interxion™

Case study

DELUXE INTEGRATES MULTI-SITE RESILIENCE INTO ITS CLOUD-BASED PLAYOUT PLATFORM

deluxe LeapCloud™

Challenge

- To design and deliver a secure, flexible cloud-based broadcast platform for managing media assets, playout and distribution to global audiences

Solution

- An N+N active/active broadcast playout model, delivered from Interxion's data centres in London and Amsterdam
- An ultra-secure and resilient online broadcast environment that maximises uptime and underpins service delivery to customers

Result

- A cloud-based asset management and playout platform designed to eliminate outages with integrated, affordable active/active disaster recovery capability

LeapCloud provides a completely new way of managing media assets, broadcast playout and distribution that increases flexibility and reduces costs using a cloud-based platform. What's more, it delivers disaster recovery capabilities that are often unaffordable when systems are owned and managed in-house. To ensure the levels of security, resilience, performance and uptime required to underpin its platform, Deluxe colocates its LeapCloud infrastructure at Interxion data centres in London and Amsterdam.

The traditional model of broadcasters owning and operating proprietary systems that run on dedicated hardware has often made it difficult to implement comprehensive disaster recovery (DR). The main barrier has generally been cost: the cost of replicating equipment at a second site, of transporting tapes and files between sites, and of ensuring the second site is active and available to take over at a moment's notice.

Even if a broadcaster has implemented partial DR capability at its main site, damage to the building or loss of power or connectivity could still have a devastating effect on its ability to continue broadcasting. Today, however, the ongoing transition from tape-based to file-based digital workflows opens the door to new ways of thinking about DR, as digital processes can become software-driven ones and applications can be engaged with from any geographic location.

When Deluxe set out to design its next-generation cloud-based media asset management, playout and distribution platform, building in cost-effective DR capability was a prime consideration. This was made possible by the IT-centric nature of the solution, and a distributed architecture housed in geographically diverse Interxion data centres to maximise security and resilience.

> *LeapCloud is designed to eliminate outages by integrating disaster recovery as a fundamental element. Hosting our infrastructure at multiple Interxion facilities plays a key part in achieving that aim.*
>
> **Alec Stichbury**
> CTO, Deluxe Broadcast Services

Secure, reliable facilities underpin continuous broadcasting

By bringing together non-proprietary IT technologies and state-of-the-art media tools, LeapCloud sets new standards for how content owners and broadcasters engage with and distribute their content. It delivers live linear TV and content services as a platform that broadcasters can access and use in much the same way as if they owned and operated it themselves, but lets them move from a capital-intensive model to one based on opex.

"The entire service is designed to eliminate outages by integrating DR as a fundamental element. Hosting our infrastructure at multiple Interxion facilities plays a key part in achieving that aim," says Alec Stichbury, CTO at Deluxe Broadcast Services. He explains why the company chose to work with Interxion:

"When we did our research, Interxion came out head and shoulders above everyone else for operational excellence. In addition, they have a dedicated digital media team who understood what we wanted to achieve and were ready and able to support us."

Interxion's data centres operate to Tier 3 standards as defined by the Uptime Institute, providing space, power and cooling with very high levels of reliability and performance, and follow robust processes that are aligned with the ITILv3 framework. The environment within each data centre is fully controlled with 8MVA redundant grid supply, 2N UPS redundancy, N+1 backup generators, and a minimum of dual-fibre entry points for multiple connectivity providers. A stringent SLA governs uptime.

The physical security of the LeapCloud installation is assured through data centre features such as full CCTV monitoring inside and out, 24x7 staffed security, mantraps, and proximity card and biometric readers for managing access.

Network access is managed through a strict framework of hardware and software security products to detect and prevent unauthorised access to the platform. Broadcast streams are secured using AES 256-bit encryption; and regular penetration and DDoS tests carried out by Deluxe corporate IT and third-party agencies contribute to security policies and software patching processes across the platform.

An active/active model with real-time mirroring

The LeapCloud platform design is based on an N+N active/active broadcast playout model, delivered from Interxion's data centres in London and Amsterdam. The data centres are connected by diversely routed fibre supplied by different connectivity providers for maximum resilience.

Because the service is software based, Deluxe can deploy redundant hardware across the two Interxion sites and mirror all the components. The two playout engines are locked together, ensuring frame-accurate delivery, with either one able to take over from the other instantaneously.

Software tools support self-healing that detects, for example, when a broadcast signal isn't present, and auto-switches to a secondary active path. In addition, the service is managed by two Deluxe teams working closely together: TX Operations is focused on transmission output, while Tech Operations takes care of the technology servicing playout and related products.

