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# List of dictionaries

## Dictionary asnum\_dic

Dictionary of network protocols. Cloud dictionary, loaded on schedule. Not editable.

Example of dictionary asnum\_dic

```
0   -Reserved AS-, ZZ
1   LVL1-1, US
2   UDEL-DCN, US
3   MIT-GATEWAYS, US
4   ISI-AS, US
5   SYMBOLICS, US
6   BULL-HN, US
7   DSTL, GB
8   RICE-AS, US
...
```

Columns :

1. AS number
2. AS name

Для принудительной загрузки словаря, выполните:

```
sh /var/qoestor/backend/app_bash/cron_daily.sh
```

## Dictionaries asnum\_local\_dic and subnets\_local\_dic

These dictionaries list your local ASs and local subnets. Dictionaries are used to determine the direction of traffic (relevant when DPI is set on the mirror) and filtering subscribers (so that IP addresses of hosts do not appear in reports on subscribers)

Example of dictionary **asnum\_local\_dic**

```
12345   LOCAL
65535   UNKNOWN
```

The first column is the AS number, second is title (displayed in reports) .

Example of dictionary **subnets\_local\_dic**

```
192.168.1.0/24   LOCAL
10.64.66.0/24    LOCAL
172.16.0.0       LOCAL
2a02:2168:aaa:bbbb::2   LOCAL
```

The first column is the IP address or CIDR, the second is the name (not displayed in reports, but the dictionary format requires).

To control filtering by these dictionaries, use the SUBSCRIBER\_FILTER\_MODE and TRAFFIC\_DIR\_DEF\_MODE parameters. See section [Configuration](#).



Do not add too large a subnet. Break it down into small pieces. Limit - 100,000,000

## Dictionaries **asnum\_exclude\_dic** and **subnets\_exclude\_dic**

These dictionaries contain a list of your AS and subnets (or single IPs) that must be excluded from aggregated logs. Subnets specified in the directories will be ignored when writing to the aggregated log (which is used to generate reports). To control filtering by these dictionaries, use the SUBSCRIBER\_EXCLUDE\_MODE parameter. See section [Configuration](#).

Example of dictionary **asnum\_exclude\_dic**

|       |       |
|-------|-------|
| 12345 | LOCAL |
| 65535 | LOCAL |

The first column is the AS number, second is title (not displayed in reports, but the dictionary format requires).

Example of dictionary **subnets\_exclude\_dic**

|                       |       |
|-----------------------|-------|
| 192.168.1.0/24        | LOCAL |
| 10.64.66.0/24         | LOCAL |
| 172.16.0.0            | LOCAL |
| 2a02:2168:aaa:bbbb::2 | LOCAL |

The first column is the IP address or CIDR, the second is the name (not displayed in reports, but the dictionary format requires).



Do not add too large a subnet. Break it down into small pieces. Limit - 100,000,000

## Dictionary **gtp\_cells\_locations\_dic**

The dictionary contains a list of the operator's cellular base stations with coordinates. The dictionary is used to build reports on maps.

Dictionary example

|           |   |             |         |                    |                    |           |
|-----------|---|-------------|---------|--------------------|--------------------|-----------|
| 250       | 1 | 17774       | 4881420 | 55.783184763200005 | 37.525521418974996 |           |
| cell_id_0 |   | cell_name_0 |         | cell_description_0 |                    |           |
| 250       | 1 | 17716       | 3398401 | 55.86518562276     | 37.66309891922     | cell_id_2 |

|             |                    |                    |                    |                    |           |
|-------------|--------------------|--------------------|--------------------|--------------------|-----------|
| cell_name_2 | cell_description_2 |                    |                    |                    |           |
| 250 1       | 17716              | 3398411            | 55.86312193015     | 37.657007482905    | cell_id_4 |
| cell_name_4 | cell_description_4 |                    |                    |                    |           |
| 250 1       | 17782              | 2359297            | 55.86370294584     | 37.661393065359995 |           |
| cell_id_5   | cell_name_5        | cell_description_5 |                    |                    |           |
| 250 1       | 1603               | 26057              | 55.80400515858     | 37.63568625476     | cell_id_1 |
| cell_name_1 | cell_description_1 |                    |                    |                    |           |
| 250 1       | 17781              | 2914571            | 55.799170861170005 | 37.6376949577      |           |
| cell_id_6   | cell_name_6        | cell_description_6 |                    |                    |           |
| 250 1       | 1605               | 23895              | 55.869888445769995 | 37.64814730281     | cell_id_3 |
| cell_name_3 | cell_description_3 |                    |                    |                    |           |

