



**Dualz Solutions**  
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# Dualz BRIGHT Toolbox

User manual



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## Introduction

This document gives a description of the usage of 'BRIGHT Toolbox'.

## Operating system

Dualz BRIGHT Toolbox user interface runs on any Windows operating system. Win10 prof 64bit recommended.

NOTE: The Dualz Probe (server application) is available both in Linux as well as in Windows. The Dualz BRIGHT Toolbox on Windows has the Windows version of Dualz Probe included, but it is also possible to connect to a (remote) Dualz Probe on any system with one of these OS installed.

## Installation BRIGHT Toolbox.

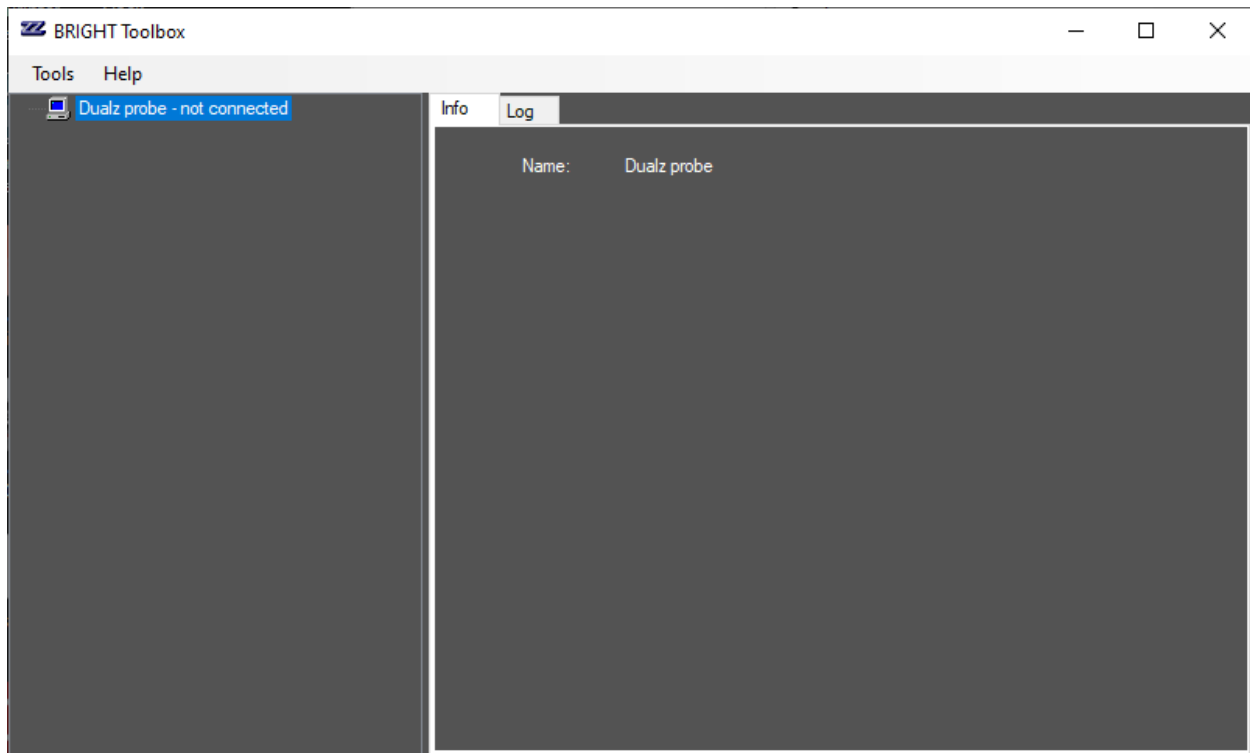
In order to install the Dualz BRIGHT Toolbox, run 'BRIGHT\_Toolbox\_Setup.msi'.

Once the BRIGHT Toolbox has been installed, the application can be started via:  
Program menu – Dualz Solutions – Dualz BRIGHT Toolbox.

