

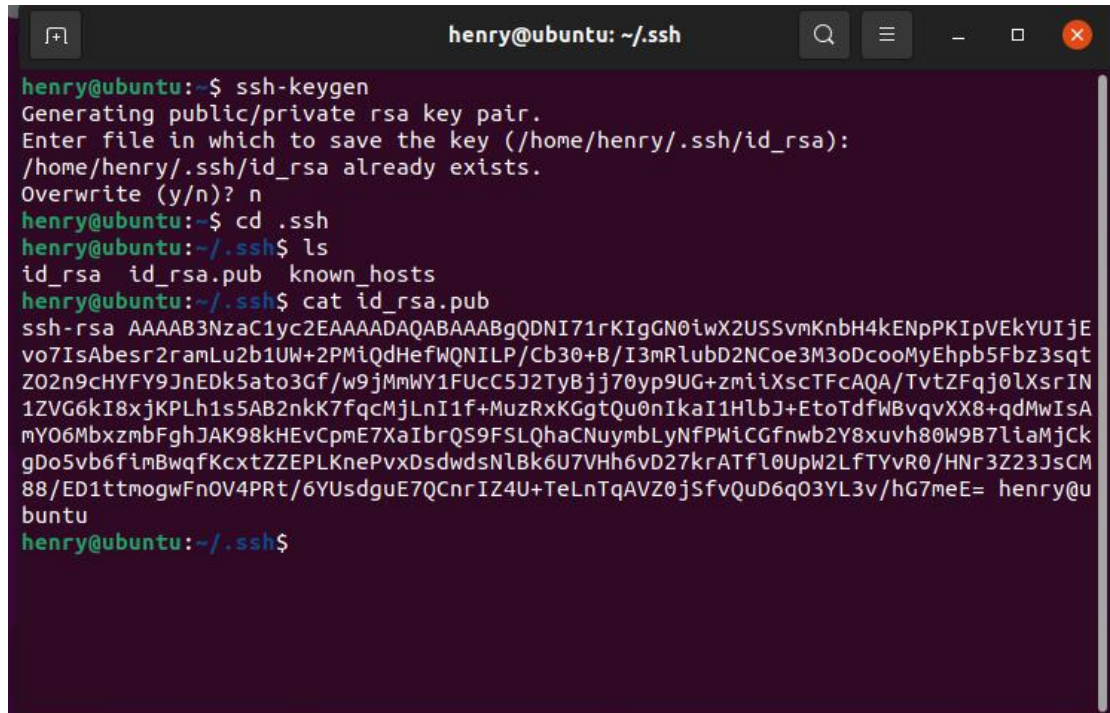
Linux 第七周小组作业

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实验流程:

