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# Searching Subscriber Statistics by IP Address

To enable this functionality, the following **components** are required:

1. [QoE Stor Module](#)
2. [SSG DPI Management Interface](#)



The following **licenses** are required:

1. SSG: [CG-NAT — Network Address Translation and IPFIX Format Statistics Export](#)
2. QoE: [NAT Flow Statistics Collection, Compression, and Custom Filters.](#)

The data set to be stored depends on the type of subscriber:

- For a public IP address, exporting Full NetFlow to QoE Stor is sufficient. [Configuring Full NetFlow export in IPFIX \(Netflow 10\)](#)
- For a private IP address, additional NAT Flow data collection — translation information — is required. [NAT Flow Configuration](#)

## Data Types

- **Raw (unaggregated) logs** are the full set of IPFIX fields and contain all the details: time, IP addresses, ports, and more. These logs provide information down to the second.
- **Aggregated logs** are summarized data that is used for reports, such as subscriber or host TOPs. Aggregation groups events by time (for example, every 15 minutes) and removes unnecessary details such as ports. The result is data to analyze over time intervals, without exact timing.

Raw logs are needed for accurate analysis, while aggregated logs are needed for reporting.

In this case, information retrieval is performed on aggregated data. Initially, SSG exports raw data to QoE Stor, and by default, aggregation is performed every 15 minutes. [More on changing aggregation and re-aggregation intervals.](#)

Raw unaggregated data is available in the following sections of QoE Analytics in the GUI:

1. *Raw Full NetFlow* (by default, data is stored for **2 hours**)
2. *Raw NAT Flow* (by default, data is stored for **2 hours**, QoE license required)

The screenshot shows the VAS Experts interface. On the left, there is a navigation menu with a search bar and several categories: SSG control, PCRF control, and QoE analytics. Under QoE analytics, there is a sub-menu for 'QoE dashboard' and a list of data sources. Two items, 'Raw full netflow' and 'Raw NAT flow', are highlighted with red boxes. On the right, there is a 'QoE a' section with a 'Period' dropdown set to 'Top s' and a 'Subscr' search filter. Below this is a list of data sources with their counts:

| Data Source      | Count    |
|------------------|----------|
| Raw full netflow | 46.243   |
| Raw NAT flow     | 188.227  |
| Raw clickstream  | 188.227  |
| Raw GTP flow     | 188.227  |
| Raw NAT flow     | 188.227  |
| Raw clickstream  | 46.243   |
| Raw GTP flow     | 46.243   |
| Raw NAT flow     | 78.140   |
| Raw NAT flow     | 78.140   |
| Raw NAT flow     | 45.151.1 |
| Raw NAT flow     | 78.140   |
| DNS flow         | 45,022   |

Aggregated statistics are available in the following sections of QoE Analytics in the GUI:

1. *NetFlow* (by default, data is stored for **14 days**)
2. *NAT Flow* (by default, data is stored for **14 days**), QoE license required)

The screenshot shows the VAS Experts interface. On the left is a navigation menu with categories: SSG control, PCRF control, QoE analytics (expanded), and QoE dashboard. Under QoE analytics, 'Netflow' and 'NAT flow' are highlighted with red boxes. On the right, there's a table with columns for 'Period', 'Subscr', and 'QoE a'. The table contains several rows of data with values like 46.243, 188.22, 78.140, and 45.151.1.

| Period | Subscr   | QoE a |
|--------|----------|-------|
| Top s  |          |       |
|        | 46.243   |       |
|        | 188.22   |       |
|        | 188.22   |       |
|        | 188.22   |       |
|        | 188.22   |       |
|        | 46.243   |       |
|        | 46.243   |       |
|        | 78.140   |       |
|        | 78.140   |       |
|        | 45.151.1 |       |
|        | 78.140   |       |
|        | 45,022   |       |

## Configuring Data Retention Period

In the GUI, go to Administrator → GUI Configuration → Settings → QoE Stor: DB lifetime settings:

- For Raw Full NetFlow, select *QoE Stor fullflow main log lifetime in hours (1)*.
- For NAT Flow, select *QoE Stor NAT aggregated log lifetime in days (2)*.

The screenshot shows the 'QoE Stor: DB lifetime settings' configuration page. The left sidebar lists various settings categories, with 'QoE Stor: DB lifetime settings' selected. The main content area displays a list of settings with their values and a 'The form' tab. Two rows are highlighted with red boxes and numbered 1 and 2:

| Setting Name   | Value |
|--|-------|
| QoE Stor fullflow main log lifetime in hours (QOESTOR_FULLFLOW_MAIN_LOG_PARTITIONS_LIFE_TIME_HOUR) | 2     |
| QoE Stor NAT aggregated log lifetime in days (QOESTOR_NAT_AGG_LOG_PARTITIONS_LIFE_TIME_DAYS)       | 14    |

When increasing the data retention period, it's recommended to enable the deletion of old data when the disk fills up: Administrator → GUI Configuration → Settings → QoE Stor: Disk settings → Select *Enable force moving data for DEFAULT disk* – choose *Enable data removing!* → Select *Move factor for DEFAULT disk* – set the value to *0.1*.

