Raspberry Pi

- HDMI Doesn't Output Video When Plugging in Display After Boot
- Install UniFi Controller on Raspberry Pi

HDMI Doesn't Output Video When Plugging in Display After Boot

ISSUE: Raspberry Pi does not display video output when connecting HDMI monitor after startup. Keyboard and mouse input do not wake up display and rebooting outputs video. Raspberry Pi is responsive to ping/ssh and other services.

RESOLUTION: This functionality is disabled by default. To enable, edit /boot/config.txt and add/uncomment the line `hdmi_force_hotplug=1`. This file also contains `disable_overscan=1` which will fix issues with black borders if not set up during initial configuration. Once changes to the file are made, a reboot is needed to apply.

As the file requires root permissions, can be edited with `sudo nano /boot/config.txt`.

Install UniFi Controller on Raspberry Pi

1. Install and update 64-bit OS.
2. Set a static IP. From the terminal enter `nano /etc/dhcpcd.conf` and uncomment the lines under Example static IP configuration. Reboot to apply and test.
3. Install rng-tools with `sudo apt install rng-tools`. The config in /etc/default/rng-tools-debian should be modified. Uncomment the line with `HRNGDEVICE=/dev/hrng`. Once the file is saved restart with `sudo systemctl restart rng-tools`.
4. Prior to installing the UniFi controller, an older version of libssl needs to be installed and mongodb installed, enabled, and started.

```
wget http://ports.ubuntu.com/pool/main/o/openssl/libssl1.0.0_1.0.2g-1ubuntu4_arm64.deb -O libssl1.0.deb
sudo dpkg -i libssl1.0.deb
wget https://repo.mongodb.org/apt/ubuntu/dists/xenial/mongodb-org/3.6/multiverse/binary-arm64/mongodb-org-server_3.6.22_arm64.deb -O mongodb.deb
sudo dpkg -i mongodb.deb
sudo systemctl enable mongod
sudo systemctl start mongod
```

5. Rather than downloading and installing the Debian package, we will add the repository so that it can be managed with apt. Enter `echo 'deb [arch=amd64 signed-by=/usr/share/keyrings/ubiquiti-archive-keyring.gpg] https://www.ui.com/downloads/unifi/debian stable ubiquiti' | sudo tee /etc/apt/sources.list.d/100-ubnt-unifi.list >/dev/null` to add the repository to the apt configuration. Next, add the key to your trusted keys with `curl https://dl.ui.com/unifi/unifi-repo.gpg | sudo tee /usr/share/keyrings/ubiquiti-archive-keyring.gpg >/dev/null`.
6. Run `sudo apt update` to update the package repository.
7. Install the UniFi package with `sudo apt install unifi`. Answer yes to continue.
8. Check the service status with `sudo service unifi status`. If it hasn't started install Java with `sudo apt install openjdk-17-jre-headless unifi`.
9. Run `sudo service unifi start` to start the service again.
10. You should now be able to access the controller at https://{your-ip}:8443 and begin configuration.