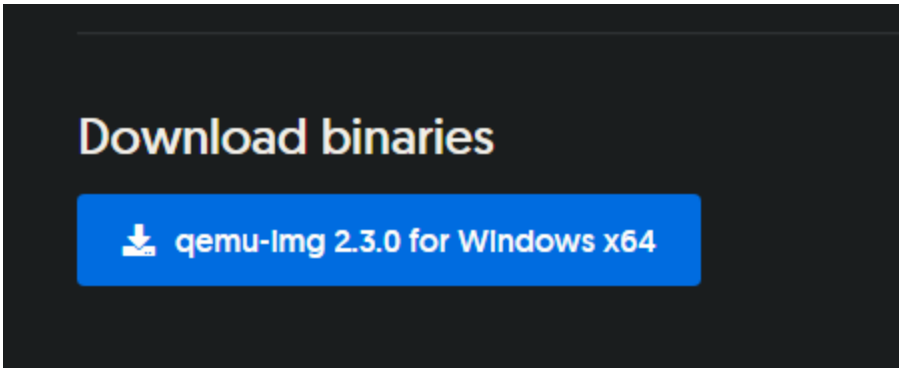
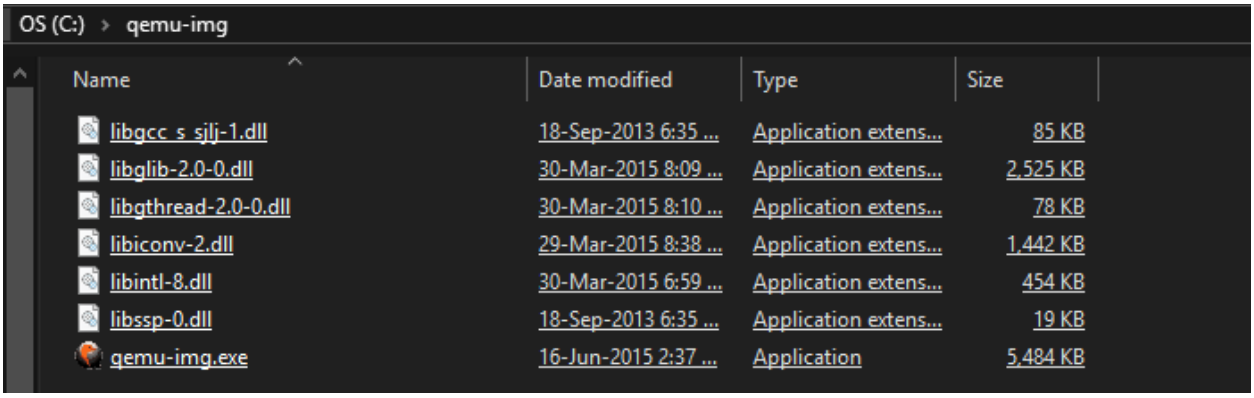
How to convert VHDX to VMDK

In this post, we will convert VHDX virtual machine to VMDK virtual machine, so we can import the machine into ESXi Host or vCenter 7.

You can download the converter from here https://cloudbase.it/qemu-img-windows/

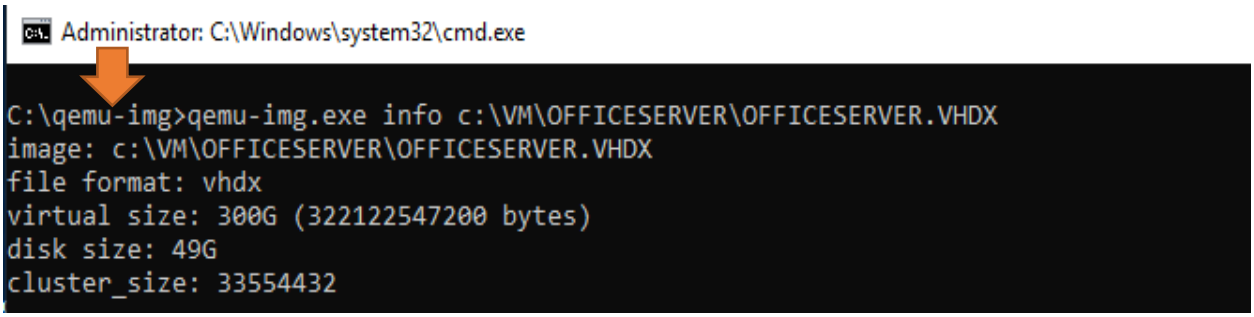


Extract the files to a folder to root of C or any other place of your interest. I extracted the files to C:\qeum-ing folder. After that open command prompt – change the directory to the folder where you extracted the files and run this command.



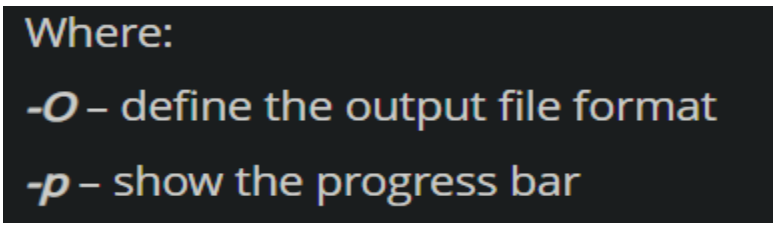
This command will give disk information of VHDX file

