

# Full Spectrum Data Protection

## Avoiding the Ready, Fire, Aim Approach to Data Protection

Too often, data protection solutions are chosen and implemented without careful consideration of all objectives and requirements. Full Spectrum Data Protection is a new approach, designed to help organizations analyze their requirements and design flexible data protection solutions that will meet their needs today and in the future.

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## Data protection is multidimensional

Data protection is not a one-size-fits-all requirement. Each organization utilizes its data differently and faces different risks.

Developing a well-constructed solution for data replication and recovery requires a thoughtful analysis of:

- **Primary objectives:** Data protection, data availability, risk vs. cost
- **Potential threats:** Logical corruption, physical damage, natural disasters
- **Potential changes:** Business growth, increasing regulation, management changes

## Ready, Fire, Aim.

It's an understandable approach for those whose days are filled with managing the crisis at hand and moving from one critical issue to the next, without the luxury of carefully framing a project's over-arching goals. This is particularly true for data protection and disaster recovery projects, where it is common to decide on and implement solutions before objectives are considered or the requirements are fully understood.

There are a number of reasons for this.

### Data protection is over-assumed and under-funded

The real benefactors of data protection are the people who rely on data and application availability and protection 24 hours a day, 7 days a week, 365 days a year. Sales managers assume their orders can be placed, operations managers assume that systems will be available for processing orders, financial managers assume they can process collections, and corporate counsel assumes data will have the integrity and protection to meet regulatory and legal requirements. For them, information systems have become a utility they can count on. They don't understand the inner-workings of how availability and protection are achieved, nor do they want to.

In the absence of a catastrophic event that puts backup systems to the test, there is no recognition or appreciation of potential risks in terms of outages or data loss. These worries are left to the CIO and IT managers, who find that funding for data protection initiatives is hard to come by because of a general over-assumption of service, lack of technical knowledge, and lack of interest.

This thoughtful analysis is difficult to come by. Data protection projects are often reactionary, in response to a specific threat that overshadows all the other dimensions that should be considered. As a result, solution decisions are made without considering the whole problem, and often solve for only one aspect (e.g., data protection), in a manner that forsakes others (e.g., data availability).

### Vendors often sell one-size-fits-all "solutions"

If all you have is a hammer, then every problem looks like a nail. Some server, software, tape backup, and storage vendors focus on a single solution for data protection, often as an add-on to another project, such as server, software, or storage upgrades. This perpetuates the "ready, fire, aim" approach by focusing on the solution at hand without analyzing objectives, threats, and potential changes.

The problem with this approach is that it tends to give a false sense of security until a catastrophic event happens. A recent Info-Tech Advisor In-Depth Report titled *Options in Enterprise Backup* states: "Backup technologies and practices are often overlooked or poorly understood. The result is that enterprises are often taking on more risk than they realize."

Proper planning requires a sound methodology for addressing the primary objectives, potential threats, and potential changes that are specific to the organization. This can then lead to careful consideration of the available products and services from which to architect a solution.

# Full Spectrum Data Protection

Full Spectrum Data Protection from Xiotech Corporation is a comprehensive program that is designed to help each organization sufficiently plan for and implement data protection in a manner that is customized to meet its specific needs.

Full Spectrum Data Protection has two major components:

- **A methodology** for fully understanding the organization’s data availability and data protection requirements in a manner that takes such threats as logical corruption, physical component failure, and natural or man-made disasters into account.
- **A complete solution set** comprised of products and services that assist in the planning and address the full spectrum of potential protection and availability requirements that the organization faces.



Together the methodology and solution set help the organization make thoughtful decisions for data protection and implement solutions that specifically meet its needs.

## Methodology

Full Spectrum Data Protection begins with the Availability / Protection (AP) Matrix (Fig. 1), which provides a framework for mapping data protection needs in a manner that allows comparison between current and future needs and proposed solutions.

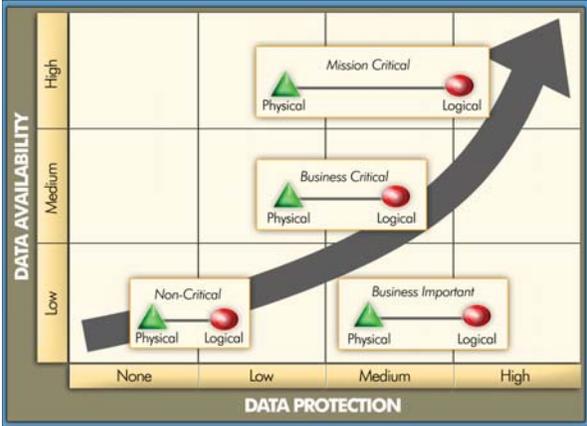


Fig. 1. The AP Matrix maps requirements for specific applications in terms of data availability and data protection. Users can separately map physical (triangle) and logical (circle) protection requirements for more specificity.

Too often data availability and protection—as well as physical vs. logical protection—get lumped together, which misrepresents the real need. The AP Matrix provides specificity in a form that is easy to comprehend and graphically prioritizes the need for availability and protection from logical (data corruption) and physical (component failure, disasters) threats.

