

# Proven Mission Information Workflows for Intelligence & Defense

Enabling Fast Capture, Shared Access, and Cost-Effective Archives with StorNext

Mission owners are challenged as never before. Increases in the amount of Intelligence, Surveillance, and Reconnaissance (ISR) data—combined with advances in sensor, precision geolocation, and packet capture technologies—have created tremendous opportunities for those who defend national security and ensure the safety of citizens, for those who protect against cybersecurity threats and steward our environment. But these technology advances create storage and archive challenges as intelligence analysts, military personnel, first-responders, and scientists all struggle to capture, process, exploit, and share the growing influx of data.

ISR data can include geospatial data from satellites; motion imagery from remotely piloted vehicles (RPVs) or unmanned aerial vehicles (UAVs); optical, radar, and infrared sensor data; surveillance video from fixed towers or streets; mapping data; and in today's hyperconnected world, ISR data also includes packet capture data used for network forensics. More than ever before, organizations are collaborating across boundaries—so it's not only important to collect, process, and exploit the data once, but to share it, collaborate on it, process it again, and preserve it for future investigations.

## MASSIVE INFLUX OF MOTION IMAGERY CREATES NEED FOR SPEED & SCALE

StorNext® high-performance storage is found at the center of some of the most demanding workflows in Intelligence and Defense. And the data collection demands keep growing—new maritime UAVs fly missions as long as 24 hours and can monitor 2,000 nautical miles of ocean at once, to support surface warfare, intelligence operations, homeland defense, and search and rescue. StorNext scale-out storage specializes in large motion imagery files—up to 5 billion of these large files per StorNext cluster—and with its high-speed capture, StorNext has become an integral part of high-performance ISR workflows.

## PRESERVE GEOSPATIAL ARCHIVES FOR FUTURE INTELLIGENCE & ANALYSIS

Cartography and mapmaking have always been an integral part of the human condition; today, geospatial technology gives us a wider and more dynamic lens through which to survey our world, and today's geospatial imagery—combined with data fusion and machine learning—gives our analysts and scientists unprecedented capabilities. But this geospatial data cannot be recaptured, and may be of even more value when connected to some future event; hence it must be preserved for future analysis. A StorNext tiered archive enables you to match the cost of the storage to the needs of the data—so that you can reduce the overall cost of the geospatial archive. StorNext archive options include petascale, low-latency Lattus™ Object Storage and cost-effective, tape-based StorNext AEL Archives—both with the power of StorNext Storage Manager's policy-based data tiering.

## StorNext

### STORNEXT SOLUTION PROFILE

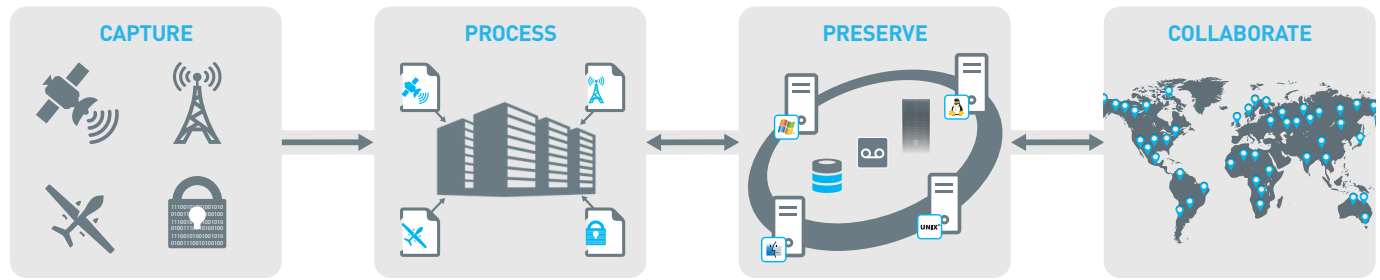
The Quantum StorNext High-Performance File System and Tiered Archive solution is ideal for Intelligence and Defense agencies concerned about:

- **Fast Capture** of mission critical data
- **Shared Access** to large sets of large files
- **Cost-Effective Tiered Archives** to preserve data for future intelligence
- **Massive Influx** of ISR data that needs to be collected, processed, and exploited
- **Increased Sophistication** of cyber attacks
- **Global Collaboration** across geographies without copying data from site to site

### INTELLIGENCE & DEFENSE USE CASES

- Motion Imagery and FMV
- Geospatial & HPC Archives
- Video Surveillance
- Packet Capture
- Global Collaboration

Figure 1. Quantum Mission Information Workflow



### ULTRAFAST PACKET CAPTURE AND ANALYSIS FOR NETWORK FORENSICS

The widespread adoption of 10GbE network environments, combined with the increased sophistication of cyber attacks, has created demand for high-performance packet capture and network forensic tools that can write to disk at extremely high rates and index large amounts of “PCAP” data for quick search and retrieval. Quantum and FireEye have partnered together to provide the first network forensics solution to index and write to a single file system from multiple capture appliances at rates up to 20Gbps per appliance with no dropped packets. And StorNext offers a tiered archive that allows you to cost-effectively retain PCAP data for longer periods of time, by leveraging petascale, low-latency Lattus™ Object Storage and low-power, tape-based StorNext AEL Archives.

### ENABLE GLOBAL COLLABORATION—ACROSS AGENCIES AND GEOGRAPHIES

Collaboration is a top priority for many StorNext customers in Defense & Intelligence. StorNext is designed to enable shared access and to be flexible: our scale-out storage is built on top of an intelligent, shared file system; is optimized for systems connected over Ethernet, 10GbE, Fibre Channel, and InfiniBand; and is also compatible with a broad assortment of operating systems, including Linux, UNIX, Windows, and Mac. And when StorNext data has been tiered to Lattus Object Storage, the mission data can also be accessed via HTTP REST, enabling integration with Hadoop analytics and cloud infrastructures. StorNext file sharing works transparently no matter where the file physically resides—the pathname remains the same regardless of whether the file is tiered to flash, primary disk, object storage, tape, or a vaulted archive location. Whether you’re an emergency responder, or working to protect the environment, or an analyst for national intelligence, StorNext file sharing means that teams can collaborate on the most current mission data to raise situational awareness.

To learn more about how this solution would work in your environment, please visit us at [quantum.com/Government](http://quantum.com/Government) or email [government@quantum.com](mailto:government@quantum.com).

### ABOUT STORNEXT AND LATTUS

- Proven end-to-end storage solution for Mission Information Workflows
- Industry’s best streaming performance
- Shared collaboration via SAN and LAN, for NFS, CIFS, StorNext and HTTP REST clients
- Flexible access to mission data via GbE, 10GbE, FC, iSCSI, or InfiniBand
- Independently scales performance and capacity up to 5 billion files
- Optimized for SSDs, disk, object storage, and LTO/LTFS tape
- Policy-based and cost-effective tiered archiving
- Extreme scale and low-latency access with Lattus Object Storage
- Available via complete solution stack of StorNext Metadata Appliances, StorNext Q-Series Storage, StorNext AEL Archives, and Lattus Object Storage

### ABOUT QUANTUM

Quantum is a leading expert in scale-out tiered storage, archive, and data protection, providing solutions for capturing, sharing, and preserving digital assets over the entire data lifecycle. From small businesses to major enterprises, more than 100,000 customers have trusted Quantum to address their most demanding data workflow challenges. Quantum’s end-to-end, tiered storage foundation enables customers to maximize the value of their data by making it accessible whenever and wherever needed, retaining it indefinitely and reducing total cost and complexity. See how at [www.quantum.com/customerstories](http://www.quantum.com/customerstories).