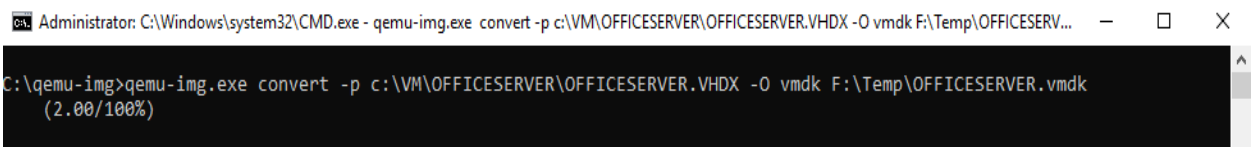
qemu-img.exe info c:\VM\OFFICESERVER\OFFICESERVER.VHDX

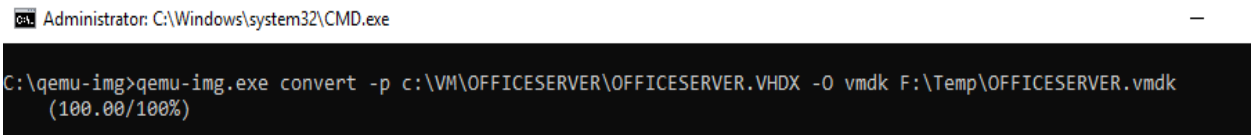


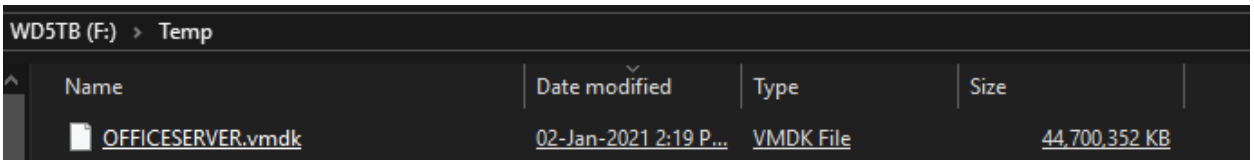
To convert VHDX to VMDK – run this command

qemu-img.exe convert -p c:\VM\OFFICESERVER\OFFICESERVER.VHDX -O vmdk F:\Temp\OFFICESERVER.vmdk





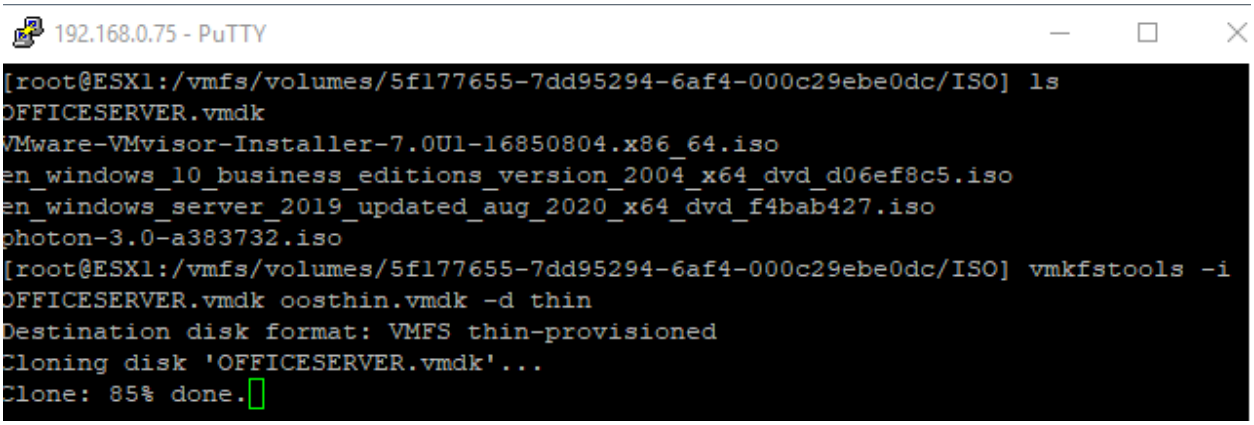




Although we have converted the file to vmdk, we need to convert to ESXi format, so we can use it with vCenter or ESXi host.

Upload the converted VMDK file to the datastore connected to an ESXi host. In my example the file is copied to Datastore5 – ISO folder. Use SCP client like putty to connect to ESXi Host. Go to the directory where the vmdk file is and run this command

vmkfstools -i OFFICESERVER.vmdk oosthin.vmdk -d thin



192.168.0.75 - PuTTY

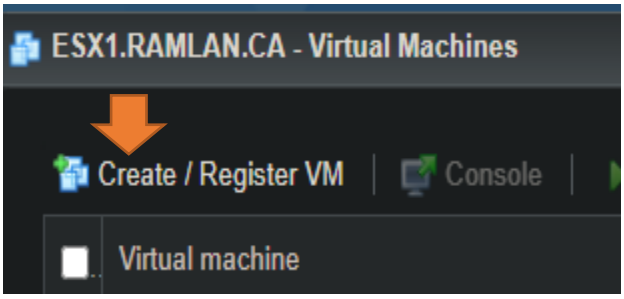
```
[root@ESX1:/vmfs/volumes/5f177655-7dd95294-6af4-000c29ebe0dc/ISO] ls
OFFICESERVER.vmdk
VMware-VMvisor-Installer-7.0U1-16850804.x86_64.iso
en_windows_10_business_editions_version_2004_x64_dvd_d06ef8c5.iso
en_windows_server_2019_updated_aug_2020_x64_dvd_f4bab427.iso
photon-3.0-a383732.iso
[root@ESX1:/vmfs/volumes/5f177655-7dd95294-6af4-000c29ebe0dc/ISO] vmkfstools -i
OFFICESERVER.vmdk oosthin.vmdk -d thin
Destination disk format: VMFS thin-provisioned
Cloning disk 'OFFICESERVER.vmdk'...
Clone: 100% done.
[root@ESX1:/vmfs/volumes/5f177655-7dd95294-6af4-000c29ebe0dc/ISO]
```

