

Team 9

Inject DSGN02T

Understanding Network Data Flows

To IT Management:

We created two network diagrams that illustrate network segments between a web server segment and the external network.

The first, pictured in Figure 1, shows the following packet flow:

- TCP HTTP flow (port 80/443) from the web server segment to the external network segment:
- The web server segment hosts a web server that receives an HTTP request from an external device in the external network segment.
- The request is sent to the router that acts as the gateway between the two segments.
- The router forwards the HTTP request to the web server using the TCP protocol.
- The web server responds with an HTTP response, which the router forwards back to the external device using the TCP protocol.

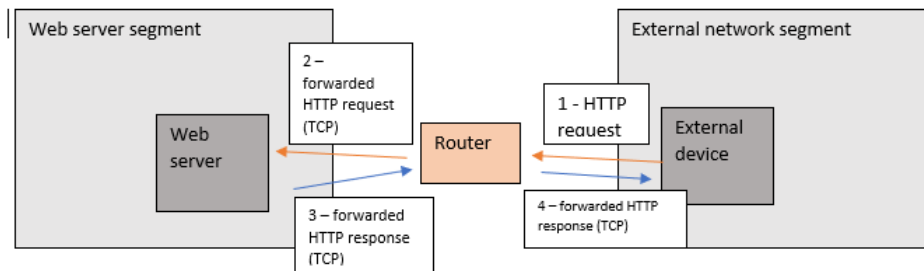


Figure 1, TCP HTTP flow (port 80/443) from the web server to the external segment

For the second network diagram, we showed the UDP DNS flow over port 53 from the external network to the web server segment. This is illustrated below in Figure 2 and the flow is as follows:

- UDP DNS flow (port 53) from the external network segment to the web server segment:
- An external device in the external network segment needs to resolve a domain name to an IP address.
- It sends a DNS query to the router using the UDP protocol.
- The router forwards the query to the web server segment, where a DNS server resolves the domain name to an IP address.
- The DNS server sends the resolution result back to the router, which forwards it to the external device in the external network segment.

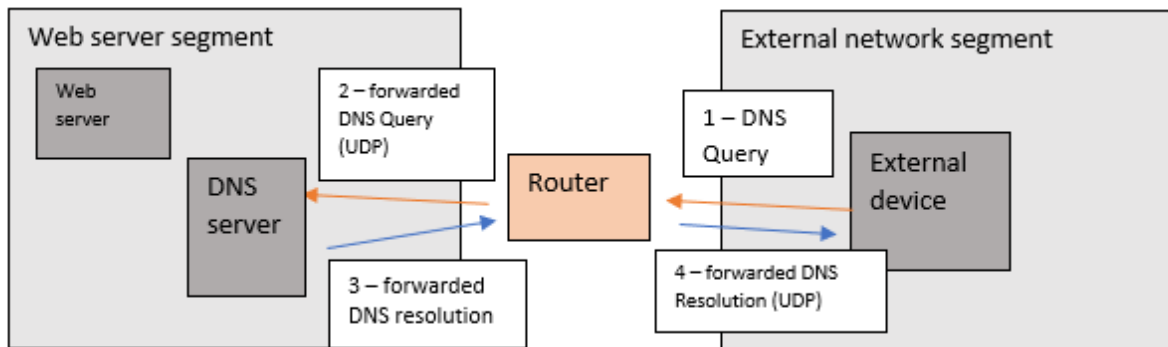


Figure 2, UDP DNS flow (port 53) from the external segment to the web server segment

Thank you,

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