



TechTalk

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LISTENING TO BUSINESS, APPLYING TECHNOLOGY

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Heartbleed Bug: What is it, Who is handling our security?

Heartbleed Bug has raised eyebrows of all the users across the globe and security advocates and surprisingly, only a few people are handling our internet security.

The Heartbleed Bug has uncovered the hidden bitter truth about tech companies and the Federal Government. OpenSSL is used by most of the companies like Google, Facebook, Yahoo and Dropbox for online communication and earning billions of dollars. There is only one person Stephen Henson—UK based mathematician— working as a full-time employee for OpenSSL, along with Stephen and few developers, whose total labor amounts to two full-time employees. These employees supervise more than half a million lines of code.

OpenSSL: The Mother Of All Vulnerabilities - What is OpenSSL? The "SSL" in "OpenSSL" refers to a Secure Sockets Layer and OpenSSL is an open project that was designed to prevent hackers from retrieving personal data submitted by users to a website (such as a banking, shopping, or digital content website). There are only eleven people currently that work in OpenSSL. What started as a project committed to data encryption has now become standard on two-thirds of all websites on the Internet.

Heartbleed: is essentially a programming error that leaves all forms of Internet data open to hackers. While the Heartbleed bug seems focused on user data and hackers, it's also possible that the server could extract personal user data from any client.

How To Protect Yourself From The Heartbleed Bug - Changing your passwords at most if not all sites you use on a regular basis is an excellent idea. At the same time, however, you may change your passwords in vain if the website you use doesn't install some sort of security patch to prevent possible hacker attacks in the days and months to come. What you should know for now is that sites such as Yahoo, CloudFlare, Duckduckgo, Reddit, Launchpad, Netflix, Amazon, Paypal, Adobe, CloudFront, and Github have all issued new SSL certificates for their sites – so these sites should be fine. At the same time, it is reported that there are still nearly 500,000 or more SSL certificates from affected websites that have yet to be changed.

Heartbleed to accelerate adoption of two-factor authentication solutions -

A security expert has said that the recent Heartbleed Bug fiasco will encourage more service providers to introduce two-factor authentication. JD Sherry, VP of Technology and Solutions at Trend Micro, said, "Even if your username and password is compromised from a server that's vulnerable to Heartbleed, if that server has two-factor authentication installed, the hacker would need your authenticator or token to be able to truly authenticate with that service.". Sherry said that two-factor authentication would have protected people's account information stored on servers vulnerable to Heartbleed.

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The Future is Now

No More Pills

Just give it to me in a chip

The Goal - Better manage chronic diseases

How we'll get there - Implantable microchips will make taking daily medications easy

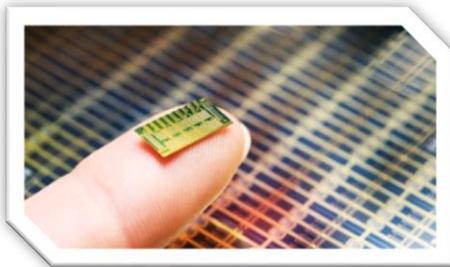
Real-Life Example - A microchip gave eight women their osteoporosis drug for four months

How close are we? - MicroCHIPS plans to release its first product to the public in 2017.

Did you take your meds today? At the right time? All of them?

Following your doctor's orders can be cumbersome, especially if you're supposed to take more than one pill a day.

That's why scientists are working to develop microchips that can be preloaded with medications and implanted in our bodies, programmed to administer drugs at a given time, interval and/or dose. A doctor would theoretically be able to adjust the dose, or stop the drug altogether, by remote control.



Massachusetts Institute of Technology researchers Robert Langer and Michael Cima started working on this idea with John Santini in the 1990s. Langer and Cima are on the board of directors of MicroCHIPS, a company trying to make the idea a reality.

In a 2012 study, they implanted a chip under the skin below the waistlines of eight women with osteoporosis. Over four months the device delivered regular doses of an osteoporosis drug normally given by injection. The study showed this method was safe and effective.

