



Computer and Internet Knowledge Test

Development Guide

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Introduction

This Development Guide provides suggestions and information that will help you develop and improve the knowledge needed for the Computer and Internet Knowledge Test. This Job Knowledge test assesses the knowledge necessary to enter certain job titles at Verizon. To be considered for these jobs, the knowledge test must be passed. The Computer and Internet Knowledge Test consists of 50 multiple-choice questions, **covering 6 different knowledge areas**. These knowledge areas are described in detail in this Guide.

Using the Guide

1. Read the Test Information, Test Preparation Tips, and Test-Taking Tips sections on pages 5

through 11. Then, review the section on ways to improve your score on the job knowledge tests.

Read the suggested activities that may help you further develop your knowledge. Tailor the

suggestions to fit your specific work style and situation.

2. Each topic area measured on the Job Knowledge Test is described in a different section of this

Guide. First, a brief description of the topic area is provided. This description is not a complete

tutorial on the topic area; it simply identifies what the topic areas are. Following the brief

description, a number of relevant aspects of the topic area are listed. These are the things you

should be sure to learn about when studying for the Job Knowledge Test. Each section description

is followed by a sample test question to give you an idea of the type of question that will be asked

on the Job Knowledge Test. Suggested resources are provided to help you learn about the knowledge area. These resources include textbooks, websites, and training materials.

3. You might want to read relevant portions of the books listed in the suggested readings. You do not need to read every book that is listed. Most of the books can be found at local libraries and bookstores. The books listed are examples of the type of books that you should read. It is the content of the books, not these specific titles, that is important. You may want to seek out/focus on references that cover a variety of the content covered by the test.

4. You may also want to complete the practice test questions at the end of the Development Guide.

Check your answers with the answer key at the end of the Guide. Work to understand the difference between the correct and incorrect responses. The questions included in the practice test are **NOT** the items that are on the knowledge test. Successful performance on the practice test **DOES NOT** guarantee successful performance on the knowledge test.

Note: Using this Guide does not guarantee that you will obtain satisfactory test results on the knowledge tests. Your performance depends on your initial level of knowledge, the effort you put into increasing your knowledge, and the effectiveness of the activities you undertake.

Test Information

The goal in developing the Computer and Internet Knowledge Test was to ensure that the test is job-related, fair, and accurate. These goals were accomplished by working closely with a large number of job experts. Job-relatedness was established by asking the job experts to identify the knowledge elements required to perform the job and to review the test questions to make sure they tap the required knowledge elements and are relevant to the jobs for which they will be used as selection tools. Fairness is ensured by asking job experts to review all knowledge elements and test questions to ensure that they only represent knowledge that is required on the job and not specific to Verizon. Asking job experts to review each test question to make sure there is only one, clearly correct answer ensures accuracy.

The Computer and Internet Knowledge Test contains 50 questions. All of the questions will be multiple-choice with five alternatives and there will be no “trick” questions. This test requires knowledge of computers and Internet technology. The test does not require any knowledge of specific Verizon practices or instrumentation. The type of knowledge measured by this Knowledge Test can be acquired either inside or outside of Verizon.

The test measures several knowledge elements that job experts indicated are important requirements for the targeted jobs. **The test measures basic and intermediate knowledge of: computer hardware, operating systems and other software, the Internet, and networking knowledge.** The ability to troubleshoot these areas is also important. The number of items devoted to each knowledge element on the test varies.

Test Preparation Tips

This section provides information about how to study effectively and how to apply your knowledge effectively during the test.

General Suggestions

- Study to learn material now, permanently, rather than putting off the real learning for later.
- Practice not "I will remember!" but "How do I remember?" by finding patterns in the study materials.
- Cultivate interest in the material and confidence in your ability; both improve learning.
- Avoid cramming just prior to the test; it reduces your concentration and increases your confusion! Plunging into material without an organized "plan of attack" does not contribute to learning.

Study Schedule and Study Environment Suggestions

- Set aside plenty of study time several weeks before the test.
- Devise a special study schedule by dividing material into organized units to learn in a specified period of time.
- Let your family and friends know how important it is that you stick to your study schedule.
- Arrange for a distraction-free and efficient study area.

Review Suggestions

- Review all the materials you have access to, but don't just skim; strive to understand the material as well as memorize for the test.
- Actively review material by writing things down as you study rather than just passively re-reading the material.
- Remember that pattern-finding is very important to learning large amounts of information.
 - Try to impose a pattern on each topic area you are studying.
 - Outline material by numbering or lettering important points.
 - Find relationships, concrete examples, and applications that will aid your memory of material.
 - Use mnemonics (that is, memory aids such as using the sentence Every Good Boy Does Fine to remember the correct order of musical notes --- EGBDF) when possible to help you learn information.

Test-Taking Tips

Before the Test

- If possible, get a good night's sleep before the test so that you're well rested.
- Go into the test with a positive attitude, determined to do your best. Focus on what you know, rather than worrying about what you do not know.
- Reduce test anxiety and tension by breathing deeply and stretching before the test.

During the Test

- Read the instructions carefully. Be sure you understand the test instructions before you start.
- Read the entire question and all response options before choosing your answer.
 - Be careful not to add or delete any words in the question stem or options.
 - Pay attention to words like NOT and EXCEPT.
 - Do not over-interpret questions or try to find hidden meanings; the questions are not designed to be tricky. Instead, take questions at face value.
- Try to stay relaxed during the test. If you have trouble concentrating or become tense, pause and take a few deep breaths.

Ways to Improve Your Score on Job Knowledge Tests

This section contains development suggestions that should help you improve your job-related knowledge. You may find these suggestions helpful in preparing for the test.

Developmental Suggestions

- Studying books on basic computers and the basic information on how Internet works and the systems behind it. These books are available in libraries and bookstores.
- Answering practice questions found in books on computers and the Internet and basic networking. These books are available in bookstores.
- Taking a course in computers, Internet and networking at a community or vocational/technical school.
- Taking formal or self-study training courses in computers, Internet and networking.

Resources

Online Degreed Courses *available to current Verizon employees only*

There are several relevant training courses on Degreed. You can review the Topic Areas outlined in this Guide to determine some key search terms.

Hardware

CompTIA IT Fundamentals (FC0-U61) Cert Prep 1: Computer Basics, Hardware, and Operating Systems

<https://degreed.com/view/Course/9167310>

Explore physical hardware troubleshooting

<https://degreed.com/view/Course/32944627>

Operating Systems

Windows 11 Essential Training

<https://degreed.com/view/Course/38439166>

Networking

Introduction To Telecom Networks: Fixed/Wireless Networks

<https://degreed.com/view/Course/34985030>

Networking Foundations: Networking Basics

<https://degreed.com/view/Course/21172608>

Troubleshooting Network Connectivity

<https://degreed.com/view/Course/7361577>

CompTIA A+ Core 2 (220-1102) Cert Prep: 7 Wireless Networking and the Internet

<https://degreed.com/view/Course/34313782>

The Internet

Computer Science Principles: The Internet

<https://degreed.com/view/Course/7355739>

Learning Computer Security and Internet Safety

<https://degreed.com/view/Course/34009655>

Web Sites *available to all applicants*

Hardware

- <https://www.lifewire.com/computer-hardware-2625895>

Operating System & Other Software

- <https://www.lifewire.com/operating-systems-2625912>

Internet of Things

- <https://www.netacad.com/courses/iot>

Networking

- <https://www.netacad.com/courses/networking>
- http://www.practicallynetworked.com/support/troubleshoot_index.htm

Manuals and Published Works

Computer Hardware

CompTIA A+ Certification All-in-One Exam Guide, Tenth Edition (Exams 220-1001 & 220-1002) 10th Edition. Mike Meyers (Author). Publisher: McGraw-Hill Education; 10th edition (April 12, 2019). ISBN-10: 1260454037

Bigelow's PC Hardware Desk Reference. Stephen Bigelow, Michael Mueller (Illustrator), Jackie Sieben (Illustrator). Publisher: McGraw-Hill Osborne Media; 2nd edition (December 24, 2002) ISBN: 0072225254.

MCDST Self-Paced Training Kit. Supporting Users and Troubleshooting a Microsoft Windows XP Operation System. Walter Glenn, Michael T. Simpson, Michael Simpson. Publisher: Microsoft Press; Kit edition (August 25, 2004) ISBN: 0735620652.

PC Annoyances: How to Fix the Most Annoying Things About Your Personal Computer. Steve Bass. Publisher: O'Reilly; 1 edition (October 14, 2003) ISBN: 0596005938.

Upgrading and Repairing PCs, 22th Edition. Scott Mueller. Publisher: PEARSON INDIA; 22nd edition (January 1, 2015) ISBN: 978-9332557352

Operating Systems and Software

Windows Operating System Fundamentals 1st Edition. Crystal Panek (Author). Publisher: Sybex; 1st edition (November 12, 2019). ISBN-10: 1119650518

MCSE Self-Paced Training Kit: Microsoft Windows 2000 Core Requirements, Second Edition, Exams 70-210, 70-215, 70-216, 70-217. Microsoft Press, Corporation Microsoft. Publisher: Microsoft Press; 2nd Bk&Cdr edition (August 28, 2002). ISBN: 0735617716.

Microsoft Windows 2000 Administrators Pocket Consultant, Second Edition William R. Stanek. Publisher: Microsoft Press; 2 edition (August 14, 2002). ISBN: 0735617929.

Microsoft Windows XP (Inside Out Series). Ed Bott, Carl Siechert, Craig Stinson. Publisher: Microsoft Press; 20th edition (November 3, 2004). ISBN: 978-0735620445.

Microsoft Windows XP Plain & Simple. Moon Joyce Resources, Marianne Moon Publisher: Microsoft Press; 2nd edition (September 22, 2004). ISBN: 978-0735621121.

Microsoft Windows XP Professional Resource Kit. Microsoft Windows Team Staff, The\Microsoft Windows Team Staff. Publisher: Microsoft Press; 2nd Bk&Cdr edition (June 11, 2003). ISBN: 0735619743.

Microsoft Windows XP Professional: Administrator's Pocket Consultant. William R. Stanek. Publisher: Microsoft Press; 2nd edition (November 13, 2004). ISBN: 978-0735621404.

Windows XP Annoyances. David A. Karp. Publisher O'Reilly Media; 2nd edition (November 30, 2004). ISBN: 978-0596008765.

Windows XP Tips and Tricks in Easy Steps. Stuart Yarnold. Publisher: In Easy Steps Limited; 3rd ed. edition (June 30, 2005). ISBN: 978-0760771419.

Networking

CompTIA Network+ Certification All-in-One Exam Guide, Seventh Edition (Exam N10-007) 7th Edition. Mike Meyers (Author). Publisher: McGraw-Hill Education; 7th edition (June 26, 2018). ISBN-10: 1260122387.

Absolute Beginner's Guide to Networking. Joe Habraken. Publisher: Pearson Education; 4 edition (September 9, 2003). ISBN: 0789729113.

Computer Networking First-Step. Wendell Odom. Publisher: Cisco Press (April 21, 2004). ISBN: 1587201011.

Network Tutorial: A Complete Introduction to Networks. Steve Steinke, Network Magazine Editors. Publisher: CMP Books; 5th edition (January, 2003). ISBN: 1578203023.

Networking in Easy Steps (In Easy Steps Series). Steve Rackley. Computer Step (January 27, 2000). ISBN: 1840780886.

Appendix A. Practice Test

Instructions: Please read each question and select only one response to the question.

