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embedded computing

APPLICATION EXAMPLE: Network Attached Storage for Deployed Systems

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Galleon's customer wanted a central storage system to avoid their previous experience of obsolesces issues for data transfer systems, legacy and special data interconnects, and life cycle challenges.

Executive Summary

Network Attached Storage (NAS) provides an open standard interface for the collection, distribution, and security of data on deployed systems. Galleon Embedded Computing's G1 and XSR NAS offerings are SWAP optimized for the most demanding applications providing the highest storage and I/O capabilities in the smallest form factors.

Challenges

This application example relates to an airborne platform requiring a particularly small rugged NAS device with large storage capacity.

The system required data to be accessed and stored by four separate computer subsystems. Traditional options using a storage device attached to every processor, would have created an increase in system complexity as well as security and maintenance challenges.

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The small space and weight available in the aircraft combined with the need for at least 4TB or storage capacity excluded many traditional solutions.

How Product Helped



A central G1 NAS was able to simplify our maintenance and update procedures by having a single spot for all data.

By moving to a Galleon G1 microNAS system, this user was able to use a single location for all data. The G1 fitted within the space envelope provided, with storage capacity to spare.

The stored data can be either data moved onto or off a platform by using the easy to remove high capacity data modules. With the single network attached G1 storage device, all processing systems on the platform can be networked booted, and updated creating a single spot for all critical updates and software. Galleon's G1 (and XSR) products offer tool free removable storage so the data can be removed from a deployed system.

The G1 microNAS central storage system also provides increased security. The data in this system is also protected by full disk encryption for increased data protection.

Lifecycle management issues for this system have also been solved by the transition to a networked data share. Storage capacity can be updated with new data cartridges and new functions and additions added by either software or hardware changes. But the interface remains the same; Ethernet.



Galleon's G1 and XSR NAS products have reduced the costs of customer systems and programs while adding major features and benefits

Results and Future Plans

By taking the common capabilities of the commercial office and packaging and ruggedizing these systems, Galleon has provided this customer the ability to deploy a wide range of new applications quickly.

With the G1 taking much smaller space weight power and cost than competitive solutions, the system integrator was able to deploy their system quickly and successfully.

The reduction in maintenance costs alone have increased the adoption rate for small form factor NAS units like the G1 by many programs and systems like this one. Moving to 10GbE capable solutions like the XSR, other programs have been able to increase the amount of data shared, processed, and collected by their advanced systems and sensors.

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