

Avaliação 04 - SSH

Instalação do PuTTY no Windows

Download PuTTY: latest release (0.76)

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This page contains download links for the latest released version of PuTTY. Currently this is 0.76, released on 2021-07-17.

When new releases come out, this page will update to contain the latest, so this is a good page to bookmark or link to. Alternatively, here is a [permanent link to the 0.76 release](#).

Release versions of PuTTY are versions we think are reasonably likely to work well. However, they are often not the most up-to-date version of the code available. If you have a problem with this release, then it might be worth trying out the [development snapshots](#) to see if the problem has already been fixed in those versions.

Package files

You probably want one of these. They include versions of all the PuTTY utilities.

(Not sure whether you want the 32-bit or the 64-bit version? Read the [FAQ entry](#).)

MSI (Windows installer)

64-bit x86: [putty.msi](#) ([or by FTP](#)) ([signature](#))

64-bit ARM: [putty-arm.msi](#) ([or by FTP](#)) ([signature](#))

32-bit x86: [putty32.msi](#) ([or by FTP](#)) ([signature](#))

Unix source archive: [putty-0.76.tar.gz](#) ([or by FTP](#)) ([signature](#))

Alternative binary files

The installer packages above will provide versions of all of these (except PuTTYtel), but you can download standalone binaries one by one if you prefer.

(Not sure whether you want the 32-bit or the 64-bit version? Read the [FAQ entry](#).)

putty.exe (the SSH and Telnet client itself)

64-bit x86: [putty.exe](#) ([or by FTP](#)) ([signature](#))

64-bit ARM: [putty-arm.exe](#) ([or by FTP](#)) ([signature](#))

32-bit x86: [putty32.exe](#) ([or by FTP](#)) ([signature](#))

putty.exe (an SCP client, i.e. command-line secure file copy)

64-bit x86: [pscp.exe](#) ([or by FTP](#)) ([signature](#))

64-bit ARM: [pscp-arm.exe](#) ([or by FTP](#)) ([signature](#))

32-bit x86: [pscp32.exe](#) ([or by FTP](#)) ([signature](#))

putty.exe (an SFTP client, i.e. general file transfer sessions much like FTP)

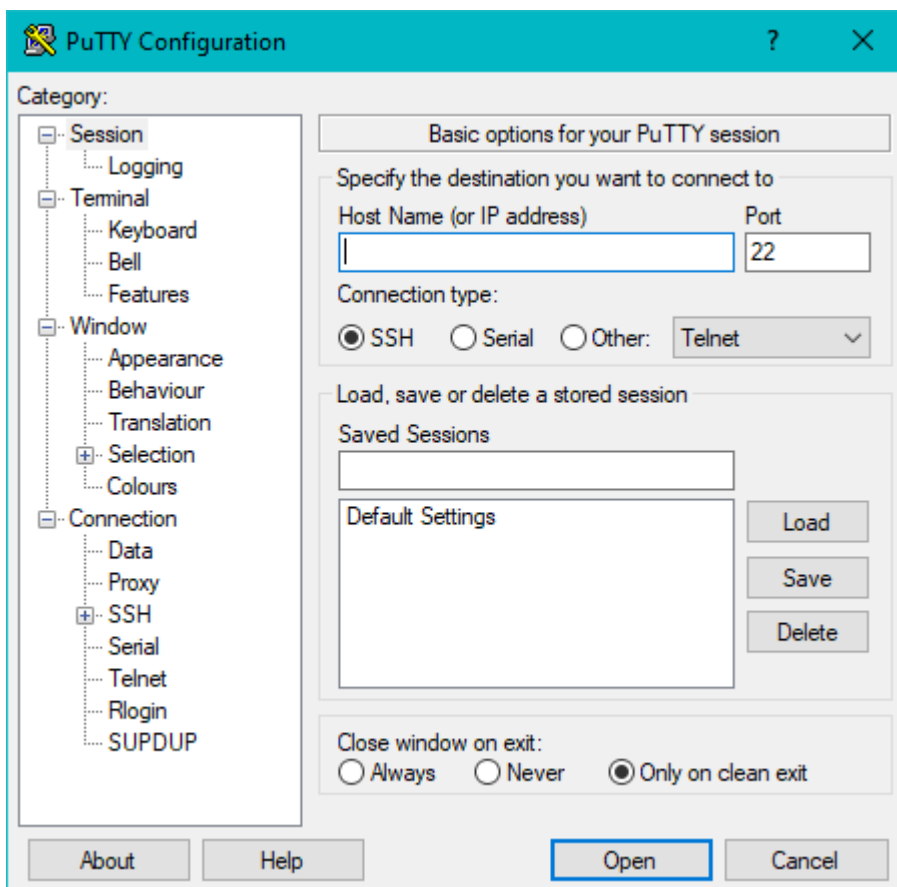
64-bit x86: [psftp.exe](#) ([or by FTP](#)) ([signature](#))

