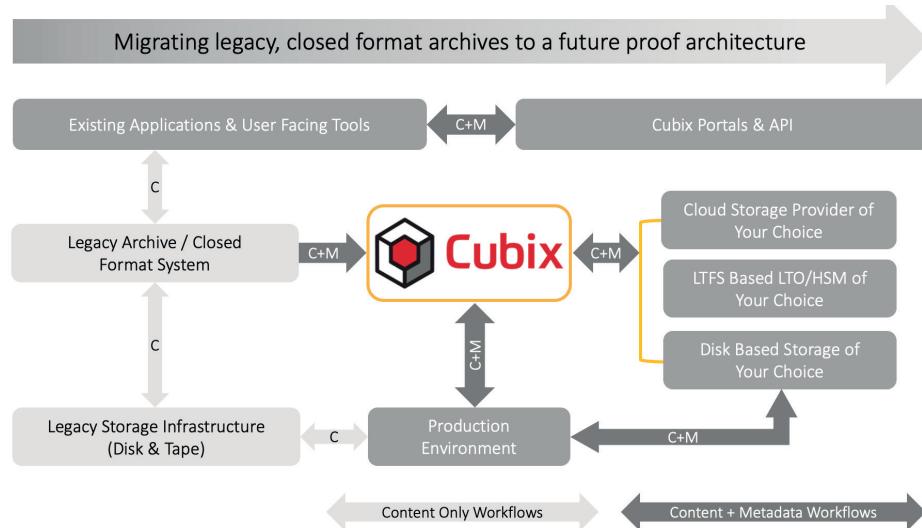


Legacy LTO / HSM Migration



Migrating your legacy, closed format archive to a future proof architecture.

There are potentially multiple reasons why businesses want to migrate away from their current archive solution, ranging from managing risk, concerns over legacy hardware, media degradation, and format support. Many businesses also find themselves stuck with a ‘closed format’ solution, based on legacy middleware that suffers from escalating support costs and hardware obsolescence.

Once the decision has been made to migrate, the choice of what, where, and how, becomes paramount. Options for media storage have increased exponentially since these ‘closed’ format solutions came to market with the latest architectures offering significant opportunities to media operations. By combining the right storage solutions with seamless architecture and ‘lights out’ orchestration driving the entire process, businesses can focus on maximising potential revenues for their media stock. Ortana Media Group has designed the Cubix platform to be storage agnostic by providing interoperability via API, and a range of on-premises, cloud, and hybrid solutions.

Decision makers, learning from previous solutions, no longer want to be channelled down a proprietary route when choosing their new architecture. At Ortana, we believe the key is to store media in an open format and therefore not be bound to any one vendor. The LTFS format is now well established within media as a portable and easy to use format which critically holds its specification and implementation within the public domain. This ensures it is supported and is interoperable with many vendors, and guarantees support longevity for on-premises storage. Ortana supports many HSM’s and ‘speaks’ LTFS natively.

With significant operational cost reductions in cloud-based object storage, off-premises or ‘in-the-cloud’ has become an alternative to a second copy LTO. With large capacity HDD’s now standard in the marketplace, nearline based storage has also become a strong contender for content storage when combined with intelligent hybrid storage tiering.

To swap or to migrate? Some vendors even suggest that ‘swapping’ your LTO tapes from one HSM to another is the solution. Ortana knows that these libraries are often the linchpin of the organisation and any significant downtime has a negative impact on operations. Combine this with the potential for these ‘one shot, one direction’ migrations to go wrong, and it can fill media managers with dread. Simply moving tapes also does not generate any additional editorial metadata or address the objective of making content more available. Cubix not only manages the media migration process, but can also generate additional rich editorial metadata and make it instantly available to editorial teams.

With the high transfer speeds of LTO, combined with the inherent scalability of Cubix, even the largest libraries can be migrated in the shortest timescales, whilst having zero downtime on the archive, all without impacting existing systems. Whilst the content is being migrated to the desired mix of storage and MAM, Cubix can perform several tasks on the content to further augment the metadata, including proxy and waveform generation, through to AI-based image detection and speech to text.

