

# DVBControl

Intuitive tools that enables you to Control DVB!

- DVBAalyzer
- DVBMosaic
- DVBLoudness
- DVBMonitor

# DVBAnalyzer

DVBAnalyzer enables powerful analyzing of all aspects of DVB/ATSC/ISDB Transport Streams. This can be done with high level summary overviews, down to bit interpretation compliance.

By quickly identifying different fields of interest, DVBAnalyzer helps developers, broadcasters, system integrators and field engineers during maintenance, development and testing of equipment, network and services.



## Features

- PID structures
- Service structures
- SI/PSI/PSIP structures
- ETR-290 compliance
- Timing
- Bitrate measurement
- Teletext
- Subtitling
- Layout Manager
- Thumb overview
- Media Viewer
- UDP Multicast output
- Video Quality
- Private Data
- Object/Data Carousels
- GOP structures
- PTS-DTS Timing
- Buffer behaviour
- Audio measurement
- Loudness measurement
- DVB-H analysing
- 3D
- Dolby® Digital (+)
- Dolby®-E
- Table overview
- Descriptor overview
- Hex Viewer
- Burst Viewer
- PCR Timing
- IP Traffic
- Logging
- Filtering
- Plugins
- Preferences
- EPG
- Multiple views

## Input Support

File, DVB-ASI, DVB-S, DVB-H, DVB-C, DVB-T, Multicast, Unicast and Live Streaming.



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DVBControl.com: DVBAAnalyzer - GOP Viewer

File View Tools Device Window Help

DVB Mode Timeslice: Mid Term (1000ms/1sec) Input: UDP/Multicast Source

PID 1 Filter: All PIDs

Services on Transport Stream ID: 1079

- Program 28006 - ZDF (6.3 Mbps)
- Program 28007 - 3sat (8.4 Mbps)
- Program 28011 - ZDFinfokanal (4.4 Mbps)
- Program 28012 - DKULTUR (266.2 kbps)
- Program 28013 - DLF (266.2 kbps)
- Program 28014 - zdf\_neo (4.1 Mbps)
- Program 28016 - zdf.kultur (6.2 Mbps)
- Program 28017 - DRadio Wissen (266.2 kbps)

Services: ZDF, 3sat, KiKa, ZDFinfokanal

EPG Viewer

EIT PIDs: 0018 Transponders: 1079 (Actual) Type: All Lang:

17:00 heute - Wetter (17:00) ZDF

17:15 hallo deutschland (17:15) ZDF

17:30 Gasettn (16:55) 3sat

fit aktiv (17:00) ZDFinfokanal

Teletext Viewer

Teletext PIDs: ZDF

DVB500\_100\_ZDFtex

Rätselraten: Wo Sarkozy lädt Re 660.000 Rentner GfK: Jeder sche

Bayern mit Top-Elf gegen Zürich 210 Hockey-Herren besiegen Spanien 213 Streak in Spanien: keine Einigung 226

17.00 heute - Wetter 17.15 hallo deutschland ..... 365

Spiel-Highlights im ZDF ..... 388

Wiese Warte Das Zitat des Tages ... 550

LOTTO am Samstag: Gewinnquoten ... 556

Size ZDF (MPEG) Frame / PES (12) video\_format: PAL, 576i25

Graph Type: Repetition Use Table: Duration: 1000ms Analyze

Bitrate

40 Mbps

30 Mbps

20 Mbps

10 Mbps

Transport Bandwidth (38.01 Mbps)

Transport Payload (35.76 Mbps)

Transport Stuffing (2.25 Mbps)

Scale: 2px: 1sec (duration: 00:00:00)

UDP-MC 239.10.10.10:1234 (7.0 pkt/s/MTU) 5% 38.014.900 bps / 94.2% PCR 188 DVB 22.08.2011 17:09:39

EIT Now/Next

Channel	Start	Duration	State	Description
DRadio Wissen	17:00:00	08:00:00	Running	Hirn will Arbeit
DRadio Wissen	01:00:00	08:00:00	Next	Hirn will Arbeit
ZDFinfokanal	17:02:00	00:13:00	Running	fit & aktiv
ZDFinfokanal	17:15:00	00:15:00	Next	garen & genießen

Ready

Log ETR-290 History, EIT Now/Next

ES Info

Bitrate: 3.4 Mbps

continuity\_counter\_errors: 0

PCR Time: 08:51:52.016

PTS Time: 08:51:52.383

PTS Interval: 40 ms

DTS Time: 08:51:52.303

DTS Interval: 120 ms

0670 [PES -> Audio MPEG-1]

0671 [PES -> Audio MPEG-1]

AIT\_PID: 0950

- table\_id: 0x74
- PID: 0950
- version\_number: 6
- last\_section\_number: 0
- application\_type: 16 (subject to registration with I)
- test\_application\_flag: 0
- No common\_descriptors
- Applications
- application\_id: 1
- application\_id: 1
- organisation\_id: 17 (Zweites Deutsches Fer
- application\_control\_code: 1 (Unknown)

SI/PSI/SPS

- PAT
- CAT
- PMT
- NIT
- SDT
- BAT
- EIT
- TDT
- TOT
- AIT

Reference PIDs: 1

stream\_id: 0x0 (224) - Video

ES Info

Bitrate: 3.4 Mbps

continuity\_counter\_errors: 0

PCR Time: 08:51:52.016

PTS Time: 08:51:52.383

PTS Interval: 40 ms

DTS Time: 08:51:52.303

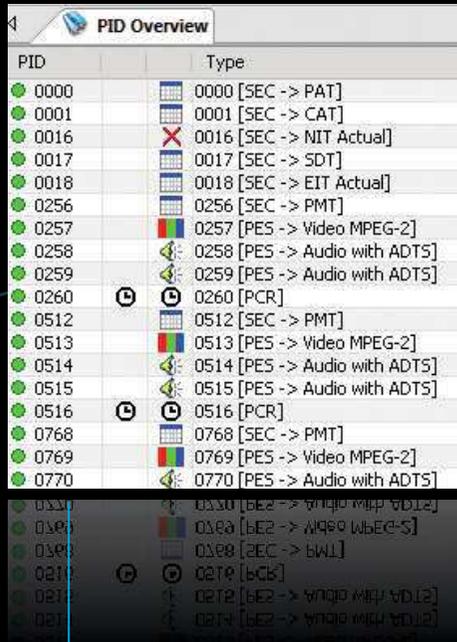
DTS Interval: 120 ms

0670 [PES -> Audio MPEG-1]

0671 [PES -> Audio MPEG-1]

AIT\_PID: 0950

- table\_id: 0x74
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- application\_id: 1
- application\_id: 1
- organisation\_id: 17 (Zweites Deutsches Fer
- application\_control\_code: 1 (Unknown)



## PID Overview

PID-oriented overview of the analyzed Transport Stream, presenting all component details.



