Exam Report: 5.6.10 Practice Questions

Date: 10/5/2019 11:15:19 pm   Candidate: Garsteck, Matthew
Time Spent: 9:51   Login: mGarsteck

Overall Performance

Your Score: 63%

Passing Score: 80%

View results by: ○ Objective Analysis ● Individual Responses

Individual Responses

▼ **Question 1:**   <u>Correct</u>

Which of the following is a valid IPv6 address?

○ 199.12.254.11

○ FEC0:AB04:899A

○ FEC0:AB98::A7::9845:4567

○ FEC0:9087:AB04:9900:7GA2:7788:CEDF:349A

➡ ● FEC0::AB:9007

Explanation

FEC0::AB:9007 is a valid IPv6 address. The :: in the address replaces blocks of consecutive 0s. The longer form of this address isFEC0:0000:0000:0000:0000:0000:00AB:9007. Leading 0s within a quartet can also be omitted.

You can only omit one block of 0s using the double colon. Each number in the IPv6 address must be between 0-9 or A-F; G is not a valid number for the IPv6 address. An address without double colons should have a total of 32 hexadecimal numbers in eight blocks.

References

LabSim for Network Pro, Section 5.6.
[netpro18v5_all_questions_en.exm NP09_1-3 #7]

▼ **Question 2:**   <u>Correct</u>

You manage a network that uses IPv6 addressing. When clients connect devices to the network, they generate an interface ID and use NDP to learn the subnet prefix and default gateway.

Which IPv6 address assignment method is being used?

○ Static partial assignment

○ Static full assignment

➡ ● Stateless autoconfiguration

○ Stateful DHCPv6

Explanation

With stateless autoconfiguration, clients automatically generate an interface ID and learn the subnet prefix and default gateway through the neighbor discovery protocol (NDP).

With static full assignment, the entire 128-bit address and all other configuration information is statically assigned. Static partial assignment generates the interface ID from the MAC address, and clients are statically assigned the prefix. Stateful DHCPv6 is when the DHCP server provides each client with an IP address, default gateway, and other IP configuration information.

References

LabSim for Network Pro, Section 5.6.
[netpro18v5_all_questions_en.exm *NP15_IP_VERSION_6_01]

▼ **Question 3:**   Correct

Match the IPv6 address configuration method on the right with its definition on the left.

Static Full Assignment

> ✔ The entire 128-bit address and all other configuration information is statically assigned to the host.

Static Partial Assignment

> ✔ The prefix is statically assigned, and the interface ID is derived from the MAC address.

Stateless Autoconfiguration

> ✔ Clients automatically generate the interface ID and learn the subnet prefix and default gateway through the neighbor discovery protocol (NDP).

Stateful DHCPv6

> ✔ Provides each client with an IP address, default gateway, and other IP configuration information.

Stateless DHCPv6

> ✔ Supplies the client with the DNS server IP address only. Does not provide the client with an IP address, and does not track the status of each client.

Explanation

An IPv6 address can be configured using any of the following methods:

- **Static Full Assignment:** The entire 128-bit address and all other configuration information is statically assigned to the host.
- **Static Partial Assignment:** The prefix is statically assigned, and the interface ID is derived from the MAC address.
- **Stateless Autoconfiguration**: Clients automatically generate the interface ID and learn the subnet prefix and default gateway through the neighbor discovery protocol (NDP).
- **Stateful DHCPv6:** Provides each client an IP address, default gateway, and other IP configuration information.
- **Stateless DHCPv6:** Supplies the client with the DNS server IP address only. Does not provide the client an IP address, and does not track the status of each client.

References

LabSim for Network Pro, Section 5.6.
[netpro18v5_all_questions_en.exm *NP15_IP_VERSION_6_02]

▼ **Question 4:**   Correct

Which of the following tunneling methods is used to send IPv4 traffic through an IPv6 network?

- ◯ ISATAP

- ◯ 6to4 tunneling

- ◯ Toredo tunneling

- ➡ ◉ 4to6 tunneling

Explanation

4to6 tunneling is used to send IPv4 traffic through an IPv6 network by encapsulating IPv4 packets within IPv6 packets.

6to4 tunneling is used to send IPv6 traffic through an IPv4 network. ISATAP is used to provide IPv6 communication over a private IPv4 network. Toredo tunneling establishes a tunnel between individual IPv6 hosts so they can communicate through a private or public IPv4 network.

