

Check Point VSX

Introduction

- Course Objectives
- The VSX Course
- Course Map
- Lab Setup
- First Classroom Lab Topology
- First Classroom Configuration MSP1
- First Classroom Configuration MSP2
- Course and Lab Terminology

VPN-1 VSX Architecture and Deployment

- Objectives
- Key Terms

VSX Overview

- Virtual/Physical Comparison
- Scaling the NGX Environment

VSX Building Blocks

- Virtual Systems
- Virtual Systems in Bridge Mode
- Virtual Routers
- Virtual Switches
- Interfaces

Managing the VSX Gateway

- Management Servers

Clustering in VSX

- VPN-1 Pro Clustering
- VSX Clustering

IP Address Allocation for VSX Implementation

- VSX Cluster IP Design
- Virtual IP Addresses
- VSX Packet Flow and Routing
- Routing from Virtual System to Virtual System

Overlapping IP Address-Space Support

Review

- Review Questions
- Review Answers

VSX Management Server Installation and Configuration

- Objectives

VSX Management

- SmartCenter Management Model
- Provider-1 Management Model

Check Point Licenses

- Obtaining Licenses
- Trial Licenses
- Understanding License Details
- VSX Provider-1 Bundle License
- VSX Bundle License for HA CMAs
- License Violations
- Replacing the Trial-Period License
- Upgrading Previous Deployments
- Supported Upgrade Paths for VSX
- Upgrading your License

VSX NGX System Requirements

- Optimal Performance Settings

Installing and Configuring VSX

Lab 1: Installing Provider-1 NGX for VSX on a SecurePlatform Machine

Lab 2: Installing the Provider-1 NGX MDG on Windows

Lab 3: Configuring the Admin CMA

Review

Review Questions

Review Answers

VSX Gateway Installation and Configuration

Objectives

Key Terms

VSX Gateway's Virtual Topology

Management of Virtual Devices

Lab 4: Installing the VSX Gateway on SecurePlatform

Virtual Systems

Unique State-Table Configuration

Security Policy Separation

Unique Configuration Parameters

Logging Functionality

VS Architecture

Management Virtual System

VSX Interface Support

Virtual Routers

External Virtual Router

Lab 5: Configuring the VSX Gateway

Management Server Communication

Provisioning and Network-Configuration Channel

Security Management

System Virtualization

Check Point Daemons

VS Policy Enforcement

Lab 6: Managing Virtual Systems

Lab 7: Configuring Unique Policies for Multiple Virtual Systems

Advanced Routing Configurations

Multiple External Virtual Routers

External and Internal Virtual Routers

Review

Review Questions

Review Answers

VSX and Layer 2 Communications

Objectives

Key Terms

Virtual Switch

Virtual Switch in a Cluster

Virtual Switch and Dynamic Routing using OSPF

Lab 8: Classroom Reconfiguration

Second Classroom Lab Topology

Second Classroom Configuration MSP1

Second Classroom Configuration MSP2

Lab 9: Implementing a Virtual Switch

Review

Review Questions

Review Answers

VSX and VLAN Tagging

Objectives

Key Terms

VLAN Technology

VLAN Tagging

VLAN Tag Composition

VLAN Trunking

VLAN Membership

Implicit/Explicit VLAN Membership

VLAN Configuration in a VSX Environment

Configuring Interfaces to Allow VLAN-Tagged Traffic

Associating VLAN Traffic with Specific Virtual Systems

Lab 10: Classroom Reconfiguration (Optional)

Third Classroom Lab Topology

Third Classroom Configuration MSP1

Third Classroom Configuration MSP2

Lab 11: Implementing VLANs with VSX (Optional)

Review

Review Questions

Review Answers

Deploying Virtual Systems in a Bridged Configuration

Objectives

Key Terms

Virtual System in Bridge Mode

Security for Virtual Systems in Bridge Mode

Core-Side Security

Clustering Virtual Systems in Bridge Mode (ClusterXL Only)

Review

Review Questions

Review Answers

Configuring VSX Gateway High Availability

Objectives

Key Terms

VSX Gateway High Availability

NGX Clustering

VSX Clustering

VSX State Synchronization

Synchronization Network

Synchronization Modes

Lab 14: Classroom Reconfiguration

Fourth Classroom Lab Topology MSP1

Fourth Classroom Configuration MSP1

Fourth Classroom Lab Topology MSP2

Fourth Classroom Configuration MSP2

Lab 15: Implementing VSX Gateway HA

Deploying Multiple VSX Gateways in an HA Environment

Creating VSX Gateway and EVR Cluster Objects

Completing VSX System Configuration

Configuring Customer Clusters

Review

Review Questions

Review Answers

Appendix A: VSX Management Through an EVR

Classroom Configuration