NOTE: The application can also be started via shortcut "BRIGHT Toolbox" on desktop.

## BRIGHT Toolbox UI.

When Dualz BRIGHT Toolbox is started for the first time, you will see the following GUI.



## Tools Menu

### Load

Loads a previously saved configuration on the Probe server. The list of previously saved configurations is shown.

### Save as

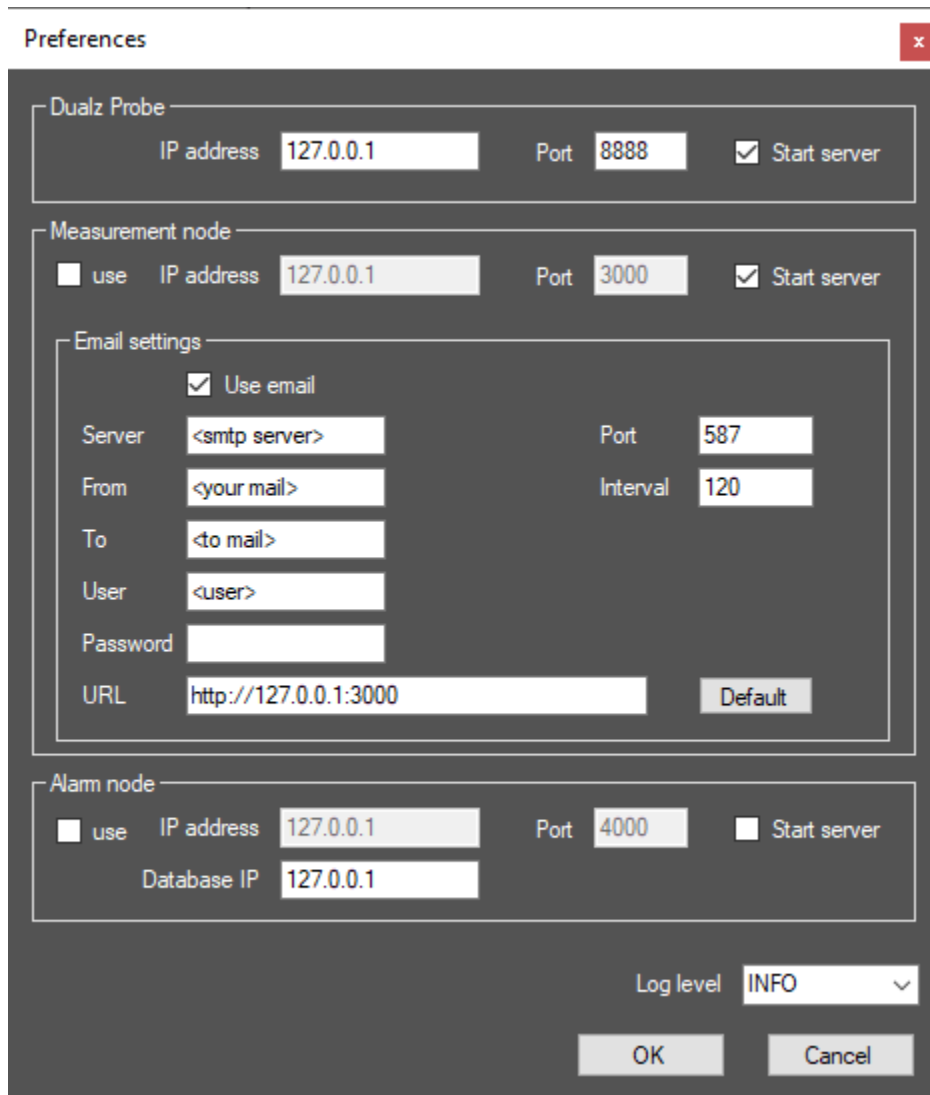
Saves the current configuration on the server, you can enter a logic name.

### Remove a configuration

Select a configuration from the list, the selected configuration shall be removed on the server.