Solutions can then be added to the AP Matrix to demonstrate the appropriateness of each solution (e.g., tape, replication, CDP) for a given need (Fig. 2).

With this step completed, any disconnects between solutions and needs become apparent; the business

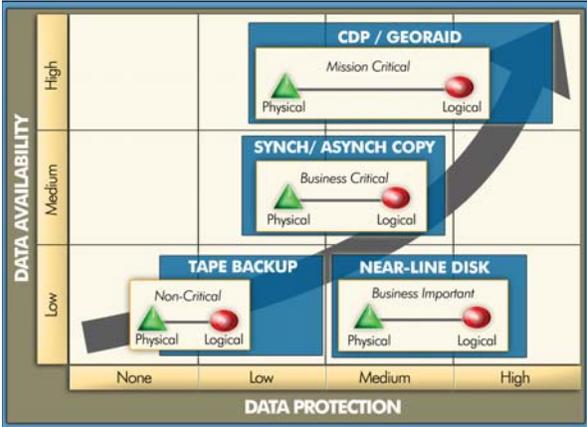


Fig. 2. Mapping proposed solutions with needs identifies disconnects and provides for an intelligent comparison of options.

risks of these disconnects can be discussed, along with a cost-benefit analysis of proposed solutions.

Additionally, the AP Matrix presents needs and solutions in a manner that facilitates thoughtful discussions with business managers regarding solution shortfalls and business risks. This improved communication helps set appropriate expectations for data protection and makes funding for projects easier to approve.

This results in more appropriate expectations between IT and other business managers, more accurate assessments of business risks, and a more intelligent appropriation of funds for data protection.

## A Complete Solution Set

As part of Full Spectrum Data Protection, Xiotech offers a full line of data replication and recovery solutions to effectively address specific data protection, data availability, and budget requirements of organizations.

### Data Storage

Xiotech's data protection solutions start with the Emprise™ 7000 system or Magnitude 3D® storage family. The architecture of these systems inherently delivers excellent data protection and availability via optimal storage virtualization, on-the-fly configuration, multiple RAID options, and more. Components also can be separated across physical locations, with automatic failover and failback to keep data online. Emprise 7000 adds the unmatched reliability of Intelligent Storage Element (ISE™) technology.

Xiotech's TimeScale® data protection solutions extend far beyond the capabilities of a single storage system, however. Building from this foundation, one or more layers of data protection can

be added as the organization's needs require and budget allows.

### TimeScale Copy

TimeScale Copy software enables you to dynamically copy, mirror, and swap storage volumes within a Magnitude 3D or Emprise 7000 system—without disturbing end users or applications. It also supports space-efficient point-in-time sparse image replication (snapshot) for affordable backup and recovery.

### TimeScale GeoRep

TimeScale GeoRep software enables IT personnel to create point-in-time copies and synchronous mirrors of storage volumes between Magnitude 3D or Emprise storage systems. Data can be easily moved between systems on-the-fly, whether systems are within a data center or across distance—over a Fibre Channel or Internet Protocol communications infrastructure.

### TimeScale GeoRAID

When enabled, TimeScale GeoRAID software writes storage volumes across both physical locations of a distributed Magnitude 3D or Emprise 7000 storage cluster. In the event of a localized disaster, server access to data is automatically routed to the other location without interruption—maintaining access to critical data.

### TimeScale CDP

TimeScale CDP systems provide local and/or long-distance data replication, protection, and recovery that can grow to meet changing needs. These systems provide easy-to-use, real-time CDP for recovery to any point in time, to protect data from geographic site disasters, physical failures, or logical corruption.

### Xiotech Deduplication Storage

The Xiotech Deduplication Storage Solution combines industry-leading deduplication technology from Data Domain with Xiotech's Emprise 5000 storage system. Data Domain has revolutionized disk backup and remote office data protection with patented high-

## Conclusion

The Full Spectrum Data Protection methodology enables clear identification and prioritization of data availability and protection requirements, and a mapping of proposed solutions to those requirements—all in a format that facilitates thoughtful discussion on business risks, cost justification, and the appropriateness of available solutions.

speed,  
inline  
deduplication.  
Backup data can be  
reduced in size by an average  
of 20 times. When combined with XioTech's Emprise  
5000 storage system, disk backup and archiving  
become cost-effective and easy for long-term, onsite  
retention and highly efficient for offsite replication to  
disaster recovery sites.

XioTech offers a complete solution set to address the full spectrum of data protection requirements. Selecting a single vendor, like XioTech, for all the organization's data protection needs, can help reduce costs and complexity, while ensuring integration of all solution components.

## Tape Libraries

For more traditional tape backup and restoration, you can rest assured that XioTech's storage systems integrate seamlessly with all leading tape libraries and backup software.

To learn more, visit [www.xioTech.com](http://www.xioTech.com), or contact XioTech toll-free at 1.866.472.6764.

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