Raw Device Mappings

What is raw device mapping?

Raw device mapping is a feature where the virtual machine can directly access the storage devices such as SAN or DAS.
With a VMware we will use vmdk pointer to provide the proxy facility to raw device.

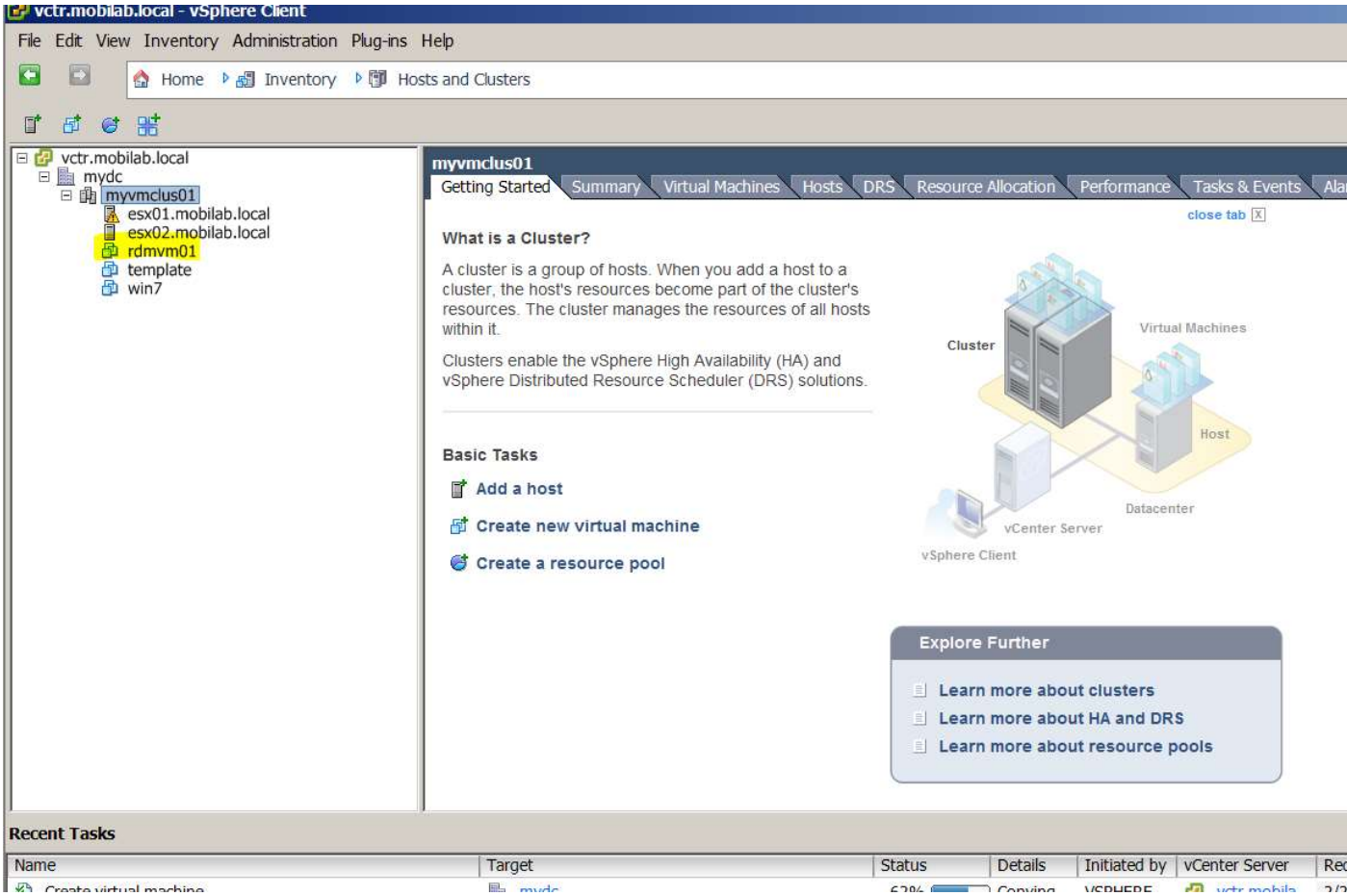
In a virtual environment some cases we may need to have a raw device mappings.

Why we need raw device mapping?

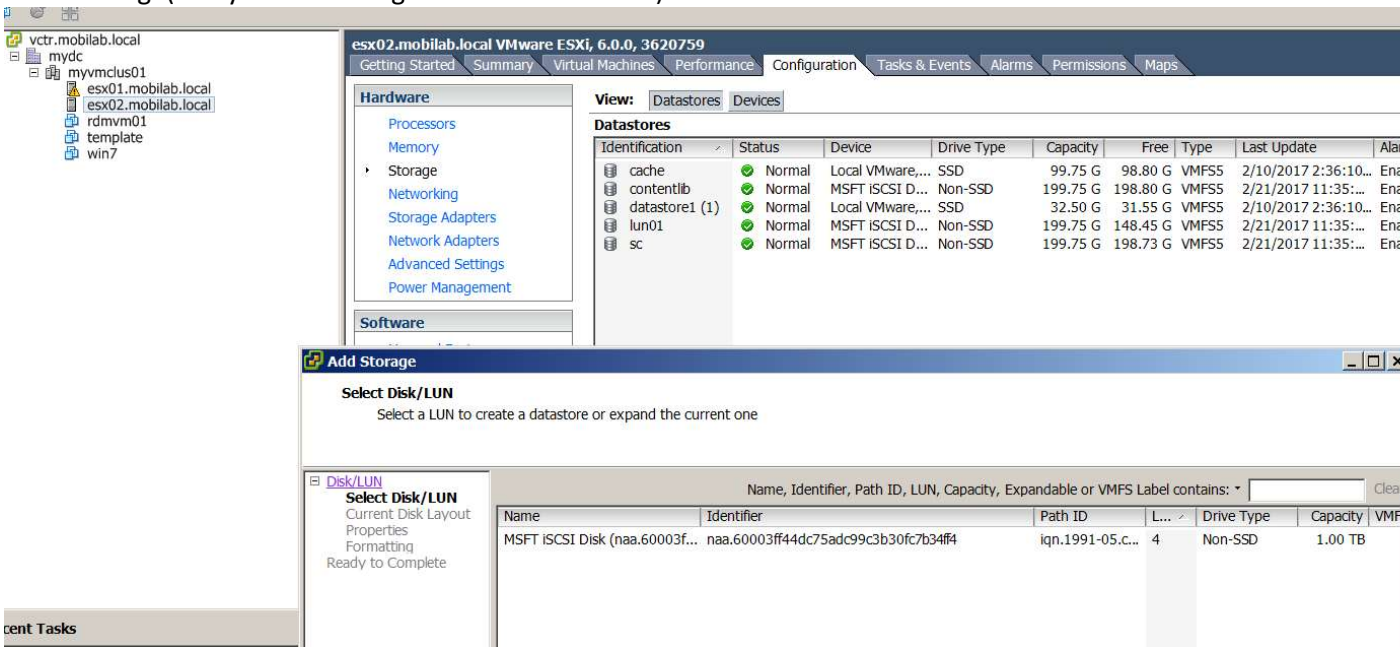
- To configure Microsoft failover cluster, we can configure raw device as shared storage.
- When we are configuring Microsoft failover cluster with one node is running on as a VM & other node/s running as a physical.
- To run some of the san management software(ex hitachi horcm)
- To run some backup software on virtual machine, and needs to get storage level backup

How to Configure?

