



It's 10:00 PM, Do You Know Where Your Data Backups Are?

Back in the early days of television, a standard announcement just before the late news was a stern voice asking, "It's 10:00 PM, do you know where your children are?" Not having seen that in a couple of decades, we can only guess that parents today must do a better job of keeping up with their children – or perhaps have given up completely.

Short of roaming children, nothing will cause a sleepless night more than a lack of viable copies of data and system information when needed for prompt restoration of computing services. Virtually all the transactional data (e.g., sales orders, customer information, project cost data) for the organization and much of the intellectual property as well (in the form of text documents, spreadsheets, and design diagrams) is now maintained in an electronic format. Because of this, it is imperative that a comprehensive "bullet proof" data backup process be in place.

With appropriate data backups, any disaster from an individual component failure (e.g., server disk drive) up through complete destruction of the data center can eventually be remedied. Without these backups, the long-term impact to your business can be catastrophic.

We've developed the following 10 key questions in order to conduct a quick assessment of your organization's backups and your readiness to deal with the unexpected:

1. Are backup copies being maintained on a *completely separate* technology component?

This may sound obvious, but we've seen cases where backups were being maintained on a separate area of the *same* file server.

We understand that advances in redundant arrays of disks and Storage Area Networks (SANs) have led to an unprecedented level of reliability in these products. However, humans can make configuration mistakes, and even the best-designed systems with multiple redundancy can still have unexpected failures. If you're not convinced, search the Internet for "United Flight 232."

2. Are copies of the backups periodically being moved out of your primary data center?

The best executed backup strategy is going to be useless if all the copies are destroyed along with the rest of your physical infrastructure.

If you're using tapes, then copies should be moved offsite at least weekly. Those using cloud-based backup solutions can easily accomplish this on a more frequent basis.



3. Are your backups restored and verified on a scheduled basis?

Despite the planning involved in the backup process, it's still possible to miss vital system components. We recommend that backup components be restored and verified at least on a monthly basis.

A rotating schedule can be developed where one component can be tested each month. Over the course of a year, all of the critical components, including e-mail stores and databases, can be tested in this manner.

4. Is one person in your organization in charge of the backup process?

Given the importance of managing the backup process, it is recommended that one person be assigned accountability for successful execution of *all* the backup components. This is particularly the case if different systems are backed up using different procedures.

5. If you're (still) using tape backups, are you observing the manufacturer's recommendation on media replacement?

Tape has a finite lifespan. The manufacturer of your particular tape technology will publish information on how long it can be considered viable. If you're using tape for archival purposes, you'll need to re-copy the data to new tapes occasionally.

It's also important to make sure the tape drive itself receives appropriate cleaning and maintenance and is covered under a manufacturer's support program. As tape equipment ages, it may be difficult to find replacement equipment. Having good tapes with a malfunctioning (and obsolete) tape drive can present serious complications if a rapid data restore is needed.

6. Have you verified that the backups are encompassing all needs for databases and other applications?

Databases, e-mail systems, and other complex applications can have their own backup requirements. This will often require using specialized software or having a Database Administrator (DBA) develop the appropriate techniques to export the data in an acceptable format.



7. Do your backups provide for both “individual file” and “system level” recovery?

The more common use of backups is to restore individual files, individual e-mail messages, or a selected database that has been inadvertently changed or deleted.

Backups may also be used to recover complete servers in the case of more widespread system problems.

Depending on the backup techniques used, either (or both) of these functions can be facilitated. However, it’s important to understand which approach has been architected for your systems and understand what can (and can’t) be restored in an expeditious manner.

8. Are you keeping multiple copies of your backups?

When tape was the predominantly used backup media, it was commonplace to keep multiple copies of the backups. The tape set from the end of each week might be kept a month, the tape set from the end of each month might be kept a year, and the tape set from the end of the year might be kept five years.

When using tape this was (and is) a requisite practice because of the likelihood of an individual tape failing. It is still a good practice because it’s possible a file deletion might not be noticed for an extended period of time.

With the overall growth in disk storage used by organizations, and the ongoing movement away from tape, we see this practice less than in the past. However, the cost for additional storage may well be justified for the occasional times historical backups are needed.



9. Have you reviewed recent advancements in backup technology?

While tape was a mainstay for data backups since the beginning of computer usage by businesses, it had a number of disadvantages. Tapes aren't the most reliable media, they hold limited amounts of data, and there is a considerable amount of manual labor involved in executing the backup process effectively.

Several leading-edge technology products have been made available to improve the backup process over the last few years. Backup "appliances" are often used that will copy data on a periodic basis during the day to a separate device on your network. The data on these "appliances" is then copied over a network connection to an offsite location. Depending on your exact needs, a third copy might then be made to yet another offsite location.

If you're still using tape, these alternative products may decrease risk and as well as overall long-term costs.

10. Do you have a written policy with specific accountabilities for each component of the backup process?

Having a written agreement in the form of a policy can help set expectations between business and technology leaders regarding your organization's backup process. This should include defining accountabilities, identifying whom should be notified in case backups aren't completed successfully, and setting requirements for backup processes for new systems as they are installed.

Send us an E-Mail at info@OnCourseGroup.net, and we'll be happy to supply a copy of a sample backup policy.

Conclusion

The importance of each item listed above is dependent on the exact requirements of your business. However, we feel some of them (e.g., maintaining offsite backups) to be an absolute requirement for every business.

Hopefully, you've answered these questions in the affirmative and can sleep well tonight. If not, we would suggest there's no higher priority than improving your backup process and the ability to recover your key business information in the event of an unexpected system failure.



Technology Topics is a series of communications by Mike Davidson for clients and friends of OnCourse Technology Group, LLC. To be placed on our mailing list, please visit our website at www.OnCourseGroup.net or e-mail us at info@oncoursegroup.net.

About OnCourse Technology Group - Headquartered in Birmingham, Alabama, we provide consulting services for businesses seeking to improve operations and profitability through the application of Information Technology. Our goal is to become the trusted advisor to our clients in all matters relating to the usage of technology products. Our services include strategic planning, software selection, and implementation project management for a wide range of businesses.

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