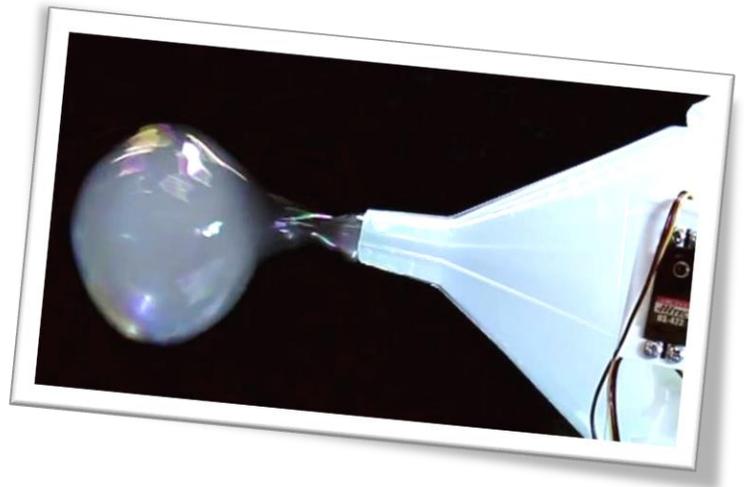
Since then the device has improved considerably, says Robert Farra, MicroCHIPS president and chief operating officer. The current version is about the size of a Scrabble tile and can deliver more drugs than before.

The company is aiming to release its first product to the public in 2017, which will likely be a hormonal contraception device that can be turned on and off wirelessly and releases a consistent daily dose. It will have the ability to offer progesterin and estrogen together, like a combination birth control pill.

The first version of this device will likely last five years, but it's possible to create one that could remain in the body and effectively deliver drugs for up to 16 years.

"The MicroCHIPS implantable drug delivery device is the greatest advancement in delivering medicine since the first tablet pill was developed in 1876," CEO Bradley Paddock says.

Another device is being developed for other chronic conditions, including multiple sclerosis. It may even lead to new therapies, Langer says, because the device protects unstable drugs. The device could also transmit data to hospitals and doctors so "you could have permanent records of exactly what you took when."



Further down the line, the chip could serve as a rescue device, releasing medications for heart attack, stroke or allergic reaction in at-risk patients.

A New Kind of Tech Bubble

We've heard a lot lately about the bursting of the tech bubble, but scientists at Bristol University believe their bubble technology could have a profitable future.

Their system for producing bubbles onto which images can be projected and which release a scent when burst will be unveiled at a major conference on human-computer interfaces this weekend.

The video demonstration of what is described as a "chrono-sensory mid-air display system" shows how bubbles of varying sizes can be created, then tracked so that images can be projected on them.

The man leading the project is Professor Sriram Subramanian from the computer science department at Bristol. One wonders - what on earth have bubbles got to do with human-computer interfaces?

He explains that his team's primary interest is in different kinds of display surfaces for information. "Think about your laptop or phone - you can't put your finger through the screen." Whereas his bubbles deliver short-term messages which disappear when popped but leave behind a longer term scent.

The technology has already attracted interest from shopping malls. The professor imagines a future where a bakery chain releases bubbles containing the scent of sausage rolls to entice people into their stores.

Another idea involves an educational use. "There's an iPhone game which involves bursting bubbles to learn maths - we could project numbers onto different bubbles, so the children would have to burst the right bubble."

He also sketches out ideas for what he calls an ambient notification system - for instance, a bubble that would float around your office every now and then with a number showing how many unread emails are in your inbox. "You could go even further. If we encode each category of email with a different scent, the smell would tell you vaguely how many emails you had from family as opposed to work-related ones."

Professor Subramanian describes how a visit to a Disney theme park involves a lot of interaction with technology but "you almost never notice the technology, it's such a fun experience". This is the new frontier for computer science - making our interactions with machines such fun that the technology just disappears.