## Media Viewer

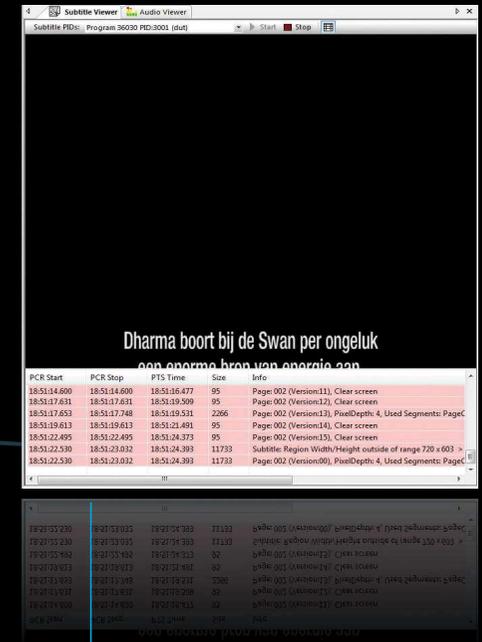
Watch or listen to TV and Radio Services. Overlaid Teletext, Subtitles and EPG now/next information.



## Teletext Viewer

Teletext information available in the analyzed Transport Stream can be shown in different representations:

- Graphics
- Tree
- Grid
- Statistics



## Subtitle Viewer

DVB Subtitles and their timing properties can be shown using the Subtitle Viewer window.

- Details
- Log



## Bitrate Overview

Visual overviews of PID bitrates and comparisons are possible in four representations:

- Bar
- Time
- Stacked
- Pie

## EPG

A visual grid representation of EPG events are displayed in the EPG Viewer window.

EPG data can be shown in different representations:

- Grid
- Details

## ETR-290

ETR-290 compliancy results are shown in two different views:

- ETR-290 Viewer
- ETR-290 History

## Thumb Overview

Three different Thumb Overviews can be shown:

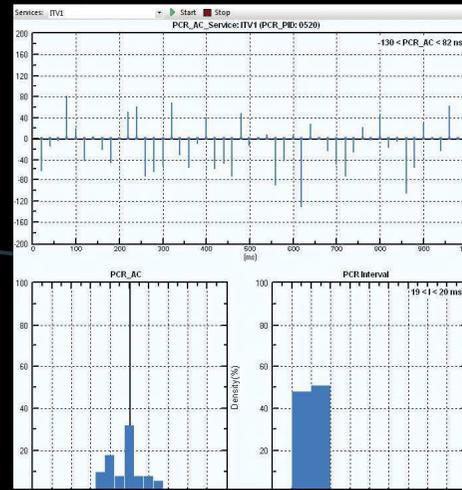
- Thumbnails Only
- Brief Details
- Full Details



## Video Quality

Live video quality measurements, using thresholds:

- Blocking
- Blurring
- Ringing



## PCR Viewer

PCR Viewer displays every second a graphical overview of the PCR (Program Clock Reference) frequency and precision.

- PCR Jitter snapshot
- PCR Jitter snapshot
- PCR Interval

The screenshot shows a table of parameters and their values:

Parameter	Value	Address	Length	Description
start_code_3d	0x00000100	0x1500.0	4	(1572 nodes in 4 levels)
PES_packet_length	0x01508 (5384)	0x00004.0	4	Audio
10	0x00000.0	0x00002.0	1	
PES_scrambling_control	0x00	0x00002.2	2	No scrambling of PES packet
PES_priority	0x0	0x00004.4	1	Normal priority
data_alignment_indicator	0x1	0x00005.5	1	PES packet header is immediately aligned on a byte boundary
copyright	0x0	0x00006.6	1	Not defined if the associated PES packet is not a video PES packet
original_or_copy	0x1	0x00006.7	1	Contents of the associated PES packet are original or copy
PES_DTS_flags	0x0	0x00007.0	2	PES DTS fields shall be present
ESCR_flag	0x0	0x00007.2	1	No ESCR fields are present
ES_rate_flag	0x0	0x00007.3	1	No ES_rate field is present
DSM_trick_mode_flag	0x0	0x00007.4	1	No trick mode field is present
additional_copy_info_flag	0x0	0x00007.5	1	No additional_copy_info field is present
PES_CRC_flag	0x0	0x00007.6	1	No CRC field is present
PES_extension_flag	0x0	0x00007.7	1	No extension field is present
PES_header_data_length	0x005 (5)	0x00008.0	1	

## Hex Viewer

Hex Viewer enables in-depth analyzing of Bits, Bytes and their interpretations.

- Implemented for:
- Sections
  - MIP (DVB-T)
  - TS-packets



## GOP and Buffer Viewer

Graphical presentation of the picture order and buffer behavior in GOP (Group of Pictures) structures of MPEG-2 or AVC Video components.



# DVBMosaic

Real-time mosaic overview showing multiple services received from multiple Transport Streams.

Detection, visualization and signaling of freeze, black, silence, PID lost, service lost and input lost behavior.

Intuitive configuration for multiple walls, which can decode MPEG-2/AVC Video, MPEG and Dolby® Audio, Teletext and DVB-Subtitles.

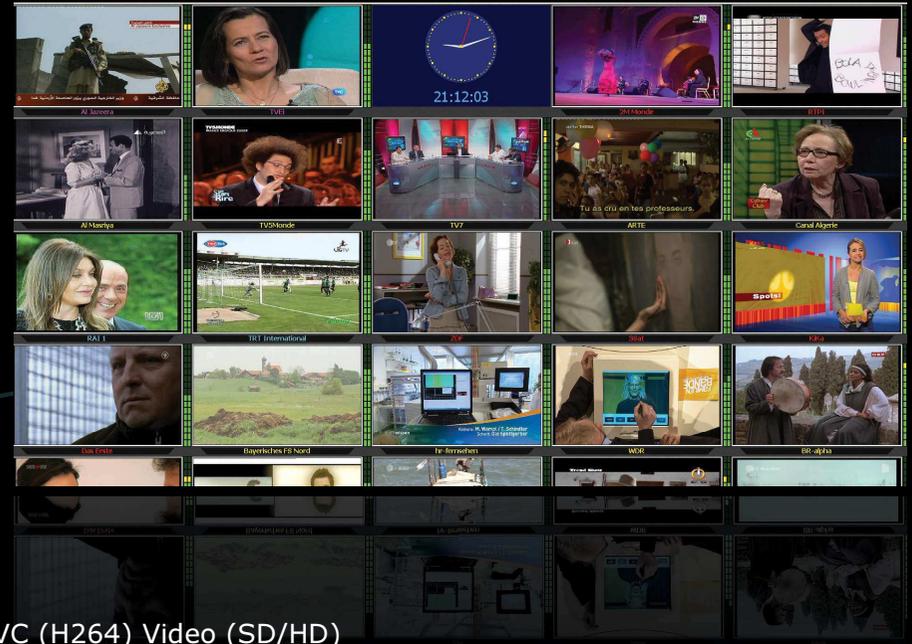
Walls can be completed using clocks and graphics.

