Bits & Bytes

Arkansas' Premier Computer Club

July 2025

The Bella Vista Computer Club - John Ruehle Center

Highlands Crossing Center, 1801 Forest Hills Blvd Suite 208 (lower level), Bella Vista, AR 72715

Website: http://BVComputerClub.org **Email: BVCCeditor@bvcomputerclub.org**

MEETINGS

Board Meeting: July 14, 2pm, in John Ruehle Training Center, Highlands Crossing Center.

General Meeting: July 14, 3pm. Program: "Recycling, The Best Way To Save Our World...One Person At A Time! ", presenter Ken Nelson. Since computers can be both part of the problem and part of the solution, recycling where possible should be a concern of those who use computers.

We will meet in-person in John Ruehle Training Center, Highlands Crossing Center, lower level, 1801 Forest Hills Blvd, Bella Vista, or you may attend the meeting on-line via Zoom. Zoom access information is published on our website.

Visitors or Guests are welcome.

Consider attending by Zoom if you are unable to attend in-person.

HELP CLINICS

July 5, 9am - noon at John Ruehle center
July 16, 9am - noon at John Ruehle center
Members may request Remote Help on our website at https://bvcomputerclub.org at menu path Member Benefits ►Remote Help .

MEMBERSHIP

Single membership is $30; $15 for each additional family member in the same household.
Join on our website at https://bvcomputerclub.org at menu path Get Involved ►Join/Renew, by mailing an application (from the web site) with check, or complete an application and pay in person at any meeting.

CLASSES

(At BVCC Training Center)

"KeePassXC Password Manager", Tuesday, July 22, 1pm - 3pm, with Joel Ewing.

Advance sign up required for each listed class: For reservations: email to bvccedu@bvcomputerclub.org, or sign up at the General Meeting. Classes are free to Computer Club members.

Check the monthly calendar and announcements for any last minute schedule changes at https://bvcomputerclub.org .

NEW OR RETURNING BVCC MEMBERS

We are pleased to welcome the following new members or members returning as BVCC members after an absence:

James Blass Jennifer Johnson Connie Cain

PETE OPLAND RECOGNIZED FOR OUTSTANDING SERVICE

At the April 2025 BVCC Board Meeting the board voted unanimously to recognized Pete Opland for his outstanding service to the Bella Vista Computer Club and add his name to the Outstanding Service plaque that is displayed at the back of the BVCC Training Center. I don't believe Pete has ever served as a BVCC officer or Board Member, but he has consistently helped keep some of the services of BVCC functional, services that are undoubtedly responsible for attracting many people to join BVCC.

Pete first joined BVCC in April 2016. Either later that year or in 2017 he began using his work background experience with IBM PCs to help solve problems at our Help Clinics. He has become one of the primary helpers at our Help Clinics. He also helps solves member's computer problems remotely over the Internet, and when the occasion warrants, even does house calls to resolve computer problems.

Pete Opland at Help Clinic

Pete began serving as an instructor for some of our training sessions in November 2017. By April 2025 he has conducted a total of 44 classes, with topics that include: "Backup C Drive", "Basic Computing", "Data Where Is It and What To Do With It", "Installing WiFi Printers", "Slow PC? Let's Upgrade or Buy New", "Movies (Recording, Editing)", "Building A Password Management Using Excel", "Storage Solutions", and "Windows 10 and 11 For Beginners".

We greatly appreciate Pete's contributions to BVCC over the last nine years.

RUSTDESK REMOTE DESKTOP FOR REMOTE HELP

By Joel Ewing, President Bella Vista Computer Club
Bits & Bytes, July 2025
htttps://bvcomputerclub.org
president (at) bvcomputerclub.org

In the past we have used various tools like TeamViewer and AnyDesk to allow our Help personnel to do remote help for our members over the Internet. Both of these products now have licensing plans that make them unattractive for a non-profit organization of modest financial means. We use an application like that only several times a month, but over the course of a year may connect to many different computers of our members. Our pattern of non-commercial use of these products has been repeatedly misinterpreted as a for-profit business usage, causing various issues when using the only licensing plans our budget can afford.

