

MODULE 1 :- FIREWALL

Day 1 - 120 mins

Introduction to the course

Course Material

Planning or CCIE

Discuss the Table of Content

Day 2 - 120 mins

Cisco ASA Overview

Firewall Overview

Firewall Technique

Stateless Packet Filtering

Stateful Packet Filtering

Cisco ASA Product Family

Introducing the Cisco ASA 5500-X Series NGFW

Introducing the Cisco ASA v

Different between UTM and NGFW

Day 3 - 120 mins

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 Level

Assigning the IP Address

Day 4 - 120 mins

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 - 240 mins

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



CCIE Security Syllabus

Day 7 - 120 mins

Cisco ASA Modes

Transparent Mode

Routed Mode

Day 8/9/10 - 360 mins

Cisco High Availability

ASA Failover

Active/Standby

Active/Active

Verifying failover Operations

Clustering ASA Firewall

Wireshark Capture

Cisco ASA ACL

Inside/Outside ACL.

Object ACL

Life of a Packet on the Cisco

Cisco ASA Context

Admin Context

System Context

User Context

Deployment Guide



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

What is VPN

Introduction of Ipvsec Terminology

VPN Types

Ipvsec Features

Confidentially, Integrity, Available 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

Fundamentals of VPN Technologies and IPSec

Day 13/14 - 240 mins

What is Site-toSite VPN

Wireshark Capture

GRE

Gre Over IPSec

Site-to-site VPN Labs

Site to Site VPN



CCIE Security Syllabus

Day 15/16 - 240 mins

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

Deploying DMVPN

Day 15 - 120 mins

Remote Access VPN Introduction

Remote Access VPN modes

Client Mode Software

Client Mode Hardware

Remote Access with DVTI

Remote Access Working

Remote Access Labs

Remote Access VPN

Day 18 - 120 mins

SSL VPN Overview

SSL Handshake

SSL VPN Modes

Clientless and Thick Client

SSL VPN Working

SSL VPN Labs

Deploying Clientless SSL VPN

www.acs-networks.com



CCIE Security Syllabus

Day 19 - 120 mins

Anyconnect Overview

Connection Policies

Group Policies

Split Tunnelling

Client Profile

Anyconnect Image Upload

Deploying Anyconnect VPN

Day 20 - 120 mins

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

GET VPN

Day 21/22 - 240 mins

Introducing and Working IOS Flex VPN

Flex VPN Labs

Flex VPN

Day 23 - 120 mins

Security Challenges

Cisco ISE Solutions Use Cases

Secure Access Control

ISE function

ISE deployment components

Context visibility



CCIE Security Syllabus

ISE Personas

ISE Licensing

Infrastructure Components

Identity Source

Introducing Cisco ISE Architecture and Deployment

Day 24 - 120 mins

AAA

Radius Overview

Radius Messages

AV Pair

IEEE 802.1xPrimer

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

Fundamentals of AAA



Day 25 - 120 mins

Radius Commands

AAA Commands

Bootstrap Network Access Devices

Day 27/28/29 - 120 mins

Dot1x Authentication and Authorization

MAB Authentication and Authorization

AP Authentication and Authorization

Device Administration

Configuring Authentication and Authorization Policy

Day 26 - 120 mins

AD Overview and configuration

Admin Access

Administrative Work

Certificate in ISE

Personas

Probes for ISE

Back/Restore

Maintenance

Introduction to ISE GUI

Configuring Posturing and Profiling

Posturing

Profiling of Devices

Cisco Trustsec and its Component

SGT/SGN Tagging

Classification



CCIE Security Syllabus

Day 32/33/34/35/36 - 480 mins

What is NGFW and UTM

Components of NGFW

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

Cisco NGFW

Day 30/31 - 240 mins

Configuration the Cisci WLC and AP via GUI and CLI

Miscellaneous Topics

Propagation

Inline

SXP

Enforcement ACL

Cisco Anyconnect VPN authentication from ISE

Cisco VPN Authentication

Troubleshooting ISE

Radius Live Log

Diagnostic Validator

Logs Management

Radius Messages with Attribute Type

Day 37/38/39 – 360 mins

Describe the Cisco WSA

Install and verify the WSA

Deploy proxy Services for the WSA

WCCP Services and Transport 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

