VidMonHB

The Video Monitor Handbrake Batch Conversion Program

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Overview

The VidMonHB program is a PowerShell script that will call the HandBrake command line interface program to convert larger video files of various types into smaller MP4 (*MPEG-4 video file format*) files. The script was written for **Windows** operating systems and is compatible with PowerShell versions 5 and up. It can be run as an interactive program or as an unattended scheduled task (*Video Monitor HandBrake)*.

It is assumed that the GUI version of the HandBrake video transcoder program has been installed already. Downloads for this can be found at https://handbrake.fr/

The script executes the command line interface version of HandBrake (*HandBrakeCLI.exe*) to reduce video files. The Windows 64bit version of HandBrakeCLI.exe is free and can be downloaded from the HandBrake website.

- Note – Currently compatible with version 1.3.1 which can be found here: [HandBrakeCLI.exe version **1.3.1**](#)

The script can process a single file at a time or in a batch of up to 9,999 files. A PowerShell windows form front end will prompt for parameters allowing the user to select various options before executing.

Sample screen.

Download and Installation

VidMonHB

The required files for VidMonHB can be downloaded from GitHub and then copied into a folder for execution.

1. Create a folder (i.e. C:\VidMonHB).

Download the following files from GitHub into the newly created VidMonHB folder.

- https://github.com/mrpaulwasserman/vidmonhb

File Name	Description
VidMonHB.ps1	PowerShell conversion script
VidMonHB.ps-properties	Sample configuration/parameters file
imageSmall.png	VidMonHB image
VidMonHBPostExec.cmd	Sample batch command to be executed after conversion has been completed
presets.json	Sample HandBrake presets file. *Contains recommended preset VeryFastDDtoAAC*

2. Open a PowerShell window and navigate to the C:\VidMonHB folder where the software was downloaded.

3. Run the following two commands in the PowerShell window.

```
Set-ExecutionPolicy Unrestricted -Scope CurrentUser -Force

Install-Module -Name Recycle -RequiredVersion 1.0.2 -Scope CurrentUser -Force
```

NOTE - Recycle only works on local files. Files on network drives will be deleted!

HandBrake GUI and HandBrakeCLI.EXE

If not already installed, download and install the HandBrake GUI from
https://handbrake.fr/downloads.php.

Download HandBrakeCLI.exe from https://handbrake.fr/downloads2.php and
save to your local system.

Notes:
- Do not use Version 1.3.2 which has a known bug causing preset failures
- HandBrakeCLI.exe is typically placed under C:\Program Files\HandBrake\ where the GUI version of HandBrake is installed.

Installation is now complete.

Execute VidMonHB

From a PowerShell window, type in .\VidMonHB.ps1 and hit Enter.

The script is designed to run independently or with user input. When the script first runs, it will open a dialog box asking to press the Enter key to edit parameters.
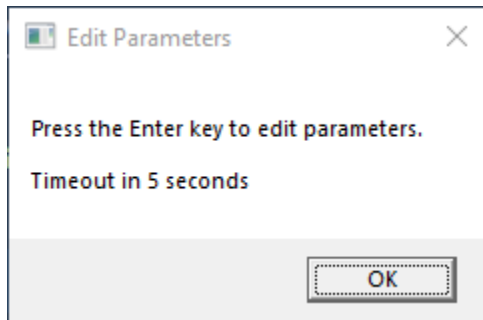
If the user does not hit Enter within a 5 second timeout, the script will automatically continue execution using the parameters specified in the default parameter file VidMonHB.ps-properties.

Parameters

File Location Info

Input – Location where video files will be searched for.

- Note - The script automatically recurses all subdirectories under the Input location.

Output – Location where video files will be written after being converted.
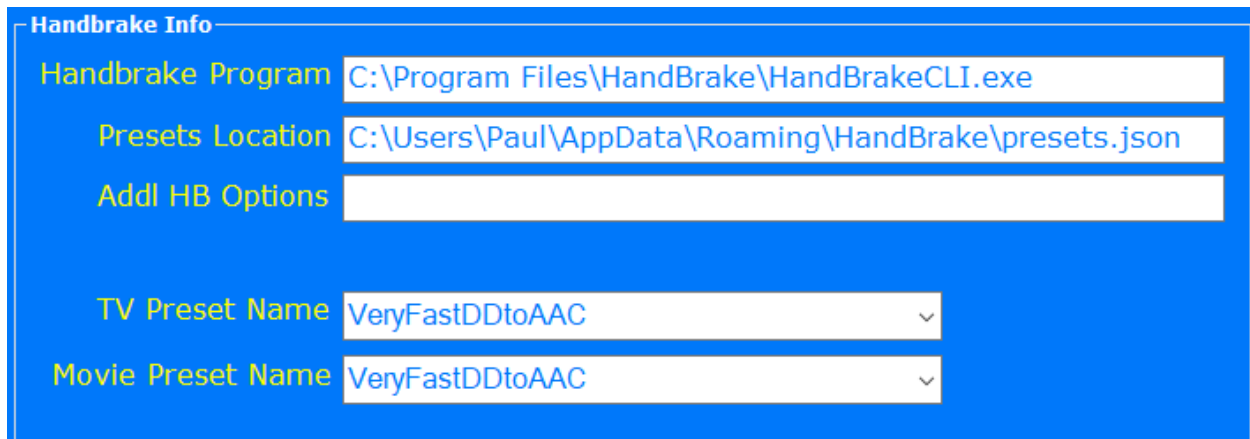
Log files – Location where log files will be written during the conversion.