Technology Focus

5 New Wireless Technologies for Today's Businesses

Wireless technology is literally all around us. In a corporate setting, there are Wi-Fi signals, fast 4G LTE access points on smartphone and Bluetooth running in everything from mobile printers to security terminals in the front entryway.

Because wireless tech is so pervasive, and because businesses rely on wireless tech now more than ever, it's also constantly improving and evolving. To help you keep track, here are five of the latest advancements to expect this year and in 2015.

WiGig: High-Speed Wireless - Known by the technical spec 802.11ad, this new Wi-Fi protocol due later this year will connect at theoretical speeds of 10Gbps using the 60GHz radio band.

Today, the latest 802.11ac spec connects at up to 1Gbps using the 40GHz radio band. In a corporate setting, one potential early application is monitoring a building using extremely high-definition video cameras that send their signal over Wi-Fi instead of a wired connection, according to Nick Ilyadis, CTO at wireless chipmaker Broadcom.

Bluetooth Smart: Same Tech, Less Energy - This short-range wireless tech has a distinct advantage over existing Bluetooth: While both connect over a similar 30-foot range, Bluetooth Smart isn't constantly sending out a signal and uses less power. According to the official Bluetooth SIG working group, businesses will start using the new Bluetooth signal this year and into next for authentication (using gadgets such as the Bionym Nymi, which verifies users based on their heartbeat) and collaboration (by syncing devices and sharing documents).

Apple iBeacon: Transmit Retail Deals to iOS Devices - So-called iBeacon devices are actually a retail-oriented use of Bluetooth Smart. However, the concept relies on Apple technology to transmit a signal to the iPhone or iPad. As you walk by a store shelf, your phone can connect over a short-range to receive a discount.

"These emit information that can be picked up by apps on your phone, creating an in-store sensor network that can provide shoppers with product information, electronic coupons and deals. Now the store shelves can talk to you," says Erick Schonfeld, a producer for the DEMO conferences for emerging technology.

Cisco Intelligent Proximity: Wireless Content Sharing - Here's an unusual - and highly targeted - wireless tech that will soon be available in beta. For those who participate in a high-definition videoconference using Cisco Systems telepresence gear, your iOS or Android device can connect automatically when you walk into the room. You can then use Cisco Intelligent Proximity for Content Sharing to grab presentations and other documents you need during the HD video meeting. Conferencing systems such as the Cisco MX200 and MX300 will support the service. The service uses standard Wi-Fi but senses your proximity to the meeting and authenticates your access automatically.

Wireless in the Car: Safely Stay Productive on the Go - Get ready for a revolution of wireless streaming in cars. Starting this



summer, you'll be able to tap into fast wireless data access over 4G LTE wireless in cars such as the upcoming 2015 Audi A3 and the 2015 Chevy Impala.

New apps such as Kaliki, which reads the news to you, will work without data connection hiccups. In the Impala, you can share the data connection with up to seven people around the vehicle - it's a roving hotspot. The Audi A3, meanwhile, will also support read-aloud news and high-resolution photos in the touchscreen navigation to help you find a meeting location fast.

Now, Passwords That Change Every Minute

Ever fancied a password that changes every minute? One may soon be available, with engineers developing a new password technique that uses visual patterns and resembles a Sudoku puzzle.

"The problem of passwords is that they are very weak, they are always getting hacked, and also, from a user point of view, they are too complicated, everybody has 20, 30, 60 passwords," said Steven Hope, managing director of Winfrasoft.

Worse, they all have to be different, so "no one can remember them, so everybody writes them down or resets them every time they log in. They don't work in the real world today," he added.

And as millions of internet users have learned the hard way, no password is safe when hackers can net them en masse from banks, e-mail services, retailers or social media websites that fail to fully protect their servers.

In response to the vulnerabilities and hassles of the antiquated username - password formula, Winfrasoft has developed an alternative based on a four-colour grid with numbers inside that resembles a Sudoku puzzle.

