

THE CALLTOWER NETWORK TEST

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2 Introduction

This document gives a brief explanation of the operation of the CallTower Network Test.

The Test simulates VoIP calls to the SIP server, where measurements are made regarding call quality. It runs a batch of calls every 15 minutes during the seven-day testing period. Each batch of calls, known as a Call Run, consists of six calls, started at one second intervals. Each call has three minute duration.

Data from the calls is collected and stored in a database. As long as there is a network connection from the Test on your local machine to CallTower, the results will be available for analysis by as soon as a Call Run has been completed (approximately 15 minutes).

The best way to use the Test is in conjunction with CallTower Support or CallTower Engineering. They will be able to analyze the results and explain what they mean and how to address any issues that are found.

2.1 Requirements

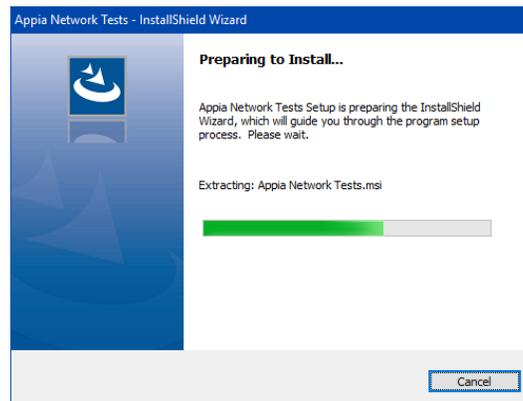
- Windows 7 or higher
- All Windows updates should be installed before using the Test.

2.2 Installation

Download CallTower the Test at:

<http://NetworkTestTool.appiaservices.com/NetworkTestToolInstall.exe>

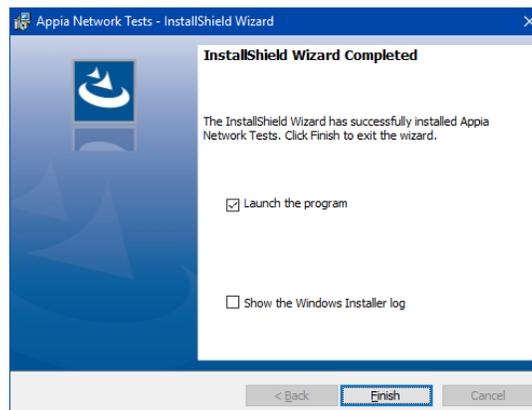
Depending on your web browser, select to Run, Save and Run, or in some cases, download the file and run it from Windows File Explorer.



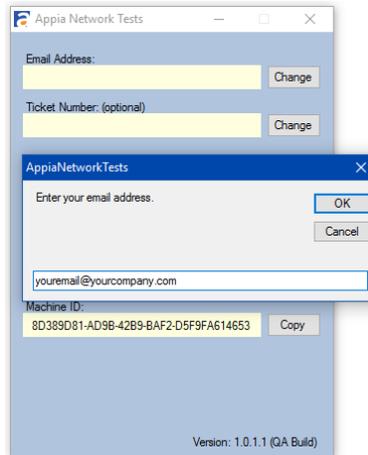
Click 'Yes' if Windows account control asks if you want to permit the application to make changes to your computer.

The installer will start to extract the installation files to your system.

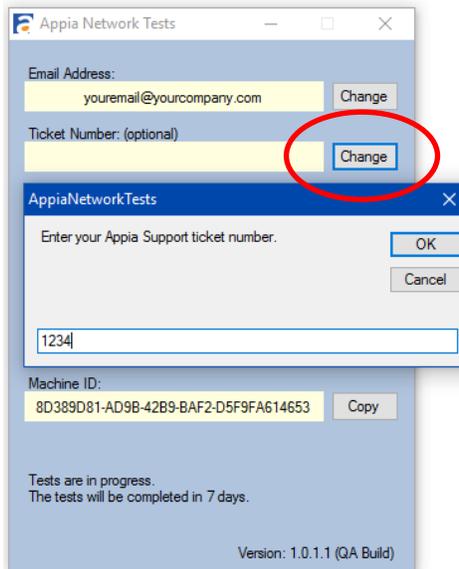
Leave the 'Launch the program' checkbox checked and press the 'Finish' button to continue.



