



Leverage the Power of HyperDrive® at the Edge

Major Aviation Defense Organization Chooses SoftIron's Ceph appliance to Capture Flight Data at the Edge for Quick Processing in Geographically Dispersed Data Centers.

A major aviation defense organization using high-performance computing to analyze audio, video, and telemetry data from test flights needed to consolidate their data on geographically dispersed "DevOps" pods. With power, space, and management issues specific to edge deployments, as well as sensitive, mission critical data on the line, SoftIron's HyperDrive was the clear choice to deliver an efficient, secure, and supremely reliable storage platform that outperformed traditional, legacy infrastructure solutions.

Challenges

Performance, power, space, and security were critical factors behind the selection of SoftIron's HyperDrive solution in this challenging use case.

Performance & Flexibility

In order to streamline their operations and improve efficiencies, the organization was seeking a new solution that would enable them to drastically reduce time to analysis. Edge computing and storage facilities were erected around the geography to quickly handle the processing and conversion of the object-store data to S3.

Space & Power

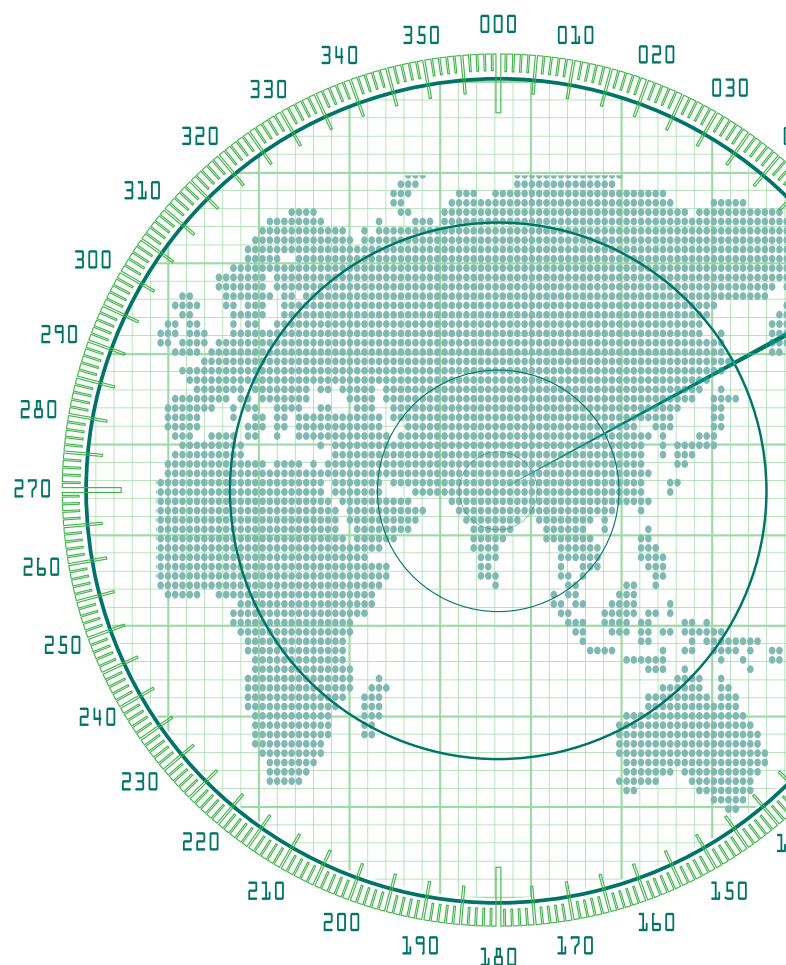
Data gathering devices, or "canisters" are fitted to each aircraft to collect the audio, video, and telemetry data, equating to 5.4PB per aircraft, per year. Due to a smaller footprint and power constraints, the edge pods required a low power, but dense storage solution that was able to very quickly read, process, and convert the data transferred from these canisters within minutes, allowing the admins to replace the devices into the aircraft for their next run.

Security

With sensitive data being moved around physically as well as electronically, industry-leading security and encryption were mandatory.

