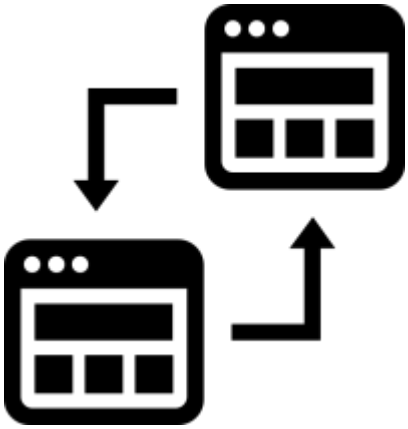
Command & Control



Name	Command & Control
Description	A wall of displays showing off the most essential data needed by NOC & C3L in general.
Status	Half-running (currently being updated)
Contact	virii & orimpe
Participants:	metalgamer xbr



Hardware

- 4x ORDOID C2
- 4x 8GB eMMC
- 4x 16x2 LCD IO kits
- 4x GW2270 1080p HDMI monitors
- 4x 1M patch cables
- 1x 5 port network switch
- 4x 1M HDMI cables
- 4x power supplies

Software

- Fullscreen web browser with no controls (Kiosk-style)
  - MCR-Alpha (Top-Left): Turris
  - MCR-Gamma (Bottom-Left): MQTT
  - MCR-Delta (Bottom-Right): ODroid
  - MCR-Beta (Top-Right): SpaceAPI
- `autom8` account
  - This user is used internally to shut down the individual SBCs (Single-board computer) when the space is closing.
  - It needs to have access to *at least* `shutdown` without entering a password:
    - The following line is in the sudoers file:

```
autom8 ALL=NOPASSWD: /sbin/halt, /sbin/reboot, /sbin/poweroff, /sbin/shutdown now
```

  - The `autom8` user connects via SSH, so the following key is authorized:

```
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQDZOMpHb1kVe+4dhj5QTh6wB69RSbkqxA6CA9Olwq+SSIe/CObbOafaEGyTUmZ1HDIgyTGzH2PgYDz17gxcld11GBKrW4lViIvkblnbMyzjjzxqqJY4CwGjpEBtnwnw3q4GZqQO2Jk7ZK1aJ3s5nJylDMmaLong5BUqDwohBNykuC2OMt+Xg/o0px3uVvz//THjIy4SSRGKwDnoh8d8CIOvi3RA1g6wov8q/Xcm4w6eZhOTgInovO9sKukng3LgTnnY5FXHuCRBZuvi9sy6Bye8If3rG4uPMQ3fLnd/Y7ekDev7oZLViFm7Ldmgmbpu99ezdus+OOdo0YeHegccxAux autom8@dash
```

- 16x2 LCD text, currently dependent on the host:
  - MCR-Alpha:

```
Hello! ODROID!
- MCR-Alpha -
```

  - MCR-Gamma:

```
Hello! ODROID!
- MCR-Gamma -
```

  - MCR-Delta:

```
Hello! ODROID!
- MCR-Delta -
```

  - MCR-Beta:

```
Hello! ODROID!
- MCR-Beta -
```

Implementation

The ODROIDs are now using Armbian's Focal (Fossa) XFCE release with an older version (early 2020 release) of the U-Boot bootloader flashed with the ArchLinuxARM sd_fusing.sh tool.

This older bootloader version is flashed instead of using the one that is on the Armbian image, because at the time of installation, the version distributed on Armbian's ISO images is a more recent, broken version. (doesn't boot without a serial adapter connected, Ethernet doesn't work.

Then:

- an `odroid` user and `autom8` user are created
- the `autom8` user gets the ssh key added
- the `sudoers` shutdown commands get added to the '/etc/sudoders' file
- a file to autostart XFCE, with the `odroid` user is added (lightdm)
- Add the Barrier SSL key to the Barrier's TrustedServers.txt
- add files to the `odroid` user's autostart (XFCE) directory:
    - Start Firefox Kiosk mode with the corresponding URL
    - Kill the xfce4 panel/menu bar because otherwise it shows up over the firefox fullscreen until the window is clicked on
    - Start Barrier in client mode that automatically connects to the server (config) with SSL, or in server mode with SSL (config)

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https://wiki.c3l.lu/ - **Chaos Computer Club Lëtzebuerg**

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Last update: **2021/10/10 22:51**