64-bit ARM: [psftp-arm.exe](#) ([or by FTP](#)) ([signature](#))

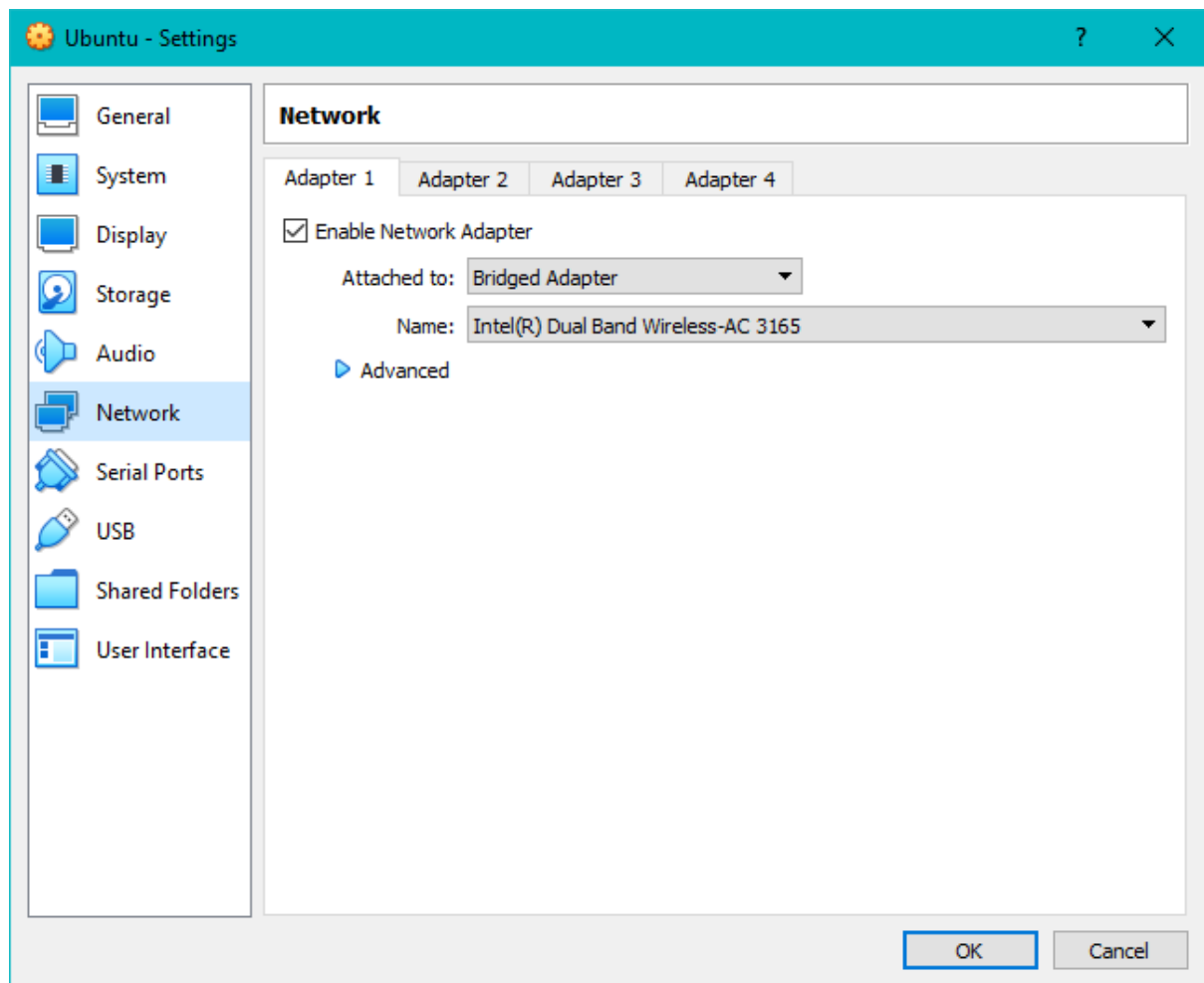
32-bit x86: [psftp32.exe](#) ([or by FTP](#)) ([signature](#))

