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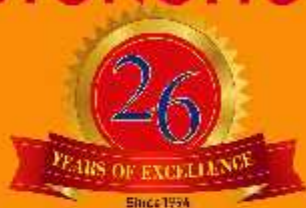
CyberCrewS

# IT UNLIMITED

# MAGAZINE

ISSUE 77

# A BIMONTHLY BONANZA

## OCT - NOV ' 19

### DBT SPONSORED STAR DEPARTMENT

## DEPARTMENT OF COMPUTER SCIENCE (UG)

## CYBER CREWS ASSOCIATION

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TÜV SUD
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# *Editorial Board*

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# THOUGHTS OF THE ISSUE

## REMEMBER



## FREE ADVICE



5 Eye Health Tips for Today's Digital Society

Adjust screen position below eye level

Adjust computer and workplace lighting.

Prevent dry eye by blinking at the end of each line you read.

Consider anti-reflective lenses or blue-blocker glasses to minimize eye strain.

20/20/20 Look 20 feet away from your screen every 20 minutes for 20 seconds.

## JUST FOR FUN



She can't cook, but knows how to order online

## MESSAGE



"YOU ARE ONLY CONFINED BY THE WALLS YOU BUILD YOURSELF"

**STAFF EDITOR**

# ANDROID 10

Google released the first beta of Android 10 under the preliminary name "**Android Q**" on March 13,2019, exclusively on their Pixel phones, including the first-generation Pixel and Pixel XL devices where support was extended due to popular demand. Having been guaranteed updates only up to October 2018, the first-generation Pixel and Pixel XL devices received version updates to Android 10. The Pixel 2 and Pixel 2 XL were included, after being granted An extended warranty period which guaranteed Android version updates for them for at least 3 years from when they were first available on the Google Store. A total of six beta or release candidate versions were released before the final release. The beta program was expanded with the release of Beta 3 on May 7, 2019, being made available on 14 partner devices from 11 OEMs; twice as many devices compared to Android Pie's beta. Beta access was removed from the Huawei Mate 20 Pro on May 21, 2019 due to U.S. government sanctions, but was later restored on May 31. Google released Beta 4 on June 5, 2019 with the finalized Android "Q" APis and SDK (API Level 29) Dynamic System Updates (DSU) was also included in Beta 4. The Dynamic System Update allows Android "Q" devices to temporarily install a Generic System Image (GSI) Once users decide to end testing the chosen GSI image, they can simply reboot their device and boot back into their normal device's Android version. Google released Beta 5 on July 10, 2019 with the final API 29 SDK as well as the latest optimizations and bug fixes.

## ANDROID 10 HOMESCREEN



On August 22, 2019, it was announced that Android "Q" would officially be branded as Android 10, ending the practice of naming major versions after desserts. Google stated that these names were not "inclusive" to international users (due either to the aforementioned foods not being internationally known, or being difficult to pronounce m some languages). Android VP of engineering Dave Burke did reveal during a podcast that, in addition, most desserts beginning with "Q" were "exotic", and that he personally would have chosen "queen cake". He also noted that there were references to "qt"—an abbreviation of "quince tart", within internal files and build systems relating to the release. The statue for the release is likewise the numeral 10, with the Android robot logo.

(Which, as part of an accompanying rebranding, has also been changed to only consist of a head) resting inside the numeral "0"

Android 10 was officially released on September 3, 2019 for supported Google Pixel devices. The third-party Essential Phone and Redmi K20 Pro also received updates in selected markets the same day. The OnePlus 7T was the first device with Android 10 preinstalled. Samsung released family, with the update. Android 10 with One UI 2.0 on November 27, 2019 in Germany for the Galaxy S 10 other countries in the following days, making this the earliest Samsung has delivered the latest version of Android to one of their devices from the original release, beating the previous record of Android Pie getting released for the Galaxy S9 family by one month. In October 2019, it was reported that Google's certification requirements for Google Mobile Services will only allow Android 10 based builds to be approved after January 31, 2020.
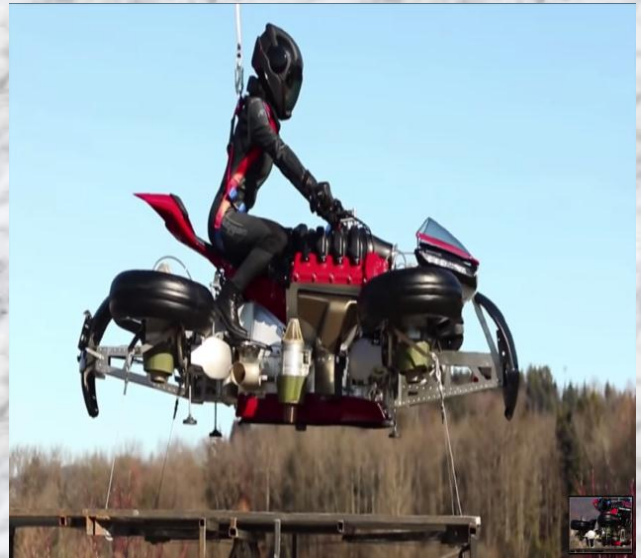
Android 10 introduces a revamped full-screen gesture system, with gestures such as swiping from either side edge of the display to go back, swiping up to go to the home screen, swiping up and holding to access Overview, swiping diagonally from a bottom corner of the screen to activate the Google Assistant, and swiping along the gesture bar at the bottom of the screen to switch apps. An API can be used by apps to opt out of handling a back gesture within specific areas of the screen, a sensitivity control was added for adjusting the size of the target area to activate the gesture, and Google later stated that the drawer widget would support being "peeked" by long-pressing near the edge of the screen, and then swiped open. The traditional three-key navigation system used since Android "Honeycomb" remains supported as an option.



