

INFOLINE



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Prepare for Windows8 Even Though It's Not Coming to Enterprises



Windows8 won't be adopted as a standard at your business anytime soon, according to a new Forrester report. But that doesn't mean IT shouldn't prepare for it to sneak through the BYOD side door.

On the one hand, it is not catching on with Android- and iOS-loving consumers turned off by the Windows8 tile-based interface and the Windows App Store, which by Android and Apple standards, is anemic and disorganized. And these days, consumer technology is frequently a precursor to enterprise technology as shown by the BYOD (bring your own device) phenomenon.

On the other hand, the situation for Windows 8 isn't any better in the enterprise.

IT decision-makers interviewed for a new Forrester report don't see the Windows 8 experience as an improvement over the stable and well-liked Windows7, mostly due to confusing behavior between applications running in the "Metro" touch interface and those running in the traditional desktop mode.

In the report, entitled "IT Will Skip Windows8 as the Enterprise Standard," IT professionals reveal that a top concern about Windows8 is the "potential for significant user training and support and the need for application redesign to take advantage of the new Windows 8 interface."

Also working against Windows8 adoption: Most enterprises are too caught up in Windows 7 migrations to focus on Windows 8. According to a separate Forrester survey of more than 1,200 IT decision-makers in the U.S. and Europe, 48 percent of current PCs are running Windows7 and 76 percent of new PCs being deployed in the enterprise are running Windows7.

"This doesn't mean enterprises will lock out Windows8," writes report author and Forrester analyst David Johnson. "Some will support it for specific segments of employees, but it is not likely to displace Windows7 as the platform standard."

Yet it would be a mistake for enterprise IT decision-makers to let Windows 8 slip off the radar. Despite enterprise IT trepidation, employees are more interested in Windows 8 than you might think.

Forrester's Forrsights Employee Survey in Q4 2012 showed that 38 percent of employees would prefer to use Windows8 on their work computers, compared with 35 percent for Windows7. Windows8 may have a confusing user interface, but it is unquestionably more modern than the three-and-a-half-year-old Windows7.

"Windows8 opens up entirely new use cases for Microsoft customers," writes Johnson, "which will only gain momentum as the app ecosystem ramps up development and hardware vendors offer new designs that blend the lines between tablets and traditional PCs."

In short, IT should give employees freedom to work on Windows8 PCs as the BYOD trends continues. Here are five ways enterprise IT should prepare, according to Forrester.

Microsoft is ending extended support for Windows XP on April 8, 2014, so Forrester recommends that IT pros ignore the

Windows 8 hype for now and finish enterprise-wide Windows7 migrations.

"Rest assured that this laborious effort will ultimately pay off with greater compatibility if or when your organization decides to support Windows 8," writes Johnson. "If you're already on Windows7 today, then consider adding incremental support for Windows 8 and new devices, starting with pilot groups to better manage the change."

If your organization is still on Windows XP and hasn't begun the migration to Windows 7, then a Windows 8 migration is worth a look, but you must consider the broad effect it will have on your employees and applications, writes Johnson.

"If you find it's manageable, then moving to Windows 8 will put you ahead of the curve."

"Early BYOD programs focused exclusively on smartphones and tablets but it's inevitable that they extend to Macs and PCs, and Windows 8 may serve as the start for PC inclusion,"

V.ASHOK

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Dealing With DNS Attacks



DNS servers work by translating IP addresses into domain names. This is why you can enter CIO.com into the browser to visit our sister site, instead of trying to remember 65.221.110.97.

When DNS is compromised, several things can happen. However, compromised DNS servers are often used by attackers one of two ways. The first thing an attacker can do is redirect all incoming traffic to a server of their choosing. This enables them to launch additional attacks, or collect traffic logs that contain sensitive information.

The second thing an attacker can do is capture all in-bound email. More importantly, this second option also allows the attacker to send email on their behalf, using the victim organization's domain and cashing-in on their positive reputation.

Making things worse, attackers could also opt for a third option, which is doing both of those things.

"In the first scenario this can be used to attack visitors and capture login credentials and account information. The common solution of mandating SSL works until the attacker takes advantage of [the second option] to register a new certificate in your name. Once they have a valid SSL cert and control of your DNS (one and the same, basically) - they have effectively become you without needing access to any of your servers," Rapid7's Chief Research Officer, HD Moore, told CSO in an email.

In a blog post, Cory von Wallenstein, the CTO of Dyn Inc., a firm that specializes in traffic management and DNS, explained the three common types of DNS attacks and how to address them.

The first type of DNS attack is called a cache poisoning attack. This can happen after an attacker is successful in injecting malicious DNS data into the recursive DNS servers that are operated by many ISPs. These types of DNS servers are the closest to users from a network topology perspective, von Wallenstein wrote, so the damage is localized to specific users connecting to those servers.

"There are effective workarounds to make this impractical in the wild, and good standards like DNSSEC that provide additional protection from this type of attack," he added.

If DNSSEC is impractical or impossible, another workaround is to restrict recursion on the name servers that need to be protected. Recursion identifies whether a server will only hand out information it has stored in cache, or if it is willing to go out on the Internet and talk to other servers to find the best answer.

"Many cache poisoning attacks leverage the recursive feature in order to poison the system. So by limiting recursion to only your internal systems, you limit your exposure. While this setting will not resolve all possible cache poisoning attack vectors, it will help you mitigate a good portion of them," Chris Brenton, Dyn Inc.'s Director of Security, told CSO in an email.

The second type of DNS attack happens when attackers take over one or more authoritative DNS servers for a domain. In his post, von Wallenstein noted that authoritative DNS hosting is the type of service that his firm provides to Twitter. However, Dyn Inc. wasn't targeted by the

SEA, so their services to Twitter were not impacted by Tuesday's incident.

If an attacker were to compromise an authoritative DNS, von Wallenstein explains, the effect would be global. While that wasn't what the SEA did during their most recent attack, it's been done before.

