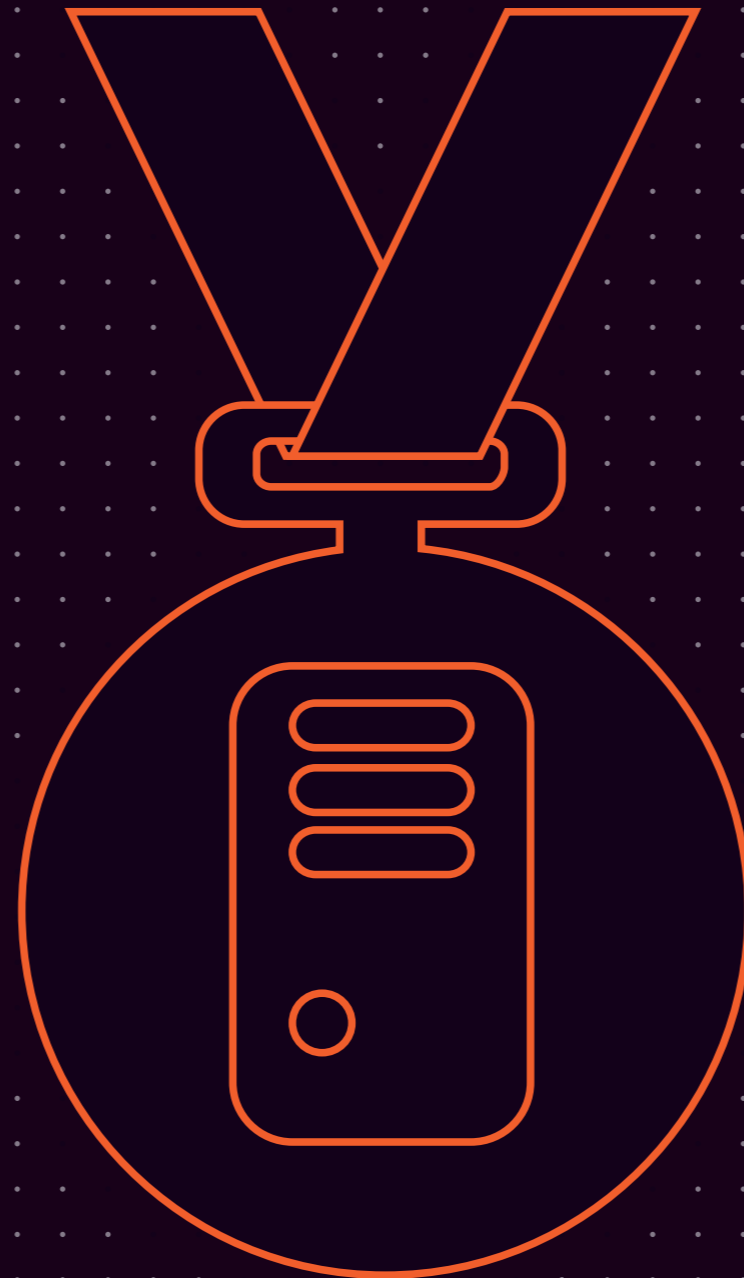


# Advanced Ubuntu server administration



# Learn from the best

You've been using Ubuntu Server for a while and want to advance your skills. The Ubuntu Advanced Server course is an intensive three-day hands-on course in which you will learn and use advanced techniques.

The training course covers a variety of topics with labs to reinforce the concepts learned. The course begins with the setup of a virtual machine that you will use for the labs.

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## Schedule:

Three days of lecture and labs

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## Level required:

Experienced linux and cloud professionals

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# Advanced Ubuntu server administration

Students should complete the course with a comprehension of the following lessons:

## Section 1: OpenSSH

- What is SSH?
- What is the Kernel?
- SSH Keys
- SSH Tools

## Section 2: Virtualization lab setup

- What is Virtualization?
- What is KVM?
- QEMU-img

## Section 3: System Initialization

- What is Grub2?
- Advanced systemd Usage
- On-Demand Processes
- HWE

## Section 4: Advanced Filesystem Concepts

- The setuid and setgid Bits
- Sticky Bits
- Filesystem Basics
  - Inodes
  - Superblocks
- XFS

## Section 5: Storage

- RAID
- Managing a Software RAID
- Software RAID Drive Failures
- Device Mapper Multipathing

## Section 6: ZFS

- ZFS Overview
- ZFS Architecture
- ZFS Pools
- Configuring and Tuning ZFS
- ZFS Snapshots

## Section 7: Advanced Networking Concepts

- Linux Bridges
- Bridge Configuration
- Network Interface Bonding
- Bond Configuration
- VLANs
- Trunking

## Section 8: Security

- Pluggable Authentication Modules (PAM)
  - PAM Configuration
  - PAM Architecture
  - PAM Modules
- Access Control Lists (ACLs)
  - ACL Entries
  - Adding and Removing a User
- AppArmor
  - AppArmor Parser
  - AppArmor Profiles

## Section 9: Snappy

- Snaps
- Ubuntu Core

## Section 10: LXD

- Containerization
  - What is LXD?
  - LXD Setup
  - Creating and Using a Container

## Appendix

- Time Synchronization
- Rsyslog
- sosreport

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