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| **Subject** | Computer Communication and Networks (CCN) |
| **Experiment No.** | 7 |
| **Aim** | Packet Crafting using Scapy |
| **Step1: Ping (ICMP Echo Request):** | * **Craft an ICMP Echo Request packet using Scapy.** * **Send the packet to a target IP address.** * **Expect an ICMP Echo Reply packet in response from the target.**   **Crafting the packet and the response packet received:**  **Sent Packet:** |
| **Step2: UDP Datagram** | * **Craft a UDP packet with custom payload using Scapy.** * **Send the UDP packet to a target listening on a specific UDP port.** * **Expect a response from the target if the port is open and reachable.**   **Crafting the packet and the response packet received:**    **Sent Packet:** |
| **Step 3: DNS Query** | * **Craft a DNS query packet using Scapy to query a DNS server for a specific domain.** * **Send the DNS query packet to the DNS server.** * **Expect a DNS response containing the IP address associated with the queried domain.**   **Crafting the packet and packet which is sent:**    **Response Packet:** |
| **Step4: HTTP GET Request** | * **Craft an HTTP GET request packet using Scapy to retrieve a specific web page from a web server.** * **Send the HTTP GET request to the web server.** * **Expect an HTTP response containing the requested web page content.**   **Crafting packets and response packet:**    **Sent Packet:** |
| **Step6: Traceroute** | * **Craft UDP packets with increasing TTL (Time-to-Live) values using Scapy.** * **Send these packets towards a destination IP address.** * **Observe the ICMP Time Exceeded messages returned by intermediate routers to map the network path to the destination.** |
| **Conclusion** | Hence, by completing this experiment I came to know about Packet Crafting using Scapy |