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Editorial

We would like to wholeheartedly thank our honorable Chairman, Secretary, Executive Director and Principal for their continuous encouragement and constant support for bringing out the magazine. We profoundly thank our Head of Department for encouraging and motivating us to lead the magazine a successful one right from the beginning. Ishare serves as a platform for updating and enhancing upcoming technologies in Information and Communication. We are grateful to all the contributors to this magazine so far. The magazine has been sent to almost 60 institutions in and around Tamilnadu. So far we have received feedbacks and appreciations from various institutions.

We would be very pleased to receive your feedbacks. Please send your feed backs to ksrcas.ishare@gmail.com
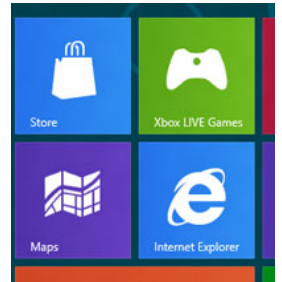
By,

Editorial Board

Top 10 Windows 8 tips and tricks

G.Hari kumaran, I-cs_"A"

Customize your tiles

Make the most of your Windows Start screen tiles by adjusting the sizes, where they are located, and what is listed.

- Move any tile by clicking and dragging the tile. While moving a tile, if you need a larger view of the Start screen move the tile towards the top or bottom of the screen to zoom out.
- Use your mouse wheel to scroll left-to-right through your tiles.
- Any Desktop shortcut or program can be pinned to the Start screen by right-clicking the icon and choosing **Pin to Start**.
- In the bottom right-hand corner of the start screen is a magnifying glass with tiles, click this icon to get a zoomed out view of your Start screen. In this view, if you right-click on a group of tiles you'll be given the option to **name group**, which can be useful if you have a group of related tiles (e.g. games). In this view, you can also click and drag a group to organize your tile groups.
- Create a new speed bump between tile groups by moving a tile to a speed bump.
- Resize any User tile or Live tile by right-clicking the tile and choosing resize.
- If there is a tile you want on your Taskbar, right-click the tile and choose **Pin to taskbar**.
- Show admin applications on the Start screen by clicking Settings in Charms, click Settings, and change the Show administrative tools from No to Yes.

- In Internet Explorer 10, you can also pin any of your favorite web pages to your Start Screen.

Windows 8 keyboard shortcuts

Knowing at least some of the Windows 8 keyboard shortcuts will make your Windows 8 experience much more enjoyable. Try to memorize these top Windows 8 shortcut keys.

- Press the **Windows key** to open the Start screen or switch to the Desktop (if open).
- Press the **Windows key** + **D** will open the Windows Desktop.
- Press the **Windows key** + **.** to pin and unpin Windows apps on the side of the screen.
- Press the **Windows key** + **X** to open the power user menu, which gives you access to many of the features most power users would want (e.g. Device Manager and Command Prompt).
- Press the **Windows key** + **C** to open the Charms.
- Press the **Windows key** + **I** to open the Settings, which is the same Settings found in Charms.
- Press and hold the **Windows key** + **Tab** to show open apps.
- Press the **Windows key** + **Print screen** to create a screen shot, which is automatically saved into your My Pictures folder.

See our Windows shortcuts page for a full listing of all Windows shortcuts.

Know your hot corners

The corners on your screen are hot corners and give you access to different Windows features. Below, is a brief explanation of each of these corners.

Bottom Left-hand corner

The bottom left-hand hot corner of the screen will allow you to access the Start screen, if you're in the Start screen and have the Desktop open, this corner will open the Desktop from the Start screen.

Tip: Right-clicking in the left hand corner will open the power user menu.

Top-left corner of the screen

Moving the mouse to the top-left corner and then down will display all the apps running on the computer. Clicking and dragging any of these apps to the left or right-hand side of the screen will snap that app to that side of the screen. Each of these open app icons can also be right-clicked to close or snap.

Right-hand side of the screen

On the full right-hand side of the screen will be given access to the Windows Charms.

Taking advantage of search

The Search in Windows 8 has been significantly improved when compared to all previous versions of Windows. To search for a file or run a program in Windows 8 from the Start screen just start typing what you're trying to find or want to run.

As you begin typing, the results will start appearing on the left-hand side. In addition to being able to search for files and run programs, the Search also supports limiting the search to apps such as Finance, People, Maps, Photos, Mail, Music, Videos, Weather, and much more. If what you are searching for is not a file or program, click on the app you wish to use as the search. For example, if you were searching for "New York" and selected the Weather App you would be shown the weather in New York, NY.

By default, Search organizes the available Apps by how frequently they are used and then in alphabetical order. If you want to keep your favorite app at the top of the Search list, right-click the app and choose Pin. Pinning the app will lock it in place regardless of how often it is used. If there is an app you don't want (e.g. Finance) you can turn on and off any of the search apps through the PC settings, which is found under the Settings in the Charms.

Bonus tip: The Search is also found through Charms and can also be opened by pressing **Windows key + F**.

