



Virtualization: What It Is All About And Advantages To Education

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Agenda

- Introduction
- Introduction To Virtualization eLearning Module
- Why Virtualization Is Important
- VMware's Education Programs, Value Proposition & Benefits
- VMware Academy Program, Offerings & Eligibility
- Program Costs
- Program Success Metrics
- Proof of Concept
- Support
- Questions

Why Virtualization Is Important

- Current Economy
- Reduces Capital Expenses
- Reduces Operational Expenses
- Promotes Green IT
- Enables “Cloud” Computing
- Demand for VMware Certified Professionals
- Foothill College 1st Class Full With 30 Students with 12 Waitlisted
- Georgia Southern University 1st Class Is Full 23 Students

Open & Inclusive Collaborative Programs

- **VMware Academic Program**
- **GoVirtual.org**
- **VMware Academy Program**

Value Proposition & Goals

➤ Value Proposition

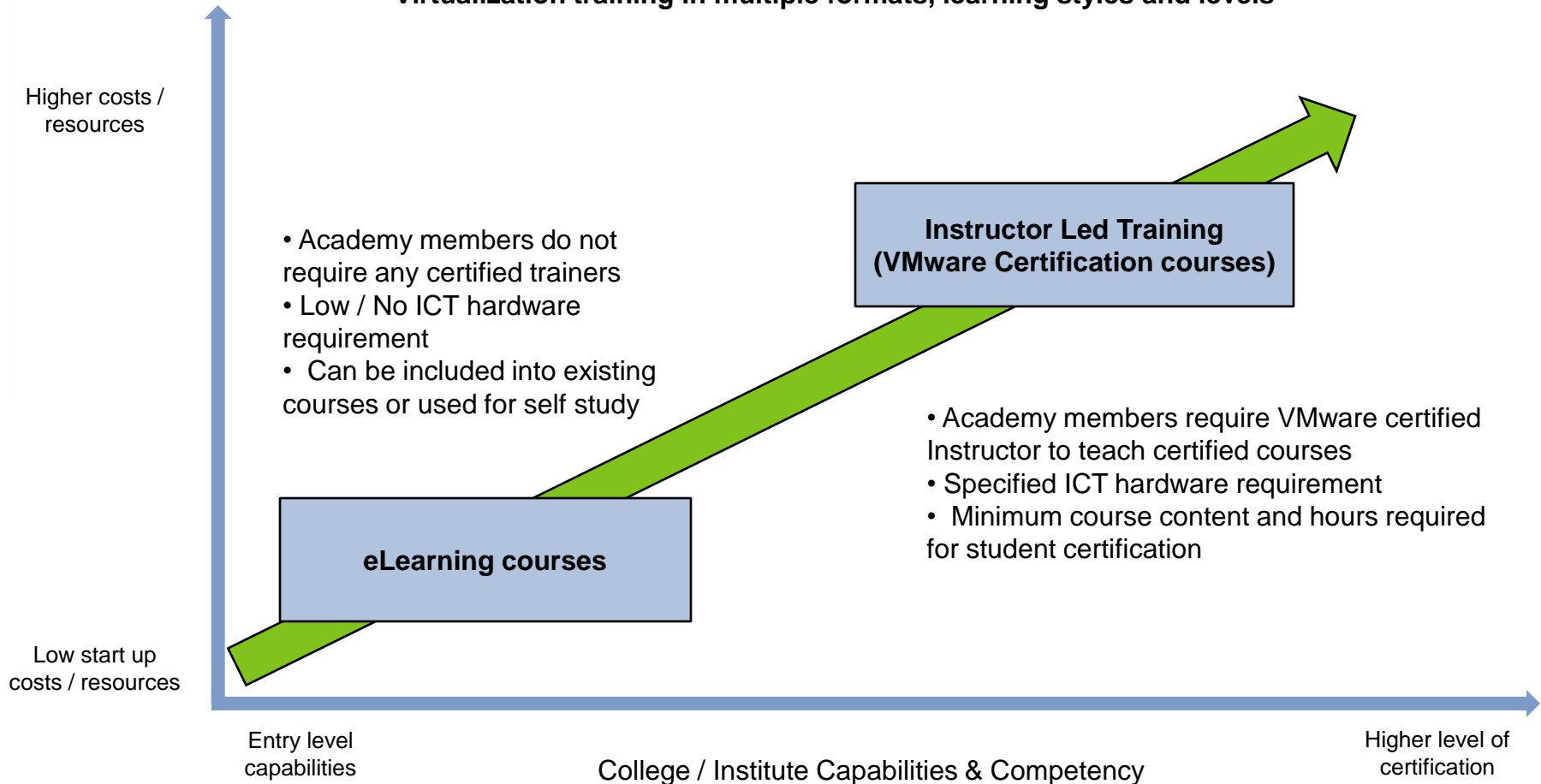
- Schools – Use of Industry Leading Intellectual Property
- Students – Affordable Access To Training & Professional Certification
- VMware – Proliferation Of Virtualization Competencies

