CHAPTER 25 : Domain Name System (DNS)

Solutions to Selected Review Questions

Review Questions

1. ***Caching*** reduces the search time for a name.

2. In ***recursive resolution*** the client queries just one server. In ***iterative resolution*** the client queries more than one server.

3. When the name space is large, searching a name in ***hierarchical*** structure (tree) is much faster that searching it in a ***flat*** structure (linear). The first can use a binary search; the second needs to use a sequential search.

4. An ***FQDN*** is a domain name consisting of labels beginning with the host and going back through each level to the root node.

5. A ***primary server*** is a server that stores a file about the zone for which it is an authority. It is responsible for creating, maintaining, and updating the zone file. A ***secondary server*** is a server that transfers the complete information about a zone from another server (primary or secondary) and stores the file on its local disk. The secondary server neither creates nor updates the zone files.

6. A ***DNS*** message is either a ***query*** or a ***response***.

7. A ***zone*** is an area for which a server is responsible.

8. ***Generic domain***, ***country domain***, and ***inverse domain***.

9. The ***inverse domain*** maps an address to a name.

10. A ***PQDN*** is a domain name that does not include all the levels between the host and the root node.

11. ***DDNS*** is needed because the many address changes makes manual updating inefficient.

Exercises

12. Remembering a ***name*** is often easier than remembering a ***number.***

13. No specific answer.

14. The number of question sections and answer sections must be the same. The relationship is ***one-to-one***.

15.
a. **FQDN**
b. **FQDN**
c. **PQDN**
d. **PQDN**

16. There are ***three labels*** but ***four levels*** of hierarchy since the root is considered a level.

17.
a. **PQDN**
b. **FQDN**
c. **PQDN**
d. **FQDN**

18. It is always shorter by ***at least a dot***.

19. This is a ***generic domain***.

20. If computer A needs the IP address of destination B, the answer is in the IP data field. The IP destination field contains the address of computer A.

21. The recursive resolution is ***normally faster*** because multiple requests are handled by faster servers.