



HP Education Services

HP Integrity Cell-Based Server Administration (U5075S)

This course prepares experienced HP-UX system administrators to successfully manage HP Integrity rx7620, rx7640, rx8620, rx8640, and cell-based Superdome servers. Learn about HP's cell-based server architecture and gain in-depth intensive hands-on experience with HP's nPar, vPars, and Integrity Virtual Machine technologies as implemented on Integrity cell-based servers. The course is 50 percent lecture and 50 percent hands-on labs using HP servers.

Notes

- Students who attend U5075S need not attend HP Integrity Virtual Machines v4.3 Administration (HB506S) course as U5075S and HB506S include identical Integrity Virtual Machine content
- Students responsible for managing HP Integrity Superdome 2 servers should attend HP Integrity Superdome 2 Administration (HK713S) rather than U5075S

Audience

- Experienced HP-UX system administrators responsible for managing HP Integrity rx7620, rx7640, rx8620, rx8640, and cell-based Superdome servers

Prerequisites

- HP-UX System and Network Administration I (H3064S) and HP-UX System and Network Administration II (H3065S) or
- HP-UX System and Network Administration for Experienced UNIX® System Administrators (H5875S) or
- Equivalent experience

Course objective

At the conclusion of this course you should be able to:

- Identify the hardware and software components of HP's Virtual Server Environment (VSE)
- Configure and manage cell-based node partitions (nPars)
- Configure and manage virtual partitions (vPars v5)
- Configure and manage HP Integrity Virtual Machines
- Use Ignite-UX to install HP-UX in partitions

Course title:	HP Integrity Cell-Based Server Administration
HP product number:	U5075S
Category/Subcategory:	HP-UX / UNIX
Course length:	4 days
Level:	Advanced
Delivery language:	English
To order:	You can register your interest for this course online at http://www.hp.com.au/education At the site, select the course under HP-UX portfolio and you will see dates for the course. Register your interest for the date of your choice

Benefits to you

- Determine and utilize the appropriate combination of HP Partitioning Continuum technologies that best meet your data center needs
- Increase server flexibility and utilization by knowing how to easily reconfigure and resize partitions
- Learn how to use Integrity VM to set up isolated virtual machines as test environments to reduce the time required to deploy new applications or application revisions
- Gain valuable hands-on experience with installing HP Virtual Machines on a properly configured Integrity server

Why education services from HP?

- Focus on job-specific skills
- Hands-on practice
- Experienced and best-in-the-field HP instructors
- Comprehensive student materials
- Customized on-site delivery
- More than 80 training locations worldwide

Next steps

- Learn more about HP virtualization technologies by attending HP-UX Systems Insight Manager (HK712S) and HP Capacity Advisor and Global Workload Manager (HF869S) or
- Expand your HP-UX administration skills by attending additional courses in the HP-UX advanced administration curriculum

Detailed course outline

Introduction to the HP Virtual Server Environment

- Why virtualize or partition systems?
- HP partitioning continuum
- Instant capacity solutions
- A cell-based system with node partitions
- Virtual partitions (vPars v5)
- Integrity Virtual Machines (VM)
- HP Process Resource Manager
- VSE management tools
- Workload managers
- Capacity Advisor
- Virtualization Manager

Addressing Hardware

- HP servers supporting partitioning
- HP-UX address types
- Legacy vs. agile view hardware addresses
- Viewing nPar, vPar and VM hardware addresses
- Device special files: legacy vs. persistent
- Slot addresses
- EFI hardware addresses (Integrity only)
- Viewing interface cards with pdweb
- Addressing tools summary
- Cell-based servers Integrity boot disk format

Administering Node Partitions (nPars)

- What are node partitions?
- Partition planning
- Interleaved vs. cell local memory
- The first and genesis partitions
- The complex profile
- HP-UX nPar management tools

- parmgr
- Booting nPars
- Displaying complex information
- Dynamic nPartitions
- Cell state transitions
- Hyper-threading

Brief Introduction to Ignite-UX

- What is Ignite?
- Ignite-UX use models
- Interacting with Ignite-UX
- Ignite recovery choices

Virtual Partitions Preparation and Planning

- vPars v5 concepts
- Partition configuration key points
- nPar/vPar boot sequence
- vPars v5 planning and current releases
- Mixed release environments
- Installing vPars v5
- Minimum vPars v5 requirements
- Planning vPar resources
- Dynamic memory migration
- Locality of reference

Creating Virtual Partitions

- vPars v5 commands
- Interacting with the vPars v5 monitor
- Setting Integrity environment variables
- Managing and accessing the vPars v5 console

Virtual Partitions Management

- Display vPars v5 status
- Find unused resources in a vPars v5 environment
- Migrate CPUs and memory between running vPars v5
- Flexible administrative capability
- vPars v5 - Ignite-UX considerations

Integrity Virtual Machines Introduction

- Virtualization concepts and terminology
- Shared resources
- VM host, virtual machines, and VM guests
- Virtual networks and storage devices
- Reserved devices
- Integrity Virtual Machine Manager

Preparing the Physical Server

- Integrity VM requirements
- Creating virtual networks and storage backing devices

- Reserving access to VM host devices
- VM host HP-UX upgrade

Creating and Running Integrity Virtual Machines

- Integrity VM administration, configuration, and VM management
- VM CPU, memory, and I/O allocation
- Starting and stopping a VM
- Accessing a VM console
- Suspend and resume a VM

Managing and Monitoring Integrity VMs

- Managing I/O devices
- Adding devices to a running VM
- Storage — high availability guidelines
- Accelerated Virtual I/O (AVIO)
- Managing virtual DVD devices and VLANs
- VM guest dynamic memory
- Dynamic CPU management
- Cloning and removing a virtual machine
- Monitoring VMs and VMs from the host
- Configuration and log files
- Glance (and Performance Agent) in a virtual OS environment
- VM host CPU monitoring - hpvmsar

Migrating Integrity Virtual Machines

- Why migrate a VM?
- VM host configuration to support VM migration
- VM host requirements and recommendations
- VM configuration to support online migration
- VM migration procedures
- Offline and online VM migration

Using HP Serviceguard with Integrity VMs

- Integrity VM commands
- Serviceguard commands
- Serviceguard and Integrity VM use models
- Integrity VMs as Serviceguard nodes
- Cluster in a box
- Integrity VMs as Serviceguard packages
- Serviceguard and online VM guest migration
- Application monitoring in a VM guest package
- HPVM toolkit
- Serviceguard on VM host - LAN failover

For More Information

To review course schedules and to register for a course, visit www.hp.com.au/education and select your country from the drop down menu.

