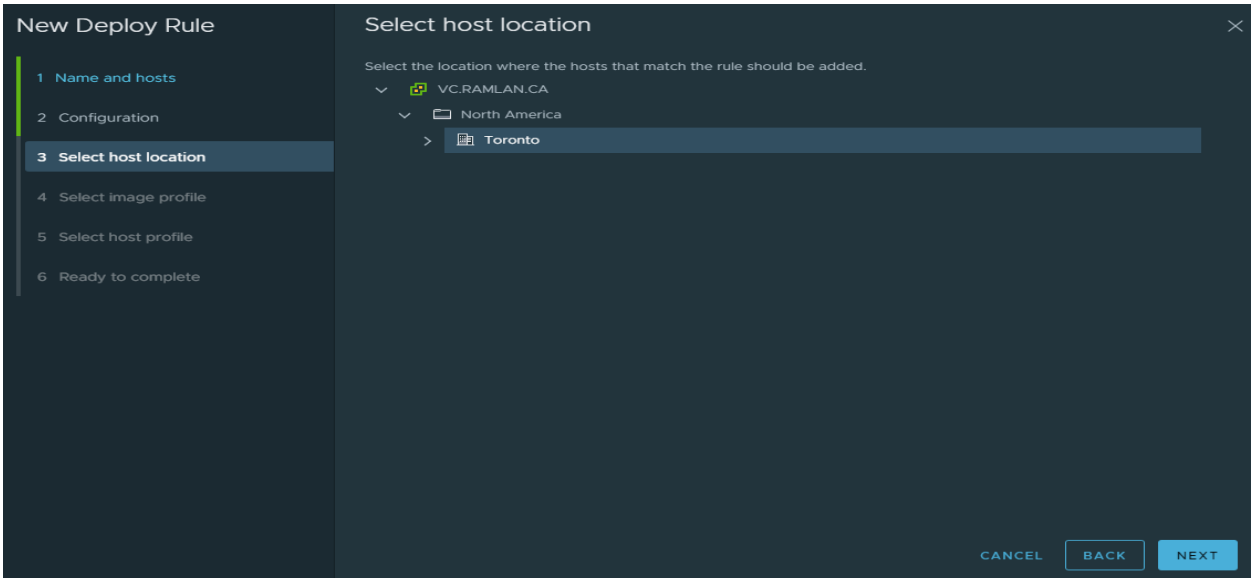


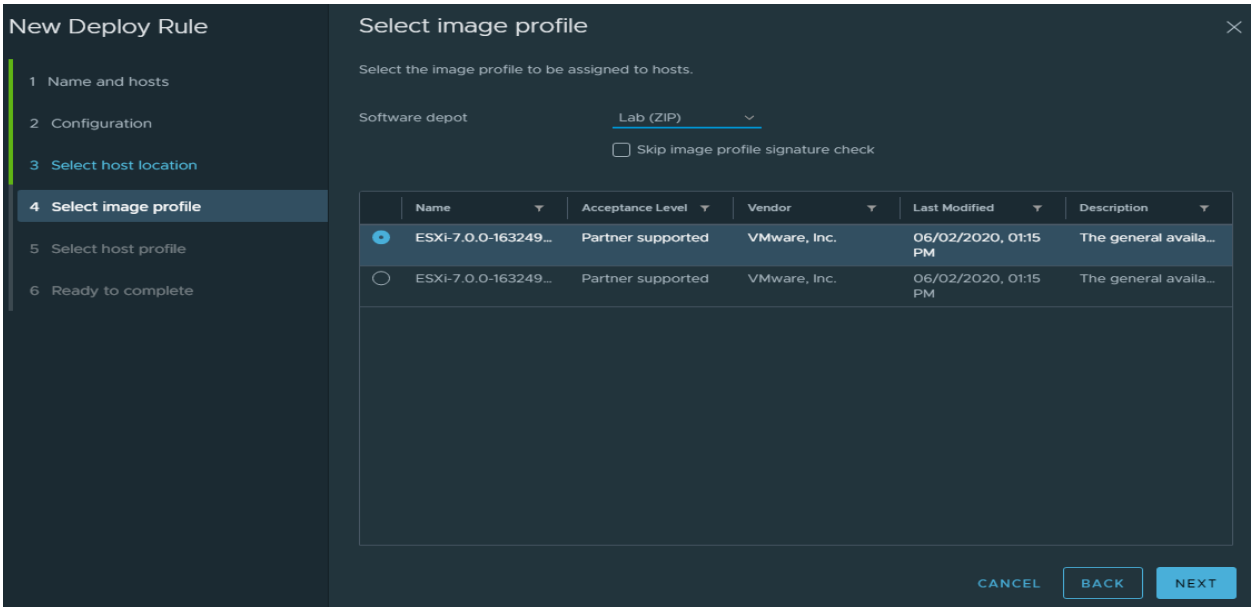


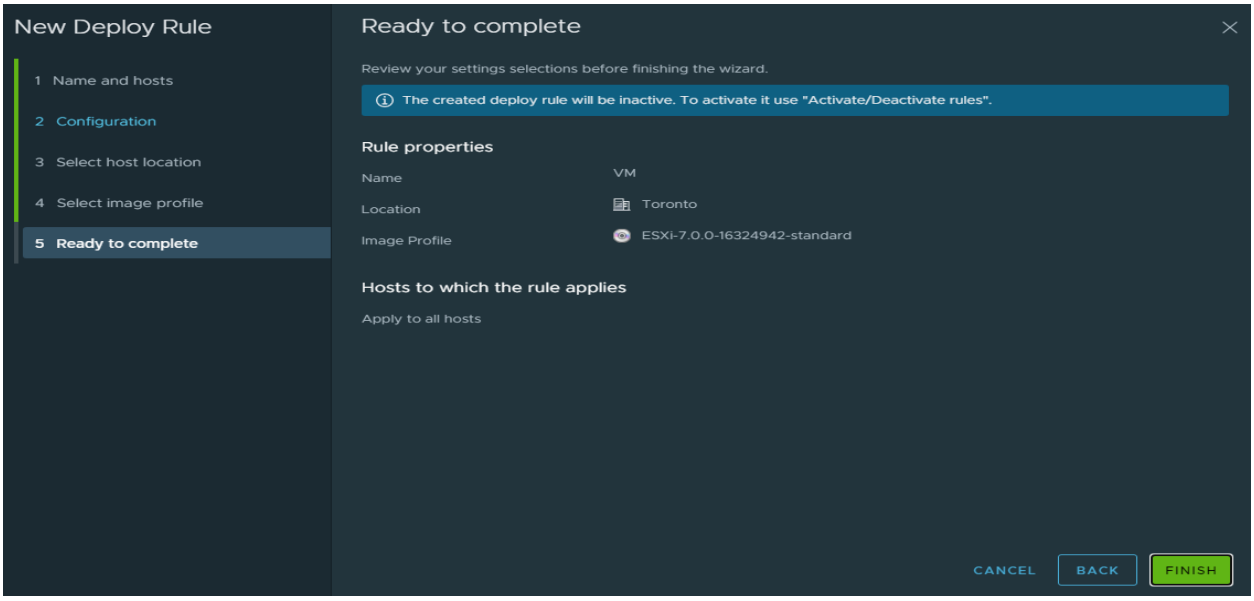
Now we will create Deploy Rules – Click New Deploy Rule – Give a name



