4.7.11 Practice Questions

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Score: 100%

Passing Score: 80%

Question 1. ✓ Correct

Listed below are several DNS record types. Match the record type on the left with its function on the right.

Points a hostname to an IPv4 address.

✓ A

Provides alternate names to hosts that already have a host record.

✓ CNAME

Points an IP address to a hostname.

✓ PTR

Points a hostname to an IPv6 address.

✓ AAAA

Identifies servers that can be used to deliver mail.

✓ MX

Explanation

Records are used to store entries for hostnames, IP addresses, and other information in the zone database. Below are some common DNS record types:

- The A record maps an IPv4 (32-bit) DNS host name to an IP address. This is the most common resource record type.
- The AAAA record maps an IPv6 (128-bit) DNS host name to an IP address.
- The PTR record maps an IP address to a hostname and is referred to as a reverse lookup.
- The MX record identifies servers that can be used to deliver email and is referred to as a Mail eXchanger.
- The CNAME (Canonical NAME) record provides alternate names (or aliases) to hosts that already have a host record. Using a single A record with multiple CNAME records means that when the IP address changes, only the A record needs to be modified.

References


4.6.1 DHCP Overview


4.6.2 DHCP Facts


4.6.3 Set Up DHCP


4.6.4 DHCP Configuration Facts


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Question 2. ✓ Correct

If dynamic DNS is being used, which of the following events will cause a dynamic update of the host records? (Select two.)

- [ ] A CNAME record is added to the DNS server.
- [x] → The **ipconfig /registerdns** command is entered on a workstation.
- [x] → The DHCP server renews an IP address lease.
- [ ] The browser cache on a workstation is cleared.
- [ ] An MX record is added to the DNS server.

Explanation

Dynamic DNS (DDNS) enables clients or the DHCP server to update records in the zone database automatically. Dynamic updates occur when:

- A network host's IP address is added, released, or changed.
- The DHCP server changes or renews an IP address lease.
- The client's DNS information is manually changed using the **ipconfig /registerdns** command.

Clearing a browser's cache has no effect on DNS records. Because MX records and CNAME records need to be manually added and created, they have no effect on DDNS.

References

 **4.6.1 DHCP Overview**

 **4.6.2 DHCP Facts**

 **4.6.3 Set Up DHCP**

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Question 3. ✓ Correct

Which of the following services automatically creates and deletes DNS host records when an IP address lease is created or released?

- DHCP Relay
- Forward lookup
- Dynamic NAT
- → Dynamic DNS

Explanation

Dynamic DNS (DDNS) enables clients or the DHCP server to update records in the zone database automatically whenever an IP address lease is created or renewed.

A forward lookup is the process of resolving a hostname to an IP address. A DHCP relay is used to forward DHCP requests to a DHCP server in a different subnet. Dynamic NAT is used to automatically map internal IP addresses with a dynamic port assignment.

References


4.6.1 DHCP Overview


4.6.2 DHCP Facts


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Question 4. ✓ Correct

You want to implement a protocol on your network that allows computers to find the IP address of a host from a logical name. Which protocol should you implement?

- Telnet
- ARP
- → DNS
- DHCP

Explanation

DNS is a system that is distributed throughout the internetwork to provide address/name resolution. For example, the name www.mydomain.com would be identified with a specific IP address.

ARP is a protocol for finding the IP address from a known MAC address. DHCP is a protocol used to assign IP addresses to hosts. Telnet is a remote management utility.

References

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Question 5. ✓ Correct

You are setting up a new branch office for your company. You would like to implement solutions to provide the following services:

- Hosts should be able to contact other hosts using names such as server1.westsim.com.
- IP address assignment should be centrally managed.

Which services should you implement on your network to meet the requirements? (Select two.)

- [ ] NAT
- [x] DHCP
- [ ] RARP
- [x] DNS
- [ ] ICS
- [ ] WINS

Explanation

Use the domain name system (DNS) to provide name resolution. Clients use logical names to identify
computers. DNS maintains a list of logical names and their corresponding IP addresses.

Use dynamic host configuration protocol (DHCP) to assign IP addresses to hosts. When a host system boots, it obtains an IP address from the DHCP server. DHCP can also be configured to provide additional IP configuration information, such as the default gateway and DNS server addresses.

WINS is a NetBIOS name resolution protocol. It is not a TCP/IP protocol. ARP is a protocol for obtaining the
MAC address of a host from its IP address.

Network address translation (NAT) and internet connection service (ICS) are two methods of connecting a
private network to the internet. While NAT might be required for the branch office, the scenario did not ask you to provide internet connectivity to the branch office.

