

CMSC412 Discussion

9/5/2012

Overview

- Introduction
- Running project remotely
 - Xming
 - printrun
 - qemu -curses
 - debugging
- Project overview
- Tips / Warnings

Read the source!
Start early!

Introduction

- Full-time TA: Eric Norris
- Half-time TA: Johnny Wu
- Office hours held in linuxlab
 - Office hours will be posted on Piazza
- Discussion only once a week
 - Primarily for projects

Running GeekOS: X11 forwarding

"ssh -X" or putty "Enable X11 forwarding" to
<cs412***>@linuxlab.csic.umd.edu

svn co https://svn.cs.umd.edu/repos/geekos/network --
username sv-geekosro

cd network/build

make run

Read the source!
Start early!

printrun (change Makefile.linux)

```
dbg : all
    gdb geekos/kernel.exe

# qemu:
#     wget www.cs.umd.edu/~ntg/qemu/qemu
#     chmod a+x qemu

#note: if in linuxlab then:
#BIOSLOCATION:= -L /usr/local/qemu-0.10.5/share/qemu
printrun: qemu all
    ./qemu -no-fd-bootchk -m 10 --vga std -curses
)
include depend.mak
```

delete spaces
make single tab

```
dbg : all
    gdb geekos/kernel.exe

qemu:
    wget www.cs.umd.edu/~ntg/qemu/qemu
    chmod a+x qemu

#note: if in linuxlab then:
BIOSLOCATION:= -L /usr/local/qemu-0.10.5/share/qemu
printrun: qemu all
    ./qemu -no-fd-bootchk -m 10 --vga std -curses
)
include depend.mak
```

uncomment

printrun

Then run "make printrun"

Runs without X11 forwarding (faster) and output will be copied to a file "build/out.txt"

Lose control of terminal though...

Second terminal (to same machine)

```
pkill -9 -u <username> qemu
```

qemu -curses

make

qemu -curses diskc.img

(Also lose control of terminal)

Debugging

2 terminals:

"make dbgrun" and "make dbg"

Makefile.linux uses X11 forwarding, to disable, add -curses option to make dbgrun:

```
dbgrun : all
        echo "target remote localhost"
        $(QEMU) -curses -no-fd-boot
        -no-acpi diskc.img -hdb diskd.img
```

Project 0 Overview

- System calls (syscalls)
 - Use syscalls to give user program access to kernel side operations
 - Call wrapper function on user-side (e.g. Print)
 - Which raises interrupt handled in trap.c
 - Which calls appropriate handler (syscall.c)
- Book-keeping
 - User.h, kthread.h

Due this coming Monday (9/10)

Read the source!
Start early!

Warnings: Not much disk space

If working in linuxlab, don't use firefox

Otherwise will likely quickly exhaust disk

Have at most 1 built version of the project

Make sure your .Trash is empty

Read the source! Start early!

Tips / Warnings:

Specs being changed (hopefully improved)

Projects may be slightly different than before,
but the gist should be the same

Don't copy code.

Expect to read and modify a lot of code!
Start projects early!