### Preferences

First select 'Preferences', in order to configure your setup:



The screenshot shows a 'Preferences' dialog box with a dark grey background and a red close button in the top right corner. The dialog is organized into several sections:

- Dualz Probe:** Contains fields for 'IP address' (127.0.0.1), 'Port' (8888), and a checked 'Start server' checkbox.
- Measurement node:** Contains a 'use' checkbox (unchecked), 'IP address' (127.0.0.1), 'Port' (3000), and a checked 'Start server' checkbox.
- Email settings:** Contains a checked 'Use email' checkbox, and fields for 'Server' (<smtp server>), 'Port' (587), 'From' (<your mail>), 'Interval' (120), 'To' (<to mail>), 'User' (<user>), 'Password' (empty), and 'URL' (http://127.0.0.1:3000) with a 'Default' button.
- Alarm node:** Contains a 'use' checkbox (unchecked), 'IP address' (127.0.0.1), 'Port' (4000), a 'Start server' checkbox (unchecked), and 'Database IP' (127.0.0.1).

At the bottom right, there is a 'Log level' dropdown menu set to 'INFO' and two buttons: 'OK' and 'Cancel'.

This form configures 2 servers:

- Dualz Probe: Application server, that's where the magic happens.
- Measurement Node: Server for application results. Fill in email settings for email notification.
- Alarm node: Store all alarm occurrences and the counter alarms

For all servers, the IP address ('127.0.0.1' if local) and port must be given.

The checkbox 'Start server' indicates whether the UI embeds the server(s). If so, they are started and shut down at GUI startup and shutdown resp. If these checkboxes are unchecked, it is expected that the servers are started externally, and remain running after closure of the GUI.

If no external server has been started yet, we recommend to check both checkboxes.

### [Email settings](#)

#### **Use email**

Select 'Use email' if you want to send email notification in case of alarms.

#### **Server**

Defines the outgoing SMTP mail server .

#### **From**

From email address

#### **To**

To email address

#### **User**

Username of the sending email box

#### **Password**

Password of the sending email box

#### **URL**

Defines the URL that will be included in the mail message, and indicates where to find the web UI. If local the measurement node IP and port must be given. This can be configured to an external address, if the email receiver comes from extern.

#### **Port**

Port of the outgoing mail server

#### **Interval**

The minimum amount of seconds of a mail interval. Max one mail will be sent during this interval.

### [Start/Stop Dualz probe](#)

These functions start/stop the Dualz Probe server, as well as all applications/analyzers.

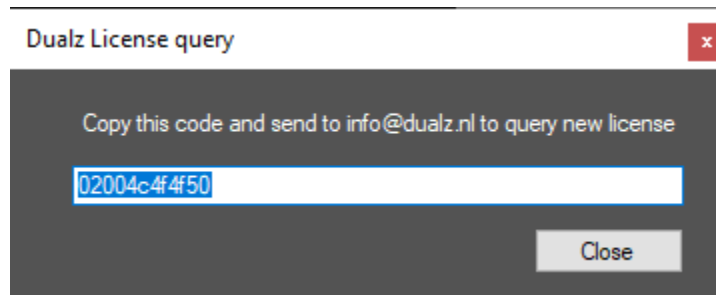
### [Help](#)

The Help menu contains:

- License: Menu for querying and setting new license
- Show log folder: Directly go to the logging location via file explorer (for analysis purpose only)
- Show recordings folder (only available if recorder licensed): Directly go to the recordings location via file explorer
- About: Shows 'Dualz application manager' about information.