Running two apps side by side

Any app can be pinned to the left or right-hand side of the screen. For example, open the People app and then press the **Windows Key + . (period)** to move that app to the right-hand side of the screen, pressing the same keys again will move it to the left-hand side, and pressing the same keys again will make it full screen. While an app is pinned, any other app or program can be opened and loaded into the available space on the screen. For example, in the below picture, we've opened a browser window and have the People app running to monitor our social networks.
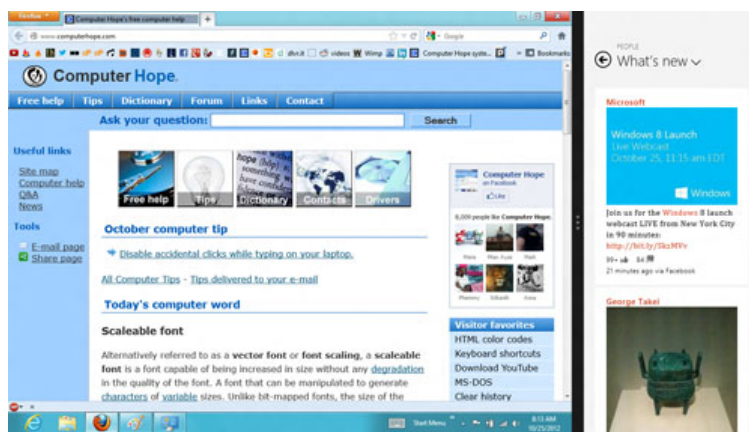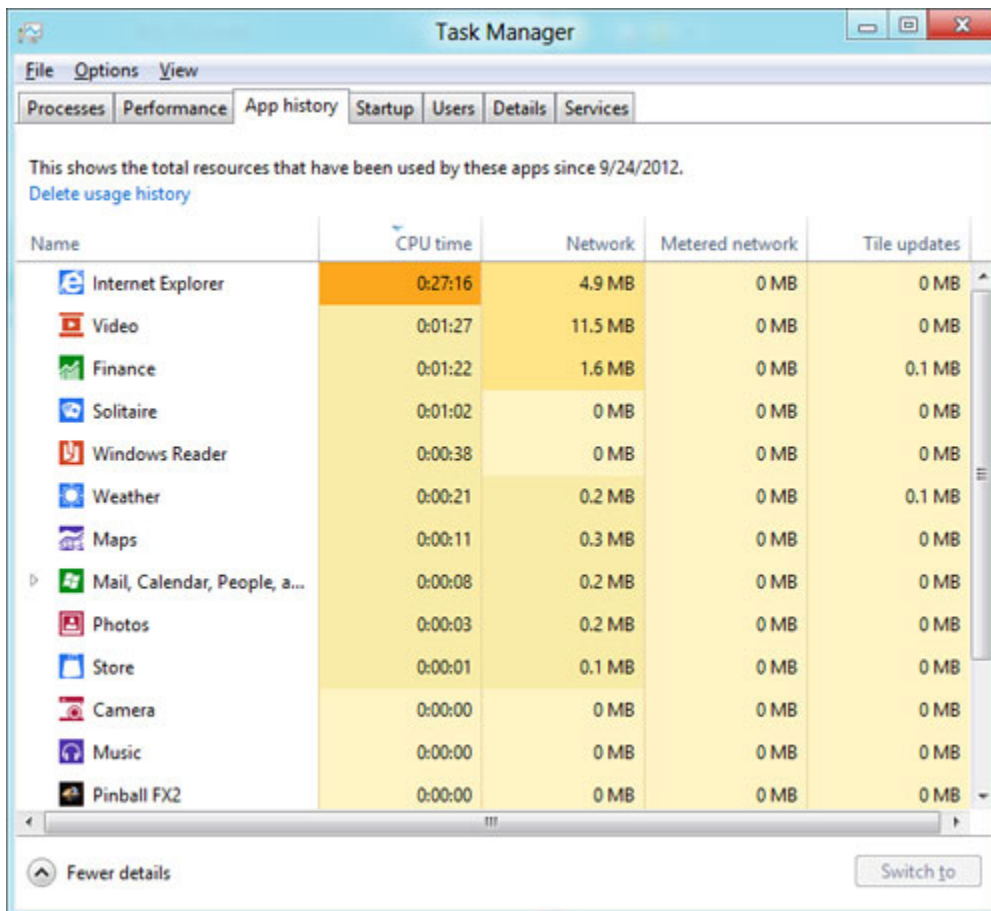

Any open app can also be pinned using your mouse by clicking at the top of the tile and dragging it to the left or right-hand side of the screen.

Bonus tip: The Desktop can also be pinned to the left or right-hand side of the screen.

Note: In order for snap to work properly your resolution must be at least 1,366 x 768.

Windows 8 Task Manager

The Windows 8 Task Manager has been significantly improved over previous versions of Windows. Some of the new changes include showing a total percent usage at the top of your Processes, which makes it easier to determine total memory and CPU usage, improved Performance graphs, a Startup tab to see startup processes and their impact to system performance, and the App history tab (as shown below) that gives you the total resources an app has used over a period of time. Press **Ctrl** + **Shift** + **Esc** to start exploring the new Task Manager.

Use a picture password to log into your computer

Windows 8 includes a new feature called Picture password, which allows you to authenticate with the computer using a series of gestures that include circles, straight lines, and taps. Enable this feature if you want a new way to access your computer or have a hard time with passwords.

1. Open the Windows Charms.
2. Click **Settings** and then **More PC settings**
3. In the PC settings window click **Users** and then select **Create a picture password**

Bonus tip: A four digit pin password can also be created and used to access your computer.

Take advantage of Windows 8 apps

Windows 8 comes included with several apps to help you get the most from your computer. Below are just a few of the included apps.

People

Microsoft touts the People feature in Windows 8 because they understand how many people are using social networks today. In the People feature you'll be able to connect your Windows computer to all the major social networks including Facebook, LinkedIn, and Twitter. Once connected, you can pin the people app and monitor your social network (as shown below), use People in Search to find people, and get an overview of what is happening in all your social networks.
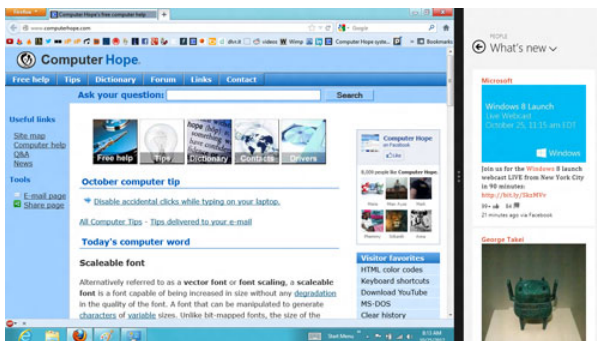
Reader

The Reader app will give you PDF support right out of the box.

