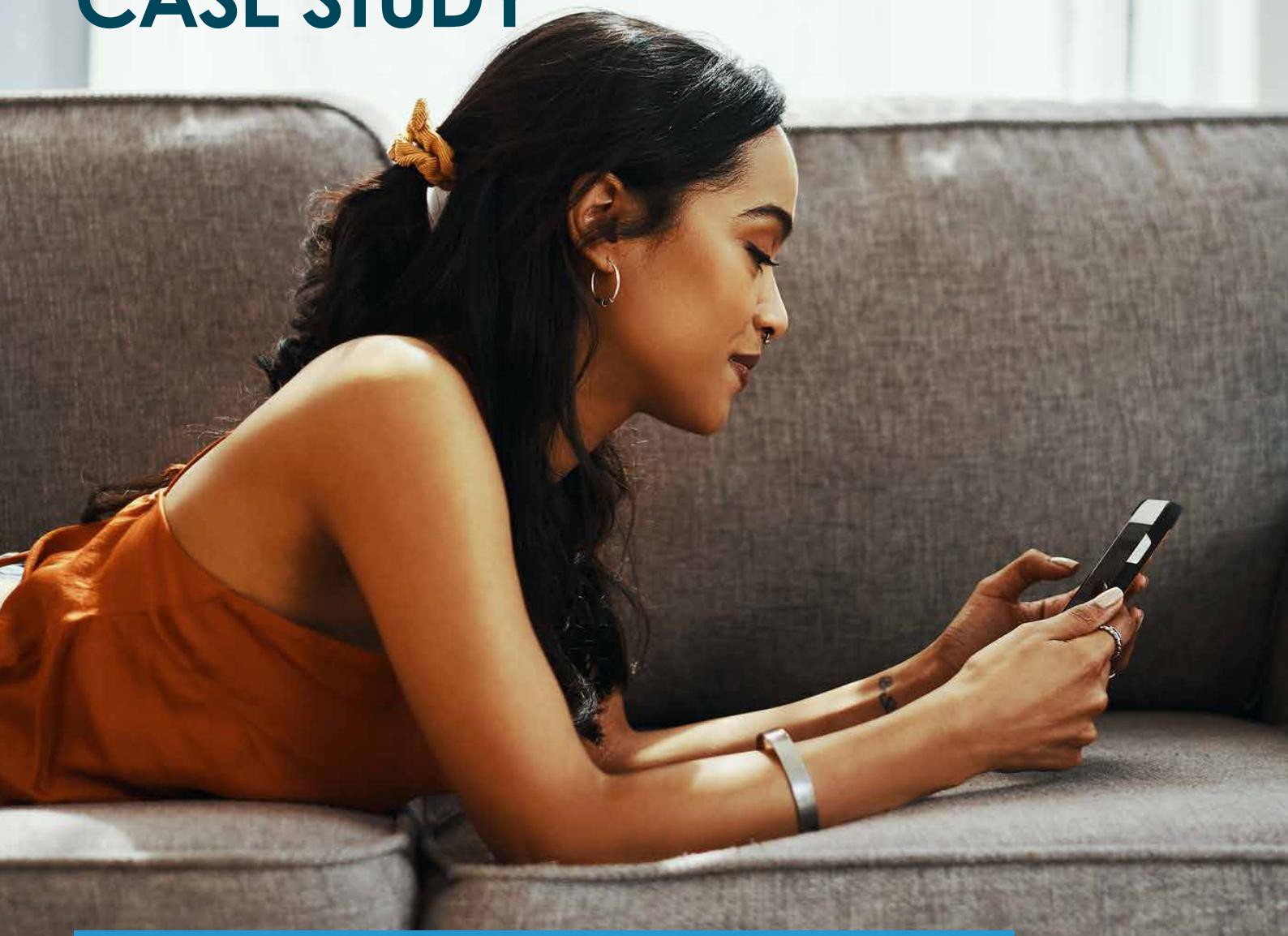


HIGH SPEED ENCRYPTION PROTECTS SUBSCRIPTION TV BROADCASTS CASE STUDY



Application of High-Assurance Network Encryption

Sector:	Broadcast Media
Use Case:	Encrypting real-time TV broadcasts
Solution:	High-assurance, low-latency encryption of real-time data, voice and video streams between multiple data centres.

SECURE BROADCAST TV SUBSCRIPTION SERVICES

A large television broadcasting company has long provided on-demand video content, but as the media corporation expanded to develop live broadcast technology, they needed to ensure every drama, sitcom and sports match was encrypted – while ensuring a smooth viewing experience.

The Organization

One of the world's leading communications services companies, this multinational corporation serves customers in more than 150 countries worldwide. Its services range from phone and internet, to networked IT services, and on-demand and broadcast television programming.

The Business Need

Many years ago, the company launched its innovative IPTV platform, allowing subscribers to watch television programming on-demand over their internet connection. But when it wanted to enhance its offering to add live channels, the company needed a system that could deliver real-time programming securely. By ensuring broadcasts on its live channels were encrypted, only paid subscribers were able to watch its channels.

To ensure redundancy, the company established several backup datacenters to host television broadcast data so that in case of failure, any datacenter could take over broadcasting so viewers wouldn't lose programming. By rapidly deploying high speed encryption to secure data in motion between those datacenters, the company ensured the protection of its intellectual property.

