

Optimizing SoftLINK for Wireless Networks

Summary

SoftLINK version 8.02 through 10.70.0006 was optimized to provide better performance in a Wireless Local Area Network (WLAN) environment. A new configuration setting has been added to the SoftLINK Tutor that can be used to maximize performance for WLAN operation. This setting is displayed on the connectivity section of the SoftLINK Tutor configuration and is called "Access Point Speed."

To achieve the maximum benefit from this feature it is important to ensure that the "Access Point Speed" setting used within the SoftLINK Tutor is in-line with your WLAN.

An Access Point is a Device that allows wireless-equipped computers and other devices to communicate with a wired network. It is also used to expand the range of a wireless network. Wireless LAN access points will typically have 'factory' settings which provide a balance between 'Range' and 'Performance'. In general terms, by reducing the range you can enhance performance. Access Points will use one or more of the currently available networking standards. It is important to know the Data transfer rate that is used in your WLAN when configuring the SoftLINK Tutor

- 802.11a - An IEEE wireless networking standard that specifies a maximum data transfer rate of 54Mbps and an operating frequency of 5GHz.
- 802.11b - An IEEE wireless networking standard that specifies a maximum data transfer rate of 11Mbps and an operating frequency of 2.4GHz.
- 802.11g - An IEEE wireless networking standard that specifies a maximum data transfer rate of 54Mbps, an operating frequency of 2.4GHz, and backward compatibility with 802.11b devices.

When SoftLINK is optimized for maximum show performance the networking protocol used is called UDP (User Datagram Protocol), sometimes referred to as Broadcast. This minimizes network traffic and maximizes show performance.

It is important to note that on many high end Wireless access points there is a separate setting for UDP data transmission rates. In many cases the default setting may be set very low. For example 1Mbps. Re-configuring your access point to allow UDP (Multicast/Broadcast) network traffic to be transmitted at higher transfer rates can provide significant performance benefits.

When using UDP/Performance mode in SoftLINK it is also important to match your SoftLINK wireless LAN configuration to the transfer rate set for your wireless network. Using the correct SoftLINK School/Inform configuration will ensure that data is sent at the correct transfer rate to match your network. Sending Data faster than your network transfer rate can result in lost packets / re-tries and have a detrimental effect on performance.

This setting can also be used to throttle the bandwidth used by SoftLINK over your WLAN. If you need to reduce the bandwidth used by SoftLINK you can set the Access Point Speed to a value lower

than the Maximum data transfer rate and this will ensure that SoftLINK will throttle back its Network usage to match this setting, leaving available bandwidth for other applications.

This setting can also be used in a LAN environment to throttle the bandwidth used by SoftLINK.