- Note – There are 2 types of log files that will be created:

    o A summary log file contains a list all conversions during this session
    o A detail log file contains all the operations of the HandBrakeCLI.exe program on each individual video file

TV Base Path – If the Move Files option is selected, this is the base location where converted TV Show files will be written to.

Movie Base Path – If the Move Files option is selected, this is the base location where converted movie files will be written to.

Handbrake Info

Handbrake Program – Location where the HandBrakeCLI.exe program can
be found.
(typically under C:\Program Files\HandBrake)

Presets Location – Location where the Handbrake presets file can be
found. Presets determine the quality settings that are
used while converting video files.

Follow this link for additional information on Handbrake official presets.
https://handbrake.fr/docs/en/latest/technical/official-presets.html

Addl HB Options – Additional Handbrake program options that will be
appended to the Handbrake command line.

TV Preset Name – Name of the preset that will be used while converting TV
show files.

Movie Preset Name – Name of the preset that will be used while
converting movie files.

Handbrake Info

Input Video Types – Comma delimited list of video files to search for in the input folder.
Sample Video Types : mkv,mov,m4v,mpg,mpeg,avi,flv,webm,wmv, vob,evo,mts,m2ts,ts,iso,

# of files to process – This limits the # of files to process to the first *X* number of files found.

Parallel Processes – VidMonHB has the ability to administer multiple processes (*up to 10*).
Warning – The higher the # of parallel processes, the more likely to hit the rate of diminishing return. Experiment on your own machine to find the optimal number that works best for you.

Output dest same – If checked, the output will be written to the same
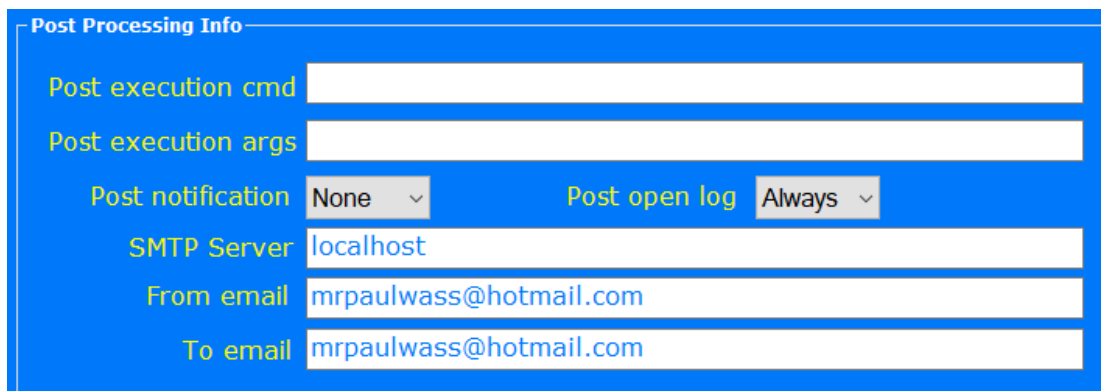**as input location** folder where the input file was found.

Move files after – If checked, the script will attempt to move the converted
Conversion video file to the proper TV or Movie file (*see examples for details*)

Delete – There are 3 types of actions that can be applied to the
Original original video file after the conversion has been completed.
     a) Maintain the original
     b) Delete the original (file is permanently deleted)
     c) Recycle the original (sends file to the Windows recycle bin)
       NOTE - Recycle only works on local files. Files on network drives will be deleted!

Post Processing Info

Post execution cmd – Enter the name of the batch cmd file to execute. This can be used to execute commands such as ExifTool to change files from read-only read/write.

Sample cmd file : VidMonHBPostExec.cmd

Post execution args – Optional at this time to allow arguments to be passed to the post execution cmd. *Future version of this process may allow for runtime information to be passed*.