The screenshot shows the 'QoE Stor: Discs settings' configuration page. The left sidebar lists various settings categories, with 'QoE Stor: Discs settings' selected. The main content area displays a list of settings with their values and a 'The form' tab. One row is highlighted with a red box:

| Setting Name   | Value                 |
|--|-----------------------|
| Enable force moving data for DEFAULT disk (QOESTOR_FORCE_MOVE_FROM_DEFAULT_DISK) | Enable data removing! |

You can find out how much disk space logs are using in QoE Analytics → Administrator → Reports → Tablespace info.

The screenshot shows the VAS Experts GUI. On the left sidebar, the 'Administrator' option is highlighted with a red box. The main interface is titled 'QoE analytics > Administrator'. It features a 'Tablespace info' table with columns: Table, Disk name, Cluster host, Min partition, Max partition, and On disk, bytes. The table lists several tables including 'fullflow', 'inner.fullflow\_og', 'inner.clickstream', 'clickstream', 'inner.clickstream', 'inner.subscribers', 'dnsflow', and 'inner.dnsflow\_og'. To the right of the table is a pie chart showing the distribution of data across these tables. The largest slice is 'inner.fullflow\_og' at 40%, followed by 'inner.clickstream' at 13%, and 'inner.subscribers' at 3%. A legend below the chart identifies the colors for each table. On the far right, a 'Reports' sidebar is visible with 'Tablespace info' highlighted in a red box.

## Searching for Subscriber Activity in the SSG GUI

### For a Private IP Address. NAT Flow Section. QoE License Required



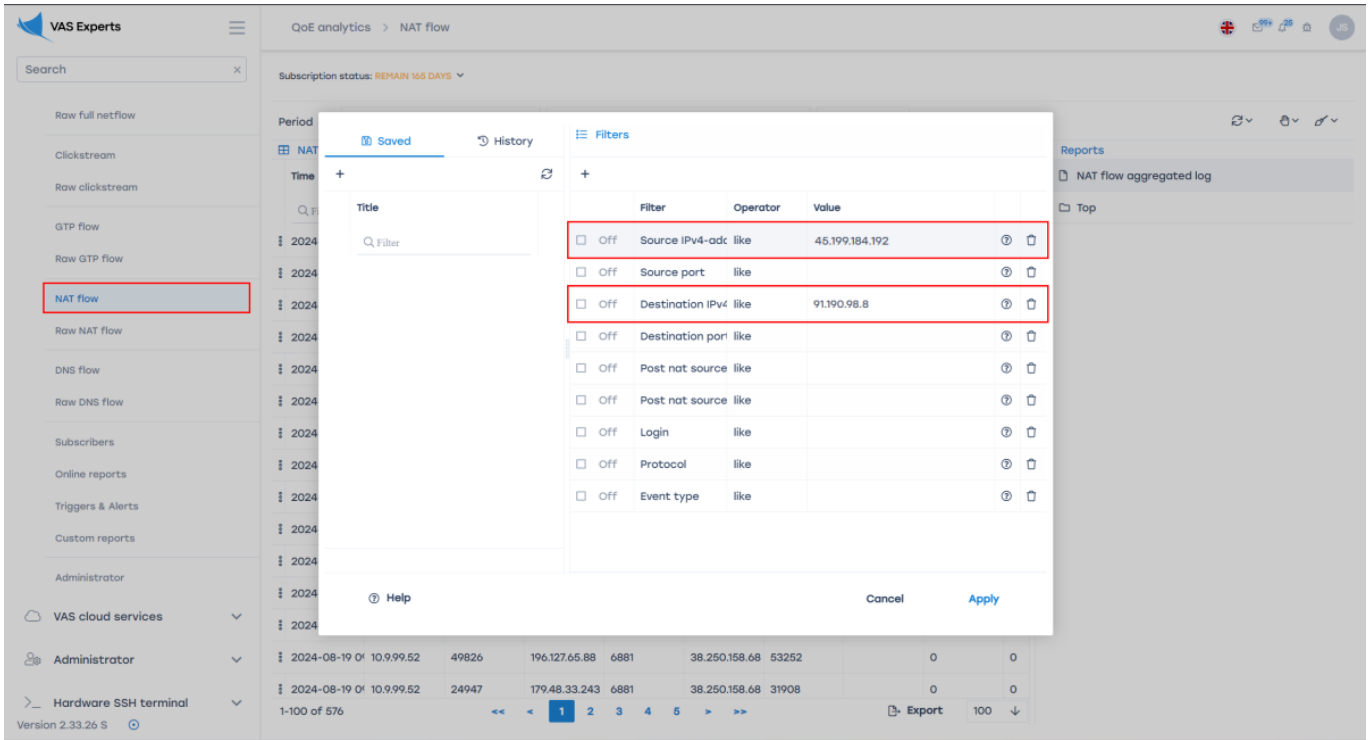
You can request a license from the GUI by filling out a form in the respective section or contact [sd@vas.expert](mailto:sd@vas.expert)

The ability to view subscriber activity data appears after generating the NAT log — instructions [NAT Flow Configuration](#).

In the GUI, navigate to QoE Analytics → NAT Flow.