References

4.6.1 DHCP Overview

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Question 6. ✓ Correct

Match the DNS components on the left with its function on the right.

Managed by the Internet Corporation of Assigned Names and Numbers (ICANN).

✓ Top-level domain

Includes the host name and all domain names separated by periods.

✓ Fully qualified domain name

The part of a domain name that represents a specific host.

✓ Hostname

Has a complete copy of all the records for a particular domain.

✓ Authoritative server

The last part of a domain name.

✓ Top-level domain

Denotes a fully qualified, unambiguous domain name.

✓ . (dot) domain

Explanation

The . (dot) domain, or root domain, denotes a fully qualified, unambiguous domain name.

A top-level domain (TDL) is the last part of a domain name (for example, .com, .edu, .gov). TDLs are managed by the Internet Corporation of Assigned Names and Numbers (ICANN).

The fully qualified domain name (FQDN) includes the hostname and all domain names separated by periods.

The hostname is the part of a domain name that represents a specific host.

An authoritative server is a DNS server that has a complete copy of all the records for a particular domain.

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4.6.1 DHCP Overview


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Question 7. ✓ Correct

What is the difference between a forward lookup zone and a reverse lookup? (Select two.)

- [ ] A forward lookup finds the host name from a given IP address.
- [x] A reverse lookup finds the host name from a given IP address.
- [ ] A reverse lookup finds the IP address for a given host name.
- [ ] A forward lookup finds the DNS server name from a given IP address.
- [x] A forward lookup finds the IP address for a given host name.
- [ ] A reverse lookup finds the DNS server name from a given IP address.

Explanation

A forward lookup finds the IP address for a given hostname.

A reverse lookup finds the hostname from a given IP address.

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4.6.1 DHCP Overview
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Question 8. ✓ Correct

You have a workstation configured with DNS server addresses as follows:

- Primary DNS server = 192.168.1.1
- Alternate DNS server = 192.168.1.155

While browsing the internet, you go to www.cisco.com. A few minutes later, you type **ping www.cisco.com** into a command prompt.

How will the workstation get the IP address for www.cisco.com?

- ○ By querying server 192.168.1.155
- → ◉ Out of its local DNS cache
- ○ By querying server 192.168.1.1
- ○ Out of the HOSTS file

Explanation

In this instance, because the workstation has recently resolved the DNS hostname, it retrieves the IP address from its local DNS cache. DNS name resolution looks for information in different locations in the in the following order:

1. Local DNS cache
2. HOSTS file
3. DNS server query

If the primary DNS server is unavailable, the secondary DNS servers are queried in order. If a name server responds that the name is unknown, no additional servers are consulted.

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 **4.6.1 DHCP Overview**

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Question 9. ✓ Correct

Listed below are several places that a workstation checks to resolve DNS hostnames.

- A. Primary DNS server
- B. Secondary DNS servers
- C. HOSTS file
- D. Local DNS cache

In a browser, you type the name of a website. In which order will these locations be checked during the name resolution process?

- C, D, A, B
- A, B, C, D
- A, B, D, C
- → D, C, A, B
- A, C, D, B

Explanation

DNS name resolution looks for information in the following locations in a certain order:

1. Local DNS cache
2. HOSTS file
3. DNS server query

If the primary DNS server is unavailable, the secondary DNS servers are queried in order. If a name server responds that the name is unknown, no additional servers are consulted.

References

4.6.1 DHCP Overview

4.6.2 DHCP Facts

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4.6.4 DHCP Configuration Facts

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Question 10. ✓ Correct

For each operation on the right, match the appropriate command from the list on the left.

Configure DNS server addresses for the router to use for resolving hostnames.

✓ **ip name-server**

Create static entries for hosts that associate each hostname with an IP address.

✓ **ip host**

Prevent the router from using DNS to resolve hostnames.

✓ **no ip domain-lookup**

Set the DNS name used by the router.

✓ **hostname**

Explanation

Use the **ip name-server** command to configure DNS server addresses for the router to use for resolving host names.

Use the **ip host** command to create static entries for hosts that associate a hostname with an IP address.

Use the **no ip domain-lookup** command to prevent the router from using DNS to resolve host names. Use **ip domain-lookup** to enable the router to use DNS.

Use the **hostname** command to set the DNS name used by the router.

Use **[no] ip hostname** strict (disabled by default) to ensure strict compliance with Section 2.1 of RFC 1123.

References

4.6.1 DHCP Overview

4.6.2 DHCP Facts

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