



TECH COOKBOOK – PLAIN TECH TALK FOR YOUR OFFICE



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About K2 Enterprises

- Provides live and on-demand Continuing Professional Education (CPE) in 48 US states and in Canada
- Largest provider of technology-focused CPE for accountants and financial professionals in North America
- Services Offered
 - Live in-person presentations (conferences & seminars)
 - Webinars
 - On-site training
 - On demand self study materials
- www.k2e.com for more information



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K2 Enterprises Web Sites

- www.k2e.com - CPE Info
- www.CPAFirmTech.com – CPA Firm Info
- www.AccountingSoftwareWorld.com – Accounting Software Info
- www.TotallyPaperless.com – Paperless Info
- <https://www.youtube.com/user/K2Enterprises> - The K2 Enterprises YouTube channel with over 160 free technology training videos



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Learning Objectives

Upon completing this session, participants should be able to

- Create a list of hardware and software technologies available to solve business problems;
- Differentiate between technology that is needed and technology that is not needed; and
- Identify top suppliers of products in major categories.



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Let's Begin With Personal Tech

- Let's Discuss
 1. Selecting the Right Workstation
 2. Mice and Keyboards – A few changes can be a huge increase in productivity
 3. Selecting the Correct Office Monitor – Dual or Large, Touch or not
 4. Cleaning up Your Computer for Better Performance



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Specific Hardware Recommendations

- It has been a number of years since we covered some fundamental technologies
- Along the way, a number of you and your teams have requested more guidance
- We have picked specific items that we know to be reliable, safe choices



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www.technologybestpractices.com

Technology Best Practices

Latest Updates

Tweets

Randy Johnston @RPJohnston 22 Feb
Zeus banking malware hides crucial file inside a photo | PCWorld
pcworld.com/article/209852... via @pcworld

Brian F. Tankersley @bftkpa 19 Feb
@cavokong_19k @bfontkpa The behavior change is the key to adopting new tech, not just throwing money at it. @cpapalis
13 Retweeted by Randy Johnston

TBP News

- Accounting Firm Survey
- Apple iPad Mini
- Microsoft Surface and the Plethora of New Tablets
- iPhone 5 and other new phones
- Xero launches guide to invoicing and payments
- 2012 K2 Quality Award Winners

An Independent Review of Today's Top Hardware for Business

Randy Johnston, and Dr. Bob Spencer lecture across the United States and Canada for K2 Enterprises, and write frequently on technology in business. After responding to hundreds of requests for technology recommendations, they developed this site to provide independent technology reviews and



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Surge And UPS

- Surge
 - APC – recall of all products from 1993-2002 because of fire hazard - recall.apc.com/en
 - PRO8T2, PRO7, PRO7T
- UPS
 - Eaton
 - Liebert



Peripherals - Keyboard



Logitech G15 Gaming Keyboard (Black)

by Logitech

★★★★★ 199 customer reviews | 4 answered questions

Price: **\$139.99**

Note: \$6.49 shipping when purchased from Eonline. Offers with free Prime shipping available in [more buying choices](#).

Only 9 left in stock.

Ships from and sold by Eonline.

- With the Logitech-exclusive GamePanel LCD, you can easily find out what server your friends are using to play Battlefield 2142
- Create useful macros on the fly and play them back with a single press of a G-key
- 1-year limited hardware warranty
- Illuminated characters allow you to play late into the night
- Intelligent cable management: Keep mouse, headset, and other cords out of the way by routing them through channels on the underside of the keyboard



Peripherals - Keyboard

Logitech Wireless Illuminated Keyboard K800

by Logitech

★★★★★ - 1,403 customer reviews | 119 answered questions



List Price: \$99.99
Price: **\$69.99** ✓Prime
You Save: **\$30.00 (30%)**

In Stock.

Ships from and sold by Amazon.com. Gift-wrap available.

Want it tomorrow, April 2? Order within **4 hrs 17 mins** and choose One-Day Shipping at checkout. [Details](#)

- Brightly backlit keys with illuminated characters for easy typing?even in the dark
- PerfectStroke key system makes every keystroke more comfortable, fluid and quiet
- No batteries needed?recharge quickly with the included universal micro-USB cable
- Powerful 2.4 GHz wireless connection with one tiny Unifying receiver that stays in your computer
- Works with Windows-based PCs



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Peripherals - Keyboard

Logitech Wireless Wave Combo Mk550 With Keyboard and Laser Mouse

by Logitech

★★★★★ - 1,330 customer reviews | 109 answered questions



Click to open expanded view

List Price: \$79.99
Price: **\$54.95** ✓Prime
You Save: **\$25.04 (31%)**

In Stock.

Sold by [EverythingDeals](#) and [Fulfilled by Amazon](#). Gift-wrap available.

Want it tomorrow, April 2? Order within **1 hr 44 mins** and choose One-Day Shipping at checkout. [Details](#)

- The Wave Combo MK550 includes the K350 model keyboard and M510 Mouse
- Powerful 2.4 GHz wireless connection with one tiny Unifying receiver that stays in your notebook
- Contoured laser mouse with rubber grips gives you smooth, precise cursor control
- Wave-design ergonomic keyboard with cushioned palm rest for exceptional typing comfort
- Virtually no battery changes ? up to three years of battery life for the keyboard and two years for the mouse* (* Keyboard and mouse battery life may vary based on user and computing conditions.)
- Operate up to 30 feet (10 meters) with the receiver in clear sight of the keyboard and mouse



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Peripherals - Keyboard

Logitech Wireless Solar Keyboard K760 for Mac/iPad/iPhone

by [Logitech](#)
★★★★★ | 396 customer reviews | 61 answered questions



List Price: \$79.99
Price: **\$45.99** ✓Prime
You Save: **\$34.00 (43%)**

In Stock.
Ships from and sold by Amazon.com. Gift-wrap available.

- Charges itself with lamplight or sunlight, indoors or outdoors
- Fully charged, it works for at least three months-even in total darkness
- Easy-switching Bluetooth connection enables switching from Mac to iPad or iPhone as simple and easy as pushing a button
- Unique concave key design delivers fast, quiet typing, with more precision than your iPad or iPhone on-screen keyboard
- From the PVC-free construction to the fully recyclable box, designed to reduce its environmental footprint



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Peripherals - Keyboard

Microsoft Sculpt Ergonomic Desktop (L5V-00001)

by [Microsoft](#)
★★★★★ | 205 customer reviews | 63 answered questions



List Price: \$129.95
Price: **\$84.50** ✓Prime
You Save: **\$45.45 (35%)**

In Stock.
Ships from and sold by Amazon.com. Gift-wrap available.


- Keyboard: Split keyset design helps to position wrists and forearms in a natural, relaxed position
- Cushioned palm rest provides support and promotes a neutral wrist position
- Separate number pad provides greater flexibility for workspace setup
- Natural Arc key layout mimics the curved shape of the finger tips
- Reverse tilt angles the keyboard to promote a straight neutral wrist position
- 4-way scroll wheel for navigating up, down, left and right
- Mouse: Thumb scoop helps to maintain the correct ergonomic hand and wrist position




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Peripherals - Mice




Logitech G500 Programmable Gaming Mouse
~~\$84.99~~ ✓Prime
Order at the next 22 hours and get it by Wednesday, Mar 26.
Only 2 left in stock - order soon.