SkyDrive

The SkyDrive app will give you access to the Microsoft cloud service SkyDrive, which allows you to store your photos, documents, and other files in the cloud and access or share those files with any computer with Internet access.

Store

Take advantage of the Windows Store and install one or more of the thousands of available apps designed for Windows 8. The Store is found in the Start screen, or use Search to search the Store app for any apps that you are trying to find.

Computer Number System
D.Kavin Kumar II B.Sc Cs "C"

The reason that "hex" and octal are popular in computing is that it's easy to translate to and from the binary system that computers *really* use. People use decimal primarily because they have ten fingers, but it's just not that convenient to switch back and forth from 10011010010 to 1234. It IS convenient to convert to 4D2 (hex) or 2322 (octal), however. Let's see how this is done.

These are all called radix numbers because the method for figuring out how to represent the value (remember the rocks in a bag) is the same. The only real difference between them is the base that they use.

binary - base 2
octal - base 8
decimal - base 10
hexadecimal - base 16

One thing that should be kept in mind is that the number system used to represent the value of the base above is actually expressed as a decimal, or

base 10 number. That is, we don't normally say hexadecimal is base 10 in hex. We say it's base 16 in decimal.

Any radix number is a sum of a series of powers of the base times a number from 0 to 1 less than the base. This is what it looks like as a formula:

$$\text{Number} == \text{Num}(n) * \text{Base}^n + \text{Num}(n-1) * \text{Base}^{n-1} + \ldots + \text{Num}(0) * \text{Base}^0$$

- Each position has a value (10 to the power 3, or 1000 is the value of a position).
- Each symbol has a value.
- Multiply the value of the symbol by the value of the position, then add.

Let's see how this works with a real number ... say, decimal 7382. In decimal, 7382 means:

7 times 1,000
plus 3 times   100
plus 8 times   10
plus 2 times   1

It's the same in binary, octal, or hex. The only thing that changes is the base. For example, in binary, the same number (expressed as 1110011010110 in binary) is:

    1 times 1,000,000,000,000 (decimal 4,096)
plus 1 times   100,000,000,000 (decimal 2,048)
plus 1 times   10,000,000,000 (decimal 1,024)
plus 0 times   1,000,000,000 (decimal 512)
plus 0 times   100,000,000 (decimal 256)
plus 1 times   10,000,000 (decimal 128)
plus 1 times   1,000,000 (decimal 64)
plus 0 times   100,000 (decimal 32)
plus 1 times   10,000 (decimal 16)
plus 0 times   1,000 (decimal 8)
plus 1 times   100 (decimal 4)

plus 1 times   10 (decimal 2)
plus 0 times   1 (decimal 1)

Decimal is easier for humans to handle. Binary is the only thing that computers use. Octal and hex are a kind of a compromise between the two. Here's the number (1CD6) in hex.

1 times 1,000 (decimal 4,096)
plus C times   100 (decimal 256)
plus D times   10 (decimal 16)
plus 6 times   1 (decimal 1)

Not as many numbers to deal with, but what does C and D mean? Simple. Hex needs to have six more symbols in addition to the symbols 0 through 9. IBM invented the term hexadecimal and they decided that since this system needed six extra symbols, why not just use the first six letters of the alphabet.Octal and hex are used to represent numbers instead of decimal because there is a very easy and direct way to convert from the "real" way that computers store numbers (binary) to something easier for humans to handle (fewer symbols). To translate a binary number to octal, simply group the binary digits three at a time and convert each group. For hex, group the binary digits four at a time. Here's how to convert to hex using our example number, 7382 (decimal) == 1110011010110 (binary).

First, group the binary digits four at a time (start with the least significant digits):

1 1100 1101 0110

   1 == 1
1100 == C
1101 == D
0110 == 6

Get 10GB More Space in your PC / Laptop

P.Raja Durai I-BCA-D

It shows you how to convert your Gmail space into extra HDD space 10GB.

1) Download Gmail drive-->DOWNLOAD

2) Run it;

3) Restart your computer and then go to "My Computer" and there are another disk;

4) Click on it and it asks for an username/password;

5) Place there all your stuff...

You can create 1 disk, but you can login with 2 different Gmail accounts. That means you can get 30GB if you have 3 Gmail accounts.
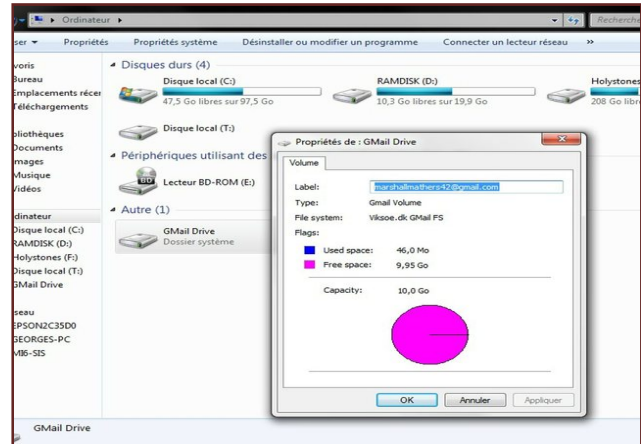
Nokia Mobile Tricks with Coding

S.Bala Kumar I-B.C.A."C"

To enter in the secret menu in Nokia Phone.
On the main screen type *#92702689# [*#war0anty#]

It will take you to a secret menu where you may find some of the information below:

1. Displays Serial Number.

2. Displays the Month and Year of Manufacture

3. Displays (if there) the date where the phone was purchased (MMYY)

4. Displays the date of the last repair - if found (0000)

5. Shows life timer of phone (time passes since last start)

Hiding your Mobile/ Cellphone Number

Go to: Menu > Tools > Settings > Call > Send My Caller ID >

'Yes', 'No' or 'Set By Network' to follow the default settings of your home network.