Columns:

1. MCC - Mobile Country Code
2. MNC - Mobile Network Code
3. TAC/LAC - Location Area Code
4. CID/SAC/ECI - Cell ID
5. LAT - latitude
6. LON - longitude
7. CELL\_ID - cell ID (set by the operator)
8. CELL\_NAME - cell name (set by the operator)
9. CELL\_DESCRIPTION - cell description (set by the operator)

## Dictionary **net\_protocols\_dic**

Dictionary of network protocols protocols. Not editable, updated when QoE Stor is updated.

Example of dictionary **net\_protocols\_dic**

|     |             |
|-----|-------------|
| 0   | HOPOPT      |
| 1   | ICMP        |
| 2   | IGMP        |
| 3   | GGP         |
| 4   | IPv4        |
| 5   | ST          |
| 6   | TCP         |
| 7   | CBT         |
| 8   | EGP         |
| 9   | IGP         |
| 10  | BBN-RCC-MON |
| 11  | NVP-II      |
| ... |             |

Columns:

1. Port number
2. Protocol name

## Dictionaries **protocols\_dic** and **protocols\_groups\_dic**

Dictionaries of application protocols and groups of application protocols. Cloud dictionaries loaded on schedule. Not editable.

Example of dictionary **protocols\_dic**

```
1  tcpmux      1
2  compressnet 1
5  rje         1
7  echo        1
11 systat      7
13 daytime     7
17 qotd        7
18 msp         8
19 chargen     7
20 ftp-data    9
21 ftp         9
22 ssh         8
23 telnet      8
25 smtp        5
27 nsw-fe      7
...
```

Columns:

1. Port number
2. Protocol name
3. Protocol group ID

Example of dictionary **protocols\_groups\_dic**

```
1  Network services
2  Web browsing
3  P2P
4  Gaming
5  E-Mail
6  Instant messengers
...
```

Columns:

1. Protocol group ID
2. Group name

To force loading dictionaries run:

```
sh /var/qoestor/backend/app_bash/cron_daily.sh
```

## Dictionary settings\_dic

Service dictionary of settings. Formed by scripts based on configuration files. Not editable.

Example of dictionary

```
TRAFFIC_DIR_DEF_MODE      0
SUBSCRIBER_FILTER_MODE   0
SUBSCRIBER_EXCLUDE_MODE  0
URLS_CATEGORIES_DIC_AUTOLOAD_ENABLED    1
ASNUM_DIC_AUTOLOAD_ENABLED    1
ULR_REPLACE_LOGIN_WITH_VCHANNEL 0
ULR_USE_DIC_WHEN_REPLACING_LOGIN    0
ULR_VCHANNEL_NAME_DIC_AUTOLOAD_ENABLED  0
ULR_VCHANNEL_NAME_DIC_URL
NAT_AGG_LOG_FIELDS_TO_SAVE_BITMASK  0x654
NAT_IMPORT_FROM_FULLFLOW
NAT_AGG_LOG_GROUP_TIME_INTERVAL  15
FULLFLOW_AGG_LOG_FIELDS_TO_SAVE_BITMASK 0x39fff
FULLFLOW_AGG_LOG_GROUP_TIME_INTERVAL    15
CLICKSTREAM_AGG_LOG_FIELDS_TO_SAVE_BITMASK  0x30ff
CLICKSTREAM_AGG_LOG_GROUP_TIME_INTERVAL  15
CLICKSTREAM_ADD_INFO_FROM_FULLFLOW  1
SUBSCRIBER_BIND_MODE      1
FILL_IP_LOGIN_BINDING_FROM_FULLFLOW 1
NAT_ADD_LOGIN_FROM_IP_LOGIN_BINDING 1
APP_ID    qoestor
APP_VERSION 1.9.0
```

Columns:

1. Parameter
2. Value

## Dictionaries subscribers\_dic, switches\_dic, crc\_dic

### subscribers\_dic

Dictionary of subscribers.

