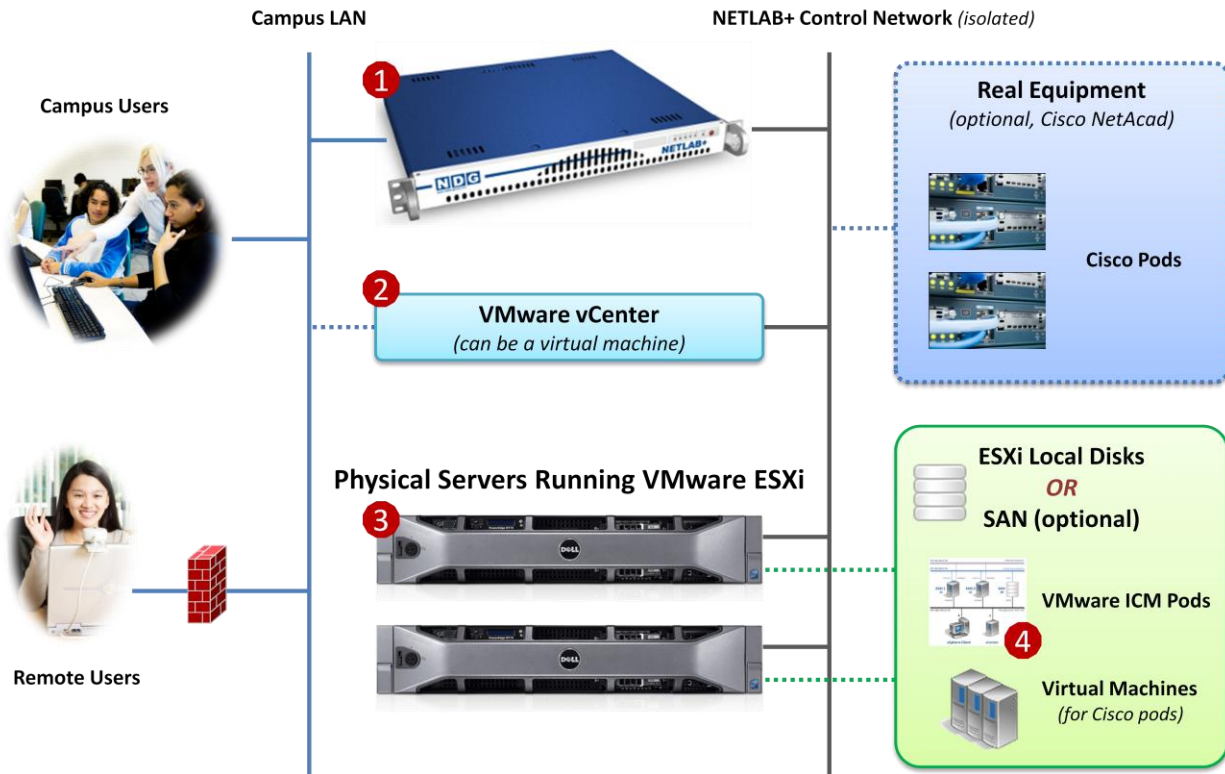


Equipment Needed to Setup NETLAB+ for the VMware IT Academy Program[®]

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

NDG recommends the following server hardware specifications. Specifications are subject to change. For additional details and to view the most current information available, please refer to: <http://www.netdevgroup.com/content/vmita/requirements/>.

Components	Recommended Minimum / Features
Server Model	Dell R710
Physical CPUs	Two (2) x Intel Xeon E5620 Quad Core @ 2.4GHz ^{1, 2}
Hardware Assisted Virtualization Support	Intel-VT ³
Total CPU Cores/Threads	8 cores, 16 threads
Total System Memory	72 GB (use 8 GB sticks)
Hard Drive Bay Configuration	6 x 3.5"
Hard Drives	1TB 3.5" 7200 RPM SATA (up to 6)
Storage Configuration	Up to 3TB in RAID1 configurations
	Option 1: 1TB = 1 x RAID1, 2 Drives, 1 VMFS Datastore
	Option 2: 2TB = 2 x RAID1, 4 Drives, 2 VMFS Datastores
	Option 3: 3TB = 3 x RAID1, 6 Drives, 3 VMFS Datastores
RAID Controller	PERC 6/i SAS RAID Controller
Power supplies	2 x 870W

¹ Minimum recommended processor is Intel E5620 @ 2.4Ghz (4 cores, 8 threads per CPU). VMware ICM pods have not been tested on AMD based systems by NDG.

² Two (2) physical CPUs per server (i.e. dual-socket) are required for VMware ICM pod support (8 cores, 16 threads per host).

³ 64-bit processors with hardware assisted virtualization (Intel-VT or AMD-V) are required for good virtual machine performance.

⁴ 72GB memory per host is the minimum memory required to support the VMware IT Academy vSphere ICM Install, Configure, Manage course, version 4.1, using NDG's standard ICM pod design. Support of vSphere ICM Install Configure, Manage version 5.0 is planned, but may require more memory (specifications to be determined). Although 72GB can be achieved using 18 x 4GB memory sticks in the R710, this will leave no room for expansion (likely with ICM 5.0). Therefore, we are recommending 8GB memory sticks at this time.