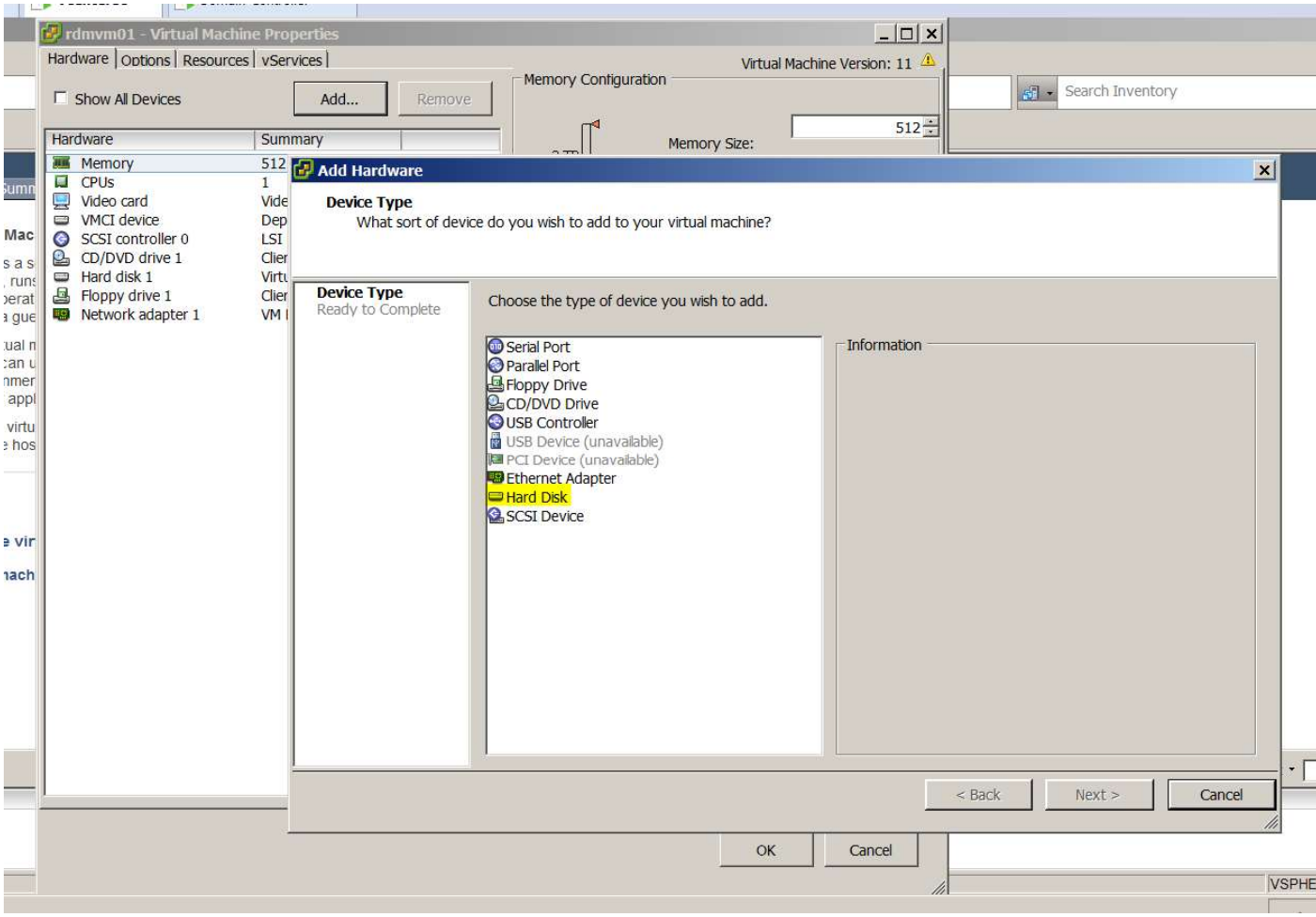
- Here I have one vm which is prepared to mount raw device



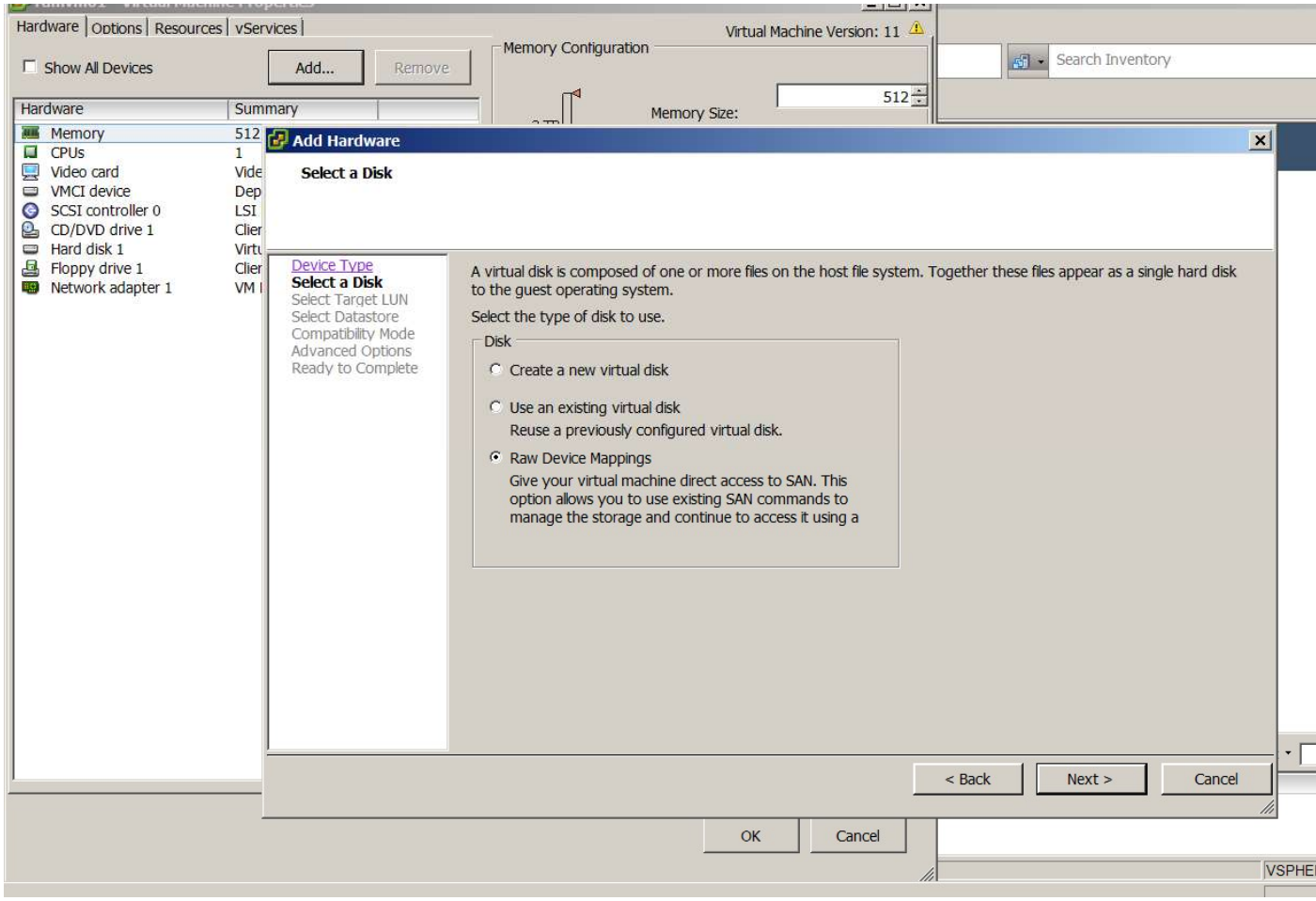
- Using new datastore adding procedure, we can see new lun which is provided from our shared storage(in my case im using windows iscsi server)