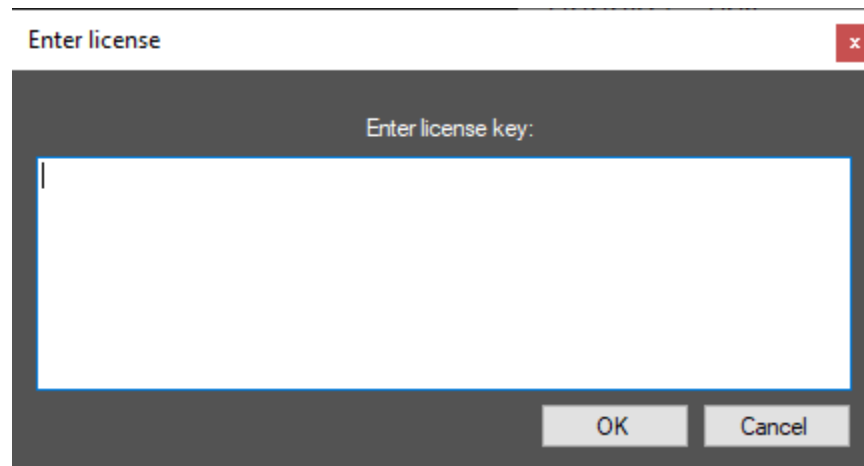
### [Licensing](#)

In order to query a license, first select 'Help'-'License' – 'Get system query'.



Copy the code and send that to [info@dualz.nl](mailto:info@dualz.nl), citing the required application license (HLS analyzer, IPRecorder, ...) and the number of required channels, in order to retrieve the requested license. If you already paid for the tool, please also cite the quote number for our reference.

Once you have received the license key, insert that via 'Help' – 'License' – 'Set license':



Press OK and your application is licensed correctly. Restart the application, to start analyzing.

Recommended to store the key on a safe place as well.

### Tree view

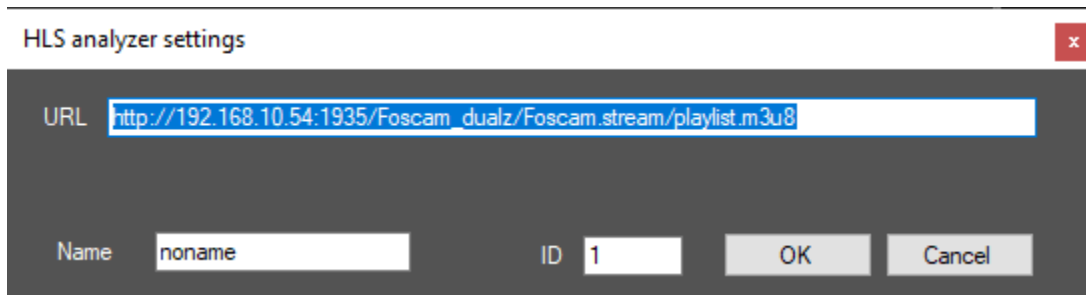
The tree view (left hand side of GUI), show the details of the Application manager.

The top level node is drawn in green if it is connected successfully. If not, it is shown in orange, with extension 'not connected'.

### Add HLS application

In order to add an application, right-click and select 'Add application'. Now the licensed applications are visible. If the system is not licensed yet, it shows all the possible (but not licensed) applications. In this case it shall not be possible to start an application.

If HLS Analyzer is licensed, select "Add application" – "HLS Analyzer". The form below is shown.



HLS analyzer settings

URL

Name  ID

Enter the HLS url to analyze, give a proper name, and enter the Service ID. By default, the service ID is filled in automatically.

Press OK.

