



LINUX TRAINING

Lpic 3 Virtualization High Availability

Master advanced Linux virtualization and high availability. Earn your LPIC-3 certification to design resilient IT infrastructures.

DURATION

2 hours

LEVEL

Intermediate

FORMAT

Instructor-Led

-
- Globally Recognized Certification
 - Expert-Led Hands-On Training
 - Flexible Scheduling

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COURSE OVERVIEW

The LPIC-3 Virtualization and High Availability course is designed for senior Linux professionals aiming to master the complex domains of system virtualization and building fault-tolerant infrastructures. This advanced certification delves deep into core virtualization technologies like KVM and Xen, equipping you with the expertise to design, implement, and manage robust virtualized environments. You will learn to optimize resource allocation, ensure guest system isolation, and troubleshoot common virtualization challenges, making you adept at leveraging virtualization for scalability and efficiency in modern data centers.

Beyond virtualization, this course provides comprehensive training in architecting and deploying high availability (HA) solutions using industry-standard tools such as DRBD, Pacemaker, and Corosync. You will gain practical skills in setting up shared storage, configuring cluster resources, managing failover mechanisms, and ensuring continuous service uptime for critical applications. By completing this certification, you will not only validate your expertise in building resilient Linux systems but also enhance your ability to contribute to mission-critical infrastructure projects, ensuring business continuity and minimizing downtime in complex enterprise environments. This knowledge is invaluable for anyone aspiring to senior-level roles in system architecture, cloud engineering, or infrastructure management.

Duration	2 hours
Level	Intermediate
Vendor	Linux
Exam Code	LPIC-3

COURSE CURRICULUM

01 Module 1: Virtualization Concepts and Technologies

- Introduction to Virtualization: Types and Benefits
- Kernel-based Virtual Machine (KVM) Architecture and Installation
- Xen Hypervisor: Domain Types and Installation
- Virtual Network Configuration and Bridging
- Virtual Storage Management and Image Formats

02 Module 2: Virtual Machine Management

- Managing VMs with libvirt and virsh
- Virtual Machine Creation, Migration, and Lifecycle Management
- Guest Operating System Installation and Configuration
- Performance Tuning and Monitoring of Virtual Machines
- Security Best Practices for Virtualized Environments

03 Module 3: High Availability Fundamentals

- Introduction to High Availability Concepts
- Cluster Architectures and Quorum Management
- STONITH (Shoot The Other Node In The Head) Mechanisms
- Shared Storage Solutions for HA Clusters
- Introduction to Pacemaker and Corosync

04 Module 4: DRBD for Shared Storage

- DRBD (Distributed Replicated Block Device) Concepts and Modes

- DRBD Installation and Configuration
- Setting up Primary/Secondary and Dual Primary DRBD Resources
- Monitoring and Troubleshooting DRBD
- Integrating DRBD with Pacemaker

05 Module 5: Pacemaker and Corosync Cluster Configuration

- Corosync Cluster Engine Installation and Configuration
- Pacemaker Resource Management and Configuration
- Defining Resources, Resource Groups, and Constraints
- Managing Cluster Fencing (STONITH) Devices
- Advanced Pacemaker Resource Agents and Operations

06 Module 6: Advanced HA Solutions and Troubleshooting

- Designing and Implementing Complex HA Scenarios
- Load Balancing with HA Clusters
- Troubleshooting Common Cluster Issues
- Performance Optimization for HA Services
- Backup and Recovery Strategies for Clustered Environments

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Senior Linux Systems Architect specializing in Cloud Infrastructure**
- > **High Availability Cluster Engineer**
- > **Virtualization Solutions Consultant**

FREQUENTLY ASKED QUESTIONS

Q: What level of practical experience will I gain in deploying and managing highly available virtual environments upon completing this LPIC-3 306 course?

Upon completion of this LPIC-3 306 course, you will possess hands-on expertise in designing, implementing, and troubleshooting complex virtualized and highly available Linux infrastructures. You will be proficient in setting up and managing KVM and Xen hypervisors, configuring shared storage with DRBD, and building robust failover clusters using Pacemaker and Corosync. This includes defining resource groups, establishing fencing mechanisms, and ensuring seamless service continuity for critical applications, preparing you for real-world enterprise challenges.

Q: Are there any specific prerequisites in terms of prior Linux certification or experience required to effectively benefit from this advanced LPIC-3 Virtualization and High Availability course?

Yes, to get the most out of this advanced LPIC-3 course, it is strongly recommended that you hold an LPIC-2 certification or possess an equivalent level of senior-level Linux administration experience. This includes a deep understanding of networking, file systems, kernel management, and common system services. While specific clustering or virtualization experience is not strictly required as these topics are covered, a solid foundation in general Linux system administration is crucial.

Q: How will this course specifically enhance my ability to architect and maintain resilient systems against

single points of failure, differentiating it from general Linux administration training?

This course goes beyond general administration by focusing explicitly on eliminating single points of failure in IT infrastructure. You will learn to implement strategies like active-passive and active-active clustering, configure data replication with DRBD to protect against storage failures, and master automated failover mechanisms using Pacemaker to ensure continuous application uptime. This specialized focus on fault tolerance and disaster recovery differentiates it, equipping you with the advanced skills needed to design systems that self-heal and remain operational even during critical component failures.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

Years of Excellence

10,000+

Professionals Trained

50+

Vendor Certifications

READY TO ENROL?

Take the next step in your technology career.

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