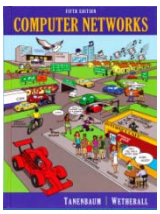
Solutions – ARP



The solutions below are based on our capture and use of tools. Your answers will differ in the details if they are based on your own capture and use of tools in a different network setting. Nonetheless, we expect our solutions to help you understand whether your answers are correct.

Step 4: ARP request and reply

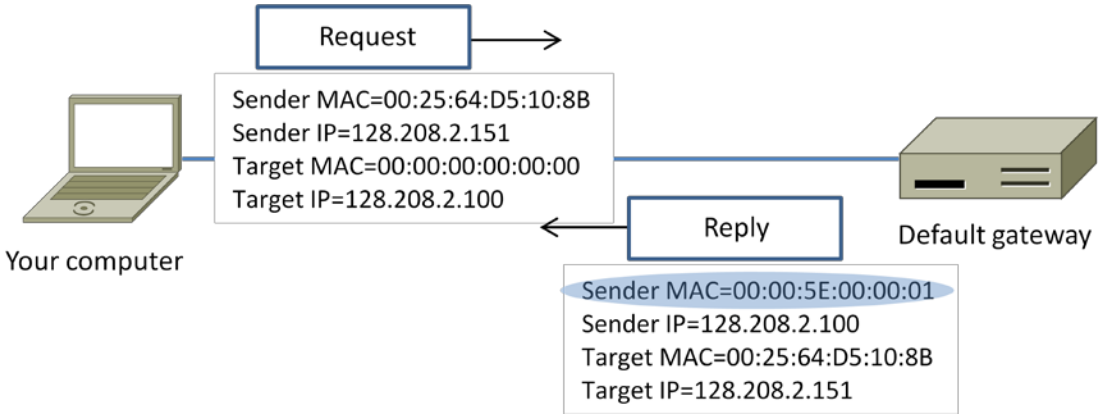


Figure 1: Details of the ARP request and reply to resolve the default gateway

There are several features to note:

- On the request, the target MAC is not known so it is usually filled in as 00:00:00:00:00:00.
- On the reply, the request target becomes the reply sender and vice versa.
- On the reply, the sender MAC returns the answer that is sought; it is highlighted.
- All of the fields that are shown are ARP header fields

Step 4: Details of ARP over Ethernet

Answers to the questions:

1. The request opcode is 1 and the reply opcode is 2.
2. The ARP header is 28 bytes for both the request and reply for IPv4.
3. The target MAC address of the request is normally all zeros, or 00:00:00:00:00:00.
4. The Ethernet Type value for ARP is 0x806.
5. The ARP reply is normally not broadcast. It is sent directly to the target using its Ethernet address.

Explore on your own

Note that the supplied trace contains examples of all four types of other ARP traffic.

[END]