SRI LANKA INSTITUTE OF INFORMATION TECHNOLOGY

Enterprise Standards and Best Practices for IT Infrastructure

4th Year 2nd Semester 2016

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Practical Session: WD Friday

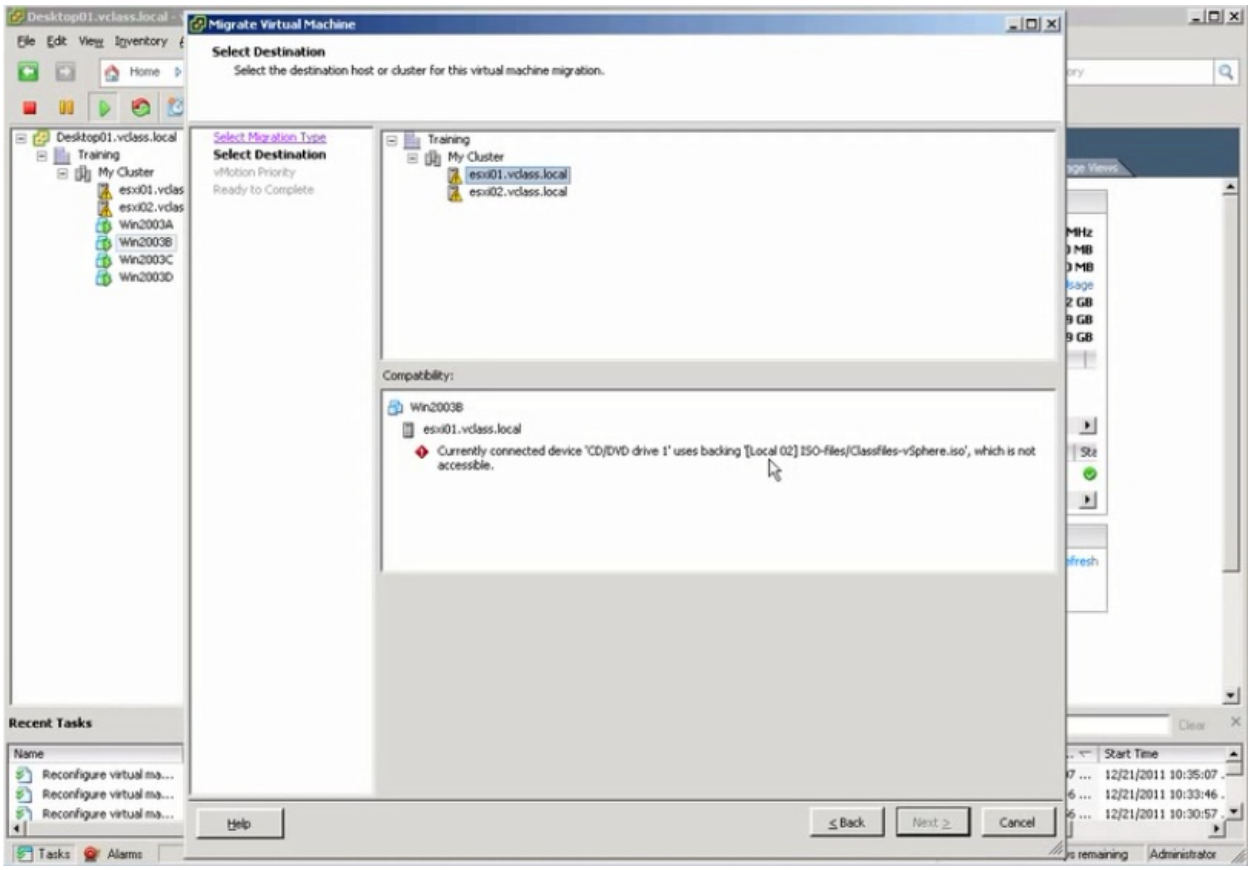
Practical Number: Vmotion Lab

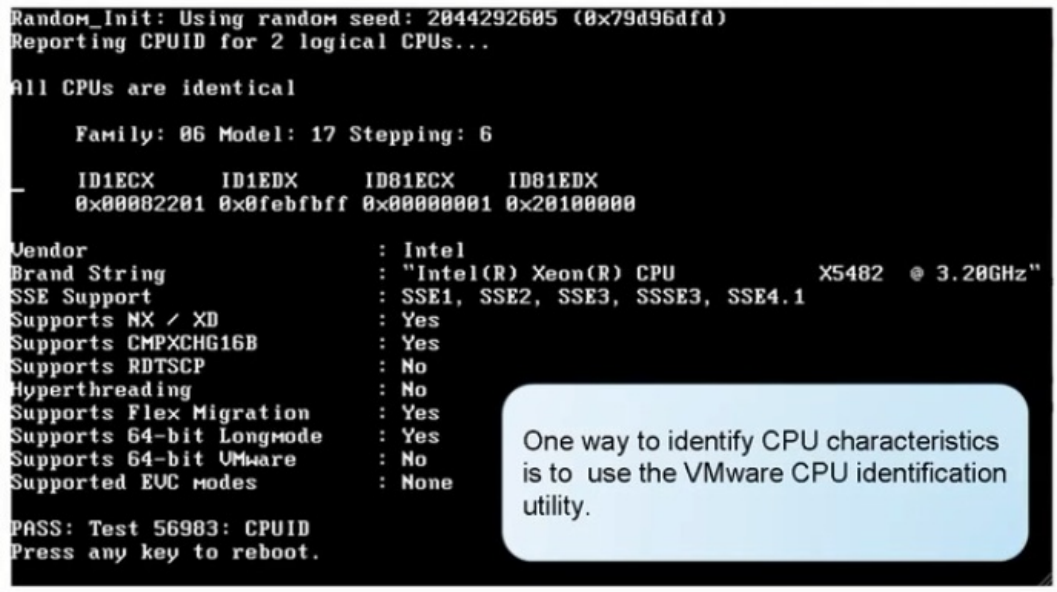
vMotion

virtual machine can move from one physical server to another while it's running without any downtime to end users. (running virtual machine moves from one host to another)

1. vMotion Requirements

- virtual machine must not have a connection to a virtual device such as a CD-ROM with a logical image mounted. if they are connected to a host, that will block the Motion migration. solution- store those devices in a shared data store.
- need to makesure to have storage between ESXi servers- iSCSI, CF, NFS (shared storage) so the both hosts can see the vm files from the shared storage.
- each host must have the Gigabit Ethernet network connection.
- host must be plugged into the same physical network.
- vMotion works with standard switches or destributed virtual switches.
- should have CPU compatibility. otherwise we can't do the migration. following is happen when there is no CPU compatibility. it says that the vMotion is blocking because, there is a CD-ROM is attatched to the data store that is not accessible to the host.





2. Benefits of vMotion.

- Automatically optimize and allocate entire pools of resources.

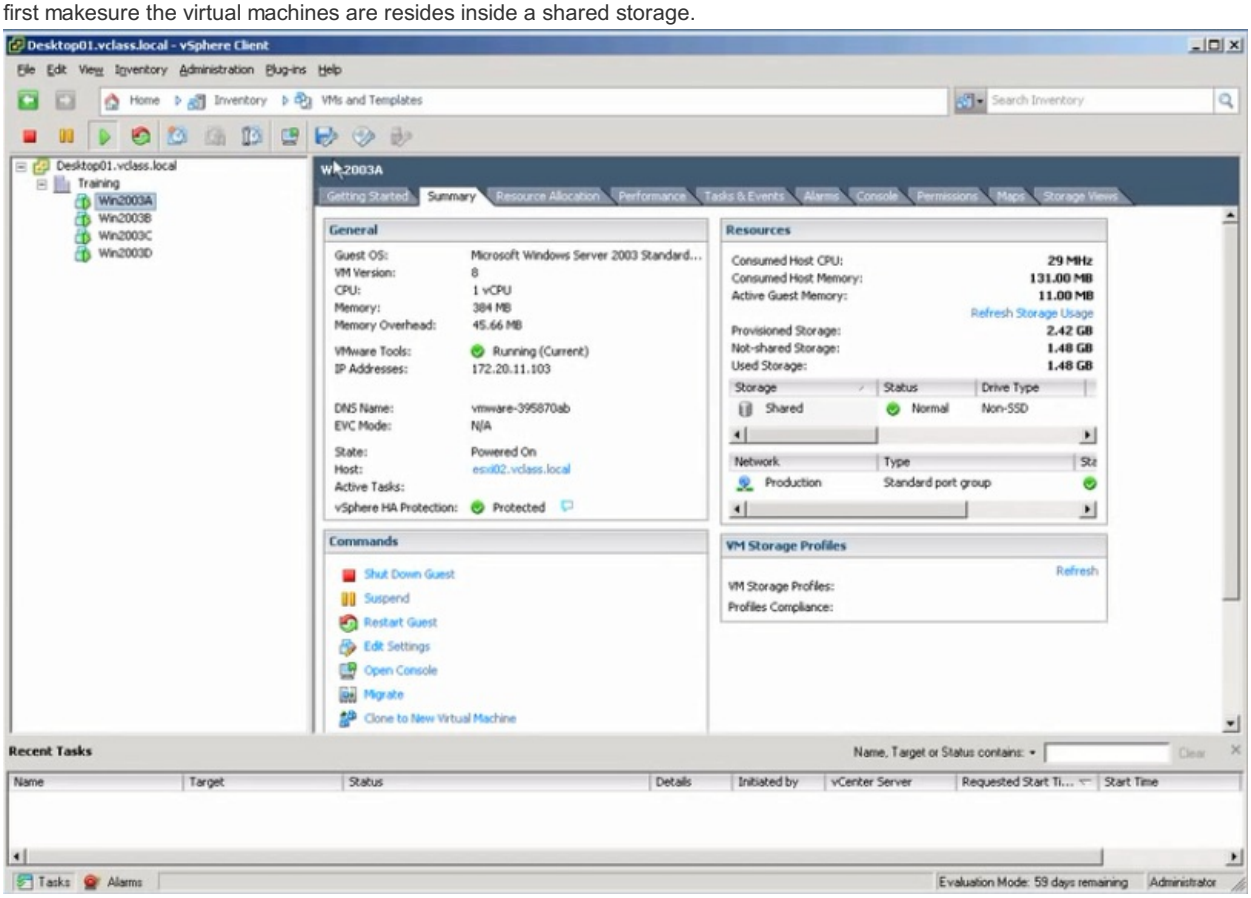
By having all your server and/or desktops virtualized you can move VM's from one physical host to another, which is done rapidly over a high speed network connection, the original host and destination host stay in sync until the transfer it complete leaving the user unaware of the move. This allows network administrators to easily select resource pools to assign to the different VMs.