Per Google certification requirements, OEMs are required to support Android 10's default gestures and three-key navigation. OEMs are free to add their own gestures alongside them. However, they must not be enabled by default, they must be listed in a separate area one level deeper than other navigation settings, and they cannot be promoted using notifications. The two-key gesture navigation system used on Android Pie is deprecated, and may not be included on devices that ship with Android 10.



**ANDROID Q EMBLEM**

# Flying Bikes

This French custom auto/moto maker has a long history of building wacky and bizarre one-offs and short run vehicles, but the Moto Volante flying motorcycle is his most ambitious yet.It looks like an evolution of Lazareth's own mind-boggling LM-847, a tilting four-wheeler built around a fire-breathing 470-horsepower Maserati engine. But the Moto Volante ups the ante by putting a 96,000-rpm JetCat jet turbine in the hub of each wheel and adding hydraulic actuators that tilt the four wheels out and up, forming a configuration something like a jet-powered quadcopter. Two extra jets can be added near the middle of the chassis to handle more weight.



You can ride the thing on the road, according to Lazareth, then when you've had it with traffic pull over to a suitable launch area. Pressing a button converts the bike from ride to fly mode and, after waiting about 60 seconds for the jets pre-heat, you can lift off and leave the gridlock behind.

It's truly impressive how Lazareth has designed and executed the bike's unique fly/ride power arms. Each of the rear wheels needs to be driven and braked for on-road use, and the front wheels need steering and braking capability – all while the main wheel hubs are built around jet turbines thick enough to lift this hulking beast of a thing, with a ballistic parachute mounted in each wheel as well in case things go wrong.

Since there are no chains leading back from that monster Maserati powerplant, it appears that the bike runs on electric drive to the two rear wheels in road mode. Indeed, we suspect there may not be a monster Maserati powerplant in there at all any more, with the giant V8 cylinders and plastic airbox cover possibly being faked up purely for appearance in the Moto Volante. Certainly, an engine that big would add significant weight, and keeping weight down is a challenge for any aircraft.

Lazareth has hover-tested the bike on tethers to a height of 1 m (3.3 ft), with his brave and lightweight girlfriend Vanessa at the helm. Check out the video below.

The Lazareth team will be bringing the Moto Volante to Gitex in Dubai this October, and will launch pre-orders there at a price of €496,000 (approx. US$560,000). La Moto Volante joins Jetpack Aviation's Speeder as the only two jet-powered flying motorcycle concepts we've seen to date.



Mind you, the Speeder is much more of a single-purpose vehicle without any road capability, and as such we'd expect its flight dynamics to be superior and less compromised. But Lazareth's got a full size prototype in the air that's also road-certified, so congratulations to the Lazareth team for building what must be acknowledged as a ground-breaking multi-mode vehicle.Then German Jetcat turbines in each wheel fire directly downward to elevate the bike, like a Harrier Jump Jet or a manned drone.

While the short hover may not be much, it's a start.And it is not that this will be the first flying motorcycle nor the first commercially available.



Only five copies of the LM 496 will be ever made. The motorcycles available to order are the numbers # 002, # 003, # 004 and # 005. And each of these flying machines can be picked up if you are ready to foot almost half a million dollars of your worth.

Concealed within the composite body is a kerosene tank with enough fuel capacity to allow the LMV 496 hover above the ground for a good ten minutes. While in flight, the dashboard displays essential flight information such as speed, position, altitude, etc., and joysticks on either side of the handlebar control this rush of ecstasy. The rest of this maniac still carries the LM 847 design elements like the kevlar carbon composite bodywork, Italian rear loop, carbon wheel covers, TFX Suspension Technology, a digital dash, driving position, light steering, Rizoma accessories, braking, and the undercarriage technology.

# MicroSoft Windows Server

Microsoft Windows Server 2019 brings a number of new capabilities plus updates and performance improvements to its server operating system. The question for most IT administrators will be whether to upgrade existing systems now or wait.Microsoft Windows Server 2019 is the latest iteration of Microsoft's venerable operating system (OS), and it brings to the table a laundry list of new and improved capabilities and features. This release of Windows Server should especially appeal to IT professionals because of the huge number of functional scenarios it can address. While Windows Server isn't seen on customer premises as much anymore, it's still the most popular server OS, and that's across both on-premises data centers as well as in public clouds where it's widely used in (IaaS) implementations. That's why it makes sense that Microsoft is focusing on deepening the relationship between Windows Server and the Microsoft Azure cloud service, evident in this iteration through what's called the "Azure Hybrid Benefit."

To qualify for this benefit, you must be a Microsoft Software Assurance customer with a current contract in place. The goal of this benefit is to make it financially attractive to move your virtual machine (VM) workloads up to Microsoft Azure. We'll look at some of the other features added in this release that address the hybrid cloud model as well.Windows Server 2019 comes in several different flavors to include the most recently released Microsoft Hyper-V Server 2019.

Windows Server 2019 Essentials rounds out the current SKU targeted at small businesses with up to 25 users and 50 devices.Pricing differences are significant between the Datacenter version at $6,155 and the other two SKUs. Standard retails for $927 per license while Essentials will cost you $501. What you don't see here is the surcharge for each CPU core required for both Datacenter and Standard editions.