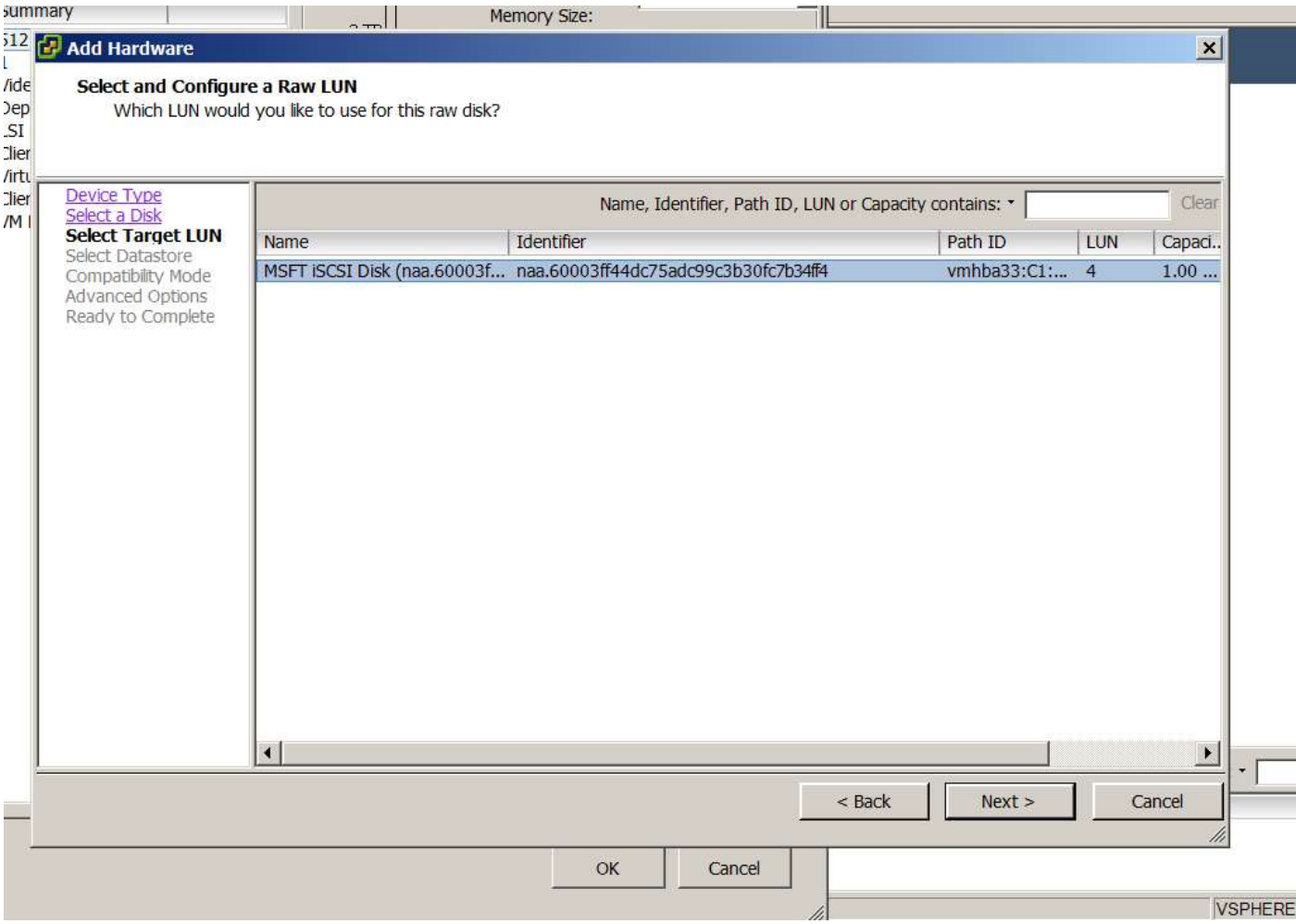
3. Go to add hardware wizard of virtual machine and select hard disk