Post notification – There are 3 options for a post notification email to be sent after the conversion process completes.
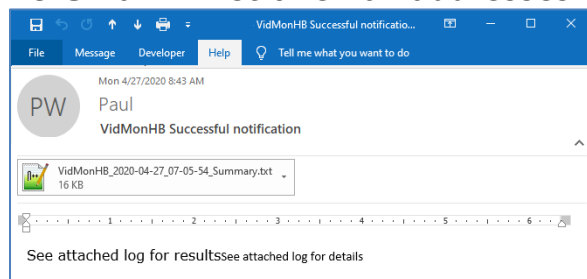   a) None – No email will be sent
   b) All – Email notification will be sent after conversion completes
   c) Error – Only sends email if an error occurs

   • Note – Requires SMTP server to be configured

SMTP Server – (See SMTP setup for example)
From email – Email address where the email will come from
To email – List of email addresses to send notification to

Information, Config/Parms file and buttons

Information	Execute script with the parameters shown
Config/Parms file	C:\vidmonhb\VidMonHB.ps-properties ∨ **Save Config/Parms** **Execute Script** **Exit**

Information – This text box will display information about each of the individual fields when the field receives focus. A yellow background with red lettering indicates an error.

Config/Parms files – VidMonHB is driven by parameters and can load parameter information from files. This allows the user to save and store multiple conversion scenarios.

- Note - The default config/parms file is VidMonHB.ps-properties

Save Config/Parms – Saves the current settings on the screen to the specified config/parms file.

Execute Script – Executes the batch conversion process with the options shown on the screen.

Exit – Exits the script without executing any commands. Hitting the escape key defaults to hitting the Exit button.

Move Files After Conversion

VidMonHB has built in logic that will attempt to move the completed video file to its final destination on a Media Server. VidMonHB determines TV Show vs. Movie file based on the file naming conventions.

Moving TV Show Files

TV Base Path D:\Media\20. TV Shows\   Move files after ☑ conversion

Below is a sample file structure, where D:\Media\20. TV Shows\ is the base folder for TV Shows.

- Note – TV Show folder names will be created if they do not exist.

```
|Media
|   |-- 20. TV Shows
|   |-- Dynasty
|   |-- Forensic Files II
|   |-- Green Acres
|   |-- The Andy Griffith Show
|   |-- The Flintstones
```

TV filenames typically have season and episode information embedded in the name.
- Sample TV filename: "Forensic Files II - S01E01 - Buried Secrets.mp4"

VidMonHB will pull out 4 key pieces of information from the filename to determine where to move the completed file to. This information is appended to the specified TV base path.

1) TV Show folder name
2) Season
3) Episode
4) TV Show name

Below is an example of a completed TV show that has been moved to its final destination.

"D:\Media\20. TV Shows\Forensic Files II\Season 01\Forensic Files II - S01E01 - Buried Secrets.mp4"

```
|Media
|   |-- 20. TV Shows
|   |   |-- Forensic Files II
|   |   |   |-- Season 01
|   |   |   |   |-- Forensic Files II - S01E01 - Buried Secrets.mp4
```

Moving Movie Files

Movie Base Path `D:\Media\00. Movies\`   Move files after conversion ☑

Below is a sample file structure, where D:\Media\00. Movies\ is the base folder for movies.

- Note – Unlike TV Show folder names, Movie folder names will **NOT** be created if they do not exist. Movie folder names should be created ahead of time for the desired preference.
- Note – If a Year encompassing movie folder cannot be found, movie files will automatically be moved to the Movie base path.

```
|Media
|   |-- 00. Movies
|   |   |-- 01. Movies 1920-1979
|   |   |-- 02. Movies 1980-1999
|   |   |-- 03. Movies 2000-2019
|   |   |-- 04. Movies 2020-2029
```

VidMonHB will pull out 2 key pieces of information from the filename to determine where to move the completed file to. This information is appended to the specified TV base path.

1) Movie year (*the year the film was released*)
2) Movie name

Movie filenames typically have the year in parenthesis embedded in the name.
- <u>Sample Movie filename</u>: "Caddyshack (1980).mp4"

Below is an example of a completed movie that has been moved to its final destination.

"D:\Media\00. Movies\02. Movies 1980-1999\Caddyshack (1980).mp4"

```
|Media
|   |-- 00. Movies
|   |   |-- 02. Movies 1980-1999
|   |   |   |-- Caddyshack (1980).mp4
```

Schedule VidMonHB

VidMonHB is meant to be run as an unattended scheduled task within Windows Task Scheduler. You must have a predefined config/parms file set up telling VidMonHB what operations to perform. Below is an example how to set up VidMonHB to run at 10pm.

