Introduction to the Course

While many cyber-attacks may start with social engineering, the actual breach occurs after the malware or an intruder has got inside the perimeter. Consequently, businesses place a lot of emphasis on using firewalls, intrusion detection systems, and sometimes Honeypots to protect the perimeter. In this course, he'll cover the major perimeter protection devices. I'll start by explaining and demonstrating the basics of firewall technology. We'll take a look at web application firewalls and API gateway threat mitigation solutions, and we'll learn about the carrier Honeypot and how operational security teams use security onion for intrusion detection and alerting. We'll then take a look at the evasion techniques used by malware and intruders, and we'll demonstrate some evasive attacks. This course teaches us about perimeter defences and how our adversaries evade them. The topics covered in this course are drawn from the Evading IDS, Firewalls, and Honeypots competency in the Certified Ethical Hacker (CEH) body of knowledge.

Learning objectives

- Applying the basics of the Windows Firewall
- Using advanced features in the Windows Firewall
- Reviewing firewall logs
- Linux iptables
- Setting up an iptables firewall
- Managing rules with Firewall Builder
- Setting up a Cisco PIX firewall
- Installing GNS3
- How web application firewalls protect web servers
- Protecting API services with the WSO2 gateway
- Running the Cowrie honeypot
- Detecting intrusions with Security Onion