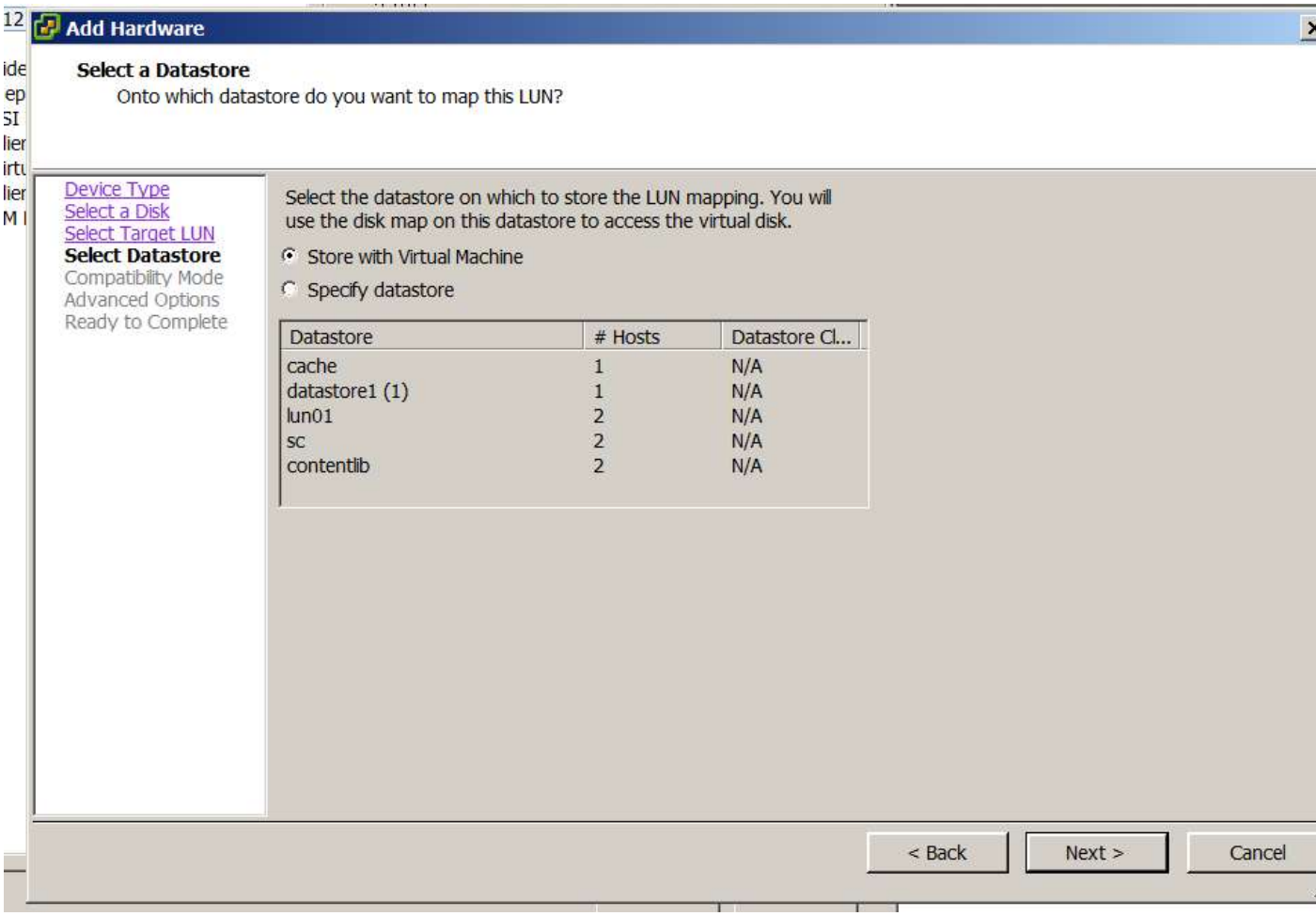
4. Select "Raw Device Mappings"