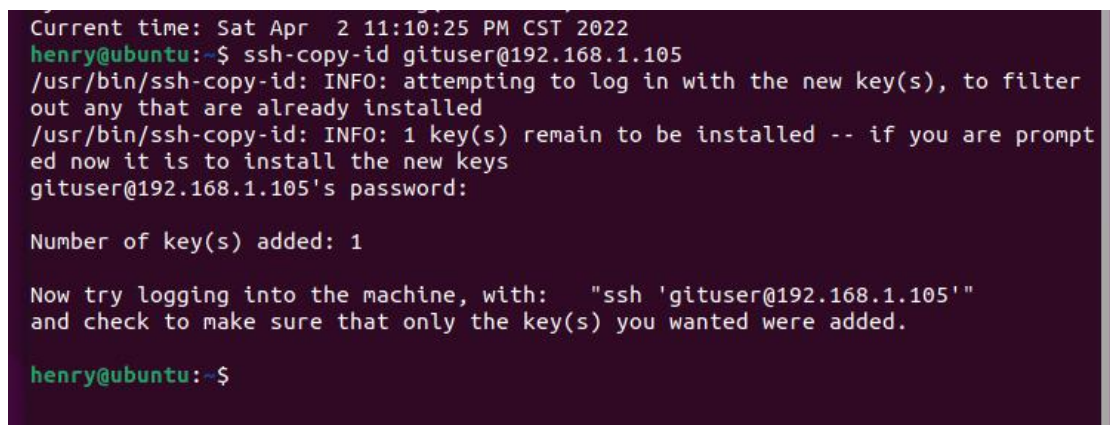
1. 使用 ssh-keygen 命令生成 id_rsa.pub 公钥。



```
henry@ubuntu: ~/.ssh
henry@ubuntu:~$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/henry/.ssh/id_rsa):
/home/henry/.ssh/id_rsa already exists.
Overwrite (y/n)? n
henry@ubuntu:~$ cd .ssh
henry@ubuntu:~/.ssh$ ls
id_rsa id_rsa.pub known_hosts
henry@ubuntu:~/.ssh$ cat id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQGDNI71rKIgGN0iwX2USSvmKnBH4kENpPKIpVEkYUIjE
vo7IsAbesr2ramLu2b1UW+2PMiQdHefWQNILP/Cb30+B/I3mRLubD2NCoe3M3oDcooMyEhpb5Fbz3sqt
Z02n9cHYFY9JnEDk5ato3Gf/w9jMmWY1FUcC5J2TyBjj70yp9UG+zmiXscTFcAQA/TvtZFqj0lXsrIN
1ZVG6kI8xjKPLh1s5AB2nkK7fqcmJLnI1f+MuzRrXKGgtQu0nIkaI1HlbJ+EtoTdfWBvqvXX8+qdmwIsA
mY06MbxzmbFghJAK98kHEvCpmE7XaIbrQS9FSLQhaCnuymbLyNfPWICGfnwb2Y8xuvh80W9B7liaMjCk
gDo5vb6fimbWqfKcxtZZEPLKnePvxDsdwdsNlBk6U7VHh6vD27krATfL0UpW2LfTYvR0/HNr3Z23JsCM
88/ED1ttmogwFnOV4PRt/6YUsdguE7QCnrIZ4U+TeLnTqAVZ0jSfvQuD6q03YL3v/hG7meE= henry@u
buntu
henry@ubuntu:~/.ssh$
```

已生成公钥

2. 使用 ssh-copy-id 命令将公钥拷贝至远端另外一台计算机。



```
Current time: Sat Apr  2 11:10:25 PM CST 2022
henry@ubuntu:~$ ssh-copy-id gituser@192.168.1.105
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter
out any that are already installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompt
ed now it is to install the new keys
gituser@192.168.1.105's password:

Number of key(s) added: 1

Now try logging into the machine, with:  "ssh 'gituser@192.168.1.105'"
and check to make sure that only the key(s) you wanted were added.
henry@ubuntu:~$
```

ssh-copy-id 命令执行结果

```
gituser@shineast-virtual-machine:~$ cd .ssh
gituser@shineast-virtual-machine:~/.ssh$ cat authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQGDAAoMWELGIIdLj/NBL/kb2HeUp8yAIAGL8U4ehVjpmx7z4cI
dodIzz0mXtwk/BVLk08yBIW3ZSzXHsrP07E+99N0iW9JiEWMyRw751VE917BtQLd4H6MERjqWsyL/vQ/Kghn
HWifW179qM5rCE4p6hCtexKlY2ZX7qBKIXrPt7nxBSM+n0FFC53LuDCXxKpieEP0rKqDYDbDwidIwL7KxGwO
lrmkApo+/tg/HEQ545LQcQapuHqvdkI85Y+t08w4kzmH0U3pR0FrTavf8LaupQj4WRX0iBAb5IuoqG6iLLKY
qG6aPyzK0b0rILAd8CVH/08smZ7CNPJK+R8/e2Vfz165d8iqKGttP5yszYQMtUjV9o7TEI7KV5uiW9cAvKLlP
e2p46LhHYr/MMR7kfov2z/u/wA9ELXTt0NrDysfsQy4jcZRYJshisZiOENmu2ERiQoT9xU7tmadl3g1ze74kY
LdrnT9oLfbufK1tUtsy0bAK2vufmX7EhFoAeedqws= shineast@shineast-virtual-machine
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQGDNI71rKIGN0iWx2USSvmKnBH4kENpPKIpVEKYUIjEvo7Is
Abesr2ramLu2b1UW+2PMiQdHeFWQNILP/Cb30+B/I3mRLubD2NCoe3M3oDcooMyEhpb5Fbz3sqTZO2n9cHYFY
9JnEDk5ato3Gf/w9jMmMY1FUcC5J2TyBjj70yp9UG+zmiiXscTFcAQA/TvtZFqj0lXsrIN1ZVG6KI8xjKPLh1
s5AB2nk7fqcMjLnI1f+MuzRxxKgtQu0nIkaI1HlBJ+EtoTdfWBvqvXX8+qdMwIsAmY06MbxbzmbFghJAK98kH
EVCpmE7XaIbrQS9FSLQhaCNuymbLyNfPWICGfnwb2Y8xuvh80W9B7liaMjCkgDo5vb6fmbWqfKcxtZZEPLKn
ePvxDsdsdwsNlBk6U7VHh6vD27krATfL0UpW2LFTYvR0/HNr3Z23JsCM88/ED1ttnogwFn0V4PRt/6YUsdguE7
QCnrIZ4U+TeLnTqAVZ0j5FvQuD6q03YL3v/hG7meE= henry@ubuntu
gituser@shineast-virtual-machine:~/.ssh$
```

