

Video Delivery Assurance

End-to-end visibility of video quality

High network coverage

Use of standard x86 hardware for cost efficiency and high network coverage. Deploy Netrounds Test Agents on bare metal or in hypervisor environments such as OpenStack.

Multi-purpose Test Agents

Also use your Test Agents for SIP, HTTP, Y.1564, Y.1731, QoS profiling, mobile radio access, remote packet capture, and more.

Consistent cloud interface

Control all your Test Agents in one interface, accessible anywhere.

Collaboration

Share Test Agents and data with teams in your own organization or with your vendors or clients.

Historical data

Monitor quality over time and go back to find the root cause of problems. Also accessible through APIs.

Alarms

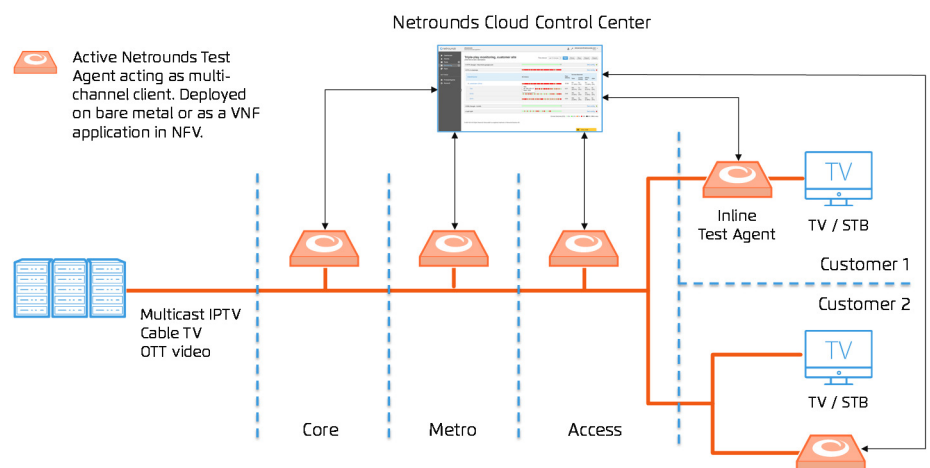
Work proactively, get notifications of negative trends, and solve problems before they are noticed by end customers.

Netrounds video delivery assurance solution provides multichannel monitoring of OTT video, IPTV and cable TV quality at multiple locations in your network. Netrounds visualizes the video quality from the head-end to the subscribers, helps you understand where problems occur from end-to-end, and guides you in taking appropriate actions to eliminate network problems.

Using active Test Agents located in the core or distribution networks helps you identify problems that most likely affect all of your subscribers, while Test Agents located in the access networks help you isolate geographical areas where problems occur.

For network assessment and troubleshooting, Test Agents can temporarily be placed in the subscribers' homes to accurately monitor all channels that are being viewed. In addition, Netrounds Test Agents can be used remotely in sophisticated test scenarios to stress test and troubleshoot the home environment without any need for expensive field visits.

- Gain insight into video quality and performance
- Quickly eliminate network problems
- Improve subscriber experience
- Eliminate the need for expensive field efforts
- Reduce CAPEX and OPEX



IPTV and digital cable TV

Visualize the quality of the IPTV and DVB-C channels at strategic locations in your network and quickly spot any problems. Using a Test Agent connected inline between the STB and CPE gives you detailed insight into the quality of the TV channels that a subscriber is watching. Furthermore, Netrounds' channel zapping time feature lets you test and monitor how long it takes for a subscriber to leave one channel and join a new one during switching.

Measured parameters

Per ETSI TR 101 290, priority 1:

Rate

Transport rate

MPEG loss

PCR jitter

RTP jitter, loss, misorders

PAT errors

PMT errors

IPTV channel zapping time:

Join delay; failed joins

Leave delay; failed leaves

* An *Errored Second (ES)* is defined as an interval of one second during which a threshold violation occurred. Netrounds presents errored seconds as absolute numbers and as a percentage of total time.

Key performance indicators (KPIs), based on Errored Seconds (ES)*

ES MPEG loss: MPEG loss exceeded threshold.	ETSI TR 101 290
ES jitter: PCR jitter and/or RTP jitter exceeded threshold.	
ES invalid stream: Aggregate of number of seconds containing PAT/PMT/PID errors.	
ES total: Sum of all errored seconds encountered.	
SLA compliance: Measured as percentage of seconds that are not errored seconds.	
ES join: Generated by failed IGMP join.	IPTV channel zapping time
ES leave: Generated by failed IGMP leave.	
ES total: Sum of all errored seconds encountered.	
SLA compliance: Measured as percentage of seconds that are not errored seconds.	

Over-the-top video streaming

Visualize the user experience of OTT adaptive video streaming using HTTP Live Streaming (HLS). Use multiple Test Agents distributed all the way from the content source, through the content distribution network (CDN), and over the last mile. Netrounds helps assess streaming video quality throughout the network by providing real-time data and business intelligence that gives you the visibility required to secure and improve the end-user experience.

Key performance indicators (KPIs), based on Errored Seconds (ES)*

ES playback rate: Playback rate dropped below threshold.
ES download rate: Download rate dropped below threshold.
ES selected rate: Selected rate dropped below threshold.
ES buffer underrun: Amount of buffered data dropped below threshold.
ES buffering: Buffer ran empty, and rebuffering is needed.
ES total: Sum of all errored seconds encountered.
SLA compliance: Measured as percentage of seconds that are not errored seconds.

Measured parameters

Playback rate

Download rate

Selected rate

(Min) buffer