PERTH AIRPORT

Video surveillance platform maintains pace with airport's rapid expansion

ESSENTIALS

Industry

Aviation

Company Size

12,570 employees

Business Challenges

- Intelligent IP video surveillance requires scalable platform
- Instant playback of video footage for more responsive incident management
- Large-scale development plans to expand camera coverage

Results

- Gained responsiveness to security incidents with real-time video and instant playback
- Delivered scalability to meet changes in camera quality and the retrofit of new facilities
- Reduced management complexity and delivered high availability for 24/7 operations

COMMITTED TO THE SAFETY OF PASSENGERS AND VISITORS

As the fourth busiest airport in Australia, Perth Airport handles over 13 million passengers each year, which is expected to surge to over 40 million by 2044. As one of the most important public transport facilities in Western Australia, the airport expects to open new domestic and international piers, car parks, and a hotel, and complete construction on a third runway over the next five years. The airport's security and surveillance solution has to keep up with this increasing capacity and rapid growth in facilities.

To maintain its commitment to the safety of passengers, visitors, and employees, Perth Airport operates one of the largest surveillance installations in the country. The use of network video management software is a critical element of the airport's security strategy. The airport currently has over 100 users requiring closed-circuit television (CCTV) access on a daily basis for landside operations and security operations, as well as in the airport control center. As its future development plans continue to be realized, Perth Airport wanted to capitalize on new video surveillance technology as well as advances that provide real-time access to high-resolution video streams.

The airport implemented Aimetis Symphony™ to provide a single platform for new upgraded IP network cameras and its existing analog cameras. Brett Hoogland, IT Systems and Security Supervisor at Perth Airport, explains, "To manage our surveillance data, we wanted the flexibility to accommodate large-scale increases in the video quality, be able to increase the speed and number of cameras we bring online, as well as have the performance to deliver instant playback of footage."

The company partnered with EMC and Aimetis to implement a single video management platform, in a physical server environment utilizing EMC® Isilon® scale-out storage.

The solution is helping Perth Airport meet its regulatory obligations for aviation security and surveillance, quickly protect new facilities with the latest video surveillance technology, and improve its responsiveness to security incidents through immediate access to video data.

ENVIRONMENT

Perth Airport initially deployed a single cluster, and now has assets deployed over two separate clusters, currently comprised of 18 EMC Isilon NL400 series nodes providing a 2.5 petabytes storage platform for the Aimetis Symphony video management solution.

REDEFINE

CUSTOMER PROFILE

EMC²

"EMC Isilon was the only solution we tested that could scale to 50 petabytes and meet the kind of expansion we're demanding from our surveillance solution," says Hoogland.

EMC Isilon SmartConnect™ provides load-balancing and failover capabilities for connections to the Isilon cluster to optimize storage performance, while monitoring and reporting is performed using EMC Isilon InsightIQ®.

The Aimetis architecture and product suite running on EMC storage provides the airport with extreme scaling of its camera operations from hundreds to thousands, which can be easily added as required. Having originally installed 570 cameras, including new IP cameras and existing analog cameras, this number has now grown to 980 cameras. There are plans to add a further 320 cameras in the next months with the opening of a new terminal.

"The ease of management of the EMC Isilon storage means we can set it up very quickly and basically press a button to add a new node to the farm. The ability to get surveillance up and running faster means we can focus our attention on the next immediate stages of the airport's growth and development," says Hoogland.

"The immediate advantage we have gained with the Aimetis Symphony and EMC Isilon platform is that when we need to replay video footage, we can access it with less than one second latency."

Brett Hoogland
IT Systems and Security Supervisor, Perth Airport

INSTANT ACCESS IMPROVES RESPONSIVENESS

Perth Airport stores the high-resolution video files for up to 30 days. With access to the intelligent user interface provided by Aimetis video surveillance, security staff has real-time access to security information, enabling them to remain highly responsive to incidents. The EMC Isilon system's performance enables immediate access and sharing of surveillance video with local and federal police in order for all constituents to act with more alacrity when events are witnessed and reported.

"The immediate advantage we have gained with the Aimetis Symphony and EMC Isilon platform is that when we need to replay video footage, we can access it with less than one second latency. There wasn't another storage solution available that could give us instant playback with very low latency time," says Hoogland.

Previously, it took an overnight job to download two hours of footage. Now, historic video data can be replayed instantly, saving time and enabling the airport to easily monitor all facilities to increase the safety of passengers, visitors, and employees. Hoogland says, "We've grown our camera numbers by 70 percent since the implementation, and the addition of a new terminal pier in the next months will more than double our initial number. With the storage platform, we can reach more areas of the airport."

SCALABILITY MEETS CHANGES IN SURVEILLANCE TECHNOLOGY

To fulfil its long-term expansion plans, Perth Airport needs the flexibility to meet changes in both higher camera counts and video resolutions. The ability to scale up to 50 petabytes within a single file system means the EMC platform can easily accommodate improvements in video quality per camera as the technology moves from HD to 4K, without additional storage or management complexity. This scalability combined with the high camera density of the Aimetis system means that Perth Airport benefits from a cost-effective, quick-to-scale IP CCTV solution.

Hoogland says, "Having high camera density and the linear scalability to handle the massive amounts of data from cameras is imperative to security being able to operate effectively on a daily basis. We haven't hit the performance barrier yet, even with the large amount of cameras we have and are adding."

EASE OF MANAGEMENT KEEPS FOCUS ON LONG-TERM VISION

With a 22-person IT team, Perth Airport requires only a single person to maintain the EMC Isilon storage and ensure high availability for security operations.

Hoogland explains, "In comparing options, many other systems required direct attached storage. In running 24/7 airport operations, having no single point of failure with EMC Isilon means we can shut down one data room and everything moves over without causing any impact or disruption to our services."

Because Aimetis Symphony server software is an intelligent management system, it can process all video and multimedia streams, and transfer the data to the EMC storage, which further reduces the airport's IT operations workload. As a result of the high availability and reduced management of the VMS solution, Hoogland's time is freed to work on the large number of projects involved in the airport's long-term redevelopment plans. "EMC has critically provided us with the ease of management with reduced hours to keep everything up to date. Adding additional cameras can be done quickly, and it means that even with a platform of this scale, it's freed up a lot of my time that would have been spent managing the infrastructure," concludes Hoogland.

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