

## COURSE OUTLINE

# HCIA-Security

**Duration:** 5 Days

**Prerequisites:**

- Basic knowledge of TCP/IP
- Basic knowledge of Routing and Switching

**Course Objectives:**

On completion of this program, the participants will be able to:

- Understand the basic concepts of information security.
- Understand information security common specifications.
- Configure network devices Know some common security attacks.
- Understand the basic process of security operation and maintenance.
- Understanding of safety analysis methods and evidence collection methods.
- Understand basic firewall technology and configuration.
- Understand NAT technology.
- Understand firewall dual-system hot back principles.
- Know basic network instructions.
- Know the basic component of operating system.
- Understanding the common risks and defense methods of operating systems.
- Understand encryption principles.
- Understand encryption application and practice the related configurations.

**Intended Audience:**

- Security operation and maintenance personnel
- Those who hope to obtain HCIA-Security V3.0 certificate

**Course Outlines:**

1. Basic Network Concepts
  - TCP/IP Architecture Common Network Protocols
2. Information Security Standards and Specifications
  - Information Security Standards and Specifications
  - ISO 27001 ISMS
  - Graded Protection of Information Security
  - Other Standards
3. Common Network Devices
  - Basic Network Devices
  - Initial Device Login
4. Threat Defense and Information Security Development Trends
  - Security Threat Defense
  - Information Security Awareness
  - Information Security Development Trends
5. Common Information Security Threats
  - Current Situation of Information Security Threats
  - Threats to Network Security
  - Threats to Application Security
  - Threats to Data Transmission and Device Security
6. Basic Concepts of Information Security
  - Information and Information Security
  - Information Security Risks and Management

### SECURITY OPERATION AND ANALYSIS

1. Cyber Security Emergency Response
  - Background of Cyber Security Emergency Response
  - Overview of Cyber Security Emergency Response
  - Process of Cyber Security Emergency Response
2. Introduction to Security Operations
  - Concept of Security Operations
  - Basic Requirements for Security Operations
  - Content of Security Operations
3. Data Monitoring and Analysis
  - Proactive Analysis
  - Passive Collection
  - Data Analysis

4. Digital Forensics
  - Cyber crime
  - Overview of Digital Forensics
  - Digital Forensic Process
5. Case Workshop
  - Discussion on Information Security Deployment Procedure
  - Discussion on Cyber Security Cases

### NETWORK SECURITY BASIS

1. Firewall User Management
  - User Authentication and AAA Technical Principles
  - User Authentication Management and Application
2. Overview of Intrusion Prevention
  - Intrusion Overview
  - Intrusion Prevention System Overview
  - Network Antivirus Overview
3. Introduction to Firewalls
  - Firewall Overview
  - Principle of Firewall Forwarding
  - Firewall Security Policies and Application
  - ASPF
4. Dual-System Hot Standby
  - Technical Principles of Dual-System Hot Standby
  - Basic Networking and Configuration of Dual-System Hot Standby
5. Network Address Translation
  - NAT Principle
  - Source NAT
  - Server Mapping
  - Application Scenarios

### OPERATION SYSTEM AND HOST SECURITY

1. Host Firewalls and Antivirus Software
  - Windows Firewalls
  - Linux Firewalls
  - Antivirus Software
2. Operating System Overview
  - Operating System 101
  - Windows Operating System
  - Linux Operating System
3. Common Server Types and Threats
  - Server Overview
  - Common Server Software
  - Server Security Threats
  - Vulnerabilities and Patches

### APPLICATION OF ENCRYPTION AND DECRYPTION

1. Public Key Infrastructure (PKI) Certificate System
  - Digital Certificate
  - PKI System Structure
  - PKI Implementation
2. Application of Cryptographic Technologies
  - Application of Cryptography
  - VPN Overview
  - VPN Configuration
3. Encryption and Decryption Mechanisms
  - Encryption Technology Development
  - Encryption and Decryption Mechanisms
  - Common Encryption and Decryption Algorithms

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