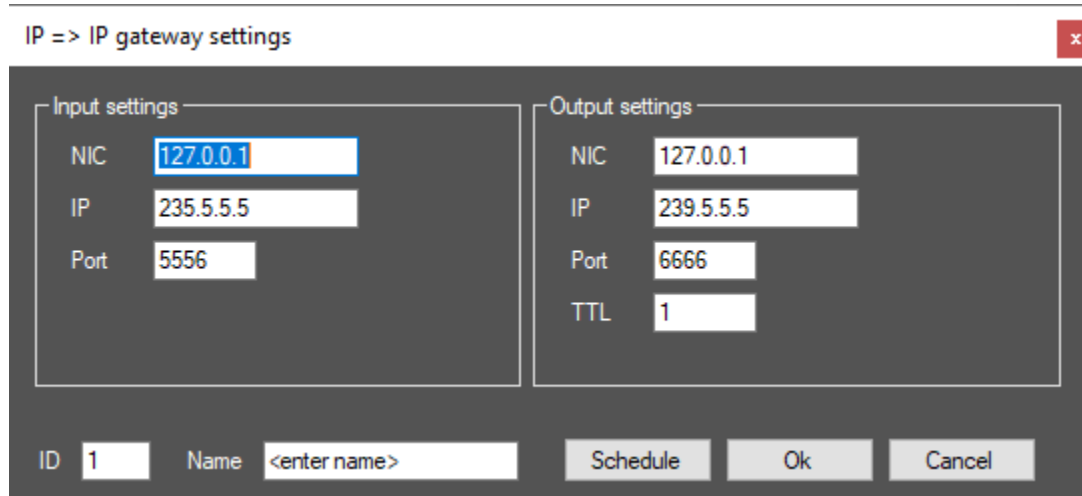
Now the application shall appear in the tree view on the left.



### Add IP recorder application

In order to add an IP recorder application, right-click and select 'Add application'. Now the licensed applications are visible. If the system is not licensed yet, it shows all the possible (but not licensed) applications. In this case it shall not be possible to start an application.

If IP recorder is licensed, select "Add application" – "IPRecorder'. The form below is shown.



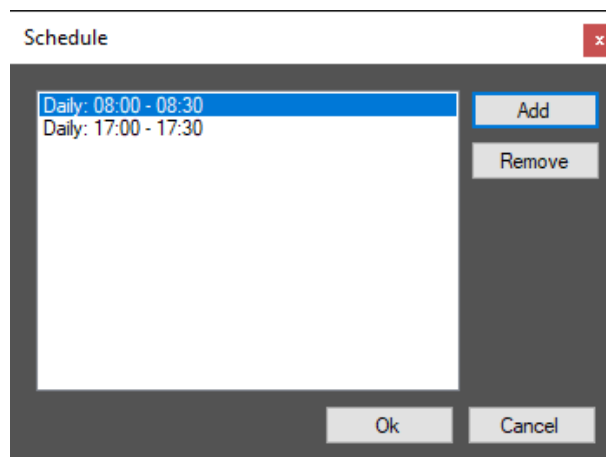
Enter the input IP settings as well as the file output settings. By default, the service ID is filled in automatically.

Press OK.

Now the application shall appear in the tree view on the left.

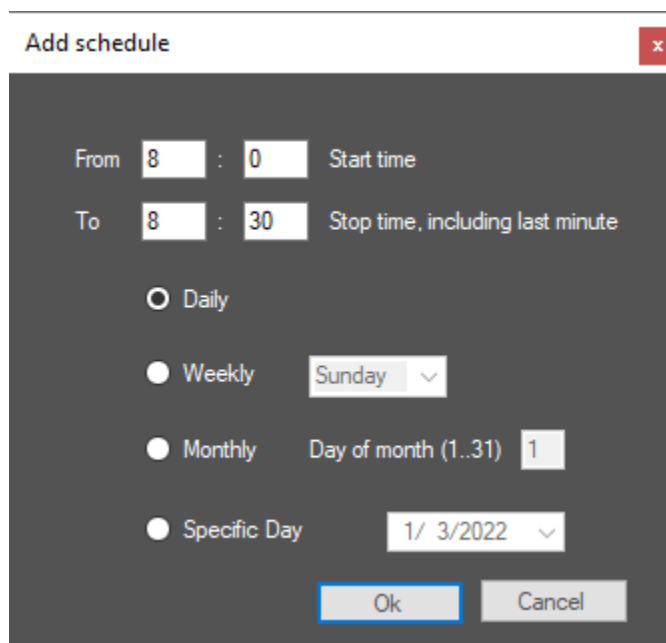
### Schedule application

Instead of running 24x7, an application can also be scheduled. You can add a range of active periods that the application shall be running.



