IP Address Configuration

Submitted by Jochen Wendebaum on Wed, 2016-04-06 09:01

By default, the network interfaces of all CCpilot and CrossCore units use DHCP [1], i.e. they acquire their IP address automatically. The devices broadcast their IP address on the local network (please see here on how to detect the units from your PC [2]). For the device to aquire an IP address in this mode it requires a DHCP server. These can be found in all routers and some switches and other devices. An easy way to have the device aquire and IP address and connect to it with your computer is to hook both the device and your computer to the same router. This can either be a work network or a single stand alone router.

If your network policy does not allow those information packets to pass through, you can configure a static IP address [3] instead.

There are a two different ways this can be done:

1. Attached to this article there is a file 'cc-auto.zip' that will allow you to set the IP address mode (static / dynamic) and settings and insert the file into the display via USB. The script file will automatically update the IP address settings. Instructions for use are contained in the file itself (cc-auto.sh).
2. Connect to the display using DHCP and change the mode manually to a fixed IP address. In order to do this, you need to access the unit once through the network using DHCP. So you need to connect both the unit and your PC to for example a router or another network which do not restrict the trafic. After connecting to the unit through SSH (an application called 'Putty' is useful here), you can edit the interfaces file and change it according to your requirements. You should contact your IT department to get a dedicated static IP address you should use.

To edit the interfaces file, first unlock the OS with

```
# mount -o remount,rw /
```

Then edit the 'interfaces' file using the simple text-editor, nano [4].
Type:

```
# sudo nano /etc/network/interfaces
```

Sample of 'interfaces' file, changing from dhcp to static IP address (in this example: 192.168.2.185):

Original (DHCP):

```
auto lo
iface lo inet loopback
auto eth0
iface eth0 inet dhcp
```

Changed (Static IP):

```
auto lo
iface lo inet loopback
auto eth0
iface eth0 inet static
address 192.168.2.185
netmask 255.255.255.0
gateway 192.168.2.254
```

Once the file has been edited, re-lock the OS with:

```
# mount -o remount,ro /
```

it is recommended to either reboot the device, or to bring the network interfaces down and up again, for the IP address configuration to take effect.

```
# sudo ifdown eth0
# sudo ifup eth0
```

There is plenty of information on the internet about usage of the interfaces file and how to use it. [5]

Resetting the IP Address to DHCP with USB

Sometimes due to improperly setting the static IP or other issues it may be necessary to reset the IP configuration back to its original state. This will reset the networks file back to a DHCP type network. Once this is done you may use the attached USB file below to change the display back to a static type configuration.

To complete this, download the 'IPAddress_DHCP_Reset.zip' file below. Extract both files in the zip file to the **root** directory of a USB and insert the USB into the display. When the display reboots remove the USB. Once it has booted back up it should be reset to a DHCP type connection. You may then use the other zip file attached to this article and the instructions above to set the display back to a static address if desired.

Attachment	Size
Auto set IP address configuration for imX5 (VC/VA/XA/XS) [6]	907 bytes
Auto set IP address configuration for imX6 (VS/VI2) [7]	929 bytes

Attachment	Size
⊞ ipaddress_dhcp_reset.zip [8]	522 bytes

Category:

ARM-Platform [9]
Linux [10]
X86-Platform [11]

Source URL: https://support.crosscontrol.com/kb/ip-address-configuration

Links

[1] http://whatismyipaddress.com/dhcp

[2] https://support.crosscontrol.com/kb/how-find-ip-address-ccpilot-network

[3] http://whatismyipaddress.com/dynamic-static

[4] https://www.howtogeek.com/howto/42980/the-beginners-guide-to-nano-the-linux-command-line-text-editor/

[5] https://duckduckgo.com/?q=linux+networking+interfaces+file

[6] https://support.crosscontrol.com/sites/default/files/kb/cc-auto.zip

[7] https://support.crosscontrol.com/sites/default/files/kb/auto_ip_config_vs.zip

[8] https://support.crosscontrol.com/sites/default/files/kb/ipaddress_dhcp_reset.zip

[9] https://support.crosscontrol.com/kb/arm-platform

[10] https://support.crosscontrol.com/kb/linux

[11] https://support.crosscontrol.com/kb/x86-platform