In 2009, Twitter suffered a separate attack by the Iranian Cyber Army. The group altered DNS records and redirected traffic to propaganda hosted on servers they controlled. The ability to alter DNS settings came after the Iranian Cyber Army compromised a Twitter staffer's email account, and then used that account to authorize DNS changes. During that incident Dyn Inc. was the registrar contacted in order to process the change request.

Defense against these types of attacks often include strong passwords, and IP-based ACLs (acceptable client lists). Further, a solid training program that deals with social engineering will also be effective.

All the time and resources in the world can be placed into securing a webserver, but if an attacker can attack the authoritative server and point the DNS records at a different IP address, "to the rest of the world

its still going to look like you've been owned," Brenton added.

"In fact it's worse because that one attack will also permit them to redirect your email or any other service you are offering. So hosting your authoritative server with a trusted authority is the simplest way to resolve this problem."

The third type of DNS attack is also the most problematic to undo. It happens when an attacker compromised the registration of the domain itself, and then uses that access to alter the DNS servers assigned to it.

This is also what the SEA did when they went after Twitter and the New York Times. They gained access to MelbourneIT, the registrar responsible for the domains targeted, and changed the authoritative DNS servers to their own.

"At this time, those authoritative nameservers answered all queries for the affected domains. What makes this attack so dangerous is what's called the TTL (time to live). Changes of this nature are globally cached on recursive DNS servers for typically 86,400 seconds, or a full day. Unless operators are able to purge caches, it can take an entire day (sometimes longer)

for the effects to be reversed," von Wallenstein wrote.

Again, Brenton's advice for authoritative DNS will apply here as well. It's also possible to host authoritative servers within the organization, allowing for complete control.

"If you are going to run your own authoritative servers, make sure you follow the best security practices that have been identified by SANS and the Center for Internet Security," Brenton advised.

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Data Visualization Helped Madras Cements Turn Big Data into Big Ideas



A simple change in the way you visualize data can lead to a new world of insights as Madras Cements discovered.

Let's put some commonly held myths to rest. Big data doesn't reveal earth-shattering information about your customers or about your business. In fact, big data doesn't reveal anything. If anything, big data is term to describe the current state of the digital world which is creating, and capturing digital data made possible by technology.

What's the big fuss about big data then? Service providers want you think it's huge because they want to sell you solutions that will help you do capture and store data. They however, will not help you decode the various cryptic patterns and lead you to discover what your customers want or the market is demanding. Even Dan Brown can't help you with that.

The fundamental problem is that traditional forms of data interpretation have stuck to text or table based report like Excel sheets. But humans are visual creatures. Our ability to quickly interpret visual information is far greater than that of written words. The data deluge we are witnessing further compounds the problem. Our attention spans are shrinking, there's a constant overload of

information and our ability to retain what we read is abysmal.

Data visualization or the art of interpreting data through info graphics, color-codes, geo-mapping, and 3D modeling among others is paving the way to make complex data into simple, consumable information sets. And N. Vardarajan, AVP-IT of Madras Cements is one of the few Indian CIOs who has successfully embraced it to spectacular business results.

Madras cements is the fifth largest cement manufacturer in the country and second biggest in Tamil Nadu. It had all the traditional IT instruments that it needed to function efficiently. An ERP, business intelligence software, a great supply chain, and an efficient workforce, and yet the top-line didn't grow as much as expected. It's true in cement industry; supply has always been higher than demand and competition is tight. But the demand too was growing, so how could Madras Cements leverage Information Technology to tap the potential for top-line and bottom-line growth?

This was the challenge faced by the company. The IT Team of Madras Cements knew there was lot of scope and untapped potential in managing information. Their

ERP was generating rich data but the lack of visualizations was hindering the company's ability to leverage it and get better insight.

It led to the conclusion that the only way to avoid it was to radically change the way the end users saw, read and interpreted data on any device, whether it was desktops, laptops, mobiles or tablets.

Information can be presented in many ways. But complex information such as a salesperson performance or cement outlet performance benchmarking or location mapping of the company's wagon movements are best understood not through numbers but through color coding and representation on a map.

Hence, Madras Cements decided to integrate its entire business intelligence system with the enterprise version of Google Maps, while its Ramco ERP application provided the underlying data. Super-imposing its data onto Google Map layer, led to some stunning results.

All across India, over 300 field salespersons access reports and transactions on a daily basis from the company's ERP system and integrated Google maps based BI. Management at Madras Cements started using Google Maps for visual analysis – for

monitoring benchmarks, and identifying discrepancies and deviation.

The technique followed is called “*Geocoded Color Banding*”. They assigned color codes to denote a range of performance. For e.g. performance beyond expectation was assigned a dark green, expected performance green, average orange, below average a red and very bad performance is given dark red. Such color coded icons are depicted on Google Map using longitude and latitude data captured. For example, the delivery time from factory to each customer outlet can be shown as color coded dots with the dots placed on their longitude and latitude values.

Now using the tool, the dark red dots among predominately green dots quickly pointed them to areas of weakness and anomalies. More than 60 such KPIs/parameters can be visualized as color coded icons or regions on the map. This brings out additional insights than what is normally available through a table or a chart. For example, it is very useful to compare and benchmark information such as dealer outlets, delivery points, marketing region or sales person performance. The tool allows choosing a particular Geographical entity (like Kerala) and analyze the chosen KPI based on a slice

(say district, customer Point, etc). It helps to analyze patterns of distribution of these color dots on the selected area.

A little investigation revealed that a particular customer was located on a hilly terrain, because of which it was taking more time for delivery when a truck used was less powerful or old. When the problem was identified, logistics took up the matter with transporters and advised them to use better trucks for that particular location. From the next dispatch, the deliveries were on time.

“Insights like these would be impossible without such a visualization tool based on maps. Such data, known as “geographically significant information” forms bulk of Marketing Performance BI,” explains Varadarajan.

