

## Instalação do OpenSSH

```
Ubuntu 18-04 - VMware Workstation 17 Player (Non-commercial use only)
Player ▾ || ▾ ↕ □ □

root@vmubuntu:/home/lucas# apt install openssh-server_
```

```
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[10.9 kB]
Fetched 683 kB in 1s (903 kB/s)
Preconfiguring packages ...
Selecting previously unselected package libwrap0:amd64.
(Reading database ... 64792 files and directories currently installed.)
Preparing to unpack .../libwrap0_7.6.q-27_amd64.deb ...
Unpacking libwrap0:amd64 (7.6.q-27) ...
Selecting previously unselected package ncurses-term.
Preparing to unpack .../ncurses-term_6.1-1ubuntu1.18.04_all.deb ...
Unpacking ncurses-term (6.1-1ubuntu1.18.04) ...
Selecting previously unselected package openssh-sftp-server.
Preparing to unpack .../openssh-sftp-server_1%3a7.6p1-4ubuntu0.7_amd64.deb ...
Unpacking openssh-sftp-server (1:7.6p1-4ubuntu0.7) ...
Selecting previously unselected package openssh-server.
Preparing to unpack .../openssh-server_1%3a7.6p1-4ubuntu0.7_amd64.deb ...
Unpacking openssh-server (1:7.6p1-4ubuntu0.7) ...
Selecting previously unselected package ssh-import-id.
Preparing to unpack .../ssh-import-id_5.7-0ubuntu1.1_all.deb ...
Unpacking ssh-import-id (5.7-0ubuntu1.1) ...
Setting up ncurses-term (6.1-1ubuntu1.18.04) ...
Setting up openssh-sftp-server (1:7.6p1-4ubuntu0.7) ...
Setting up ssh-import-id (5.7-0ubuntu1.1) ...
Setting up libwrap0:amd64 (7.6.q-27) ...
Setting up openssh-server (1:7.6p1-4ubuntu0.7) ...

Creating config file /etc/ssh/sshd_config with new version
Created symlink /etc/systemd/system/ssh.service → /lib/systemd/system/ssh.service.
Created symlink /etc/systemd/system/multi-user.target.wants/ssh.service → /lib/systemd/system/ssh.service.
Processing triggers for systemd (237-3ubuntu10.57) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
Processing triggers for ufw (0.36-0ubuntu0.18.04.2) ...
Processing triggers for ureadahead (0.100.0-21) ...
Processing triggers for libc-bin (2.27-3ubuntu1.6) ...
root@vmubuntu:/home/lucas#
```

```
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root@vmubuntu:/home/lucas# apt list | grep openssh

WARNING: apt does not have a stable CLI interface. Use with caution in scripts.

libconfig-model-openssh-perl/bionic 1.238-1 all
libghc-crypto-pubkey-openssh-dev/bionic 0.2.7-7build10 amd64
libghc-crypto-pubkey-openssh-doc/bionic 0.2.7-7build10 all
libghc-crypto-pubkey-openssh-prof/bionic 0.2.7-7build10 amd64
libnet-openssh-compat-perl/bionic 0.09-1 all
libnet-openssh-parallel-perl/bionic 0.12-1 all
libnet-openssh-perl/bionic 0.74-1 all
lxqt-openssh-askpass/bionic 0.12.0-3 amd64
lxqt-openssh-askpass-l10n/bionic 0.12.0-4ubuntu1 all
openssh-client/bionic-updates,now 1:7.6p1-4ubuntu0.7 amd64 [installed,automatic]
openssh-client-ssh1/bionic 1:7.5p1-10 amd64
openssh-known-hosts/bionic 0.6.2-1 all
openssh-server/bionic-updates,now 1:7.6p1-4ubuntu0.7 amd64 [installed]
openssh-sftp-server/bionic-updates,now 1:7.6p1-4ubuntu0.7 amd64 [installed,automatic]
root@vmubuntu:/home/lucas# _
```

