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***] [--config-file** *configurationFile***]**

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

dpath --retrieve|-r *[/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.

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|hostName|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
> 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-pro-
        vided path or - if no additional path is given - in the user dpaths directory. If a "--quiet|-q" is pro-
        vided, then output is omitted and success/failure is only reported by the exit value.

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)