

## **CompTIA Security+ 2007 Edition**

- **Course Number:** SY0-101
- **Length:** 5 Day(s)

### **Certification Exam**

This course will help you prepare for the following exam:

- **CompTIA Exam SY0-101:** Security+

### **Course Overview**

Students are introduced to essential security concepts, including passwords, authentication, firewalls, cryptography, and web security among others. Guidance is provided on network attacks, TCP/IP Hijacking, Denial of Service attacks and more.

### **Prerequisites**

Network+ or equivalent experience is recommended.

### **Audience**

This course is geared toward IT professionals who have a responsibility to protect networks from security breaches.

### **Course Outline**

- Level 1 - General Security Concepts
- Goals of a Secure Network
- Access Control
- Bell-LaPadula Model
- Lattice-Based Models
- Discretionary Access Control
- Demo - Discretionary Access Control List
- Role-Based Access Control
- Authentication
- Kerberos
- CHAP
- Demo - CHAP Settings
- Certificates
- Username/Password
- Demo - Password Policies
- Tokens
- Mutual Authentication
- Biometrics
- Auditing
- AAA Examples
- Demo - Auditing
- Disabling Non-Essential Services
- Disabling Non-Essential Protocols

- Disabling Non-Essential Systems
- Disabling Non-Essential Processes
- Demo - Disabling Non-Essential Services
- Network Attacks
- Sniffing
- Demo - Vulnerability Scans
- Denial of Service (DoS)
- SYN Attacks
- Demo - DoS Attacks
- Back Door
- Spoofing
- Demo - Man in the Middle Attack
- Replay Attacks
- TCP/IP Hijacking
- Weak Keys
- Social Engineering
- Birthday Attack
- Password Guessing
- Demo - Brute Force Password Attack
- Software Exploitation
- Buffer Overflows
- Malicious Code
- Logic Bombs
- Demo - Buffer Overflow
- Level 1 Review
- Level 2 - Communication Security
- Remote Access
- EAP
- Virtual Private Network (VPN)
- RADIUS
- PPTP
- SSH (Secure Shell)
- IPSec
- Demo - IPSec
- Remote Access Vulnerabilities
- E-mail
- Demo - PGP Keys
- E-mail Vulnerabilities
- Spam
- Web Security
- Secure Sockets Layer (SSL)
- Transport Layer Security (TLS)
- Demo - HTTPS
- Instant Messaging
- Web Vulnerabilities
- Demo - Security Settings in IE
- Web Vulnerabilities Cont.
- Directory Services
- SSL/TLS
- File Transfer Protocol (FTP)
- Wireless Communications
- 802.11x

- WEP
- Wireless Vulnerabilities
- Level 2 Review
- Level 3 - Infrastructure
- Firewalls
- Application Level Firewalls
- Network Level Firewalls
- Routers
- Switches
- Wireless
- Modems
- RAS
- Demo - Routing and Remote Access Services
- Telecom/PBX
- IDS
- Network Monitoring/Diagnostics
- Workstations
- Servers
- Coax
- UTP/STP
- Fiber
- Removable Media
- Tape
- CDR
- Hard Drives
- Diskettes
- Flashcards
- Security Zones
- VLANS
- Network Address Translation (NAT)
- Tunneling
- Network Based IDS
- Active Detection
- Incident Response
- Demo - Server Hardening
- Network Hardening
- Application Hardening
- Demo - SQL Injection
- Level 3 Review
- Level 4 - Basics of Cryptography
- Algorithms
- Symmetric
- CIA
- Digital Signatures
- Demo - Using Keys
- Non-Repudiation
- Certificates
- Demo - Examples of Certificates
- Certificate Contents
- Revocation
- Trust Models
- Demo - Certificate Services

- Standards and Protocols
- Key/Certificate Management
- Expiration
- Key Usage
- Level 4 Review
- Level 5 - Physical Security
- Access Control
- Physical Barriers
- Social Engineering
- Wireless Threats
- Disaster Recovery
- Backups
- Demo - Backups
- Tape Rotation & Testing
- Off-Site Storage
- Disaster Recovery Plan
- Business Continuity
- Utilities
- Security Policy
- Privacy
- Separation of Duties
- Service Level Agreements
- HR Policy
- Forensics
- Chain of Custody
- Risk Identification
- Risk Assessment
- Vulnerabilities
- Education - Users, HR, Execs
- Communication
- Education
- Documentation
- Systems Architecture
- Change Documentation
- Logs and Inventories
- Classification
- Level 5 Review
- Level 6 - Implementing Web Security
- Securing the Web Client
- Demo - Securing the Web Client
- Configuring OS and Network Security
- Enhancing Web Server Security
- Issuing and Managing Certificates
- Demo - Certificate Requests
- Protecting Networks with Firewalls
- Security Management
- Level 6 Review
- Level 7 - PKI in the Enterprise
- Trust in a Digital World
- Foundations of Cryptography
- PKI Components
- Level 7 Review

- Course Closure