

How To Load Linux Kernel With Real Time Patch (PREEMPT_RT)

Step1:

mkdir Kernel && cd Kernel

Step2:

wget https://cdn.kernel.org/pub/linux/kernel/v4.x/linux-4.13.15.tar.xz

Step3:

wget https://cdn.kernel.org/pub/linux/kernel/projects/rt/4.13/patch-4.13.13-rt5.patch.gz

Step4:

tar xvf linux-4.13.15.tar.xz

Step5:

cd linux-4.13.15

Step6:

gzip -cd ../patch-4.13.13-rt5.patch.gz | patch -p1 --verbose

Step7:

sudo add-apt-repository "deb http://archive.ubuntu.com/ubuntu \$(lsb_release -sc) main universe"

sudo apt-get update

sudo apt-get install libncurses5-dev

sudo apt-get install libssl-dev

sudo apt-get install libelf-dev

Step8:

make menuconfig

Step9:

Processor type and features

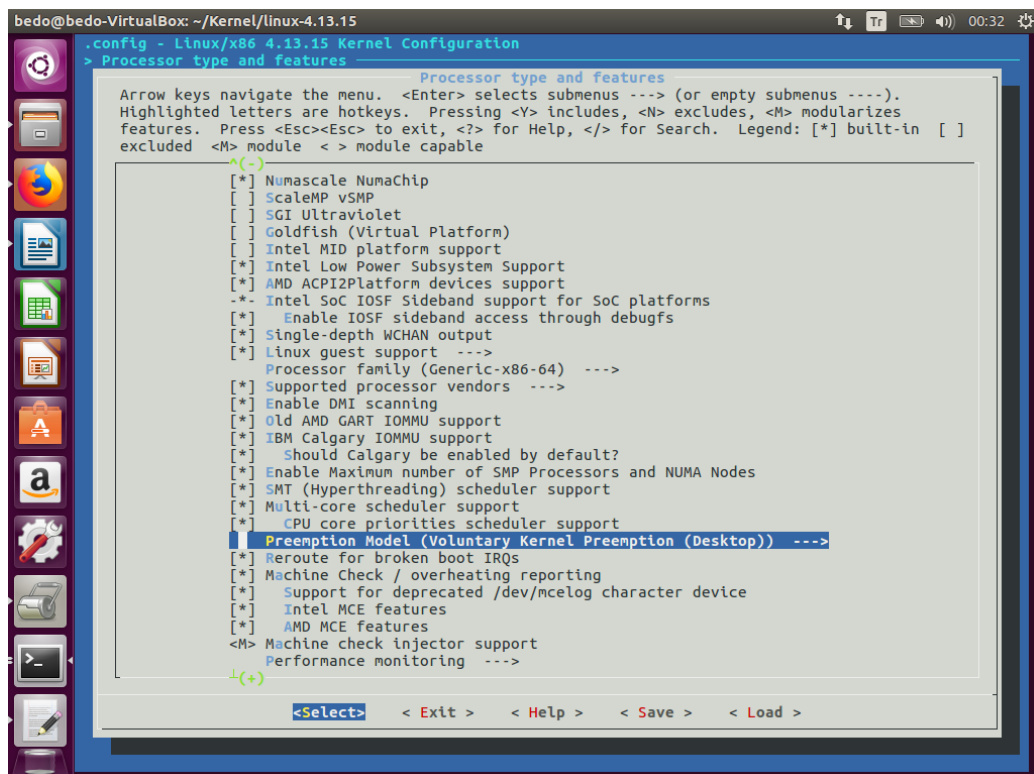
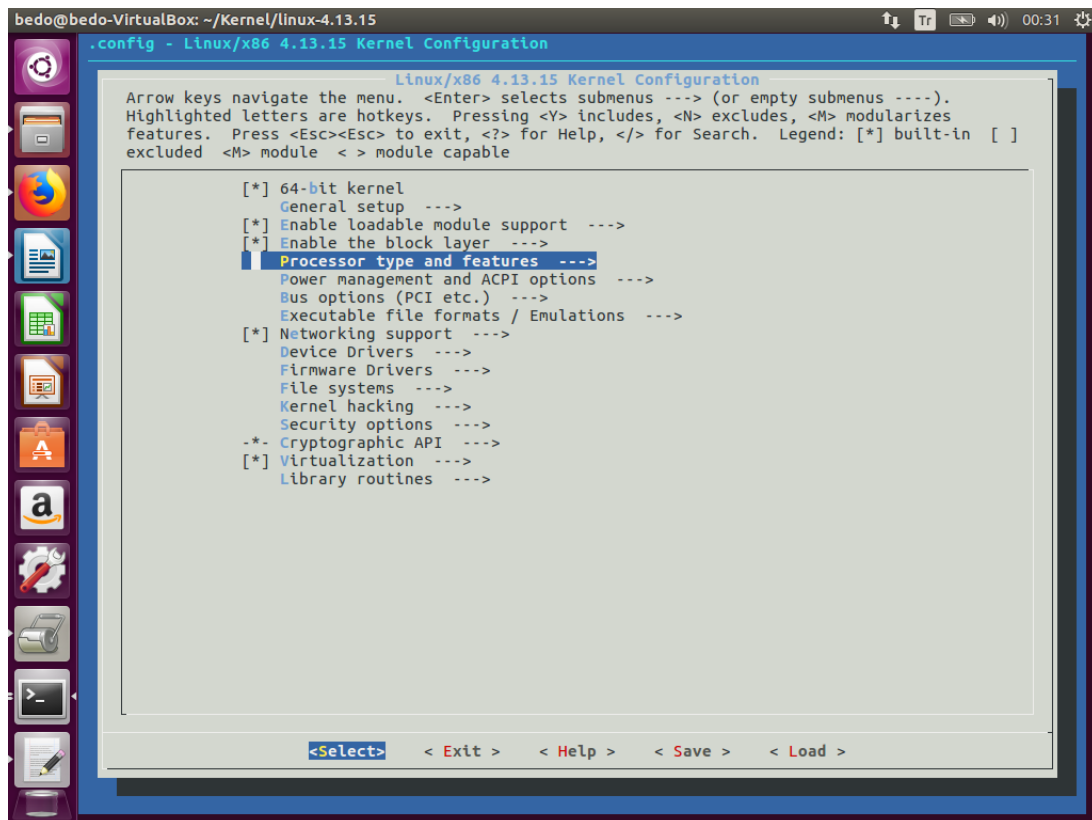
Preemption Model (Voluntary Kernel Preemption (Desktop))

