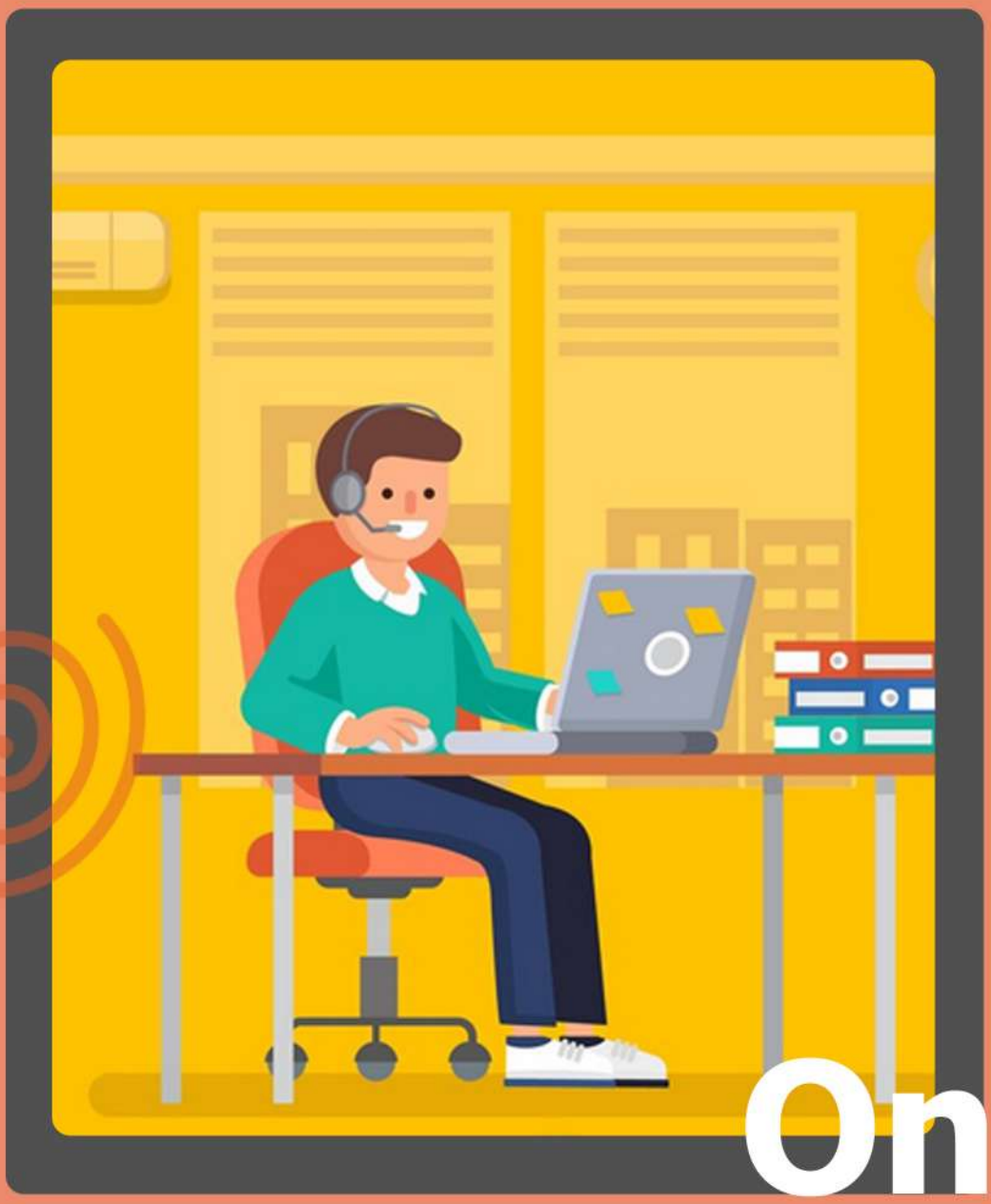
Palo Alto Networks Certificated Cybersecurity Entry-Level Technician

