

Latest Version: 31.0

Question: 1

A company recently added a DR site and is redesigning the network. Users at the DR site are having issues browsing websites.

INSTRUCTIONS

Click on each firewall to do the following:

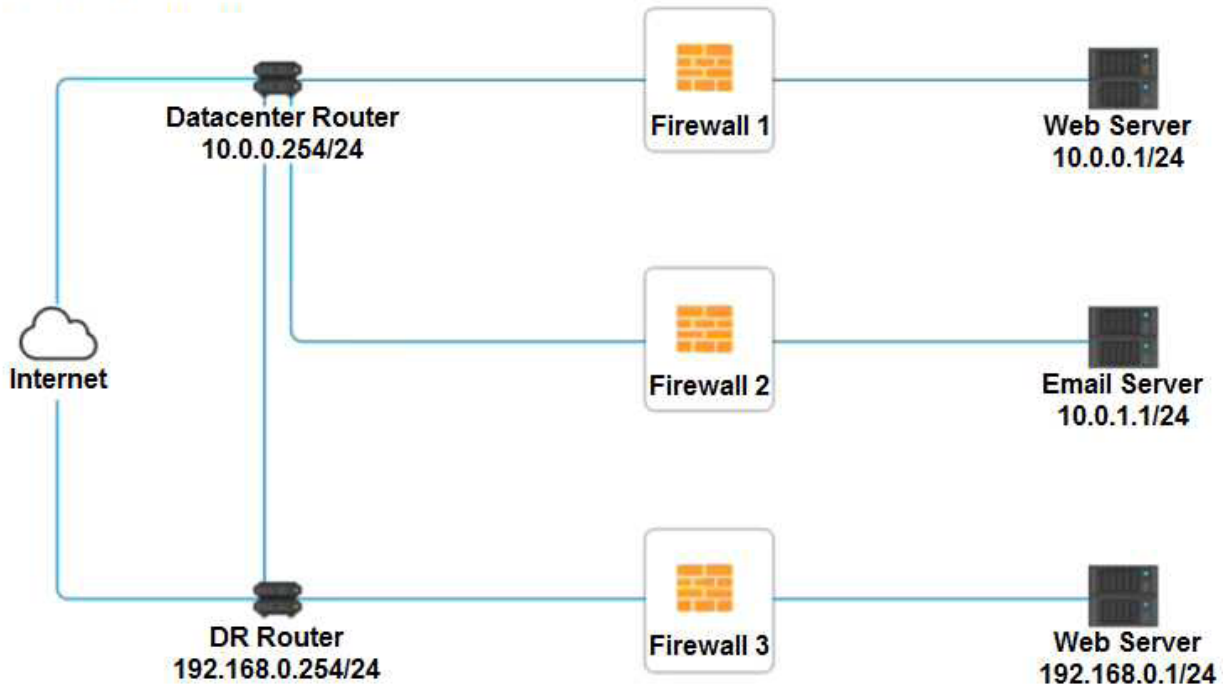
Deny cleartext web traffic.

Ensure secure management protocols are used. Resolve issues at the DR site.

The ruleset order cannot be modified due to outside constraints.

If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.

Network Diagram



Firewall 2



Rule Name	Source	Destination	Service	Action
DNS Rule	<input type="text"/> ▼ ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ▼ ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ▼ ANY DNS HTTP HTTPS TELNET SSH	<input type="text"/> ▼ PERMIT DENY
HTTPS Outbound	<input type="text"/> ▼ ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ▼ ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ▼ ANY DNS HTTP HTTPS TELNET SSH	<input type="text"/> ▼ PERMIT DENY
Management	<input type="text"/> ▼ ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ▼ ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ▼ ANY DNS HTTP HTTPS TELNET SSH	<input type="text"/> ▼ PERMIT DENY
HTTPS Inbound	<input type="text"/> ▼ ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ▼ ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ▼ ANY DNS HTTP HTTPS TELNET SSH	<input type="text"/> ▼ PERMIT DENY
HTTP Inbound	<input type="text"/> ▼ ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ▼ ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ▼ ANY DNS HTTP HTTPS TELNET SSH	<input type="text"/> ▼ PERMIT DENY

Reset Answer
Save
Close

Firewall 3				
Rule Name	Source	Destination	Service	Action
DNS Rule	<input type="text"/> ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ANY DNS HTTP HTTPS TELNET SSH	<input type="text"/> PERMIT DENY
HTTPS Outbound	<input type="text"/> ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ANY DNS HTTP HTTPS TELNET SSH	<input type="text"/> PERMIT DENY
Management	<input type="text"/> ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ANY DNS HTTP HTTPS TELNET SSH	<input type="text"/> PERMIT DENY
HTTPS Inbound	<input type="text"/> ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ANY DNS HTTP HTTPS TELNET SSH	<input type="text"/> PERMIT DENY
HTTP Inbound	<input type="text"/> ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ANY 10.0.0.1/24 10.0.1.1/24 192.168.0.1/24	<input type="text"/> ANY DNS HTTP HTTPS TELNET SSH	<input type="text"/> PERMIT DENY

Answer: See explanation below.