- 1) What is one thing that will NOT help poor PC connectivity?
 - a. Rebooting the router
 - b. Calling your internet provider
 - c. Moving closer to the wireless access point
 - d. All of these will help poor PC connectivity
- 2) Which of the following is NOT one of the main purposes of an IP address?
 - a. allow computing devices to communicate with online destinations (e.g. websites)
 - b. let websites know who is connecting
 - c. identifying the location of a device
 - d. identifying a host or network
 - e. provide a location to send online communications (e.g. email)
- 3) What might cause someone to hear noise/static while on the phone?
 - a. An issue with the phone itself
 - b. A bad cable
 - c. A bad filter
 - d. The jack it is plugged into
 - e. All of these
- 4) Which of the following is a wireless encryption protocol type?
 - a. WEP
 - b. TKIP
 - c. WPA
 - d. WPA2
 - e. All of the above
- 5) Fill in the blank: Each (blank) has its own IP address.
 - a. home or business street address
 - b. router
 - c. internet accessing device
 - d. internet user
 - e. Both B and C
 - f. All of the above
- 6) In order to get high definition on your HDTV, you need:
 - a. an HD cable
 - b. HD satellite service
 - c. Both
 - d. None
- 7) Which of the following are common operating systems? Select all that apply.
 - a. Apple macOS
 - b. Android OS
 - c. AcerOS
 - d. Microsoft Windows
 - e. Apple iOS
 - f. AdobeDOS
 - g. Linux
 - h. EurOS 1.0

8) Which of the following is NOT a primary purpose of a firewall?

- a. encrypt data shared over the internet to protect internet user
- b. monitor and block unwanted traffic
- c. provide a layer of security between home network and the internet
- d. prevent hacking and malicious access of your network

9) A device driver is:

- a. a set of files that tells a piece of hardware how to function by communicating with a computer's operating system.
- b. a piece of hardware that steers your internet connection
- c. a component of an operating system that prompts automatic updates and reboots to your OS
- d. a desktop application that allows you to store your device history

10) Which of the following is a call feature on a landline phone?

- a. Call forwarding
- b. Call waiting
- c. Voicemail
- d. Speed dial
- e. All of the above

11) Which of the following is NOT a main component of an operating system?

- a. Network Management
- b. User Interface
- c. File Management
- d. CPU Housing

12) What is the purpose of a source port on a television?

- a. to connect to multiple video devices
- b. to power on and off the television
- c. to allow the television to display multiple channels
- d. to record and replay programs

Answer Key

1. D - Rebooting the router, moving closer to the access point, and receiving troubleshooting tips from your Internet provider will all help PC connectivity.
2. E - An email address is used in sending Online communications, not an IP address.
3. E - All of the items listed will contribute to causing noise/static over the phone.
4. B - WPA, WEP, and WPA2 are not wireless encryptions protocols.
5. E - Only a router and an Internet accessing device can have their own IP address.
6. C - Both an HD cable and an HD satellite service can be used to higher definition on your TV.
7. A, B, D, E, G
8. A - A firewall is not used to encrypt data.
9. A - This is the definition for a device driver.
10. E - Call forwarding, call waiting, voicemail, and speed dial are all call features on a landline.
11. D - CPU Housing is not part of an OS.
12. A - The source port allows for a television to connect with multiple video devices.

Appendix B. Practice Items Listed by Topic Area

Hardware: This topic evaluates skills related to PC performance, RAM, Rev levels, NIC in motherboard, hard-disk sector, IRQ, DMA, modem functions, troubleshooting IRQ problems, and device drivers.

Items: 1, 9

OS & Other Software: This topic covers skills related to Windows 2000 and XP features, file structures, installation problems, booting issues, registry compositions, backup and restoration in XP, hot fixes, and patches for OS.

Items: 7, 11

Internet Knowledge: This topic evaluates skills related to download speed in Internet, freeware, opensource, MIME types, blocking spam mails, SMTP and POP3, and email applications.

Items: 2,5

Networking Knowledge: This topic evaluates skills related to EMI, ethernet switch, routers, network layer protocols, the OSI model, components of PPP protocols, ICMP, debugging RIP routing, get IP from MAC, and sub-layers of datalink layer.

Items: 4, 8

Voice Knowledge: This topic evaluates skills related to telephones and their functionality.

Items: 3, 10

TV: This topic evaluates the skills related to connectivity devices used by televisions, such as HDMI, coax cables, etc.

Items: 6, 12

COMPUTERS, LAPTOPS & TABLETS > ACCESSORIES & HARDWARE

👍 833

Everything You Need to Know About Computer Hardware

Hardware is the physical part of a computer system, while software is all data-based

By [Tim Fisher](#) Updated on November 5, 2021

✓ Reviewed by [Ryan Perian](#)



IN THIS ARTICLE

List of Computer Hardware

Troubleshooting Faulty Computer Hardware

Hardware Vs. Software

Frequently Asked Questions

Computer hardware refers to the *physical* components that make up a computer system.

There are many different kinds of hardware that can be installed inside, and connected to the outside, of a computer.

Computer hardware may sometimes be seen abbreviated as *computer hw*.



SKIP TO CONTENT

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Tip: Take a toUr inside of YoUr desktop PC to learn hoW all the hardWare in a traditional desktop PC connects together to create a complete compUter sYstem like the one YoU may be Using right noW.

List of CompUter HardWare

Here are some common indiVidual compUter hardWare components that YoU'll often find *inside* a modern compUter. These parts are almost alWaYs foUnd inside the compUter case, so YoU Won't see them Unless YoU open the compUter:

Motherboard: The motherboard (also knoWn as a logic board in other deVices) coordinates all of the other hardWare.

Central Processing Unit (CPU): The CPU interprets and eXecUtes most of YoUr compUter's commands.

Random Access MemorY (RAM): RAM is the memorY YoUr compUter Uses to Work; it's different from the storage that holds YoUr files and programs. YoUr compUter spends RAM to rUn those programs and process information.

PoWer SUpply Unit (PSU): The PSU is the means throUgh Which YoUr compUter draWs poWer. It's UsUally a cord that plUGs into the Wall and a "poWer brick."

Video card: This component handles draWing graphics in games and displaYing Videos.

Hard Disk Drive (HDD): An HDD is an older Version of the hard driVe; it stores information like apps and docUments on a phYsical disc that YoUr compUter reads With an arm that traVels across it (similarly to a record plaYer).

Solid-State Drive (SSD): NeWer SSDs store information on chips. They're faster, qUieter, and more eXpensiVe than HDDs, thoUgh both do the same job.

Optical disk driVe (e.g., BD/DVD/CD driVe): This featUre is less common in neWer compUters, bUt they provide a place to enter a mUsic, moVie, or data disk for YoUr compUter to read.

Card reader (SD/SDHC, CF, etc.): YoUr compUter Uses these to read from portable storage like SD cards.

Here is a list of hardWare that YoU might find connected to the oUtside of a compUter, althoUgh manY tablets, laptops, and netbooks integrate some of these items into their hoUsings:

Monitor: This is a displaY deVice; it shoWs YoU What's on YoUr compUter.

KeYboard: YoU Use this to enter teXt into apps and programs.

MoUse: The moUse lets YoU select items on YoUr monitor.

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Flash drive: A flash drive is a small temporary storage device that lets you move files from your computer and take them elsewhere.

Printer: Printers create hard copies of documents and photos.

Speakers: Your computer likely has internal speakers, but external ones can provide a better sound.

External hard drive: An external hard drive is like a flash drive, but they're larger and have more storage capacity.

Pen tablet: Tablets are good choices for artists and designers. You can "draw" on the screen, and the image will appear in an app.

Less common individual computer hardware devices, either because these pieces are now usually integrated into other devices or because they've been replaced with newer technology:

Sound card: The sound card handles audio for your computer, processing and sending it to the speakers.

Network Interface Card (NIC): NICs usually add an Ethernet port that you can use to connect your computer to the internet. They may also provide Wi-Fi access.

Expansion card (FireWire, USB, etc.): These, like NICs, add functionality to your computer. You use them to add more ports to connect things like external hard drives.

Hard drive controller card: Also known as a disk controller, this device communicates between internal storage and the CPU.

Scanner: A scanner lets you digitize documents and images.

Floppy disk drive: CD- and DVD-ROMs replaced floppy drives as ways to read software.

The following hardware is referred to as *network hardware*, and various pieces are often part of a home or business network:

Digital modem (e.g., cable modem, DSL modem, etc.)

Router: A router is an important part of a Wi-Fi network. It takes the wired connection from a modem and converts it into a wireless one.

Network switch: A network switch also connects to the router and provides multiple Ethernet ports for additional wired connections (for example, to a game console).

Access point: A wireless access point is similar to a router; it also transmits a wireless network signal, but it does so without a dedicated modem.

Repeater: A repeater, like a wireless extender, expands the range of a Wi-Fi signal.

Bridge: You may not have much personal use for a bridge, but in business settings, they link multiple physical networks to cover a

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the software that goes between your computer and the printer.

FireWall: FireWalls are security elements that stop Unauthorized Users from accessing your computer.

Network hardware isn't as clearly defined as some other types of computer hardware. For example, many home routers will often act as a combination router, switch, and firewall.

In addition to all the items listed above, there's more computer hardware called *auxiliary hardware*, of which a computer might have none, or several, of some kinds:

Fan (CPU, GPU, Case, etc.): Fans move hot air from inside your computer case to stop components from overheating.

Heat sink: Heat sinks also absorb heat, usually channeling it to a fan to be sent outside the computer.

Data cable: These physically transmit information between, for example, a modem and a router.

Power cable: This hardware transmits power, typically from a wall socket to a piece of hardware.

CMOS battery: These batteries hold a very small amount of information that's necessary to run your computer.

Daughterboard: A daughterboard works to expand the functionality of the motherboard; it also works with sound and graphics cards.

Some of the devices listed above are called peripheral devices.

A peripheral device is a piece of hardware (whether internal or external) that isn't actually involved in the computer's main function. Examples include a monitor, video card, disc drive, and mouse.

Troubleshooting Faulty Computer Hardware

Computer hardware components individually heat up and cool down as they're used and then not used, meaning that eventually, every single one will fail. Some may even fail at the same time.

Fortunately, at least with desktop computers and some laptop and tablet computers, you can replace the non-working piece of hardware without having to replace or rebuild the computer from scratch.

Here are some resources you should check out before you go out and purchase a new hard drive, replacement RAM sticks, or anything else you think may be going bad:

Memory (RAM)

Find [free memory test programs](#).

Learn [how to replace the memory \(RAM\) in your computer](#).

Hard Drive

Learn [hoW to replace a hard driVe.](#)

Learn [What to do When YoUr hard driVe is making noise.](#)

CompUter Fan

Learn [hoW to fiX a loUd compUter fan.](#)

Find oUt hoW to [fiX the CPU fan error.](#)

DeVice Manager

In Microsoft WindoWs, hardWare resoUrces are managed by DeVice Manager. It's possible that a "faUltY" piece of compUter hardWare is really jUst in need of a deVice driVer installation or Update, or for the deVice to be enabled in DeVice Manager.

HardWare deVices Won't Work at all if the deVice is disabled, or maY not be rUnning properly if the Wrong driVer is installed.

Here are some deVice manager troUbleshooting resoUrces:

Learn [hoW to VieW a deVice's statUs in WindoWs.](#)

Learn to [enable a deVice in DeVice Manager in WindoWs.](#)

Learn [hoW to Update driVers in WindoWs.](#)

Learn seVeral WaYs to [find free driVer doWnloads.](#)

Check oUt the [best free driVer Updater tools.](#)

If YoU decide that some hardWare needs replacing or Upgrading, [find tech sUpport information](#) from the manUfactUrer, inclUding WarrantY information (if it applies to YoU), or look for identical or Upgraded parts that YoU can bUY directly.

