

High-Speed Bare Metal Recovery: International Medical Technology Company Diagnostica Stago Recovers Critical Server in Minutes with Backup Express® Advanced Recovery

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Background

Clusters are intended to preserve business continuity in the event a critical server goes down. But what if the cluster itself is hit and failover fails?

BMR Nightmare

Then it's bare metal recovery time. If you are a system administrator, you know BMR can be a nightmare. The clock is ticking. Users – and managers – are clamoring to resume business, and you are scrambling in the data center to replace hardware and then restore the server – all of it: operating system, applications, data; and don't forget system settings, application settings, and patches.

It's a complicated task, time-consuming and prone to error. Some administrators consider themselves fortunate if they can get back online – and stop the clamor – within 24 hours. But in today's fast-moving, competitive business environment, where every lost minute is costly, 24 hours business interruption just won't cut it.

Server Recovery in Minutes

The U.S. subsidiary of Diagnostica Stago, a major international manufacturer of blood testing reagents and analytical instruments, experienced just such a cluster failure.

Luckily, only a week earlier the company had deployed

the solution, the latest release of Syncsort's Backup Express, with Advanced Recovery. They were able to recover **in minutes**. As network administrator Larry Paprota tells it: "We had an electrical glitch in our server room, and two clustered file servers failed to come back up. One turned out to have a hardware issue, so we cannibalized an identical server and swapped hard drives." Then Paprota turned to the recently deployed Backup Express Advanced Recovery.

"We restored the machine using the Backup Express server recovery feature," Paprota recalls, "and 30 minutes later we had a server." The recovery steps themselves – inserting

the Backup Express server recovery CD, booting the machine, and connecting via the Backup Express GUI to the stored virtual volume image – took only a few minutes; the rest was network transmission time.

Challenge

The company had been a Backup Express customer for several years, using conventional file-level data protection; but increasing amounts of data and the need for quick recovery of critical servers prompted the company to look for an advanced disk-based solution.

Recovery Requirements

Conventional, multi-step BMR was no longer acceptable. "Realistically, you want to bring the machine back as quickly as possible," Paprota stressed.

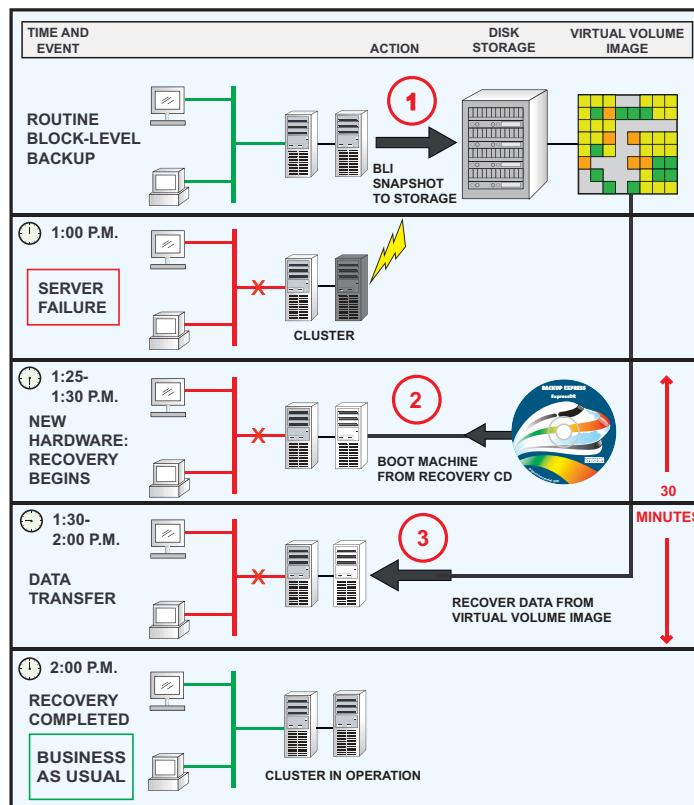
The company had three primary requirements for an upgraded data protection system:

1. Fast server recovery.
2. Uninterrupted user access (business continuity).
3. Ability to utilize existing disk storage and expand storage inexpensively.