Below is an example of the default config/parms file *VidMonHB.ps-properties*

Input	`D:\Downloads`	Handbrake Program	`C:\Program Files\HandBrake\HandBrakeCLI.exe`
Output	`D:\Media`	Presets Location	`C:\Users\Paul\AppData\Roaming\HandBrake\presets.json`
Log Files	`D:\Media\Logs`	Add HB Options	
TV Base Path	`D:\Media\20. TV Shows\`	TV Preset Name	`VeryFastDDtoAAC`
Movie Base Path	`D:\Media\00. Movies\`	Movie Preset Name	`VeryFastDDtoAAC`
Input Video Types	`mkv,avi`	Post execution cmd	
# of files to process	`100`	Post execution args	
Parallel processes	`1`	Post notification	`Error`
Output dest same as input location	`Not checked`	SMTP Server	`localhost`
Move files after conversion	`Not Checked`	From email	`paul@hotmail.com`
Delete Original	`Delete`	To email	`paul@hotmail.com`

- Find up to 100 files with an extension of mkv or avi under the folder D:\Downloads
  - *Process will automatically recurse through subdirectories*
- Store the converted video files under D:\Media
- Write out log files to D:\Media\Logs
- Process the files synchronously (*one at a time, not in parallel*)
- Do not move completed converted video files
- Use the preset VeryFastDDtoAAC for both TV and Movie files
- If conversion is successful, delete the original video file
- Send email notification to paul@hotmail.com when the process has completed

Open Task Scheduler and create a task.
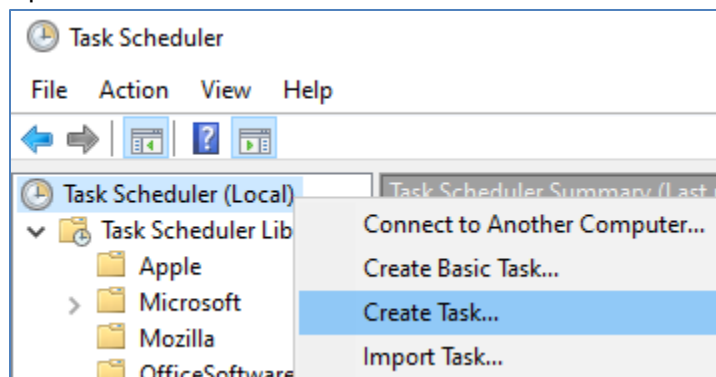
Fill in the name and description information.
Change the user to SYSTEM or use a service account that can run unattended.
Check the Run with highest privileges setting.
Select your OS from the Configure for dropdown.
Select the next tab (Triggers)
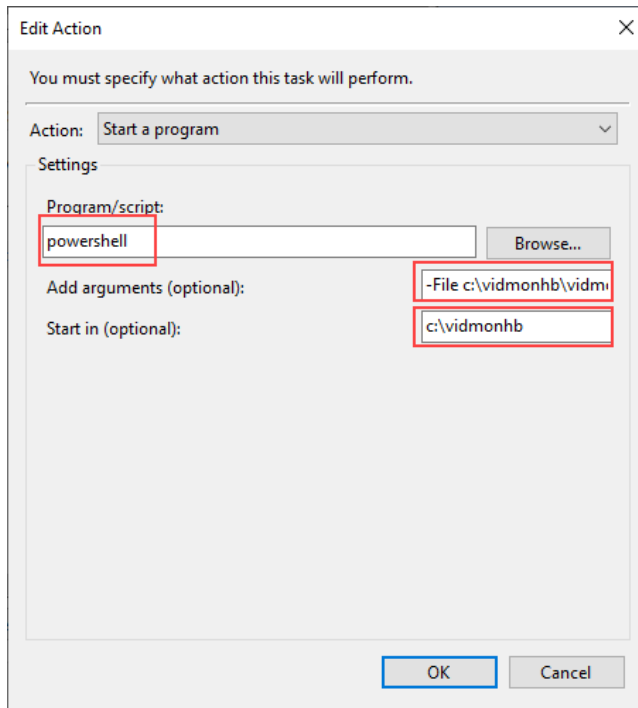

Create a new trigger that runs at the specified time.

Set the Program/script to powershell.
Add the argument to run:
  -File c:\vidmonhb\VidMonHB.ps1 -propfileloc C:\vidmonhb\VidMonHB.ps-properties
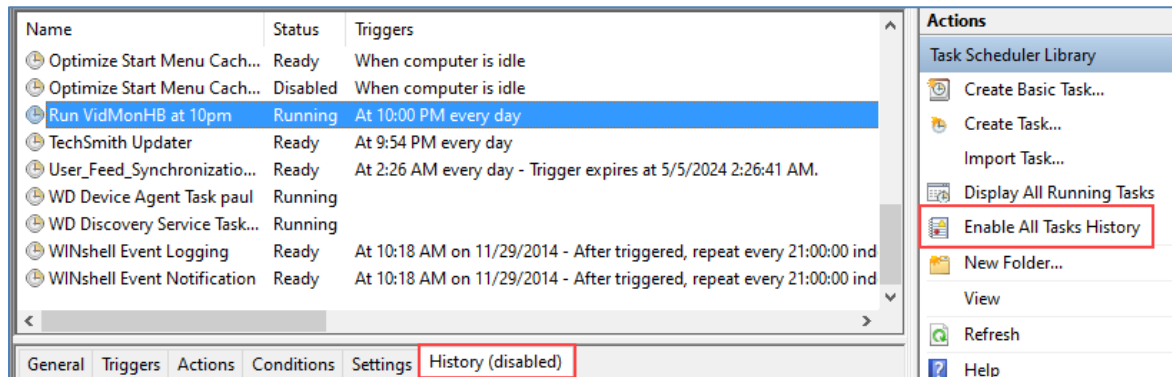Set the starting folder to the same folder where VidMonHB.ps1 resides.