HardWare Vs. SoftWare

A compUter sYstem isn't complete Unless there's also softWare, Which is different than hardWare. The softWare is data that's stored electronically, like an operating sYstem or a Video editing tool, Which rUnS *on the hardWare*.

HardWare gets its name dUe to the fact that it's strict When it comes to modifications, Whereas softWare is more fleXible (i.e., YoU can easily Upgrade or change softWare).

FirmWare is closely related to hardWare and softWare, too. FirmWare is Used to tie the tWo together so that a softWare program knoWs hoW to interface With a piece of hardWare.

FreqUently Asked QUestions

What are the four main types of computer hardware? The foUr primarY categories of compUter hardWare inclUde inPUt deVices, oUtpUt deVices, processing deVices, and storage deVices.

SOFTWARE & APPS > APPS

👍 916

Operating System (OS) Definition & Examples

Operating system definition and examples of modern operating systems

By [Tim Fisher](#) Updated on January 24, 2022

✔ Reviewed by [Ryan Perian](#)



An operating system is a powerful and usually extensive program that controls and manages the hardware and other software on a computer.

All computers and computer-like devices require operating systems, including your laptop, tablet, desktop, smartphone, smartwatch, and router.

Not sure what operating system you're running? Use the Lifewire System Info Tool below to find out!

System Info Tool

Tap or click "Check Now" and We'll automatically determine Your IP address, ISP, browser, operating system, and other basic information about Your device.

CHECK NOW

None of Your information is sent to LifeWire's servers and no one but You can see the results.

Examples of Operating Systems

Laptops, tablets, and desktop computers all run operating systems. You've probably heard of most of them. Some examples include versions of Microsoft Windows (like [Windows 11](#), Windows 10, Windows 8, Windows 7, Windows Vista, and Windows XP), Apple's

Your smartphone runs a mobile operating system, probably either Apple's iOS or Google's Android. Both are household names, but you may not have realized that they are the operating systems running on those devices.

Servers such as those that host the websites you visit or serve the videos you watch typically run specialized operating systems designed and optimized to run the special software required to make them do what they do. Some examples include Windows Server, Linux, and FreeBSD.

Software & Operating Systems

Most software applications are designed to work with just one company's operating system, like *juSt Windows* (Microsoft) or *juSt m:cOS* (Apple).

A piece of software will clearly say which operating systems it supports and will get very specific if necessary. For example, a video

Software developers also often release other versions of their software that work with different operating systems. In the video production program example, that company might also release another version of the program with the same features, which only works with macOS.

It's also crucial to [know if you have Windows 64-bit or 32-bit](#) for your operating system. It's a common question asked when downloading software.

Special types of software called [virtual machines](#) can mimic "real" computers and run different operating systems from within them.

Operating System Errors

There are many ways that an operating system itself can become corrupted or damaged, but these issues are relatively rare.

In Windows, the most severe is the [Operating System Not Found error message](#) that implies an OS can't even be found!

Operating System Updates

All modern operating systems have a built-in mechanism to keep the software updated. In Windows, this is through [Windows Update](#). Other operating systems work similarly, like when you [update the Android OS](#) or [download and install new iOS updates](#).

Keeping an operating system up to date with the newest features is vital so that you're getting the most out of your money. Getting security fixes is another crucial reason to ensure your OS is up-to-date; this can help prevent hackers from getting into your device.

FAQ

How many operating systems are there?

There are three main operating systems for computers: Windows, Apple, and Linux. The two main operating systems for mobile are Android and iOS. There are countless other operating systems made for specific devices, such as Samsung's One UI that only works on Samsung devices.

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for Use With Google's ecosystem of online tools (Google Docs, the Chrome browser, etc.) Some Chromebooks, however, can also run Android apps and Linux apps.

What is the operating system for Amazon Fire tablets?

Amazon tablets run Fire OS, which is a modified version of Android. (Learn about the [history of Fire OS](#) and how it matches up to Android.)

What operating system do smartwatches use?

It can vary. Apple Watch runs on [WatchOS](#) while most other smartwatches use the [Wear operating system](#), Google's operating system for wearable products.

Was this page helpful?





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Troubleshooting

Practically Networked Troubleshooting Guides

If you have a networking problem, then you've come to the right place! Our Troubleshooting guides and advice columns are full of help and info to get you back on track.

If there's something you'd like to see that's not here, just let us know!

TRENDING

- 1 Apple iPhone Timeline – From 2007 to 2023
- 2 Windows Remote Desktop Part 1: Setting Up Traditional Access
- 3 Windows Remote Desktop Part 2: Setting Up Web Access

Networking

Network adapter installation and basic network functions.

Gaming Help

Gaming related questions and advice for your network.

Software Proxies

Mostly about problems with older versions of Wingate, but can be useful for solving problems with other proxy-based programs

Wireless

Setup, WEP, drivers and more for wireless networking products.

Other Problems

If they don't fit in any of the above categories, they go here!

Troubleshooting

Tips on Sharing Printers on a Network

You can share a single printer across multiple computers that are on the same network. Here we'll discuss some tips to help you get your printer shared and use it via your other computers.- 8/9/11

Going Away for the Holidays? Skype Yourself!

An inexpensive webcam and pair of free Skype accounts

4 NetIQ's Qcheck

5 Using Zeroconf on Linux: What Is It Good For?

Apple iPhone Timeline – From 2007 to 2023

iPhone Size Comparison Chart 2023 – From The Smallest To The Biggest iPhones

Avast Blocking Internet? Reasons And Simple Fixes

How To Change Wifi On Ring Doorbell Or Camera

Home Automation Ideas – Make The Most Of Your Smart Home

What Is Zigbee – It's Purpose And Function Explored

What is an Ethernet Connection? And How It Compares To Others

CATEGORIES

can help you keep an eye on the house while traveling.-

12/18/08

Windows Easy Windows Remote Desktop: Configuring Your Firewall and Router

Before Windows can accept remote desktop connections via Microsoft's Remote Desktop Connection client application or via a Web browser, the firewall and router must be set to allow it. Learn how to configure both. – 11/13/08

Windows Easy Transfer: New System, Meet Old Data Vista's Windows Easy Transfer makes getting a new system up and running a more manageable process. – 8/14/08

Beyond Simple File Sharing: Using Mapped Drives

More advanced sharing techniques are at your fingertips. Learn how to reach out and touch them. – 7/3/08

Get a Little (Technical) Help From Your Friends

Help is an Internet connection away. Using Vista's Remote Assistance feature is way better than doing tech support over the phone. – 6/26/08

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Beyond Simple File Sharing: Using Hidden Shares

On a network? Have files you don't want everyone to see? We walk through how to hide whichever ones you want to keep to yourself. – 6/12/08

'Free Wi-Fi' May Not Be What It Seems

Beware of ad-hoc networks in public places. – 5/29/08

Don't Let Your Networked A/V Devices Go It Alone

Connecting multiple consumer electronics devices to your network wirelessly can be a pricey and time-consuming undertaking. Networking them via a wireless bridge is one way to save money, time and clutter. – 4/24/08

Share and Share Alike: More on Vista's Network and Sharing Center

When it comes to network sharing on a Vista network, NSC streamlines the setup. Learn how to set up printer, file, media sharing and more in a snap. – 4/17/08

Vista's Networking Central, A Reason to Reconsider

A plethora of network information and options await within the Network and Sharing Center. – 4/10/08

Ask the Wi-Fi Guy: Hotspot Sharing

Thinking of sharing a hotspot? The Wi-Fi guy weighs in on the best way to manage and control it. – 4/1/08

Reviews

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Reduce or Eliminate Messy DHCP Address Changes

Tired of your printer disappearing due to DHCP-assigned IP addresses? Don't want to assign it a static address? Configurable lease times and reservations offer the advantages of DHCP without the pain. – 3/27/08

Track Down Elusive Network Printers

A painless step-by-step guide to bringing that ghost printer back to life. – 3/20/08

What's in Your Hand-Rolled VPN?

Hamachi makes it a cinch to say sayonara to your VPN woes. With the free software utility, your VPN can be up and running in minutes, usually with little or no configuration. – 3/13/08

Get Fast, Free Smartphone Phone Internet Access With Wi-Fi

You can save a lot of money and gain a lot of speed if your smartphone supports Wi-Fi networking. Here's how to set up your Windows Mobile device for WLAN access. – 3/6/08

Better Security Through Password Management

Quit typing your dog's name over and over: Tools like KeePass and Clipperz can help make dealing with passwords simpler and more secure. – 2/27/08

Master Vista With Keyboard and Desktop Shortcuts

Unless you really like your mouse, it pays to learn how to navigate Vista with keyboard shortcuts. And when nothing but an icon to click will do, save yourself some menu crawling with desktop shortcuts. – 2/26/08

A Tale of Two Passwords

A pair of passwords could be leaving your router — and your network — vulnerable to attack. Learn how to batten down your network and choose secure passwords. – 2/21/08

How to Share Files With Network Windows Media Player II

If you've got multimedia content such as songs, photos and video that you'd like to access from a remote system, the media-sharing feature of Windows Media Player II offers a way to do it. Here are step-by-step tips. – 2/14/08

Windows Vista Tips & Tricks

Tips, tricks and tools for optimizing performance under Windows Vista while ensuring that you're taking full advantage of Windows Vista's advanced security features. – 2/12/08

Block Web Sites and More with OpenDNS

OpenDNS offers quicker and more reliable Web browsing, but when you sign up for a free OpenDNS

account, you can also get other features such as content/domain blocking and access to your DNS usage statistics. – 1/31/08

Seven Tips for Safely Sharing Your Access Point

Thinking of sharing your home (or small business) WLAN? This primer on Wi-Fi basics explains security, routers, the various flavors of 802.11 and other essentials. – 1/29/08

Make Your Internet Connection Faster, Better With OpenDNS

free service called OpenDNS can not only help your browser display Web pages faster it also offers some added fringe benefits such as address typo correction and phishing protection, plus site blocking, content filtering, and more. – 1/24/08

Skype vs. Every Other VoIP Provider

All VoIP services allow you to make and receive voice calls via your broadband Internet connection, but there are big differences between Skype and other VoIP services. – 1/17/08

Networking Notes: GnuPG on the Mac: Building Trust

We conclude our look at using public-key cryptography to secure your mail and text by delving into managing

your GnuPG keys — the foundation of its security. —

1/16/08

Five Easy Steps to Hotspot Safety

Most people realize that hotspots can be risky, but they fail to take even the most basic precautions. Here are a handful of ways to protect yourself when using public hotspots. — 1/15/08

BitTorrent 101: A Peer-to-Peer Review

You may not have tried it for yourself yet, but chances are good that you have at least heard of BitTorrent, a peer-to-peer file-sharing technology gets more popular everyday. — 1/10/08

Five Windows Vista Tips for Networking and File Sharing

One of the hardest thing about using Vista is figuring out how to get to the settings and network configuration areas. Here are five tips that will help you maneuver through the networking options in Vista. — 1/9/07

Troubleshooting Help Fresh From the Forums

Tips on port triggering with a Netgear WGR614 for Xbox Live, troubleshooting problems with multiple Windows XP PCs trying to share a cable modem, and step-by-step help for connecting to the Internet using Internet Explorer. — 1/07/08