puttytel.exe (a Telnet-only client)

64-bit x86: [puttytel.exe](#) ([or by FTP](#)) ([signature](#))



Configuração da Máquina Virtual Linux para o modo Bridge



Instalação do net-tools na máquina virtual

```
tiago@tarso-VirtualBox: ~  
tiago 4013 0.0 0.0 17672 724 pts/0 S+ 21:38 0:00 grep --color=auto -i apt  
tiago @ tiago-VirtualBox:~$ ps aux | grep -i dpkg  
tiago 4063 0.0 0.0 17672 728 pts/0 S+ 21:40 0:00 grep --color=auto -i dpkg  
tiago @ tiago-VirtualBox:~$ sudo kill 8808  
kill: (8808): No such process  
tiago @ tiago-VirtualBox:~$ sudo kill 4063  
kill: (4063): No such process  
tiago @ tiago-VirtualBox:~$ ifconfig  
Command 'ifconfig' not found, but can be installed with:  
sudo apt install net-tools  
tiago @ tiago-VirtualBox:~$ sudo apt install net-tools  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
The following packages were automatically installed and are no longer required:  
  chromium-codecs-ffmpeg-extra ethtool gstreamer1.0-vaapi libgstreamer-plugins-bad1.0-0 libmpack0  
  libva-wayland2 libxmlsec1-openssl open-vm-tools zerofree  
Use 'sudo apt autoremove' to remove them.  
The following NEW packages will be installed:  
  net-tools  
0 upgraded, 1 newly installed, 0 to remove and 182 not upgraded.  
Need to get 196 kB of archives.  
After this operation, 864 kB of additional disk space will be used.  
Get:1 http://br.archive.ubuntu.com/ubuntu focal/main amd64 net-tools amd64 1.60+git20180626.aebd88e-1ubuntu1 [196 kB]  
Fetched 196 kB in 1s (239 kB/s)  
debconf: unable to initialize frontend: Dialog  
debconf: (Dialog frontend requires a screen at least 13 lines tall and 31 columns wide.)  
debconf: falling back to frontend: Readline  
Selecting previously unselected package net-tools.  
(Reading database ... 184555 files and directories currently installed.)  
Preparing to unpack .../net-tools_1.60+git20180626.aebd88e-1ubuntu1_amd64.deb ...  
Unpacking net-tools (1.60+git20180626.aebd88e-1ubuntu1) ...  
Setting up net-tools (1.60+git20180626.aebd88e-1ubuntu1) ...  
Processing triggers for man-db (2.9.1-1) ...  
tiago @ tiago-VirtualBox:~$
```