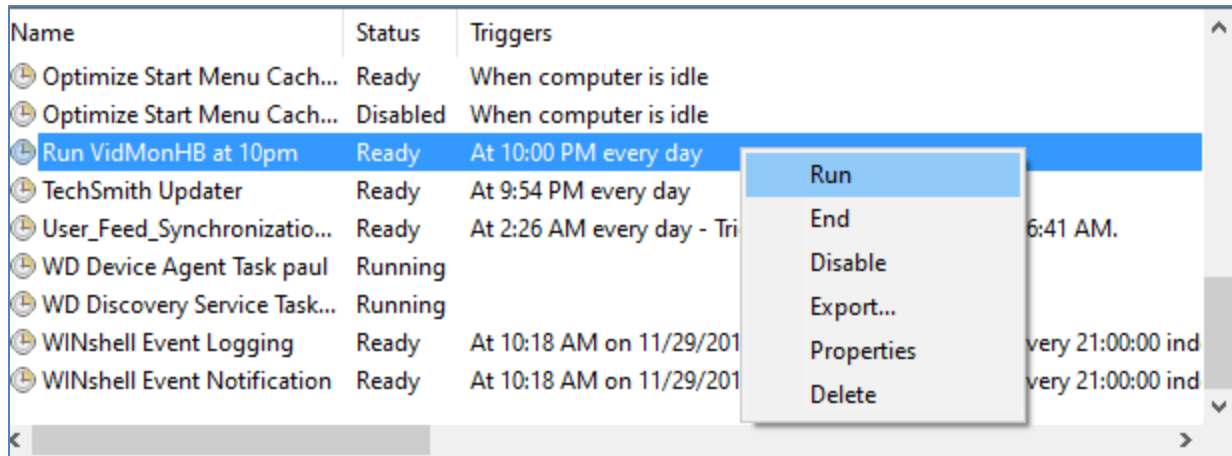Leave the default settings for the Conditions and Settings tab.
Click OK.
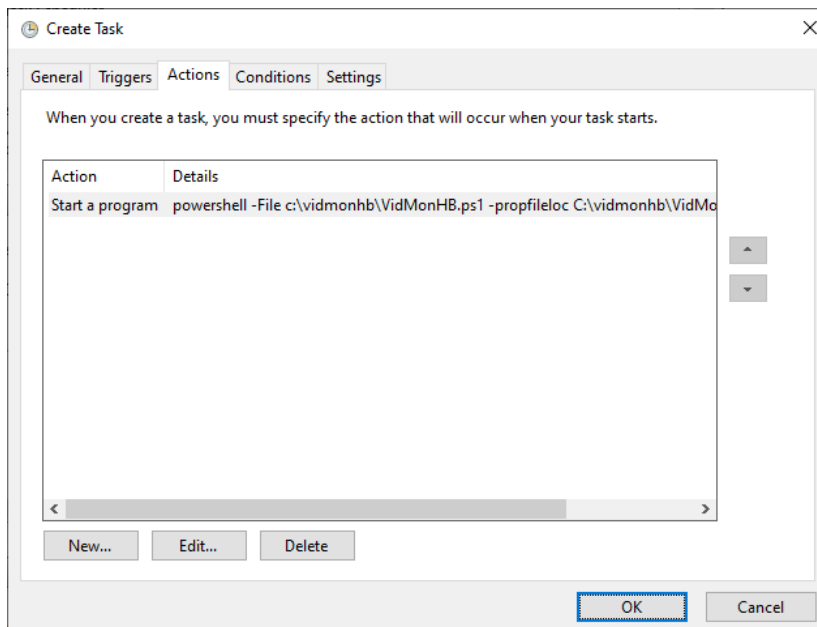
Select the Enable All Tasks History for the VidMonHB Task.

Test the task by right clicking and select run.