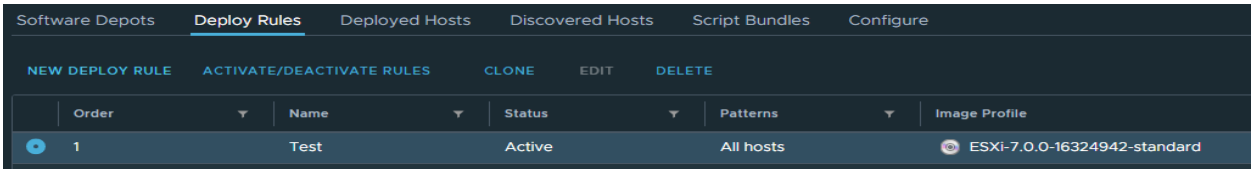

New Deploy Rule
1 Name and hosts
2 Configuration
3 Select host location
4 Select image profile
5 Ready to complete
Configuration
Specify the items to include in the rule.
Items to include
Host Location
Image Profile
Host Profile
Script Bundle
CANCEL
BACK
NEXT


New Deploy Rule
1 Name and hosts
2 Configuration
3 Select host location
4 Select image profile
5 Select host profile
6 Ready to complete
Select host location
Select the location where the hosts that match the rule should be added.
VC.RAMLAN.CA
North America
Toronto
CANCEL
BACK
NEXT


New Deploy Rule
1 Name and hosts
2 Configuration
3 Select host location
4 Select image profile
5 Select host profile
6 Ready to complete
Select image profile
Select the image profile to be assigned to hosts.
Software depot
Lab (ZIP)
Skip image profile signature check
Name
Acceptance Level
Vendor
Last Modified
Description
ESXi-7.0.0-163249...
Partner supported
VMware, Inc.
06/02/2020, 01:15 PM
The general availa...
ESXi-7.0.0-163249...
Partner supported
VMware, Inc.
06/02/2020, 01:15 PM
The general availa...
CANCEL
BACK
NEXT

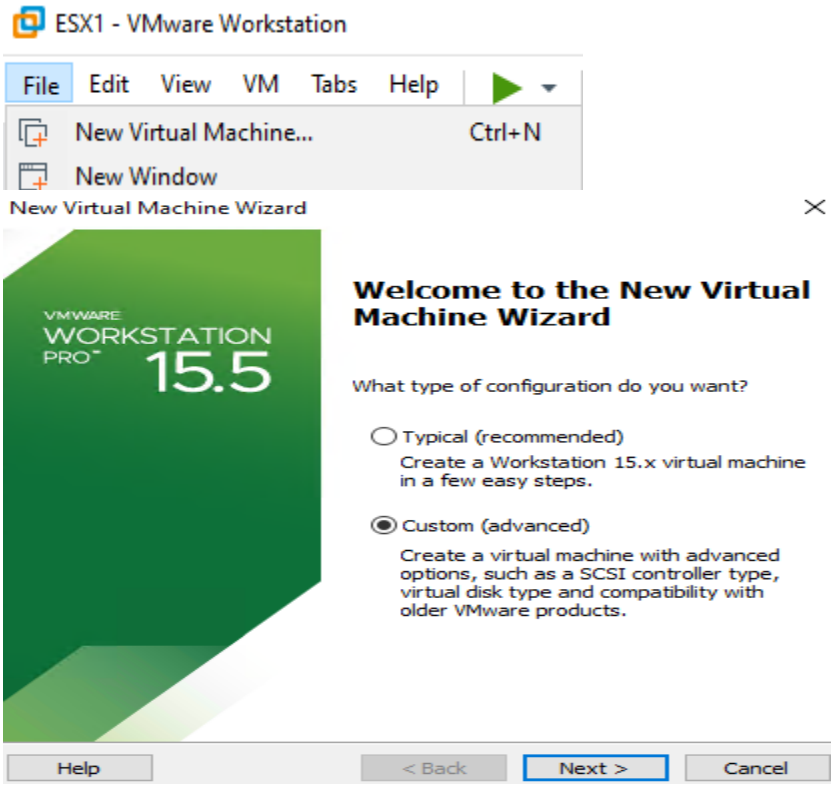


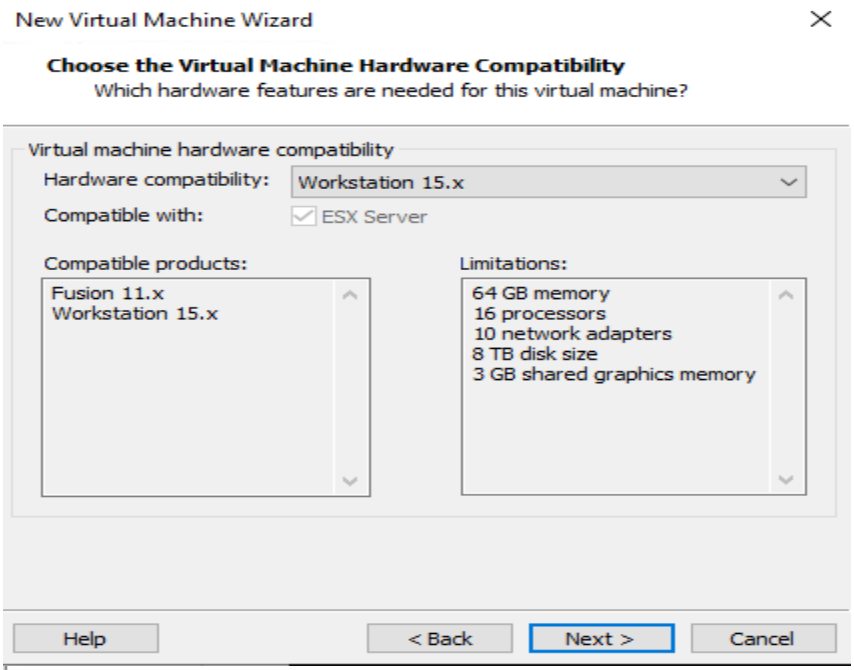
Now select the rule and Click Activate.