Instalação do openssh-server na máquina virtual

```
tiago@tiago-VirtualBox: ~  
tiago@tiago-VirtualBox:~$  
tiago@tiago-VirtualBox:~$ sudo apt install openssh-server  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
The following packages were automatically installed and are no longer required:  
  chromium-codecs-ffmpeg-extra ethtool gstreamer1.0-vaapi libgstreamer-plugins-bad1.0-0 libnsspack0 libva-wayland2 libxnlsec1-openssl  
  open-vn-tools zerofree  
Use 'sudo apt autoremove' to remove them.  
The following additional packages will be installed:  
  ncurses-term openssh-sftp-server ssh-import-id  
Suggested packages:  
  molly-guard monkeysphere ssh-askpass  
The following NEW packages will be installed:  
  ncurses-term openssh-server openssh-sftp-server ssh-import-id  
0 upgraded, 4 newly installed, 0 to remove and 182 not upgraded.  
Need to get 688 kB of archives.  
After this operation, 6.810 kB of additional disk space will be used.  
Do you want to continue? [Y/n]  
Get:1 http://br.archive.ubuntu.com/ubuntu focal/main amd64 ncurses-term all 6.2-0ubuntu2 [249 kB]  
Get:2 http://br.archive.ubuntu.com/ubuntu focal-updates/main amd64 openssh-sftp-server amd64 1:8.2p1-4ubuntu0.3 [51,5 kB]  
Get:3 http://br.archive.ubuntu.com/ubuntu focal-updates/main amd64 openssh-server amd64 1:8.2p1-4ubuntu0.3 [377 kB]  
Get:4 http://br.archive.ubuntu.com/ubuntu focal/main amd64 ssh-import-id all 5.10-0ubuntu1 [10,0 kB]  
Fetched 688 kB in 1s (515 kB/s)  
Preconfiguring packages ...  
Selecting previously unselected package ncurses-term.  
(Reading database ... 184604 files and directories currently installed.)  
Preparing to unpack .../ncurses-term_6.2-0ubuntu2_all.deb ...  
Unpacking ncurses-term (6.2-0ubuntu2) ...  
Selecting previously unselected package openssh-sftp-server.  
Preparing to unpack .../openssh-sftp-server_1%3a8.2p1-4ubuntu0.3_amd64.deb ...  
Unpacking openssh-sftp-server (1:8.2p1-4ubuntu0.3) ...  
Selecting previously unselected package openssh-server.  
Preparing to unpack .../openssh-server_1%3a8.2p1-4ubuntu0.3_amd64.deb ...  
Unpacking openssh-server (1:8.2p1-4ubuntu0.3) ...  
Selecting previously unselected package ssh-import-id.  
Preparing to unpack .../ssh-import-id_5.10-0ubuntu1_all.deb ...  
Unpacking ssh-import-id (5.10-0ubuntu1) ...
```

Iniciando serviço de ssh

```
tiago@tiago -VirtualBox: ~  
tiago @ tiago -VirtualBox:~$ sudo service ssh status  
● ssh.service - OpenBSD Secure Shell server  
   Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: enabled)  
   Active: active (running) since Mon 2021-12-06 21:51:59 -03; 3min 15s ago  
     Docs: man:sshd(8)  
           man:sshd_config(5)  
   Main PID: 5909 (sshd)  
     Tasks: 1 (limit: 2208)  
    Memory: 1.0M  
   CGroup: /system.slice/ssh.service  
           └─5909 sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups  
  
dez 06 21:51:59 tiago -VirtualBox systemd[1]: Starting OpenBSD Secure Shell server..  
dez 06 21:51:59 tiago -VirtualBox sshd[5909]: Server listening on 0.0.0.0 port 22.  
dez 06 21:51:59 tiago -VirtualBox sshd[5909]: Server listening on :: port 22.  
dez 06 21:51:59 tiago -VirtualBox systemd[1]: Started OpenBSD Secure Shell server.  
tiago @ tiago -VirtualBox:~$ sudo service ssh start  
tiago @ tiago -VirtualBox:~$ sudo service ssh status  
● ssh.service - OpenBSD Secure Shell server  
   Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: enabled)  
   Active: active (running) since Mon 2021-12-06 21:51:59 -03; 4min 11s ago  
     Docs: man:sshd(8)  
           man:sshd_config(5)  
   Main PID: 5909 (sshd)  
     Tasks: 1 (limit: 2208)  
    Memory: 1.0M  
   CGroup: /system.slice/ssh.service  
           └─5909 sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups  
  
dez 06 21:51:59 tiago -VirtualBox systemd[1]: Starting OpenBSD Secure Shell server..  
dez 06 21:51:59 tiago -VirtualBox sshd[5909]: Server listening on 0.0.0.0 port 22.  
dez 06 21:51:59 tiago -VirtualBox sshd[5909]: Server listening on :: port 22.  
dez 06 21:51:59 tiago -VirtualBox systemd[1]: Started OpenBSD Secure Shell server.  
tiago @ tiago -VirtualBox:~$
```