Encrypting traffic between broadcast centers and viewers was complicated, as the company required a hardware solution that could manage the entire encryption key life-cycle, from generation to storage and distribution. Every time a viewer changed channel a new key would be generated and used to decrypt the channel for viewing. Of course, this all needed to happen transparently and near instantaneously so it didn't impact on the viewing experience.

The technical challenges didn't end there. The company regularly broadcasts popular sporting events that see millions of fans tuning in to watch the games. During key moments of the broadcast there are millions of simultaneous channel changes, causing significant spikes in workload on the system. The chosen solution would need to handle these significant variations in concurrency and maintain low latency to protect the integrity of the content.

The Solution

After evaluating several alternatives, the company chose Senetas hardware encryptors to protect the data travelling between data centers and Thales Luna HSMs for key management.

"We knew we needed encryption for our live TV broadcasts, especially for popular shows and sporting events. We were constrained by a tight timeframe and strict performance requirements. Live broadcasting is essential to our subscription revenue and brand, so we needed to ensure continuity- you can't have a blackout on changing the channel."

TV Integration and Test Project Director

Thales Luna Network HSM is a high-assurance hardware appliance that generates, stores and manages cryptographic keys, and is able to handle the thousands of requests per second that the company required.

Senetas hardware encryption solutions provide the assurance of FIPS and Common Criteria certified security. Designed to support the growing demand for increasing bandwidth, the encryptors secure sensitive data more efficiently than higher layer protocols, thereby lowering the cost of network security and compliance, and providing a means of encrypting communications between redundant datacenters.

The Benefits

The project team worked with the company's developers and professional services around the globe, and was able to integrate encryption into the live broadcast environment, test the solution and formally launch the encrypted platform in time for the first football match of the season.

"The team was very responsive," said the Company's TV integration and Test Project Director. "In a very short period of time, they turned around the quote and shipped test devices we could use to get familiar with the new technology.

Senetas hardware encryptors were simple to install, thanks to their 'bump in the wire' design. They are used to encrypt data transmitted over the company's network connections, ensuring TV programming cannot be intercepted and pirated en route between data centers.

"The encryptors simply 'dropped in' within our network. They didn't require changes to other devices or network reorganization, and did not add load to the network operations or management. It was truly encryption made easy," explained the project director.

By deploying Senetas hardware encryption solutions, the company was able to meet their criteria to provide live, encrypted IPTV/television broadcasts with zero impact on the viewers' experience. Senetas solutions ensure:

- **Valuable content security.** The company can confidently broadcast high-value programming knowing that their television content is only available to those authorized to access it.
- **Low latency.** Encryption transactions happen transparently so users don't even notice its happening.
- **Resilience.** Redundant datacenters with encrypted communications ensure that the programming is consistently available, while maintaining its high levels of security.



GLOBAL SUPPORT

The global support paragraph needs updating on all collateral going forward.

Senetas CN Series hardware encryption, CV Series virtual encryption and SureDrop encrypted file-sharing solutions are distributed exclusively (outside Australia & New Zealand) to Enterprise, Government and Service Provider customers by Thales.

Thales is the world's largest data security company. Offering the combined expertise of 80,000 employees, with operations in 68 countries, it is trusted by over 30,000 organisations worldwide.

ANZ PARTNER COMMUNITY

Senetas works directly with customers and their service providers across Australia and New Zealand. We provide technical consultancy and support to data networks providers, systems integrators and cloud service providers. Visit our ANZ Partner Page for full details.

GET IN TOUCH

Are you looking for a service provider to help you select and implement a network data encryption solution? Contact Senetas and we'll help you find the right one.

Senetas works with IT infrastructure service providers and systems integrators across the globe, to help specify the optimal encryption solution for their customers' needs.

Customers may contact Senetas directly to discuss their requirements; or ask their service provider to speak to us on their behalf.

ENCRYPTION SECURITY WITHOUT COMPROMISE

Whatever your network security needs, Senetas has an encryption solution to suit. Our certified high-assurance encryptors protect data across networks operating at speeds from modest 10Mbps to ultra-fast 100Gbps and support all network topologies.

Our virtualised encryption solution, for virtual CPE and virtualised WAN, supports bandwidths of up to 5Gbps. It provides policy-based, end-to-end encryption across multi-Layer networks.

Senetas encryptors are recognised globally for delivering maximum data security and crypto-agility, without compromising network or application performance.

SECURE FILE SHARING

SureDrop offers all the flexibility of a drop-box style solution, with the added benefit of best-in-class encryption security and 100% control over data sovereignty.

For customers seeking additional layers of content security, SureDrop is also available with the Votiro Secure File Gateway extension.

DISARM MALICIOUS CONTENT

Votiro leverages patented anti-malware technology to protect your files from the most advanced, persistent cyber-attacks. It sanitises incoming files, eliminating the risks associated with zero-day or undisclosed attacks, whilst preserving 100% file functionality.

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Senetas is a leading developer of end-to-end encryption security solutions; trusted to protect enterprise, government, defence, Cloud and service provider network data in over 40 countries.

From certified high-assurance hardware and virtualised encryption, to secure file-sharing and collaboration with data sovereignty control, all are based on the same crypto-agile platform and deliver security without compromise.

Regional Contacts:

Asia	T: +65 8307 3540	E: infoasia@senetas.com
Australia & New Zealand	T: +61(03) 9868 4555	E: info@senetas.com
Europe, Middle East & Africa	T: +44 (0)1256 345 599	E: info@senetas-europe.com
The Americas	T: +1 949 436 0509	E: infousa@senetas.com