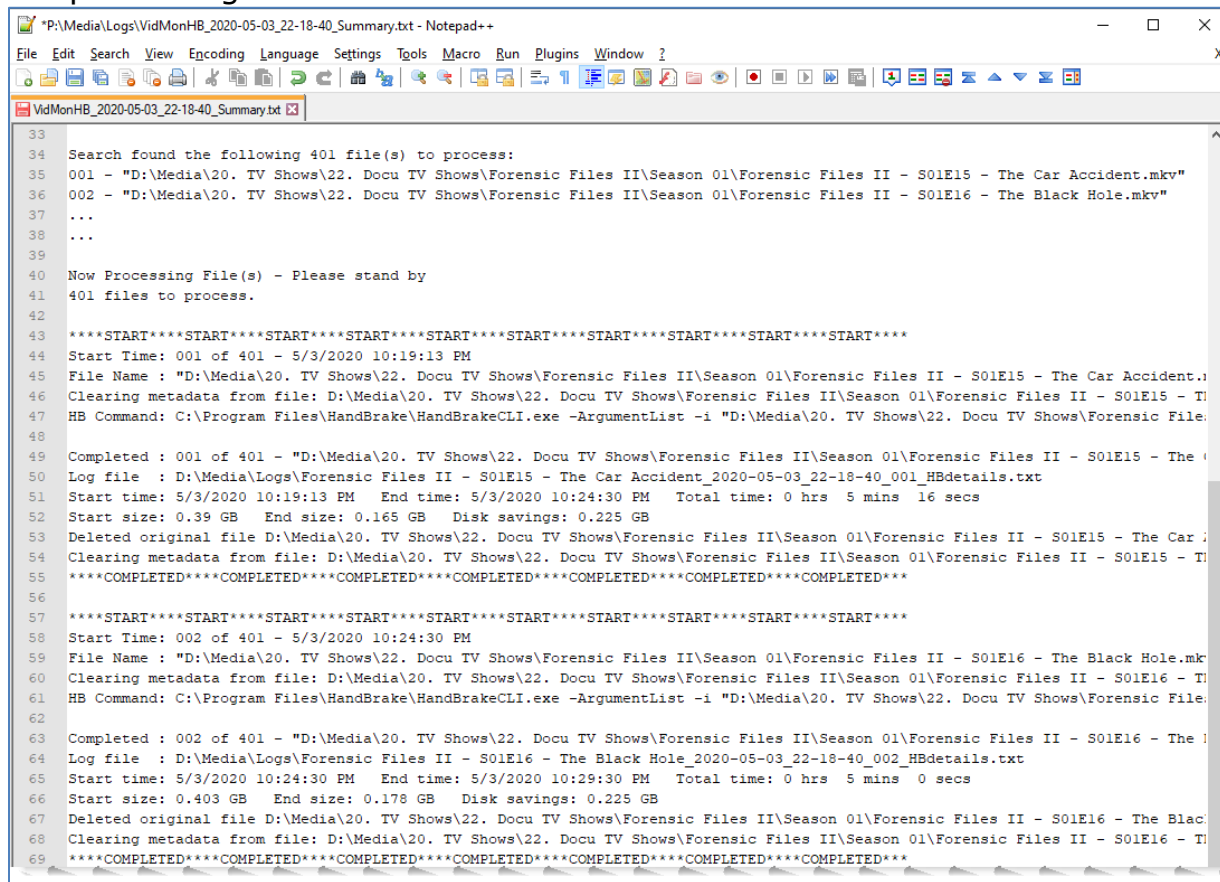Be sure to review the Logs to ensure they job completed successfully.

