

## TREVECCA UNPLUGGED

### WIRELESS FAQ

The purpose of this document is to answer many of the commonly asked questions pertaining to wireless access at Trevecca Nazarene University.

Trevecca Nazarene University uses two SSIDs on the **Trevecca Unplugged** wireless network. Those are Trevecca-Unplugged and Trevecca-Unplugged-Secure. For *unsecured* access, the SSID is Trevecca-Unplugged and is available to employees, students, and visitors. For *secure* access, the SSID is Trevecca- Unplugged-Secure and is available to employees and students only. To avoid confusion, the secure SSID, Trevecca-Unplugged-Secure, will be hidden. Unless a question specifically pertains to the secure SSID, “Trevecca Unplugged” will be used as a *general name*.

Q: Which wireless network should I use?

A: Trevecca Nazarene University’s wireless network is named "Trevecca Unplugged" and this is the one you should use on campus. You may see other networks listed but they are not supported by ITS and they may be unsafe to use.

Q: Can I use my own wireless router or wireless access point?

A: No. It is against Trevecca Nazarene University’s Acceptable Use Policy to connect your own wireless router or wireless access point anywhere on campus. Such devices can disrupt the system, preventing other users from accessing the Trevecca Unplugged wireless network. In addition, Trevecca Nazarene University has supplied access points in all residence halls and apartments, so there is no need to bring one from home. If you have done so already, please send it home immediately.

Q: How do I connect to Trevecca Unplugged?

A: Please refer to the instructions that pertain to your specific operating system. Those are located at our external website, <http://www.trevecca.edu> and on the internal ICE page (<http://ice.trevecca.edu>). In a nutshell, students and employees may use the **Trevecca Unplugged WiFi Utility**. Visitors may select **Trevecca-Unplugged** from the list of available wireless networks.

Q: I’ve connected to Trevecca Unplugged, but when I try to use my web browser all I see is a Network Access Control (Campus Manager) page. Why can I not browse the Internet?

A: All computers and devices that connect to Trevecca Unplugged (and *TNUnet*) must register with our computer registration system (Campus Manager) and meet the requirements of having an up-to-date operating system, anti-virus software, and anti-spyware. For more information on Campus Manager, browse to <http://www.bradfordnetworks.com>.

Q: How can a visitor connect to Trevecca Unplugged?

A: Visitors may connect to **Trevecca-Unplugged** (not **Trevecca-Unplugged- Secure**) to obtain Internet only access after registering their computer on our Campus Manager computer registration system. The wireless access through **Trevecca-Unplugged** is not encrypted and therefore visitors access this wireless network at their own risk. Trevecca requires all computers connecting to *TNUnet* or Trevecca Unplugged to have up-to-date patches and/or service packs for their operating system. In addition, the computer must have up-to-date anti-virus and anti-spyware installed.

Q: What can I access from Trevecca Unplugged?

A: Any Internet resource commonly available, although all web traffic is filtered. Access to campus systems is available for students and employees by using Citrix (<http://lester.trevecca.edu>).

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Q: Does the TNU Bookstore sell wireless b/g cards for laptop or desktop computers?

A: Yes. The TNU Bookstore sells b/g USB wireless adapters, g desktop wireless adapters, and g laptop wireless adapters.

Q: Can VPN software be used on wireless Trevecca Unplugged?

A: No, VPN capability is not supported.

Q: Should I use wireless in my residence hall room?

A: Students living in Trevecca's residence halls and apartments can use the wired network – which is much faster – or the wireless network – which may be more convenient. The choice is yours.

Q: What does "full coverage" mean?

A: All floors of a building with full coverage have wireless access. But just like cell phone coverage, there may be isolated "dead zones" in any given building. These weak or dead zones could be caused by interference with electronic appliances, physical barriers, or even mirrors.

Q: I cannot detect Trevecca Unplugged from my dorm room or apartment. What can be done?

A: ITS (Network Support) wants to know about coverage issues in locations reported to have full coverage. You may report such problems by calling the ITS HelpDesk (x1223). ITS network support staff will arrange for a site visit to test the signal in the identified area and take appropriate action based on findings.

