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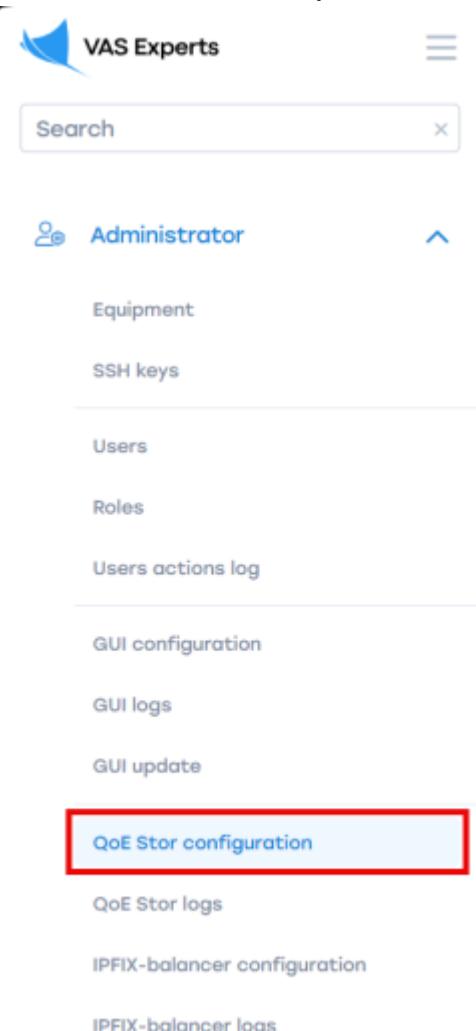
NAT Flow Configuration

There are 3 ways to generate a NAT log in QoE Stor (statistics server)

1. Receive NAT Flow in a separate flow with DPI. To do this, you need to configure the DPI on the device [export of broadcasts to external collectors](#);
2. Get NAT Flow from Netstream third party systems (non DPI);
3. Form NAT Flow from FullFlow using QoE Stor.

Configuring receiving a separate NAT Flow with DPI or NETSTREAM

1. Go to: Administrator → QoE Stor Configuration;



2. Go to the "Receivers" section; add a new receiver; select "Receiver type" - NAT Flow; fill in the form for adding a receiver and click the "Apply" button;

The screenshot shows the QoE Stor configuration interface. On the left, a sidebar lists various settings like Configuration, Save, Settings, Receivers, Filtration, Common, Ulr settings, FULLFLOW log settings, FULLFLOW AGG log settings, CLICKSTREAM AGG log settings, NAT log settings, ONLINEFLOW log settings, DNS AGG log settings, OpenCellID settings, GTP settings, UPLINK LOAD RATE settings, Kaspersky list of infected hosts, and Cluster settings. The 'Settings' tab is selected. In the main area, under 'Receivers', the 'Receiver type' dropdown is set to 'NAT flow'. Other settings include 'Port type: tcp', 'Port: 1500', 'Rotate in minutes: 10', 'Delay in seconds: 0', 'Queue size: 10', 'Insert processes number: 0', 'DPI ID: -1', 'Balancer: Disabled', 'Balancer subreceivers type: tcp', 'Balancer subreceivers: 10.0.0.2/9920,10.0.0.3/3440', 'Balancer auto: Disabled', and 'Balancer core number: 0'. Below the configuration table are 'Cancel' and 'Apply' buttons.

3. Go to the section of the form "NAT log settings"
 1. Enable populate IP-LGIN binding from fullflow
(`FILL_IP_LOGIN_BINDING_FROM_FULLFLOW`);
 2. Enable adding LOGIN to NAT log from binding IP-LGIN
(`NAT_ADD_LOGIN_FROM_IP_LOGIN_BINDING`).

The screenshot shows the QoE Stor configuration interface. The sidebar includes Configuration, Save, Settings, Receivers, Filtration, Common, Ulr settings, FULLFLOW log settings, FULLFLOW AGG log settings, CLICKSTREAM AGG log settings, NAT log settings (highlighted with a red box), ONLINEFLOW log settings, DNS AGG log settings, OpenCellID settings, GTP settings, UPLINK LOAD RATE settings, Kaspersky list of infected hosts, and Cluster settings. The 'Settings' tab is selected. In the main area, under 'NAT log settings', there are two sections: 'Import NAT events from fullflow (NAT_IMPORT_FROM_FULLFLOW)' (Enabled) and 'Fields to save when aggregating NAT log (NAT_LOG_FIELDS_TO_SAVE_BITMASK)' (0x1 - Protocol ID, 0x2 - Event type, 0x4 - Source IPv4, 0x8 - Source port, 0x10 - Destination IPv4, 0x20 - Destination port, 0x40 - Post NAT). Below these are 'Time interval for aggregating NAT logs (NAT_LOG_GROUP_TIME_INTERVAL)' (16 minutes (By default)) and 'Enable filling IP-LGIN bind from fullflow (FILL_IP_LOGIN_BINDING_FROM_FULLFLOW)' (Enabled). A second red box highlights the 'Enable adding LOGIN to NAT log from IP-LGIN binding (NAT_ADD_LOGIN_FROM_IP_LOGIN_BINDING)' option (Enabled). At the bottom, there is a note about using a distributed IP-LGIN binding table (NAT_USE_DISTR_IP_LOGIN_BINDING).

