

Browser-based Speedtest

Initiated from subscriber PCs and mobile devices

Netrounds' Speedtest function gives customers a self-service opportunity to measure their throughput themselves which offloads our customer support center and improves our customer satisfaction.

Roger Fagerdal
 Head of Urban and Cable
 Television Networks
 Vännäs, Sweden

The Netrounds Speedtest feature provides quick answers to the following questions:

- What performance are your end users getting?
- When end users experience a problem, is it network- or application-related?
- Is the issue within your network or on the customer's premises?

Netrounds software-based and downloadable Test Agents can be used as testing points for network speed tests. End users are directed to a web URL, where they can easily start a performance test from their web browser. As Speedtest supports WebSocket, **any browser can be used**, including those on mobile devices.

With Speedtest, end users can verify uplink and downlink data rates and measure packet loss, jitter, and round-trip delay, from their devices **all the way to the core parts** of your infrastructure. This is a great aid in troubleshooting as NOC managers can immediately verify where and why issues are occurring from end user Speedtest history logs in Netrounds.

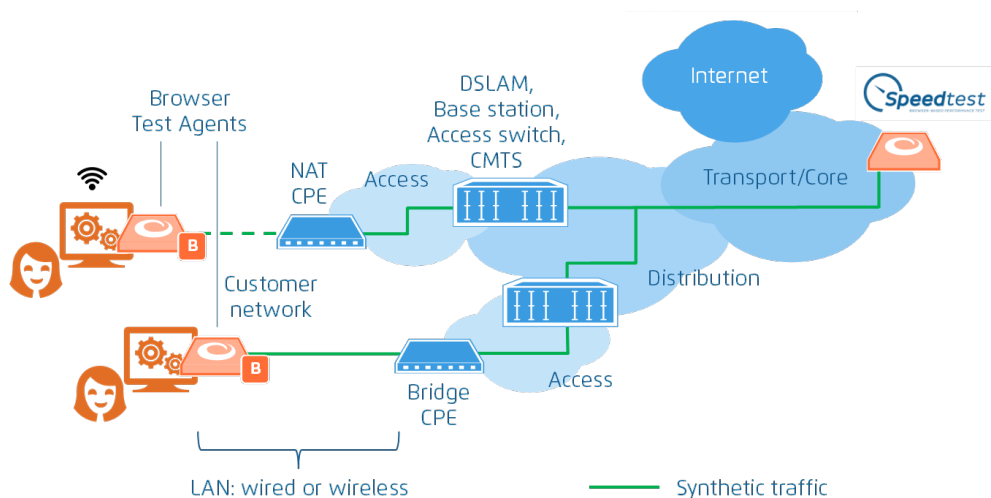


Figure 1: Overview of Netrounds Speedtest feature. Customers run Speedtest from their PC or mobile device browsers (using browser Test Agent software), interacting with a regular Netrounds Test Agent in the core network.

Advantages over competing solutions

- Install and configure a Speedtest server **in less than 30 minutes**
- All results are stored in the Netrounds cloud, providing a convenient overview of your network performance

Key output metrics

Uplink and downlink data rates

TCP and Ping packet loss

TCP and Ping round-trip delay (RTT)

TCP jitter (RTT variation)

TCP path MTU

TCP retransmissions

How Speedtest works

Download and install a Test Agent in your core network, then activate the Speedtest feature on your Test Agent. Now end users can use their web browsers to initiate **TCP and Ping performance tests** towards that Test Agent and obtain results on bandwidth, response times and packet loss. All measurement results are stored in a database and are instantly available in Netrounds Control Center with a time resolution of one second.

Netrounds also helps you **analyze** executed Speedtests. A time interval in Netrounds Control Center may be selected to obtain a quick overview of all results for that period, including indications of any violations of predefined SLA thresholds. Multiple thresholds may be specified, allowing for the creation of different groups and quick analysis of different regions in your network or different broadband services, for example.

The primary purpose of Netrounds Speedtests is to provide information for **preliminary analysis**. Unexpected results provide valuable clues into where future efforts should be focused for pinpointing underlying problems. This can be followed with high-accuracy network performance and stability tests using Netrounds' active UDP and TCP traffic generation.

Related features

Below are other Netrounds features which can be used for efficient troubleshooting and support.

Type of issue or task	Remedy
User complaining about "slow network"	UDP performance and/or TCP throughput measurement
Firewall problems, web application problems	HTTP testing with monitoring of response times and download speeds
DNS problems	DNS testing with monitoring of success rate and response times
Identifying which router hop is problematic	Distributed ICMP Ping from several Test Agents towards several IP addresses
Intricate application problems	Remote packet capture for detailed packet analysis