It works only with very few network who provide you facility of "Private Number"

To restore Factory Settings for Nokia mobile

*#7780# reset to factory settings.

Speed Dialing From Simcard contact (not stored in mobile phonebook)

Type number followed by # then call.

Example: 1# or 2# or 21#

Taking picture without getting noticed.

Turn on/off the "click" sound made by the camera by selecting the 'Silent' profile or by turning warning tones on/off.

Basic PC shortcut keys

S.V.Vetrivel II B.Sc (CS)-C

The below basic shortcut keys are a listing of shortcut keys that will work with almost all IBM compatible computers and software programs. It is highly recommended that all users keep a good reference of the below shortcut keys or try to memorize the below keys. Doing so will dramatically increase your productivity.

Shortcut Keys	Description
Alt + F	File menu options in current program.
Alt + E	Edit options in current program
F1	Universal Help in almost every Windows program.
Ctrl + A	Select all text.
Ctrl + X	Cut selected item.
Shift + Del	Cut selected item.
Ctrl + C	Copy selected item.
Ctrl + Ins	Copy selected item
Ctrl + V	Paste
Shift + Ins	Paste
Ctrl + P	Print the current page or document.
Home	Goes to beginning of current line.
Ctrl + Home	Goes to beginning of document.
End	Goes to end of current line.
Ctrl + End	Goes to end of document.
Shift + Home	Highlights from current position to beginning of line.
Shift + End	Highlights from current position to end of line.

Ctrl + Left arrow   Moves one word to the left at a time.
Ctrl + Right arrow Moves one word to the right at a time.

General scanner troubleshooting

By:S.J.Naga Vishnu
I B.Sc –"A"

Issue

General scanner troubleshooting.

Cause

It may be necessary to do general scanner troubleshooting to help determine the cause or to help resolve a scanner related issue.

Solution

Verify cables connected properly to the back of the scanner

If the scanner is a parallel port scanner it is likely it has two available connections on the back of the scanner. Verify that the cable coming from the computer is connecting to the IN, Computer IN, computer, or similar connection.

Ensure that the scanner is getting power

If your scanner is not getting power it is recommended that you check the connections ensuring that they are connected properly to the back of the computer and from the scanner to the wall. If you have the scanner connected to a power strip or surge protector it is temporarily recommended that you connect the scanner directly to the wall.

If the computer scanner is getting power, you should notice the inside light come on when the power is first received by the scanner.

After checking the connections you still get no power to the scanner, it is recommended you contact the manufacturer of the scanner.

Additional parallel port scanner troubleshooting

If you have another device connected in between the scanner and the computer, turn off the computer and temporally disconnect the devices connected to or from the scanner. If, after disconnecting these devices, the scanner works, it is likely that another device may have issues or may be unable to work with other parallel devices.

PC Windows users verify no TSRs are running in the background

Press CTRL + ALT + DEL and end task all currently running software except explorer and Systray and scan again. If this resolves your issue it's a possibility that an application in the background such as a virus utility is preventing your scanner from scanning.

Verify the LPT port mode

PC users ensure that the LPT port mode within the computer BIOS is set to either EPP or bi-directional mode or try alternating between these two modes.

Update the drivers

Verify that the latest drivers are installed for the operating system being used on your computer. A listing of computer scanner manufacturers and links to the drivers pages can be found on our scanner drivers page.

The Computer Facts
S. Ranichandra
Lecturer, Dept of CS
KSRCAS

- The domain name **www.youtube.com** was registered on February 14, 2005.

- **Hewlett Packard** was started at a garage in Palo Alto in 1939.

- **Computer programming** is currently one of the fastest growing occupations.

- On an average work day, **a typist's fingers** travel 12.6 miles.

- The **Dvorak** keyboard is more efficient than **QWERTY**. 20 times faster, in fact.

- **TYPEWRITER** is the **longest word** that can be made using the letters only on one row of the keyboard.

- **On eBay**, there are averages of $680 worth of transactions each second.

- **"Stewardesses"** is the longest word that is typed with only the left hand.

- In the 1980s, an IBM computer wasn't considered 100 percent compatible unless it could run **Microsoft Flight Simulator***.

- The world's first computer, called the **Z1**, was invented by Konrad Zuse in 1936. His next invention, the **Z2** was finished in 1939 and was the first fully functioning electro-mechanical computer.

- The first computer mouse was invented by **Doug Engelbart** in around 1964 and was made of wood.

- **Domain names** are being registered at a rate of more than one million names every month.
- There are approximately **1.06 billion instant messaging** accounts worldwide.
- The **first banner advertising** was used in 1994.
- **E-mail** has been around longer than the World Wide Web.
- The average computer **user blinks 7 times a minute,** less than half the normal rate of 20.
- One of **every 8 married couples** in the US last year met online.
- The average 21 year old has spent **5,000 hours** playing video games, has exchanged **250,000 e-mails**, instant and text messages and has spent **10,000 hours** on the mobile phone.
- By the year 2012 there will be approximately **17 billion devices** connected to the Internet.
- While it took the **radio 38 years**, and the **television a short 13 years**, it took the **World Wide Web only 4 years to reach 50 million** users.
- There are approximately **1,319,872,109 people on the Internet.**
- For every 'normal' webpage, there are **five porn pages**.
- **Bill Gates' house** was designed using a **Macintosh computer**.
- The **first domain name** ever registered was **Symbolics.com**.
- Another name for a **Microsoft Windows** tutorial is **'Crash Course'**!

