



We are very proud to be celebrating our 15 year anniversary, which would not have been possible without our loyal customers. Happy Birthday ASK and thank you to our clients! In this edition of ASK NEWS, we review the importance of implementing and maintaining an efficient backup strategy, and provide several different methods for doing so. We touch on password security in this edition as well. We have included a valuable password checker link to determine how your password will fair against an attack. Good reading.



Stephen Pirolli, ASK Technologies, Inc.

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Cisco Survey Designates 10 Riskiest Data Loss Behaviors as featured in CRN

Despite data breaches that seem to grace front page news on an almost daily basis, employees continue to alter security settings on computers, leave passwords in plain sight and share sensitive company information with non-employees.

A Cisco-commissioned study identifies some of the biggest data loss mistakes based on survey results from more than 2,000 employees and IT professionals in 10 countries. Altogether, Cisco surveyed 1,000 employees and 1,000 IT professionals.

Of the numerous behavioral findings, the top 10 most noteworthy are:

- 1. Altering Security Settings on Computers: One in five employees altered security settings on work devices in order to bypass IT policies so they could view unauthorized Web sites.
2. Use of Unauthorized Applications: Seven out of 10 IT professionals said that employees use of unauthorized applications and Web sites such as social networking sites and ecommerce sites, resulted in as many as

half of their companies' data loss incidents.

- 3. Unauthorized network/Facility Access: Two out of five IT professionals said that they had to deal with employee access to unauthorized parts of the network or facility.
4. Sharing Sensitive Corporate Information: One in four employees admitted verbally that they had shared sensitive information to non-employees.

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Tape Backup Strategy

from our Tech Staff

Tape backup systems have been in use for years on computer systems, from mainframes to minis to personal. With so many systems being backed up there have also been many different backup technologies which vary in both archi-

itecture and methodology. One of the areas that has differentiated backup systems is how tapes are rotated and what files get backed up to which tape. Each rotation method has different advantages that can apply to different systems. Some of the

differences between methods are the time it takes to backup and restore, the number of copies and the number of different revisions of a file that get stored on tape.

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Cisco Survey Designates 10 Riskiest Data Loss Behaviors *continued from pg. 1*

5. Sharing Corporate Devices: Almost half of the employees surveyed said that they share work devices with non-employees such as family and friends without supervision.

6. Blurring of Work and Personal Devices: Almost two out of three employees admitted using work computers daily for personal use for things like music downloads, shopping, banking and blogging.

7. Unprotected Devices: At least one in three employees said they leave computers logged on and unlocked when they're away from their desk, and also leave laptops on their desks overnight.

8. Storing Logins and Passwords: One in five employees said that they store their login and passwords on their computers or write them down and leave them on their desks.

9. Losing Portable Storage Devices: Almost one in four employees said they carry corporate data on portable storage devices outside the office.

10. Allowing Tailgating and Unsupervised Roaming: More than one in five employees allowed non-employees to roam around offices unsupervised, while 18 percent allowed unknown individuals to tailgate behind employees into corporate facilities.



Tape Backup Strategy *continued from pg. 1*

When looking into how you are going to develop your backup strategy and rotation method, it is important to look at what data is on your system, how critical it would be if some data were lost, and how fast a system would need to be operational if the system did become damaged or inoperative. You should also assign one individual who is responsible and accountable for administrating the backup to make sure it is done on a consistent basis. Your plan should include a specific time or times when backup is done. For more critical data, you may want to

backup files several times during the day while backing up all changed files only once or twice a day.

The easiest way of backup is where a full image of the system is put on tape every single day. A different tape is cycled through the system each day. This guarantees that a complete restore is able to be done with only one tape. The downside is that it takes many tapes, and, if you have a large amount of data, longer backup times each day. This type of backup is common for smaller servers with less

than 100 gigabytes of data and that do not need to be up 24 hours a day for operation. You will also need a tape drive that can hold the entire amount of data on the server(s).

A variation of the above method is where one tape that contains a full image of the system and subsequent tapes receive copies of the files which are different or were updated after the image backup. This type of backup is called Differential Backup. This allows the system to

The easiest way of backup is where a full image of the system is put on tape every single day.



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Linksys Wireless-G Router for Mobile Broadband *from our Sales Staff*

Does your office come to a stop when your internet connection is down?

The Linksys Wireless router for Mobile Broadband provides an inexpensive means of backup internet connectivity.

The Linksys Wireless-G Router for Mobile Broadband is really three devices in one box. First, there's the Wireless Access Point, which lets you connect Wireless-B & G devices to the network. Second, it's a built-in 4-port full-duplex 10/100 Switch to connect your wired-Ethernet devices together. Thirdly, the Router function ties it all together and lets your whole network share a

Mobile Broadband Internet connection. This requires a Mobile Broadband Data Card, available through your cell phone provider i.e. Verizon Wireless. The Mobile Broadband Data card is typically provided at no cost as long as you initiate a one year contract for broadband service. The contract typically costs approximately \$55.00 per month.