How to Choose the Right WRT54G Router for You

The Linksys/Cisco WRT54G Router line is famous not so much for what it is, but what it can be thanks to alternative versions of firmware that enable a wide range of networking features. But first you need to know which of its many models does what. – 1/03/08

Getting Started: A Guide to Data Backup

Don't risk losing data to theft, disaster or human error. Play it smart and back it up. We take a look at the basic options. – 12/17/07

Find Answers in the PracticallyNetworked Forums

What to do when two XP computers won't talk to each other. Why is the Microsoft Computer Browser service starting and stopping? And forum members weigh in on Windows Home Server. – 12/11/07

Build a NAS Device With an Old PC and Free Software

Looking for a way to share storage on your network? If you have more time, space and PCs than you do disposable cash, FreeNAS is an excellent — and free — option. We show you how you set it up. – 12/6/07

Networking Tips From the PracticallyNetworked Forums

Microsoft Windows Home Server resources and reviews, troubleshooting advice for a Linksys WRT54GT router

and discussion on file sharing with Windows XP. –

11/13/07

Shiny! Two of Leopard's Practical Improvements

Sharing files with a Mac got much easier and much more robust with the release of Leopard. And if you're on the fence about Time Machine, don't be: It's pretty good despite the eye candy. – 11/01/07

Networking Tips From the PracticallyNetworked Forums

Advice on LAN reconnect issues and using batch files with the "net use" command to map drives and printers. Plus: an interesting discussion on the security risks associated with adding a public hotspot to a business LAN. – 10/29/07

Kill Many IM Birds with One Software Stone

Keeping in touch with people on different IM services doesn't necessarily require you to use a separate IM client for each. You can simplify things by using a third-party IM client that supports multiple services. – 10/25/07

Networking Notes: We're Just Web Tenants

Unlike public spaces that have to operate under certain constraints defined by Constitutional considerations, the many private spaces of the Internet are 'democratic' only as long as being so suits the people who are renting them out to the rest of us.- 10/24/07

Easy Troubleshooting With Network Diagnostics and WNTIPCFG

Can't reach a Web site or send and receive e-mail?

Tucked away into Windows XP is a built-in utility called Network Diagnostics that can save some time and effort by automatically scanning various aspects of your connection with a single click. – 10/18/07

Help Is Just an Internet Connection Away

In the third installment of our series on remote access, we provide step-by-step instruction on how to get or give technical help in Windows XP or Vista with Remote Assistance . – 10/11/07

Stay in Control With Remote Access Services

Microsoft's Remote Desktop is free, so why would you pay for a service? For starters, Microsoft doesn't offer Remote Desktop in Windows XP Home, Vista Home Basic or Windows Home Premium. But even if your version of Windows has Remote Desktop, a remote access service is easier to configure. – 10/04/07

Advice From the PracticallyNetworked Forums

Suggestions on how to keep some computers from hogging bandwidth on a network, a look at WiFi routers

and wired print servers, and some excellent advice on sharing your Internet connection using ICS. – 10/02/07

Access Your Windows PC Remotely — For Free

A variety of remote access services will let you reach your computer from wherever you happen to be. But if you'd like remote access without a monthly fee, check out Windows Remote Desktop feature. – 09/28/07

Security Notes: Manage Your Passwords With 1Passwd

In our ongoing look at password security, this week we take a look at an application for Macs. – 09/26/07

Cable Modems: Buy vs. Rent

You don't have to resign yourself to paying cable modem rental fees in perpetuity. You may be able to save yourself some money over the long run by buying your own cable modem. – 09/20/07

Heard in the PracticallyNetworked Forums

Up for discussion this week is a helpful Dos and don'ts list for wireless network security, how to find and fix IP conflicts on your network, and inconsistent and slow cable modem speeds. – 09/20/07

Security Notes: The Password Game

We're taught early on that we need to do the impossible: Create and memorize a unique password for

each and every service we use. But there are options — a nifty Web site or just write them down. — 9/19/07

Share and Sync Folders on Multiple Systems

FolderShare is one of Microsoft's Windows Live services and this free (albeit beta) product is an easy way to keep the same data up to date on several systems. — 09/13/07

Practical Mac Networking: Growl Makes Your Mac Chatty

If you're looking for a simple, flexible way to make sure you know about what's going on with one computer from the comfort of another, Growl 1.1 might be for you. — 9/12/07

Is It Time to Get Gigabit Ethernet?

Gigabit Ethernet is now inexpensive and ubiquitous enough for home or small office networks. This week, we look at when Gigabit Ethernet is useful and explore how to add it without having to replace existing network hardware. — 9/06/07

Lessons Learned in the PracticallyNetworked Forums

Readers weigh in to resolve Windows XP Pro connection issues, the case of extremely inconsistent speeds when using a router, and moire — 9/04/07

Looking for a Better Way to Share Storage?

If you want to share your storage across a network, or think you might in the future, connecting devices directly to a PC isn't the best option. This week, we look at several options for networked storage. – 08/30/07

Networking Notes: Microsoft's IP Protection Is Risky Business

When a Vista-based PC fails software authentication, the user continues on in a 'reduced functionality mode.' We'd be better off, collectively, if an invalidated copy of Vista stopped working altogether. – 08/28/07

Sharing on a Wi-Fi Network Using Windows Vista

Learn how sharing resources in Vista differs from Windows XP and see exactly how to perform common network sharing tasks. – 08/28/07

Keep Your Internet Access Going During a Power Outage

The same UPS that powers a PC only for about 20 minutes will likely run your gateway and router a good deal longer — perhaps for several hours. – 08/23/07

Networking Notes: Skype Says That Was No DDoS Attack

Skype responds to rumors that a band of criminal hackers brought down its VoIP service and more security updates. Plus: the latest networking product news. – 8/22/07

Connecting to Wi-Fi Networks Using Windows Vista

Learn how sharing resources in Vista differs from Windows XP and see exactly how to perform common network sharing tasks. – 08/21/07

Big File Transfers? Go Direct With IM and More

Sending large files can be a hassle, but instant messaging and direct transfer software offer a way around going by e-mail or third-party hosting. – 8/16/07

Big Files Don't Have to Be Big Headaches

Ever send an e-mail that appears to leave your outbook, but then later you find a notice that delivery failed? You're not alone — sending large files often fails. Fortunately, alternatives abound. – 8/09/07

Networking Notes: Safe at Home?

Most new malware doesn't do anything you're going to notice. In fact, most of it makes it a point to remain unnoticed. It's decidedly unspectacular, but decidedly dangerous. – 8/08/07

Stream Video From Your Windows XP PC

Last week, we modified a Windows Media Center PC to stream video formats such as DivX and XviD to an Xbox 360 console. But what if you want to stream to an Xbox

360 from a plain-old XP Home or Professional system?

We got you covered. – 08/02/07

Stream Videos to Your Xbox 360

Networking a Windows Media Center PC and Xbox 360 lets you access files as if you were front of the computer. But there's a catch: It doesn't work with DivX or XviD (two of the most prevalent video formats). Fortunately, a free utility offers a simple fix. – 07/26/07

Be Careful What You Click For

The strongest firewalls and most savvy anti-virus/anti-spam software can't protect you from phishers. Here's how to not get caught in their nets. – 07/19/07

Networking Notes: The Power of the Hosts File

Need to contact another computer on the Internet? You usually rely on a DNS server to look up the host's IP address. but the system has a few issues that make it occasionally frustrating. Here's how you can use hosts files for immediate access. – 07/17/07

Networking Notes: Netgear's Storage Central Goes Turbo

The network-connected two-drive storage device brings — in addition to 'turbo' speed — SATA disks, Gigabit Ethernet and disk mirroring. Plus: the latest in 802.11n, iPhone mania rages on and more. – 07/11/07

Utilities for Nothing, Security for Free

Free utilities may lack the polished interface and some of the features you typically get with commercial software, but for most people, free security software can be a cost-effective way to protect one or more PCs. –

6/28/07

Understanding and Resolving IP Address Conflicts

IP address conflicts are usually temporary, but you can't count on them to always resolve themselves. This week, we'll look at likely causes of IP address conflicts and some ways to address them. – 6/14/07

Cut Spam Out of Your Network's Diet

You probably wonder why e-mail providers can't simply block all spam before it gets to you. The truth is there's only so much they can do. The rest is up to you. – 6/7/07

Networking Notes: Prepare Your Network for Tomorrow's Software

The choices we make in terms of our network infrastructure will matter for a lot more than how quickly we can view streaming video. They might end up being our lifeline to apps our businesses (or academic careers, or household budgets) depend on. – 06/06/07

Sauce Up Your Router with Tomato

The firmware options for a given router are typically limited to those provided by the manufacturer of the device. But on some routers you can install third-party firmware versions that may enhance the router's existing features and even add some new ones. – 05/31/07

Wake Up and Smell the Network

More and more people want to take advantage of remote access, but your PC has to be on to be accessible, right? Well, yes and no, because a technology called Wake on LAN. – 5/24/07

Wireless Tips: Stop Roaming to the Wrong AP

It was only a matter of time before businesses started to monetize what amounts to a state of near chaos in wireless connectivity. Time Warner is the latest to buy into the FON model. – 5/22/07

Do You Always Need A Broadband Router?

If you don't need the extra LAN ports or wireless access a broadband router offers, does it serve any real purpose other than to add cost and complexity? – 5/17/07

Networking Notes: Free (and Almost Free) Mac Networking Tools

This week we look at two handy, free tools that make using Macs a little nicer for practical networkers. And we

take a peek at one that costs a little, but offer good value. – 05/16/07

Get the Most From Your USB WLAN Adapter

It's not hard to see the appeal of easy-to-install USB WLAN adapters, but how do you ensure you are getting the best results? – 5/10/07

Networking Notes: So Long and Thanks for Nothing

The only reason anyone could possibly have to ask a question of the sales team at a big-box retailer is simple politeness — the guy asks if he can help, so you humor him. – 5/9/07

Wireless Network Configuration Tips for Windows XP

If you have several systems running Windows XP SP2, Windows Connect Now (WCN) provides a way to avoid some of the repetitive, time-consuming and error-prone tasks involved in configuring a wireless network. – 5/03/07

SSL Alone Is Not Enough to Protect You

The presence of SSL can often lead to a false sense of security because it protects your data only from being intercepted while in transit from your computer to a merchant's site. – 4/26/07

Firewire Facts: What's a 1394 Network Connection?

Firewire/1394 is a high-speed serial connection used to connect to external storage and multimedia devices, but you can also run TCP/IP over Firewire to network two systems together. – 4/19/07

Wireless Security: Say No to WEP, And Yes to WPA

If reports and studies are accurate, a significant percentage of wireless LANs (especially those used in homes) are still using outdated and insecure WEP for their encryption. – 04/11/07

Practical Lessons You Can Learn From Network Pros

Much of what we buy off the shelves of CompUSA and BestBuy started somewhere up in 'the enterprise,' and found its way down to us as a way for vendors to differentiate themselves. – 4/11/07

Practical Lessons You Can Learn From Network Pros

Much of what we buy off the shelves of CompUSA and BestBuy started somewhere up in 'the enterprise,' and found its way down to us as a way for vendors to differentiate themselves. – 4/11/07

Can Your Router Keep Your Kids Safe Online?