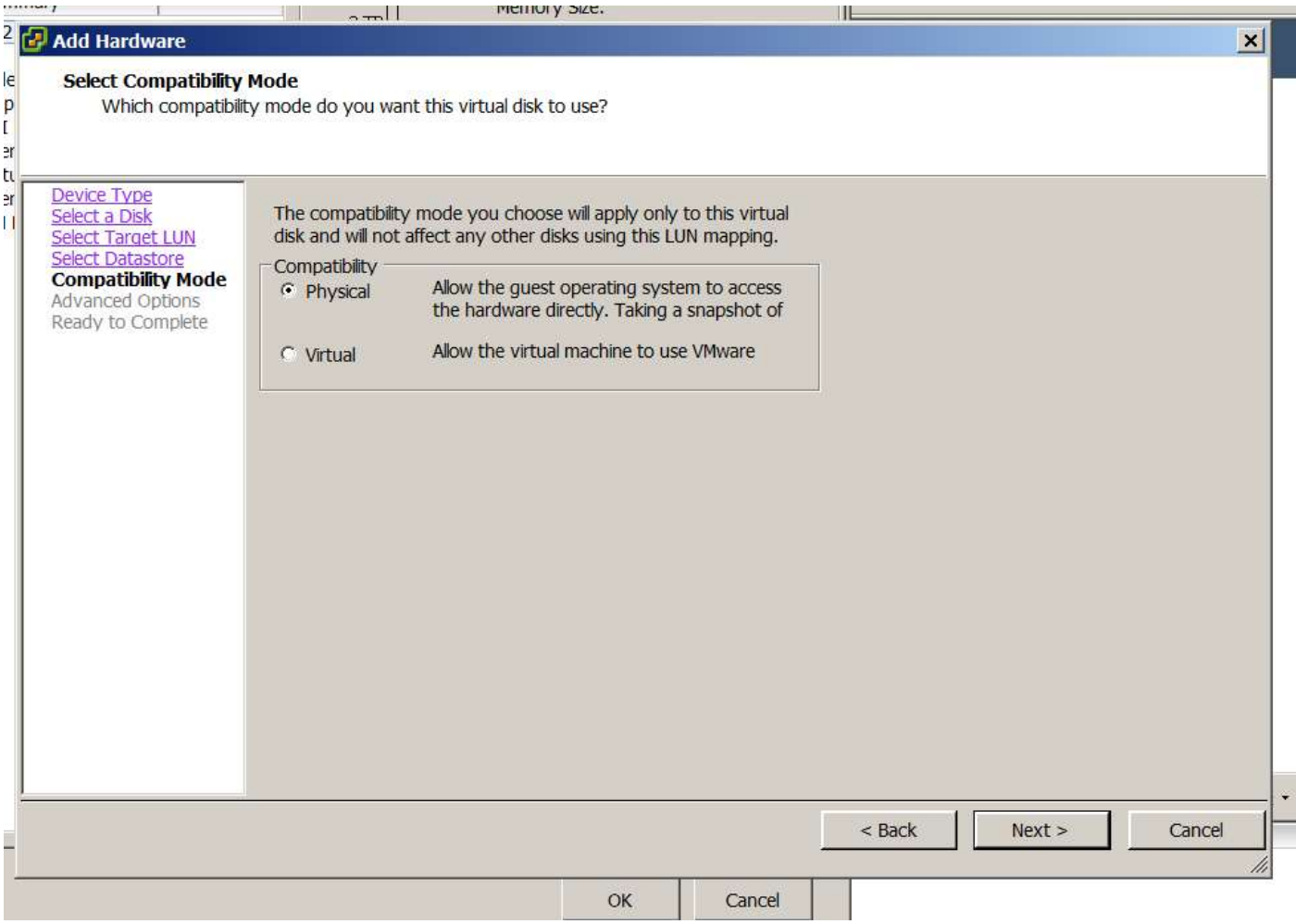
5. Select the Raw device lun

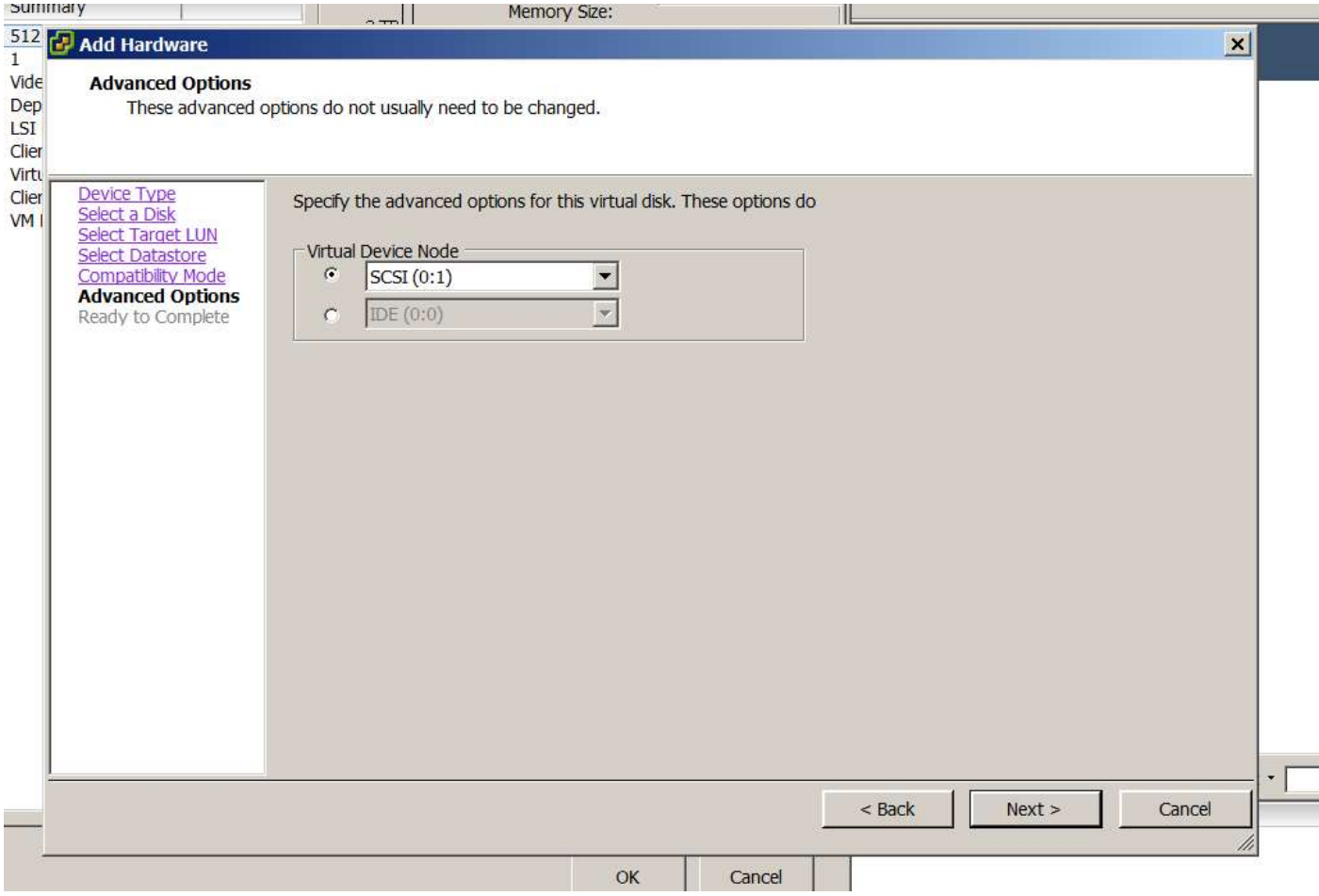


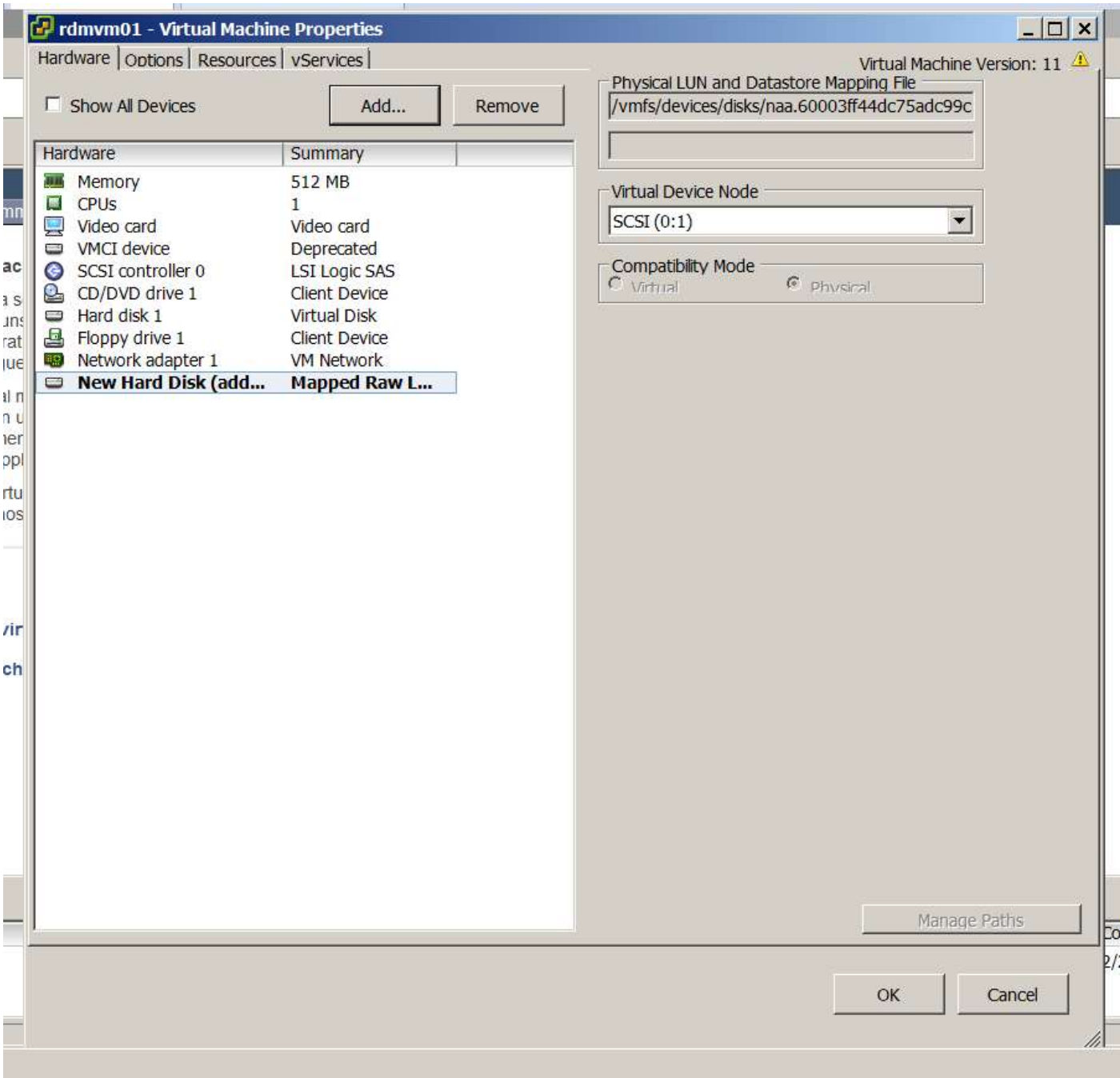
6. We can select location for VMDK pointer(raw device mapping pointer)