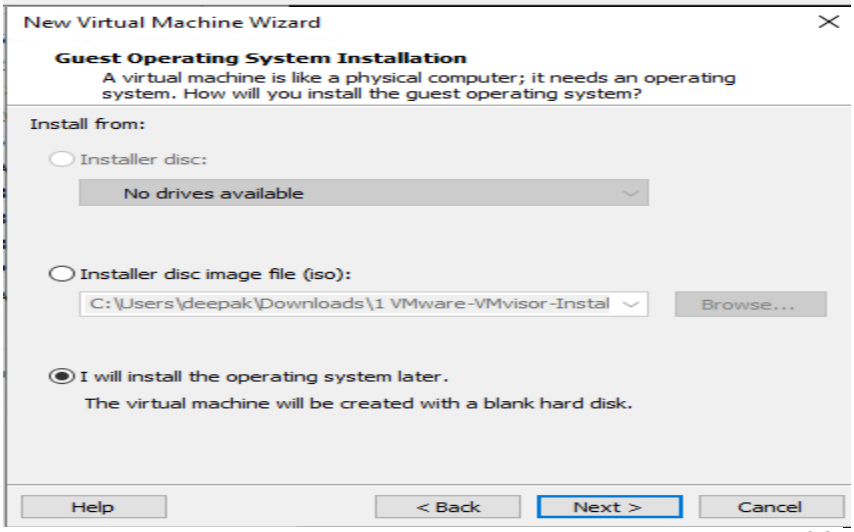


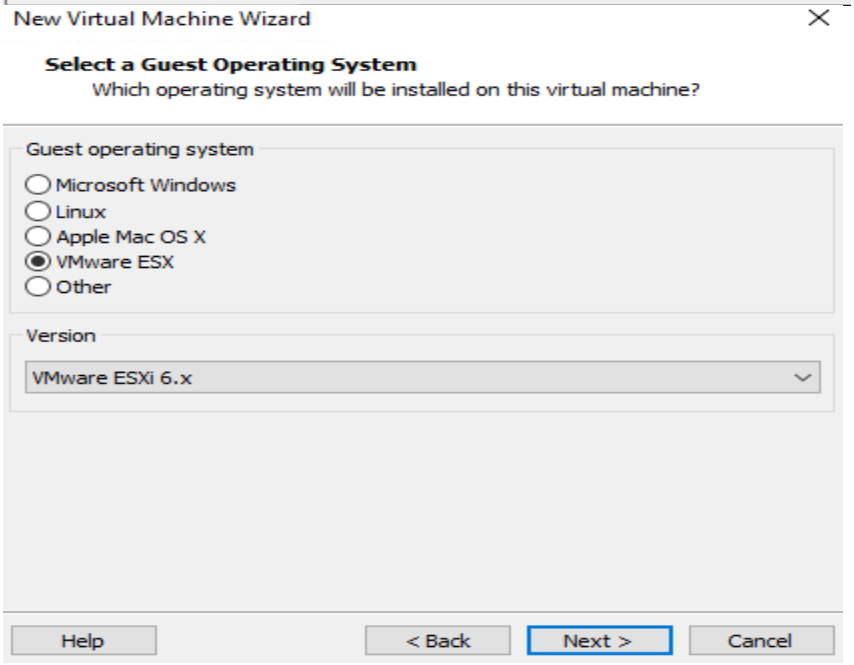
Now we have Auto Deploy ready for deployment.

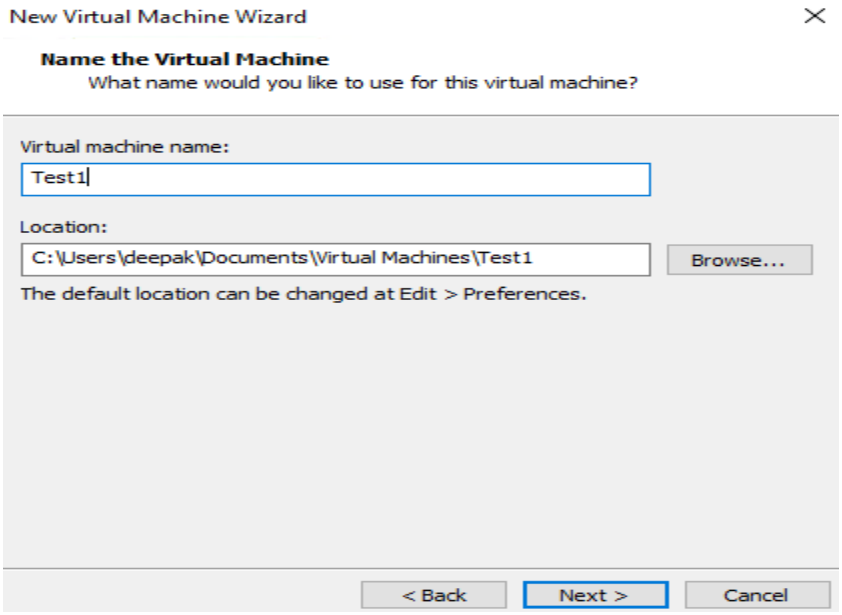
For this test, I will create a virtual machine within VMWare workstation.

