



Global Aerospace Leader

Full flight simulators provide necessary training for pilots. One aerospace company uses Avere FXT appliances to increase the storage performance of the computer simulation to real-time to create the most realistic flight experience outside of the cockpit.

Customer Challenges

- A cost-effective NAS solution that can keep up with data generated from one of the world's most advanced simulator technology
- Multiple file systems and storage networks, making management complex

Avere Benefits

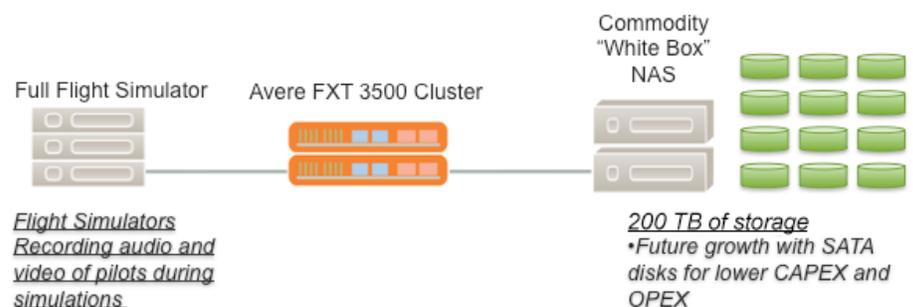
- Avere's high performance FXT Edge filer enables audio and video from flight simulations to be captured and stored in real time.
- Avere FXT Edge filers' Global Namespace (GNS) capability enabled all storage to be managed under one file system.

Full Flight Simulation Demanded Increased Performance to Create Real-time Scenarios for Pilot Training

Avere FXT Edge Filers Delivered Performance and Simplified Storage Management with a Global Namespace

High-end commercial and military full flight simulators (FFS) have high-resolution image generation and large field-of-view display systems for civil and military large aircraft. The FFS simulates the flight behavior and creates appropriate physical effects such as stiffening the control column, perhaps, or adding bumps and vibrations to simulate turbulence. The terrain, the sky, weather and other aircraft are computer generated creating demanding storage performance. Images are projected onto huge mirrors (to give depth of view when looking out of the 'windows') in real time, changing in accordance with the flight of the aircraft, the pilot's control inputs and whatever conditions or emergencies that the instructor wants to simulate. Creating these massive CGI effects realistically in real-time, brought one top global aerospace company to Avere.

"During the simulation, we record and store the audio and video of the entire engagement to our storage network. That lets the pilots play back their moment-by-moment interactions later for training purposes," states the Aerospace firm's Lead Infrastructure Architect.



When they were originally developed, the simulators had a NetApp 3140 FAS for the storage system. But as the number of simulators grew, they found they were outgrowing it. "It couldn't keep up with our demands, so we began the hunt for a replacement."

“We looked at all the players in the NAS storage space, and in addition to performance we knew we needed to find a way to make management of the storage systems easier. We tested multiple traditional NAS technologies in the Lab, but none could stand up to our multi-GB per second I/O requirements. Our hunt eventually led us to Avere.”

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“One of the main advantages of Avere was the FXT Edge filers’ ability to provide a single Global Namespace (GNS) to manage all of our storage environment. And that became the deciding factor.”

Avere GNS enables a single namespace view across all NAS storage servers throughout an enterprise, allowing the unification of islands of NAS from multiple vendors across multiple locations. With Avere’s GNS, storage administrators can easily create and manage logical groupings of file-based resources regardless of physical location, presenting clients running NFS or CIFS with simplified and transparent access to data from a single mount point. Global namespace dramatically simplifies NAS management.

After testing multiple NAS solutions the company deployed a 2-node Avere FXT 3500 cluster in every flight simulation lab. “With Avere we’re able to manage 200 TB of commodity, white-box NAS with a Linux file system and SATA drives. And Avere lets us deliver one global namespace to our client devices.”

“In addition, Avere was the only technology we tested that worked out-of-the-box as advertised. Now we have multiple storage points behind the Avere cluster, but our client devices only see one mount point. We get the performance we need along with simplified management.”

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