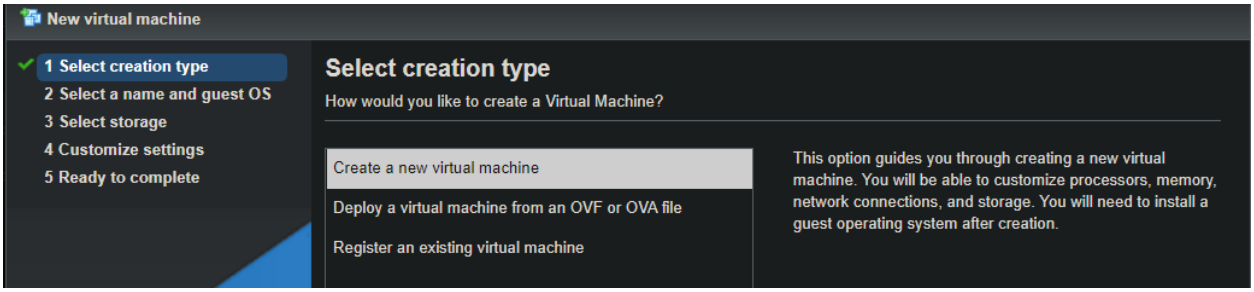
192.168.0.75 - PuTTY

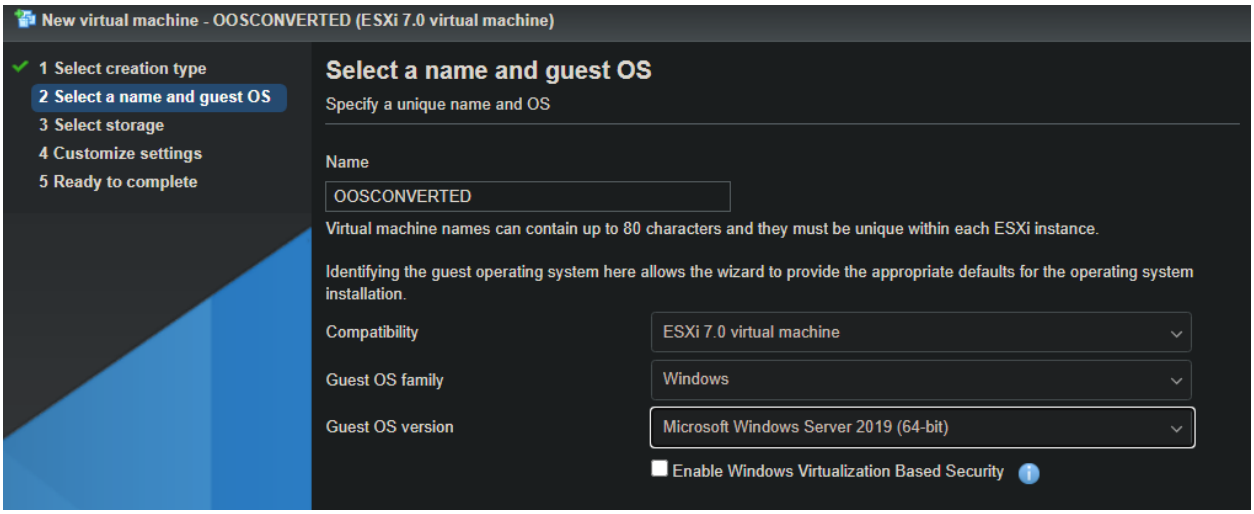
```
[root@ESX1:/vmfs/volumes/5f177655-7dd95294-6af4-000c29ebe0dc/ISO] ls
OFFICESERVER.vmdk
VMware-VMvisor-Installer-7.0U1-16850804.x86_64.iso
en_windows_10_business_editions_version_2004_x64_dvd_d06ef8c5.iso
en_windows_server_2019_updated_aug_2020_x64_dvd_f4bab427.iso
photon-3.0-a383732.iso
[root@ESX1:/vmfs/volumes/5f177655-7dd95294-6af4-000c29ebe0dc/ISO] vmkfstools -i
OFFICESERVER.vmdk oosthin.vmdk -d thin
Destination disk format: VMFS thin-provisioned
Cloning disk 'OFFICESERVER.vmdk'...
Clone: 100% done.
[root@ESX1:/vmfs/volumes/5f177655-7dd95294-6af4-000c29ebe0dc/ISO] ls
OFFICESERVER.vmdk
VMware-VMvisor-Installer-7.0U1-16850804.x86_64.iso
en_windows_10_business_editions_version_2004_x64_dvd_d06ef8c5.iso
en_windows_server_2019_updated_aug_2020_x64_dvd_f4bab427.iso
oosthin-flat.vmdk
oosthin.vmdk
photon-3.0-a383732.iso
[root@ESX1:/vmfs/volumes/5f177655-7dd95294-6af4-000c29ebe0dc/ISO]
```