Enabling import of NAT events from FullFlow

To enable import of events from FullFlow transmitted from DPI to QoE Stor:

1. Go to: Administrator → QoE Stor Configuration;

The screenshot shows the VAS Experts administrator interface. The left sidebar has a search bar at the top. Below it, under the 'Administrator' section, there are several menu items: Equipment, SSH keys, Users, Roles, Users actions log, GUI configuration, GUI logs, GUI update, QoE Stor configuration (which is highlighted with a red box), QoE Stor logs, IPFIX-balancer configuration, and IPFIX-balancer logs.

2. Import NAT events from fullflow (NAT_IMPORT_FROM_FULLFLOW) - Enable.

The screenshot shows the 'QoE Stor configuration' page. On the left, a sidebar lists various settings like Configuration, Settings, Receivers, Filtration, Common, Ulr settings, FULLFLOW log settings, FULLFLOW AGG log settings, CLICKSTREAM AGG log settings, NAT log settings (which is highlighted with a red box), ONLINEFLOW log settings, DNS AGG log settings, OpenCellID settings, GTP settings, UPLINK LOAD RATE settings, Kaspersky list of infected hosts, and Cluster settings. The main panel shows the 'NAT log settings' section with a sub-section titled 'Import NAT events from fullflow (NAT_IMPORT_FROM_FULLFLOW)'. A checkbox labeled 'Enabled' is checked and highlighted with a red box. Other settings in this section include 'Fields to save when aggregating NAT log (NAT_AGG_LOG_FIELDS_TO_SAVE_BITMASK)' (set to 0x1 - Protocol ID, 0x2 - Event type, 0x4 - Source IPv4, 0x8 - Source port, 0x10 - Destination IPv4, 0x20 - Destination port, 0x40 - Post NAT) and 'Time interval for aggregating NAT logs (NAT_AGG_LOG_GROUP_TIME_INTERVAL)' (set to 15 minutes (By default)).

NAT Flow aggregation

1. Go to: Main Menu → Administrator → QoE Stor Server Configuration → QoE Stor Server

Configuration;

The screenshot shows the VAS Experts configuration interface. The left sidebar has a tree view with the following structure:

- Administrator
- Equipment
- SSH keys
- Users
- Roles
- Users actions log
- GUI configuration
- GUI logs
- GUI update
- QoE Stor configuration** (highlighted with a red box)
- QoE Stor logs
- IPFIX-balancer configuration
- IPFIX-balancer logs

2. Select "NAT log settings" → Select fields to save during NAT log aggregation, Log filling time interval (15 minutes by default);

The screenshot shows the "Administrator > QoE Stor configuration" screen. The left sidebar shows the following navigation:

- Administrator
- Equipment
- Users
- Roles
- GUI configuration
- GUI logs
- GUI update
- QoE Stor configuration** (highlighted)
- QoE Stor logs
- Captcha configuration
- Captcha template
- Captcha logs

The main panel displays the "QoE Stor nodes" configuration. Under the "QoE Stor" tab, the "NAT log settings" section is selected. It shows the following configuration:

- Fields to save when aggregating NAT log (NAT_AGG_LOG_FIELDS_TO_SAVE_BITMASK):
0x4 - Source IPv4, 0x10 - Destination IPv4, 0x20 - Destination port, 0x40 - Post NAT source IPv4, 0x200 - Login
- Time interval for aggregating NAT logs (NAT_AGG_LOG_GROUP_TIME_INTERVAL):
15 minutes (By default)
- Enable filling IP-LOGIN bind from fullflow (NAT_IP_LOGIN_BINDING_FROM_FULLFLOW)
- Enable adding LOGIN to NAT log from IP-LOGIN binding (NAT_ADD_LOGIN_FROM_IP_LOGIN_BINDING)
- Use distributed IP-LOGIN binding table (NAT_USE_DISTR_IP_LOGIN_BINDING)

3. Save changes and restart the service.