Logitech Wireless Performance Mouse MX for PC and Mac
\$99.99 ~~\$75.00~~ ✓Prime




Microsoft Arc Touch Mouse - Black
\$59.95 ~~\$38.99~~ ✓Prime




[See more choices](#)


Logitech Ultrathin Touch Mouse T630 for Windows 8 Touch Gestures
\$69.99 ~~\$65.11~~ ✓Prime
Order in the next 23 hours and get it by Wednesday, Mar 26.



Logitech Rechargeable Touchpad T650 with Windows 8 Multi-Touch Navigation - Black
\$79.99 ~~\$49.99~~ ✓Prime



Logitech Unifying USB Receiver for Performance Mouse MX
\$39.99 ~~\$11.00~~ ✓Prime



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Tip On Using Mice Better

- Logitech G series are excellent high resolution options, such as the G9x or Performance mouse
 - Adjustable pixel density for rapid mouse movement across multiple monitors
 - Use *Logitech SetPoint software with Windows* for best Windows 8 experience
 - Programmable buttons are great for returning to Start Screen
- If using Microsoft mouse, install *Microsoft Intellisense software* for the mouse



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Printers

- HP LaserJet (Example Color M453dw)
- HP DeskJets – better support in virtual desktops
 - Homes
 - Light use
- All in one copiers – watch your contracts!
 - Xerox
 - Canon
 - IBM
- Other brands like Lexmark are fine, but you have to watch service and supply costs



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Scanners

- Interfaces
 - Use TWAIN
 - Avoid ISIS, WIA, proprietary if possible
- Production
- Personal (Doxie www.getdoxie.com)
- Cloud



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Don't Forget The Scanner

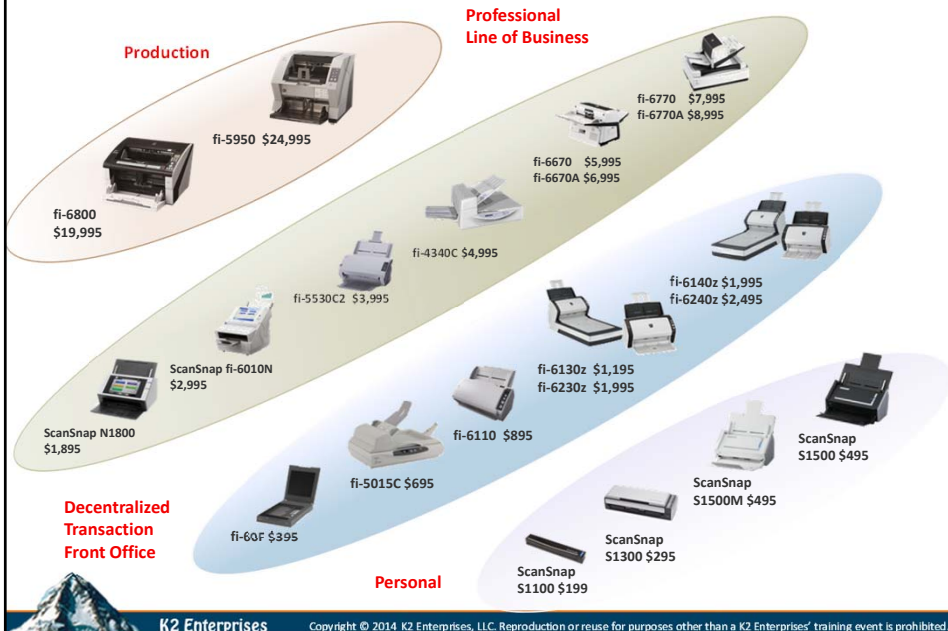
- [Fujitsu fi-6140z](#)
 - Consider purchasing advanced exchange warranty
- [Fujitsu Document Scanner fi-7160](#)
- Look for bundled applications
 - Image enhancement tools like Kofax VRS Professional
 - Batch scanning utilities like Scandall Pro
 - PDF editing applications like Adobe Acrobat
 - Some providers have configuration guides



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Fujitsu Scanner Line-up



Canon Scanners

- Many new models – of note:
 - imageFORMULA P-215 Scan-tini
 - imageFORMULA DR-C130 Document Scanner
 - imageFORMULA DR-6030C



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Mobile

- Cell phones
 - Apple iPhone 5s
 - Samsung Galaxy S5 and Note 3
 - HTC 8x, One
 - Motorola Moto X (Google sold to Lenovo)
 - Nokia Lumia Icon (929), 1020, 1041
- Tablet and smartphone accessories
 - iPad Air or Mini
 - Google Nexus 7
 - Samsung Galaxy Tab
 - Microsoft Surface – if you need/want Windows compatibility



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Smartphones

iPhone joins the legions for 64 bit smart device computing



Android devices like the Samsung Note 3 continue to revolutionize. Samsung Gear, Google Glass – only the beginning.



Windows Phone 8 grows market share – well suited for business users



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Phablets (**Phone** + *Tablet*)



L to R: Nokia Lumia 1520 Phablet, Lumia 928 SmartPhone, iPhone 5 Smartphone, Samsung Galaxy Note 3 Phablet



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Planned Obsolescence In Mobile Devices And Tablets

- 1st Gen tablets (~3 yrs old) are now having trouble running newer apps
- Few, if any, devices which are over 3-4 years old will work with modern LTE networks on cellular carriers
- Wireless standards in mobile devices 4 years ago included no Wi-Fi or 802.11g – NOT 802.11n or 802.11ac
- With heavy use (150x/d, 141 minutes/d), batteries are weak at the end of many two year contracts
- Expected useful lives of devices are much shorter than we have accepted from PCs in the recent past



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Disk

- SSD – server, business, consumer
- NAS – personal, business
- SAN – iSCSI, fiber channel
 - Use SSDs if available
 - HP, Dell, Cybernetics
- Remember backup – safest approach is to use a backup appliance

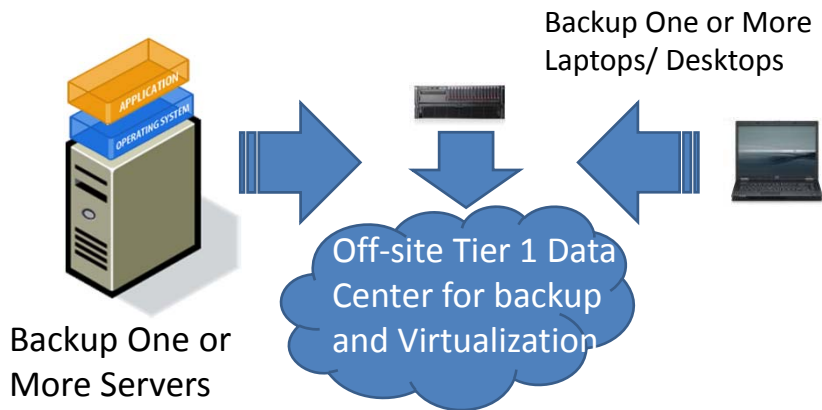


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NetRescue Appliance

\$2,200 to start + annual offsite
Off-site every night



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Desktop
Laptop
Server

GENERAL RECOMMENDATIONS



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Workstations – Desktop Configuration

- 8 – 16 GB of RAM for i7 or i5 based systems
- SSD or HDD (Hybrid Disk Drive) for the boot drive
 - 128GB OK for Cloud, but typically not enough space for processing desktop apps
 - 256 – 512GB preferred for boot drive
- Many desktop systems are not shipping with an optical disk
- Verify type of display adaptor
 - VGA and DVI are disappearing quickly in favor of HDMI, mini-DisplayPort and DisplayPort



