

NAME

dpath – The dpath helper script

SYNOPSIS

dpath --create|-c [/path/to/files] **--source|-s** *gsiftpSourceUrl* **--destination|-d** *gsiftpDestinationUrl* **--alias|-a** *alias* [**--dpath-template** *dpathTemplate*] [**--configfile** *configurationFile*]

dpath --batch-create|-b [/path/to/files] **--hosts|-h** *hostsFile* [**--dpath-template** *dpathTemplate*] [**--configfile** *configurationFile*]

dpath --list|-l [/path/to/files] [**--verbose|-v**] [**--configfile** *configurationFile*]

dpath --retrieve|-r [/path/to/files] [**--verbose|-v**] [**--configfile** *configurationFile*]

dpath --reindex [/path/to/files] [**--verbose|-v**] [**--configfile** *configurationFile*]

DESCRIPTION

dpath is a helper script for **gtransfer** to support users in creating dpaths, listing available dpaths and retrieve the latest dpaths from a preconfigured repository.

MODES

dpath has several modes of operation:

CREATE Creates a dpath file and a link to it named after the *alias* that is specified by the user.

BATCH CREATE

Creates all possible dpaths between host addresses given in a file. Corresponding aliases are created automatically.

LIST Lists all available dpaths. Additionally only sources and destinations of dpaths can be listed, too.

RETRIEVE

Retrieve the latest dpaths available. In this mode **dpath** updates the local dpaths with data available from a preconfigured repository.

REINDEX

Reindex all dpaths. In this mode **dpath** updates the sources and destinations index files.

OPTIONS

The options are as follows:

CREATE Mode:

--create|-c [/path/to/files]

Create a new dpath either in the user-provided path or - if no additional path is given - in the user dpaths directory in:

\$HOME/.gtransfer/dpaths

--source|-s *gsiftpSourceUrl*

Set the source URL for the dpath without any path portion at the end.

Example:

gsiftp://saturn.milkyway.universe:2811

--destination|-d *gsiftpDestinationUrl*

Set the destination URL for the dpath without any path portion at the end.

Example:

gsiftp://pluto.milkyway.universe:2811

--alias|-a *alias*

Set the alias for the created data path. **dpath** will create a link named "alias" to the dpath file which name is the SHA1 hash of the source destination combination.

NOTICE: Naming of the aliases is not restricted, but one's encouraged to use something like the following:

{ {site|organization}_ {resource|hostName|FQDN}|Local } --to-- {site|organization}_ {resource|host-Name|FQDN }

[--dpath-template *dpathTemplate*]

When provided, dpath will use the given template for dpath creation. The following variables are expanded during dpath creation:

\$sourceWithoutPath => *gsiftpSourceUrl* => the host address of the source site

\$destinationWithoutPath => *gsiftpDestinationUrl* => the host address of the destination site

BATCH CREATE Mode:**--batch-create|-b** [*/path/to/files*]

Create dpaths in batch mode either in the user-provided path or - if no additional path is given - in the user dpaths directory in:

\$HOME/.gtransfer/dpaths

When used dpath will create dpaths for all possible connections between the hosts given in the *hostsFile* and omit connections between the same hosts.

--hosts|-h *hostsFile*

Set the file name for the file containing the host addresses for which dpaths should be created. The format of each line in this file is as follows:

<PROTOCOL>://hostname.domain.tld:<PORT>

Example contents:

gsiftp://gridftp.omicron.mercury:2811

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gsiftp://gridftp.gamma.mars:2812
[...]
```

[--dpath-template *dpathTemplate*]

When provided, dpath will use the given template for dpath creation. The following variables are expanded during dpath creation:

\$sourceWithoutPath => gsiftpSourceUrl => the host address of the source site

\$destinationWithoutPath => gsiftpDestinationUrl => the host address of the destination site

LIST Mode:

--list|-l [*/path/to/files*] [**--verbose|-v**]

List all dpaths available in the user-provided path or - if no additional path is given - in the user and system dpaths directories.

--list-sources [*/path/to/dataPaths*]

List all sources from the dpaths in the user provided path or - if no additional path is given - in the user and system dpaths directories.

--list-destinations [*/path/to/dataPaths*]

List all destinations from the dpaths in the user provided path or - if no additional path is given - in the user and system dpaths directories.

RETRIEVE Mode:

--retrieve|-r [*/path/to/files*] [**--quiet|-q**]

Retrieve the latest dpaths available on the preconfigured repository and store them in the user-provided path or - if no additional path is given - in the user dpaths directory. If a "--quiet|-q" is provided, then output is omitted and success/failure is only reported by the exit value.

REINDEX Mode:

--reindex [*/path/to/files*]

Reindex all dpaths in the user provided path or - if no additional path is given - in the user dpaths directory.

General options:

[--configfile *configurationFile*]

Set the name of the configuration file for **dpath**. If not set, this defaults to:

/etc/gtransfer/dpath.conf or

<GTRANSFER_BASE_PATH>/etc/dpath.conf or

/etc/opt/gtransfer/dpath.conf or

\$HOME/.gtransfer/dpath.conf or

\$(dirname \$BASH_SOURCE)/..etc in this order.

[--help]

Prints out a help message.

[--version|-V]

Prints out version information.

FILES

[...]/dpath.conf

The **dpath** configuration file.

[...]/dpaths/

This dir contains the system dpaths usable by **gtransfer** and is configurable. Can be created with **dpath**.

\$HOME/.gtransfer/dpaths/

This dir contains the user dpaths usable by **gtransfer**. Can be created with **dpath**.

[...]/dpaths/sources.index

These files (there can be a system one and a user one!) contain all source host addresses available in the respective dpaths directories.

[...]/dpaths/destinations.index

These files (there can be a system one and a user one!) contain all destination host addresses available in the respective dpaths directories.

The index files enable for faster lookup when used by **gtransfer**'s bash completion. Index files are automatically created and extended when creating dpaths. The format of each line in these files is as follows:

<PROTOCOL>://hostname.domain.tld:<PORT>

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SEE ALSO

dparam(1), **sha1sum**(1), **tgftp**(1), **gtransfer**(1)