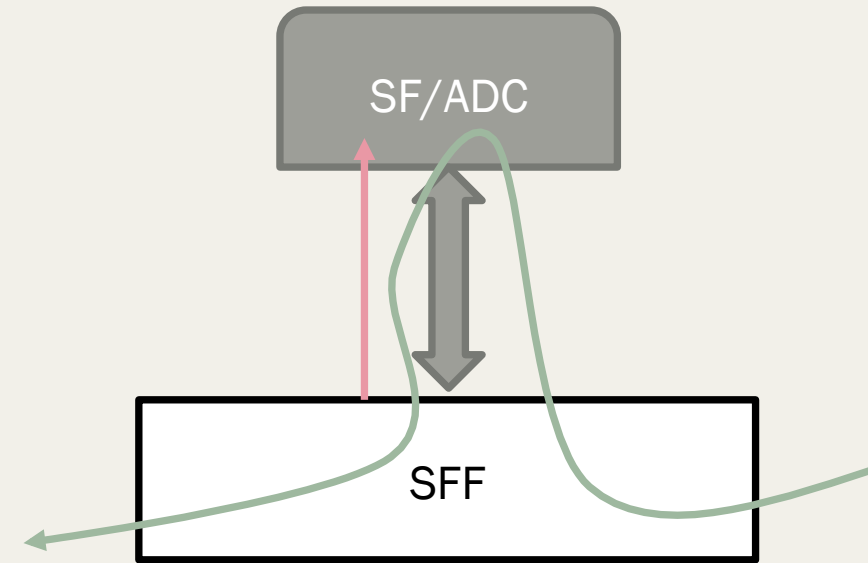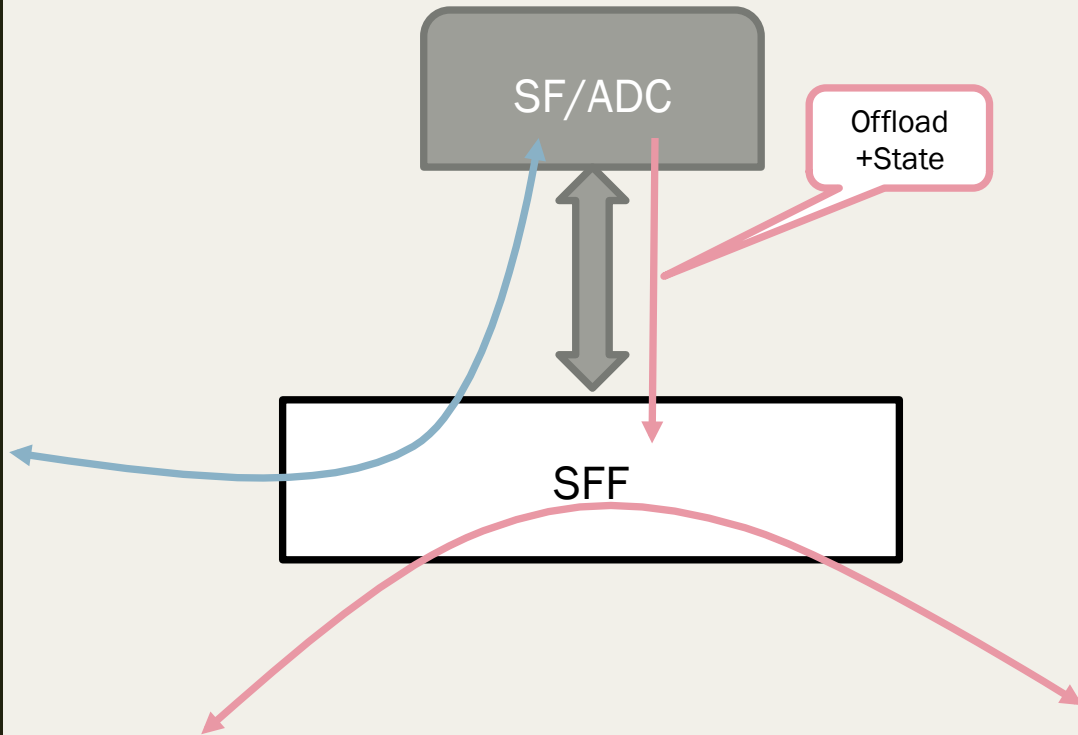# L7 OPTIMIZATION

