

ulimit

ulimit [-SHaAcdfMnst] [num]

ulimit

-S

-H

-a

-A 1024

-C 512 0

-d 1024

-F 512 0 SIGXFSZ S

-M 2 GB

ulimit -M RACF® OMVS MEMLIMIT OMVS shell

-n

-s 1024

-t CPU CPU CPU SIGXCPU CPU

num num " "

1. ulimit shell tcsh shell
- 2.

```
uname -a          #
uname --m         # 32 /64
lsb_release -a   #
```

```
root@H101:~# lsb_release -a
No LSB modules are available.
Distributor ID: Ubuntu
Description:    Ubuntu 20.04.4 LTS
Release:        20.04
Codename:       focal
```

```
Distributor ID|Ubuntu  ubuntu
Description|Ubuntu 20.04.2 LTS
Release|20.04
Codename|focal  ubuntu
```

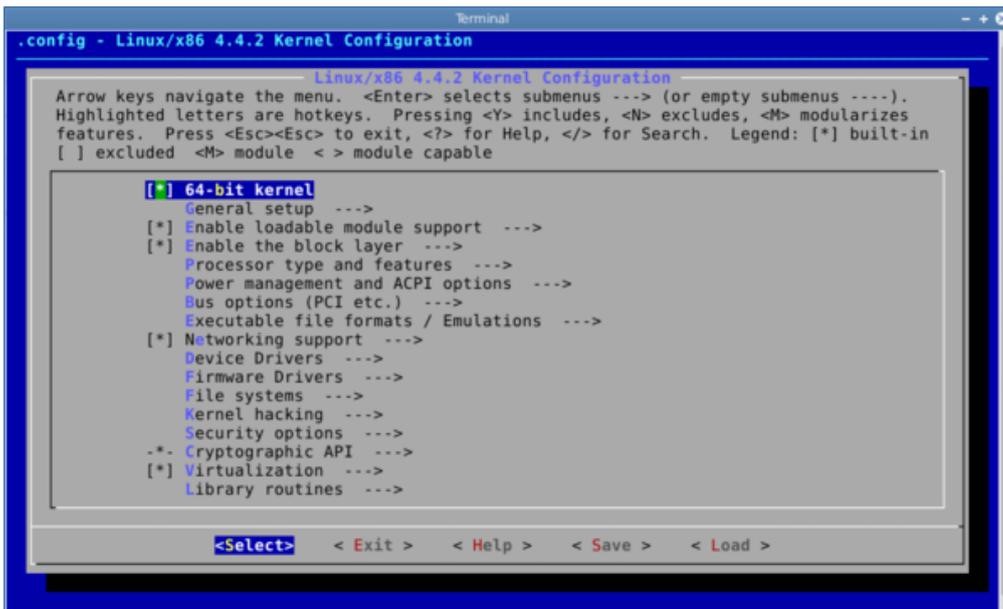
```
uname --s        #
uname --r        #
uname --n        #
uname --p        #cpu
```

```
sudo apt-get install git fakeroot build-essential ncurses-dev xz-utils libssl-dev bc flex
libelf-dev bison
```

```
wget https://mirrors.tuna.tsinghua.edu.cn/kernel/v5.x/linux-5.5.9.tar.xz
```

```
tar xf linux-5.5.9.tar.xz
```

```
cd linux-5.5.9
```



NOTE:

:

