

# iCluster™ DataMirror®

## Protect Your Critical iSeries Data and Applications From the Effects of Downtime or Disaster

DataMirror iCluster™ gives iSeries-based companies the peace-of-mind that their business is protected against the costs of planned or unplanned downtime. iCluster is a single, integrated software solution that provides the highest levels of availability and clustering support for IBM iSeries business environments. In addition to providing high availability and resiliency, iCluster can help companies of all sizes increase revenues and improve their bottom line through new operational efficiencies, enhanced service levels and the ability to do business 24/7.

iCluster captures iSeries objects and database transactions from primary iSeries systems and mirrors them in real-time to one or more backup systems. iCluster can detect primary system failure and invoke operational switching for continuous availability. The solution includes an intuitive Java graphical user interface to manage clustered iSeries environments. Users can quickly and easily define nodes in a cluster, mirror data and other critical objects to specific nodes, and monitor the entire cluster from a single station. iCluster supports IBM's ClusterProven™ standard for application resiliency. DataMirror's flagship resiliency solution raises the bar for high systems availability with advanced features and functionality including match-merge architecture, XtremeCache, alarms and alerts, real-time auto-registration, IFS mirroring and fully integrated remote journaling support.

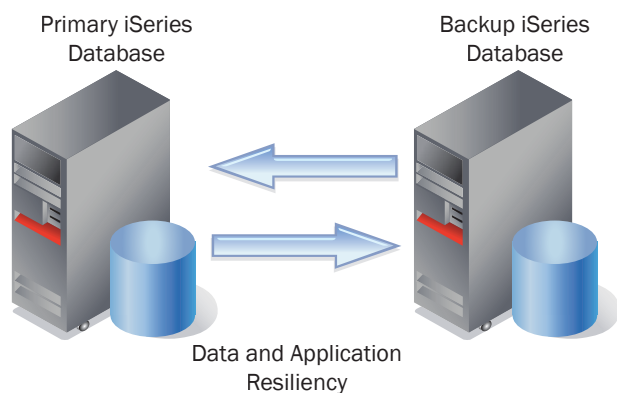
iCluster is a highly efficient, reliable and flexible solution that helps your business run more smoothly and effectively by providing superior system uptime. Continuous data access and availability empower your company with the back-end security and confidence to focus on business growth and providing the best customer experience possible. Should an outage occur, your organization is protected against the adverse effects of system downtime and business can continue as usual.

The iCluster solution is backed by extensive iSeries expertise. DataMirror is an IBM High Availability Business Partner, a Cluster Middleware Business Partner, and an All Star Partner in Development. DataMirror is committed to delivering the most comprehensive high availability solution available for iSeries customers including software, proven implementation methodology, consulting services and global 24/7 support.

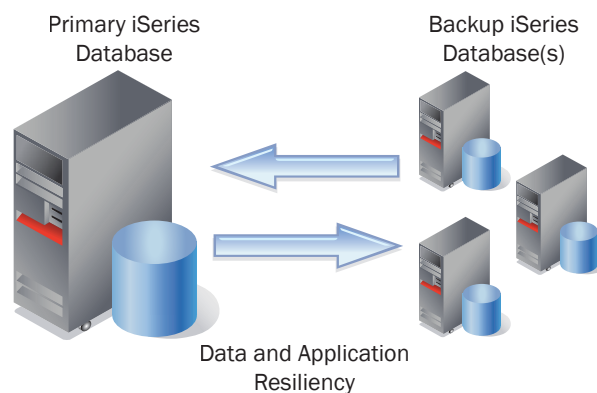
### Customer Benefits:

- **24/7 availability of key databases and objects**
- **Disaster avoidance and recovery for IBM iSeries-based businesses**
- **Avoid the costs of both planned and unplanned downtime. Enhance service levels and promote customer retention and loyalty**
- **Maximize operational efficiency through data and workload distribution**
- **Ensure the continuity of supply chains and e-Business environments**
- **Solution backed by a proven methodology and extensive iSeries expertise**

### One-to-one Failover



### One-to-many or Many-to-one Failover



## KEY FEATURES

### High Speed Operational Switching

iCluster automatically detects primary system failure and invokes automatic failover or other corrective measures specified by the user. iCluster is tightly integrated with IBM Cluster Resource Services, utilizing IBM's user exits and iSeries heartbeat monitoring to seamlessly switch physical operations to a backup system within seconds of an outage.