## Gerando as chaves privada e pública

```
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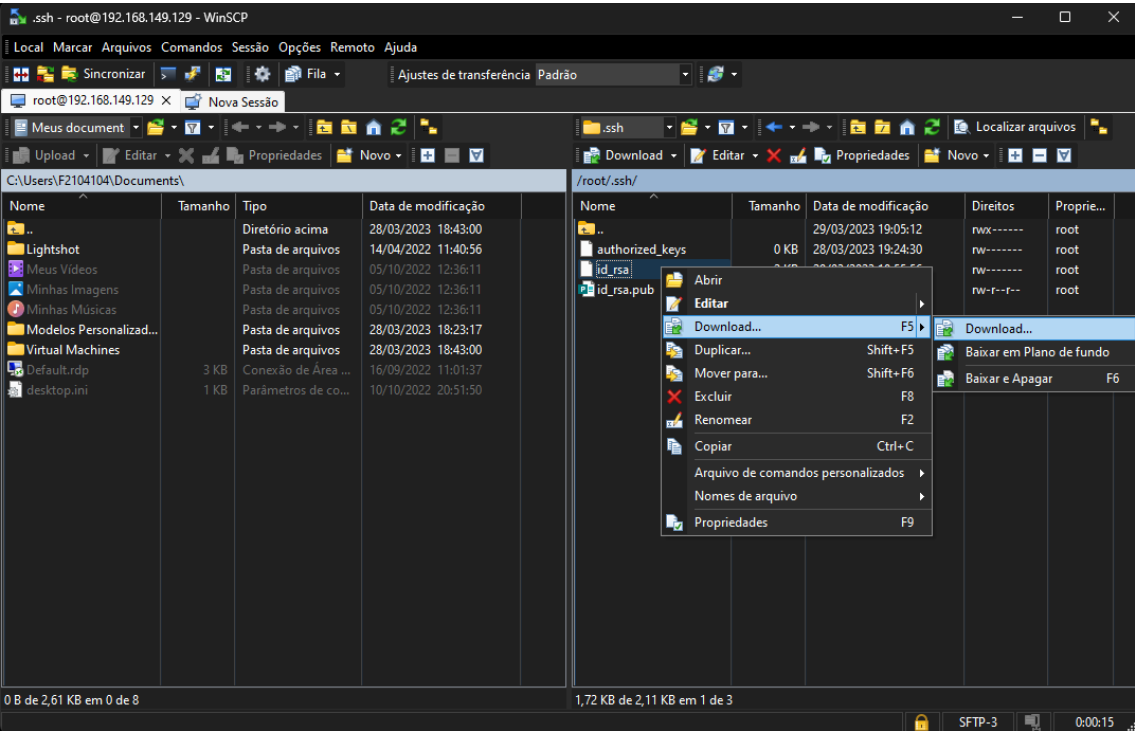
root@vmubuntu:/home/lucas# ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/root/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /root/.ssh/id_rsa.
Your public key has been saved in /root/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:p/xSBDmZcin5rVbu9vd20e+1Pp02B90B/P7jRhoSXka root@vmubuntu
The key's randomart image is:
+---[RSA 2048]-----+
|  .  .  .  .  .  |
| + 0  .  0      |
| = B  .  0      |
|  . +.  .  0    |
| S=0  0  .  .  +|
| .0000  .  .  ++|
| .00  .  +0*   |
| ..0  .0B0    |
|  0...0*B     |
+---[SHA256]-----+
root@vmubuntu:/home/lucas# _
```

```
Ubuntu 18-04 - VMware Workstation 17 Player (Non-commercial use only)
Player  ▾  ||  ▾  🖨  📄  🗑

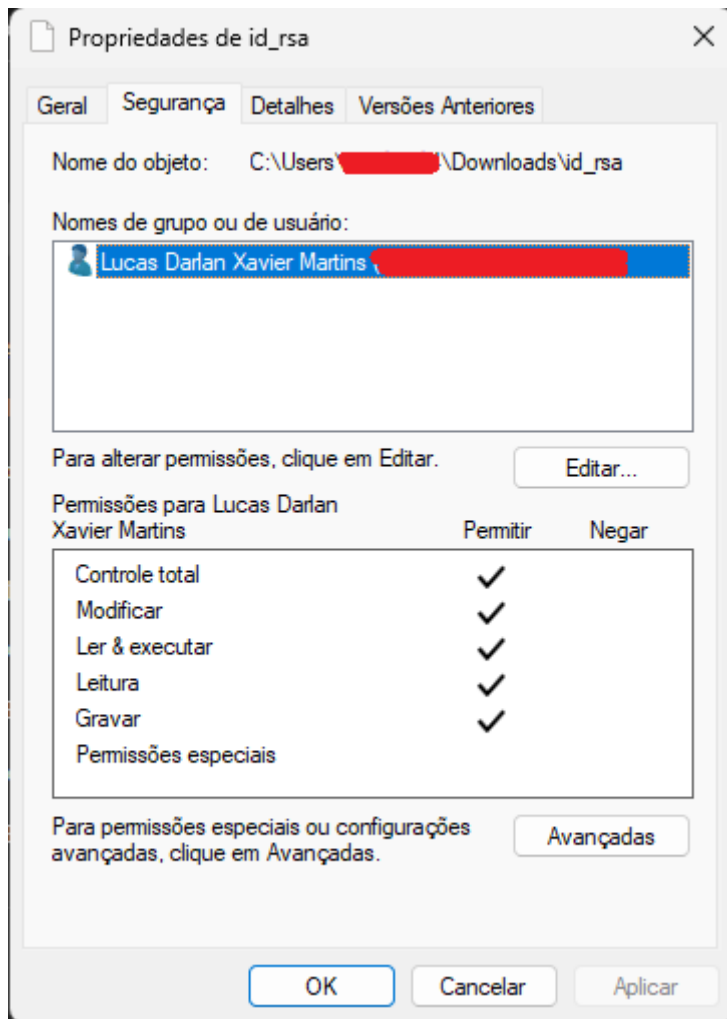
root@vmubuntu:~# ls -la
.  .. .bash_history .bashrc .profile .ssh
root@vmubuntu:~# cd .ssh/
root@vmubuntu:~/.ssh# ls -la
.  .. authorized_keys id_rsa id_rsa.pub
root@vmubuntu:~/.ssh# cat id_rsa
-----BEGIN RSA PRIVATE KEY-----
Proc-Type: 4,ENCRYPTED
DEK-Info: AES-128-CBC,ACDCEEF22221489CB062CD083802ACF2

hG5+k5vSvGITcsGfmJenmsBTIGb1r3JF6sp1pDfo5e15XRpma69oaQtoLEfMxFxE
4L03nzLn+JMh1+AGP70u1JXLJLUz2w0tHkVhbJXiqKfYz4f2D8y25S389vnQb7hs
p/xutrDf61GKX5zGV89WYac6tNdX7F72W2+IyNFdvCamqMWCuUq9UDvSy0KKv2Y0
ViT6HikqJRfVe/RIYcPkci7XFbqUNP55nXGM9/0M07c4vqL0wpI40FSvgXc/X7Kv
