Optimize Data Collection & Processing Using the Axellio XpressWay

In today's rapidly evolving landscape, we are experiencing an overwhelming flood of data. This data is generated by an ever-expanding array of sensors, drones, and advanced signal collection systems. It is pushing our signal analysis capabilities to their limits. Collecting and processing this data can be complex, time consuming, and expensive. Some reasons for this include: the speed of the data can be too fast, the volume of the data can be too much, congested or contested data communication channels back to the command-and-control node, or due to the complex nature of data (e.g., radio frequency (RF) data).

In addition, after you capture the data, something then has to be done with that data, or all of your effort was wasted. But what do you do with that data and how do you turn it into intelligence? These questions are why the software-based Axellio Xpress Platform™, and its solutions PacketXpress® and SensorXpress™, were created.

The Axellio Xpress Platform addresses these issues and enables you to:

- Improve data visibility and access
- Utilize a unique architecture that delivers military grade solutions while being scalable up and down the data rate highway from 1 to over 200 Gbps
- Deploy extensive flexibility that empowers you to manage data distribution to reduce costs while improving data control
- Capitalize on DVR-like capabilities that allow you to play, and replay, specific data you need to see

Looking at the first bullet in more detail, the Xpress Platform is data source agnostic. This means you can use the platform and specific features to capture packets, radio frequency data, video, voice, or log files. Since the Xpress Platform is robust and software-based, it can be used on industry standard (or military grade) Linux servers to capture and distribute data in physical, virtual, and cloud networks from mud to sky.

A second benefit of the Xpress Platform is that the architecture allows you to simultaneously read, write and store data at high speeds up to 200 Gbps in a single instance (1U), or higher speed data networks if networked. Per instance storage is up to 1.2 Petabytes with compression. If higher data rates or capacity is needed, the solution can be rack and stacked to scale upwards. All of this capacity comes with no data loss.

After you have captured the right types and amount of data, another fundamental challenge is to process and refine that data. Your analysis tools don't need to see every piece of data, just the relevant pieces. Depending on where the data came from, you often have some, if not a significant amount of, duplicate data. Built-in de-duplication and data filtering tools allow you to optimize the data.

Load balancing capabilities along with simultaneous distribution to multiple tools further enable you to optimize the output to your tools, and commonly results in the reduction of the amount of tools you need, creating significant cost savings. The load balancing feature creates n+1 survivability by allowing data to rebalance across a remaining set of tools should one or more of those tools fail out of service.

Buffering capabilities within the Xpress Platform and its solutions allow you to control traffic rates to all analysis applications and still see all of the data you need to, especially when it comes to military threats. Another benefit of buffering is that you can potentially reduce analysis tool licensing costs. Now you don't have to license to the peak data rate, you can license to a lower rate.

The Axellio Xpress Platform is a very dense, compact, and powerful data management solution. It delivers high speed and high bandwidth in a pure software solution. This enables Axellio to answer your requirements by reducing the size, weight and power consumption (SWaP) of data collection from sensors in the field. The Xpress Platform delivers the lowest SWaP of any similar solution available.

Lastly, get immediate access to any pre- and post-event data with the built-in DVR capability to improve data intelligence analysis and accuracy. This capability allows you to look at a subset of the data you want, and not the whole stream. The play and replay capability enable you to conduct various functions like:

- Review and re-review data to create actionable intelligence for the warfighter
- Quickly review specific frames of video to determine courses of action
- Review data to observe and capture new signals of interest data for exploitation

Overcoming Battlefield Data Intelligence Issues with Network Visibility

Reduce your time transmitting, storing, and analyzing data so that you can increase time actioning the intelligence produced. The Xpress Platform is a pure software-based platform that scales for military-grade networks and includes all the core data management features (deduplication, filtering and buffering) you would expect.

Contact Axellio and we can show you how to create unparallelled network visibility and optimize your intelligence analysis solutions.

Learn more at: www.axellio.com

Axellio delivers scalable, simultaneous, always-on recording and distribution at over 200 Gbps with no data loss.

For more information, contact us at: www.axellio.com/contact-us/