CCSE





Upgrading

Taking backup of a Security Gateway and Management Server Explain the differences between backups, snapshots, & upgrade-exports.

Perform Upgrade and troubleshoot a Management Server using a database migration.

Upgrade and troubleshoot a clustered Security Gateway deployment.

Backup and Restore Security Gateways and Management Servers

Managing Snapshots

Upgrade Tools

Backup Schedule Recommendations

Upgrade Tools

Performing Upgrades

Support Contract

Advanced Firewall

Check Point Firewall Infrastructure

GUI Clients

Management

Security Gateway

User and Kernel Mode Processes

CPC Core Process

FWM

FWD

CPWD

Inbound and Outbound Packet Flow

Inbound FW CTL Chain Modules

Outbound Chain Modules

Columns in a Chain

Stateful Inspection

Kernel Tables

Connections Table

Connections Table Format



Check Point Firewall Key Features

Packet Inspection Flow

Policy Installation Flow

Policy Installation Process

Policy Installation Process Flow

Network Address Translation

How NAT Works

Hide NAT Process

Security Servers

How a Security Server Works

Basic Firewall Administration

Common Commands

FW Monitor

What is FW Monitor

C2S Connections and S2C Packets fw monitor

Clustering and Acceleration

VRRP

VRRP vs ClusterXL

Monitored Circuit VRRP

Troubleshooting VRRP

Clustering and Acceleration

Clustering Terms

ClusterXL

Cluster Synchronization

Synchronized-Cluster Restrictions

Securing the Sync Interface

To Synchronize or Not to Synchronize

ClusterXL: Load Sharing

Multicast Load Sharing

Unicast Load Sharing

How Packets Travel Through a Unicast

LS Cluster

Sticky Connections

Maintenance Tasks and Tools

Perform a Manual Failover of the FW Cluster

Advanced Cluster Configuration





Management HA

The Management High Availability Environment

Active vs. Standby

What Data is Backed Up?

Synchronization Modes

Synchronization Status

SecureXL: Security Acceleration

What SecureXL Does

Packet Acceleration

Session Rate Acceleration

Masking the Source Port

App Layer Protocol - e.g with HTTP HTTP 1.1

Factors that Preclude Acceleration

Factors that Preclude Templating (Session Acceleration)

Packet Flow

VPN Capabilities

CoreXL: Multicore Acceleration

Supported Platforms and Features

Default Configuration

Processing Core Allocation

Allocating Processing Cores

Adding Processing Cores to the Hardware

Allocating an Additional Core to the SND

Allocating a Core for Heavy Logging

Packet Flows with SecureXL Enabled

Advanced User Management

User Management

Active Directory OU Structure

Using LDAP Servers with Check Point

LDAP User Management with User Directory

Defining an Account Unit

Configuring Active Directory Schemas

Multiple User Directory (LDAP) Servers

Authentication Process Flow

Limitations of Authentication Flow

User Directory (LDAP) Profiles



Troubleshooting User Authentication and User Directory (LDAP)
Common Configuration Pitfalls
Some LDAP Tools
Troubleshooting User Authentication
Identity Awareness
Enabling AD Query
AD Query Setup
Identifying users behind an HTTP Proxy
Verification of a log-on AD user at the source IP

Advanced IPsec VPN and Remote Access

Advanced VPN Concepts and Practices

Checking the source computer OS

IPsec

Internet Key Exchange (IKE)

IKE Key Xchange - P1/P2

Using SmartView Tracker

Remote Access VPNs

Connection Initiation

Link Selection

Multiple Entry Point VPNs

How Does MEP Work

Explicit MEP

Implicit MEP

Tunnel Management

Permanent Tunnels

Tunnel Testing

VPN Tunnel Sharing

Tunnel-Management Configuration

Permanent-Tunnel Configuration

Tracking Options

Advanced Permanent-Tunnel configuration

VPN Tunnel Sharing Configuration

Troubleshooting-VPN Encryption Issues



VPN Debugging commands
vpn debug Command
vpn debug on | off
vpn debug ikeon | ikeoff
vpn Log Files
vpn debug trunc
VPN Environment Variables
vpn Command
vpn tu
Compare Sas

Auditing and Reporting

Standards for Auditing and Reporting
Introduction to SmartEvent
SmartEvent Arch
Process of Component Communication
Event Policy User-Interface
Concept of SmartReporter