The tool has an Exception Module which alerts management immediately when any performance parameter downgrades in color (say a green moves to an orange, indicating that performance is dipping) and prompt them to take corrective action before it's too late. This module also helps to analyze and focus only exceptional items for a particular KPI, say Dark Reds, instead of viewing all data. Another aspect of this tool is that no data is entered for this purpose. The data is

captured as physical process is done (like invoicing, Accounts receivable etc) and KPI is built on this vast volume of data. This ensures transparency and objectivity. There is an inbuilt Issue Tracker which can be used to raise queries to concerned salesperson (through mail/sms) based on the depicted data and to track responses/action taken.

Madras Cements' sales and marketing divisions also benefited from this system of BI based on Google Maps. The field sales team now has the capability to easily view information on their mobile devices – information ranging from competitor distribution networks in their area, to the best and worst performing dealers and salespersons. This not only enabled them to make better sales strategies on-the-go, it also helped management improve their market penetration strategy based on competitiveness in a particular market. They can now locate their cement warehouses and outlets and key customers on Google Maps vis-à-vis critical operation information, empowering them to devise effective supply chain strategies and enhance customer service. Google Maps based BI helped to visualize data at various levels of detail, for example, which regions were experiencing strong growth, which dealers were

performing best, or had the most potential for growth. Google Maps also made it easier to identify and analyze performing markets with the potential for growth.

The results have been stupendous. Madras Cements reduce penalties, losses and damages arising during the wagon clearance process by up to 70 percent, and improved consignment clearance time by up to 40 percent. Since implementing Google Maps, the company has successfully captured 20-30 percent market share in these specific markets. “We’ve also noticed a 10-12 percent increase in sales. But that’s just quantitative data. The customer satisfaction that has improved is immeasurable!”, says Varadarajan.

Big data can only lead you to bid ideas if you ask the right questions. But technology can take you a little further, if you have the right tools.

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How to Transfer Contacts from BlackBerry to iPhone



How to transfer contacts from a BlackBerry to an iPhone? whether it is from a new BlackBerry 10 device or from an older BlackBerry phone.

How to transfer contacts from a BlackBerry to an iPhone, whether it is from a new BlackBerry10 device or from an older BlackBerry phone.

Many of us use an iPhone as our personal phone, but are saddled with a BlackBerry by our employers. There's nothing wrong with that, of course, but it would be nice to be able to rely only on the iPhone. For that you need to set up your work email on your iPhone, which may or may not be possible, depending on your employer's BYOD strategy. But you definitely can transfer your business contacts from your BlackBerry to

your personal iPhone - here we show you how. See also: iPhone productivity app reviews.

How to transfer contacts from BlackBerry to iPhone using your Mac (or PC)

First show you how to transfer contacts from older BlackBerry to iOS if you sync your iPhone with your Mac. To do this you can use the BlackBerry Desktop software app. You can get BlackBerry Desktop for Mac here. Then just connect your BlackBerry to your Mac and start the BlackBerry Desktop software. There is a PC version of the BlackBerry desktop software, too. The process works in exactly the same way.

In BlackBerry desktop, go to Device, Backup, and then back up your BlackBerry. This will save your Contacts to your Mac (or PC).

Now connect your iPhone to your Mac and launch iTunes. Scroll down and select 'Info', and then tick the box next to 'Sync Contacts'. The next time you sync your iPhone on your Mac your contacts will sync with your iPhone - and you're done!

Of course, you may not regularly sync your iPhone with either a Mac or a PC. And your BlackBerry may be set up in such a way that

you can't back it up to your home computer. Fortunately, there is another way... Visit our iPhone spotlight for more iPhone tips.

How to transfer contacts from BlackBerry to iPhone if you use Google Apps & Google Sync

As we said in our piece on transferring contacts from Android to iPhone, once your contacts are in your Google account you can access them from just about any device. With BlackBerry, unfortunately, you can no longer use the following method unless you pay for Google Apps for Business. Clearly, you are unlikely to do that for this reason alone, but if your business uses Google Apps the following may work:

On your BlackBerry go to m.google.com/sync. Download the google sync app when prompted. Launch the app and enter your Google account username and password - if you have a Gmail account it's this login. If you don't have a Google account (and we'd be surprised), setting one up is free. Just open a Gmail account - you don't have to use it for email. Now select 'Sync Now'. Your contacts will copy over to your Gmail account. Head to your iPhone. Choose Settings; Mail, Contacts, Calendars. Now hit Add Account and choose Microsoft

Exchange - you need to enter this email account as an Exchange account in order to fully sync contacts. Enter your Gmail address where it asks for email and again where it asks for username. Enter your Gmail password. Hit Next. Now scroll to the 'Server' field, and type m.google.com. Set 'Sync' to Yes under both 'Contacts' and 'Calendars'.

Your contacts data is now in your iPhone (as well as your Gmail account, should you wish to access it from your PC).

Transfer Contacts from BlackBerry 10 phone to iPhone

Not being a Google Apps for Business subscriber we couldn't get the above method to work on our BlackBerry Z10. And BlackBerry 10 phones don't come with BlackBerry Desktop software. Instead they bundle BlackBerry Link, which doesn't offer the same function.

The only good way we could find to move contacts from the BlackBerry Z10 was by using InTouch - a free app you can get from BlackBerry World, upload your contacts, and then install on to other devices. InTouch supports iOS and Android, as well as older Nokia Bada phones. And you can install a

beta of the app into your desktop browser. Sounds good right? Well, it is. And it works for all BlackBerries, as well as those other phones.

Think of it as Dropbox for contacts. If anyone knows of a better way to transfer contacts from BlackBerry 10 handsets, I'd love to hear them! Let me know in the comments below, or mattjegan.

Download and install the app. Accept the conditions. Set up an account. Hit Register, then give your name, email, mobile number, as well as a username and password. Then hit Register again. The app will now download your contacts from the BlackBerry.

Install InTouch on any other device, or access your account from a desktop browser, and you can use all of your contact data. Indeed, update your account from anywhere and it will sync to all of your devices.

