R&S®IPGW

R&S®RelayCaster Software Lite

ROHDE&SCHWARZ

Make ideas real

AT A GLANCE

R&S®RelayCaster can greatly improve reliability and data rates when contributing and distributing live content and help you efficiently solve packet loss issues.

Application areas
► Optimizing distribution and contribution of live content
► Improving reliability and increasing bandwidth on long distance internet links
► Fixing packet loss up to 50%
► Replacing expensive satellite links and CDN contracts

R&S®RelayCaster can replace expensive satellite links or contracts with CDN service providers. Unlike these services, R&S®RelayCaster is not limited to certain regions or data centers. R&S®RelayCaster enables you to distribute your content across any distance to any place that is reachable by internet infrastructure.

Optional encryption protects the streams between all transmitters and receivers. The R&S®RelayCaster setup wizard offers user-friendly stream configuration. Integrated monitoring features ensure stream health.

Being compatible with existing gateways, transcoders, conditional access systems, streaming servers and set-top boxes, R&S®RelayCaster appliances can be seamlessly integrated into your existing infrastructure. R&S®RelayCaster input and output streams support standard compliant protocols.

R&S®RelayCaster Software Lite is easy to install on existing servers hosted in data centers. It is an entry-level version that supports one stream at up to 25 Mbps.
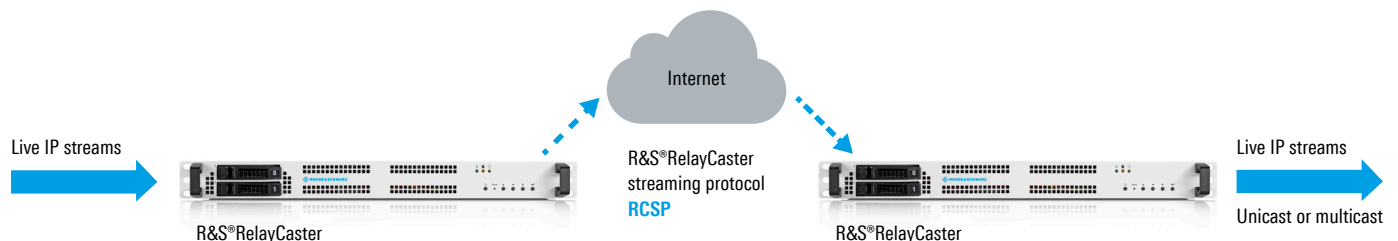
BENEFITS AND KEY FEATURES

Using the R&S®RelayCaster streaming protocol (RCSP) as the streaming protocol between two R&S®RelayCaster servers optimizes transmission of live IP streams to remote company sites, data centers or networks.

Compared to streaming with UDP or RTP, RCSP greatly reduces packet loss. Compared to content distribution with TCP or higher-level protocols such as FTP or HTTP, RCSP offers much higher bandwidths for transmission of live content over lossy long distance links.

This approach can be scaled. You can create your own content delivery network (CDN) of R&S®RelayCaster servers. Live IP streams from a central data center are redistributed to various intermediate and terminating data centers that are spread around the world.

Over-the-top (OTT) streaming, adaptive bitrate streaming (ABR) and R&S®RelayCaster work together. In each data center, streams received by R&S®RelayCaster are forwarded to OTT streaming servers providing streams to end user devices that are 'nearby' (in terms of internet distance). R&S®RelayCaster helps 'push' streams close to end users.

Live IP streams

R&S®RelayCaster

Internet

R&S®RelayCaster streaming protocol
RCSP

R&S®RelayCaster

Live IP streams

Unicast or multicast

IP streaming

▶ MPEG transport stream (MPEG-TS)
  – MPEG single program transport stream (MPEG-SPTS)
  – MPEG multi program transport stream (MPEG-MPTS)
  – Support of common audio/video codecs
▶ Protocols
  – Unicast, multicast and broadcast
  – UDP
  – RTP over UDP
  – R&S®RelayCaster streaming protocol (RCSP)
  – Secure reliable transmission (SRT) (open source)
▶ Fixes packet loss rate up to 50 %
▶ Output rate for receiving and sending
  – One stream
  – Up to 25 Mbps
  – Performance depends on user's hardware platform

Stream protection and monitoring

▶ Encryption and decryption with AES: 128, 192 and 256 bits
▶ Option: MPEG-TS continuity count check
▶ Option: stream monitoring in line with ETR 101 290 priority 1, 2, 3
▶ Option: link redundancy with two parallel internet links and seamless failover

Setup and administration

▶ Responsive web interface (http/https)
▶ Setup wizard: automatic setup of streams
▶ ssh (if available on user's system)
▶ Free software developer kit (SDK) for XML-RPC and PHP
▶ Option available from partner: integration of Skyline DataMiner

Software

▶ Download for Linux operating system
▶ Ask for supported Linux distributions

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