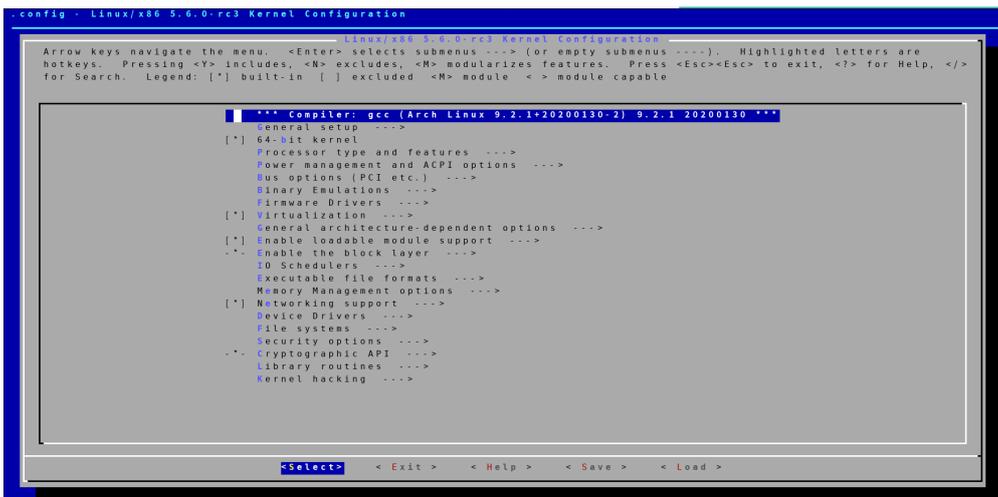
Linux

```
make menuconfig[]# Update current config utilising a menu based program
make xconfig[]# Update current config utilising a Qt based front-end
make gconfig[]# Update current config utilising a GTK+ based front-end
```

