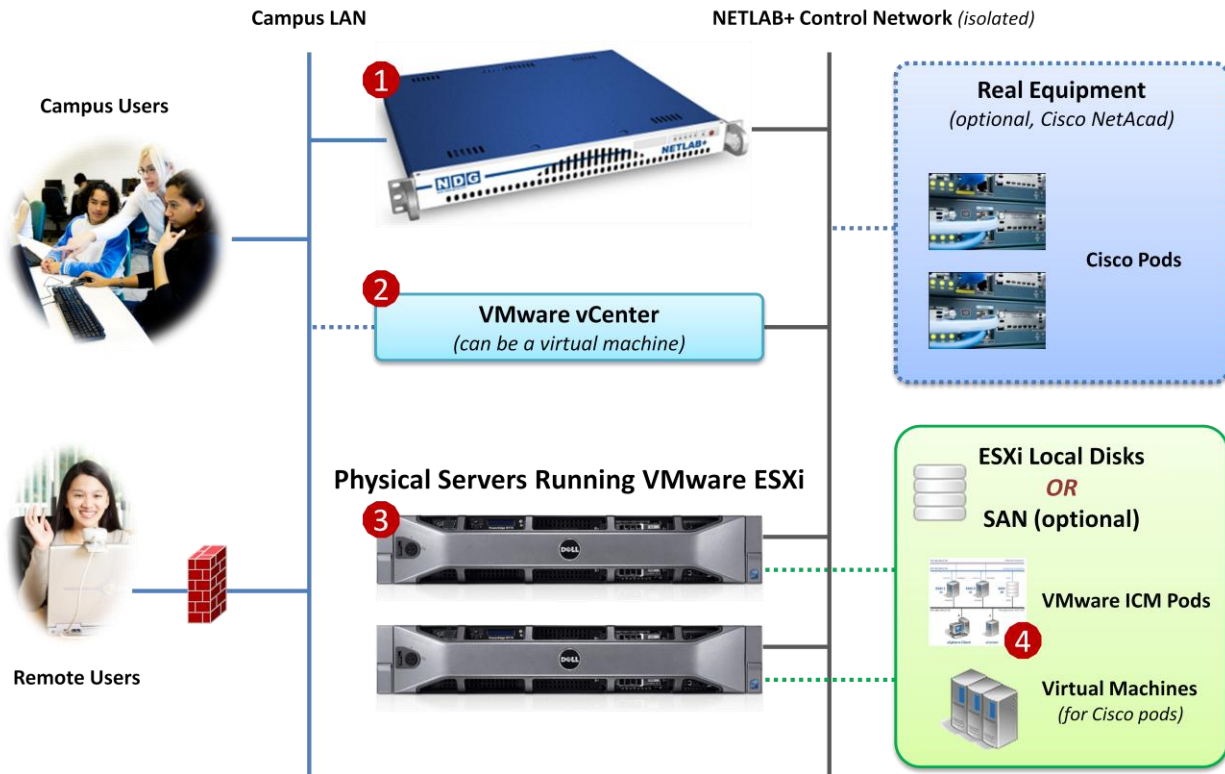


Equipment Needed to Setup NETLAB+ for the VMware IT Academy Program[®]

The four major components that make up the NETLAB+ training environment for the VMware IT Academy Program, Install Configure, Manage (ICM) course are shown in the diagram below:



Component Details

1. The NETLAB+ server provides the user interface for student and instructor access, an interface to manage virtual machines, and software features to automate ICM pod creation.
2. VMware vCenter is used to manage your physical VMware ESXi servers, to create virtual machines, and to take snapshots of virtual machines. NETLAB+ communicates with vCenter to perform automated tasks and virtual machine management. vCenter can reside on a physical machine.
3. Physical VMware ESXi servers host the virtual machines in your ICM pods. The two host servers depicted can run up to 16 active ICM pods.
4. ICM pods consist of 5 virtual machines that reside on your physical ESXi host server disks.

