

IBM Copy Services for System i™

Avoid System i downtime due to planned and unplanned outages



Offering Highlights

An IBM solution to enable enhanced backup and business continuity solutions in an IBM i5/OS® environment

■ **Challenge**

Provide external storage-based backup, high availability, and/or disaster recovery solutions for a System i computing environment.

■ **Solution** – Integrate i5/OS Clustering and Independent Auxiliary Storage Pools (IASPs) with IBM System Storage™, Advanced Copy Services (FlashCopy®, Metro Mirror, and Global Mirror), and the Copy Services for System i toolkit

■ **Targeted benefit**

Simple, automated, low-maintenance solution that leverages reliable, hardware-based storage copy and replication services managed and controlled from a familiar i5/OS command line interface.

Supporting continuous availability in an on demand world

In a global economy that demands a 24 hour per day/seven day a week environment no business can afford downtime – whether it's a planned outage for an upgrade, maintenance, repair, or backup operation or an unplanned outage due to human error, hardware failure, utility disruption, or a disaster. Yet many companies have business continuity plans that allow core applications to recover within 24 to 48 hours – with 24 hours of lost data. Often these companies rely on back office, manual processes to keep operations running until their systems are restored. As information has become an increasingly valuable organizational asset, many companies are seeking to reduce the risk of downtime and avoid the negative consequences of a prolonged disruption in I/T services.

The cost of downtime for a typical System i computing infrastructure can be significant; to the extent that even a small improvement in availability can potentially result in reduction of lost revenue, increased user productivity, improved customer satisfaction, and heightened brand perception.

The IBM Copy Services for System i is designed to help your business reduce downtime, support high availability, and improve disaster recovery for mission-critical applications.

Reduce downtime for saves

One of the biggest challenges of administering a system is finding sufficient time to backup critical business data. Many I/T shops are continually being asked to provide greater availability which in turn shrinks the overnight window for save operations and batch processing. This problem can be greatly alleviated using the IBM System Storage FlashCopy function. In only a few seconds the FlashCopy function can create a copy of a logical volume at a specific point in time. This point-in-time copy can then be attached to a second System i server or partition, thereby allowing for saves to be performed from the backup system while the production system continues against the primary copy of

the data with minimal or no disruption.

High Availability

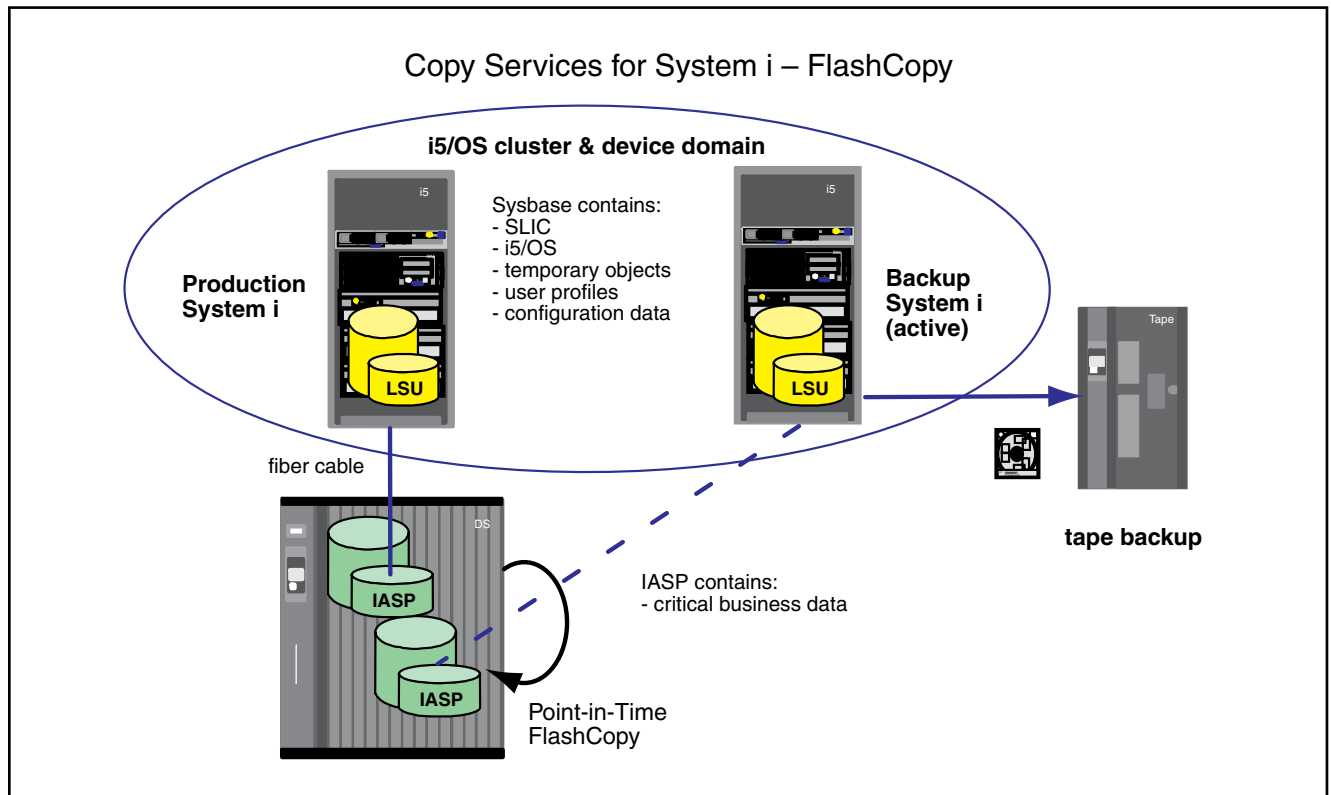
Another significant challenge for an I/T staff is developing, operating, and maintaining a solution that satisfies the business continuity requirements of the company. Again, customers can leverage Advanced Copy Services functions, namely Metro Mirror or Global Mirror, to help resolve this issue.