Plenty of options exist to let you monitor and limit what kids can access on the Internet. You may need to look no further than your broadband router. – 4/5/07

Supercharge Your Wireless Broadband Router

The Linksys WRT54G line of wireless broadband routers and its competitors, may be the bargain of the 21st century when combined with DD-WRT — Broadcom-chip-based open source firmware. – 04/03/07

Wireless — Brush Up on Your Bluetooth

While the Bluetooth probably conjures up images of people appearing to talk to themselves, the technology is useful for much more than voice. For example, Bluetooth shines for wireless data networking for up to 32 feet. – 3/29/07

WPA PSK Crackers: Loose Lips Sink Ships

Think Wi-Fi Protected Access makes your home or small business network impenetrable? Think again — and learn how to protect yourself. – 03/28/07

Windows XP: Don't Forget the Firewall

This week, we take a look at how to set up and use the firewall feature built into Windows XP Service Pack 2. We also discuss why you might need more protection than Microsoft offers. – 3/22/07

Networking Notes: Unsafe at Any Price

If anyone could write a decent anti-virus package for

Windows, it'd have to be Microsoft, right? Unfortunately, that argument fails miserably in reality. – 03/21/07

Tips on How to 'Extend' Your XP PC with an Xbox 360

If your PC is running XP Media Center Edition 2005, you're not using it to its full potential if it's tucked away in a back room. But you can remedy this situation, by using the Xbox 360 game console as a Media Center Extender. – 3/15/07

Networking Notes: Mac Tools — Old Stats with a Pretty Face

This week, we take a quick look at a Mac tool that provides one-stop access to pinging, route tracing or domain investigating. – 3/14/07

A Guide to VoIP — Just the FAQs

There are two kinds of people: Those who have switched to voice over IP service and those who are thinking about it. If you fall into the latter category, these frequently asked questions will help you make your decision. – 3/08/07

Networking Notes: Optimize Your Browser's Internet Connection

It seems we're all looking for a way to squeeze a bit more out of our Internet connections. If you're using Firefox, the two add-ons I've got for this week help you

speed Firefox up a little without having to deal with its about:config page. – 03/5/07

Three Roads to Network Printing

Having a printer for each computer on your network is usually overkill. A better use of money and space is to set up a networked printer that everyone can share. This week, we explore three printer-sharing methods and discuss the pros and cons of each. – 3/1/07

Microsoft Vista Tips: Home Networking Setup and Options

The most daunting part of upgrading to Windows Vista may be trying to figure out where in the layers of menus the networking and file-sharing options are hidden.- 02/28/07

Networking Notes: Build a Dropbox with SSH and Applescript

This week, we take a quick look at a handy feature in Mac OS X called Folder Actions, and discuss how we can use them in conjunction with a program called rsync to create a secure network dropbox.- 02/26/07

Tips for Securing Your Home Router

Seemingly minor and easily overlooked settings can still have profound security implications. Here are some

steps you can take to make sure your wired or wireless home router — and by extension, your network — is as secure as possible. – 2/22/07

Getting Your System Ready for Windows Vista

If you plan to throw caution to the wind and upgrade to Microsoft Windows Vista, here are some things you need to first consider. – 2/21/07

Networking Notes: Tunneling With Mac OS X

This week, we take a look at a part of what SSHKeychain makes really easy: secure tunneling. – 2/20/06

Troubleshooting Tips Before You Resort to a Reboot

When you can't get an Internet connection, a common response is to reboot the computer, router and/or DSL or cable modem device. But this should be the last resort. Rebooting everything may clear up the problem, but it won't shed any light on where the problem was in the first place. – 2/15/07

Networking Notes: Mac OS X — Pimp my SSH

OpenSSH is at home in most Unix environments, and the Mac's OS X is no exception. But getting OpenSSH to feel a little more Mac-like takes a download or two. – 2/13/07

How Powerline Networking Works

With the right (inexpensive) equipment, you can use the

AC wires in your walls to transmit data along with electricity. – 02/8/07

Living in Virtual World — It Has Real Benefits

While the virtualization buzz is loud in big business circles, the technology also provides safer, more convenient networking for home offices and small businesses. – 02/1/07

Dynamic DNS Means Anytime, Anywhere Network Access

Because ISPs don't assign static IP addresses, accessing devices your network remotely is tricky. One way around changing IP addresses is to use a Dynamic DNS service, which automatically tracks the changes to your network's public IP address. – 1/25/07

Broadband connections: How Fast Does Your Data Swim Upstream?

Browsing isn't the only thing people use the Internet these days. In fact, for just about any Internet-based application other than Web browsing, the speed of your upstream connection is sometimes more important than your downstream connection. – 1/18/06

Home Networking Made Simple(r)

Using a home network management utility is a good way

to make Windows networking easier for novices and experienced users alike. We look the range of features offered in this genre of software. – 1/11/07

Networking Notes: The Problem With Windows (or Any Other OS)

The battle of Windows vs. Linux or Mac people is a case of everybody being to some degree right combined with an abundance of human obnoxiousness. Regardless of which camp you're in, security threats are changing. – 1/10/07

SSL Provides VPN Security the Web Way

If you're looking for a way to set up secure remote access with less complexity and cost than a traditional a IPSec VPN, an SSL VPN may be the way to go. – 1/4/07

Networking Notes: Security Begins at Home

When it comes to keeping outsiders off your home or office wireless network, a little security can go a long way. – 01/03/07

Static DHCP Offers Consistent Remote Access

Open source router firmware such as DD-WRT does things the factory-installed stuff never offers. For example, you can give a computer the same IP address every time so you'll always have remote access. – 12/21/06

Boost Your Bandwidth, Boost your Network Performance

In recent years Gigabit Ethernet has become a practical and economical option for home offices and small businesses. Today it now makes sense to consider Gigabit to the desktop as a viable option when upgrading or setting up a new network. – 12/7/06

Networking Notes: Remote File Access in a Virtual Snap FUSE lets you make filesystems out of all sorts of things — from remote SSH servers to that spare space you have in your gigantic Google Gmail quota – 12/5/06

Why Can't I See My Computer on the Network?

Your peer-to-peer network is humming along, but you can't see all the PCs connected? We offer several options to browse your network resources. – 11/1/06

Networking Notes: Things That Go Bump on the Network

On this Halloween, we bring you the story of a high school, a mysterious recurring Phantom of Fifth Period network issue and an admin who realized the power of a community watch group. – 10/31/06

Networking Notes: 802.11 nUh-Uh

Vendors that are selling 802.11 n have decided the imperatives of their product cycles trump the long-term

benefit of their customers, who they're busy turning into beta testers. – 10/24/06

Don't Fall Prey to Lazy Password Practices

Building strong passwords helps you protect both business and personal data from unauthorized access. But passwords are meaningless if they are too simple or written down where other can access them. – 10/16/06

Why Wireless Uplink Signal Strength Matters

Signal coverage is very important when deploying a wireless LAN. Here's how to ensure that you're getting the coverage you need. – 10/12/06

Sharing Calendars and Contacts on a Budget

Sharing Outlook calendars and contacts doesn't have to be an expensive proposition. We rundown network-based and hosted alternatives. – 10/4/06

Do You Really Need a Server?

PCs networked in a peer-to-peer fashion are adequate when you have only two or three users on the network. After that you really need to consider investing in a network server. Here's why. – 9/14/06

Have Big Files, Will Travel

Some files are just too big to send via e-mail. However, you don't have to resort to burning a CD and snail mail.

We review the options for getting large files from here to there. – 8/31/06

New Notebook, Same Old Wireless Troubles

Brand new notebook PC, established wireless network waiting at home ... Everything should just work, right?

Our columnist gets a refresher course in troubleshooting. – 8/15/06

Step-by-Step: Creating a Wireless Network, Part 3

Your wireless network is set up, but what if it seems to slow or unreliable? In the conclusion to our series we look at some common factors that can undermine your wireless network and how you might be able to improve its performance. – 8/8/06

Building Network Appliances With Linux, Part 6: Running Servers

Once your firewall is protecting your Linux appliance, you need to poke a few holes in it to allow visitors access to network services. – 8/3/06

Step-by-Step: Creating a Wireless Network – Part 2

Once you've got all your gear lined up, it's time to bring your wireless network to life. Part 2 of our three-part series steps you through what you need to know to configure your network easily and securely. – 8/1/06

Don't Leave an Internet Trail Behind You

In addition to storing Web addresses, AutoComplete can also store usernames and passwords of your accounts. So if you're not careful, AutoComplete could inadvertently allow unauthorized users to gain access to your sensitive information. – 7/28/06

Protect Your Network With Content Filtering

One of the best ways to maintain the security and performance of your network — whether at home or in a large office setting — is to restrict the material users are able to access over the Internet. – 7/25/06

How Fast Is Your Wireless Network? Guess again!

To achieve advertised performance numbers, hardware manufacturers employ numerous techniques. As a result, you need to shop wisely: Two competing products might be capable of 108Mbps, but they do so in different ways and are not completely compatible with one another. – 7/11/06

Accidents Happen (Even to Networking Columnists)

Accidents happen all of the time: Hard drives fail, viruses and spyware wreak havoc, or sometimes we just delete things we didn't mean to delete. But no matter how bleak things look, remember, there is almost always a fix. – 6/27/06

How to Up the Number of Downloads IE Allows

Increase the number of Internet Explorer's simultaneous downloads with this simple registry hack. Plus, how to make Universal Plug and Play work for you. – 6/14/06

An Introduction to Windows Vista, Part II

In part two of our Vista series, we take a closer look at new or newly improved features that could help your small business perform and produce more securely. – 6/13/06

Safety First: 16 Steps to a Healthy Network

To maintain network security takes diligence and the integration of strong security practices into our daily lives. – 6/7/06

Build a Linux Network Appliance, Part 2

In our first installment, we described the benefits of Linux-based network appliances. Now the construction begins using Debian GNU/Linux operating system as the foundation of your gateway box – 5/31/06

Better Living Through the Remote Desktop

Windows XP Professional's Remote Desktop feature allows you to see and control your office PC as though you were sitting directly in front of it. You may never have to leave home again. – 5/23/06

Build a Linux Network Appliance

Welcome to our series on how to build your own Linux-based network appliance. You'll learn how to configure Internet-connection sharing and firewalls, and how to add services such as intrusion detection, HTTP caching, name services, file and print sharing, and network storage. Whether your network is running Windows, Mac or something else, your Linux appliance will serve them all. – 5/18/06

Move Between Networks the Easy Way

Automatic Configuration for Multiple Networks hasn't gotten much recognition, but its transparent operation is one of the most useful features every integrated into Windows XP. – 5/11/06

UPDATED: Special Application Port List

– 5/3/06

An Introduction to Windows Vista

As the rollout of Microsoft's long-awaited operating system draws a little closer, we kick off a three-part series to look at what's new and what Vista offers small and home-based businesses. – 5/3/06

The Importance of Backup Systems — Part 2

There's more than one way to backup up your network. In Part 2 of our two-part series on preparing for disaster, we

look at your hardware and software options for implementing an efficient backup strategy. – 4/24/06

Is Wi-Fi Roaming Really Seamless?