Explanation:

Firewall 1:

DNS Rule – ANY --> ANY --> DNS --> PERMIT

HTTPS Outbound – 10.0.0.1/24 --> ANY --> HTTPS --> PERMIT

Management – ANY --> ANY --> SSH --> PERMIT

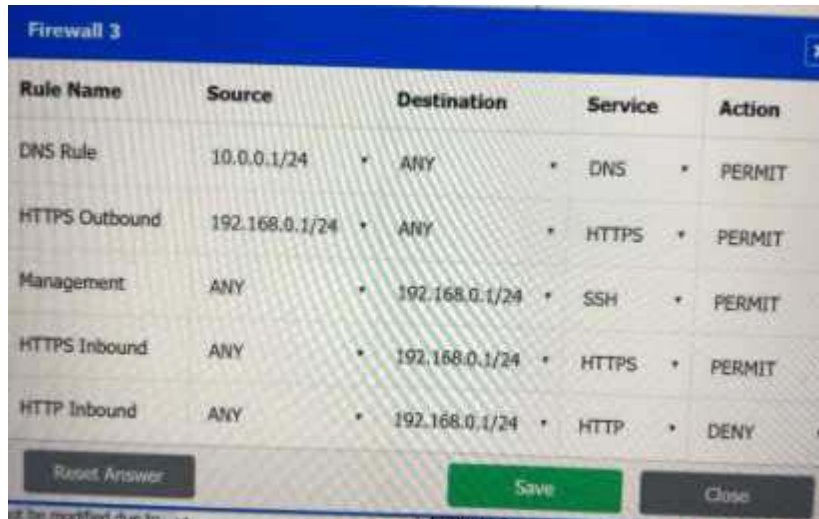
HTTPS Inbound – ANY --> ANY --> HTTPS --> PERMIT

HTTP Inbound – ANY --> ANY --> HTTP --> DENY

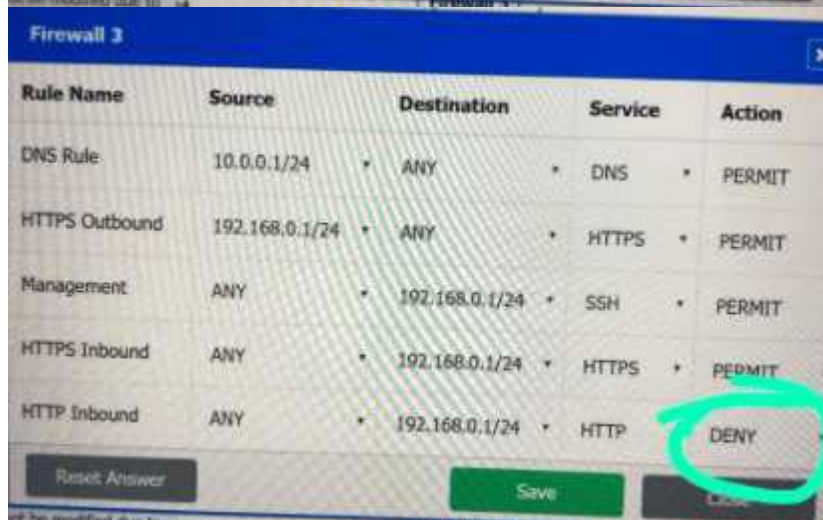
Firewall 2:

No changes should be made to this firewall

Firewall 3:



Rule Name	Source	Destination	Service	Action
DNS Rule	10.0.0.1/24	ANY	DNS	PERMIT
HTTPS Outbound	192.168.0.1/24	ANY	HTTPS	PERMIT
Management	ANY	192.168.0.1/24	SSH	PERMIT
HTTPS Inbound	ANY	192.168.0.1/24	HTTPS	PERMIT
HTTP Inbound	ANY	192.168.0.1/24	HTTP	DENY



Rule Name	Source	Destination	Service	Action
DNS Rule	10.0.0.1/24	ANY	DNS	PERMIT
HTTPS Outbound	192.168.0.1/24	ANY	HTTPS	PERMIT
Management	ANY	192.168.0.1/24	SSH	PERMIT
HTTPS Inbound	ANY	192.168.0.1/24	HTTPS	PERMIT
HTTP Inbound	ANY	192.168.0.1/24	HTTP	DENY

DNS Rule – ANY --> ANY --> DNS --> PERMIT

HTTPS Outbound – 192.168.0.1/24 --> ANY --> HTTPS --> PERMIT

Management – ANY --> ANY --> SSH --> PERMIT

HTTPS Inbound – ANY --> ANY --> HTTPS --> PERMIT

HTTP Inbound – ANY --> ANY --> HTTP --> DENY

Question: 2

DRAG DROP

A security engineer is setting up passwordless authentication for the first time.