- minimize the scheduled downtime.

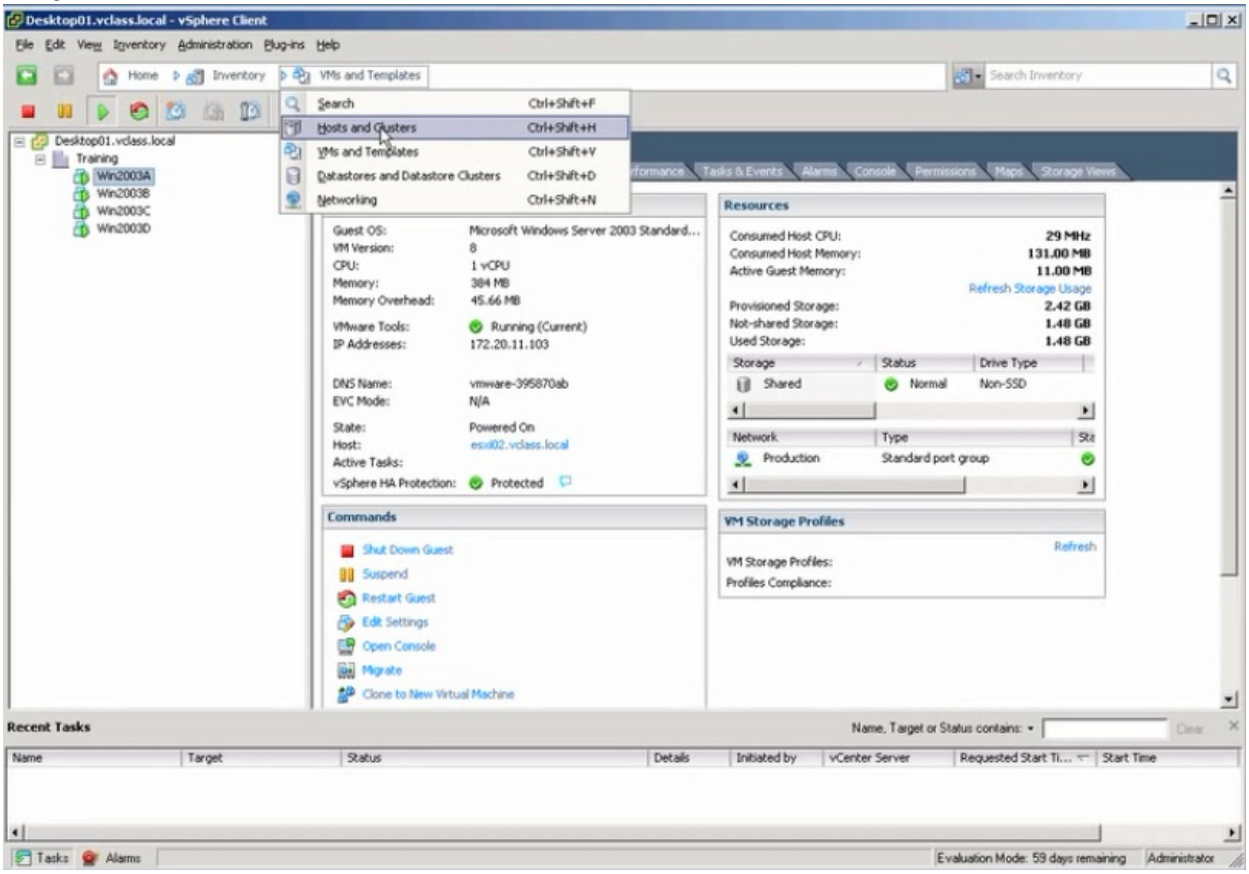
only have to move the VM to another physical host, creating zero downtime for the users and allowing administrators to perform maintenance at any time.

3. How to configure hosts to do the vMotion.

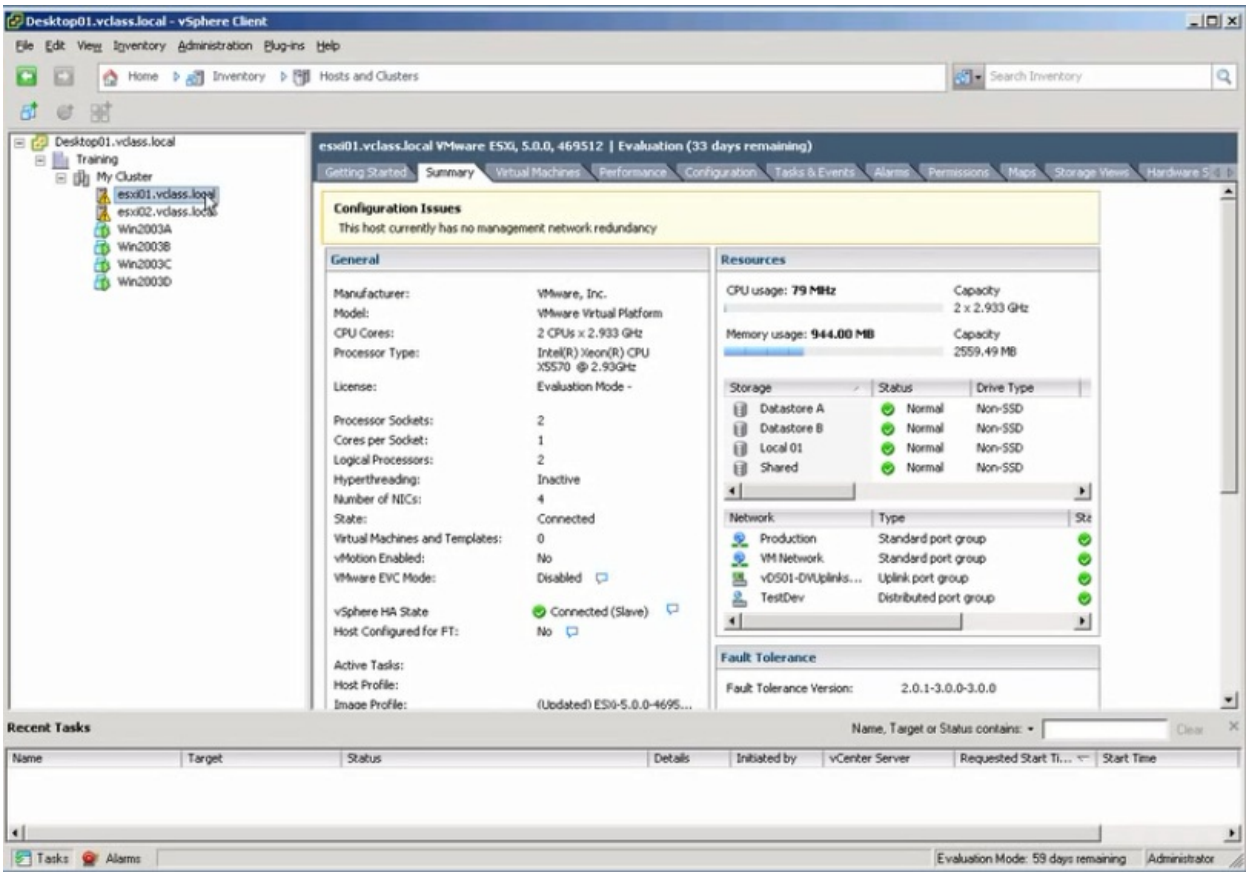
first makesure the virtual machines are resides inside a shared storage.



