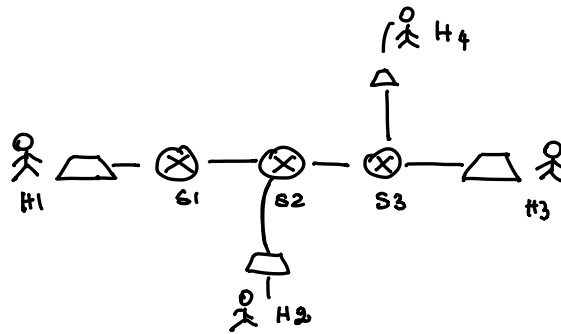## Computer Network Performance project – n 10

Using the Mininet APIs, build the following custom topology:

You can set the link attributes (bandwidth, delay, queue size) individually for the different links of the topology. Create links with uniform bandwidth and generate traffic between the four pairs of hosts:

(H1,H3), (H1,H4), (H2,H3) and (H2,H4),

Let each pair generate the same rate of packets λ.

For growing values of λ measure and plot the end-to-end latency and the utilization of each of the links (S1,S2), and (S2,S3).

Find λ^*, i.e., the value of λ that saturates the bottleneck link. Analyze the performance of the end-to-end traffic and of the individual links when λ grows and approaches the value of λ^*.

Consider the addition of only one other link to be used to connect any pair of switches, and let the controller dynamically route the existing traffic so as to alleviate the bottleneck.

What solution would you propose for routing the existing traffic in the new topology?

Produce the same measures and plots for the new topology.

Comment your analysis.