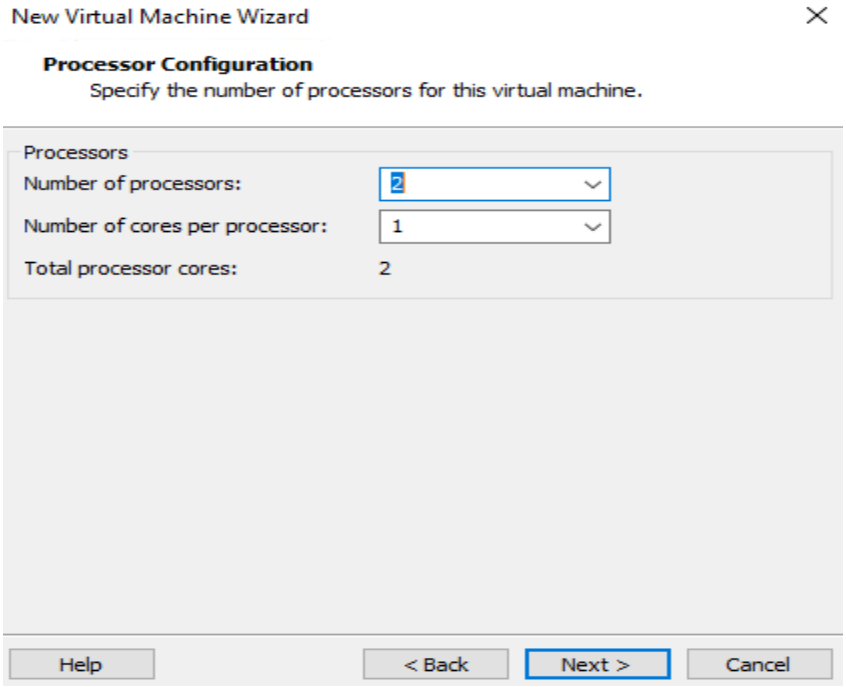


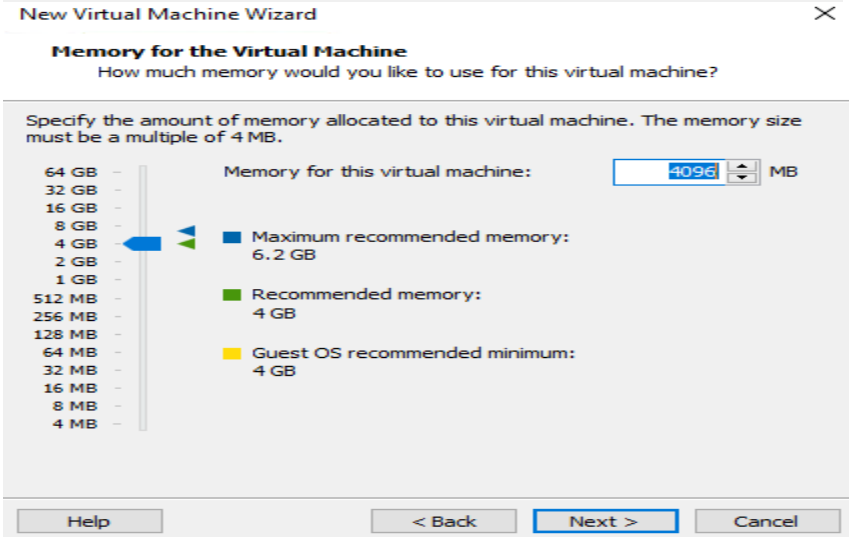

New Virtual Machine Wizard
Choose the Virtual Machine Hardware Compatibility
Which hardware features are needed for this virtual machine?
Virtual machine hardware compatibility
Hardware compatibility:
Workstation 15.x
Compatible with:
ESX Server
Compatible products:
Fusion 11.x
Workstation 15.x
Limitations:
64 GB memory
16 processors
10 network adapters
8 TB disk size
3 GB shared graphics memory
Help
< Back
Next >
Cancel

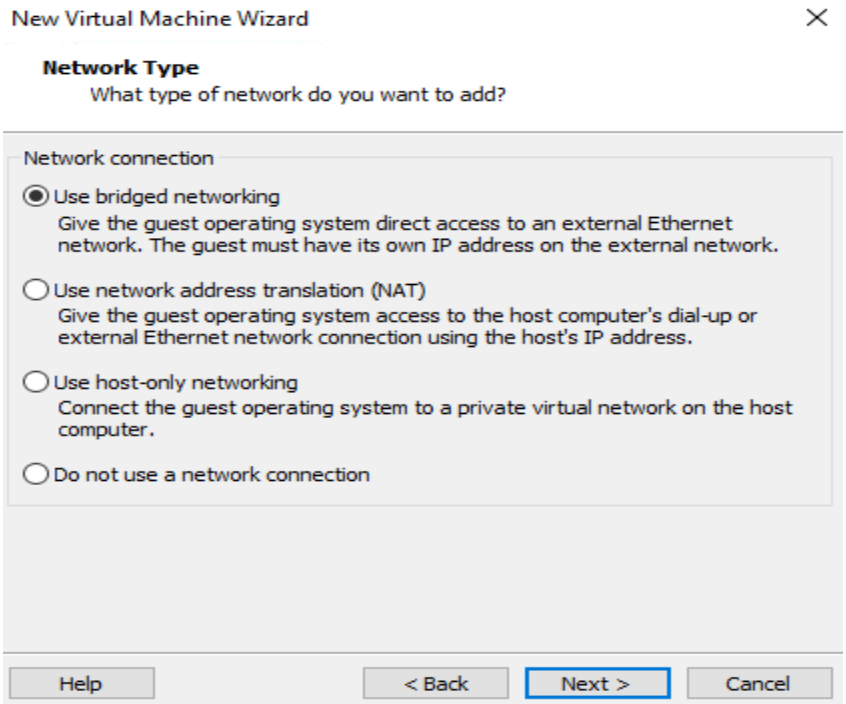

New Virtual Machine Wizard
Guest Operating System Installation
A virtual machine is like a physical computer; it needs an operating system. How will you install the guest operating system?
Install from:
Installer disc:
No drives available
Installer disc image file (iso):
C:\Users\deepak\Downloads\1 VMware-VMvisor-Instal
Browse...
I will install the operating system later.
The virtual machine will be created with a blank hard disk.
Help
< Back
Next >
Cancel