You will then be asked to enter your email address. Please make sure you enter an email address that is current and that CallTower Support can use to reach you. If you do not enter a valid email address, the Test will close.



If you are working with a member of CallTower Support and they have given you a ticket number, please press the 'Change' button, enter the ticket number, and press 'OK'.



- Leave the application running for the full duration of the tests. You can minimize the application to the system tray and it will continue to perform the tests in the background.
- Leave your computer switched on and connected to the internet for the duration of the tests. Disable sleep, power saving, or hibernation modes so that the tests can be performed around the clock.

3 Test Operation

When the application is first installed, it will automatically generate and store a unique Machine ID, which is used to identify the computer under test.

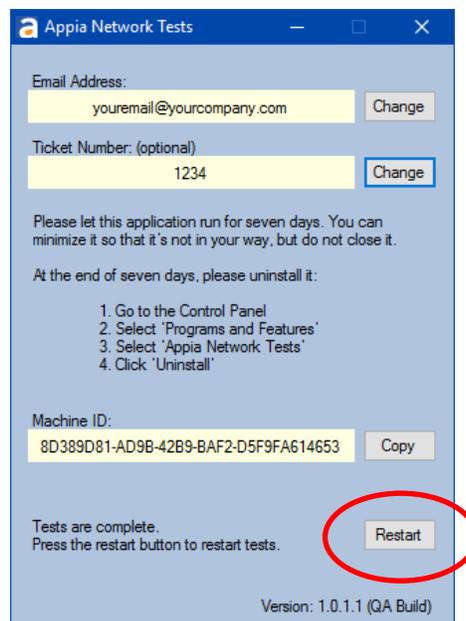
Once the Test is running, it will collect data for seven days. Only one instance of the Test may run at a time. (If you attempt to start another instance, the original instance will be brought to the foreground.)

While the Test is running, it can be minimized to the system tray.

The Test will automatically start up again when Windows starts. It will start up minimized in the system tray.

Once completed, you can uninstall the Test via the Windows Control Panel. This will remove the Test from the computer, but will leave the configuration settings there so that if the Test is reinstalled later, the same Machine ID will be used.

If the tests were inconclusive, or if you want to retest after making modifications to the network, you can press the 'Restart' button to run the tests for a further seven days.



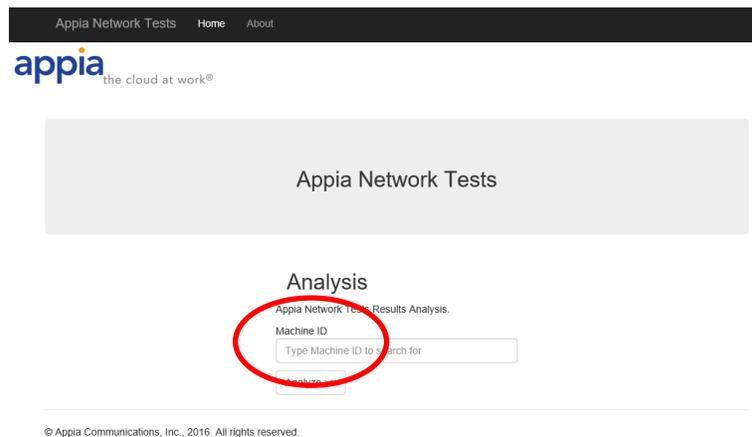
The 'Restart' button is not visible until the tests have been completed. Note: The 'Restart' button is not visible until the tests have been completed.

4 Test Results

Once the tests have been completed, you will receive an email. Click on the 'Report Charts' link in the email to launch the application in your web browser. Any major web browser should be able to access the site. The site has been tested with Internet Explorer, Chrome, Firefox, and Safari. For best results, upgrade your browser to the latest version.

4.1 Home

The Home page allows you to enter your Machine ID (discussed earlier) to display a suite of analysis charts or that Machine ID. Press the 'Analyze >>' button to continue. This will take you to the Results Charts page.



You can return to this page at any time by pressing the "Home" button in the navigation bar.

Note: You would not normally enter the site this way as you will normally follow the link in the tests completion Email which takes you directly to the Results Charts page.

4.1.1 Results Charts

The Results Charts page shows graphical representations of the three main quality metrics.

Green Value is well within the expected range to produce good quality VOIP Calls.

