Proposal

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In this project, we want to implement a framework that is similar to **In-band Network Telemetry (INT)**, which allows the switch to embed information into data packets, and there is a traffic sink that can collect those data and give the feedback.

There are many different applications of INT. For example, the network can decide the routing path in the real-time by detecting the congestion, and the network can also collect the packet latency and report it to the user.

In this project, we want to let the monitor (1) reports the end-to-end latency along different paths between a pair of end-hosts, and (2) intelligently selects the routing path which has the smallest latency.

For example, in the following network topology, if the application finds out that the packet transmission through switch3 is faster than the transmission through switch2 or switch4, it will select the path which will go through switch3.

Switch2

Switch1

Switch3

Switch4

Switch5

We would run the application in the simulated network topology. The packet latency will be displayed on the user interface, and we will compare the network throughput with the network which never change the routing path.