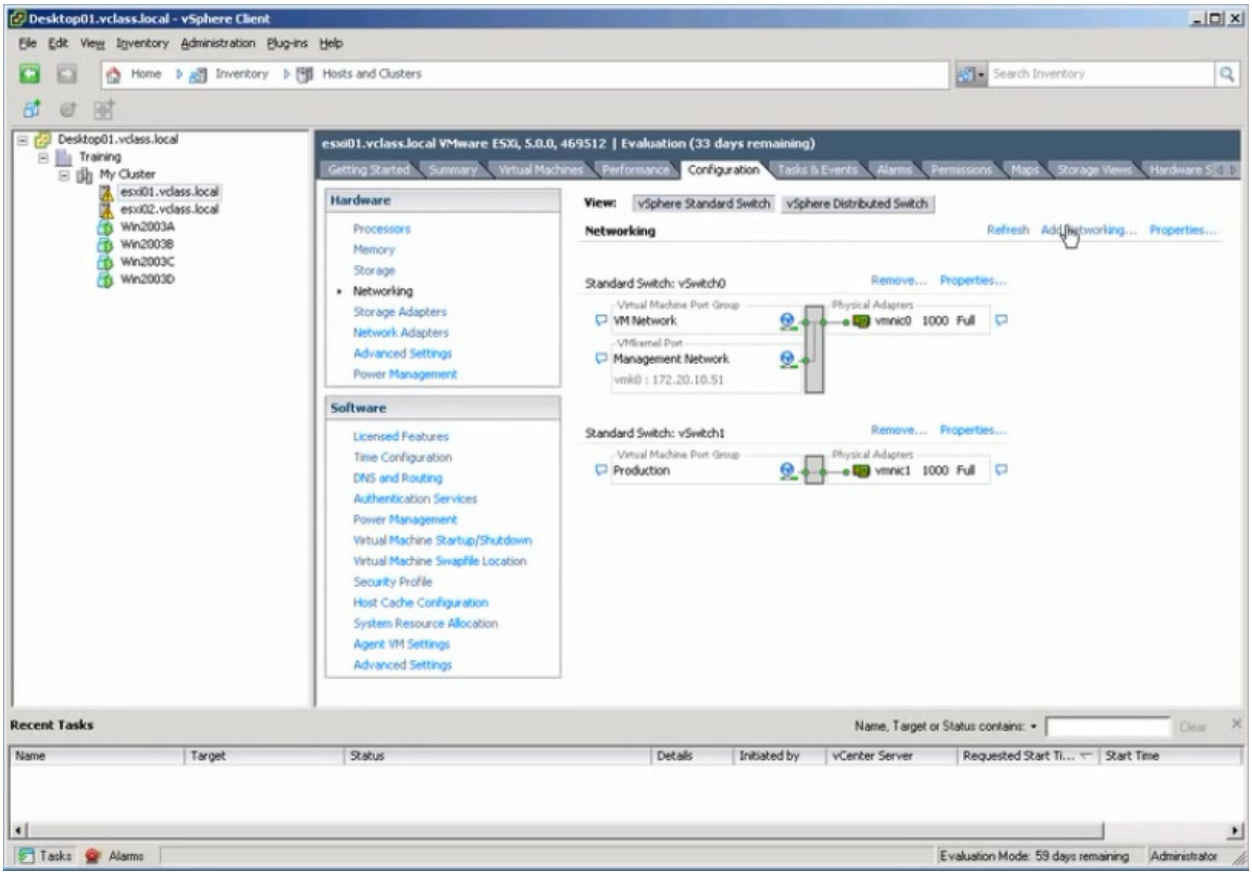
change VMs to the **hosts and clusters**.



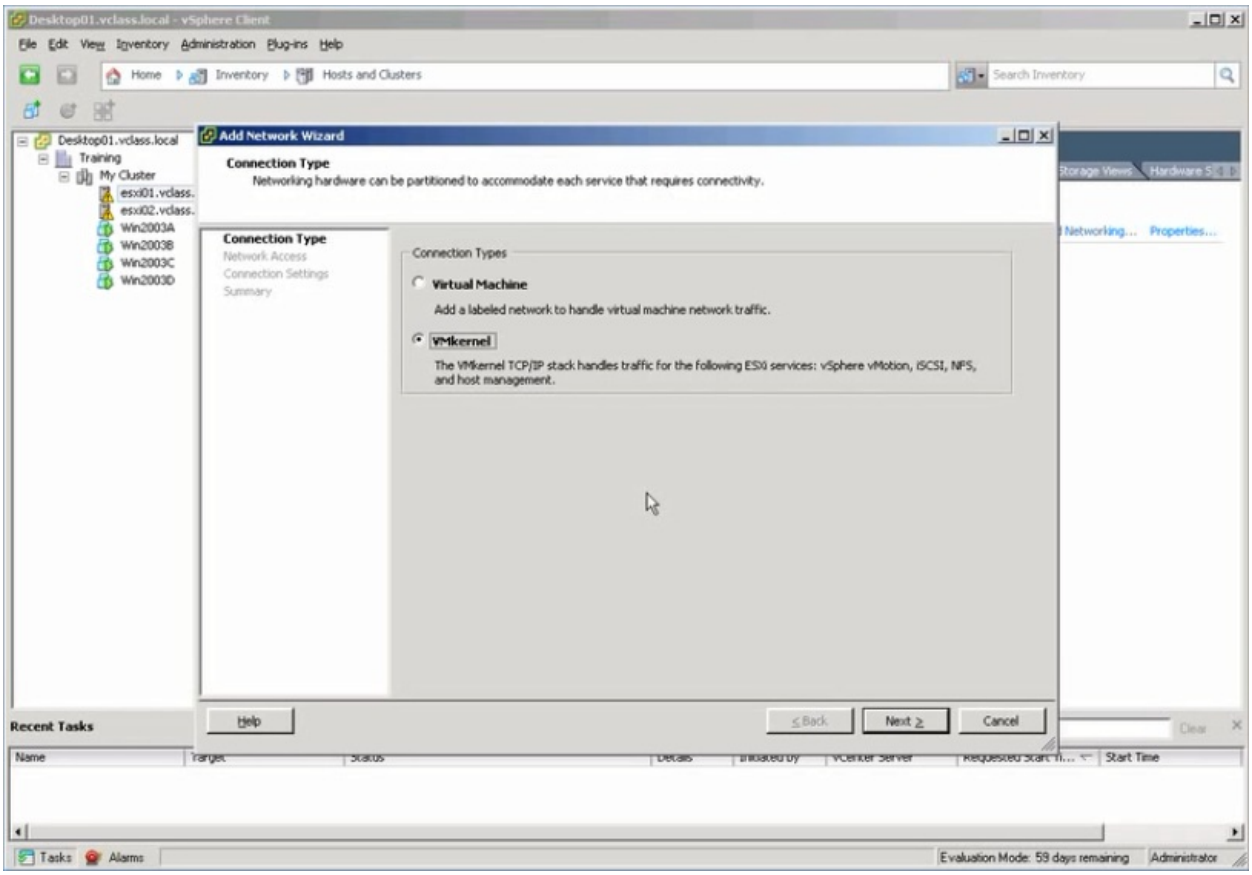
then create VM kernal port on each host.
select the **1st ESXi host** and go to the **configuration tab** --> **networking**.



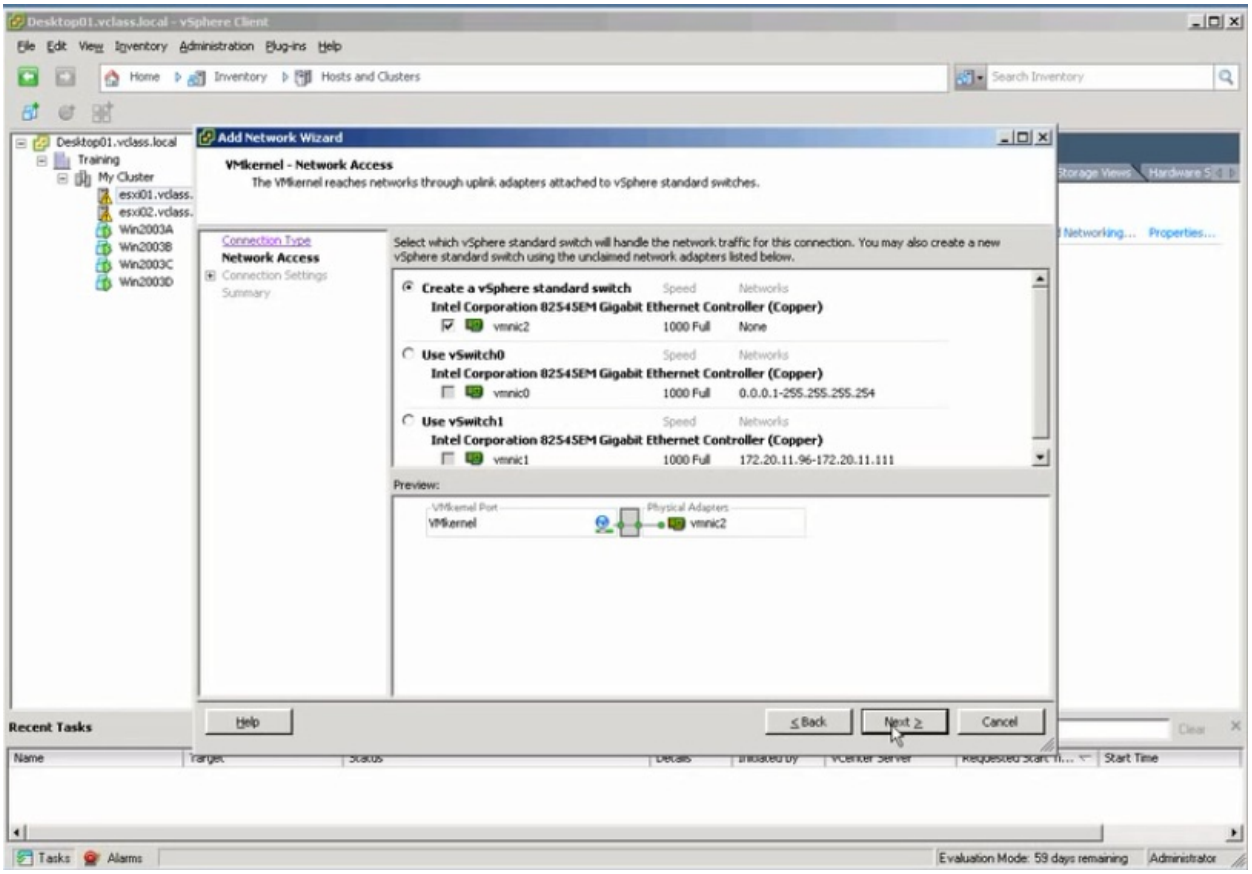
then select **Add networking**.



