Differences Between Ingress and Egress Packet Processing

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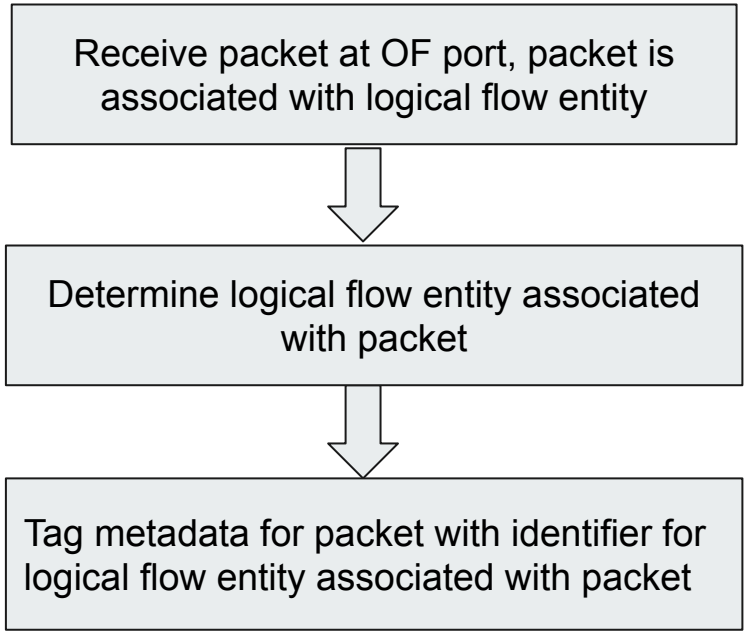
What are ingress and egress ports?

- Ingress port = port of entry
  - Explain where a frame enters to the device
  - Openflow packets are received
  - For a packet this is a property
- Egress port = port of exit
  - Describe the frames leaving the device from a particular port
  - Output port

Ingress packet processing

- packet ingress processing comprises receiving a packet at an OF port.
- The packet is associated with one of multiple logical flow entities, such as logical ports, allocated to the OF port.

