Quick inside. Course Overview

Course Introduction

- Welcome
- IMPORTANT. Please Read!
- Quick inside. Course Overview
- Setting Up the Environment
- Getting Course Resources

Quick inside. Course Overview

Netfilter/Iptables basics
- Netfilter/Iptables Introduction
- Chains and Tables
- Chain Traversal for Incoming Packets
- Chain Traversal for Outgoing Packets
- Chain Traversal for Routed Packets

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iptables command

- Basic Usage

- Iptables Commands

- Where Do We Write Iptables Rules

- A vs -I

- Listing the Firewall

- Setting Default Policy

- Deleting the Firewall

- Loading at Boot Time iptables-save, iptables-restore

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Basic Matches
- Filter by IP Address
- Filter by IP Range and Address Type
- Filter by Port
- Filter by Protocol and Type
- Filter by TCP Flags
- Assignment: Allow Routed DNS Queries to a Single DNS Server
- Assignment Answer: Allow Routed DNS Queries to a Single DNS Server

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Advanced Matches
- Connection Tracking (Stateful Firewall)
- NOTRACK & RAW table
- Filter by MAC Address
- Filter by Date & Time
- DoS Protection - connlimit
- The Limit Match
- Building a Dynamic Database of Blacklisted IP's
- Quota
- Mangle Packets
- Filter by Country (geoip)

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V. Targets
- ACCEPT
- DROP
- REJECT & PORTS
- LOG
- TEE
- REDIRECT: Setting a Transparent Proxy

Quick inside. Course Overview

NAT & Port Forwarding
- SNAT & MASQUERADE
- DNAT (Port Forwarding)
- Assignment: Load-Balancing NAT Traffic using 2 Internet Service Providers
- Assignment Answer: Load-Balancing NAT Traffic using 2 Internet Service Providers

Quick inside. Course Overview

User-defined CHAINS
- Description, Options, Examples
- Refactoring

Quick inside. Course Overview

Firewall Automation using Shell Scripts
Shell Scripts Basics
Script that Blocks an IP or a Port
Script the Automates Firewall Creation and Management
Assignment: Script that blocks or permits traffic from an IP/Network
Assignment Answer: Script that blocks or permits traffic from an IP/Network