Trivial File Transfer Protocol

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1 Testing

To test our client, we connected to a local TFTP server. We set up the server using the `tftpd-hpa` package for Linux. We bound it to a local IP address (127.0.0.3) and were able to control the files in its directory. We sent packets to this server and monitored the traffic on Wireshark. We also tested over a switch.

We used the Linux `diff` command to determine whether the files were the same. Additionally, we sent the same file using the built in TFTP utility and our client. We `diff`'d them to check if they were the same. We repeated this process for receiving.

Things we tested:

- Text files
- Images
- Files of various sizes
- Octet and netascii sending modes
- Carriage return + new line spanning two packets
- Packets of 512 bytes in length
- Packets less than 512 bytes in length
- Packets of 0 bytes in length
- Temporary disconnects (testing the timeout functionality)

2 Difficulties

Shorts into unsigned bytes

Carriage returns in netascii mode

reading bytes from a file and writing bytes to a file

Dealing with timeouts

Converting txt files into netascii to be sent - handled overflow dumbly -should read data size - overflow.length

3 Static Analysis