COMP2322 Computer Networking

Lab 3 DNS

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A screenshot of a computer program

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Problem 2 trace file: a nslookup result for a European university’s authoritative DNS servers

**Problem 2 solution**

I look up the UCL (University College London) in UK sever by nslookup and it owns 2 authoritative DNS servers. Their IP address are 144.82.252.3 and 193.60.252.2, respectively.

**Part 3a:**

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the DNS query is sent over UDP

Problem 4 trace file: the DNS query

A screenshot of a computer

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the DNS response is sent over UDP

Problem 4 trace file: the DNS response

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The contents of the answers

the DNS response contains two answers

Problem 8 trace file: the DNS response

**Problem 4 solution**

They are all sent over UDP.

**Problem 8 solution**

There were 2 answers containing information about the name of the host, the type of address, class, the Time to live, the data length and the IP address.

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Problem 8 trace file: the DNS response’s answers

**Part 3b:**

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the local default DNS server address

Problem 12 trace file: the local default DNS address by ipconfig command

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The destination port of the DNS query

Problem 12 trace file: DNS query

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The contents of the 3 answers

the DNS response contains 3 answers

Problem 14 trace file: the contents of the DNS answers

**Problem 12 solution**

The DNS query is sent to 158.132.8.3;

And the default local DNS server’s address could be obtained by the ipconfig /all command, which is also 158.132.8.3. So they are of the same.

**Problem 14 solution**

The response DNS message contains one answer containing the name of the host, the type of address, the class, and the IP address.

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Problem 14 trace file: the contents of the DNS answers

**Part 3c:**

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The namesevers and their addresses

the DNS response contains 8 answers

Problem 18 trace file: the answers of the DNS response

**Problem 18 solution**

The nameservers are use5, eur5, asia1, usw2, asia2, ns1-173, ns1-37. We can find their IP addresses if we in the Additional records field.

**A screenshot of a computer code

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Problem 18 trace file: the answers of the DNS response