WSA/ESA

Configuring the Policies

Access Control Policy

SSL Policy

Pre-Filter Policy

Security Intelligence

DNS Policy

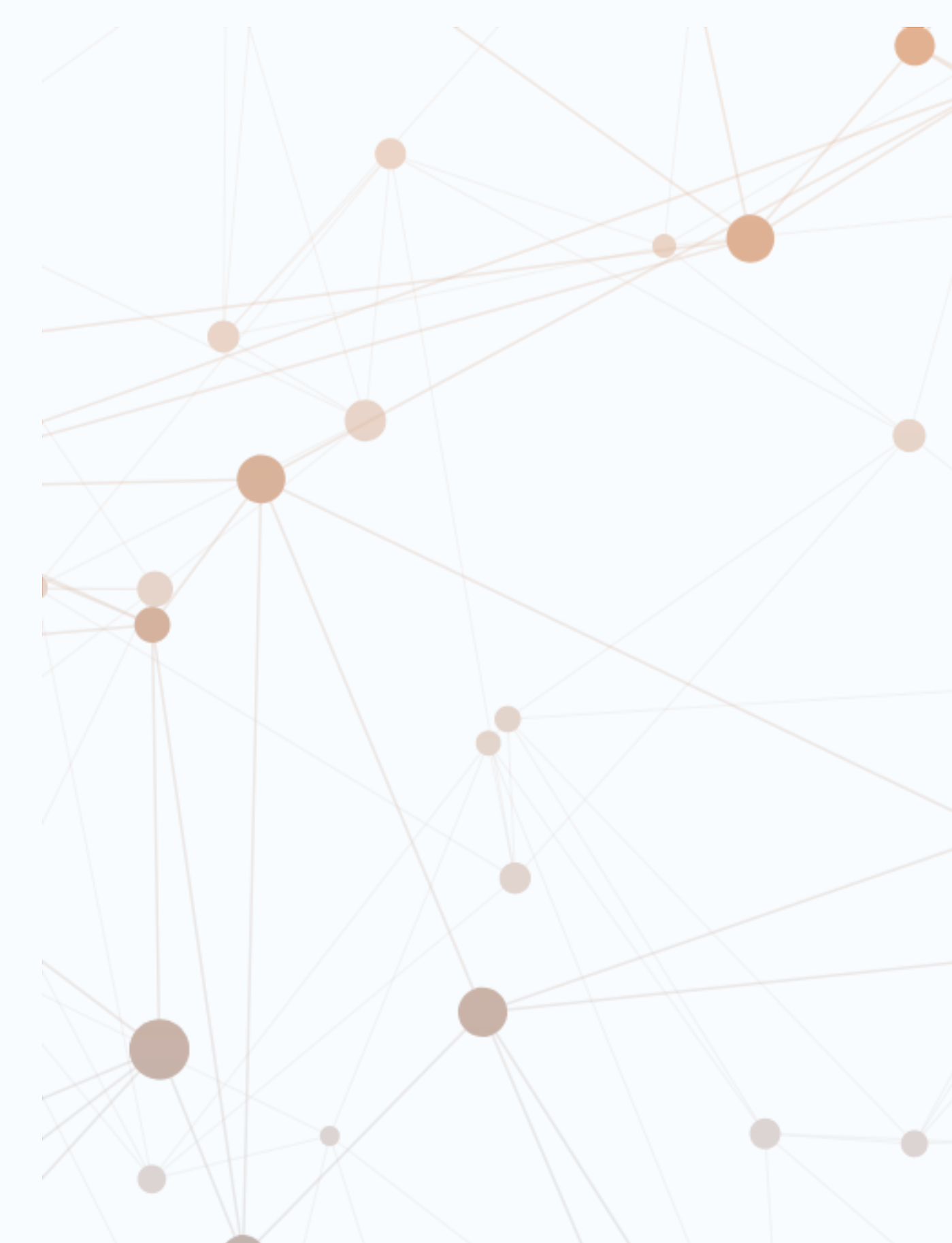
HTTP Response

Blocking Gambling and Social Networking Sites

Intrusion Policy

Life of a Packet the Cisco Next Generation Firewall

MODULE 5 :- WSA



MODULE 6 :- Cisco Stealth Watch and Cisco Umbrella

Day 40/41/42/43 - 480 mins

Stealth Watch

Introduction to NetFlow

Why we need Cisco StealthWatch

Components of StealthWatch

Advance Feature of StealthWatch

Configuring the StealthWatch Management

Using the Appliances Setup Tool with the SMC

Configuring the StealthWatch Flow Collector

Day 44/45/46 - 360 mins

Umbrella

