VMWARE ESX SERVER 3.5 AND VIRTUALCENTER 2.5

Install & Configure Beyond

INTRODUCTION   V1.0

The Infrastructure 3 suite of products consisting of: ESX Server 3.5, VirtualCenter 2.5 and VMware Consolidated Backup, is both exceptionally powerful and comprehensive. Our Install and Configure Beyond course is intended for students with significant production experience in the Infrastructure 3 product suite. It is our intention to take your existing knowledge base and expand upon that.

CLASSROOM SETUP

Each student will have a ESX Server and a Windows Server 2003 workstation. Our classroom lab will share a cluster of ESX Servers, a variety of different Storage solutions (SAN, NAS, ISCSI, local, etc..) as needed, a VirtualCenter Server, Variety of 3rd party tools and access to many already pre-configured VM's (Microsoft, Novell, Red Hat, Ubuntu …etc). At the end of the course students will have the option to take the VIP (Virtual Infrastructure Professional) Exam thus reinforcing concepts learned.

PRE-REQUISITES

- ESX Server familiarity
- VirtualCenter usage
- VirtualCenter Administration
- Excellent familiarity with Windows
- Some familiarity with Linux

MAJOR AREAS COVERED

ESX Server 3.5	**Physical to Virtual (P2V) migrations**
VirtualCenter 2.5	**Virtual to Virtual (V2V) migrations**
Storage VMotion	**VMware Converter 3.0 Enterprise Edition**
Update Manager	**VMware Consolidated Backup (VCB)**
Distributed Power Management	**Command line administration**
VMware Guided Consolidation	**3rd Party Reviews – Platespin, VizionCore, Veeam**

COURSE OUTLINE

This course covers items from the following VMware courses.

VMware I3 - What's New
VMware I3 - Install and Configure
VMware I3 - Deploy, Secure, and Analyze
VMware I3 - P2V Assistant (converter)
VMware I3 – Fast Track

1) What's New - an in-depth look at Infrastructure 3

    a)   I3 product architecture

    b)   New feature overview

2) Introduction to a Virtualized Environment - Terms and concepts to support Virtualization

    a)   Common terms and definitions

    b)   ESX service console

3) Installing ESX server 3.5

    a)   Pre-installation

    b)   Installing

    c)   Post-installation

4) Configuration of Virtual Machines, templates, and clones

    a)   VM build basics

    b)   VM build advanced

    c)   VM files

    d)   VM optimization

5) Configuration of Virtual Networking and supporting VMotion

    a)   Understanding of layer 2 switches

    b)   Bulid and design vm, vmkernel, and service console switches

    c)   MAC support and discussion

6) P2V , V2V, V2P, and P2P Methods and Techniques

    a)   4 common techniques/tools

    b)   VMware convertor enterprise and free tool use

    c)   Comparison of tools and considerations

7) Server Consolidation Procedures and reasoning

    a)   Server consolidation benefits

    b)   Server consolidation tools

    c)   Server consolidation project methods

8) Tools to support a virtual infrastructure - VMware, Platespin, Vizioncore, Veeam and more

    a)   Veem tools

    b)   Vizioncore tools

    c)   Platespin tools

    d)   Other misc tools

9) VirtualCenter installation and support

  a) Virtualcenter design considerations
  b) Virtualcenter databases
  c) Install Virtualcenter
  d) VMotion
  e) Securing Virtualcenter
  f) Update Manager
  g) Power Management
  h) Guided consolidation
  i) DRS
  j) HA
  k) Clustering
  l) Performance monitoring
  m) Event logs
  n) Alarms
  o) Resource pools
  p) Cloning
  q) Topology maps

10) Best Practices within a Virtual Enterprise

  a) Hardware
  b) software
  C) Virtual Machine

11) Backing up the ESX Environment - Service Console and Virtual Machines – VCB

  a) Backing up Service Console
  b) Backing up Virtual Machine
  c) Traditional and non-traditional methods

12) The ESX Server inside - a look a understanding the underlining OS

  a) Critical files
  b) ESX boot process
  c) ESX startup environment
  d) Filesystem managment
  e) runlevels

13) Using the Command Line Interface for supporting ESX Servers - ESX commands

  a) Common linux commands
  b) File editing and management
  c) VMware specific commands

Appendix A: Licensing – Licensing the I3 product suite

Appendix B: Instructor notes – set up a low cost SAN, notes, commands...more

Appendix C: VMware Security – Virtual Machine, Virtual Center, ESX and SAN security

Appendix D: Logging – view log files and location for VM's, Virtual Center, and ESX

Appendix E: ESX Server 3i – setup, and configure

Appendix F: Module bullets – highlights for each module

Appendix G: Helpful Websites – list of a variety of web sites for VMware engineers

Appendix H: Test your knowledge answers – answers to question at the end of each Chapter

Appendix I: Glossary - list of terms and definition.