Leading Pediatric Hospital Addresses Ongoing IT Growth

with Keysight Visibility Architecture and Vision X
### Organization
- one of America’s best children’s hospitals

### Challenges
- high speed deduplication, header stripping and tunneling
- interface speeds (10/25/40/100G)
- low rack space

### Solutions
- Vision X Network Packet Broker
- PacketStack module
- Flex Taps and Vision Edge 40 for aggregation

### Results
- fast out-of-the-box deployment thanks to user-friendly graphical user interface
- line rate advanced packet processing with zero loss
- simple future expansion with addition of modules

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**Wanted: 100G, High Performance and High Port Density**

This leading healthcare provider, ranked among the top Pediatric hospitals in the US, with more than 1,000 medical staff and over 10,000 total employees, was redesigning their data center in order to move from a traditional 3-tiered design to a Spine-Leaf architecture. This required higher-speed interfaces and higher-performance packet processing to continue feeding their network monitoring tools properly. Low rack space requirements and product appearance were also critical elements for the new data center.

**Delivered: Vision X with Keysight Visibility Security Fabric**

Vision X is Keysight's high-performance, high-density network packet broker with a compact, three rack unit form factor. Its modular chassis is upgradeable to meet network visibility requirements now and in the future. Keysight Vision Series network packet brokers (NPBs) optimize traffic, providing enhanced visibility and security coverage. NPBs resolve application performance bottlenecks, troubleshoot problems, and improve data center automation. NPBs aggregate and optimize data sent to monitoring tools with intelligent grooming and security enhancements such as deduplication, TLS decryption, data masking, and application and threat intelligence.

Positioned between traffic input and output ports to connect directly to monitoring and security tools, the Vision Series NPBs act as a packet distribution layer.
PacketStack

PacketStack deduplicates traffic before delivery to security and monitoring tools to ensure a clean feed of data, greater efficiency and a reduction in tool and bandwidth utilization. Only the first instance of a packet is forwarded, even if the header of the packet has changed. PacketStack’s deduplication, header de-encapsulation, and packet stripping capabilities helped drive an increase in error detection rates, data processing volume, and a reduction in false positives.

PacketStack uses high-performance FPGAs to deliver scalable and consistent performance, with multiple features and up to two terabits per second.

Vision Edge 40 Network Packet Broker

Keysight’s Vision Edge 40 packet broker is deployed as a rack-level device to aggregate and stream traffic to a central Keysight Vision X, providing connectivity to monitoring and security solutions on the network.

Flex Tap

Keysight Flex Tap passive fiber optical taps ensure seamless, reliable capture of traffic. Flex Tap provides an exact copy of network traffic without impacting equipment on the network. Flex Tap’s high-density form factor supports a high number of taps within a compact space, helping you get the most from valuable data center space.
Keysight’s Visibility Architecture is a Winner

The customer was impressed with the ease of use and flexibility of the Vision Network Packet Brokers. They can always stay on top of things and deliver a fast response with the user-friendly, drag & drop, graphical user interface, which allows for easy deployments and fast changes.

New functionality can be added, new ports enabled, or speeds upgraded, by software licenses. In addition to that, Vision X’s modularity allows for even greater performance and functionality upgrades via hardware modules hot plugin, without affecting live traffic.

This healthcare provider also appreciated the speed flexibility of Vision X’s 5-speed ports: 10/25/40/50/100G, software-selectable and applicable at runtime, without system reboot.