Log File Examples

Summary Log

The top portion of the summary log contains the session parameters.

```
*P:\Media\Logs\VidMonHB_2020-05-03_22-18-40_Summary.txt - Notepad++
File  Edit  Search  View  Encoding  Language  Settings  Tools  Macro  Run  Plugins  Window  ?

VidMonHB_2020-05-03_22-18-40_Summary.txt

 1
 2
 3              VidMonHB - Version 1.19
 4    -----------------------------------------------------------------------------
 5    Parameter Settings
 6    Video types            : mkv,avi
 7    Input location         : D:\Media\
 8    Output location        : Override - Output will be written to the same folder where the input was found
 9    Same As Input Override : True
10    Delete original        : Delete
11    HandBrake file location : C:\Program Files\HandBrake\HandBrakeCLI.exe
12    HB preset file location : C:\Users\Administrator\AppData\Roaming\HandBrake\presets.json
13    HandBrake TV preset     : VeryFastDDtoAAC
14    HandBrake movie preset  : VeryFastDDtoAAC
15    HandBrake options       :
16    Property location       : D:\vidmonhb\VidMonHB.ps-properties
17    Move files option       : False
18    Log file path           : D:\Media\Logs
19    TV Show base path       : D:\Media\20. TV Shows\
20    Movie base path         : D:\Media\00. Movies\
21    Parallel processing max : 1 - Single Threaded Mode
22    # of files to process   : 1500
23    Post exec cmd           :
24    Post exec arguments     :
25    Post notification       : All
26    SMTP Server             : localhost
27    From Email              : email@hotmail.com
28    To Email                : email@hotmail.com
29    Post open log           : Always
30    Taglib found            : Title metadata will be cleared
31    Note - Parameters Settings were pulled from D:\vidmonhb\VidMonHB.ps-properties
32    -----------------------------------------------------------------------------
```
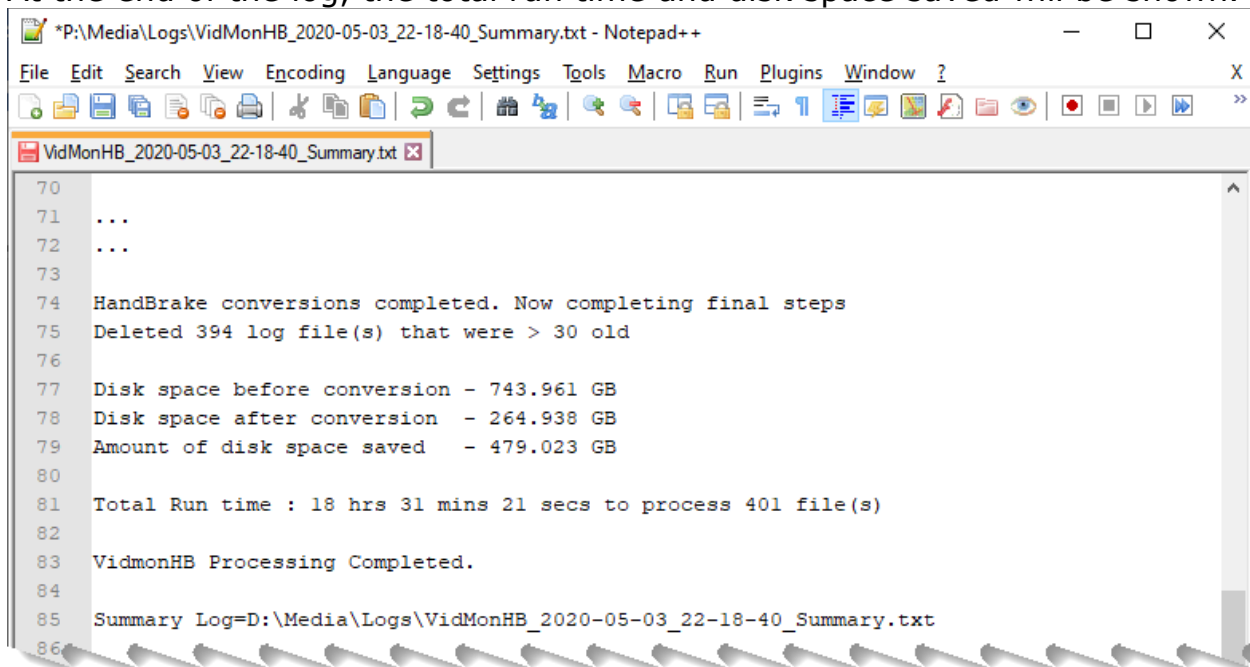
The script will list all the files that were found and then show a summary of the processing that occurred on each.

If processing in single threaded mode, each set of individual file operations will be contained within the ****START**** and ****COMPLETED**** blocks.

At the end of the log, the total run time and disk space saved will be shown.

```
*P:\Media\Logs\VidMonHB_2020-05-03_22-18-40_Summary.txt - Notepad++        —    ☐    ✕

File  Edit  Search  View  Encoding  Language  Settings  Tools  Macro  Run  Plugins  Window  ?                    X

VidMonHB_2020-05-03_22-18-40_Summary.txt ☒

70
71    ...
72    ...
73
74    HandBrake conversions completed. Now completing final steps
75    Deleted 394 log file(s) that were > 30 old
76
77    Disk space before conversion -  743.961 GB
78    Disk space after conversion   -  264.938 GB
79    Amount of disk space saved    -  479.023 GB
80
81    Total Run time : 18 hrs 31 mins 21 secs to process 401 file(s)
82
83    VidmonHB Processing Completed.
84
85    Summary Log=D:\Media\Logs\VidMonHB_2020-05-03_22-18-40_Summary.txt
86
```

Errors

Many of the fields within VidMonHB have error handling built in, including file path verifications. Fields containing errors will be highlighted in yellow as shown in the example below.

The information box will provide a description of the error/problem.

Below is an example of a preset error.