Sumandra Majee
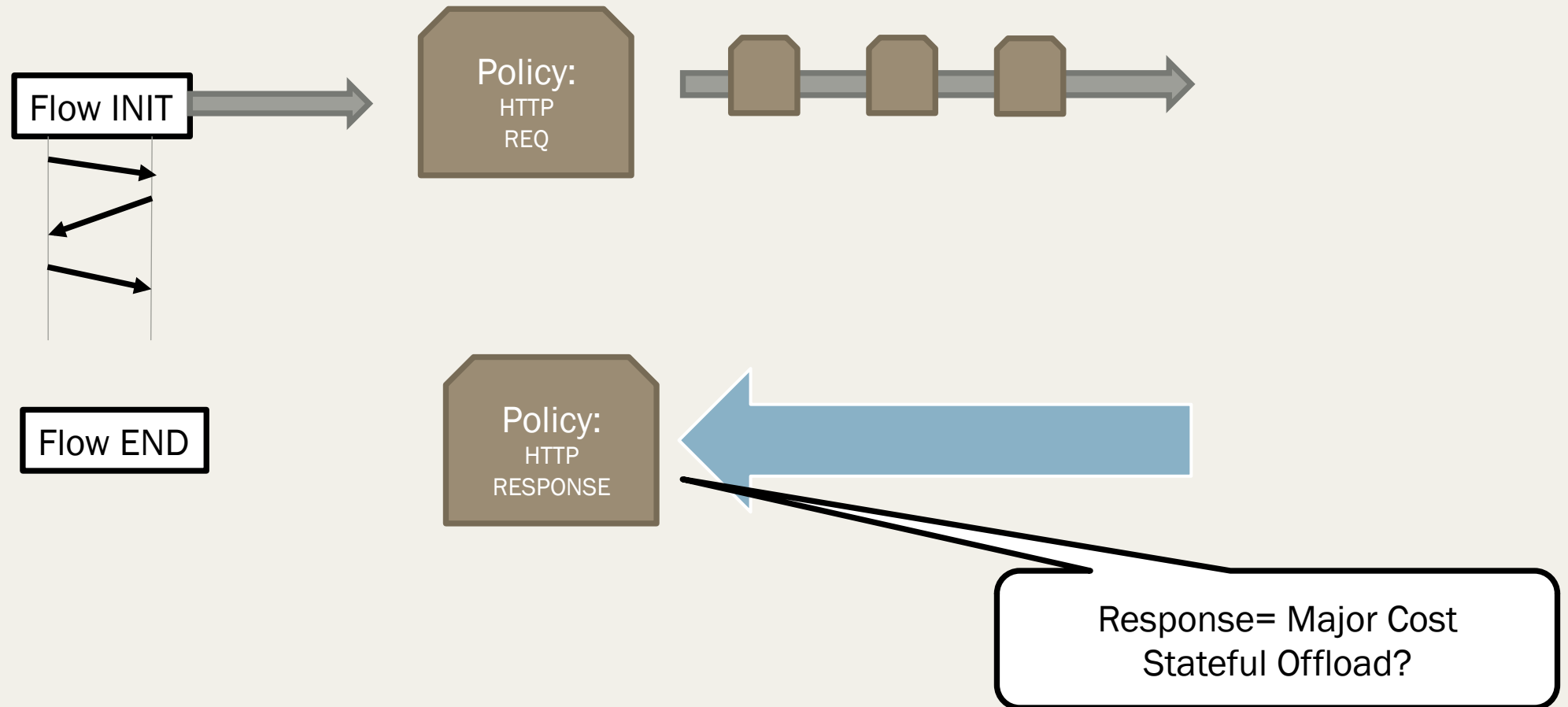
Attributes of L7 Devices

- Manages Flow life. (SYN < ---- >FIN). Typically Bidirectional

- 5/6 tuple for flow identification for a given flow only. Necessary for security function.