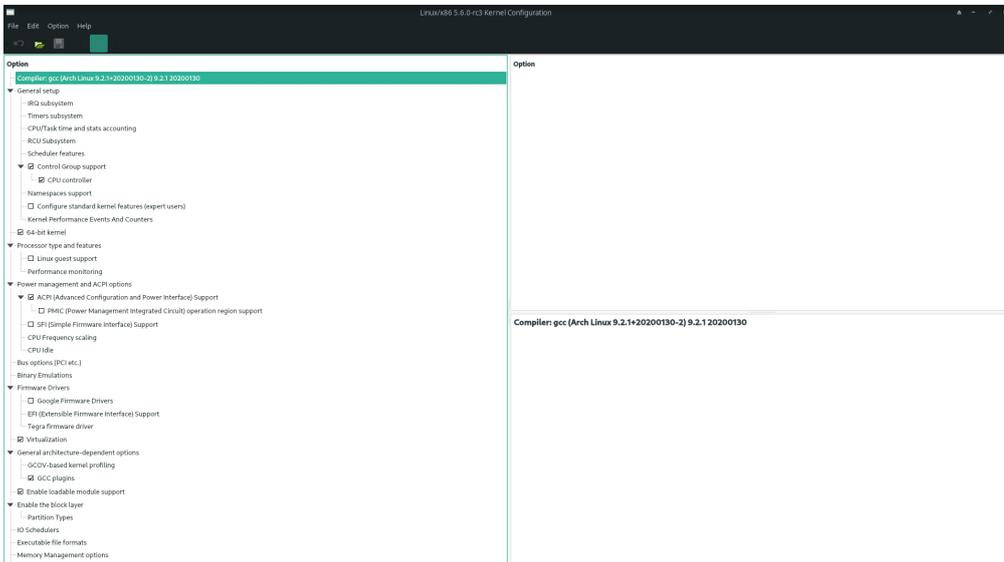
`make help`

Make

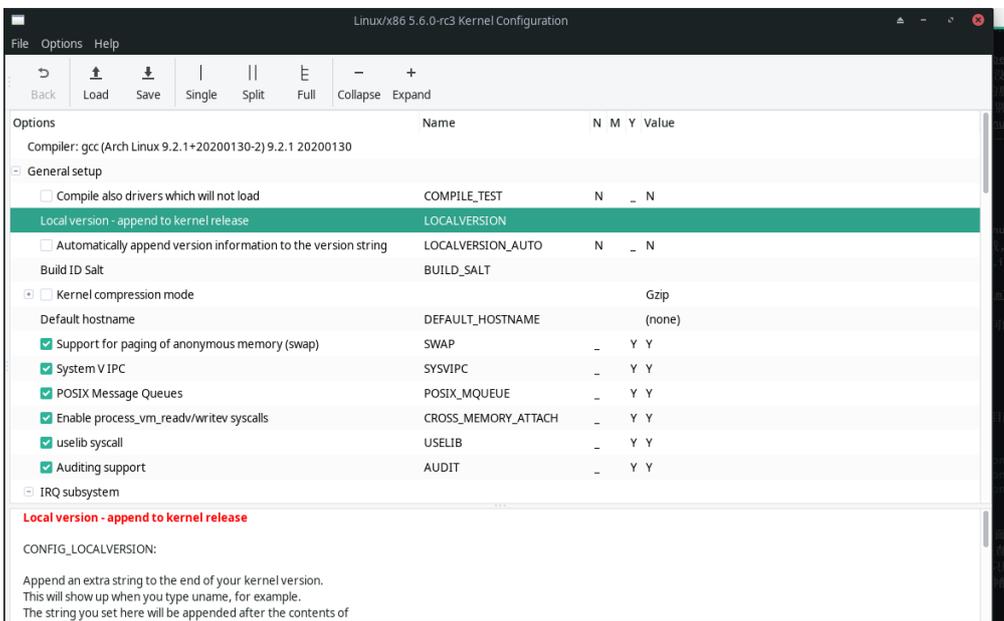
- `make menuconfig`



- `make xconfig`



- `make gconfig`



`.config`

- Y -
- N -
- M -

`make -j`

`make -j 4 # 4 2 CPU Core`

`make -j $(nproc) # nproc`

M

```
make modules
```

Linux Makefile

```
make modules_install[]#  
make htmldocs[] # html
```

.....

Linux

200GB

GNU C	5.1	gcc -v
Clang/LLVM (optional)	11.0.0	clang --version
GNU make	3.81	make --version
bash	4.2	bash --version
binutils	2.23	ld -v
flex	2.5.35	flex --version
bison	2.0	bison --version
pahole	1.16	pahole --version
util-linux	2.10o	fdformat --version
kmod	13	depmod -V
e2fsprogs	1.41.4	e2fsck -V
jfsutils	1.1.3	fsck.jfs -V
reiserfsprogs	3.6.3	reiserfsck -V
xfspgrog	2.6.0	xfsd_b -V
squashfs-tools	4.0	mksquashfs --version
btrfs-progs	0.18	btrfsck
pcmciautils	004	pccardctl -V
quota-tools	3.09	quota -V
PPP	2.4.0	pppd --version
nfs-utils	1.0.5	showmount --version
procps	3.2.0	ps --version
udev	081	udev --version
grub	0.93	grub --version grub-install --version
mcelog	0.6	mcelog --version
iptables	1.4.2	iptables -V
openssl & libcrypto	1.0.0	openssl version
bc	1.06.95	bc --version

Sphinx ¹	1.7	sphinx-build -version
cpio	any	cpio -version

Sphinx

GCC

gcc CPU

Clang/LLVM ()

clang LLVM release.llv Clang/LLVM Linux

Make

GNU make 3.81

Bash

bash Bash 4.2

Binutils

Binutils 2.23

pkg-config

4.18 pkg-config kconfig 'make {g,x}config' pkg-config

Flex[¶]

Linux 4.16 flex 2.5.35

Bison

Linux 4.16

bison 2.0

pahole

Linux 5.2

CONFIG_DEBUG_INFO_BTF

vmlinux

DWARF

BTF BPF

'dwarves' 'pahole' <https://fedorapeople.org/~acme/dwarves/>

Perl

perl Getopt:::Long, Getopt:::Std, File:::Basename, and File:::Find

BC

bc 3.10

OpenSSL

OpenSSL

openssl

3.7

openssl

4.3

DevFS

<https://www.kernel.org/pub/linux/utils/kernel/hotplug/>)

32 UID

Linux

/ ReST

PostScript HTML

Util-linux

util-lfdisk

2.4

fdformat

Ksymoops

CONFIG_KALLSYMS

ksymoops CONFIG_KALLSYMS; moops

Oops

ksymoops

O

Mkinitrd

`/lib/modules` mkinitrd

E2fsprogs

`e2fsprogs` fsck debugfs

JFSutils

`jfsutils`

- `fsck.jfs` - JFS
- `mkfs.jfs` - JFS
-

Reiserfsprogs

`reiserfsprogs` reiserfs-3.6.x Linux `mkreiserfs` . `i3resize_reiserfs` `debugreiserfs`
`reiserfsck`