This Month That Day

January 4, 1972

Hewlett-Packard introduces the HP-35

Hewlett-Packard introduces the HP-35, the first scientific handheld calculator and the final step in ending reliance on slide rules among scientists and students alike. The HP-35 was named for its 35 keys, weighed nine ounces, and sold for $395. One of the tests HP co-founder Dave Packard applied to the device was to throw it across his office and see if it still worked. It did.
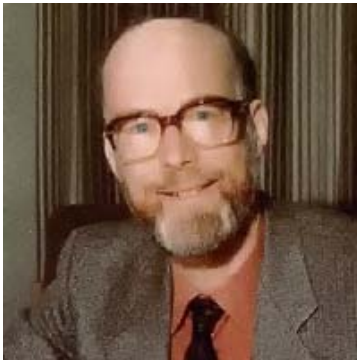
January 11, 1934

C.A.R. Hoare, the Developer of the Axiomatic Approach, is Born

Charles Antony Richard (Tony) Hoare is born. He received an MA from University of Oxford in 1959. During 1960 - 1968 he had worked at Elliot Bros. (London) Ltd. During 1968 - 1977 Hoare taught at the University of Belfast. Since 1977 he has become James Martin Professor of Computing at Oxford. He was a major contributor to the understanding of the logic of programs, and in particular was the developer of the Axiomatic Approach to program description. He received the 1980 ACM Turing Award and the 1990 Computer Society Pioneer Award.

January 15, 1986
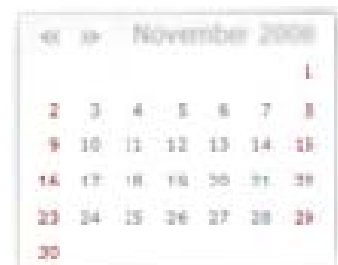
The National Science Foundation Opens the National Center for Supercomputer Applications (NCSA).

The National Science Foundation opens the National Center for Supercomputer Applications (NCSA) at the University of Illinois, a national "Center of excellence" for research into high-performance computing. Its most famous alumnus, Marc Andreesen, invented his Mosaic browser for the network known as the "World Wide Web" while a student there, an effort he later transformed into the Netscape browser company.

January 25, 1979

Robot Kills Auto Worker

Robert Williams of Michigan was the first human to be killed by a robot. He was 25 years old. The accident at the Ford Motor Company resulted in a $10 million dollar lawsuit. The jury deliberated for two-and-a-half hours before announcing the decision against Unit Handling Systems, a division of Litton Industries. It ordered the manufacturer of the one-ton robot that killed Williams to pay his family $10 million. The robot was designed to retrieve parts from storage, but its work was deemed too slow. Williams was retrieving a part from a storage bin when the robot's arm hit him in the head, killing him instantly. In the suit, the family claimed the robot had no safety mechanisms, lacking even a warning noise to alert workers that it was nearby.

Ramnit's Virus

A.Rama Priya II-B.Sc.CS

This article gives information about the Ramnit's Virus and Steps to prevent form that virus.

Ramnit's Financial Focus

Ramnit was first discovered in April 2010. But it's a major nuisance for corporate IT administrators. Symantec issued a report in July 2011 indicating that the Ramnit worm and its variants made up about 17 percent of all new malicious software infections.

"Ramnit started purely as a worm and only later added financial malware features. But this worm isn't new. It has been around for a while," how the latest hit made the Facebook account passwords available on a drop server for the botnet.

"Originally thought to be distributed via USB key, Ramnit is now using things like stolen Facebook credentials to spread,". "This is just another example of how end users are at risk from malware that puts sensitive data at risk, and yet another reason for organizations to consider applying a browser information security solution to protect data accessed within a Web session."

Seculert's researchers said the attack indicates hackers may be moving away from e-mail targeting.

"With the recent ZeuS Facebook worm and this latest Ramnit variant, it appears that sophisticated hackers are now experimenting with replacing the old-school email worms with more up-to-date social network worms,".

"As demonstrated by the 45,000 compromised Facebook subscribers, the viral power of social networks can be manipulated to cause considerable damage to individuals and institutions when it is in the wrong hands."

The Hackers' Motive

Security firm Seculert is taking credit for discovering the hack, which mostly targeted users in the United Kingdom and France. The Microsoft 📧 Malware Protection Center describes Ramnit as "a multi-component malware family which infects Windows executable as well as HTML files," and said its goal is to steal "sensitive information such as stored FTP credentials and browser cookies."

"The attackers behind Ramnit are using the stolen credentials to log-in to victims' Facebook accounts and to transmit malicious links to their friends, thereby magnifying the malware's spread even further,".

"In addition, cybercriminals are taking advantage of the fact that users tend to use the same password in various Web-based services (Facebook, Gmail, Corporate SSL VPN, Outlook Web Access, etc.) to gain remote access to corporate networks."

Virus:Win32/Ramnit.A

It is a detection for a virus that infects Windows executable files and HTML files, and spreads to removable drives. The virus attempts to open a backdoor and wait for instructions.

Symptoms

System changes

The following system changes may indicate the presence of this malware:

- The presence of the following files: <file_name>*Srv.exe*

Technical Information (Analysis)

When executed, the virus drops a file as "<file_name>*Srv.exe*" (for example, "mytestSvr.exe"), where <file_name> is the file name of the infected executable. The dropped file is then executed.

This file may be detected as Worm:Win32/Ramnit.A.

Spreads via…

Infects files

Virus:Win32/Ramnit.A also infects .HTML files with .HTML or .HTM extension. The infected .HTML or .HTM files may be detected as Virus:VBS/Ramnit.A.

Payload

Allows backdoor access / Connects to remote server

Virus:Win32/Ramnit.A creates a backdoor by connecting to a remote server. Using this backdoor, a remote attacker can instruct an affected computer to download and execute files.