- Cost per bits much higher compared to switch, routers.

- Typically Stateful. TCP Splice State, LB/NAT State (ADC) and host of others.

- Stream Handling: Full TCP Proxy, Half, inline serializer
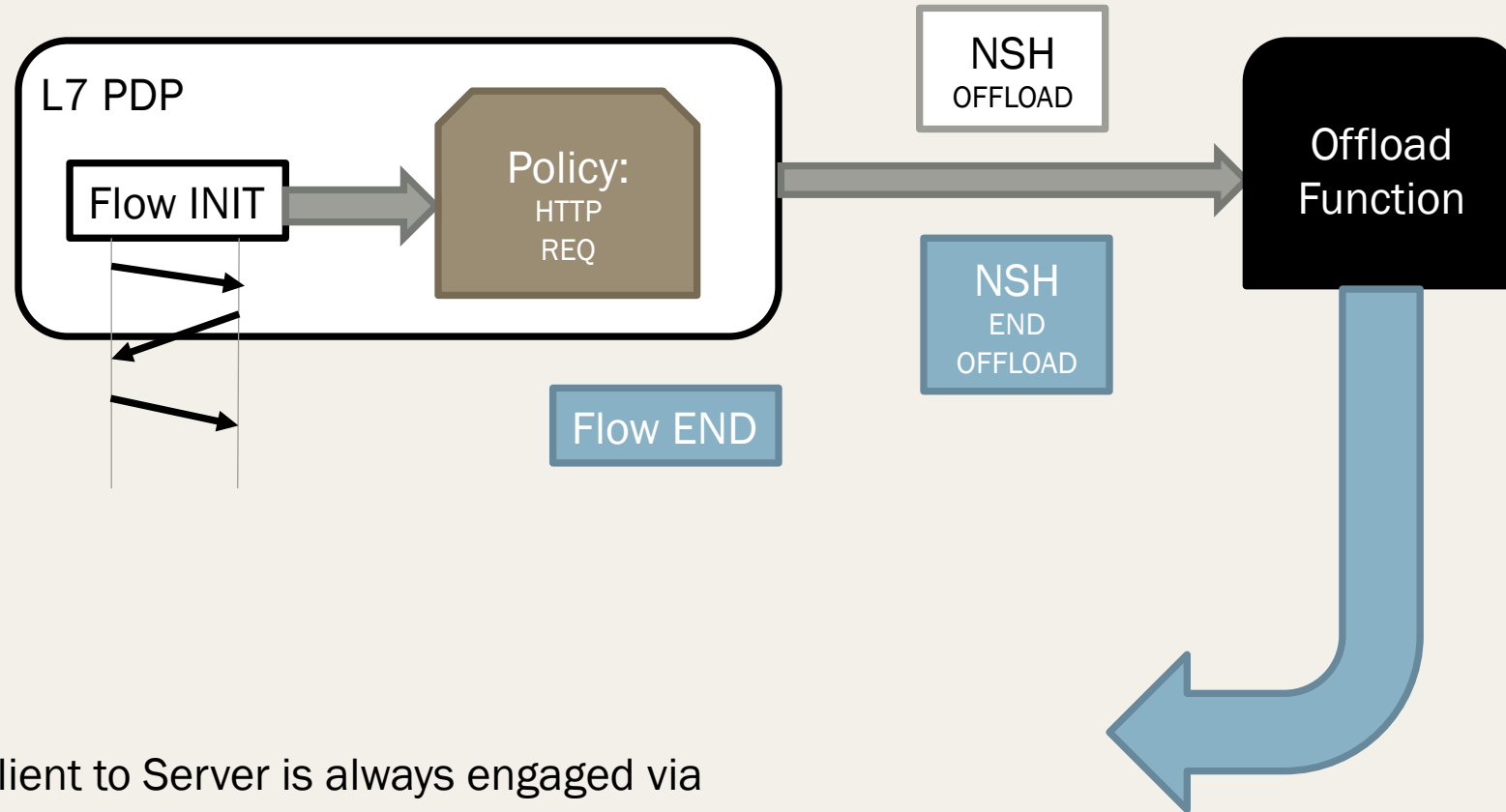
- FLOWS NOT PKTS

