

Statistical Multiplexing Function



The description is valid for software version [2.11.0](#) and newer.

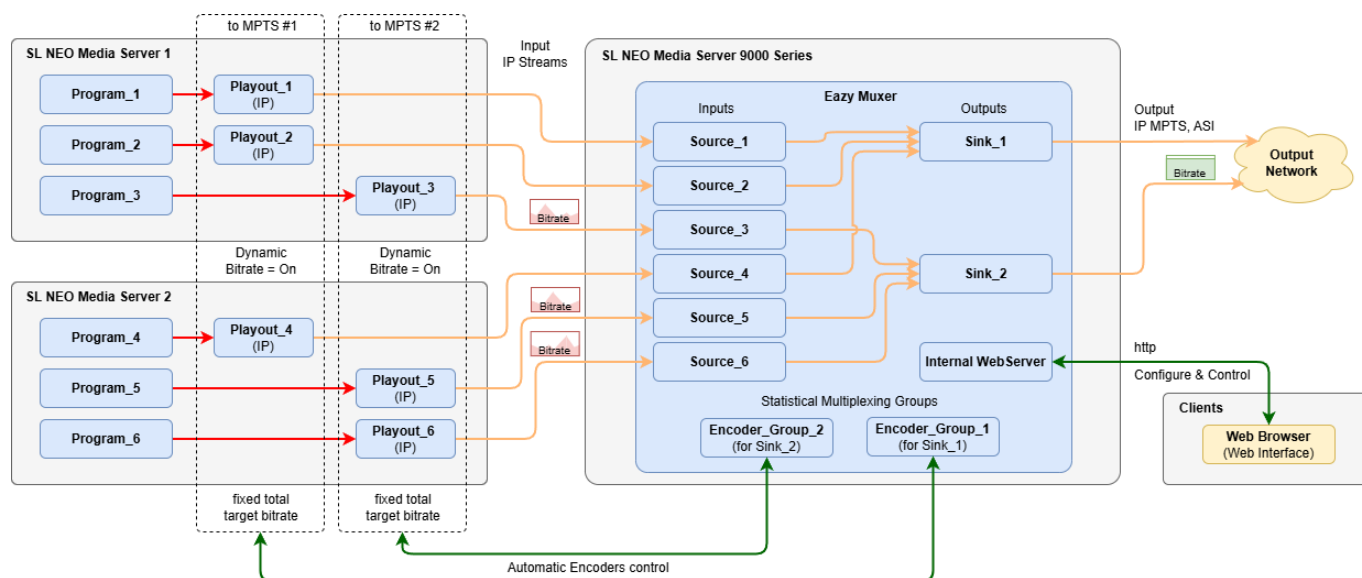
Since the [2.10.0](#) application [Eazy Muxer](#) enables statistical multiplexing in conjunction with [Playout](#) modules enabling the formation of MPTS streams with a fixed total bitrate. This is required in those cases when there is a strict limitation on the output bitrate, for example, when forming streams for transmission to multiplexes or satellite transponders.



Attention! If Eazy Muxer redundancy function is enabled, then when configuring the Statistical Multiplexing function you need to configure [redundancy for Encoder Groups](#) additionally.

Scheme

The image shows a scheme of functional component interaction in the Statistical Multiplexing mode.



Configuration

The Statistical Multiplexing configuration consists of three steps.

Group Adding

To get started, add a new statistical multiplexing group to [Encoder Groups](#) menu: Eazy Muxer→Encoder Groups→New Group.... For each MPTS output stream with bitrate to be stabilised, a separate Encoder Group should be created.

Encoder Group creation window:

Local - New Group

Group Name:

Group Bitrate:

10000

kbps

Ok

Cancel

Parameter	Description
Group Name	An arbitrary name for the created group.
Group Bitrate	Total target bitrate of all streams in the group. Possible values are from 1000 to 50000 kbps.
Ok	Save changes.
Cancel	Close the window with no changes saved.

Add Encoder

Connect Playout modules to the created Encoder Group via the menu: Eazy Muxer→Encoder Groups→New Encoder.... A window will be opened with a list of previously configured groups. Select the target group to add a new encoder (Playout module in IP) to it.

Local - Add Encoder

Select group:

SATTransp_1

SATTransp_2

SAT2

Ok

Cancel

When you select the group, the Playout module connection settings window will be opened.

Local - Add Encoder

Encoder Parameters

Name:

Ch1

IP Address:

192.168.107.166

Service name:

Playout_1

Priority:

1

Ok

Cancel

Parameter	Description
Name	An arbitrary encoder name that will be displayed in the Encoder Groups area.
IP Address	IP address of the Skylark server.
Service Name	The name of the Playout service specified in the server settings: Neovid→Administrator Control Panel→Manager→Video I/O Boards→LAN Interfaces/Ethernet Adaptor→Playout→Name. Example: Playout_1.
Priority	Coders with lower value in Priority field get higher relative bandwidth (higher bitrate). Thus, it is possible to prioritise channels with dynamic content (e.g. sports) within the same Encoder Groups.

Encoder Configuration

For each Playout module connected to an Encoder Group, you are to enable dynamic bitrate control. To do this, activate the Dynamic Bitrate option in the Playout module settings: Administrator Control Panel→Manage→Video I/O Boards→Lan Interfaces/Ethernet Adaptor→Playout_N→MPEG2 TS Parameters→Video→Dynamic Bitrate.

Configure Service

Mode

☐ Genlock

☐ Capture

☒ Playout

General

Storages

Audio DRC

Audio Channel Map

EBU-R128 Loudness

Nielsen

Color

Caption Configuration

Open Captions Configuration

DVB Subtitles

MPEG2 TS Parameters

IP Parameters

Output

Video

Audio

DVB Subtitles

ATSC Caption Services

ATSC PSIP

Teletext

SCTE-35

Compression:

MPEG4/AVC

B-Frame:

2

Resolution:

1920x1080

☐ Strict GOP

Bitrate:

Auto

Quality:

100

GOP:

12

Denoise:

None

☐ HQ Encoding

PID:

Profile:

Default

☐ Lower Latency

Encoder:

Default

Encoder Num:

Auto

☐ Dynamic Bitrate

Launching

Run the configured Encoder Group to start dynamic bitrate control: Eazy Muxer→Encoder Groups→Start Group (Apply Changes)....

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