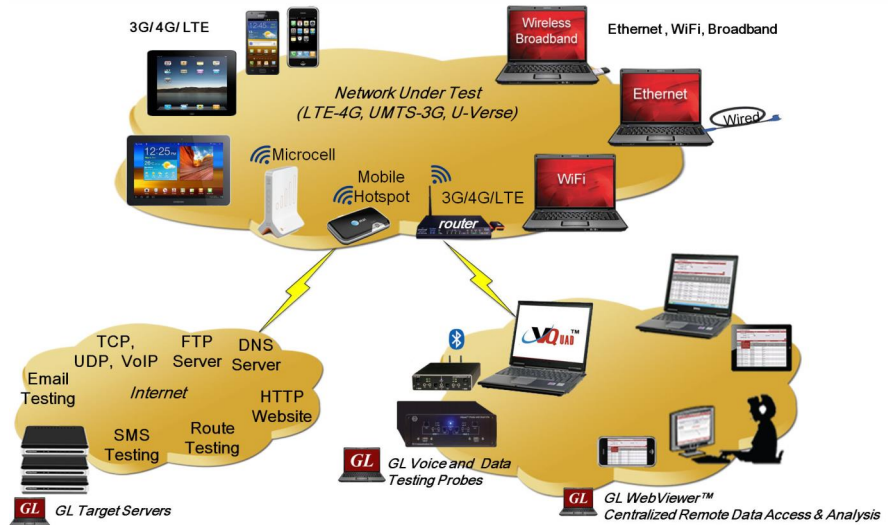


Automated Data Testing over Wireless Networks (3G, 4G, WiMax, LTE, WiFi)



Overview

Communication is dramatically changing as mobility and IP technologies such as LTE, Advanced LTE, WiMax, 3G, and Broadband Internet lead this transformation. As these technologies are rolled out, basic voice/data quality will ultimately determine the fate of carriers and end equipment manufacturers.

GL's **VQuad™ NetTest** solution provides automated network data testing while supporting Mobile Devices (Android & Apple) and a PC internet connection. Using GL's VQuad™, both Voice and Data Quality can be analyzed simultaneously on a wireless or wired network. Since the GL VQuad™ solution is network independent, all networks are supported including 3G, 4G, WiMax, LTE, and Advanced LTE. In addition all PC based internet connections are supported including WiFi, Broadband Card (3G/4G/LTE), and Wired Ethernet.

Supported data tests include **TCP, UDP (capacity), VoIP, Route, HTTP (web lookup), DNS, FTP and SMS, Email, Phone Info, SIM Info, and UE Info**. These tests can be fully automated using the VQuad™ scripting. While testing mobile devices, the VQuad™ remotely accesses the Android/Apple phone/tablet for initiating the test and retrieving the results. Both automated remote access along with manual testing is available on the mobile device using the Android/Apple downloadable apps.

GL's VQuad™ Scripting, portability for mobile drive testing, remote accessibility, analysis and centralized data retrieval are just a few attributes of GL's next generation Voice and Data Testing solution. The testing along with the result generation is fully automated and can be controlled from a central system or via a WEB Browser. All test results are automatically relayed to a Central Database where they are accessed via a simple WEB Browser/Viewer.

For complete details, visit <http://www.gl.com/automated-data-testing.html> webpage.

Features

- GL NetTest supports both Android & Apple devices and is Network independent including support for 3G, 4G, WiMax, LTE, and Advanced LTE.
- PC Based GL NetTest solution includes support for WiFi, Broadband Card (3G/4G/LTE), and wired Ethernet.
- Downloadable application available for both Android and Apple devices supporting manual and automated operation.
- NetTest supports TCP, UDP, HTTP, VoIP, FTP and DNS testing for both PC and Mobile Devices.
- SMS, Email, Phone Info, SIM Info, and UE Info testing are available for mobile devices only.
- Complete automation and a centralized system to control and monitor remotely.
- Simultaneous voice and data quality tests supporting 3G/4G networks.
- Data Testing supports remotely deployed GL Target Server's for end-to-end testing.
- **VQuad™ Probe**, self contained unit includes VQuad™, Dual UTA and PC. Control via Ethernet Remote Desktop (with support for mouse/keyboard).

Automated and Centrally Controlled Testing

Apple/Android Mobile Devices

Test PC Internet Connection (Broadband 3G/4G, WiFi, Wired)

TCP, UDP, VoIP, Route, HTTP, FTP, DNS, SMS, Email, Phone Info, SIM Info, and UE Info

Access Mobile Device and PC based NetTest Statistics and Results through WebViewer™

Remotely Control Mobile Devices (WiFi, Bluetooth®, 3G, 4G, LTE)

Data, Voice, and Video Network Quality Testing

Up to 8 Simultaneous and Independent Tests per VQuad™

View and Control all Probes, Events, Results via Browser

 **GL Communications Inc.**

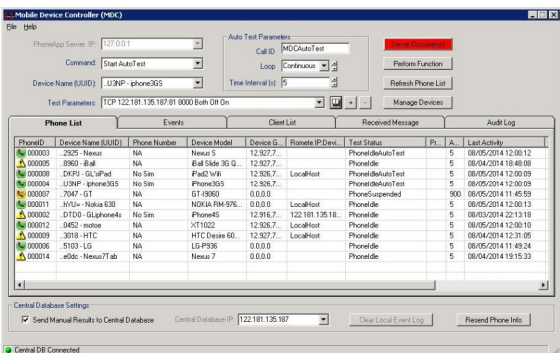
818 West Diamond Avenue - Third Floor, Gaithersburg, MD 20878, U.S.A
(Web) <http://www.gl.com/> - (V) +1-301-670-4784 - (F) +1-301-670-9187 - (E-Mail) gl-info@gl.com

