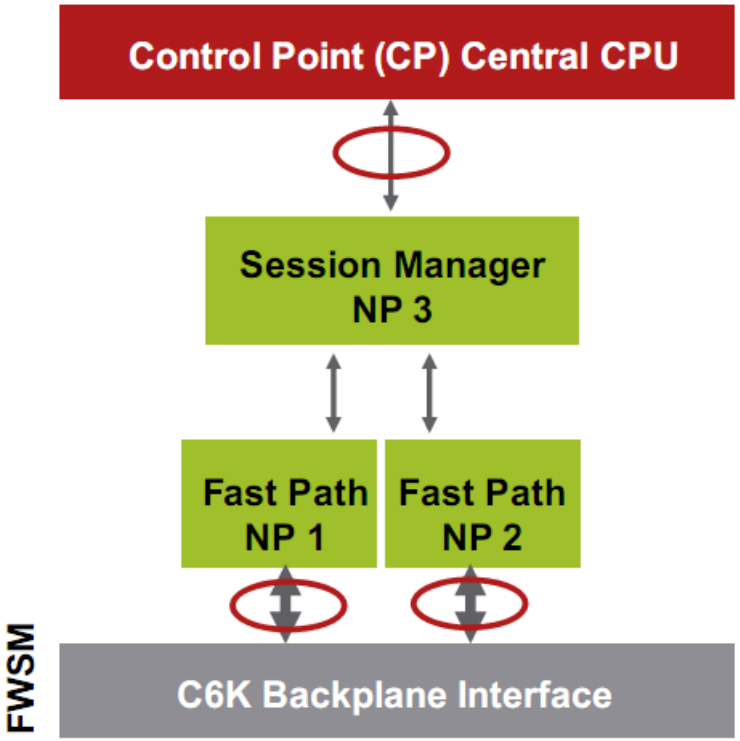
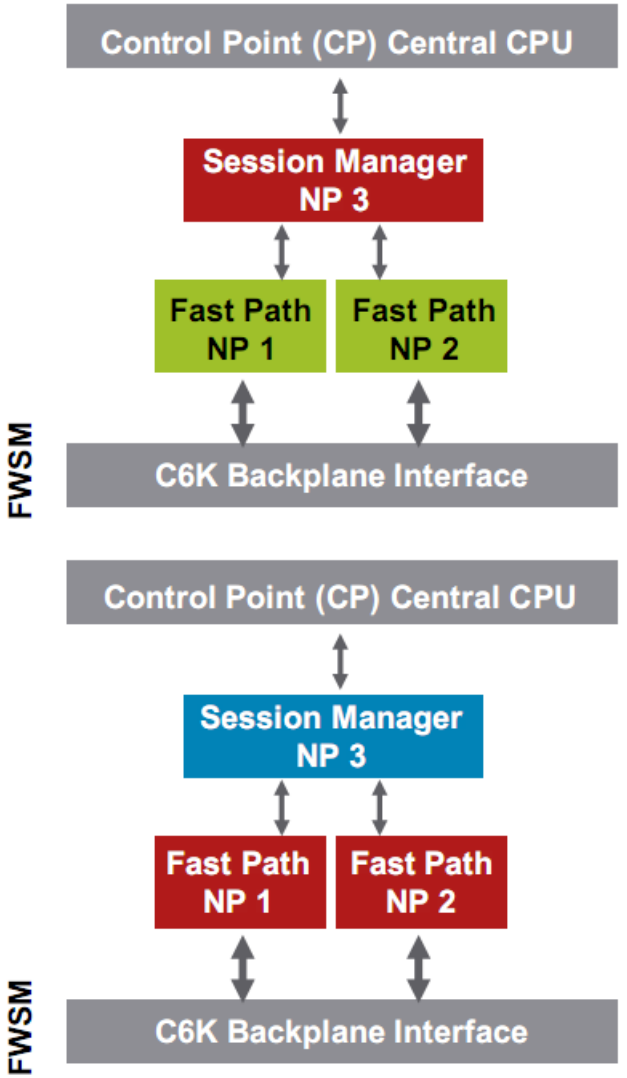
FWSM and Control Point

- The traffic that makes it to the control point is traffic that requires Layer 7 fixup (embedded NAT, or cmd inspection)
  - FTP
  - VoIP (SIP/SKINNY/H.323/RTSP)
  - DNS
  - XDMCP, etc.
- Traffic sourced from, or destined to, the FWSM also goes through the control point
  - Syslogs
  - AAA (RADIUS/TACACS+)
  - URL filtering (WebSense/N2H2)
  - Management traffic (telnet/SSH/HTTPS/SNMP)
  - Failover communications
  - Routing protocols (OSPF/ RIP)
  - etc.



FWSM and Network Processors

- The session manager—NP 3
  - Processes first packet in a flow
  - ACL checks
  - Translation creation
  - Embryonic/established connection counts
  - TCP/UDP checksums
  - Sequence number randomization
  - TCP intercept
  - etc.
- The fast path—NP 1 and 2
  - Performs per packet session lookup
  - Maintains connection table
  - Performs NAT/PAT
  - TCP checks
  - Fragmentation reassembly
  - etc.



FWSM—Enabling the Completion Unit

- Due to the FWSM's NP architecture, there exists a possibility that packets arriving with a low inter-packet gap might be re-ordered by the firewall

- This issue might be encountered when performing TCP throughput testing, or passing high speed TCP flows through the FWSM
  - Examples: CIFS, FTP, AFP, backups
- FWSM version 3.1(10) and 3.2(5) introduce a new command `sysopt np completion-unit` to ensure the firewall maintains the packet order (by enabling a hardware knob on the NPs called the completion unit)
- In multiple mode enter this command in the admin context configuration; It will then be enabled for all contexts on the firewall