Metro Mirror provides real-time mirroring of logical volumes between two IBM external storage units. It is a synchronous copy solution designed to confirm write operations are completed on both copies (local and remote site) before the operation is considered to be complete. It is typically used for applications that cannot suffer data loss in the event of a failure. As data is transferred synchronously, the distance between primary and secondary disk subsystems may impact application response time.

Disaster Recovery

Replicating data over larger distances beyond 300km or over networks with limited bandwidth requires an asynchronous approach to reduce the impact on application performance. Global Mirror provides such capability and ensures data consistency at the remote disaster recovery location.

The Copy Services for System i is a software utility or toolkit that facilitates the integration of the Advanced Copy Services function with the System i. It is designed to provide automated management of Copy Services functions by coordinating the point-in-time FlashCopy and the Metro Mirror or Global Mirror switch processes with the corresponding activities that need to occur in the System i server environment. This is accomplished through interfaces with i5/OS clustering, the i5 Hardware Management Console (HMC), and the external storage HMC/Storage



Note: The Load Source Unit (LSU) could reside in external storage, but would not be included in the FlashCopy relationship. The IASP could also contain application objects that are supported for use in independent disk pools.

Management Console (using DS Command Line Interface).

In an environment implementing the FlashCopy function, the toolkit is designed to help make the IASP available to the Backup server with minimal or no impact to the production server. When the backup copy of data is no longer needed it performs the necessary actions to prepare the backup server to accept the next FlashCopy operation.

In an environment implementing the Metro Mirror or Global Mirror function, the toolkit is designed to help make the IASP available to the HA/DR server in the event of a scheduled (planned) or unscheduled (unplanned) switch. Depending on the hardware configuration and state of the servers, data replication can be reversed from the HA/DR server to the production server such that when users are redirected to the original production

server they will have access to the most recent data. The toolkit can help automate these tasks which are referred to as failover and fallback operations within the storage server.

