Hewlett Packard Enterprise

HPE Performance Cluster Management Foundations H8PE8S

HPE course number	H8PE8S
Subscription length	2 days
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The HPE Performance Cluster Manager Foundations course provides knowledge and practice in cluster operation areas such as navigating the HPCM graphical user interface (GUI), monitoring cluster components, operating system boot modes and root filesystem modes, cluster power management, running commands on multiple servers, connecting to server consoles, and backing up the cluster configuration.

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Audience

Attend this class if you operate and monitor cluster managed with the HPE Performance Cluster Manager (HPCM)

Prerequisites

Linux Fundamentals (GL120) U8583S or equivalent Linux or VMware experience

Course Objectives

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

- Describe cluster components

- Navigate HPCM GUI

- Use operating system boot modes and root file system modes

- Manage power with graphical and command line options

- Gather information from groups of servers

- Send instructions to groups of servers

- Compare differences between servers

- Connect server consoles with graphical and command line options

- Back up cluster and management switch configuration

- Backup the system admin node with your house solution

Detailed course outline

Module 1: Cluster Components	
• Describe HPCM	• ICE compute nodes
• Describe clusters	• Chassis management controllers (CMCs)
• Describe clusters (flat) and distributed (hierarchical) clusters	• Management interfaces (iLO, LO100i, BMC)
• Define management, data and rack networks	• Management of Ethernet switches
• List cluster components Admin node	• Fabric switch switches and blades
• Compute nodes	• Smart PDUs
• Rack leader nodes	• Storag

Module 2: HPCM GUI	
• Locate system groups	• Run commands to apply load on nodes
• Locate network groups	• View left chart to display CPU load
• Review image groups	• View right chart to display memory usage
• Use custom groups	• Focus on single node
• Manage nodes	• Focus on group of nodes
• SSH to nodes	• Switch to bar graph or table view
• Shutdown node	• Turn metrics off and on
• Power off node	• Manage cluster power
• Reboot node	• Monitor node power consumption
• Illuminate the locate beacon to identify the chassis	• Monitor job power consumption
• Run tasks on multiple systems	• Monitor system power consumption
• Monitor the cluster	

Module 3: Operating System Boot Modes and Root Filesystem Modes	
• Describe disk mode	• Describe disk, nfs and tmpfs root file system mode
• Describe PXE mode	

Module 4: Running Commands to Gather Information on the Cluster	
• Describe pdsh	• Format output from pdsh commands with dshbak –c
• Use pdsh commands to interrogate the cluster	• Copy a file to all compute nodes, to all leader nodes, to all ice-compute nodes,
• Describe output, interleaved stdout, stderr	• Retrieve a file from all compute nodes, from all leader nodes, from all ice-compute nodes
• Review predefined pdsh node groups	• Work with HPCM connector to job scheduler
• Add a pdsh node group	• Search central log repository
• Run a command with the new pdsh node group	
• Run a command using the exclude node group format	

Module 5: CLI Power commands	
• Use the cm power command to	– Power off the cluster
– Check the power status of the cluster	– Power on or off individual and groups of nodes
– Power on the cluster	– Turn on and off node identify LEDs

Module 6: CLI Console Feature	
• Connect to the node console by using the ole command	• Steal write privileges on the console session
• Disconnect from the console session	• Playback the last 60 lines of cached console outputN
• Obtain online help in the console session	• Troubleshoot failing console command

Module 7: Cluster Configuration	
• Save a cluster configuration file	• Back up the system admin node with your house olution
• Backup the cluster database	
• Backup and query management switch configurations	

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