

NAME

git-commit-graph – Write and verify Git commit-graph files

SYNOPSIS

```
git commit-graph verify [--object-dir <dir>] [--shallow] [--[no-]progress]
git commit-graph write <options> [--object-dir <dir>] [--[no-]progress]
```

DESCRIPTION

Manage the serialized commit-graph file.

OPTIONS

--object-dir

Use given directory for the location of packfiles and commit-graph file. This parameter exists to specify the location of an alternate that only has the objects directory, not a full **.git** directory. The commit-graph file is expected to be in the **<dir>/info** directory and the packfiles are expected to be in **<dir>/pack**.

--[no-]progress

Turn progress on/off explicitly. If neither is specified, progress is shown if standard error is connected to a terminal.

COMMANDS

write

Write a commit-graph file based on the commits found in packfiles.

With the **--stdin-packs** option, generate the new commit graph by walking objects only in the specified pack-indexes. (Cannot be combined with **--stdin-commits** or **--reachable**.)

With the **--stdin-commits** option, generate the new commit graph by walking commits starting at the commits specified in stdin as a list of OIDs in hex, one OID per line. (Cannot be combined with **--stdin-packs** or **--reachable**.)

With the **--reachable** option, generate the new commit graph by walking commits starting at all refs. (Cannot be combined with **--stdin-commits** or **--stdin-packs**.)

With the **--append** option, include all commits that are present in the existing commit-graph file.

With the **--split** option, write the commit-graph as a chain of multiple commit-graph files stored in **<dir>/info/commit-graphs**. The new commits not already in the commit-graph are added in a new "tip" file. This file is merged with the existing file if the following merge conditions are met:

- If **--size-multiple=<X>** is not specified, let **X** equal 2. If the new tip file would have **N** commits and the previous tip has **M** commits and **X** times **N** is greater than **M**, instead merge the two files into a single file.
- If **--max-commits=<M>** is specified with **M** a positive integer, and the new tip file would have more than **M** commits, then instead merge the new tip with the previous tip.

Finally, if **--expire-time=<datetime>** is not specified, let **datetime** be the current time. After writing the split commit-graph, delete all unused commit-graph whose modified times are older than **datetime**.

verify

Read the commit-graph file and verify its contents against the object database. Used to check for corrupted data.

With the **--shallow** option, only check the tip commit-graph file in a chain of split commit-graphs.

EXAMPLES

- Write a commit-graph file for the packed commits in your local **.git** directory.

```
$ git commit-graph write
```

- Write a commit-graph file, extending the current commit-graph file using commits in **<pack-index>**.

```
$ echo <pack-index> | git commit-graph write --stdin-packs
```

- Write a commit-graph file containing all reachable commits.

```
$ git show-ref -s | git commit-graph write --stdin-commits
```

- Write a commit-graph file containing all commits in the current commit-graph file along with those reachable from **HEAD**.

```
$ git rev-parse HEAD | git commit-graph write --stdin-commits --append
```

GIT

Part of the **git(1)** suite