NFV Use-case Enablement on DPDK and FD.IO

Cristian Dumitrescu

SW Architect, Intel

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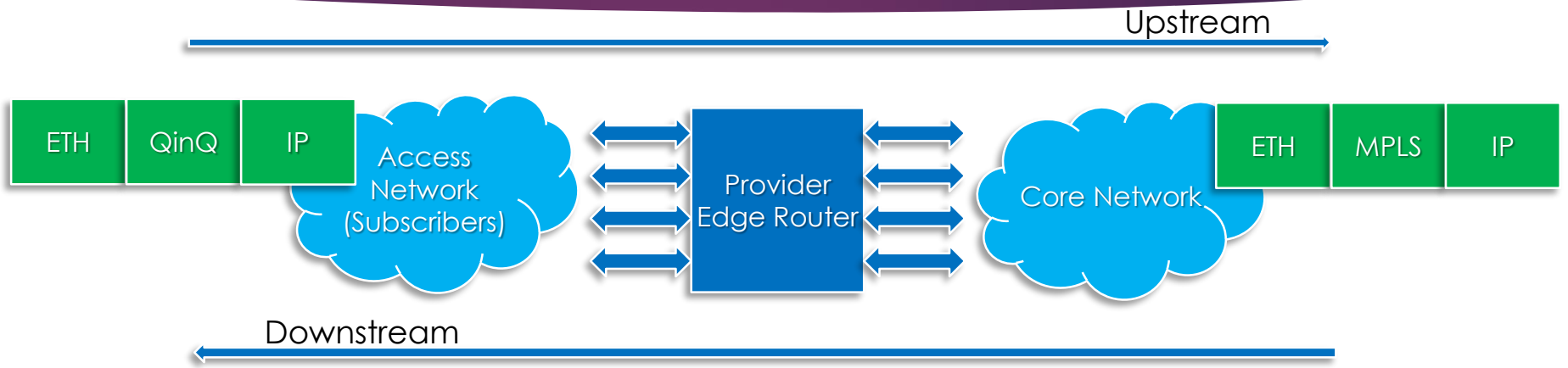
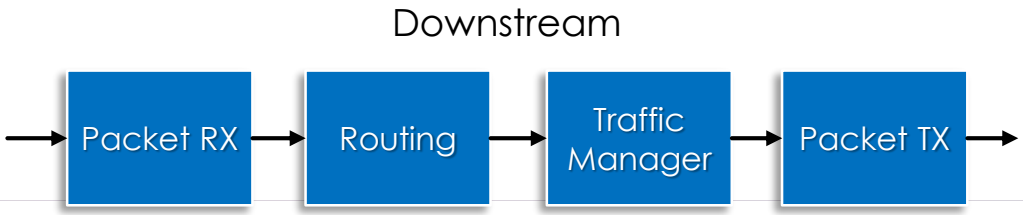
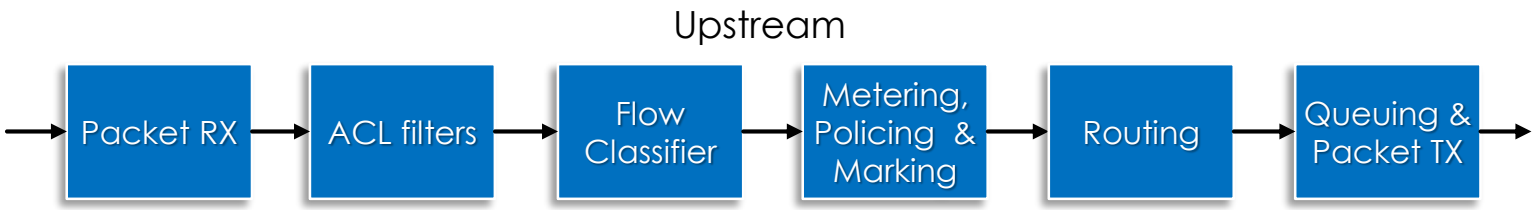
- Edge Router Use-case Overview
- Implementation using DPDK
- Implementation using FD.IO VPP

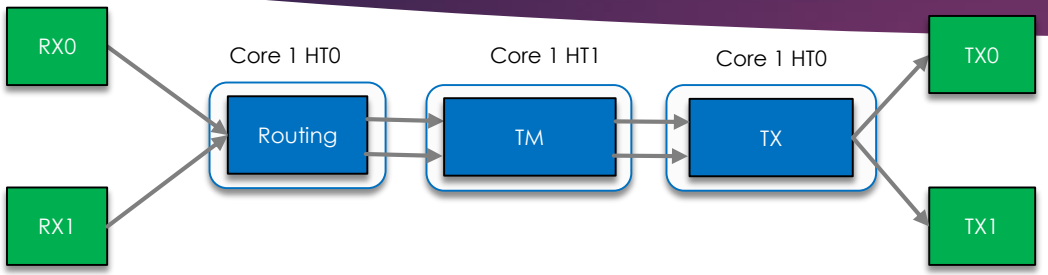
Edge Router Use-case Overview







Implementation using DPDK (1)

