
The Computer Club At Willow Valley

The President's Pen by Sid Paskowitz

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Membership As of this writing, your Computer Club has 590 paid members including 364 who have signed up as Lifetime members. Please keep your email address current on Club records so we can send you important emails. *Those emails only go to Computer Club members for whom we have a good email address.* Let our Treasurer, Charlie Trumbo, know if your email address has changed or if you don't get a future Newsletter.

Letters are being sent to Computer Club members whose membership expires on March 1, 2017. For those whose membership is expiring, we are sorry you will no longer get these Newsletters or be sent emails advising you about important computer or Internet issues. However, you are still welcome to attend Computer Club programs and classes.

Renaissance Classes We will be trying something new for the Summer Renaissance classes. Instead of the presenter developing a presentation of material based on what the presenter thinks might be of interest to the attendees, we will be contacting the class registrants and asking them to submit questions that they would like to have answered during the class. We will then set up a panel of presenters who are best able to answer those questions. We may also send an email to registrants and tell them what will be covered in the class based on the questions we receive. If this approach is successful, we will continue this type of class in future Renaissance publications.

Update Your Online Directory Something some Residents may not know: you can update or correct your own information in the Willow Valley on-line phone directory. Left-click on the Resident Directory tile on the Kiosk Home Page; then left click in the Phone Search box; then put your last name in the empty box to the left of the Search button; review the information displayed about you; and if you note something such as your email address that needs to be changed, left-click on the link [Click here to make a correction](#). Fill in the information on the next screen and say what you want to be done in the Comments box. When you are satisfied you have clearly stated what you want done, left-click on the Submit button. In a day or so, check your information in the on-line directory to verify the desired change was made. When your email address is correct in the on-line phone directory, it can save you and other Residents a phone call when they want to send you an email.

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Coming Programs

March 2

Ed Dahrsnin, Willow Valley Resident
Keeping Your System Running Smoothly

April 6

Sid Paskowitz, Willow Valley Resident
You Have a Friend in Information Central

May 4

Ron Dillon, Willow Valley Resident
Your Handheld Device as a Camera

*All programs are held
in the Theater at the
Cultural Center
on the 1st Thursday of
the month at 2:00 p.m.
unless otherwise noted.*

President

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Scams, scams, scams... No one who calls you, emails you or displays a message or your computer or device can tell you your computer or device is infected or running poorly. They have to have been given access. If you haven't provided them with access, you are being scammed. Don't give them access. Hang up. Disconnect. Shut down. Also do not respond to emails that say your account is missing information or they were not able to deliver a package with something you did not order. Be skeptical. **Protect yourself.**

I will be covering the following item in my February 28th class and at a future Computer Club meeting; however, I know that not everyone attends those classes or comes to meetings: Above the three columns in Information Central (the Computer Club tile on the Kiosk Home Page) is a section headed by *Significant changes made to this page in the last two months*: That section contains links to documents such as class notes or charts from presentations that have been provided to us in electronic form so we can share them with Residents. One benefit of this approach is that if you see a page or two of specially valuable information, you can print those pages and not waste paper and ink on the rest of the pages.

Linux Project My assessment of using Linux software to avoid contaminating Residents' computers with malware resulted in my finding that Linux processing was too slow (Residents are not patient enough) and the learning curve was too steep. Accordingly, I have abandoned efforts to get Residents to run Linux on their computers.

Routers Historically we have focused on protecting our computers from malicious software (malware) and protecting ourselves from invasion of privacy. Now, with the Internet of Things (IoT) and the unimaginable advances in data storage, data processing

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and data transmission speed, we need to turn some of our focus to a key element that can put our computers and ourselves at risk. Routers are that key element.

In past years we could hook our computers to the Internet through a network or a modem and we only had to worry about that computer getting infected or being damaged. Today the IoT is enabling the connection of thermostats, heating and air-conditioning, lighting, buying, requests for information, alarm systems, cameras, TV recording, volume level on speakers, phones, and station selection on radios and TV. As we become more connected to the Internet, we become more at risk from individuals anywhere in the world who are up to no good. They can load code on those IoT devices that can get inside our firewalls, put malware on our computers or control devices in ways we never intended. Key to almost all of these connections is Wi-Fi, and a critical element of Wi-Fi is a wireless router. In light of the possible risks associated with routers, I will be putting more emphasis on informing Residents about what they need to know about routers and how they can best protect themselves. Please let me know if you think you can help in this effort. Two other articles in this Newsletter provide additional information. One is on Router Issues and the other is on Router Security. Also you might want to look at the charts in Information Central that are from Tom Fleischmann's 2/8/17 Renaissance Class Presentation (<http://resident.willowvalley.org/kiosk/cclub/p/networkcomponents.pdf>).

Please Use Recommended Software PC owners are reminded that they can receive the best help if they use software that is familiar to other Residents who volunteer to provide technical assistance. Recommended applications are CCleaner, Malwarebytes, Defraggler and Windows Defender (or Windows Security Essentials). We recognize there are alternatives; however, problems are more quickly diagnosed and repaired when the applications running on the PC are familiar to the helper.