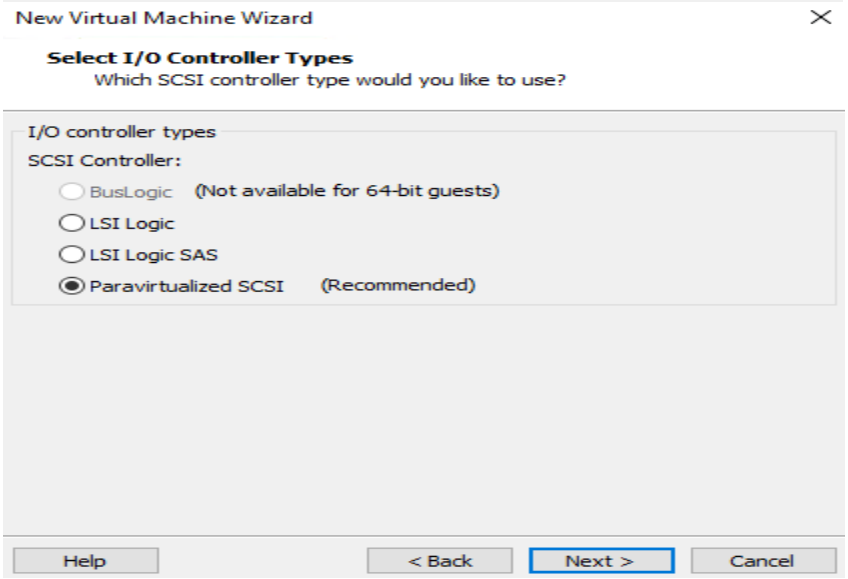

New Virtual Machine Wizard
Select a Guest Operating System
Which operating system will be installed on this virtual machine?
Guest operating system
Microsoft Windows
Linux
Apple Mac OS X
VMware ESX
Other
Version
VMware ESXi 6.x
Help
< Back
Next >
Cancel

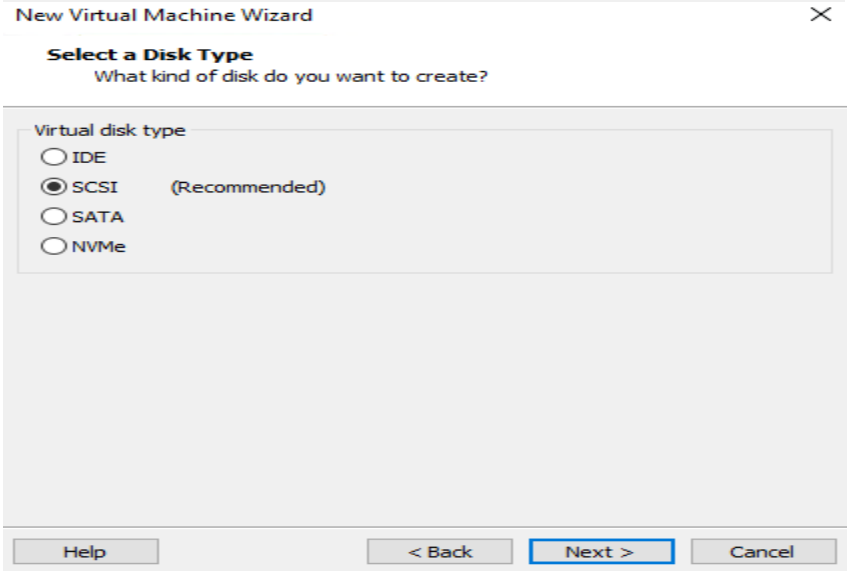

New Virtual Machine Wizard
Name the Virtual Machine
What name would you like to use for this virtual machine?
Virtual machine name:
Test1
Location:
C:\Users\deepak\Documents\Virtual Machines\Test1
Browse...
The default location can be changed at Edit > Preferences.
< Back
Next >
Cancel

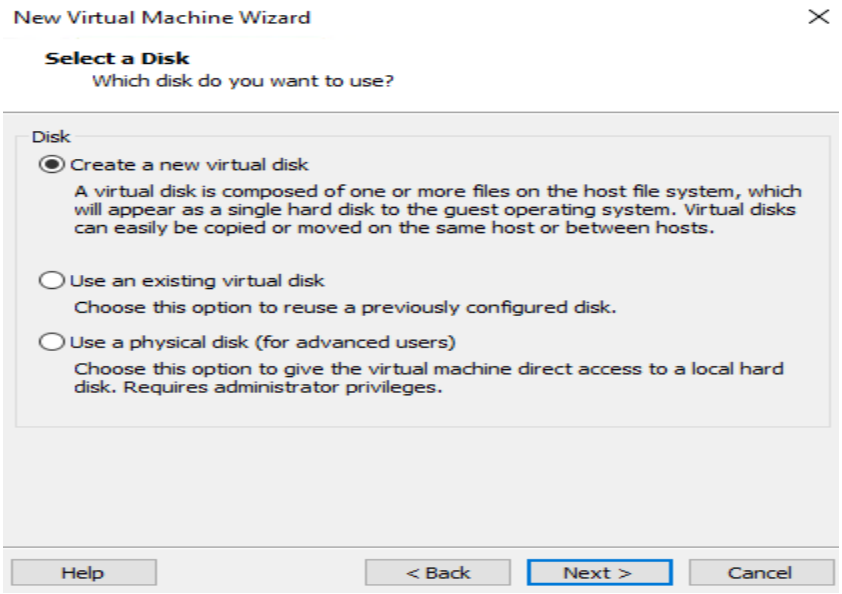

New Virtual Machine Wizard
Processor Configuration
Specify the number of processors for this virtual machine.
Processors
Number of processors:
2
Number of cores per processor:
1
Total processor cores:
2
Help
< Back
Next >
Cancel

