PROGRAMMING ASSIGNMENT 1 - VM INSTRUCTIONS AND EXTRA HELP

Starting And Using The Virtual Machine

You should install QEMU on your machine to run this. The `qcow2` image is a QEMU virtual machine file. You can get QEMU at https://www.qemu.org/download/. The following commands *should* work to run the `qcow2` VM.

- Mac: `qemu-system-x86_64 -hda "/ABSOLUTE/PATH/TO/QCOW2/DIRECTORY/366_s2020_vm.qcow2" -accel hvf`
- Linux: `qemu-system-x87_64 -hda "/ABSOLUTE/PATH/TO/QCOW2/DIRECTORY/366_s2020_vm.qcow2" -accel kvm`
- Windows: It should be similar, but you may need to install a hardware virtualization framework on your machine. Please refer to https://www.qemu.org/2017/11/22/haxm-usage-windows/. If you do not want to do this, the VM may be a little slower, but that should be fine. In that case, use the same command for Mac and Linux but takeout the `-accell hvf/kvm` part.

Please replace the `/ABSOLUTE/PATH/TO/QCOW2/DIRECTORY` with the path to the VM which you can download also from Canvas.

Installation Directory Of BCVS

bcvs is installed in `/opt/bcvs`.

Helpful Hints

A few hints on getting setup to test and run exploits:

1. To untar a file with the extension of `.tgz` or `.tar.gz`, you can use `tar -xzvf FILE.tgz` which will unarchive the file in your current directory and print out the files as it does so. Please reference the `bcvs.c` file when you work on this project.
2. If you try to run `install.sh` in the student directory after untarring `bcvs.tgz`, then it will fail because bcvs is already installed in `/opt`.

3. You need to setup a BCVS repository (place to store the files you will check in and checkout) in your home directory. If you look at the source code, you can see this can be done by making a `.bcvs` folder with `mkdir`. Unlike Git, BCVS does not have an `init` command.
4. When you run `/opt/bcvs/bcvs ci/co FILENAME`, it will get moved in and out of the `.bcvs` folder you made using the `copyFile` function in `bcvs.c`.