

Course Length: 4 days

Course Description: This highly technical course focuses on properly securing machines running the Linux operating systems. A broad range of general security techniques such as packet filtering, password policies, and file integrity checking are covered. Advanced security technologies such as Kerberos and SELinux are taught. Special attention is given to securing commonly deployed network services. At the end of the course, students have an excellent understanding of the potential security vulnerabilities -- know how to audit existing machines, and how to securely deploy new network services.

Prerequisites: This class covers advanced storage and high availability topics and is intended for experienced systems administrators. Candidates should have current Linux or UNIX systems administration experience equivalent to the GL-120 "Linux Fundamentals, GL-250 "Red Hat Linux Systems Administration" and GL-275 "Red Hat Linux Network Services"

Distributions: This courses is currently supported on the latest releases of Red Hat Enterprise Linux.

Course Topics:

1. Review Red Hat Enterprise Clustering and Storage Management Technologies
2. Linux Dynamic Device Management
 - udev Features
 - udev Rule Configuration
3. iSCSI
 - iSCSI as a Shared Storage Device
 - Configuring an iSCSI initiator
 - Configuring an iSCSI target
 - Authentication
4. Advanced Software RAID
 - Types and Differences
 - Monitoring
 - Optimization Techniques
 - Growth and High Availability
5. Device Mapper and Multipathing
 - Mapping Targets
 - LVM2 Snapshots
 - Multipath Device Configuration
6. Cluster Suite Overview
 - Design and Elements of Clustering
 - Cluster Configuration Tools
 - Clustered Logical Volumes and Lock Management
7. Quorum and the Cluster Manager
 - Intracluster Communication
 - Cluster Tools
8. Fencing and Failover
 - Fencing Components
 - Failover Domains

9. Quorum Disk

- Heuristic Configuration

10. Service Manager

- Resource Groups and Recovery
- Hierarchical Resource Ordering
- High Availability Services

11. Global File System (GFS)

- Implementation and Configuration
- Lock Management
- Planning For and Growing On-line GFS
- Monitoring Tools
- Journal Configuration and Management