



Digital Libraries and Preservation Repositories whose purpose is long-term retention of digital information need a standard, open source preservation object.

The business and technical challenges of long-term digital information retention are significant. Here are some typical examples:

- Ever-growing cost and complexity to preserve and to logically and physically migrate
- Scaling repositories and services to keep up with relentless growth
- Extensive requirement for metadata management
- Maintaining access, security, confidentiality, authenticity, integrity, audit logs, and other preservation services over long periods of time
- Information portability across systems and locations

XAM Enables Preservation Objects

XAM is a standard, open-source, application to storage interface for file sharing similar to CIFS or NFS with the distinct difference that XAM also standardizes the ability to use expanded metadata and create portable information objects. XAM has the expanded metadata fields to support the preservation and migration requirements for long-term retention. It is also the application to storage interface supporting federation of storage and support of robust information management and data services.

- XAM is a standard open-source container (preservation object) that can function like an Archival Information Package as defined by OAIS¹
- Reduces logical and physical migration challenges

Vision of Preservation with XAM

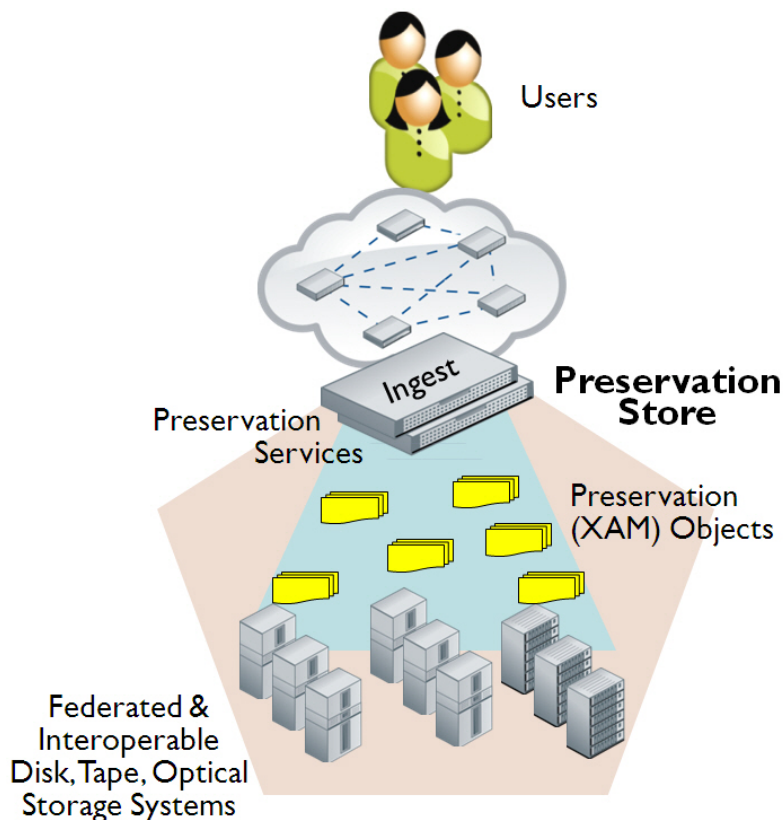
Digital preservation systems that utilize XAM enjoy storage interoperability and federation, resulting in reduced physical migration costs. Preservation objects based on XAM are produced by the application or during the ingestion process, resulting in increased portability, control, interchangeability, and usable life of digital information at lower operating costs.

In the datacenter, XAM enables preservation to cost effectively “begin at creation,” enabling achievement of information governance, compliance, and risk management goals.

XAM Value Propositions

- XAM is open source, without proprietary lock-in, and directly reduces the cost of migration and of metadata maintenance over time because of its extensibility and portability
- Addresses logical & physical migration issues:
 - Makes preservation objects portable - storage & location independent
 - Portable, application independent objects can be virtualized, tiered, and placed on self-healing storage systems, eliminating physical migration
 - Potential to embed readers in the preservation object, reducing the cost and impact of periodic logical migration
- Accommodates extended metadata needed for audit logs, authenticity, integrity, security, chain of custody, and future requirements
- Supports federated, context aware search across XAM aware repositories
- Digital preservation practices become more scalable, cost effective, automated, and better able to extend the life of digital information

Typical Preservation Store



¹ OAIS: Reference Model for an Open Archival Information Systems: ISO:14721:2003