Constant Data Protection (CDP): A New Way to Do Backups

For many years, backing up a server has meant a tape drive and a series of tapes. In most computer rooms, you will still find this form of backup in use.

There are a few problems with this strategy. First, as you reuse tapes, they get old and break (there goes your data). Second, unless you take them offsite, if there is a catastrophic problem (such as a fire), your data could be gone. And finally, tape backups are only able to save one copy of the data and only at the time of the backup. How do you get around these difficulties? One way is to use a Constant Data Protection (CDP) device, like the Sonicwall CDP series device.

A CDP is a device with hard drives built into it that allows you to make real time copies of the data on your computer. This means that as the data changes, it makes multiple copies so at any time, you can go back to a copy of the file that you need. With the proper licensing, offsite backups are a built-in functionality (no more taking tapes home or sending them to another facility). And since there are no tapes, there are no tapes to break.

A CDP can be used to back up any data that is currently being backed up by your tape drives, including all Exchange stores, all SQL databases and the user files. If you love your data, this may be the way to go.

You may ask how difficult is it to set up a CDP? After purchasing the device and the licensing, it is very simple. The first step is to configure the IP address of the device. The next step is to install the software on the machine that is to be backed up and configure a portion of the CDP device hard drives to back up the data for that server. The final step is to select the files, folders and databases to be backed up. That is all there is to it. One device that is particularly good is the Sonicwall series that is mentioned above.

Computers Will Not Have XP Preloaded After June 30, 2008

After June 30, 2008, you will no longer be able to purchase computers pre-loaded with Microsoft Windows XP. Even though the industry has petitioned Microsoft to extend its deadline, the company has refused to change the date. Makers of Ultra Low-Cost PCs will have until June 30, 2010 because these computers do not have enough horsepower to run Windows Vista. Vendors of white box (no brand clones) computers can still preload Windows XP on their systems through January 31, 2009.

Microsoft will still provide mainstream (free) support for XP until April 2009. Extended support (free for security fixes and paid for other help) ends in 2014.

Dell and Lenovo, however, have announced that they will load Windows XP after the June cut by taking advantage of a little known clause in Windows Vista's downgrade rights. Any users who purchase computers with Vista Ultimate or Vista Business have the right to downgrade their systems to Windows XP Professional, Professional x64 or XP Tablet PC. Dell has announced that it will factory load Windows XP on behalf of the person placing the order as long as they are purchasing the appropriate version of Vista. Lenovo has said that customers who purchase qualified systems may purchase a Windows XP recovery CD until January 31, 2009.

Agencies that have purchased either Windows XP or Vista through TechSoup.org have received two years of software assurance. As long as you are still in that two year period of software assurance, you can downgrade a computer from Vista to Windows XP if you choose to do so. The IT Project at this time recommends staying with Windows XP, however, because Microsoft is pressuring everyone to use Vista, we also need to bow to their pressure. At this time, we do not see any business advantage to using Vista or creating a mixed environment of Windows XP and Vista networks.

See inside

From the Director · Bits and Bytes

As we just came to the close of another fiscal year, I thought it might be a good time for a general end of year report.

The IT Project has expanded dramatically over the past several years, and our customers couldn't be happier. We currently service 17 agencies that have purchased more than 1,500 hours in service contracts. Add that to the balance of hours from last year and our staff has provided more than 1,940 hours of on-site services for our customers. That's quite a difference from when there was only one engineer servicing accounts and agencies needed to book him weeks in advance. Three of our agencies participate in the "engineer for a day" program, where an engineer spends one day a week (or every other week) at the agency and acts as the "internal" IT Support staff person for the agency. This model has proved to be very valuable and very economical for the agencies that participate.

At the end of last fiscal year, the IT Project responded to an RFP put out by the New Jersey Council on Developmental Disabilities (NJCDD) and we were happy to be awarded this new contract. Our engineer spends ½ day every other Friday in Trenton at NJCDD's facility. The IT Project is currently performing maintenance on their website, and holds planning meetings with management each quarter. The IT Project has also engaged a subcontractor (as part of the RFP) to redesign their contact management database of consumers, legislators and other stakeholders. The IT Project was involved during the month of June in physically moving NJCDD's computers and servers to a new location within the same building.