See the description for Worm:Win32/Ramnit.A for more details on how the malware downloads and executes arbitrary files.

Injects code

The virus creates a default web browser process (which is invisible to users) and injects code to it. The infection and backdoor functionality occurs in the web browser process context, presumably for the purpose of bypassing a firewall.

Prevention

Take the following steps to help prevent infection on your computer:

- Enable a firewall on your computer.
- Get the latest computer updates for all your installed software.
- Use up-to-date antivirus software.
- Limit user privileges on the computer.
- Use caution when opening attachments and accepting file transfers.
- Use caution when clicking on links to web pages.
- Avoid downloading pirated software.
- Protect yourself against social engineering attacks.
- Use strong passwords.

Enable a firewall on your computer

Use a third-party firewall product or turn on the Microsoft Windows Internet Connection Firewall.

- How to turn on the Windows Firewall in Windows 7
- How to turn on the Windows Firewall in Windows Vista
- How to turn on the Windows firewall in Windows XP

Get the latest computer updates

Updates help protect your computer from viruses, worms, and other threats as they are discovered. It is important to install updates for all the software that is installed in your computer. These are usually available from vendor websites.

You can use the Automatic Updates feature in Windows to automatically download future Microsoft security updates while your computer is on and connected to the Internet.

- How to turn on Automatic Updates in Windows 7

- How to turn on Automatic Updates in Windows Vista
- How to turn on Automatic Updates in Windows XP

Use up-to-date antivirus software

Most antivirus software can detect and prevent infection by known malicious software. To help protect you from infection, you should always run antivirus software, such as Microsoft Security Essentials, that is updated with the latest signature files. For more information, see

http://www.microsoft.com/windows/antivirus-partners/.

Limit user privileges on the computer

Starting with Windows Vista and Windows 7, Microsoft introduced User Account Control (UAC), which, when enabled, allowed users to run with least user privileges. This scenario limits the possibility of attacks by malware and other threats that require administrative privileges to run.

You can configure UAC in your computer to meet your preferences:

- User Account Control in Windows 7
- User Account Control in Windows Vista
- Applying the Principle of Least Privilege in Windows XP
- More on User Account Control

Use caution when opening attachments and accepting file transfers

Exercise caution with email and attachments received from unknown sources, or received unexpectedly from known sources. Use extreme caution when accepting file transfers from known or unknown sources.

Use caution when clicking on links to web pages

Exercise caution with links to web pages that you receive from unknown sources, especially if the links are to a webpage that you are not familiar with, unsure of the destination of, or suspicious of. Malicious software may be installed in your computer simply by visiting a webpage with harmful content.

Avoid downloading pirated software

Threats may also be bundled with software and files that are available for download on various torrent sites. Downloading "cracked" or "pirated" software from these sites carries not only the risk of being infected with malware, but is also illegal. For more information, see 'The risks of obtaining and using pirated software'.

Protect yourself from social engineering attacks

While attackers may attempt to exploit vulnerabilities in hardware or software to compromise a computer, they also attempt to exploit vulnerabilities in human behavior to do the same. When an attacker attempts to take advantage of human behavior to persuade the affected user to perform an action of the attacker's choice, it is known as 'social engineering'. Essentially, social engineering is an attack against the human interface of the targeted computer. For more information, see 'What is social engineering?'.

Use strong passwords

Attackers may try to gain access to your Windows account by guessing your password. It is therefore important that you use a strong password – one that cannot be easily guessed by an attacker. A strong password is one that has at least eight characters, and combines letters, numbers, and symbols. For more

information, see

http://www.microsoft.com/protect/yourself/password/create.mspx.

Recovery

To detect and remove this threat and other malicious software that may be installed in your computer, run a full-system scan with an up-to-date antivirus product such as the following:

- Microsoft Security Essentials
- Microsoft Safety Scanner

10 Tips To Tighten Network Security

Anand II-B.Sc.CS

1. Get a Firewall

    The first step for any attacker is to find network vulnerabilities by scanning for open ports. Ports are the mechanisms by which your small business network opens up and connects to the wider world of the Internet. A hacker sees an open port to as an irresistible invitation for access and exploitation. A network firewall locks down ports that don't need to be open.

    A properly configured firewall acts as the first line of defense on any network. The network firewall sets the rules for which ports should be open and which ones should be closed. The only ports that should be open are ports for services that you need to run.

If you're running a Web or mail server on your network, the proper ports for those services need to be open. If you're *not* running those services directly on your own network, say for example you're hosting your website and email with a service provider, you shouldn't have your Web server and email ports open.

Typically, most small business routers include some kind of firewall functionality, so chances are if you have a router sitting behind your service provider or DSL/cable modem, you likely have a firewall already.

To check to see if you already have firewall capabilities at the router level in your network, log into your router and see if there are any settings for Firewall or Security. If you don't know how to log into your router on a Windows PC, find your Network Connection information. The item identified as **Default Gateway** is likely the IP address for your router.

There are many desktop firewall applications available today as well, but don't mistake those for a substitute for firewall that sits at the primary entry point to your small business network. You should have a firewall sitting right behind where your network connectivity comes into your business to filter out bad traffic before it can reach any desktop or any other network assets.

2. Password Protect your Firewall

Great you've got a firewall, but it's never enough to simply drop it into your network and turn it on. One of the most common mistakes in configuring network equipment is keeping the default password.

It's a trivial matter in many cases for an attacker to identify the brand and model number of a device on a network. It's equally trivial to simply use Google to obtain the user manual to find the default username and password.

Take the time to make this easy fix. Log into your router/firewall, and you'll get the option to set a password; typically you'll find it under the **Administration** menu item.

3. Update Router Firmware

Outdated router or firewall firmware is another common issue. Small business network equipment, just like applications and operating systems, needs to be updated for security and bug fixes. The firmware that your small business router and/or firewall shipped with is likely out-of-date within a year, so it's critical to make sure you update it.

