

DVB-NIP Analyzer

Quick Start Guide for DVB-NIP Analyzer

This guide provides instructions for installing and configuring the DVB-NIP Analyzer on Windows and Linux systems

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1 System Requirements

Ensure that your system meets the following requirements:

Operating System: Windows 10 or Linux + Docker

Processor: Intel i5 or equivalent

RAM: 8 GB minimum

Disk Space: 200 MB free space

1.1 Windows Installation

- Download the DVB-NIP Analyzer installer from the *Verification and Validation (V&V) material* wiki page of the TM-NIP group on <https://member.dvb.org>.
- Extract the zip file
- Double-click on `dvb-nip-analyzer.exe` to start the application

Warning: Only one instance of the DVB-NIP Analyzer can run at the same time

1.2 Linux Installation

Pull the latest version of the DVB-NIP Analyzer docker image:

```
docker pull sessystems/dvb-nip-analyzer
```

Run the DVB-NIP Analyzer:

- Select `net=host` if you want to give access to your host network to receive the multicast UDP/IP streams:

```
docker run --rm --net=host sessystems/dvb-nip-analyzer
```

- If not using the host network, export the port 8000 to give access to the web interface

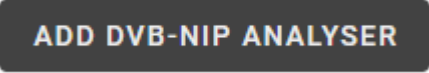
```
docker run -p 8000:8000 --rm sessystems/dvb-nip-analyzer
```

Open the application:

Open <http://localhost:8000> on your browser to run the app.

2 Opening a DVB-NIP Stream

A new DVB-NIP Stream analysis can be created by clicking on **ADD DVB-NIP ANALYZER** button.



Multiple DVB-NIP Stream can be opened at the same time.
The tool supports any UDP/IP Stream containing FLUTE sessions or mABR session with FLUTE.
Other transport protocol is not supported.

2.1 Supported inputs

2.1.1 PCAP Files


UDP Packets captured and saved into a PCAP file.
The DVB-NIP Analyzer supports PCAP files containing both Ethernet and IP layers.

1. Click on the file icon and select the pcap file you want to open
2. Select the pcap file on your PC
3. Click on START button

Start Analysis of a DVB-NIP Stream

Select the input type
PCAP File

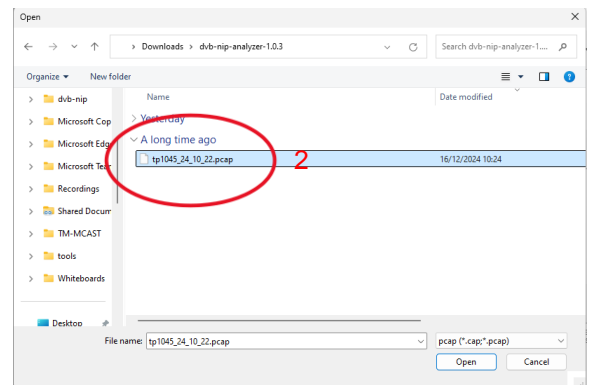
PCAP File

1  Path to a PCAP File
C:\Users\u\Downloads\tp1045_24_10_22.pcap

Enable PCAP File Looping

Bitrate Analyzer parameters

Averaging window duration (in ms) 100	Sampling Interval (in ms) 25	Max Storage Duration (in s) 180
<small>Window duration used for calculating the average bitrate. Increase this value to smooth the bitrate curve.</small>	<small>The interval at which the bitrate is sampled. An average bitrate value is calculating for each sample. Sampling Rate is 40.00Hz</small>	<small>Maximum duration for which data is stored in memory. Increase this value to retain more data for analysis, but note that it will require more RAM.</small>



2.1.2 TS file with MPE

Open a Transport Stream containing MPE with DVB-NIP Streams inside

1. Select the TS file by clicking on the File icon, then pick up on file stored on you PC
2. Configure the Bitrate of your TS file

3. Click on START button

Start Analysis of a DVB-NIP Stream

Select the input type
TS File

TS File

1 Path to a TS File

Enable TS File Looping TS Bitrate (bps) 2

Bitrate Analyzer parameters

Averaging window duration (in ms) 100	Sampling Interval (in ms) 25	Max Storage Duration (in s) 180
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Window duration used for calculating the average bitrate. Increase this value to smooth the bitrate curve.

The interval at which the bitrate is sampled. An average bitrate value is calculating for each sample. Sampling Rate is 40.00Hz

Maximum duration for which data is stored in memory. Increase this value to retain more data for analysis, but note that it will require more RAM.

CLOSE **START** 3

2.1.3 Invert to QStream

The DVB-NIP Analyzer can connect to a QStream device in bridge mode to receive live UDP/IP packets or Transport Stream (TS) packets.

1. Enter the IP address of a QStream box available in your network
2. Enter the query used to tune the box to the correct transponder. The query must start with interrogation point and it follows the SAT>IP query syntax.
3. Click on START button

Start Analysis of a DVB-NIP Stream

Select the input type
Inverto QStream

Inverto QStream

1 IP address of the QStream box
192.168.1.1
ex. 192.168.1.xxx

2 Query
?freq=11141&orb=192&pol=h&msys=dvbs2&sr=23500&mcast_in=all

URL: http://192.168.1.1/?freq=11141&orb=192&pol=h&msys=dvbs2&sr=23500&mcast_in=all

Bitrate Analyzer parameters

Averaging window duration (in ms) 100 <small>Window duration used for calculating the average bitrate. Increase this value to smooth the bitrate curve.</small>	Sampling Interval (in ms) 25 <small>The interval at which the bitrate is sampled. An average bitrate value is calculating for each sample. Sampling Rate is 40.00Hz</small>	Max Storage Duration (in s) 180 <small>Maximum duration for which data is stored in memory. Increase this value to retain more data for analysis, but note that it will require more RAM.</small>
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CLOSE **START** 3

2.1.4 Capture from Network Interface

The DVB-NIP Analyzer can connect to a network interface to capture UDP/IP packets. This functionality is only available with the Linux Docker version.

1. Select the network interface
2. Click on **START** button

Start Analysis of a DVB-NIP Stream

Select the input type
Network Interface

Network Interface device

1 Select a Network Interface in the list
eth0

Bitrate Analyzer parameters

Averaging window duration (in ms) 100 <small>Window duration used for calculating the average bitrate. Increase this value to smooth the bitrate curve.</small>	Sampling Interval (in ms) 25 <small>The interval at which the bitrate is sampled. An average bitrate value is calculating for each sample. Sampling Rate is 40.00Hz</small>	Max Storage Duration (in s) 180 <small>Maximum duration for which data is stored in memory. Increase this value to retain more data for analysis, but note that it will require more RAM.</small>
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CLOSE **START** 2