Users select a pattern on the grid as their "password" and because the numbers inside the boxes change once per minute, the code changes too, making it far harder to hack..

Tech News

EMC Unveils Software-Based Storage Protection Suite for Data Centers

EMC Corp. has released a new portfolio of data storage applications designed to help enterprises manage archiving, recovery and security functions.



The Data Protection Suite is built to support physical, virtual and cloud computing systems and helps customers shift toward a software-defined storage model.

According to the company, the offerings work to integrate with cloud-based infrastructures such as VMware's vCloud Suite and Microsoft's System Center

Virtual Machine Manager.

EMC also launched its Blueprint for Backup Architecture service to provide customers with baseline information and strategies regarding data security.

"Data protection-as-a-service is a key tenant for establishing effective protection for software-defined data centers — a 'bedrock' that needs to be in place for organizations to confidently transition to third platform software infrastructures," said Guy Churchward, president of EMC data protection and availability division.

The company introduced an operating system to power its Data Domain deduplication storage systems and support third-party applications. EMC also added snapshot management features have been added to its Isilon, VNX and NetApp storage arrays.

IBM unveils a computer that can argue

IBM (IBM) has been a leader in developing artificial intelligence systems such as the Watson supercomputer, which won \$1 million on Jeopardy in 2011, beating out top human champs. And now Big Blue has taken Watson technology one step further with a system that can form logical arguments for or against a complex issue--rather than just answering questions--once it absorbs relevant information.

At the Milken Institute's annual conference in Beverly Hills, John Kelly III, IBM's director of research, unveiled an artificial intelligence project called the Debater that has new capabilities to think—and argue-- like a human.

The technology breakthrough here is the ability to understand spoken and written language in context, then applying computing power to a question that arises from that language. The human brain is far better at contextual learning than computers, because we can almost instantly ascertain whether a word like "fair" pertains to a square deal or a carnival with a Ferris wheel. A few minutes of speech or a few paragraphs of writing might contain dozens of such associations, leaving a typical computer stupefied, no matter what its processing speed or RAM.

The Debater could have plenty of important real-life uses once it comes to market. Medical researchers could use its services to get a big head start when they're trying to find cures and treatments for diseases. The Debater could help develop a personalized course of treatment for cancer patients by processing all known factors associated with the

individual case, and comparing that with all the data available on treatment outcomes for different types of malignancies. That might



allow doctors to prescribe a precise cocktail of drugs or other treatments with the highest likelihood of success, avoiding a trial-and-error approach that often burns valuable time. If there's a risk, it might be that practitioners in the future come to rely too much on machines, taking human judgment out of the process.

Cisco, Microsoft, VMware & other tech giants unite behind critical open-source projects

In the wake of the Heartbleed OpenSSL security disaster, The Linux Foundation has brought together both open-source supporters and companies better known for proprietary software to fund mission-critical open-source projects.

The OpenSSL Heartbleed security hole, arguably open-source's biggest security breach ever, has made many major technology companies realize just how much they all depend on open source and that such vital projects as OpenSSL need adequate funding. So it is that The Linux Foundation brought Amazon Web Services, Cisco, Dell, Facebook, Fujitsu, Google, IBM, Intel, Microsoft, NetApp, RackSpace, and VMware together to form a new project to fund and support critical elements of the global technology: The Core Infrastructure Initiative (CII)

The purpose of CII is to enable technology companies to collaboratively identify mission-critical open-source projects that need funding. That done, the project will then receive the funds its developers need to continue their work under their existing open-source management.

This multi-million dollar project will be administered by The Linux Foundation and a steering group composed of project backers as well as key open-source developers and other industry stakeholders. Support from the initiative will include funding fellowships for key developers to work full-time on open source projects, security audits, computing and test infrastructure, travel, face-to-face meeting coordination and other support.