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5 Tips to Keep Your Data Secure on the Cloud



Here are five data privacy protection tips to help you tackle the issue of cloud privacy:

1. Avoid storing sensitive information in the cloud.

Many recommendations across the Net sound like this: "Don't keep your information on the cloud." Fair enough, but it's the same as if you asked, "How not to get my house burned down?" and the answer would be, "Do not have a house." The logic is solid, but a better way to translate such advice is, "avoid storing sensitive information on the cloud." So if you have a choice you should opt for keeping your crucial information away from virtual world or use appropriate solutions.

2. Read the user agreement to find out how your cloud service storage works.

If you are not sure what cloud storage to choose or if you have any questions as for how that or another cloud service works you can read the user agreement of the service you are planning to sign up for. There is no doubt it's hard and boring but you really need to face those text volumes. The document which traditionally suffers from insufficient attention may contain essential information you are looking for.

3. Be serious about passwords.

You must have heard this warning a hundred times already, but yet most people do not follow it. Did you know that 90 percent of all passwords can be cracked within seconds? Indeed, a great part of all the sad stories about someone's account getting broken is caused by an easy-to-create-and-remember password. Moreover, doubling your email password for other services you use (your Facebook account, your cloud storage account) is a real trap as all your login information and forgotten passwords always arrive to your email.

Here is an efficient method of creating a secure password:

1. Choose a random word (preferably a long one) -- for example, "communication."

2. Now let's say you are signing up for Gmail. What you should do is add a "Gmail" word to the word you have chosen. Thus your password for Gmail will be "communicationGmail." If you sign up for Skype, your password will be "communicationSkype", for example.

Therefore, you need to remember only your "core" word and the structure of your password. To strengthen it even more you can add a certain number before the name of the service, for example your birth date. In that case your password will look like "communication12111975Skype", etc.

You can invent any other way of memorizing your passwords, the one that appeals to you. But the main point doesn't change - such a method is really simple and effective.

4. Encrypt.

Encryption is, so far, the best way you can protect your data. Generally encryption works as follows: You have a file you want to move to a cloud, you use certain software with which you create a password for that file, you move that password-protected file to the cloud and no one is ever able to see

the content of the file not knowing the password.

5. Use an encrypted cloud service.

There are some cloud services that provide local encryption and decryption of your files in addition to storage and backup. It means that the service takes care of both encrypting your files on your own computer and storing them safely on the cloud. Therefore, there is a bigger chance that this time no one -- including service providers or server administrators -- will have access to your files (the so called "zero-knowledge" privacy). Among such services are Spideroak and Wuala.

Spideroak provides 2GB space for full featured backup, sync, share, access and storage for free. However, you'll have to upgrade to Plus Plan for \$10/monthly if you need more space. Wuala offers 5GB for free and paid accounts with the price depending on the amount of space you need.

V.RAMYA

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Tamil Nadu Government Paves Way for Road Safety With TNRADMS



TNRADMS is an analysis engine which has been deployed in 1,400 police stations across Tamil Nadu and personnel at each station have been trained in its use.

The system provides reports that give information to analyse the cause of the accident, and helps police officials take preventive measures. Rajeev P, Project Manager *IBS Software Services*

Road accidents in the state of Tamil Nadu (TN) have seen a 25 percent reduction in fatalities from 13.39 for every 10,000 vehicles in 2006 to 10.09 in 2010. All thanks to a DBMS called Tamil Nadu Road Accident Data Management System (TNRADMS).

This analysis engine which can create accident reports at the snap of a finger has replaced the cumbersome paper-based reports and inaccurate data-metrics which were only used for reporting in assembly/parliament queries.

TNRADMS

The objective was to digitise accident records with easy-to-use software and reduce road accidents. The plan is a part of a project undertaken by the state called Tamil Nadu Road Sector Project (TNRSP).

The TN government approved a comprehensive Road Safety Action Plan put forth by TNRSP and developed the Road Accident Data Management System (RADMS) in 2009. This was developed at a cost of Rs. 2.20 Crores (about \$500,000) with funding from World Bank and software support from Kerala-based IBS Software Services.

RADMS has been deployed in 1400 police stations across Tamil Nadu and personnel at each station have been trained in its use. Kumar, Deputy Project Director - TNRSP, said, "The system links three departments Police, Transport and Highways who update accident details as and when they happen."

Whenever an accident occurs, the data has to be uploaded to the system within 24 hours to the respective Police Station.

The Backbone

What does each police station need to access the web-based RADMS? A basic computer with a regular internet connection. In absence of internet connectivity, a RADMS Lite software installation is available list.

The data entered is integrated into a server, which uses PostgreSQL 8.2 running in Proliant ML150 G3 Server, Quad-core Intel Xeon Processor, 4GB RAM and 120GB storage disk, on a daily/weekly basis. Also, the digital maps on the system are based on Geographic Information Systems (GIS).

Explaining the procedure of recording accident details, Kumar added, "Whenever an accident occurs the data has to be uploaded to the system within 24 hours to the respective Police Station. The policeman on duty has to simultaneously file the First Information Report (FIR) and add details to a web-based Accident Record Form (ARF) on the bilingual (English and Tamil) RADMS."

IBS Software Services was roped in by the TN government to create a powerful data management system.

In collaboration with VIC Roads Australia, IBS created the TNRADMS. Rajeev P, Project Manager-IBS said, "The system provides various reports that give information to analyse the cause of the accident and helps them (police officials) take various preventive measures.

Implementing these preventive measures systematically helps reduce accidents at various places and thereby reduce the overallratio."

Inspiring The Country

According to a recent report, the success of TNRADMS has inspired the Union road transport and highways ministry of India to implement a similar system in the rest of the country. The ministry is in the process of customising the software to their specific needs.

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Remotely Install Apps on Your Smartphone



All you need is an internet connection to download and install apps to your smartphones.

You can download and install apps to your iPhone and Android phone without being anywhere near it. What sorcery is this? It isn't sorcery. It's the internet. And it takes almost no effort to set up.