Xfsprogs

`xfsprogs` contains `mkfs.xfs` `xfs_db` `xfs_repair` XFS 2.0.0 XFS

PCMCIAutils

PCMCIAutils `pcmcia-cs` PCMCIA 16 PCMCIA

Quota-tools

2 32 uid gid Quota-tools 3.07

Intel IA32 microcode

IA32 udev

```
mkdir /dev/cpu
mknod /dev/cpu/microcode c 10 184
```

```
chmod 0644 /dev/cpu/microcode
```

root microcode_ctl

udev

udev/devudev devfs

FUSE

libfuse 2.4.0 direct_iokernel_cache

Networking

General changes

ip-route2

Packet Filter / NAT /NAT

NAT 2.4.x (iptables) 2.2.x ipchains 2.0.x ipfwadm

PPP

PPP PPP pppd 2.4.0

udev /dev/ppp

```
mknod /dev/ppp c 108 0
```

NFS-utils

2.4 mountdexportfs /var/lib/nfs/rmtab.

rmtab rmtab

rmtab mountd mountd

```
mount -t nfsd nfsd /proc/fs/nfsd
```

exportfs mountd

NFS

Internet

mcelog

x86

`CONFIG_X86_MCE`

CPU

Kernel documentation

Sphinx

[SphinxDocumentation/doc-guide/sphinx.rst](#)Sphinx

Getting updated software

Kernel compilation

gcc

- [<ftp://ftp.gnu.org/gnu/gcc/>](ftp://ftp.gnu.org/gnu/gcc/)

Clang/LLVM

- [Getting LLVM.](#)

Make

- [<ftp://ftp.gnu.org/gnu/make/>](ftp://ftp.gnu.org/gnu/make/)

Bash

- [<ftp://ftp.gnu.org/gnu/bash/>](ftp://ftp.gnu.org/gnu/bash/)

Binutils

- [<https://www.kernel.org/pub/linux/devel/binutils/>](https://www.kernel.org/pub/linux/devel/binutils/)

Flex

- <https://github.com/westes/flex/releases>

Bison

- [<ftp://ftp.gnu.org/gnu/bison/>](ftp://ftp.gnu.org/gnu/bison/)

OpenSSL

- <https://www.openssl.org/>

System utilities

Util-linux

- <https://www.kernel.org/pub/linux/utils/util-linux/>

Kmod

- <https://www.kernel.org/pub/linux/utils/kernel/kmod/>
- <https://git.kernel.org/pub/scm/utils/kernel/kmod/kmod.git>

Ksymoops

- <https://www.kernel.org/pub/linux/utils/kernel/ksymoops/v2.4/>

Mkinitrd

- <https://code.launchpad.net/initrd-tools/main>

E2fsprogs

- <https://www.kernel.org/pub/linux/kernel/people/tytso/e2fsprogs/>
- <https://git.kernel.org/pub/scm/fs/ext2/e2fsprogs.git/>

JFSutils

- <http://jfs.sourceforge.net/>

Reiserfsprogs

- <https://git.kernel.org/pub/scm/linux/kernel/git/jeffm/reiserfsprogs.git/>

Xfsprogs

- <https://git.kernel.org/pub/scm/fs/xfs/xfsprogs-dev.git>
- <https://www.kernel.org/pub/linux/utils/fs/xfs/xfsprogs/>

Pcmciautils

- <https://www.kernel.org/pub/linux/utils/kernel/pcmcia/>

Quota-tools

- <http://sourceforge.net/projects/linuxquota/>

Intel P6 microcode

- <https://downloadcenter.intel.com/>

udev

- <https://www.freedesktop.org/software/systemd/man/udev.html>

FUSE

- <https://github.com/libfuse/libfuse/releases>

mcelog

- <http://www.mcelog.org/>

cpio

- <https://www.gnu.org/software/cpio/>

Networking

PPP

- <https://download.samba.org/pub/ppp/>
- <https://git.ozlabs.org/?p=ppp.git>
- <https://github.com/paulusmack/ppp/>

NFS-utils

- http://sourceforge.net/project/showfiles.php?group_id=14

Iptables

- <https://netfilter.org/projects/iptables/index.html>

Ip-route2

- <https://www.kernel.org/pub/linux/utils/net/iproute2/>

OProfile

- <http://oprofile.sf.net/download/>

NFS-Utills

- <http://nfs.sourceforge.net/>

Kernel documentation

Sphinx

- <https://www.sphinx-doc.org/>

4

2. CPU

3. /

4. SCI

Web