Slow internet connection and interruptions: updating operating system and advanced Wi-Fi settings

Troubleshooting · https://www.studentinternet.eu/en/docs/english/troubleshooting/slow-internet-connection-and-interruptions-updating-operating-system-and-advanced-wi-fi-settings/

A **slow** internet connection or **interruptions** are often related to the personal device of the user or a nearby user causing interference.

Your device - your maximum speed

Your own device (both hardware and software) mainly determines the capabilities and thus also the speed of your Wi-Fi. Most devices have settings for home use which is not always ideal. Furthermore you also need to apply **all** updates and the latest device drivers for your device. By doing so, you already can resolve some wifi issues.

Minimum specifications for your device:

- 2.4Ghz **and** 5Ghz
- 802.11bgn:2x2, 802.11an:2x2, 802.11ac:1x1

Recommended specifications for your device:

- 2.4Ghz **and** 5Ghz
- 802.11bgn:2x2, 802.11an:2x2, 802.11ac:2x2

When your device does not meet the minimum requirements (visible through a Wifi link of max 65Mbps or 72Mbps), we recommend to only buy one of the validated USB Wifi Adapter:

- ***ASUS USB-AC53*** *WiFi Adapter (WiFi 5)*
- ***ASUS USB-AX55*** *WiFi Adapter (WiFi 6,* ***recommended****)*
- ***ASUS USB-BE92*** *WiFi Adapter (WiFi 7,* ***recommended****)*

Power Savings - Screen Off

To save battery, some devices disable the wireless connection when locking/turning off the screen. In case your device regularly loses its wireless connection after a locked/unlock sequence, make sure your device is connected to either one of the following wireless networks: **SMARTEYE-Secure** or **eduroam**

Above wireless networks allow your device to automatically re-connect in the background without you requiring to enter a username and password every time. Android, Windows and MacOS allow you to keep the wireless being connected, even if your screen is turned off.

- **Android:** keep wifi on during sleep android
- **Windows:** energy settings => high performance + keep wireless adapter enabled
- **MacOS:** Energy Saver => Prevent computer from sleeping automatically when the display is off + Enable Power Nap

Updating Device Drivers

Make sure your operating system is the latest version of the **manufacturer** (so not of Microsoft!) https://www.intel.com/content/www/us/en/support/intel-driver-support-assistant.html

The video below explains how you can check this for a Windows device.

Embedded media: https://www.youtube.com/embed/IntCvfD2OP0?feature=oembed

Advanced Wi-Fi settings

Step 1

First make sure that Windows is set for maximum performance/maximum speed: Wireless Power Saving in Windows

Step 2

It is also important to check the advanced settings of your Wi-Fi adapter. These can be found via the configuration panel/device manager/network adapters.***The most important settings summed up:***

- *afterburner*: disabled
- *association roam preference*: enable

- *u-apsd support*: disable
- *roaming decision*: optimize bandwidth
- *roam tendency*: aggressive
- *minimum power consumption*: disable
- *maximum transmission power*: 100% (maximum throughput)
- *band preference*: 5Ghz
- *HT mode*: enable
- *AP Compatibility Mode*: higher performance
- *WMM/WME*: enable
- *Bluetooth collaboration*: enable

The options and names can vary depending on your Wi-Fi supplier.

Switching off your ***Bluetooth adapter*** can also help if you do not need it.