➤ Goals & Objectives

- Drive Collaboration Between Schools & Between Students With Communities
- Maximize Awareness and Competencies on Virtualization Products and Technologies
- Supply the IT industry a pool of VMware Certified Professionals (VCP)

VMware Academy Program – two levels

VMware has designed a flexible program to allow colleges to provide Virtualization training in multiple formats, learning styles and levels



Instructor Led Courses:

- VMware Infrastructure 3: Install & Configure V3.5
- VMware Infrastructure 3: Deploy, Secure & Analyze V3.5
- VMware Infrastructure 3: Tour V3.5
- VMware Infrastructure 3: Skills for Operators V3.5
- VMware Workstation 6.5: Mastery

eLearning courses:

- VMware ESXi: Administration
- VMware Lifecycle Manager: Fundamentals
- VMware Infrastructure 3: What's New v3.5
- VMware Workstation 6: Mastery
- VMware ACE 2.0 Quick Start Guide

Note: *The eLearning courses currently do not qualify faculty or students to take the VCP exam.*

Eligibility for VMware Academy Program

- VMware Academy program open to Accredited, degree & diploma granting higher education institutions worldwide offering 2- or 4- year college programs are eligible to participate in the program
- Technical schools offering accredited degrees through distance education programs are also eligible to participate in the program
- No minimum course enrollment commitment (i.e. Academy members can scale classes as the markets and opportunity demand)

Program Costs

- No cost to Join. A simple registration form submitted for approval.
- Student course kits purchased directly from VMware's print vendor to leverage VMware's price point based on quantity & scale. Student kits are expected to cost approximately \$50 USD including tax & shipping.
- Academy partners can purchase certification vouchers directly from VMware's certification testing delivery partner (Pearson VUE) at a discounted rate of 70% off commercial cost.
- Academy partners receive eLearning courses to use at "No Charge" to supplement instructor led courses or for reference for any courses desired.

**Note: eLearning courses do not satisfy the prerequisite for the VMware VCP Certification.
The cost of printing, shipping and taxes will vary by region as will the cost of certification test delivery.**

VMware Academy - Support

- Administrative Support:
 - Program Manager
 - Operations
 - myLearn LMS for Class, Student, Certification Vouchers & Evaluations
- Technical Support - VMware Forum:
 - <http://communities.vmware.com>
 - Mentoring via WebEx with Playback
- Course Materials – Gilmore – Dedicated School Storefront
- Certification – Pearson VUE – Redeemable Discount Vouchers
- Hardware – IBM, Dell & HP **

Note: VMware Academy Program Office is working with our hardware vendors to obtain most favored pricing

VMware Program Success Metrics

- # of students participating over time
- # of students completing certifications over time
- Quality Ratings \geq Commercial Scores as measured by student feedback scores
- Academy members and student direct program feedback

VMware will measure academy program members success using the metrics above. These inputs will be used to determine further program enhancements and future program direction

VMware Instructor Led Training Pilot

- 6 - 12 Schools Representing WW Geographies
- Time Period: 2008/2009 School Year
- Courses: I&C & DSA + eLearning
- Objectives Of The Pilot – Test The Following:
 - Contract and Approval Process
 - Viability of Commercial Content with Academic Calendar
 - Instructor Certification and Readiness
 - Gilmore and Pearson VUE's Processes and Fulfillment
 - Program and Operation Guides
 - Support via Forum and Mentoring via WebEx

Schools Participating In Academy Pilot

- **Foothill College, California**
- **Honolulu Community College, Hawaii**
- **Georgia Southern University, Georgia**
- **Caldwell Community College, North Carolina**
- **Tidewater Community College, Virginia**
- **triOS College, Canada**
- **Mohawk College, Canada**
- **TAFE NSW at Ultimo College, Australia**
- **Delaware Technical & Community College, Delaware**
- **Syracuse University, New York**
- **University of Colorado at Boulder**
- **SUPINFO, Institute of Information Technology, Paris, France**