When adding a period, you have the following options for the schedule:

- Daily
- Weekly
- Monthly
- Specific Day



### [Edit application](#)

Edit specific application settings, the changes shall be sent to the server.

### [Import from csv](#)

Import applications from a csv file.

Syntax:

HLSANALYZER,<srvid>,<name>,<url>

HLSRECORDER,<srvid>,<name>,<url>,<loc>,<prefix>,<chunksize>,<maxsize>

IPRECORDER,<srvid>,<name>,<nic\_in>,<ip\_in>,<port\_in>,<nic\_out>,<ip\_out>,<port\_out>

IPGATEWAY,<srvid>,<name>,<nic\_in>,<ip\_in>,<port\_in>,<nic\_out>,<ip\_out>,<port\_out>

DEMUXER,<srvid>,<name>,<nic\_in>,<ip\_in>,<port\_in>,<prognum>,<nic\_out>,<ip\_out>,<port\_out>

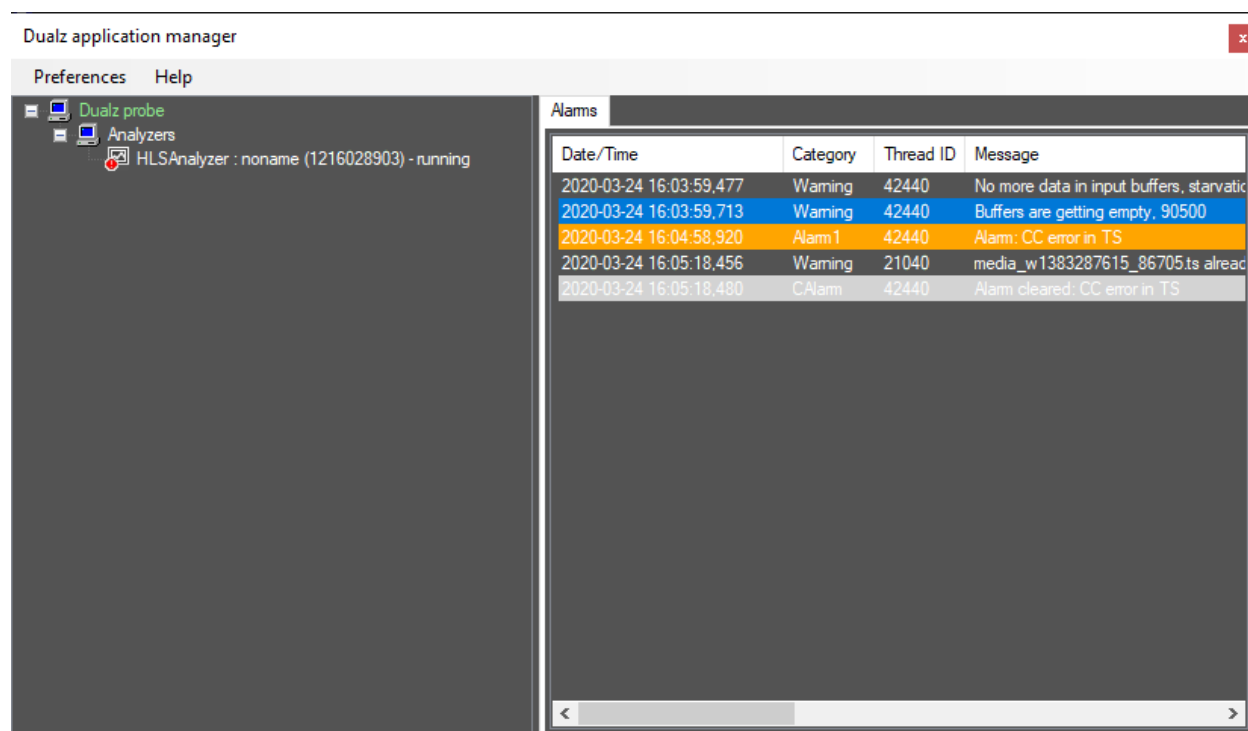
VIDEORENDERER,<srvid>,<name>,<nic\_in>,<ip\_in>,<port\_in>,<locx>,<locy>,<w>,<h>,<hwaccel>,<aspect\_ratio> (hwaccel: 0|1, aspect\_ratio : 0|1)

### Remove application

Removes the selected application

### Remove all applications

Removes all existing analyzers/applications.