On Android

If you have an Android phone, you can quickly and easily remotely install apps to your phone without having to tinker with any settings. Visit the Google Play store from your computer and log in using the Google account that's associated with your phone. Next, find the app that you want

to install and go to its information page, then press the Install button for that app.

Once you click Install, you'll be presented with a box that tells you which permissions the app needs (whether it needs to access your contacts or connect to the Internet, for instance), as well as a drop-down list of the devices associated with your Google account. Select the phone or tablet you want to install the app on from this list, then press Install. After a few moments, your phone will begin installing the app.

On iOS

iOS 7 comes with a similar feature, but you need to make sure it's switched on first. To check, open the Settings app, scroll down, then tap iTunes & App Store. From here, look for the Automatic Downloads section, then toggle the *Apps* slider to the on position (the toggle switch will turn green). If you want to have updates downloaded to your phone automatically, switch the Updates toggle to the on position as well.

Next, open iTunes on your Mac or PC, then go to the iTunes Store, and sign in using the Apple ID associated with your phone. Go to the App Store, then find an app you want to download. Press the *Download* button--it

will be labelled with the app's price--and after a few moments it will be downloaded to both your computer and your phone.

On Windows Phone 8

Setting up your Windows phone for remote app installation is similar to the process for iOS. Start by going to the Settings app on your phone and then select *Find My Phone* from the list. Next, look for the checkbox labelled *Send apps to my phone using push notifications (not SMS)* and tap it if it isn't checked already.

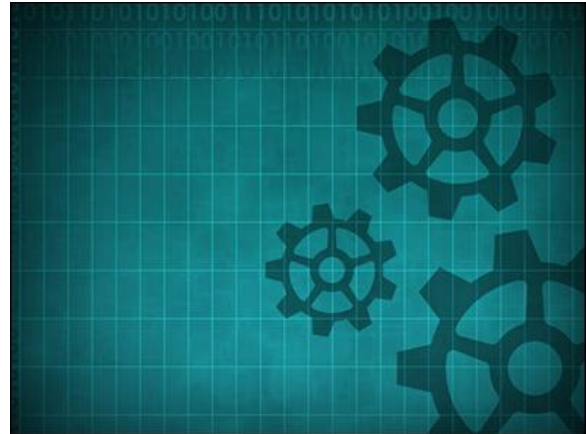
Now go to the Windows Phone store, then mouse over *Explore My Phone* in the upper-right corner and sign in with the Microsoft account associated with your phone. Find the app you want to install, and press the *Buy* or *Install* button (which button label you see will depend on whether the app is paid or free).

Once you do that, the Windows Phone store will pick your default device and install that app to it after a few moments.

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Prepare Your Small Business for Tech Success



Take some time in the early days of 2014 to improve the computer setup in your home office or small business. These security, networking, storage and productivity tips will help you work faster once you get back to business as usual.

With vendors and customers alike taking it easy during the holiday season, business likely won't pick up until we are a few weeks into 2014. Why not use the extra time to fine-tune your home office or small business for the year ahead?

Here are some tips for methodically upgrading every aspect of your network to help you work at your peak.

Up the Ante on Security

A good place to start is ratcheting up the security of your home office or small business. Given that prevalence of Wi-Fi wireless capabilities, be sure to secure your Wi-Fi network with WPA2 encryption and a sufficiently complex passphrase to prevent your neighbors from listening in. The strength of WPA is directly related to the length of the passphrase, so avoid a passphrase with fewer than 20 characters.

Though commonly found in older Wi-Fi access points, Wi-Fi Protected Setup (WPS) is universally considered to be broken - hackers can guess passcodes through repeated attempts over a few hours - and should be avoided at all costs. Disable WPS support on any Wi-Fi access point (AP) that comes with it, if you can. (The ability to disable WPS may not be available on some Wi-Fi APs.)

BitLocker is offered in the Ultimate and Enterprise editions of Windows 7, and the Pro and Enterprise editions of Windows 8. Full-disk encryption essentially scrambles the data saved in the storage drive so that it remains inaccessible even if the disk is removed and accessed from another computer.

Though BitLocker is a mature and well-established product, one often-missed point is that it checks for unauthorized changes to the pre-boot environment (BIOS, MBR) before booting up. This means a system malfunction could result in BitLocker requiring a recovery key data. Keep it handy and store it on a USB device.

BitLocker Drive Encryption prevents unauthorized users from using your files.

Finally, nothing beats good physical security. Use a Kensington lock to secure expensive equipment. It won't stop a well-prepared burglar armed with heavy cutting equipment, but it should slow down someone less prepared and hopefully eliminate opportunistic equipment theft. Finally, while IP cameras don't actually stop burglaries, they can serve as a strong deterrent to miscreants and are affordable even for home offices.

Upgrade Your Network for Lightning-Fast Work

Constantly frustrated by slow network access speeds in your office? Even if you have no complaints, productivity will benefit from a speed boost from an upgraded network. Unless your network has been

upgraded in the last couple of years, chances are you're at least one generation behind what is now available as affordable mainstream equipment.

If you still use 802.11g, or you have slower access points or routers, do yourself a favor and buy a faster one with at least 802.11n capabilities. Better yet, ensure that the new APs supports simultaneous operation on both the 2.4GHz and 5GHz bands; in environments with a mix of 2.4 and 5GHz Wi-Fi devices, as it effectively offers twice as much bandwidth. Larger offices should consider deploying additional APs for better coverage.

On the wired end, upgrade to a Gigabit Ethernet LAN if you don't already have one. This typically entails swapping out an aging Fast Ethernet (100Mbps) network switch with one offering Gigabit Ethernet (1,000Mbps) capability. This upgrade that makes sense even in offices where Wi-Fi use predominates, as a slow LAN can become the bottleneck with faster 802.11n implementations, as well as with the upcoming 802.11ac "Gigabit Wi-Fi" standard.