Target Milestones

- eLearning General Availability – Q1 2009
- Instructor Led Training Pilot – Now Through Q2 2009
- Instructor Led Training General Availability – Q3 2009



Questions

Additional Information

Additional Information - Agenda

- ILT Equipment requirements overview
- VMware Certified Instructor requirements
- Pearson VUE Testing Center Overview
- VMware Certified Professional (VCP) Overview

ILT Equipment Requirements – Server, Storage & Network Infrastructure

Server Requirements:

- A VMware certified x86 (Intel Xeon or AMD Opteron) based 64bit server with 2GB RAM or more (4 or 8 GB recommended), 36GB local disk storage (72GB or more recommended) & DVD ROM & access to Keyboard, mouse & monitor capabilities (see http://www.vmware.com/pdf/vi3_systems_guide.pdf & http://www.vmware.com/pdf/vi3_io_guide.pdf)
- A minimum of 3 x 1Gbit NIC interface cards (see supported NIC models http://www.vmware.com/pdf/vi3_io_guide.pdf)
- A minimum of 1 VMware supported Fibre Channel adapter per server (http://www.vmware.com/pdf/vi3_san_guide.pdf)

Storage Requirements:

- 1 x shared NAS device listed on the VMware SAN compatibility guide (see http://www.vmware.com/pdf/vi3_san_guide.pdf) or use of a customised NFS server
- 1 x Fibre Channel switch & Storage Area Network (on VMware certified device list – see http://www.vmware.com/pdf/vi3_san_guide.pdf) . This array must be capable of having a minimum of 3 dedicated LUNs (10GB each) for each server & 2 shared LUNs 100GB each for use by all servers.
- Sufficient Fibre Channel switches to connect the servers to the storage array.

ILT Equipment Requirements – Server, Storage & Network Infrastructure

Network Requirements:

- All student & server networking components should be 1 Gbps network connected and appropriate network isolation should be in place (i.e. ESX server management & training network separated from academy production network)
- NAS / IP Storage device should be connected to the ESX server management network
- Static IP address allocation scheme for specific components (4 per server recommended) & DHCP addressing capabilities to cater for up to 10 IP addresses per physical ESX host for virtual machines created during the class exercises)

Virtual Center Server Requirements:

- Sufficient hardware (virtual or physical) to run a Windows 2003 Virtual Machine per ESX server within the classroom environment. VMware recommends these Virtual Center servers be run as VMs on top of a common ESX host within the training environment.

ILT Equipment Requirements – Classroom Computers & Environment

Classroom Computer Requirements:

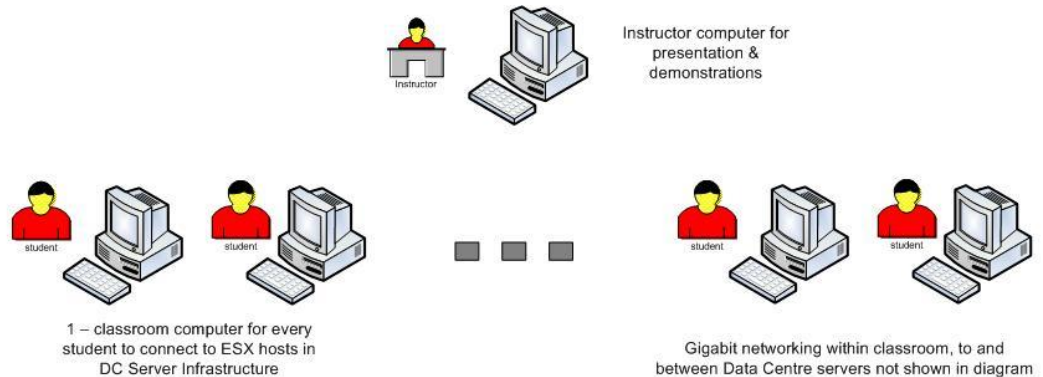
- Standard x86 PCs with Intel or AMD processors (500 Mhz or better recommended) capable of running Windows XP Pro or Windows Server 2003 with 512MB RAM or more recommended) with keyboard, mouse & monitor. Computers must be capable of running VMware Virtual Infrastructure Client (with .NET framework 1.1 or higher installed).
- Computers should be setup in as standard a manner as possible and allow access to external websites for students and instructors.
- Access to training environment can be provided by remote capability. For this VMware recommends use of VMware's secure Virtual Desktop Infrastructure capability through VMware View 3 capability.