There is finally an open source remote remote desktop application **RustDesk**, that has matured to the point that we are exploring using it as our primary method for remote desktop help.

You don't want to install any of these remote desktop tools on your computer using downloads or instructions from an un-trusted party.

A primary consideration for all remote desktop applications is security. All of these tools can be intentionally or accidentally mis-configured in ways that could allow someone to potentially gain control of your computer from the Internet without your explicit knowledge and consent and do bad things to your system and data.

There are documented scams where these tools have been abused. Someone unknown person convinces a willing victim they have a computer problem that can be easily resolved if they install one of these tools, and once you grant them access to your desktop they can do anything they want. The object could be to download and install malware, other programs that allow them to use your hardware, search for sensitive data, or possibly just reconfigure the remote desktop program so they can gain access and do damage at a later time without your knowledge. Somehow they plan to make money at your expense.

We have looked closely at RustDesk and are convinced it can be configured for safe use, provided that BVCC runs its own RustDesk Server, through which the remote desktop connections are established. It turns out we happen to have a Training Center with business Internet service and spare computers lying around, so the cost of running our own open-source RustDesk Server on a free Linux Operating System is just the time to install and configure the server and to enable our router to allow server access from the Internet.

All computers connected to the Internet these days are connected through a WiFi or wired Ethernet cable connection to a router of some kind. By default a router hides the computers behind the router from inbound connections from the Internet, so there is no way my computer behind my router can directly initiate a connection with your computer behind your router.

The way all these remote desktop client tools work is that both computers involved in the remote desktop setup process must first have their copy of the desktop client started and running. Each client connects over the Internet to the same remote desktop server, and identifies itself by telling the server the client's unique ID value (which is established when the client is installed). The party that wants to control the desktop must be told the ID of the target computer (by direct contact with the other party) and can request his desktop client to establish a connection to that ID. The server relays that request to the corresponding remote machine, and if the other party approves, a connection is established using the server to relay data between the two computers. At that point the controlling computer sees a window with a copy of the desktop of the other machine and his keyboard and mouse actions on his copy of the desktop are mirrored on the remote machine. Once the two computers are communicating, there are some "tricks" that may work to allow the two computers to bypass the relay server and talk directly, but if that fails they will continue to use the server to relay data between the two machines.

TeamViewer and AnyDesk each have a vendor-supplied server to which all their clients connect. RustDesk also has a public server, but it is only intended for testing and does not support encrypting data, which would make it a security exposure for general usage.

The recommended usage for RustDesk is for an organization to set up their own RustDesk Server, protect it with an encryption key, and supply all those entitled to use that server with the server Internet address and the corresponding key to access the server. We have a server in the BVCC Training Center that is being tested. The plan is to set up an installation process for the RustDesk Client that will only be available for BVCC members that will configure the RustDesk client with the BVCC server address and corresponding access key.

With a unique BVCC RustDesk server, the exposure to abuse is even less than with AnyDesk or TeamViewer. Even if someone learns your RustDesk Client unique ID, they can't request a connection unless they first connect to the BVCC RustDesk server -- and they can't connect to that server without a copy of the fairly long server access key. Provided we don't mess up and publish the access key, the number of people that could attempt to gain access is limited to the small subset of Internet users that are or have been associated with BVCC.

Even with access to the BVCC RustDesk Server and your RustDesk Client ID, someone can't request to connect unless you have manually started your RustDesk Client, and even then the connection must either be approved at the target machine or the requester must know a password (that by default is unique for each new startup of the client). If you don't auto-start your RustDesk Client, or leave it active when not in use AND tell someone your RustDesk password, you should have no exposure to unauthorized access using RustDesk.

Assuming there are no problems and the RustDesk Client gets rolled out to our members, those astute users may realize that this arrangement means the same RustDesk Client would allow free remote desktop support between two of their own computers. But, keep in mind our RustDesk Server is running on old hardware and primarily for use by the Help Clinic personnel and remote help. We have no idea how many concurrent connections it can handle. We also don't currently have any process in place to monitor the RustDesk server, so it could go down and we wouldn't know it needed fixing until the Help Clinic personnel complained they couldn't access it.