It took a major security catastrophe, but now many of technology's biggest players, including proprietary software companies, have realized that open-source software has become such a vital part of the global technology base that it must be supported not just with lip-service but with cold hard cash. Hopefully, the result will be better quality and safer software for all.

Special Focus

VMware Launches Horizon 6- Automates and Streamlines Desktop & App Management

With a variety of laptops, tablets, smartphones and an array of other employee-owned devices putting pressure on IT departments, VMware (VMW) comes to the rescue with the release of VMware Horizon 6, an integrated solution that delivers published applications and desktops on a single platform.

The new release is a comprehensive desktop solution with centralized management of any type of enterprise application and desktop, including physical desktops and laptops, virtual desktops and applications and employee-owned PCs.



Horizon 6 enables entire desktops –or just applications –to be delivered in a flexible manner to end-users. It allows access virtually from multiple devices and locations, physically by syncing the entire desktop image to end user laptops, and securely by delivering applications and content in a managed

secure container. New in version 6, Horizon offers streamlined management, end-user entitlement, and quick delivery of published Windows applications, RDS-based desktops and virtual desktops across devices and locations. End-users can access all applications and desktops from a single unified workspace, which supports the delivery of virtualized applications hosted in the datacenter or local on the device.

VMware Horizon 6 is optimized for the Software-Defined Data Center. The solution provides integrated management of VMware Virtual SAN that can significantly reduce the cost of storage for virtual desktops by using local storage. With this innovation, the capital cost of virtual desktops with Horizon 6 can be similar to physical desktops. The new VMware vCenter Operations for View provides health and risk monitoring, proactive end-user experience monitoring and deep diagnostics from datacenter-to-device all within a single console. Using the updated VMware Mirage, IT administrators can design a single desktop with the required operating system and applications, and deliver it to end-users in a department or entire organization based on end-user needs.

VMware Horizon 6 introduces a new client that seamlessly connects to virtual desktops and applications running in an on-premise cloud, a service provider partner cloud, or through VMware vCloud Hybrid Service with the same, high performance end-user experience. This flexibility gives customers the ability to deploy Horizon 6 via the hybrid cloud — balancing between business-owned and public cloud-based infrastructure to best satisfy their needs.

“Governance and compliance can only work if end-users stay within the confines of IT, but end-users are savvy with more options than ever before to work outside the purview of IT,” said Brett Waldman, research manager, End-User Computing, IDC. “If IT can provide the resources, capabilities and support end-users need, they will be less likely to stray, so IT needs vendors, such as VMware, to provide simpler, more agile solutions. With VMware Horizon 6’s new ability to deliver published applications in addition to virtual desktops, IT can deliver just what end-users need, or more importantly want.”

Why F5 Synthesis realizes “Leave no Application Behind”?

The proliferation of Bring Your Own Device (BYOD) or the ability to respond to spurs in Internet or Web traffic is driving a shift in end-user expectations and business demands. According to Frost and Sullivan, the number of connected devices that are encompassed within the Internet of Things will be close to 80 billion by 2020 globally.

The number of applications delivered within an enterprise is anywhere up to 1,000 according to Morgan Stanley. The increasing number of applications infiltrating the enterprise will in turn have security implications for businesses, both from a data and device perspective. In particular, we are also witnessing the evolution of a new era of cybercriminals who are becoming increasingly sophisticated and

targeted in their approach through distributed denial-of-service (DDoS) attacks, network, and more recently around application layer attacks.

This paradigm shift we are witnessing across the IT landscape is dramatically changing the way data centers are delivering applications to any device. This is driven largely by the disintegration of the network perimeter with



cloud, mobility and security quickly becoming the norm. The challenge for businesses is to ensure they can deliver applications from anywhere, to anyone, at any time. Especially as people and global organizations increasingly rely on the Internet and web-enabled devices, which inevitably spurs innovation and an ever increasing volume of data traffic.