## Features

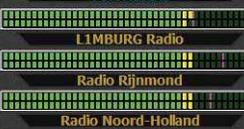
- Freeze detection
- Black detection
- Silence detection
- Input Lost detection
- PID Lost detection
- Service Lost detection
- Multiple walls
- Acknowledge mode
- Visual signalling
- Audio alerts
- SNMP traps
- Mail alerts
- DVBMonitor connectivity
- Round Robin
- MPEG-2 / AVC (H264) Video (SD/HD)
- Audio (MPEG/Dolby®)
- Teletext
- DVB-subtitles
- Clocks
- Images
- Preferences

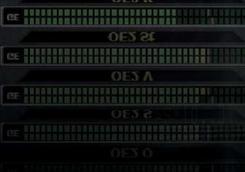
## Input Support

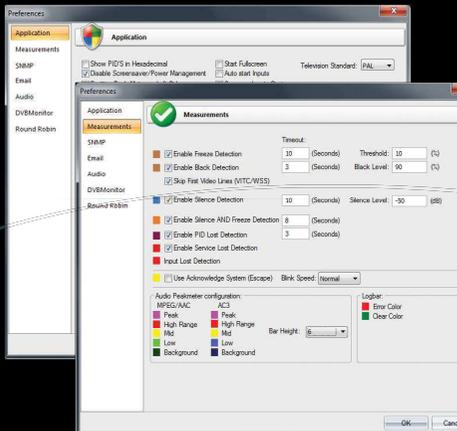
File, DVB-ASI, DVB-S, DVB-H, DVB-C, DVB-T, Multicast, Unicast and Live Streaming.



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<p><b>AMSTERDAM</b></p>  <p>16:09:20</p>	 <p>ZDF</p>  <p>ZDF Infokanal</p>	<p><b>LONDON</b></p>  <p>15:09:20</p>	 <p>3sat</p>  <p>zdf_neo</p>	<p><b>HONG KONG</b></p>  <p>22:09:20</p>	 <p>Kika</p>  <p>ZDF theaterkanal</p>	<p><b>SYDNEY</b></p>  <p>00:09:20 AM</p>
 <p>LIMBURG</p>	 <p>TV Rijnmond</p>	 <p>TV Noord-Holland</p>	 <p>Omrop Fryslan Televisie</p>	 <p>TV Noord</p>	 <p>TV Drenthe</p>	 <p>TV Oost</p>
 <p>TV Gelderland</p>	 <p>Omroep Zeeland Televisie</p>	 <p>Omroep Brabant Televisie</p>	 <p>NICK AUSTRIA</p>	 <p>MTV AUSTRIA</p>	 <p>RTL Austria</p>	 <p>VOX Austria</p>
 <p>RTL2 Austria</p>	 <p>Super RTL A</p>	 <p>Eurosport</p>	 <p>HSE24 extra</p>	 <p>LTI-OOE</p>	 <p>Radio Drenthe</p>	 <p>Radio Oost</p>
 <p>EuroNews</p>	 <p>GoTV</p>	 <p>ServusTV</p>	 <p>Radio Noord</p>	 <p>Radio Drenthe</p>		

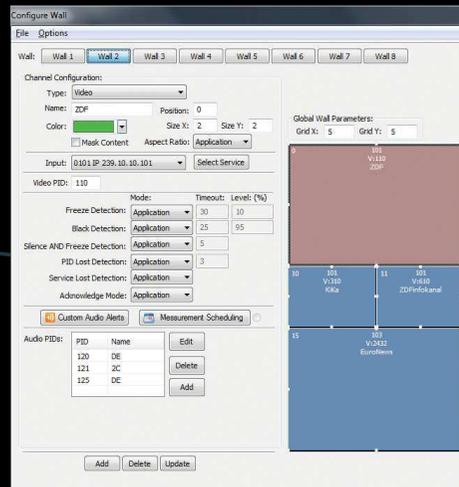
 <p>DVBControl</p>	 <p>DVBControl</p>	 <p>DVBControl</p>	 <p>DVBControl</p>	 <p>DVBControl</p>
---	---	--	---	---



## Preferences

Customized preferences have impact on behavior and are categorized:

- Application
- Measurements
- SNMP
- Email
- Audio
- DVBMonitor
- Round Robin



## Wall configuration

Up to 8 walls can be configured with different Service components:

- Video (SD/HD)
- Audio
- DVB-Subtitles (SD/HD)
- Teletext (Subtitles, Newsflash, Interrupted, Subpages)
- Images
- Clocks



## Multiple displays

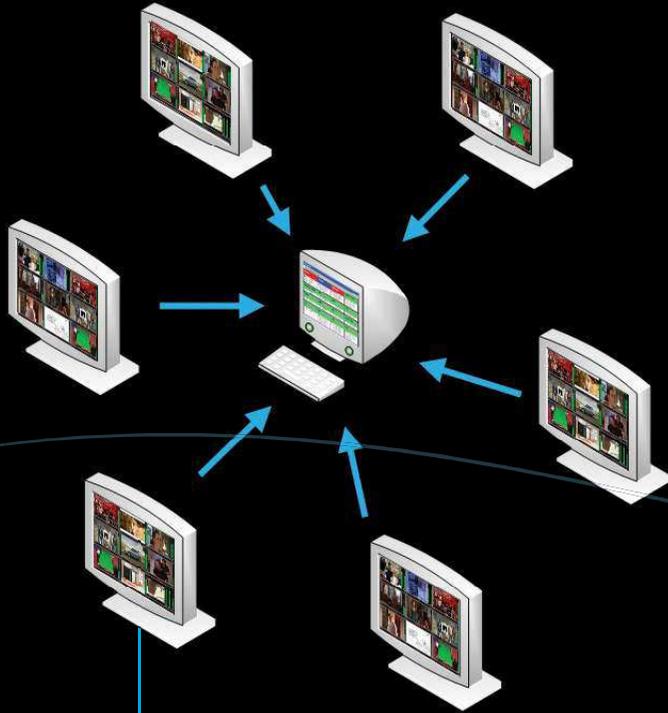
When using DVBMosaic with a multi display output adapter, the output of the mosaic can be spread across multiple screens.



## Round Robin

Automatically changing of walls can be realized using the Round Robin option.

The walls to be included and their display time can be customized by the user.



## Signalling Types

All measurement errors and clearing will be logged via multiple communication routes:

- On-screen visualization
- Audio alerts
- SNMP traps
- Email alerts
- DVBMonitor integration

## DVBMonitor Solution

Multiple DVBMosaic agents can seamlessly be integrated with the DVBMonitor Server and Clients.

This will enable remote monitoring of all connected DVBMosaic Clients, from all over the world.

