

# Evaluating Availability Choices

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Every organization has different availability needs, depending on business demands, critical applications, information assets, and mix of topologies. The opposite of availability—downtime—comes in two forms: planned and unplanned. Planned downtime includes regular application, database, and system maintenance that keeps your environment running smoothly. Unplanned downtime includes the sudden major events of weather or technology that can not only stop business but also generate headlines.

Most organizations define “availability” somewhere along a continuum between multiple hours of downtime with significant data loss to real-time 24/7 uptime with zero data loss. Do you need the ability to recover operations quickly after a power outage, security breach, software failure, or other event? Do you require technology resiliency – the ability to avoid, or mask, hardware and software failures so that business systems continue despite interruptions in any one component? Or do you need the capacity to keep functioning while performing routine system maintenance?



## **Downtime Costs**

Downtime can impact more than day-to-day interactions. It can impact the integrity of your databases and the applications that use them. For example, a business that relies on midnight tape backup processes risks losing a whole day’s worth of data should an unplanned event occur at 11:55 p.m. Some businesses could survive that kind of data loss. Others may suffer the effects for a long time. These organizations depend on electronic data interchange, archive information to comply with Federal regulations, deploy a global workforce that collaborates around the clock, or rely on the Internet and eCommerce for around-the-clock sales and service.

How do you know which availability solution will solve downtime issues and fit best in your organization? The first step is to calculate the cost of downtime. This creates a benchmark against which any future addition or enhancement to availability can be measured, and it provides the basis for future ROI calculations. There are two types of downtime costs:

1. Tangible costs—lost revenue, lost wages, remedial labor costs, lost inventory, marketing costs, bank fees or penalties, legal costs, etc
2. Intangible costs—lost future buying opportunities, employee productivity and retention, loss in share value, goodwill, damage to brand names, etc.

Calculate the total cost of downtime per hour for your organization, using as much hard financial data as possible. Use averages where available for lost opportunity costs. Intangible costs for such things as damage to your reputation, goodwill or brand could be represented by an “impact factor” a multiplier effect that would be determined by how much your organization depends on each to remain a profitable successful business. For example, eBay saw its market capitalization fall by \$4 billion when it experienced a few hours of system downtime. Obviously, their share price “impact factor” would be a high multiple.

## **Recovery Time-Recovery Point**

Next, determine the recovery time objective (RTO)—the length of downtime the organization can afford before reaching an intolerable cost. Then determine the recovery point objective (RPO) for your business—the amount of data can you afford to lose without incurring high costs to recover as well as intangible costs in lost future opportunities. RTO and RPO objectives differ between some departments or some particularly critical applications within an organization.

An availability solution must ensure that information and applications remain as accessible and available as needed to continue to drive revenue, profitability, and productivity at acceptable levels, regardless of planned or unplanned events. The availability solution you choose should:

- Protect your data, applications, and systems to a level that meets your business requirements, RTO, and RPOs.
- Manage business uptime as automatically as possible to streamline operations and save staff time.
- Assure the integrity and quality of your environment during interruptions and when it returns to full operations.

## **A Continuum of Availability Solutions**

An availability solution should reduce the impact that downtime, whether planned or unplanned, will have on information, applications and systems as well as the inevitable negative repercussions for revenue, profits and productivity. There are three major solution types to investigate:

1. **Tape-based Backup and Recovery:** The oldest form of disaster protection. An organization copies its data from disk to tape on a regular basis, typically once a night. Even in high RTO and RPO businesses, where more advanced availability solutions are also used, tape-based backup and recovery solutions may often support non-critical applications.
2. **Disk-based Disaster Recovery Solution:** An increasingly attractive alternative or supplement to tape as a backup medium. Combined with the reasonably low cost of bandwidth, backup data can be sent anywhere, eliminating any effects from unplanned downtime. Disk-based strategies require more than once-a-night bandwidth.
3. **High Availability:** Provides near zero data loss and near 100 percent business uptime. HA offers comprehensive information protection capabilities, an array of automated management functions, self-assessment and healing, clustering of multiple servers if needed, and the autonomies and redundancies to assure the integrity of a switchover or failover.

### **Availability to Protect, Manage, and Ensure Your Business Thrives**

Regardless of your critical applications, user commitments or IT environment, every business faces availability issues. Some are driven by customer or supplier requirements, others by competitive pressures. Whatever your reasons, the right availability choice can reduce risk to your business while providing ROI and lower cost of ownership overall. It offers protection for your strategic investments in systems, applications, customers, employees, and business processes. It ultimately assures the integrity of your most powerful asset: information.

### **Further Resources:**

Best Practices in Availability White Paper, "Making the Right Choice: Availability for your Business." [www.MIMIX.com/Choices](http://www.MIMIX.com/Choices)

### **About Lakeview Technology Inc.**

Lakeview Technology, a Datatrend Business Partner, is a leader in infrastructure software and services, specializing in High Availability, Disaster Recovery, Clustering and Data Replication. Lakeview's solutions enhance the customer's information enterprise by making business information highly available and accessible to decision makers. By supporting any application in OS/400®, Windows®, UNIX®, and Linux® operating environments, Lakeview offers customers a vendor who can simplify the complexity of the IT infrastructure and deliver high ROI within 12 months. Companies around the world have trusted their information to Lakeview Technology's MIMIX® software for over a decade. Customers range from Fortune 100 to medium and small businesses across all industries. Headquartered near Chicago, Illinois, Lakeview serves customers from offices in the U.S., Europe, and Asia as well as through an extensive partner network. For more information, please visit [www.lakeviewtech.com](http://www.lakeviewtech.com) or call 630-282-8100.