If you plan on hosting more than two VMs on a Standard edition license, then you will need additional Operating System Environment (OSE) licenses. The Datacenter edition supports an unlimited number of VMs, meaning you pay a larger fee upfront but you can provision as many Windows Server VMs as the system will support.



## Installation and Configuration

The installation process for Windows Server hasn't changed in quite some time. You boot from either a network image or Universal Serial Bus (USB) device and walk through a few installation steps. Most server vendors have tools to help make this process even easier. HPE offers is tool delivered on a USB key to help automate and simplify the process as well.

For this purpose, Microsoft's Azure lets you create a VM from one of their base templates, which is quick once you know what you're doing and what you need the VM to do_(AWS) is likely the second most popular destination for Windows Server instances and, while it's not quite as easy to deploy an instance there, it's generally done by creating a VM from an ISO, so it's still fast.Additionally, with Windows 10 version 1809 as well as Windows Server 2019, Microsoft has introduced the ability to download an ISO containing all Features on Demand (FOD) to make it easier to install for disconnected systems. This would include most server systems sitting in a data center and not directly connected to the internet. These are typically installed by using the DISM command from either a command prompt or PowerShell. OpenSSH is an example of a self-contained FOD, which is distributed in a single .CAB file.



## Containers

Speaking of containers, they remain one of the most talked about features in both Windows Server and in the cloud. Microsoft has established a close working relationship with Docker and continues to innovate around the container ecosystem. One of those innovations coming to future versions of Windows 10, and presumably Windows Server, will use the Windows Subsystem for Linux (WSL) to run Linux containers as opposed to a Hyper-V VM.Currently, you will need to install the full Docker Enterprise Edition to run Linux VMs. If you already installed the Community Edition with the commands mentioned earlier, then you will need to remove it and install the Enterprise Edition. The following commands will do the trick: When that finishes, you'll be ready to launch Linux containers. Don't try to do this on a Windows Server Hyper-V system as the containers role won't work on that SKU. Group Managed Service Accounts (also known as gMSA) provides a way to give permissions to a container and allow it to run with a prescribed domain.
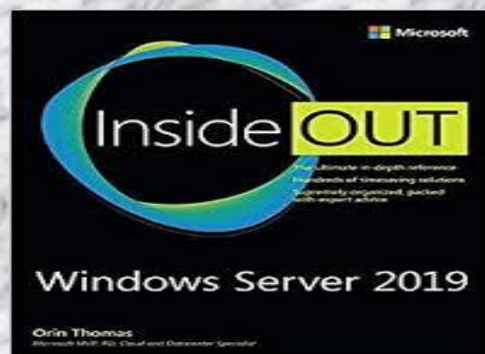


## Management Tools

Administrators have a plethora of options when it comes to getting their job done. If you're a command line wizard, then you'll probably turn to PowerShell as it's become the administrative tool of choice for many since its introduction in 2006. If a graphical user interface (GUI) is more your speed, then rest assured, you still have options. Server Manager has been around since Windows Server 2012 and has a layout familiar to most IT admins.

**Do you know?** A cryptocurrency-mining botnet is infecting computers with an image of American singer Taylor Swift to spread its malware.

07

# Samsung Neon



Neon's super realistic digital people are real. Well, sort of. The mysterious company, emerging from the Samsung Technology and Advanced Research Labs (aka STAR Labs), debuted late Monday at CES 2020 here in Las Vegas. It described its technology, also called Neon, as "a computationally created virtual being that looks and behaves like a real human, with the ability to show emotions and intelligence.

"Basically, Neon makes video Chabot that look and act like real people. Neons aren't all-knowing smart assistants, androids, surrogates or copies of real humans, the company said in an FAQ shared with reporters. They can't tell you the weather or how old Abraham Lincoln was when he died.



"Neons are not AI assistants," the company said. "Neons are more like us, an independent but virtual living being,
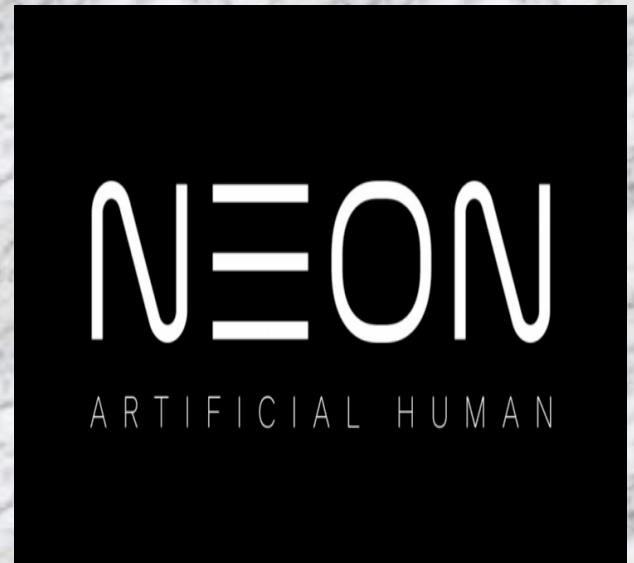
who can show emotions and learn from experiences. Unlike AI assistants, Neons do not know it all, and they are not an interface to the internet to ask for weather updates or to play your favourite music."Instead, they're designed to have conversations and behave like real humans. They form memories and learn new skills but don't have a physical embodiment, at least not now.

Neons can help with "goal-oriented tasks or can be personalized to assist in tasks that require human touch." They can act as teachers, financial advisers, health care providers, concierges, actors, spokespeople or TV anchors.While they can borrow traits of real people and have a similar look and voice, they can't be exact copies of existing humans, Neon said. And each Neon is unique, with its own personality.