Prerequisites for deploying Copy Services for System i:

1. i5/OS V5R3 or higher
2. i5/OS Option 41 (HA Switchable Resources)
3. Dedicated Fiber Channel IOA(s) for the IASP volumes
4. IBM System Storage (DS8000™, DS6000™, ESS 800™)
5. Advanced Copy Services (FlashCopy, Metro Mirror, Global Mirror)
6. IASP-enabled application

The Copy Services for System i is an offering provided by the IBM STG Lab Services organization and is packaged as part of a consulting services engagement. The offering consists

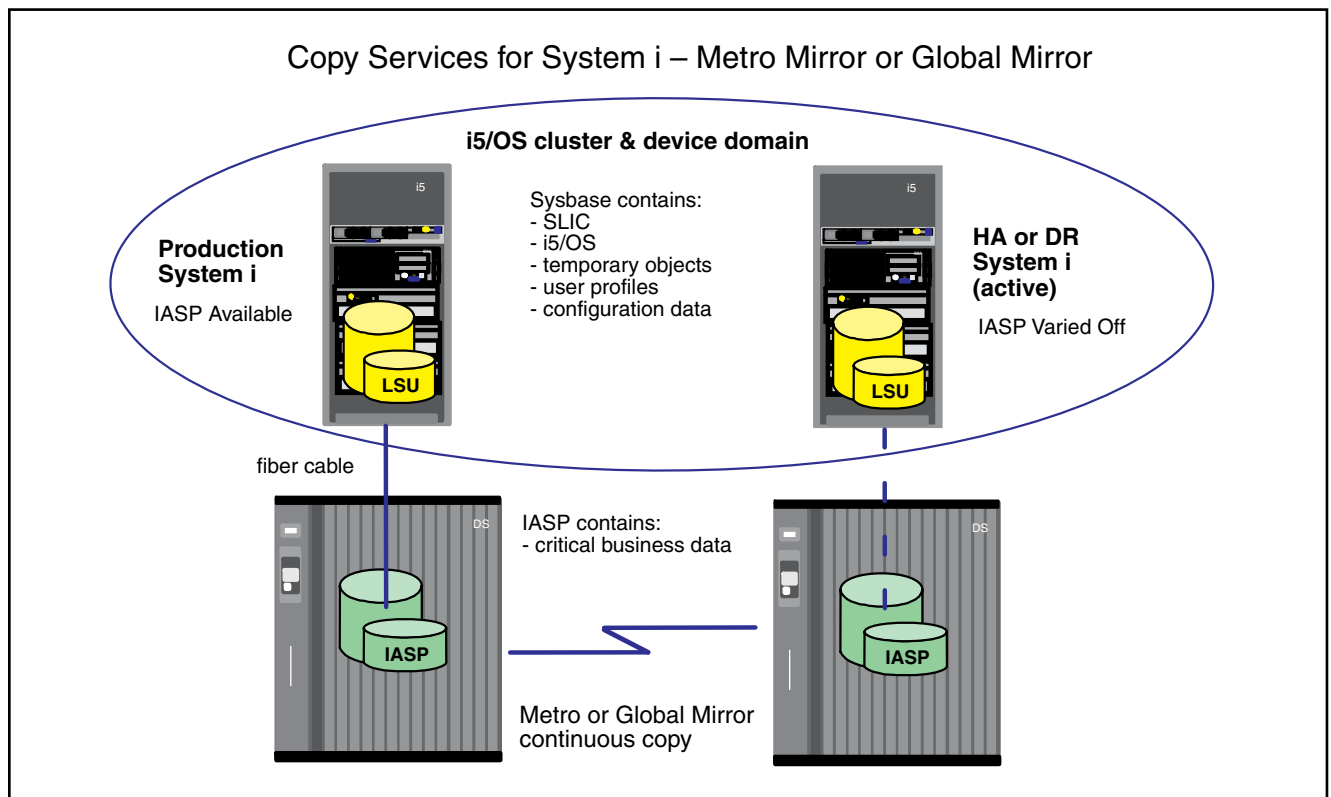
of the System i Copy Services toolkit license and maintenance as well as planning, design, and implementation services.

The value of an IBM Business Continuity solution

The IBM Copy Services for System i toolkit is intended to address several key factors that can help improve I/T operations and form the basis of a sound business resilience plan including frequent saves, high availability, disaster recovery, acceptable recovery time and recovery point objectives, and geographic dispersion between your primary and backup systems. The Copy Services for System i is designed to help simplify operations, reduce human error, and protect your mission-critical applications and data.

Pricing

To obtain this service, contact one of our opportunity managers to confirm



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requirements, create a statement of work, and determine pricing.

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For More Information

To find out more about the IBM Copy Services for System i and other related products and services, contact your IBM Business Partner or contact and STG Lab Services Opportunity Manager in your location.

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