Classes We know we need more classes on computer-related topics and we are looking for instructors who can teach those classes. If you can help other Residents with topics such as Word, Wordpad, Notepad, browsers, email, etc., please send me an email at wvcomputerclub@gmail.com. We need your help.

MAC SIG Steve Lynn, head of the Mac SIG group, is looking for suggestions as to how the Computer Club can better support Mac users. If you have ideas that can help Steve formulate a plan for supporting Mac users, please send them to him at slynn15@icloud.com. Information Central has been modified based on Steve's recommendations. In the center column of Information Central is a feature called *For MAC Users*. It contains information applicable to Apple computers. Let Steve know if you have suggestions for other beneficial information links that might be added to the area *For MAC Users*.

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Recycling Ed Dahrsnin and his team are accepting working computers and components for recycling, but no CRT monitors. Let Ed know if you would like to help recycle computers. Ed and his team meet on Monday afternoons at Manor North. Working in the recycling effort may also help you when you have problems. Thanks to Ed and his team, the Computer Club has given **158** computer systems to the Lampeter-Strasburg School District for families that cannot afford a computer for their students and two laptops to the Hand Middle School in Lancaster for their Science classroom.

Thank You My thanks to all of you who volunteer your time and knowledge to help other Residents. We need more volunteers! •

Router Issues by Sid Paskowitz

Recently a Spring Run Resident was using TurboTax to prepare his income tax return and when he printed his return, the print job was processed in another Resident's apartment in another building. The exact cause of that problem is still under investigation; however, there is agreement that routers were involved in the problem.

That was not the first time Spring Run Residents had a print job completed on someone else's printer. A number of years ago, before routers became popular, a Resident in one apartment printed greeting cards in another Resident's apartment three buildings away using the Spring Run network.

What makes routers important is that they can create their own network as well as perform a number of other functions. Those functions, when settings and connection are made properly, include making the router and associated network invisible to the outside world, adding an additional firewall to Internet connections, protecting itself and associated network with a password, encrypting and decrypting data passing through the router, enabling wireless devices access to the Internet, and allowing authorized guests to use its facilities to access the Internet. When not connected correctly or when settings are not correct, undesired results can occur.

Besides the experiences at Spring Run, a February 19th article in the LNP newspaper by Brian Chen from the New York Times further triggered the need to address this subject. Think about the devices you have now or may get in the future: TVs that listen to what you say and may watch what you do, Echo Dots and similar devices that respond to your voice, cameras on phones and computers that can send pictures anywhere in the world, cars that drive themselves, and the list goes on.

We live in exciting times but as is the case with all new technologies, they involve risks

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Router Issues

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and we need to be able to control them. Recent experience at Spring Run and the proliferation of devices that connect to the Internet have caused me to realize we need a better understanding of routers and how to deal with them. See AI Williams' article that explains how to deal with the router problem. •

What Is The Internet Of Things? Should I Be Concerned? by AI Williams

The Internet of Things is everything that can be controlled and monitored remotely over the Internet with the exception of personal computers and servers. The good news is that remote control of these devices is very convenient. The bad news is that the security on these devices is almost non-existent and therefore they can be used to attack and infiltrate personal computers and servers.

Beginner The Internet of Things (IoT) comprises everything that can be controlled and monitored remotely such as street lights, lamp posts, surveillance cameras, refrigerators, thermostats, smart TVs, Amazon's Echo, and Google's Home. The security on some of these devices is so bad that they advertise their password to all who are willing to listen.

If you don't have any such devices, then you have no reason to be concerned. As the number of IoT devices that you have increases the more concern you should have. What you need to do is to change the password on each IoT device. If you do not know how to do that, you should ask for help. Changing the password will not completely solve the problem but it will be an impediment to a hacker.

Intermediate IoT devices are constantly listening for commands over the Internet. Unfortunately, the manufacturers of many of these devices use the same username and password for each model of device. These usernames and passwords become well known to anyone who is willing to do some research. Changing the password is a significant positive step but unfortunately some of the IoT devices provide their passwords over the Internet.

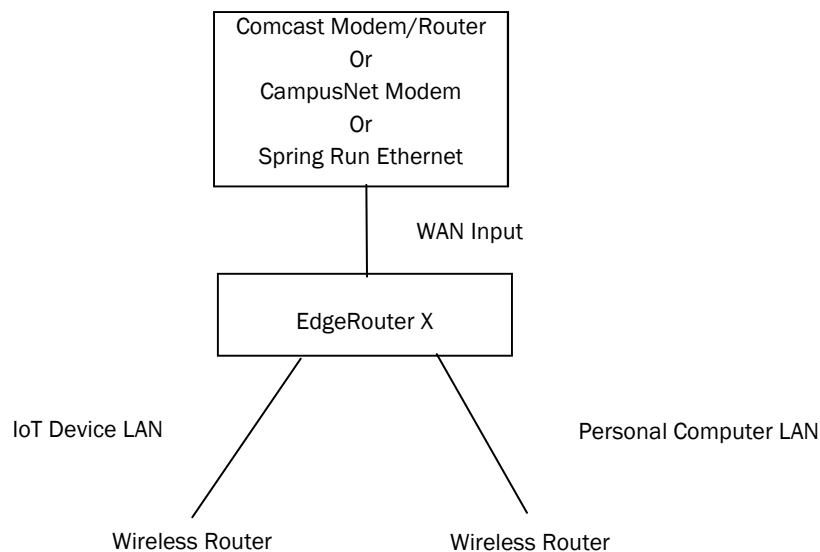
The best way to defend against these insecure devices is to put them on a network that cannot access your personal computers, tablets, iPhones, Android phones, etc. The figure on the next page shows the recommended architecture to defend your personal computing equipment.