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Workstations – Laptop Configuration

- Consider what we presented for desktop and apply to laptops as well
- Consider Ultrabooks™ as super thin, powerful, and highly mobile devices
- Chromebook – Google Android notebook devices targeted to those not needing Windows compatibility to run local apps



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Displays

- There is a movement to larger displays in the 27" – 30" range
 - Samsung, HP, Dell, LG
 - Windows 8 does an excellent job of supporting multiple monitors for desks
- Portable Displays
 - HP U160, MMT, AOC, Lenovo LT1423p



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Workstations – Displays

- There is a movement to larger displays such as 27 – 30" models and away from dual or triple monitors that were in the 15 – 19" class
- Windows 8 does an excellent job of supporting multiple monitors



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Touchscreen Progress And Update

- Touch monitors in the 27" or larger class include Planar, Panasonic, and LG
- Pricing is currently from \$700 up
- Pricing trending down
- Disney introduces 3D touch experience
- Consider lay flat touchscreen monitors
- Touchscreen included with all-in-one computers
 - Sony VAIO Tap 21 - \$999
 - HP TouchSmart or EliteOne 800



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Server Recommendations

- Remain on name brand (HP, IBM, Dell)
 - Lenovo purchased IBM Server line
- License Microsoft Data Center edition (>12 CPUs)
- Look for Intel Xeon E7 V2
- 8-16 cores
- Virtualize (VMware)!
- 64-128GB of RAM
- SSDs for performance
- Boot ROMs if SANs are used
- Fiber Channel SAN if
 - Virtual Desktops implemented
 - More than 50 users



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Should You Take Your Office Virtual?

VIRTUALIZATION

According to ZoomInfo.com, "The concept of the virtual office has existed for decades and was first implemented in 1994 by Ralph Gregory, who founded The Virtual Office, Inc. in Boulder, Colorado."⁽⁴⁾



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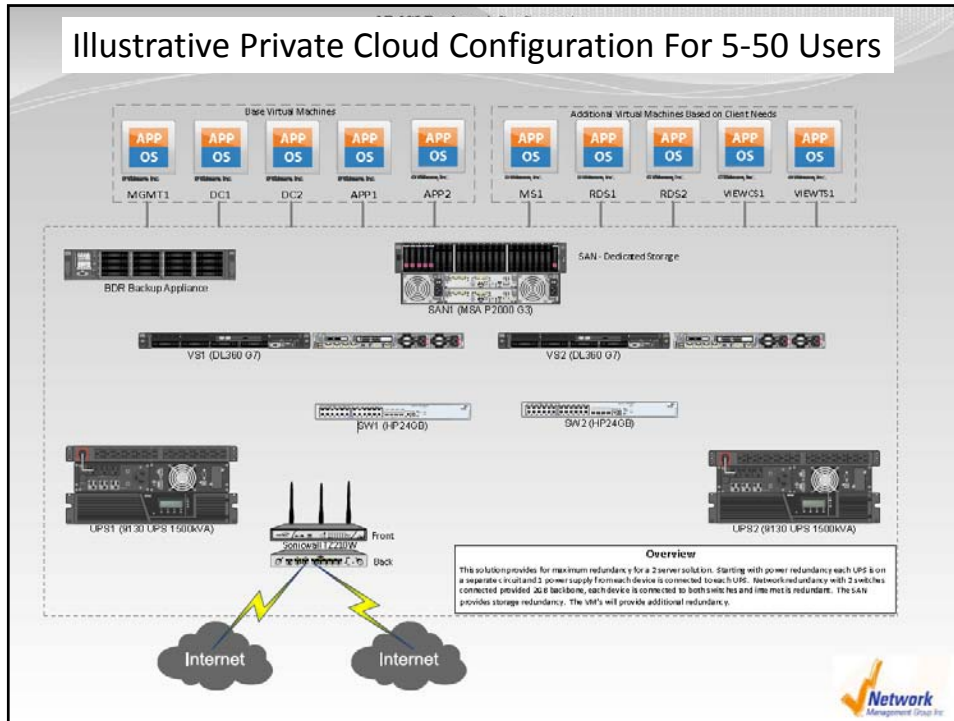
Virtualization

- Server
 - VMware (Enterprise, Essentials, ESXi)
 - XenServer
 - Hyper-V
- Desktop
 - VMware View
 - Citrix XenDesktop
- Cloud hosting, but watch HIPAA compliance...



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That's Right, For The Network Servers, SAN, Licensing And Implementation

- Small network 5-50 Users - \$55-65K
- Large network 50-200 Users - \$90-\$170K, depending on storage needs
- Five year life
- You can supplement your IT team with Managed Services, typically for less than the cost of another IT person.



For Example, Amazon

- Amazon steps into desktop virtualization with WorkSpaces, an assault on VMware
 - Standard Plus w/ Office: \$600-900/yr./user
- The entrance of Amazon into this space with Amazon WorkSpaces is an interesting strategic move, which should concern small hosting companies

Amazon just announced Amazon WorkSpaces, a fully managed desktop-as-a-service in the cloud. WorkSpaces also helps in the work than Amazon's cloud infrastructure offerings, providing access to a Windows 7 experience across desktops, laptops, iPads, and Android tablets. And because it's in the cloud, you can manage a persistent virtual machine across multiple devices — so if you leave the office, for example, you can jump right back into your session from a tablet.

WorkSpaces represents a major challenge to VMware, which rules in most of its core market from desktop virtualization services. Amazon intends to undercut VMware on cost, pricing its cheapest WorkSpaces offering (Standard) at \$55 per user per month.

WorkSpaces comes in four tiers, from Standard to Performance Plus. Standard offers 2 vCPUs, 3.75 GB of memory, and 50 GB of persistent user storage. All of the bundles include Adobe Reader, Adobe Flash, Firefox, Internet Explorer 9, and 7-Zip, among other utilities.

"Virtual desktops are difficult to set up, they're difficult to manage, you have to worry about the hardware, the virtual

- Currently available from many providers:
 - Dell
 - VMware
 - Toshiba



- Amazon WorkSpaces is a fully managed desktop computing service in the Cloud. Amazon WorkSpaces allows customers to easily provision Cloud-based desktops that allow end-users to access the documents, applications and resources they need with the device of their choice, including laptops, iPad, Kindle Fire, or Android tablets.
- With a few clicks in the AWS Management Console, customers can provision a high-quality desktop experience for any number of users at a cost that is highly competitive with traditional desktops and half the cost of most virtual desktop infrastructure (VDI) solutions.

Amazon Workspaces - Desktop Computing In The Cloud

- Each WorkSpaces user can install the client application on the device of their choice. After a quick download, they have access to a complete Windows 7 experience in the Cloud, with persistent storage, bundled utilities and productivity applications, and access to files and other resources on the corporate intranet.



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Amazon WorkSpaces For Enterprise

- The IT professional chooses to supply each user with a given WorkSpaces Bundle. There are four standard bundles:
 - **Standard** - 1 vCPU, 3.75 GiB* of memory, and 50 GB of persistent user storage.
 - **Standard Plus** - 1 vCPU, 3.75 GiB of memory, and 50 GB of persistent user storage.
 - **Performance** - 2 vCPU, 7.5 GiB of memory, and 100 GB of persistent user storage.
 - **Performance Plus** - 2 vCPU, 7.5 GiB of memory, and 100 GB of persistent user storage.