Zetlan Technologies



Online Course

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Course Modules

1. **Fundamentals of Cybersecurity**

- Distinguish between Web 2.0 and 3.0 applications and services
- Describe port-scanning methodologies and their impact
  - Nonstandard ports
  - Identify applications by their port number
- Recognize applications used to circumvent port-based firewalls
- Differentiate between common cloud computing service models
  - SaaS
  - PaaS
  - IaaS
- Describe the business processes of supply-chain management
- Describe the vulnerabilities associated with data being stored
  - Describe roles within a SaaS environment
  - Describe security controls for SaaS applications
- Describe the impact of governance, regulation, and compliance
  - Differentiate between compliance and security
  - Identify major cybersecurity laws and their implications
- Describe the tactics of the MITRE ATT&CK framework
- Identify a leading indicator of a compromise
  - Describe how to use CVE
  - Describe how to use CVS

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- Identify the different attacker profiles and motivations
  - Dscb the diff value levels of the info that needs to be protected
- Describe the differt phases and events of the cyberattack lifecycle
  - Describe the purpose of command and control (C2)
- Identify the characteristics, capabilities, and appropriate actions
- Differentiate between vulnerabilities and exploits
  - Differentiate between various business email compromise attacks
  - Identify different methodologies for social engineering
  - Identify the chain of events that result from social engineering
- Identify what chain of events follows an attack
- Differentiate between the functional aspects of bots and botnets
  - Describe the type of IoT devices that are part of a botnet attack
- Differentiate the TCP/IP roles in DDoS attacks
  - Differentiate between DoS and DDoS
- Describe advanced persistent threats
- Describe risks with Wi-Fi networks
  - Differentiate between common types of Wi-Fi attacks
  - Describe how to monitor your Wi-Fi network
- Describe perimeter-based network security
  - Identify the types of devices used in perimeter de
- Describe the Demilitarized Zone (DMZ)

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- Describ the transitn from a trusted netwrk to an untrusted network
  - Differentiate between North-South and East-West zones
- Describe Zero Trust
  - Identify the benefits of the Zero Trust model
  - Identify the design principles for Zero Trust
  - Describe a microperimeter
  - Differentiate between Trust and Untrust zones
- Describe the integration of services for network, endpoint, & cloud
- Identify the capabilities of an effective Security Operating Platform
  - Describe the components of the Security Operating Platform

2. Network Security Components

- Differentiate between hubs, switches, and routers
  - Given a network diagram, Identify the icons for hubs, switches..
- Describe the use of VLANs
- Differentiate between routed and routing protocols
- Differentiate between static and dynamic routing protocols
  - Differentiate between link state and distance vector
- Identify the borders of collision and broadcast domains

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- Differentiate between different types of area networks
  - WAN
  - LAN
- Describe the advantages of SD-WAN
- Describe the purpose of the Domain Name System (DNS)
  - Describe how DNS record types are used
  - Identify a fully qualified domain name (FQDN)
  - Describe the DNS hierarchy
- Differentiate between categories of IoT devices
  - Identify the known security risks and solutions associatd with IoT
- Identify IoT connectivity technologies
- Differentiate between IPv4 and IPv6 addresses
  - Describe binary-to-decimal conversion
  - Describe IPv4 CIDR notation
  - Describe IPv4 classful subnetting
  - Given a scenario, identify the proper subnet mask
  - Describe the purpose of subnetting
  - Describe the structure of IPv4 and IPv6
  - Describe the purpose of IPv4 and IPv6 addressing
- Describe the purpose of a default gateway
- Describe the role of NAT

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- Describe OSI and TCP/IP models
  - Identify the order of the layers of both OSI and TCP/IP models
  - Compare the similarities of some OSI and TCP/IP layers
  - Identify the protocols and functions of each OSI layer
- Describe the data-encapsulation process
  - Describe the PDU format used at different layers
- Identify the characteristics of various types of network firewalls
  - Traditional firewalls
  - Next-generation firewalls
  - Differentiate between NGFWs and traditional firewalls
- Describe the application of NGFW deployment options
- Differentiate betwn intrusion detection systems & intrusion prevent
  - Differentiate betwn knowledge-based & behavior-based systems
- Describe virtual private networks
  - Describe when to use VPNs
- Differentiate between the different tunneling protocols
- Describe the purpose of data loss prevention
  - Classify different types of data (e.g., sensitive, inappropriate)
- Differentiate the various types of security functions