### • Ordering

Typeno.	Description
DC10	DVBMosaic base software license, which enables 10 License Points
DC20	DVBMosaic base software license, which enables 20 License Points
DC30	DVBMosaic base software license, which enables 30 License Points
DC40	DVBMosaic base software license, which enables 40 License Points
DC50	DVBMosaic base software license, which enables 50 License Points
DC60	DVBMosaic base software license, which enables 60 License Points
DC70	DVBMosaic base software license, which enables 70 License Points
DC80	DVBMosaic base software license, which enables 80 License Points
DD5	Option which enables 5 Dolby® Digital Plus decoders
DE5	Option which enables 5 Dolby®-E decoders
RR	Option which enables Round Robin between Walls

### • Benchmark

CPU	SD MPEG-2	SD AVC/H264	HD MPEG-2	HD AVC/H264
i7-930	40	25	10	5
i7-980	70	50	20	9
Dual X5550	75	55	22	10
Dual X5675	110	75	30	15

## License points calculation

- 1 SD TV Service = 1 License Point
- 1 HD TV Service = 2 License Points
- 1 LD TV Service = 0,5 License Point
- Each TV Service has 1 Video and 1 Audio component
- 1 Teletext or DVB-Subtitle = 0,5 License Point
- 1 extra Audio = 0,2 License Point
- For Dolby® Digital decoding, also Dolby® Digital (DD) options are needed

# DVBLoudness

Powerful Loudness measurements for multiple Audio services coming from multiple Transport Streams.

Loudness is measured according to the ITU-R BS.1770 standard and EBU R-128 recommendation.

DVBLoudness is very modular and can be used in flexible and scalable environments enabling a wide range of users to analyze and control Loudness process behavior and the impact of process improvements.

## Features

- Momentary loudness
- Short Term loudness
- Program loudness
- Service loudness
- Loudness Range (LRA)
- True Peak Level
- Manual/External Triggered
- Live Meter (60 seconds)
- MPEG, AAC and Dolby® audio
- Control of Audio Level Control (ALC) equipment
- Visual Onscreen Alarms
- SNMP
- DVBMonitor integration
- Loss of Input detection
- Loss of Service Component detection
- Silence detection

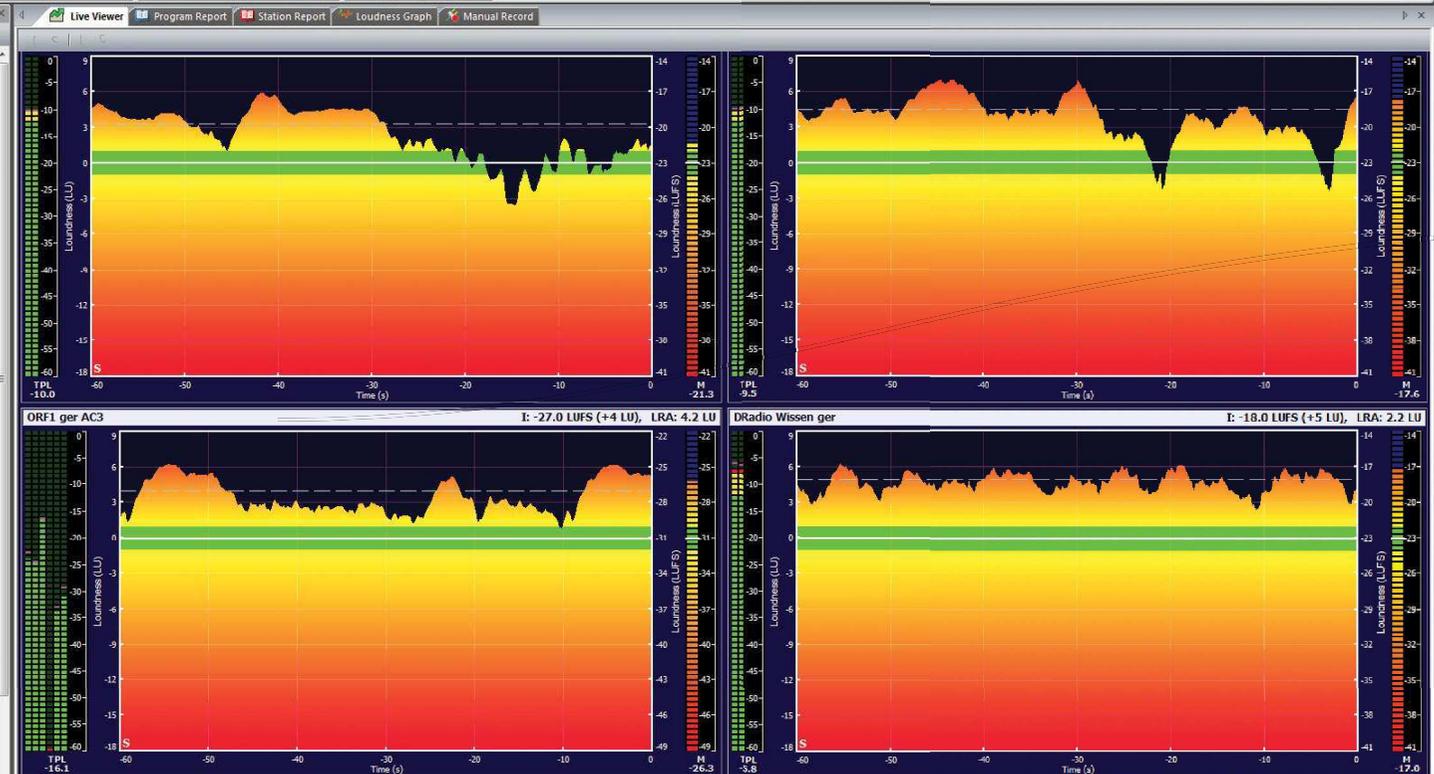
## Input Support

File, DVB-ASI, DVB-S, DVB-H, DVB-C, DVB-T, Multicast, Unicast and Live Streaming.



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- Inputs (3)
- 1000 ZDF TS UDP (38.0 Mbps)
    - Program 28006 - ZDF
      - PID: 0120 Type: 03 - Audio MPEG-1
      - PID: 0121 Type: 03 - Audio MPEG-1
      - PID: 0125 Type: 06 - Private PES, Audio AC3
    - Program 28007 - 3sat
      - PID: 0220 Type: 03 - Audio MPEG-1
      - PID: 0221 Type: 03 - Audio MPEG-1
      - PID: 0225 Type: 06 - Private PES, Audio AC3
    - Program 28008 - KiKa
      - PID: 0320 Type: 03 - Audio MPEG-1
    - Program 28011 - ZDFinfokanal
      - PID: 0620 Type: 03 - Audio MPEG-1
    - Program 28012 - DKULTUR
      - PID: 0710 Type: 03 - Audio MPEG-1
    - Program 28013 - DLF
      - PID: 0810 Type: 03 - Audio MPEG-1
    - Program 28014 - zdf\_neo
      - PID: 0670 Type: 03 - Audio MPEG-1
      - PID: 0671 Type: 03 - Audio MPEG-1
    - Program 28016 - ZDFtheaterkanal
      - PID: 1120 Type: 03 - Audio MPEG-1
      - PID: 1121 Type: 03 - Audio MPEG-1
    - Program 28017 - DRadio Wissen
      - PID: 0410 Type: 03 - Audio MPEG-1
  - 1001 UDP\_239.10.10.103 (38.0 Mbps)
    - Program 28640 - NICK AUSTRIA
      - PID: 0661 Type: 04 - Audio MPEG-2
    - Program 28641 - MTV AUSTRIA
      - PID: 0662 Type: 04 - Audio MPEG-2
    - Program 28800 - RTL Austria
      - PID: 0202 Type: 03 - Audio MPEG-1
    - Program 28805 - VOX Austria
      - PID: 0302 Type: 03 - Audio MPEG-1
    - Program 28810 - RTL2 Austria
      - PID: 0402 Type: 03 - Audio MPEG-1
    - Program 28815 - Super RTL A
      - PID: 0502 Type: 03 - Audio MPEG-1
    - Program 31200 - Eurosport
      - PID: 0103 Type: 04 - Audio MPEG-2
    - Program 31201 - Guide Plus+
      - PID: 0660 Type: 04 - Audio MPEG-2
    - Program 31220 - EuroNews
      - PID: 2433 Type: 03 - Audio MPEG-1
      - PID: 2434 Type: 03 - Audio MPEG-1
      - PID: 2435 Type: 03 - Audio MPEG-1
      - PID: 2436 Type: 03 - Audio MPEG-1
      - PID: 2437 Type: 03 - Audio MPEG-1
      - PID: 2438 Type: 03 - Audio MPEG-1
      - PID: 2439 Type: 03 - Audio MPEG-1
      - PID: 2440 Type: 03 - Audio MPEG-1
      - PID: 2441 Type: 03 - Audio MPEG-1