Q: What kind of wireless network card should I purchase?

A: ITS does not recommend a specific brand or model of wireless card. Laptop users should consult with their laptop vendor to arrange the appropriate purchase of a wireless card that will support the WPA protocol. The TNU Bookstore sells wireless network adapters for laptop and desktop computers.

Q: What is Trevecca Unplugged wireless coverage area on campus?

A: View the PDF document, Wireless Coverage Map for details regarding coverage areas (see the I.C.E. page under Services). If you are in a partially coverage area, please understand that some offices, floors, or areas may not receive a wireless signal.

Q: Why am I failing to authenticate properly?

A: The secure SSID **Trevecca-Unplugged-Secure** utilizes your Trevecca logon user name and password for authentication. Please contact the ITS HelpDesk (x1223) to have your password reset and/or your account unlocked.

Q: How do I connect my PDA to Trevecca Unplugged?

A: ITS does not support PDA's, but we can offer general guidance on connecting to the wireless network. Please refer to the PDA instructions located at <http://www.trevecca.edu> and on the internal ICE page (<http://ice.trevecca.edu>).

Q: What wireless standard does Trevecca Unplugged follow?

A: Trevecca Unplugged is based on 802.11g WiFi technology, which is also compatible with 802.11b devices.

Q: What does 802.11 a, b and g mean?

A: See [http://www.webopedia.com/TERM/8/802\\_11.html](http://www.webopedia.com/TERM/8/802_11.html) for definitions of 802.11.

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Q: Where can I get additional information about Trevecca Unplugged wireless network?

A: The wireless information index is located at <http://www.trevecca.edu> and on the internal I.C.E. page under Services (<http://ice.trevecca.edu>).

Q: Where is Trevecca Unplugged wireless available?

A: Wireless connectivity is currently available in all residence halls, apartments, classrooms, conference rooms, and auditoriums. The wireless network is also available in a few outdoor areas, including the quad areas outside of Adams, Mackey, and Waggoner, and the athletic fields which are home to baseball, soccer, softball, tennis, and the walking track.

Q: Do I need to register my computer through a wired connection and a wireless connection?

A: No. Registering your computer through one connection (wired or wireless) will register both of your network cards with Campus Manager. The only exception to this is if one of your network cards is disabled while registering your computer.

Q: How many computers can 1 AP support?

A: Typically, 15 – 20 computers. These averages are for general computing use, and therefore, may not be suitable for network intensive multimedia applications or large file transfers among many users.

Q: What are the real world data speeds with the AP's used on campus versus the wired data ports speeds?

A: Under general usage, ITS figures you can expect DSL type speeds out of wireless. That is 1-3Mb/s per user, maybe more, maybe less. All wired ports are 10Mb/100Mb full duplex and are connected on a 1:1 ratio. The use of a hub (in your dorm room or apartment) reduces the wired ratio. This is not recommended, but it is still faster than wireless.

Q: What are the plans to move to the new 802.11n on campus?

A: Wireless 802.11n is not currently a ratified IEEE standard and, therefore, is not supported by our enterprise vendor. While some vendors are selling pre-standard solutions, they are not based on a ratified standard and in all likelihood, will not work properly once the standard is accepted. When it is ratified, we will explore options and costs to implement 802.11n.

Q: What is the speed of the Trevecca Unplugged wireless network?

A: 802.11 G works at a maximum theoretical speed of 54 Mbps and 802.11 B works at a maximum theoretical speed of 11 Mbps.

Q: How fast is the wireless network?

A: The easy answer is: it depends. It depends on what type of card you are using. If you are using an 802.11g card you can achieve speeds up to 20 Mbps (Megabits per second). If you are using an 802.11b card you may be able to get 4 – 5 Mbps. It also depends on how far away from an access point you are. The further away you are the slower the speed you can expect. It also depends on the number of people using a particular access point. Wireless is a shared medium, meaning the more people using a particular access point the slower the speed.

Q: Is wireless as fast as the network in my dorm room?

