SecureNinja
The Cybersecurity Experts

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Hands-on IPv6 Implementation

Course Description

SecureNinja's IPv6 Fundamentals and Implementation (3) three-day hands-on training boot camp provides the latest skills and knowledge regarding IPv6 technology. The main advantage of IPv6 over IPv4 is its larger address space. The length of an IPv6 address is 128 bits, compared to 32 bits in IPv4 will enhance VoIP, QoS, and security within your organization. This course will deep dive into such areas as Access Control Lists, IP Security and DNS implementation within an IPv6 network.

All students will gain real-world experience with IPv6 during their hands-on lab exercises as they create a plan that covers IPv6 implementation for DNS, mobility, multicasting, security, transition mechanisms, routing, and other IPv6 routing protocols. The IPv6 Fundamentals and Implementation training boot camp are concluded by a major technical hands-on lab where the class is divided into teams and gets to design and implement IPv6 according to 5 scenarios (the last scenario simulates merging of 2 organizations).

Topics Covered

- Fundamentals of IPv6
- The difference between IPv4 and IPv6
- IPv6 Internals (Functionality of the various sub-protocols of IPv6)
- Implementing IPv6
- Planning IPv6 Implementation

Who would benefit

IT professionals responsible for the migration from IPv4 to IPv6 protocol-based network environments such as:

- IT Security Professionals
- Network Admin staff
- VoIP Professionals
- LAN / WAN personnel
- Software Designers
- IT Managers

Prerequisites

TCP/IP Networking

Course Length

24 Hours

SecureNinja's IPv6 Fundamentals and Implementation - Course Details

1. Fundamentals of IPv6

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- IPv4 Limitations
- Understanding IPv6 Addressing
- IPv 6 Benefits

2. IPv6 Internals (Functionality of the various sub-protocols of IPv6)

- Fundamental SecurityCisco packet filtering, IPSec in IPv6

3. Implementing IPv6

- Various Auto/Manual Host Configuration approaches
- Configuring IPv6 DNS
- Configuring DHCPv6
- IPv6 configuration on Windows and Linux hosts
- Configuring IPv6 ACLs
- Implementing IPv6 Routing Protocols
- Troubleshooting IPv6

This is concluded by a major technical hands-on lab where the class is divided into teams and get to design and implement IPv6 according to 5 scenarios (the last scenario simulates merging of 2 organizations

4. Planning IPv6 Implementation

- Preparing the Business Case
- Identifying Business & Technical Requirements
- Identifying Business & Technical Constraints in addition to Cost and Time Constraints
- Developing an Implementation Plan
    - IPv6 Network Design
    - Implementation Approach

This is a team exercise where each team creates and presents the plan to the class