Question:

Many websites expose their ".git" files, please show how it could be dangerous.

Answer:

Step1- Detect .git exposure using forced browsing

Once you have a solid list of Web applications, use forced browsing to see if a .git folder is accessible on them.

If file & directory bruteforce tools are allowed, you can use **dirsearch or dirb (with common.txt dictionary)**. They both check for .git/.

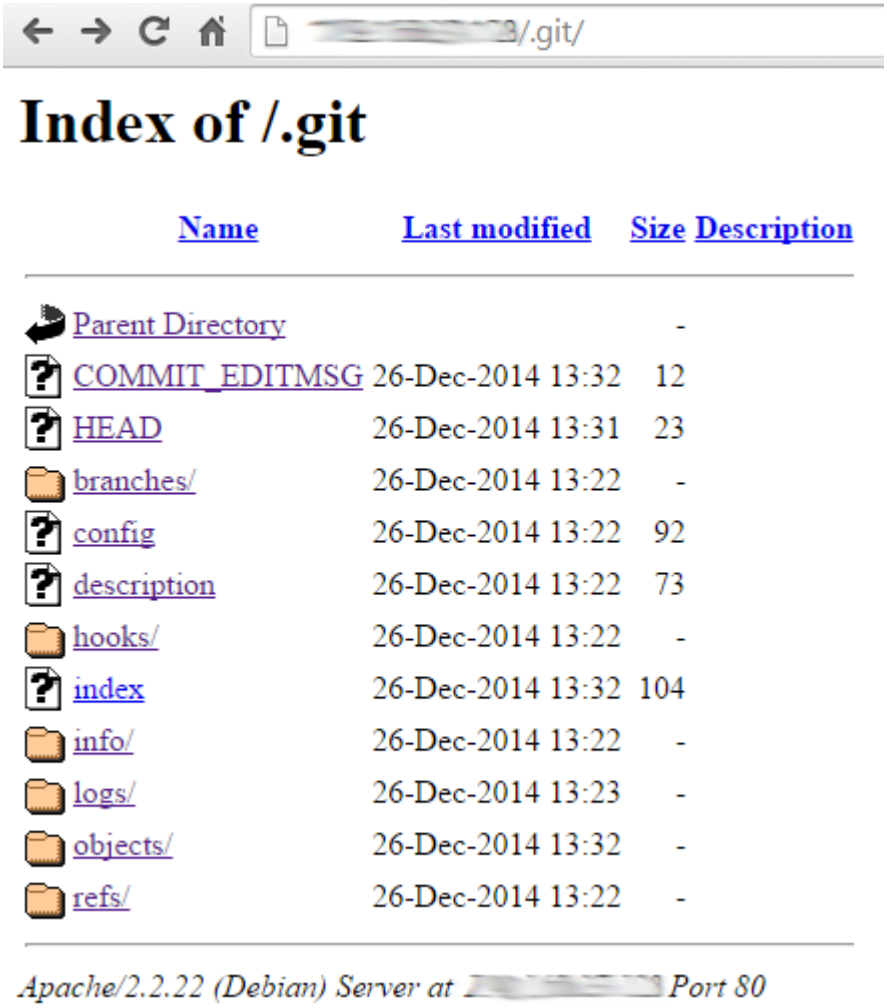
But if automated tools are not allowed (happens even on pentests!), simply **go to <web-app>/.git** (e.g. https://example.com/.git or https://example.com/git/) on a browser.

If you get a 404 error, then .git/ doesn't exist on the server. But if you get a **403 forbidden error**, it does! The folder's root just won't be directly accessible if directory listing is disabled on the server:

Forbidden

You don't have permission to access /.git/ on this server.

If you're lucky and directory listing is enabled, then you could directly browse the .git folder's contents:

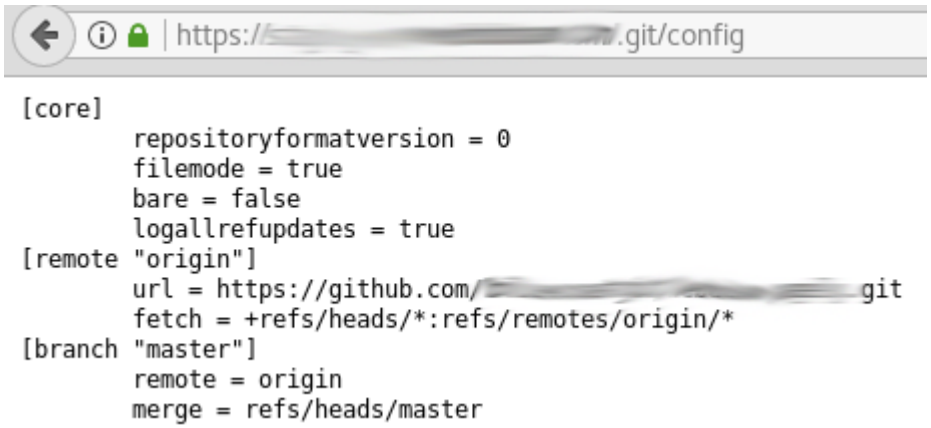


Step2- Confirm the bug by manually browsing the .git folder

If you "git clone" any Git project from Github and look at .git/ in its root you'll notice that some file are always present: .git/config, .git/HEAD, .git/logs/HEAD, .git/index…

You can confirm that the .git folder's contents are accessible (even if .git/ itself isn't) by trying to open these different common file names, for example:

- https://example.com/.git/config
- https://example.com/.git/HEAD
- https://example.com/.git/logs/HEAD
- https://example.com/.git/index



Step3-Automatically extract contents of .git

This is the fun part! Browsing .git/ manually is good for proof of concept, but tedious. If you want to retrieve as many files as possible, even with directory listing disabled, the tool to use is GitTools.

It's really good! Just 4 lines and you'll have all or parts of the remote Git repository on your computer:

```
./gitdumper.sh https://example.com/.git/ /output-directory/
git status                    # Returns that the files were deleted because folders are empty
git checkout -- .       # To restore the files & download the directory
git log                                # See what other commits are there
```

Finally, you have to **analyze the local repository** manually. Try to detect other vulnerabilities using static code analysis, or credentials, authentication tokens, new endpoints, etc.

And don't forget, if you find a vulnerable domain, to **check** its **development and staging subdomains** too. They would probably be vulnerable, even if the bug was fixed on the main domain/subdomain.

Potential impact

- Finding new vulnerabilities by analyzing the source code
- Finding files containing sensitive information like credentials, tokens, new endpoints, etc

Examples of bug bounty reports

- Git repository found on Grabtaxi Holdings Pte Ltd ($1,000)
- Git available containing passwords. on Boozt Fashion AB ($400)
- [staging-engineering.gnip.com] Publicly accessible GIT directory on Twitter ($280)
- GIT Detected on Nextcloud ($0)