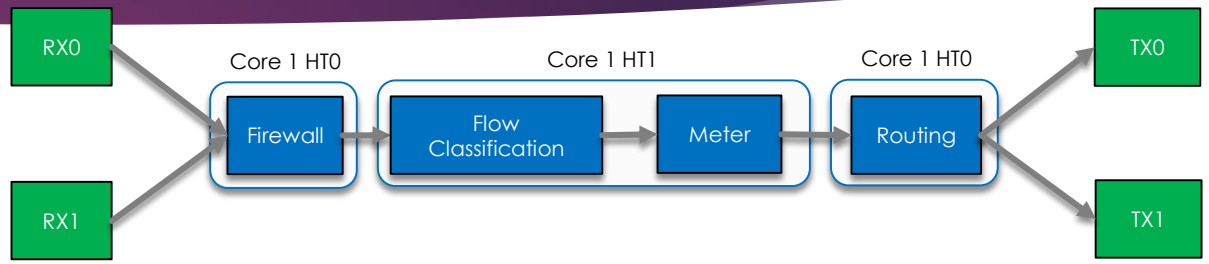



```
[PIPELINE1]
type = ROUTING
core = 1
pktq_in = RXQ0.0 RXQ1.0
pktq_out = SWQ0 SWQ1 SINK0
encap = ethernet_qinq
ip_hdr_offset = 270

[PIPELINE2]
type = PASS-THROUGH
core = 1h
pktq_in = SWQ0 SWQ1 TM0 TM1
pktq_out = TM0 TM1 SWQ2 SWQ3

[PIPELINE3]
type = PASS-THROUGH
core = 1
pktq_in = SWQ2 SWQ3
pktq_out = TXQ0.0 TXQ1.0

[MEMPOOL0]
pool_size = 2M
```



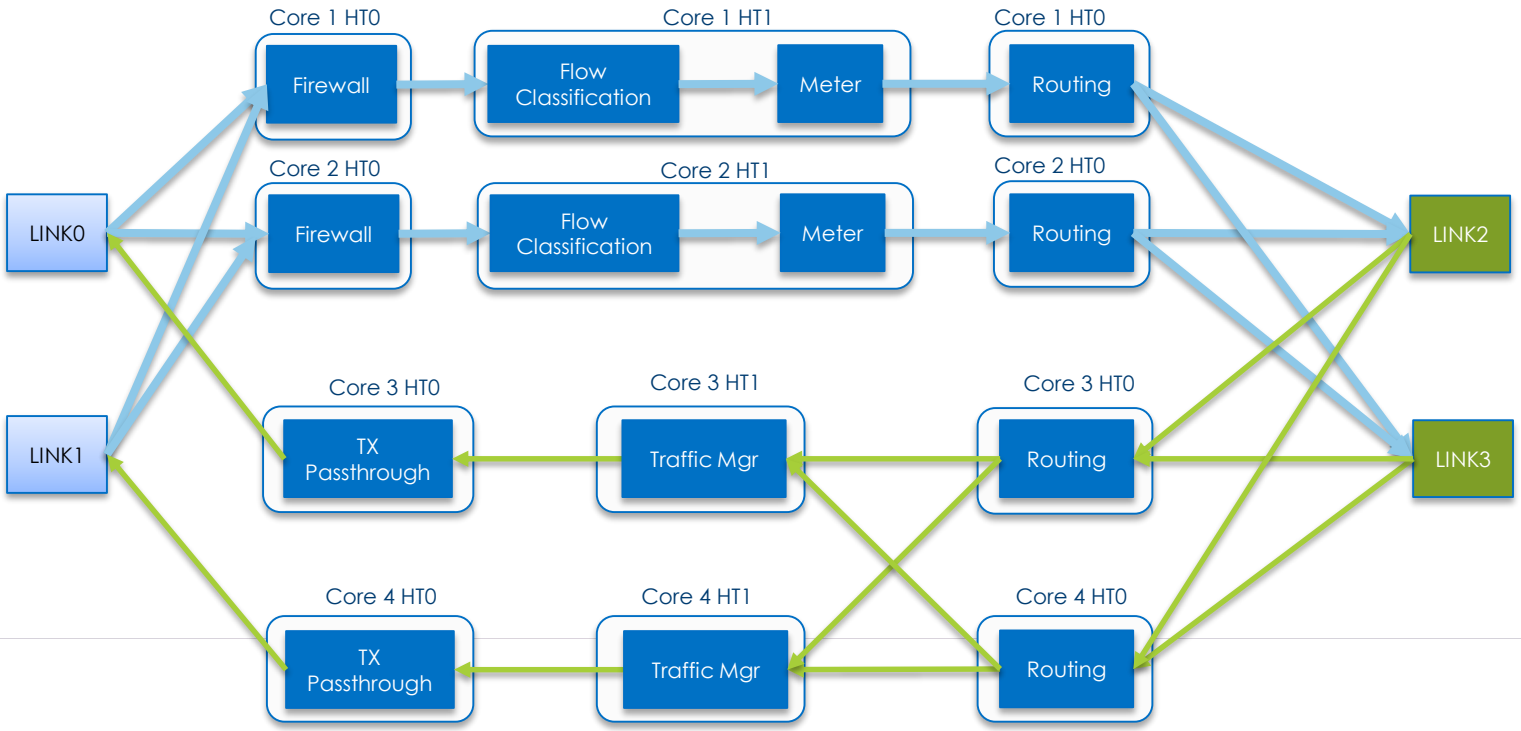

```
[PIPELINE1]
type = FIREWALL
core = 1
pktq_in = RXQ0.0 RXQ1.0
pktq_out = SWQ0  SINK0
n_rules = 4096
pkt_type = qinq_ipv4

[PIPELINE3]
type = FLOW_CLASSIFICATION
core = 1h
pktq_in = SWQ0
pktq_out = SWQ1 SINK1
n_flows = 65536
key_size = 8
key_offset = 268
hash_offset = 128
Key mask = 00000FFF00000FFF
```

