

Ubuntu 20.04 Server Administration

Duration: 40 Hrs

1. Introduction to Ubuntu Linux

- Ubuntu Server
- Ubuntu Server 20.04 Server Installation Alternatives and Options
- Server on the Desktop Installation
- Desktop on the server Installation
- minimal GNOME Desktop
- server install options
- Ubuntu help and Documentation

2. Installing the Ubuntu Linux ▪ Upgrading

- Ubuntu Server CD
- Getting the Install Server CD
- Installing Ubuntu from Server CD
- Installation Overview
- Stating the Installations Program
- Starting the Installation Program
- Language and Keyboard
- Network Configuration and Cobbler
- Recovery, Rescue , and Boot loader re-install

3. Usage Basics: login Interfaces, and Help ▪ Ubuntu server start-up

- Grub selection and editing
- the command line interface
- Accessing Ubuntu from the Command line Interface on a server
- Using the Ubuntu Desktop Interface
- Light DM, guest Login, Lock Screen

4. Managing Software

- Ubuntu Packages Management Software
- Command Line interface tools
- Desktop Tools
- Ubuntu Software Repositories
- repositories Components
- Software Management with Taskel, DEB, APT and
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- DKPG
- DEB Software Packages
- Installing and Removing Software with taskel
- Managing software with aptitude manage
- software with APT

5. Managing Services

- Upstart
- Upstart and Run levels
- Services: /etc/init.d/
- The inetd and Xinetd Services
- NTP
- AppArmor Security

6. Shells

- the Command Line
- Command Line Editing
- History
- Matching Multiple Characters
- Generating Patterns
- Pipes

7. Working with file and Directories ▪ Linux files

- the file structure
- Home Directories
- Path Names
- System Directories
- Archiving Compress File
- File Compression

8. Shell Variables and Scripts

- Shell Variables
- Definition and Evaluation of Variables
- shell Scripts
- executing a shell scripts
- shell environments

9. Shell Configuration

- shell Initialization and Configurations Files
- Configuration Directories and Files
- Alias
- Shell Parameters Variables
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- Using Initialization Files
- Configure shell Profile

10. TCP/IP Networks

- TCP/IP protocol Suite
 - Zero Configuration Networking: Avahi and link local addressing IPv4 and IPv6
TCP/IP Network Address
Class Based IP addressing
Net mask
 - CIDR
 - Broadcast, Gateway, and Name server Address
 - IPV6 Addressing
 - Unicast, Multicast, Any cast address ▪ IPV6 and IPv4 Coexistence Methods
 - Network Information : ping, finger, trace route, and host
- ## 11. Print services
- CUPS
 - Printer Devices and Configuration
system-config-printer
 - Printer classes
 - adding New Printer Manually
 - CUPS Web Browser-based Configuration tools
 - Remote Printer on CUPS
 - CUPS Printer Classes and Groups

12. FTP

- FTP Servers
- available Servers
- FTP Users
- Anonymous FTP
- Enabling Standalone Access
- vsftpd Access Controls
- rsync Mirroring

13. Mail Servers

- MTA
- Postfix
- POP and IMAP Server: Dovecot
- Spam: Spam Assassin
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- Mail Filtering: Amavisd-new
- Mailing Lists: Mailman

14. Web servers

- Apache web server
- LAMP
- Virtual Hosting
- Site level Configuration Directives
- Directory Blocks

15. News and databases services

- News Servers
- Databases Servers: MySQL and PostgreSQL
- MySQL tools
- MySQL Management with mysql and mysqladmin

16. Network File system , Network Information System (NFS, NIS and GFS)

- NFS
- NFSv4
- NFS Clients
- NIS
- /etc/nsswitch.conf file
- Red Hat Global Filesystem
- Implementing GFS 2 File System

17. Samba

- samba Applications
- Starting up and accessing Samba
- Firewall Access
- SWAT
- users level Security
- share Definitions
- testing samba Configurations
- Accessing Samba Services with Clients
- mount.cifs

18. Squid

- Configuring Clients Browsers
- Proxy Security
- Proxy Caches
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19. DNS

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- Logs
- DNS address Translations
- FQDN
- IPv4 Address
- IPv6 Address
- DNS servers
- DNS Operation
- Local Area Network Addressing
- BIND
- DNS Zones
- Named Configuration file
- Resource Records for Zone Files
- Zone Files
- Sub domains and Slaves
- IP Virtual Domains
- DNS Security: TSIG, Zone keys, Split DNS

20. DHCP and DHCPv6

- IPv6 Stateless Auto Configuration
 - DHCP
- DHCP Fixed Address

21. Firewalls

- IP tables
- TCP wrappers
- Graphical firewall

22. Introduction to Cloud Computing

- Cloud Documentation
 - Public Cloud
 - Cloud init
 - Open Stack