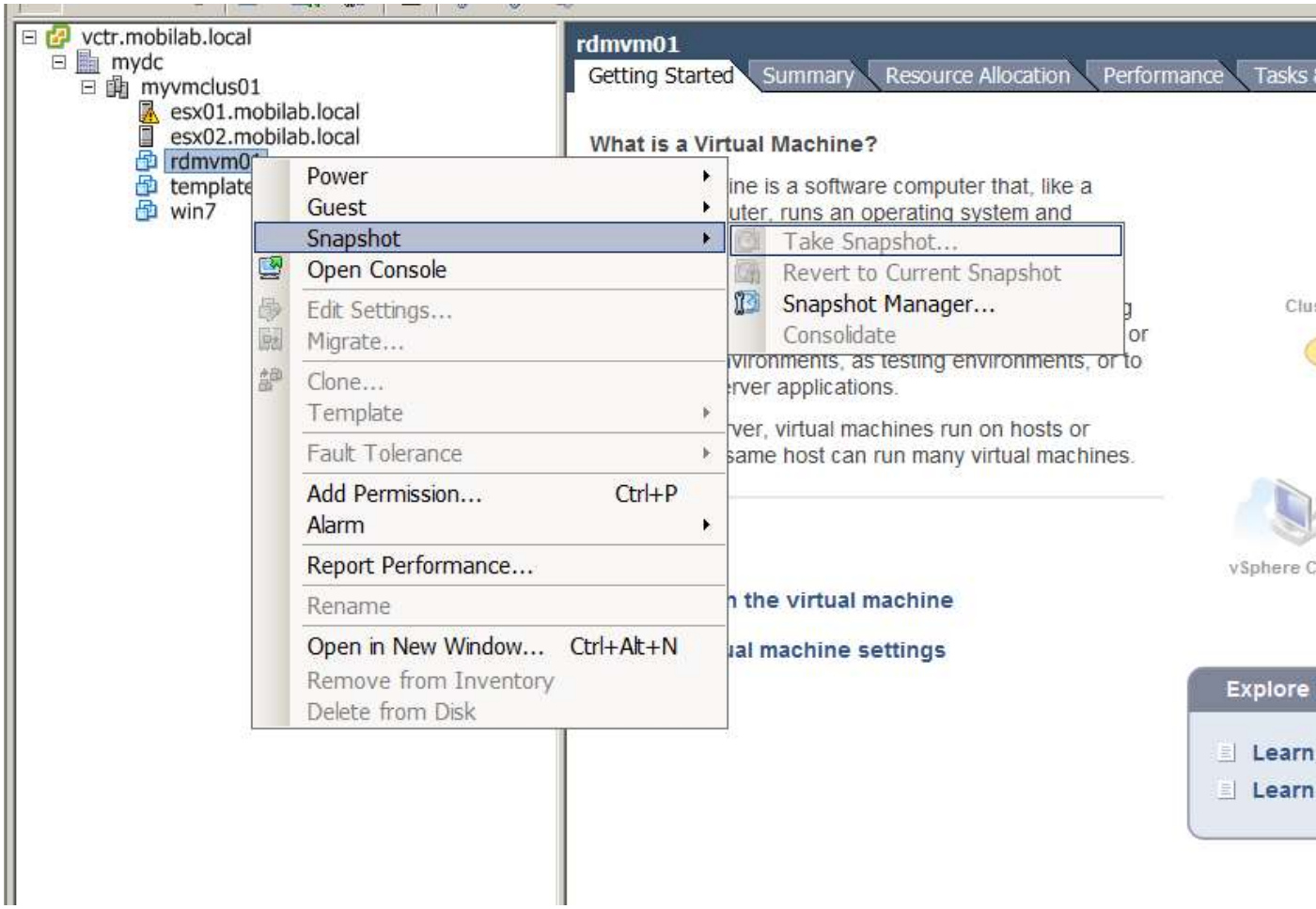
7. There are two options
    a. Physical
    b. Virtual- In a virtual mode we can take the snapshots


Add Hardware
Select Compatibility Mode
Which compatibility mode do you want this virtual disk to use?
Device Type
Select a Disk
Select Target LUN
Select Datastore
Compatibility Mode
Advanced Options
Ready to Complete
The compatibility mode you choose will apply only to this virtual disk and will not affect any other disks using this LUN mapping.
Compatibility
Physical
Allow the guest operating system to access the hardware directly. Taking a snapshot of
Virtual
Allow the virtual machine to use VMware
< Back
Next >
Cancel
OK
Cancel

