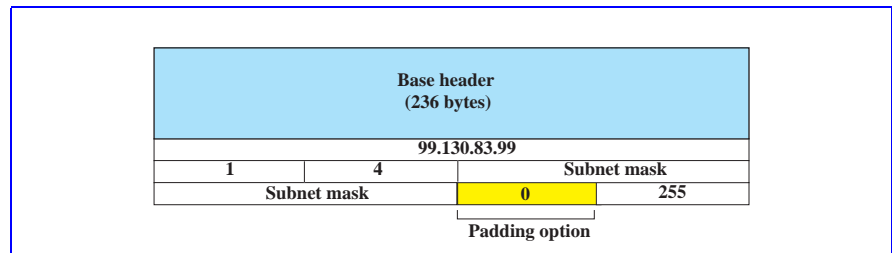

CHAPTER 18

Host Configuration: DHCP

Exercises

1. The minimum length of a DHCP packet is 236 (without the option field). The maximum is 300 bytes (with the option field).
3. Figure 18.E3 shows an example of the *padding* option. The option section starts with the cookie (99.130.83.99) followed by the *subnet mask* option (included to show the use of the padding option). We also need the *end of list* option (tag 255).

Figure 18.E3 Solution to Exercise 3



5. The second field is 16 bits long. It can store up to $2^{16} - 1 = 65,535$ seconds.
7.
 - A newly added host needs to know its subnet mask because this allows the host to find out which subnet it is on.
9. A newly added host needs to know the address of a name server in order to resolve a domain name to an IP address.
11. See Figure 18.E11. We assume that the server is 4 hops away. We also use transaction ID of 1456. The messages between the client and the relay agent are broadcast. The messages between the relay agent and the server are unicast.

Figure 18.E11 Solution to Exercise 11

