

Using the TP-LINK TL-WN722N on CentOS 6.2 x86_64

Revised Feb 11, 2012 by j.w.curtis and r.a.parks.

Introduction

The following document was created for the purpose of supporting a **TP-LINK TL-WN722N** USB Wi-Fi adapter (802.11b/g/n) on a clean, vanilla installation of CentOS 6.2 x86_64. The following is provided “as is” without warranty of any kind, either expressed or implied.

Prerequisites

- You've successfully installed CentOS 6.2 x86_64 using either the 'Minimal Desktop' or 'Desktop' configuration, or a custom configuration that includes the Minimal Desktop functionality. (CentOS is available for download via <http://www.centos.org/>. Installing it is outside the scope of this document.)
- You have yet to apply any CentOS updates after installation. This document assumes a new, non-patched installation, and does not take into account the possibility of kernel and driver updates until after the initial Wi-Fi configuration is complete.
- You know the 'root' password created when installing your CentOS.
- A TP-LINK TL-WN722N adapter is physically plugged in to a USB port on the system.
- A functional, wired Ethernet adapter is also connected to the system, and you're able to reach destinations on the Internet. (Note that Ethernet is not configured to 'Connect automatically' following a new CentOS 6.2 installation, so you may have to activate it before getting started.)

Getting Started

1. Log in to the system as 'root' if you haven't already.
2. Launch Applications > System Tools > Terminal.
3. Type **lsusb** and press Enter. Look for a line similar to the following that mentions the Atheros AR9271 chipset. This confirms that the system knows that your TP-LINK TL-WN722N is physically connected. If you don't see the following, it's unlikely that this procedure is going to work upon completion.

```
Bus 002 Device 002: ID 0cf3:9271 Atheros Communications, Inc. AR9271 802.11n
```

4. Next we need to install the Kernel Development package. Type the following command and press Enter.

```
yum install kernel-devel-2.6.32-220.el6.x86_64
```

You'll be prompted asking, Is this ok [y/N], twice. Press **y** [Enter] each time.

5. Install the C compiler using the following command and Enter.

```
yum install gcc
```

You'll be prompted asking, Is this ok [y/N]. Press **y** [Enter].

6. Install a program to download files from the web. It will likely be already installed, but it doesn't hurt to confirm.

```
yum install wget
```

7. Confirm that we're in the home folder by typing following command, followed by Enter.

```
cd
```

8. Download the firmware for the Atheros AR9271 chipset and copy it to the correct place using the following two commands, pressing Enter after each line.

```
wget http://linuxwireless.org/download/htc_fw/1.3/htc_9271.fw
```

```
cp htc_9271.fw /lib/firmware
```

9. Download the correct driver using the following command, followed by Enter. Please note that this is a single line, and not two.

```
wget http://www.orbit-lab.org/kernel/compat-wireless-3-stable/v3.3/compat-wireless-3.3-rc1-2.tar.bz2
```

10. Extract the driver into /usr/src, compile it, and install it using the following commands, with Enter after each line.

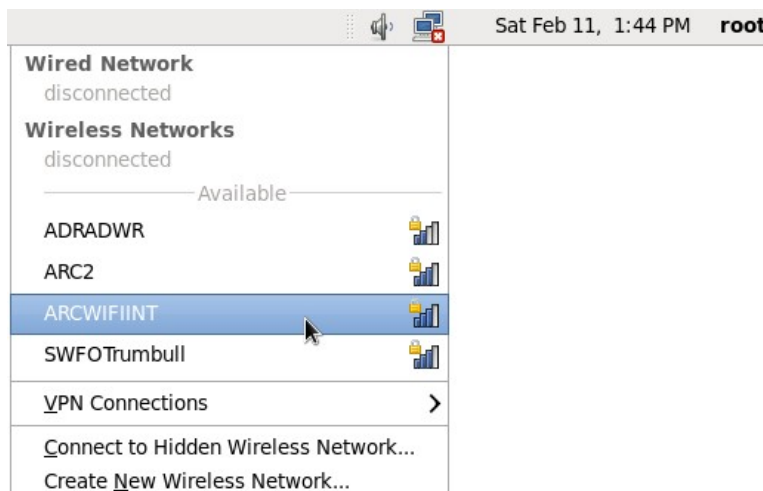
```
cd /usr/src
tar jxvf /root/compat-wireless-3.3-rc1-2.tar.bz2
cd compat-wireless-3.3-rc1-2
./scripts/driver-select ath9k_htc
make
make install
modprobe ath9k_htc
service NetworkManager start
chkconfig NetworkManager on
exit
```

11. Reboot computer via System > Shut Down > Restart.

12. Disconnect Ethernet cable, as we'll want to test our Wi-Fi connectivity.

13. Log back in as root.

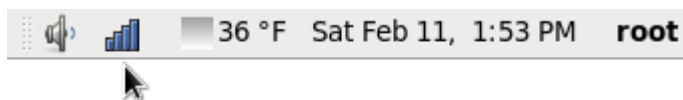
14. Left-click on the Network icon in the upper, right-hand portion of the screen, just to the left of the date and time. Any locally available Wi-Fi networks should appear in the list.



15. Click on the Network you wish to connect to. Then choose the appropriate security type, enter the password, and click **Connect**.



16. You should now be connected to Wi-Fi successfully.



Updates

Because we began this process with a system to which no updates had been applied, let's now walk through the update process.

17. Launch System > Administration > Software Update. Assuming you've logged in as root, you'll be warned that you're running as a privileged user. Choose **Continue Anyway**.

18. If updates are available, install them all by selecting **Install Updates**. Reboot when finished if prompted. Please continue reading on the next page for very important information.

19. Your TP-LINK TL-WN722N may be once again unusable following a significant update. If that is the case, launch Applications > System Tools > Terminal, and re-enter the following commands one at a time, pressing Enter after each. You will not need Ethernet or Internet connectivity to perform these steps. Only perform these steps when your adapter becomes unavailable following an update.

```
cd /usr/src/compat-wireless-3.3-rc1-2
./scripts/driver-select ath9k_htc
make
make install
modprobe ath9k_htc
service NetworkManager start
chkconfig NetworkManager on
exit
```

20. Any time that you need to perform step 19, reboot again and verify Wi-Fi functionality afterward. Save this document for use after future updates.

Reference

- <http://wireless.kernel.org/en/users/Download/stable/>
- http://wireless.kernel.org/en/users/Drivers/ath9k_htc
- http://linuxwireless.org/download/htc_fw/1.3/
- <http://home.roadrunner.com/~computertajjutsu/wireless.html>



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