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Amazon WorkSpaces Pricing

- The persistent storage is backed up to [Amazon S3](#) on a regular basis, where it is stored with 99.99999999% durability and 99.99% availability over the course of a year.
- Pricing is on a per-user, per-month basis, as follows:
 - **Standard** - \$35/user/month
 - **Standard Plus** - \$50/user/month
 - **Performance** - \$60/user/month
 - **Performance Plus** - \$75/user/month
- <http://aws.amazon.com/workspaces/>



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Cabling
Switches
Firewall
Internet Communication Line Options

INFRASTRUCTURE



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Network Update – Support It Right

- Cabling
 - New CAT 8 standard
 - Most compatible CAT 7A, Level F
 - Cost effective – CAT 6A
 - Leading edge – CAT 6AF, CAT 7 or CAT 7A
- Wireless
 - High density access points
 - 802.11ac/ad – new standard



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Optical Connection Cuts Cost Of Connecting Fiber Cable In Half

- While improving performance...
 - Intel MXC
 - Fujitsu-Furukawa connector – 25 Gbps
- Optical LAN ([OLAN](#)) – Passive optical LAN-POL
 - Optical line terminal-OLT-32 users to 4 port switches
 - Optical network terminal-ONT
 - GPON-gigabit passive optical network
 - “It's time! You are going to pull out all that Category 5 and recycle it. Copper prices are at all-time highs, so it will bring a pretty price.”
 - Jim Hayes, “Optical LANs: What contractors need to know.” Cabling Installation and Maintenance Feb 20, 2014



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Layer 2-3 Switches (Routers)

- Brands – HP, Cisco
- Switch trunking needs to be set up for server farms
- Evolving through Software Defined Networking (SDN), and Network Functions Virtualization (NFV) with services like AT&T Domain 2.0
- Dell tends to have lower performance for similar money

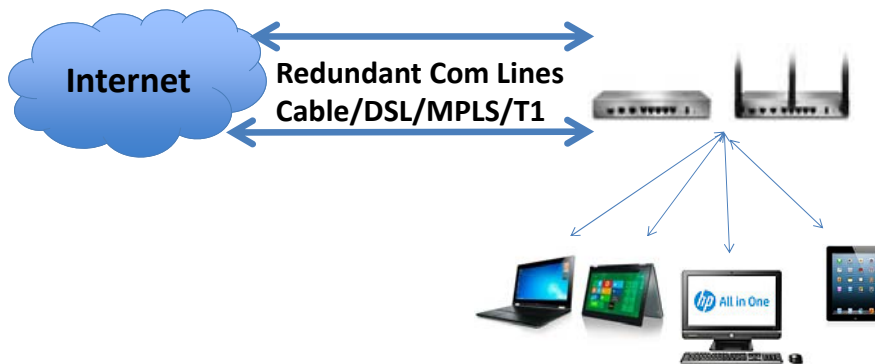


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Needed No Matter What Solution

- Com line(s), firewall/switch, cabling/wireless



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Firewall

- SonicWALL
 - Larger networks NSA 3600 \$3995
 - Small networks [TZ215w](#) \$1000
 - Homes [TZ105](#) \$495
- WatchGuard
- Cisco
- Fortinet
- CheckPoint



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Communication Lines (Best To Worst)

- Metro Ethernet
- MPLS
- Verizon FIOS
- AT&T Uverse – Can you get TV/Video?
Separates fiber from copper DSL...
- Cable Modem
- DSL



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VOIP Phone Systems

- Hosted
 - 8x8
 - RingCentral
 - Vantage
- From one location
 - Fonality
 - ShoreTel
 - Avaya
 - Cisco



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Key Items To Consider

SOFTWARE GUIDANCE



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Security

- In data centers – NSA, Patriot Act Section 215
- Malware – ZeusVM – Deutsche Bank, Wells Fargo, Barclays using steganography (disguises crucial configuration code in a digital photo)
- Encryption – no longer effective
- Protection – sophisticated bad guys bypassing
 - In Firewalls – ASUS Router exploit, files exposed
 - In Antivirus
- Password managers



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Who Is Attacking?

Country	Q2 '13 % Traffic	Q1 '13 %
1 Indonesia	38%	21%
2 China	33%	34%
3 United States	6.9%	8.3%
4 Taiwan	2.5%	2.5%
5 Turkey	2.4%	4.5%
6 India	2.0%	2.6%
7 Russia	1.7%	2.7%
8 Brazil	1.4%	2.2%
9 Romania	1.0%	2.0%
10 South Korea	0.9%	1.4%
– Other	11%	18%

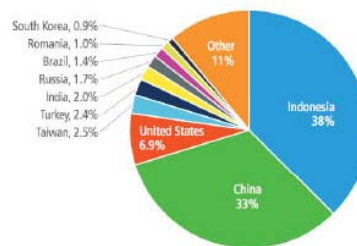


Figure 1: Attack Traffic, Top Originating Countries (by source IP address, not attribution)

- Indonesia is top country

COUNTRIES	NO. OF MALICIOUS IPS REPORTED	MONTH/MONTH TREND
CHINA	1,677,339	↑
UNITED STATES	1,181,775	↑
RUSSIAN FEDERATION	256,589	↑
GERMANY	251,393	↑
TURKEY	188,777	↑



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Password Managers

- LastPass 3.0 (free)/LastPass Premium(\$12/yr)
- Dashlane
- RoboForm Everywhere 7/Desktop 7
- Keeper 5.0
- MyLOK Personal
- Norton Identity Safe (free)
- PasswordBox
- KeePass (free)



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Antivirus Software

- VIPRE
- BitDefender
- AVG CloudCare
- End point protection not as effective
 - Symantec Endpoint Protection
 - McAee End Point Protection



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WINDOWS AND OFFICE UPGRADE OPTIONS AND WHAT'S HAPPENING WITH SOFTWARE



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Reminder Microsoft Dates

- End of life for Windows XP and Office 2003
 - **Ended** on April 8, 2014
 - Extended security patches to July 2015
- Mainstream support ends for Windows 7
 - January 13, 2015
 - Extended support ends 1/14/2020
 - Not the best strategy to replace Windows XP
- End of Life for Windows Server 2003
 - July 15, 2015



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Productivity Software

- Microsoft Office 2013 is a clear winner
 - Consider using Open Licensing with Software Assurance
 - There will be much effort to sell you Office 365
- Others:
 - Google Docs
 - IBM Lotus Symphony
 - Apache Open Office
 - Libre Office



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Some Thoughts On Licensing

- Office 365 ProPlus is less expensive than either Open License plus Software Assurance or SPLA
 - Version, one time plus maintenance over 9 years
 - Office 2013 Standard = $\$233 \times 3 + 109 \times 6 = \1353
 - Office 2013 Professional = $\$318 \times 3 + 158 \times 6 = \1842
 - Office 365 ProPlus = $\$144 \times 9 = \1296 , stop paying, you don't own the license, and MS Office is disabled
 - Expect software audits (SAM or full) from Microsoft
 - OEM can't be used in many situations – avoid!