Instead, they're designed to have conversations and behave like real humans. They form memories and learn new skills but don't have a physical embodiment, at least not now. Neons can help with "goal-oriented tasks or can be personalized to assist in tasks that require human touch." They can act as teachers, financial advisers, health care providers, concierges, actors, spokespeople or TV anchors.

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"There are millions of species on our planet, and we hope to add one more," Pranav Mistry, Neon CEO and head of STAR Labs, said in a press release. "Neons will be our friends, collaborators and companions, continually learning, evolving and forming memories from their interactions. "Before CES 2020 even started, Neon had generated some of the biggest buzz for the world's biggest tech show.

That came despite -- or maybe because of -- the fact that no one really knew what it was. Neon tweeted out several teasers after launching its social media accounts in mid-December, hinting at something it called "an 'Artificial.'" The only concrete fact known about Neon was that it was run by Mistry, the long-time Samsung research exec who in October was named CEO of STAR Labs.

Neon has a social media presence a mile wide and just a few GIFs deep. There are Twitter, Facebook, and Instagram accounts for Neon, all sharing the same vague and extremely futuristic-looking images. Posts pose questions like "Have you ever met an 'artificial'?" and tease technology called "Core R3," which stands for "reality, real time, responsive." They also make clear that, whatever Neon is, it has nothing to do with Samsung's AI assistant Bixby. Thanks to advances in AI and CGI, digital human avatars have certainly become increasingly lifelike, but they're functionally very limited.
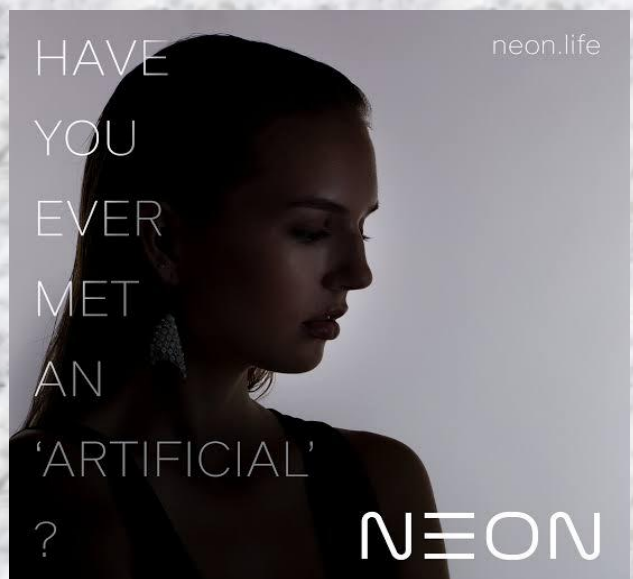
# TOR Browser

Tor is free and open-source software for enabling anonymous communication. The name is derived from an acronym for the original software project name "The Onion Router".
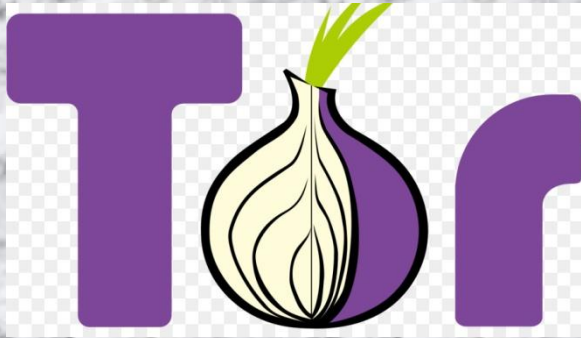


Tor directs Internet traffic through a free, worldwide, volunteer overlay network consisting of more than seven thousand relays to conceal a user's location and usage from anyone conducting network surveillance or traffic analysis. Using Tor makes it more difficult to trace Internet activity to the user. This includes "visits to Web sites, online posts, instant messages, and other communication forms".

Tor's intended use is to protect the personal privacy of its users, as well as their freedom and ability to conduct confidential communication by keeping their Internet activities unmonitored.Tor does not prevent an online service from determining when it is being accessed through Tor. Tor protects a user's privacy, but does not hide the fact that someone is using Tor. Some websites restrict allowances through Tor.

For example, Wikipedia blocks attempts by Tor users to edit articles unless special permission is sought.Onion routing is implemented by encryption in the application layer of a communication protocol stack, nested like the layers of an onion. Tor encrypts the data, including the next node destination IP address, multiple times and sends it through a virtual circuit comprising successive, random-selection Tor relays. Each relay decrypts a layer of encryption to reveal the next relay in the circuit to pass the remaining encrypted data on to it. The final relay decrypts the innermost layer of encryption and sends the original data to its destination without revealing or knowing the source IP address. Because the routing of the communication was partly concealed at every hop in the Tor circuit, this method eliminates any single point at which the communicating peers can be determined through network surveillance that relies upon knowing its source and destination.

An adversary may try to de-anonymize the user by some means. One way this may be achieved is by exploiting vulnerable software on the user's computer.