They considered a leading disk-based backup system, but the cost of the proprietary storage and the prospect of being tied to it were daunting.

Solution

When Backup Express with Advanced Recovery became available, the company tested it



and quickly concluded that the new advanced disk-based version of Backup Express precisely met their requirements:

1. Provides reliable server recovery within 30 minutes. The recovery is from a full virtual image; it thus provides complete recovery, including O/S, data, apps, settings, and previously applied updates and fixes.
2. Uses LUN mapping to stored virtual recovery points, enabling users to continue work during the brief server recovery period so they hardly notice an interruption.
3. Utilizes the company's existing Dell SAN storage, which can be upgraded relatively inexpensively by adding racks.

No DR Backups Needed

The Advanced Recovery solution eliminates the need for special disaster recovery backups. Advanced Recovery accomplishes server recovery from routine block-level incremental backups, automatically creating a virtual base backup image for rapid recovery to a point in time. Server recovery, near-continuous data availability, ordinary restores, and archiving to tape all use these virtual volume images based on routine non-intrusive backups.

No Disruption to Users

Paprotta is particularly impressed by the combination of LUN mapping to stored virtual volume images (called **Instant Availability**) and high-speed server recovery.

The two go hand in hand to ensure business continuity. "With Instant Availability," says Paprotta, "if a customer relations server goes down, we can continue business while the server is rebuilt. Because the applications run off the stored data, we can have files available to users and the recovery would almost appear seamless."

Reduced Storage Cost

As for storage, "there was a significant cost savings in going with the same solution we already had and upgrading it," Paprotta said. "We expanded the Dell SAN specifically for this application. We added another rack and upgraded the drives." The company plans to expand storage further to 5 terabytes, enabling them to store virtual volume images for almost all servers in the enterprise, so that nearly everyone in the company can be connected to application data via Instant Availability in the event of a down server.

"That's a very good thing," added Paprotta, emphasizing the importance of business continuity. "That's why we want to upgrade storage, so the Instant Availability feature is available throughout the company."

SQL and Exchange Protection

The company has used Backup Express Advanced Recovery to protect three critical 2-node clusters: one a file server, another for Exchange, and a third for SQL Server. Once the Dell storage is expanded, the Advanced Recovery deployment will be expanded to back up a Citrix farm and 30-40 additional Windows servers, almost half of them running SQL Server.

Auto-Archiving to Tape

Also as part of the full deployment, the company plans to utilize the Backup Express Advanced Recovery Double Protection feature, which will automatically run scheduled backups of virtual volume images from the Dell SAN to an ADIC Scalar 24 tape library, with tapes being vaulted offsite.

Backups in Minutes or Seconds

The Advanced Recovery base backup of 450 gigabytes required several hours overnight, but a base backup is typically required only once to "seed" the storage. Subsequent backups are block-level incrementals, in which only changed blocks are transferred to storage.

Paprotta said the block-level incremental backups of the cluster machines "were wonderful," typically requiring only several minutes, and smaller independent machines required "only seconds."

Conclusion

Backup Express Advanced Recovery provides server recovery in minutes with virtually no business disruption, while reducing backup time, CPU load, network transmission, and storage requirements by up to 90% compared to traditional methods.

Advanced Recovery utilizes almost any disk storage subsystem, reducing storage cost and providing great flexibility in assigning and deploying data protection storage.

No More Nightmare

By taking advantage of Backup Express Advanced Recovery, Syncsort's disk-based data protection system, the U.S. subsidiary of Diagnostica Stago, which had been employing traditional file-level backups, will be able to meet increasingly stringent data protection demands. The company quickly discovered that when failover failed, Backup Express could recover a critical server in minutes, transforming the BMR nightmare to a sweet dream.



Backup Express is enterprise data protection software that provides fast server backup, reliable disaster recovery and business continuity. It reduces storage, bandwidth and CPU requirements for unmatched cost savings, while enabling server and site recovery in only minutes.

For a free consultation or demo, visit www.syncsort.com/coibex.