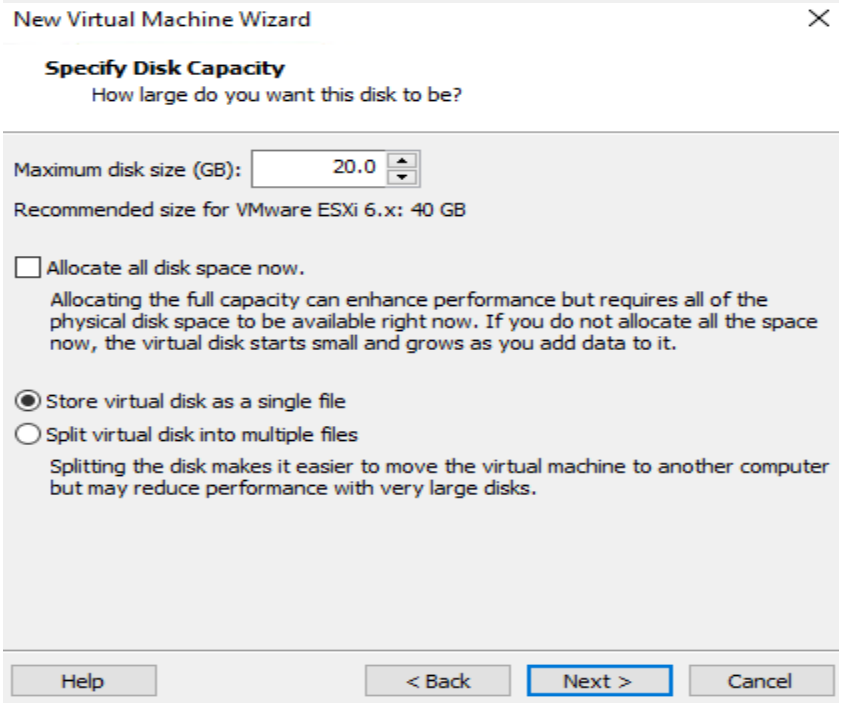

New Virtual Machine Wizard
Memory for the Virtual Machine
How much memory would you like to use for this virtual machine?
Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.
64 GB
32 GB
16 GB
8 GB
4 GB
2 GB
1 GB
512 MB
256 MB
128 MB
64 MB
32 MB
16 MB
8 MB
4 MB
Memory for this virtual machine:
4096
MB
Maximum recommended memory:
6.2 GB
Recommended memory:
4 GB
Guest OS recommended minimum:
4 GB
Help
< Back
Next >
Cancel

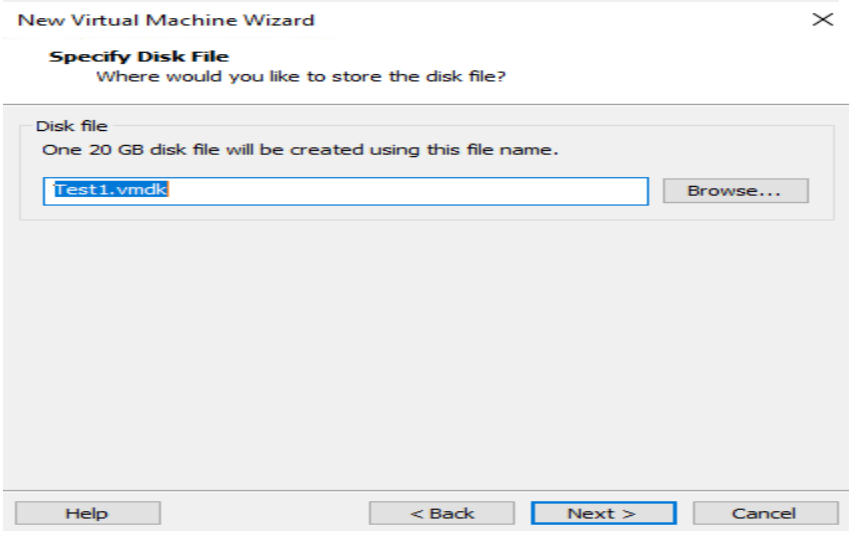

New Virtual Machine Wizard
Network Type
What type of network do you want to add?
Network connection
Use bridged networking
Give the guest operating system direct access to an external Ethernet network. The guest must have its own IP address on the external network.
Use network address translation (NAT)
Give the guest operating system access to the host computer's dial-up or external Ethernet network connection using the host's IP address.
Use host-only networking
Connect the guest operating system to a private virtual network on the host computer.
Do not use a network connection
Help
< Back
Next >
Cancel

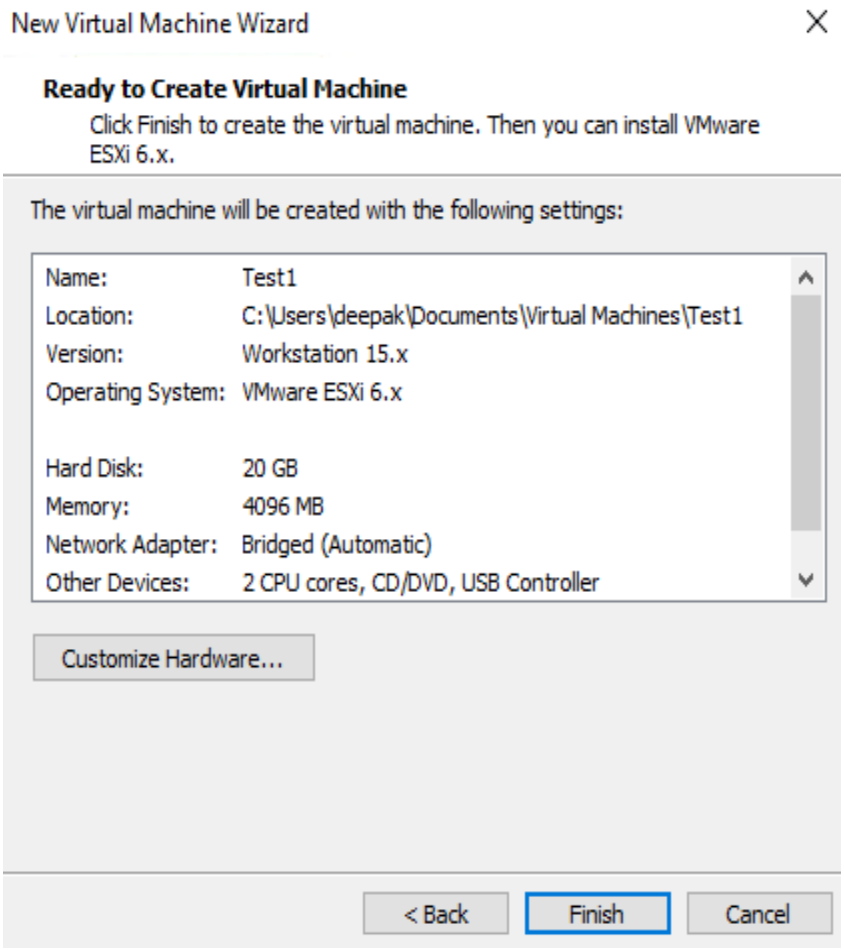

New Virtual Machine Wizard
Select I/O Controller Types
Which SCSI controller type would you like to use?
I/O controller types
SCSI Controller:
BusLogic (Not available for 64-bit guests)
LSI Logic
LSI Logic SAS
Paravirtualized SCSI (Recommended)
Help
< Back
Next >
Cancel


