

Palo Alto (PCNSA)

Palo Alto Network Certified
Network Security Administrator



PALO ALTO



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Paloalto Intro and Deployment Options

1. Palo Alto Firewalls overview
2. Deployment Options
3. Layer 2 deployment
4. Layer 3 deployment
5. Layer 2 deployment and spanning tree
6. Layer 2 Features and Limitations with demonstration
7. Virtual Wire deployment
8. Virtual Wire IP Classify
9. Tap Mode deployment
10. Initial Configuration

Basic Administrative Tasks

1. Basic Settings
2. Changes and Committing changes
3. Local Administrator Account with External Authentication
4. External Authentication Using Radius Server
5. System software Upgrade / Downgrade, global protect client install
6. Dynamic Updates
7. Interface Management Profile

Threat Prevention

1. Security Zones and Traffic Processing
2. Packet Flow
3. Rules based on application using App-ID
4. Security Policy Rules for applications not running on application default ports
5. Application Override Policies - Custom Applications
6. URL Filtering Rules and Options
7. Custom URL Category
8. Using Address Objects
9. Using Service Objects
10. Using Dynamic Block Lists
11. Using Tags



User ID integration

User ID integration

Installing User ID agent on AD

Configure the firewall to use user ID agent

Configuring integrated User ID agent

Group to User ID mapping

Making decisions based on user group membership example

Identifying Users using Captive Portal Redirect Mode

User ID mapping using CaptivePortal in Transparent Mode

Captive Portal using Browser Challenge SSO example

Relaying UserID information using XML example

Threat Prevention

AntiVirus configuration

Anti Spyware and DNS Sinkholing

Creating custom Anti-Spyware signatures

Configuring Vulnerability Protection and Custom Signatures

File Policies

Configuring Wildfire

Wildfire Portal

Configuring Data Filtering - Data Leakage Prevention

Data leakage demo - Credit Card Numbers Detection and Blocking

Denial Of Service Protection

Implementing Zone and Host Denial Of Service Protection

SSL Decryption

Certificates, Certificate of Authorities, and Decryption Concepts

SSL Forward Proxy - Trust Certificate - Local Cert on PaloAlto

SSL Forward Proxy - Untrust Certificate - Local Cert on PaloAlto

SSL Forward Proxy Using an Internal PKI Subordinate CA

SSL Forward Proxy Blocking Threats in Encrypted Traffic - Demo

SSL Inbound Inspection



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Network Address Translation

Understanding Dynamic NAT and port
Dynamic NAT and port configuration examples
Dynamic NAT and port Egress Interface Multiple ISP consideration
What is the difference between Dynamic IP and Dynamic IP and port with examples
Static NAT concepts and example
Static NAT with Port Translation Use Case and scenario example
Destination NAT and Destination NAT with Port Address Translation
UTurn NAT with port translation
Source and Destination NAT
New in Version 8.1 Dynamic Destination NAT

Basic and Intermediate Networking

DHCP Services
Default Route
OSPF Routing
BGP Routing
BGP Advertise
Using Multiple Virtual Routers
Multiple Virtual Routers NAT and Security Policy Example
Multiple ISP Failover Scenario using BGP
Multiple ISP Failover using floating Static Route
Multiple ISP Failover using Policy Based Forwarding
Multiple ISP Load Sharing using Policy Based Forwarding

High Availability

High Availability Overview
Active Passive Configuration Configuration Example
High Availability Active / Passive different failure scenarios
HA1 HA2 heartbeat
High Availability Active / Passive HA1-backup
HA2-backup configuration
High Availability active / passive link and path monitoring, HA operations
Active Active High availability intro, Floating IP
Active Active with Floating IP configuration example



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IPv6 Config

IPv6 structure, addressing, unicast (link local, site local, global), multicast

IPv6 neighbor discovery, icmpv6, dhcpv6

IPv6 Stateless, Stateful DHCP, M Flag O Flag concepts

IPv6 basic firewall configuration example

IPv6 Network Prefix Translation NPTv6 configuration example

IPv6 NAT64 example connecting IPv6 only network to IPv4 Internet example

IPv6 NAT64 example connecting IPv4 only network to IPv6 only network

IPv6 dhcpv6 relay on PaloAlto firewall example

IPv6 issues related to Windows and policy based on IPv6 addresses, example

VPN IPsec configuration details

VPN IPSEC L2L intro and configuration steps

VPN IPSEC L2L PaloAlto to PaloAlto Example

VPN IPSEC Site To Site Hub Spoke, Dynamic IP address example

VPN IPSEC L2L Paloalto to Cisco ASA configuration example

VPN IPSEC L2L Paloalto to Cisco ASA with Dynamic IP address

IPsec Quick mode negotiation understanding

IKE main mode more details, explanation

Understanding IPsec Quick mode with PFS

IKE security policies required and NAT-T explanation / example

IKEv1 main mode versus aggressive mode, understand the difference

IKEv2 intro and differences between IKEv2 and IKEv1

IKEv2 Auth phase, IPsec associations, differences between IKEv1 and IKEv2



Global Protect

Global Protect Setup example

Getting a free publicly trusted ssl certificate to test Global Protect

Setting up global protect for on-demand mode, discover agent settings

Dual Factor Authentication Using Open Source Solution PrivacyIdea demo

Joining a windows PC to AWS windows domain - vpn tunnel to AWS

Installing CA services on windows, certificate enrollment policy service, OCSP

Global Protect Authentication using Dual Factor Token and Computer Certificate

Global Protect Always On User-Logon and Pre-Logon configuration

Global Protect Pre-Logon with User Logon (on demand) configuration example

Global Protect HIP Check

Panorama

Panorama concepts, hardware, template and template stack

Panorama Device Group Concepts Part 1

Panorama Device Group and Object Inheritance

QoS

QoS Introduction

QoS Download Upload Bandwidth Restriction

QoS Classification and Marking

QoS Classification and Markings Example

IPSec QoS lab setup overview

Bandwidth Throttling IPSec tunnels demo

IPSec Tunnel QoS traffic classification

IPSec Tunnel QoS controlling traffic bidirectional

IPSec QoS Copy ToS Header Explanation and demo

Using the CLI to show QoS details