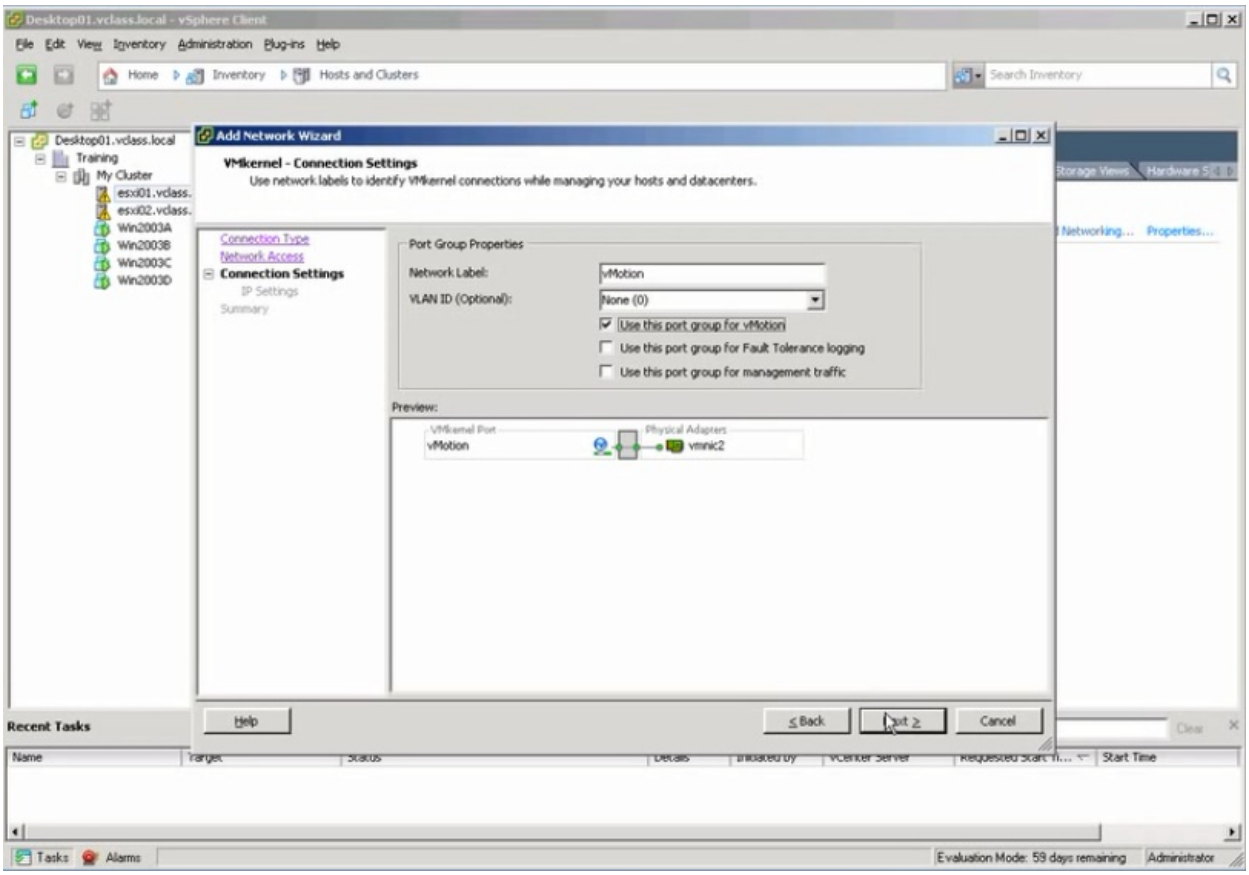
select the **VMkernal** and go **next**.



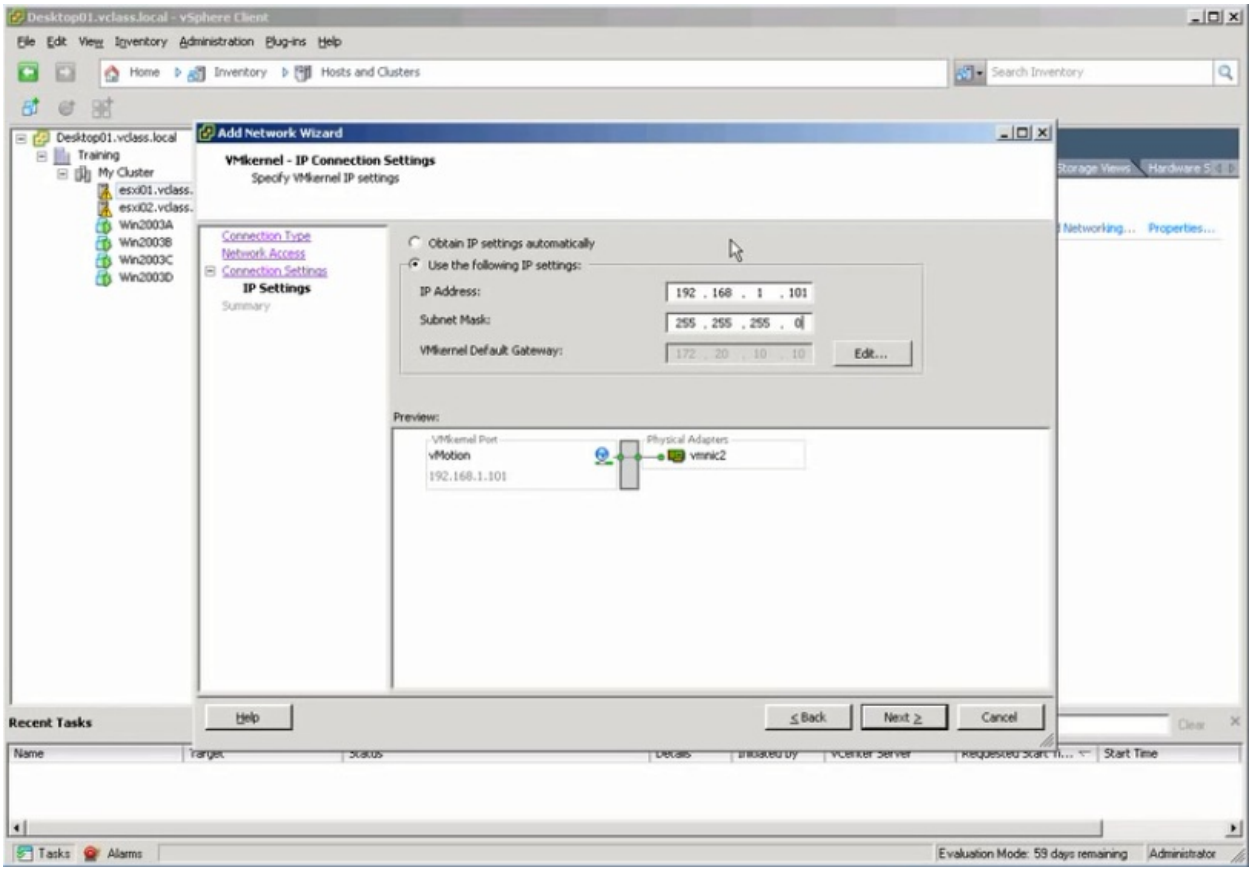
specify which physical network the vMotion traffic will be transmitted through.



