

# CCNA SECURITY

50 Hours

**SYLLABUS**

## **A: Describe the security threats facing modern network infrastructures**

- Describe and list mitigation methods for common network attacks
- Describe and list mitigation methods for Worm, Virus, and Trojan Horse attacks
- Describe the Cisco Self Defending Network architecture

## **B: Secure Cisco Routers**

- Secure Cisco routers using the SDM Security Audit feature
- Use the One-Step Lockdown feature in SDM to secure a Cisco router
- Secure administrative access to Cisco routers by setting strong encrypted passwords, exec timeout, login failure rate and using IOS login enhancements
- Secure administrative access to Cisco routers by configuring multiple privilege levels
- Secure administrative access to Cisco routers by configuring role based CLI
- Secure the Cisco IOS image and configuration file

## **C: Implement AAA on Cisco routers using local router database and external ACS**

- Explain the functions and importance of AAA
- Describe the features of TACACS+ and RADIUS AAA protocols
- Configure AAA authentication
- Configure AAA authorization
- Configure AAA accounting

## **D: Mitigate threats to Cisco routers and networks using ACLs**

- Explain the functionality of standard, extended, and named IP ACLs used by routers to filter packets
- Configure and verify IP ACLs to mitigate given threats (filter IP traffic destined for Telnet, SNMP, and DDoS attacks) in a network using CLI
- Configure IP ACLs to prevent IP address spoofing using CLI

## **E: Implement secure network management and reporting**

- Use CLI and SDM to configure SSH on Cisco routers to enable secured management access
- Use CLI and SDM to configure Cisco routers to send Syslog messages to a Syslog server
- Mitigate common Layer 2 attacks

## **F: Mitigate common Layer 2 attacks**

- Describe how to prevent layer 2 attacks by configuring basic Catalyst switch security feature

## **G:** Implement the Cisco IOS firewall feature set using SDM

- Describe the operational strengths and weaknesses of the different firewall technologies
- Explain stateful firewall operations and the function of the state table

## **H:** Implement the Cisco IOS IPS feature set using SDM

- Define network based vs. host based intrusion detection and prevention
- Explain IPS technologies, attack responses, and monitoring options
- Enable and verify Cisco IOS IPS operations using SDM

## **I:** Implement site-to-site VPNs on Cisco Routers

- Explain the different methods used in cryptography
- Explain IKE protocol functionality and phases
- Describe the building blocks of IPSec and the security functions it provides



## Our Facilities





advanced  
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