

Network Monitoring and Characterization with cBurst®

The Most Precise Microburst Analysis and High-Resolution Counters in the Industry

Technology Benefits

- Reduce MTRR with Complete Network Visibility

cBurst provides detailed traffic analytics on flow patterns

- Accurately Identify Burst Flows

Create filters and drill down into port groups identifying specific flows

- Proactively Detect Service Degradation

Set alerts for delta percentage from the baseline

Business Benefits

- Improve User Experience and Transaction Processing

Optimize networks and flow visibility

- Reduce CapEx by Optimizing Network Resources

Remove unnecessary traffic on expensive links and shaping flows

- Operational Efficiency

Pervasive visibility allows you to optimize applications, security posture, and network capacity with timely upgrades

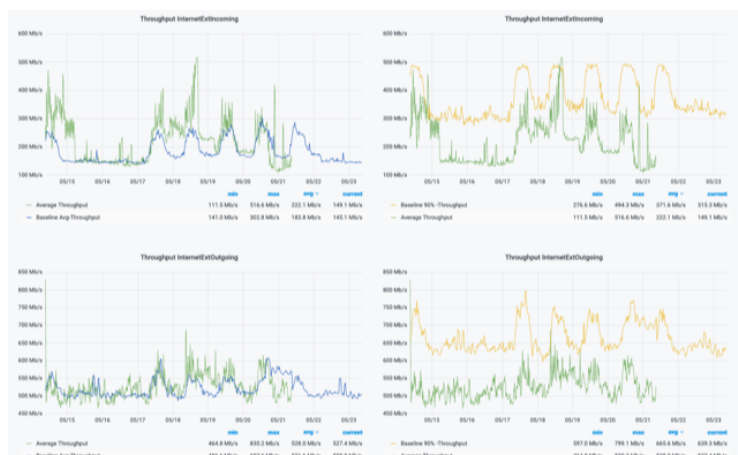
The Challenge

As business applications and user-experiences become more demanding, network infrastructure continues to grow in performance and speed, so does the dependency of the business on the network for their success. A network monitoring infrastructure for delivering accurate, real-time data is important for any organization looking to maximize ROI. With financial services (FinServ) organizations such as trading, this becomes even more critical. A glitch in the network, such as a microburst, can cause packet loss which results in delayed and/or lost market transactions. This can have serious financial and legal repercussions.

Financially, customer/business churn is an issue, and losing even one customer can seriously impact revenue. So, when a FinServ company is experiencing dropped transactions because of increased network congestion and/or higher latency, there is an urgent need to find and resolve the issue.

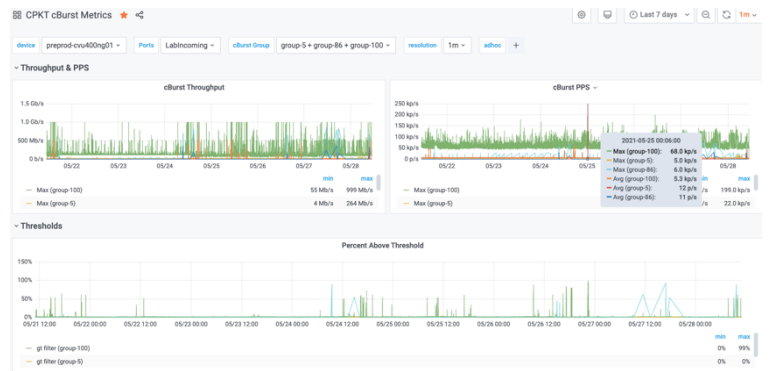
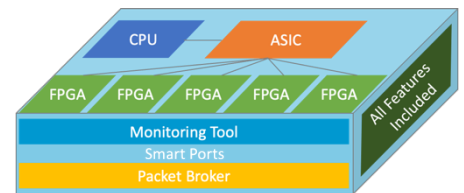
The Technology

cPacket cBurst is a specialized feature that takes the network traffic at wire-speed and provides full and the most accurate microburst characterization – with traffic utilization of user specified profiles that include IP endpoints, VLAN tags, QoS bits and other L2-L4 parameters. cBurst leverages hardware signaling to gain access and visibility to specific flows which are available for trending and provides visualization through cPacket cClear® dashboards. Unlike measurement methods that rely on proxies such as buffer utilization, cBurst measures for each profile and the network behavior at millisecond resolution. Moreover, it does this in real time for up to 1,000 flows per link regardless of the network traffic speed or the packet mix. By creating filters and groups on specific IP subnets, or other parameters, cBurst provides insightful flow characteristics for troubleshooting. Furthermore, baseline capability allows for alerting to be set on a percentage value above the baseline.