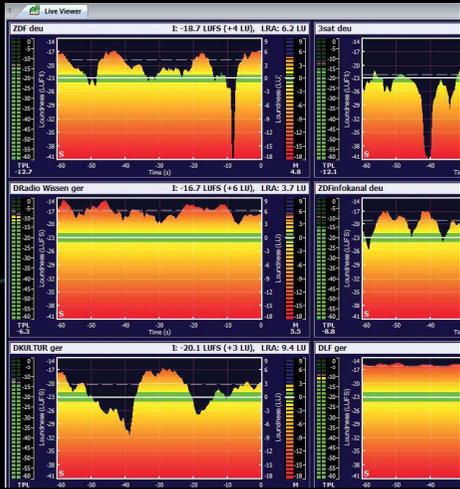
Log

0 Errors 110 Messages

Date/Time	ID	Input	PID	Service	Message
30/08/2010 15:00:00					Report Hourly_20100830_14 Exported
30/08/2010 15:00:00	1001	UDP_239.10.10.103	0202	RTL Austria ger	Record Finished: Mitten im Leben! -> I=-18.1 LUFS, LRA=6.6 LU, TPL: -6.4 dBTP
30/08/2010 15:00:00	1001	UDP_239.10.10.103	0202	RTL Austria ger	Record Started: Verdachtsfälle
30/08/2010 15:00:02	1000	ZDF TS UDP	0810	DLF ger	Record Finished: Campus & Karriere -> I=-17.2 LUFS, LRA=6.5 LU, TPL: -6.1 dBTP
30/08/2010 15:00:02	1000	ZDF TS UDP	0810	DLF ger	Record Started: Nachrichten

CPU: Active Services: 34/36 Active DD Services: 3/4 Licenses Used: 36/100 Services, 4/12 DD Licenses Selected Services: None

ID	Input	PID	Service	Message
30/08/2010 15:00:05	UDP_239.10.10.103	0810	DLF ger	Record Finished: Nachrichten
30/08/2010 15:00:05	UDP_239.10.10.103	0810	DLF ger	Record Finished: Campus & Karriere -> I=-17.2 LUFS, LRA=6.5 LU, TPL: -6.1 dBTP
30/08/2010 15:00:05	UDP_239.10.10.103	0202	RTL Austria ger	Record Finished: Verdachtsfälle
30/08/2010 15:00:05	UDP_239.10.10.103	0202	RTL Austria ger	Record Started: Mitten im Leben! -> I=-18.1 LUFS, LRA=6.6 LU, TPL: -6.4 dBTP
30/08/2010 15:00:00	UDP_239.10.10.103	0202	RTL Austria ger	Record Finished: Nachrichten
30/08/2010 15:00:00	UDP_239.10.10.103	0202	RTL Austria ger	Record Started: Mitten im Leben! -> I=-18.1 LUFS, LRA=6.6 LU, TPL: -6.4 dBTP



## Live Viewer

- Up to 16 Live Meters
- Short Term Chart with colour scale
- Integrated Loudness value
- Momentary Loudness
- Loudness Range
- True Peak Level

Program Name	Genre	Start/Stop Time	I (LUFS)	TPL (dBTP)	LRA (LU)	L_Min (LUFS)	L_Max (LUFS)	LRA_Min (LUFS)	LRA_Max (LUFS)
19-6	-9.0	4.7	-39.8	-15.2	-22.3	-17.6			
19-6	-9.1	3.9	-39.9	-17.0	-22.0	-18.1			
19-6	-9.0	15.6	-42.7	-13.0	-33.3	-17.7			
20-0	-9.1	3.9	-40.2	-16.6	-22.3	-18.4			
19-1	-9.0	4.2	-39.5	-16.5	-21.9	-17.7			
21.5	-8.8	7.6	-41.3	-17.2	-20.5	-18.9			
18.9	-9.1	4.2	-39.3	-16.8	-21.7	-17.9			
23.5	-9.1	11.5	-44.6	-15.3	-31.9	-20.4			
19.7	-9.1	6.6	-40.6	-16.4	-24.8	-18.2			
21.6	-9.0	5.0	-41.5	-17.8	-23.9	-18.9			
19.9	-9.0	5.6	-40.4	-16.0	-22.5	-17.9			
19.5	-9.4	4.4	-39.5	-15.5	-21.8	-17.4			
20.7	-8.9	8.6	-41.4	-16.3	-26.4	-17.8			
20.6	-9.1	4.3	-40.9	-16.4	-23.1	-18.8			
20.8	-9.1	7.4	-41.4	-16.1	-25.6	-18.2			
20.0	-9.0	5.6	-40.7	-16.9	-24.0	-18.4			
10.8	0.4	6.7	-46.1	-14.3	-39.5	-17.8			
21.5	-9.1	5.4	-42.0	-17.8	-25.0	-19.6			
20.1	-9.3	11.6	-41.4	-14.0	-28.8	-17.2			
20.0	-9.1	6.3	-40.4	-14.7	-24.1	-17.8			
20.9	-9.1	4.3	-41.0	-16.3	-23.1	-18.8			
19.7	-9.2	5.0	-40.3	-17.2	-23.6	-18.6			
20.2	-9.2	4.0	-40.3	-17.1	-22.5	-18.5			
20.2	-9.1	5.1	-40.7	-16.5	-22.7	-18.6			
19.5	-9.1	11.4	-40.4	-14.3	-28.0	-16.6			
19.9	-9.1	4.2	-40.4	-17.2	-22.5	-18.3			
19.4	-9.0	9.9	-40.3	-13.9	-26.1	-16.2			
18.9	-9.1	5.3	-39.4	-15.5	-22.4	-17.1			
20.2	-9.0	5.6	-40.6	-16.1	-23.8	-18.2			
19.9	-9.0	4.9	-40.2	-14.4	-22.7	-17.8			
18.3	-9.0	5.4	-38.7	-14.2	-21.7	-16.3			
19.1	-8.9	4.6	-39.4	-16.6	-22.0	-17.4			
21.6	-9.0	4.9	-41.9	-17.3	-24.5	-19.6			
18.8	-9.1	2.4	-39.0	-17.2	-20.2	-17.8			
20.3	-9.0	5.6	-40.7	-16.1	-24.1	-18.5			
21.8	-8.0	10.1	-41.8	-15.8	-28.1	-18.0			
19.8	-9.1	4.6	-40.3	-16.4	-23.0	-18.4			

