

Xbox Series X|S Low Latency DOCSIS Trial Instructions

Purpose

The Xbox Series X|S provides the ability to enable and test low latency from within the OS itself. We can use the built-in functionality to gather data showing the benefit of low latency when there is congestion in the upstream bandwidth.

Prerequisites

- Are using an ARRIS S33 or Netgear CM1000v2 or
- Have your XB7/XB8 in bridge mode i.e., the XB7/8's Wi-Fi is disabled, and you have an external router with either built-in Wi-Fi or external Wi-Fi access point.
- Your Xbox Series X|S is connected to the network via Ethernet.
- PC or Mac on the same network, preferably connected via Ethernet

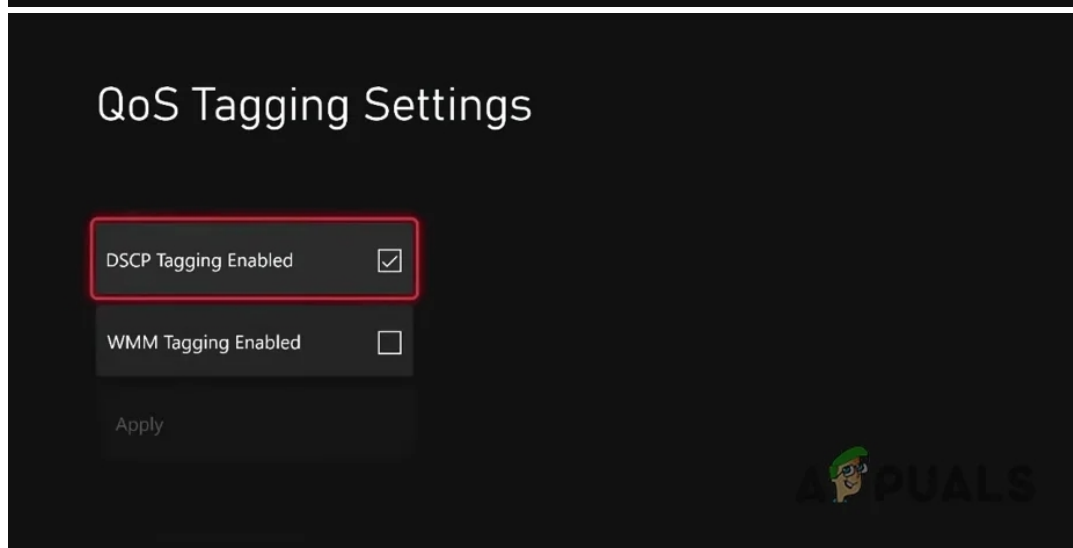
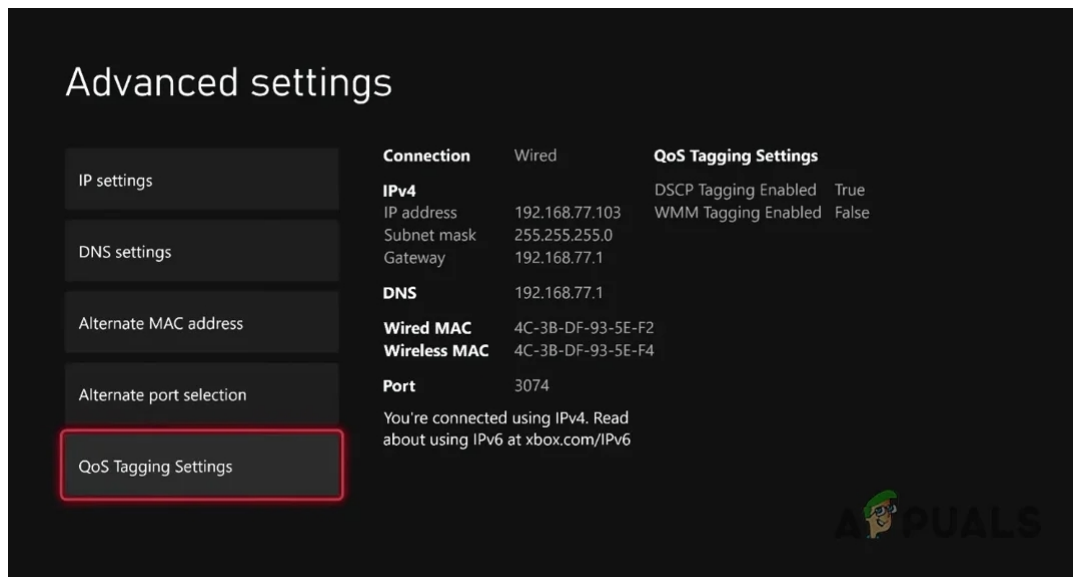
Note: The Xbox's low latency implementation is not currently supported when a XB7 or XB8 are in gateway mode.

