CCIE Security v6.0

SKY7
TRAINING & CONSULTING

Join us for the best
CCIE Security v6.0 training

MODULE 1 :- FIREWALL

Day 1 – 120 mins

- Introduction to the course
- Course Material
- Planning for CCIE
- Discuss the Table of Content

Day 2 – 120mins

Cisco ASA Overview

- Firewall Overview
- Firewall Techniques
    - Stateless Packet Filtering
    - Stateful Packet Filtering

Cisco ASA Product Family

- Introducing the Cisco ASA 5500-X Series NGFW
- Introducing the Cisco ASAv
- Difference between UTM and NGFW

Day 3 – 120mins

Cisco ASA Features

- Using the CLI
- Using the Cisco ASDM
- Understanding Factory default configuration
- Working on the configuration files

Cisco ASA Firewall Interfaces

- Configuring Physical interfaces
- Configuring Vlan interfaces
- Redundant Interface
- Configuring Interface Security Parameters
    - Naming the interface
    - Security Leve
    - lAssigning the IP Address

Day 4 – 120mins

Cisco ASA IP Connectivity

- Configuring the Static Routing
- Routing with EIGRP
- Routing with OSPF
- Routing with BGP
- Verifying the routing Table
- Configuring the SSH and Telnet
- Configuring HTTP/S

Day 5/6 – 240mins

Cisco ASA NAT (Address Translation)

- Understanding the NAT
- Methods of NAT
    - Inside NAT
    - Outside NAT
- Implementation of NAT
    - Auto NAT
    - Manual NAT
- Types of NAT
    - Static
        - NAT
        - PAT
    - Dynamic
        - NAT
        - PAT
    - Twice NAT
    - Identity NAT

Cisco ASA ACL

Inside/ Outside ACL.
Object ACL.
Life of a Packet on the Cisco

Day 7 – 120mins

Cisco ASA Modes

- Transparent Mode
- Routed Mode

Cisco ASA Context

- Admin Context
- System Context
- User Context
- Deployment Guide

Day 8/9/10 – 360mins

Cisco High Availability

- ASA Failover
- Active/Standby
- Active/Active
- Verifying failover Operations
- Clustering ASA firewall
- Wireshark Capture

MODULE 2 :- VPN

Day 11 – 120 mins

- Cryptography Overview
- Hash Algorithm
- Encryption Overview
- Cryptanalysis
- Symmetric Encryption Algorithm
- Asymmetric Encryption Algorithm
- Digital Signatures
- PKI Overview
- PKI Operations

Day 12 – 120 mins

Fundamentals of VPN Technologies and IPSec

- What is VPN
- Introduction of Ipsec Terminology
- VPN Types
- Ipsec Features
- Confidentiality, Integrity, Availability and Anti-Replay.
- IPSec Protocols: - IKE, ESP and AH
- IKE Modes
- IKE Phases

- NAT-T
- Security Associations and Components
- How to configure cisco IOS as CA

Day 13/14 – 240 mins
Site to Site VPN
- What is Site-to Site VPN
- Wireshark Capture
- GRE
- Gre over IPSec
- Site-to-Site VPN Labs

Day 15/16 – 240mins
Deploying DMVPN
- DMVPN Overview
- DMVPN Terminologies
- NHRP
- MGRE
- DMVPN Working
- DMVPN Advantages and Limitations
- DMVPN Phase 1, 2 and 3
- DMVPN Labs
- DMVPN Redundancy – Dual Hub DMVPN Deployment

Day 17– 120 mins
Remote Access VPN
Remote Access VPN Introduction
Remote Access VPN modes
Client Mode Software
Client Mode Hardware
Remote Access with DVTI
Remote Access Working
Remote Access Labs

Day 18– 120mins
Deploying Clientless SSL VPN
- SSL VPN Overview

- SSL Handshake
- SSL VPN Modes
- Clientless and Thick Client
- SSL VPN Working
- SSL VPN Labs

Day 19 – 120 mins
Deploying Anyconnect VPN
- Anyconnect Overview
- Connection Policies
- Group Policies
- Split Tunnelling
- Client Profile
- Anyconnect Image Upload

Day 20 – 120 mins
GET VPN
- GET VPN
- GET VPN Terminologies
- GDOI
- Key Server (KS)
- KEK (Key Encryption Key)
- TEK (Traffic Encryption Key)
- Rekey Process (Unicast and Multicast)
- Group Member (GM)
- GET VPN Lab and Working

Day 21/22– 240mins
Flex VPN
- Introduction and Working IOS Flex VPN
- Flex VPN Labs

Day 19 – 120 mins
Deploying Anyconnect VPN
- Anyconnect Overview
- Connection Policies

- Group Policies
- Split Tunnelling
- Client Profile
- Anyconnect Image Upload

Day 20 – 120 mins
GET VPN
- GET VPN
- GET VPN Terminologies
- GDOI
- Key Server (KS)
- KEK (Key Encryption Key)
- TEK (Traffic Encryption Key)
- Rekey Process (Unicast and Multicast)
- Group Member (GM)
- GET VPN Lab and Working

