



Disaster Prevention & Recovery in the Datacenter

ResponsiveWeb's Disaster Recovery solutions encompass its capacity restart operations after a disaster. ResponsiveWeb's standalone recovery programs provide enhanced features, and Disaster Recovery is used both in the context of data loss prevention and data recovery.

Assessing Recoverability

There are two primary metrics to demonstrate recoverability following failure:

Recovery Point Objective (RPO): the point in time that the restarted infrastructure will reflect. Essentially, this is the roll-back that will be experienced as a result of the recovery. Reducing RPO requires increasing synchronicity of data replication. ResponsiveWeb can set up minute to minute health checks every hour, and help clients determine what hardware will be required to accomplish such a task without impacting application performance.

Recovery Time Objective (RTO): the amount of time that will pass before an infrastructure is available. Reducing RTO requires data to be online and available at a failover site. Redundant servers and multiple datacenter locations are two means of ensuring a favorable RTO.

When Lightning Strikes

When critical data loss occurs without a preventive disaster recovery policy in place, data recovery becomes the only option. Although clients often decide to perform their own independent preventive disaster recovery, it is not always the best option. They are always in control of RPO, but RTO is severely compromised. It could take several hours to build a new server and replicate the backed up data,

instead of having the luxury of switching IPs from a server that failed – to a working server on the fly.

In order for an organization to effectively protect its resources from potential disaster, they should invest in implementing ResponsiveWeb's Multiple Server Disaster Recovery Plan. At its most basic level, every server will contain two hard drives for efficient data replication. Every server will also have a mirror server, which will contain nightly backups. The benefit of having one mirror server for each server ensures the lowest RTO, while any level of hardware or software failure is being addressed – it is very efficient to swap disks between servers that work, and servers that don't. More complex Disaster Recovery Plans involve setting up backups in several datacenters around the globe.

Contact Rajan Patel
[rajanpatel@responsiveweb.com] at
(888)RW2-HOST x23. Discuss your disaster prevention and recovery measures *before* experiencing Murphy's Law.

Disasters & Information Technology

As information technology systems, networks, and organizations become complex, disaster recovery becomes more essential to the continuity of ResponsiveWeb's clients worldwide. The more complex a hosting solution grows, the greater its risk of financial loss incurs in the event of a disaster. ResponsiveWeb provides insurance coverage for up to \$1 million per incident through Valley National Bank for qualified clients.

On average, companies spend up to 25% of its information technology budget on disaster recovery. It is worthwhile to minimize the downtime and reduce greater potential losses, than the bearing the cost of a failure.

Disaster Recovery Plans

Proactive, well planned, and well tested disaster recovery plans are essential for business continuity after a disaster.

ResponsiveWeb can help organizations assess all the critical operations and functions of the business when clients entrusts their Internet connectivity through one of its datacenters. ResponsiveWeb's documented and tested procedures in ResponsiveWeb's *Multiple Server Disaster Recovery Plan* will ensure the ongoing availability of critical resources and continuity of operations. Even though the probability of a disaster occurring in an organization is highly minimized by our second to none preventive measures, a disaster plan provides a certain level of comfort assuring that if a major catastrophe occurs, financial liability will be limited.

One of our simplest solutions to preventive disaster recovery is also our most effective: new hardware for all dedicated hosting customers, guaranteed. You will receive a serial number for a brand new Dell PowerEdge server guaranteed not to be older than 1 month from the date of your hosting order, should you request it. Any additional hard drives ordered will also be factory sealed with a minimum 5 year warranty against defects from the manufacturer. This guarantee is unsurpassed by any hosting competitors to date.

Featured in HostingTech Magazine

ResponsiveWeb's Disaster Recovery accolades have been earned by addressing disaster recovery on all levels:

Facilities:

ResponsiveWeb has more than one 'site' available for the company. In case of a physical disaster, the company's hosting is already relocated and available at another site. Business processes can be quickly resumed.

Types of Backups Available at Facilities:

Hot: Almost a duplicate of the original facility, fully equipped and ready for use immediately after the

disaster. This is the most expensive, and bulletproof solution.

Warm: Contain most of the features of the mother facility, but without the most relevant technology available. RTO is slightly affected by this setup, but is much more cost effective.

Cold: A mock site for the company to momentarily stabilize itself after a disaster. It is without computer equipment installed. This is the cheapest setup available, and has the greatest RTO risks.

Knowledgeable Techs:

ResponsiveWeb's Administrators are trained under simulated post disaster circumstances, so they know exactly what to do in the event of a disaster. Every Administrator has to successfully complete simulated training prior to obtaining access to live servers.

Business Information:

ResponsiveWeb provides routine backups at customer controlled intervals. Between RAID arrays and duplicated mirror servers the possibility of losing data is extremely minimized. This ensures the most up-to-date information is available as soon as the disaster passes.

Computer Equipment:

ResponsiveWeb has a myriad of different software and operating platforms. Our infrastructure is based on Dell servers, APC power management, and HP networking equipment. ResponsiveWeb runs Fedora distributions of Red Hat, FreeBSD, and Windows Servers to maintain its operations. Organizational costs for this level of complexity is relatively higher, however the benefits of being prepared for disaster greatly outweigh the costs.

Telecommunication infrastructure:

Arbinet provides ResponsiveWeb's redundant network connectivity; additional fiber can be run from a carrier of the clients' choosing.

ResponsiveWeb's Steps in Developing Customized Disaster Recovery Plans

1. Perform a risk assessment

The client must establish a guideline of what constitutes a harmful loss of data. This is accomplished considering the impact of losing data. For example, in the event of a system mal-function, a company that is client based will suffer substantial loss as client information is an essential part of its daily business activities.

A risk analysis can be completed by the planning committee by assessing possible disasters, such as natural, technical and human disasters. Each functional area of the organization outsourced to ResponsiveWeb's datacenter should be analyzed to determine the potential consequence and impact associated with several disaster scenarios. The risk assessment process will evaluate the safety of critical documents and vital records.

2. Establish priorities

Next the client should consider the loss of access to the database itself. What will be consequences of your end users not being able to access information for a period time after a disaster? Answering such questions will assist us in determining priorities in the operations and what the disaster recovery plan should focus on. Areas of consideration can include and are not limited to:

- Key operation functions
- Information processing

- Service
- Documentation and record keeping
- Policies and procedures

3. Proposed Recovery Strategies

After the client has decided what can be considered a harmful loss and the consequences of the inability of accessing certain information, ResponsiveWeb can then begin to develop a backup strategy.

Alternatives recovery strategies may include a combination of the following:

- Hot, warm, and/or cold sites
- Reciprocal agreements
- Multiple servers

www.responsiveweb.com

operator@responsiveweb.net

ResponsiveWeb LLC Offices in the Americas

United States – Edison, NJ

Corporate Headquarters
Phone + 1 888 RW2 HOST x23

United States – Franklin Park, NJ

Phone + 1 888 RW2 HOST x33



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