



Research Brief

Bycast Extends Its Leadership Position In Grid Storage Technology

IBM has announced that they will OEM Bycast's StorageGRID software as a new product called the IBM System Storage Multilevel Grid Access Manager Software (Grid Access Manager Software)

This is a significant event and storage buyers should pay due attention. This Data Mobility Group Research Brief provides an overview of the StorageGRID technology and explains why it has the potential to reshape the market for fixed-content storage.

Chances are you've never heard of the Canadian company named Bycast or their flagship StorageGRID software. Bycast has been flying under the radar of most storage buyers because they've been single-mindedly focused on providing fixed content storage solutions for just one particular industry segment, namely healthcare and medical imaging. Specializing was probably a wise strategy, as it has allowed Bycast to develop and support a product that is very well-suited to its target market, but we at Data Mobility Group have been waiting—impatiently—for Bycast to branch out and start selling StorageGRID to customers in other industry segments.

Our impatience stems directly from our enthusiasm for StorageGRID, which we consider to be extraordinarily excellent technology. There are a number of fixed content archiving solutions already available in the market, of course, but StorageGRID has some important features that distinguish it from other solutions. StorageGRID would make an attractive archiving platform for organizations in a wide variety of industries, not just healthcare.

Copyright © 2002-2007 Data Mobility Group, LLC. All Rights Reserved. Reproduction of this publication without prior written permission is forbidden. Data Mobility Group believes the statements contained herein are based on accurate and reliable information. However, because information is provided to Data Mobility Group from various sources, we cannot warrant that this publication is complete and error-free. Data Mobility Group disclaims all implied warranties, including warranties of merchantability or fitness for a particular purpose. Data Mobility Group shall have no liability for any direct, incidental, special, or consequential damages or lost profits. The opinions expressed herein are subject to change without notice.



We therefore regard it as a welcome development indeed that IBM has decided to OEM the StorageGRID software and bring this technology—rebranded as IBM’s Multilevel Grid Access Manager Software—to a much broader market. IBM already uses StorageGRID as the basis for IBM’s Grid Medical Archive Solution, so on one level this decision just represents a deepening of the relationship between IBM and Bycast, but the new Grid Access Manager will be a generalized solution, suitable for any customer that needs to manage fixed content.

Grid Access Manager Advantages

IBM’s Grid Access Manager will inherit the considerable strengths of StorageGRID. A few of the features and architectural design decisions that make StorageGRID (and Grid Access Manager) a noteworthy platform for managing fixed content include:

Multi-site architecture

With other archiving solutions, it is possible to establish WAN connections between remote sites and a centralized archive, or do replication between one site and another site for disaster recovery purposes, but neither of those capabilities amount to a true multi-site architecture. By contrast, StorageGRID was designed from the beginning to operate across multiple geographical locations. StorageGRID automatically replicates and caches data across different locations and nodes, in accord with configurable rules and access patterns; this provides fast response times for end users as well as built-in fault tolerance and disaster recovery. Of course, StorageGRID works perfectly well if deployed at only one site—the benefits of its grid architecture still apply even in a single location.

Object-based

StorageGRID stores and manages data as objects, and an object can be either a single file or a collection of files. In our view, this is one of the most important distinguishing features of the StorageGRID software. There are many business scenarios in which it makes sense to store and manage several related files as one unified object, but StorageGRID is the only archiving system that is designed to support such scenarios. Other archiving systems have no inherent means of treating a set of files as a unified object and we have consistently identified this as a significant shortcoming of those systems.



StorageGRID users can define different classes of objects. Each object class can have its own custom metadata, and different business rules can be applied to different object classes, enabling organizations to create finely tuned policies for managing stored objects.

Cost-effective storage management & ILM

StorageGRID aggregates heterogeneous storage hardware into a virtual pool of storage that is then managed by StorageGRID. Organizations can utilize existing storage hardware, preserving their investment, and add new hardware as needed. Because StorageGRID works with a variety of hardware on the backend, organizations can set up tiers of storage within the grid. For example, StorageGRID is able to manage the storing of some objects on tape or optical media, which can be a more appropriate and far less expensive option than storing all objects on disk arrays. Using the aforementioned combination of object classes, custom metadata, and business rules, an organization can implement policy-driven ILM.

Because of the grid architecture, users do not experience any downtime if a node in the grid fails; while nodes are being repaired or replaced, the grid adapts and users remain unaware. Similarly, a node can be added to the grid at any time, and the grid reconfigures to incorporate the new node. StorageGRID comes equipped with a web-based GUI that administrators can use to monitor and manage the entire geographically distributed grid. All of these elements serve to make management of a StorageGRID system relatively simple and inexpensive.

Security and compliance

Due to its origins as a solution for healthcare organizations, StorageGRID was designed to meet the strict requirements of HIPAA (the Health Insurance Portability and Accountability Act). As a result, it includes features such as encryption of data both at rest and in transit, guaranteed data integrity using digital fingerprints, audit logs of all system activities, and so on. In addition, for organizations that may want additional compliance or data retention features, IBM Grid Access Manager will be able to use IBM's DR550 as a storage node.



Data
Mobility
Group

www.datamobilitygroup.com

Bottom Line

IBM Grid Access Manager has the potential to be a disruptive force in the marketplace for fixed content archiving solutions. For example, when compared to EMC's Centera, the market leader in terms of sales, Grid Access Manager has advantages in both functionality and cost. The same could be said about Grid Access Manager in comparison to HP's RISS and other systems. Grid Access Manager represents breakthrough technology at a breakthrough price. Moreover, Grid Access Manager is only one half of IBM's archiving strategy—the other half is the DR550 and DR550 Express. Taken as a whole, this represents an impressive portfolio of archiving solutions. We prefer, however, to focus for the moment on celebrating the long-awaited expansion of Bycast's StorageGRID technology into new markets, courtesy of IBM. 