Example of dictionary

|              |       |   |       |             |       |          |
|--------------|-------|---|-------|-------------|-------|----------|
| 10.64.66.100 | login | 5 | port1 | unit_vendor | cabel | contract |
| services     | mac   |   |       |             |       |          |
| 10.64.66.101 | login | 2 | port1 | unit_vendor | cabel | contract |
| services     | mac   |   |       |             |       |          |
| 10.64.66.102 | login | 3 | port1 | unit_vendor | cabel | contract |
| services     | mac   |   |       |             |       |          |
| 10.64.66.103 | login | 4 | port1 | unit_vendor | cabel | contract |

|              |       |   |       |             |       |          |  |
|--------------|-------|---|-------|-------------|-------|----------|--|
| services     | mac   |   |       |             |       |          |  |
| 10.64.66.104 | login | 5 | port1 | unit_vendor | cabel | contract |  |
| services     | mac   |   |       |             |       |          |  |
| 10.64.66.105 | login | 5 | port2 | unit_vendor | cabel | contract |  |
| services     | mac   |   |       |             |       |          |  |
| 10.64.66.106 | login | 5 | port3 | unit_vendor | cabel | contract |  |
| services     | mac   |   |       |             |       |          |  |

Columns:

1. IP address
2. Login
3. Switch (Access) ID
4. Switch port
5. Subscriber equipment vendor
6. Cable
7. Contract
8. Services
9. MAC address of user equipment (reserved for future purposes)

## switches\_dic

Hierarchical dictionary of equipment (access switches and trunk switches)

Example of dictionary

|   |          |          |         |           |             |       |
|---|----------|----------|---------|-----------|-------------|-------|
| 1 | Switch 1 | Ethernet | Region1 | Address 1 | 10.140.1.18 | oper1 |
| 0 | 0        |          |         |           |             |       |
| 2 | Switch 2 | Ethernet | Region2 | Address 2 | 10.140.2.18 | oper1 |
| 0 | 0        |          |         |           |             |       |
| 3 | Switch 3 | Ethernet | Region3 | Address 3 | 10.140.3.18 | oper1 |
| 0 | 1        | port1    |         |           |             |       |
| 4 | Switch 4 | Ethernet | Region4 | Address 4 | 10.140.4.18 | oper1 |
| 0 | 3        | port1    |         |           |             |       |
| 5 | Switch 5 | Ethernet | Region5 | Address 5 | 10.140.5.18 | oper1 |
| 0 | 4        | port1    |         |           |             |       |

Columns:

1. Hardware ID UInt64
2. Name
3. Type
4. Region
5. Address
6. Switch IP address
7. Operator
8. Flag: flag of the trunk switch (1 - if yes). Not used, you can leave 0 everywhere
9. UInt64 upstream switch id
10. Upstream Switch Port
11. Owner

## **crc\_dic**

Error dictionary (CRC) on switch ports

Example of dictionary

```
2   port1    450
5   port1    550
5   port2    500
4   port1    780
```

Columns

1. Switch ID
2. Switch port
3. CRC value

## **Dictionaries urlcats\_dic and urlcats\_host\_dic**

Host category dictionaries. Designed to determine whether a host belongs to a certain category. Cloud directories are loaded on schedule. Not editable.

Example of dictionary urlcats\_dic

```
1   unknown
2   software_tools
3   search_engine
4   0_other
5   school
6   proxys
7   tabak_alkohol
8   religia
...
```

Columns:

1. Category ID
2. Category code

Example of dictionary urlcats\_host\_dic

```
iris06-gold-ssl.gameloft.com    1
satfrog-tv.ddns.net:5890       1
vs824.vcdn.biz 1
cs05.trafmag.com                1
...
```

Columns:

1. Host

## 2. Category ID

To force loading dictionaries run:

```
sh /var/qoestor/backend/app_bash/cron_daily.sh
```

### Dictionary **ulr\_vchannel\_name\_dic**

Dictionary of virtual circuit names. Designed to generate statistics for virtual channels.

Example of dictionary

```
0 1 vchan_0_1
0 2 vchan_0_2
0 3 vchan_0_3
0 4 vchan_0_4
1 1 vchan_1_1
1 2 vchan_1_2
1 3 vchan_1_3
1 4 vchan_1_4
```

Columns:

1. DPI number
2. Virtual channel number (vchannel)
3. Name