Fig 1. TOR Circuit
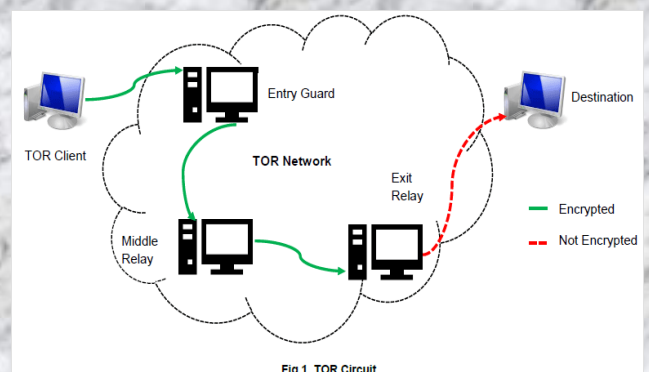
The NSA had a technique that targets a vulnerability – which they codenamed "Egotistical Giraffe" – in an outdated Firefox browser version at one time bundled with the Tor package and, in general, targets Tor users for close monitoring under its X Key score program.
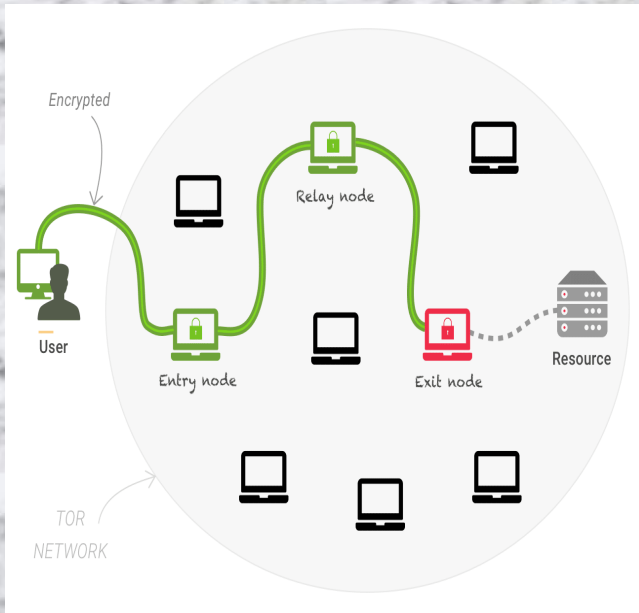


Attacks against Tor are an active area of academic research which is welcomed by the Tor Project itself. The bulk of the funding for Tor's development has come from the federal government of the United States, initially through the Office of Naval Research and DARPA.

**Operations:**

Tor aims to conceal its users' identities and their online activity from surveillance and traffic analysis by separating identification and routing. It is an implementation of onion routing, which encrypts and then randomly bounces communications through a network of relays run by volunteers around the globe.

These onion routers employ encryption in a multi-layered manner (hence the onion metaphor) to ensure perfect forward secrecy between relays, thereby providing users with anonymity in network location.

That anonymity extends to the hosting of censorship-resistant content by Tor's anonymous onion service feature. Furthermore, by keeping some of the entry relays (bridge relays) secret, users can evade Internet censorship that relies upon blocking public Tor relays.

Because the IP address of the sender and the recipient are not both in clear text at any hop along the way, anyone eavesdropping at any point along the communication channel cannot directly identify both ends. Furthermore, to the recipient it appears that the last Tor node (called the exit node), rather than the sender, is the originator of the communication.
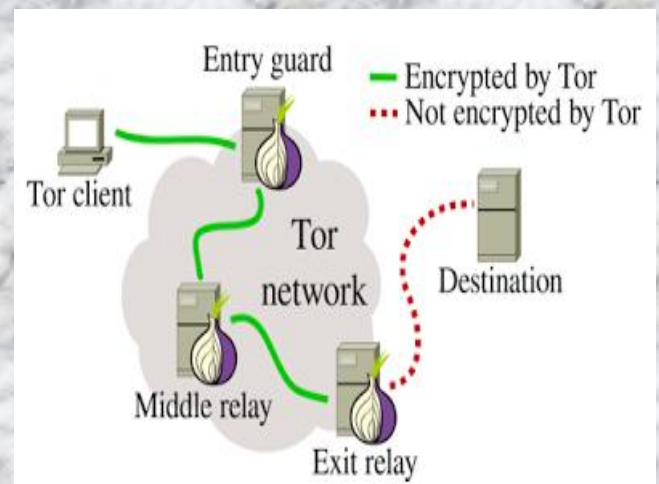
# # LEARN A TOOL-RECUVA

Recuva is a freemium app that helps recover and restore deleted files files on your Windows machine. It can recover files of all types - pictures, music, documents, videos, emails and more, even if it's been some time since they were lost. Recuva can also be used to help if you've lost something after reformatting a drive a drive, which is no mean feat.

Recuva is a handy Windows utility that allows you to recover lost and deleted files from pretty much any corner of your computer. It's a freemium program, which means you can use this basic version without restriction. For extra recovery power, priority support, and virtual hard drive support, you'll have to upgrade. Recuva portable is also available, which is perfect if you're helping others with their file recovery problems. Unfortunately, there doesn't seems to be Recuva for Mac.

Downloading and installing this file recovery program is very easy. The download and installation are quick and don't present any complicated options or questions.

You may, however, want to hit the customize button during the installation process - this will allow you to choose if you want Recuva to open on start-up or to hang around in the app tray.

**How do you use Recuva?**

Using Recuva is very easy. When you decide to scan, the app will ask you where you want to scan and what you're looking for. If you know the answer to either of these, perfect, but if not, don't worry - you can just scan everything and see what it throws up. Once the scan has been completed, it will present you with a list of all the recoverable items.

Recuva will also tell you what has happened to the file since you deleted it, for example, if it has been overwritten.If you find the file you're looking for and it seems to be recoverable, hit Recover, and Recuva will do what it can.

You pick a place to save the recovered file (Recuva seems to suggest that chances for recovery are higher if you save the recovered file onto a different drive to the one Recuva is installed on) and, if successful, you'll have your file back.Here green button refers to recoverable and red to indicate non-recoverable files.A practical app that does one job well.

