CCIE Security v6 Outline

Firewalls - ASA

- Basic Configuration
  - Interface configuration
  - Security Levels
  - Management [Telnet / SSH]
  - Routing [EIGRP, OSPF, BGP]
  - NAT [Dynamic/Static NAT, Dynamic/Static PAT, Manual NAT]
  - Access Policies
- Transparent firewall
  - Initialization
  - Access policies
  - Ethertype ACLs
- Redundancy
  - Redundant Interfaces
  - Port-channels
  - Security Contexts
  - Failover [Active/Standby & Active/Active]
  - Clustering [Spanned mode / Individual Interface mode]

Firewalls - Zone-Based

- Basic Configuration
  - Configuring Zones
  - Assigning Zones to Interfaces
  - Configuring Zone-pair Policies
  - Configuring Port-maps

Firewalls – Firepower Threat Defense [FTD]

- Basic Configuration
  - FMC & FTD Integration
  - Interface configuration
  - Zones
  - Routing [RIPv2, OSPF, BGP]
  - NAT [Dynamic/Static NAT, Dynamic/Static PAT, Manual NAT]
  - Access Policies
- Advanced Features
  - Geolocation Filtering
  - URL Filtering
  - AVC
  - Intrusion Policies
  - Logging and Alerting
  - Network AMP/File Policies
- Redundancy
  - High Availability (Failover)
  - Multi-Instance
- Transparent firewall
  - Initialization
  - Access policies

Virutal Private Networks [VPN]

- Basic VPNs
  - LAN-to-LAN IPSec VPNS [with NAT-T & without NAT-T]
  - GRE, GRE/IPSEC
  - Static-Virtual Tunnel interface [S-VTI]
- Advanced VPNs
  - DMVPN
  - VRF-Aware VPNs
  - VPNs using Certificates with Router as a CA Server
- IKEv2 VPNs
  - Using legacy method
  - Using S-VTI
- FLEX VPN
  - D-VTI /S-VTI based Site-To-Site VPN
  - D-VTI /S-VTI based Spoke-to-Spoke using NHRP
- ASA VPNs
  - Site-to-Site IPSec – NAT-T
  - Remote access
    - Web VPN
    - AnyConnect

Content Filtering using WSA & ESA

- WSA
  - Initialization
  - Integration with Routers/Switches/Firewall using WCCP
  - Configuring traffic policies
  - Configuring custom categories

- ESA
  - Initialization
  - Integration with E-mail servers and DNS
  - Configuring Mail flow policies
  - Configuring incoming mail filters

Router / Switch Security

- Router Security
  - NTP
  - uRPF
  - DHCP server / DHCP Relay Agent
  - Syslog
- Switch security
  - Port-security
  - DHCP snooping
  - ARP Inspection
  - Source guard
  - VLAN ACL

Identity Management using ISE

- Wired ISE
  - Configuring the relationship between Switch & ISE
  - Configuring Identity groups and users
  - Configuring Dot1x authentication with VLAN assignment and DACL
- Integrations
  - Integrating ISE & AD
  - Integrating ISE & FMC
  - Configuring Identity Policies
  - Configuring ACP based on AD Groups
- Device administration
  - Router/Switch Authentication
  - Router/Switch Exec & Command authorization
  - Router/Switch Accounting

Implementing SDA & Automation

- Fabric Provisioning & DNA Center Policies
  - Device Discovery & Inventory
  - Device Provisioning Templates
  - Security Groups
  - Virtual Networks (VNs)
  - Policy Administration
  - ISE Authentication and Authorization Policy
  - Provisioning Devices into Fabric
  - LAN Automation

- Host Onboarding & Communications
  - Configuring and verifying ISE and Cisco TrustSec
  - Onboarding Wired Endpoints
  - Macro Segmentation
  - Micro Segmentation

- Automation
  - Understanding Python Fundamentals
  - Configuring Network Devices using Python