

PiBox - Bug #164

eth0 comes up even if nothing is connected

16 Feb 2013 20:26 - Hammel

Status:	Closed	Start date:	16 Feb 2013
Priority:	Immediate	Due date:	
Assignee:	Hammel	% Done:	100%
Category:	04 - Root File System	Estimated time:	0.00 hour
Target version:	0.5.0 - Beta 1		
Severity:	01 - Critical		
Description			
PiBox needs a /etc/network/interfaces that defines which interfaces to bring up: lo0, eth and wlan0.			
This might go away once connman is properly configured.			

Associated revisions

Revision 810ce415 - 29 Apr 2013 08:52 - Hammel

RM #164: Integrate bui-network-config into buildroot build.

Revision 80bb1c11 - 29 Apr 2013 08:59 - Hammel

RM #164, RM #165: Enabled bui-network-config and feh (image browser) along with associated dependent libraries.

Revision 88f07801 - 29 Jul 2013 21:06 - Hammel

RM #164: Updated S40network to work with /etc/network/interfaces and ifup/ifdown.

History

#1 - 17 Feb 2013 16:52 - Hammel

- Status changed from New to In Progress
- % Done changed from 0 to 10

Connman links:

- [web site](#)
- [ArchLinux Wiki](#)
- [Beaglebone Linux 101: Assigning a Static IP Address with Connman](#)
- [BugLabs](#) - which uses Connman under the hood
- [Ubuntu Wiki](#)
- [The pros and cons of Intel's ConnMan for Linux](#)
- [Adafruit tutorial](#)
- [Meego discussion](#)
- [Mobile network management with ConnMan](#)
- [D-Bus/ConnMan](#)

I need to see if connman can be convinced to bring up the network only if the interface is configured. If so, I can drop S50network and let connman handle it instead.

#2 - 23 Feb 2013 16:07 - Hammel

- % Done changed from 10 to 20

Based on [ArchLinux Wiki](#), the following updates need to be made.

1. Add dbus-python under Hardware Handling for Buildroot
2. Add --enable-test in the connman package. This requires a patch for connman in Buildroot. Ideally, it should be a patch that adds the test scripts as a configurable option (and submit to Buildroot if its not there now) or, at a minimum, a patch that copies <src>/test/test-connman to <target>/usr/bin

The former is required before I can even test the ArchLinux instructions. The latter can be copied by hand to perform that test.

It's not clear how this interacts with wpa_supplicant and whether /etc/wpa_supplicant.conf needs to be updated by connman or not. We'll just have to try it and see.

#3 - 24 Feb 2013 13:04 - Hammel

- % Done changed from 20 to 50

I've enabled python support for dbus and added a patch for enabling the test option. These build fine in my sandbox. I need to do a full rootfs build while I test the rootfs on the Pi board before checking these changes in.

#4 - 25 Feb 2013 09:12 - Hammel

- % Done changed from 50 to 60

Verified build completes correctly with the following updates:

1. Bump connman to 1.11
2. Add connman-tests configuration to get test-connman script.
3. Disabled avahi. Not needed by anything that I know of.
4. Enabled python-dbus for connman.
5. Disable ext2 image creation.

Initial use of [test-connman](#) does not generate a list of services as displayed on the ArchLinux wiki, though the mods to /etc/dbus-1/system.d/connman.conf has not yet been applied. It's unclear if I have additional configuration to do or not.

#5 - 01 Mar 2013 21:37 - Hammel

Connman wants wpa_supplicant 0.8 or 1.0. Buildroot 201205 provides 0.7.3. The configuration settings specified for wpa_supplicant to work with connman can't be set with 0.7.3.

I'll need to rev wpa_supplicant before continuing with connman integration.

#6 - 03 Mar 2013 16:22 - Hammel

Rev'd Buildroot to 2013.02 to pick up latest wpa_supplicant and everything else I might need. Seems to work so far, but the rootfs needs to be sanitized on a 32bit build system first.

Once that's done, I can return to trying to get connman running.