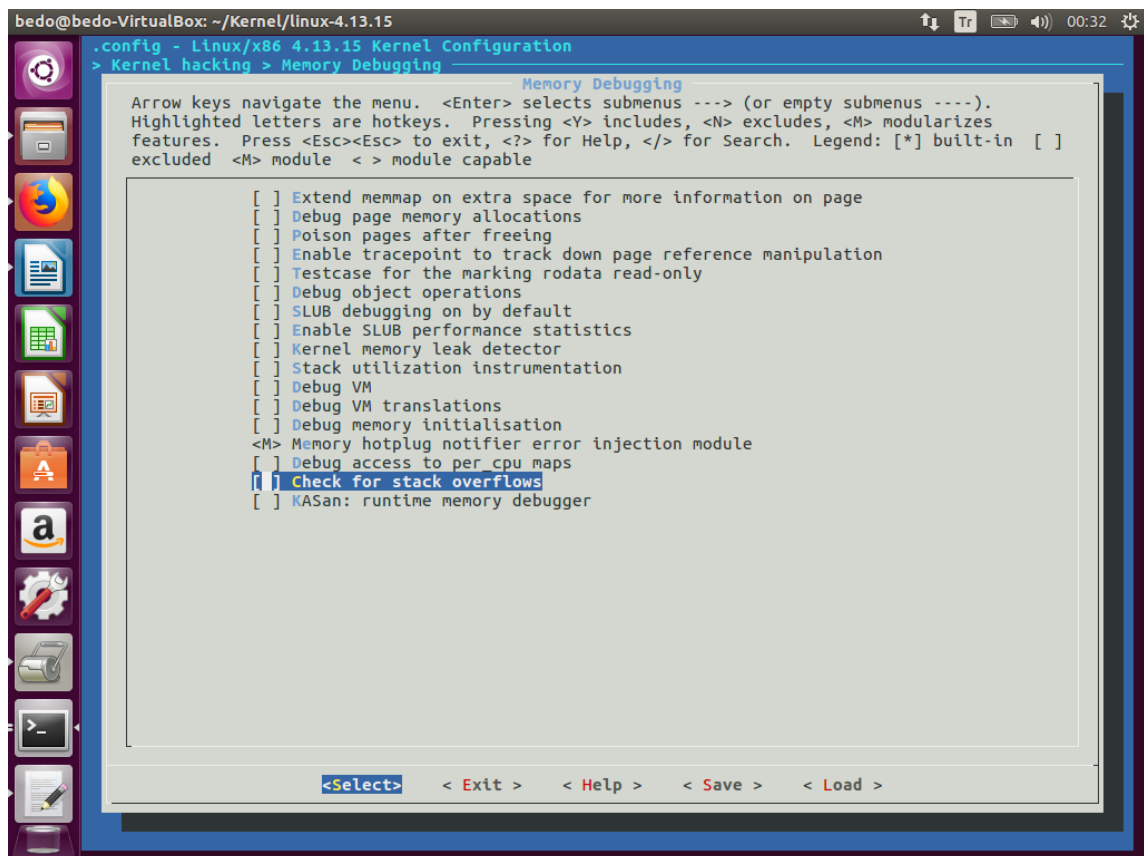
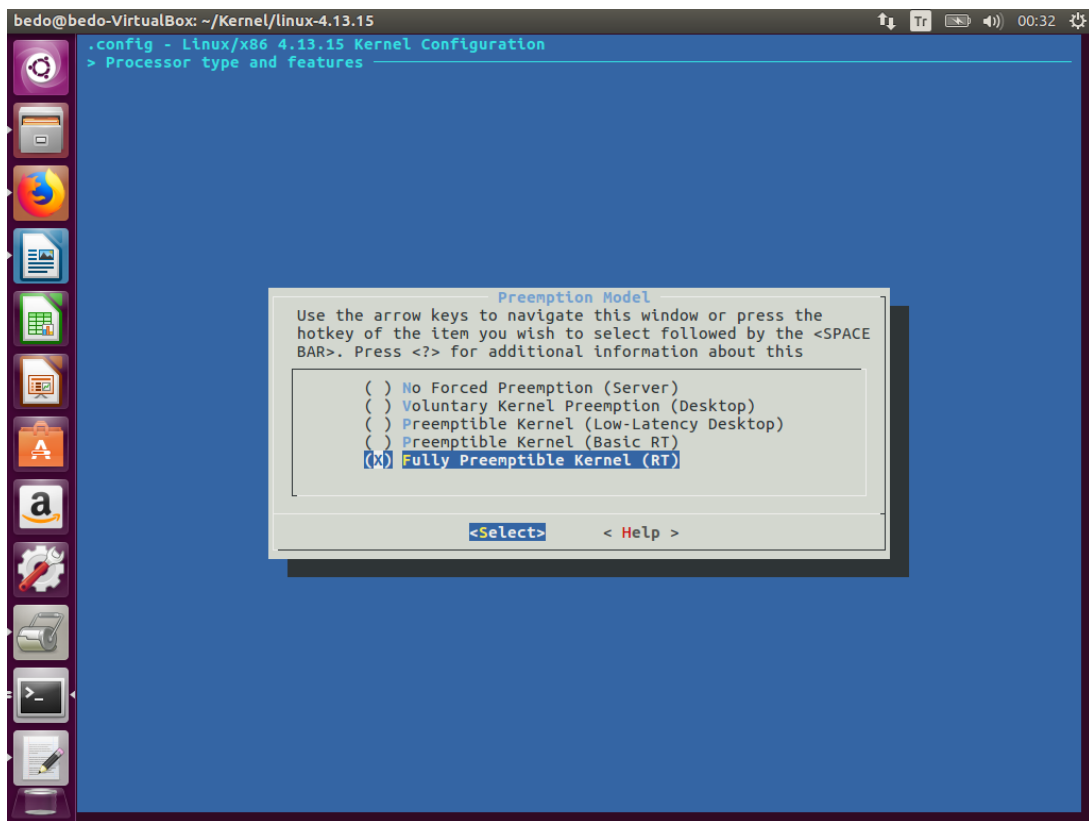
Fully Preemptible Kernel (RT)

