

# How To Read RAM

1:

```
root@localhost:~# free -m
total        used        free      shared  buff/cache   available
Mem:      9957        1862       4236        84       4212       8095
Swap:    5171          33       5138

[root@localhost ~]# yum install kernel-devel kernel-headers
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use subscription-manager to register.

Last metadata expiration check: 1 day, 22:29:38 ago on Mon 24 Jul 2023 01:03:18 AM IST.
Package kernel-devel-5.14.0-284.11.1.el9_2.x86_64 is already installed.
Package kernel-headers-5.14.0-284.11.1.el9_2.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@localhost ~]# yum install git
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use subscription-manager to register.

Last metadata expiration check: 1 day, 22:29:51 ago on Mon 24 Jul 2023 01:03:18 AM IST.
Package git-2.39.1-1.el9.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
```

2:

```
Complete!
[root@localhost ~]# ls
anaconda-ks.cfg Desktop Documents Downloads Music Pictures Public Templates Videos
[root@localhost ~]# git clone https://github.com/vimallinuxworld13/LiME.git
Cloning into 'LiME'...
remote: Enumerating objects: 362, done.
remote: Counting objects: 100% (13/13), done.
remote: Compressing objects: 100% (9/9), done.
remote: Total 362 (delta 4), reused 10 (delta 4), pack-reused 349
Receiving objects: 100% (362/362), 1.61 MiB | 2.94 MiB/s, done.
Resolving deltas: 100% (193/193), done.
[root@localhost ~]# ls
anaconda-ks.cfg Desktop Documents Downloads LiME Music Pictures Public Templates Videos
[root@localhost ~]# cd LiME/
[root@localhost LiME]# ls
doc LICENSE README.md src
[root@localhost LiME]# cd src/
[root@localhost src]# ls
deflate.c disk.c hash.c lime.h main.c Makefile Makefile.sample tcp.c
```

3:

```
[root@localhost src]# pwd
/root/LiME/src
[root@localhost src]# yum install make
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use subscription-manager to register.

Last metadata expiration check: 1 day, 22:45:11 ago on Mon 24 Jul 2023 01:03:18 AM IST.
Package make-1:4.3-7.el9.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@localhost src]# yum install gcc
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use subscription-manager to register.

Last metadata expiration check: 1 day, 22:45:19 ago on Mon 24 Jul 2023 01:03:18 AM IST.
Package gcc-11.3.1-4.3.el9.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
```

```
root@localhost src# make
make -C /lib/modules/5.14.0-284.11.1.el9_2.x86_64/build M="/root/LiME/src" modules
make[1]: Entering directory '/usr/src/kernels/5.14.0-284.11.1.el9_2.x86_64'
  LD [M] /root/LiME/src/lime.ko
  BTF [M] /root/LiME/src/lime.ko
Skipping BTF generation for /root/LiME/src/lime.ko due to unavailability of vmlinux
make[1]: Leaving directory '/usr/src/kernels/5.14.0-284.11.1.el9_2.x86_64'
strip --strip-unneeded lime.ko
mv lime.ko lime-5.14.0-284.11.1.el9_2.x86_64.ko
[root@localhost src]# ls
deflate.c  disk.o  lime-5.14.0-284.11.1.el9_2.x86_64.ko  lime.mod.c  main.c  Makefile.sample  tcp.c
deflate.o  hash.c  lime.h                                lime.mod.o  main.o  modules.order    tcp.o
disk.c     hash.o  lime.mod                             lime.o      Makefile  Module.symvers
[root@localhost src]# modinfo lime-5.14.0-284.11.1.el9_2.x86_64.ko
filename:        /root/LiME/src/lime-5.14.0-284.11.1.el9_2.x86_64.ko
license:         GPL
rhelversion:     9.2
srcversion:      04EED6E8981104D7EBE947E
depends:
retpoline:      Y
name:           lime
vermagic:       5.14.0-284.11.1.el9_2.x86_64 SMP preempt mod_unload modversions
parm:           path:charp
parm:           dio:int
parm:           format:charp
parm:           localhostonly:int
parm:           digest:charp
parm:           timeout:long
parm:           compress:int
[root@localhost src]#
```

```
[root@localhost ~]# insmod /root/LiME/src/lime-5.14.0-284.11.1.el9_2.x86_64.ko path=/myRam.data format=raw
[root@localhost src]# ls /root
anaconda-ks.cfg Desktop Documents Downloads LiME Music Pictures Public Templates Videos
[root@localhost src]# cd /root
[root@localhost ~]# ls
anaconda-ks.cfg Desktop Documents Downloads LiME Music Pictures Public Templates Videos
[root@localhost ~]# ls -l /myRam.data
-r--r--r--. 1 root root 11022167040 Jul 26 00:14 /myRam.data
[root@localhost ~]# head -2 /myRam.data
AAAAAAf/AAAAA
AAAAAAAAAA
cAAAAA AAAA AAAA AMSPAMSh A @AAAAA 6,uV*
[root@localhost ~]# cat /myRam.data | strings | grep Password#gMail
Password#gMail
Password#gMail
Password#gMail
```

7:

```

root@localhost:~ — cat /myNewRam.data
root@localhost:~ — python
[root@localhost ~]# python
Python 3.9.16 (main, Dec  8 2022, 00:00:00)
[GCC 11.3.1 20221121 (Red Hat 11.3.1-4)] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> x="XXZZYYZZCCVV"
>>>

```

8:

```

root@localhost:~
root@localhost:~ — python
[root@localhost ~]# insmod /root/LiME/src/lima-5.14.0-284.11.1.el9_2.x86_64.ko path=/myNewRam.data format=raw
insmod: ERROR: could not insert module /root/LiME/src/lima-5.14.0-284.11.1.el9_2.x86_64.ko: File exists
[root@localhost ~]# rmmod lima
[root@localhost ~]# insmod /root/LiME/src/lima-5.14.0-284.11.1.el9_2.x86_64.ko path=/myNewRam.data format=raw
[root@localhost ~]# ls -l /myNewRam.data
-r--r--r--. 1 root root 11022167040 Jul 26 00:40 /myNewRam.data
[root@localhost ~]# cat /myNewRam.data | strings | grep x = "XXZZYYZZCCVV"
grep: =: No such file or directory
grep: XXZZYYZZCCVV: No such file or directory
[root@localhost ~]# cat /myNewRam.data | strings | grep "XXZZYYZZCCVV"
XXZZYYZZCCVV"
>>> x="XXZZYYZZCCVV"
>>> x = "XXZZYYZZCCVV"
>> x="XXZZYYZZCCVV"
"XXZZYYZZCCVV"
>>> x="XXZZYYZZCCVV"
[KXXZZYYZZCCVV"
[KXXZZYYZZCCVV"
>>> x="XXZZYYZZCCVV"
>>> x = "XXZZYYZZCCVV"
x = "XXZZYYZZCCVV"
"XXZZYYZZCCVV"
>> x="XXZZYYZZCCVV"

```

Finally, we read data stored in RAM. On the 7th page we have `X="XXZZYYZZCCVV"` , then in 8th page we capture the RAM and find the X value and we find it is the same that we have assigned in page 7.

➔ If you like, u can save entire data into a file by using

`$cat /<filename.data> | strings > <filename.txt>`

Thank you.