Cubix has native API support for EcoDigital DIVArchive (DIVADirector via DB connector), XenData, Quantum Stornext, Spectra Logic and DAC ALTO, as well as true native support for all the major cloud storage providers.

Ortana is a trusted partner in the management and deployment of business transformation projects, making full use of the Cubix architecture and the full range of integration it offers, as well as flexible commercial models.

For more information on how Ortana and Cubix can help you, contact us at hello@ortana.tv

Legacy LTO / HSM Migration - a case study

The Scenario:

Large Broadcaster with multi-channel linear playout, VoD and in-house news and post production utilising DIVArchive & DIVADirector. 4PB of media / 1.4m objects across 2 generations of LTO tape. Migration to LTFS under new XenData HSM and LTO robot with Wasabi cloud as the second copy. Content to be indexed via AI powered image recognition and speech to text. Cubix UI was used to replace the existing archive as the media portal for both internal and external stakeholders.

Success Criteria:

- To fully migrate all tape and disk-based content to the new HSM in an expedited manner, making full use of the dedicated drive resources available.
- To fully migrate all editorial metadata into Cubix, including all ancillary files (subtitles, scripts, etc.).
- To replace legacy WMV proxy with new full HD H264 frame-accurate proxy.
- To provide the business with secure, group-based access to the content.
- To index all media using AI-powered media discovery.
- To leverage cloud benefits, whilst keeping cloud costs to a minimum.

The Ortana Method:

Cubix Core instance deployed on-site along with harnesses for DIVArchive, DIVADirector, XenData, FFmpeg, Wasabi and Google plus AWS Cloud. Fully integrated with existing Active Directory for security. Metadata schemas configured to meet client requirements for each content type.

Cubix queries the DIVArchive via the published API for object information in each storage plan, learning about all tapes and their associated objects. As Cubix is now asset aware, all media can be managed directly via its UI. Restore requests are then submitted on a per tape basis, working on the archived date, ensuring the DIVA Actors always perform a linear read from the same tape to maximise throughput.

Cubix maintains sync to ensure any new or modified content that appears during the process is automatically included. Content is restored to a temporary nearline location as configured within DIVArchive, where the content is then imported into Cubix. A full technical deep dive is performed on the asset, allowing Cubix to gather as much technical metadata as possible, including track layout, thumbnails, and waveforms.

Using the Cubix MediaRules / Taskflow engines, content is then asynchronously delivered to both Wasabi Cloud & XenData HSM / robot, whilst also being proxied and indexed via AI Media Discovery services. Each is driven by configurable business rules, allowing for the parameters to be tailored based on the content type (news rushes vs TX masters, etc.).

Harnesses for proxy generation can be scaled to any size, running FFmpeg to generate the proxies, complete with devaluations such as BITC, logo and watermarking. The same policy applies also to Wasabi, AWS and Google harnesses, ensuring that the maximum utilisation is achieved across the different resources and the process keeps up with the restore speeds. Proxies are also archived to Wasabi for backup, and our AI media discovery tools make cost-effective use of these APIs to keep costs down to an absolute minimum.

Any editorial metadata regarding the asset is pulled automatically from DIVADirector and tagged into one of the configured schemas, mapping across from previous fields to the new structure. This includes the transfer of any ancillary files. This causes the content to become visible in the client facing Cubix portal, complete with all the metadata acquired through the AI media discovery process.

Once an asset is confirmed as complete and the content is present on Wasabi and committed to LTFS tape, the nearline copy is automatically purged, allowing space for further content to be restored. Cubix self-throttles and so the process runs 'lights-out', raising an alert whenever exceptions occur. Several different dashboards and reports are available for both real-time monitoring of the process as well as reporting on throughput.

The client migrates onto the new portal once the bulk of the content is migrated, with the business then submitting requests for content directly via Cubix. These are actioned against the XenData HSM, allowing for the existing DIVArchive and DIVADirector estate to be decommissioned.

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