New Virtual Machine Wizard
Select a Disk Type
What kind of disk do you want to create?
Virtual disk type
IDE
SCSI (Recommended)
SATA
NVMe
Help
< Back
Next >
Cancel

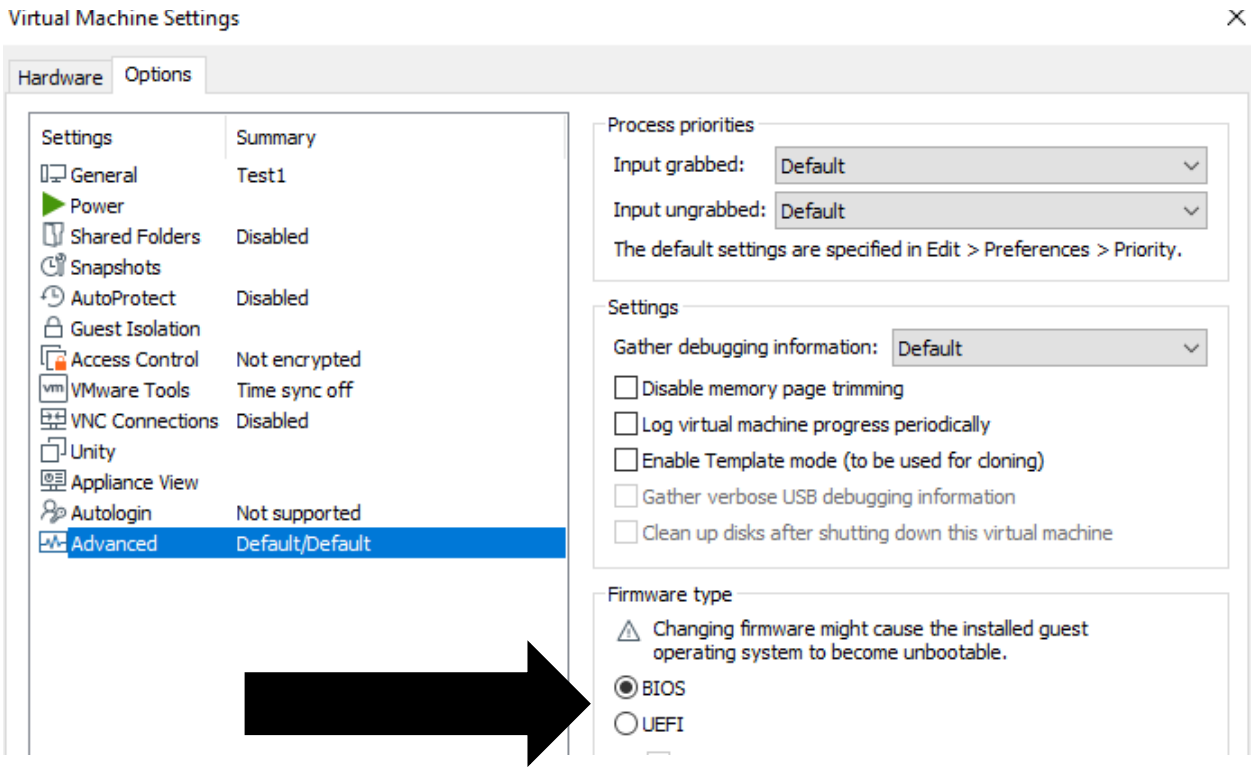

New Virtual Machine Wizard
Select a Disk
Which disk do you want to use?
Disk
Create a new virtual disk
A virtual disk is composed of one or more files on the host file system, which will appear as a single hard disk to the guest operating system. Virtual disks can easily be copied or moved on the same host or between hosts.
Use an existing virtual disk
Choose this option to reuse a previously configured disk.
Use a physical disk (for advanced users)
Choose this option to give the virtual machine direct access to a local hard disk. Requires administrator privileges.
Help
< Back
Next >
Cancel


New Virtual Machine Wizard
Specify Disk Capacity
How large do you want this disk to be?
Maximum disk size (GB):
20.0
Recommended size for VMware ESXi 6.x: 40 GB
Allocate all disk space now.
Allocating the full capacity can enhance performance but requires all of the physical disk space to be available right now. If you do not allocate all the space now, the virtual disk starts small and grows as you add data to it.
Store virtual disk as a single file
Split virtual disk into multiple files
Splitting the disk makes it easier to move the virtual machine to another computer but may reduce performance with very large disks.
Help
< Back
Next >
Cancel

