Xbox Series X|S Low Latency DOCSIS Trial Instructions

Purpose

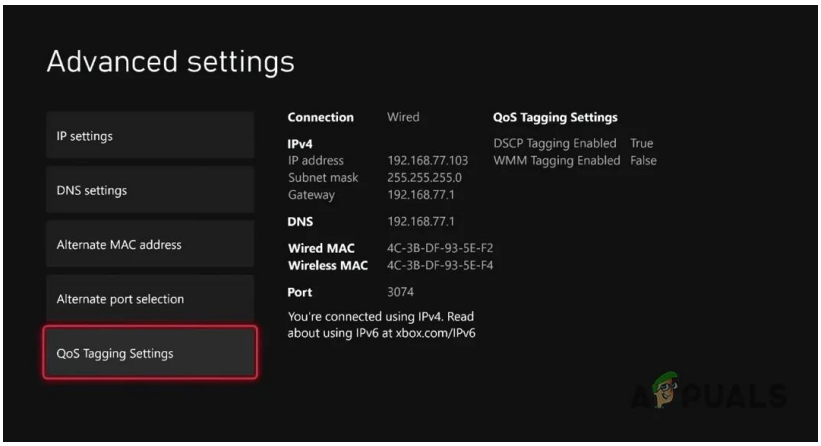
The Xbox Series X|S provides the ability to enable and test low latency from within the OS itself. We can use the built-in functionality to gather data showing the benefit of low latency when there is congestion in the upstream bandwidth.

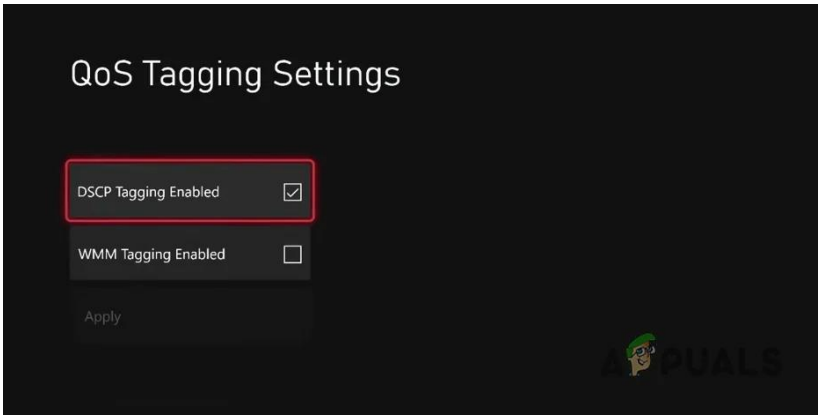
Note: In previous trial communications, we stated this test only applies to users using a S33, Netgear CM1000v2 or a XB7/XB8 in bridge mode. **This is no longer the case!** Please run these tests with any device and in any mode that you are already using for the Low Latency trial.

Setup

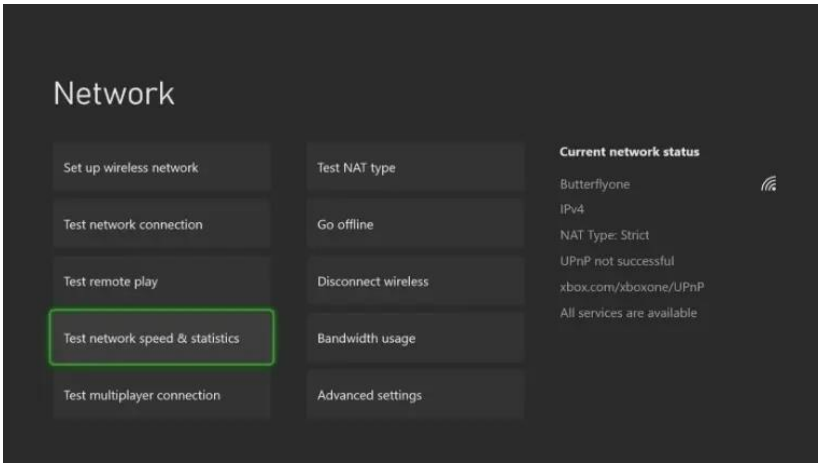
1. Download the iPerf traffic generation tool onto your PC or Mac:
    - Mac: https://github.com/jlivingood/IETF-L4S-Deployment/blob/main/iperf3-GUI-macos-10102023-v2.zip
    - Windows: https://github.com/jlivingood/IETF-L4S-Deployment/blob/main/iperf3-GUI-windows-x86_64-10102023-v2.exe
    - Click the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

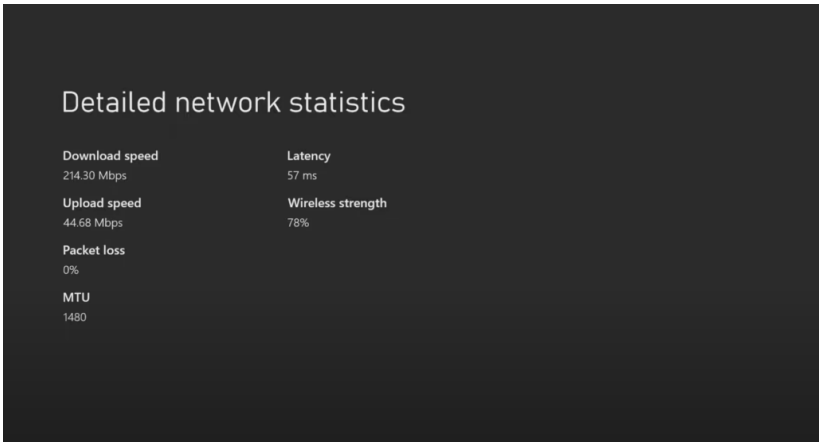
2. For the tests, we will enable and disable the low latency option. This option is under your Xbox's Settings > General > Network Settings > Advanced Settings shown below. Your Xbox will require a restart when you change this setting.





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 setting if not already.
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 Upstream Background Traffic

1. Disable the “DSCP tagging enabled” option in the Xbox’s network settings if not already.
2. Open the iPerf tool on your PC or Mac and click the Upload button.
3. Press the Play button
4. Run “Test network speed & statistics" in your Xbox’s network settings.
5. When complete, please record the following data:
    a. Packet Loss
    b. Latency
6. Stop the traffic generation tool.

Test Scenario 3 – Low Latency with Upstream 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 Upload button.
3. Press the Play button
4. Run “Test network speed & statistics” in your Xbox’s network settings.
5. When complete, please record the following data:
    a. Packet Loss
    b. Latency
6. Stop the traffic generation tool.

Test Scenario 4 – No Low Latency with Downstream Background Traffic

1. Disable the “DSCP tagging enabled” option in the Xbox’s network settings if not already.
2. Open the iPerf tool on your PC or Mac and click the Download button.
3. Press the Play button
4. Run “Test network speed & statistics" in your Xbox’s network settings.
5. When complete, please record the following data:
    ~~6.~~a. Packet Loss
    ~~7.~~b. Latency
~~8.~~6. Stop the traffic generation tool.

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Test Scenario 5 ~~3~~ – Low Latency with ~~Upstream~~ Downstream 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 Download button.
3. Press the Play button
4. Run “Test network speed & statistics” in your Xbox’s network settings.
5. When complete, please record the following data:
    a. Packet Loss
    b. Latency

6. Stop the traffic generation tool.

Note: The Xbox applies the low latency tags to the latency test packets only and not the speed test packets.

More Data Is Welcome!

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

Send In Your Results

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