Wireless LANs are meant to provide roaming, and most people expect it to be seamless. Here's how it really impacts wireless applications. – 4/20/06

The Importance of Backup Systems

Even though most of us know that we need to do regular backups, the fact is that many us don't. In part I of a two-part series, we review why it's important to perform these backups on a regular basis. – 4/10/06

Do It Yourself: Roll Your Own Network Cables

This one begs the question: Why assemble your own Ethernet cables? Maybe you need custom lengths of cable. After all, coiling a 25-foot cable when you need only two feet is overkill, not to mention a decorating don't. You won't do it everyday, but having the supplies and know-how to whip up a cable on the spot is handy. – 4/5/06

Safeguard Your Laptop When You're Away From Home

Wireless networks and Internet cafes have made it more convenient than ever for road warriors to get online, but this convenience often comes at price. Here are some

tips to keep your data safe while you're on the move. —

3/30/06

The Lowdown on Wi-Fi Security: From Supplicants to Keys

While you should never just assume your wireless communication is secure, securing your WLAN doesn't have to be a trial. However, it does help to be aware of — and understand — the complexities. — 3/23/06

Trends in Wireless Networking

Convergence, security and lower prices continue to be the hot developments in wireless networking. — 3/16/06

How to Track Down Rogue Wireless Access Points

Rogue access points are the silent killer of wireless network security. However, there are numerous steps you can take to minimize the threat. — 3/3/06

Why All Networked PCs Need Antivirus Software

Many computer users mistakenly think that if they run anti-virus software on the computer connected to the Internet all PCs on the network are protected ... plus, tips for new Mac owners and how far can Ethernet cables reach. — 2/23/06

Understanding IP Addresses

Networks don't work without addresses: Whenever you are sending something, you need to specify where it

should go and where it came from. To be able to troubleshoot your network, you need to understand IP addresses. – 2/22/06

Q&A – Wireless Connectivity Starts at Ground Zero

Setting up a wireless network in your home shouldn't be a major project, but one thing can stand in the way of unsuspecting users — it's called Wireless Zero Configuration and you gotta have it. – 2/9/05

Q&A – Installing a Cable Modem: USB vs. Ethernet

Cable modems will operate fine connected to either a USB or an Ethernet port. Your cable provider may not tell you, but one is a much better choice. Plus, everyone talks about using secure passwords, but what constitutes one? – 2/2/06

Q&A – Making a Case for Remote Access

An attorney leaves a big firm to open his own practice and discovers he needs access to his office PC from the road. We outline the options, which range from installing a virtual private network to using a simple Web-based service. – 1/26/05

Q&A – Wi-Fi Authentication and Encryption Demystified

A curious reader — eager to understand how wireless encryption and security works — runs two scenarios by

our columnist. Read on to find out if logical assumptions pan out in the world of Wi-Fi. – 1/19/06

Q&A – Managing With Unmanaged Switches

While it's true that managed switches are technically superior to unmanaged switches, that superiority comes with more complexity and the need for a network engineer to get the best performance. For those reasons, unmanaged switches are best for small networks. – 1/5/05

Q&A – What to Do When You're Branded as Spam

If you send an e-mail and it bounces back to you with a message that it was blocked by SORBS, the problem lies with your service provider's open relay mail server. Here's what you need to do to resolve the situation. – 12/12/05

Troubleshooting Poor WLAN Performance

Sooner or later, you'll need to check on performance issues in your Wi-Fi network. Learn how to pinpoint root causes, and what solutions to implement. – 12/7/05

Q&A – Make Your Wi-Fi Network Cover Your Larger Digs?

Can a router that has been providing wireless Internet access to every room in a one-floor apartment adjust to life in a three-floor townhouse? We offer some pointers to make it work. Plus, why your boss's notebook won't connect to a wireless network? – 11/30/05

Q&A – So You Want to Be a Hotspot

Making your small business a hotspot can be a great boost to customer satisfaction as well as a potential profit center. Here's some advice on how to offer Wi-Fi capabilities without spending a fortune or putting your internal network at risk. – 11/17/05

Tutorial – The Open Source WRT54G Story

Linksys gave wireless home network tweekers a gift in its Linux based router. Here's how you can get started with open source firmware upgrades. – 11/10/05

Q&A – Making a Case for Wireless Networks

Some small businesses — especially those concerned with compliance, confidentiality and liability issues — are still reluctant to trust wireless networks. In this week's column, we help a network manager at a small law firm go extreme with wireless security. – 11/3/05

Q&A – Wireless Tips for Road Warriors

If you travel a lot for work, chances are good that your notebook PC is equipped with a wireless adapter. So it's understandable that you hate the thought of being tethered to a wired Internet connection — especially a dialup one. Follow these tips if you find yourself away

from home and looking for a wireless connection. –

10/27/05

Q&A – Don't Let 802.11b Bring You Down

Buying a 802.11g router won't improve your wireless LAN's performance if you also have 802.11b devices connected to it. The good news is that there is a painless resolution to ensure that faster devices aren't slowed down by slower WiFi devices. – 10/20/05

Q&A – Understanding WEP Encryption Bit by Bit

Wireless technology is confusing enough, but when terminology collides, it can get ugly. We sort out a bit of encryption confusion. Plus, will a wireless network mess with cordless phones? – 10/6/05

Q&A – To Static From Dynamic IP Addresses and Back

No need to stress. You can use both static and dynamic IP address on the same network. We provide a couple of options. Plus, what to do when two PCs on a LAN share the same name. – 9/29/05

Q&A – Deciphering the Latest Wireless Acronyms

Stumped by acronyms such as WPA2 and WMM? You're not alone. We define these new terms and, more importantly, explain why you need to care about them. – 9/22/05

Q&A – Falling Hook, Line and Sinker

A phishing victim explains how he was reeled in by a bogus e-mail. We also offer tips on how to quickly spot a scheme designed to steal your identity and offer some advice on what to do if you're caught in a phisher's net. –

9/8/05

Q&A – A Second Look at Software Firewalls

A few weeks ago, we explained why having software firewalls may not make sense when you have multiple PCs sharing resources on your network. Some readers objected. While we understand the concern, here's why we're sticking with our advice. – 8/18/05

Q&A – Inside the Numbers: Why DSL Speeds Vary

Sure, DSL is a huge improvement over dial-up, but knowing what's behind the speed will help you manage your expectations. Plus, learn what can happen when Windows Update meets a fully functioning wireless adapter. – 8/9/05

Q&A – Two Firewalls Too Much of a Good Thing

One Internet connection and two computers each running firewall software can mean PCs that refuse to talk to each other. Here's an easy way to break down

walls. Plus, diagnosing the cause of a dysfunctional wireless network. – 7/29/05

Q&A – Need More Ports on Your Router? No Problem

Because routers have the capability to support up to 256 PCs, they are inherently expandable — just add an inexpensive switch to the mix. Plus, what to do when your WLAN and cordless phone just can't get along. – 7/14/05

Q&A – Why E-mails Come With No Attachments Attached

Microsoft's increased Outlook security features restrict access to attached programs and file types that could contain viruses. If you find this annoying, you can disable the restrictions. We tell you how, but warn you to do so cautiously. – 7/7/05

Q&A – WEP, WPA and Wireless Security

Wireless networking is relatively easy to setup, but it's also easy to forget the importance of protecting yourself. We dissect WEP and WPA and also offer some commonsense advice. – 6/29/05

Q&A – Plug Into Power-Line Networking

Defining the difference between HomePlug and HomePNA, just the 'fax' on DSL and Universal Plug and Play explained. – 6/23/05

Q&A – Are Cable and DSL Created Equal?

Both broadband technologies have matured over recent years and are faster, easier to setup and more reliable. Each has its pros and cons, but which is better? The answer is a frustrating ‘it depends.’ – 6/7/05

Q&A – Make a Wireless Peer-to-Peer Connection

Tips and tricks for setting up a P2P wireless network with no access point and wireless cards from different vendors ... plus, how to remove unused ports once and for all. – 5/19/05

Five Ways to Improve Your Wireless Network

Whether you already have a wireless network or you’re about to take the plunge, these five steps help provide better security and compatibility. – 5/18/05

Q&A – Is XP to Blame for Drops in Wireless Connection?

If you are using Windows XP and haven’t upgraded to Service Pack 2, you could experience drops in wireless connectivity. We detail the issue and also suggest some workarounds should you not want to upgrade to SP2. – 5/12/05

Q&A – Sharing Your DSL Connection, The Inside Story

If you’re using an internal DSL modem, what’s the best way to share your connection with another PC? Buy an

external DSL modem or keep the internal modem and use Windows' Internet Connection Sharing feature? Plus, how to turn off annoying 'debug error' popup messages.
– 5/5/05

Q&A – Is That a VPN or Is It Just Passing Through?

Is there a difference between a VPN and VPN Passthrough device? Turns out it's a big difference. Plus, what's the best protocol for VPNs? IPSec or PPTP? –
4/21/05

Q&A – Hubs, Switches, Routers ... What's the Difference?

Conversations concerning routers, switches and hubs can be a bit misleading because many people use the terms interchangeably. However, the functions of the three devices are all quite different from one another, even if at times they are all integrated into a single device. – 4/13/05

Q&A – Working With Different Versions of Windows on a P2P Network

Tips for getting Windows XP, 2000 and 98SE to share and share alike on a peer-to-peer network. Plus, turning a wired network into a wireless one ... and configuring firewalls to allow sharing within while keeping intruders out. – 4/4/05

Q&A – Used Routers Can Create Whole New Problems

When you buy a second-hand router, be sure to wipe its

history clean for a fresh start ... plus, Internet Explorer limits you to downloading only two files simultaneously. We offer a workaround to let you take advantage of high bandwidth. – 3/28/05

Q&A – Why Your Router May Be Blocking Web Sites

Could your wireless router really be keeping you from connecting to some Web sites and preventing you from sending and receiving e-mail? It could. The problem may lie in something called Maximum Transmission Units. Plus, how to set up TCP/IP using Mac OS X. – 3/10/05

Q&A – Wireless Woes? Repeat, Rearrange or Replace?

Wireless networks must overcome steel beams, concrete, glass, sheer distance and other types of interference. To conquer these obstacles, you can try repeaters and rearranging your WLAN configuration. Or you could opt for a more stable, more secure and faster wired network. – 2/28/05

Q&A – When Wireless Print Servers Meet Multifunction Devices

Can a wireless print server support nonprinting functions such as scanning and faxing? Plus, unscrambling WiFi encryption ... and where is Microsoft's NetMeeting hiding in Windows XP? – 2/22/05

Q&A – What Windows Task Manager Won't Tell You

Many malicious programs are capable of hiding from the Windows Task Manager, but a third-party utility called Security Task Manager, which performs a threat assessment of every running process on your PC, can help. – 2/11/05

Q&A – Can You Share a Dial-up Connection?

Even in today's high-speed world of cable and DSL connections, dial-up isn't dead. However, options for sharing a dial-up line are limited. We offer a look at the products available and also make a plea to convert to broadband. – 2/1/05

Q&A – Is Router to Blame for Connection Error?

When you can't access a Web site, should you blame your router or is the problem more likely in your browser settings? Plus, why you might be getting inundated with 'runtime error' messages. – 1/25/04

Q&A – What's a MAC Address and How Do You Find It?

To ensure optimal wireless network security, a little MAC (Media Access Control) filtering couldn't hurt. Learn what a MAC address is and how to find your's ... plus, why some online games may be dropping you. – 1/11/05

Q&A -Make a Video Connection ... But Be Careful

Video conferencing lets you stay in face-to-face contact

with far-away friends, but getting it to function means fussing with your firewall. We offer some advice for getting Microsoft's NetMeeting to work over the Internet, and then offer some caveats and some alternatives. – 12/22/04

Q&A – Taming a Network Printer for the Home

The good news is your company upgraded its hardware and gave you one of its retired printers. The bad news is that reconfiguring a printer built for corporate workgroups to function on your home network will take a bit of fussing. Fear not. We walk you through the process. – 12/16/04

Q&A – Should You Ever Switch Wireless Channels?

