Hewlett Packard Enterprise

HPE Integrity Cell-Based Server Administration U5075S

HPE course number	U5075S
Course length	4 days
Delivery mode	ILT
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This course prepares experienced HP-UX system administrators to successfully manage HPE Integrity rx7620, rx7640, rx8620, rx8640, and cell-based Superdome servers. Learn about HPE's cell-based server architecture and gain in-depth intensive hands-on experience with HPE'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 HPE servers.

Why HPE Education Services?

- IDC MarketScape leader 4 years running for IT education and training*
- Recognized by IDC for leading with global coverage, unmatched technical expertise, and targeted education consulting services*
- Key partnerships with industry leaders OpenStack®, VMware®, Linux®, Microsoft®, ITIL, PMI, CSA, and (ISC)²
- Complete continuum of training delivery options—self-paced eLearning, custom education consulting, traditional classroom, video on-demand instruction, live virtual instructor-led with hands-on lab, dedicated onsite training
- Simplified purchase option with HPE Training Credits

*Realize Technology Value with Training, IDC Infographic 2037, Sponsored by HPE, January 2016

Notes

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

Audience

- Experienced HP-UX system administrators responsible for managing HPE 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 HPE's Virtual Server Environment (VSE)
- Configure and manage cell-based node partitions (nPars)
- Configure and manage virtual partitions (vPars v5)
- Configure and manage HPE Integrity Virtual Machines
- Use Ignite-UX to install HP-UX in partitions

Benefits to you

- Determine and utilize the appropriate combination of HPE 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 HPE Virtual Machines on a properly configured Integrity server

Detailed course outline

Module		
Module 1: Introduction to the HPE Virtual Server Environment	• Why virtualize or partition systems? • HPE partitioning continuum • Instant capacity solutions • A cell-based system with node partitions • Virtual partitions (vPars v5) • Integrity Virtual Machines (VM)	• HPE Process Resource Manager • VSE management tools • Workload managers • Capacity Advisor • Virtualization Manager
Module 2: Addressing Hardware	• HPE 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
Module 3: 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
Module 4: Brief Introduction to Ignite-UX	• What is Ignite? • Ignite-UX use models	• Interacting with Ignite-UX • Ignite recovery choices
Module 5: 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
Module 6: Creating Virtual Partitions	• vPars v5 commands • Interacting with the vPars v5 monitor	• Setting Integrity environment variables • Managing and accessing the vPars v5 console
Module 7: 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
Module 8: 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
Module 9: 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
Module 10: 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

Module 11: Managing and Monitoring Integrity VMs	• Managing I/O devices	• Dynamic CPU management
	• Adding devices to a running VM	• Cloning and removing a virtual machine
	• Storage—high availability guidelines	• Monitoring VMs and VMs from the host
	• Accelerated Virtual I/O (AVIO)	• Configuration and log files
	• Managing virtual DVD devices and VLANs	• Glance (and Performance Agent) in a virtual OS environment
	• VM guest dynamic memory	• VM host CPU monitoring—hpvmsar
Module 12: Migrating Integrity Virtual Machines	• Why migrate a VM?	• VM configuration to support online migration
	• VM host configuration to support VM migration	• VM migration procedures
	• VM host requirements and recommendations	• Offline and online VM migration
Module 13: Using HPE Serviceguard with Integrity VMs	• Integrity VM commands	• Integrity VMs as Serviceguard packages
	• Serviceguard commands	• Serviceguard and online VM guest migration
	• Serviceguard and Integrity VM use models	• Application monitoring in a VM guest package
	• Integrity VMs as Serviceguard nodes	• HPE VM toolkit
	• Cluster in a box	• Serviceguard on VM host—LAN failover

Next steps

• Learn more about HPE virtualization technologies by attending HP-UX Systems Insight Manager (HK712S) and HPE 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

Learn more at
hpe.com/ww/learnhpuxintegrity

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