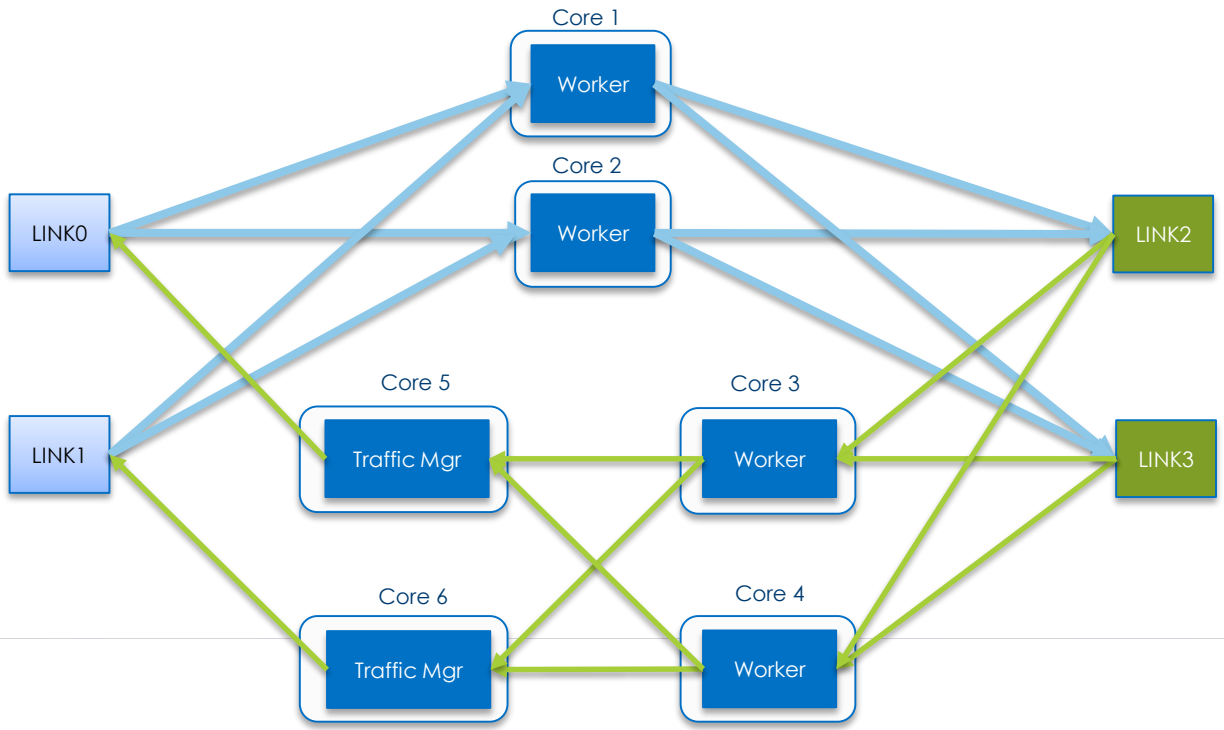
```
[PIPELINE4]
type = FLOW_ACTIONS
core = 1h
pktq_in = SWQ1
pktq_out = SWQ2
n_flows = 65536
n_meters_per_flow = 1
flow_id_offset = 132
ip_hdr_offset = 278
color_offset = 136

[PIPELINE5]
type = ROUTING
core = 1
pktq_in = SWQ2
pktq_out = TXQ0.0 TXQ1.0 SINK2
encap = ethernet_mpls
mpls_color_mark = yes
ip_hdr_offset = 278
color_offset = 136
```

Implementation using DPDK (2)



Implementation using FD.IO VPP



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