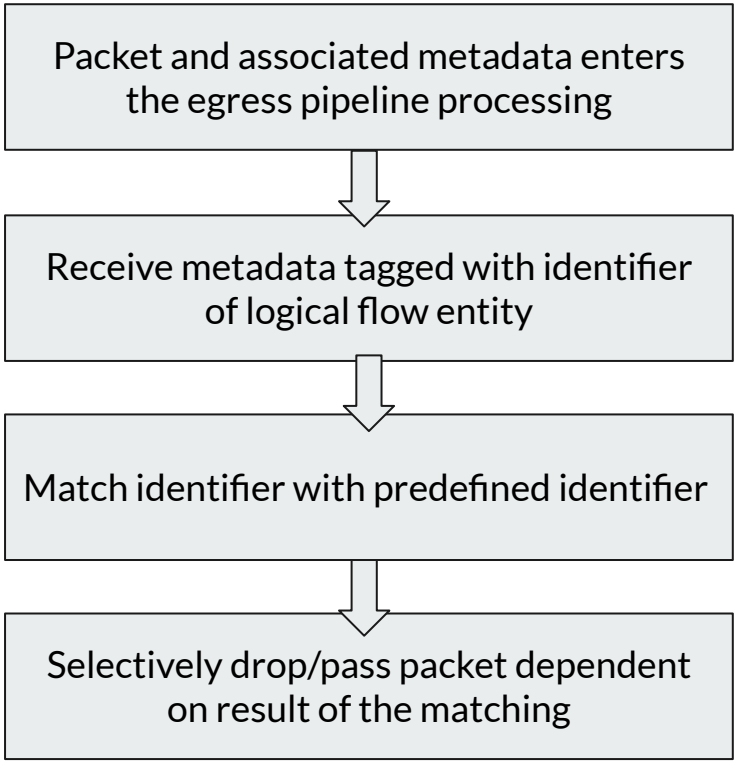
Ingress Processing

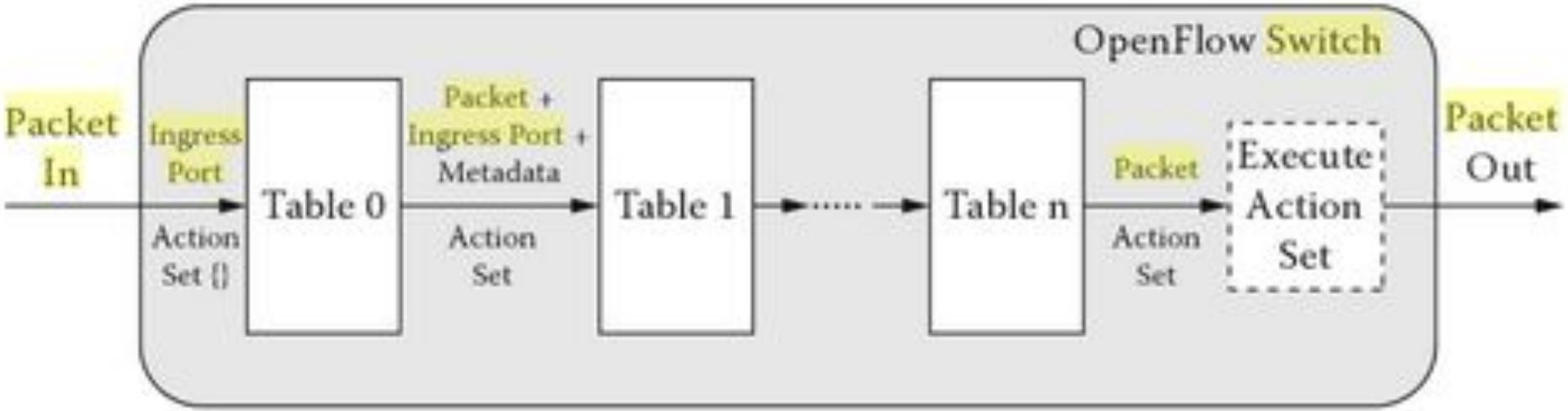


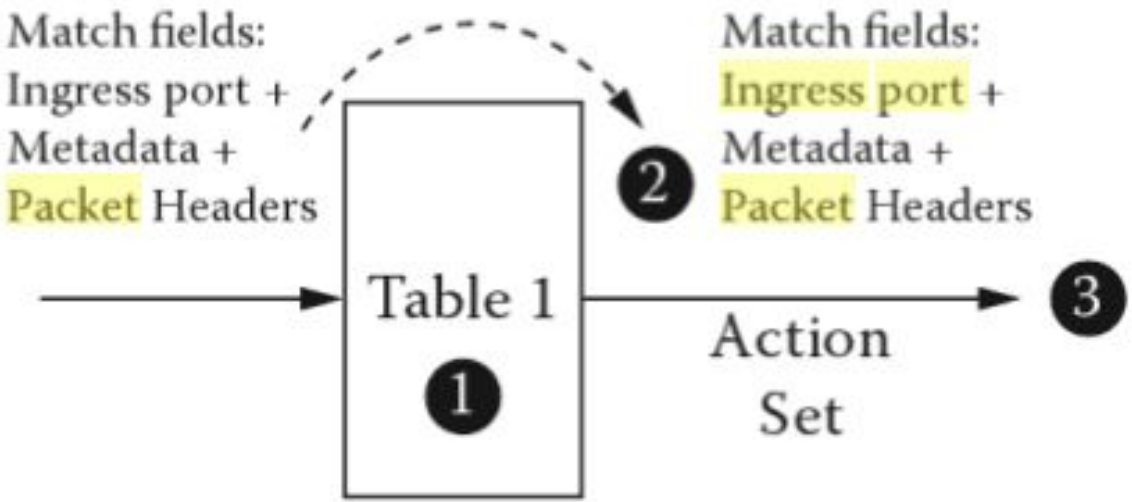
Egress packet processing

- In the next step, the logical flow entity associated with the received packet is determined. Then, metadata for the packet is tagged with an identifier for the logical flow entity associated with the packet. The tagging controls handling of the packet at egress processing.
- The packet handling, in turn, may include a selective dropping or passing of the packet.

Egress Processing




OpenFlow Switch
Packet In
Ingress Port
Action Set {}
Table 0
Packet + Ingress Port + Metadata
Action Set
Table 1
.....
Table n
Packet
Action Set
Execute Action Set
Packet Out


Match fields:
Ingress port +
Metadata +
Packet Headers
2
Match fields:
Ingress port +
Metadata +
Packet Headers
Table 1
1
3
Action
Set

Differences

- Ingress (inbound) processing means, when a packet arrives to the switch it will determine the egress path(egress port) to which the packet need to be forwarded. This processing involves many things, depending on if the packet is a bridged packet, routed packet or vxlan packet and also depends on the routing policies.
- If the processing is successful, switch/router will forward the packet to egress port, else it drops the packet.

Thank you...