已拷贝至另一台计算机上

- 使用 git config 命令初始化用户姓名和邮箱。

```
henry@ubuntu:~/.ssh$ git config -l
user.name=201180189-Zhou Zihang
user.email=792872682@qq.com
core.editor=vim
color.ui=true
henry@ubuntu:~/.ssh$
```

git config 初始化完毕

- 使用 git clone 将远端仓库克隆至本地。

```
henry@ubuntu:~/EEIlinux/w7$ git clone gituser@192.168.1.105:~/201180006.git
Cloning into '201180006'...
warning: You appear to have cloned an empty repository.
henry@ubuntu:~/EEIlinux/w7$
```

git clone 克隆远程仓库

- 使用 git remote 命令添加一个同学的仓库作为远端仓库。

```
henry@ubuntu:~/EEIlinux/w7/201180006$ git remote add origin gituser@192.168.1.105
:~/201180006.git
henry@ubuntu:~/EEIlinux/w7/201180006$
```

- 进入自己学号目录下编写基本的 C 程序，要求有源文件和头文件。

```
henry@ubuntu: ~/EElinux/w7/2011800006$ tree
.
├── add.c
├── hw_6
│   ├── app
│   ├── app1
│   ├── convert1
│   ├── convert.c
│   └── makefile
├── include
│   └── head.h
├── libcalc.a
├── libcalc.so
├── main.c
├── sub.c
├── test1_lib
│   ├── app
│   ├── head.h
│   ├── libcalc.so
│   └── main.c
├── test2_make
│   ├── add.c
│   ├── head.h
│   ├── main.c
│   ├── makefile
│   └── sub.c
└── test3_gdb
    ├── add.c
    ├── app
    ├── head.h
    ├── main.c
    └── sub.c

5 directories, 25 files
```

7. 使用 `git status` 命令查看状态。

```
henry@ubuntu:~/EElinux/w7/2011800006$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    w6/

nothing added to commit but untracked files present (use "git add" to track)
henry@ubuntu:~/EElinux/w7/2011800006$
```

8. 使用 `git add` 命令添加新文件至索引。

```
henry@ubuntu:~/EElinux/w7/201180006$ git add .
henry@ubuntu:~/EElinux/w7/201180006$ git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   w6/add.c
    new file:   w6/hw_6/app
    new file:   w6/hw_6/app1
    new file:   w6/hw_6/convert.c
    new file:   w6/hw_6/convert1
    new file:   w6/hw_6/makefile
    new file:   w6/include/head.h
    new file:   w6/libcalc.a
    new file:   w6/libcalc.so
    new file:   w6/main.c
    new file:   w6/sub.c
    new file:   w6/test1_lib/app
    new file:   w6/test1_lib/head.h
    new file:   w6/test1_lib/libcalc.so
    new file:   w6/test1_lib/main.c
    new file:   w6/test2_make/add.c
    new file:   w6/test2_make/head.h
    new file:   w6/test2_make/main.c
    new file:   w6/test2_make/makefile
    new file:   w6/test2_make/sub.c
    new file:   w6/test3_gdb/add.c
    new file:   w6/test3_gdb/app
    new file:   w6/test3_gdb/head.h
    new file:   w6/test3_gdb/main.c
    new file:   w6/test3_gdb/sub.c

henry@ubuntu:~/EElinux/w7/201180006$
```

