NAME

update_manifest - Update a checksum manifest of a folder

SYNOPSIS

update_manifest -i *input_folder* [**-m** *input_manifest*] [**-a** *file_to_add*] [**-d** *file_to_delete*]

update_manifest -h | -x

DESCRIPTION

Bash AVpres is a collection of Bash scripts for audio-visual preservation. One of these small programs is **update_manifest** updates a checksum manifest of a folder, after elements have been added to or removed from the folder. Unless elements are explicitly added and/or deleted, the number of files in the folder and lines of the manifest allow to determine if there was an addition or a removal of files.

Bash version 3.2 or later is strongly recommended. We advise to use the current version 5.2.

OPTIONS

BASIC OPTIONS

-i *input_folder*, **--input=***input_folder*
path to the input folder

-m *input_manifest*, **--manifest=***input_manifest*
path to the manifest file

If this parameter is not passed, then the script uses

<input_folder>_<algorithm>.txt

-a *file_to_add*, **--add=***file_to_add*
path to the file to add

If this parameter is not used, then either adding or deleting is permitted, but not both in the same command.

-d *file_to_delete*, **--del=***file_to_delete*
path to the file to delete

If this parameter is not used, then either adding or deleting is permitted, but not both in the same command.

ADVANCED OPTIONS

The arguments of the advanced options can be overwritten by the user. Please remember that any string containing spaces must be quoted, or its spaces must be escaped.

--algorithm=(*xxh32*|*xxh64*|*xxh128*|*md5*|*sha1*|*sha256*|*sha512*|*crc32*)

We advise to use a faster non-cryptographic hash functions, because we consider that, for archival purposes, there is no necessity to apply a more complex unkeyed cryptographic hash function. The algorithm name can be passed in upper or lower case letters.

The default algorithm is xxHash 128:

--algorithm=xxh128

Note that until end of 2020 the default algorithm was MD5.

The script needs external commands to compute recursively the hash checksums of all elements inside the folder. Run either **make_manifest -x** or **make_manifest --options** to see the actual default tools on a specific computer.

--xxh32='/bin/xxhsum -H32'

xxHash 32 command

--xxh64='/bin/xxhsum -H64'

xxHash 64 command

--xxh128='/bin/xxhsum -H128'

xxHash 128 command

--md5='/bin/md5sum'

MD5 command

--sha1='/bin/sha1sum'

SHA-1 command

--sha256='/bin/sha256sum'

SHA-256 command

--sha512='/bin/sha512sum'

SHA-512 command

--crc32='/bin/crc32'

CRC-32 command

Output file default parameters:

--suffix='_<algorithm>'
The suffix is inserted at the end of the filename, immediately before the period and the extension. Note that a preceding underscore, if wished, must be added.

--extension='txt'
As it is a text file the default value is 'txt'.

INFORMATIVE OPTIONS

-h, --help
display a help message

-x, --options
display the advanced options with their default arguments and indicate if a local configuration has been defined or not

NOTES

The '.DS_Store' files generated by macOS and the 'desktop.ini' files generated by Windows are deleted before creating the checksum manifest.

CONFIGURATION FILE

An external configuration file

${HOME}/.config/AVpres/Bash_AVpres/modify_manifest.txt

can be defined, allowing the script to import alternate default values for the following options:

default_algorithm
md5
sha1
sha256
sha512
xxh32
xxh64
xxh128
crc32
suffix

extension

LOG FILES

Temporary log files are stored at

/tmp/AVpres/update_manifest.XXXXXXXXXX

The log files can be used for debugging, for example by running **cat** on the address prompted with fatal error messages:

cat /tmp/AVpres/update_manifest.XXXXXXXXXX

SEE ALSO

Yann Collet: "xxHash fast digest algorithm", version 0.1.1, 2018-10-10
https://github.com/Cyan4973/xxHash/blob/dev/doc/xxhash_spec.md

RFC 1321, "The MD5 Message-Digest Algorithm", April 1992
https://www.rfc-editor.org/info/rfc1321

RFC 3174, "US Secure Hash Algorithm (SHA1)", September 2001
https://www.rfc-editor.org/info/rfc3174

"Descriptions of SHA-256, SHA-384, and SHA-512"
https://web.archive.org/web/20130526224224/http://csrc.nist.gov/groups/STM/cavp/documents/shs/sha256-384-512.pdf

make_manifest(1) and **verify_manifest**(1).

xxhsum(1), **md5sum**(1), **sha1sum**(1), **sha256sum**(1) and **sha512sum**(1).

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