Screenshots

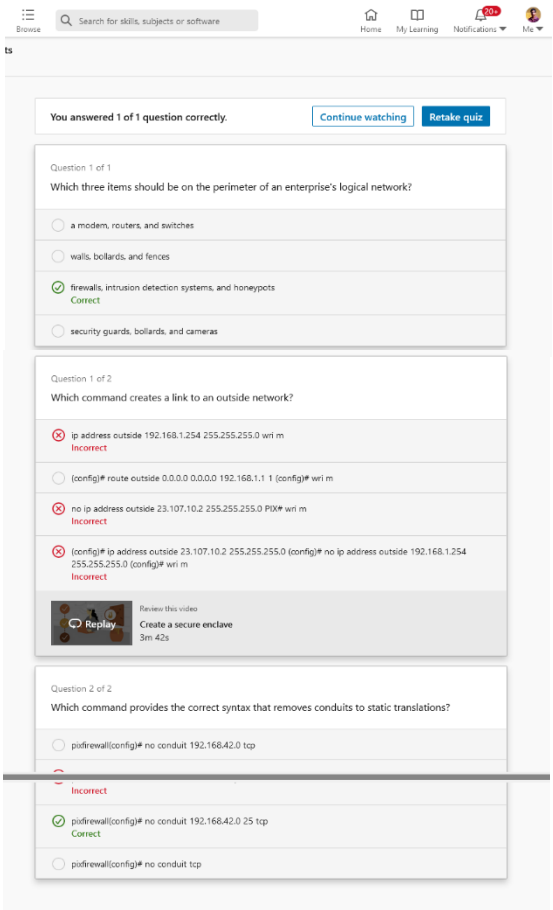


Figure: Section 01 – Firewall

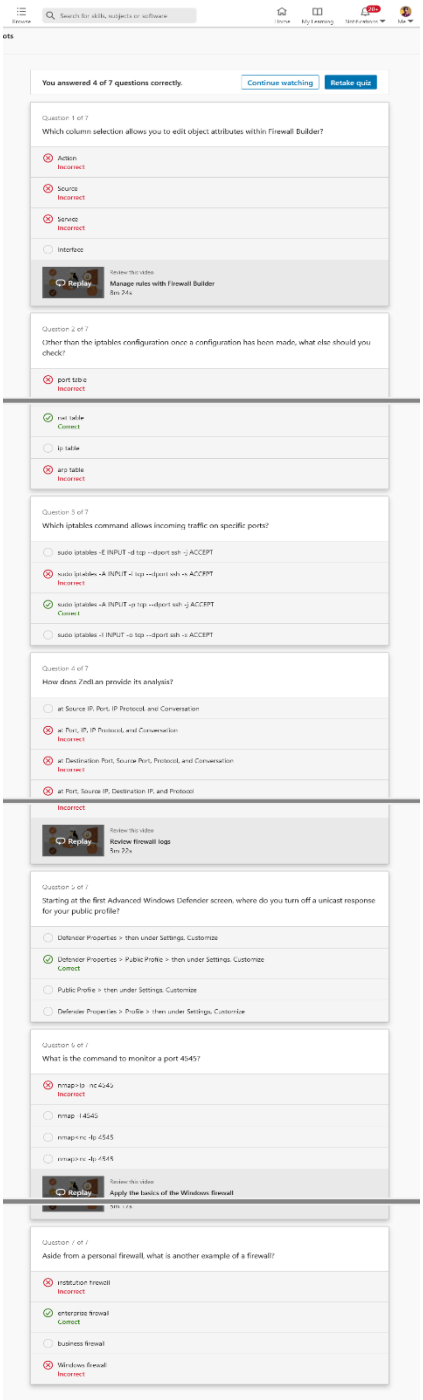
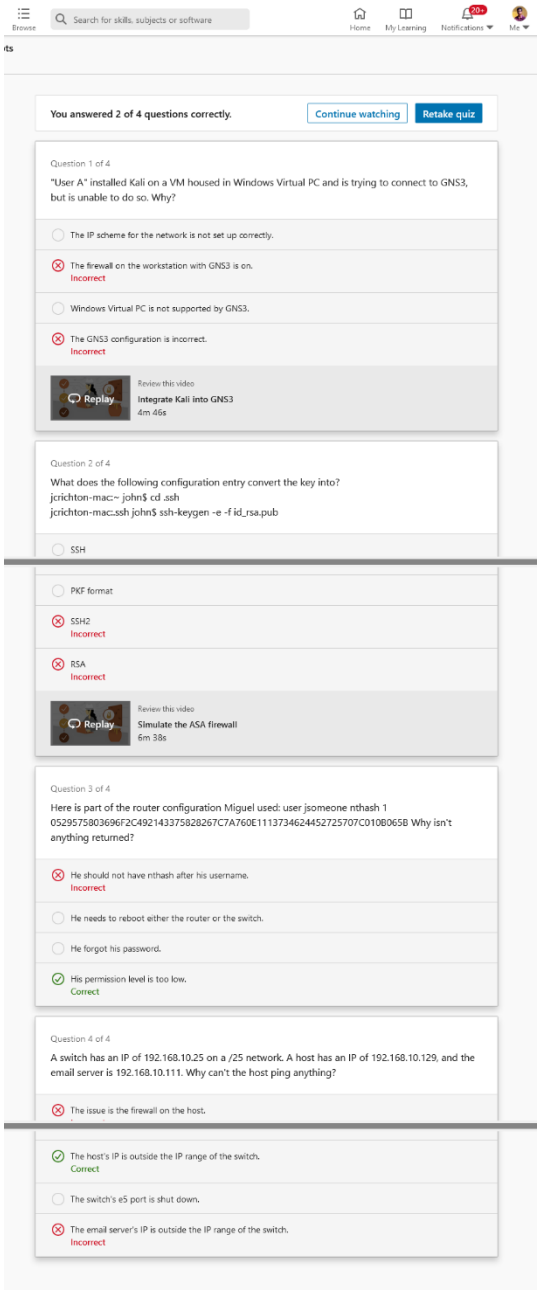


Figure: Section 02- Hardware Firewalls



You answered 2 of 4 questions correctly.

Continue watching | Retake quiz

Question 1 of 4

"User A" installed Kali on a VM housed in Windows Virtual PC and is trying to connect to GNS3, but is unable to do so. Why?

- The IP scheme for the network is not set up correctly.
- The firewall on the workstation with GNS3 is on. Incorrect
- Windows Virtual PC is not supported by GNS3.
- The GNS3 configuration is incorrect. Incorrect

Review this video: Integrate Kali into GNS3 (4m 46s)

Question 2 of 4

What does the following configuration entry convert the key into?
jcrichton-mac:~ john$ cd .ssh
jcrichton-mac:.ssh john$ ssh-keygen -e -f id_rsa.pub

- SSH
- PKF format
- SSH2 Incorrect
- RSA Incorrect

Review this video: Simulate the ASA firewall (6m 38s)

Question 3 of 4

Here is part of the router configuration Miguel used: user jsomeone nthash 1 0529575803696F2C4921433758282 67C7A760E1113734624452725707C010B065B Why isn't anything returned?