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Windows OS

- Migration to
 - Windows 7 or
 - Windows 8



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Windows 8 Adoption

- Cloud connected out-of-the-box
- Tight integration with Office 2013
- Improved security
- Generally better performance
- Support for multiple devices, including desktops, laptops, tablets, and smartphones
- Much better multi-monitor support
- Touch enhances experience but not required



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Windows 8.1 Updates

- Start button (not the traditional Start button)
- Single checkbox configuration to boot straight to the desktop
- Easy Shutdown/Restart/Sleep from the Start button
- Improved organization and configuration options for the Start Screen
- FREE upgrade for Windows 8 users, but must be completed by August 15



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Utilities To Help With Day To Day Maintenance

KEEP IT CLEAN



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Keep It Clean

- Many of the problems and issues reported on a daily basis occur because our systems are in disarray.
- There are a few utilities that can help us clean up and thereby speed up our systems.
- Utilities also help us maintain inventory and keep track of our hardware and software
- Here are a few of our favorite recommendations.



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Belarc Advisor

- www.belarc.com
- Evaluates your system
 - All hardware resources
 - All software loaded along with license numbers
- Check that virus scans are complete
- Provides a valuable audit of all your technology resources
- Free version limited, but worthwhile for SMB



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BELARC Advisor

The license associated with the Belarc Advisor product allows for free personal use only. Use on computers in a corporate, educational, military or government installation is prohibited. See the [license agreement](#) for details. The information on this page was created locally on your computer by the Belarc Advisor. Your computer profile was not sent to a web server. [Click here for more info.](#)

- [About Belarc](#)
- [System Management Products](#)
- [Security Advisor for Android](#)
- [Your Privacy](#)

System Security Status Security Benchmark Score <small>Available only for Windows 7, Vista, and XP Pro</small>	Virus Protection Up-to-date	Security Updates Up-to-date
---	---------------------------------------	---------------------------------------

Computer Profile Summary

Computer Name: TSIF-Bob (a TSIF) — TSIF Office - Dr. Spencer
 Profile Date: Monday, March 24, 2014 7:02:11 PM
 Advisor Version: 8.4
 Windows Login: Bob

new [Click to try Belarc's Security Advisor for Android](#)

In page Links:

- [Software Licenses](#)
- [Software Versions & Usage](#)
- [Hardware Updates](#)
- [USB Storage](#)
- [Mounted Virtual Machines](#)
- [Network Map](#)
- [Installed Hardware](#)

Operating System	System Model
Windows 8.1 Professional (x64) (build 9600) Install Language: English (United States) System Locale: English (United States) Installed: 12/24/2013 11:47:06 AM Boot Mode: BIOS (Secure Boot not supported)	EVGA 132-CK-NFTS 2 System Serial Number: 1 Enclosure Type: Desktop
Processor ^a	Main Circuit Board ^b
3.15 gigahertz Intel Core2 Extreme 64 kilobyte primary memory cache 6144 kilobyte secondary memory cache 64-bit ready Multi-core (4 total) Not hyper-threaded	Board: EVGA 132-CK-NFTS 2 Serial Number: 1 Bus Clock: 333 megahertz BIOS: Phoenix Technologies, LTD 6.00 PG 12/21/2007
Drives	Memory Modules ^{c,d}
1255.89 Gigabytes Usable Hard Drive Capacity 358.01 Gigabytes Hard Drive Free Space	8192 Megabytes Usable Installed Memory
TSS/tecp CDDVDW SH-S20JB SCSI CDRom Device [Optical drive] TSS/tecp CDDVDW SH-S20JB SCSI CDRom Device [Optical drive]	Slot 'A0' has 2048 MB Slot 'A1' has 2048 MB Slot 'A2' has 2048 MB Slot 'A3' has 2048 MB
Generic STORAGE DEVICE USB Device [Hard drive] -- drive 3 Generic STORAGE DEVICE USB Device [Hard drive] -- drive 4 Generic STORAGE DEVICE USB Device [Hard drive] -- drive 5 Generic STORAGE DEVICE USB Device [Hard drive] -- drive 6 Generic STORAGE DEVICE USB Device [Hard drive] -- drive 2 Generic Ultra HS-SD MMC USB Device [Hard drive] -- drive 7 <small>Source: SRT 8.0.0 (P) Edition (2/24/2014) (7.06.04 GB) ... Action 0 ...</small>	Local Drive Volumes
	c: (NTFS on drive 0) * 255.69 GB 185.57 GB free d: (NTFS on drive 1) 1000.20 GB 172.44 GB free

* Operating System is installed on c:



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Software Licenses	[Back to Top]
Adobe Systems - Adobe Acrobat X Pro	1118-1061-2216-7884-1372-7036
ATI - CatalystMC	MV49742189549015
ATI - CatalystMC	ZZZ061128-01
Belarc - Advisor	0284ee1
Microsoft - Internet Explorer	00259-40838-04892-AAQEM (Key: 3VGMPCJNT3-4KF6F-9KV8G-4M32Q) ⁶
Microsoft - Office Professional Plus 2013	00216-27960-59889-AA963 (Key: emds with X8Q63) ⁶
Microsoft - Office SharePoint Designer 2007	89394-704-4560015-63082 (Key: JB28C-2GKFM-3V9G3-V8XMG-QBYVB)
Microsoft - PowerShell	89383-100-0001260-04309
Microsoft - Windows 8.1 Professional (x64)	00259-40838-04892-AAQEM (Key: 3VGMPCJNT3-4KF6F-9KV8G-4M32Q) ⁶
TechSmith - Camtasia Studio	F9VCC-WFZ6Q-C974C-BPL3A-77C22

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Software Versions & Usage	[Back to Top]
i Adobe Systems - Acrobat Distiller for Windows Version 10.1.9.22	i Microsoft - Mail, Calendar, and People Version 17.5.9600.20413 (64-bit)
i Adobe Systems - Acrobat Update Service Version 1.701.3.3014	i Microsoft - Maps Version 2.0.2550.2317 (64-bit)
i Adobe Systems - Acrobat Version 10.1.9.22	i Microsoft - Music Version 2.2.767.0 (64-bit)
i Adobe Systems - AeroTray - Adobe Acrobat Distiller helper application Version 10.1.9.22*	i Microsoft - Office 2007 Version 12.0.6606.1000
i Adobe Systems - LiveCycle Designer ES Version 9.0.0.2, 20120627, 2, 874785	i Microsoft - Office 2013 Version 15.0.4569.1505 (32bit-64bit)
i Adobe Systems - Reader and Acrobat Manager Version 1.701.3.3014	i Microsoft - Office Diagnostics Service Version 12.0.6606.1000
i Adobe Systems - Shockwave Flash Version 12.0.0.77 (32bit-64bit)	i Microsoft - Office Diagnostics Version 12.0.6606.1000
i Apple - Bonjour Version 2.0.2.0 (32bit-64bit)	i Microsoft - Office InfoPath Version 12.0.4518.1014 (64-bit)
i Apple - iTunes Version 11.5.5 (32bit-64bit)	i Microsoft - Office InfoPath Version 15.0.4569.1505 (32bit-64bit)
i Apple - Push Version 2.3.4.27	i Microsoft - Office Picture Manager Version 12.0.6606.1000
i Apple - QuickTime QuickTime 7.7.5 (1680.95.13)	i Microsoft - Office Source Engine Version 15.0.4454.1000
i Apple - Software Update Version 2.1.3	i Microsoft - OneNote Version 15.0.4569.1505
i Apple - YSLoader.exe Version 5.3.0.0	i Microsoft - Outlook Version 15.0.4569.1505
i Appmakerstore Nordic - app Version 2.0.2.2	i Microsoft - PC settings Version 6.2.0.0
i Arhoreal Technologies - Technology Review Version 1.0.0.0	i Microsoft - Reader Version 6.3.9654.17044 (64-bit)
i AWIND - McTivVia Version 2.1.0.3	i Microsoft - SelfCert Version 12.0.6606.1000
i Belarc - Advisor Version 8.4	i Microsoft - Silverlight Plug-In Version 5.1.30214.0 (32bit-64bit)
i Check Point Software Technologies - VPN Version 1.0.0.1	i Microsoft - Silverlight Version 5.1.30214.0 (32bit-64bit)
i Comedy Central - The Daily Show Headlines Version 1.0.2.105 (64-bit)	i Microsoft - SkyDrive and Photos Version 6.3.9600.16384
i Creative Labs - Audio Engine Licensing Service Version 2.80.12.6	i Microsoft - Store Version 13.0.0.0
i Creative Technology - 3D MIDI Player Version 1.0.48.0	i Microsoft - Video Version 2.2.767.0 (64-bit)
i Creative Technology - Audio Console Version 2.0.0.0	i Microsoft - Weather Version 3.0.2.233 (64-bit)
i Creative Technology - Audio Service Version 1.0.0.0	i Microsoft - Windows Alarms Version 6.3.9654.20335 (64-bit)
	i Microsoft - Windows Calculator Version 6.3.9600.20278 (64-bit)