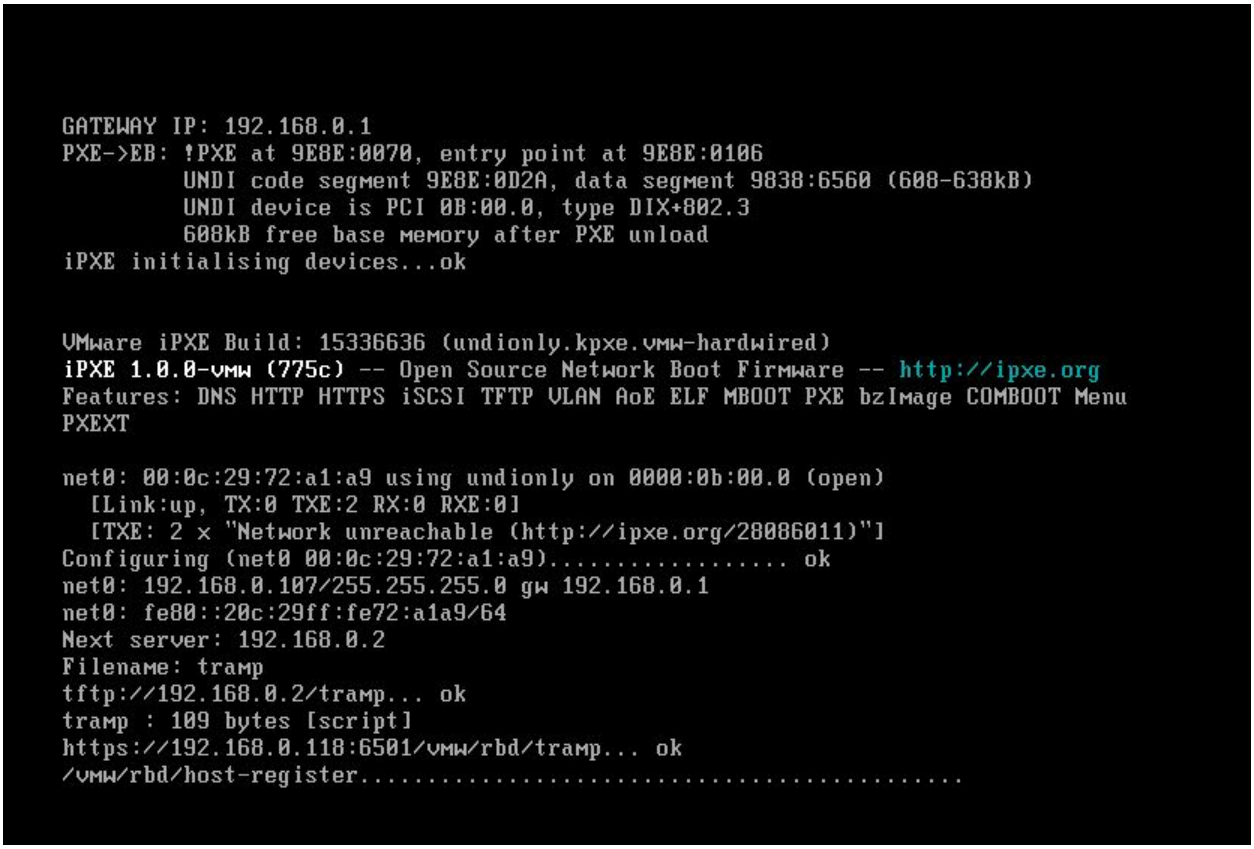

New Virtual Machine Wizard
Specify Disk File
Where would you like to store the disk file?
Disk file
One 20 GB disk file will be created using this file name.
Test1.vmdk
Browse...
Help
< Back
Next >
Cancel



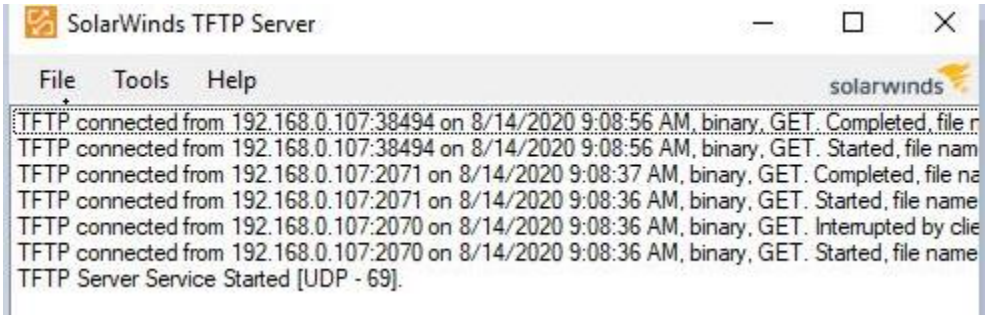
Before you power on VM – edit the setting and change this

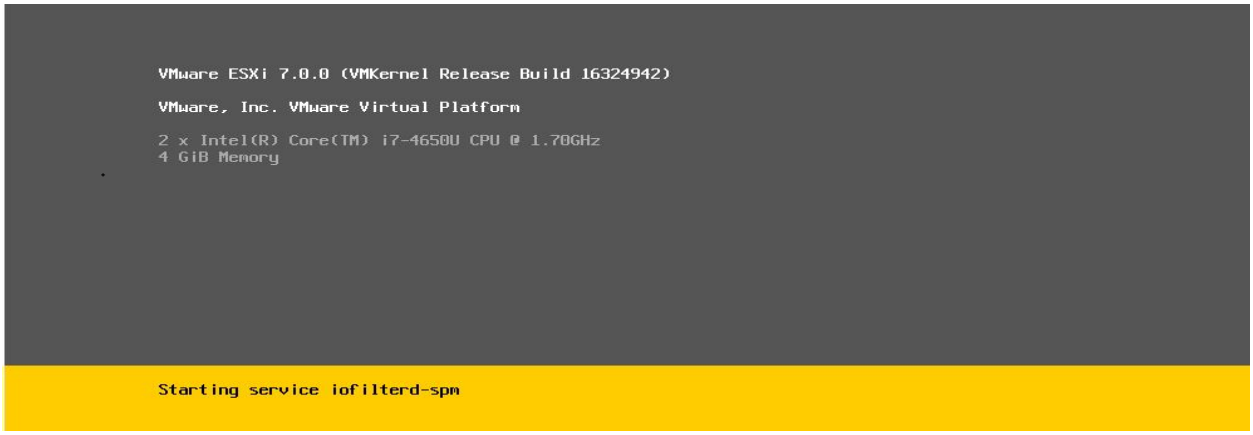


Power on the Virtual Machine and watch the progress



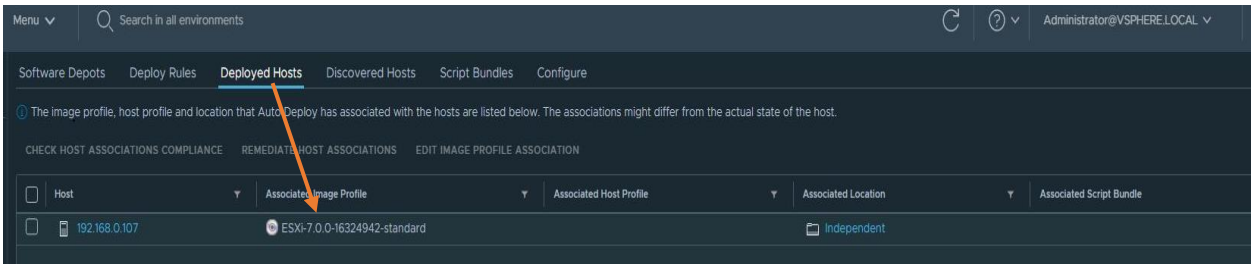
Our TFTP Server is providing the boot file.





Now the deployment is complete. When we login for the first time the root password is blank.

At Auto Deploy menu, we can see Deployed Host through Auto Deploy process.



In the next article, I will do a bit more creating Host Profile and other stuff to fully automate Auto Deploy and assign the host machine to a Cluster within the Data Center.

Thanks

Ram Lan
14th Aug 2020