NetTest from PC and Mobile Devices

GL's **VQuad™ NetTest** solution supports data testing from PC and from mobile devices (using Mobile Device Controller). VQuad™ can send commands (via the VQuad™ scripting) to the MDC and automate the NetTest to be performed on any connected Mobile Devices. Manage Devices option gives the flexibility to manage the NetTest supporting devices (with MDC app installed) connected to MDC server. The Mobile Device will run the specified NetTest irrespective of whether the phone is on a voice call or not.

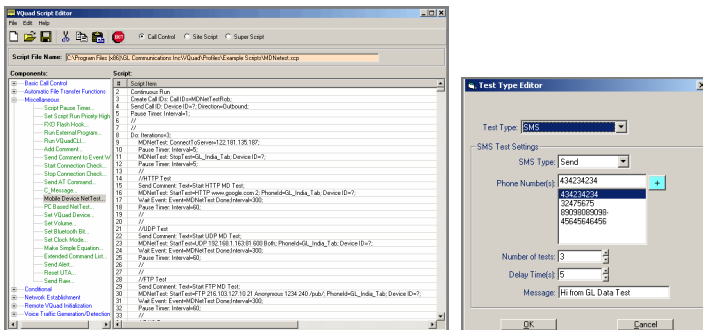
- **Automated and Manual Data Testing (NetTest)** to test TCP, UDP capacity, VoIP, Route, HTTP, FTP, DNS, SMS, Email, Phone Info, SIM Info, and UE Info
- Statistics and complete results are available through the WebViewer™ for both Mobile Device NetTests and PC based NetTests.
- Flexibility to manage the mobile device connections within the MDC server
- Email Alert to automatically send the Phone Info and Geographical location of the mobile devices in pending requests.

The NetTest requires a GL Data Server at each target location, and the Mobile Device requires a GL deployed app (Apple or Android based) for operation.



VQuad™ Scripting

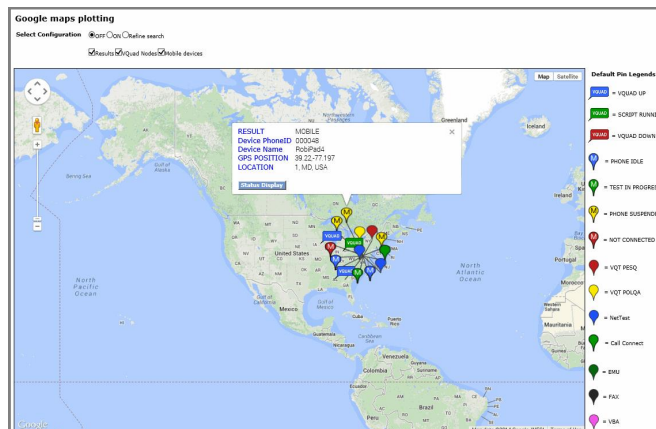
- Enhanced VQuad™ scripting for generating a variety of automated voice and data quality tests.
- VQuad™ scripting can send commands to the MDC for initiating NetTest on any connected Mobile Device.
- Supports conditional statements along with user-defined variables.
- Near-end VQuad™ device can control the far-end VQuad™ device via a TCP/IP connection.



NetTest Results Display in VQT Webviewer™

GL **WebViewer™** is a simple, easy-to-use Web browser which can operate on both PC and Mac systems (including iPhone and iPad).

- Multi-user support, and user-friendly interfaces are remotely accessible via browser based clients
- Central Database query via web interface to display results in both tabular and graphical formats.
- Results include Call Event, User Defined Events, Bluetooth® events, NetTest Results (both PC and Mobile Device), Echo Measurement, VQT, VBA, Delay Measurement and others over TDM, VoIP, and Wireless networks.
- NetTest Results including TCP, UDP, Route, VoIP, HTTP, FTP, DNS, SMS, and Email tests are displayed. Mobile device Information result display includes Phone Info, SIM Info, and UE Info
- Filter results using user-defined search criteria.
- Customized Reports and test statistics.
- Send all Results and Mobile Device information along with GPS co-ordinates to the Central Database and plot using the **WebViewer™ Google Maps**



Buyer's Guide

NetTest Solution

- [VQT600](#) - Data Server
- [VQT601](#) - Mobile Device Controller (MDC) Software
- [VQT610](#) - Target Server
- [VQT040](#) - WebViewer™

VQuad™ Options

- [VQT010](#) - VQuad™ Software (Stand Alone)
- [VQT241](#) - VQuad™ Dual UTA with Balanced, Analog FXO, PTT, and Phone Handset Interfaces
- [VQT242](#) - VQuad™ Dual UTA Bluetooth option for controlling any Bluetooth® device (Call Control and Audio)
- [VQT270](#) - VQuad™ Probe with Dual UTA

For complete NetTest Solution product list, refer to <http://www.gl.com/automated-data-testing.html>



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