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CCleaner

- Automated cleaning of your computer
- Protects your online privacy
- Fixes system errors, freezes & crashes
- Restores PC speed, power & stability
- Free version limited, but worthwhile
- For Mac, <http://www.piriform.com/>



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CCleaner


Overview	Features	Recommended By	Uninstall Guide
PC Cleaner - removes junk files to increase your computer's operational speed	Browser Cleaner - cleans Internet history, cookies and cache for fast, safe & secure web browsing	Uninstall tool - locates and removes unused programs to free up processing power	Fully customizable cleaning options - edit default settings to clean less popular programs
Secure deletion - makes deleted data impossible to retrieve by third parties - even under forensic examination	Industry leading registry cleaner - resolves error messages and system crashes	Scheduler - allows you to automate PC cleaning to periods the system is idle	Fully compatible with Windows 8 - automatic background updates mean CCleaner Professional is always compatible with the latest software
Startup Cleaner - Removes unused programs that start automatically when Windows is launched		Multi profile cleaning - ideal for computers that are used by more than one person	Priority technical support 7 days a week

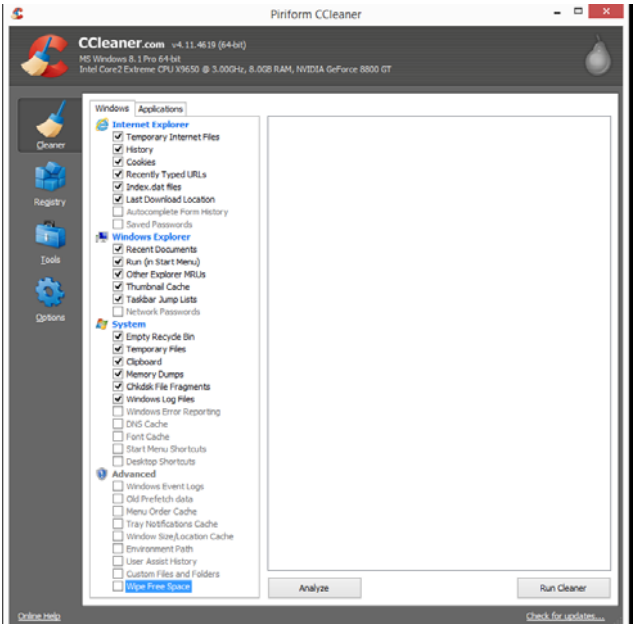


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	 CCleaner Free	 CCleaner Professional	 CCleaner Professional Plus
Enhanced Speed Gives you a Faster Computer!	✓	✓	✓
Privacy Protection Security against ID theft	✓	✓	✓
Complete Cleaning Cleans all user accounts!		✓	✓
Real-time Monitoring Live monitoring and alerts		✓	✓
Automatic Updating Software updates!	Manual	✓	✓
Disk Defragmentation Includes Defraggler Professional			✓
Advanced File Recovery Includes Recuva Professional			✓
Hardware Analysis Includes Speccy Professional			✓
	Download	Free Trial Buy Now \$32.95 \$24.95	Free Trial Buy Now \$69.95 \$39.95


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Piriform CCleaner v4.11.4619 (64-bit)
MS Windows 8.1 Pro (64-bit)
Intel Core2 Extreme CPU X9650 @ 3.00GHz, 8.0GB RAM, NVIDIA GeForce 8800 GT

- Internet Explorer**
 - Temporary Internet Files
 - History
 - Cookies
 - Recently Typed URLs
 - Index.dat files
 - Last Download Location
 - Autocomplete Form History
 - Saved Passwords
- Windows Explorer**
 - Recent Documents
 - Run (in Start Menu)
 - Other Explorer MRUs
 - Thumbnail Cache
 - Taskbar Jump Lists
 - Network Passwords
- System**
 - Empty Recycle Bin
 - Temporary Files
 - Clipboard
 - Memory Dumps
 - Chkdsk File Fragments
 - Windows Log Files
 - Windows Error Reporting
 - DNS Cache
 - Font Cache
 - Start Menu Shortcuts
 - Desktop Shortcuts
- Advanced**
 - Windows Event Logs
 - Old Prefetch data
 - Menu Order Cache
 - Tray Notifications Cache
 - Window Size/location Cache
 - Environment Path
 - User Assist History
 - Custom Files and Folders

[Online Help](#) [Analyze](#) [Run Cleaner](#) [Check for updates...](#)

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CCleaner Cleans System Registry

The screenshot shows the CCleaner application window with the 'Registry Cleaner' tab selected. The interface displays a list of registry issues with columns for 'Problem', 'Data', and 'Registry Key'. A 'Scan for Issues' button is visible at the bottom of the list.

Problem	Data	Registry Key
Unused File Extension	.365n	HKEY\Software\Microsoft\Windows\CurrentVersion\Explorer\FileExt_365n
ActiveXCOM Issue	Map\Foxit - {0032205-0000-0000-C000-000000000040}	HKEY\LocalMach
ActiveXCOM Issue	map\Foxit.object.1 - {41136C00-8990-1028-96CD-00AA003B14FC}	HKEY\map\Foxit.object
ActiveXCOM Issue	map\Foxit.object.1 - {41136C00-8990-1028-96CD-00AA003B14FC}	HKEY\map\Foxit.object.1
Application Paths Issue	C:\Users\Bob\Documents\Data\bin\h365-0.5.exe	HKEY\Software\Microsoft\Windows NT\CurrentVersion\AppCompatFlags\Compatibility Assistant\Store
Application Paths Issue	C:\Program Files (x86)\DF-Files.com\Free-DL-User.exe	HKEY\Software\Microsoft\Windows NT\CurrentVersion\AppCompatFlags\Compatibility Assistant\Store
Application Paths Issue	C:\Program Files (x86)\DF-Files.com\Free-Linux2005.exe	HKEY\Software\Microsoft\Windows NT\CurrentVersion\AppCompatFlags\Compatibility Assistant\Store
Application Paths Issue	C:\Program Files (x86)\MyFree Code\1.0\beta\uninstall.exe	HKEY\Software\Microsoft\Windows NT\CurrentVersion\AppCompatFlags\Compatibility Assistant\Store
Installer Reference Issue	c:\Program Files (x86)\Microsoft Silverlight\5.1.20913.0	HKEY\Software\Microsoft\Windows\CurrentVersion\Installer\Folders
Installer Reference Issue	c:\Program Files (x86)\Microsoft Silverlight\5.1.20913.0	HKEY\Software\Microsoft\Windows\CurrentVersion\Installer\Folders
Installer Reference Issue	c:\Program Files (x86)\Microsoft Silverlight\5.1.20913.0\de	HKEY\Software\Microsoft\Windows\CurrentVersion\Installer\Folders
Installer Reference Issue	c:\Program Files (x86)\Microsoft Silverlight\5.1.20913.0\es	HKEY\Software\Microsoft\Windows\CurrentVersion\Installer\Folders

The screenshot shows the CCleaner application window with the 'Uninstall' tab selected. The interface displays a list of programs to be removed with columns for 'Programs to Remove', 'Publisher', 'Install Date', 'Size', and 'Version'. A 'Run Uninstaller' button is visible on the right side of the list.