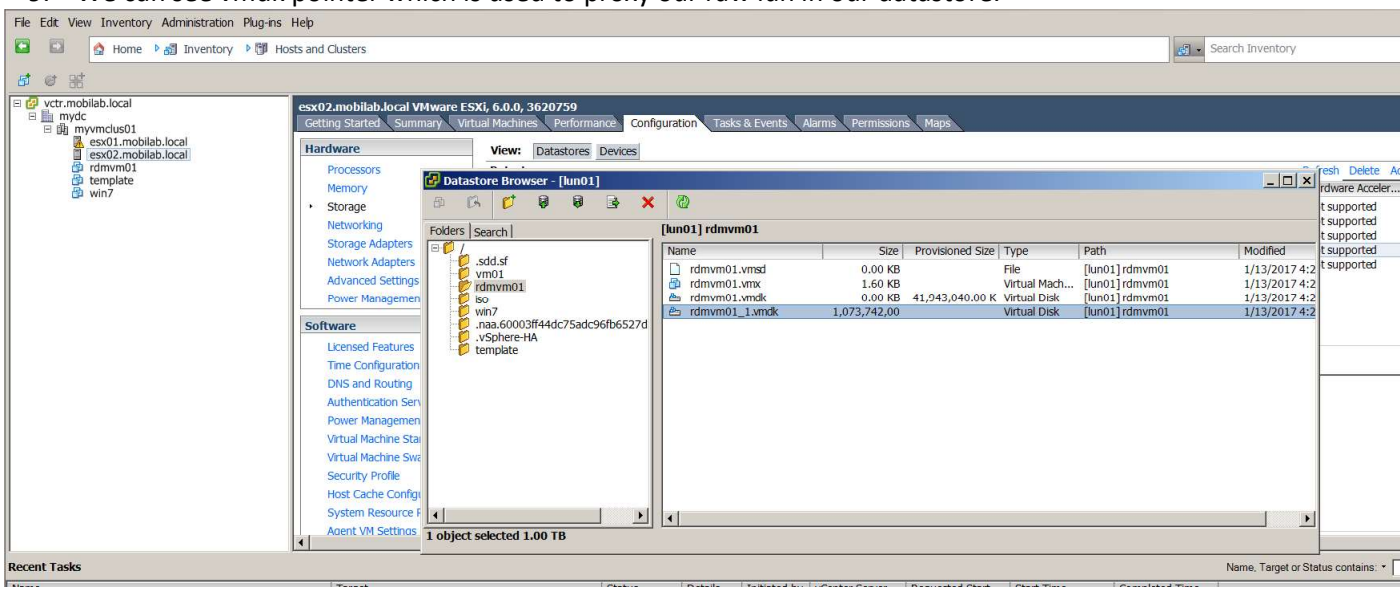

Summary
Memory Size:
512
1
Vide
Dep
LSI
Clier
Virtu
Clier
VM
Add Hardware
Advanced Options
These advanced options do not usually need to be changed.
Device Type
Select a Disk
Select Target LUN
Select Datastore
Compatibility Mode
Advanced Options
Ready to Complete
Specify the advanced options for this virtual disk. These options do
Virtual Device Node
SCSI (0:1)
IDE (0:0)
< Back
Next >
Cancel
OK
Cancel