Example ILT Infrastructure Requirements - Diagram

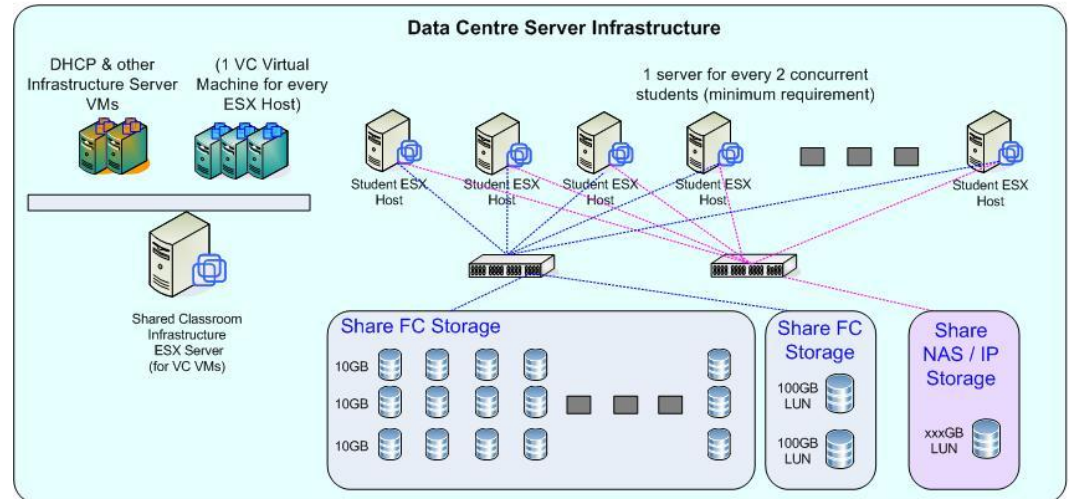
Academy Members are responsible for design and build of their own training environments and ensuring proper capabilities according to VAP agreement

Example Only:

This diagram is a pictorial example of the infrastructure setup required to run the ILT courses. Please refer to the detailed specifications and configurations found in VMware Academy Program agreement.



- Example Only:** For a class of 16 concurrent students, minimum recommendations are for:
- 8 – student ESX hosts
 - 1 - infrastructure ESX host
 - 1 – FC shared SAN
 - 1 – NAS shared storage
 - Appropriate network switches & connectivity
 - 16 – student classroom computers
 - 1 – instructor classroom computer



VCI - VMware Certified Instructor Requirements

For each certified course, a VCI needs to:

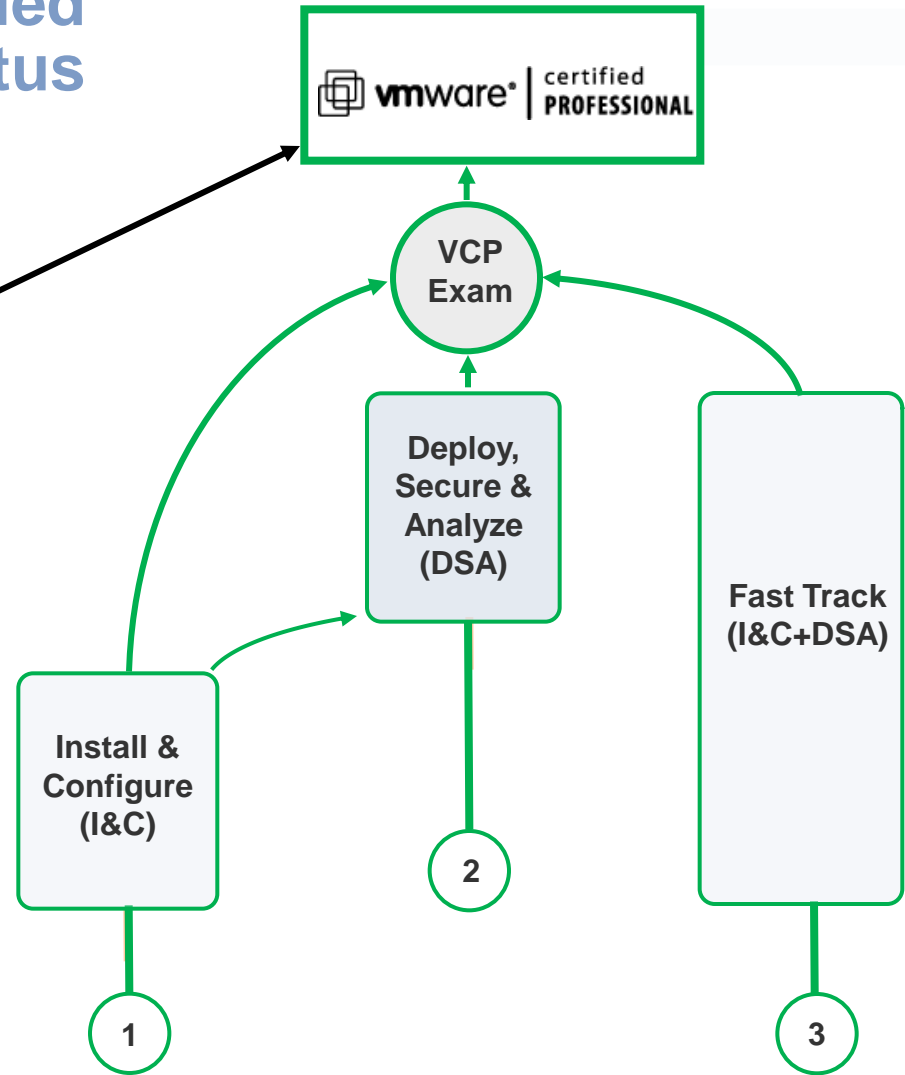
- Attend and actively participate in the specified course & any pre-requisite courses
- Pass the associated VMware authorized exam with an instructor pass mark of 85% (higher than the standard student pass mark)
- Actively participate and complete a co-teach / train-the-trainer session with an authorized VCI or VMware authorized representative either live or web based
- VMware recommends VCI's attend an approved instructional methods course or an industry trainer certification.

