

Raspberry Pi Network Troubleshooting

Connecting to the Pi's

The Pi's on both the ground robot and the drone have been given static IP addresses to make establishing an SSH connection easy every time they are powered on. The D-Link router provided to us is discoverable under the name 'd-link', and can be connected to with the password 'capstone'. To give the router and everything connected to it internet access, simply plug an Ethernet cable into the back of it. To connect to the Pi's on the robot or drone, you must be connected to the d-link network.

To SSH into the Pi on the ground robot , use the IP address: 192.168.0.101

To SSH into the Pi on drone, use the IP address: 192.168.0.100

For each Pi:

username - *pi*

password - *raspberrypi*

Troubleshooting

The Raspberry Pi's network configurations are a bit finicky, and can cause problems with trying to autoconnect to networks that have WiFi access. In case anyone runs into problems keeping the WiFi connection, below is a description of what I had to do to correct the problem.

The Pi's network configurations can be found in the `/etc/wpa_supplicant/` directory in a file called `wpa_supplicant.conf`. Here you will find a list of all networks known to the Pi, and the Pi's login credentials. The first two lines of the file are typically uniform across all Pi's, so you shouldn't need to mess with them. To restrict what networks your Pi can and cannot connect too, simply delete all of the other network information and save the file.

If the above steps were unsuccessful in keeping your Pi connected to the WiFi, try following the steps in the link below.

<http://alexba.in/blog/2015/01/14/automatically-reconnecting-wifi-on-a-raspberrypi/>

More in depth instructions and other work-arounds pertaining to the Pi's WiFi connections can be found in the link below.

<https://www.raspberrypi.org/forums/viewtopic.php?f=28&t=44044>