Eddie Mazariegos
Professor Edward Crowley
CIS 3347

Application Protocols

1. How does the Application level of the TCP/IP model map to the ISO/OSI model?

-The application layer of the TCP/IP model maps to the application, presentation, and session layer of the ISO/OSI model

2. The primary difference between FTP and TFTP is user authentication. What is meant by the term "user authentication?"

-The user has to verify that they are who they say they are in FTP

3. Which of the mail protocols is used most often for sending mail between mail servers?

-SMTP (Simple Mail Transfer Protocol)

4. Which mail protocols would you use for receiving mail?

-POP3 (Post Office Protocol 3)

-IMAP4 (Internet Message Access Protocol 4)

5. If you are using a conventional browser to surf the Internet, what protocol are you most likely using?

-HTTP (Hypertext Transfer Protocol)

6. If you are buying a product on Amazon or checking your bank balance online, what protocol should you be using?

-HTTPS (Hypertext Transfer Protocol Secure)

7. Who created SSL?

-Netscape created SSL (Secure Sockets Layer)

8. What is TLS and who created it?

-TLS (Transport Layer Security) is the updated version of SSL (Secure Sockets Layer) and was created by IETF (Internet Engineering Task Force)

9. Name common Voice over IP (VoIP) protocols.

-SIP (Session Initiation Protocol) – creates and cancels phone calls

-RTP (Real-Time Transport Protocol) – digitizes the voice and sends it as output to another user

10. Which protocol actually sends your voice across the network?

-RTP (Real Time Transfer Protocol)

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Domain Name System

1. What is the difference between a routable and a non-routable protocol?

- A routable is a communications protocol that contains a network address as well as a device address, and a non-routable protocol only has a device address.

2. To connect separate routable networks, what hardware device would be appropriate?

- A switch connects routable networks.

3. In TCP/IP, what physical device is called the default gateway?

- The router is called the default gateway.

4. What is DNS?

- Domain Name System (DNS) is the server service that maps domain names to IP Addresses. It is a process that allows us to type in name of server and have that server behind the scenes automatically resolve to an IP address.

5. Briefly describe the DNS query/response process.

- Computer requests the DNS for the network address with the host name the DNS then returns it if it is locally cached, if not, it is a hierarchically upward looking process that the DNS uses to retrieve the network address of the host.

6. What is DHCP (Dynamic Host Configuration Protocol)?

- Dynamic Host Control Protocol (DHCP) is a network-layer protocol standard used to supply TCP/IP address information using dynamic address assignment.

7. Briefly describe the DHCP process

- The DHCP client, when booted up, sends out a message to the local server requesting a unique network layer address. Then the local server runs a software package to correspond to the message.