Use Cases

1) To build a topology with the data from the SDN Controller. It gives the information regarding the Nodes, Links.

2) a) To detect the hosts (detect them as edge nodes) i.e. whether they are available or not b) To determine the shortest path between the edge nodes (Precompute and store the path)

3) a) Adding a node ---🡪 reconfiguring the path

b) Deleting a node --🡪 reconfiguring the path

4) At the moment when host changes from one node to another node then reconfigure the path and remove the old path.

5) When an intermediary switch fails, reconfiguring all the paths going through that switch. Weight --- Weight is the numeric value which is based on amount of traffic between the nodes (weight directly proportional to traffic).

6) Best path: Based on the traffic we will give the weight on each link, based on the weight we will be determining best path.

If sum of total weights is less than Threshold value then it is considered as the best path. User should provide Threshold value.

Cases between shortest paths and best paths based on scenarios:

Ex: firstly consider the shortest path with less traffic, if the traffic increases then we will go for best path1, if the traffic increases in the best path1 too we will go for best path2. In this period of time if the traffic on shortest path become less then we jump from bestpath2 to shortest path. If there is less traffic in all paths then the priority order would be (Shortest path, best path 1, and best path 2).

7) Every 30 sec calculate T (Sum of weights)

Trends: Increasing Trend Ex: T = (35, 40, 45, 50, 60)

Decreasing Trend Ex: T = (65, 60, 55, 45, 40)

Normal Trend Ex: T = (60, 57, 55, 58, 55, 50)

Sudden Decrease Ex: T = (60, 55, 30, 25)

Sudden Increase Ex: T = (30, 50, 55, 60)

Every 2 minutes if necessary changing of the paths should be done according to trends.