Bits & Bytes

Arkansas' Premier Computer Club
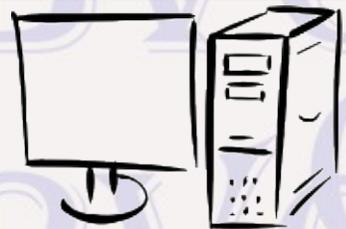
July 2019

Bella Vista Computer Club - John Ruehle Center

HOW TO FIND US

All meetings are on the lower level of the Highlands Crossing Center in Bella Vista. You may use entrance A on the West side or entrance C on the South side and take the elevator or stairs to the lower level. Turn left (West) to reach the General Meeting room, right for the John Ruehle Training Center. **The lower-level NE entrance is also now available again.**

MEETINGS

Board Meeting: July 8, 6:00 pm, John Ruehle Training Center

General Meeting: July 8, (2nd Monday), 7:00 pm, Community Room 1001.
Program: "Windows 10 Update 1903 Overview", presenter Woody Ogden. This Feature Update was finally released for distribution in June. Those who are still at Windows 10 level 1803 (or earlier) can expect a forced upgrade to 1903 by this November.

Bring a guest! New Members and Guests are always welcome at the General Meeting

Genealogy SIG: July 20 (meets 3rd Saturday of the month).

MEMBERSHIP

Single membership is $20; $10 for each additional family member. Join by mailing an application (from the web site) with check, or complete an application

HELP CLINICS

Saturday, July 6, 9am – noon

Wednesday, July 17, 9am – noon

Saturday, August 3, 9am – noon

Help clinics are a free service for BVCC club members, held in the Training Center

Bring your tower, laptop, tablet or smartphone for problem solving.

CLASSES

"Computer Security for Regular People, Part 2" – Justin Sell, Tuesday, July 16, 6:30 – 8:30 pm
Part 1 will be offered again on 3rd Tuesday in August.

"Windows 10 Installation/First-Start Settings" – Joel Ewing, Wednesday, July 24, 10 – 11 am

Advance sign up required for classes: Contact Grace: email to edu@bvcompclub.org, text 469-733-8395, call 479-270-1643, or sign up at the General Meeting. Classes are **free to Computer Club members** and are at our John Ruehle Training Center.

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

OFFICER ELECTIONS

The August 12 meeting will once again be time for annual officer elections.   This year the offices up for election include two Board positions (two-year term) and the one-year-term offices of President, Vice President, Secretary, and Treasurer. Existing officers can be found on our website from the "Club Officers" link in the Contents column.   The functions of the various officer positions are at the "Help Wanted" link under Contents. The elected officers comprise The Bella Vista Computer Club Board, which meets on the 2nd Monday of the month an hour before the monthly General Meeting. A Nominating Committee will be working on finding a list of candidates starting in July.

WINDOWS 10 FEATURE 1903 UPDATE PROCEDURE OVERVIEW

By Joel Ewing, President BVCC

There have been some warnings about problems with Windows 10 Feature Update 1903 after its initial release which caused its general release to be delayed by several months until June 2019. The recommendation now is to install Feature 1903; and, if you are still at Feature level 1803 or earlier, to completely bypass Feature 1809 and go directly to 1903.   We have recently learned that Windows 10 at level 1803 or earlier will no longer be supported for maintenance after November 2019, so Microsoft plans to force an install of Feature 1903 on those back-level Windows 10 systems prior to November 2019.

If you are unsure of your level of Windows 10, search for "**winver**" and select "run command" to run it.   The resulting window should start off something like the figure at the right.   In this case the system was at Feature level "1809" (which is still supported after November 2019)
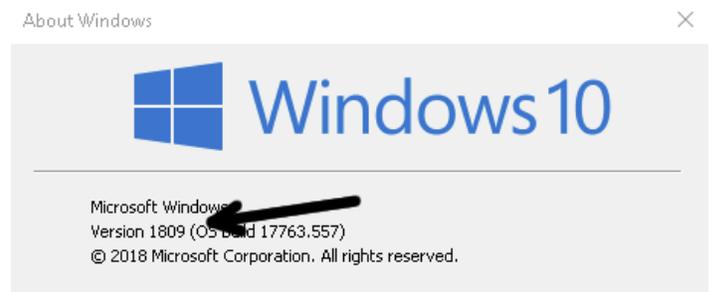
There is always some chance that a Windows Feature upgrade might cause problems with certain combinations of hardware or software. While I have not seen problems on any upgrade attempts, since there were some early problems with Feature 1903 it is especially recommended that the image backup step not be skipped.

The steps you should take to install Feature 1903 can be summarized as follows:

1. Use Macrium Reflect (or some similar backup tool) to make a full-image backup of your internal hard drive onto an external USB drive. Macrium Reflect is a free utility whose installation and usage has been described in our "Backup C Drive Class").   This will not only preserve a copy of all your personal files but enable recovery to a functional system should the update process break your system.

2. **Unplug the external drive used in step 1 and any other USB storage devices from your system before proceding. Having any USB storage devices plugged in during an attempt to install Feature 1903 has been known to cause problems or prevent the install from succeeding.**

3. Search for "Check for Updates", which should be found under Systems Settings.   Run it.   It may erroneously say "You're up to date" depending on how recently you last checked. Click the "Check for Updates" button to find what is currently available.   If there are any updates other than the Feature 1903

upgrade, let those updates install (the Feature 1903 Upgrade will probably not be visible if there are any ordinary updates needing an install).   If pending updates require a system restart to complete, do a system restart.   Repeat this step until the only update showing is the Feature 1903 Upgrade.   I have seen cases where it may be necessary to close out the Windows Update window and restart it if it has found ordinary updates but is taking no action toward installing them.