## Program Report

- Program Name/Genre
- Start/Stop Time
- Integrated Loudness value
- Loudness Range
- True Peak Level
- AC-3 Dialnorm

Service Name	Genre	Start/Stop Time	I (LUFS)	TPL (dBTP)	LRA	
19-6	-9.0	4.7	-39.8	-15.2	-22.3	-17.6
19-6	-9.1	3.9	-39.9	-17.0	-22.0	-18.1
19-6	-9.0	15.6	-42.7	-13.0	-33.3	-17.7
20-0	-9.1	3.9	-40.2	-16.6	-22.3	-18.4
19-1	-9.0	4.2	-39.5	-16.5	-21.9	-17.7
21.5	-8.8	7.6	-41.3	-17.2	-20.5	-18.9
18.9	-9.1	4.2	-39.3	-16.8	-21.7	-17.9
23.5	-9.1	11.5	-44.6	-15.3	-31.9	-20.4
19.7	-9.1	6.6	-40.6	-16.4	-24.8	-18.2
21.6	-9.0	5.0	-41.5	-17.8	-23.9	-18.9
19.9	-9.0	5.6	-40.4	-16.0	-22.5	-17.9
19.5	-9.4	4.4	-39.5	-15.5	-21.8	-17.4
20.7	-8.9	8.6	-41.4	-16.3	-26.4	-17.8
20.6	-9.1	4.3	-40.9	-16.4	-23.1	-18.8
20.8	-9.1	7.4	-41.4	-16.1	-25.6	-18.2
20.0	-9.0	5.6	-40.7	-16.9	-24.0	-18.4
10.8	0.4	6.7	-46.1	-14.3	-39.5	-17.8
21.5	-9.1	5.4	-42.0	-17.8	-25.0	-19.6
20.1	-9.3	11.6	-41.4	-14.0	-28.8	-17.2
20.0	-9.1	6.3	-40.4	-14.7	-24.1	-17.8
20.9	-9.1	4.3	-41.0	-16.3	-23.1	-18.8
19.7	-9.2	5.0	-40.3	-17.2	-23.6	-18.6
20.2	-9.2	4.0	-40.3	-17.1	-22.5	-18.5
20.2	-9.1	5.1	-40.7	-16.5	-22.7	-18.6
19.5	-9.1	11.4	-40.4	-14.3	-28.0	-16.6
19.9	-9.1	4.2	-40.4	-17.2	-22.5	-18.3
19.4	-9.0	9.9	-40.3	-13.9	-26.1	-16.2
18.9	-9.1	5.3	-39.4	-15.5	-22.4	-17.1
20.2	-9.0	5.6	-40.6	-16.1	-23.8	-18.2
19.9	-9.0	4.9	-40.2	-14.4	-22.7	-17.8
18.3	-9.0	5.4	-38.7	-14.2	-21.7	-16.3
19.1	-8.9	4.6	-39.4	-16.6	-22.0	-17.4
21.6	-9.0	4.9	-41.9	-17.3	-24.5	-19.6
18.8	-9.1	2.4	-39.0	-17.2	-20.2	-17.8
20.3	-9.0	5.6	-40.7	-16.1	-24.1	-18.5
21.8	-8.0	10.1	-41.8	-15.8	-28.1	-18.0
19.8	-9.1	4.6	-40.3	-16.4	-23.0	-18.4

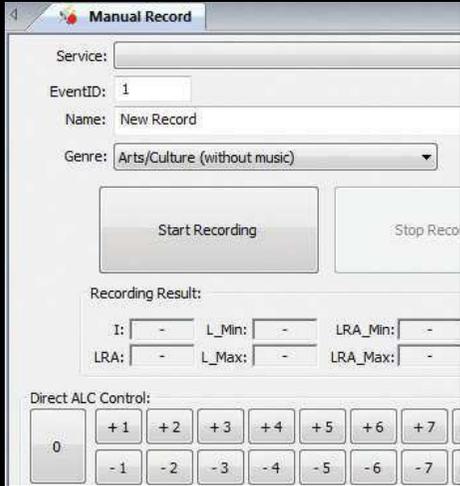
## Service Report

- Daily report of all services
- Integrated Loudness value
- Loudness Range
- True Peak Level
- AC-3 Dialnorm



## Loudness graph

- Loudness analyzing is continuously done for 3 different time intervals:
- Hourly (Short Term)
  - Daily (Integrated)
  - Monthly (Integrated)



• **Ordering**

Typeno.	Description
DL25	DVBLoudness base software license, which enables 25 Loudness measurements
DL50	DVBLoudness base software license, which enables 50 Loudness measurements
DL75	DVBLoudness base software license, which enables 75 Loudness measurements
DL100	DVBLoudness base software license, which enables 100 Loudness measurements
DL150	DVBLoudness base software license, which enables 150 Loudness measurements
DL200	DVBLoudness base software license, which enables 200 Loudness measurements
DL250	DVBLoudness base software license, which enables 250 Loudness measurements
DD5	Option which enables 5 Dolby® Digital Plus decoders
DE5	Option which enables 5 Dolby®-E decoders
ALC	Option which enables control on an Audio Level Control unit

## Manual Recorder

Besides automatically triggered (EIT/SNMP) program recording, also manual recording can be realized.

## ALC Control

Control of Audio Level Control equipment to normalise multiple services in a DVB network.

# DVBMonitor

DVB Networks are getting more complex rapidly.

Besides the growing amount of Services, also the varieties of components that must connect and interact in a specific way to be successful are getting beyond human perception.

All activities together are responsible for the behavior and quality of a DVB network. Thereby DVB networks evolve constantly with changes in services, parameters, devices and their firmware releases. It can be concluded that a DVB network owner constantly needs to be aware of the quality of his DVB network!

The most reliable means to know how a DVB network performs is to continuously measure in real-time its behavior through comparison to a set of recommendations for various stream elements.

The key question which has to be answered is: **What do you accept or not in your DVB network?**

To ensure that all DVB signals meet the customer requirements, constant real-time compliancy checks are needed.

## Features

- Multiple Transport Streams
- Multiple Configurable Compliancy Checks
- Multiple Templates
- Multiple Notifications
- Multiple Organizations
- Multiple Sites
- Multiple Users

## Input Support

File, DVB-ASI, DVB-S, DVB-H, DVB-C, DVB-T, Multicast, Unicast and Live Streaming.



