# cPacket Intelligent Observability for 100Gbps Networks

Enabling Low-Latency, High-Resolution, High-Density Monitoring at 100Gbps

Organizations have responded to a massive shift towards digital transformation. The increased demand for digital services, reliance on intensive applications, and exploding network traffic has accelerated data center consolidation into fewer, but denser sites. Compute in most data centers is now accessed through 10/25Gbps bandwidth and this is pushing upgrades of spine-leaf and core networks to 100Gbps speed. This increased demand and volume of new data streams has added to the workloads of already stretched IT teams and has become a major contributing factor to IT struggles with a lack of network visibility into their data center environments.

This is happening at even faster rate in high-performance, low-latency data centers such as financial services and high-performance computing. Low-latency and high-performance network observability is therefore critical to ensure business continuity, to avoid down time, and revenue loss. Monitoring such intensive, mission-critical, and high-performance network environments requires very precise monitoring with the right observability metrics.
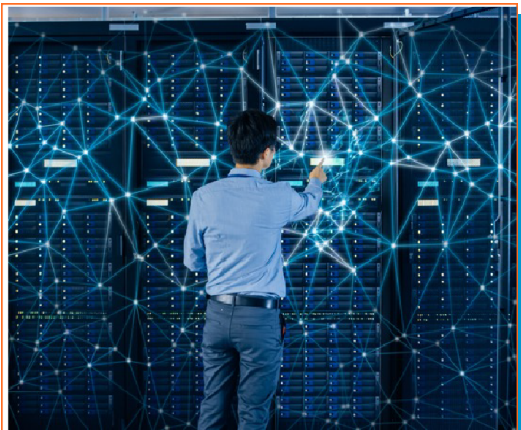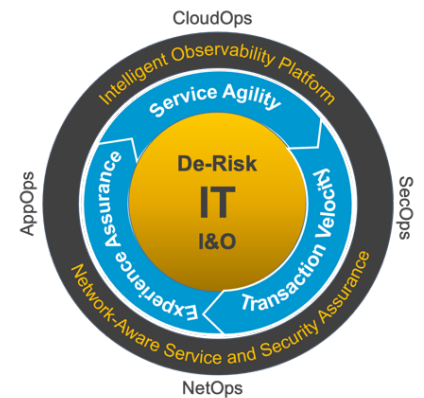
Hear from our customers:

"Executing trades as fast as technology allows is critical for us. Every nanosecond is money and it's a race to zero. cPacket's 100Gbps monitoring solution enables us to maximize our investments and our revenue."

– Director Network Engineering at a major Financial Trading Exchange

WHAT WE OFFER

The cPacket Intelligent Observability Platform supports NVIDIA or any 3rd party 100Gbps (and below) data center fabric to provide a holistic data center architecture for today's intensive workloads.

The cPacket 100Gbps observability solution consists of:

- High-density TAP/SPAN/Tool aggregation/leaf up to 100Gbps per port with the cVu 32100 or cVu 32100E (for low latency) packet broker+

- High-performance 100Gbps core/spine packet processing layer with the FPGA-based cVu 16100, 8100, 4100 packet broker+

- High-performance packet capture and replay at 100Gbps with the cStor 100 appliance for historic, stateful, and low-latency analysis

- Centralized management and observability through cClear high-speed analytics

Why cPacket + NVIDIA?

Intelligent Observability for Low-Latency and Generic Enterprise Networks

cPacket's Intelligent Observability Platform consists of an AIOps-ready full visibility stack including cTap series network TAP, cVu series packet brokers, cStor series packet capture appliances, cProbe series flow-generator appliances, and cClear series analytics. The stack extends across public and private cloud environments with cCloud virtual-appliance suite.
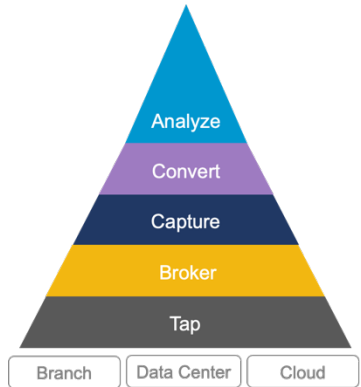
Key Benefits

- **Business Profitability**
  Stay ahead of the competition in the demanding Financial Services industry such as high-frequency trading and banks where performance, experience, and latency makes all the difference

- **Operational Efficiency**
  Fewer monitoring components, centralized data, processing, and delivery with single-pane-of-glass analytics reduce IT complexity, down-time, and operational costs

- **Intelligent Observability**
  cPacket and NVIDIA offer a fully integrated solution that glues network and visibility together as a 100Gbps fabric for a single-pane-of-glass operation

High-Precision and Low-Latency 100Gbps Monitoring

Controlling mission critical environments is becoming a stringent requirement for high-frequency trading and high-performance computing. Proactive monitoring and timely intelligence are critical for these ultra-low latency environments to function securely and at full performance. cPacket's 2-tier monitoring consisting of the cVu 32100E and cVu 16100 packet brokers for proactive real-time monitoring and to pinpoint imminent issues before they turn into big problems. The cVu series is the industry's number one low-latency monitoring and brokering solution that delivers a suite of differentiating features such as nanosecond timestamping and millisecond microburst characterization to provide unmatched observability at 100Gbps speeds. Learn more about cVu.

Cost-Effective 100Gbps Aggregation and Packet Brokering

In the generic non-low-latency environments, cVu 32100 packet broker (non-E version) can provide a scalable and economical TAP/SPAN leaf aggregation feeding into a cVu 16100 packet broker++ for the core processing. Both cVu 32100 and cVu 16100 solutions provide backward compatibility for 40, 25, and 10Gbps speeds to mix-n-match the network fabric and the tools operating at different speeds. The cVu solution supports features such as protocol decapsulation, smart filtering, packet slicing, deduplication, load-balancing, and

lossless forwarding in order to deliver the right network data to the right destinations. This strategy eliminates the data blind-spots and reduces the tool sprawl issues for the enterprises, hence maximizing the return in investment. Read cVu data sheet.
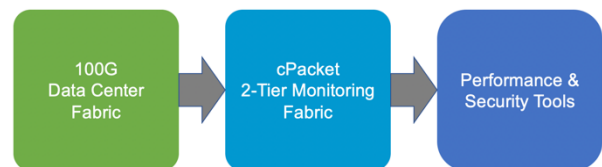
Real-Time Network Insight with NVIDIA What Just Happened™

Integrated with NVIDIA What Just Happened™ (WJH), a laser-focused network anomaly detection technology, the cPacket cClear solution allows real-time network data to be accessible directly from the NVIDIA Spectrum switch powered network infrastructure, via cPacket analytics – enabling root-cause-analysis and resolution of the most elusive problems within the network. Learn more about WJH.