Setup

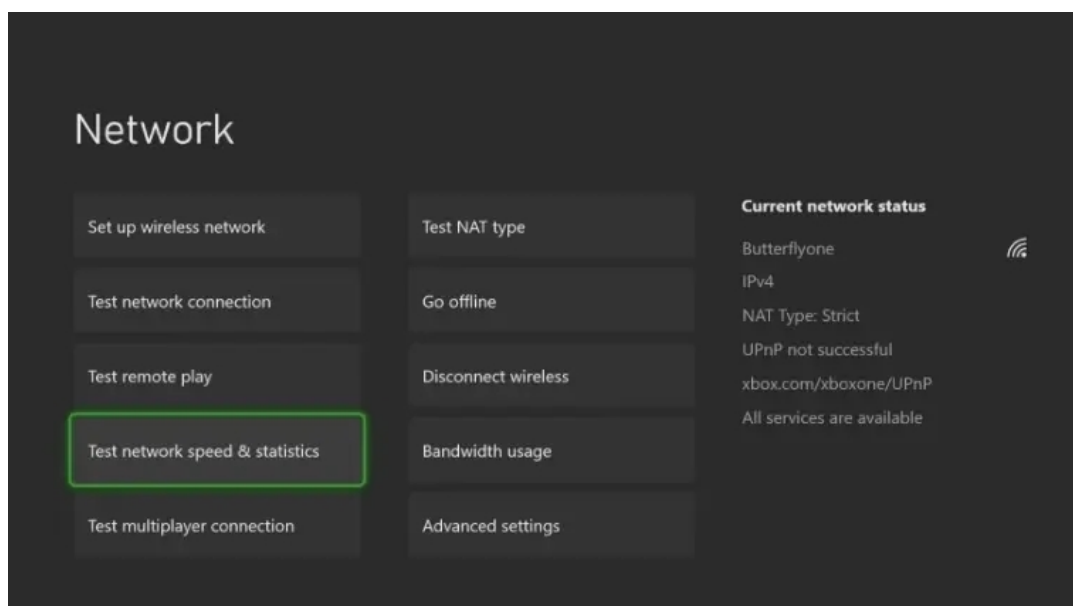
1. Download the iPerf traffic generation tool onto your PC or Mac:
 - Mac: <https://github.com/jlivingood/IETF-L4S-Deployment/blob/main/iperf3-GUI-macos-10102023-v2.zip>
 - Windows: https://github.com/jlivingood/IETF-L4S-Deployment/blob/main/iperf3-GUI-windows-x86_64-10102023-v2.exe
 - Click the "Download Raw file" button to properly save the file.

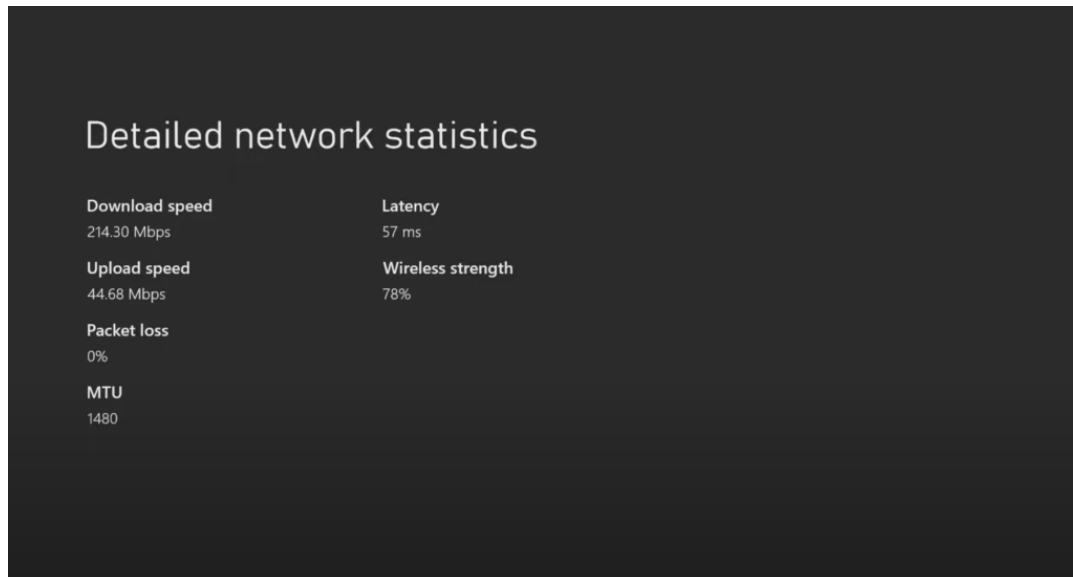


2. For the tests, we will enable and disable the low latency option. This option is under your Xbox's Settings > General > Network Settings > Advanced Settings shown below. Your Xbox will require a restart when you change this setting.



3. The built-in speed/latency test we will run is also under the network settings:





Test Scenarios

The three scenarios we would like you to gather data for:

Test Scenario 1 – No Low Latency without Background Traffic

1. Disable the “DSCP tagging enabled” option in the Xbox’s network settings.
2. Select “Test network speed & statistics” in your Xbox’s network settings. It takes about 30 seconds.
3. When complete, please record the following data:
 - a. Packet Loss
 - b. Latency

Test Scenario 2 – No Low Latency with Background Traffic

1. Disable the “DSCP tagging enabled” option in the Xbox’s network settings.
2. Open the iPerf tool on your PC or Mac and click the Play button.
3. Run “Test network speed & statistics” in your Xbox’s network settings.
4. When complete, please record the following data:
 - a. Packet Loss
 - b. Latency
5. Stop the traffic generation tool.

Test Scenario 3 – Low Latency with Background Traffic

1. **Enable** the “DSCP tagging enabled” option in the Xbox’s network settings.
2. Open the iPerf tool on your PC or Mac and click the Play button.
3. Run “Test network speed & statistics” in your Xbox’s network settings.
4. When complete, please record the following data:
 - a. Packet Loss
 - b. Latency
5. Stop the traffic generation tool.

Note: The Xbox applies the necessary tags to the latency test packets only.

More Data Is Welcome!

If you can, rerunning the tests more than once will be very helpful.

Send In Your Results

Please use this form to upload your notepad files with collected game statistics:

<https://app.smartsheet.com/b/form/a7fc9fdcae4f4f468d2c1c99c78b05df>