Laptops manufactured in the last couple of years should already have Gigabit Ethernet -

though there isn't much you can do if they don't. In some cases, a USB Wi-Fi adapter will give you a speed boost, though a clunky adapter can be unwieldy and detracts from the portability of a laptop.

If you work from home extensively and rely on fast Internet access, one unconventional approach is to consider doubling up on your Internet access by signing up with a second ISP. Whether configured in load balancing or fail-over mode, having two Internet connections helps ensure that you are not beholden to a single ISP for continued Internet access. On this front, a company called Peplink makes router appliances that deliver robust, easy-to-use WAN load balancing.

Make Storage Faster, More Robust

While cloud storage providers would sooner have everyone exclusively on cloud storage, this isn't always possible from a compliance or privacy standpoint. Even if these aren't concerns, a local backup allows for much faster disaster recovery, as well as substantially faster access for large files.

The Transporter NAS device offers a portable way to synchronize files.

For businesses that can't consider cloud storage, or that need a local copy for quick disaster recovery, a disaster-hardened device such as the ioSafe SoloPRO external drive offers protection from local disasters such as fires and flood. While not invulnerable, it does offer 30 minutes of protection against fire of up to 1,550 degrees Fahrenheit (843 degrees Celsius) or 72 hours of protection in water of up to 10 feet (3 meter). The company also makes a Network-Attached Server (NAS) version in the form of the ioSafe 214 that runs the popular Synology DSM operating platform under the hood.

Another strategy to consider is deploying a second NAS to an offsite location and setting it to synchronize with a primary NAS. A number of NAS devices, including Synology's DSM platform, offers some form of support for this, though exact capabilities vary. On a similar vein, Connected Data (now merged with Drobo) sells a novel Transporter network-enabled storage drive that offers both PC-to-Transporter and Transporter-to-Transporter synchronization capabilities.

When it comes to onsite storage, users with older NAS devices may want to consider upgrading to newer, faster hardware with support for substantially faster Gigabit

Ethernet network interfaces. If your existing NAS supports it, it may be worth swapping out older 500GB or 1TB hard disk drives (HDD) and replacing them with new 2TB or 3TB HDDs for a leg up in both capacity and performance.

If you've yet to make the jump to a solid-state drive (SSD), consider it. Prices have fallen substantially, and the speed gain from an SSD upgrade is far more noticeably than a CPU or RAM upgrade.

Add Peripherals, Enhance Your Workspace

Nothing enhances productivity like having an additional display available when doing work that involves correlating or referencing information across different apps. Even if this isn't necessary, having more screen real estate can be a huge timesaver by reducing the need to sort through multiple open windows for the correct one.

Start off the New Year with a bang by getting a second (or third) monitor. Lower-end LCD monitors can be purchased for less than \$100 and can be used over the life of multiple PC upgrades. (As for the technicalities end of things, CIO.com has previously addressed setting up multiple

monitors for laptops, and also using multiple monitors at your workstation.

A monitor arm such as the Ergotron HD Arm frees up valuable desktop space by elevating your monitor.

If you're dead set against a multimonitor rig, consider a good monitor arm for greater flexibility. Since they typically clip to the edge of a desk, they can be pushed out of the way to free up additional space on your desktop as required. Moreover, the capability to tilt, rotate and generally reposition your monitor can do wonders for your eyesight. Ergotron, a specialist in this area, sells a range of desktop arms, including a heavy-duty arm that can accommodate an All-in-One PC.

Finally, having some of life's comforts on hand can help you work faster, too. Nothing beats having the right peripherals to boost productivity. Why not settle down with a new wireless keyboard or mouse to begin 2014? If you lack ideas, here's a list of 10 new gadgets to improve your workspace.

S.AKSHAYA

II-B.Sc.(IT)

iPad App Helps Forest Service Distribute Maps for Firefighters



The U.S. Forest Service deploys a mobile map application for firefighters and emergency responders to use in the field and for tactical planning.

We can make edits to the maps up to a half-hour before the morning briefing. It gives us what they call in the military a better common operating picture. Head, production and distribution of maps, fire-behavior assessments and weather forecasts, US Forest ServiceChris Brenzel

The U.S. Forest Service deploys a mobile map application for firefighters and emergency responders to use in the field and for tactical planning

The Project: Implement a mobile map application for U.S. Forest Service

firefighters and emergency-situation units to use in the field and for tactical planning.

The Business Case: As situation unit leader for the U.S. Forest Service, Chris Brenzel oversees production and distribution of the maps (and fire-behavior assessments and weather forecasts) for his 52-person emergency-response team and the camps of 2,000 to 5,000 federal firefighters responding to disasters across the country. While the map-distribution process had improved since the days of cutting up topographic maps from the U.S. Geological Survey, taping them together and running them through the photocopier, it remained labor- and paper-intensive, with Brenzel producing up to 150,000 map pages a day. Because of the time required for printing, the deadline for editing the maps was 9 p.m. the night before a shift. With fast-moving wildfires, the maps distributed to firefighters at 6 a.m. were already antiquated.

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First Steps: Brenzel looked at several digital display options and selected Avenza's free PDF map app for its ease of use, display quality and clean functionality. He and his team tested the app for two months over the summer on an iPad purchased with Brenzel's own money (the federal government provides only one rented tablet per situation unit) while responding to incidents at the Cleveland National Forest in San Diego. Brenzel's team compared notes with other situation units experimenting with mobile apps before having others, including the firefighters, download the Avenza app on their personal devices in August. Although Brenzel uses Esri's GIS mapping software, not Avenza's MAPublisher, to build his maps, pushing them to the app as PDFs is as simple as checking a box before export. "We can make edits to the maps up to a half-hour before the morning briefing," says Brenzel, a former fire captain. "It gives us what they call in the military a better common operating picture."

That was clear when Brenzel and his team were coming off of a 14-day shift fighting the 41,983-acre North Pass Fire in the Mendocino National Forest last summer. "The biggest benefit was using it to brief the team [on the next shift]," says Brenzel. "We

were all in the helicopter [overlooking the forest] and it can be disorienting up there. Everyone was able to take out their tablets and look at the custom map as we went over our concerns and what issues we were leaving for the other team. It made for a smooth transition."

