

NAME

verify_bagit - Verify a BagIt archive, according to RFC 8493

SYNOPSIS

verify_bagit **-i** *input_folder*
verify_bagit **(-h|-x)**

DESCRIPTION

Bash AVpres is a collection of Bash script for audiovisual preservation. One of these small programs is **verify_bagit**. It verifies an archive, according to the "BagIt File Packaging Format", as designed by the Library of Congress in the U.S.A. and standardised under RFC 8493.

OPTIONS**BASIC OPTIONS**

-i *input_folder*, **--input=***input_folder*
 input BagIt folder

ADVANCED OPTIONS

The arguments of the advanced options can be overwritten by the user. Note that any string containing spaces must be quoted.

make_bagit and **verify_bagit** support the four hash algorithms MD5, SHA-1, SHA-256 and SHA-512 considered in RFC 8493, but the use of different and/or multiple algorithms in the same BagIt archive is currently not allowed. Of course, **verify_bagit** uses the algorithm provided by the given input folder.

The script needs an external command to compute recursively the hash checksums of all elements inside the folder.

--md5=*md5_tool*

The default for MD5 is:

```
--md5=' /usr/local/bin/md5deep -r'
```

--sha1=*sha1_tool*

The default for SHA-1 is:

```
--sha1=' /usr/local/bin/sha1deep -r'
```

--sha256=*sha256_tool*

The default for SHA-256 is:

```
--sha256=' /usr/local/bin/sha256deep -r'
```

--sha512=*sha512_tool*

The default for SHA-512 is more complex, because there is no recursive function to call:

```
--sha512=' -find . -type f -exec sha512sum "{}" +'
```

INFORMATIVE OPTIONS

-h, --help

display a help message

-x, --options

display the advanced options with their default arguments

NOTES

The structure of a BagIt archive is:

```
bagit.txt
data/<archive_content>
manifest-<algorithm>.txt
[bag-info.txt]
[tagmanifest-<algorithm>.txt]
```

Only the 'bagit.txt' and 'manifest-<algorithm>.txt' files are mandatory, in addition to the 'data' folder, which contains the actual content to archive.

RFC 8493 defines BagIt version 1.0 and **make_bagit** uses this by default, but, for compatibility reasons, the values from 0.93 to 0.97 are also considered valid and supported.

According to RFC 8493, the 'bag-info.txt' and 'tagmanifest-<algorithm>.txt' files are optional and **make_bagit** creates these always. The 'bag-info.txt' file contains metadata elements describing the bag and its payload and is intended primarily for human use. Yet the 'Payload-Oxum' metadata is used by **verify_bagit** to quickly detect incomplete bags, before performing any checksum validation. The 'tagmanifest-<algorithm>.txt' file contains the checksum manifest of all the other files generated.

The optional 'fetch.txt' file is currently not supported neither by **make_bagit** nor **verify_bagit**.

In addition, for sustainability and transparency reasons, **make_bagit** embeds into the BagIt folder its own source code as well as **verify_bagit**'s one: 'make_bagit.txt' is the script used to actually generate the BagIt archive and 'verify_bagit.txt' can be used to check its integrity.

Note that the '.DS_Store' files generated by macOS are deleted and the spaces in folder and file names are replaced by underscore signs before the BagIt archive is created.

Temporary log files are stored at:

```
/tmp/AVpres/verify_bagit.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/verify_bagit.XXXXXXXXXX
```

SEE ALSO

RFC 8493, "The BagIt File Packaging Format (V1.0)", October 2018:
<https://www.rfc-editor.org/info/rfc8493>

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_bagit(1).

md5deep(1), **sha1deep(1)**, **sha256deep(1)** and **shasum(1)**.

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