



PCAP Express WorkBench

Accelerate Packet Capture Applications up to 10 Gbps

The PCAP Express (PCAPX) WorkBench is a general-purpose packet capture & monitoring toolkit designed for skilled network engineers and application developers looking to accelerate pcap applications to multi-Gigabit rates and beyond. Each system includes a high-performance Napatech capture adapter powered by the PCAPX drivers and a suite of PCAP Express tools, such as high-speed capture-to-disk.

Accelerate PCAP Applications

Hardware-based zero-copy DMA ensures that the WorkBench's CPUs are freed from the interrupts of a standard NIC, releasing CPU resources for faster application performance. Captured traffic is load-balanced across multi-cores to accelerate the performance of a single analysis application or to allow multiple applications to run in parallel.

Line-Rate Packet Capture to 10 Gbps

The advanced monitoring ports ensure 100% packet capture at line rate. Packets are captured, time-stamped to nanosecond resolution, filtered and processed as required, then placed directly into host memory. Even at 10 Gbps, less than 1% of processor resources are required for 100% packet capture.

10 Gbps Write-to-Disk

PCAPXstream technology ensures that captured data is streamed to disk at full line rate for later retrieval, replay or transfer to longer-term archival storage. Up to 16 TB of onboard, hot-swappable storage provides a deeply buffered "go back in time" view for forensic analysis and troubleshooting.

Ready for use out-of-the-box

WorkBench has both a CLI interface and a configuration and management GUI, and includes familiar, pre-configured, open-source tools for auditing network activity, including Wireshark. WorkBench also provides a development tool-chain for quickly integrating additional pcap applications.



Key Features

- Lossless packet capture and inspection at full line rate up to 10 Gbps
- Nanosecond time stamp resolution
- Multi-core traffic splitting and load-balancing
- Hardware-accelerated packet capture and processing
- CaptureOS (Debian/Linux-based operating system)
- Libpcap development toolchain
- Remote desktop access (via SSH)
- Nehalem-based Xeon processors
- 10 Gbps (2-ports) or 1 Gbps (4-ports)
- 1U and 3U configurations
- Optional hardware RAID with 10 Gbps write-to-disk
- Bundled with complete application source code (GPL-compliant)

Technical specifications

	X104	X120	X304	X320
Target Applications				
Application focus	Line-rate packet inspection and analysis	Line-rate packet inspection and analysis	Line-rate capture to disk Record, retrieve, replay	Line-rate capture to disk Record, retrieve, replay
Traffic capture performance	4 Gbps	10 Gbps	4 Gbps	10 Gbps
Hardware				
Form factor (rack units)	1 U	1 U	3 U	3 U
Nehalem processors	4 cores	8 cores	8 cores	8 cores
Memory	8 GB	16 GB	24 GB	24 GB
Packet capture interfaces	4 x 1 GigE	2 x 10 GigE	4 x 1 GigE	2 x 10 GigE
Packet capture functions	100% capture at line rate, CPU offload, zero-copy DMA, nsec timestamp			
Hot swap drives	4 x 1 TByte	4 x 1 TByte	16 x 1 TByte	16 x 1 TByte
Raid controllers	SW	SW	HW	HW
Management ports (GigE)	2	2	2	2
Software				
Operating system	Debian Linux			
PCAPx tools	PCAPxstream (high-speed write to disk) and PCAPxtract (high-speed retrieve)			
Bundled application packages	SiLK/YAF, Argus, Wireshark, TCPDump			
Disk Performance				
Record-to-disk	3.5 hours @ 2.5 Gbps	3.5 hours @ 2.5 Gbps	3.5 hours @ 10 Gbps	3.5 hours @ 10 Gbps
Retrieve-from-disk	3.5 hours @ 2.5 Gbps	3.5 hours @ 2.5 Gbps	8.8 hours @ 4 Gbps	3.5 hours @ 10 Gbps