Swift Infosys (P) Ltd

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CCNA Routing and Switching Syllabus: first Month (30 days to 45 days)

1. Network Fundamentals:

- Introduction to Networking
- OSI and TCP/IP Models
- Subnetting and VLSM
- IP Addressing (IPv4 and IPv6)
- Routing and Switching Concepts

2. LAN Switching Technologies:

- Ethernet and Switch Operation
- VLANs (Virtual LANs)
- Spanning Tree Protocol (STP)
- EtherChannel and Link Aggregation

3. Routing Technologies:

- Routing Basics
- Routing Protocols (RIPv2, EIGRP, OSPF)
- Inter-VLAN Routing
- Static Routing

4. WAN Technologies:

- Overview of WAN Technologies
- PPP (Point-to-Point Protocol)
- Frame Relay
- GRE (Generic Routing Encapsulation)
- Broadband Solutions (DSL, Cable)

5. Infrastructure Services:

- DHCP (Dynamic Host Configuration Protocol)
- DNS (Domain Name System)
- NAT (Network Address Translation)
- NTP (Network Time Protocol)

6. Infrastructure Security:

- Security Fundamentals
- ACLs (Access Control Lists)
- Basic Device Hardening

7. Infrastructure Management:

- Device Management
- Syslog

8. Troubleshooting:

- Troubleshooting Methodologies
- Troubleshooting VLANs, STP, Routing Protocols
- WAN Troubleshooting

Linux and termux understanding and practical (20 Days) to 25 Days

1. Introduction to Linux:

- Overview of Linux and its history
- Comparison with other operating systems (Windows, macOS)
- Understanding Linux distributions (Ubuntu, CentOS, Debian, etc.)

2. Linux File System:

- File system hierarchy (root directory, /bin, /etc, /home, etc.)
- File and directory permissions
- Navigating the file system (cd, ls, pwd, etc.)

3. Basic Commands:

- Working with files and directories (cp, mv, rm, mkdir, rmdir, etc.)
- Text file manipulation (cat, echo, grep,)

- Working with processes (ps, kill, top, bg,)

4. Users and Permissions:

- User accounts and groups
- Managing users (useradd, userdel, passwd)

5. Package Management:

- Package managers (apt, yum, dnf)
- Installing, updating, and removing software packages

6. System Configuration:

- Basic system configuration files (e.g., /etc/network/interfaces, /etc/hostname)
- Hostname and network configuration
- Time and date configuration

7. Networking Basics:

- Basic network commands (ping, traceroute, ifconfig, ip)
- Network configuration files (e.g., /etc/hosts, /etc/resolv.conf)
- Introduction to networking services (SSH, FTP, HTTP)

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3. Basic Commands:

- Working with files and directories (cp, mv, rm, mkdir, rmdir, etc.)
- Text file manipulation (cat, echo, grep, sed, awk)
- Working with processes (ps, kill, top, bg, fg)

4. System Configuration:

- Basic system configuration files (e.g., /etc/network/interfaces, /etc/hostname)
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5. Networking Basics:

- Basic network commands (ping, traceroute, ifconfig, ip)
- Network configuration files (e.g., /etc/hosts, /etc/resolv.conf)
- Introduction to networking services (SSH, FTP, HTTP)

Certified Ethical Hacking and System Analysis (45 Days)

1. Introduction to Ethical Hacking:

- Overview of ethical hacking
- Different types of hackers
- The role of ethical hacking in cybersecurity

2. Footprinting and Reconnaissance:

- Information gathering techniques
- Network scanning and mapping
- Enumeration

3. Scanning Networks:

- Host discovery
- Port scanning techniques
- Vulnerability scanning

4. Enumeration:

- SNMP enumeration
- LDAP enumeration
- NTP enumeration

5. System Hacking:

- Password cracking
- Escalating privileges
- Trojans and backdoors

6. Malware Threats:

- Types of malware (viruses, worms, trojans)
- Malware analysis
- Anti-virus evasion techniques

7. Sniffing:

- Sniffing concepts
- Sniffing tools and techniques
- Defenses against sniffing

8. Social Engineering:

- Types of social engineering attacks
- Social engineering countermeasures
- Phishing attacks

9. Denial-of-Service (DoS) Attacks:

- Types of DoS attacks
- DoS attack techniques
- DDoS attacks

10. Session Hijacking:

- Session hijacking concepts
- Session hijacking techniques
- Countermeasures

11. Hacking Web Servers:

- Web server vulnerabilities
- Web application attacks

- Web application security countermeasures

12. Hacking Web Applications:
- Web application vulnerabilities

- Web application hacking methodology

- Countermeasures

13. SQL Injection:
- SQL injection concepts
- SQL injection attacks

- Prevention and mitigation

14. Hacking Wireless Networks:
- Wireless encryption
- Wireless hacking techniques

- Wireless security countermeasures

15. Hacking Mobile Platforms:
- Mobile device security
- Mobile hacking techniques

- Mobile security countermeasures

16. Evading IDS, Firewalls, and Honeypots:
- IDS (Intrusion Detection System) evasion
- Firewall evasion

- Honeypot concepts and evasion

17. Cloud Computing:
- Cloud computing concepts
- Cloud security

- Cloud penetration testing

18. Cryptography:
- Cryptography basics
- Public key infrastructure (PKI)

- Cryptanalysis techniques

19. Penetration Testing:
- Penetration testing methodologies
- Reporting and documentation

- Ethics and legal considerations

Totally Days 3 month 15 Days
Class on zoom
Sunday To Thursday 2 hrs
Every Friday Doubt Clear Session
Every Class Video Provide
Lms through study
Coursera Syllabus also we are provide