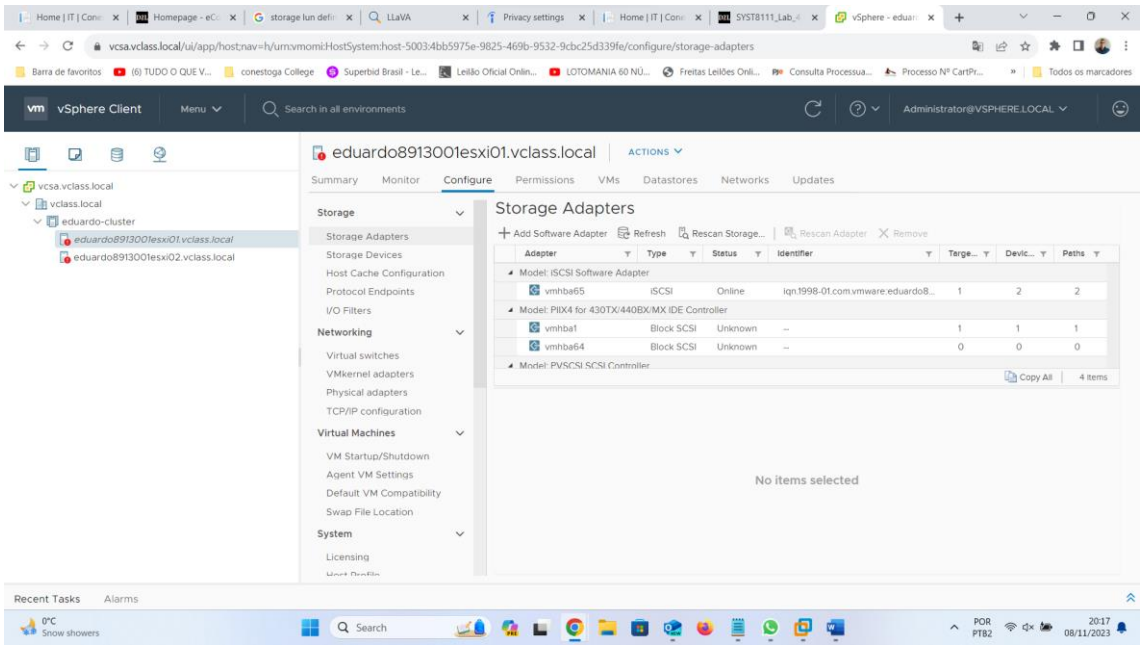
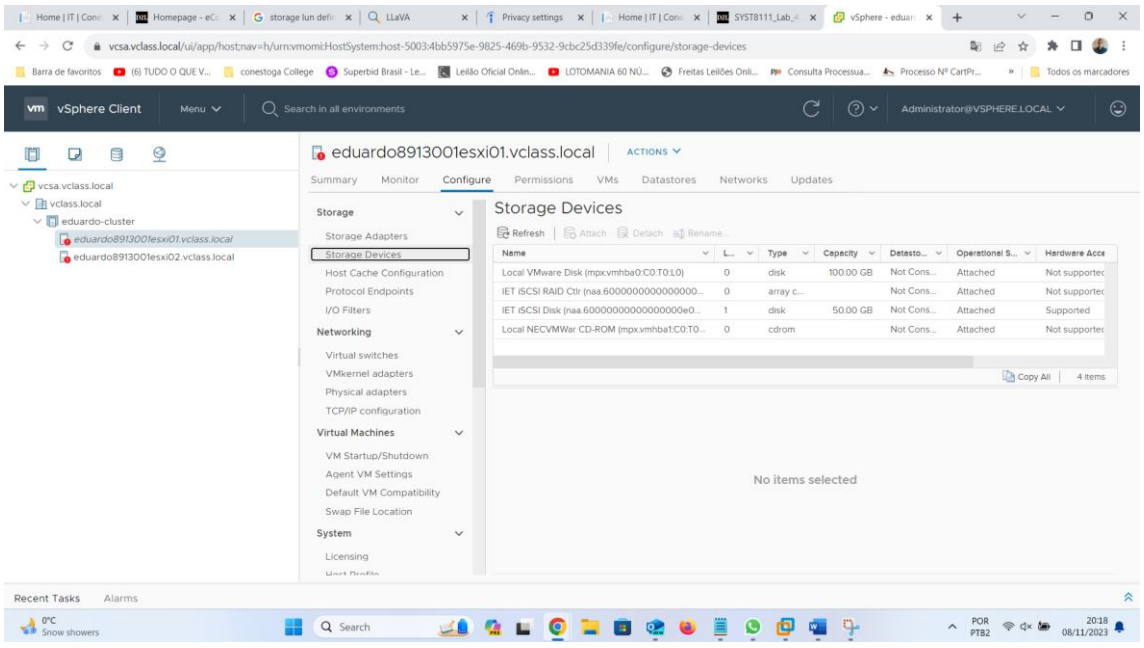
VMware LUN


vcsa.vclass.local/ui/app/host;nav=h/urn:vmomi:HostSystem:host-5003:4bb5975e-9825-469b-9532-9cbc25d339fe/configure/storage-adapters
vSphere Client
Menu
Search in all environments
Administrator@VSPHERE.LOCAL
vcsa.vclass.local
vclass.local
eduardo-cluster
eduardo8913001esxi01.vclass.local
eduardo8913001esxi02.vclass.local
eduardo8913001esxi01.vclass.local
ACTIONS
Summary
Monitor
Configure
Permissions
VMs
Datastores
Networks
Updates
Storage
Storage Adapters
Storage Devices
Host Cache Configuration
Protocol Endpoints
I/O Filters
Networking
Virtual switches
VMkernel adapters
Physical adapters
TCP/IP configuration
Virtual Machines
VM Startup/Shutdown
Agent VM Settings
Default VM Compatibility
Swap File Location
System
Licensing
Storage Adapters
Add Software Adapter
Refresh
Rescan Storage...
Rescan Adapter
Remove
Adapter
Type
Status
Identifier
Targe...
Devic...
Paths
Model: iSCSI Software Adapter
vmhba65
iSCSI
Online
iqn.1998-01.com.vmware:eduardo8...
Model: PIIX4 for 430TX/440BX/MX IDE Controller
vmhba1
Block SCSI
Unknown
vmhba64
Model: PVSCSI SCSI Controller
Copy All
4 items
No items selected
Recent Tasks
Alarms
0°C
Snow showers
Search
POR
PTB2
20:17
08/11/2023


