

CASE STUDY

NRJ TV**STORAGE AND ARCHIVING OF ALL VIDEO CONTENT FOR THE FRENCH MEDIA GROUP**

NRJ TV – Production and Broadcasting Center - Paris

NRJ TV has selected Active Circle to store all of its video content for its innovative and open approach.

**NRJ Group and NRJ TV**

A major player in the world of French media, the NRJ Group launched itself into the television business at the introduction of digital terrestrial television and has since grown rapidly. The NRJ TV division has launched successively NRJ 12, a general-interest channel with a large audience of young people; NRJ Hits, a national music channel; and NRJ Paris, an urban general-interest station.

A strategic challenge: bringing broadcasting in-house

In early 2009, the Group's technical facilities for production and broadcasting were scattered across multiple sites. NRJ Paris, the youngest station, was already tapeless and broadcast directly from the headquarters, while the two other stations were hosted at a service provider. As the infrastructure of NRJ Paris had not been designed to host three channels, it became clear that a reorganization taking into account the future growth of the Group was necessary. The decision was made to create a full-scale production and broadcast facility at the Group's headquarters in Paris. "Of course this project makes financial sense, but ultimately the decision was a strategic one. The goal was to bring in-house the infrastructure for all the activities that lie at the heart of our business: production, editing, post-production, and especially multi-channel broadcasting," highlights Cédric Drapeau, Technical Director for the division NRJ TV.

A tapeless production and broadcasting center

An invitation to tender was launched in 2009 for the implementation of a completely tapeless, highly scalable system for NRJ TV. The contract was won by the system integrator SFP with a solution consisting of the following elements: Ninsight's Spark for automation, Louise from ProConsultant for traffic management, Quantel for new post-production, and Avid for more "traditional" post-production. Storage is organized into three levels: Omneon broadcasting systems, Isilon for near-line, and finally a storage and archiving space to keep all the material, all of the video content, available for access in file format.

Active Circle: an open and scalable archiving system

For this last part, NRJ TV chose Active Circle over its competitor, a traditional player in the sector. Active Circle was chosen because it presented an innovative an open solution, not the usual proprietary systems. The archives are available in file mode and are stored in TAR format on LTO tape. Disks and tapes are managed in the same way in Active Circle as virtualized storage repositories. "We chose Active Circle because it is an open and modular system solidly based on standards, which is a guarantee for the future. It is very easy to scale, which is well suited to a group like ours that is growing very quickly," continues Cédric Drapeau.

A system based on standard components

The Active Circle Storage System is installed on two redundant HP servers to guarantee access to the content in the event of a hardware failure. There is a 2-TB disk cache on each server to facilitate archiving and restoration. The LTO tape storage system is a Sun-StorageTek SL500 tape library with 200 LTO-4 slots for a total capacity of 160 TB. That represents over 3,000 hours of HD video that can be accessed at the click of a mouse.

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Cédric Drapeau –
Technical Director for NRJ's TV division

"The archiving system is very reliable. In spite of the thousands of file transfers per day, Active Circle simply works. I don't even hear about it."

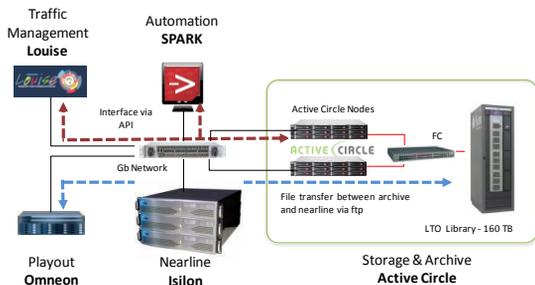
Cédric Drapeau
Technical Director, NRJ TV division



Multi-channel Control Room

Project schedule

- June 2009: Solution chosen
- July: Interfacing and tests
- August: Installation by SFP (integrator)
- September: Pre-production
- October: NRJ Paris is operational
- January 2010: NRJ 12 and Hits deployed



Archive Workflow

Archive groups and storage rules

Data is stored in archive groups called shares. "For each group, we can define the storage rules for disk and tape, which perfectly addresses our requirements in terms of content management," states Cédric Drapeau. For example, content acquired and content produced internally are stored differently. "The content produced by NRJ is invaluable and we have the only copy. What we need to do is define rules that automatically transfer multiple copies to a number of different physical media."

The only long-term storage

As soon as content is received or produced, before it is even verified or edited, it is archived in order to store a reference copy. "Our archive is the only long-term storage space. The other servers only store files temporarily," relates Mr. Drapeau. Near-line storage is the work area, but files do not remain there. Similarly, files are deleted from broadcast servers shortly after going on air.

Thousands of file movements per day

In terms of output, all the elements that are going to be broadcast are first transferred from the archive to near-line storage. "There are between 4,000 and 10,000 file movements per day into and out of the archiving system and I can tell you that Active Circle simply works. I don't even hear about it," emphasizes Mr. Drapeau.

Integrated with traffic management and broadcast automation

In NRJ TV's workflow, new content is deposited in the archive using the application Louise from ProConsultant, which manages the content, the rights, and the program scheduling. On the day before broadcast, the tentative list of programs is finalized and becomes the detailed schedule for the next day. The broadcast automation system Spark from Ninsight gathers all the required content ahead of time using its Spark Playlist and Mover modules. Active Circle provides a very straightforward interface via FTP for archiving and restoring, as well as an API to provide third-party applications with a means to exchange information, for example to retrieve the list of archived content, the location of this content, available storage space, and so on.

Result: security and scalability

Six months after the installation, it was time to look at the initial results. First of all, the level of security has been significantly increased: all of NRJ TV's video content is stored on a stable medium (LTO tape) in TAR format (a file format for encapsulating data that guarantees the information can be accessed even in the absence of the archiving system). Secondly and most importantly, NRJ TV now has a centralized storage area for all of its video content. The videos can be quickly and reliably accessed by users for editing and broadcasting via any channel, linear or non-linear.

Outlook: scaling up and a remote site

With the growth of HD content, the volume of data is growing faster than anticipated. It will therefore be necessary to increase the overall capacity of the archiving system. "We are going to structure the archives in two levels: the current archive, which is on LTO tape; and a near-line archive on disk for content that is frequently accessed. Expanding the system is easy, we can add capacity as required and modify the storage rule accordingly. We will also implement automatic replication of the archives to a remote site to protect against any eventual disaster and eliminate the manual aspect of the process." In the current configuration, this requires the intervention of a technician.

Created in 2002, Active Circle develops software for organizations that manage large volumes of data: video content, images, scientific or technical data, or user information. The Active Circle solution optimizes data lifecycle management while at the same time simplifying storage administration and reducing total cost of ownership.



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