Networking Fundamentals

1 hour | 19 Questions | 3.16 Minutes per Question | Intermediate (/search?type=Practice Exam Challenge&difficulty=Intermediate&categories=AWS)

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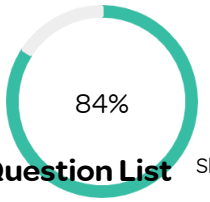

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Congratulations!

You passed this challenge on this attempt.

Question List

Show All Answers

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Expectations Report Card

Networking Fundamentals 84.21%

Exam Breakdown

Networking Fundamentals

INCORRECT

1. Which OSI layer would you place a firewall if you wanted to deny traffic by port number?

A Session Layer

B Network Layer

C Application Layer

D Transport Layer

Your Answer: B

Why is this incorrect?

Layer 3, the Network layer, allows/denies traffic based on IPs and ranges.
Video for reference: Firewalls

Correct Answer: D

Why is this correct?

Layer 4, the Transport layer will allow/deny traffic based on TCP/UPD and port information.
Video for reference: Firewalls

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2. Which layer views the request and reply communication as a single session between the client and the server?

A Session

B Presentation

C Application

D Network

Correct Answer: A

Why is this correct?

Layer 5, the Session Layer, views requests and replies as a single session between the client and server.
Video for reference: Seven-Layer OSI Model: Part 2

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3. Which layer is used for device to device communication over an interconnected network?

A None of these answers are correct

B Network

C Datalink

D Physical

Correct Answer: B

Why is this correct?

The network layer is used for device to device communication over an interconnected network?

Video for reference: Seven-Layer OSI Model: Part 1

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4. How many addresses are within **each octet** of an IPv4 address?

A 256

B 64

C 128

D 32

Correct Answer: A

Why is this correct?

Each octet has 256 addresses. It may seem like there are 255 addresses, but 0 is still an assignable address (0-256).
Video for reference: Subnetting

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5. In an architecture context, where does the proxy server sit?

A Placement of a proxy server is unimportant.

B It sits on the boundary between a private and public network.

C It is a serverless technology that exists outside the realm of AWS.

D In the public network sector.

Correct Answer: B

Why is this correct?

Proxy servers cater to outbound traffic within a private network. Therefore it resides between a private and public network.
Video for reference: Proxy Servers

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6. What is the main function of a firewall?

A Soley monitors for malicious traffic and denies inbound access a network.

B Monitors and inspects traffic to determine if it should allow/deny access to/from its network.

C Monitors traffic and denies outbound requests from a network.

D Monitors traffic and sends requests to the server with the least amount of traffic.

Correct Answer: B

Why is this correct?

A firewall sits at the border between different networks and monitors traffic flow between them. It's capable of reading packet data and either allows/denies traffic based on that data.
Video for reference: Firewalls

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7. What is the process of subnetting?

A Subnetting is the creation of a VPC.

B Subnetting is the process of taking a larger network and splitting it into smaller networks.

C Subnetting creates public and private addresses.

D Subnetting is the process of assigning IP addresses to devices.

Correct Answer: B

Why is this correct?

Correct, subnetting allows for the creation of smaller networks from a bigger network.
Video for reference: Subnetting

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8. What key piece of information indicates whether a device is in the same or remote LAN?

A A router and its placement

B The type of device

C MAC address

D IP address and it's subnet/prefix

Correct Answer: D

Why is this correct?

The IP address and its subnet/prefix are telling of which network it's device belongs to.
Video for reference: IP Routing

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9. How many layers are in the OSI model?

A 10

B 8

C 6

D 7

Correct Answer: D

Why is this correct?

The OSI Model contains 7 layers: Physical, Datalink, Network, Transport, Session, Presentation, Application.
Video for reference: Seven-Layer OSI Model: Part 1

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10. Proxy servers handle what type of traffic?

A Outbound

B Inbound

C They do not handle any traffic

D Inbound and outbound

Correct Answer: A

Why is this correct?

Proxy servers act as an intermediary between the user's outbound traffic and the public network.
Video for reference: Proxy Servers

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11. Which layer can add encryption to a packet?

A Datalink

B Application

C Presentation

D Transport

Correct Answer: C

Why is this correct?

The Presentation Layer can add encryption, compressions, and data conversion to a packet.
Video for reference: Seven-Layer OSI Model: Part 2

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12. How many **bits** are in an IPv4 address?

A 4

B 16

C 24

D 32

Correct Answer: D

Why is this correct?

An IPv4 address has 32 bits.
Video for reference: IP Addressing Basics

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13. What IP address range does 10.0.0.0/16 cover?

A 10.0.255.255 - 11.0.0.0

B 10.0.0.0 to 10.0.127.255

C 10.0.0.0 - 10.0.255.0

D 10.0.0.0 - 10.0.255.255

Correct Answer: D

Why is this correct?

The /16 prefix represents that the first two octets are used for networking, thus leaving the third and fourth octet for assigning.
Video for reference: Subnetting

INCORRECT

14. If a firewall was placed on layer 3, which aspects will determine access?

A TCP/UDP protocols and port numbers

B Source/destination IP addresses or ranges

C Session traffic

D Application specific details

Your Answer: C

Why is this incorrect?

Layer 5, the Session layer will allow/deny traffic based on session information.
Video for reference: Firewalls

Correct Answer: B

Why is this correct?

Layer 3, the Network layer, allows/denies traffic based on IPs and ranges.
Video for reference: Firewalls

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15. What is the main job of the ARP?

A Assign IPs to devices

B Translates MAC addresses into an IP

C Pushes packets to its gateway router

D Translates an IP into a MAC address

Correct Answer: D

Why is this correct?

As the name suggests, the Address Resolution Protocol is a communication protocol used for discovering the MAC address given by the datalink layer.
Video for reference: IP Routing

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16. Which protocol is utilized for its reliability, segment checking, and error correction?

A SSH

B TCP

C UDP

D Application

Correct Answer: B

Why is this correct?

The TCP protocol, located in the Transport Layer, is known for its reliability, segment checking, and error correction.
Video for reference: Seven-Layer OSI Model: Part 2

INCORRECT

17. Which is **not** a private IPv4 address?

A 10.0.0.0

B 178.18.255.255

C 172.16.0.0

D 192.168.0.0

Your Answer: A

Why is this incorrect?

This is a private IP, as it is in the range of 10.0.0.0 to 10.255.255.255.
Video for reference: IP Addressing Basics

Correct Answer: B

Why is this correct?

This is **not** a private IP.
Video for reference: IP Addressing Basics

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18. Which is **not** a benefit of a proxy server?

A Outbound filtering based on application values

B Can be installed on an EC2

C Caching of frequently visited sites

D Inbound traffic monitoring

Correct Answer: D

Why is this correct?

Proxy servers do **not** monitor inbound traffic.
Video for reference: Proxy Servers

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19. Which IPv4 addresses represent all IP addresses?

A 10.0.0.0

B 0.0.0.0

C 0.0.0.0/0

D 127.0.0.1

E 255.255.255.255

Correct Answer: B

Why is this correct?

This is one way to represent all IP addresses.
Video for reference: IP Addressing Basics

Correct Answer: C

Why is this correct?

This is one way to represent all IP addresses.
Video for reference: IP Addressing Basics