Descobrimo o IP da máquina virtual para acessá-la através do puTTY

```
tiago @ tiago -VirtualBox:~$ ifconfig  
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500  
    inet 192.168.18.40 netmask 255.255.255.0 broadcast 192.168.18.255  
    inet6 2804:248:fcc5:9900:dcdf:112a:3f65:be3b prefixlen 64 scopeid 0x0<global>  
    inet6 2804:248:fcc5:9900:e4af:7107:8555:54d1 prefixlen 64 scopeid 0x0<global>  
    inet6 fe80::8b7a:cda7:88e4:f26a prefixlen 64 scopeid 0x20<link>  
    ether 08:00:27:cb:70:a1 txqueuelen 1000 (Ethernet)  
    RX packets 230175 bytes 314097278 (314.0 MB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 66103 bytes 9443885 (9.4 MB)  
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536  
    inet 127.0.0.1 netmask 255.0.0.0  
    inet6 ::1 prefixlen 128 scopeid 0x10<host>  
    loop txqueuelen 1000 (Local Loopback)  
    RX packets 3936 bytes 411295 (411.2 KB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 3936 bytes 411295 (411.2 KB)  
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
tiago @ tiago -VirtualBox:~$ ifconfig  
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500  
    inet 192.168.18.40 netmask 255.255.255.0 broadcast 192.168.18.255  
    inet6 2804:248:fcc5:9900:dcdf:112a:3f65:be3b prefixlen 64 scopeid 0x0<global>  
    inet6 2804:248:fcc5:9900:e4af:7107:8555:54d1 prefixlen 64 scopeid 0x0<global>  
    inet6 fe80::8b7a:cda7:88e4:f26a prefixlen 64 scopeid 0x20<link>  
    ether 08:00:27:cb:70:a1 txqueuelen 1000 (Ethernet)  
    RX packets 230175 bytes 314097278 (314.0 MB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 66103 bytes 9443885 (9.4 MB)  
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536  
    inet 127.0.0.1 netmask 255.0.0.0  
    inet6 ::1 prefixlen 128 scopeid 0x10<host>  
    loop txqueuelen 1000 (Local Loopback)  
    RX packets 3936 bytes 411295 (411.2 KB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 3936 bytes 411295 (411.2 KB)  
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
tiago @ tiago -VirtualBox:~$
```

SSH service status (repeated from previous block):

```
ssh.service - OpenBSD Secure Shell server  
Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: enabled)  
Active: active (running) since Mon 2021-12-06 21:51:59 -03; 4min 11s ago  
Docs: man:sshd(8)  
man:sshd_config(5)  
Main PID: 5909 (sshd)  
Tasks: 1 (limit: 2208)  
Memory: 1.0M  
CGroup: /system.slice/ssh.service  
        └─5909 sshd: /usr/sbin/sshd -D [l
```

Putty Configuration dialog box:

Category: Session

Basic options for your PuTTY session

Specify the destination you want to connect to

Host Name (or IP address): 192.168.18.40 Port: 22

Connection type: SSH (selected)

Load, save or delete a stored session

Saved Sessions: (empty list)