Other projects we completed this year included development of electronic forms for emergency psychiatric screening documents for St. Clare's Hospital Emergency Screening Center. The project was completed in December with final document review in January. The concept was to send out screeners with laptops to remote locations, either other hospitals or clients' homes, and have them complete the electronic forms and print them to portable printers. The documents can then be sent with clients when transported to the hospital. The printers have battery packs making the need for an electrical outlet optional. The documents must be signed by the consumers, screeners or doctors at this time, so there is no need for an electronic record per se. We hear that St. Clare's is very happy with the solution and we hope that DMHS will fund other screening providers so they may implement a similar solution.

In the current fiscal year, the IT Project is excited to offer remote monitoring for any agencies that want it as a part of their contracted services. Our Managed Services "product" will detect any problems with data lines or circuits and servers, routers and desktops if they are part of the subscription. By using Managed Services, our providers will be offered the type of protection that only some of the larger for-profit corporations use today to prevent small problems from getting out of hand. By installing a probe device within a network infrastructure, we will "see" problems on a 24/7 basis and we will dispatch an engineer first thing in the morning to address and resolve the problem. Now, if that isn't customer service, I don't know what is!

> **"Now, if that isn't customer service, I don't know what is!"**

Our training program has also exploded this year with the hiring of a new full-time software trainer. Agencies have learned the real value of having a trainer come to their facilities to perform training. The travel expense savings alone make this program worthwhile, as well as convenient.

So, whether you need technology services or training, call the IT Project today and see how we can assist your organization operate more effectively. That's what we are here for, and that's what we do!

Enjoy the summer. Stay cool and peace to all,

June A. Noto
Executive Director
IT Project

Strong Passwords: How Not to Open Your System to the Weekend Hacker

How secure is your Network? As in the chain with the weak link, your network is only as secure as your weakest password. This article will examine a few things such as what constitutes a weak and a strong password and why the admin password should be extra strong and rotated frequently. This article will also talk about why a password algorithm can be too strong.

Placing Firewalls and fully patching all the computers on a network may be a wonderful way of securing them and both are very important. However, the easiest way for a hacker to get into your system is with a password. To this end, there are many programs designed to crack passwords. Therefore, the stronger the password is, the harder it is to crack. So, what constitutes a strong password? And what constitutes a weak password? A strong password is something that resembles a random string of characters. A weak password is everything else.

The admin password can be called the "Keys to the Kingdom." With the admin password, hackers can get into any computer on the network and go anywhere and do anything that they like. That is why this password or any password that has admin rights should be very strong. Another way to protect this password is to rotate it frequently. (Some organizations change it every single day.) What changing your password does is force a hacker to go through the trouble of cracking your password again.

So, with all of this information, network administrators should force their users to make extremely strong passwords (notice each user creates the password). The answer to this is, "not necessarily". If users are forced to have passwords that are too strong, they will inevitably do the worst thing with a password: WRITE IT DOWN. This is obviously what network administrators do not want: The easiest password to crack is the one written right in front of you. So, the network administrator must set the rules at a level where the users will be able to remember the passwords while at the same time, making them strong enough to discourage attacks.

No attacker wants to waste his time cracking hard passwords for an unknown gain. When faced with difficult networks to get into, the average hacker will move onto an easier target. Do not be the easier target!
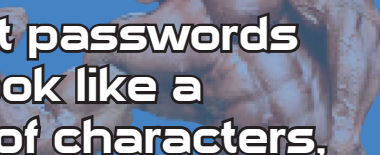
[Look below for guidelines on weak and strong passwords]

Weak VS. Strong

Some of the weakest passwords are those that are based on single words.

·   admin -- could be a default password
·   1234, abc123, aaaa, asdf, qwerty, !@#$ -- sequences of letters, numbers, and keyboard keys
·   rowboat -- a dictionary word
·   jsmith!! -- based on a username
·   smith, rover -- names
· $m1th1 -- a weak password with simple substitutions applied and a number appended
·   20500, 12/3/75, 078-05-1120 -- ZIP Codes, dates in whatever format and other numbers such as SSNs or employee IDs may appear sufficiently random, but not only are such standard formats readily searched, but also, passwords too closely based on a user's personal, family or work information are, in and of themselves, weak.

The strongest passwords always look like a random string of characters, and should be a minimum of eight characters long. (Remember, do not use these passwords; make up your own.)

