

## Lab 9 - Wireshark Protocol Analyzer

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### Introduction

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In this lab you will use the Wireshark Protocol Analyzer to capture, filter and examine IP frames.

You will follow the procedure described in two of the Wireshark labs prepared by J.F. Kurose and K.W. Ross, authors of the book “Computer Networking.” The lab descriptions are available online and on the course web site.

If you read the lab descriptions before coming to the lab you should be able to complete the Introductory and IP Protocol labs during your lab session.

Although we will not have time to study all of the IP protocols mentioned in the labs in detail, the lab should help you become familiar with this useful tool.

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### Pre-Lab

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Download and read the following labs (available from the course web site or <http://www-net.cs.umass.edu/wireshark-labs/>):

- Wireshark\_Intro
- Wireshark\_IP

For the second lab you may want to have access to [RFC 791](#) and [RFC 792](#).

Submit a short report to the dropbox on the course web site with your name, ID, lab number and answers to the following questions:

- what protocol layer is shown in the ‘Protocol’ column in the top window?
- what is the purpose of the filter?
- how do you get Wireshark show you more or less detail about a particular protocol layer?
- which window shows the contents of the frame in hex format?

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### Lab

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Wireshark has been installed on the lab computers. Go through the instructions in the two lab writeups to practice using Wireshark.

Use the standard Windows `tracert` program for the IP lab and skip the Fragmentation section (modern systems almost never use fragmentation).

Shut down the browser when doing the IP lab to minimize the number of unrelated packets captured.

Note that the ICMP echo response (response to a ‘ping’) and TTL exceeded response frames contain copies of the transmitted IP frame (or header). Don’t confuse the two IP headers.

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### Report

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Submit a report in PDF format containing:

- The lab number, your name, BCIT ID and date.
- The answers to questions 1 through 4 in the Introduction lab. For question 4, use a screen shot rather than printing the packet.
- The answers to questions 1 through 9 in Section 2 of the IP lab.