9. 使用 `git commit` 命令对本地仓库进行提交。


```

henry@ubuntu:~/EElinux/w7/201180006$ git commit -m 'v1'
[master (root-commit) 542fed2] v1
25 files changed, 148 insertions(+)
create mode 100644 w6/add.c
create mode 100755 w6/hw_6/app
create mode 100755 w6/hw_6/app1
create mode 100644 w6/hw_6/convert.c
create mode 100755 w6/hw_6/convert1
create mode 100644 w6/hw_6/makefile
create mode 100644 w6/include/head.h
create mode 100644 w6/libcalc.a
create mode 100755 w6/libcalc.so
create mode 100644 w6/main.c
create mode 100644 w6/sub.c
create mode 100755 w6/test1_lib/app
create mode 100644 w6/test1_lib/head.h
create mode 100755 w6/test1_lib/libcalc.so
create mode 100644 w6/test1_lib/main.c
create mode 100644 w6/test2_make/add.c
create mode 100644 w6/test2_make/head.h
create mode 100644 w6/test2_make/main.c
create mode 100644 w6/test2_make/makefile
create mode 100644 w6/test2_make/sub.c
create mode 100644 w6/test3_gdb/add.c
create mode 100755 w6/test3_gdb/app
create mode 100644 w6/test3_gdb/head.h
create mode 100644 w6/test3_gdb/main.c
create mode 100644 w6/test3_gdb/sub.c
henry@ubuntu:~/EElinux/w7/201180006$

```

10.使用 `git push` 命令将本地仓库分支推送至远端 sesa 服务器。

```

henry@ubuntu:~/EElinux/w7/201180006$ git push --set-upstream origin master
Enumerating objects: 22, done.
Counting objects: 100% (22/22), done.
Delta compression using up to 2 threads
Compressing objects: 100% (18/18), done.
Writing objects: 100% (22/22), 11.57 KiB | 658.00 KiB/s, done.
Total 22 (delta 6), reused 0 (delta 0), pack-reused 0
To 192.168.1.105:~/201180006.git
 * [new branch]      master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
henry@ubuntu:~/EElinux/w7/201180006$

```

11.自行设计练习 `git branch` 命令用法。

```

henry@ubuntu:~/EElinux/w7/201180006$ git branch
* master
henry@ubuntu:~/EElinux/w7/201180006$ git branch dev
henry@ubuntu:~/EElinux/w7/201180006$ git branch
dev
* master
henry@ubuntu:~/EElinux/w7/201180006$ git checkout dev
Switched to branch 'dev'
henry@ubuntu:~/EElinux/w7/201180006$ git branch
* dev
  master
henry@ubuntu:~/EElinux/w7/201180006$ touch hello.c
henry@ubuntu:~/EElinux/w7/201180006$ ls
hello.c  w6

```

创建一个新的 `dev` 分支用于开发

```

henry@ubuntu:~/EElinux/w7/201180006$ git status
On branch dev
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        hello.c

nothing added to commit but untracked files present (use "git add" to track)
henry@ubuntu:~/EElinux/w7/201180006$ git add .
henry@ubuntu:~/EElinux/w7/201180006$ git commit -m 'a new version'
[dev 7adb552] a new version
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 hello.c
henry@ubuntu:~/EElinux/w7/201180006$ git status
On branch dev
nothing to commit, working tree clean

```

```

henry@ubuntu:~/EElinux/w7/201180006$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
henry@ubuntu:~/EElinux/w7/201180006$ git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean
henry@ubuntu:~/EElinux/w7/201180006$ ls
w6

```

Dev 分支不影响主分支的结构

12.自行设计练习 git fetch 命令用法。

```

henry@ubuntu:~/EElinux/w7/t$ git fetch
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 2 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (2/2), 213 bytes | 213.00 KiB/s, done.
From 192.168.1.109:~/test
   03acde..81cdea1 master    -> origin/master

```

13.自行设计练习 git merge 命令用法。

```

henry@ubuntu:~/EElinux/w7/201180006$ git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean
henry@ubuntu:~/EElinux/w7/201180006$ ls
w6
henry@ubuntu:~/EElinux/w7/201180006$ git merge
Already up to date.
henry@ubuntu:~/EElinux/w7/201180006$ git merge dev
Updating 542fed2..7adb552
Fast-forward
 hello.c | 0
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 hello.c
henry@ubuntu:~/EElinux/w7/201180006$ ls
hello.c w6
henry@ubuntu:~/EElinux/w7/201180006$

```

git merge 命令将 dev 分支合并至 master 主分支