Koenig Course for Linux HA Cluster and Storage

1. Introduction to Cluster and Storage Technologies
   - Features of Cluster
   - Storage Requirements
   - NAS vs SAN

2. Introduction to Virtualization
   - XEN
   - KVM

3. iSCSI concepts and configuration
   - iSCSI as a shared storage device
   - Configuring iSCSI initiator & target
   - Authentication
   - Troubleshooting

4. Kernel Device Management with udev
   - Requirement of udev and its features
   - udev Rule Creation
   - Persistent Device Naming with udev

5. Device mapper and multipathing
   - Mapping targets
   - Multipath concepts
   - Configuring Multipath for IP Storage Devices
   - Channel Bonding/NIC Teaming

6. Preparing the OS for the Cluster Setup
   - Design and elements of HA Cluster
   - Cluster configuration tools

7. Quorum and the cluster manager
   - Quorum concepts and calculations
   - Using Quorum Disk for Votes in Cluster

8. Fencing and Failover
   - Configuring Shared Fence Devices (Fencing) in Cluster
   - Configuring Failover Domains

9. Resource Group Manager (rgmanager)
   - Understanding rgmanager
   - Configuration of resources and resource groups
   - Understand resource dependencies

10. Two-node cluster
   - Understanding cluster.conf
   - Setting up a 2 Node Cluster with Conga (luci and ricci)
   - Adding Extra Nodes in Cluster

11. Logical Volume Management
   - Overview of LVM2
   - Clustered Logical Volume Manager (clvm)

12. Global File System 2 (GFS2)
   - Features of GFS2
   - Creating, maintaining, and troubleshooting
   - Migrating from GFS to GFS2

13. XFS
   - Features of the XFS file system
   - Creating, maintaining, and troubleshooting

14. Comprehensive review
   - Serving a Webserver/NFS from Cluster
   - Troubleshooting with Command Line Tools