Day 21/22– 240mins
Flex VPN
- Introduction and Working IOS Flex VPN
- Flex VPN Labs

MODULE 3 :- ISE
Day 23 – 120 mins
Introducing Cisco ISE Architecture and Deployment
- Security challenges
- Cisco ISE solutions Use Cases
- Secure Access Control
- ISE function
- ISE deployment components
- Context visibility
- ISE Personas
- ISE Licensing
- Infrastructure Components
- Identity Source

Day 24– 120mins

Fundamentals of AAA

- AAA.
- Radius Overview
- Radius Messages
- AV Pair
- IEEE 802.1x Primer.
- EAP
    - Types of EAP
    - Tunnel EAP
        - EAP-FAST
        - PEAP
        - EAP-TLS
    - Non-Tunnel EAP
        - EAP-MD5
        - MSCHAP
        - EAP GTC
    - Host Mode
    - Deployment of 802.1x

Day 25 – 120 mins

Bootstrap Network Access Devices

- Radius Commands
- AAA Commands

Day 26 – 120mins

Introduction to ISE GUI

- AD overview and configuration
- Admin Access
- Administrative Work
- Certificate in ISE
- Personas
- Probes for ISE
- Backup/Restore
- Maintenance

Day 27/28/29 – 360mins

Configuring Authentication and Authorization Policy

- Dot1x Authentication and Authorization
- MAB Authentication and Authorization
- AP Authentication and Authorization
- Device Administration

Configuring Posturing and Profiling

- Posturing
- Profiling of Devices

Cisco TrustSec and Its Component

- SGT/SGN Tagging
- Classification

- Propagation
  - Inline
  - SXP
- Enforcement ACL

Day 30/31 – 240 mins

Miscellaneous Topics

- Configuring the Cisco WLC and AP via GUI and CLI

Cisco VPN Authentication

- Cisco Anyconnect VPN authentication from ISE

Troubleshooting ISE

- Radius Live Log
- Diagnostic Validator
- Logs Management
- Radius Messages with Attribute Type

MODULE 4 :- NGFW

Day 32/33/34/35/36 – 480mins

Cisco NGFW

- What is NGFW and UTM

- Introduction of the SourceFire and Snort Rules
- Cisco Acquisitions
- FTD, NGIPS
- Off Box Management and On Box Management
- FMC and FDM GUI
- Licensing on the FMC
- Registration of FMC with FTD and NGIPS
- Configuration of the Sensor Interface
- Configuring NAT and Routing
  - Access Control Policy
  - SSL Policy
  - Pre-Filter Policy
  - Security Intelligence
  - DNS Policy
  - HTTP Response
  - Blocking Gambling and Social Networking Sites
  - Intrusion Policy
- Life of a Packet on the Cisco Next Generation Firewall

MODULE 5 :- WSA
Day 37/38/39 – 360mins
WSA/ESA
- Describe the Cisco WSA
- Install and verify the WSA
- Deploy proxy services for the WSA
- WCCP Services and Transparent Proxy
- Utilize authentication with the WSA
- Configure various policies for the WSA
- Enforce acceptable use using the WSA
- Defend against malware
- Configure data security
- Perform Administration and Troubleshooting of WSA's

MODULE 6 :- Cisco Stealth Watch and Cisco Umbrella

Day 40/41/42/43 – 480 mins
StealthWatch

- Introduction to Netflow
- Why we need Cisco StealthWatch
- Components of StealthWatch
- Advance Features of StealthWatch
- Configuring the Stealthwatch Management Console
- Using the Appliance Setup Tool with the SMC
- Configuring the Stealthwatch Flow Collector
- MODULE 7 :- CCIE LAB
- Finalising the Flow Collector Configuration
- Adding a Flow Collector to the SMC
- Exploring Where to Enable NetFlow on a Network
- Configuring NetFlow on Cisco IOS Routers/ASA/Switches
- An Example of a NetFlow Config Generator Tool
- Introduction to the Stealthwatch GUIs
- Organizing Hosts with Host Groups
- Analyzing Flows
- Enabling Cognitive Analytics
- Configuring Encrypted Traffic Analytics
- Creating Custom Policies
- Acknowledging Alarms
- Installing Stealthwatch Apps
- Capturing Packets for Diagnostics
- Logs, Stats, and Diagnostic Packs

Day 44/45/46 – 360mins
Umbrella
- Cisco Umbrella – Security Solution
- Implementing Cisco Umbrella
- Roaming Client
- Umbrella Roaming Security
- Reporting
- Active Directory User Sync

MODULE 7 :- CCIE LAB
CCIE LAB Preparation
1. 20 x 8hr Session = 120 Hrs.
2. Multiple Mock Labs
3. 80 Hrs Technology Labs
4. Preparation for the Design/Tshoot/Configuration
5. Self-Analysis Sheet