vcsa.vclass.local/ui/app/host;nav=h/urn:vmomi:HostSystem:host-5003:4bb5975e-9825-469b-9532-9cbc25d339fe/configure/storage-devices
vSphere Client
Menu
Search in all environments
Administrator@VSPHERE.LOCAL
vcsa.vclass.local
vclass.local
eduardo-cluster
eduardo8913001esxi01.vclass.local
eduardo8913001esxi02.vclass.local
eduardo8913001esxi01.vclass.local
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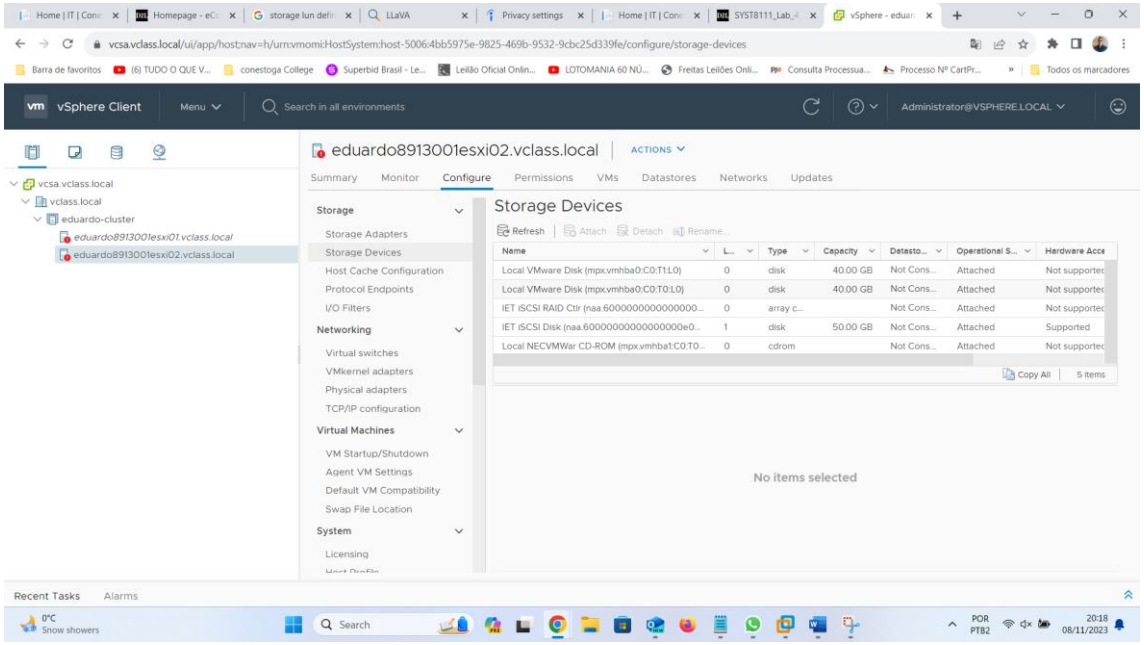
Virtual Machines
VM Startup/Shutdown
Agent VM Settings
Default VM Compatibility
Swap File Location
System
Licensing
Storage Devices
Refresh
Attach
Detach
Rename...
Name
L...
Type
Capacity
Datasto...
Operational S...
Hardware Acce
Local VMware Disk (mpx.vmhba0:C0:T0:L0)
0
disk
100.00 GB
Not Cons...
Attached
Not supported
IET iSCSI RAID Ctlr (naa.60000000000000000...
array c...
IET iSCSI Disk (naa.60000000000000000e0...
1
50.00 GB
Supported
Local NECVMWar CD-ROM (mpx.vmhba1:C0:T0...
cdrom
Copy All
4 items
No items selected
Recent Tasks
Alarms
0°C
Snow showers
Search
POR
PTB2
20:18
08/11/2023


vcsa.vclass.local/ui/app/host;nav=h/urn:vmomi:HostSystem:host-5006:4bb5975e-9825-469b-9532-9cbc25d339fe/configure/storage-devices
vSphere Client
Menu
Search in all environments
Administrator@VSPHERE.LOCAL
vcsa.vclass.local
vclass.local
eduardo-cluster
eduardo8913001esxi01.vclass.local
eduardo8913001esxi02.vclass.local
eduardo8913001esxi02.vclass.local
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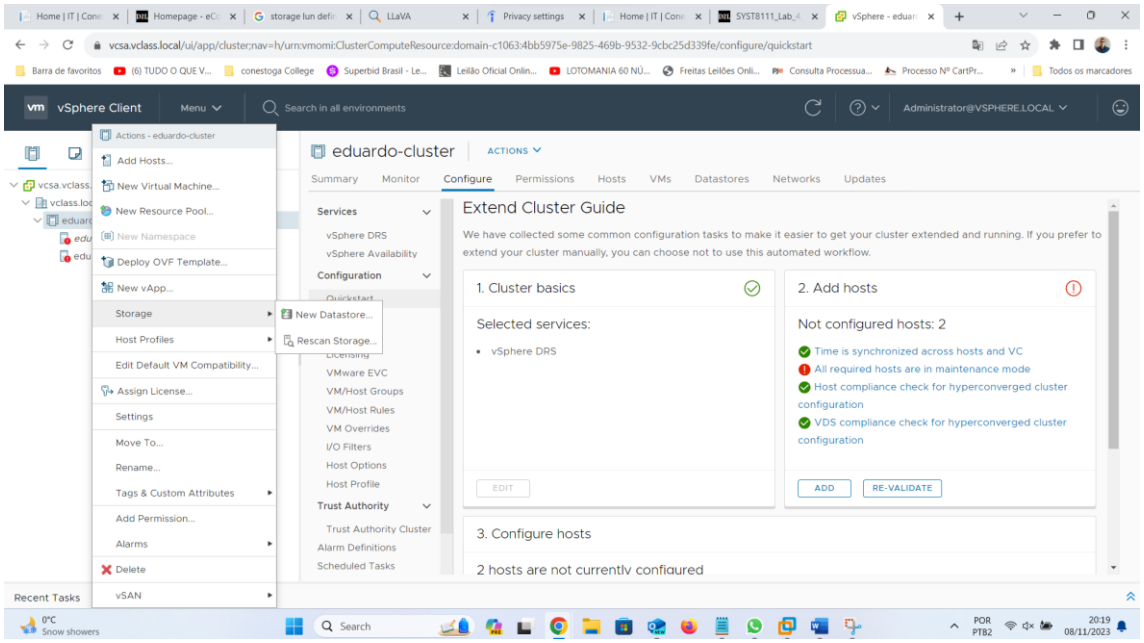
Agent VM Settings
Default VM Compatibility
Swap File Location
System
Licensing
Storage Devices
Refresh
Attach
Detach
Rename
Name
Type
Capacity
Operational S...
Hardware Acce
Local VMware Disk (mpx.vmhba0:C0:T1:L0)
Local VMware Disk (mpx.vmhba0:C0:T0:L0)
IET iSCSI RAID Ctlr (naa.60000000000000000...
IET iSCSI Disk (naa.60000000000000000e0...
Local NECVMWar CD-ROM (mpx.vmhba1:C0:T0...
Attached
Not supported
Supported
Copy All
5 items
No items selected
Recent Tasks
Alarms
Search
0°C
Snow showers
POR
PTB2
20:18
08/11/2023