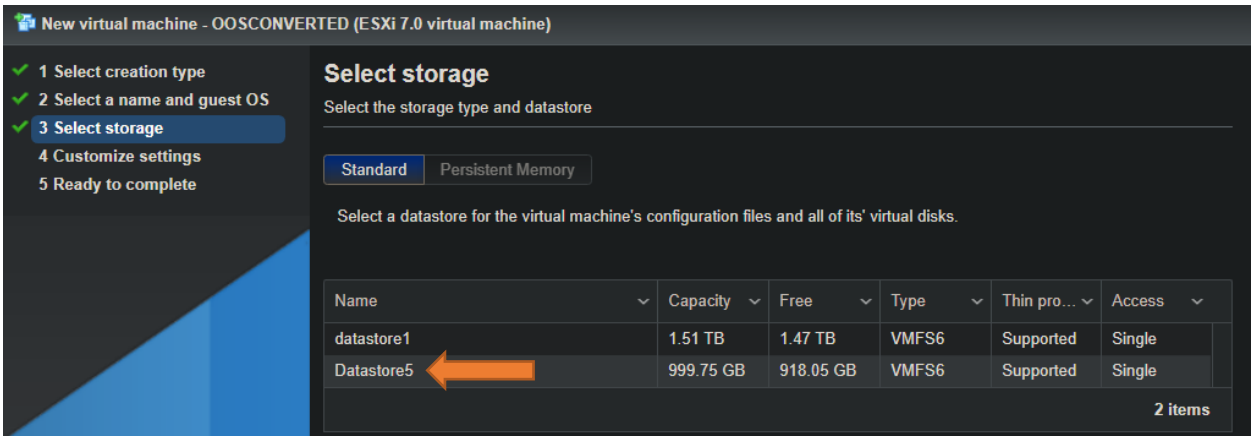
As you can see on the screenshot, the post conversion of VMDK from the Workstation format to the ESXi format with vmkfstools has completed successfully and two new files have been created:

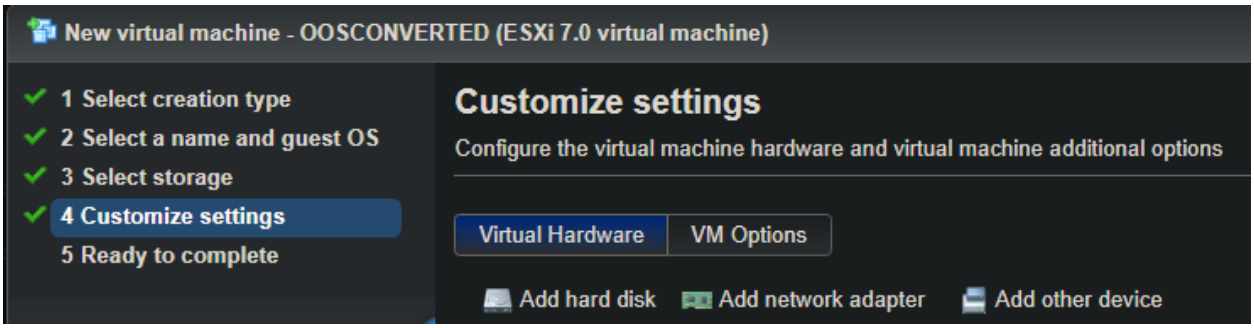
Now we will create new virtual machine but for hard disk we will select the existing vmdk file.