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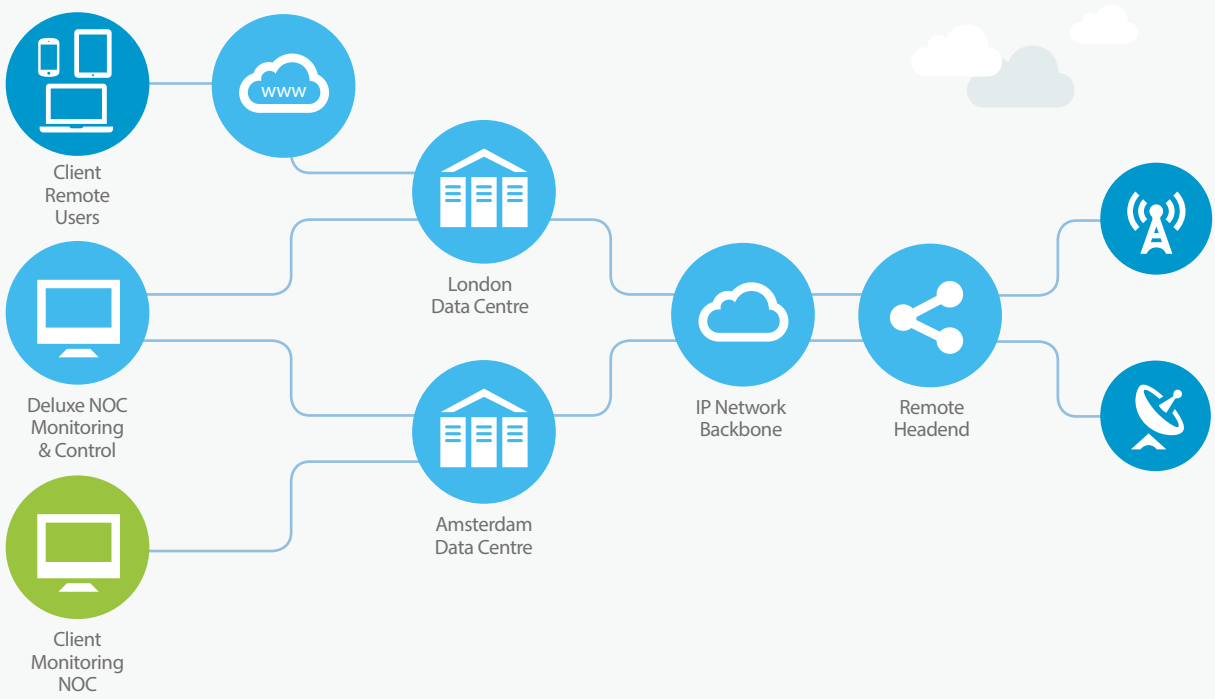
"LeapCloud delivers active/active DR for the price of a single site, making DR truly affordable to broadcasters for the first time," says Stichbury. "For many of our customers, the service's inherent DR capabilities were the initial attraction, but they quickly came to appreciate the cost savings, flexibility and rich features that LeapCloud also provides as part of a live broadcast offering."

LeapCloud Disaster Recovery: Multi-site resilience



Carrier-neutrality helps guarantee content availability

As a carrier-neutral data centre provider, Interxion provides access to a wide choice of connectivity partners, enabling LeapCloud and its customers to reach any platform simply and cost-effectively. Interxion is home to all the main fibre-based media contribution network providers and to a growing community of satellite service providers, facilitating, high-quality content acquisition and contribution. LeapCloud also has access to a broad range of IP carriers, ISPs and CDNs at Interxion.

“By selecting multiple providers, we can build in resilient connectivity that ensures delivery of content from our platform to IPTV headends or ‘over the top’ directly to consumers watching via the Internet or on mobile devices,” says Stichbury.

Uptime and disaster recovery like never before

Broadcasters and content producers that choose to work with an outsource partner like Deluxe expect uninterrupted service delivery with an SLA of at least 99.99%. Stichbury explains why Interxion is the perfect partner to help Deluxe meet its quality targets:

“Achieving these targets depends on having a solid infrastructure base. Combining our applications, compute, network and storage with Interxion’s highly available, geographically diverse facilities, delivers virtually 100% uptime and the comprehensive DR capabilities that are simply not possible with single-site playout solutions.”

About Interxion

Interxion (NYSE: INXN) is a leading provider of carrier and cloud-neutral colocation data centre services in Europe, serving a wide range of customers through over 45 data centres in 11 European countries. Interxion's uniformly designed, energy efficient data centres offer customers extensive security and uptime for their mission-critical applications. With over 700 connectivity providers, 21 European Internet exchanges, and most leading cloud and digital media platforms across its footprint, Interxion has created connectivity, cloud, content and finance hubs that foster growing customer communities of interest.

For more information, please visit **www.interxion.com**

LeapCloud

The service is based on a non-proprietary, distributed IT-centric platform housed in multiple Interxion data centres. It's available as a complete outsourced broadcast playout solution, or on a flexible PaaS basis so that customers can mix and match the elements they need. The service interoperates with all the Deluxe services that support traditional broadcasting, giving broadcasters full control over the end-to-end workflow.

There are four elements to the service:

- **Portal.** A comprehensive orchestration and digital asset management system presented through a web browser. Functionality includes search, browse, EDL generation, spot check, temporal metadata annotation, content and schedule tracking to manage TX readiness, and remote channel monitoring.
- **PortaLive.** A suite of tools for monitoring, controlling and recording (MCR) the entire contribution and/or distribution network within a web-based environment. It can manage any number of live feeds and group virtual routing clusters for brands, genres, operational needs and so on.
- **Playout.** A software-centric, scalable, resilient and feature-rich playout platform that's accessible globally. It can deliver any type of channel from the simplest linear to the most complex arrangement, and can handle live event and subtitle insertion, complex graphic event scheduling with voiceovers, and social media interactivity.
- **Delivery.** A suite of tools for transporting premium broadcast streams reliably and securely across almost any network topology – including the public Internet – with high levels of service quality, security and reporting. It includes the ability to hand off to traditional satellite and fibre distribution networks as ASI, IP and SDI/HD-SDI interfaces.

About Deluxe Entertainment Services Group Inc.

A wholly-owned subsidiary of MacAndrews & Forbes Holdings Inc., Deluxe is a leading provider of a broad range of services and technologies for the global digital media and entertainment industry. Bringing together a comprehensive network of specialized companies with boasting best-in-class artistry, cutting-edge technology, streamlined delivery and distribution solutions and customized management strategies, Deluxe approaches all of its businesses with an ingrained attention to quality, detail and creativity. From start to finish, in whatever format or language is required, Deluxe has the infrastructure and in-house capacity to provide complete solutions to a broad range of customers, including: major motion picture studios, television networks and cable companies, advertising agencies, brands, production companies, independent distributors and content owners.

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