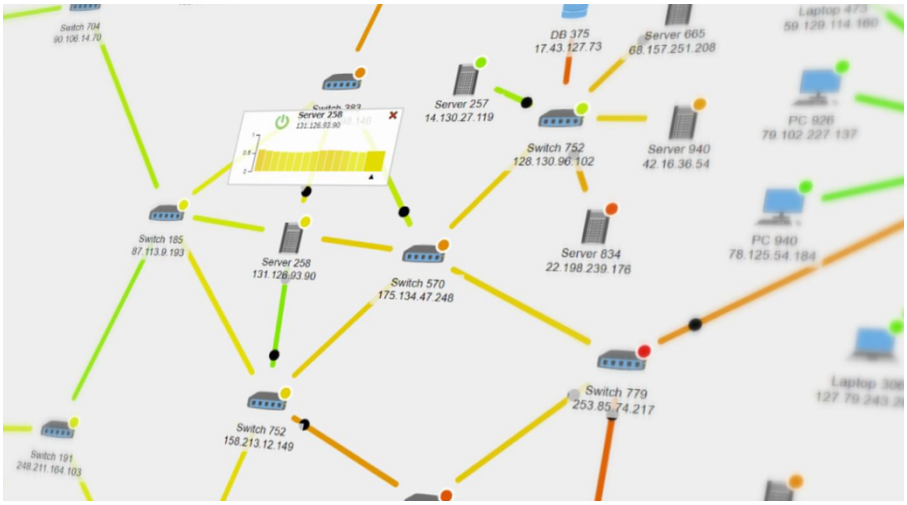
Routing visualization:

1. The students will implement three algorithms for the dissemination of data through a given static topology. Each node will have a queue for each of its next hop. One of those algorithms will be a greedy algorithm (students will define the specifics). The different algorithms will decide how to move the packets through the network, until no data is left to transmit.
2. The students will implement a simulator for the different algorithms they have proposed. The simulator will include visual tools for monitoring how the packets traverse through the graph. The visualization should include:
    a. Information about the packets.
    b. The load on the nodes that the packets go through.
    c. The load on the edges that are used.
    d. Additional metrics the students should suggest.
3. The students will compare the implemented algorithms and explain the trade-off between each algorithm. The routing choices as well as time metrics for the dissemination of the data. The students should also explain the reason they chose those metrics.



Open-source tools that can help:
Network x
The Gremlin Graph Traversal Machine and Language

Requirements:
Introduction to Networking (Must), Internet Networking (Optional)

Programming Language:

Python, Java Script

Supervisor:
Barak Gahtan