·   4pRte!ai@3 -- mixes uppercase, lowercase, numbers and punctuation
·   Convert_100£ to Euros! -- long, and contains a special symbol (£)
·   Tp4tci2s4U2g! -- built from a phrase that a user can memorize: "The password for (4) this computer is too (2) strong for you to (4U2) guess!" -- mixes types of characters as well
·   BBslwys90! -- loosely based on a phrase that a user can memorize: "Big Brother is always right (right angle = 90°)!" -- mixes types of characters as well

Virtualization Saves on Hardware and Other Costs

What is happening in the world of server virtualization? If you have not been keeping up with the server world, virtualization is the hot application to load. What is virtualization? Traditionally, companies had servers running one or maybe two applications. For example, if you needed to run a SQL server, that would be it for that physical box. If you need to run Exchange, you would need to get another box, authentication and file services, another box and so on. Soon, you would have a server room filled with servers running at 15 percent capacity or less.

With virtualization, a layer of software called a hypervisor emulates the underlying hardware server, allowing a physical server to run multiple operating systems and their associated applications. Therefore, one physical box may run two or three sessions of Windows or Novell server each with its application running on it. As a result, one server may do work that once took eight or more machines, reducing not only hardware spending, but also other costs, such as electrical and technicians to maintain multiple servers.

Currently, VMWare is the leader in the market with its virtualization products for servers, virtual desktops and a workstation product.

The market for virtualization software is expected to double from $6.5 billion to $11 billion by 2010, according to the Gartner Group Inc. As you can expect, Microsoft is not just going to ignore this trend. Microsoft has released a test version of its product called Hyper-V. See more about it at:
http://technet2.microsoft.com/windowsserver2008/en/servermanager/virtualization.mspx

Microsoft expects to release the final version by June 2008. In response, VMWare has asked its developer to come out with a new version by September that will out perform Microsoft's product.

VMWare came out with its product back in 1998. Since then, two open source competitors came out: one distributed by XenSource, which has since been acquired by Citrix System, and another by Virtual Iron Software (http://www.virtualiron.com/).

Give us a call (609-838-5488, ext. 215) or send us an e-mail (rgordon@njamha.org) if you would like to learn more about virtualization, find out about NJAMHA's virtual servers, test it out or implement virtualization at your agency. We would be happy to talk about our experiences in test and live systems.

Microsoft Server Update Services: A Better Way to Patch

Patches are a fact of life on Microsoft computers; it seems every week, some new vulnerability is found. The downloading of all these new patches to every computer in your organization can be time consuming and take up precious bandwidth. Worse yet, some software (such as Open Systems "Traverse") may not work with new patches. So, how do you get a handle on this? One way is to use Microsoft's Server Update Services (SUS).

With SUS, one computer can be set to go to the Internet and download all the updates needed for the computers in your organization. You can specify the time that you want it to check for and download the updates. This means that you can download updates only at night and not affect the bandwidth during business hours.

Another nice thing about using an update server is that you can authorize the installation of a service pack or update only after you have tested it on your computers. This means that if an update affects only one piece of software, you do not have to install it. By creating different groups for computers, you can allow some computers to get updates while others will not. This is very useful in the case where an update is not compatible with a piece of software that is on a few computers. You can create a group so the update is not installed on those computers.

The deployment of SUS is a multi-step process. First, the server must be deployed. Next, you must configure the server for the software you need to update and set it to download the updates. Then, you need to configure the computers to get the updates from the server.

Finally, you can group the computers for the updates that you want to install.

As you can see, Microsoft SUS can be a very good way to get a handle on patching your computers. Once through the somewhat complicated setup procedure, it can save time and money. It does this by allowing you to download and test updates before deploying them to all the computers in your organization, and by downloading the updates only at night when your bandwidth is not in use for the daily business of your organization.

If you are interested in deploying this process, engineers from the IT Project can help. Give us a call and we can arrange to install and configure your server(s) to make use of this vital service.

Office 2007 · Advanced Features for Adding Style to Documents
by Roseann Moran

In the last issue of *Bits and Bytes*, I introduced readers to the basic changes users will notice when they upgrade to Office 2007. In this issue, I will go into more advanced features of Word 2007. This article will demonstrate how easy it is to use these advanced features to make documents look great in Word.

In most cases, when a document is created in Word, there are various headings, paragraphs and sections that need to be added. Also, there are times when lists are included in the document, as well. To make the sections of the document stand out and to improve the entire document's readability, it is a good idea to add separate styles to each of these sections.

