SC23 Network Research Exhibition: Demonstration Preliminary Abstract

Standard Packet Drop Monitoring In High Performance Networks

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Abstract

In a packet-switched network the primary goal is to deliver packets reliably to their destination. For some use cases in high performance computing a dropped packet can significantly impact performance, and yet the detailed monitoring of dropped packets has only recently become possible with new features in switch ASIC design. This demonstration will show the next logical step: a standards-based approach to deliver the headers of dropped packets to a central location for real-time analysis.

Exhibitors Arista Networks and InMon Corp. will demonstrate this standard measurement mechanism running live on the SCinet network at SC23.

One or more Arista switches will be configured to send a standard sFlow® measurement feed to the InMon collection server for real-time analysis.

Goals

1. Demonstrate real-time packet drop monitoring.
2. Demonstrate simultaneous real-time monitoring of both successfully forwarded traffic and dropped packets.
3. Demonstrate simultaneous real-time monitoring of both successfully forwarded traffic and dropped packets even under high utilization conditions, with no impact to switching performance and reliability.
4. Deploy this standard measurement end-to-end, including visibility into packet drops that may occur in the Linux kernel of the server endpoints.

Resources

The hardware equipment and software required for the demonstration will have already been donated and installed in the SC23 SCinet network. No additional resources are required.

Involved Parties

- Wilbur Smith, Arista Networks, wilbur.smith@arista.com
- Peter Phaal, InMon Corp, peter.phaal@inmon.com