

TECH TRACKER

For IT By IT

Storage For The Long Haul

XAM standard builds in vendor and format flexibility, boosts metadata capabilities

CONTENT-ADDRESSABLE storage and write once, read many systems solve key enterprise problems for long-term data retention by storing information in nonmodifiable format on disk.

Unfortunately, these systems require integration with applications that write to them. This forces enterprises to standardize on one vendor's fixed-content media or incur the cost of integrating apps to multiple fixed-media platforms.

The Extensible Access Method standard puts power back in the hands of IT. XAM provides a common interface for applications to write to any fixed-content device, no integration necessary. Enterprises can deploy a variety of storage media from multiple vendors and even migrate content from one storage platform to another.

XAM also includes a framework for extensible metadata that can be associated with stored objects. This metadata will support retention/disposition and e-discovery capabilities, and help enterprises implement an information life-cycle management strategy by making it easier to migrate static content to different storage tiers.

The XAM spec, developed by IBM and EMC as an open, standards-

THE LOWDOWN

» **THE PROMISE** The Extensible Access Method API provides a standard interface for apps to write to heterogeneous fixed-content storage devices without custom integration. Enterprises can migrate data from one vendor platform to another via XAM. It also provides an extensible metadata structure to meet retention needs.

» **THE PLAYERS** The Storage Networking Industry Association oversees the XAM effort. Major vendors, including EMC, Hewlett-Packard, IBM, Hitachi Data Systems, and Sun, are developing the API and software developers' kit through the association. Version 1.0 of the API spec was released this spring.

» **THE PROSPECTS** Thanks to backing from industry heavyweights, XAM will be well supported by storage devices. EMC's Centera and HP's Integrated Archive Platform already support the 1.0 specification. Application vendors will begin to release XAM-ready apps in 2009.

based protocol based on the API for EMC's Centera CAS, is off to a good start thanks to the backing of major storage vendors, including Hewlett-Packard and Sun Microsystems. While apps that support XAM are a year or more away, widespread software developer adoption is likely.

STANDARDIZATION SELLS

Why would storage vendors—particularly EMC, which initially undertook the XAM initiative and leads the content-addressable storage market—want to loosen their grip on customers? Because they believe they can sell even more products with a standards-based interface.

XAM anticipates that objects will migrate from one storage medium to another during their lifetimes. For instance, 10-year-old medical images stored on tape are now being migrated to disk. Ten years from now, images in disk-based archives may wind up on a storage platform that hasn't been invented yet.

XAM relies on a flat address space that isn't tied to a specific storage device. XAM also assigns each object (for example, an e-mail message) a unique identifier that exists for the lifetime of the object. The identifier doesn't change even if the object is moved from one storage system to another, making

it findable and able to be traced to any XAM-enabled device.

XAM also has a language to express metadata about the object. This metadata will provide key information about each object that can be used to apply policies, such as a retention period, without the need for the app that created the information to access the object.

XAM has standardized the language for expressing metadata, and work is ongoing to create standard formats for different content types. For instance, likely metadata formats for e-mail will include sender, recipient, and subject. The creators of the standard had an eye on electronic discovery. XAM can search metadata, a key re-

quirement for legal discovery and internal corporate investigations.

The technology also lets administrators save search queries as

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their own objects and apply a retention policy to those queries. This is a useful feature because it's not uncommon for opponents or the court to request the search terms used by litigations to find relevant information. Administrators can put objects on legal hold and append case numbers to objects, further facilitating the discovery process.

At present, XAM doesn't create a full-content index of the information being stored. Many of the apps that will write to a fixed content system, such as e-mail archives, already create full-content indexes.

Version 1.0 of the XAM API spec has been submitted to the ANSI and ISO standards bodies for final ratification and is expected to become an official standard by the third quarter of 2008.

An XAM software developers' kit, created by the Storage Networking Industry Association, is expected in September, although an early version is available for software vendors that want a jump on integration.

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