

Wireless Client Troubleshooting - What can a wifi client do?

- **Streamline your computers connection** to OCU wifi by eliminating other networks. Verify that "ocu" is at the top of the connection list. Remove OCU_Guest and any other un-necessary ESSID. If your home network is at the top of the list then the client will attempt to connect to the home network [broadcasting the ESSID] before attempting a connection to OCU. Each entry on the list above "ocu" will have to "timeout" until an active network is found.
- **Any device in the 2.4 Ghz band** can adversely affect your valid wireless client. By far, unauthorized or "**rogue**" access points are the single most common cause for valid client connectivity issues. Please, report any non OCU wireless access point to Campus Technology and/or Student Life. The owner of these devices may not be aware that their device is interfering with others ability to use the wireless network. The only authorized access points are those installed by Campus Technology Services. Other devices such as **wireless printers, speakers or telephones** in the 2.4 Ghz range will also impede the radio signal for wireless data users. Finally, understand that even devices not designed as wireless devices can adversely affect your signal. **Microwave ovens, CRT monitors or TVs** can leak enough interference to greatly impact a wireless data device from successfully maintaining a connection to a valid wireless network.
- Refrain from using the OCU_Guest network. Fifty percent (50%) of those connected to the OCU_Guest network are "associated" but not authenticated. This additional ESSID is in effect using radio airspace that the "ocu" network could be using. More devices on the guest network cause slower connectivity on the "ocu" network. The OCU_Guest wireless network is unsecured, has limited bandwidth and in addition is limited to web browsing only. Its purpose is to provide access for guest to the campus which may not have another method of connection.
- **Turn off additional wifi devices.** Wifi capable devices such as iPhone, iTouch, Blackberry smartphones with the wifi enabled are using radio bandwidth and therefore limiting connectivity for other devices possibly your own laptop, even though not actively being used.
- Do NOT configure your device to automatically connect to any detected wireless networks.
- Do NOT operate ad-hoc wireless networks; these product interference with the OCU networks.
- Do NOT enable Internet connection sharing.

- **Update your wireless card drivers** to the latest version and/or those with support for enterprise wireless networks and set them for optimized performance. Driver settings such as Aggressive Roaming [how quickly to roam to a less busy AP], Wireless mode [a, b or g], Throughput Enhancement [enabled], RTS/CTS [reduce collisions] could be changed from the default “home” environment settings to those more appropriate for enterprise wireless networking.
- **Use the 802.11a 5.4 GHz band.** Connecting to the “a” radio eliminates several of the interference issues inherent to 802.11bg networks.
- **Turn off the radio when not actively in use** on all your devices, i.e. phones and laptops. Many computer systems have hardware buttons which simply turn off the power to the wifi antennas when not in use. This will free up bandwidth for other devices to use and conserve your battery life.
- Since a client’s radio power can be affected by the battery power, **keep the battery fully charged.** Some systems decrease the signal strength of the wireless radio as the battery charge is reduced. The result is that one could “connect” successfully when the battery is charged and not be able to “connect” when the battery is at 50%.
- When possible, **move to an area with fewer potential clients.** Several client associating with the same AP can congest the AP. Try moving to a different area away from other wireless clients. Depending on the “roaming” setting on your wireless card, your computer should associate with a less congested AP.
- **Use a “wired” connection when you can.** Wireless networks are subject to environmental changes which are out of your control. Be prepared to adapt. Carry a network patch cable in your laptop bag and use a direct wired line, especially when you need more bandwidth. Wired networks by design have a more controlled environment and provide a faster connection with more available bandwidth.