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Lab 3

2.

The IP address of the DNS server that resolved my request is 2001:4860:4860::8888, which is an IPv6 address for Google’s public DNS server. After changing the TCP ‘Configure IPv6’ setting to ‘Link Local Only’ for my current Wi-Fi connection, making the same nslookup request instead uses the DNS server at IPv4 address 192.168.1.1, which is the address for my home’s local network router.

A screen shot of a computer

Description automatically generated

4.

The authoritative name server for the iitb.ac.in domain is dns1.iitb.ac.in. To find the IP address of that authoritative name server, you would run nslookup dns1.iitb.ac.in.

A computer screen with white text

Description automatically generated

6.

The packet number in the trace for the DNS response to the initial DNS query is 148. This message is received by my machine via UDP.



A screenshot of a computer

Description automatically generated



A screenshot of a computer

Description automatically generated



12.

The destination port of the initial DNS query message is 53.

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated



The source port of the DNS response message is also 53.

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated



16.

The DNS query is being sent to IP address 192.168.1.1. This is indeed the address of my default local DNS server.

A computer screen with a blue and white text

Description automatically generated with medium confidence