Virtual Machine Host Server Specifications

Please review the current recommended specifications for ESXi host servers used to host virtual machines in NETLAB+ pods. The latest information is available on the NDG Website:

http://www.netdevgroup.com/support/remote_pc.html#vm_host_server_specifications

Server Specifications for Hosting NETLAB+ Pod Virtual Machines

The following table shows the current recommended specifications for ESXi host servers used to host virtual machines in NETLAB+ pods.

Please check the [VMware Compatibility Guide](#) to verify that all server hardware components are compatible with the version of VMware ESXi that you wish to use.

Specification Last Updated: December 7, 2012

Please note that the Dell PERC H200 RAID controller for the Dell R710 is no longer recommended due to poor performance under load. Currently, we recommend using Dell PERC H700 controllers for the Dell R710.

Comments	Recommended Minimum / Preferred: Dell R710	Recommended Minimum / Preferred: Dell R720
Server Model	Dell R710	Dell R720
Operating System	Specify HD operating system on order.	Specify HD operating system on order.
Hypervisor (Installed by you)	VMware ESXi 4.1 LT	VMware ESXi 4.1 LT
Physical CPU	Two (2) x Intel Xeon E5500 Quad Core @ 2.4GHz	Two (2) x Intel Xeon E5-2650 Six Core @ 2.95GHz
Hardware Assisted Virtualization Support	Intel VT	Intel VT and Intel QPT
RAM (CPU)	12 GB DDR3	12 GB DDR3
Network	2 x 1GbE	2 x 1GbE
Storage	<p>Management Server: ECC or higher recommended. Data (Virtual only): ECC or higher recommended.</p> <p>Use 15GB quad-ranked DIMMs for maximum expansion. (Penguin part number: HTD-P8210-15G)</p> <p>Recommended VMDisk configurations for Dell R710:</p> <p>3.5TB Internal Direct Attached Storage Option</p> <ul style="list-style-type: none"> HT00 RAID Controller, 2GB Cache RAID 5 2 x 1TB, 3.5 SATA, 7200 RPM, 3.0GB/s Western Digital R4 WD1002FBYX Recommended 1 VMware VMDisk Database <p>3.5TB Internal Direct Attached Storage Option</p> <ul style="list-style-type: none"> HT00 RAID Controller, 2GB Cache RAID 5 2 x 2TB, 3.5 SATA, 7200RPM, 3.0GB/s Western Digital R4 WD1002FBYX Recommended 2 VMware VMDisk Database <p>Please review the RAID controller section for important performance information.</p> <p>Dell PERC H700 Controllers with 2GB cache are recommended.</p> <p>Dell PERC H200 Controllers are NOT recommended.</p>	<p>Management Server: ECC or higher recommended. Data (Virtual only): ECC or higher recommended.</p> <p>Use 15GB DIMMs for maximum expansion. (Penguin part number: HTD-P8210-15G)</p> <p>Ex 3.5TB</p> <p>3.5TB Internal Direct Attached Storage Option</p> <ul style="list-style-type: none"> HT00 RAID Controller, 2GB Cache RAID 5 4 x 1TB, 3.5 SATA, 7200 RPM, 3.0GB/s Western Digital R4 WD1002FBYX Recommended 1 VMware VMDisk Database <p>3.5TB Internal Direct Attached Storage Option</p> <ul style="list-style-type: none"> HT00 RAID Controller, 2GB Cache RAID 5 4 x 2TB, 3.5 SATA, 7200RPM, 3.0GB/s Western Digital R4 WD1002FBYX Recommended 2 VMware VMDisk Database
NIC	Dual Top-Rear SFP-based Broadcom NetXtreme E 5703 GbE SFP Ethernet	Broadcom 5703 GP 1Gb Network Daughter Card
Power Card	Power with 2 PDCs or 4 PDCs or 8 SAs	Power with 8 PDCs or 4 PDCs or 8 SAs
BIOS Setting	Performance BIOS Setting	Performance BIOS Setting
Power Supply	High Output Power Supply, Redundant, 870W	Dual Hot-Swap, Redundant Power Supply (1+1), 750W
Embedded Management	iDRAC Express	iDRAC7 Express
Optical Drive	DVD ROM, SATA, Internal	DVD ROM, SATA, Internal

To see the latest specs, click the URL above.