



Rocky Enterprise Linux 9.2 Manual Pages on command 'git-daemon.1'

C:\>man git-daemon.1

GIT-DAEMON(1)

Git Manual

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NAME

git-daemon - A really simple server for Git repositories

SYNOPSIS

```
git daemon [--verbose] [--syslog] [--export-all]
           [--timeout=<n>] [--init-timeout=<n>] [--max-connections=<n>]
           [--strict-paths] [--base-path=<path>] [--base-path-relaxed]
           [--user-path | --user-path=<path>]
           [--interpolated-path=<pathtemplate>]
           [--reuseaddr] [--detach] [--pid-file=<file>]
           [--enable=<service>] [--disable=<service>]
           [--allow-override=<service>] [--forbid-override=<service>]
           [--access-hook=<path>] [--[no-]informative-errors]
           [--inetd |
           [--listen=<host_or_ipaddr>] [--port=<n>]
           [--user=<user> [--group=<group>]]]
           [--log-destination=(stderr|syslog|none)]
           [<directory>...]
```

DESCRIPTION

A really simple TCP Git daemon that normally listens on port "DEFAULT_GIT_PORT" aka 9418. It waits for a connection asking for a service, and will serve that service if it is enabled.

It verifies that the directory has the magic file "git-daemon-export-ok", and it will refuse to export any Git directory that hasn't explicitly been marked for export this way (unless the --export-all parameter is specified). If you pass some directory paths as git daemon arguments, you can further restrict the offers to a whitelist comprising of those.

By default, only upload-pack service is enabled, which serves git fetch-pack and git ls-remote clients, which are invoked from git fetch, git pull, and git clone.

This is ideally suited for read-only updates, i.e., pulling from Git repositories.

An upload-archive also exists to serve git archive.

OPTIONS

--strict-paths

Match paths exactly (i.e. don't allow "/foo/repo" when the real path is "/foo/repo.git" or "/foo/repo/.git") and don't do user-relative paths. git daemon will refuse to start when this option is enabled and no whitelist is specified.

--base-path=<path>

Remap all the path requests as relative to the given path. This is sort of "Git root" - if you run git daemon with --base-path=/srv/git on example.com, then if you later try to pull git://example.com/hello.git, git daemon will interpret the path as /srv/git/hello.git.

--base-path-relaxed

If --base-path is enabled and repo lookup fails, with this option git daemon will attempt to lookup without prefixing the base path. This is useful for switching to --base-path usage, while still allowing the old paths.

--interpolated-path=<pathtemplate>

To support virtual hosting, an interpolated path template can be used to dynamically construct alternate paths. The template supports %H for the target hostname as supplied by the client but converted to all lowercase, %CH for the canonical hostname, %IP for the server's IP address, %P for the port number, and %D for the absolute path of the named repository. After interpolation, the path is validated against the directory whitelist.

--export-all

Allow pulling from all directories that look like Git repositories (have the

objects and refs subdirectories), even if they do not have the `git-daemon-export-ok` file.

`--inetd`

Have the server run as an `inetd` service. Implies `--syslog` (may be overridden with `--log-destination=`). Incompatible with `--detach`, `--port`, `--listen`, `--user` and `--group` options.

`--listen=<host_or_ipaddr>`

Listen on a specific IP address or hostname. IP addresses can be either an IPv4 address or an IPv6 address if supported. If IPv6 is not supported, then `--listen=hostname` is also not supported and `--listen` must be given an IPv4 address. Can be given more than once. Incompatible with `--inetd` option.

`--port=<n>`

Listen on an alternative port. Incompatible with `--inetd` option.

`--init-timeout=<n>`

Timeout (in seconds) between the moment the connection is established and the client request is received (typically a rather low value, since that should be basically immediate).

`--timeout=<n>`

Timeout (in seconds) for specific client sub-requests. This includes the time it takes for the server to process the sub-request and the time spent waiting for the next client's request.

`--max-connections=<n>`

Maximum number of concurrent clients, defaults to 32. Set it to zero for no limit.

`--syslog`

Short for `--log-destination=syslog`.

`--log-destination=<destination>`

Send log messages to the specified destination. Note that this option does not imply `--verbose`, thus by default only error conditions will be logged. The `<destination>` must be one of:

`stderr`

Write to standard error. Note that if `--detach` is specified, the process disconnects from the real standard error, making this destination

effectively equivalent to none.

syslog

Write to syslog, using the git-daemon identifier.

none

Disable all logging.

The default destination is syslog if `--inetd` or `--detach` is specified, otherwise `stderr`.

`--user-path`, `--user-path=<path>`

Allow `~user` notation to be used in requests. When specified with no parameter, requests to `git://host/~alice/foo` is taken as a request to access `foo` repository in the home directory of user `alice`. If `--user-path=path` is specified, the same request is taken as a request to access `path/foo` repository in the home directory of user `alice`.

`--verbose`

Log details about the incoming connections and requested files.

`--reuseaddr`

Use `SO_REUSEADDR` when binding the listening socket. This allows the server to restart without waiting for old connections to time out.

`--detach`

Detach from the shell. Implies `--syslog`.