A: No. The wired connection in your dorm room will be faster. The wireless network, under normal load, will run about 20Mbps (Megabits per second). Your wired dorm connection can run up to 100Mbps.

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Q: I heard I should be getting speeds of 11Mbps (802.11b) or 54Mbps (802.11g); my speeds are slower than this. Is my card defective?

A: For 802.11b, eleven (11) Mbps is the theoretical maximum speed that equates to two way transmissions (5.5Mbps upload and 5.5Mbps download). On a real network with many users, those speeds are unlikely. Your wireless card within your computer automatically adjusts its speed to the access point based on many factors including, signal strength, number of users sharing bandwidth on the same access point, and interference. The steps typically are 11Mbps, 5Mbps, 2Mbps, 1Mbps. The same principal applies to 802.11g.

Q: How many people can the wireless network support?

A: Typically, one access point can support up to 20 people. So, theoretically, the wireless network can support over 3,700 people.

Q: How secure is wireless?

A: Wireless networks use public radio frequencies that can be listened in on by anyone who has the proper knowledge. Use caution and do not transmit information you deem confidential. You never know who is listening.

Q: I have Bluetooth wireless. Why doesn't it work?

A: Bluetooth is a wireless standard meant for short range communication with other Bluetooth devices. You need an 802.11 b or g card to use Trevecca Unplugged wireless network.

Q: Do I need a new password to access **Trevecca-Unplugged-Secure** wireless?

A: No. The password required to access the **Trevecca-Unplugged-Secure** wireless network is the *TNUnet* password which is the same as the password for Citrix, lab computers, web mail, and M: drives.

Q: Does a wireless card affect the battery life of my laptop or PDA?

A: Yes. Having a wireless card in your PDA or laptop will drain the battery much faster than normal. Your operating system should have utilities to help you conserve battery life.

Q: What kind of computer do I need for use with the Trevecca Unplugged wireless network?

A: Devices with the following operating systems should work properly (unless otherwise noted): Windows XP Professional, Windows Vista, Macintosh OS x version 10.0 and above. Devices with operating systems older than these may not operate properly and will not be supported on the campus wireless network.

Q: Is there a charge for using the Trevecca Unplugged wireless network?

A: No, there is no charge for connecting to the Trevecca Unplugged wireless network.

Q: How do I get support if I have problems using the Trevecca Unplugged wireless network?

A: Problems using the Trevecca Unplugged wireless network, should be reported to the ITS HelpDesk at x1223.

Q: When is the Trevecca Unplugged wireless network available?

A: The Trevecca Unplugged wireless network will be available 24 hours a day, seven days a week.

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Q: What wireless network cards are recommended and/or supported?

A: For PCs and Macs, we recommend use of a wireless network card that is 802.11b or 802.11g WiFi compliant.

Q: Why is my wireless connection disrupted more frequently than my wired connection?

A: Wireless access points operate within the 2.4GHz frequency range and are prone to interference from microwave ovens, other unknown access points in the area, some cordless phones and many other environmental factors that may be passing between you and the access point at any given time. Though the wireless protocol was designed to be robust, it is still radio frequency and it can be interrupted by various pieces of equipment and/or structures.

Q: I ran the Trevecca Unplugged Wifi Utility (TreveccaUnplugged.exe) on my Windows XP/Windows Vista computer, but I did not receive the balloon window or a prompt to logon to the secure wireless network.

A: The wireless network adapter on your computer is more than likely disabled. To enable your wireless network adapter, click on **Start**, click on **Control Panel**, click on **Network and Internet Connections**, click on **Network Connections**, click on **Wireless Network Configuration**, right-click and select **Enable**.

Q: I am trying to connect to **Trevecca-Unplugged-Secure** and while I am entering my correct Trevecca logon name and password, I cannot authenticate.

A: Your network logon account may be locked out. Please contact the ITS HelpDesk (x1223) for assistance.

Q: I have connected to Trevecca Unplugged, but the signal is weak.

A: Ensure that you are within a coverage area. Also, this issue may be experienced if your wireless network adapter driver is out of date. Please visit the manufacturer's web site for your laptop and/or wireless network adapter.