SF/SFF Offload

Typical L7 Policy Decision Point

Flow INIT

Policy:
HTTP
REQ

Flow END

Policy:
HTTP
RESPONSE

Response= Major Cost
Stateful Offload?

One Way Offload

L7 PDP

Flow INIT

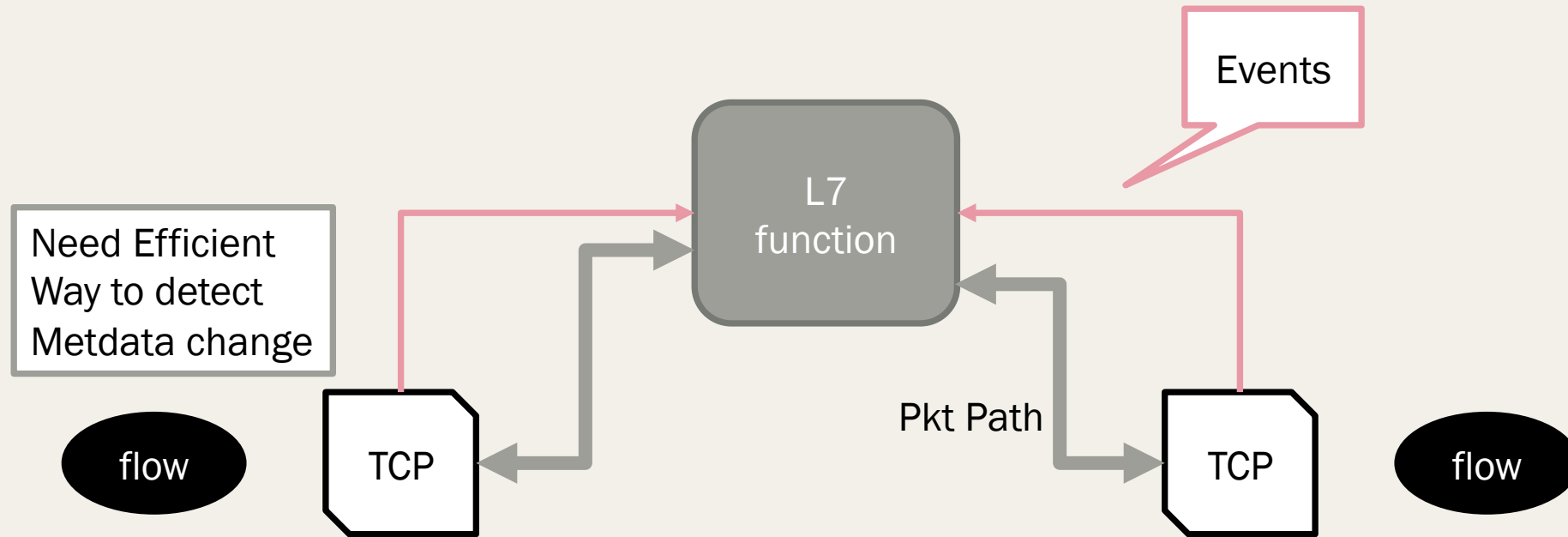Policy: HTTP REQ

NSH OFFLOAD

Offload Function

Flow END

NSH END OFFLOAD

Client to Server is always engaged via L7 PDP. Response PATH is offloaded based on http hdr based policy for example

Flows Vs. Pkt

WARNING: Not a Design, Just to convey the point

PROPOSAL: Let the Bit war Begin

- Inband OFFLOAD (START/STOP) . Preferably as part of the context hdr

- Transaction Id/ Version bits for efficient detection of Change