

# Enterprise Linux High Availability Clustering Eğitimi

## Eğitim Hakkında

Enterprise Linux High Availability Clustering eğitimi iki temel alana odaklanır: Linux yüksek kullanılabilirlik (HA) kümeleme ve HA depolama yönetimi. Katılımcılar, etkin / etkin yapılandırmaları etkinleştirmek için kümelenmiş depolama teknolojilerinden nasıl yararlanacaklarını öğrenirler.

## Neler Öğreneceksiniz

En iyi uygulamaları kullanarak gerçekçi bir üç düğümlü Linux kümesi oluşturmayı,

Gerçek dünya ortamında çoklu yol, yedekli halka iletişimini, son ayakta duran küme ve paylaşılan depolama senaryoları dahil çok gerçek dünya görevlerini gerçekleştirmeyi,

Cluster Architecture & Design, Pacemaker, Corosync, Fencing, Resource Management, Advanced Resource Management, Multipathing, Cluster LVM v2 ile çalışmayı.

## Eğitim İçeriği

### Introduction to Clustering And Storage Management

- Clustering Introduction
- Cluster Building Blocks
- Shared Storage
- Hardware and Software Requirements
- Network Considerations
- Split Brain Prevention with Fencing
- HA Components
- Clustered Resources
- Configuration Tools
- Red Hat Cluster Stack Roadmap
- Running Commands on Multiple Systems

### Corosync And Quorum Management

- Vocabulary
- Network Topology
- Ethernet Bonding
- Communication Methods
- IPv6 Considerations
- Cluster Node Preparation
- Enable and Configure pcsd



PCS & PCSD  
Cluster Quorum  
Advanced Quorum Techniques  
Corosync  
Corosync - Redundant Ring Protocol (RRP)  
Corosync Security  
Joining and Leaving the Cluster  
Quorum Administration  
Upgrading

### **STONITH and Fencing**

Fencing Introduction  
Node Level Fencing  
Node Fencing: External  
Node Fencing: Internal  
Node Fencing: Pseudo  
Resource Level Fencing  
Fencing Architecture  
STONITH Subsystem  
Fencing Agents  
Fencing Agents listing  
STONITH Resources  
Working With stonith\_admin  
Manual Fencing  
Best Practices

### **Pacemaker Cluster Resource Manager**

Cluster Architecture Revisited  
Pacemaker Architecture  
Pacemaker Cluster Information Base (CIB)  
Resource Management Overview  
Component Relationships  
Resource Agents  
Types of Resources  
Resource Naming Conventions  
Resource Specific Parameters/Options  
Resource Meta Parameters/Options  
Resource Agent Operations  
Discover Resource Agents  
Available Resource Agents  
Resource Spotlight: IPAddr2  
Add a Primitive Resource  
Resource Group Management  
Resource Group Example  
Resource Actions: Monitoring  
Resource Administration  
PCS vs. CRM\_\*

## Advanced Resource Configuration

Resource Placement Basics  
Resource Ordering  
Location Constraints  
Relocating Resources  
Relocation on Failure  
Resource Standard: Clones & Multi-State  
Resource Operations  
Troubleshooting  
Cluster Maintenance

## Storage Technologies

Remote Storage Overview  
Remote Filesystem Protocols  
Remote Block Device Protocols  
Distributed Lock Manager  
dlm\_controld & dlm\_tool  
Block Devices and the Device Mapper  
Managing Loopback Devices  
iSCSI  
iSCSI Architecture  
iSCSI Target Implementations  
iSCSI Target Node Preparation & targetcli  
iSCSI Target Administration  
iSCSI Target Defining Storage Objects  
iSCSI Target LUN Administration  
iSCSI Target Network Portal Configuration  
iSCSI Target Security  
iSCSI Target Examples  
Open-iSCSI Initiator Implementation  
iSCSI Initiator Discovery  
iSCSI Initiator Node Administration  
Mounting iSCSI Targets at Boot  
iSCSI Multipathing Considerations  
Kernel Device Management  
Managing Linux Device Files

## Kernel Hardware Info â€“ /sys/

/sys/ Structure  
udev  
I/O Elevators

## Device Mapper and Multipathing

SAN Multipathing  
Multipath Configuration  
Multipathing Best Practices

## Advanced Lvm & Cluster Lvm

Logical Volume Management  
Implementing LVM



Creating Logical Volumes  
Activating LVM VGs  
Exporting and Importing a VG  
Examining LVM Components  
Changing LVM Components  
Advanced LVM Overview  
Advanced LVM: Components & Object Tags  
Advanced LVM: Automated Storage Tiering  
Advanced LVM: Thin Provisioning  
Advanced LVM: Striping & Mirroring  
Advanced LVM: RAID Volumes  
cLVM

### **Global File System (GFS) 2**

GFS2 Overview  
GFS2 Capabilities  
GFS2 Theory of Operation  
GFS2 Configuration Prerequisites  
Setting Up Cluster LVM  
GFS2 Filesystem Creation & Mounting  
GFS2 Filesystem Management  
GFS2 Fencing Requirement