Programs to Remove	Publisher	Install Date	Size	Version
Adobe Acrobat X Pro	Adobe Systems	2/2/2014	3.37 GB	10.1.9
Apple Application Support	Apple Inc.	2/28/2014	94.4 MB	3.0.1
Apple Mobile Device Support	Apple Inc.	2/28/2014	22.7 MB	7.1.1.3
Apple Software Update	Apple Inc.	12/25/2013	2.38 MB	2.1.3.127
ATI Catalyst Install Manager	ATI Technologies, Inc.	12/24/2013	18.1 MB	3.0.642.0
Belarc Advisor 8.4	Belarc Inc.	3/24/2014	8.4 MB	8.4.0.0
Bonjour	Apple Inc.	3/23/2014	1.74 MB	2.0.2.0
Bonjour Print Services	Apple Inc.	3/23/2014	3.21 MB	2.0.2.0
Camtasia Studio 8	TechSmith Corporation	12/25/2013	349 MB	8.0.2.918
Catalyst Media Center		12/24/2013		
Catalyst Media Center DVD Authoring Module		12/24/2013		
CCleaner	Piriform	3/9/2014	4.11	
Creative Audio Control Panel	Creative Technology Limited	1/23/2014	2.00	
Creative Software AutoUpdate	Creative Technology Limited	1/23/2014	1.40	
Creative Sound Blaster Properties x64 Edition		1/23/2014		
Creative System Information		12/24/2013		
Cucusoft DVD to iPod Converter 8.18	Cucusoft, Inc.	3/19/2014	19.1 MB	
CutePDF Writer 3.0	CutePDF.com	12/25/2013	3.0	
Dropbox	Dropbox, Inc.	1/23/2014	2.4.11	
Google Chrome	Google Inc.	12/25/2013	33.0.1750.154	
iTunes	Apple Inc.	2/28/2014	216 MB	11.1.5.5

CCleaner For Mac

Piriform[™] For Home For Business Download Support

Home Products Mac CCleaner

CCleaner for Mac

Version 1.07.236

CCleaner for Mac is now available! The number one tool for optimizing your computer can be purchased and downloaded today.

[Download](#) [BUY NOW](#)

Release notes

- New interface and icon.
- Improved cookie management.
- Optimized cleaning speed for OS X 10.8.
- Improved Safari cleaning.
- Added in-app upgrade to Pro version.
- Improved compatibility for OS X 10.5.
- Minor GUI improvements and bug fixes.

Screenshots

System Requirements

Requires an Apple Mac running OS X 10.5 to 10.9 Mavericks

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CCleaner

- Use for office or home systems
- Clean at least quarterly, heavy browsers, or if you install and uninstall apps, use monthly
- Use if system feels sluggish or simply not running well

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Steve Gibson Research Tools

- Perhaps best known for SprinRite, to improve disk drive performance
 - Still useful even today
- Visit www.grc.com
- Use to audit your system network vulnerability as well as network firewall performance
- Tools are free downloads!



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Shields UP!!

Port Authority Edition – Internet Vulnerability Profiling
By Steve Gibson, Gibson Research Corporation



Greetings!

Without your knowledge or explicit permission, the Windows networking technology which connects your computer to the Internet **may be offering some or all of your computer's data to the entire world at this very moment!**

- For orientation and background, please examine the page links provided below for important information about Internet vulnerabilities, precautions and solutions.
- First time users should start by checking their Windows File Sharing and Common Ports vulnerabilities with the "File Sharing" and "Common Ports" buttons below.
- For orientation and information about the Port Authority system, click the Home or Help icons in the titlebar . . .

Click here to check your router now...

GRC's Instant UPnP
Exposure Test

HOME	ShieldsUP!! Services				HELP
File Sharing	Common Ports	All Service Ports	Messenger Spam	Browser Headers	
You may select any service from among those listed above . . .					
User Specified Custom Port Probe		LookUp Specific Port Information			
Or enter a port to lookup, or the ports for a custom probe to check, then choose the service. Your computer at IP 76.122.201.154 will be tested.					



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Checking the Most Common and Troublesome Internet Ports

Your computer at IP:
76.122.201.154

Is being profiled. Please stand by. . .

Total elapsed testing time: 5.105 seconds

FAILED
TruStealth Analysis
FAILED

Solicited TCP Packets: RECEIVED (FAILED) – As detailed in the port report below, one or more of your system's ports actively responded to our deliberate attempts to establish a connection. It is generally possible to increase your system's security by hiding it from the probes of potentially hostile hackers. Please see the details presented by the specific port links below, as well as the various resources on this site, and/or our extensive [helpful and active user community](#).

Unsolicited Packets: FAILED – No Internet packets of any sort were received from your system as a side-effect of our attempts to elicit some response from any of the ports listed above. Some sophisticated personal security systems require their users to attempt to "incubate the probe", thus revealing themselves. But your system remained wisely silent. (Except for the fact that not all of its ports are completely shielded as shown below.)

Ping Echo: FAILED – Your system ignored and refused to reply to repeated Pings (ICMP Echo Requests) from our server.

Port	Service	Status	Security Implications
0	<all>	Stealth	There is NO EVIDENCE WHATSOEVER that a port (or even any computer) exists at this IP address!
21	FTP	Closed	Your computer has responded that this port exists but is currently closed to connections.
22	SSH	Stealth	There is NO EVIDENCE WHATSOEVER that a port (or even any computer) exists at this IP address!
23	Telnet	Stealth	There is NO EVIDENCE WHATSOEVER that a port (or even any computer) exists at this IP address!
25	SMTP	Stealth	There is NO EVIDENCE WHATSOEVER that a port (or even any computer) exists at this IP address!
29	Finger	Stealth	There is NO EVIDENCE WHATSOEVER that a port (or even any computer) exists at this IP address!
80	HTTP	OPEN!	The web is an insecure data store that most security "experts" are being discredited almost daily. There are many known problems with Microsoft's Personal Web Server (PWS) and its message databases that most people run on their personal machines. So having port 80 "open" as it is here leaves intruders to wonder how much information you might be willing to give away.
110	POP3	Stealth	There is NO EVIDENCE WHATSOEVER that a port (or even any computer) exists at this IP address!
113	IDENT	Stealth	There is NO EVIDENCE WHATSOEVER that a port (or even any computer) exists at this IP address!
119	NNTP	Stealth	There is NO EVIDENCE WHATSOEVER that a port (or even any computer) exists at this IP address!
135	RPC	Stealth	There is NO EVIDENCE WHATSOEVER that a port (or even any computer) exists at this IP address!
139	Net BIOS	Stealth	There is NO EVIDENCE WHATSOEVER that a port (or even any computer) exists at this IP address!
143	IMAP	Stealth	There is NO EVIDENCE WHATSOEVER that a port (or even any computer) exists at this IP address!
389	LDAP	Stealth	There is NO EVIDENCE WHATSOEVER that a port (or even any computer) exists at this IP address!
443	HTTPS	OPEN!	The presence of this secure web port in your system implies that this system is establishing secure connections with web browsers. The number one reason for doing this is the transmission of credit card information. This implies that the successful intruder could access the web server's credit card database and score big time. This is a VERY bad port to have open unless you are actually conducting secure web commerce.