Kernel hacking -> [Enter]

Memory Debugging [Enter]

Check for stack overflows





Step10:

make -j2

Step11:

sudo make modules_install -j2

sudo make install -j2

Step12:

cd /boot

ls

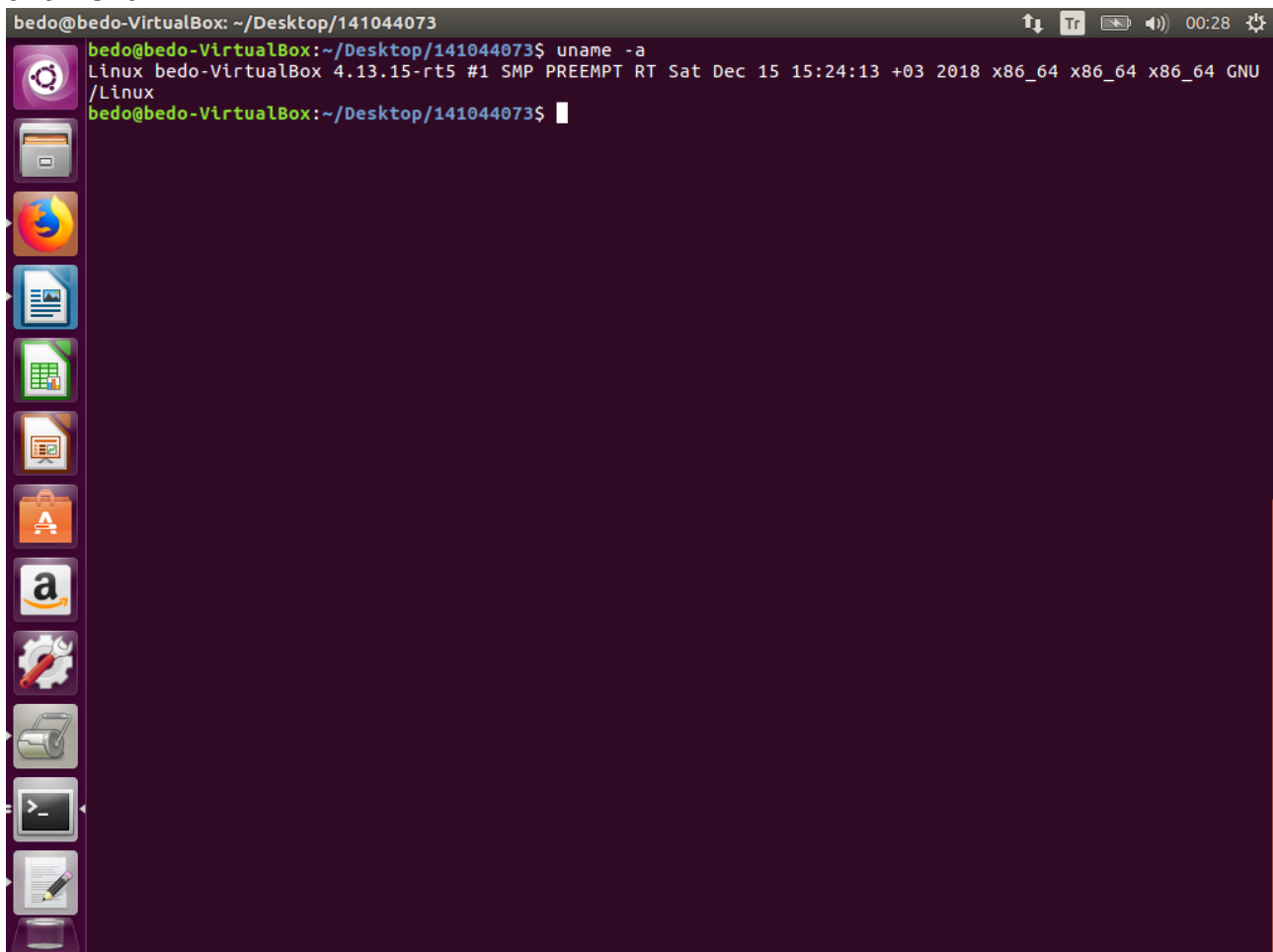
Step13:

sudo update-grub

sudo reboot

Step14:

uname -a



The screenshot shows a terminal window titled 'bedo@bedo-VirtualBox: ~/Desktop/141044073'. The terminal output for the command 'uname -a' is as follows:

```
bedo@bedo-VirtualBox:~/Desktop/141044073$ uname -a
Linux bedo-VirtualBox 4.13.15-rt5 #1 SMP PREEMPT RT Sat Dec 15 15:24:13 +03 2018 x86_64 x86_64 x86_64 GNU/Linux
bedo@bedo-VirtualBox:~/Desktop/141044073$
```

The terminal window has a dark purple background. On the left side, there is a vertical dock with various application icons, including a gear for settings, a folder, Firefox, LibreOffice Writer, LibreOffice Calc, LibreOffice Impress, a shopping bag, the Amazon logo, a wrench and gear, a printer, a terminal, and a document with a pencil. The top of the window features a status bar with icons for window management, a 'Tr' label, network and audio status, and a clock showing '00:28'.