

Cybersecurity

• Introduction to cybersecurity

- What is Cybersecurity?
- CIA Triad
- Identification and Authentication, Authorization, and Accounting (AAA)
- Threat Actors
- Malwares
- Common Types of Cybersecurity Attacks
- Social engineering

CompTIA Security+ SY0-601 Certification Study Guide

• Network

- Network Devices
- OSI Model
- TCP/IP
- Protocols
- IP Subnetting
- Network Segmentation
- Zero Trust Security Model
- Firewalls
- Proxies
- VPN
- Wireless Cryptographic Protocols

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• Operating Systems

- How Operating Systems Works ?
- Windows 7 / 10 / 11
- Windows Server
  - Active Directory
- Linux

• Web

- How the Web Works ?
- HTTP Methods
- HTTP Headers
- Cookies
- HTTP response status codes
- Client Server Architecture

• Cryptographic

- Cryptosystem
- Key Exchange
- Encryption
  - Symmetric Algorithms
  - Asymmetric Algorithms
- Hashing
- Steganography

• Virtualization and Cloud Computing

- Virtualization
- Cloud Workloads
- Service Models
- Deployment Models
- Regions and Availability Zones
- Virtual Private Cloud (VPC)
- Security Groups & Policies

• Programming Language

- PHP
- Python
- Javascript
- SQL

• Shell Scripting

- Bash
- Powershell

• Vulnerabilities

- Web Vulnerabilities
  - OWASP TOP 10
- Network Vulnerabilities & Attacks
- Zero-Day
- Third-Party Risks

• Penetration Testing

- What is Penetration Testing ?
- Types of Penetration Testing
- Testing Methodology
- SAST & DAST
- Vulnerability Scans
- Threat Assessment

• Advanced

- Active Directory Attacks
- Reverse Engineering
- Buffer overflow
- Malware analysis

• Must know

- Cyber Kill Chain
- MITRE ATT&ck

• Blue Team & Red Team

- Red Team
  - Red Teaming Methodology
  - Red Teaming Tools
- Blue Team
  - SOC
  - Digital Forensics
  - SIEM / CASB
  - Incident Response
  - Log Management & Analysis
  - Blue Team Tools

• Regulations, Standards, and Frameworks

- What is a Cybersecurity Framework ?
- The NIST Framework
- CIS Benchmarks
- ISO 27001 and ISO 27002
- PCI DSS
- HIPAA
- GDPR

Courses, Books and Cert Path

- Learning platforms
  - LetsDefend
  - Portswigger
  - TryHackMe
  - HackTheBox
- Youtube
  - 13Cubed
  - Computerphile
  - PwnFunction
  - LiveOverflow
  - The Cyber Mentor
  - HackerSploit
  - John Hammond
  - Free4arab
- Books
  - Cybersecurity For Dummies
  - Social Engineering: The Science of Human Hacking
  - The Art of Invisibility
  - Ghost In The Wires
  - Kali Linux Hacking: A Complete Step by Step Guide by Ethem Mining
  - The Hacker Playbook 3: Practical Guide to Penetration Testing
  - Penetration Testing: A Hands-On Introduction to Hacking
  - Practical Malware Analysis: The Hands-On Guide to Dissecting Malicious Software
- Some of Certifications Learning Path
  - CCNA
  - CompTIA Network +
  - CompTIA Security +
  - GIAC (GISF)
  - CISSP
  - eJPT
  - OSCP