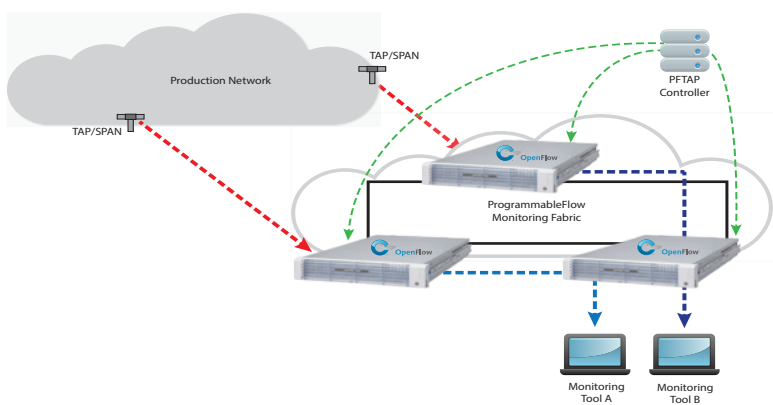**NEC**

ProgrammableFlow TAP (PFTAP)
SDN Based Network Monitoring Solution

At a Glance

- Provides **automated aggregation** of packet flows on a network using an Open Network fabric and redirecting them to security and analysis tools

- Easily add **pre-defined traffic filters** via user interface, enabling selected traffic to be redirected to any port for further analysis on-the-fly

- Improved **visibility of network flows** on logical and physical networks to easily **identify TAP source data**

- **Reducing the load** on packet brokers, intrusion detection systems and other tools, through the use of OpenFlow switches for aggregation and filtration

Overview

### NEC ProgrammableFlow TAP (PFTAP)

NEC ProgrammableFlow TAP (PFTAP) is a monitor, aggregation and filtering solution for complete network visibility for modern age IT teams.

It provides a function to filter the traffic input from network equipment or a network tap to the dedicated OpenFlow enabled visibility fabric and then transmit that filtered traffic to an external troubleshooting and monitoring tools such as Application Performance Monitoring (APM), Network Performance Monitoring (NPM), Security measurement as well as Data Recorders.

Today's networks are getting more complex and vulnerable to security threats. The applications in the network are growing exponentially and far more advance. These higher bandwidth networks are driving the need for filter/aggregation/visibility in telemetry/monitoring networks. The traditional approach used by proprietary Network Packet Broker (NPBs) is not sufficient to manage this complex network. This visibility solution needs to be non-disruptive, scalable and more importantly with ultra-low CAPEX/OPEX cost.

PFTAP utilizies the powerful Virtual Tenant Network (VTN) running on Controller (PFC) which allows each tenant to define their own customized layer-2 or layer-3 network and leverage inter-tenant isolation to create a secured slice of the underlying physical network. Provides the network operator the visibility for each tenant in the network based on the preset filtering rules.

PFTAP utilizies the OpenFlow protocol to program the OpenFlow enabled switches (OFS). This helps IT organizations remove vendor lock-ins and expensive networking devices. PFTAP is supported on NEC ProgrammableFlow switches as well as wide selection partner OpenFlow enabled switch.

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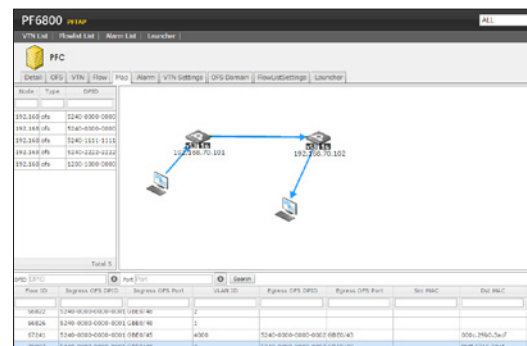
Specification

Solution

Network Operator Challenges	PFTAP Solution
High volumes of network traffic coming from a various TAP/SPAN sources	PFTAP provides an automated aggregation of packet flows and load balancing between high and low priority data traffic.
Scaling out monitoring equipment is not easy.	PFTAP auto orchestrates OpenFlow based network fabric with any topology. Traffic filters can be easily added via user interface. Selected traffic can be redirected to any port for further analysis.
Source of traffic coming from network taps can be difficult to trace.	User interface provides of communication on logical and physical NWs, visually identifying traffic patterns
Cost of traditional network visibility solutions is high e.g. purpose built Network Packet Broker (NPB)	Inexpensive OpenFlow aggregation can reduce the load on network and performance monitoring tools and removes the need for any dedicated NPB.

Software

PFC Functions	• Flow filtering (L2 and IPv4 match) • Flow filtering (IPv6 match) • Traffic Policing • Port Group functions • Administrative status initialization of the OFS port • Link down relay • Bandwidth monitoring • Flow Entry count monitoring • Logical link failure and high-speed detection • OpenFlow v1.3 • Web UI • OFS Domain • Path Policy
Packet header Match condition	• Input port • VLAN ID • MAC address - Source/Destination • IPv4/IPv6 address and prefix length - Source/Destination • IP header • TCP/UDP Source/Destination port number
Throughput	• Supports up to 2 terabit aggregate throughput

Hardware

Supported Switch	Min ver. required
NEC PF52xx	V5.1 or later
NEC PF54xx	V7.1.11 or later
NEC PF5820	V7.6 or later
Partners	Visit www.necam.com/sdn/alliances

Ordering Info

PN	Description
UWT011-N0200EAM	PFC 6.0 PFTAP Software (Includes connections to 5 OFS)
Q24-HL000000072218	PFC 6.0 PFTAP Appliance (Includes connections to 5 OFS)
Q24-HL000000072219	PFC 6.0 PFTAP Appliance High Availability (Includes connections to 5 OFS)
UL4325-112EAM	PFC OFS Switch License Pack (+5), For connection to up to 5 additional OFS

To learn more and download the NEC PFTAP 90-day trial version, please visit, visit www.necam.com/sdn.

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