NFV Use-case Enablement on DPDK and FD.IO

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- Edge Router Use-case Overview
- Implementation using DPDK
- Implementation using FD.IO VPP
Edge Router Use-case Overview

**Upstream**

- Access Network (Subscribers)
- Provider Edge Router
- Core Network

**Downstream**

- Packet RX
- Routing
- Traffic Manager
- Packet TX

- Packet RX
- ACL filters
- Flow Classifier
- Metering, Policing & Marking
- Routing
- Queuing & Packet TX
Implementation using DPDK (1)

**Pipeline 1**
- **Type**: ROUTING
- **Core**: 1
- **Packet Queues In**: RXQ0.0, RXQ1.0
- **Packet Queues Out**: SWQ0, SWQ1, SINK0
- **Encapsulation**: ethernet_qinq
- **IP Header Offset**: 270

**Pipeline 2**
- **Type**: PASS-THROUGH
- **Core**: 1h
- **Packet Queues In**: SWQ0, SWQ1, TM0, TM1
- **Packet Queues Out**: TM0, TM1, SWQ2, SWQ3

**Pipeline 3**
- **Type**: PASS-THROUGH
- **Core**: 1
- **Packet Queues In**: SWQ2, SWQ3
- **Packet Queues Out**: TXQ0.0, TXQ1.0

**Pipeline 4**
- **Type**: FLOW_ACTIONS
- **Core**: 1h
- **Packet Queues In**: SWQ1
- **Packet Queues Out**: SWQ2
- **Number of Flows**: 65536
- **Number of Meters per Flow**: 1
- **Flow ID Offset**: 132
- **IP Header Offset**: 278
- **Color Offset**: 136

**Pipeline 5**
- **Type**: ROUTING
- **Core**: 1
- **Packet Queues In**: SWQ2
- **Packet Queues Out**: TXQ0.0, TXQ1.0, SINK2
- **Encapsulation**: ethernet_mpls
- **MPLS Color Mark**: yes
- **IP Header Offset**: 278
- **Color Offset**: 136

**MemPool 0**
- **Pool Size**: 2M
Implementation using FD.IO VPP
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