4. Select "Download & Install" under the Feature 1903 Upgrade.   The download part takes about 5 minutes with 110 Mbps Internet access – proportionally longer if your access is slower. The install process will require multiple restarts. The entire process could take as little as 70 – 110 minutes on fairly recent hardware with a SSD drive, but on older hardware or with a mechanical hard drive expect longer than two hours.   Be sure your system will have adequate power for the duration of the install.

5. On your first login after the new Feature is installed, a tutorial will be started to explore the new features in Windows 10 1903.   It is not necessary to view the tutorial at this time.   You can return to the tutorial at any time by clicking on "Explore new features" in the top right of the "Check for Updates" window. I would recommend proceeding directly to the next step in case there are any critical fixes to Feature 1903 that need to be installed, and then returning to the tutorial later.

6. After the Feature has been installed, go through a process similar to step 3 to check for and install any available updates that apply to Feature 1903, and repeat the process until no additional updates are found.

7. If the system appears to be functional after the feature update, use Macrium Reflect to make another full-image backup onto the external drive. Keep the previous pre-Feature-Update backup around until the new system has been thoroughly tested.

WI-FI SECURITY – PROTECT YOUR COMMUNICATIONS
DON'T LEAVE YOUR WI-FI OPEN

By Phil Sorrentino, Contributing Writer, The Computer Club, FL
February 2019
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Wi-Fi is all around us. In homes, libraries, airports, shopping centers, recreational places, houses of worship, the CA buildings, just about everywhere. Wi-Fi is the first step in the complex way we get to the internet for information, entertainment, or purchases. Our smartphones, tablets, and computers, more than likely, communicate with a router over Wi-Fi. (I say more than likely because there are still some desktop computers directly connected to routers by wire, using an Ethernet RJ-45 connection). The router in turn connects to a modem (modulator-demodulator) which in turn connects to your ISP (internet service provider). It is the ISP that is the final step and the gateway to the internet and all of its wonderful websites and servers.

Wi-Fi is a wireless communications link. Like any wireless communications, for example radio or TV, it can be intercepted by an antenna and an appropriate receiver. This means that anyone with a laptop (antenna and receiver are integral components), and some special software (commonly called a wireless sniffer) could intercept the

wireless signal and "listen in" on your digital communications. I don't mean "listen in" as in hearing with your ears. I mean intercepting the digital data stream that makes up your communications, and interpreting, and possibly recording, the communications content. (Googling "sniffer" reveals that a network sniffer is a software tool that monitors, or sniffs out, the data flowing in a communications link in real time. It can be a self-contained software program or a hardware device with appropriate software or firmware. Wireshark is widely recognized as the world's most popular network sniffer. It is a free, open source application that displays intercepted communications data. In the hands of a skilled user it can intercept communications and even capture passwords from nearby communications activity.) With this computer setup, the person at the next table at your favorite coffee shop could be "listening in" on your every request for information, and the information you receive. This is the reason you are always counseled to never do anything with your financial apps, or any app that accesses personal private data, when you are in a coffee shop setting. The Wi-Fi routers at most of these locations are usually "Open" and not protected. Though the person at the next table is probably not listening to your communications, you should consider all open Wi-Fi communications as if it was available to the public.

So, at home where you will want to use your financial apps, it is important that you secure your Wi-Fi by employing encryption. This guarantees that your Wi-Fi communications cannot be compromised, even if someone with sniffer equipment parks in your driveway where the signal is strong enough to be intercepted. I would bet that most of us already have our Wi-Fi encrypted. Any Wi-Fi that requires a password is using some type of encryption and is therefore protected. Today, there are at least three types of encryption that are used with routers, WEP, WPA, and WPA2. WEP is the oldest and least secure way to encrypt your Wi-Fi, short of leaving it open or unencrypted. A WEP, or "Wired Equivalent Privacy", password is said to be easy to crack, by those who practice the art of cryptography. WEP will only stop the most casual of users from connecting to a WEP protected network. Common advice is that if your router only supports WEP, you should replace it, post haste. All networks should use one of the stronger encryption techniques, WPA or WPA2.

WPA or "Wi-Fi Protected Access" is the newer Wi-Fi security standard. There are two versions of WPA - WPA and WPA2. WPA was created as a stop gap solution for devices that originally only supported WEP. It allowed those devices to upgrade to a stronger encryption scheme, WPA, and leave behind the known flaws of WEP. WPA was always only a temporary solution improving the situation, but not expected to be the final solution. The final solution is WPA2. WPA2 is the most secure type of encryption available today for typical home equipment. (The government may have other encryption schemes but that would only be known by people way above my pay grade.) WPA2 is the encryption standard that we should all use on our routers at home. The strength of an encryption scheme comes from the algorithms used and the length of the encryption key. Without getting into the technical details, WPA2 uses the strongest algorithm and employs very long keys. The WPA2 in this discussion is sometimes called WPA2-Personal. There are other variants of WPA called WPA2-Enterprise that may be even more secure but are intended for large business installations. So, at home when you are setting up your typical home or small business router, make sure your data is protected, (and access to your Wi-Fi is limited), by setting up and using WPA2 Wi-Fi security.