COMPENG 4DN4 Lab 1 Report

Aaron Pinto
pintoa9

Raeed Hassan
hassam41

February 12, 2023

TCP: WireShark

Figure 1: http://compeng4dn4.mooo.com:50008/photos/351.jpeg

TCP: WinDump

DNS

The `nslookup` utility was used to do a DNS query on the `compeng4dn4.mooo.com` server. The terminal output of the DNS query is shown in Listing 1.

Listing 1: DNS Query Terminal Output

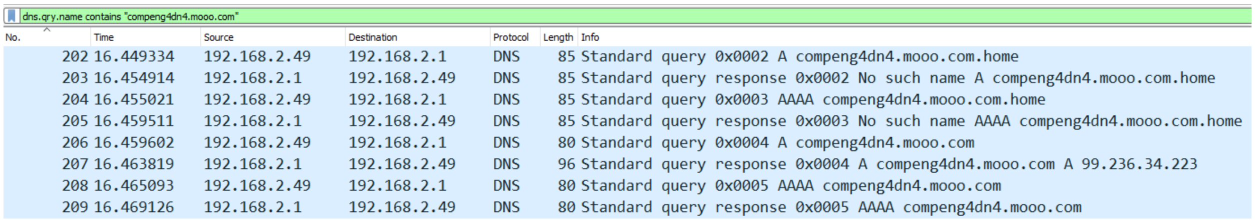
```
nslookup compeng4dn4.mooo.com
Server:  mynetwork
Address:  192.168.2.1

Non-authoritative answer:
Name:    compeng4dn4.mooo.com
Address:  99.236.34.223
```

The WireShark capture for the DNS query is shown below in Figure 2. The capture was filtered for DNS queries containing `compeng4dn4.mooo.com`, using the display filter `dns.qry.name contains "compeng4dn4.mooo.com"`.

The DNS query first searches for compeng4dn4.mooo.com with the DNS suffix .home, performing the query with ”A” and ”AAAA” records, for mapping hostnames to IPv4 and IPv6 addresses. Both DNS queries return ”no such name” indicating that the queries are unsuccessful. The DNS query then queries compeng4dn4.mooo.com with no suffix, returning the correct IPv4 address for the A record. The AAAA record does not return any address.

Figure 2: DNS Query Display Filter



dns.qry.name contains "compeng4dn4.mooo.com"

No.	Time	Source	Destination	Protocol	Length	Info
202	16.449334	192.168.2.49	192.168.2.1	DNS	85	Standard query 0x0002 A compeng4dn4.mooo.com.home
203	16.454914	192.168.2.1	192.168.2.49	DNS	85	Standard query response 0x0002 No such name A compeng4dn4.mooo.com.home
204	16.455021	192.168.2.49	192.168.2.1	DNS	85	Standard query 0x0003 AAAA compeng4dn4.mooo.com.home
205	16.459511	192.168.2.1	192.168.2.49	DNS	85	Standard query response 0x0003 No such name AAAA compeng4dn4.mooo.com.home
206	16.459602	192.168.2.49	192.168.2.1	DNS	80	Standard query 0x0004 A compeng4dn4.mooo.com
207	16.463819	192.168.2.1	192.168.2.49	DNS	96	Standard query response 0x0004 A compeng4dn4.mooo.com A 99.236.34.223
208	16.465093	192.168.2.49	192.168.2.1	DNS	80	Standard query 0x0005 AAAA compeng4dn4.mooo.com
209	16.469126	192.168.2.1	192.168.2.49	DNS	80	Standard query response 0x0005 AAAA compeng4dn4.mooo.com

Traceroute

The tracert terminal output is shown below in Listing 2. We can see that the traceroute begins first with a hoop to the local router at 192.168.2.1, then takes 10 hops to route to 24.156.158.102, with all subsequent hops timing out.

Listing 2: Traceroute Terminal Output

```
tracert compeng4dn4.mooo.com

Tracing route to compeng4dn4.mooo.com [99.236.34.223]
over a maximum of 30 hops:

  1     5 ms     5 ms     5 ms  mynetwork [192.168.2.1]
  2    22 ms    15 ms    19 ms  10.11.2.49
  3     *        *        *     Request timed out.
  4    14 ms    21 ms     *     cksnon1673w_lag37.net.bell.ca [142.124.127.44]
  5     9 ms    18 ms    22 ms  cr01-toroonxnhe9-bundle-ether1.net.bell.ca [142.124.127.159]
  6    22 ms    26 ms    24 ms  bx5-torontoxn_ae0.net.bell.ca [64.230.52.229]
  7    29 ms    28 ms    20 ms  rogers_bx5-torontoxn.net.bell.ca [184.150.158.205]
  8    22 ms    20 ms    21 ms  209.148.235.221
  9    23 ms    13 ms    15 ms  3039-dgw01.hstr.rmgt.net.rogers.com [209.148.237.94]
  10    23 ms    33 ms    18 ms  24.156.158.102
  11     *        *        *     Request timed out.
  12     *        *        *     Request timed out.
  13     *        *        *     Request timed out.
  14     *        *        *     Request timed out.
  15     *        *        *     Request timed out.
  16     *        *        *     Request timed out.
  17     *        *        *     Request timed out.
  18     *        *        *     Request timed out.
  19     *        *        *     Request timed out.
  20     *        *        *     Request timed out.
  21     *        *        *     Request timed out.
  22     *        *        *     Request timed out.
  23     *        *        *     Request timed out.
  24     *        *        *     Request timed out.
  25     *        *        *     Request timed out.
  26     *        *        *     Request timed out.
  27     *        *        *     Request timed out.
  28     *        *        *     Request timed out.
  29     *        *        *     Request timed out.
  30     *        *        *     Request timed out.
```

```
Trace complete.
```

The WireShark capture

Nmap