There are currently 2,000 users of the app, and Brenzel expects that number to triple this year as his unit starts chasing the fire season from late February to early November. "We're also starting to work with the battalion chiefs making maps of the forest for the day-to-day project work that we do when we're not on fire," such as creating community defense fuel breaks, where people remove vegetation around the forest to stop a fire's spread and protect homes.

What to Watch Out For: Avenza has not yet introduced its Android app, so Brenzel had to implement a different map distribution app for half of his users. He also had to figure out a stable method of distribution since most federal sites use protected intranets.

P.VIGNESH

III-B.Sc.(CT)

How to Support Mobile App Development in Your Organization



Mobile apps can be harder to manage than their Web-based brethren, but agile development methods can help ease the pain.

Spotlight Ticket Management's path to mobile software development is perhaps somewhat smoother than what other enterprises experience.

The 3-year old Calabasas, Calif. company, which helps corporations manage and track the sports tickets they provide to clients, lacks the years of legacy software development that an older company would need to address.

That said, the company still needed to work through a mobile transition. Product development started about 18 months ago, with the company tapping outsourced

resources for some of the work. More recently, the company has moved to build up its in-house team. In May, the company hired a senior vice president of technology to help with the mobile change.

Spotlight Ticket Management has hired mobile development staff in addition to the technology executive. The company, which initially catered to customers asking for Web-based and laptop-oriented products, now has two native mobile apps and one mobile Web app in beta.

The mobile shift "may be catching some people by surprise," Knopp says, "because it's happening faster than they anticipated. For us, it's happening faster than we anticipated."

As Developers Target Growing Mobile Market, IT Departments Adjust

Organizations from recent startups to long-established enterprises all contend with the pace of mobile change. A recent Gartner forecast predicts that more than 2.3 billion mobile devices will ship worldwide in 2013. The market watcher expects tablet shipments to expand 67.9 percent over 2012 levels, while the mobile phone category will grow 4.3 percent. Notebook and desktop

PCs, in contrast, are expected to decline 10.6 percent.

Naturally, software development increasingly targets those platforms. IT departments are adjusting in various ways. Some create specialized teams to tackle mobile development. Others aim to centralize mobile application management while letting people in different parts of the organization carry on with development.

The latter group may launch governance boards or centers of excellence to coordinate mobile development efforts. Industry executives describe the two-fold objective of such organizations: Encourage creativity and avoid app anarchy.

"As a CIO, you really want to say to users, 'Yes, you can develop mobile apps.' But at the same time, you have a responsibility to control security, data access and data integrity-all the way up through the brand. You're trying to do both innovation and control at the same time and, it's a pretty interesting balancing act."

Mobile Apps Hard to Manage, But Users Love 'Em

Indeed, IT shops are grappling with the mobile juggernaut.

"Getting a handle on mobile initiatives that are underway is proving to be a challenge," says Sriram Ramanathan, chief technology officer at Kony, a mobile and multi-channel application platform provider.

Ramanathan says multiple lines of business within enterprises have already invested in native, consumer-facing apps, which were built using external consultants. Those apps may reflect myriad standards, technologies and processes used in their development. New devices, form factors and operating systems upgrades also contribute to the management task. In addition, Ramanathan notes strong demand for mobilizing internal apps, with both executives and employees leading the charge.

The spreading influence of mobile technology marks a departure from the traditional Web-based world. In that setting, CIOs grew accustomed to browser-based app delivery where they could centrally control Web apps with ease, according to Ramanathan.

To overcome the difficulties of mobile app development, some organizations are rolling specialized oversight groups. Ramanathan has seen a mobile/multi-channel center of excellence work well. He describes a center

of this kind as a central, CIO-funded initiative that may carry out several tasks:

Mobile Units Take Agile Approach to App Development

Examples of oversight groups include the Department of Veterans Affairs' still-evolving mobile application governance board. The department describes the board in its VA Digital Strategy document as being "responsible for decisions concerning the development of mobile apps centrally managed by VA."

As enterprises create centers or boards, they also look to deploy development methodologies for mobile apps. Agile methods and DevOps are among the approaches receiving attention.

Spotlight Ticket Management, for instance, follows the agile methodology, which the company had been using before its mobile development transition. "We're big believers in Scrum and just getting things down quickly and getting iterations out," Knopp says. (Scrum is a framework for team collaboration on software projects.)

Dave Peters, VA assistant deputy CIO for enterprise software development, also noted

that apps need to be designed in an iterative fashion. The key is to involve users.

In the VA's case, Peters says the department needs to practice both continuous integration-an approach that's been around for about 20 years-and continuous deployment/DevOps "to decrease our time to market and enable more frequent and timely end user and customer feedback."

Successful Mobile App Development Makes Key Processes Repeatable

Army Epstein, chief technology officer at Verivo Software, which provides enterprise mobility software, says companies that have built a good app development shop tend to be doing several things well. For one, they have determined the key skills they need and hired accordingly. They have also put thought into their desired development technologies and selected a mobile development and deployment platform to be productive with infrastructure, he notes.

"The best shops have also created an app lifecycle process where all the key phases-development, test deployment of an app, live deployment of an app, repeating the process with the next app or revision-are well

established, repeatable and easier to improve in a consistent way," Epstein adds.

Agilex's Baker, meanwhile, cited the importance of having both the IT department and the business side work together on the mobile app certification process. IT, for example, may want that process to require user authentication to be properly implemented using the accepted organizational standard. The business side, for its part, may want to ensure that the organization's logo appears appropriately on an app.

In addition, Baker believes an enterprise mobility group should specify a standard data access mechanism through which mobile apps can tap legacy systems. Instead of building multiple interfaces to legacy systems, Baker recommends building a mapping layer on top of the legacy systems. The idea, he explains, is to create a layer that "knows how to access data from legacy systems and make [data] available to the mobile device in a standard way."