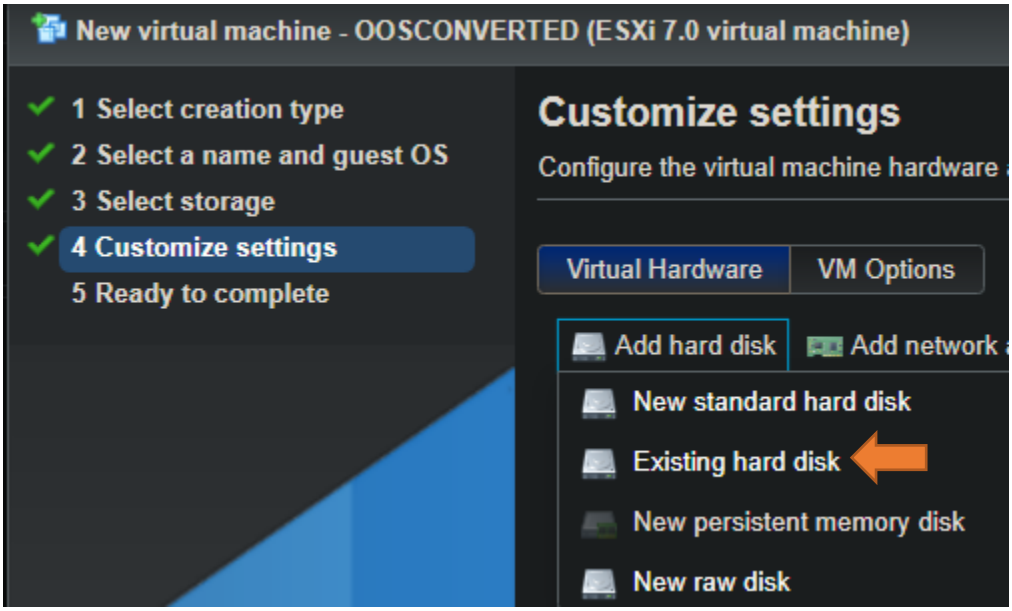


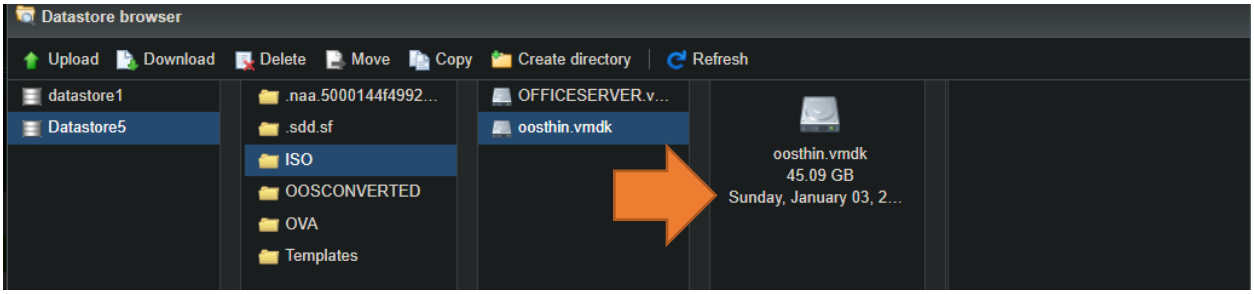

New virtual machine
1 Select creation type
2 Select a name and guest OS
3 Select storage
4 Customize settings
5 Ready to complete
Select creation type
How would you like to create a Virtual Machine?
Create a new virtual machine
Deploy a virtual machine from an OVF or OVA file
Register an existing virtual machine
This option guides you through creating a new virtual machine. You will be able to customize processors, memory, network connections, and storage. You will need to install a guest operating system after creation.

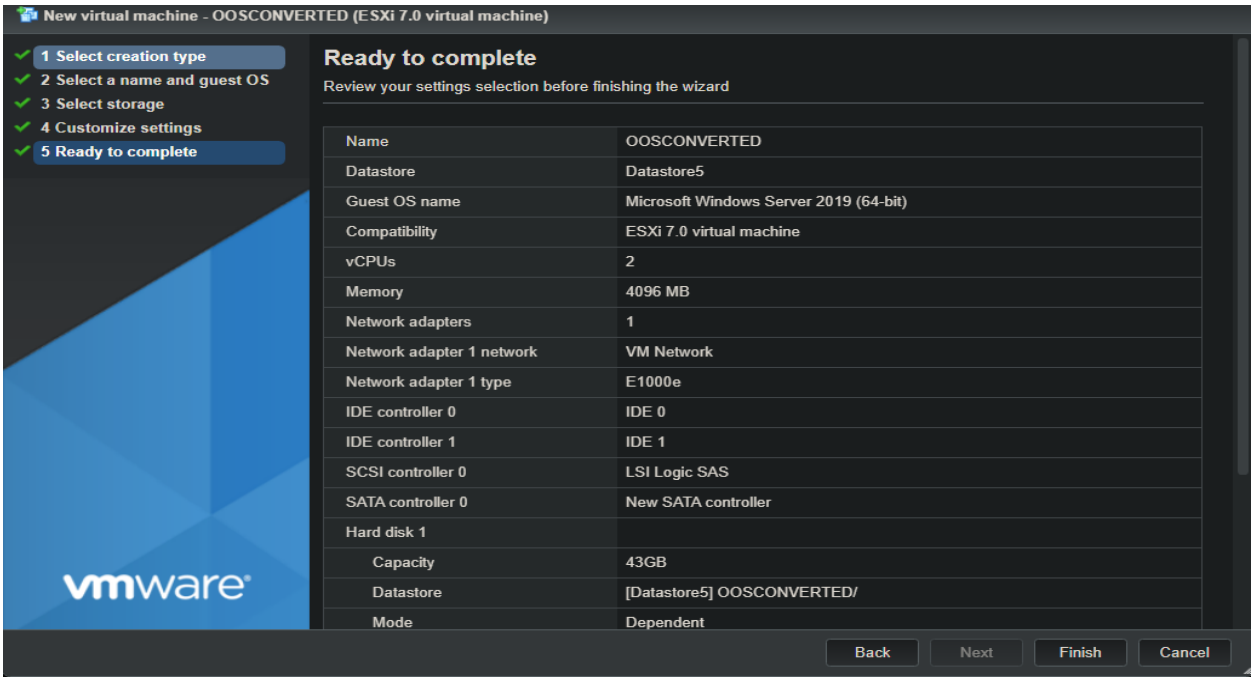

New virtual machine - OOSCONVERTED (ESXi 7.0 virtual machine)
1 Select creation type
2 Select a name and guest OS
3 Select storage
4 Customize settings
5 Ready to complete
Select a name and guest OS
Specify a unique name and OS
Name
OOSCONVERTED
Virtual machine names can contain up to 80 characters and they must be unique within each ESXi instance.
Identifying the guest operating system here allows the wizard to provide the appropriate defaults for the operating system installation.
Compatibility
ESXi 7.0 virtual machine
Guest OS family
Windows
Guest OS version
Microsoft Windows Server 2019 (64-bit)
Enable Windows Virtualization Based Security