vcsa.vclass.local/ui/app/cluster;nav=h/urn:vmomi:ClusterComputeResource:domain-c1063:4bb5975e-9825-469b-9532-9cbc25d339fe/configure/quickstart
vSphere Client
Menu
Search in all environments
Administrator@VSPHERE.LOCAL
Actions - eduardo-cluster
Add Hosts...
New Virtual Machine...
New Resource Pool...
New Namespace
Deploy OVF Template...
New vApp...
Storage
Host Profiles
Edit Default VM Compatibility...
Assign License...
Settings
Move To...
Rename...
Tags & Custom Attributes
Add Permission...
Alarms
Delete
vSAN
New Datastore...
Rescan Storage...
eduardo-cluster
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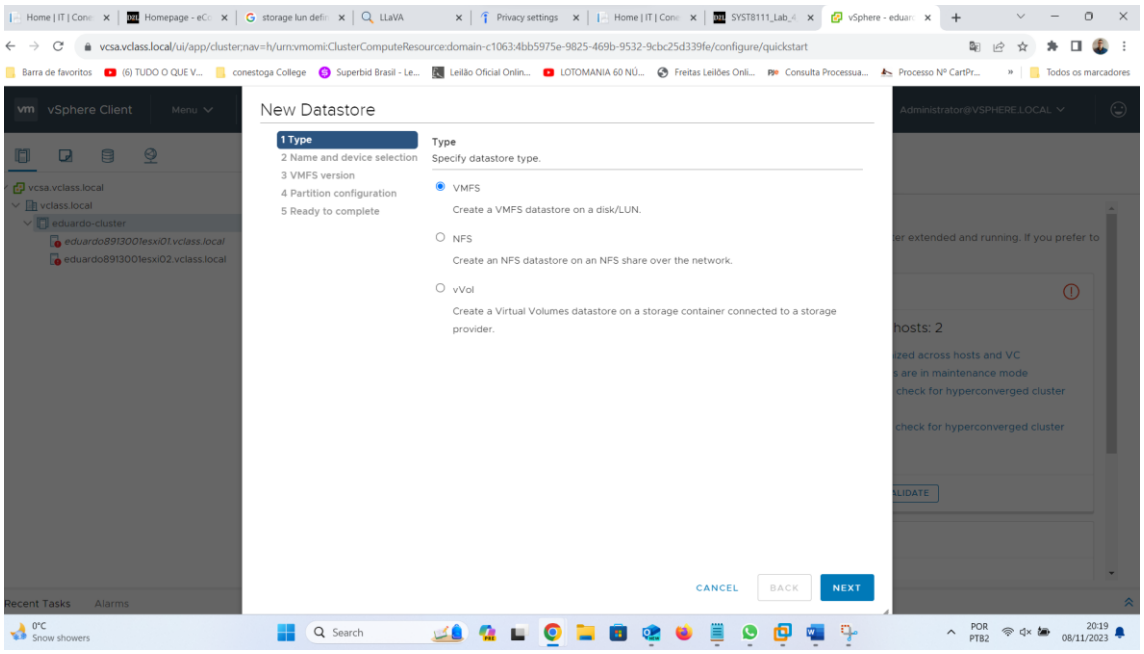
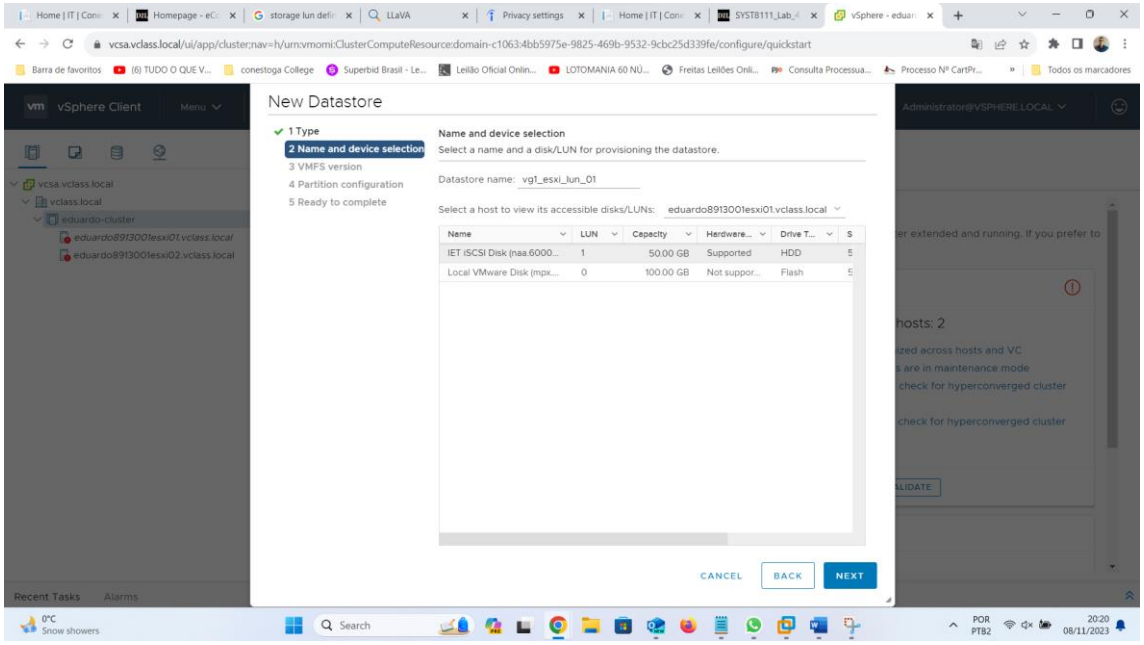
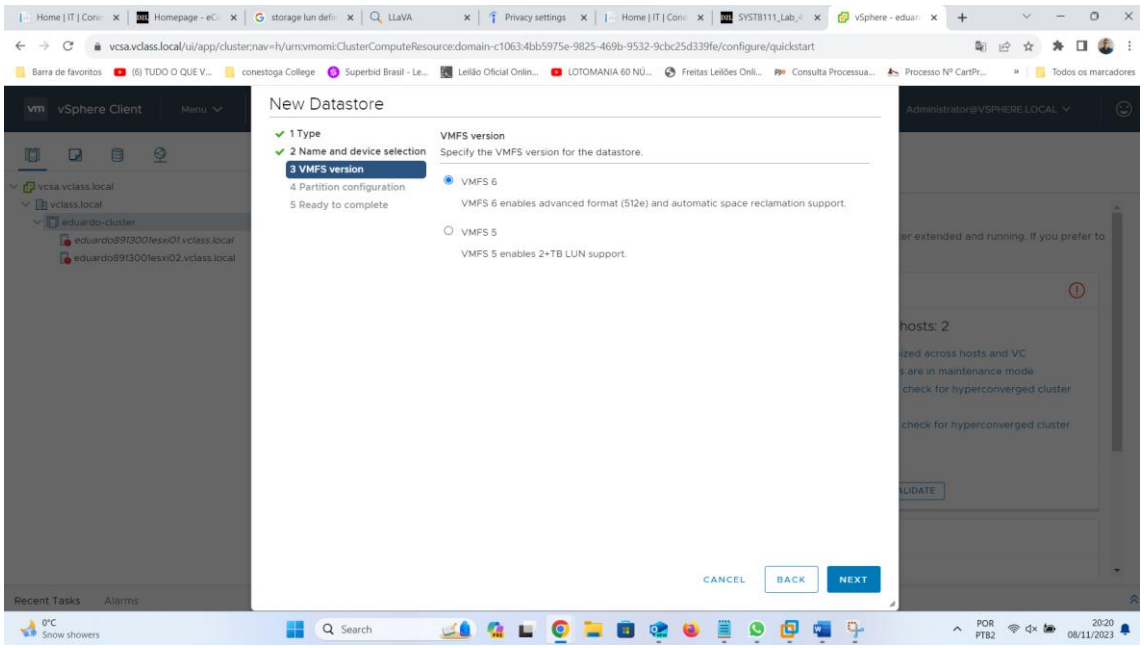
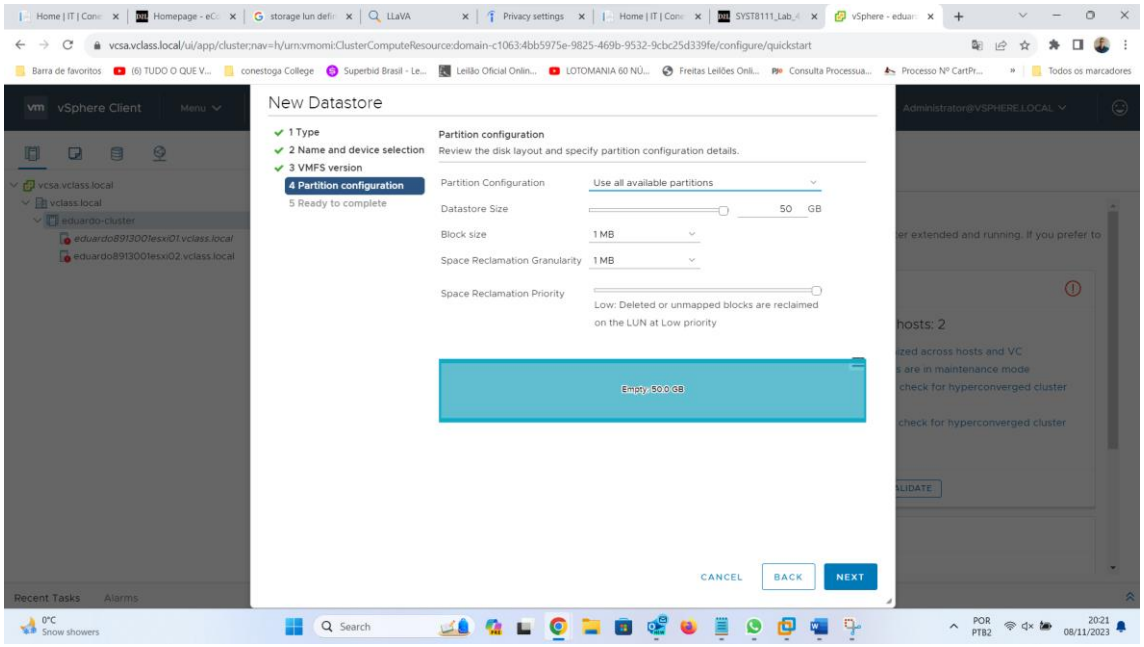
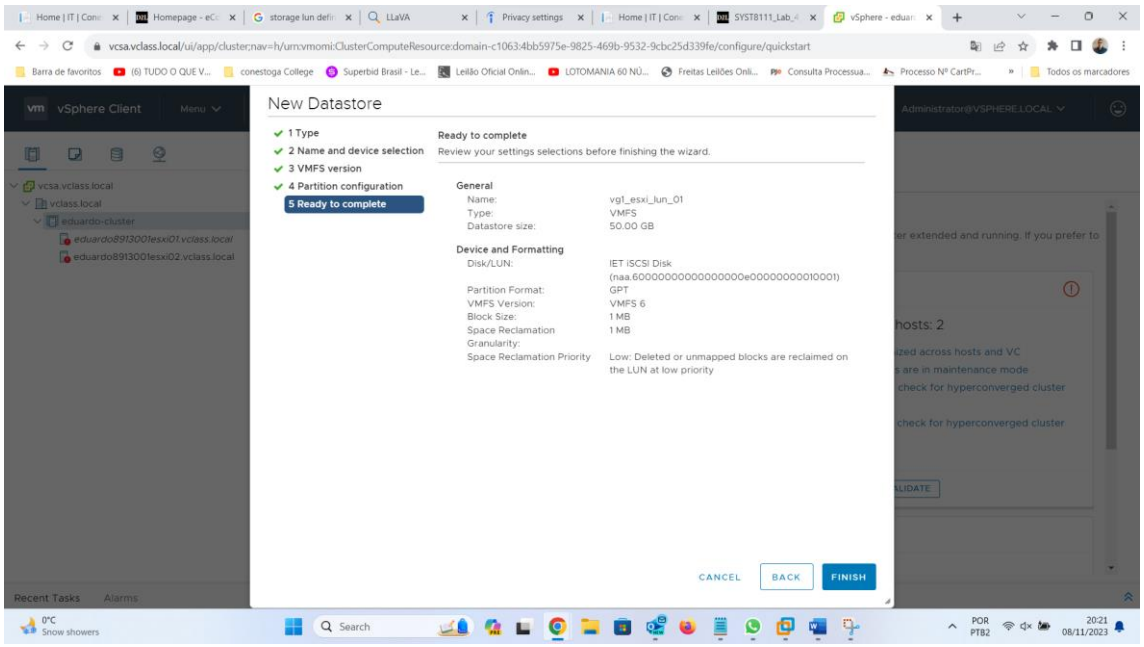
VMs
Datastores
Networks
Updates
Services
vSphere DRS
vSphere Availability
Configuration
Quickstart
VMware EVC
VM/Host Groups
VM/Host Rules
VM Overrides
I/O Filters
Host Options
Host Profile
Trust Authority
Trust Authority Cluster
Alarm Definitions
Scheduled Tasks
Extend Cluster Guide
We have collected some common configuration tasks to make it easier to get your cluster extended and running. If you prefer to extend your cluster manually, you can choose not to use this automated workflow.
1. Cluster basics
Selected services:
vSphere DRS
EDIT
2. Add hosts
Not configured hosts: 2
Time is synchronized across hosts and VC
All required hosts are in maintenance mode
Host compliance check for hyperconverged cluster configuration
VDS compliance check for hyperconverged cluster configuration
ADD
RE-VALIDATE
3. Configure hosts
2 hosts are not currently configured
Recent Tasks
Search
0°C
Snow showers
POR
PTB2
20:19
08/11/2023