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- Describe endpoint security standards
  - Describe the advantages of endpoint security
  - Describe host-based intrusion detection/prevention systems
  - Differentiat betwn signature-based & behavioral-based malware
  - Describe application block and allow listing
  - Describe the concepts of false-positive and false-negative alerts
  - Describe the purpose of anti-spyware software
- Identify differences in managing wireless devices compard to other
- Describe the purpose of identity and access management
  - Single- and multi-factor Authentication
  - Separation of duties and impact on privileges
  - RBAC, ABAC, DAC, and MAC
  - User profiles
- Integration of NGFWs with the cloud, networks, & endpoints
- Describe App-ID, User-ID, and Content-ID
- Describe Palo Alto Networks firewall subscription services
  - WildFire
  - URL Filtering
  - Threat Prevention
  - DNS Security
  - IoT Security
  - SD-WAN
  - Advanced Threat Prevention

- Advanced URL Filtering
- GlobalProtect
- Enterprise DLP
- SaaS Security Inline
- Virtual Systems

- Describe network security management
  - Identify the deployment modes of Panorama
  - Describe the three components of Best Practice Assessment

3. Cloud Technologies

- Describe the NIST cloud service and deployment models
- Recognize and list cloud security challenges
  - Describe the vulnerabilities in a shared community environment
  - Describe cloud security responsibilities
  - Describe cloud multitenancy
  - Differentiat between security tools in various cloud environments
  - Identity and access management controls for cloud resources
  - Describe different types of cloud security alerts and notifications
- Identify the 4 Cs of cloud native security
- Describe the purpose of virtualization in cloud computing
  - Describe the types of hypervisors
  - Describe characteristics of various cloud providers
  - Describe economic benefits of cloud computing and virtualization

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- Describe the security implications of virtualization
- Explain the purpose of containers in application deployment
  - Differentiate containers versus virtual machines
  - Describe Container as a Service
  - Differentiate a hypervisor from a Docker Container
- Describe how serverless computing is used
- Describe DevOps
- Describe DevSecOps
- Illustrate the continuous integration/continuous delivery pipeline
- Governance & compliance related to deployment of SaaS apps
  - Describe security compliance to protect data
  - Describe privacy regulations globally
  - Describe security compliance betwn local policies and SaaS apps
- Describe the cost of maintaining a physical data center
- Difft betwee=n data-center security weaknesses of traditional solns
- Differentiate between east-west and north-south traffic patterns
- Describe the four phases of hybrid data-center security
- How data centers can transform their operatns incrementally
- Describe the cloud-native security platform
- Identify the four pillars of Prisma Cloud application security
- Describe the concept of SASE

- Describe the SASE layer
  - Describe sanctioned, tolerated, and unsanctioned SaaS apps
  - List how to control sanctioned SaaS usage
- Describe the network-as-a-service layer
- Describe how Prisma Access provides traffic protection
- Describe Prisma Cloud Security Posture Management (CSPM)

4. Elements of Security Operations

- Main elements included in the dvlopmnt of SOC business objectives
- Describe the components of SOC business management & operatns
- List the six essential elements of effective security operations
- Describe the four SecOps functions
  - Identify
  - Investigate
  - Mitigate
  - Improve

- Describe SIEM
- Purpose of security orchestration, automation, & response (SOAR)
- The analysis tools usd to detect evidence of a security compromise
- Describe how to collect security data for analysis
- Use of analysis tools within a security operations environment

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- The responsibilities of a security operations engineering team
- Cortex platform in a security operatns environment & the purpose
- How Cortex XSOAR improves security operations efficiency
- Describe how Cortex Data Lake improves security operatns visibility
- How XSIAM can be used to accelerate SOC threat response

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