There's nothing glamorous or cool about Recuva, but it's a solid little app that recovers deleted files for free and, for that, we salute it. It's really got a lot going for it - it's easy to use (even if you're not at all technically inclined), it walks you through all steps with a wizard, it's pretty good (but not infallible) at recovering files, doesn't hide the received files behind a paywall and, finally, has lots of good help and advice online.
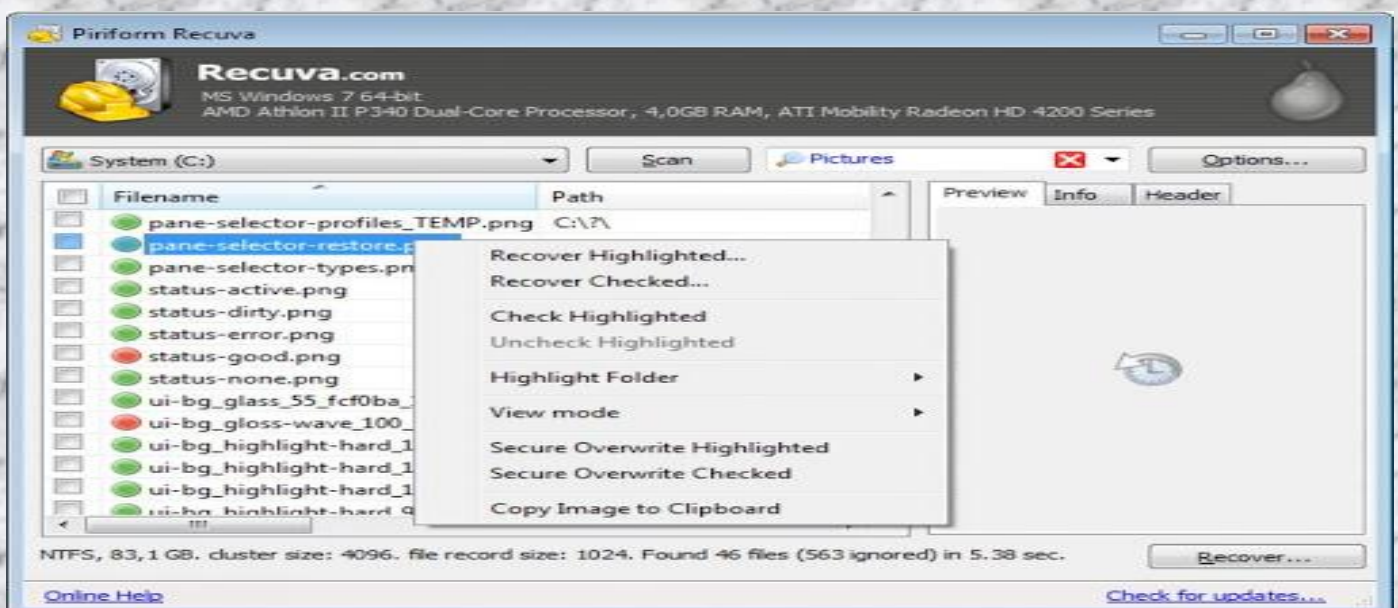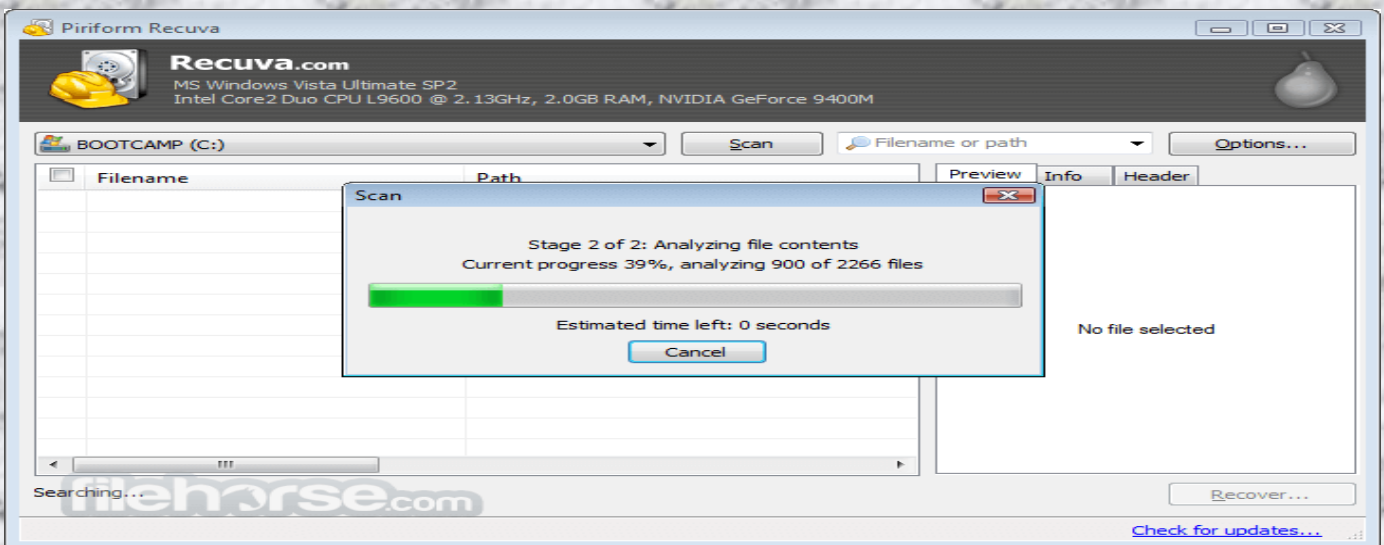






**Showing the related files. Here green button refers to recoverable and red to indicate non-recoverable files.**

# @REVIEW BOX-MX PLAYER

It is a global offline video player and OTT streaming provider, created by J2 Interactive and owned by Times Internet, the digital media division of Times Group. It has a base of 350+ million users in India.