0xQhi9fq60oclnAFS6z2Ka42XSVJ4zkuL1bX5xhjstMkgmAgSx4M14ebuEY4xi
PB4NPxEnB/qnivhXtqzk11PJ3iQ2WdNe82e47qeuTdwXVSEajthLRX2faXq1gppW
aTL1jbiGPYwQR2F8KsbReaC2IW854K1M9dFfVoNJ2rCYCptgutaYcPSP0FJiVEqq
VsjiGGtkD9qcJ7iKELOL1t52xTtqEGIVrFoCu+2TajKQFsJBC6ydhQSh24RVJCN8
ZV6GwQ1J64pUostBUBf4mQmIym79DbpyXBxJvqRaVydLnLUH0jMgC8G5KB0vYDv5
Jf9JDVPuCO/P11fqSSdA0Q1Bq05n4d3FqpfaFYR1F0o2cLGht9S9nEAuVYuCBWL1
Gs0s8ZCu8bquD1RuWyMVcXv1tIudcuNGVEI03Exi2QVgf4TRf83530yMo/i3kxL0
ZWGCUm+UZsU+tiyfvojcqgjite5fD4xWj+5IIABSAI0nJX0bBSHnt1pT4wiJV65E
XW36QopSrb60aR3fH2Qb9IcrMwD/VeQeJzyWQpjefxHrHa5hJkIcsNJhTJnGRyLN
PefqH1uBRsAvRaq9JpWkrARM3gUTcoWQHFR0ZyLR3LqASJUKxKU21fcspute+UkA
1emj40kn2VGBL+MC+e2KnNBXJjKAKAx5HLUJV7m2Whyt8d7sEJASTUgD0cvtSASA
CrrTn9x6FRH0Vix2hWLqdWe3h0HtJpD0iBIY1jknI1gCr0Toss8vodFoJUHkvT3x
5DPQIJ5uWkc/X7mPekWFJufJup7cNy5x6jRRU3n2Nfe6tv4fah3Yea1EMUPYXPvA
b3ZdbacYK9g+HwReAmv/C4exjSbGrH2nGv50htRY5BRCPGK/MJPhvWz0ImVu6iZ
Pr9JbiphybghGWKEHb0we6kqs2k/LxotEisuAHKnFpd2bLxSaaQKIR8nhS3WGiBy
j24QAF6e2JwN04MU1or01I3J+6G3QxvZEbDJ0rJenREigxvgrI82JR6vInbtLCsv
Z7X0CPIJmhuMENSxKr7yW0+yFr9oAkmkDcQ1XnfVMWDTCAKZ+fHMcOKJpM2veEH
1jvu+FRAPUCHE+JtN9NPWae8NWEIdzjr9HNgQZ+8+nJA2GgSh3H2Gc82uhoHdXBjp
Qe2D3CHo0q19rXhtvdC9Uh+R8UBw1gEWdjPGc4h1/59udCQED0VgB/uaNjMj81s+
BoMPQDFRmYpoREztysFoLdAGEcKfKgd33ic0WY4xeac0vA1X4vcq2c2c65W24qkAF
SL/pWx251A03HEXACpUwaqT1Fi4YaVwe02UtJz8r9sC1Q30PKatTtK05y6GctVb+
-----END RSA PRIVATE KEY-----
root@vmubuntu:~/.ssh#
```