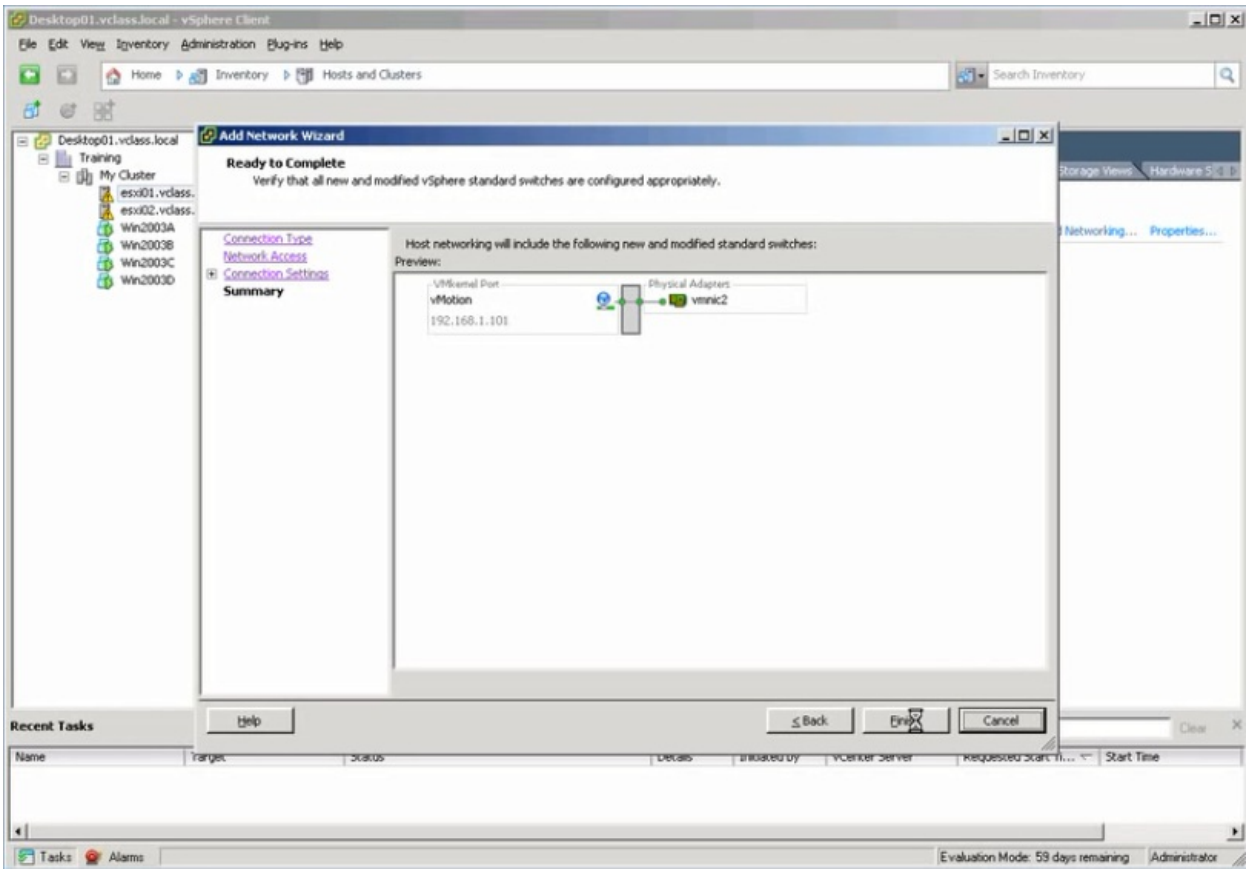
Then click **next**.



tick the **use the port group for vMotion** and click **next**.

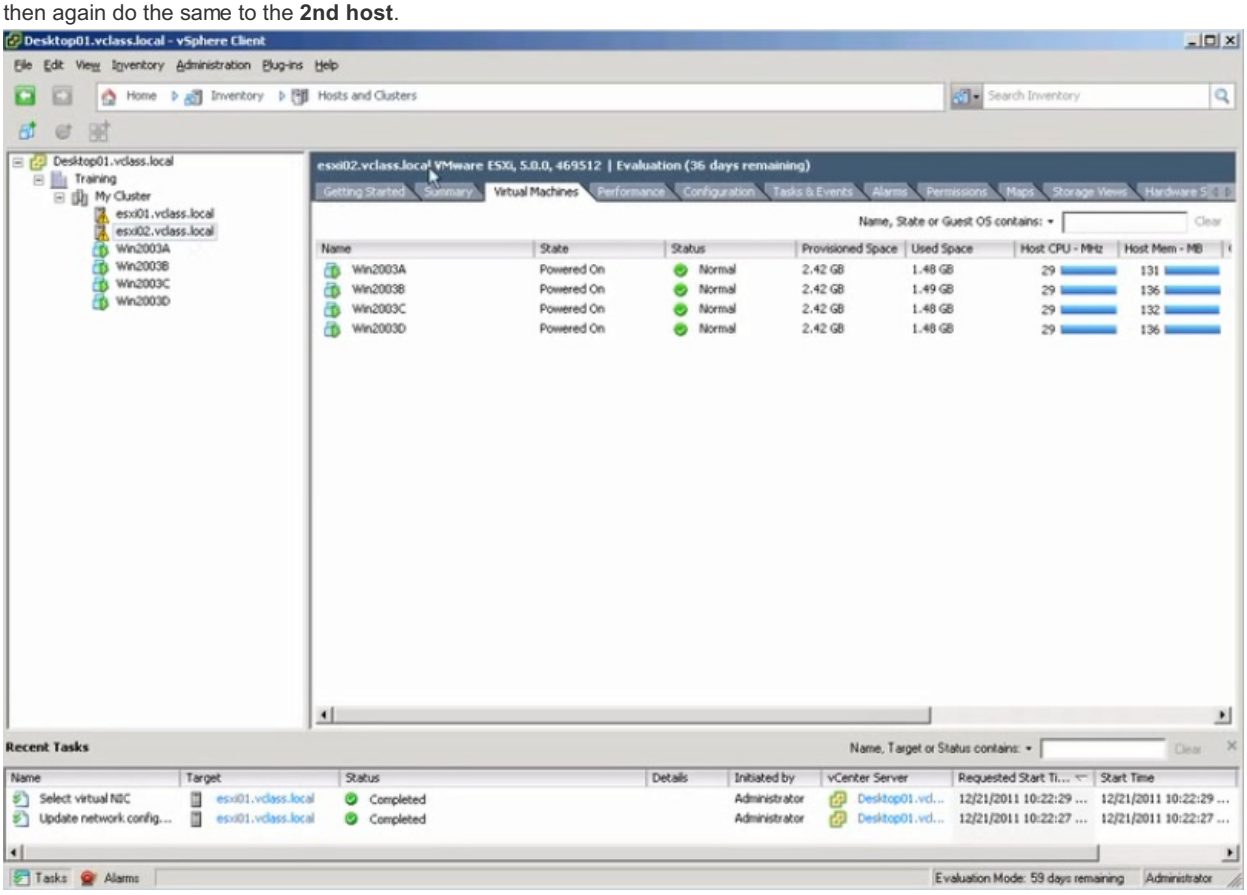


specify the **ip address** (198.168.1.101)and the **subnet mask**. and then click **next**.

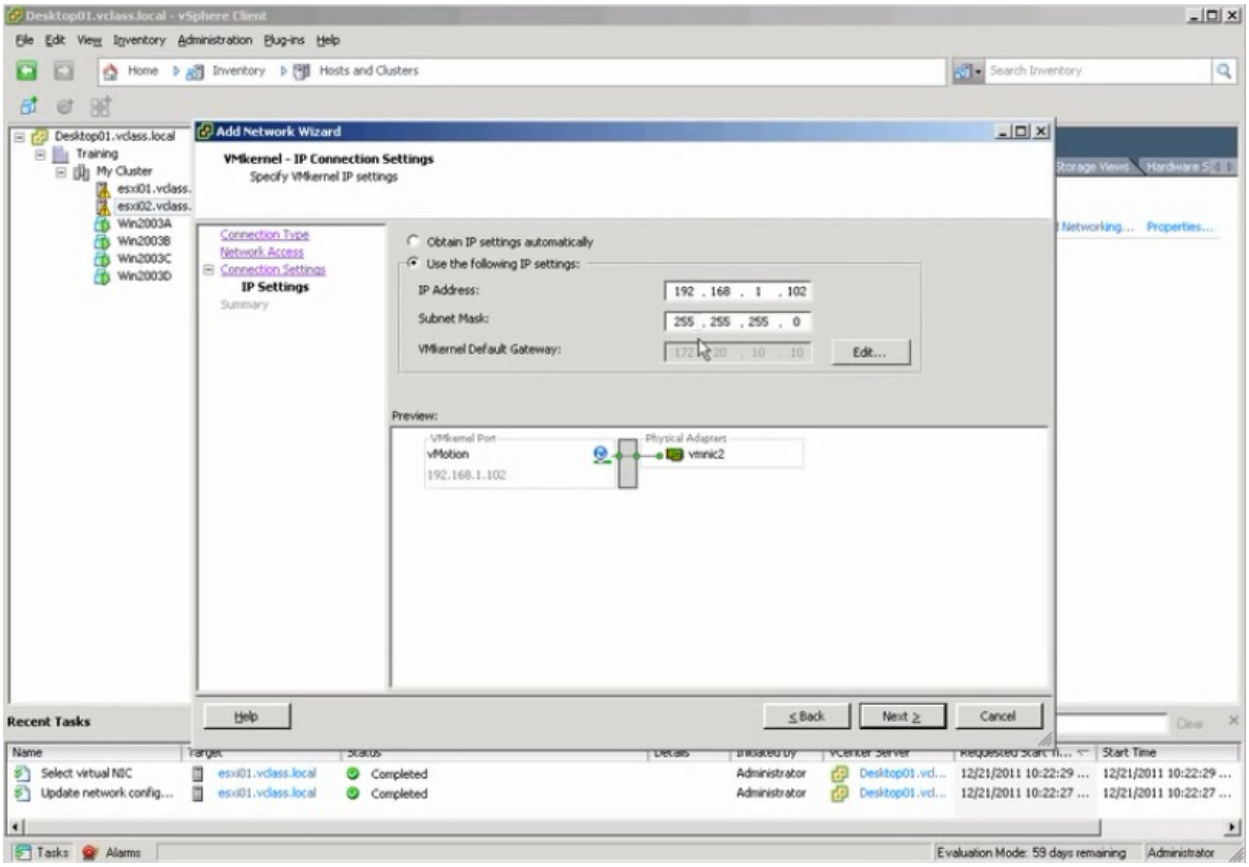


then click **finish**.

