Hewlett Packard Enterprise

HPE Serviceguard on Linux H4C12S

HPE course number	H4C12S
Course length	5 days
Delivery mode	ILT
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This course is designed for experienced Linux® system and network administrators implementing HPE Serviceguard A.12.00. Topics include the basic requirements of a highly available system and progress through to the configuration of a Serviceguard cluster/packages, culminating in using both NFS and Oracle 11gR2 toolkit packages along with using the cluster simulator and analytics utilities. The course is 50 percent lecture and 50 percent hands-on labs using RHEL 6.4.

Why HPE Education Services?

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

Audience

- Linux system and network administrators who currently, or soon will, develop, design, implement, and monitor Serviceguard (SG) clusters on Linux

Prerequisites

- Background in Linux system and network administration including Logical Volume Manager (LVM) and/or Veritas Volume Manager (VxVM)

Course objectives

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

- Configure, implement, and manage an HPE SG cluster and packages
- Install HPE Serviceguard A.12.00 and Serviceguard Manager
- Use "cmeasyinstall"
- Utilize basic troubleshooting techniques
- Install and configure NFS and Oracle packages using the toolkits
- Use Live Application Detach and "rolling upgrade"
- Configure generic resources
- Use the SG simulator and SG cluster analytics

Benefits to you

- Protect mission critical applications against a variety of hardware and software failures through effective use of Serviceguard on Linux
- Reduce application downtime by learning how to configure Serviceguard cluster and using Serviceguard's rolling upgrade facility
- Minimize, and in some instances eliminate, your application downtime by learning how to automate the detection of failures and restoration of application service

Detailed course outline

Module 1: Introduction to High Availability	• What is high availability and reducing the risk • Storage technologies and HA network design
Module 2: High Availability with Serviceguard (SG)	• SG features and benefits and SG packages • Minimizing planned downtime • Installing prerequisite software • Serviceguard Manager
Module 3: Storage for Serviceguard	• Volume management • Persistent reservation overview • Review of LVM and VxVM concepts • Configure a shared LVM volume and VxVM data group • Using hosttags
Module 4: Cluster Concepts and Configuration	• Describe the difference between heartbeat, stationary, and standby LAN interfaces • Configure active/standby LAN interfaces using channel bonding • Cluster arbitration using a LockLUN and Quorum server • Steps to configure a Serviceguard cluster • View the status of the cluster and log file
Module 5: Additional Cluster Features	• Test the local LAN failover • Node failures and cluster reformation • Node joining and leaving a cluster • Basic cluster management
Module 6: Packages and Services	• Configure a basic Serviceguard package • The package configuration file • Package and node switching management • Interpret package status from cmviewcl • Package log file
Module 7: Package Policies	• Package FAILOVER and FAILBACK policies • Package access control • Using package dependencies, priorities, and weights
Module 8: Application Monitoring Scripts and Toolkits	• Writing and using an application monitor • The package control script • Application integration toolkits
Module 9: Cluster Troubleshooting	• Test clusters and packages for problems • Using the log files • Using Serviceguard commands for troubleshooting • Approaches to troubleshooting
Module 10: Cluster and Package Online Reconfiguration	• Cluster modifications online and online package modifications • Storage reconfiguration • Add and remove a node or package while the cluster is running
Module 11: Highly Available NFS	• Install the NFS server toolkit • Configure an NFS server package using the NFS toolkit • Configure an NFS client package • Test the NFS server package for various failures

Course data sheet

Module 12: Highly Available Oracle Database	• Install the Oracle database toolkit • Configure an Oracle 11gR2 database package using the Oracle toolkit • Check the operation of the Oracle database and failover
Module 13: Cluster and Package Maintenance	• Rolling upgrade of Serviceguard • Kernel parameter change using Live Application Detach • Package partial startup
Module 14: Generic Resources	• Configure and use generic resources in a package
Module 15: Cluster Simulation	• Investigate the simulator interface and actions
Module 16: Cluster Analytics	• Install the Analytics utility • Display data collected by Serviceguard Cluster Analytics
Module 17: Serviceguard Manager	• Discuss the components of Serviceguard Manager • Navigate the Serviceguard Manager interface

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