Your Wi-Fi device may allow you to specify what channel to use for your connection, but would you ever want to change the default configuration? Plus, before you let your guard down, know the risks of playing online games or participating in video chats without the safety of a firewall. – 12/9/04

Q&A – Discover the Joys of Automatic Network Configuration

One of the lesser-known features in Windows XP makes it easy to move a mobile computer from a home network

to the office LAN without needing to manually reconfigure TCP/IP settings. And it doesn't matter if you are moving between wired networks, wireless networks or any other networked environment. – 11/30/04

Q&A -Can You Ever Be Truly Safe and Secure Online?

You avoided going with a broadband connection for as long as possible, fearing the effects of the always-on nature of cable and DSL modems. Now it's time to hang up the dial-up service. Here are some security tips to ease your trepidation. – 11/17/04

Q&A – Straight Talk on Network Cables

If you are going cross-eyed trying to tell the difference between cross-over and straight-through cables, we pin down the keys to clearing up the confusion. Plus, why every computer needs its own anti-virus software. – 11/9/04

Q&A – New Computer, Wireless Connection Gone Awry

Even if your new computer is a beauty with a wireless LAN adapter built in, your connection could still get ugly. If your WiFi is dropping, here some are simple suggestions to help you pick up some consistent strength in your signal. – 10/20/04

Q&A – How to Cover Your Web Tracks

If your Web surfing has taken you to places you'd rather not have your boss (or anyone else for that matter) know

about, here are some techniques and some products that can help you erase the trail. – 10/6/04

Q&A – How to Cover Your Web Tracks

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Tips for Extending Access Point Coverage

Sometimes a WLAN access point doesn't quite cover as much space as needed. Learn how to extend the range of an access point without installing another access point. – 9/29/04

Q&A – Give Your Wireless Signal a Boost

The range of wireless networks can fluctuate dramatically depending on the environment you're in, but there is a simple way to add some power and consistency to your WLAN. Plus, what the heck is NAT? – 9/21/04

Q&A – Make Your Wireless Print Server Print

A wireless print server allows you to print untethered from the constraints of cables. However, this reader ran into an obscure problem. At first confounded, our

intrepid columnist recreated the problem and offers some simple directions to solve it. – 9/13/04

Q&A – A Workaround for When Workgroup Networks Won't Work

Ten PCs — some wireless, some not — a network without a server and office workers who need to share info can add up to frustration. Here's our advice and a suggestion. – 9/2/04

Q&A – Will Adding NAS Attract Worms and Viruses?

Network attached storage is a good option if you work with large amounts of data. We look at ways to keep that data flowing but the viruses at bay. Plus, how to configure your router for online games and voice chat. – 8/26/04

Q&A – Two LANs Aren't Better Than One

One house, two LANs and one Internet connection can add up to some PCs being left in the cold. We look at how networks in two rooms can share one cable modem. – 8/12/04

Q&A – 'Why Don't My PCs Share Anymore?'

One day your laptop and desktop PCs are happily sharing files, the next day they won't. We look at several reasons and solutions for this failure to communicate. – 7/22/04

Q&A – Hijacking? Blocking? It's a Jungle Out There

If your system has been infiltrated by an error page hijacker, here's how to cleanse your system. Also, learn how the well-intentioned Spam and Open Relay Blocking System can separate innocent users from their legitimate e-mail messages. – 7/15/04

Q&A – Sharing a Dial-Up Connection in a Broadband World

If you live in an area where DSL and cable Internet access is difficult to come by, can you still enjoy the convenience of a wireless router? Plus ... can you tell your firewall from your anti-virus? – 7/7/04

Q&A – What to Do When Spyware Attacks

When sinister spyware and adware invade your system, can you ever take back control? Plus, how to leap your own firewall ... and are two routers better than one? – 6/29/04

Q&A – Let's Chat About Firewall Issues

If your browser is browsing and your e-mail is flowing, there's one logical reason why IRC may be refusing to chat. Plus, sharing a cable between two PCs — we have some good news and some bad news. – 6/21/04

Sharing a Cable Modem — Get to the Route of the Problem

In this week's Troubleshooting column, we look at what not to do when you set up two PCs to share a cable modem using a router. Plus, we help you configure your VPN to work with your firewall.- 6/3/04

Q&A – When Work PCs Go Home ... and Vice Versa

When you bring old work PCs home or try to treat new home PCs like your office computer, you often find trouble. But it's nothing that a little time and money can't fix. – 5/27/04

Q&A – Setting Up a Wireless Peer-to-Peer Network

There's nothing magical about setting up a wireless local area network. As with standard LAN adapters, wireless network cards can function in a peer-to-peer mode. The good news is it's relatively simple to configure — with just a few exceptions. – 5/20/04

Q&A – Networking AOL's High Speed Cable Modem Service

Sharing AOL's cable modem service among multiple computers is notoriously difficult to set up, with many giving up on the idea completely. But as this week's Q&A shows, with the right tools and information in hand nothing is impossible, including networking your AOL cable modem connection. – 5/6/04

Q&A – Troubleshooting Internet Performance Problems

Mysterious problems slowing down your internet connection? This week's Q&A presents some tips and advice for resolving internet performance issues, as well as recommendations for preventing them from occurring in the future. – 4/29/04

Q&A – The Wireless ThinkPad Blues

Adding a computer to your wireless network can occasionally be the simplest thing in the world, but at other times it can be more challenging than successfully evading the tax man. This week's Q&A offers a few general tips and some ThinkPad-specific tricks to try when all else fails. – 4/15/04

Q&A – Internet Connection Sharing and Networking Issues

This week's Q&A looks at when to use – and when not to use – Windows XP's Internet Connection Sharing (ICS) for networking computers, as well as when to go with wireless over wired networks. – 4/8/04

Q&A – Troubleshooting Networking and Firewall Issues

This week's Q&A presents tips for solving issues that can prevent PCs from being able to share data with others computers on a network. It also diagnoses a

conflict between VPN and Windows XP's Internet Connection Firewall. – 3/31/04

Q&A – Wireless Alphabet Soup

This week's Q&A looks at the pros and cons of the various flavors of 802.11 wireless technology. It also addresses potential problems that can prevent you from networking two machines via a crossover cable. – 3/25/04

Q&A – Bluetooth vs. Wi-Fi Technology

Keeping current with the multitude of home networking technologies can be quite a challenge. It's all too easy to get lost in the endless avalanche of new acronyms and technologies. This week's Q&A compares and contrasts a couple of commonly confused technologies — Bluetooth and Wi-Fi. – 3/18/04

Q&A – Discover the Wireless Zero Configuration Service

This week's Q&A explores how you can take advantage of Windows XP's Wireless Zero Configuration service and the Automatic Configuration for Multiple Networks feature to automatically configure network settings between different wireless networks. – 3/11/04

Q&A – When Web Browsing Gets Quirky

This week's Q&A troubleshoots a couple of quirky problems that can creep up with your Web browser when

trying to access the Windows Update site or sites with scripting issues. – 3/4/04

Q&A – Cable Modem Not Working with Router

This week's Q&A diagnoses a common problem that can prevent your cable modem from properly connecting to and communicating with your router and networked PCs.

– 2/26/04

Q&A – Dealing with Sneaky, Slimy Malware

There are all sorts of less than scrupulous downloads and sites that covertly install malevolent code onto your system. In this week's Q&A, learn how to avoid malware malaise by protecting yourself from the threat of insidious, often invisible adware and spyware. –

2/19/04

Q&A – Troubleshooting Windows 98SE Networking Issues

This week's Q&A addresses a couple of networking issues on Windows 98 Second Edition machines, including how to network multiple 98SE machines that have software- or hardware-based firewalls in place, and how to share a printer over a 98SE network. – 2/12/04

Q&A – Transferring Files Between Computers over the Internet

Firewalls, routers, and security settings can make transferring files between two computers – or controlling another computer – over the Internet quite challenging. This week's Q&A looks at two options that can help ease your pain and frustration. – 2/5/04

Q&A – Power over Ethernet vs. Powerline Technology

Keeping current with the multitude of home networking technologies can be quite a challenge. It's all too easy to get confused as new acronyms and technologies pop up right and left. This week's Q&A compares and contrasts a couple of commonly misunderstood technologies – Powerline and PoE. – 1/22/04

Q&A – Networking Multiple Computers Without a Hub

In some cases, it doesn't make sense or is simply not feasible to use a hub when networking multiple computers. This week's Q&A steps through the process of setting up a network and sharing internet access without using a hub or switch. – 1/15/04

Q&A – Controlling Internet Access for Specific Apps with Windows XP's ICF

This week's Q&A reveals how to enable specific applications to connect to the Internet through Windows XP's Internet Connection Firewall. We'll also explore how Uplink ports on network hubs differ from regular ports. – 1/8/04

Q&A – Wired Networking, Step One – Choosing Your Connection

The first step in networking two or more computers is to determine how best to connect them. This week's Q&A looks at the pros and cons of networking via direct cable connections, hubs, switches, or routers. – 12/23/03

Q&A – Troubleshooting the Basics – Equipment Failure

When networking problems inevitably pop up, it can be all too easy to forget that faulty equipment can be the source of your trouble. Save yourself some time and frustration by doing a quick check on the cables and your hardware before narrowing in on potential software issues. – 12/18/03

Q&A – Overcoming Wireless Network Configuration Obstacles

Any number of problems can pop up when attempting to properly configure a wireless network. This week's Q&A provides solutions for some of the more common configuration issues. – 12/4/03

Q&A – Automatic Configuration for Multiple Networks

One of Windows XP's lesser known features makes automatically switching network settings between different types of networks – wired, wireless, or whatever

– a breeze. Learn all about the feature in this week's

Q&A. – 11/20/03

Q&A – Wireless Networking Performance Tips

Suffering from wildly fluctuating wireless connection speeds or having trouble getting any connection at all?

This week's Q&A offers some tips and tricks for helping you get the maximum speed out of your wireless

network. – 11/13/03

Q&A – The Hardware vs. Software Firewall Debate

Any broadband Internet-connected computer should be protected by a firewall at the bare minimum, but should that protection come in the form of a hardware or software firewall (or both)? Explore the advantages and disadvantages of each in this week's Q&A. – 10/30/03

Q&A – Diagnosing Net Connection Problems

Have a network with one or two PCs that can't connect to the internet or other networked computers? This week's Q&A looks at several tips and tricks for diagnosing and fixing connection issues. – 10/23/03

Q&A – Ill Intentions: Adware and Spyware Applications, Part 2

Arming yourself with up-to-date anti-virus software should be top priority, but even with virus protection in place you'll still be vulnerable to the threat of adware and spyware applications. Learn what these insidious tools

can do and how you can protect yourself from them in this week's Q&A. – 10/9/03

Q&A – Ill Intentions: Adware and Spyware Applications, Part I

Arming yourself with up-to-date anti-virus software should be top priority, but even with virus protection in place you'll still be vulnerable to the threat of adware and spyware applications. Learn what these insidious tools can do and how you can protect yourself from them in this week's Q&A. – 10/2/03

Troubleshooting Wireless Networking Performance Issues

Suffering from performance problems with your wireless network connection? This week's Q&A reveals some of the more common issues that can prevent you from getting top-notch speed out of your wireless connection. – 9/25/03

Q&A – Setting Up an FTP Server – Part 2

FTP servers are inexpensive and relatively simple to operate tools that work well for sharing files over the Internet. In this week's Q&A, learn how to upload files to and download files from your FTP server as well as how

to open up ports on your firewall for allowing Internet users to access your FTP server. – 9/18/03

Q&A – Setting Up an FTP Server – Part I

An FTP server is an inexpensive and relatively simple to operate tool that works great for sharing files over the Internet. Learn how to install, configure, and operate an FTP server in this week's Q&A. – 9/11/03

Q&A – Distinguishing Between Friendly and Felt Firewall Attacks

Ever wonder whether or not external “attacks” reported by your firewall are dangerous or how these “attacks” could possibly be allowed to penetrate your defenses? Explore the logic behind firewalls and also learn how to share a broadband connection between both Windows and Mac computers in this week's Q&A. – 9/2/03

Q&A – Sharing a Printer Across the Network

Confused about whether or not you can share a printer over your network? Learn the most effective ways for setting up printer sharing in this week's Q&A. We'll also explore why it's imperative that each workstation on your network have up-to-date anti-virus software installed. – 8/14/03

Q&A – Sharing Your AOL DSL Broadband Connection

AOL's High Speed Cable Modem service is weakened by several limitations, so it's only natural to wonder whether

the company's DSL broadband service suffers from the same. This week's Q&A examines how the two AOL broadband services compare in terms of networking and provides step-by-step details for sharing your AOL DSL service via a router. – 8/7/03

Q&A – Wireless Security Tips and Tricks

This week's Q&A introduces a few tips you can easily implement on your current wireless network that should help keep it as secure as possible until you're able to upgrade your equipment to WPA later this year. – 7/31/03

Q&A – Wireless Security Beyond WEP

This week's Q&A tackles the critical shortcomings of WEP security for wireless LANs and takes an in-depth look at its ultra-secure successor. – 7/24/03

Q&A – Firewall and IM Not Playing Well Together?

