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How To Install A Public Git Repository On A Debian Server

Git is a free distributed revision control, was initially created by Linus Torvalds for Linux kernel development.It is primarily developed on Linux, but can be used on other Unix operating systems including BSD, Solaris and Darwin. Git is extremely fast on POSIX-based systems such as Linux. It differs from svn and creates a private repository on a remote server too.

Some popular projects using Git:

* YUI
* Merb
* DragonFly BSD
* GPM
* Git
* Linux Kernel
* Perl
* Gnome
* Ruby on Rails
* Android
* Wine
* Fedora
* X.org
* VLC
* Prototype

Well, we'll focus on how to install git and gitweb on the Debian distribution.gitweb is a git web interface written in Perl, and can be used as a CGI script or as mod_Perl, and it will allow us browsing a git repository. Let's start.

Getting git and gitweb packages from the Debian repository with aptitude:

```
$ sudo aptitude install git-core gitweb
```

Create some useful directories: */var/cache/git* (the git repository),*/var/www/git* contains the *gitweb.cgi*:

```
$ sudo mkdir /var/www/git
```

```
$ [ -d "/var/cache/git" ] || sudo mkdir /var/cache/git
```

In our example the directory */var/www* is Apache's DocumentRoot;make a git configuration in the Apache configuration directory:

```
$ sudo cat vim /etc/apache2/conf.d/git
```

```
<Directory /var/www/git>
  Allow from all
  AllowOverride all
  Order allow,deny
  Options ExecCGI
  <Files gitweb.cgi>
  SetHandler cgi-script
  </Files>
</Directory>
```

```
DirectoryIndex gitweb.cgi
SetEnv  GITWEB_CONFIG  /etc/gitweb.conf
```

Move *gitweb.cgi*, logo and css files into */var/www/git*:

```
$ sudo mv /usr/share/gitweb/* /var/www/git
```

```
$ sudo mv /usr/lib/cgi-bin/gitweb.cgi /var/www/git
```

Make some changes in */etc/gitweb.conf*:

```
$ sudo vim /etc/gitweb.conf
```

```
$projectroot = '/var/cache/git/';
$git_temp = "/tmp";
#$home_link = $my_uri || "/";
$home_text = "indextext.html";
$projects_list = $projectroot;
$stylesheet = "/git/gitweb.css";
$logo = "/git/git-logo.png";
$favicon = "/git/git-favicon.png";
```

Reload the git config into Apache:

```
$ sudo /etc/init.d/apache2 reload
```

First, initialize git in our project by creating a repository and setting name and email:

```
$ cd /var/cache/git/
```

```
$ mkdir project.git
```

```
$ cd project.git
```

```
$ git init
```

```
$ echo "Short project's description" > .git/description
```

```
$ git config --global user.name "Your Name"
```

```
$ git config --global user.email "you@example.com"
```

```
$ git commit -a
```

Marking a repository as exported is done by using the file *git-daemon-export-ok*.

```
$ cd /var/cache/git/project.git
```

```
$ touch .git/git-daemon-export-ok
```

Git has a mini-server for git repositories. It is small and cute, and suitable for sharing repositories.Starting git daemon with our repository as base path, base-path should not end in a slash.

```
$ git daemon --base-path=/var/cache/git --detach --syslog --export-all
```

Now the git daemon is running on port 9418 on your computer, we can start to use it with the URL *git:///location*.You can do a copy to your development environment:

```
$ git clone git://server/project.git project
```

If our clone succeeded, we should now have a local directory called *project*.