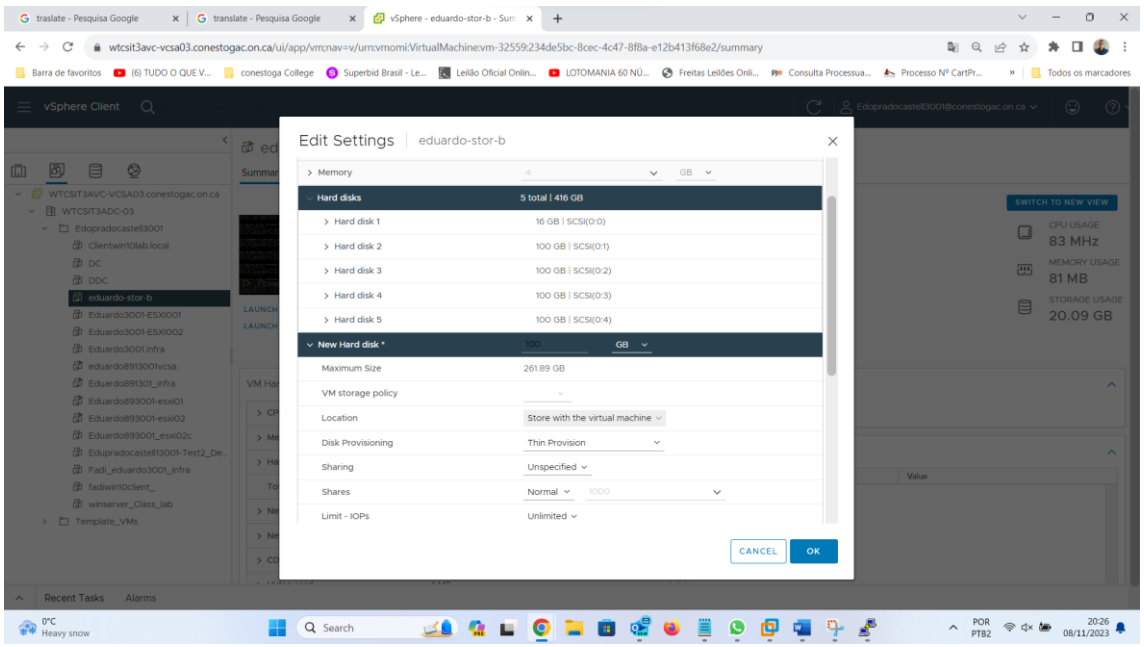

vSphere Client
New Datastore
1 Type
2 Name and device selection
3 VMFS version
4 Partition configuration
5 Ready to complete
Type
Specify datastore type.
VMFS
Create a VMFS datastore on a disk/LUN.
NFS
Create an NFS datastore on an NFS share over the network.
vVol
Create a Virtual Volumes datastore on a storage container connected to a storage provider.
CANCEL
BACK
NEXT