In the NAT Flow section, you need to:

1. Select the time period
2. Enable the “Source IPv4-address” and “Destination IPv4-Address” filters (check the box)
3. Enter values for the enabled filters and apply changes

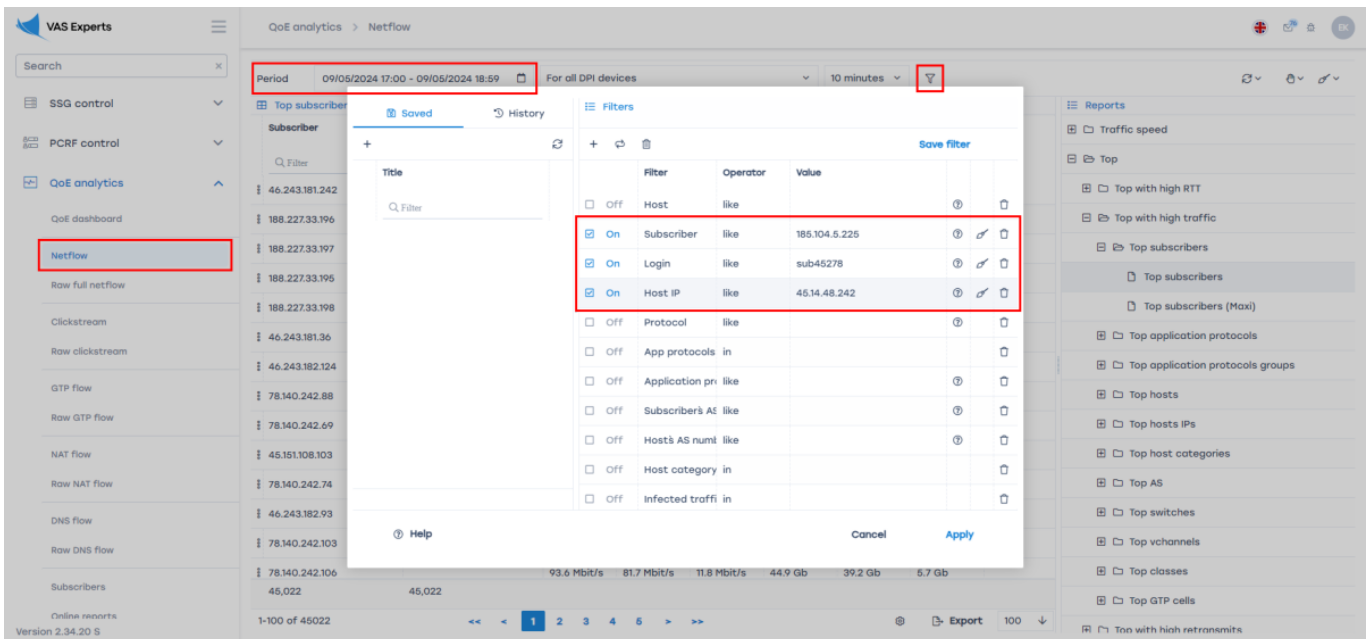


## For a Public IP Address from Aggregated Data. NetFlow Section

In the GUI, navigate to QoE Analytics → NetFlow.

In the NetFlow section, you need to:

1. Select the time period (**by default stored for only 14 days!**)
2. Enable the “Subscriber,” “Login,” and “Host IP” filters (check the box)
3. Enter values for the enabled filters and apply changes



## For a Public IP Address. Raw Full NetFlow Section

In the GUI, navigate to QoE Analytics → Raw Full NetFlow.



In the Raw Full NetFlow section, you need to:

1. Select the time period (**by default stored for only 2 hours!**)
2. Enable the “Source IPv4-address” and “Destination IPv4-Address” filters (check the box)
3. Enter values for the enabled filters and apply changes

The screenshot shows the VAS Experts interface with the 'Raw full netflow' section selected in the left sidebar. The main area displays the 'Filters' configuration dialog. The 'Period' is set to '08/16/2024 11:22 - 08/16/2024 11:37'. The 'Filters' dialog is open, showing a table of filters with the following configuration:

| Filter                                 | Operator                 | Value               |
|--|--------------------------|---------------------|
| <input type="checkbox"/> Off           | Session ID               | like                |
| <input checked="" type="checkbox"/> On | Source IPv4-address      | like 45.199.184.192 |
| <input type="checkbox"/> Off           | Source IPv6-address      | like                |
| <input type="checkbox"/> Off           | Source port              | like                |
| <input type="checkbox"/> Off           | Source AS number         | like                |
| <input checked="" type="checkbox"/> On | Destination IPv4-address | like 91.190.98.8    |
| <input type="checkbox"/> Off           | Destination IPv6-address | like                |
| <input type="checkbox"/> Off           | Destination port         | like                |
| <input type="checkbox"/> Off           | Destination AS number    | like                |
| <input type="checkbox"/> Off           | Net protocol             | like                |
| <input type="checkbox"/> Off           | Application protocol     | like                |

The 'Apply' button is visible at the bottom right of the dialog. The background shows a list of flow records with columns for time, source/destination IP, and other network parameters.