Project 1: Getting Acquainted

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Group #39

Abstract

Abstract here.

I. Log of Commands

1) cd /scratch/fall2017

2) mkdir 39

3) cd /scratch/fall2017/39

4) git clone git://git.yoctoproject.org/linux-yocto-3.19

5) cd linux-yocto-3.19

6) git status - to confirm we are on tag v3.19.2

7) cd ..

8) source /scratch/files/environment-setup-i586-poky-linux.csh

9) qemu-system-i386 -gdb tcp::5539 -S -nographic -kernel bzImage-qemux86.bin -drive file=core-image-lsb-sdk-qemux86.ext4,if=virtio -enable-kvm -net none -usb -localtime –no-reboot –append "root=/dev/vda rw console=ttyS0 debug"

10) gdb (in new terminal tab)

11) (gdb) target remote: 5539

12) (gdb) c

13) root (in VM)

14) cp /scratch/files/config-3.19.2-yocto-qemu /scratch/fall2017/39/linux-yocto-3.19/.config

15) make -j4 all

16) qemu-system-i386 -gdb tcp::5539 -S -nographic -kernel linux-yocto-3.19/arch/x86/boot/bzImage -drive file=core-image-lsb-sdk-qemux86.ext4,if=virtio -enable-kvm -net none -usb -localtime –no-reboot –append "root=/dev/vda rw console=ttyS0 debug"

17) gdb (in new terminal tab)

18) (gdb) target remote: 5539

19) (gdb) c

20) root (in VM)

II. Explanation of Qemu Flags

To learn what the qemu flags represented, we researched the linux man page [**?**].

- -gdb

  This enables the debug mode.

- tcp::5539

  This specifies the port.

- -S

  This tells the CPU to not start right at startup.

- -nographic

  This disables graphics which makes qemu only display on the command line.

- -kernel

  This is where the kernel file location is defined.

- -drive file=¡¿,if=virtio

  This is where the file that will be used for the virtual disk is defined.

- -enable-kvm

  This enables KVM virtualization and is the reason the VM boots so quickly.

- -net none

  This says there should be no network devices configured.

- -usb

  This enables the USB driver.

- -localtime

  Set the CPU at local time.

- –no-reboot

  Don't reboot qemu, just exit.

- –append "root=/dev/vda rw console=ttyS0 debug"

  This tells qemu to launch in debug mode.

III. CONCURRENCY WRITE UP

1) What do you think the main point of this assignment is?
2) How did you personally approach the problem? Design decisions, algorithm, etc.
3) How did you ensure your solution was correct? Testing details, for instance.
4) What did you learn?

IV. VERSION CONTROL LOG

V. WORK LOG

Date	Time	Person	Event
October 7, 2017	7:10pm	Courtney	Set up LaTex template
	7:30pm	Courtney	Set up Git repository
	7:55pm	Courtney	Finished fixing issue with Github
	8:55pm	Courtney	Tried setting up Overleaf with Github, unable to figure it out right now
	9:01pm	Courtney	Tries running qemu command, gets error that says "qemu command not found"
	9:39pm	Courtney	Resourced configuration file, successfully runs qemu command
	9:42pm	Courtney	Opens new terminal and connects to gdb and remote port
	9:45pm	Courtney	Successfully boots VM in qemu
	10:09pm	Courtney	Booted VM using new kernel file
	10:13pm	Courtney	Began adding command log to write up
	11:00pm	Courtney	Added makefile and made sure it correctly build the tex file
October 8, 2017	1:00pm	Courtney	Fixed the folders on Github to pull from Overleaf correctly
	6:45pm	Courtney	Began researching the qemu flags and adding explanations to the tex file
	7:30pm	Courtney	Started compiling the work log