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DVBControl.com: DVBMonitor Client

File Options Tools Layout Help Login: admin

NavBar

- MyCompany
  - Amsterdam
    - Agent A1
    - Agent A2
  - Hilversum
    - Agent H1
      - TS 9
        - 01101 - Nederland 1
        - 01102 - Nederland 2
        - 01103 - Nederland 3
        - 01104 - TV Noord-Holland
      - TS 10
        - 28007 - 3sat
        - 28012 - DKUJ TIJR
        - 28013 - DLF
        - 28017 - Dok&Deb
        - 28008 - KiKa
          - 0310 - Video MPEG-2
          - 0320 - Audio MPEG-1
          - 0330 - Teletext
          - 0955 - Private Sections
          - 0966 - DSM-CC U-N
          - 0967 - DSM-CC U-N
          - 0968 - DSM-CC U-N
          - 0969 - DSM-CC U-N
          - 0970 - DSM-CC U-N
          - 0989 - DSM-CC U-N
        - 28006 - ZDF
        - 28014 - ZDFdoku kanal
        - 28011 - ZDFinfokanal
        - 28016 - ZDFtheaterkanal
    - Agent H2
      - 239.10.10.101
      - 239.10.10.102
      - 239.10.10.103

### Service Overview

All Base Special Contribution

Service	Base	Special	Contribution
<b>Nederland 1</b> (1101)	7011 - Video MPEG-2	7012 - Audio MPEG-1	7013 - Teletext
<b>Nederland 2</b> (1102)	7021 - Video MPEG-2	7022 - Audio MPEG-1	7023 - Teletext
<b>Nederland 3</b> (1103)	7031 - Video MPEG-2	7032 - Audio MPEG-1	7033 - Unknown
<b>3sat</b> (28007)	0210 - Video MPEG-2	0220 - Audio MPEG-1	0221 - Audio MPEG-1
<b>DKULTUR</b> (28012)	0710 - Audio MPEG-1	0956 - Private Sections	0966 - DSM-CC U-N
<b>DLF</b> (28013)	0810 - Audio MPEG-1	0956 - Private Sections	0966 - DSM-CC U-N
<b>Dok&amp;Deb</b> (28017)	0410 - Audio MPEG-1	0966 - DSM-CC U-N	0967 - DSM-CC U-N
<b>KiKa</b> (28008)	0310 - Video MPEG-2	0320 - Audio MPEG-1	0330 - Teletext
<b>TV Noord-Holland</b> (1104)	7041 - Video MPEG-2	7042 - Audio MPEG-1	7043 - Teletext
<b>ZDF</b> (28006)	0110 - Video MPEG-2	0120 - Audio MPEG-1	0121 - Audio MPEG-1
<b>ZDFdoku kanal</b> (28014)	0660 - Video MPEG-2	0670 - Audio MPEG-1	0671 - Audio MPEG-1
<b>ZDFinfokanal</b> (28011)	0610 - Video MPEG-2	0620 - Audio MPEG-1	0630 - Teletext

### Input Overview

All Amsterdam Hilversum

TS	Input	Status
<b>TS 9</b> (17)	Nederland 1	OK
	Nederland 2	OK
	Nederland 3	OK
	TV Noord-Holland	OK
<b>TS 10</b> (18)	3sat	OK
	DKULTUR	OK
	DLF	OK
	Dok&Deb	OK
	KiKa	OK
	ZDF	OK
	ZDFdoku kanal	OK
	ZDFinfokanal	OK
	ZDFtheaterkanal	OK
	239.10.10.101	OK
	239.10.10.102	OK
	239.10.10.103	OK
	239.10.10.104	OK

### Log

Drag a column header and drop it here to group by that column

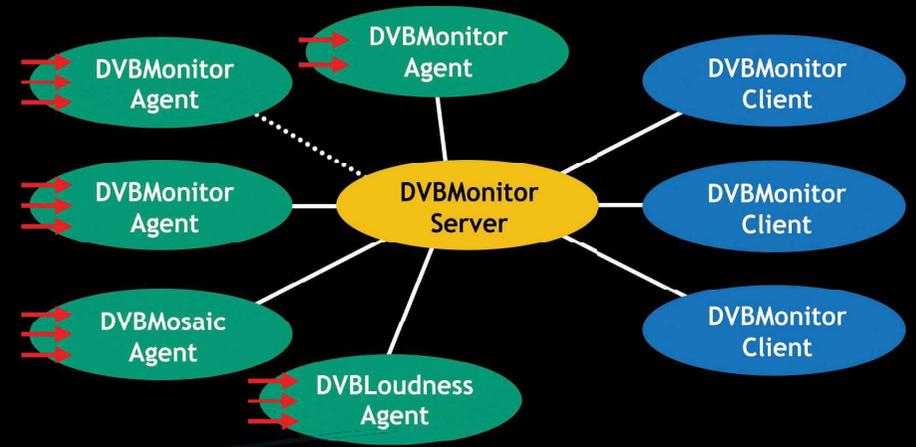
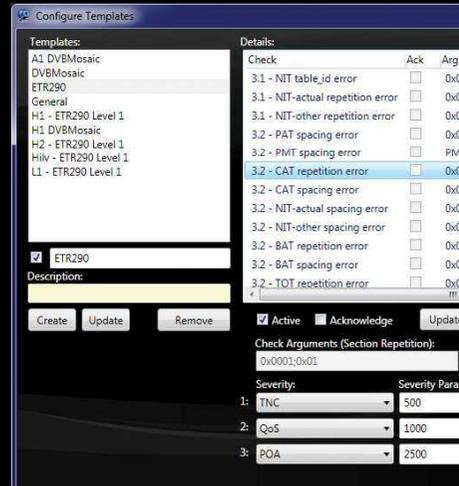
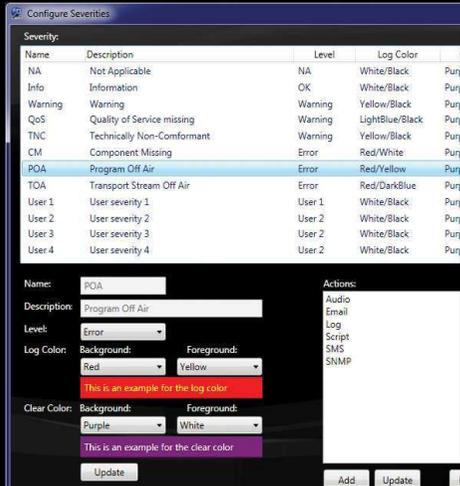
Date	Identification	Input	Service	PID	Category	Check	Context	Status	Message	Cleared
4/23/2010 4:27:09 PM	Hilversum > Agent H1	TS 10	28008 - KiKa	0320 - Audio MPEG-1	TS Packet Layer	Continuity Count (CC)	TS Packet Error	TNC	Continuity Count error	
4/23/2010 4:27:06 PM	Hilversum > Agent H1	TS 10	28014 - ZDFdoku kanal	0660 - Video MPEG-2	PID Bitrate	PID Bitrate max	PID Error	QoS	PID bitrate higher then 6 Mbps	
4/23/2010 4:26:25 PM	Hilversum > Agent H1	TS 9			DVBMosaic	Input Lost Detection	DVBMosaic Error	Error	Input Lost	
4/23/2010 4:25:25 PM	Hilversum > Agent H1	TS 9	01101 - Nederland 1		DVBMosaic	Service Lost Detection	DVBMosaic Error	Error	Service timeout	
4/23/2010 4:25:12 PM	Hilversum > Agent H1	TS 9	01103 - Nederland 3	7033	DVBMosaic	Freeze Detection	DVBMosaic Error	Error	Freeze Detected	
4/23/2010 4:25:06 PM	Hilversum > Agent H1	TS 9	01101 - Nederland 1	7011 - Video MPEG-2	DVBMosaic	Freeze Detection	DVBMosaic Error	Error / Solved	Freeze Detected	4/23/2010 4:25:26 PM (20 secs)
4/23/2010 4:25:02 PM	Hilversum > Agent H1	TS 9	01102	7022 - Audio MPEG-1	DVBMosaic	Silence Detection	DVBMosaic Error	QoS	Silence Detected	
4/23/2010 4:19:01 PM	Hilversum	Agent H1			DVBMosaic	DVBMosaic Started	DVBMosaic Error	Info	DVBMosaic started	

