

Open Storage Solutions®



The Building Blocks of Complete Data Protection

Strong data protection and disaster recovery planning has traditionally been the exclusive province of companies that could afford the massive costs of redundant infrastructure. But today, current technology and infrastructures—like virtualization and cloud computing—have made disaster recovery planning available to small, and medium size and large business too.



Open Storage Solutions
We get IT.™

Planning an effective DR strategy, for companies of any size, involves five critical factors. As you approach your own strategy, each of these five factors must be carefully considered and planned out to achieve an optimal result. In this overview, we present highlights of each, with a special emphasis on how they build on each other to form a rock solid, enterprise-level and affordable data protection solution.

Those five factors are:

1. Backup

Data you need frequently and on-demand is backed up to storage devices that are optimized for performance.

2. Archive

Data you need infrequently is archived onto secondary storage devices that are optimized for capacity and low cost.

3. High Availability

Servers and storage devices are configured to deliver redundancy and failover capability.

4. Management

Tools, resources and expertise to keep the entire storage system always up and running.

5. Disaster Recovery

All of these combine to create a trusted, powerful DR plan.

1 Backup

Performance-Optimized Backup of Critical Data

Backup copies data onto near-line, secondary storage. Backup is critical for protecting and preserving data within an organization. There are many decision points when defining a backup strategy, and complex requirements to specify and meet. Here are only a few:

- The current volume of data to be backed up
- A planned growth path for the future
- The need for on-line versus near-line data availability
- The diversity and location of users who must be accommodated
- Compatibility with existing backup systems and strategies.
- Essential control, monitoring and reporting for system management
- Ease of data recovery

The Three Types of Backup

Backup applications fall into three distinct categories:

1. Enterprise Backup

An enterprise backup strategy embodies the data collectively created

and stored by a large company. Enterprise backup employs a broad-based strategy for maintaining, monitoring and controlling considerable amounts of data throughout an organization. Accounting, administration, human resources, sales, marketing, inventory, engineering, research — every data-creating organization has to be included. Here, successful outcomes are driven by successful planning.

2. Departmental Backup

Not all data should be stored as part of the enterprise storage strategy. There are special strategies for effective data management and backup procedures for workgroups and departments that must remain insular. Although smaller in scale, workgroups pose many of the same challenges of an enterprise solution.

3. Mobile/Remote backup

Remote access to backup systems via wireless communications, the internet, or asymmetrical data transfer modes, like satellite, places extra emphasis on efficient and timely backup and retrieval of only necessary data. All the security restrictions of other backup strategies must be maintained. Just as important, the mobile strategy must seamlessly integrate with the system as a whole.

2 Archiving

Capacity-Optimized Storage of Non Critical Data

Archiving migrates infrequently used data, or stale data, from expensive, performance-optimized primary media to inexpensive, capacity-optimized, secondary storage. Archiving is valuable for any environment where the growth of data outpaces storage resources.

Archiving reduces the amount of data on the primary disk, dramatically improves system backup performance, and frees primary disk space for application use. Archived data can be automatically recalled to primary storage when users or applications need it. Advanced techniques, like deduplication and single instance storage, play a large role in lowering costs while optimizing archive performance.

Data archiving forms a critical part of an integrated data management solution and delivers a host of benefits, including:

- Lowers primary storage costs
- Lowers backup costs, licensing, media and media warehousing costs
- Increases availability of critical data
- Provides intelligent transparent migration of unaccessed, stale data to secondary storage
- Reduces the size of backups
- Reduces network traffic
- Delivers continuous data availability

Open Storage Solutions®

3 High Availability

Recovery Objectives

Maintaining high data availability in case of a failure is one of the great challenges of business today. To achieve high-availability demands knowledge of available hardware and software technologies, and the experience and expertise to successfully apply them. Today, a strong data protection strategy may include replication and virtualization.

Replication

In its simplest form, data replication protects against failure by ensuring that all data is protected at two or more locations. Should one location fail, users would access the replicated data from a remote server at a disaster recovery (DR) site, with virtually no risk of data loss. But for many companies, the expense and resource requirements of continuous replication has been prohibitive. Now, with the emergence of cost-effective global connectivity and deduplication, that is no longer an issue.

Virtualized Servers

Virtual server technology forms the backbone of today's high-availability environments. Two or more independent servers managed as a single system, together with comprehensive data protection, provides higher availability, easier manageability, and greater scalability. Open Storage Solutions offers virtual server technology combined with several comprehensive solutions to meet deployment and disaster recovery needs, from the simplest application to the most complex.

