

Providing world-class high availability
and fully automated recovery



IBM Implementation Services for Geographically Dispersed Open Clusters



Highlights

- **Automates application recovery across remote, mirrored sites**
- **Accommodates multiple open-system environments**
- **Provides a single point of control for managing the entire configuration**
- **Helps control costs by ensuring system availability so the business can continue to operate**

Meeting today's mandates for business continuity and rapid recovery

For most businesses today, simple contingency planning for lightning strikes and power outages is no longer enough. Companies must prepare for catastrophes ranging from fires and floods to hurricanes and tornadoes. At the same time, companies are expected to provide near-continuous data availability to the growing numbers of internal and external users who access information outside of business hours.

In some industries, business continuity and rapid recovery are more than a business need; they are a U.S. government mandate. In 2003, for example, the Federal Reserve, the U.S. Office of the Comptroller of the Currency (OCC) and the U.S. Securities and Exchange Commission (SEC) set forth new business continuity objectives for all financial institutions. In addition, the Health Care Portability and Accountability Act of 1996 specifies contingency plan requirements designed to protect health information data.

Other national and international groups have also issued regulations that underscore the need for a near-transparent disaster recovery solution:

- *Basel II from the Bank for International Settlements*
- *IAS/IFRS from the International Accounting Standards Board*
- *Sarbanes-Oxley Act*
- *USA Patriot Act*

Although many large enterprises have already deployed some type of recovery solution, they often end up with disparate recovery processes

from various vendors that don't translate well into actionable recovery plans. These expensive, labor-intensive solutions often fail when tested and don't meet aggressive recovery requirements. What's more, IT is often faced with the complexities of learning, testing, managing and monitoring these many solutions.

IBM Implementation Services for Geographically Dispersed Open Clusters (GDOC) is designed to help organizations meet these challenges by addressing the automation, testing and management requirements of a world-class high availability and recovery solution. Launched in 2000 as a joint effort between IBM Global Services and Symantec, this offering leverages proven methods and experience from IBM along with automation software from Symantec. IBM has successfully delivered this solution to major enterprises such as Caremark Rx, Inc.

Automating application recovery across geographically dispersed sites

GDOC typically starts with a cluster of servers managed by Symantec software to provide high availability at a single site. It then adds mirrored copies of

the data, along with more servers, at a second, geographically distant site. A data replication solution keeps the data between the two sites synchronized, enabling an organization with GDOC to recover from an outage quickly with minimal data loss. In fact, the recovery time with this solution ranges from minutes to hours—in contrast to the 24- to 48-hour recovery time that is typical with traditional recovery solutions.

Software automates recovery from an outage both within a site and across sites and provides for regular recovery testing. By eliminating manual recovery processes, organizations can greatly increase their ability to survive a local or regional outage. If an outage does occur, automated recovery processes take over to accelerate recovery time, minimize human error and enable the environment until IT staff is available.

Since the recovery time with this type of solution is much shorter than that with tape backup, the solution is especially appropriate for business-critical applications that require rapid recovery.

Accommodating heterogeneous environments

Designed specifically for today's open systems, this solution is ideal for environments that include one or more servers based on the following technologies:

- *IBM AIX® operating system*
- *HP-UX operating system*
- *Sun Solaris operating system*
- *Linux® operating system*
- *Microsoft® Windows® operating system*

A graphical user interface (GUI) enables IT staff to manage the entire cluster configuration from a single point of control. In the event of an unplanned outage, the IT staff can administer and monitor all systems, either individually or through a single point of control.

A GDOC solution also accommodates a wide variety of storage and replication technologies, including products from IBM, Symantec, Hitachi Data Systems, EMC, Oracle and NetApp.

Providing full-lifecycle guidance and support

With its wide array of integration, consulting and project management skills, IBM is well qualified to assist you in:

- *Implementing and managing data replication across sites*
- *Automating application recovery at a secondary site*
- *Managing, monitoring and testing the recovery solution.*

Ideally, GDOC begins with a technology consulting workshop (TCW) in which IBM assesses the solution requirements. IBM consultants make sure they understand your business, current environment and recovery point objectives (RPOs), which are usually just minutes or even seconds. They also look at your recovery time objective (RTO), which is usually a few hours or less. One common discovery is that organizations that have already deployed an in-house recovery solution often lack the necessary automation, monitoring and testing capabilities they need to maintain business continuity in the event of an outage.

During the TWC, IBM also defines the desired state, along with steps needed to achieve that state. In addition, IBM provides the following:

- *Project management*
- *Assessment of client availability requirements*
- *Application recovery planning, configuration and implementation*
- *Automation of application recovery*
- *Testing of application recovery*
- *Onsite skills transfer*

It all adds up to the full range of services and support organizations need for a timely, high-quality multiplatform availability and recovery solution.

Guarding against costly downtime

While it is impossible to eliminate all human, software and technology errors, proactive solutions based on GDOC can help keep these errors to a minimum, thereby reducing downtime and speeding recovery from unforeseen catastrophes. These solutions provide the ability to perform a controlled site switch for both planned and unplanned site outages with minimal data loss. The

result is full data integrity across multiple volumes, storage subsystems and open-system platforms.

This timely resumption of critical operations is especially crucial for enterprises that are highly dependent on key information systems. Such organizations not only require a multisite data replication solution—they also need the full automation, testing and monitoring capabilities necessary to provide a high level of confidence that their solution will work.

Why IBM?

IBM not only has the experience necessary to install specific products, but it also has the full range of technical experience required for robust, multi-data-center solutions, including:

- *Network bandwidth analysis experience*
- *Dual data center replication experience*
- *Recovery testing experience.*

Drawing on its extensive data replication and server management, monitoring and automation knowledge, IBM can deliver an innovative solution that provides full

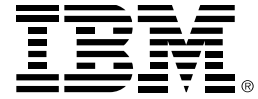
automation. This is important because it manages the mirroring environment and expedites the recovery process. It also helps eliminate as much human error as possible.

IBM's experience also crosses a wide range of product combinations in the areas of data replication, application and middleware control, database control and operating systems.

For more information

To learn more about IBM Implementation Services for Geographically Dispersed Open Clusters, please contact your IBM sales representative or visit:

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