

ISSUES

Issue 1: Connecting to the Wireless at the school network

Proposed Fixes:

*Micheal Stemle, Jr. suggested that the Authentication Type be explored. Some cards have drivers that won't well with WPA, and some don't like WEP.

*Freddy Martinez suggested that the computers be checked to ensure that the wireless drivers be enabled.

*Jim Campbell suggested checking the release cycle (and being upgraded to Ubuntu Gutsy Gibbon 07.10), as a possible fix. Jim was able to connect via the unprotected 'wisecounsel' AP. He suggested that if a student was able to connect to the unprotected AP and not the protected AP, then it was a matter of checking the wireless type of security being used on the router side and on the student side, the wireless card, as well as how they are attempting to connect to AP. He also commented that the latter part isn't always very easy in Gnome's network manager.

*Chad Sutton had several possible fix solutions. His first claim was to check the wireless enabling switch.

--FUN+F2 on Dell's was the solution.

He also wants a check to assume that everything is working properly. The following is based on the assumption that the wireless card be is eth1 (with eth0 being the wired network card).

--If the /etc/network/interfaces file has anything in it besides the lo interface then they should remark it out. This will allow your graphical network card manager. If your drivers are all installed and working than this will fix the issue pretty quickly.

```
sudo nano -w /etc/network/interfaces
```

Chad's file below. It should be readily apparent where Chad remarked out all the network card lines with a #.

---Begin File---

```
auto lo
iface lo inet loopback
```

```
address 127.0.0.1  
netmask 255.0.0.0
```

```
#iface eth0 inet dhcp  
#auto eth0
```

```
#iface eth1 inet dhcp  
#auto eth1  
---End File---
```

---In case this doesn't work, Chad suggest that they might be an issue with the driver. Chad was able to ditch ndiswrapper in Ubuntu Gutsy Gibbon 10.7, using his Broadcom 43xx wireless card. To check whether his driver was loaded, he proposed the following command:

```
lsmod |grep bcm43xx
```

Which returns:

```
bcm43xx      127336 0  
ieee80211softmac  31360 1 bcm43xx  
ieee80211     35656 2 bcm43xx,ieee80211softmac
```

To understand whether or not the driver is loaded, Chad simply checks to see if some lines are returned. In this case they are. However, Chad also suggests that other network card drivers may be different. For instance if the laptop is using the Intel Centrio chip set it would be ipw2200 instead of bcm43xx. If one is NDISWrapper then ndiswrapper is the driver you need to load.

--If the driver isn't loaded (no lines are returned from the last command), Chad further suggested loading it manually by running the following command:

```
sudo modprobe bcm43xx
```

Again, replacing the network card driver with your specific driver.

Once you know your driver is loaded, it is possible to check and see if the wireless card can actually detect networks. The following command will do the trick:

```
iwlist eth1 scan |grep ESSID
```

--This should return a list of all the wireless networks the computer can detect. Should the computer be inoperable for some reason, the list will be blank. It is also possible to run, `iwlist eth1 scan |grep` to

see all the other detailed information.

Finally, if it is possible to detect networks with the scan then your driver is loaded and working.

Fix:

Of all the solutions proposed by the various members of the group, Pat Green was the one who finally reported the solution back to the team. One of the students attempted to enter the pass phrase in ascii mode, instead of all the attempted logins using the hexadecimal 128 bit option. The conflict was resolved.

INSTALLATION

Jim helped Ashley (last name withheld) install Ubuntu (release version atm, unknown) onto her computer. He explained to her that the most key component to the installation was manually partitioning here drive to include a separate /home partition. This way, the /home is a directory where documents, photos, et al computer files are stored. documents are stored independent of the Operating sytem, making inter polarity between various flavors of GNU/Linux possible, as well as serving as a way fail safe for settings. The settings used were:

/boot partition: 98mb (this amount of space should be fine for any machine)

/ partition: ~20-25gb (do others in the loco think this size is appropriate for the root partition? It's probably more than necessary - even 10-15 gb should be more than enough. Sorry, Ashlee...)

/home partition: ~55 gb

/swap partition: 756mb (as a rule of thumb, a swap partition should be about 1.5x the amount of RAM that is on the system.)

If the student has more or less space on their HD, they could adjust the size of the /home partition accordingly.

Jim would like to note that when building a server, it is likely that the admin would want to partition things differently - maybe a separate partition for /etc or /var or /tmp, too- but the above is the standard Jim Campbell set up for a desktop.

Background

On November 4th, 2007 Patrick Green contacted the Ubuntu Chicago Loco Team with a project proposal, via the Chicago Team mailing list. Before continuing as to the details of the proposal, it is important to take speak about the team. Ubuntu is a distribution of the GNU/Linux Operating System, distributed mostly by Canonical, Ltd, with a focus on ease of use and community. As with most Open Source Software, much work is done in a a distributed manner, and Canonical is not personally responsible for much of the changes done to the software, but they do much work. To promote the Ubuntu community, there are Ubuntu Forums, local teams, Internet Relay Chat networks, and developer summits, among others. Of these, we will mostly talk of the Local Teams. The LoCo have a stated purpose of existing to help and support Ubuntu, by translating software, helping fix bugs, etc. These LoCo teams are not run by Canonical in any way, instead they are organized, run, promoted, and managed by group members.

Pat Green's proposal begins with it's own background. Pat works part time at Christian Life College, 400 E. Gregory in Mt. Prospect, IL. This is a small college, where many of the students don't have large money for software and aid. The college itself has very little flexibility with their budget, thus the technological infrastructure degraded into bad shape and was headed farther south. In return for the Ubuntu Chicago Loco's help with migrating the college's server from Windows Server 2003 to Ubuntu Linux, the college was willing to offer the largest computer lab and meeting space for the LoCo's own meetings. If there are any critical issues which occur, these would be on the top of the meeting agendas. This is key because the school is an accredited four year college, yet it is composed almost entirely of non technical users. The school does not even offer a major in any sort of IT or CS field.

Start/Progress

Nov. 5th was the official launch of the project. On this day, Richard Johnson showed up, as well as Jim Campbell and Robert Stoloroz helped out by offering lower than market rates on hardware. Between 7pm and 10pm, the LoCo gave various talks about how to use Ubuntu, helped install the system onto the computers of several students, and Richard was given a tour around the various computer labs.

Resources

Robert Stoloroz has set up a webpage for uploading videos and audio of the meetings for us. The page can be found at:

<http://www.feratechinc.com/modules/wfdownloads/viewcat.php?cid=4>

(accessed Nov. 12th, 2007)

Because of Robert Stoloroz's work, he was able to sell laptops at amazing prices. For example, he sold the following computer to a Matt, a student: HP dv4230us 1.8 Intel Celeron with 512mb Ram and a 128mb video card. Ubuntu Gutsy Gibbon (7.10) was installed without a single problem. The appearance options were set to maximum and the laptop handled it well. All the drivers worked perfectly from the get go and Wine was installed to add Windows compatibility.

As of November 12th, 2007 all of the computers in the school have Open Office instead of Microsoft Office. This was an organic extension, as the students were responsive to Open Office and tended to save their homework on the default ODT setting.