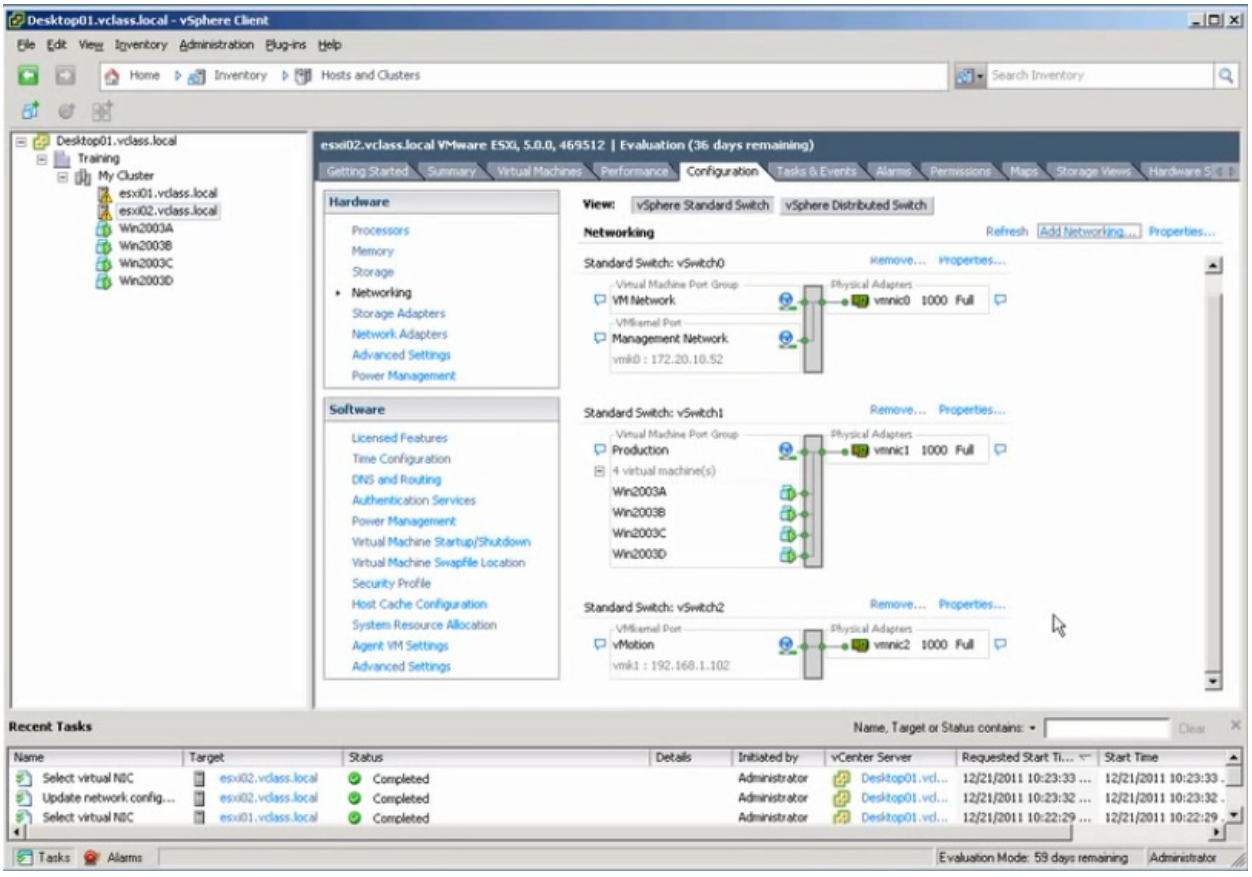
then again do the same to the **2nd host**.



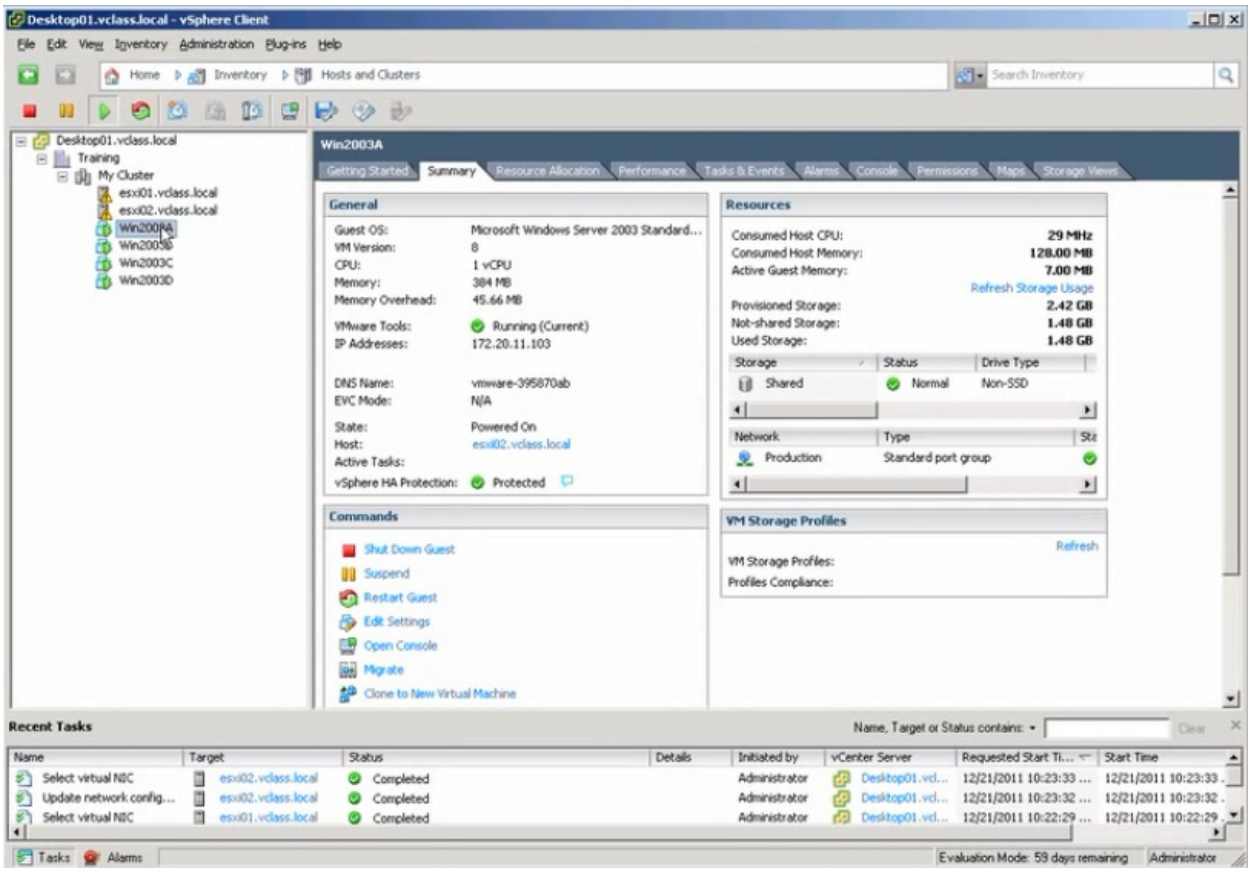
give the ip as 198.168.1.102



the created virtual switch below for the 2nd host.