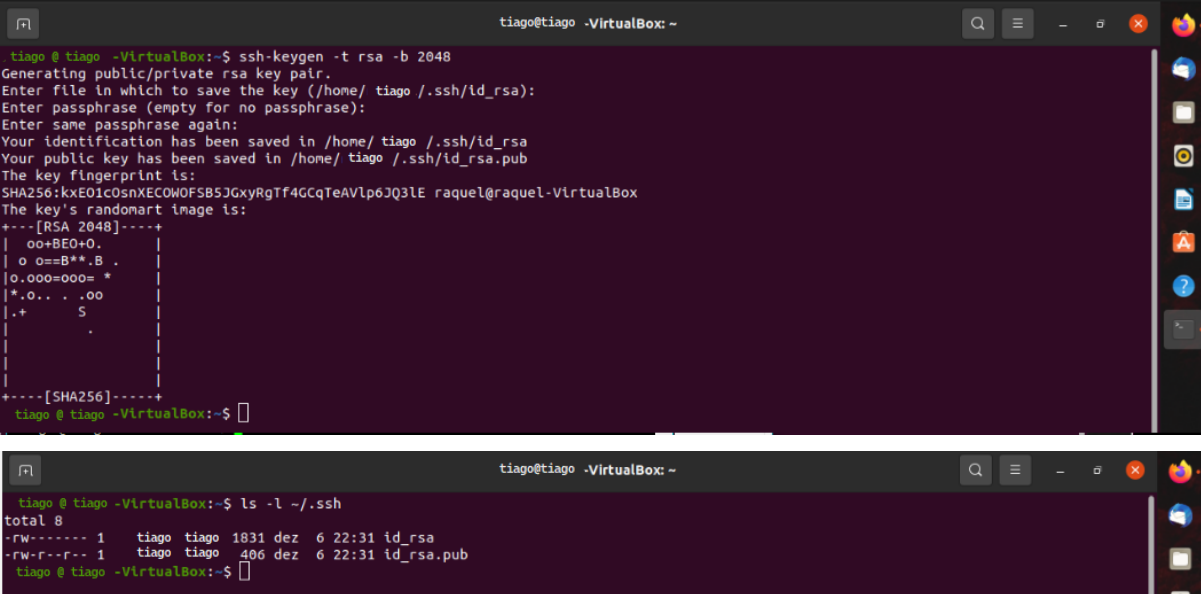
Default Settings: (empty list)

Close window on exit: Only on clean exit (selected)

Buttons: About, Help, Open, Cancel

```
tiago@tiago-VirtualBox: ~  
login as: tiago  
tiago @192.168.18.40's password:  
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.11.0-40-generic x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:        https://ubuntu.com/advantage  
  
184 updates can be applied immediately.  
107 of these updates are standard security updates.  
To see these additional updates run: apt list --upgradable  
  
101 updates could not be installed automatically. For more details,  
see /var/log/unattended-upgrades/unattended-upgrades.log  
Your Hardware Enablement Stack (HWE) is supported until April 2025.  
  
The programs included with the Ubuntu system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.  
  
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by  
applicable law.  
  
tiago @ tiago -VirtualBox:~$
```

Gerando uma chave pública e privada



```
tiago@tiago -VirtualBox: ~  
tiago @ tiago -VirtualBox:~$ ssh-keygen -t rsa -b 2048  
Generating public/private rsa key pair.  
Enter file in which to save the key (/home/ tiago /.ssh/id_rsa):  
Enter passphrase (empty for no passphrase):  
Enter same passphrase again:  
Your identification has been saved in /home/ tiago /.ssh/id_rsa  
Your public key has been saved in /home/ tiago /.ssh/id_rsa.pub  
The key fingerprint is:  
SHA256:kxE01c0snXECOW0FSB5JGxyRgTf4GCqTeAVlp6JQ3lE raquel@raquel-VirtualBox  
The key's randomart image is:  
+---[RSA 2048]-----+  
|  
|  oo+BE0+0.  
| o o==B**B .  
| o.ooo=ooo= *  
| *.o.. .oo  
|. + S  
|  
+---[SHA256]-----+  
tiago @ tiago -VirtualBox:~$  
  
tiago @ tiago -VirtualBox:~$ ls -l ~/.ssh  
total 8  
-rw----- 1 tiago tiago 1831 dez  6 22:31 id_rsa  
-rw-r--r-- 1 tiago tiago 406 dez  6 22:31 id_rsa.pub  
tiago @ tiago -VirtualBox:~$
```