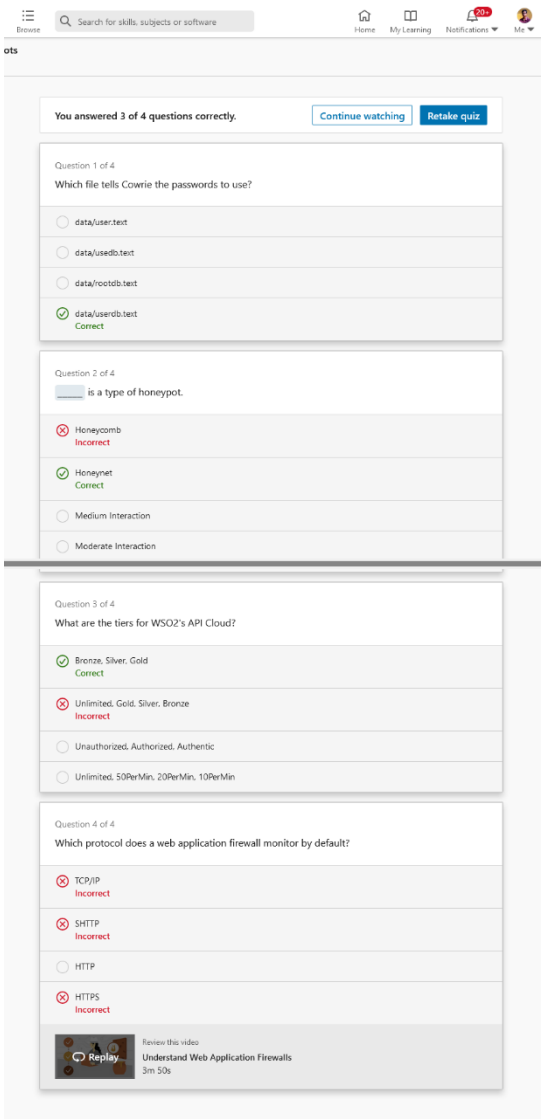
- He should not have nthash after his username. Incorrect
- He needs to reboot either the router or the switch.
- He forgot his password.
- His permission level is too low. Correct

Question 4 of 4

A switch has an IP of 192.168.10.25 on a /25 network. A host has an IP of 192.168.10.129, and the email server is 192.168.10.111. Why can't the host ping anything?

- The issue is the firewall on the host.
- The host's IP is outside the IP range of the switch. Correct
- The switch's e5 port is shut down.
- The email server's IP is outside the IP range of the switch. Incorrect

Figure: Section 04 – Special Purpose Perimeter Devices



You answered 3 of 4 questions correctly.

Continue watching | Retake quiz

Question 1 of 4

Which file tells Cowrie the passwords to use?

- data/user.text
- data/usedb.text
- data/rootdb.text
- data/userdb.text Correct

Question 2 of 4

____ is a type of honeypot.

- Honeycomb Incorrect
- Honeynet Correct
- Medium Interaction
- Moderate Interaction

Question 3 of 4

What are the tiers for WSO2's API Cloud?

- Bronze, Silver, Gold Correct
- Unlimited, Gold, Silver, Bronze Incorrect
- Unauthorized, Authorized, Authentic
- Unlimited, 50PerMin, 20PerMin, 10PerMin

Question 4 of 4

Which protocol does a web application firewall monitor by default?

- TCP/IP Incorrect
- SHTTP Incorrect
- HTTP
- HTTPS Incorrect

Review this video: Understand Web Application Firewalls (3m 50s)

Figure: Section 05 – Protection from intrusion

Conclusion

Ethical hacking—testing to see if an organization's network is vulnerable to outside attacks—is a desired skill for many IT security professionals. In this course, cybersecurity expert prepares us to take our first steps into testing client defences. He provides us with an overview of firewall technology, detailing how firewalls work in both Windows and Linux, as well as how to set up a firewall simulation in a GNS3 network. Next, he goes over web application firewalls, API gateway threat mitigation solutions, and how to use honeypots to detect intruders. Finally, he covers the main ways to manage a suspected intrusion, including how to use the Security Onion intrusion detection system (IDS).

Certificate

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Certificate of Completion

Congratulations, Suman Garai

COURSE COMPLETION

Ethical Hacking: Evading IDS, Firewalls, and Honeypots

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