Cisco Umbrella- Security Solution

Implementing Cisco Umbrella

Roaming Client

Umbrella Roaming Security

Reporting

Active Directory User Sync

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

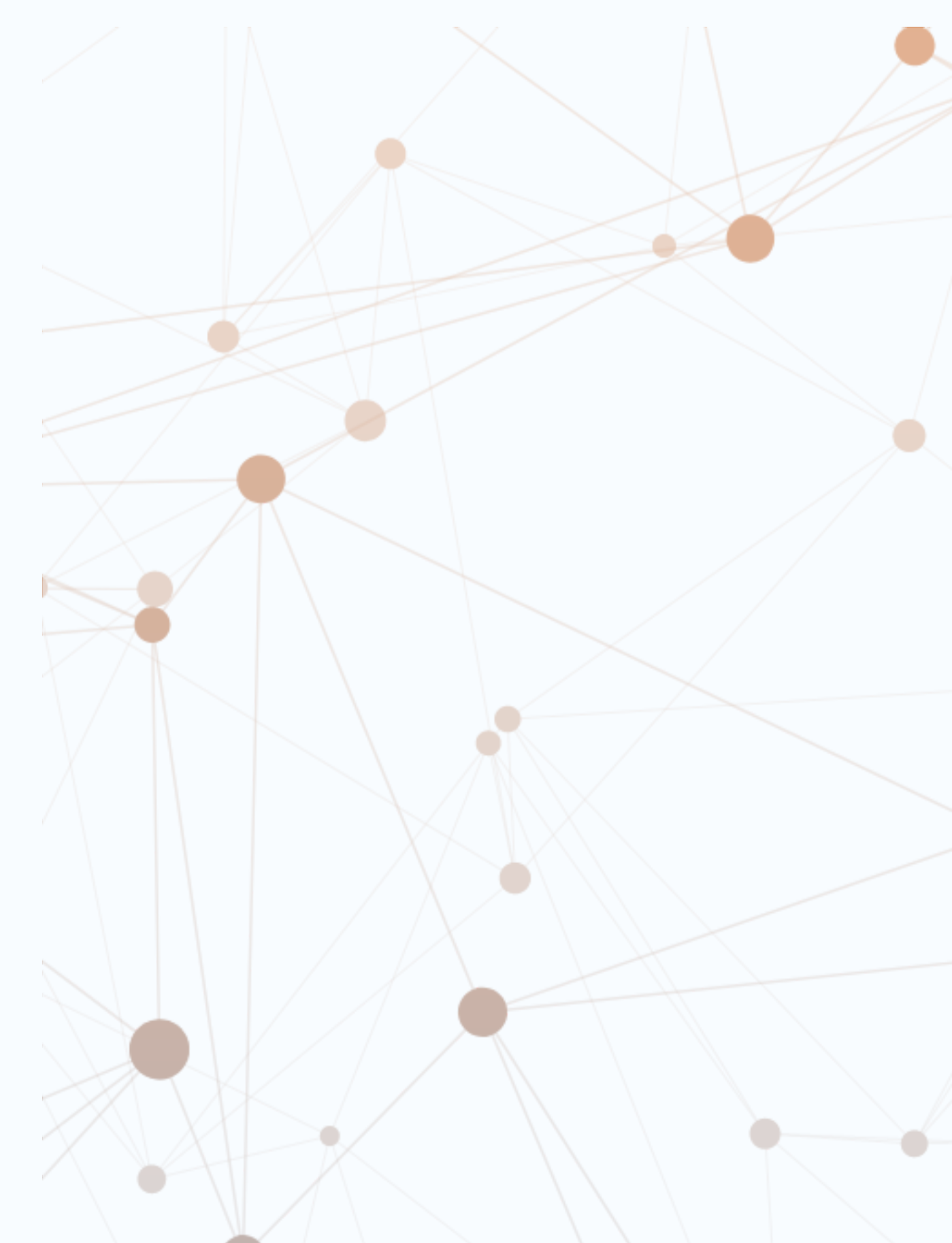
Organizing Hosts with Host Groups

Analyzing Flows

Enabling Cognitive Analytics

Configuring Encrypted Traffic Analytics

Creating Custom Policies



Acknowledge Alarms

Installing Stealthwatch Apps

Capturing Packets for Diagnostics

Logs, Stats, and Diagnostic Packs

MODULE 7 :- CCIE LAB

CCIE LAB Preparation

20x8hr Session =120 Hrs

Multiple Mock Labs

80 Hrs Technology Labs

Preparation for the Design/Tshoot/Configuration

Self-Analysis Sheet