This week's Q&A explores the problematic issue of configuring a firewall to allow instant messaging. We'll also look at why it's inadvisable to run Microsoft's Internet Connection Sharing (ICS) on computers networked through a router. – 7/17/03

Q&A – Crossover Cable Connection Troubleshooting

This week's Q&A troubleshoots various issues that can

creep up with peer-to-peer connections networked via crossover cables. Ron Pacchiano also addresses the limited network functionality in most of today's all-in-one multifunction printers. – 7/10/03

Q&A – The Infamous ‘Could Not Reconnect All Network Drives’ Error

If you're using Windows XP Home Edition and have tried using it on a corporate network, you might have encountered a “Could not reconnect all network drives” error message at startup. This week we'll explain what causes the error and how to prevent it from occurring. – 6/26/03

Q&A – Sharing Files and Printers via a Wireless Peer-to-Peer Network

Looking to share files and printers between computers without using cables? Ron Pacchiano details how to set up a wireless network in peer-to-peer mode for this purpose, and also discusses how to intermix wireless and wired networks. – 6/19/03

Q&A – Dial-up and Broadband Connections Coexisting in Harmony

Have a dial-up connection that insists on stealing Internet access from your broadband connection? We'll discuss how to configure Windows to allow the two connections to coexist in harmony. We'll also cover how

to set up your VPN access to work with Windows XP's Internet Connection Firewall. – 6/12/03

Q&A – Troubleshooting Wireless Networking Conductivity Issues

Have a wireless adapter that's finding it difficult to obtain an IP address from your wireless router's DHCP server? This week we'll cover some of the more common issues that can prevent your wireless networking gear from talking to each other. – 6/5/03

Q&A – The NetBEUI Blues

This week we'll show you how to install the NetBEUI protocol on your Windows XP systems and explain why you might be having problems seeing all of the computers on your network. – 5/29/03

Q&A – The Wonderfully Problematic World of Windows

Mysterious problems in Windows giving you trouble? We'll discuss some of the things you should look for to resolve them, as well as a couple of ways to prevent them from happening in the future. We'll also show you how spending a little bit of money on the right equipment now will not only make your life easier, but will also save you time and needless effort. – 5/22/03

Q&A – Serving Up Your Own Website

Have you ever had the urge to publish your own website, but weren't sure how to go about it? This week we'll give you some general guidelines for serving up your website(s) on the Internet. – 5/15/03

Q&A – Tips and Tricks for Sharing Broadband Access

Having trouble sharing your broadband internet access with multiple computers? This week's Q&A looks at three scenarios that might prevent you from sharing your connection and describes how you can resolve the issues. – 5/8/03

Q&A – Tips and Tricks for Configuring Wireless Networks

Having trouble getting your wireless network up and running? We'll show you some of the more common mistakes users make when configuring them. We'll also explain why you might not be able to use America Online Instant Messenger (AIM) service on your office PC. – 4/30/03

Q&A – Hackerproof Your Broadband Connection with a Firewall

Along with its many benefits, broadband access also brings the threat of potential attacks by hackers or Trojan horses infiltrating your network. If you're worried about the downside to broadband, fear not — we have

the 411 on the most important component in protecting your PC/Network from attack, firewalls. Plus, we'll delve into how and when to remove Windows XP's ICS in order to share PCs and your internet connection via a router. – 4/24/03

Q&A – Wireless Without Broadband

Do you think you can't have wireless access just because you've been handicapped by a 56k Internet connection? Think again. We'll show you two products that will have you wirelessly surfing without broadband in no time. Plus, we'll we'll give you an overview of the various flavors of the 802.11 protocol. – 4/17/03

Q&A – Dealing with the Limitations of AOL's High Speed Cable Modem Service

Over the last couple of weeks we have received quite a few questions regarding AOL's High Speed Cable Modem service. Apparently a number of people are experiencing difficulty installing a router with this service in order to share among multiple PCs. We'll explain why and what you can do to overcome the service's limitations. – 4/10/03

Q&A – Is RAID Worth the Cost?

This week we'll explore the topic of RAID and discuss

whether or not its overall value justifies the added expense. We'll also discuss some of the problems you might run into with a misconfigured firewall and what you can do to resolve them. – 4/3/03

Q&A – Cutting the Cable on Print Servers

This week we'll show you how to add a bit of mobility to your office printers as well as suggest a network operating system which might benefit a small office with a limited IT staff. – 3/27/03

Q&A – Expanding Your Horizons with Dynamic DNS

Would you like to host your own website but think you can't because your DSL or Cable modem provider saddled you with a dynamic IP address? We'll show you how you can run a Web server and more even with a static IP address. Plus we'll show you a quick and easy way to get access to your office PC while at home or on vacation. – 3/20/03

Q&A – Firewalls vs. Proxy Servers

Do you think that a firewall and a proxy server are one and the same? You're not alone. This week we'll discuss the differences between firewalls and proxies. We'll also introduce a site that will help you measure the bandwidth of your cable or DSL connection. – 3/13/03

Q&A – Proprietary Cable Modem Frustrations

This week we take some of the mystery out of why cable

and DSL providers require you to use their telecommunication equipment as opposed to purchasing your own. As an added bonus, we'll also show you how to get PPTP traffic to pass through your firewall. – 3/6/03

Q&A – Tips for Setting Up Wireless Networks

This week we outline some of the more common problems you might run into when attempting to set up a wireless network. We'll also introduce a low cost alternative to 802.11b, HomePlug. – 2/27/03

Q&A – Troubleshooting the Windows XP Internet Connection Firewall (ICF)

Are you using the Windows XP Internet Connection Firewall feature correctly? In this week's Q&A, we explain how and when ICF should be used. We'll also show you how to easily increase the range of your wireless network. – 2/20/03

Q&A – Networking Two PCs via a Crossover Cable

This week we'll show you how to connect two PCs together with just a crossover cable. We also answer that age old question, "What is the difference between a Hub and a Switch?" – 2/13/03

Q&A – Network File Sharing Woes Continued

Are you having difficulties sharing files with other users on your network? Well you're not alone. We'll show you some of the common problems you should look for. Plus we'll explain why you might not be able to get DSL in your area. – 2/6/03

Q&A – File Sharing with Windows XP Home Edition

Sharing files with other PCs and gaining access to files stored on company networks via Windows XP are two issues that come up all the time here at PracticallyNetworked. We'll show you how to do both. Plus, learn how to easily reset the password on the popular Linksys BEFSR41 EtherFast Cable/DSL Router. – 1/30/03

Q&A – Networked Computers Can't See Each Other

Troubleshoot why some networked computers can't see each other, even though they are all able to access the Internet without any problems. Plus: Learn more about the Trace Route tool and its various uses. – 1/23/03

Q&A – Unblocking AIM

Figuring out why you can't connect to AOL's Instant Messenger depends a lot on where you setup a network. Plus: The optimum setup for a home network doesn't include using the USB port. – 12/23/02

Q&A – Sharing with 2000 and XP

Wonder why you can see files on a Windows 98 system but not on Windows 2000 or XP? It's a shared resources issue. Plus: Going from an internal to external DSL Modem. – 12/16/02

Q&A – What about DOS?

Talk of networking in a home these days tends to be about Windows systems, but what if you've got an older DOS computer you want to connect? PLUS: Networking a printer and router blocking Web pages. – 12/11/02

Q&A – Two Routers are Not Better than One

Even if you have two routers, you shouldn't use them together on the same Internet connection to your network. Plus: Why you need a crossover cable to direct-connect two PCs and adding Token Ring. – 12/2/02

Q&A – The Reason for Routers

Two computers, one broadband connection with one IP address — we answer a question that cuts to the heart of home networking. Plus: Problems when you don't have a proxy server. – 11/25/02

Q&A – DVD Sharing Over the Network

Can you watch a DVD running on different computer on

your home LAN? The answer is “Maybe.” Plus: Bridging between two networks at home. – 11/21/02

Q&A – The DSL Slow-Down

Troubleshoot your broadband problem before you call your service provider. Plus: What you need to share a dial-up connection and later upgrade to a cable modem. – 11/11/02

Q&A – Direct Crossover Cable Connections

Linking two Windows computers takes more than just a crossover Ethernet cable. Also: opening ports in a firewall for sharing folders and why networked PCs can't use all the functions of a multi-function printer. – 11/4/02

Q&A -Importance of Port Mapping

The safe way to open a computer on your network to the Internet is to map the ports needed for gaming or other activities. Plus: some software firewall “attack” messages explained. – 10/28/02

Q&A – Remote Connection through the Router

When you're on the road and want to connect to your home PC with remote access software, how do you get through the router? Plus: Another look at why networks with routers don't need to use Windows Internet Connection Sharing. – 10/22/02

Q&A – Cable Modem vs. Dial-up

Sometimes dial-up Internet connections must be used, even when you have broadband. Here's how to dial-in without losing your high-speed access to the Internet.

– 10/14/02

Q&A – What Network Do You Need?

An overview of the different types of networks possibilities, from peer-to-peer to client/server, and what kind of products you need to run them. – 10/7/02

Q&A – Networking Your Satellite Internet Connection

Here's a quick look at getting a Macintosh to share a Direcway satellite connection and how to deal with viruses on your network attached storage products. –

9/30/02

Q&A – Using DHCP on a WLAN

Solving problems with wireless cards that can't receive an IP Address from a router; and just what is a home network router good for, anyway? – 9/24/02

Q&A — What Keeps Computers Safe

Here's the scoop on the differences between hardware and software firewalls, virus protection, and why you need them. – 9/10/02

Q&A — Configuring the XP Firewall

Figuring out why using the built-in XP firewall blocks other computers when using Internet Connection Sharing; Trying to share PC resources without at least a hub isn't worth the effort. – 8/31/02

Q&A — Peer-to-Peer Problems

It's our new regular feature here at PracticallyNetworked, where we answer your questions. This week, we address issues with ad hoc wireless networks and explain why you can't VPN via your broadband satellite connection. – 8/27/02

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