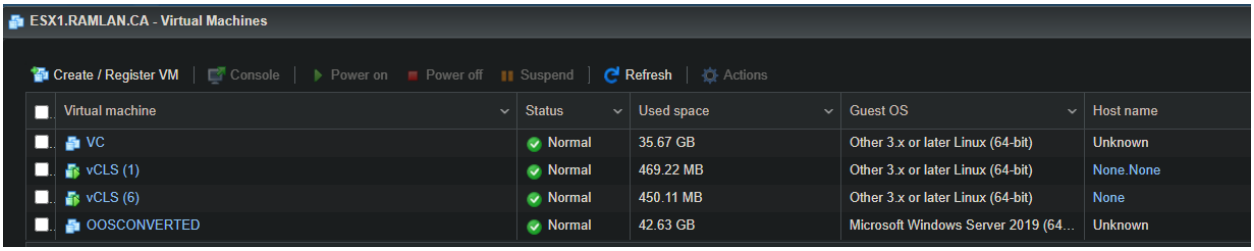

New virtual machine - OOSCONVERTED (ESXi 7.0 virtual machine)
1 Select creation type
2 Select a name and guest OS
3 Select storage
4 Customize settings
5 Ready to complete
Select storage
Select the storage type and datastore
Standard
Persistent Memory
Select a datastore for the virtual machine's configuration files and all of its' virtual disks.
Name
Capacity
Free
Type
Thin pro...
Access
datastore1
1.51 TB
1.47 TB
VMFS6
Supported
Single
Datastore5
999.75 GB
918.05 GB
VMFS6
Supported
Single
2 items

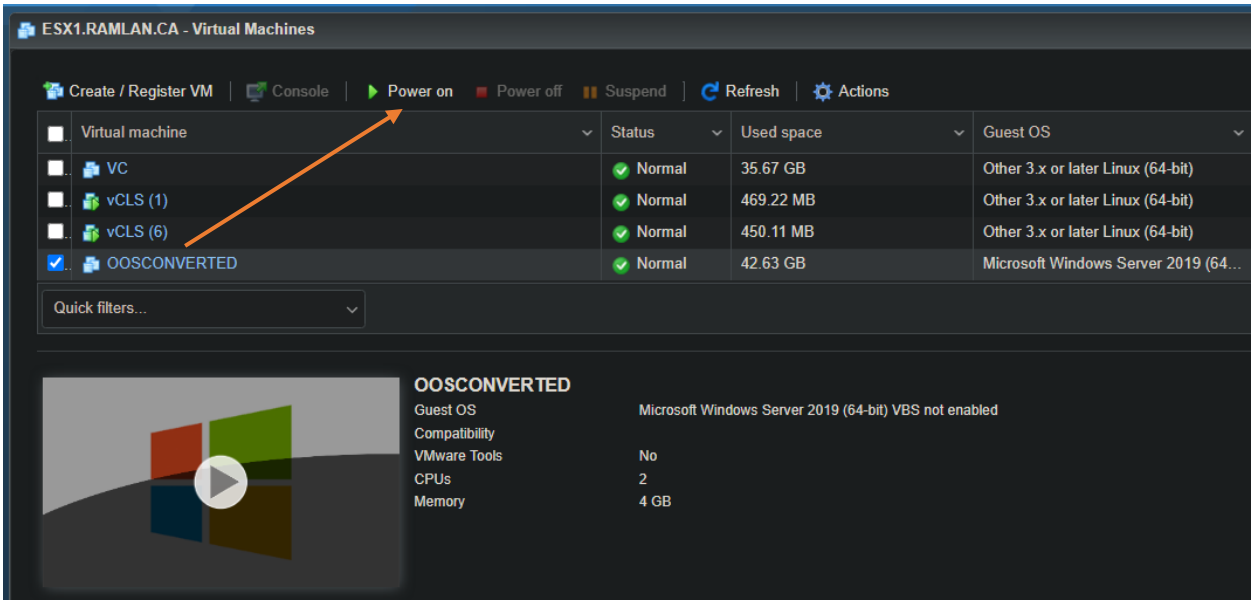

New virtual machine - OOSCONVERTED (ESXi 7.0 virtual machine)
1 Select creation type
2 Select a name and guest OS
3 Select storage
4 Customize settings
5 Ready to complete
Customize settings
Configure the virtual machine hardware and virtual machine additional options
Virtual Hardware
VM Options
Add hard disk
Add network adapter
Add other device