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What Is The Internet Of Things?

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The device shown in the figure is a router that is more sophisticated than most home routers. There are currently two major options to implement that device: using the pfsense software on a separate standalone computer or using an inexpensive router made by Ubiquiti that is named *EdgeRouter X*. There are many industrial routers that also provide the needed features but the Ubiquiti router is currently the only router that is designed for home and small office use with features. It is also significantly less expensive than the industrial routers. Because the *EdgeRouter X* is less expensive and significantly less difficult to configure than a computer running pfsense, the *EdgeRouter X* is recommended (\$49 list but typically sells for more).



If a wireless router is not needed for either LAN, and you need to connect between 2 and 4 devices to that LAN, the wireless router may be replaced with a switch. A Netgear GS105NA Prosafe 5-Port Gigabit Switch is recommended.

The *EdgeRouter X* comes with several configuration wizards that may be set up using the Graphical User Interface that comes with the router. The one to use for this configuration is the *WAN + 2LAN* wizard. You may select arbitrary IP addresses and ranges for each of the two LANs using the wizard. An IP address is an arbitrary number that is unique on its network. It serves the same purpose as the mailing address for your home.

The *WAN + 2LAN* configuration separates the two LAN networks using a software firewall that is commonly called iptables. This firewall is used in many Linux distributions.

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What Is The Internet Of Things?

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The configuration sets the iptables configuration to block traffic between the LANs thereby providing the desired separation of IoT and personal computers traffic.

Advanced The *EdgeRouter X* is based on the Debian Linux operating system. All of the software in the router is open source; see the Ubiquiti website for the open source software packages powering the router's features.

Perusing the features of the open source software packages will provide a detailed insight into the capabilities of the router. A brief indication of the broad capabilities: Load Balancing two WANs, tagged Virtual LAN (VLAN) support, several types of Virtual Private Networks, Open Shortest Path First (OSPF) routing, Border Gateway capability, and Deep Packet Inspection.

Conclusion If you have IoT devices and you want security, the *EdgeRouter X* is recommended to isolate those devices from your personal computers to reduce the effect of security problems in those devices. It is a very powerful router at a very reasonable price. •

Would you like to read or write about a topic?

Contact Sid Paskowitz or Al Williams

The Equipment Corner by Ed Dahrsnin

Refurbished Systems

No systems are available.

Miscellaneous We have 3 volt CR2023 batteries (suitable for motherboards to keep the system clock running) and a variety of CD-ROM's, floppy disk drives, keyboards, 2-button mice, various power supplies, and assorted cables. Please contact Ed Dahrsnin at 464-6591.

Donations We continue to accept printer cartridges and laptop computers with power adapters. We accept only working printers with drivers and documentation. Also, we accept only working monitors. Cathode Ray Tube monitors are not acceptable. Stand-alone scanners are not acceptable. Bring the items to Manor North's recycle closet on the fifth floor of 'J' building on Monday only, from 1pm to 1:30pm. •

The Mission

The Mission of the Willow Valley Computer Club is to:

- Provide the means to educate beginners or interested non-users on how to use a computer.
- Arrange for speakers to talk to the Club about subjects that would be of interest to those with some background and experience in computer use.
- Provide a forum for interchange of computer information among members.

For more information about the Club, contact Sid Paskowitz at 464-2127 or wvcomputerclub@gmail.com •

The Leadership

Officers

President: Sid Paskowitz

Vice President: Peter Scott

Secretary: Marge Schmieder

Treasurer: Charlie Trumbo

Community Representatives

Manor: Larry Gallagher

Manor North: Lee Yermuth

Lakes: Gene Simasek

Providence Park: Peter Scott

Committee Chairpersons

Program: Peter Scott

Training: Ralph Beedle

Equipment: Ed Dahrsnin

Technical Support: Tony Poulos

Website: Sid Paskowitz

Publicity: Wally Gordon

Newsletter: Al Williams

Mac Interest Group: Steve Lynn

Computer Room Coordinators:

Gene Simasek Lee Yermuth

Microsoft Liaison: Ed Dahrsnin

Past Presidents

Larry Gallagher

Reviewer Acknowledgment

The following individual kindly reviewed this issue:

Sid Paskowitz

Tony Poulos

Thank you,

Al Williams

Interested in reviewing the Computer Club newsletter before it goes to press, providing advice about the content, or writing an article? Please contact:

Al Williams at atwilliams136@gmail.com