

GSummer V1.0.3 - GSOS MD5 Hash Utility

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Introduction

Transferring files to your GS in a modern world sometimes involves jumping through a few hoops along the way. This is where GSummer can help you know if the file on your GS is the same as the original. GSummer does this by calculating the MD5 hash of a file (or set of files) and compares the hash against the original hash. If this matches then you are pretty sure that the destination file(s) were transferred correctly. The reason that I say pretty sure is that it is possible to have two files with the same MD5 hash but it is highly unlikely that you will hit this in normal everyday use. GSummer can also be used to make sure files on your hard drive have not changed due to some sort of file corruption. Just occasionally verify the MD5 hash file to make sure files that should never change don't.

GSummer is an NDA (New Desk Accessory) that can also integrate with the GSOS finder.

Installation

To install GSummer you can drag the GSummer NDA to the System folder of your boot drive and it will be placed in the System:Desk.Accs folder or you may copy it there manually.

GSummer uses the Hash Tool (TOOL128) by Geoff Weiss. It has been included with the GSummer NDA. It needs to be installed in the System:Tools folder of your boot drive. It can be installed the same way as the GSummer NDA. The documentation for the Hash Tool can be found at <http://hashtool.gwlink.net>. I am not sure how GS friendly the hashtool website is.

Optionally you may also copy the Ftype.GSummer file to the Icons folder of your system drive. This will show the md5 files as a GSummer file type.

Once you have copied the NDA and the Tool you must reboot your GS. If you installed it correctly then you will see the GSummer MD5 icon during bootup. If you see the GSummer MD5 icon with a red X through it then the Hash Tool was not detected.

Usage

GSummer can be used to create MD5 checksums from a group of files or it can be used to verify the integrity of files by comparing them against an MD5 file. An MD5 file is a simple text file that consists of a list of checksums and files. The file paths listed in the MD5 file are relative to the location of the MD5 file. The MD5 file must be in the same directory as the files. For example, if the MD5 file has a list of files then the MD5 file must be in the root of those files. GSummer can use MD5 files created by other MD5 utilities such as Linux/Unix utility md5sum. GSummer also looks at both the data fork and the resource fork of a file.

GSummer can be set to look inside NuFX (GSHK) files and generate a checksum based on each file or to treat the file as a normal file. Yes, I know, NuFX archives already have a CRC to ensure file integrity but GSummer ensures it a little more :).

Creating an MD5 file is quite easy. Select a set of files in a finder window and choose the 'Generate MD5...' from the finder's 'Extras' menu. This will bring up a window with a list of all the files that are to be checksummed and it will start the checksum process. You may cancel the checksum at any point. The cancel will not take effect until the current file being processed is completed. Once all the files have been checksummed you will be given the option to save the results in an MD5 file.

Verifying the integrity of files is also just as easy. and can be accomplished several ways.

- 1) Open the GSummer NDA from the Apple menu and click the 'Verify MD5'. You will be given an Open File dialog to locate the MD5 file.
- 2) Select the MD5 file in the finder menu and selecting the 'Verify MD5...' from the finder's 'Extras' menu.
- 3) Double clicking on the MD5 file. If another NDA or Finder Extension is set to open text files it may get the open event first and open the file. Most NDAs or Finder Extensions that open text files usually have an option to allow other application to get access first. This needs to be enabled in those utilities if you notice that the MD5 file is not handled by GSummer.

Once the MD5 file has been opened a window will be display and the contents will be listed. The files will then be verified. During the verification a icon will show the status of the verification for each file as it proceeds. Use the following table to determine the meaning of each icon.

Green check - Calculated MD5 is the same as in the MD5 file.

Red X - Calculated MD5 is not the same as the MD5 file.

Black ? - File listed in MD5 file does not exist.

Gray File - A file was found in a archive that was not listed in the MD5 file. This may or may not be considered a failure.

Once the verification is complete you will be given a pass or fail result as well as the number of files that were processed successfully or were failures.

Options

GSummer has a few options for you to customize. To access the options you need to Open GSummer NDA window which can be done by selecting the GSummer menu item from the Apple menu.

Show Boot Icon - During bootup the GSummer icon will be shown on the boot screen. If you don't want to see this then de-select this option. The default is selected.

Enable Finder Integration - Enabling this option adds the GSummer menu items to the Finder's Extra menu and allows you to double click on MD5 files to open them. If you don't want to clutter up your Extra's menu then disable this option. The default is selected.

Applications Get Files First - This option is only available if the Enable Finder Integration option is enabled. Since an MD5 file is just a simple text file with MD5 data in it this allows others to open the MD5 checksum files before GSummer. The default is not selected.

Look Inside Archives - This is only used when generating an MD5 checksum file. If a file that is being checked is an archive (SHK, BXY, etc) then the files inside the archive are checksummed rather than the archive itself. Disable this item to have GSummer checksum the file and not the contents. The default is selected.

Skip Invisible File - This option is also only used when generating an MD5 checksum file. If a file that is being checked is an invisible file and this option is select then the file is skipped and not added to the md5 file list. If an invisible file is inside an archive then it is still checked to verify the integrity the contents of the archive. The default is selected.

Other Uses

Gsummer can also be used to detect disk corruption. For example, use GSummer to generate an md5 checksum file for your "System" folder . Occasional verify the checksum. If the verification failes then you know which file is no longer the same as when you generated the checksum. Since an MD5 file is just a text file you can edit it to remove the lines of files that you know are going to change such as preference files.

Special Thanks

Thanks to Kelvin Sherlock for his GoldenGate Apple //GS compatibility layer as well as it Host.FST for the GSplus emulator.

As always, I need to thank Ewen Wannop for his help in testing and providing insight during the development of GSummer.

GSummer was developed on an Ubuntu 18.04 system using GoldenGate, along with the GSplus emulator and Host.FST in short amount of time. I worked with Kelvin to get GoldenGate to handle resource files correctly. I also needed to make changes to Linux version of the GSplus emulator so that it handled resource forks correctly. If you want the details of my changes let me know and I will share them with you. I can be reached via email at chris@vavruska.com

Bug Fixes

V1.0.1: Fix a crash when selecting a something in a window, closing all windows, selecting "Create MD5Sum..." fom Extras menu. Menu item should be disabled.

V1.0.1: Fix a random crash when creating an MD5 file.

V1.0.2: When "Applications Get Files First" is enabled in certain circumstances and error could be displayed after verifying an MD5 file.

V1.0.3: Fix a crash when verifying an md5 file with no valid file entries.

V1.0.4: When shutting down from the finder the menu bar would still be shown.

Legal

GSummer is being released as freeware. GSummer may not be distributed for profit. Not really sure is this necessary. Who would pay for it?

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