UW-BRL RAVEN Quick-Start Guide
Some Commands To Get Started Quickly

Workstation:
- Name: `supernova-desktop`
- IP: `128.95.30.198`
- Login: U: `supernova` |PW: `hannaford`
- SU PW: `hannaford`

Procedure:
1. Make sure the **e-stop** is pressed **down/in** (engaged)

2. Turn on workstation (supernova-desktop)

3. Select the real time (rt) Linux
   - From the boot menu ⇒ select advanced boot options
   - Select the latest RT Linux kernel (`4.4.12-rt20-rc1`)

4. Login as `supernova`

5. Start two terminal windows
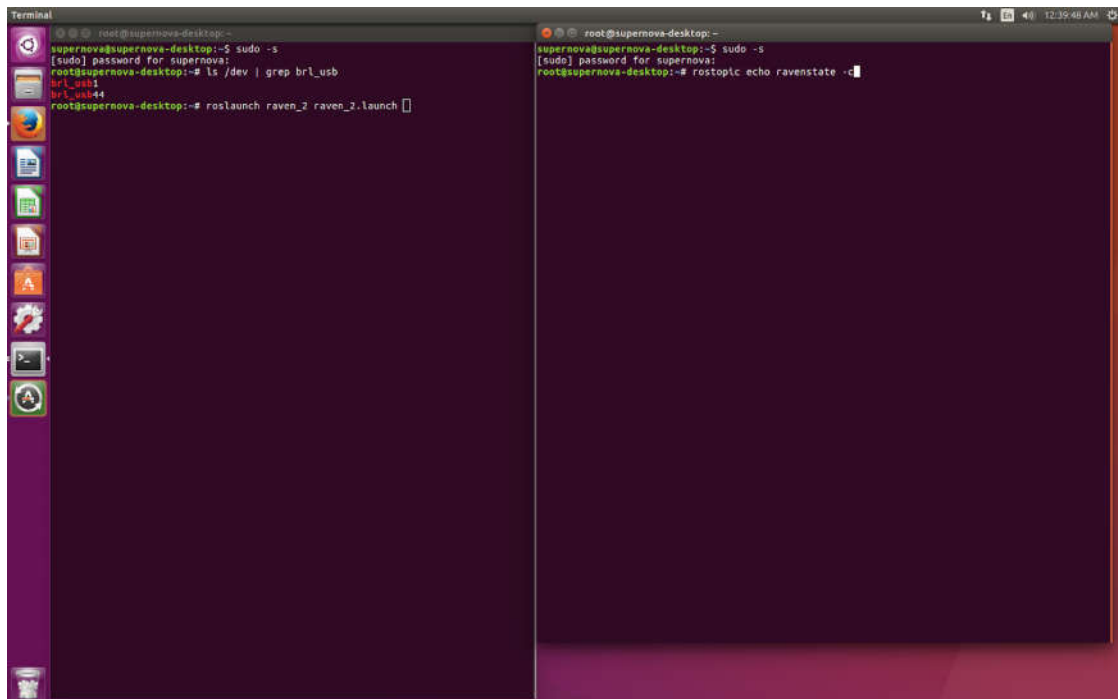
6. In the first terminal:
    ○ `sudo -s`
       [this will enter superuser mode]

    ○ `sudo /etc/init.d/brl_usb start`
       [This will load the USB kernel modules]
       [*Tip!*: try Ctrl+R, then type `init`]

7. Then turn on the power to the raven motor drivers
    (#36: Right and #44: Left)

8. Then enter:
    `ls /dev | grep brl_usb`
    ○ This should return `brl_usb1` and `brl_usb44`
       [This will ensure that the usb port is loaded and connected]

9. Load ROS Modules:
    ○ `roscd raven_2`
    ○ `roslaunch raven_2 raven_2.launch`
       [*Tip!*: try Ctrl+R ⇒ `launch`]

10. In the second terminal (we will use this to monitor robot state):
    ○ `sudo -s`
    ○ `rostopic echo ravenstate -c`
       [*Tip!*: try Ctrl+R ⇒ `echo`]
    ○ OR we can try:
       `rostopic echo /ravenstate/encVals -c`

The first terminal should look something like this (commands in bold):
> `supernova@supernova-desktop:~$` **`sudo -s`**

> `root@supernova-desktop:~$` **`sudo /etc/init.d/brl_usb start`**
`Loading brl_usb board driver...`

> `root@supernova-desktop:~#` **`ls /dev | grep brl_usb`**
`brl_usb1`
`brl_usb44`

```
> root@supernova-desktop:~# roscd raven_2
> root@supernova-desktop:~/raven_ros/raven_2# roslaunch raven_2
raven_2.launch
```

The *second* terminal should look something like this (commands in bold):

```
> supernova@supernova-desktop:~$ sudo -s
> root@supernova-desktop:~$ rostopic echo ravenstate -c
```