`--pid-file=<file>`

Save the process id in file. Ignored when the daemon is run under `--inetd`.

`--user=<user>`, `--group=<group>`

Change daemon's uid and gid before entering the service loop. When only `--user` is given without `--group`, the primary group ID for the user is used. The values of the option are given to `getpwnam(3)` and `getgrnam(3)` and numeric IDs are not supported.

Giving these options is an error when used with `--inetd`; use the facility of `inetd` daemon to achieve the same before spawning git daemon if needed.

Like many programs that switch user id, the daemon does not reset environment variables such as `$HOME` when it runs git programs, e.g. `upload-pack` and `receive-pack`. When using this option, you may also want to set and export `HOME` to point at the home directory of `<user>` before starting the daemon, and make

sure any Git configuration files in that directory are readable by <user>.

--enable=<service>, --disable=<service>

Enable/disable the service site-wide per default. Note that a service disabled site-wide can still be enabled per repository if it is marked overridable and the repository enables the service with a configuration item.

--allow-override=<service>, --forbid-override=<service>

Allow/forbid overriding the site-wide default with per repository configuration. By default, all the services may be overridden.

--[no-]informative-errors

When informative errors are turned on, git-daemon will report more verbose errors to the client, differentiating conditions like "no such repository" from "repository not exported". This is more convenient for clients, but may leak information about the existence of unexported repositories. When informative errors are not enabled, all errors report "access denied" to the client. The default is --no-informative-errors.

--access-hook=<path>

Every time a client connects, first run an external command specified by the <path> with service name (e.g. "upload-pack"), path to the repository, hostname (%H), canonical hostname (%CH), IP address (%IP), and TCP port (%P) as its command-line arguments. The external command can decide to decline the service by exiting with a non-zero status (or to allow it by exiting with a zero status). It can also look at the \$REMOTE_ADDR and \$REMOTE_PORT environment variables to learn about the requestor when making this decision.

The external command can optionally write a single line to its standard output to be sent to the requestor as an error message when it declines the service.

<directory>

A directory to add to the whitelist of allowed directories. Unless --strict-paths is specified this will also include subdirectories of each named directory.

SERVICES

These services can be globally enabled/disabled using the command-line options of this command. If finer-grained control is desired (e.g. to allow git archive to be run against only in a few selected repositories the daemon serves), the

per-repository configuration file can be used to enable or disable them.

upload-pack

This serves git fetch-pack and git ls-remote clients. It is enabled by default, but a repository can disable it by setting daemon.uploadpack configuration item to false.

upload-archive

This serves git archive --remote. It is disabled by default, but a repository can enable it by setting daemon.uploadarch configuration item to true.

receive-pack

This serves git send-pack clients, allowing anonymous push. It is disabled by default, as there is no authentication in the protocol (in other words, anybody can push anything into the repository, including removal of refs). This is solely meant for a closed LAN setting where everybody is friendly. This service can be enabled by setting daemon.receivepack configuration item to true.

EXAMPLES

We assume the following in /etc/services

```
$ grep 9418 /etc/services
git      9418/tcp      # Git Version Control System
```

git daemon as inetd server

To set up git daemon as an inetd service that handles any repository under the whitelisted set of directories, /pub/foo and /pub/bar, place an entry like the following into /etc/inetd all on one line:

```
git stream tcp nowait nobody /usr/bin/git
    git daemon --inetd --verbose --export-all
    /pub/foo /pub/bar
```

git daemon as inetd server for virtual hosts

To set up git daemon as an inetd service that handles repositories for different virtual hosts, www.example.com and www.example.org, place an entry like the following into /etc/inetd all on one line:

```
git stream tcp nowait nobody /usr/bin/git
    git daemon --inetd --verbose --export-all
    --interpolated-path=/pub/%H%D
    /pub/www.example.org/software
```

```
/pub/www.example.com/software
```

```
/software
```

In this example, the root-level directory `/pub` will contain a subdirectory for each virtual host name supported. Further, both hosts advertise repositories simply as `git://www.example.com/software/repo.git`. For pre-1.4.0 clients, a symlink from `/software` into the appropriate default repository could be made as well.

git daemon as regular daemon for virtual hosts

To set up git daemon as a regular, non-inetd service that handles repositories for multiple virtual hosts based on their IP addresses, start the daemon like this:

```
git daemon --verbose --export-all
  --interpolated-path=/pub/%IP/%D
  /pub/192.168.1.200/software
  /pub/10.10.220.23/software
```

In this example, the root-level directory `/pub` will contain a subdirectory for each virtual host IP address supported. Repositories can still be accessed by hostname though, assuming they correspond to these IP addresses.

selectively enable/disable services per repository

To enable git archive `--remote` and disable git fetch against a repository, have the following in the configuration file in the repository (that is the file `config` next to `HEAD`, `refs` and `objects`).

```
[daemon]
  uploadpack = false
  uploadarch = true
```

ENVIRONMENT

git daemon will set `REMOTE_ADDR` to the IP address of the client that connected to it, if the IP address is available. `REMOTE_ADDR` will be available in the environment of hooks called when services are performed.

GIT

Part of the `git(1)` suite