



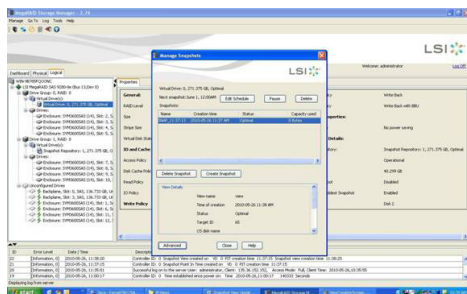
LSI™ MegaRAID® Recovery

Technical Brief

Recovery software provides valuable time and resource saving advantages for a variety of server data protection and restoration cases.

LSI™ MegaRAID® Recovery Software

On every server, both stand-alone and virtualized, there are many operating system, application and user files stored on local drives and arrays. During a normal day only a subset of all these stored files are read but even a smaller subset of these stored files are altered or added. These small subsets of the total information stored on the server are referred to as the active or working data set. The files in the working data set are often distributed throughout the drives total capacity. Often specialized applications can enhance the server's storage performance by placing the more frequently accessed files together in one place.



LSI MegaRAID Recovery Software

LSI MegaRAID Recovery software provides enhanced management and protection of all the information stored on the server. This new feature allows users to capture the state of the information stored on a server's drives at any selected time. This operation is commonly referred to as taking a point in time snapshot of the data stored on the server. If a file or directory is lost or corrupted, Recovery software allows the user to restore specific files and directories or, when necessary, completely revert back to an early (Point-in-Time) state of the server's stored information preserved by the recovery software. Because the functionality of the Recovery feature is totally separate from the operating system, recovery from blue screen and frozen software hangs is easy and straightforward. Why not just use your tape or Disk-to-Disk backup strategy to restore files? Backups are a critical part of any comprehensive disaster recovery strategy and are necessary to address instances when large amounts of stored server information is corrupted or lost, for example, when a drive fails or a virus irreparably corrupts the boot or file system information. However, it's important to understand that complimentary Recovery software provides valuable time and resource saving advantages over backup software for a majority of server data protection and restoration cases. A complete traditional backup of all the information stored on the server requires significant time and resources. Then, following the complete backup, incremental back-ups are made of only the files altered or added since the last complete or incremental backup. Therefore, restoring full operating system and users data files and directories using ONLY a traditional backup strategy often involves loading a full backup and then applying all applicable incremental backups, which can be time consuming, manually intensive and cost thousands of dollars.

In contrast, Recovery software provides simple and rapid data copy and restoration of specific host files and directories and even the complete restoration of all the stored server information back to a previously saved state. Recovery software is best in instances of specific and localized loss or corruption. Examples include unsuccessful software installations or upgrades and unintentional deletion of large files or when the operating system blue screens or freezes. Recovery software also benefits from the integrated RAID data protection that comes standard with all MegaRAID products. And Recovery is a hardware VSS provider so Windows backup applications can facilitate a backup using a snapshot view created by MegaRAID Recovery.

(1) [Use of a snapshot View completely eliminated?] Let's step through two important examples of how Recovery software can address a user's real-world needs.

Recovery software stores only the information changed since the last point in time snapshot, it's significantly faster than restoring all of the server's information from backup images.

Supported RAID Controllers	MegaRAID SAS 9260-4i MegaRAID SAS 9260-8i MegaRAID SAS 9280-4i4e
Supported Operating Systems	Windows 2003 Windows 2008
Physical Key Ordering PN	LSI00246
PITs-per-volume / Controller	8 / 504
Rollback	✓
Read / Write Volume Support	✓
Microsoft VSS Provider Support	✓
Snapshot of Boot Volume	✓

Let's assume a small business owner performs routine weekly backups as a part of his or her disaster recovery plan. Typically, when the business owner decides to install a new application or an upgrade, they first complete a full backup of all the data stored on the appropriate server or servers. In contrast, a business owner using Recovery software quickly initiates a point in time snapshot of all the information currently stored on the server using the simple user interface function in the MegaRAID Storage Manager™ console. The user can proceed with the installation of the new or upgraded application.

Now, if the business owner encounters any kind of a problem during or following the installation or, simply decides the new application or upgrade isn't needed, they can quickly restore the server's previous state by logging out, rebooting the operating system and entering MegaRAID WebBIOS to initiate a roll back to the previous state that is safely preserved by Recovery software. Because Recovery software stores only the information changed since the last point in time snapshot, it's significantly faster than restoring all of the server's information from backup images.

Another important use of LSI MegaRAID Recovery is when a user opens a readable and writeable view of a snapshot. The snapshot view does not affect the contents of the active source volume for which the snapshot is taken and does not affect the contents of the snapshot itself. This is because any changes made to the snapshot view data are stored in a completely separate location than where the current volume and snapshot data is preserved. A common use scenario is when a user wants to query the current database offline or wants to transfer a copy of a database to another location in order to perform tests on the database copy. The user first captures a point-in-time snapshot of the active database, then opens a view to the snapshot, then interrogates the database using the view, or copies the snapshot of the database to the desired destination and then closes the view to the snapshot.

In summary, LSI MegaRAID Recovery software provides an important addition to a company's backup and disaster recovery best practices policies. It allows for accelerated roll back in case of corrupt OS or data files and allows quick testing and migration of databases, lowering the cost of IT intervention and maximizing system uptime for business critical needs.

For more information and sales office locations, please visit the LSI web sites at:
lsi.com lsi.com/channel

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 August 2010

