

Traceroute Module

This is the main module for Traceroute portion of homework

`my_traceroute.form_pkt()`

Forms packet for traceroute program by using raw sockets

Returns: pkt, a crafted packet using scapy raw sockets

Return type: scapy.layers.inet.IP / scapy.layers.inet.ICMP

`my_traceroute.setup_parser()`

Sets up the argument parser for the traceroute program

Returns: parser, an initialized ArgumentParser object

Return type: ArgumentParser

`my_traceroute.trace(pkt, args, line_break)`

Performs traceroute with given packet and args

Parameters:

- **pkt** (*scapy.layers.inet.IP / scapy.layers.inet.ICMP*) – A packet formed with scapy raw sockets

- **args** (*ArgumentParser*) – ArgumentParser object with parsed arguments

- **line_break** (*str*) – string object used for printing purposes

Returns: probe_addresses, sets of IP addresses traceroute touches

Return type: Array of sets

Returns: failed_probes, array tracking # of probes answered each hop

Return type: Array of int