In an apps world, it is essential that the performance of delivery and the security of applications in the enterprise is optimized at all times to help organizations seamlessly overcome the challenges outlined above. F5 has taken this a step further by taking the same principles applied to SDN (which primarily addresses Layers 2-3 in the network), and deploying them to the application layers (Layers 4-7), providing Software Defined Application Services™ (SDAS). These are services deployed in the network between the end-user and the application to ensure apps, networking, and application services come together and provide application owners with the ability to address application mobility, security, access and identity, performance and availability challenges architecturally.

The magic of SDAS lies in the fabric, which can be deployed on a combination of hardware, software, and virtual form factors, as well as beyond the data center boundary into cloud environments. This allows the elasticity and operational consistency needed to scale and manage services in any environment.

Each service can gather a breadth and depth of information about the user, the application, and the network in real-time. With such scalability, enterprises no longer need to choose which applications to be optimized, accelerated or protected over others. In summary, no application will be left behind!

About Galaxy

- ✦ One of the most respected Information Technology integrator of the best of breed products and solutions for Enterprise Computing, Storage, Networking, Security, Automation, Application Delivery, ERP and Business Intelligence.
- ✦ An ISO 9001:2008 organization, founded in 1987
- ✦ Committed team of over 200 skilled professionals
- ✦ PAN India presence
- ✦ Trusted IT services provider to more than a 1000 companies
- ✦ Experienced consultants certified on a wide spectrum of technologies
- ✦ The Galaxy Technology Innovation Centre, a state-of-the-art integrated hardware and software laboratory, allows customers a hands-on look at the latest storage, backup, security, application delivery and virtualization technologies.
- ✦ Customer list includes many of India's leading corporations, banks and government agencies
- ✦ Four business units collaborate to provide a full spectrum of services and ensure smooth projects. Together, they provide our customers with truly end to end professional IT Services.

Galaxy Business Solutions

System integrators of best of breed technologies to deliver solutions to the problems and challenges that confront enterprises

Galaxy Technology Services

Skilled pool of resources consistently maintains and delivers enterprise class service levels

Galaxy Network Solutions

One of India's most trusted active and passive networking specialists

Galaxy BI Consulting Services

Helps organizations to deliver and leverage business intelligence to create substantial business impact

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"To become the most preferred technology solution partner by listening to our customers, anticipating their needs and providing reliability, flexibility, responsiveness and innovative products and services. Achieving market leadership and operating excellence in every segment of our company."

MISSION

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VALUE PROPOSITION

"We understand the need of a common vendor for all your IT needs. Hence, we are committed to long-term partnerships by delivering on our commitments."

MD Speaks

"Cloud is to data what a bank is to money - It took a long time for people to trust a bank enough to give them their money for safekeeping. In spite of that, just half a decade ago, there was a serious threat to quite a few large banks some of which succumbed. This happened despite the large number of regulators and measure taken to guard against this very thing. Cloud computing is at a very nascent stage and these issues have not even been thought through. Imagine there being a regulator trying to regulate every small vendor offering a SaaS on the cloud. It is absolutely impossible to even imagine the kind of resources required for this regulator. This leaves the due diligence purely in the hands of the service receiver. The number of certifications for different cloud services just clouds the matter even further. If the service receiver is an individual or a small or even medium sized business, they can easily be lulled into believing that their data is secure, when actually it may not. Unless this issue is solved, it will be very difficult for cloud providers to ever gain the trust that the banks have today. One way of solving this issue is to have a regulatory body for the cloud infrastructure who in turn will be responsible to certify the services provided on their infrastructure have complied with a certain level of security. Of course, these standards have to be universally followed for all the cloud infrastructure providers. This is definitely not anything new. Apple has been doing this for all apps loaded on its Appstore. In fact, even though Android has been rapidly gaining ground, there is a marked quality difference between the apps on the apple store and those on the Android store. One of the main reasons is the vetting that Apple does before allowing anything on its Appstore. When any of the big cloud infrastructure players starts something like that, it will build the necessary trust required for companies to take that leap of faith into the cloud. I believe this is just a matter of when rather than if."