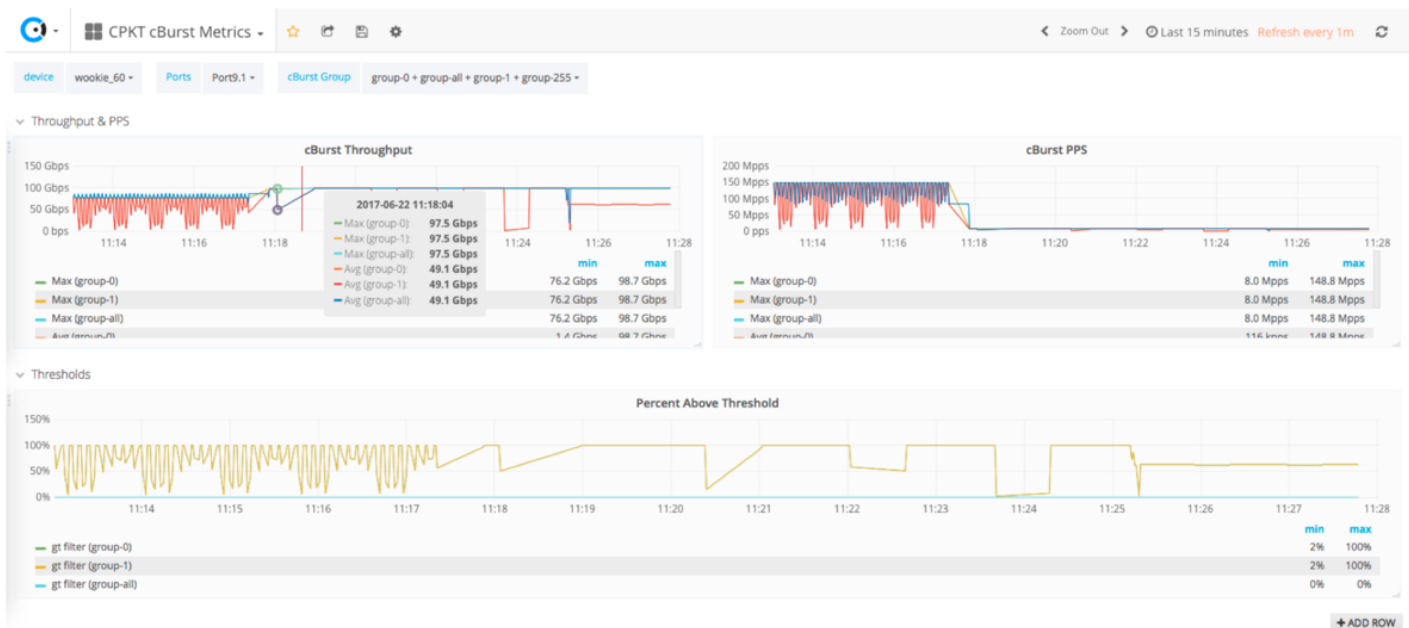
The difference between cBurst and traditional ways of microburst analysis is that rather than simply detecting that a network link is spiking, cBurst provides the profile or combination of profiles that make up the bursts. Ultimately, this identification allows for reallocation of applications and network traffic to links with more capacity or plan a network upgrade for more capacity. Instead of a trial-and-error method that ensues when only the aggregate traffic behavior is known, cBurst identifies the specific flows eliminating any guesswork.

The cBurst feature is available on certain cPacket cVu® series network packet brokers which host a field programmable gate array (FPGA) behind every I/O port – called a smart port. The FPGA runs specialized code for advanced features such as cBurst at wire-speed operation. This turns cVu into a 2-in-1 platform: a packet broker as well as a monitoring device or a tool at the same time. This unique architecture avoids packet loss at any network speed up to 100Gbps and provides reliable and timely insights to the network teams.



The Solution

After implementing cBurst, technical staff can immediately detect unexplained packet drops, troubleshoot network issues on-demand, and perform in real-time and at line rate speeds up to 100Gbps. Network engineers can deploy a solution that drastically reduces network congestion and latency issues. They are able to move the traffic flows between ports before it causes packet drops. Furthermore, by utilizing cBurst as a predictive behavior tool, they are able to carefully monitor any increase in network traffic and rebalance this traffic in anticipation of increased queues.





In summary, cBurst enables the following three key use cases and beyond:

- **Application dependency monitoring:** by analyzing which applications are contributing to the congestion and reaching peak performance, either application or the network can be optimized for the best performance, increasing business continuity and reducing MTTR
- **Tool utilization:** by monitoring and analyzing which security or performance tools connected to a cVu packet broker is reaching its maximum capacity, timely tool upgrades can be planned, avoiding expensive down times and maximizing the ROI
- **Network capacity planning:** by analyzing microbursts to the finest details, network capacity (especially on expensive WAN links) can be planned in-time, while optimizing the network for the best behavior, prolonging investments, enhanced user experience, and avoiding customer churn.

cBurst's programmatic API allows for easy access to the data in order to incorporate other forecasting, visualization, and analytics tools. With cBurst's always-on monitoring and accurate measurements at the wire, the customer has access to quality data that enables them to perform accurate analyses and confidently make strategic business decisions.

Call to Action

Want to see the architecture in action? Request a [product demo](#) today.

About cPacket Networks

[cPacket Networks](#) enables IT through network-aware application performance and security assurance across the distributed hybrid environment. Our AIOps-ready single-pane-of-glass analytics provide the deep network visibility required for today's complex IT environments. With cPacket, you can efficiently manage, secure, and future-proof your network - enabling digital transformation. cPacket solutions are fully reliable, tightly integrated, and consistently simple. cPacket enables organizations around the world to keep their business running. Our cutting-edge technology enables network, application, and security teams to proactively identify issues before negatively impacting the business. The result: increased security, reduced complexity, and increased operational efficiency. Learn more at www.cpacket.com