

**NAME**

`git-check-ref-format` – Ensures that a reference name is well formed

**SYNOPSIS**

```
git check-ref-format [--normalize]
                    [--[no-]allow-onelevel] [--refspec-pattern]
                    <refname>
git check-ref-format --branch <branchname-shorthand>
```

**DESCRIPTION**

Checks if a given *refname* is acceptable, and exits with a non-zero status if it is not.

A reference is used in Git to specify branches and tags. A branch head is stored in the **refs/heads** hierarchy, while a tag is stored in the **refs/tags** hierarchy of the ref namespace (typically in `$GIT_DIR/refs/heads` and `$GIT_DIR/refs/tags` directories or, as entries in file `$GIT_DIR/packed-refs` if refs are packed by **git gc**).

Git imposes the following rules on how references are named:

1. They can include slash / for hierarchical (directory) grouping, but no slash-separated component can begin with a dot . or end with the sequence **.lock**.
2. They must contain at least one /. This enforces the presence of a category like **heads/**, **tags/** etc. but the actual names are not restricted. If the **--allow-onelevel** option is used, this rule is waived.
3. They cannot have two consecutive dots .. anywhere.
4. They cannot have ASCII control characters (i.e. bytes whose values are lower than \040, or \177 **DEL**), space, tilde ~, caret ^, or colon : anywhere.
5. They cannot have question-mark ?, asterisk \*, or open bracket [ anywhere. See the **--refspec-pattern** option below for an exception to this rule.
6. They cannot begin or end with a slash / or contain multiple consecutive slashes (see the **--normalize** option below for an exception to this rule)
7. They cannot end with a dot ..
8. They cannot contain a sequence @{.
9. They cannot be the single character @.
10. They cannot contain a \.

These rules make it easy for shell script based tools to parse reference names, pathname expansion by the shell when a reference name is used unquoted (by mistake), and also avoid ambiguities in certain reference name expressions (see **gitrevisions(7)**):

1. A double-dot .. is often used as in **ref1..ref2**, and in some contexts this notation means **^ref1 ref2** (i.e. not in **ref1** and in **ref2**).
2. A tilde ~ and caret ^ are used to introduce the postfix *nth parent* and *peel onion* operation.
3. A colon : is used as in **srcref:dstref** to mean "use srcref's value and store it in dstref" in fetch and push operations. It may also be used to select a specific object such as with `git cat-file: "git cat-file blob v1.3.3:refs.c"`.
4. at-open-brace @{ is used as a notation to access a reflog entry.

With the **--branch** option, the command takes a name and checks if it can be used as a valid branch name (e.g. when creating a new branch). But be cautious when using the previous checkout syntax that may refer to a detached HEAD state. The rule **git check-ref-format --branch \$name** implements may be stricter

than what **git check-ref-format refs/heads/\$name** says (e.g. a dash may appear at the beginning of a ref component, but it is explicitly forbidden at the beginning of a branch name). When run with **--branch** option in a repository, the input is first expanded for the “previous checkout syntax” **@{-n}**. For example, **@{-1}** is a way to refer the last thing that was checked out using "git switch" or "git checkout" operation. This option should be used by porcelains to accept this syntax anywhere a branch name is expected, so they can act as if you typed the branch name. As an exception note that, the “previous checkout operation” might result in a commit object name when the N-th last thing checked out was not a branch.

## OPTIONS

**--[no-]allow-onelevel**

Controls whether one-level refnames are accepted (i.e., refnames that do not contain multiple /-separated components). The default is **--no-allow-onelevel**.

**--refspec-pattern**

Interpret <refname> as a reference name pattern for a refspec (as used with remote repositories). If this option is enabled, <refname> is allowed to contain a single \* in the refspec (e.g., **foo/bar\*/baz** or **foo/bar\*baz/** but not **foo/bar\*/baz\***).

**--normalize**

Normalize *refname* by removing any leading slash (/) characters and collapsing runs of adjacent slashes between name components into a single slash. If the normalized refname is valid then print it to standard output and exit with a status of 0, otherwise exit with a non-zero status. (**--print** is a deprecated way to spell **--normalize**.)

## EXAMPLES

- Print the name of the previous thing checked out:

```
$ git check-ref-format --branch @{-1}
```

- Determine the reference name to use for a new branch:

```
$ ref=$(git check-ref-format --normalize "refs/heads/$newbranch")||
{ echo "we do not like '$newbranch' as a branch name." >&2 ; exit 1 ; }
```

## GIT

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