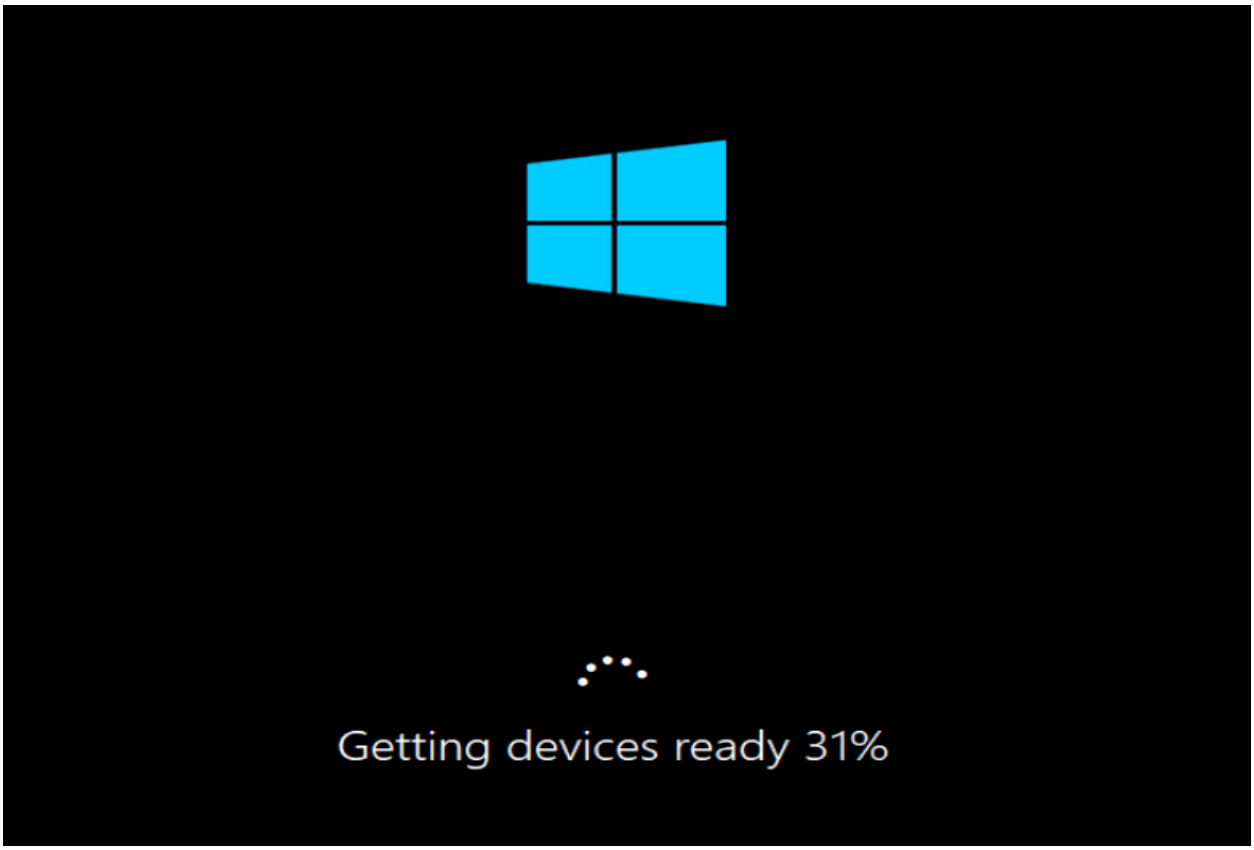

New virtual machine - OOSCONVERTED (ESXi 7.0 virtual machine)
1 Select creation type
2 Select a name and guest OS
3 Select storage
4 Customize settings
5 Ready to complete
Customize settings
Configure the virtual machine hardware
Virtual Hardware
VM Options
Add hard disk
Add network
New standard hard disk
Existing hard disk
New persistent memory disk
New raw disk

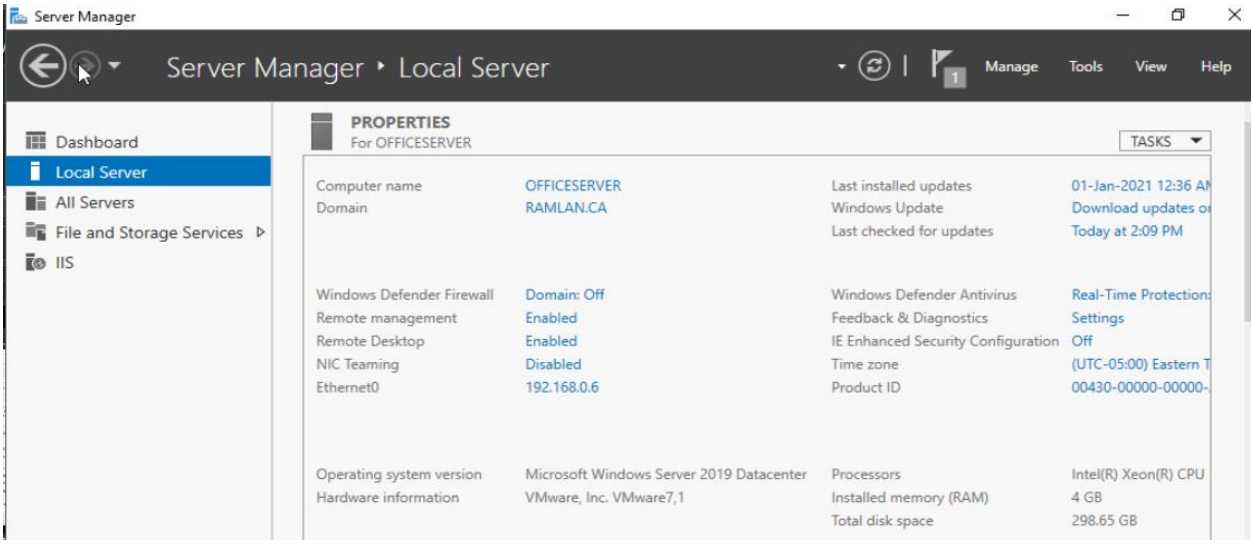

Datastore browser
Upload
Download
Delete
Move
Copy
Create directory
Refresh
datastore1
Datastore5
.naa.5000144f4992...
.sdd.sf
ISO
OOSCONVERTED
OVA
Templates
OFFICESERVER.v...
oosthin.vmdk
oosthin.vmdk
45.09 GB
Sunday, January 03, 2...

