Michael Blunt

Experiment Programs – Notes and Important Information

Setup Notes:

* Included with the experiment is an SD card with a fully functional system.
  + All that is needed is to simply insert this SD card into the new pi.
* You should not need to manually install the programs onto a new OS.
* We have provided an SD card with a copy of our entire operating system, complete with system settings, crontabs, and programs installed and working (1/19/2022).
  + Michael Blunt will retain an additional copy of this operating system, in the event of damage to the copy.
  + If you wish to make an additional copy from the SD card supplied with the experiment, go to the raspberrian desktop, and select the SD copier utility.
    - If you receive size errors, optimize the size of the original SD card by freeing up space.
    - Alternatively, use third party software to turn the system into a “.img” file and proceed from there.

Users and Root:

* There are two users on the system, “pi” and “root”
  + “pi” is an administrator and can execute the sudo command with no password.
    - user:pass is pi:detects
  + “root” is the inbuilt system administrator and is the equivalent of a Windows sysadmin.
    - user:pass is root:detects
  + All passwords can be found in a file called “the\_password” on the Desktop.
  + If all else fails, there is an SUID binary in the under the “Random\_Programs” directory in the “/home/pi/Programs” directory.
    - You should be able to use this program to execute commands with root privileges without a password.
* Security Note:
  + This system was **NOT** made with security in mind.
    - There are intentional security holes, weak passwords, etc.
  + **THIS SYSTEM SHOULD NOT BE EXPOSED TO ANY UNTRUSTED SOURCE.**
    - This system was intentionally designed to allow anyone with physical access to gain administrator privileges relatively easily.
    - PLEASE SECURE THIS MACHINE FROM ANY UNTRUSTED USERS.

In Case of Problems with SD card:

* If none of the above items can solve the problem associated with the programs or SD card, please contact Michael Blunt (see misc. notes).
* Worst case scenario:
  + In the highly unlikely event of a non-response, there are two main system configurations not explicitly shown in this folder that need to be configured for the experiment to work properly.
    - Crontab
      * There is one crontab command that launches startup.sh in the background. This works best with a thirty second delay from initial crontab run.
    - BIOS Settings
      * Needs to be configured to detect I2C devices. Should be accessible via the BIOS menu under option number five.

Miscellaneous Notes:

* Michael Blunt handled all software, please direct any questions to [michaelbblunt@gmail.com](mailto:michaelbblunt@gmail.com) or 8437099457.