

**Experimental Report**

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| **Course**: | Computer Networking |
| **Semester**: | 2nd semester of the academic year **2020-2021** |
| **Major**: | Software Engineering |
| **Class**: | 2019 |
| **Student Name**: | 吴嘉诚 |
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| **Teacher:** | Zheng Yang (杨铮) |

**School of Computer and Information Science**

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| Name | |  | | | |
| Date | |  | Type | | □Confirmatory  √ Design  √ Comprehensive |
| 1. **Objectives & Requirements** | | | | | |
| 1. **Experimental environment (**platform and software**)** | | | | | |
| 1. **Experimental content and design** (Main Content, Procedure, Codes and Results) 2. **nslookup** 3. **Run nslookup to obtain the IP address of a Web server in Asia. What is the IP address of that server?**     **One of the server’s IP address is 183.232.231.174**   1. **Run nslookup to determine the authoritative DNS servers for a university in Europe.**     **I performed nslookup for ETH in Switzerland**  **These three are all authoritative DNS server**   1. **Run nslookup so that one of the DNS servers obtained in Question 2 is queried for the mail servers for Yahoo! mail. What is its IP address?**     **I can’t get the IP of Yahoo!mail by the DNS servers of ETH or University of Cambridge. But i can get it via the DNS of my school:**  **It is 69.147.88.8 and 69.147.88.7**  **2021-05-14 15-28-42 的屏幕截图**   1. **ipconfig/ifconfig(Linux)** 2. **command**   **2021-05-18 14-32-30 的屏幕截图**     1. **Cache check and flush**   2021-05-14 15-46-34 的屏幕截图   1. **Tracing DNS with Wireshark**      1. Locate the DNS query and response messages. Are then sent over UDP or TCP?   **UDP**     1. What is the destination port for the DNS query message? What is the source port of DNS response message?   **Both are port 53**       1. To what IP address is the DNS query message sent? Use ipconfig to determine the IP address of your local DNS server. Are these two IP addresses the same?   **Is 192.168.43.1**    7. Examine the DNS query message. What “Type” of DNS query is it? Does the query message contain any “answers”?  8. Examine the DNS response message. How many “answers” are provided? What do each of these answers contain?  9. Consider the subsequent TCP SYN packet sent by your host. Does the destination  IP address of the SYN packet correspond to any of the IP addresses provided in the DNS response message?  10. This web page contains images. Before retrieving each image, does your host issue new DNS queries? | | | | | |
| 1. **Analysis and discussion of experiment results**（Analysis of experimental results, and summary of gains and the existing problems） | | | | | |
| Comments & Evaluation | Content & Design (A-E) | | |  | |
| Procedure & Codes (A-E) | | |  | |
| Results (A-E) | | |  | |
| Analysis & Discussion (A-E) | | |  | |
| Score (A-E):  Feedback comments: | | | | |