## Rename video:

When you click and hold a video to highlight it, you will be provided with different options to use.
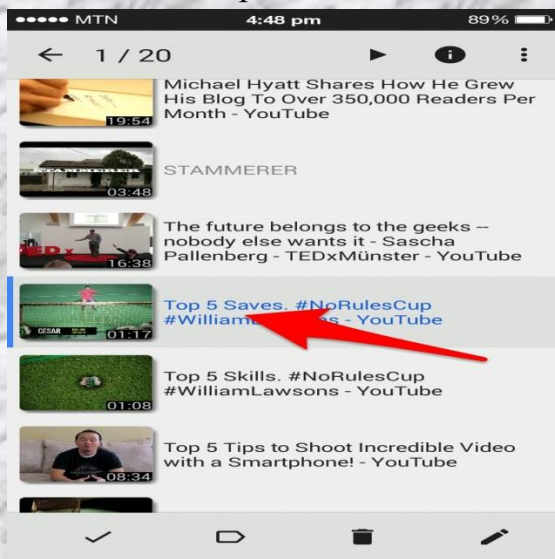


To rename a video go to the bottom right corner and click the pencil like icon, rename and click Ok.

When you rename the video here it will rename in your device and not only the player. You can also highlight multiple video and click play , the play would only play those videos highlighted.

## Hide folders

You can hide folders in MX Player by marking the folder, then click the top right corner and select Hide. But it would only be hidden in MX Player and not on your device. To unhide the folder go to Settings then to Lists and select Folder, mark the folder you have hidden and click Remove

## Change Theme and Styles

You can customize your MX Player to look different from that of your friends. One of the ways is to change the theme and style.

Go-to Settings and click List then select Theme and change the colour to whatever colour you want. To change style go to Settings again and select Player then click on Style and change it to whatever but I would choose Inverse.
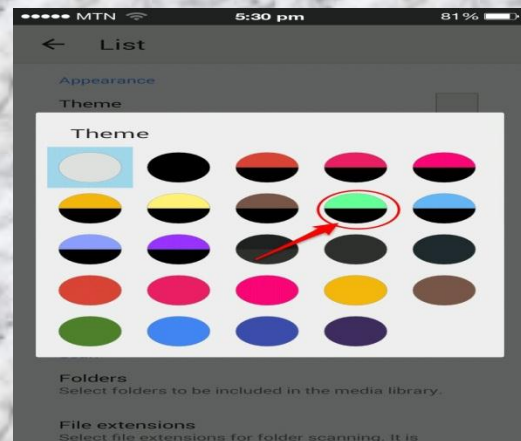


## Add Subtitles

If you want to add the subtitle to MX player. Click the Option on the top right corner - select Subtitle - then click Open and choose the subtitle you would like to add.

# ! MIND PUNCH

1. Federation cup, world cup, allywyn international trophy and challenge cup are awarded to winners of?

2. Which playing card replace question mark?


Which playing card replaces question mark?
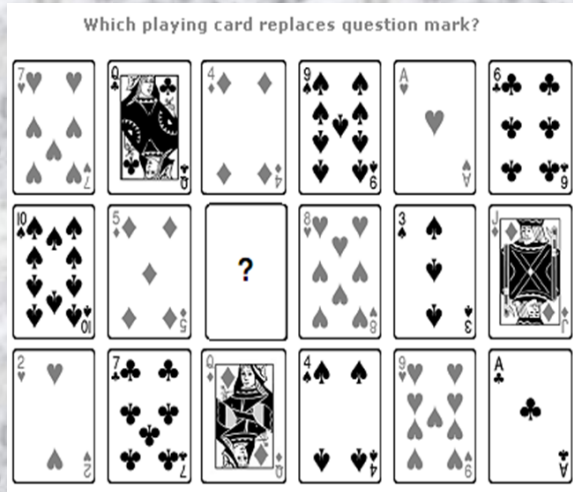
3. If a plane crashes on the border between the United States and Canada, where do they bury the survivors?
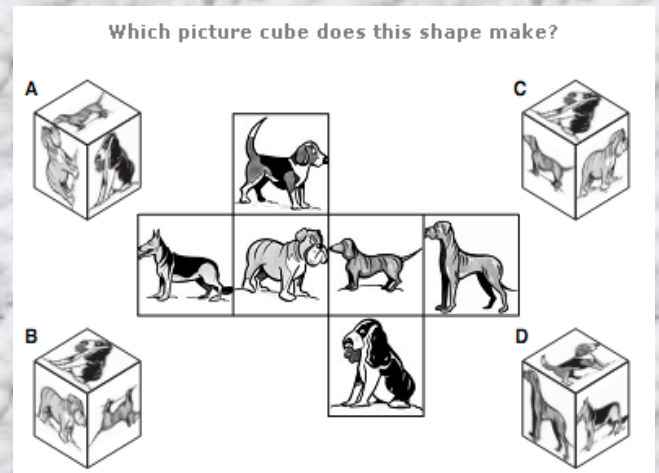
4. If you are in a dark room with candle, a wood stove and a gas lamp. You only have match, so what do you light first?
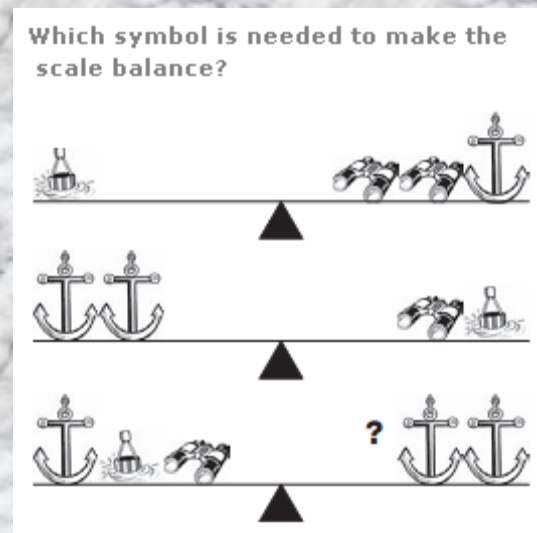
5. Which number comes inside the circle?