P.V.NIVITHA

II-B.Sc.(CT)

Brain Teasers

1. Emily loves cats and she keeps some as pets. All but two of them are completely black. All but two of them are completely white. All but two of them are completely ginger.

How many cats does she have in total?

2. A family of five people drove in a car for 300 miles at an average speed of 50 miles per hour. For the whole journey nobody noticed that the car had a flat tyre.

How come nobody noticed?

3. Try to re-arrange the letters of **NEW DOOR** to make new word.

4. A school orchestra with six musicians can play the first section of Beethoven's 5TH symphony in 7 minutes and 23 seconds.

How long would it take to play if they doubled the number of musicians.

5. Tom owns an antique grandfather clock made in the year 1877.

How long is it designed to go without winding?

6. Emma was running in a 5 mile marathon. With the end in sight she sprinted past Chloe

who was in second place and triumphantly crossed the finish line.

Why didn't Emma win the marathon?

ANSWERS

1. She has Three cats.

2. It was the spare tyre.

3. **NEW DOOR** re-arrange to make **ONE WORD**.

4. The Same amount of time. The number of musicians will not change the length of the piece of music!

5. It is not designed to go without winding.

6. She was still in second place.

B.DHAMODHARAN

III-B.Sc.(CT)

Riddles

1. What goes up and down stairs without moving?

2. Give it food and it will live; give it water and it will die.

3. What can you catch but not throw?

4. I run, yet I have no legs. What am I?

5. Take one out and scratch my head, I am now black but once was red.

6. Remove the outside, cook the inside, eat the outside, throw away the inside.

7. What goes around the world and stays in a corner?

8. What gets wetter the more it dries?

9. The more there is, the less you see.

10. They come at night without being called and are lost in the day without being stolen.

11. What kind of room has no windows or doors?

12. I have holes on the top and bottom. I have holes on my left and on my right. And I have holes in the middle, yet I still hold water. What am I?

13. I look at you, you look at me, I raise my right, you raise your left. What is this object?

14. It has no top or bottom but it can hold flesh, bones, and blood all at the same time. What is this object?

15. The more you take the more you leave behind.

16. Light as a feather, there is nothing in it; the strongest man can't hold it for much more than a minute.

17. As I walked along the path I saw something with four fingers and one thumb, but it was not flesh, fish, bone, or fowl.

18. What can run but never walks, has a mouth but never talks, has a head but never weeps, has a bed but never sleeps?

19. I went into the woods and got it, I sat down to seek it, I brought it home with me because I couldn't find it.

20. What can fill a room but takes up no space?

ANSWERS

1. Carpet

2. Fire

3. A cold

4. A nose

5. A match

6. Corn

7. A stamp

8. Towel

9. Darkness

10. Stars

11. A mushroom

12. A sponge

13. A mirror
14. A ring
15. Footsteps
16. Breath
17. Glove
18. River
19. Splinter
20. Light

R.SOWMIYA

III-B.Sc.(CT)

Puzzles

1. Children are in pursuit of a dog whose leash has broken. James is directly behind the dog. Ruby is behind James. Rachel is behind Ruby. Max is ahead of the dog walking down the street in the opposite direction. As the children and dog pass, Max turns around and joins the pursuit. He runs in behind Ruby. James runs faster and is alongside the dog on the left. Ruby runs faster and is alongside the dog on the right. Which child is directly behind the dog?
a. James b. Ruby c. Rachel d. Max

2. Nurse Kemp has worked more night shifts in a row than Nurse Rogers, who has worked five. Nurse Miller has worked fifteen night shifts in a row, more than Nurses Kemp and Rogers combined. Nurse Calvin has worked eight night shifts in a row, less than Nurse Kemp. How many night shifts in a row has Nurse Kemp worked?
a. eight b. nine c. ten d. eleven

3. Four friends in the sixth grade were sharing a pizza. They decided that the oldest friend would get the extra piece. Randy is two months older than Greg, who is three months younger than Ned. Kent is one month older than Greg. Who should get the extra piece of pizza?
a. Randy b. Greg c. Ned d. Kent

4. A four-person crew from Classic Colors is painting Mr. Field's house. Michael is painting the front of the house. Ross is in the alley behind the house painting the back. Jed is painting the window frames on the north side, Shawn is on the south. If Michael switches places with Jed, and Jed then switches places with Shawn, where is Shawn?
**a. in the alley behind the house
b. on the north side of the house**

- c. in front of the house
- d. on the south side of the house

5. In a four-day period—Monday through Thursday—each of the following temporary office workers worked only one day, each a different day. Ms. Johnson was scheduled to work on Monday, but she traded with Mr. Carter, who was originally scheduled to work on Wednesday. Ms. Falk traded with Mr. Kirk, who was originally scheduled to work on Thursday. After all the switching was done, who worked on Tuesday?

- a. Mr. Carter b. Ms. Falk c. Ms. Johnson
- d. Mr. Kirk

Answers

1. d. After all the switches were made, Max is directly behind the dog, James is alongside the dog on the left, Ruby is alongside the dog on the right, and Rachel is behind Max.

2. b. Nurse Kemp has worked more shifts in a row than Nurse Calvin; therefore, Kemp has worked more than eight shifts. The number of Kemp's shifts plus the number of Rogers's shifts (five) cannot equal fifteen or more, the number of Miller's shifts. Therefore, Kemp has worked nine shifts in a row ($5 + 9 = 14$).

3. c. If Randy is two months older than Greg, then Ned is three months older than

Greg and one month older than Randy. Kent is younger than both Randy and Ned. Ned is the oldest.

4. c. After all the switches were made, Shawn is in front of the house. Ross is in the alley behind the house, Michael is on the north side, and Jed is on the south.

5.d. After all the switches were made, Mr. Kirk worked on Tuesday. Mr. Carter worked on Monday, Ms. Johnson on Wednesday, and Ms. Falk on Thursday.

R.SARANYA

III-B.Sc.(CT)