INSTRUCTIONS

Use the minimum set of commands to set this up and verify that it works. Commands cannot be reused. If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.

Commands

- `chmod 644 ~/.ssh/id_rsa`
- `chmod 777 ~/.ssh/authorized_keys`
- `scp ~/.ssh/id_rsa user@server:~/.ssh/authorized_keys`
- `ssh root@server`
- `ssh-keygen -t rsa`
- `ssh-copy-id -i ~/.ssh/id_rsa.pub user@server`
- `ssh -i ~/.ssh/id_rsa user@server`

SSH Client

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Answer:



Question: 3

HOTSPOT

Select the appropriate attack and remediation from each drop-down list to label the corresponding attack with its remediation.

INSTRUCTIONS

Not all attacks and remediation actions will be used.

If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.

Attack Description	Target	Attack Identified	BEST Preventative or Remediation Action
An attacker sends multiple SYN packets from multiple sources.	Web server	<ul style="list-style-type: none"> Botnet RAT Logic Bomb Backdoor Virus Spyware Worm Adware Ransomware Keylogger Phishing 	<ul style="list-style-type: none"> Enable DDoS protection Patch vulnerable systems Disable vulnerable services Change the default system password Update the cryptographic algorithms Change the default application password Implement 2FA using push notification Conduct a code review Implement application fuzzing Implement a host-based IPS Disable remote access services
The attack establishes a connection, which allows remote commands to be executed.	User	<ul style="list-style-type: none"> Botnet RAT Logic Bomb Backdoor Virus Spyware Worm Adware Ransomware Keylogger Phishing 	<ul style="list-style-type: none"> Enable DDoS protection Patch vulnerable systems Disable vulnerable services Change the default system password Update the cryptographic algorithms Change the default application password Implement 2FA using push notification Conduct a code review Implement application fuzzing Implement a host-based IPS Disable remote access services
The attack is self propagating and compromises a SQL database using well-known credentials as it moves through the network.	Database server	<ul style="list-style-type: none"> Botnet RAT Logic Bomb Backdoor Virus Spyware Worm Adware Ransomware Keylogger Phishing 	<ul style="list-style-type: none"> Enable DDoS protection Patch vulnerable systems Disable vulnerable services Change the default system password Update the cryptographic algorithms Change the default application password Implement 2FA using push notification Conduct a code review Implement application fuzzing Implement a host-based IPS Disable remote access services
The attacker uses hardware to remotely monitor a user's input activity to harvest credentials.	Executive	<ul style="list-style-type: none"> Botnet RAT Logic Bomb Backdoor Virus Spyware Worm Adware Ransomware Keylogger Phishing 	<ul style="list-style-type: none"> Enable DDoS protection Patch vulnerable systems Disable vulnerable services Change the default system password Update the cryptographic algorithms Change the default application password Implement 2FA using push notification Conduct a code review Implement application fuzzing Implement a host-based IPS Disable remote access services
The attacker embeds hidden access in an internally developed application that bypasses account login.	Application	<ul style="list-style-type: none"> Botnet RAT Logic Bomb Backdoor Virus Spyware Worm Adware Ransomware Keylogger Phishing 	<ul style="list-style-type: none"> Enable DDoS protection Patch vulnerable systems Disable vulnerable services Change the default system password Update the cryptographic algorithms Change the default application password Implement 2FA using push notification Conduct a code review Implement application fuzzing Implement a host-based IPS Disable remote access services

Answer:

Attack Description	Target	Attack Identified	BEST Preventative or Remediation Action
An attacker sends multiple SYN packets from multiple sources.	Web server	Botnet	Enable DDoS protection
The attack establishes a connection, which allows remote commands to be executed.	User	RAT	Patch vulnerable systems
The attack is self propagating and compromises a SQL database using well-known credentials as it moves through the network.	Database server	Worm	Change the default application password
The attacker uses hardware to remotely monitor a user's input activity to harvest credentials.	Executive	Keylogger	Disable remote access services
The attacker embeds hidden access in an internally developed application that bypasses account login.	Application	Backdoor	Conduct a code review

Question: 4

Which of the following will MOST likely adversely impact the operations of unpatched traditional programmable-logic controllers, running a back-end LAMP server and OT systems with human management interfaces that are accessible over the Internet via a web interface? (Choose two.)

- A. Cross-site scripting
- B. Data exfiltration
- C. Poor system logging
- D. Weak encryption
- E. SQL injection
- F. Server-side request forgery

Answer: DF

Question: 5

A company recently transitioned to a strictly BYOD culture due to the cost of replacing lost or damaged corporate-owned mobile devices. Which of the following technologies would be BEST to balance the BYOD culture while also protecting the company's data?

- A. Containerization
- B. Geofencing
- C. Full-disk encryption
- D. Remote wipe

Answer: A

Explanation:

<https://www.hexnode.com/blogs/what-is-containerization-and-why-is-it-important-for-your-business/>