Support & Management

Compounding these complexities was the added need for a supported solution with strong storage management tool capabilities. SoftIron's HyperDrive solution checked all the boxes and more.



HyperDrive - Delivering Performance, Efficiency, Flexibility & Security.

HyperDrive is a family of task-specific storage appliances that can scale up to petabytes based on your organization's specific performance and capacity needs. HyperDrive is designed to optimize Ceph and take full advantage of its software-defined storage architecture and inherent support for object storage, offering an excellent solution for this unique use case. Because it delivered the **flexibility** required for the technical data challenges, the **performance** and **efficiency** needed for the physical challenges and **security** features that protect sensitive data, HyperDrive was the obvious choice among market leaders.

- › HyperDrive is 5x more energy efficient than current market-leading appliances, reducing energy usage by as much as 80% and producing as little as 20% of the heat compared to legacy storage hardware, allowing for greater density to free up floor space and dramatically improving hardware and drive reliability due to "heat exhaustion".
- › HyperDrive is custom-built to optimize the performance and management of Ceph and easily handles object, block, and file; a flexibility that separates it from other software-defined storage choices. The inherent scalability aligns well with a horizontal approach, so you can add HyperDrive clusters as demand dictates. HyperDrive has Ceph pre-installed, ready to plug-in and perform - removing complexity and unlocking its full potential.
- › HyperDrive hard drives are housed in caddies to make replacement easy and to ensure better cooling.
- › HyperDrive Storage Manager simplifies the management of a Ceph by uniquely integrating common software management tasks with HyperDrive hardware. All of which can be centrally monitored and managed - as individual appliances and as clusters - offering visibility into storage health, current utilization and predicted storage growth. Reduced time to identify and physically locate specific failed drives within caddies in particular appliances means no downtime.
- › SoftIron not only controls the entire design and build process, but designs, manufactures, and assembles all products in-house from the ground up, including electronics sub-assemblies, offering 100% transparency for secure provenance. There are no third party ODMs (Original Design Manufacturers) and we have authorship, ownership, and total responsibility for all code that goes on our appliances.

KEY BENEFITS FOR AEROSPACE & DEFENSE

- › Increased efficiencies with reduced power and space requirements
- › Versatility, scalability and hybrid cloud compatibility with Ceph
- › Easier deployment and management with Storage Manager
- › Faster data transfers between flights
- › Increased resiliency - no downtime time due to loss of nodes
- › Data security with SoftIron's unique Secure Provenance

TASK-SPECIFIC HYPERDRIVE OFFERS

- › Scalable, wire-speed storage solutions
- › Category defining management system
- › Double your data density
- › Total Ceph interoperability
- › Floorspace requirements reduced by half
- › Super-efficient: 100W under full load
- › Low heat output reduces cooling needs
- › Radically reduced data center costs
- › Full-stack hardware and software support
- › Secure Provenance

Take the Next Step

Is your data center being impacted by power and space constraints? Is archaic and inflexible infrastructure adding bottlenecks to your processing targets at the edge? Or, is performance being hampered by legacy storage solutions that are not keeping up with the complex and evolving requirements of modern-day workloads? Take HyperDrive for a test drive and discover what a secure, task-specific storage solution can do for your organization. Visit softiron.com for more information, or book a discovery call to talk to one of our Solutions Architects at bit.ly/SoftIronDemoRequest



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SoftIron® is the world-leader in task-specific appliances for scale-out data center solutions. Their superior, purpose-built hardware is designed, developed and assembled transparently, and they are the only manufacturer to offer secure provenance. SoftIron's HyperDrive® software-defined, enterprise storage portfolio runs at wire-speed and is custom-designed to optimize Ceph. HyperSwitch™ is their line of next-generation, top-of-rack switches built to maximize the performance and flexibility of SONiC. HyperCast™, built on FFmpeg, is their high-density, concurrent 4K transcoding solution, for multi-screen, multi-format delivery. SoftIron unlocks greater business value for enterprises by delivering best-in-class products, free from software and hardware lock-in. For more information visit softiron.com

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