### Application properties

When you select an application in the tree view on the left, in the right panel the property pages are shown. Currently it only shows the 'Alarms' view. All the alarms of this analyzer are shown here.

### Log view

The log view contains the following columns:

- Date/Time: Time stamp of the occurrence of this log line.
- Category: Logging severity
- Thread ID: Internal thread ID, might be needed for analysis purposes.
- Message: Message of the log line.

### Logging context menu

On right-click in the log view, the following context menu items are shown:

- Copy message to clipboard: Copies the message to clipboard.
- Update logs: Update current view, queries the new logs from server.
- Start/stop updates: Updates automatically.

## Measurement node

The measurement node is a web server that collects all measurement data from Dualz analyzer applications. Via JSON structure this data can be accessed.

### Web client: Service list

The measurement nodes also includes a web client that can be accessed via <IP>: <port>

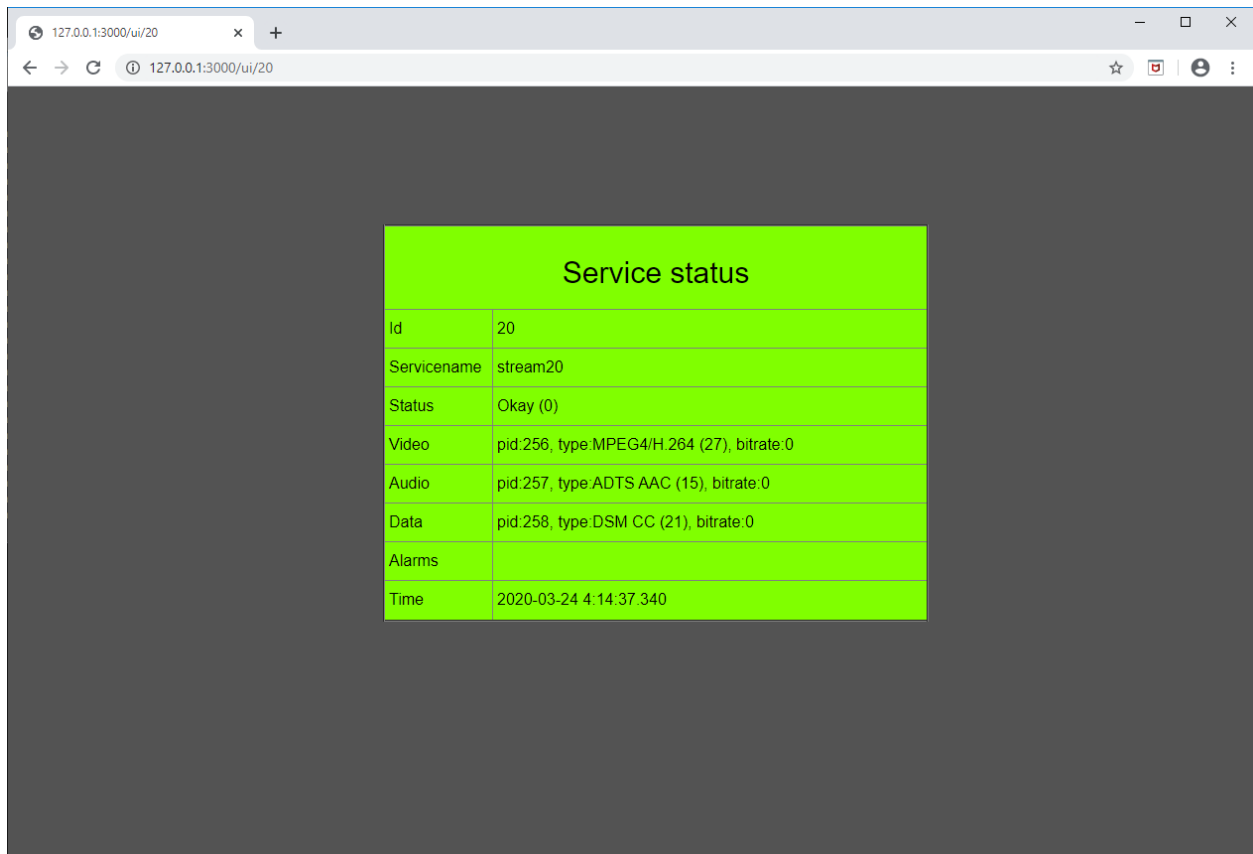


noname Status: CC error in stream (12) Time: 2020-03-24 4:12:35.787	noname Status: Okay (0) Time: 2020-03-24 4:12:36.500	noname Status: CC error in stream (12) Time: 2020-03-24 4:12:34.087	noname Status: CC error in stream (12) Time: 2020-03-24 4:12:34.611	noname Status: CC error in stream (12) Time: 2020-03-24 4:12:36.713
noname Status: Okay (0) Time: 2020-03-24 4:12:36.502	noname Status: Okay (0) Time: 2020-03-24 4:12:33.512	noname Status: Okay (0) Time: 2020-03-24 4:12:33.515	noname Status: CC error in stream (12) Time: 2020-03-24 4:12:36.257	noname Status: Okay (0) Time: 2020-03-24 4:12:33.515
