Course: Complete Guide to Installing and Using AlmaLinux (2025 Edition)

Module 1: Introduction to AlmaLinux

1.1 What is AlmaLinux?

AlmaLinux is a free, open-source, and community-driven Linux distribution designed to be a binary-compatible replacement for CentOS. Maintained by the AlmaLinux OS Foundation, it's used in enterprise, cloud, and server environments.

1.2 Homepage and Download Link

- Homepage: https://almalinux.org
- Download: https://almalinux.org/download.html

Module 2: System Requirements

2.1 Minimum Requirements

- CPU: 64-bit x86_64 processor
- RAM: 2 GB minimum (4 GB recommended)
- Storage: 20 GB (minimum), 40+ GB recommended
- USB/DVD for bootable media

Module 3: Preparing Installation Media

3.1 Download ISO Image

- Choose a version (most users select the latest Stable x86_64 ISO)

3.2 Create Bootable Media

On Windows:

- Use Rufus to flash ISO to USB

On Linux/macOS:

```
sudo dd if=almalinux.iso of=/dev/sdX bs=4M status=progress && sync
```

3.3 BIOS/UEFI Setup

- Enable USB boot
- Disable Secure Boot (if necessary)
- Choose UEFI or Legacy based on ISO and system

Module 4: Live Boot and Initial Setup

4.1 Boot from USB/DVD

- Select USB as boot device
- Choose "Install AlmaLinux" from the boot menu

4.2 Check Compatibility

- Confirm display, keyboard, and mouse responsiveness

Module 5: Installation Steps

5.1 Language and Region Selection

5.2 Disk Partitioning

Option A: Automatic Partitioning

- Recommended for beginners

Option B: Manual Partitioning

- `/boot/efi` (FAT32, 512MB)
- `/` root (xfs or ext4, 30GB+)
- `swap` (based on RAM: 2-4GB)

5.3 Set Timezone and NTP

5.4 Network Configuration

- Auto-detect DHCP or set static IP if needed

5.5 Set User Account and Password

5.6 Begin Installation

- Click "Begin Installation" and wait
- Set root password during process

Module 6: Post-Installation Setup

6.1 Reboot and Login

- Remove installation media

6.2 System Update

```
sudo dnf update -y
```

6.3 Install Common Utilities

```
sudo dnf install epel-release -y
sudo dnf install nano wget curl net-tools htop -y
```

6.4 Enable Firewall

```
sudo systemctl enable --now firewalld
```

Module 7: Best Use Cases for AlmaLinux

7.1 Server Environments

- Web servers, database servers, FTP, NFS

7.2 Cloud Deployments

- Compatible with AWS, Azure, Google Cloud

7.3 Secure Workstations

- Used by sysadmins who prefer RHEL-based environments

7.4 Enterprise Applications

- Seamless compatibility with RHEL software stacks

Module 8: Tools and Maintenance

8.1 System Monitoring

```
htop
free -h
df -h
```

8.2 Creating Users and Permissions

```
sudo useradd newuser
sudo passwd newuser
sudo usermod -aG wheel newuser
```

8.3 Backups

- Use `rsync`, `tar`, or third-party tools for backups

Course Summary

✅You've learned:

- What AlmaLinux is and its use cases
- How to install it on physical or virtual machines
- Post-install tools, configurations, and maintenance tips

♑Download AlmaLinux: https://almalinux.org/download.html

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