To protect your data and privacy, the Wireless-G Router for Mobile Broadband can encode all wireless LAN transmissions securely with WEP or WPA Personal encryption.

This combination of a Linksys Wireless Router

and Mobile Broadband Data card provides a very cost effective backup internet connection for the office. When not in use at the office, the Mobile Broadband Data card can be used to provide internet connectivity to mobile laptop users while on the road or at home.

With the Wireless-G Router for Mobile Broadband, you can create a secure wireless network with Internet connectivity anywhere that Mobile Broadband Internet service is available.

Call your **ASK** salesperson today for more information at (610) 617-0300.



The Linksys Wireless router for Mobile Broadband provides an inexpensive means of internet connectivity.

Benefits of a Microsoft Exchange Email Server *from our Tech Staff*

Anywhere access for Employees from a variety of clients and devices.

Employees get up-to-date access to their email messages, calendars and contacts. Send your email instantly on your cell phone from anywhere!

Operational Efficiency for IT.

Optimize hardware and networking investments and help make administrators more productive. With Exchange Server all user mail is backed up!

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Keep your business moving—a MUST for these economic times! Reduce spam & viruses, enable confidential communications, and help your company be more compliant. Avoid cyber crooks who attempt to steal sensitive

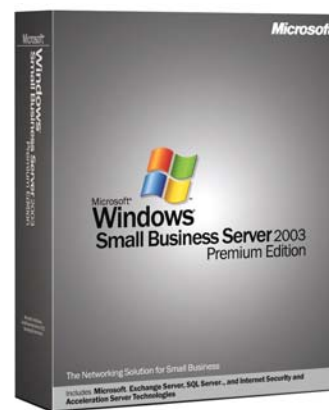
company information or plant e-mail worms. All mail is encrypted!

Create a truly unique e-mail for your business.

PC Based Email may be free but it limits your marketing potential, security and has few other benefits.

Think your company is too small?

Get these benefits with Microsoft Small Business Server—designed with you in mind.



*For more information, contact your **ASK** salesperson today at (610) 617-0300.*

Tape Backup Strategy *continued from pg. 2*

be restored with a maximum of just two tapes should a full system restore be needed.

A variation of this method would be to copy only the files that have changed since the last backup to the tape. This type of backup is called a Modified Backup. This would take less time to backup each time and could be done several times during the day. It would, however, require more time to restore since several tapes may have to be inserted into the tape driver for a total restore. Some rotation methods allow for files to be stored multiple times on multiple tapes so that you can have different versions of the same file on multiple tapes. This allows a revision history of files to be stored on the tapes in case a past revision of a file should be needed. This allows a great flexibility in single file restoration, but can hinder the time to restore the system.

To summarize the types of backups discussed above, we have three main types.

Full Backup A complete backup of all the files on the system being backed up.

Differential Backup A backup of only the files that have changed since

the last full backup.

Modified Backup A backup of only the files that have changed since last full or differential backup.

After thinking about how you wish to place files on the tapes, you need to choose a rotation method for how tapes are going to be fed through the system. A few of the more popular systems that utilize the backup types above are described next.

Grandfather, Father, Son The Grandfather, Father, Son (or for the politically correct Grandparent, Parent, Child) is a simple method that has been used for many years. In this manor, you label tapes by the day of the week with a different tape for each Friday in the month and a different tape for each month of the year. Using a tape for Saturday and Sunday is optional depending on whether you have files updated over the weekend. This would look like the following:

- MON TUE WED THUR FRI1
- MON TUE WED THUR FRI2
- MON TUE WED THUR FRI3
- MON TUE WED THUR MONTH2
- MON TUE WED THUR FRI1
- MON TUE WED THUR FRI2
- MON TUE WED THUR FRI3
- MON TUE WED THUR MONTH2
- MON TUE WED THUR FRI1
- MON TUE WED THUR FRI2
- MON TUE WED THUR FRI3

- MON TUE WED THUR FRI4
- MON TUE WED THUR MONTH3

Since some months have more than four weeks, it will take over 20 tapes for regular backups over one year.

Tower of Hanoi The Tower of Hanoi is named after a game in which you move a number of different sized rings among three poles. In the game you start out with all the rings on one pole and must move all the rings to another pole. You can never have a ring on top of one that is smaller than itself. The idea is that you must move them in a certain order to accomplish the task. The order of movement of rings is:

- A-B-A-C-A-B-A-D-A-B-A-C-A-B-A-E-A-B-A-C-A-B-A-D-A-B-A-C-A-B-A-F
- A-B-A-C-A-B-A-D-A-B-A-C-A-B-A-E-A-B-A-C-A-B-A-D-A-B-A-C-A-B-A-G
- A-B-A-C-A-B-A-D-A-B-A-C-A-B-A-E-A-B-A-C-A-B-A-D-A-B-A-C-A-B-A-F
- A-B-A-C-A-B-A-D-A-B-A-C-A-B-A-E-A-B-A-C-A-B-A-D-A-B-A-C-A-B-A-H

In the case of tape backup, we use the same order to rotate tapes through a tape drive, each day putting a complete image of the system on the tape. Although the theories behind why this works as a good rotation method are beyond our discussion, the benefit of this

Continued on pg. 5



After thinking about how you wish to place files on the tapes, you need to choose a rotation method for how tapes are going to be fed through the system.