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Shields UP!!

Port Authority Edition – Internet Vulnerability Profiling
by Steve Gibson, Gibson Research Corporation

Windows Messenger "Spam Yourself" Test Page

Messenger Spam?
Yes, unfortunately . . . Microsoft Windows Messenger Spam.

I will not repeat, here, the extensive information that appears on our "[Shoot The Messenger](#)" page. If you are not already familiar with Windows Messenger Spam (Windows' latest security annoyance and concern) our "[Shoot The Messenger](#)" page provides the entire story and offers another of my free, tiny Windows utilities to assist with managing the problem. [Please check it out.](#)

You are presumably here because you already understand the problem created by Microsoft's various servers that are open and running, by default, on port 135. So you would either like to verify that Windows Messenger spam can not reach the system you are currently using, or you are just curious and want to play around with it a bit – receiving Windows Messenger packets from someone you trust – before returning to your regular, secure, and Messenger-Spam-free environment.

So . . . Spam Yourself:

The button below will send four small UDP-protocol Internet packets to port 135 of your computer, currently located at IP address "76.122.201.154". Four packets are sent in case one or more are lost along the way. Being UDP protocol, their individual delivery is not verifiable.

Each packet will contain the text appearing in the field below. You can leave it as it is, or customize it to anything you desire:

Windows Messenger note received from www.grc.com

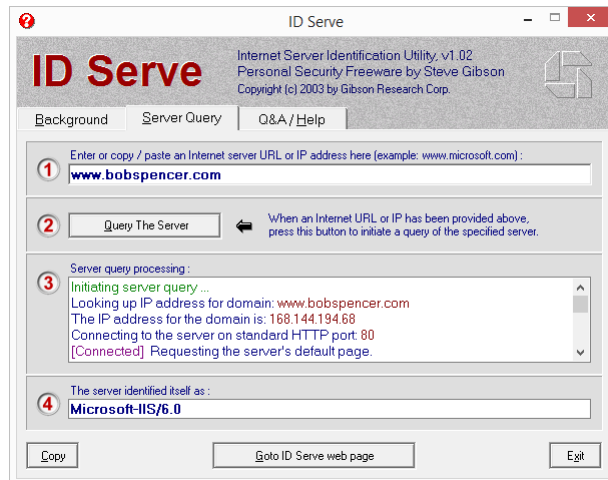
If your Internet service provider (ISP), personal computer system, personal firewall, NAT router, or network is not currently blocking UDP traffic into port 135, and if you are running a version of Windows with the Windows Messenger Internet server enabled and listening for incoming UDP messages on port 135, a number of "Messenger Service" pop-up dialog boxes will immediately appear on your system's screen.

Whether solicited (by you here) or not, these events are completely harmless to your computer. Simply acknowledge the receipt of each one, dismissing the dialog by clicking the "OK" button.

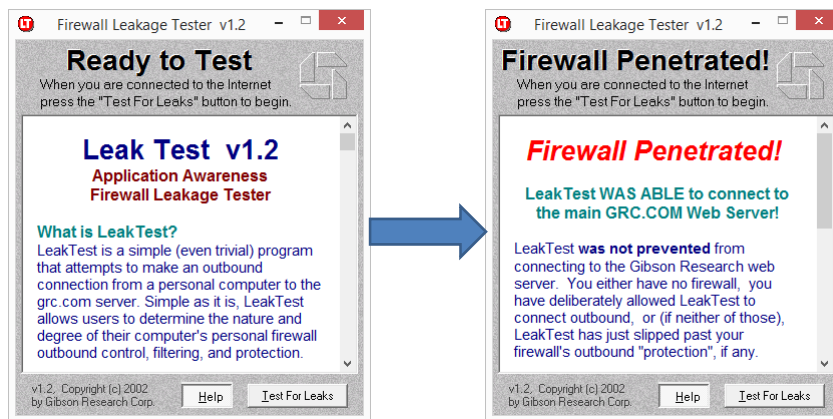
Note that you can also send these Messenger notes to yourself from any of the standard ShieldsUP!! Services panels like the one below. Simply provide a message in the field before clicking the "Messenger Spam" label. (You will then be taken to this page as if the fill-in field had been blank.)

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Another GRC Tool To Download



Another GRC Tool To Download



Thanks Steve

FreeWare

Our Growing Collection of High-Quality, Super-Small and Super-Fast, Freely Downloadable Programs & Resources

This page is automatically updated nightly.

Viewed 363 times per day

Listed by Current Popularity

[List by Historical Popularity](#) [List by Update Age](#)

GRC Project Chronology: A complete listing of my past, present, and probable future projects -- presented in the order of their occurrence -- may be found in the [projects](#) section of "Steve's page".

Daily Average Count of files downloaded from this page: 3,469
Total Historical Count of files downloaded from this page: 29,317,728

You may wish to right-click on the "Download now" buttons, then choose "Save As..." to download and save the file to the location of your choice.

DNSDench
Advanced DNS Benchmark utility. Compare the performance and reliability of your system's currently configured DNS servers to many publicly available alternatives.
Last updated: Sep 20, 2010 at 18:38 (1,270.29 days ago) Downloads/Day: 1,490 Total downloads: 1,308,041 Current Rank: 1 Historical Rank: 7

Securable
Display processor's security features. Quickly determine, display, and explore the availability and consequences of the state-of-the-art security-related features available in the system's processor.
Last updated: Jan 14, 2007 at 13:14 (7,620.45 days ago) Downloads/Day: 894 Total downloads: 3,017,245 Current Rank: 2 Historical Rank: 4

UnPlug n' Pray
Universal Plug & Play management. At the end of 2001, Microsoft revealed a critical defect in Windows XP and ME: Windows' Universal Plug and Play service (UPnP) would allow a malicious hacker to remotely take over any system that was running and exposing the UPnP service to the Internet. This UnPlug n' Pray utility lets anyone check for the presence of the dangerous UPnP service in their system, then easily and safely enable and disable it as needed.
Last updated: Dec 26, 2011 at 13:47 (4,468.34 days ago) Downloads/Day: 465 Total downloads: 3,433,116 Current Rank: 3 Historical Rank: 2

LeakTest
Personal firewall leakage tester. When LeakTest was released, most personal firewalls were easily fooled. Any malicious program could give itself the same name as a trusted program to gain access to the Internet. LeakTest demonstrates and tests for this simple application "masquerading" vulnerability.
Last updated: Jul 03, 2009 at 10:34 (7,178.53 days ago) Downloads/Day: 203 Total downloads: 7,829,427 Current Rank: 4 Historical Rank: 1



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