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Opinion

# Surviving a Systems Crash

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The trucking industry's reliance on technology has become a double-edged sword. High-tech advancements have made efficient shipping possible, but you have to ask yourself: What if my system crashes completely?

System downtime can be devastating regardless of company size — being out of business is being out of business no matter whether you are a small, medium or large company. Lost revenues can have staggering effects. Employees either must focus all their time correcting the outage — neglecting their regular jobs — or they become unemployed. What's more, there are fines, penalties and legal costs — for failure to deliver on time, for example.

A disaster recovery plan (or a business continuance plan) is crucial to any trucking company's survival in the face of disaster, whether it be common human error, a "cyber threat" like viruses or hackers, a weather-related disaster like Hurricane Katrina, a widespread power outage, such as the one that hit the Northeast in 2003, or, least common but most dangerous, a terrorist attack like 9/11.

With the increased reliance on technology, each carrier needs to take responsibility for implementing a disaster recovery plan — the only way to assure that your company's system or network will return to full operation after catastrophe strikes.

What are your options?

Your system must incorporate a way to replicate data so that, should a disaster occur, you can restart business as quickly as possible. When a carrier chooses an information technology recovery method, it classifies its recovery site as cold, warm or hot. As with many things in life, the more convenient or "warmer" a system is, the costlier the site is to implement and maintain. A cooler system is less expensive, but probably slower and less reliable.

When choosing a recovery system, consider the cost of maintaining it compared to the cost of potential downtime. A "cold" system is the cheapest, lowest-frill system. IT equipment and data are idle at another location and only used in a disaster. This type of recovery has the most downtime — possibly days — and requires operating system implementation and data reloading at a new location.

A "warm" system is based on IT equipment and applications being always "on," but which require frequent updates with current information, resulting in some downtime, but usually merely hours.

A "hot" system results in only a few

minutes of downtime and is the result of clustering (more on that below). Hot sites have up-to-date replicas of a trucking company's IT infrastructure and applications. The data are continuously saved on both the original system and the backup. The expense of a hot system is worth the cost for many carriers.

How do you decide?

There are four basic factors to consider when choosing:

**1.** Cost — Cost may be the most important factor. How much do you want to spend? Trucking companies should know the cost of downtime for them — tangible costs (lost revenue, fines) and intangible costs (lost opportunities, damaged reputation). To figure out how much you should spend on a disaster recovery plan, compare that potential cost of downtime with the cost of establishing and maintaining a disaster recovery system.

**2.** Storage — How do you want to store information and what is the preferred storage method? The choices are:

■ Data Protection: This method, also known as online backup, backs up data on a magnetic tape or a disk. This "no-frills" approach tends to be time-consuming and leaves room for human error.

■ Data Replication: There are several methods. Point-in-time copy takes a digital picture of data at one point in time. A log database enters files to a database at a physically different location. Another alternative is replicating data onto disks periodically and storing the replicas at another location. All methods are efficient, but each requires occasional maintenance, which costs companies time.

■ Clustering: This method, arguably the most efficient type of backup, needs the least frequent maintenance. Two separate systems share common storage. If one system fails, the other takes over.

**3.** Scope — What is the scope of the information you need to recover? Do you need everything from the past five years — or just the past five months? Do you need all the files, or only active account files? This is called the "recovery point objective" — a trucking company's requirement of how much information it must retrieve after a disaster and how far back that information must go.

**4.** Time — What is the acceptable "recovery window" — how quickly must systems and services be restored?

Finally, what about maintenance? After a trucking company reviews its budget, chooses a data-recovery method and implements a disaster-recovery plan, it must maintain the system, using consistent tape backup for a cold system, periodic replication for a warm system or saving data in real time for a hot system. Annual testing is a must.

It should now be clear that you need a disaster recovery plan that works for your company. Your response to this need may determine the company's future. Without a plan, delayed deliveries and lost clients can lead to a different sort of disaster — going out of business. To avoid these situations, plan and execute properly. The right disaster-recovery plan, promptly executed, could make the difference between staying in business or shutting down.

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