Agents: 3, Inputs: 12

Last Error: 4/23/2010 4:27:09 P

Agents: 3, Inputs: 12

Services: 3, Inputs: 12



## Notifications and Actions

Different notifications and actions can be fired:

- Log line
- On-screen visualization
- Audio alerts
- SNMP Traps
- E-mail alerts
- User defined scripts
- Transport Stream capture

## Checks and Templates

All compliance checks are categorized in different category templates:

- Transport Stream compliancy
- Bitrate compliancy
- Service compliancy
- SI / PSI / PSIP compliancy
- Video compliancy
- Audio compliancy

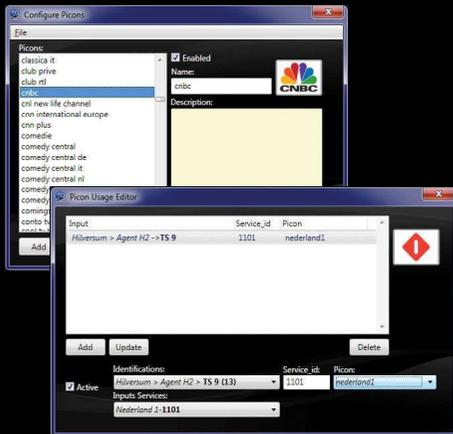
## Identifications

Identifications give the possibility to make hierarchical and non-hierarchical relations between:

- Organizations
- Sites
- Users
- DVBMonitorAgent entities
- Transport Stream inputs (probes)

## Organisations and Users

Because of its unique architecture, it is easily possible to define a Monitoring structure where multiple Organizations, Sites and Users can share one DVBMonitor installation. A network provider can create user login entries for customers to enable monitoring their local services.

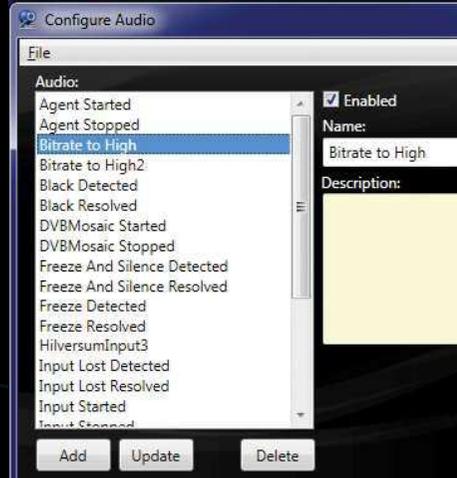


## Picons

Graphical customization of Services and Inputs.

Easier identification of:

- Broadcasters
- Multiple use of equally named services



## Audio

Custom audio tracks which will identify all auditive messages

easier for:

- Inputs
- Services
- Rise and dissolve

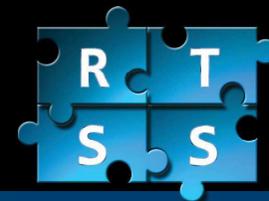
## Ordering

Typeno.	Description
	<b>DVBMonitorServer (Server)</b>
DMS	DVBMonitorServer base software license. Unlimited use of DVBMonitorClient end-user software
	<b>DVBMonitorAgent base Compliance Checks (ETR290, Transport Stream, SI/PSI/PSIP, Timing, Bitrate, Service), Structures and Measurements (Bitrate)</b>
DM5	DVBMonitorAgent base software license, which enables monitoring for 5 Base Monitor License Points
DM10	DVBMonitorAgent base software license, which enables monitoring for 10 Base Monitor License Points
DM40	DVBMonitorAgent base software license, which enables monitoring for 40 Base Monitor License Points
DM100	DVBMonitorAgent base software license, which enables monitoring for 100 Base Monitor License Points
DM-RR	Option which enables Round Robin between different TS inputs
	<b>DVBMonitorAgent Video Compliance Checks (ES settings: MPEG-2/AVC, GOP/ Picture structures, Quality: Black, Freeze, Blocking, Blurring, Ringing) and Thumbs</b>
VC5	DVBMonitorAgent base software license, which enables monitoring for 5 Base Monitor License Points
VC10	DVBMonitorAgent base software license, which enables monitoring for 10 Base Monitor License Points
VC40	DVBMonitorAgent base software license, which enables monitoring for 40 Base Monitor License Points
VC100	DVBMonitorAgent base software license, which enables monitoring for 100 Base Monitor License Points
VC-RR	Option which enables Round Robin between different video components
	<b>DVBMonitorAgent Audio Compliance Checks (ES settings: MPEG-1, Quality: Silence, Level, Loudness)</b>
AC5	Audio option, which enables audio compliance monitoring for 5 audio components
AC10	Audio option, which enables audio compliance monitoring for 10 audio components
AC40	Audio option, which enables audio compliance monitoring for 40 audio components
AC100	Audio option, which enables audio compliance monitoring for 100 audio components
AC-RR	Option which enables Round Robin between different audio components
DD5	Option which enables 5 Dolby® Digital Plus decoders
DE5	Option which enables 5 Dolby®-E decoders
	<b>DVBMonitorAgent Data Compliance Checks (Private PES Data: Teletext/DVB-Subtitles, Object/Data Carousel)</b>
DC5	Data option, which enables data compliance monitoring for 5 Data components
DC10	Data option, which enables data compliance monitoring for 10 Data components
DC40	Data option, which enables data compliance monitoring for 40 Data components
DC100	Data option, which enables data compliance monitoring for 100 Data components
DC-RR	Option which enables Round Robin between different data components
	<b>DVBMonitorAgent Frontend Compliance Checks (DVB-S/S2/T/T2/C: S/N, MER, BER)</b>
FC5	Frontend option, which enables frontend compliance monitoring for 5 inputs
FC10	Frontend option, which enables frontend compliance monitoring for 10 inputs
FC-RR	Option which enables Round Robin between different front-end units

## Dealer Information



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