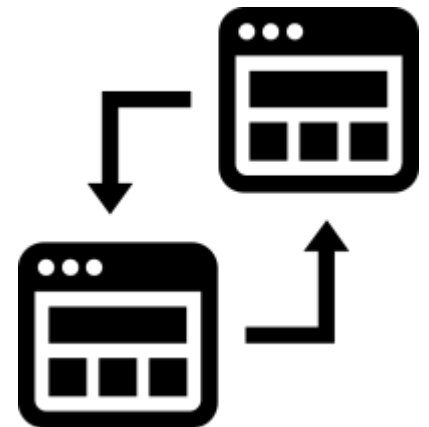


# Command & Control



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



## 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  
AAAAB3NzaC1yc2EAAAADAQABAAQDZ0MpbHb1kVe+4dhj5QTh6wB69RSbkqxA6CA90lwq+SSIE/C0bb0afaEGyTUmZ1HDIgyTGzH2PgYDz17gxcld11GBKrW4lV  
iIvkbInbMyzjjzxqqJY4CwGjpEBtnwnw3q4GZq002Jk7ZK1aJ3s5nJylDMmaLo  
ng5BUqDwohBNykuC20Mt+Xg/o0px3uVvz//THjIy4SSRGKwDnoh8d8CI0vi3RA  
lg6wov8q/Xcm4w6eZh0TgInov09sKukng3LgTnnY5FXHuCRBZuvi9sy6Bye8If  
3rG4uPMQ3fLnd/Y7ekDev7oZLViFm7Ldmgmbpu99ezdus+00do0YeHegccxAux  
autom8@dash
- 16x2 LCD text, currently dependent on the host:

- MCR-Alpha:

```
Hello! ODR0ID!  
- MCR-Alpha -
```

- MCR-Gamma:

```
Hello! ODR0ID!  
- MCR-Gamma -
```

- MCR-Delta:

```
Hello! ODR0ID!  
- MCR-Delta -
```

- MCR-Beta:

```
Hello! ODR0ID!  
- 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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Last update: **2021/10/10 22:51**