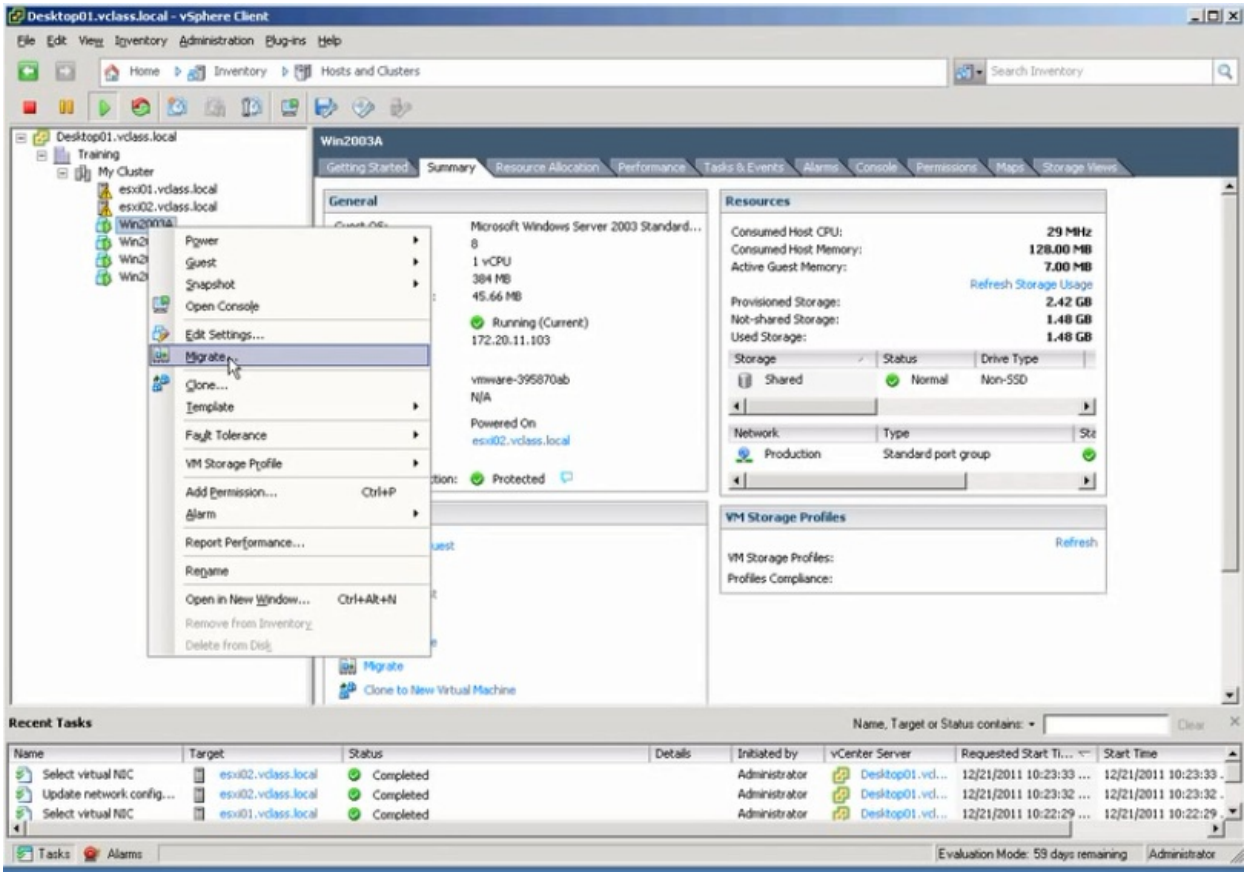


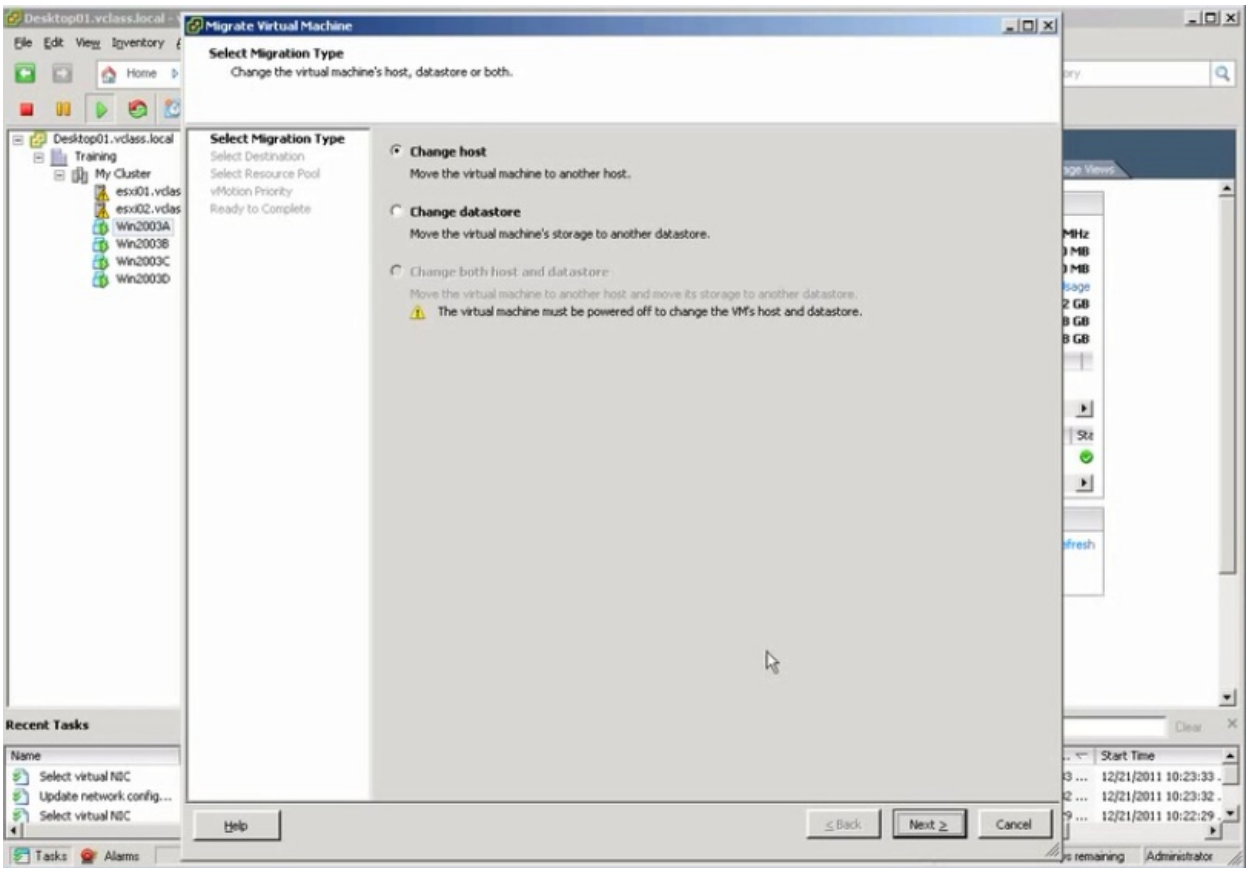
after configuring the 2 hosts we can migrate one virtual machine to another. first pick a virtual machine, which wants to migrate.



this particular virtual machine is currently running on the host 2. and migrate this virtual machine to host 1.

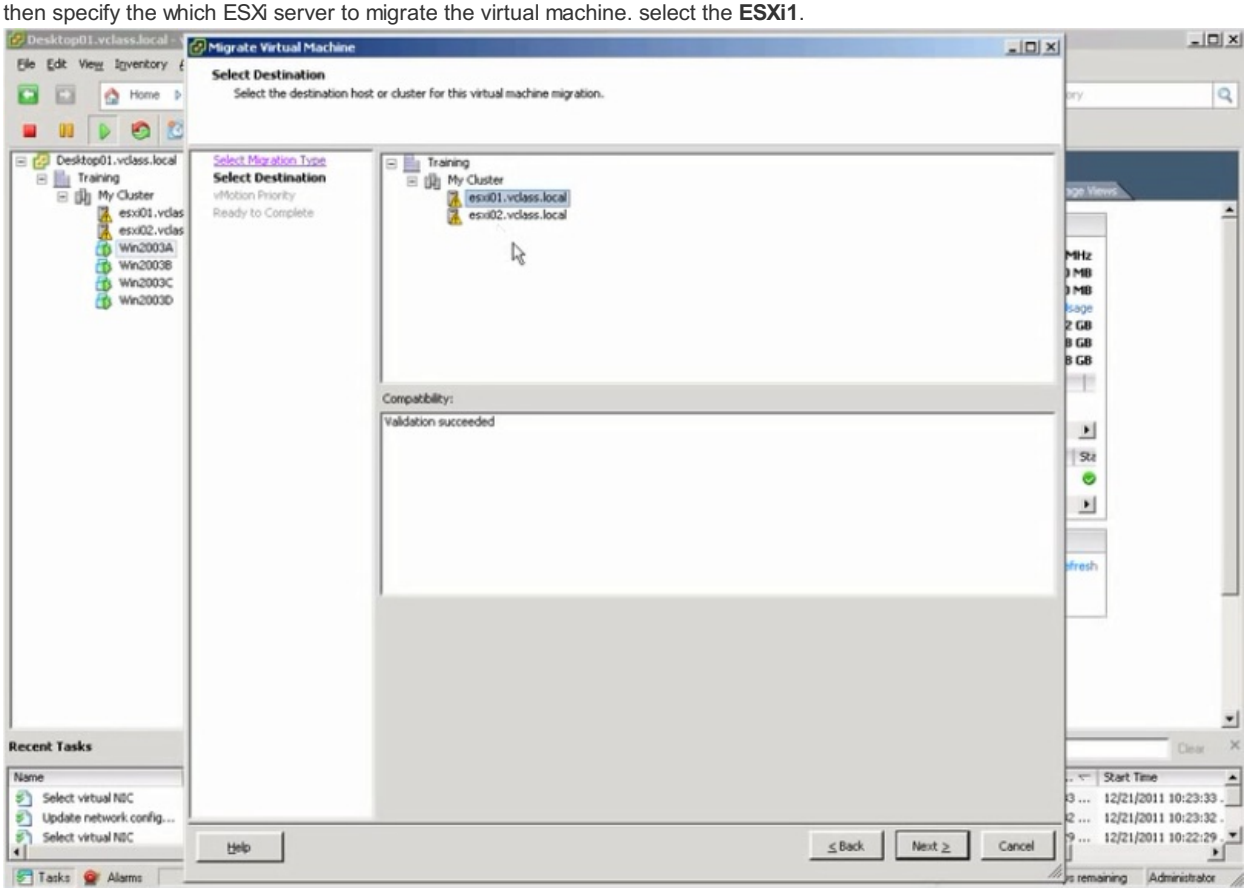
right click on the virtual machine and click **migrate**.