Fazer o download da chave privada de dentro do servidor para a minha máquina



Ajustar as permissões do arquivo para somente o meu usuário ter acesso.



Copiando a chave pública para Authorized Keys:

```

#MaxSessions 10

#PubkeyAuthentication yes

# Expect .ssh/authorized_keys2 to be disregarded by default in future.
#AuthorizedKeysFile .ssh/authorized_keys .ssh/authorized_keys2

#AuthorizedPrincipalsFile none

#AuthorizedKeysCommand none
#AuthorizedKeysCommandUser nobody

# For this to work you will also need host keys in /etc/ssh/ssh_known_hosts
#HostbasedAuthentication no
root@vmubuntu:~# cd /root/
root@vmubuntu:~# ls -a
. .bash_history .bashrc .cache .gnupg .profile .ssh .viminfo
root@vmubuntu:~# cd .ssh/
root@vmubuntu:~/.ssh# ls -a
. .authorized_keys id_rsa id_rsa.pub
root@vmubuntu:~/.ssh# cd authorized_keys
bash: cd: authorized_keys: Not a directory
root@vmubuntu:~/.ssh# ls authorized_keys
authorized_keys
root@vmubuntu:~/.ssh# cat authorized_keys
root@vmubuntu:~/.ssh# pwd
/root/.ssh
root@vmubuntu:~/.ssh# ls -a
. . . authorized_keys id_rsa id_rsa.pub
root@vmubuntu:~/.ssh# cp id_rsa.pub authorized_keys
root@vmubuntu:~/.ssh# cat authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQDeT0TkcZ3k7h6PKG2cJt0IZ1b63MhFfseT5/gsmWobqvYFY480MsuB9Hffv7
D+YbAsk2+ttvsd7tFEJnUNbvx/umE80KEy/1b9gpICanSYDhx3+92ug78CB8SNAK9va2WdaDDSYDocMp6wvwn0KnPntOUk5oB0nH
1h2vZSP2fu/Hir2YC+yANzjpu+oG5nbXgmn5vIFAVQ0rjfe1rWb1D5tML8fDePJmV9NXV7aRbcQeo9F3tTG4yHka5oJdc8zDIsj
c1rP0kdH2d0AfMxs51XTNLVID71P4fprNfIRB2S0rrnd/P2h80tBKUzdPDu197VzvgyM00sGcdSnxQCBZ root@vmubuntu
root@vmubuntu:~/.ssh#
root@vmubuntu:~/.ssh#

```

Conectando à máquina virtual usando a chave privada que foi gerada na máquina Ubuntu utilizando o utilitário openssh instalado no terminal do Windows:

```
C:\WINDOWS\system32\cmd. X + v

C:\Users\F2104104\Downloads>ssh -i id_rsa lucas@192.168.149.129
Enter passphrase for key 'id_rsa':
lucas@192.168.149.129's password: |
```

Conexão bem-sucedida

```
lucas@vmubuntu: ~ X + v

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

New release '20.04.6 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Wed Mar 29 22:31:01 2023
lucas@vmubuntu:~$ pwd
/home/lucas
lucas@vmubuntu:~$ ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.149.129 netmask 255.255.255.0 broadcast 192.168.149.255
    inet6 fe80::20c:29ff:fec6:2b7f prefixlen 64 scopeid 0x20<link>
    ether 00:0c:29:c6:2b:7f txqueuelen 1000 (Ethernet)
    RX packets 135 bytes 30136 (30.1 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 118 bytes 20433 (20.4 KB)
    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 88 bytes 6800 (6.8 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 88 bytes 6800 (6.8 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lucas@vmubuntu:~$ |
```

