

## You'd like to know before they call, right?

Prevent customer attrition by catching outages and issues before they become a problem!

### Why your investment matters!



**IP transmission** is subject to traffic congestions, packet losses and variable delay. This causes real distortions to digital video signal. Error propagation in a video is worse than in audio and much worse than in data



**Encoding issues** on live and prerecorded video may cause problems at the head-end, affecting all subscribers. Checking program video quality before encryption allows detecting problems



**Customer** equipment issues are frequently a major cause of poor service or total failure. Detecting these problems before the customers does is a hall mark of quality service. Therefore the EOC(End Office Equipment) Diagnostics are highly recommended for each EOC device.



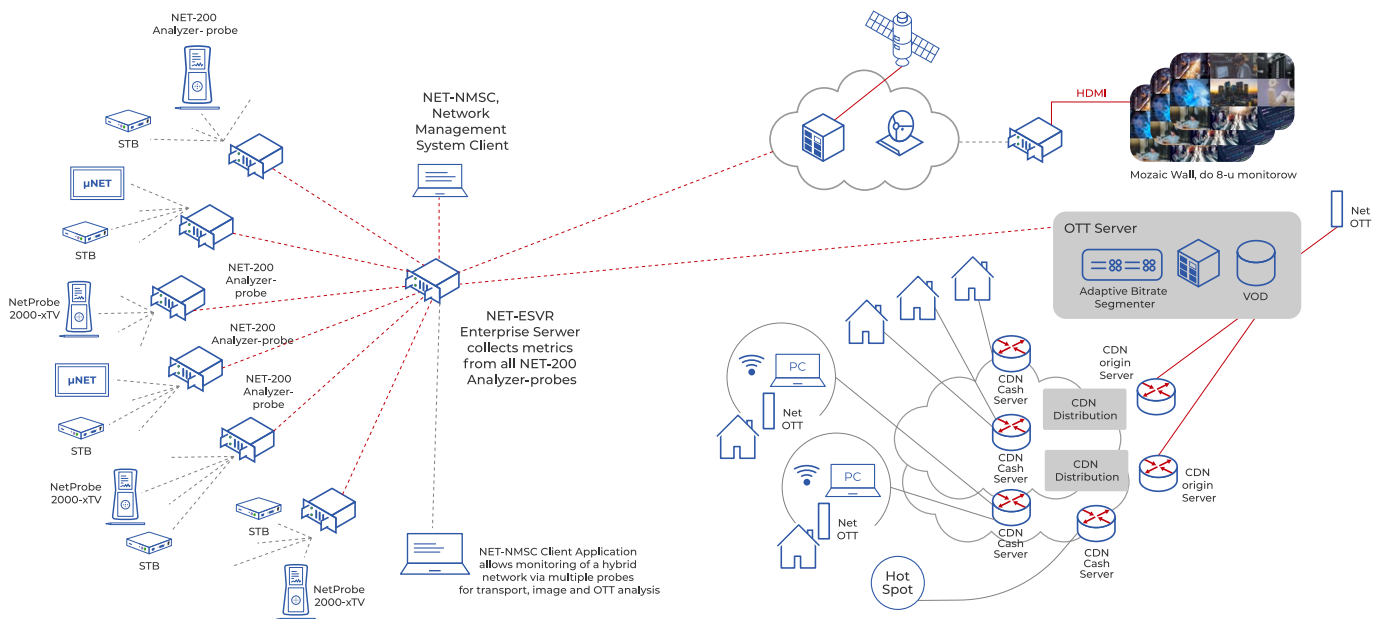
**IPTV** is a complex technology combining many layers of information, protocols and equipment. Interaction of these components can cause problems during installation as well as during normal operation.



**Customer churn** is what you want to prevent. This can be achieved if the IPTV audio/video issue is detected before the customer and the problem isolated and removed before it gets out of hand.



**Finally, efficiency** of locating and troubleshooting IPTV problems saves you time and money.



### Why your investment matters!

- Alarm Matrix for all channels/all locations.
- Map view for problem locating.
- Performance statistics.

### - Support:

- MPTS and SPTS tree with PIDs, PAT, CAT - IGMP2 and IGMP3
- Encapsulation UDP and RTP/UDP
- Encrypted and unencrypted streams
- Reports alarms and calculates metrics for
- TR 101290 Priority 1, 2 & 3, Packet Loss statistics
- Detects PIDs, Codecs, Encapsulation Protocol, Video Stream Resolution
- Video MOS score
- Optional DVB-C Interface RF & BER metrics
- Optional Analog TV Interface RF & SNR metrics

# NG-xTVMS

Digital TV Monitoring System



## NG-xTVMS System

### NET-ESVR

The Enterprise Server NET-ESVR is the hub of the system. Its central role is to receive the alarm status every 5 seconds from our NetProbe series of products, store the status and update the system alarm matrix. It also provides communication with the multiple Clients NET-NMSC.



Channel	Name	Multicast group	Number	Group	EM/AM	Info
121	NET CLASSIC	205.1133	125	50		
122	PALA-TV	205.1136	127	50		
123	TV DUCK	205.1133	128	50		
124	AMERICAN FAMILIAR	205.1132	136	50		
125	NET ELUSION	205.1135	137	50		
126	NET	205.1133	138	50		
127	NET 24	205.1136	139	50		
128	NET PURPLESA	205.1136	140	50		
129	NET PROGRESS	205.1135	141	50		
130	NET	205.1133	142	50		
131	Public House	205.1133	143	50		
132	NET 24	205.1133	144	50		
133	NET SUPERSTARS	205.1137	145	50		
134	NET CDNS	205.1133	146	50		
135	NET NEWS	205.1132	148	50		
136	NET Sport	205.1133	150	50		
137	NET					

### WEB-NMSC

The Web-NMSC is a web-based Client that communicates with the NET-ESVR remotely via any Internet connection. Multiple users can access the NG-xTVMS system at the same time. The WEB-NMSC Client is the main and only interface to the system. It provides real time status information from the server.

### NET-EXP

The NET-EXP Probe monitors SD and HD Channels in real-time 24/7. It supports MPEG-2 TS from IPTV and DVB-C sources. Our probe can be purchased with as little as 0.5 Gbps of bandwidth. Capacity is expandable up to 5 Gbps by merely purchasing additional software licenses. The customer can purchase his own server class computer on Net Research's recommendation and upgrade the computer class once the hardware bandwidth is exceeded.



### NET-MOZAIC

The NET-MOZAIC Probe can be used as a stand alone product or an integral part of our NET-xTVMS system. The NET-MOZAIC is normally located at the Headend with access to unencrypted TV channels. Customers define groups of 16 channels to monitor at time. They are then decoded and analyzed for picture quality. Hundreds of channels can be analyzed at once using our round robin method.



### NETPROBE 2000 IPTV

The NetProbe 2000 IPTV is a handheld IPTV tester that can emulate a set top box or passively monitor video channels in pass-thru mode. It can be used to turn up new service by auto scanning all channels and checking their quality or to troubleshoot the service. It is battery powered and easy to operate by a tier one technician. It also provides comprehensive TR101290, video and packet metrics.



### µNET

The µNET in the NG-xTVMS system is typically used at the customer STB in pass-thru mode to monitor MPEG-TS transport quality of up to 40 mbps of multicast video streams.