Execution Examples

Example #1

Input	D:\Downloads		Handbrake Program	C:\Program Files\HandBrake\HandBrakeCLI.exe
Output	D:\Media		Presets Location	C:\Users\Paul\AppData\Roaming\HandBrake\presets.json
Log Files	D:\Media\Logs		Add HB Options	
TV Base Path	D:\Media\20. TV Shows\		TV Preset Name	VeryFastDDtoAAC
Movie Base Path	D:\Media\00. Movies\		Movie Preset Name	VeryFastDDtoAAC
Input Video Types	mkv,avi		Post execution cmd	
# of files to process	1500		Post execution args	
Parallel processes	1		Post notification	None
Output dest same as input location	Not checked		SMTP Server	
Move files after conversion	Not Checked		From email	
Delete Original	Delete		To email	

- Find up to 1500 files with an extension of mkv or avi under the folder D:\Downloads
    - *Process will automatically recurse through subdirectories*
- Store the converted video files under D:\Media
- Write out log files to D:\Media\Logs
- Process the files synchronously (*one at a time, not in parallel*)
- Do not move completed converted video files
- Use the preset VeryFastDDtoAAC for both TV and Movie files
- If conversion is successful, delete the original video file
- Do not send any email notification when the process has completed

Example #2

Input	`D:\Downloads`		Handbrake Program	`C:\Program Files\HandBrake\HandBrakeCLI.exe`
Output	`D:\Media`		Presets Location	`C:\Users\Paul\AppData\Roaming\HandBrake\presets.json`
Log Files	`D:\Media\Logs`		Add HB Options	
TV Base Path	`D:\Media\20. TV Shows\`		TV Preset Name	`Super HQ 1080p30 Surround`
Movie Base Path	`D:\Media\00. Movies\`		Movie Preset Name	`Very Fast 480p30`
Input Video Types	`mkv`		Post execution cmd	
# of files to process	`100`		Post execution args	
Parallel processes	`1`		Post notification	`All`
Output dest same as input location	`Not checked`		SMTP Server	`Localhost`
Move files after conversion	`Not Checked`		From email	`paul@hotmail.com`
Delete Original	`Recycle`		To email	`paul@hotmail.com`

- Find up to 100 files with an extension of mkv under the folder D:\Downloads
  - *Process will automatically recurse through subdirectories*
- Store the converted video files under D:\Media
- Write out log files to D:\Media\Logs
- Process the files synchronously (*one at a time, not in parallel*)
- Do not move completed converted video files
- Use the preset Super HQ 1080p30 Surround for TV Shows and use Very Fast 480p30 for Movie files
- If conversion is successful, recycle the original video file to the Recycle Bin
- Send email notification to paul@hotmail.com when the process has completed

Example #3

Input	D:\Downloads		Handbrake Program	C:\Program Files\HandBrake\HandBrakeCLI.exe
Output	* Same as input location *		Presets Location	C:\Users\Paul\AppData\Roaming\HandBrake\presets.json
Log Files	D:\Media\Logs		Add HB Options	
TV Base Path	D:\Media\20. TV Shows\		TV Preset Name	VeryFastDDtoAAC
Movie Base Path	D:\Media\00. Movies\		Movie Preset Name	VeryFastDDtoAAC
Input Video Types	avi		Post execution cmd	
# of files to process	250		Post execution args	
Parallel processes	1		Post notification	None
Output dest same as input location	Checked		SMTP Server	
Move files after conversion	Not Checked		From email	
Delete Original	Delete		To email	

- Find up to 250 files with an extension of avi under the folder D:\Downloads
  - *Process will automatically recurse through subdirectories*
- Store the converted video files under the same location where the input file was found (i.e. D:\Downloads)
- Write out log files to D:\Media\Logs
- Process the files synchronously (*one at a time, not in parallel*)
- Do not move completed converted video files
- Use the preset VeryFastDDtoAAC for both TV and Movie files
- If conversion is successful, delete the original video file
- Do not send any email notification when the process has completed

Example #4

Input	D:\Downloads		Handbrake Program	C:\Program Files\HandBrake\HandBrakeCLI.exe
Output	* Same as input location *		Presets Location	C:\Users\Paul\AppData\Roaming\HandBrake\presets.json
Log Files	D:\Media\Logs		Add HB Options	
TV Base Path	D:\Media\20. TV Shows\		TV Preset Name	VeryFastDDtoAAC
Movie Base Path	D:\Media\00. Movies\		Movie Preset Name	VeryFastDDtoAAC
Input Video Types	avi,mkv,mov		Post execution cmd	
# of files to process	15		Post execution args	
Parallel processes	4		Post notification	None
Output dest same as input location	Checked		SMTP Server	
Move files after conversion	Checked		From email	
Delete Original	Maintain		To email	

- Find up to 15 files with an extension of avi, mkv, or mov under the folder D:\Downloads
  - *Process will automatically recurse through subdirectories*
- Store the converted video files under the same location where the input file was found (i.e. D:\Downloads)
- Write out log files to D:\Media\Logs
- Process up to 4 files at a time in Parallel
- Move completed converted video files (see Move files for additional info)
- Use the preset VeryFastDDtoAAC for both TV and Movie files
- Maintain the original video file
- Do not send any email notification when the process has completed