Problem Statement and Requirement for Inband Flow Learning

draft-hwyh-ippm-ps-inband-flow-learning-01

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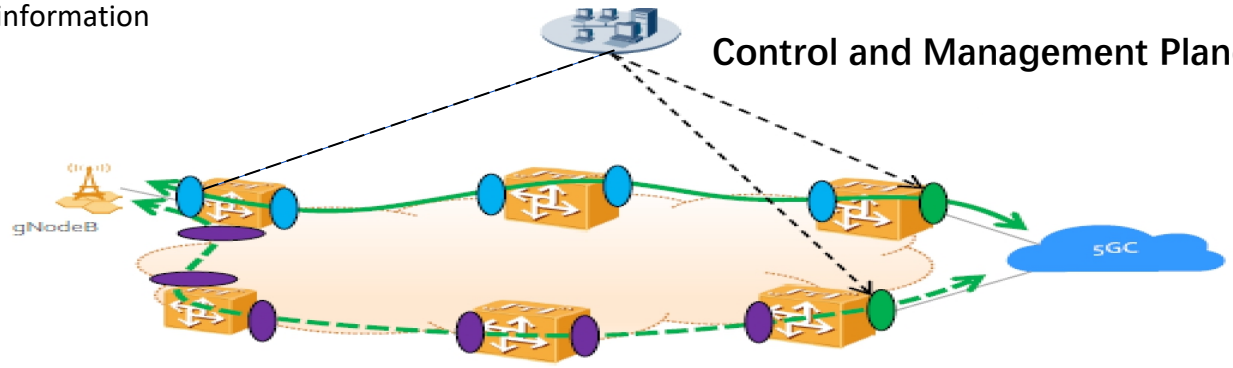
Problem Statements & Requirements

From the operator's actual deployment of flow performance monitorings,we found several difficulties in both backhaul networks and enterprise services.

- It is difficult for to get the flow information ,including Ports, IP address, DSCP, etc, to setup the instance for flow performance monitoring in the operators networks.
- 4G/5G 2C and 5G 2B scenarios， because of Tidal Effects, base station adjustments, UPF expansions, etc.
- Enterprise services, because of difficult to get the customer's information
- It is hard to deploy and maintain flow monitoring and statistics telemetry in a static mode in large scale network.
- The traffic forwarding path is changed because of service flow switching, service protection and route convergence. When a hop-by-hop flow monitoring is required by critical traffic for deep SLA investigation, monitoring instance on each node needs to be re-deployed on the new path.



Ingress Flow Learning

To captures the characteristic data fields of packet and create the monitoring instance.

Egress Flow Learning

To solve the problem of egress node changing.

Hop-by-Hop Flow Learning

To solve the problem of path of a service flow changing.

Auto Flow Aging

Automatic aging and resource recycle.

Next Step:Welcome for more discussion. Later we will propose more contributions on the solutions of the deployment of in-band flow learning.

Thank You