

Cybersecurity Infrastructure Configuration

Students will gain a general understanding of how to install, configure, and manage firewalls for the defense of enterprise network architecture. Students will also learn the theory and steps for setting up the security, networking, threat prevention, logging, and reporting features of Next-Generation Firewalls.

Using Palo Alto Networks Next-Generation Firewalls, students will learn to:

- Compare industry-leading firewall platforms, architecture, and defense capability related to Zero Trust security approaches and public cloud security.
- Demonstrate and apply configuration of firewall initial access, interfaces, security zones, routing, etc.

- Analyze security policy administrative concepts related to source and destination network address translation (NAT).
- Outline and construct security policies to identify known and unknown application software.
- Differentiate, configure, and deploy filtering technologies such as antivirus, anti-spyware, and file blocking.
- Construct and deploy URL profiles for attachment to Next-Generation Firewall security policies.

NIST/NICE Course Mapping—Work Role

- Protect and Defend: Cyber Defense Infrastructure Support Specialist – PR-INF-001

Course Structure

Module 1: Security Architecture Planning

Review Palo Alto Networks Next-Generation Firewalls, both hardware and software offerings.

Module 2: Infrastructure Device Configuration

Examine Palo Alto Networks Next-Generation Firewall flow logic and participate in several tutorials for initial configuration of a Next-Generation Firewall.

Module 3: Cybersecurity Policy

Analyze security policy and NAT concepts, along with firewall configurations.

Module 4: Application Software Identification

Configure application properties and write firewall rules to permit or deny running of specific applications.

Module 5: Antivirus, Anti-Spyware, and File Blocking

Set up malware content identification through antivirus and anti-spyware security policies for Next-Generation Firewalls.

Module 6: Uniform Resource Locator Filtering

Manage access to URL web addresses and content.