

COMP 431 — INTERNET SERVICES & PROTOCOLS

Spring 2009

Homework 8, March 2

Due: March 16

Laboratory Assignment No. 2 – Wireshark Exploration of HTTP and DNS protocols

In this assignment you will use the Wireshark (Ethereal) program to examine some of the details of the HTTP and DNS protocols. As before, these are exercises that have been created by the authors of your textbook to illustrate concepts covered there (in this case, Chapter 2).

Homework Requirements

Download “Laboratory Assignment 2A” and “Laboratory Assignment 2B” linked from the course web page. These documents are PDF files supplied by the authors of your text. Read and follow all directions in them. In particular, you will be capturing and analyzing packets that carry the application layer protocols for HTTP and DNS. You will also learn to use the Windows-supplied programs `nslookup` and `ipconfig` to invoke DNS lookup functions and manage the local DNS cache.

Grading

In “Laboratory Assignment 2A” (HTTP) do all of sections 1, 2, 3, and 4 (i.e., ignore the section numbered 2.5). For each of sections 1-4, perform all the steps of the exercises and answer all the questions (1-17) as directed in the document. You should perform all the packet capture exercises on a live network connection; do not use the option to download the pre-captured traces from the authors’ web server.

NOTE: there are errors in the URLs given in the directions. The extension “.html” should be added to all the URLs that do not have it already. For example, the URL in the document

<http://gaia.cs.umass.edu/ethereal-labs/HTTP-ethereal-file2>
should be
<http://gaia.cs.umass.edu/ethereal-labs/HTTP-ethereal-file2.html>

In “Laboratory Assignment 2B” (DNS) do all of sections 1, 2, and 3 up through answering questions 1-19 (ignore the exercise that answers questions 20-23). Use your own captured packets, not traces downloaded from the authors’ web server

Hand in (or send by email) your answers to the questions from both parts A and B before the beginning of class on March 16.

For running Wireshark, `nslookup` and `ipconfig`, you may receive help from anyone. The answers to the questions that you are handing in should be your work alone.