Quickly Format Titles, Headings and Subheadings

For example, if you highlight the title of your document, you will see the Style used is highlighted on the Styles Group of the Home Tab. One of the great features of Word 2007 is that once you have the text selected, you can then click on the various Style options—different font, larger size, bold, etc.—and the text will appear on your screen based on the selection you made.

Once the Title has been formatted, you can add a style to any Main Section Headings you may have. This needs to be a little different from the Document Title style, but still needs to stand out to draw the reader's attention to the main section of the document. Again, to do this, highlight the Main Section Heading text to see what style has automatically been placed with this Heading and choose from the formatting options provided.

To quickly change the format of multiple subheadings, you only need to change one subheading and then use the Format Painter tool to copy the selected settings. To use the Format Painter, place the insertion point to the left of the subheading and double click on the Format Painter on the Home Tab – Clipboard Group – Format Painter Command. To close the Format Painter option, go back to the Format Painter command and click once.

Format Paragraphs Just as Easily

Now, you may want to change the formatting of paragraphs to emphasize the text contained within those paragraphs. To accomplish this task, stay on the Home Tab and click on the diagonal arrow next to the word "Paragraph" to open the Paragraph Dialog Box. You can choose options such as the amount of indentations on the left and right sides and the amount of spacing between lines. Click on "OK" to implement your formatting choices in your document.

Depending on how your document is affected by the formatting changes, you may want to move text from the bottom of a page to the beginning of the next page. To quickly create a page break, place the insertion point above the text you want to move down and hit ***Ctrl and Enter*** on the keyboard. This will move the entire paragraph to the next page of your document. Now, you can use the Format Painter tool again to copy the paragraph formatting from the first paragraph to the second one.

Place the insertion point in the first paragraph, double click on the Format Painter Command and drag the paintbrush throughout the second paragraph. Then, remove the Format Painter tool by clicking on the Format Painter Command.

Make Easy-to-Read Lists with Bullets

If you have a list within your document, you may want to add bullets to that list. The easiest way to accomplish this task is to follow these steps:
- Highlight the entire selection that needs bullets.
- Staying on the Home Tab, go to the Paragraph Group and click on the down arrow on the Bullets Command.
- Select the bullet you would like to apply and click on it.

The bullet selected will be automatically added to the list. The entire document will be altered to make the many sections of the document stand out.

With Word 2007, documents can be altered easily to enhance the many sections contained in the document. This article clearly proves how easily a document can be modified.

Free Software Recommended by PC Magazine Staffers, Part III

Following are more recommendations, continued from the Fall 2007 edition of *Bits & Bytes,* for free software that were originally published in *PC Magazine* (February 20, 2007).

Security Tools

Avira AntiVir Personal Edition Classic
www.free-av.com/en/index.html

This tool is able to scan files on a schedule, on demand and on access. Though it cannot scan e-mail attachments until they are saved, it does work on rootkits and has shown to co-exist well with other security software. It has received the Virus Bulletin's VB100% award, ICSA Labs' certification for Virus detection and most recently the "Anti-Polymorphic Protection Gold Award" well ahead of 15 other test participants.

Comodo Firewall
http://www.personalfirewall.comodo.com

A free firewall protection that keeps hackers out and unauthorized programs from accessing the Internet, it is found to work as well as all but the very best for-pay firewalls!

ShieldsUP!
www.grc.com

If your PC is always on and connected to the Internet, you are hoping your firewalls are keeping your connection hidden from attackers. ShieldsUP! provides you with that quick confirmation.

Productivity Tools

KompoZer
www.kompozer.net

Much like Dreamweaver, this full WYSIWYG Web-page authoring tool integrates an FTP site manager for file uploads.

OpenOffice.org
www.openoffice.org

This suite may be all that you need. An alternative to MS Office, OpenOffice offers a word processor and spreadsheet that are compatible with MS Office. Also packed with this product is a presentation application and a diagramming tool, as well as a database.

Utilities and PC Management Tools
AutoHotkey
www.autohotkey.com

This is an open-source program that lets you automate all of your repetitive tasks. With it, you are able to compile scripts, so they can be shared with people who do not have the application. And, for those not ready to create their own scripts, available on the website too are dozens of user-contributed scripts.

Glary Utilities
www.glaryutilities.com

This free product offers numerous powerful and easy-to-use system tools and utilities to fix, speed up, maintain and protect your PC.