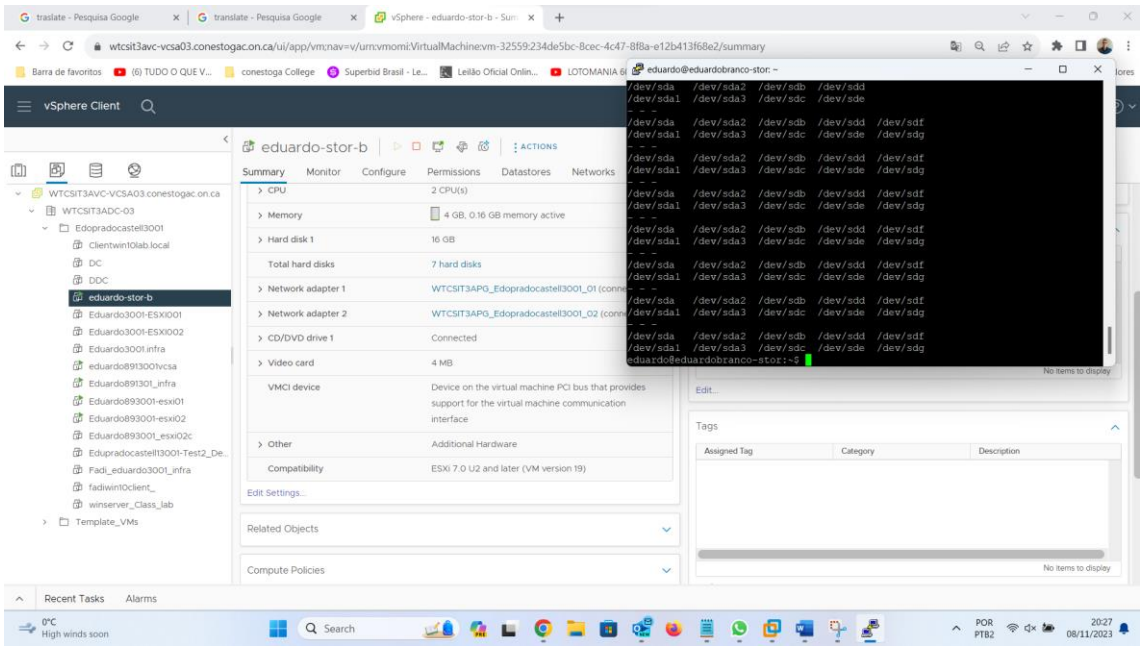

vSphere Client
New Datastore
1 Type
2 Name and device selection
3 VMFS version
4 Partition configuration
5 Ready to complete
Name and device selection
Select a name and a disk/LUN for provisioning the datastore.
Datastore name: vg1_esxi_lun_01
Select a host to view its accessible disks/LUNs: eduardo8913001esxi01.vclass.local
Name
LUN
Capacity
Hardware...
Drive T...
IET iSCSI Disk (naa.6000...
1
50.00 GB
Supported
HDD
Local VMware Disk (mpx...
0
100.00 GB
Not suppor...
Flash
CANCEL
BACK
NEXT

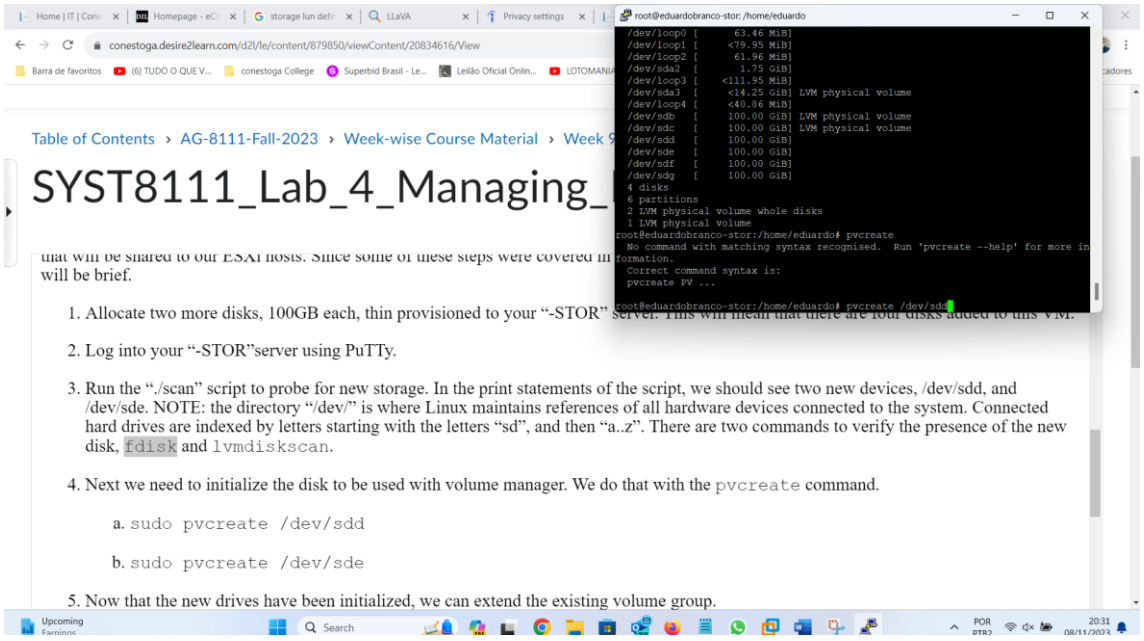

vSphere Client
New Datastore
1 Type
2 Name and device selection
3 VMFS version
4 Partition configuration
5 Ready to complete
VMFS version
Specify the VMFS version for the datastore.
VMFS 6
VMFS 6 enables advanced format (512e) and automatic space reclamation support.
VMFS 5
VMFS 5 enables 2+TB LUN support.
CANCEL
BACK
NEXT


vSphere Client
New Datastore
1 Type
2 Name and device selection
3 VMFS version
4 Partition configuration
5 Ready to complete
Partition configuration
Review the disk layout and specify partition configuration details.
Partition Configuration
Use all available partitions
Datastore Size
50
GB
Block size
1 MB
Space Reclamation Granularity
1 MB
Space Reclamation Priority
Low: Deleted or unmapped blocks are reclaimed on the LUN at Low priority
Empty: 50.0 GB
CANCEL
BACK
NEXT


New Datastore
1 Type
2 Name and device selection
3 VMFS version
4 Partition configuration
5 Ready to complete
Ready to complete
Review your settings selections before finishing the wizard.
General
Name: vg1_esxi_lun_01
Type: VMFS
Datastore size: 50.00 GB
Device and Formatting
Disk/LUN: IET iSCSI Disk (naa.60000000000000000e00000000010001)
Partition Format: GPT
VMFS Version: VMFS 6
Block Size: 1 MB
Space Reclamation Granularity: 1 MB
Space Reclamation Priority: Low: Deleted or unmapped blocks are reclaimed on the LUN at low priority
CANCEL
BACK
FINISH


Edit Settings
eduardo-stor-b
Memory
Hard disks
5 total | 416 GB
Hard disk 1
16 GB | SCSI(0:0)
Hard disk 2
100 GB | SCSI(0:1)
Hard disk 3
100 GB | SCSI(0:2)
Hard disk 4
100 GB | SCSI(0:3)
Hard disk 5
100 GB | SCSI(0:4)
New Hard disk *
Maximum Size
261.89 GB
VM storage policy
Location
Store with the virtual machine
Disk Provisioning
Thin Provision
Sharing
Unspecified
Shares
Normal
Limit - IOPs
Unlimited
CANCEL
OK