Paths to VMware Certified Professional (VCP) Status

VCP Certification

3 paths to VCP status

1. VMware Infrastructure 3: Install & Configure + VCP Exam
2. VMware Infrastructure 3: Deploy, Secure and Analyze + VCP Exam
3. VMware Infrastructure 3: Fast Track + VCP Exam



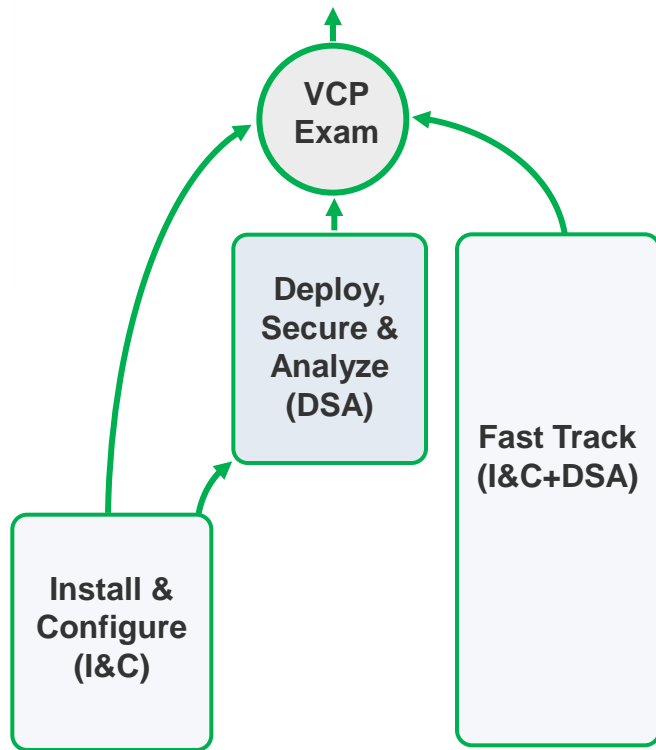
VMware Certified Design Expert on VMware Infrastructure 3

- > Measures a candidate's abilities to ... **Advanced Certification**
 - Assess customer needs and requirements
 - Design VMware Infrastructure for an enterprise data center
 - Implement, test, document and present that design
- > Benefits
 - Sets expectations of a high level of competence
 - Enables partners to distinguish themselves
 - Helps give customers confidence in consulting capabilities

VMware Certified Design Expert (VCDX) on VMware Infrastructure 3

- 1 VMware Certified Professional on VMware Infrastructure 3
- 2 VMware Enterprise Administration Exam
- 3 Design Exam
- 4 Submit, Present, Defend VMware Infrastructure Design

VMware Certified Design Expert (VCDX)



VCDX Certification

- The VCDX is an advanced certification developed for those with design architect-level knowledge of VMware Enterprise deployments
- Take the [VCDX Qualification Review](#) to see if you have the skills and experience to be one of the first in the world to achieve this elite status