Red Value is outside the range to produce good quality VOIP Calls. VOIP quality will be degraded.

Yellow Value is within the expected range to produce good quality VOIP Calls, but is close to the threshold. Further investigation is recommended.

Appia Network Tests Home About

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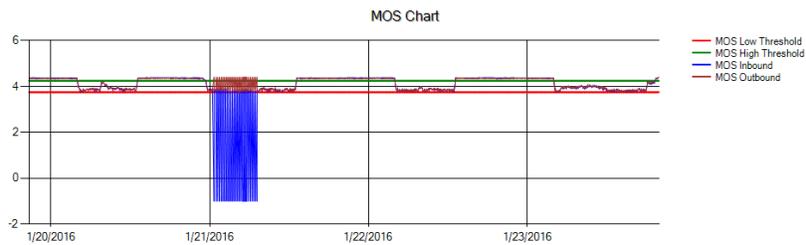
Results Charts

Showing results for Machine ID 7f579d04-1cc1-4863-8081-4e4e62ce4e49

From: 1/19/2016 To: 1/26/2016 [Update](#)

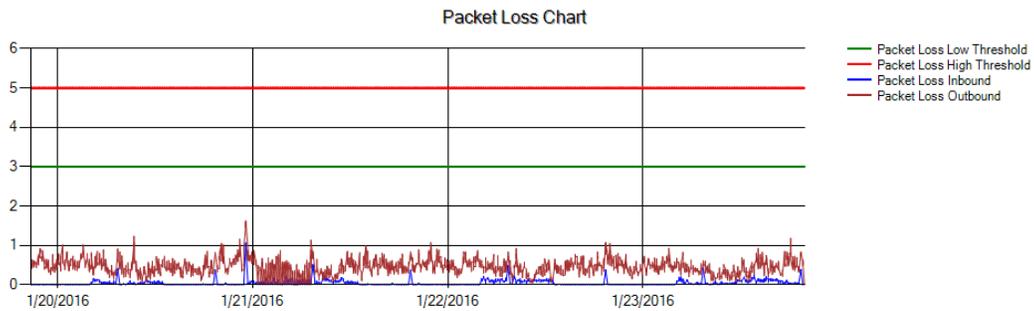


4.1.1.1 MOS Chart



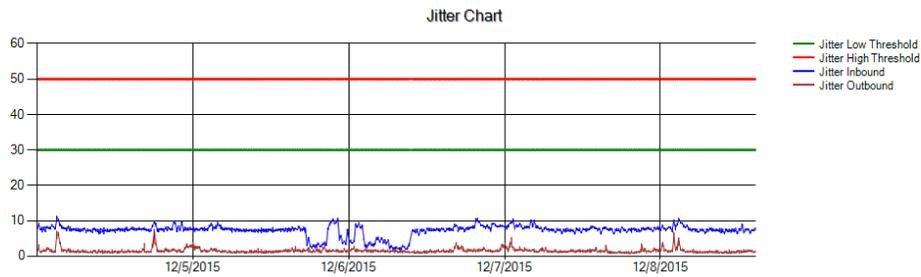
The Mean Opinion Score (MOS) is an overall measure of VoIP call quality. MOS scores range between 0 and 5, and the higher the score, the better. A score above 4.25 is good. A score between 3.75 and 4.25 may have quality issues. A score below 3.75 will have quality issues.

4.1.1.2 Packet Loss Chart



Packet loss results in calls breaking up. The measurements range between 0% and 100%, and the lower the measurement, the better. A measurement below 3% is good. A measurement between 3% and 5% may have quality issues. A measurement above 5% will have quality issues.

4.1.1.3 Jitter Chart



Jitter results in calls sounding and video transmissions being choppy. Jitter is measured in milliseconds, and the lower the measurement, the better. A measurement below 30 is good. A measurement between 30 and 50 may have quality issues. A measurement above 50 will have quality issues.

4.1.2 About

This page shows information about the Test and the metric analysis thresholds. The threshold values are used to display the threshold lines on the charts.

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About

Appia Network Tests Web Application version 1.0.1.0

Metric Threshold Settings (read only)

MOS Low	3.75
MOS High	4.25
Packet Loss % Low	3
Packet Loss % High	5
Jitter Low	30
Jitter High	50

The information on this web site is for diagnostic purposes only.

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