Network Stability Test (Packet Loss, Jitter, Round Trip Time)
April - 2020-01-30 - Basic Troubleshooting

**What is the purpose of this test?** To check a user's current network conditions that may contribute to call quality issues.

**When to run this test?**
- When experiencing intermittent network and/or A/V issues e.g. signal bar fluctuating from red to green, broken audio, freezing, lagging, low quality or no video (no video can be also a hardware problem).
- Ideally 15 mins before a video call, keeping it running 15 mins after the call. Short test durations might not generate accurate results.

**What is the difference between this test and the network statistics shown in VSee Messenger?**
- VSee Messenger network stats will show info at that instant, while this stability test will show the network trend before, during and even after the call.

**Recommendations to Improve Network Stability:**
- Problematic/inadequate router, or significant distance from it while doing a video call may cause network issues. Use a **wire connection (LAN cable)** or stay near the router (no physical barriers).
- High bandwidth due to video streaming, online storage synchronization(Dropbox, Google Drive etc) within the same network might cause **insufficient upload/download bandwidth** for video conferencing. Please quit these apps before starting a video call.
- Some network issues need to be consulted with your **internet service provider**.

**TEST YOUR NETWORK STABILITY NOW**
Go to [https://test.vsee.com](https://test.vsee.com) preferably using Google Chrome. Please follow the instructions outlined on the page. At the end of the test, results will be shown on the same page which you can send to help@vsee.com.

This stability test aims to check the following factors of your network:
- Packet Loss Rate
- Round Trip Time
• Jitter Delay
• Call quality estimation

**Call Quality Estimation:**
Overall estimated call quality score based on the packet loss rate, round trip time and jitter.

4.5: Excellent (Imperceptible)
4.0: Good (Perceptible but not annoying)
3.0: Fair (Slightly annoying)
2.0: Poor (Annoying)
1.0: Bad (Very Annoying)

**Packet Loss Rate(%):**
Packet loss happens when a packet does not arrive, arrives out of order, or arrives too late.

> 10.0: Might cause frozen video and broken audio.
\[\geq 2.0: \text{Might cause low video fps, and audio quality might be affected.}\]
< 2.0: Video/Audio quality will not be affected.

**Average Round Trip Time(ms):**
Time it took to send a packet to server then receive it back.

> 300: Might cause unnatural delays in an audio conversation and disconnect between audio and video.

**Average Jitter(ms):**
Inconsistent arrival of packets between two endpoints.

> 50: Might cause certain packets of information to drop or sent out of order, leading to a jumbled conversation.