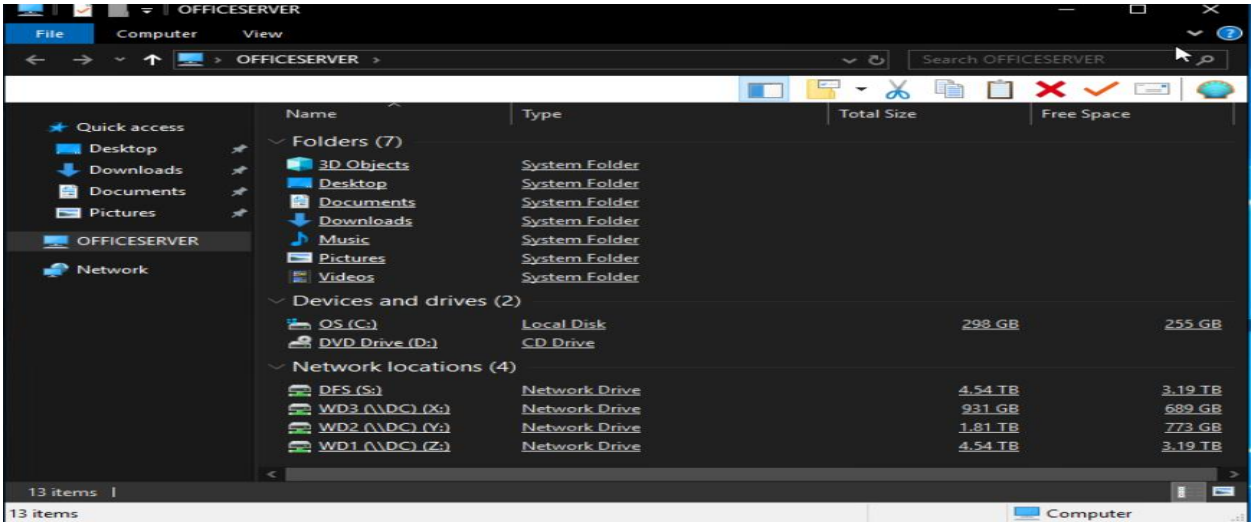

New virtual machine - OOSCONVERTED (ESXi 7.0 virtual machine)
1 Select creation type
2 Select a name and guest OS
3 Select storage
4 Customize settings
5 Ready to complete
Ready to complete
Review your settings selection before finishing the wizard
Name OOSCONVERTED
Datastore Datastore5
Guest OS name Microsoft Windows Server 2019 (64-bit)
Compatibility ESXi 7.0 virtual machine
vCPUs 2
Memory 4096 MB
Network adapters 1
Network adapter 1 network VM Network
Network adapter 1 type E1000e
IDE controller 0 IDE 0
IDE controller 1 IDE 1
SCSI controller 0 LSI Logic SAS
SATA controller 0 New SATA controller
Hard disk 1
Capacity 43GB
Datastore [Datastore5] OOSCONVERTED/
Mode Dependent
vmware
Back
Next
Finish
Cancel


ESX1.RAMLAN.CA - Virtual Machines
Create / Register VM
Console
Power on
Power off
Suspend
Refresh
Actions
Virtual machine
Status
Used space
Guest OS
Host name
VC
Normal
35.67 GB
Other 3.x or later Linux (64-bit)
Unknown
vCLS (1)
Normal
469.22 MB
Other 3.x or later Linux (64-bit)
None.None
vCLS (6)
Normal
450.11 MB
Other 3.x or later Linux (64-bit)
None
OOSCONVERTED
Normal
42.63 GB
Microsoft Windows Server 2019 (64...
Unknown

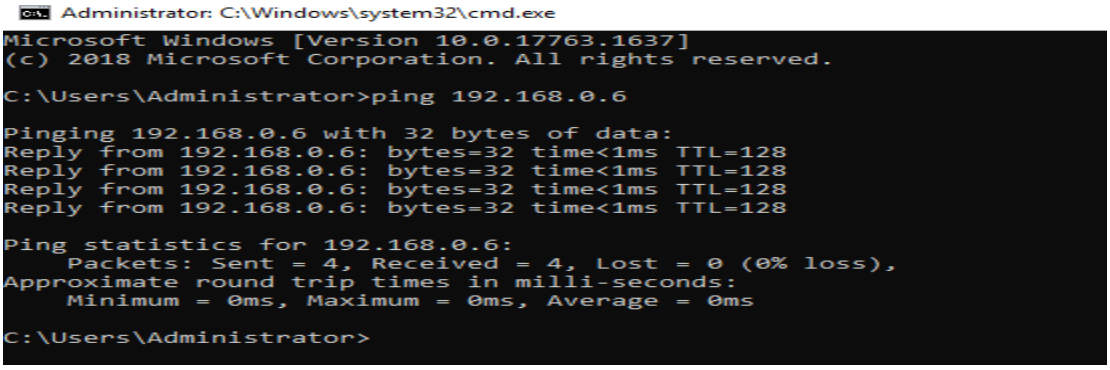

ESX1.RAMLAN.CA - Virtual Machines
Create / Register VM
Console
Power on
Power off
Suspend
Refresh
Actions
Virtual machine
Status
Used space
Guest OS
VC
Normal
35.67 GB
Other 3.x or later Linux (64-bit)
vCLS (1)
Normal
469.22 MB
Other 3.x or later Linux (64-bit)
vCLS (6)
Normal
450.11 MB
Other 3.x or later Linux (64-bit)
OOSCONVERTED
Normal
42.63 GB
Microsoft Windows Server 2019 (64...
Quick filters...
OOSCONVERTED
Guest OS
Microsoft Windows Server 2019 (64-bit) VBS not enabled
Compatibility
VMware Tools
No
CPUs
2
Memory
4 GB


Getting devices ready 31%





The conversion worked and the server running fine without any issue. Install VMWare tools later.



This concludes the conversion process.

Thanks

Ram Lan
3rd Jan 2021