4 Management

Keeping everything up and running

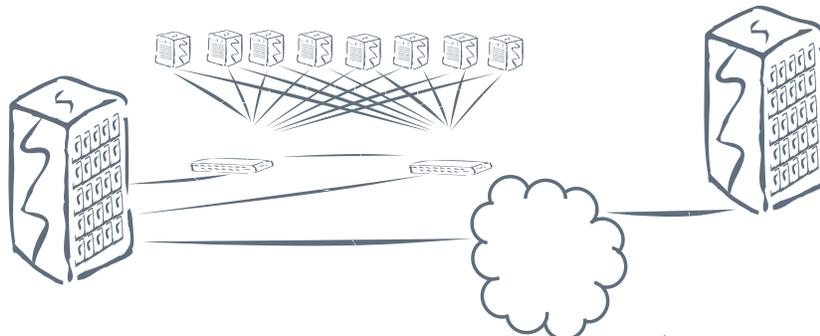
With backup, archiving and availability plans in place, the critical issues surrounding maintaining the functionality and resources of the system must be addressed. Our goal here is to deliver administrators easy-to-use, powerful and versatile tools for setting up, monitoring, evaluating and reporting on these resources.

Sophisticated multi-platform software packages have been developed to manage all aspects of data availability., Familiar graphical user interfaces allow administrators complete control of a wide range of system status, performance factors and reporting with remarkable ease and speed.

Some of the keys factors to address are effective management are:

- Automating the tasks of data storage, backup, archiving and recovery
- Freeing up of users' time for more productive activities
- Clearly assigned responsibility for all aspects of system management
- Building an organized and meaningful reporting structure for system monitoring, evaluation and decision-making

Professional Services provide an additional level of management support. Services such as: storage assessments, backup health checks and data protection auditing are just some of the services Open Storage Solutions offers.



openstore.com



5 Disaster Recovery

Bringing Everything Together to Protect Your Business

Backup, archiving, availability and management all come together to form the foundation of a strong and reliable disaster recovery (DR) plan. Large, medium and small companies share at least one thing — system outages devastate business. Unplanned downtime means lost data, lost productivity, lost revenue. Until recently, however, an effective DR plan was out of reach of most small and medium enterprises. Having two or more identical infrastructures, one local and the others remote for redundancy, was beyond the budget of most companies. That has always made small and medium-sized businesses especially vulnerable to damage from disaster. Today, though, virtualization, deduplication and cloud storage technologies —such as our own RSVP Managed DR service — have removed most of the barriers to DR planning, enabling SMEs to enjoy the security and comfort of disaster preparedness. DR solutions come in a variety of forms, from protecting data only, to providing protection for all systems for business continuity and high availability. These solutions can incorporate local protection, remote datacentres, the cloud, or a hybrid approach.

About Open Storage Solutions

An expert view of the total scope of your data storage, backup and retrieval needs is the best path to a strong, long-term storage solution. Open Storage Solutions' role is first to inform customers of advantages and potential challenges of the many strategies available to achieve their objectives. We take into account factors like data volume and sensitivity, system topology, management requirements, budgetary constraints and other realities. Then we help implement and support a successful solution. Open Storage Solutions is committed to open standards. That ensures maximum integration into your current platform, with built-in scalability for a clear growth path as your needs evolve and grow.

Our Partners

Open Storage Solutions has forged strong, direct relationships with our suppliers and partners. Their technical expertise, added to our own, provide unmatched levels of application knowledge, experience and problem solving. Every product we represent meets our own strict specifications, as well as our customers' needs. The manufacturers we represent must not only create innovative and worthy products, they must also demonstrate their commitment to stand behind their products, their promises and must show a commitment to supporting our customers in the long-term.

EMC²



Backed by the Satisfaction Plus Program



The Satisfaction PLUS Program is designed to simplify your selection of support and service options. Choose the precise levels of services your storage solution demands. As you ascend from PLUS I to PLUS IV, the amount and complexity of service increases. Although we have tried to anticipate your needs at these various PLUS levels, we can also add or subtract features to tailor a program to you.

ISO 9001:2008

At Open Storage Solutions, our ISO 9001:2008 registration is just one of the measurements of our dedication to quality. Our ongoing goal is not just to meet customer expectations, but to exceed them. To achieve this, we built a skilled and dedicated team of technology experts. Then, we armed them with the tools, procedures and resources to deliver total customer satisfaction, from initial contact through on-time delivery, to successful system implementation, and beyond.



*All product names are the property of their respective owners.

U.S.A. (Head Office)
9465 Counselors Row Suite 200
Indianapolis, IN 46240-6418
Tel: 317.805.7888
Fax: 317.805.4888



Canada (Head Office)
2 Castleview Drive
Brampton, ON L6T 5S9
Tel: 905.790.0660
Fax: 905.790.0712