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.

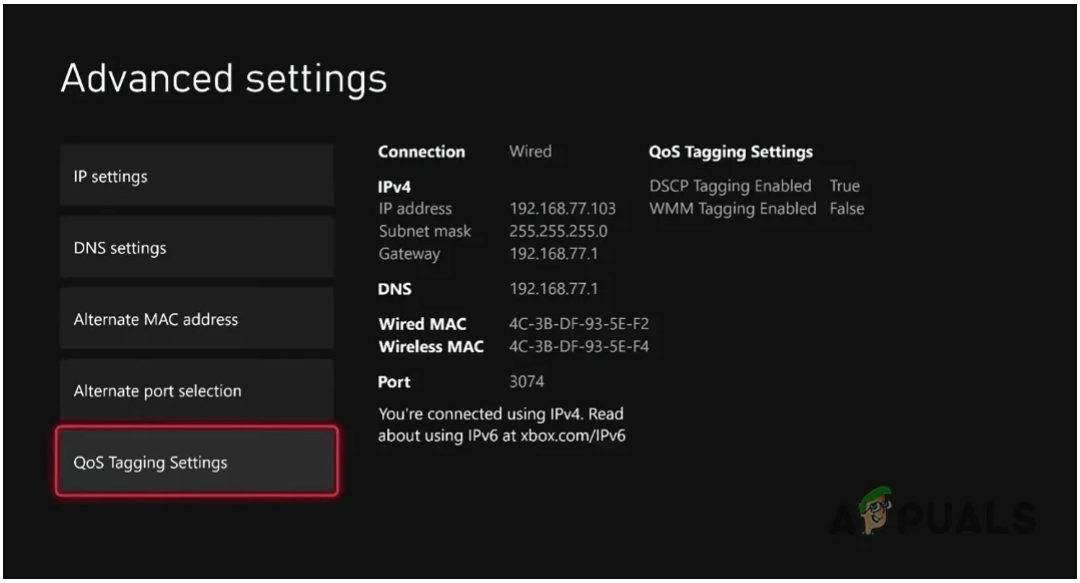
Prerequisites

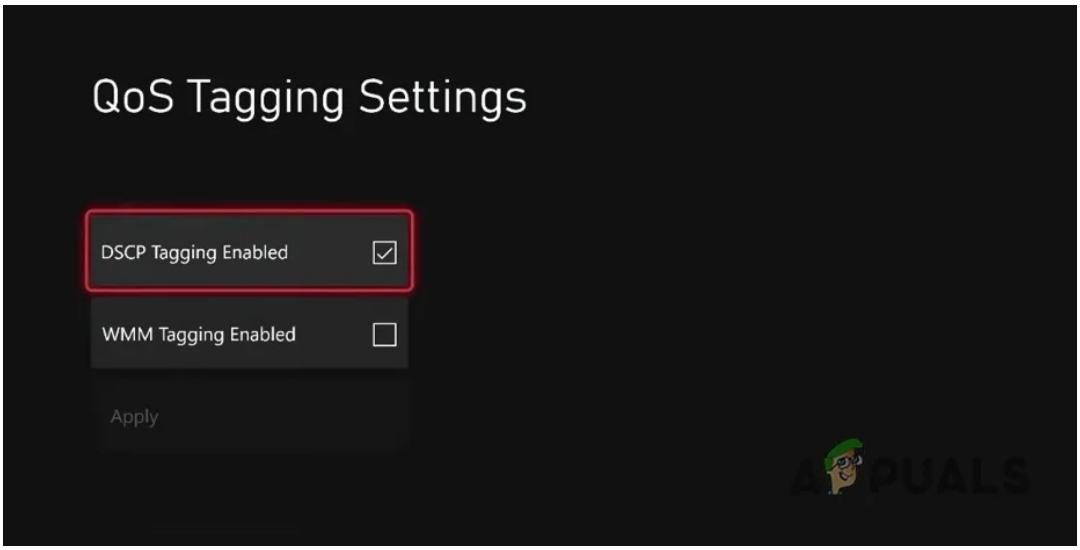
- Are using an ARRIS S33 or Netgear CM1000v2 or
- Have your XB7/XB8 in bridge mode i.e., the XB7/8's Wi-Fi is disabled, and you have an external router with either built-in Wi-Fi or external Wi-Fi access point.
- Your Xbox Series X|S is connected to the network via Ethernet.
- PC or Mac on the same network,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

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

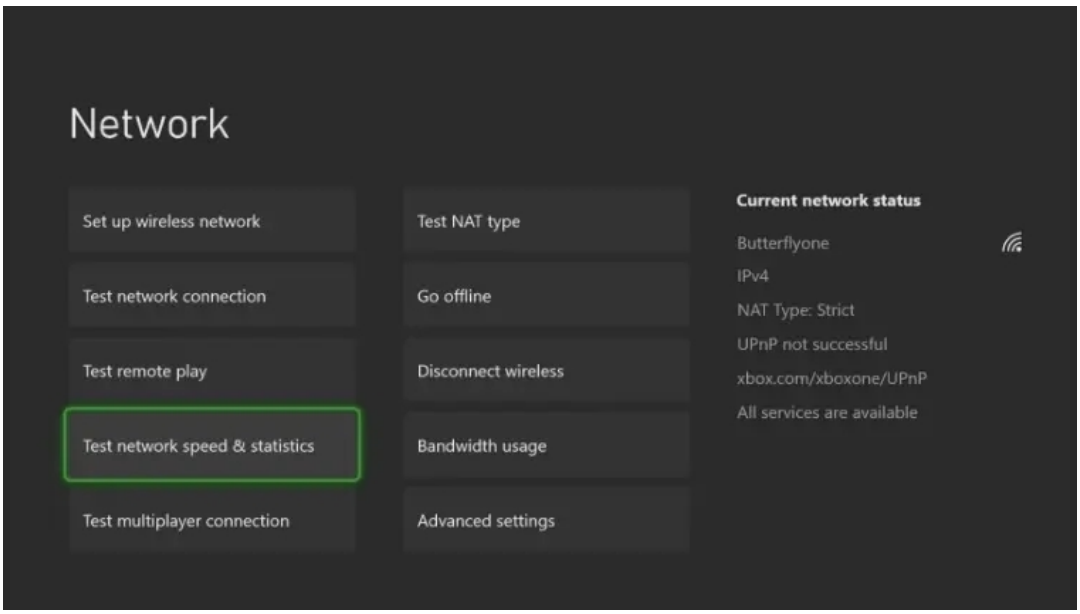
Setup

1. Download the traffic generation tool onto your PC or Mac: https://www.dropbox.com/scl/fi/auerbv51wq6dbl8wxcut2/iPerf3-tool-v2.zip?dl=0&rlkey=e8kj06zg3pjwzqsq4selh48nr
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 to gather stats for are:

☐ Test 1: LLD disabled and no background traffic.

☐ Test 2: LLD disabled and traffic filling the upstream bandwidth.

☐ Test 3: LLD enabled and traffic filling the upstream bandwidth.

Test Scenario 1

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

1. Disable the “DSCP tagging enabled” option in the Xbox’s network settings.
2. Start the traffic generation tool on your PC or Mac.
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

1. **Enable** the “DSCP tagging enabled” option in the Xbox’s network settings.
2. Start the traffic generation tool on your PC or Mac.
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.

If you want to run the tests more than once, we welcome the extra data!

Send In the Results

Please submit your results here:
https://app.smartsheet.com/b/form/a7fc9fdcae4f4f468d2c1c99c78b05df