References

LabSim for Network Pro, Section 5.6.
[netpro18v5_all_questions_en.exm *NP15_IP_VERSION_6_03]

▼ **Question 5:**   Incorrect

You manage a network with two locations, Portland and Seattle. Both locations are connected to the internet.

All computers in both locations are configured to use IPv6. You would like to implement an IPv6 solution to meet the following requirements:

   • Hosts in each location should be able to use IPv6 to communicate with hosts in the other location through the IPv4 internet.
   • You want to use a site-to-site tunneling method instead of a host-to-host tunneling method.

Which IPv6 solution should you use?

   ○ ISATAP

   ○ 4to6

   ◉ ~~Teredo~~

➡ ○ 6to4

Explanation

Use 6to4 tunneling to create a router-to-router tunnel between two sites through an IPv4 network.

Use the intra-site automatic tunnel addressing protocol (ISATAP) to enable IPv6 hosts to communicate over a private IPv4 network within a site; ISATAP does not work between sites. Use Teredo on two hosts separated by symmetric NAT to configure host-to-host tunneling. Use 4to6 tunneling to allow IPv4 traffic on an IPv6 network.

References

LabSim for Network Pro, Section 5.6.
[netpro18v5_all_questions_en.exm NP15_IP_VERSION_6_04]

▼ **Question 6:**   Incorrect

Which of the following are characteristics of Teredo tunneling? (Select three.)

➡ ☑ Tunnel endpoints configured on hosts.

➡ ☐ Works through NAT.

   ☑ ~~IPv4-only hosts communicate with IPv6-only hosts.~~

   ☑ ~~Dual stack routers.~~

➡ ☐ Dual stack hosts.

Explanation

Teredo tunneling has the following characteristics:

- Tunnel endpoints are configured on hosts.
- Hosts are dual-stack hosts and perform tunneling to send IPv6 packets on the IPv4 network.
- Works through NAT.

The only solution that allows IPv4-only hosts to communicate with IPv6-only hosts is network address translation-protocol translation (NAT-PT).

References

LabSim for Network Pro, Section 5.6.
[netpro18v5_all_questions_en.exm NP15_IP_VERSION_6_05]

▼ **Question 7:**   Incorrect

You have a server at work with a custom application installed. Connections to the server that use the custom application must use IPv6. The server is currently running IPv4.

You are the only person who connects to the server, and you always use your Linux laptop for the connection. Your laptop supports both IPv4 and IPv6. The rest of your company network runs only IPv4.

You need a cost-effective solution to allow your laptop to connect to the server. Your solution must also support communication through NAT servers.

Which client software should you use to connect to the server?

- ◯ 6to4

- ◯ ISATAP

- ◉ ~~4to6~~

➡ ◯ Miredo

Explanation

On Linux, Miredo client software is used to implement Teredo tunneling. Teredo tunneling establishes a tunnel between individual hosts. Hosts must be dual-stack hosts so they can tunnel IPv6 packets inside IPv4 packets. Teredo works through NAT.

ISATAP and 6to4 tunneling both require at least one router. Because you only need to tunnel between two individual computers, Teredo is a more economical choice. Use 4to6 to tunnel IPv4 packets through an IPv6 network.

References

LabSim for Network Pro, Section 5.6.
[netpro18v5_all_questions_en.exm *NP15_IP_VERSION_6_06]

▼ **Question 8:**   Correct

Which of the following are valid IPv6 IP addresses? Select all that apply.

- ☐ 127.0.0.1

➡ ☑ 6384:1319:7700:7631:446A:5511:8940:2552

- ☐ 192.168.2.15

- ☐ 343F:1EEE:ACDD:2034:1FF3:5012

➡ ☑ 141:0:0:0:15:0:0:1

- ☐ 165.15.78.53.100.1

Explanation

An IPv6 IP address is a 128-bit address listed as eight 16-bit hexadecimal sections. Leading zeros can be omitted in each section. Therefore, 6384:1319:7700:7631:446A:5511:8940:2552 and 141:0:0:0:15:0:0:1 are both valid IPv6 IP addresses. A single set of all-zero sections can be abbreviated with two colons (::). Therefore, 141::15:0:0:1 is also a valid address.

127.0.0.1 and 192.168.2.15 are IPv4 IP address.

343F:1EEE:ACDD:2034:1FF3:5012 is a 48 bit MAC address.

References

LabSim for Network Pro, Section 5.6.
[netpro18v5_all_questions_en.exm NP05_2-5 #77||/]