

# 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.

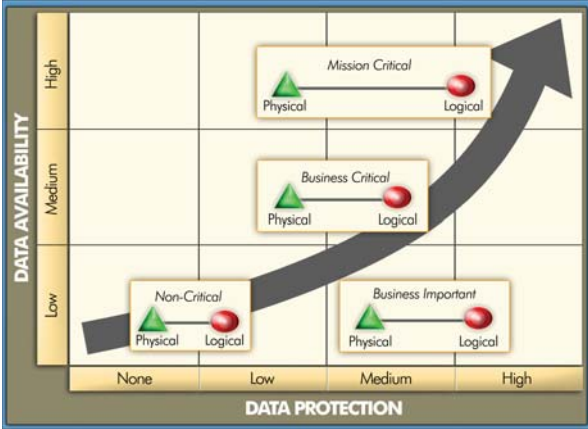


Fig. 1. The AP Matrix maps requirements for specific applications in terms of data availability and data protection. Users can separately map physical (triangle) and logical (circle) protection requirements for more specificity.

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

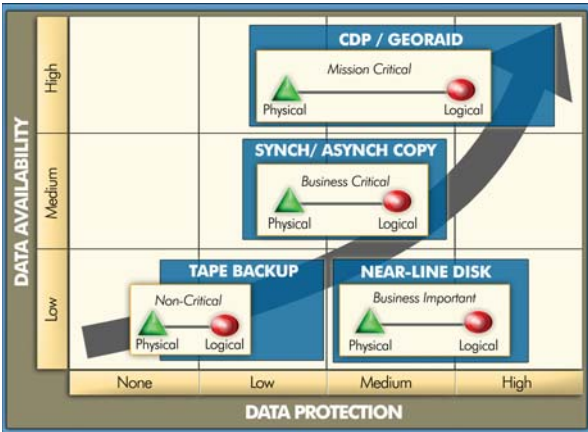


Fig. 2. Mapping proposed solutions with needs identifies disconnects and provides for an intelligent comparison of options.

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.

### Magnitude Storage Family

Xiotech's data protection solutions start with the Magnitude 3D storage family. Its architecture inherently delivers excellent data protection and availability via 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.

Xiotech's data protection solutions extend far beyond the capabilities of a single Magnitude 3D 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.

### DataScale Copy

DataScale Copy provides the capability to create virtual disk (VDisk) point-in-time copies and mirrors for data repurposing, online backup and recovery of critical application data, and more.

### DataScale GeoReplication

DataScale GeoReplication software enables IT personnel to create point-in-time copies and synchronous mirrors of storage volumes between Magnitude 3D family 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.

### DataScale GeoRAID

When enabled, DataScale GeoRAID software writes storage volumes across both physical locations of a distributed Magnitude 3D 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 200 Systems

TimeScale 200 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.

### TimeScale Replication Services

TimeScale Replication Services deliver flexible data protection, without an increase in staffing or capital investment by the organization. Data is replicated from the organization's facility to a secure, hardened site that is managed by Xiotech. Data recovery, if ever needed, is simple and secure—either across a network or on a mobile recovery unit.

## Tape Libraries

For data backup and restoration, the Spectra family of tape libraries leads the industry in cost-effective innovation—providing the greatest storage density and widest range of features. The family of libraries includes solutions that range from entry level applications through large enterprise implementations.

## Design and Implementation Services

Xiotech understands that not every organization has the personnel or time to perform a thorough assessment, design an effective solution, and implement the solution correctly. Xiotech's Design and Implementation Services are available to help organizations—from assistance in the initial planning phase to end-to-end planning, design, and implementation services.

## Planning Guide

One of the tools Xiotech uses is its Full Spectrum Data Protection Planning Guide. The guide helps to:

- **Clarify overall objectives for data protection projects:** Definition of scope based on needs, solutions, and funding.

- **Identify related planning initiatives:** Identification of existing business impact analyses or disaster recovery plans.
- **Define geographic replication requirements:** Identification of local, metro, or long-distance replication needs.
- **Map needs to the AP Matrix:** Plotting data protection and availability requirements for specific servers or applications.
- **Define network infrastructure:** Identification of LAN, SAN, or WAN bandwidth availability, point-to-point or Internet connectivity, current bandwidth utilization, and existing VPN usage.

## 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.

Xiotech offers a complete solution set, as well as expert consulting services, 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.

Contact Xiotech today to learn more.

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