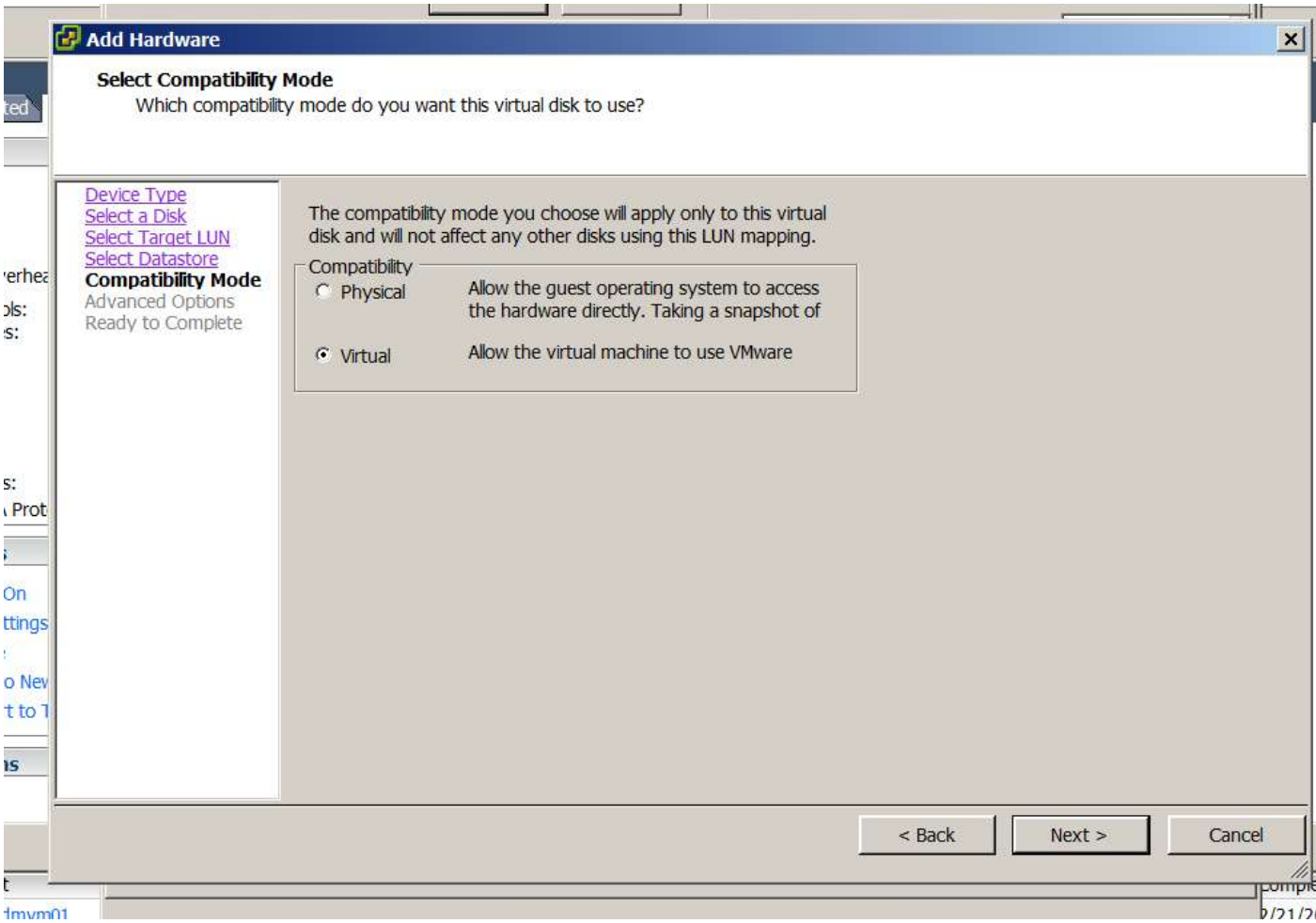


8. With physical mode of the raw device, we cannot take snapshots.

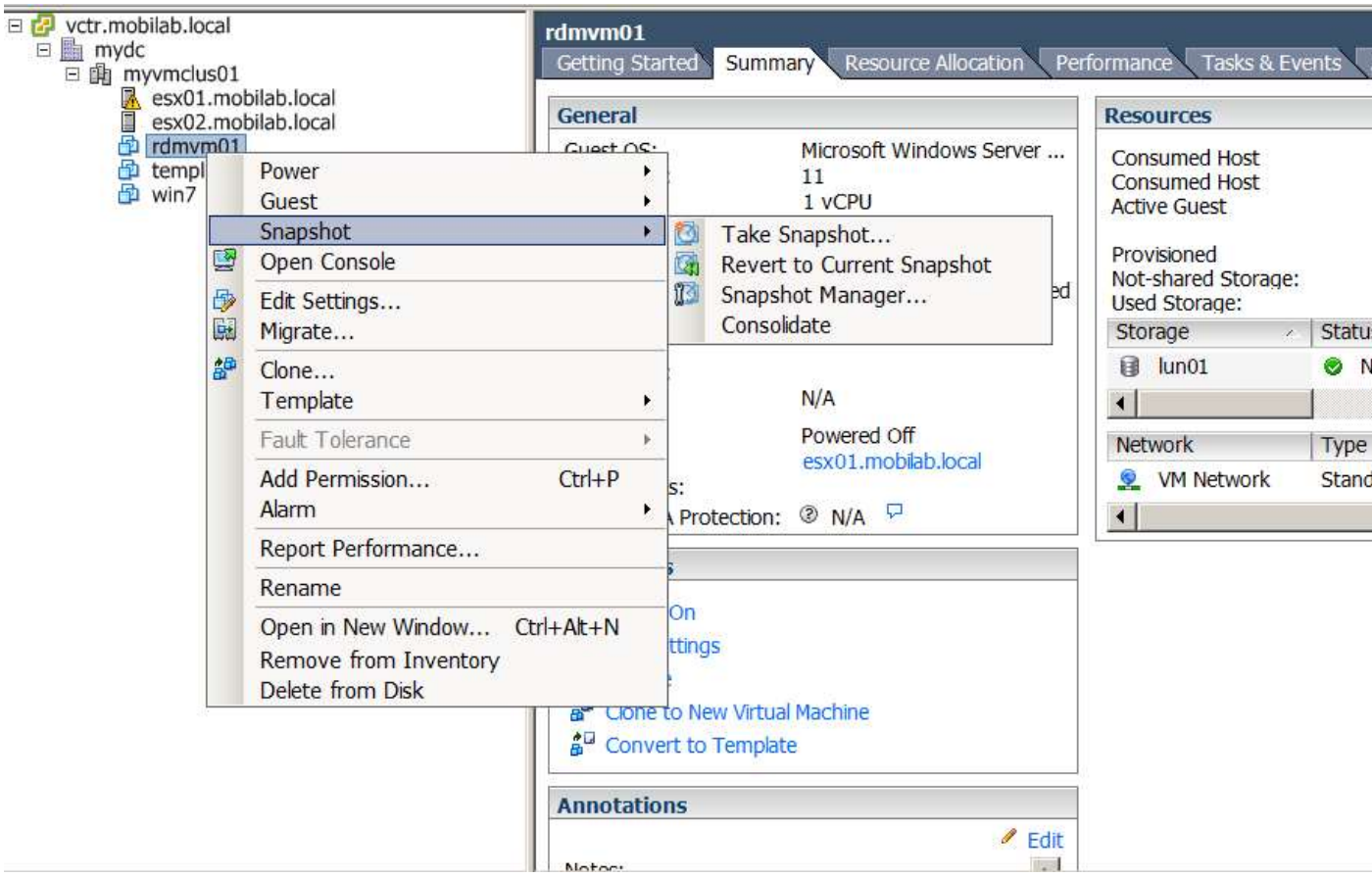


9. We can see vmdk pointer which is used to proxy our raw lun in our datastore.

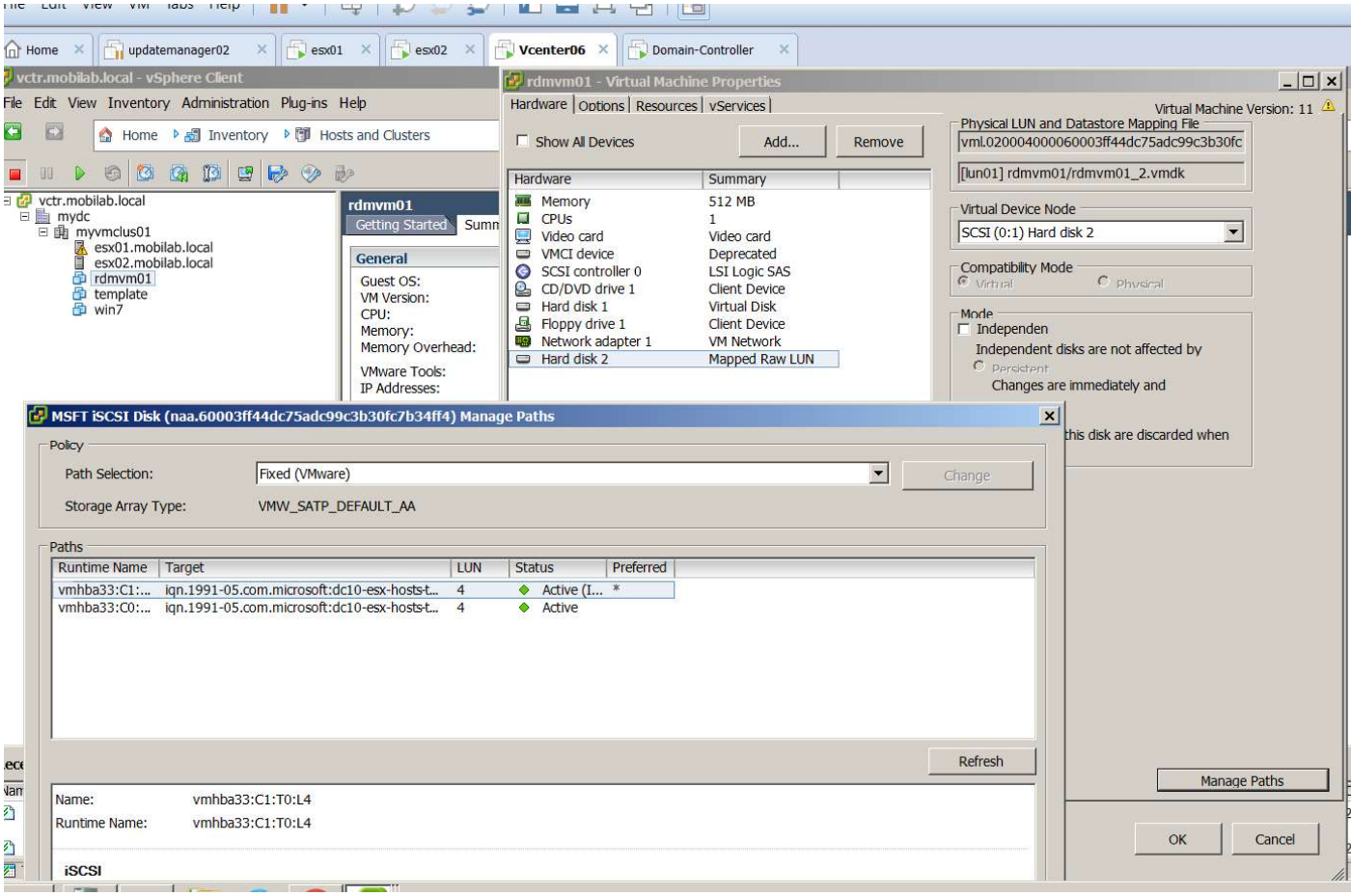




10 . With a virtual mode we can take the snapshots



11. If want we can change the multipathing policy as same as datastore



Darshanaj.wordpress.com