#7 - 09 Mar 2013 15:33 - Hammel

Buildroot is rev'd to 2013.02.

That gives me connman 1.10 and wpa_supplicant 2.0.

The build boots on the Pi board okay (minor tweaks to buildroot build required, but those are checked in now).

Testing using these instructions:

1. [ArchLinux wiki](#)
2. [Beaglebone Linux 101: Assigning a Static IP Address with Connman](#)

Neither works. I get no output at all.

Trying connmanctl, I can list technologies which only shows the wired port. No wifi port even though the wifi drive is loaded and manually configuring wpa_supplicant will get it to work.

#8 - 09 Mar 2013 15:50 - Hammel

Forget connman. Too much trouble to get working. Instead, just config the wifi with wpa_supplicant manually.

As for eth0 trying to come up, the S40network script can be modified to look in /etc/network/interfaces for interfaces marked as "auto". These are the ones that should be configured with dhcp. Only two such interfaces will be supported: eth0 (wired) and wlan0 (wifi).

#9 - 10 Mar 2013 12:08 - Hammel

- Priority changed from Urgent to Immediate

#10 - 08 Apr 2013 09:33 - Hammel

I've started writing [bui-network-config](#) for editing /etc/network/interfaces and /etc/wpa_supplicant.conf. This is extremely simple-minded but it should suffice for a project like PiBox or BeagleBox. This configuration utility is C/GTK+ based and will be available from the BUI panel.

Once configuration of the /etc/network/interfaces file is handled, S40network can be modified to use ifup to bring up only configured interfaces.

#11 - 14 Apr 2013 17:09 - Hammel

bui-network-config has been written and tested on my desktop.

I now need to do the following:

1. integrate it into the PiBox build
2. Revert S40network to the Busybox/Buildroot version
3. Add bui-network-config to default BUI configuration
4. Test bui-network-config on the target

Getting close to decent network support.....

#12 - 25 Apr 2013 09:11 - Hammel

First test of bui-network-config on target failed with a crash. This may be due to a bug fix that's been applied to bui-network-config (see [revision #80b7974f](#)). This may not be currently included in the version I tested on the target.

#13 - 29 Apr 2013 09:07 - Hammel

- Severity changed from 03 - Medium to 01 - Critical

#14 - 01 May 2013 08:59 - Hammel

Rebuild bui-network-config on target and it still crashed. This was even after removing the cached local archive.

I've created a bug against the bui-network-config project (See #189). I'll need to generate the xcc-debug opkg to debug on the target.

#15 - 07 Jul 2013 17:07 - Hammel

bui-network-config is fixed, though new issues (see #190) are being opened on it to provide new features.

Now S40network needs to be rewritten to parse /etc/network/interfaces.

#16 - 08 Jul 2013 09:12 - Hammel

- *Severity changed from 01 - Critical to 03 - Medium*

#17 - 18 Jul 2013 18:16 - Hammel

- *% Done changed from 60 to 70*

After fixing bui-network-config to properly update the interfaces file, I tried running ifdown/ifup to bring up the wlan and not the wired port. Works as expected.

This should simplify the structure of S40network dramatically, but I need to actually test that to be certain it works.

What I need to do:

1. change S40network start to be ifup -a
2. change S40network stop to be ifdown -a
3. Run multiple tests, changing the configuration between eth0, wlan0 and both and make sure the script does as expected.
4. Verify reboots bring the network up as expected.

If this works, save the modified S40network to the skeleton in the pibox source tree.

#18 - 29 Jul 2013 14:20 - Hammel

- *Severity changed from 03 - Medium to 01 - Critical*

#19 - 29 Jul 2013 21:08 - Hammel

- *Status changed from In Progress to Closed*

- *% Done changed from 70 to 100*

Done. S40network now uses just ifup/ifdown but must manually start/stop wpa_supplicant. Tried various configs with eth0 and wlan0 enabled or disabled with dhcp. Seems to work well, even on reboots.

Code pushed upstream.

Closing issue.