Stream11 Status: CC error in stream (12) Time: 2020-03-24 4:12:34.610	stream12 Status: Okay (0) Time: 2020-03-24 4:12:34.307	stream13 Status: Okay (0) Time: 2020-03-24 4:12:36.716	stream14 Status: CC error in stream (12) Time: 2020-03-24 4:12:33.677	stream15 Status: CC error in stream (12) Time: 2020-03-24 4:12:35.084
stream16 Status: Okay (0) Time: 2020-03-24 4:12:34.086	stream17 Status: Okay (0) Time: 2020-03-24 4:12:34.613	stream18 Status: CC error in stream (12) Time: 2020-03-24 4:12:33.512	stream19 Status: CC error in stream (12) Time: 2020-03-24 4:12:34.308	stream20 Status: CC error in stream (12) Time: 2020-03-24 4:12:33.296
stream21 Status: Okay (0) Time: 2020-03-24 4:12:35.788	stream22 Status: Okay (0) Time: 2020-03-24 4:12:35.789	stream23 Status: CC error in stream (12) Time: 2020-03-24 4:12:36.252	stream24 Status: Okay (0) Time: 2020-03-24 4:12:34.306	stream25 Status: CC error in stream (12) Time: 2020-03-24 4:12:35.784

The services are shown in one overview. By default sorted by ServiceID. If you like to sort the services by their name, select <IP>: <port>/ui\_name.

### Web client : Service details

If you select a service, the details of this service is shown:



The screenshot shows a web browser window with the address bar displaying "127.0.0.1:3000/ui/20". The main content area is dark gray and contains a table with a light green background. The table is titled "Service status" and contains the following data:

Service status	
Id	20
Servicename	stream20
Status	Okay (0)
Video	pid:256, type.MPEG4/H.264 (27), bitrate:0
Audio	pid:257, type.ADTS AAC (15), bitrate:0
Data	pid:258, type.DSM CC (21), bitrate:0
Alarms	
Time	2020-03-24 4:14:37.340

## Service colors

A service can be shown in 3 colors:

- Green: All okay
- Orange: medium error, like CC error
- Red: Serious error, like wrong URL.