What number comes inside the circle?
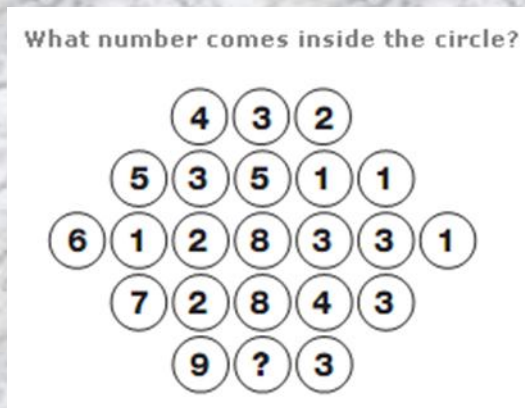
6. Imagine you are in a sinking rowboat surrounded by sharks . How would you survive?

7. Which picture cube does this shape make?


Which picture cube does this shape make?

8. Free market is?

9. Which symbol is needed to make the scale balance?


Which symbol is needed to make the scale balance?

10. Name the coco-cola CEO?

# IT VITA +

1. Expand the term HTTP?

2. The first practical typewriter and the world "type-writer" was first developed and patented?

3. Which was first virus detected on ARPANET, the forerunner of the internet in the early1969s?

4. Name the person who had written the first worm written for computer i.e. "Morris worm"?

5. Which day is celebrated as world computer literacy day?

6. First Indian cinema released through internet is?

7. Which of the following computer language is used for artificial intelligence?

8. Who programmed the first computer game 'Spacewar!' in 1962?

9. IC chips for computer are usually made of ?

10. What is the limit of characters for a tweet?

11. The world's fastest supercomputer ever?

12. Compact discs,(according tp the original CD specification) hold how many minutes of music?

13. Who was the chief executive officer of intel?

14. The CEO of e-Bay?

15. When was the first smart phone launched?

# $ FAMOUS AND $ FAVOUTITE

## JACK DORSEY

Born in st.Louis, Missouri, on November 19, 1969, Jack Dorsey become involved in web as a college student, founding the twitter social networking site in development 2006. Since that time, Dorsey has served as CEO, chairman of the board, and executive chairman of Twitter. He also launched the successful online payment platform square in 2010.



Dorsey become interested in computer and communications at an early age and began programming while still a student at Bishop. Dorsey wrote dispatch software that is still used by some taxicab companies today. After a brief stint at the Missouri university of science and technology,

Dorsey transferred to New York University. Dorsey moved to Oakland, California, and in 2000 started a company offering his dispatch software through the web. Shortly after starting his company, Dorsey came up with the idea for a site that would combine the broad reach of dispatch software with the ease of instant messaging. Dorsey, Stone and Odeo co-founder Evan Williams started a new company, called obvious, which later evolved into Twitter

On march 21,2006, Jack Dorsey posted the world's first tweet: "Just setting up my twttr".Dorsey was named the company's CEO. Co-founder Evan Williams replaced Dorsey as Twitter's CEO in October 2008, with Dorsey staying on as company chairman.

| PLACE OF BIRTH | St. Louis, Missouri, U.S on Nov 4. |
|---|---|
| OCCUPATION | Programmer, internet entrepreneur |
| NET WORTH | US$4.1billion |
| TITLE | CEO of twitter and Square, inc. |
| BORD MEMBER | Twitter , square, inc |

Do you know? Instagram has started flagging content it detects to be fake and hiding the post containing the misinformation behind a "False Information" warning layer.

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# SOLUTIONS

## ! MIND PUNCH

1. Volleyball

2. Kings of clubs

3. Survivors are not buried

4. The match!

5. 6

6. Stop imagining

7. Option A

8. Market where the price of commodity is determined by free play of the forces of supply and demand

9. ANCHOR
   Explanation: {The Binoculars =1, the Anchor =3 and the buoy =5}

10. James Quincey

## IT VITA +

1. Hypertext transfer protocol

2. IN 1868

3. Creeper virus

4. Robert Tappan Morris Jr

5. December 2

6. Vivah

7. PROLOG

8. Steve Russell

9. Silicon

10. 140

11. Sunway TaihuLight Supercomputer

12. 64

13. Robert H.Swan

14. Devin Wenig

15. 1992(IBM Simon)

# SENSE OF GRATITUDE

*The Editorial Board expresses its sincere gratitude to all those who are responsible, either by being on the stage or behind the screen for the successful launch of the magazine............!!*