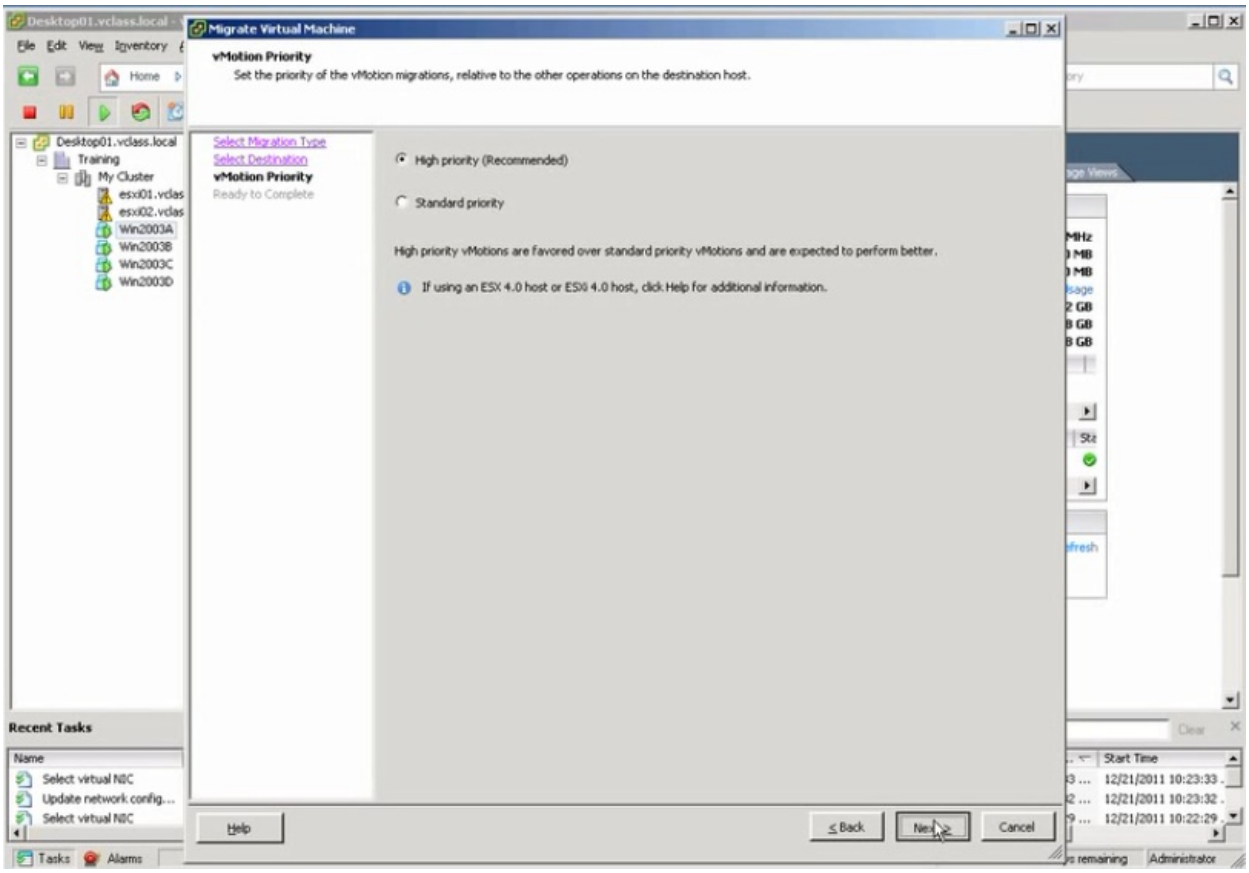


click **next**.

then specify the which ESXi server to migrate the virtual machine. select the **ESXi1**.

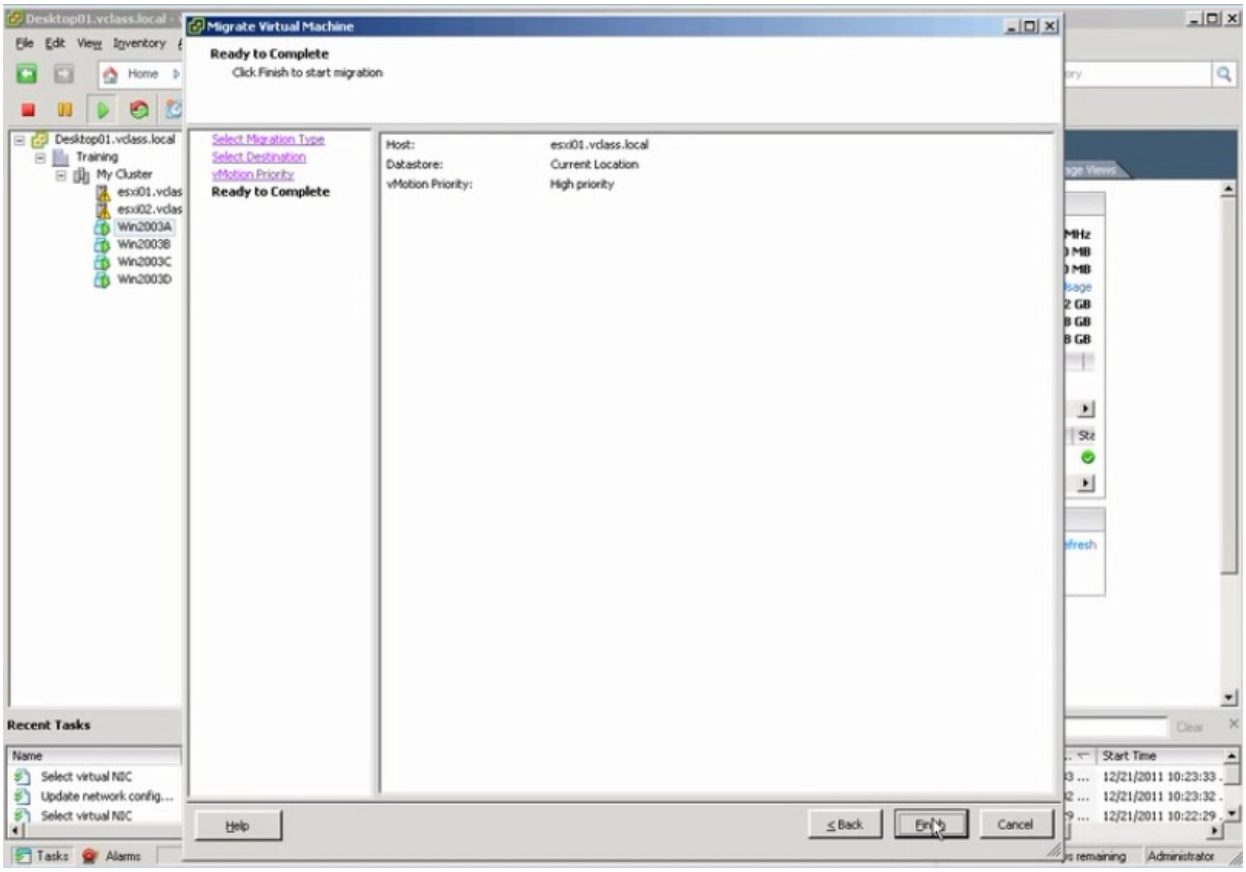


in compatibility there are no issues at the moment. and then click **next**.



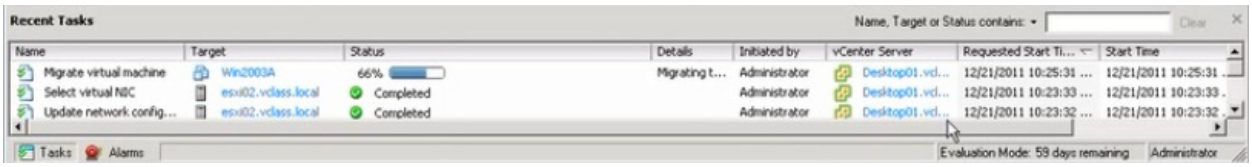
tick the **high priority**. and click **next**.

the summary report.



then click **finish**.

after that the **migration** begin as the following.



when we look at the **summary tab**, the virtual machine is now running on the **ESXi2** server.