



HP Education Services

HP Serviceguard on Linux (H4C12S)

This course is designed for experienced Linux system and network administrators implementing HP Serviceguard A.11.20. 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. The course is 50 percent lecture/50 percent hands-on labs using RHEL 6.2.

Audience

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

Prerequisites

- Background in Linux system and network administration including Logical Volume Manager (LVM)

Course objectives

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

- Configure, implement, and manage an HP Serviceguard cluster and packages
- Install prerequisite software packages
- Install HP Serviceguard A.11.20 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

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

Course title:	HP Serviceguard on Linux
HP product number:	H4C12S
Category/Subcategory:	HP-UX
Course length:	5 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.

Why education services from HP?

- Recognized as an IDC MarketScape leader for IT education (IDC MarketScape: Worldwide IT Education and Training 2012 Vendor Analysis, doc #232870, February 2012)
- Unmatched technical expertise and support for HP products and technologies
- More than 30 years of Education Consulting
- Global training with more than 90 training locations worldwide
- Training you need, when and where you need it with our Remotely Assisted Instructional Learning (RAIL)

Detailed course outline

Introduction to High Availability

- What is high availability and reducing the risk
- Storage technologies and HA network design

High Availability with Serviceguard (SG)

- SG features and benefits and SG packages
- Minimizing planned downtime
- Installing prerequisite software
- Serviceguard Manager

Storage for Serviceguard

- Volume management
- Persistent reservation overview
- Review of LVM concepts
- Configure a shared LVM volume group
- Using hosttags

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

Additional Cluster Features

- Test the local LAN failover
- Node failures and cluster reformation
- Node joining and leaving a cluster
- Basic cluster management

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

Package Policies

- Package FAILOVER and FAILBACK policies
- Package access control
- Using package dependencies, priorities, and weights

Application Monitoring Scripts and Toolkits

- Writing and using an application monitor
- The package control script
- Application integration toolkits

Cluster Troubleshooting

- Test clusters and packages for problems
- Using the log files
- Using Serviceguard commands for troubleshooting
- Approaches to troubleshooting

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

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

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

Cluster and Package Maintenance

- Rolling upgrade of Serviceguard
- Kernel parameter change using Live Application Detach
- Package partial startup

Generic Resources

- Configure and use generic resources in a package

Serviceguard Manager

- Discuss the components of Serviceguard Manager
- Navigate the Serviceguard Manager interface
- Start and stop the cluster using Serviceguard Manager
- Move a package with Serviceguard Manager

For more information

To locate contact information and to learn more about education services, please visit our web site at

<http://www.hp.com.au/education> .

