

Monitoring Media

The Challenge on delivering QoE to customers

Operators see revenues on standard services as internet going down all the time. Therefore a new revenue stream is needed. After introduction of VoIP most operators and ISPs are now preparing for the next step: IPTV. Although IPTV itself is not generating a much bigger ARPU, the (interactive) services are.

With these new services, like for instance VOD and gaming, it is of the utmost importance that the operator guarantees and measures the Quality of Experience from its end-users. The necessity of QoE is especially high, as operators often find themselves in a setting where they are not the owner of the network and have to proof that there are problems. Only after submission of the QoE data, issues are being taken care of.

QoE in the end-device

The most important objective information source regarding the QoE is the end device. The information generated by the end-device has to be useful and accurate. And it has to have a footprint in the end-device that is as small as possible, in order not to impact other running services on the modern multi-service networks.



TR-069

A solution could be to use network probes when deploying a network or a service. But in a realistic business plan, probes are only used on strategically placed places in the network to monitor the streams in real-time and 24/7. Deploying probes into every edge or end-user device would actually be far too expensive.

In the NWS setup we use a TR-069 server for the device management. TR-069 is basically an end-device driven protocol and it can retrieve collected data from the end-device. Thus with the help of an ACS (Auto-Configuration Server), the STB can be instructed to store detailed customer experience data to be sent back the next time the STB connects back to the server. This data can be used for real time fault analysis.

True impact analysis

NWS Monitoring and Customer Experience Management (CEM)

NWS provides a real-time view of the Quality of Experience delivered to each and every consumer, enabling:

- Proactive and efficient Customer Care
- Effective Device (set-top box) Management
- Enhanced information for Network Management
- True impact analysis for Faults
- Visibility of the network 'last mile'
- Real Business Intelligence and Consumer Insight

Standards

NWS uses an in house developed ACS as a device configuration system for the STB and other TR-069 enabled end devices in the market. The same system can be used for device configuration and device monitoring, both being essential capabilities for a modern service provider.

The earlier TR-069 standard was developed by the Broadband Forum for consumer device provisioning and configuration. Currently the Broadband Forum is in the process of standardising the area of consumer device monitoring, through TR-126 and TR-135. NWS follows the standards and requirements from the Broadband forum as much as possible on the applicable areas.

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