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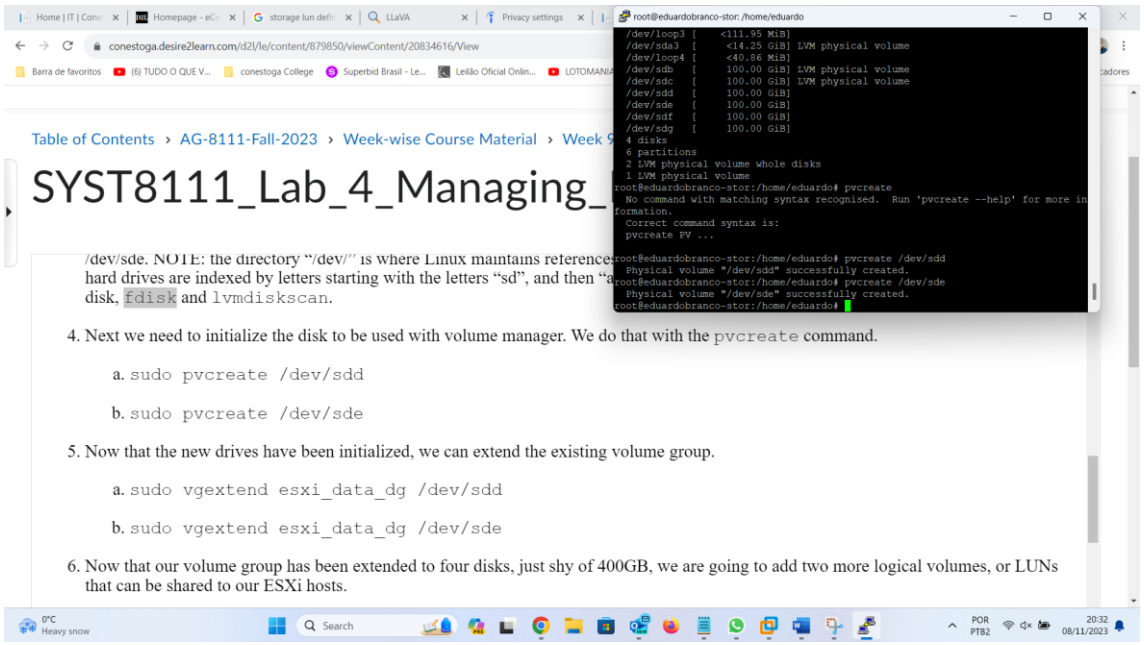
SYST8111_Lab_4_Managing_

that will be shared to our ESXi hosts. Since some of these steps were covered in [illegible] will be brief.

1. Allocate two more disks, 100GB each, thin provisioned to your "-STOR" server. This will mean that there are four disks added to this VM.
2. Log into your "-STOR"server using PuTTy.
3. Run the "./scan" script to probe for new storage. In the print statements of the script, we should see two new devices, /dev/sdd, and /dev/sde. NOTE: the directory "/dev/" is where Linux maintains references of all hardware devices connected to the system. Connected hard drives are indexed by letters starting with the letters "sd", and then "a..z". There are two commands to verify the presence of the new disk, `fdisk` and `lvmdiskscan`.
4. Next we need to initialize the disk to be used with volume manager. We do that with the `pvcreate` command.
   a. `sudo pvcreate /dev/sdd`
   b. `sudo pvcreate /dev/sde`
5. Now that the new drives have been initialized, we can extend the existing volume group.


root@eduardobranco-stor: /home/eduardo
/dev/loop3 [<111.95 MiB]
/dev/sda3 [<14.25 GiB] LVM physical volume
/dev/loop4 [<40.86 MiB]
/dev/sdb [100.00 GiB] LVM physical volume
/dev/sdc [100.00 GiB] LVM physical volume
/dev/sdd [100.00 GiB]
/dev/sde [100.00 GiB]
/dev/sdf [100.00 GiB]
/dev/sdg [100.00 GiB]
4 disks
6 partitions
2 LVM physical volume whole disks
1 LVM physical volume
root@eduardobranco-stor:/home/eduardo# pvcreate
No command with matching syntax recognised. Run 'pvcreate --help' for more information.
Correct command syntax is:
pvcreate PV ...
root@eduardobranco-stor:/home/eduardo# pvcreate /dev/sdd
Physical volume "/dev/sdd" successfully created.
root@eduardobranco-stor:/home/eduardo# pvcreate /dev/sde
Physical volume "/dev/sde" successfully created.
root@eduardobranco-stor:/home/eduardo#
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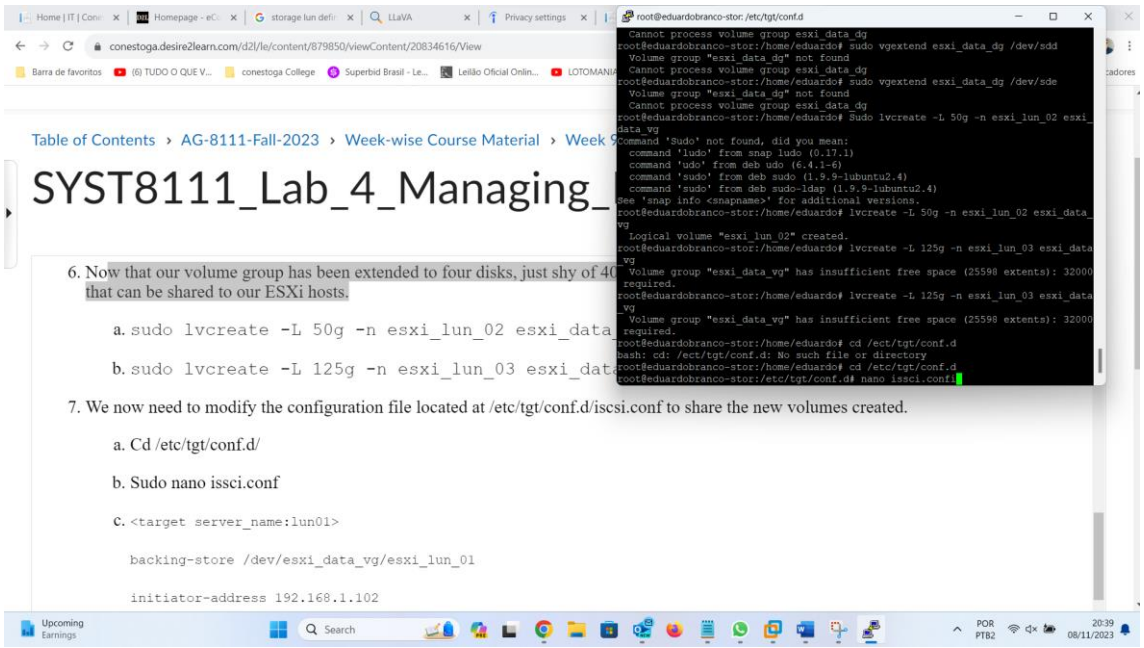
/dev/sde. NOTE: the directory "/dev/" is where Linux maintains reference
hard drives are indexed by letters starting with the letters "sd", and then "a
disk, fdisk and lvmdiskscan.
4. Next we need to initialize the disk to be used with volume manager. We do that with the pvcreate command.
a. sudo pvcreate /dev/sdd
b. sudo pvcreate /dev/sde
5. Now that the new drives have been initialized, we can extend the existing volume group.
a. sudo vgextend esxi_data_dg /dev/sdd
b. sudo vgextend esxi_data_dg /dev/sde
6. Now that our volume group has been extended to four disks, just shy of 400GB, we are going to add two more logical volumes, or LUNs that can be shared to our ESXi hosts.


