Microsoft Windows 10 *21H1* Update

Microsoft has another "spring" update, but this time they are keeping with their latest naming convention and calling it 21H1 (for year 2021 first half – which typically is released in late April or May).

This update is mostly that, just updates with security and bug fixes. Not much in added features.

CHECKSUM – better yet, check it all!

When you download files, especially ISO files, do you know how to verify the *checksum*?

First, what is a *checksum*? A *checksum* is a hash value derived from reading the bytes that make up a file for the purpose of detecting errors or injected malware that may have been introduced during a download or from failing storage. Checksums are often used to verify data <u>integrity</u> but are not relied upon to verify data authenticity. In other words, it's a good way to confirm the file you downloaded was fully downloaded and is in tact and matches what the source of the file got when they did a checksum hash.

The hash value can be short and quick to calculate, or longer (more precise) which can take nearly a minute to calculate with modern CPUs.

The most common three that I routinely see are MD5, SHA1 (or simply SHA), and SHA256 with the latter being very common these days. SHA (Secure Hash Algorithm) is more precise than MD5 (Message-Digest algorithm). Check out articles on Wikipedia.com if you want to know more.

OK, so how would one use this to verify a download? Well, let's say you wanted to download the latest Rocky Linux; you'd go to https://rockylinux.org/download and you'll see "Checksum" as one of the options under the ISOs section. If you click on "Checksum" you will get a tiny file with the hash results you should get from a SHA256 checksum on the ISO file you want to download. (See example)

```
# Rocky-8.3-x86_64-boot.iso: 714080256 bytes
SHA256 (Rocky-8.3-x86_64-boot.iso) = 7a0c39ec8c271c6112ea37ed9767d4ab98107a6c778e03d34d16cd5e4e0285f0
# Rocky-8.3-x86_64-dvd1.iso: 9354346496 bytes
SHA256 (Rocky-8.3-x86_64-dvd1.iso) = 4be83f5edf28209ce5caa06995c1c3fc5112d0d260b9e8c1cc2fecd384abcee0
# Rocky-8.3-x86_64-minimal.iso: 714080256 bytes
SHA256 (Rocky-8.3-x86_64-minimal.iso) = fba979fde098027df79b4b686359a8e22daad7f6b269f34887dbe3a53f7cf73a
```

Now compare this hash string with the results of running a SHA256 checksum on the file you chose to download in the list. If it matches, you know the integrity of the file is good.

To run a **SHA256** checksum against the file you downloaded, you can use an app like "**Hash Tool**", available from the Microsoft Store, or use the built-in PowerShell Cmdlet `Get-FileHash` like this:

```
Get-FileHash C:\Users\YourNameHere\Downloads\Rocky-8.3-x86_64-dvd1.iso
```

(Note: to open PowerShell, simply hit the [Windows] key, type PowerShell and press [ENTER])
Doing a *checksum* hash integrity check on your downloads is highly recommended.

You could even do this to verify the integrity of a file you copied over to a backup drive. Simply run the `Get-FileHash` Cmdlet (in PowerShell) on the source file and the copied file to ensure they match.

Presidents Corner

Dear Members,

Well another month gone and time to start a new month. So far we have found out we still can not get the party room, as it is not available yet.

So at this point this means we will have to push the club meeting off another month. We can wait and see if July will be available.

Sincerely,
David Ladd

So, we will not be having the June 2021 meeting...
However, we are looking into the possibility of meeting as early as July of 2021 if things progress with the vaccine distributions and lower case counts, etc.

Please check back often at
https://www.mapcc.com
For updates as we have them for when we will have our next club meeting.

Thank you for your support.

~~**Meetings - January-November**~~
~~**Apple Barrel (at Sapp Bros.)**~~
~~**2608 S. 24th St.**~~
~~**Council Bluffs, Iowa**~~
~~**MEETING BEGINS: 7 PM**~~ ~~(NOT in December)~~

Minutes of Meeting…

Meeting was called off due to the continued health concerns of having crowds of people, etc.

First Drawing

The $10 drawing was won by N/A.

Minutes and Treasury Report

Minutes and treasury report will be read at next meeting. (we hope)

Old Business

No old business due to no meeting.

New Business

No new business due to no meeting.

Demo

The "demo" was not shown, but hopefully we will be able to sometime in mid-late 2021.

Stick-Around Drawing

The stick around drawing ($0.00) was not done due to not meeting.

Adjourned

No meeting!

Minutes recorded by Bruce 05/18/2021

M.A.P.C.C.

Established 1982

The Metro Area Personal Computer Club Newsletter is published monthly and posted on the club website: http://www.mapcc.com

Meetings:

3rd Tuesday of the month at 7 p.m. (*WHEN ALLOWED TO*)

Apple Barrel (party room)

2608 S. 24th St.

Council Bluffs, IA 51501

Elected Officers:

President: David Ladd

Vice President: Kevin Holloway

Secretary: Bruce

Treasurer: Kevin Holloway

Appointed Officers:

Newsletter Editor: Bruce

Annual Membership Dues:

Individual: $15.00 Family: $20.00

Club Motto:

"*Pass It On*"

Contact: (531) 600-8847