### Exclusive XtremeCache Technology

XtremeCache optimizes the flow of data into and out of a high speed software cache to help customers attain near zero latency for system backup and recovery.

### Advanced Match/Merge Architecture

Records transmitted to the backup system or node are matched and merged in real-time to ensure that object-level and record-level events are applied in the exact sequence as they occurred on the primary system. Match/merge allows real-time auto-registration for automating tasks such as adding new tables that would otherwise need to be performed manually.

### Fully Integrated Remote Journaling Support

Customers have the flexibility to choose either remote journaling or DataMirror's highly efficient journal scrape transport method, depending on their specific environment and high availability requirements.

### Event-driven Status Monitor/Alarms and Alerts

Interactive, real-time inquiry screens monitor current activities on both the primary and backup system or any node within a cluster, while historical replication statistics are tracked for trend analysis. Alarms and alerts support notification of users via e-mail or messaging and enable automatic actions based on conditional events.

### Flexible Checkpoint User Exits

Checkpoint processing automates common administrative tasks such as running quiesced backups on the system and allows for live database reorganizations without taking the system offline.

### Full Support for Efficient IFS File Mirroring

Some applications regularly update small portions of byte stream files (BSF), while others maintain millions of BSF files within the OS/400 Integrated File System (IFS) that are created and deleted but are never actually updated. Customers have the flexibility to replicate changing BSF objects using iCluster's efficient IFS journaling support or to replicate unchanged BSF files without the additional overhead of journaling. Customers can also perform sync checks to ensure that BSF objects are synchronized between primary and backup systems.

## BUSINESS BENEFITS

Human error has been cited as the chief cause of system downtime. The ability to automatically invoke operational switching with minimal human intervention helps to ensure maximum uptime and a smooth, seamless return to normal business operations.

In any high availability environment, performance equals availability. XtremeCache ensures that the most current data is available on the backup system in the event of an outage. XtremeCache can be configured in multiple instances to achieve extreme performance scalability.

Exclusive match/merge architecture eliminates the need to continually perform sync checks to ensure data integrity and consistency. Real-time auto-registration reduces administration costs while maintaining the integrity and accuracy of data transactions. Any changes, adds or deletes made to an application data store are automatically mirrored in real-time to the system, making businesses much less vulnerable to data loss or corruption.

In certain environments, the use of remote journaling offers guaranteed delivery of every transaction, enabling companies to achieve the data integrity required for critical tables.

The ability to monitor systems and ensure the performance of mirroring operations delivers peace-of-mind for administrators and business leaders alike.

The ability to easily accommodate day-to-day requirements results in enhanced operational efficiency and lower maintenance costs. Heavy transaction volumes create situations where periodic reorganizations are required. iCluster's active reorg capability results in virtually zero downtime from the perspective of the end user.

Real-time mirroring of both journaled and non-journaled IFS files provides resiliency and stability for applications utilizing the IFS. Full IFS mirroring support also enables highly efficient processing of image files and document management applications commonly used in the health care and financial services industries.

## About DataMirror

DataMirror (NASDAQ: DMCX; TSX: DMC), a leading provider of real-time data integration, protection and Java database solutions, improves the integrity and reliability of information across all of the systems that create and store data. DataMirror's flexible and affordable integration solutions allow customers to easily and continuously detect, translate, and communicate all information changes throughout the enterprise. DataMirror helps customers make better decisions by providing access to the continuous, accurate information they need to take timely action and move forward faster.

Over 2,000 companies have gained tangible competitive advantage from DataMirror software. DataMirror is headquartered in Markham, Canada and has offices around the globe. For more information, visit [www.datamirror.com](http://www.datamirror.com).

# DataMirror®

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