root@eduardobranco-stor: /etc/tgt/conf.d
Cannot process volume group esxi_data_dg
root@eduardobranco-stor:/home/eduardo# sudo vgextend esxi_data_dg /dev/sdd
Volume group "esxi_data_dg" not found
Cannot process volume group esxi_data_dg
root@eduardobranco-stor:/home/eduardo# sudo vgextend esxi_data_dg /dev/sde
Volume group "esxi_data_dg" not found
Cannot process volume group esxi_data_dg
root@eduardobranco-stor:/home/eduardo# Sudo lvcreate -L 50g -n esxi_lun_02 esxi_data_vg
Command 'Sudo' not found, did you mean:
command 'ludo' from snap ludo (0.17.1)
command 'udo' from deb udo (6.4.1-6)
command 'sudo' from deb sudo (1.9.9-1ubuntu2.4)
command 'sudo' from deb sudo-ldap (1.9.9-1ubuntu2.4)
See 'snap info <snapname>' for additional versions.
root@eduardobranco-stor:/home/eduardo# lvcreate -L 50g -n esxi_lun_02 esxi_data_vg
Logical volume "esxi_lun_02" created.
root@eduardobranco-stor:/home/eduardo# lvcreate -L 125g -n esxi_lun_03 esxi_data_vg
Volume group "esxi_data_vg" has insufficient free space (25598 extents): 32000 required.
root@eduardobranco-stor:/home/eduardo# lvcreate -L 125g -n esxi_lun_03 esxi_data_vg
Volume group "esxi_data_vg" has insufficient free space (25598 extents): 32000 required.
root@eduardobranco-stor:/home/eduardo# cd /ect/tgt/conf.d
bash: cd: /ect/tgt/conf.d: No such file or directory
root@eduardobranco-stor:/home/eduardo# cd /etc/tgt/conf.d
root@eduardobranco-stor:/etc/tgt/conf.d# nano issci.conf
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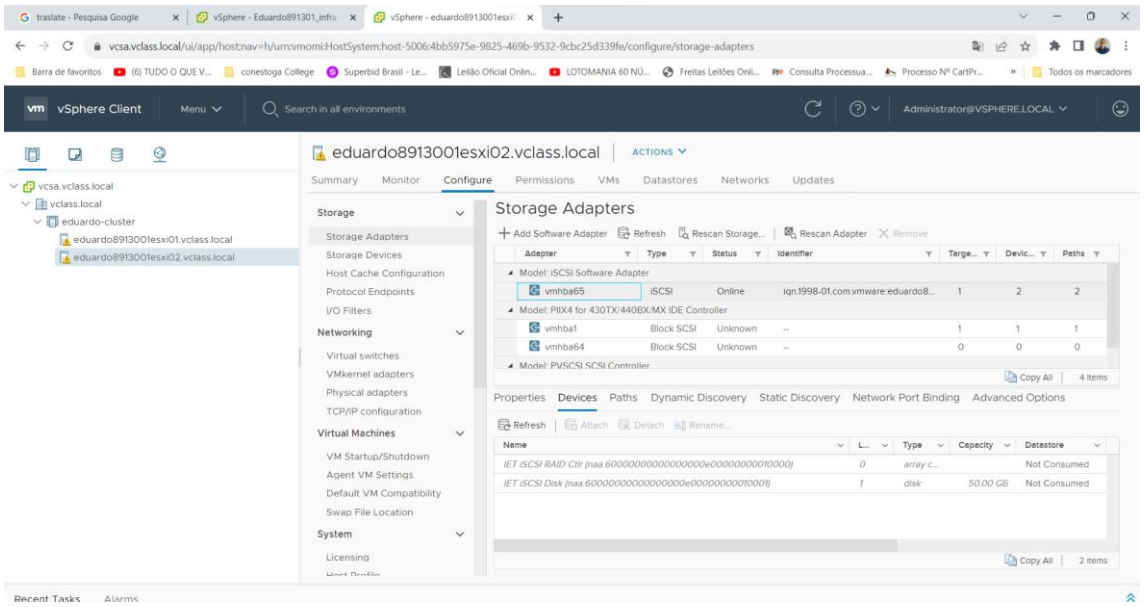
6. Now that our volume group has been extended to four disks, just shy of 40
that can be shared to our ESXi hosts.
a. sudo lvcreate -L 50g -n esxi_lun_02 esxi_data
b. sudo lvcreate -L 125g -n esxi_lun_03 esxi_dat
7. We now need to modify the configuration file located at /etc/tgt/conf.d/iscsi.conf to share the new volumes created.
a. Cd /etc/tgt/conf.d/
b. Sudo nano issci.conf
c. <target server_name:lun01>
backing-store /dev/esxi_data_vg/esxi_lun_01
initiator-address 192.168.1.102


vSphere Client
Menu
Search in all environments
Administrator@VSPHERE.LOCAL
vcsa.vclass.local
vclass.local
eduardo-cluster
eduardo8913001esxi01.vclass.local
eduardo8913001esxi02.vclass.local
eduardo8913001esxi02.vclass.local
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Agent VM Settings
Default VM Compatibility
Swap File Location
System
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Storage Adapters
Add Software Adapter
Refresh
Rescan Storage...
Rescan Adapter
Remove
Adapter
Type
Status
Identifier
Targe...
Devic...
Paths
Model: iSCSI Software Adapter
vmhba65
iSCSI
Online
iqn.1998-01.com.vmware:eduardo8...
1
2
2
Model: PIIX4 for 430TX/440BX/MX IDE Controller
vmhba1
Block SCSI
Unknown
1
1
1
vmhba64
Block SCSI
Unknown
0
0
0
Copy All
4 items
Properties
Devices
Paths
Dynamic Discovery
Static Discovery
Network Port Binding
Advanced Options
Refresh
Attach
Detach
Rename...
Name
L...
Type
Capacity
Datastore
IET iSCSI RAID Ctlr (naa.6000000000000000e0000000010000)
0
array c...
Not Consumed
IET iSCSI Disk (naa.6000000000000000e0000000010001)
1
disk
50.00 GB
Not Consumed
Copy All
2 items
Recent Tasks
Alarms