Music and Audio Tools

Media Monkey
www.mediamonkey.com

This would also be a good choice as a digital music player. It includes features for organizing, ripping, burning, converting and playing tunes. It has smart tagging, Auto DJ and a Party Mode, which allows you to make requests without modifying the library.

Video and Graphics Tools
Gallery 2
http://gallery.menalto.com

If you have either a personal or community website on either your own server or a hosted service, this product is a superb tool for organizing photos and integrating them into your site. With it, you are able to create and manage albums, upload photos, set permissions and much more.

Paint.NET

www.getpaint.net

What began as an undergraduate college senior's design project mentored by Microsoft has become a powerful image and photo-editing tool, yet is simple to use. Having won several awards, this is the closest thing to Photoshop you can find free.

Free Software Recommended by PC Magazine Staffers, Part III

Videora Converter

Videora Converter
www.videora.com

This is described as a personal video downloading program that enables you to download video from online sources or a DVD for use on any video-capable iPod or iPhone. Utilizing BitTorrent peer-to-peer technology and Real Simple Syndication, you gain such features as Watch Lists and Season Tickets, enabling you to watch videos no matter where you are as long as you have a Broadband connection and Windows.

Firefox Extension Tools
FireFTP
www.fireftp.mozdev.org

Turn your browser into an FTP client with this application's file manager for uploading and downloading. It is a excellent tool when working with public FTP sites, but doesn't yet support the increasingly common SecureFTP protocol.

Networking and Mobility Tools
LogMeIn Hamachi
www.logmeinhamachi.com

If you access your office from home or perhaps on the road, you probably connect through a VPN that encrypts all the traffic between your PC and your office network. LogMeIn Hamachi creates an encrypted tunnel between individual PCs to easily allow secure access to your home PC from anywhere on the Internet.

PrinterAnywhere
www.printeranywhere.com

Whether a printer is connected to another computer 10 feet or 10,000 miles away, this free product allows you to print to that printer directly from MS Word, Outlook, Photo Editor or any other application you use.

Fun and Games
Cartes du Ciel
www.stargazing.net/astropc

Cartes du Ciel, or Sky Maps, makes it easy to find what constellations and planets are visible on any given date and time, and from any given location on Earth. For basic star charts, this program is said to outclass many commercial astronomy programs.

Calendar/PIMs

Remember The Milk
www.rememberthemilk.com

Once you install this software, you won't have a chance to forget anything again. It is an extensible online task manager that will remind you through e-mail, SMS and IM (as AIM, Gadu-Gadu, Google Talk, ICQ, Jabber, MSN, Skype and Yahoo! are all supported).

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Product Review: TrueCrypt

Recently, there have been a lot of questions about securing data on a laptop that is being taken offsite. How do you control the data when it is not physically at your site? The only way to do this is through encryption. Microsoft in Windows Vista™ has built-in software to handle this called "bitlocker". However, this is only available in the two highest levels of the Vista operating system (Enterprise and Ultimate). To use this, you must also have a computer that has a TPM 1.2 chip in the bios.

If you do not have Vista Enterprise or Ultimate, and your hardware does not meet the requirements to use it. You still need to encrypt the data. How do you do it? One solution is a program called TrueCrypt. TrueCrypt is a free open source application that is used to create an encrypted and password protected logical drive on your computer. The newest version lets you encrypt the entire hard drive (even if it contains the file system).

Here is how it works when using it to create a logical drive. After installing the software, you use it to create a file of the size that you want to have for file storage. After creating the file, you mount it as a logical drive using the software. It can be set to open automatically when you log on to the computer. After you do this, the new encrypted drive will appear to the computer like any other local or network drive and can be used the same way. One nice feature of this program is that you can name this file anything that you want. So, by naming it with a known extension (*.doc, *.tmp, *.txt, etc.), if someone does get the computer, he will not necessarily know what the file is. (Other programs of this type have a set file name, so it is easier to find the drive.)

If you want to encrypt your entire hard drive, you will need a writeable CD-ROM to burn the recovery tool. The software encrypts your drive, so that it cannot be read even with an external boot disk. If at a future date, you no longer want to have the drive encrypted, the recovery CD-ROM that is created during the build phase enables you to decrypt the drive permanently.

You can get the software and detailed instructions for installing and configuring it at www.truecrypt.org. The current version is 5.1. And as stated earlier, it is free to download and use. It can be installed on every version of Windows from 2000 through Vista, Linux, and Mac OS X.