Just How Secure is Your Password?

from our Tech Staff

There are many ways to invite theft online, whether it be unauthorized access to proprietary business information, or your personal data. One very common blunder is to become sloppy with your passwords. Nine percent of computer users designate a single password for all their accounts. That practice lets someone who obtains your password and steals

your identity easily access ALL your accounts. Others make the mistake of using passwords that are too short, or too easy to guess correctly.

The [Microsoft Password Checker](#) tells you how long your password will last against sustained attack.

The results will probably surprise and scare you. Especially if you rely on simple, memo-

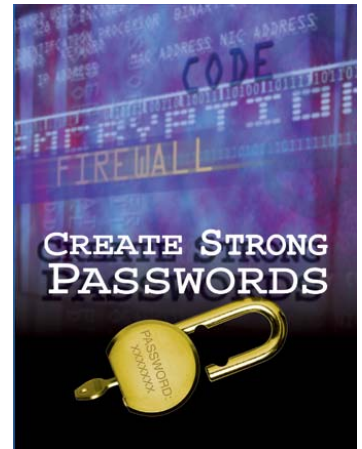
rable passwords, in the hope of securing your personal and or business information. So think again.

Think *(\$&E^"_8/ >~'#89*&\$*&!

And using different passwords for your various accounts need not be burdensome. Just using slight variations on one password can do the trick while still keeping your information safer.

Check your password strength by visiting the  **Password Checker:**

<http://www.microsoft.com/protect/yourself/password/checker.aspx>



Tape Backup Strategy *continued from pg. 4*

rotation is that you will always have an older version of a file on one tape. In the case above, you would have 8 tapes and considering you used one tape per day you could have a copy from as long as 128 days previous to the backup on tape.

A further example is that since tape F will contain a full backup of every file on the system from every 128 days, if your system was infected with a virus, you could restore an executable file without a virus as long as you caught it within 128 days.

There are several variations to this rotation also. If you did backups twice per day, you would be able to capture work in progress during the day,

but you would also only have versions from as long as 64 days previous in the example above.

It would also be possible to backup to a single tape for a week by doing a full backup and then only backing up updated files during the week. You could increase the number of copies this way but may run out of space on the tape. You could also risk losing up to a weeks worth of data if that tape has a problem or is damaged.

Incremental Tape Method This method has a few names and is fairly simple to implement. It involves determining how long you wish to maintain a copy of your data and how many tapes you wish

to use. It is based on labeling each tape with a number and then incrementing them through adding and removing one Backup Set each week. It can be configured to allow for either 5-or-7 day backup schemes. An incremental tape rotation method is set up as follows.

- The first week you use 1-2-3-4-5-6-7
- The second week you use 2-3-4-5-6-7-8
- The third week you use 3-4-5-6-7-8-9
- The fourth week you use 4-5-6-7-8-9-10
- The fifth week you use 5-6-7-8-9-10-11
- Tape 1 would then be inserted again 6-7-8-9-10-11-1

You continue this as long as you have tapes and

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It would also be possible to backup to a single tape for a week by doing a full backup and then only backing up updated files



Communicate at the Speed of Business

from our Sales Staff

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Your sales force relies on mobile phones, laptop computers, PDAs, voice-mail and email to perform communication, sales order entry and customer service functions. When your sales force is connected via **ASK Mobile**

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Your sales force moves only as fast as your communication systems allow.

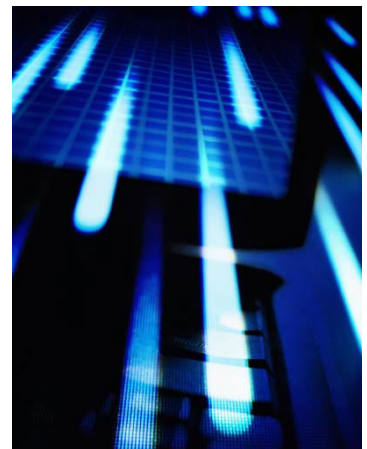
Tape Backup Strategy *continued from pg. 5*

have one tape from every week that you perform a backup able to be stored for a certain period of time. It puts even usage on each tape making sure that a file gets copied to a multiple amount of tapes. The disadvantage is that the backup time can take a while if doing

a full backup of multiple servers. It could be varied to do a full backup on the first of every week and then incremental of differential backups every day after that.

An advantage of this system is that tapes can be removed or added to the

system at any time if an archive tape or longer file histories are needed. The key is to keep a log of the tape sequence and what date it was last used. This can be calculated months at a time or even for an entire year if necessary.



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