# Configuring CVCP (MRP):

This section provides a procedure for upgrading the boot version, installing the latest Ubuntu 18.04 (version XX), and installing MMITSS on a CVCP MRP.

## Upgrade the CVCP boot code and operating system

1. Connect a serial terminal session to the CVCP (115200, N, 8, 1) with a null modem adapter on the cable.
2. The boot loader contains two files from Boundary Devices (<https://boundarydevices.com/ubuntu-bionic-18-04-3-lts-for-i-mx6-7-boards-august-2019-kernel-4-14-x/>)
3. Closely follow the instructions on this page!!
4. The image we are using is: [20190805-nitrogen-4.14.x\_2.0.1\_ga-bionic-en\_US-console\_armhf.img.gz](https://1quxc51443zg3oix7e35dnvg-wpengine.netdna-ssl.com/eula?file=20190805-nitrogen-4.14.x_2.0.1_ga-bionic-en_US-console_armhf.img.gz) (partition LABEL : sys-16h)
5. First, upgrade to  [U-Boot version 2018.07](https://boundarydevices.com/u-boot-v2018-07/) . We have a SD card in the lab that is labeled (2018.07 – BL). Insert the card into the CVCP sd-card slot on the board, not the external slot. Re-install the board into the controller. Power the controller and touch any key in the serial terminal to stop the boot loader. [if creating a new boot loader sdcard, be sure to copy the 6x\_upgrade script to repace the upgrade.scr U-Boot script and include it on the sd card].
6. Verify the version is 2108.07 using the “version” command at the “=>” prompt.
7. to create an SD card for a console image, you need to do the following :
   1. $ sudo apt-get install gddrescue xz-utils util-linux
   2. $ gunzip 20190805-nitrogen-4.14.x\_2.0.1\_ga-bionic-en\_US-console\_armhf.img.gz
   3. $ sudo ddrescue -D --force 20190805-nitrogen-4.14.x\_2.0.1\_ga-bionic-en\_US-console\_armhf.img /dev/sdX

You have to replace sdX with your actual SDHC reader/writer device. Use the lsblk command to check it.

Type lsblk with unplugged SDHC reader, then insert the device, and type lsblk again. A new node will be added , that is your SDHC reader/writer device.

1. Insert the SD card into the slot on the board, insert into the controller and power it up.
2. If at UArizona, register the mac address so you can use dhcp to get on the network. The address is dhcp.arizona.edu.
3. Copy the /etc/network/interfaces file to /etc/network/interfaces.dhcp so you have a dhcp version if needed.
4. Edit (nano) the /etc/network/interfaces file to change to a static IP address. Add the following lines:

iface eth0 inet static  
address 192.168.1.5  
netmask 255.255.255.0

gateway 192.168.1.1

1. Copy the /etc/network/interfaces file to /etc/network/interfaces.static so you can easily switch by copying to /etc/network/interfaces in the future.
2. Connect via the console. The IP address should be from the network DHCP server so that we can access the internet to load docker and mmitss.
3. Check and set date and time if needed.
   1. sudo date --set "2 July 2020 22:11:00"
4. Update the repos – sudo apt-get update
5. Apply the update – sudo apt-get dist-upgrade
6. Reboot (sudo reboot)
7. You may have to check the ip address using the serial terminal if it changes on reboot.

## Install Docker

1. sudo apt-get install \
2. apt-transport-https \
3. ca-certificates \
4. curl \
5. gnupg-agent \
6. software-properties-common
7. curl -fsSL test.docker.com -o get-docker.sh && sh get-docker.sh

## Install mmitss

1. Figure it out……