Some router vendors have a simple dialogue box that lets you check for new firmware versions from within the router's administration menu. For routers that don't have automated firmware version checking, find the version number in your router admin screen, and then go to the vendor's support site to see if you have the latest version.

4. Block Pings

Most router and firewalls include multiple settings that help to determine how visible your router and/or firewall will be to the outside world. One of the simplest methods that a hacker uses to find a network is by sending a ping request, which is just a network request to see if something will respond. The idea being if a network device responds, there is something there that the hacker can then explore further and potentially exploit.

You can make it harder for attackers by simply setting your network router or firewall so that it won't respond to network pings. Typically the option to block network pings can be found on the administration menu for a firewall and/or router as a configuration option.

5. Scan Yourself

One of the best ways to see if you have open ports or visible network vulnerabilities is to do the same thing that an attacker would do -- scan your network.

By scanning your network with the same tools that security researchers (and attackers) use, you'll see what they see. Among the most popular network scanning tools is the open source nmap tool). For Windows users, the Nmap download now includes a graphical user interface, so it's now easier than ever to scan your network with industry standard tools, for free. Scan your network to see what ports are open (that shouldn't be), and then go back to your firewall to make the necessary changes.

6. Lock Down IP Addresses

By default, most small business routers use something called DHCP, which automatically allocates IP addresses to computers that connect to the network.

DHCP makes it easy for you to let users connect to you network, but if your network is exploited it also makes it easy for attackers to connect to your network. If your small business only has a set number of users, and you don't routinely have guest users plugging into your network, you might want to consider locking down IP addresses.

On your router/firewall admin page, there is likely a menu item under network administration that will let you specify IP addresses for DHCP users. You'll need to identify the MAC address to which you can then assign an IP (to find your MAC address read What's a MAC Address, and How Do You Find It?).

The benefit of assigning an IP is that when you check your router logs, you'll know which IP is associated with a specific PC and/or user. With DHCP, the same PC could potentially have different IPs over a period of time as machines are turned on or off. By knowing what's on your network, you'll know where problems are coming from when they do arise.

7. Use VLANs

Not everyone in your small business necessarily needs access to the same network assets. While you can determine and set access with passwords and permissions on applications, you can also segment your network with VLAN or virtual LANs.

VLANs are almost always part of any business class router and let you segment a network based on needs and risks as well as quality of service requirements. For example, with a VLAN setup you could have the finance department on one VLAN, while sales is on another. In another scenario, you could have a VLAN for your employees and then setup another one for contract or guest workers.

Mitigating risk is all about providing access to network resources to the people who are authorized and restricting access to those who aren't.

8. Get an IPS

A firewall isn't always enough to protect a small business network. Today's reality is that the bulk of all network traffic goes over Port 80 for HTTP or Web traffic. So if you leave that port open, you're still at risk from attacks that target port 80.

In addition to the firewall, Intrusion Prevention System (IPS) technology can play a key network security role. An IPS does more than simply monitor ports; it monitors the traffic flow for anomalies that could indicate malicious activity.

IPS technology can sometimes be bundled in on a router as part of a Unified Threat Management (UTM) device. Depending on the size of your small business network, you might want to consider a separate physical box.

Another option is to leverage open source technologies running on your own servers (or as virtual instances if you are virtualized). On the IPS side, one of the leading open source technologies is called SNORT (which is backed by commercial vendor Sourcefire.

9. Get a WAF

A Web Application Firewall (WAF) is specifically tasked with helping to protect against attacks that are specifically targeted against applications. If you're not hosting applications within your small business network, the risks that a WAF helps to mitigate are not as pronounced.

If you are hosting applications, WAF in front of (or as part of) your Web server is a key technology that you need to look at. Multiple vendors

including Barracuda have network WAF boxes. Another option is the open source [ModSecurity](#) project, which is backed by security vendor Trustwave.

10. Use VPN

If you've gone through all the trouble of protecting your small business network, it makes sense to extend that protection to your mobile and remotely connected employees as well.

A VPN or [Virtual Private Network](#) lets your remote workers log into your network with an encrypted tunnel. That tunnel can then be used to effectively shield your remote employees with the same firewall, IPS and WAF technologies that local users benefit from.

A VPN also protects your network by not letting users who may be coming in from risky mobile environments connect in an insecure fashion.

How to Recover Deleted Files from Windows and MAC

S.Prema, Lecturer in Dept of CS, KSRCAS

If we accidentally deleted our files from the Hard disk, it can be recovered easily by using the following ways.

It is possible to recover the deleted files back from the hard disk (even after you have Shift+Deleted) provided you act as soon as you realize that the files are deleted and use the best deleted files recovery software.

Working process of File Recovery

When we delete a file from your computer, (or even from the recycle bin) the file is not actually deleted. Unlike what most people think, the file is

not permanantly deleted or dropped from your hard disk even if you have deleted them from the recycle bin.

Let's take up a small example of a book containing 50 pages. Suppose when you delete the page 25, assume that only the entry in the index which points to the page 25 is deleted and not actually the page 25 itself. Likewise, when you delete a file from your hard disk, only the pointer which points to this file is removed and not actually the file itself. This file still exists intact and is 100% possible to recover it back in the original condition. In this condition, the file becomes invisible and hence appears to have been deleted.

Recovering the deleted files 100% back in the original condition is very much dependent on the efficiency of the Data Recovery software you use. So, it is necessary to make a right choice when it comes to the selection of file recovery software.

Today, there exists hundreds of data recovery tools and softwares on the market which boast to recover 100% of all the deleted files back in the original condition. But in reality, most of these softwares are neither effective nor capable of recovering your files back. So, when it comes to Data Recovery, two important following software have been recommend

1. Stellar Phoenix Data Recovery (for Windows)

2. Stellar Phoenix Mac Data Recovery (for Mac)

Stellar Phoenix is one of the best company specializing in deleted files recovery services and solutions since 1993. Stellar's **Data Recovery Solutions** encompasses a wide range of software for almost any data loss situation ranging

from accidental formats to virus attacks to software malfunctions. Hence Stellar provides the best tools to recover deleted files with over 1,000,000 satisfied customers across 137 countries.

Chances of Recovering the Files Back

Since the operating system doesn't immediately re-use the space from the deleted files, it is most certainly possible to recover the deleted files back in 100% original condition. It may take up a very long time for those files to be completely deleted since the modern hard disks have ample capacity. Hence the chances are too less that the space from the deleted files are re-used immediately.

So, it is really worth to try out the file recovery softwares like **Stellar Data Recovery for Windows** or **Stellar Data Recover for Mac**. Some files are reported to have been recovered even after years of its deletion. However, for the best results, it is recommended that you use the file recovery software as immediately as possible to recover your deleted files.

Recovering the Deleted Files

In order to recover the deleted files all you need to do is perform a scan (search) for the deleted files using a File Recovery Software. There is no manual way to recover the deleted files.

The Phoenix Data Recovery software performs a thorough scanning of the hard disk sector by sector and will locate the existence of deleted files to restore them back in the original condition. It is the only software that supports 185 popular file types including Windows NT Registry, JPEG, MP4, GIF, BMP and MS Word files. The software offers rich graphical support and incorporates advanced

scanning methods to completely scan and recover deleted files from your hard drive. With this recovery software, it is possible to

- Recover FAT16, FAT32, VFAT, NTFS, and NTFS5 file system partitions
- Recover deleted emails
- Recover deleted documents
- Recover deleted photos
- Recover deleted music
- Formatted Hard-Drive recovery
- Recover files from USB Drives, CDs, DVDs and memory cards.

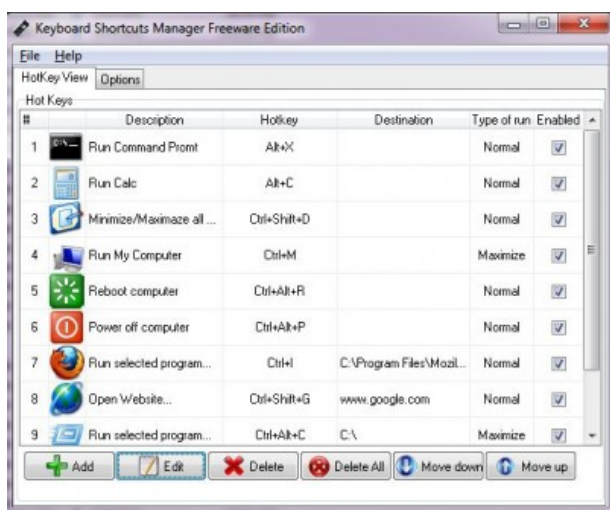# Create and manage the computer shortcuts in windows
C.Gnanasekaran I B.Sc CS-A

Although we have couple of input methods for using the computer, I prefer the keyboard most as using the **shortcuts** I can save lot of time. Imagine yourself clicking the Chrome icon to open the browser, then typing a website and hitting Go, you can just press the shortcut keys to do all this for you.
By default Windows have some preset shortcuts that can be used like Ctrl + C etc which definitely save lot of time for us, but what if we wish to create some shortcuts for ourselves that suits our working style most? Yes this can be done too, with the help of a tool called **Keyboard Shortcuts**
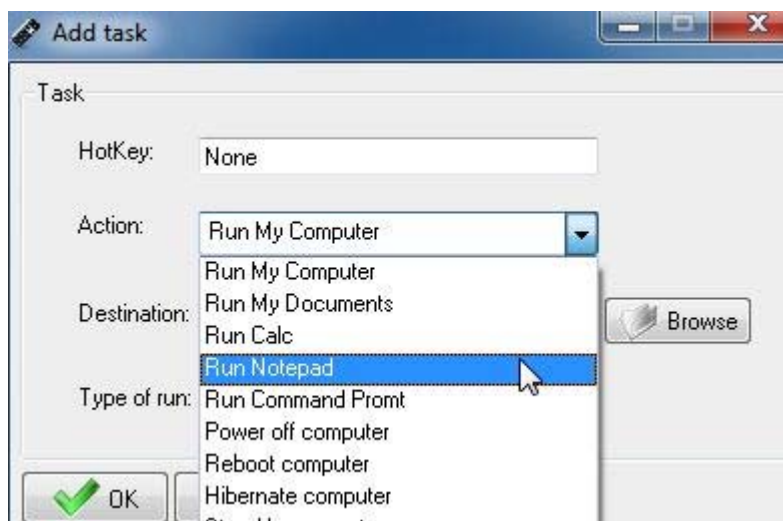
Manager.

Keyboard Shortcuts Manager is a powerful easy-to-use freeware program for creating and managing keyboard shortcuts for some system action. Using this tool we can also **create** custom keyboard **shortcuts** for some programs and functions that we usually do daily which includes Open My Computer, My Documents, Power off computer, Restart computer, Hibernate, opening Internet addresses, folders, documents, starting applications, open/close your CD-ROM, Close the selected program and more.

The tool also has list of pre-saved list of shortcuts that can be used for running the desired tasks. If you wish to add your own custom keyboard shortcut, then you just need to click Add button, give it a shortcut key, desired action or the destination to be opened. The key will be saved in the list and you can access the desired action pressing the shortcut anytime. You can edit or delete a saved shortcut and can enable or disable it too in case you don't wish to delete it from the list. The tool is a freeware and works well on all versions of Windows both 32 and 64 bits.

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