

# Table of Contents

|                                   |   |
|-----------------------------------|---|
| <b>Licensing</b> .....            | 3 |
| <b><i>SSG licensing</i></b> ..... | 3 |
| Bandwidth .....                   | 3 |
| Features .....                    | 4 |
| License Exceeding .....           | 4 |
| Reserve SSG license .....         | 5 |
| <b><i>QoE licensing</i></b> ..... | 5 |



# Licensing

- Stingray Service Gateway (SSG) licensing depends on the bandwidth and its features.
- The license is time-unlimited.
- [Technical support](#) is not included in the license and is paid separately.

## SSG licensing

### Bandwidth

Licenses grading of the bandwidth: **SSG-6/10/20/40/60/80/100/120/240**. Pay attention to the [hardware requirements!](#)

Depending on [the installation scheme](#), the following restrictions are assumed:

### 1. When installing "in line" scheme

- SSG-6 corresponds to 6Gbps total (upload+download) traffic
- SSG-10 corresponds to 10Gbps total (upload+download) traffic
- SSG-20 corresponds to 20Gbps total (upload+download) traffic
- SSG-40 corresponds to 40Gbps total (upload+download) traffic
- SSG-60 corresponds to 60Gbps total (upload+download) traffic
- SSG-80 corresponds to 80Gbps total (upload+download) traffic
- SSG-100 corresponds to 100Gbps total (upload+download) traffic
- SSG-120 corresponds to 120Gbps total (upload+download) traffic
- SSG-120 corresponds to 240Gbps total (upload+download) traffic



Licensing includes ISP traffic asymmetry. Usually, the incoming traffic is three times more than the outgoing one.

**For example, Incoming - 6G, Outgoing - 2G. License - SSG-10.**

### 2. When installing using the "mirror" scheme

- SSG-6 corresponds to 6Gbps of total mirror traffic
- SSG-10 corresponds to 10Gbps of total mirror traffic
- SSG-20 corresponds to 20Gbps of total mirror traffic
- SSG-40 corresponds to 40Gbps of total mirror traffic
- SSG-60 corresponds to 60Gbps of total mirror traffic
- SSG-80 corresponds to 80Gbps of total mirror traffic
- SSG-100 corresponds to 100Gbps of total mirror traffic
- SSG-120 corresponds to 120Gbps of total mirror traffic

## Features

Licences grading of the features: **BNG/BASE/COMPLETE**

| Options   | BNG | BASE | COMPLETE |
|---|-----|------|----------|
| Bypass, On-stick, LAG Support   | ✓   | ✓    | ✓        |
| Statistics by protocols and directions in IPFIX format collection and export        | ✓   | ✓    | ✓        |
| Traffic priority marking depending on the application protocol and direction        | ✗   | ✓    | ✓        |
| Channel policing and session policing, traffic priorities per channel               | ✗   | ✓    | ✓        |
| Subscriber channel policing and session policing, traffic priorities per subscriber | ✓   | ✗    | ✓        |
| Allow Lists and redirecting to Captive Portal                                       | ✓   | ✗    | ✓        |
| BNG/BRAS L3 (IPoE), Dual Stack IPv4/IPv6, RADIUS with CoA                           | ✓   | ✗    | ✓        |
| BNG/BRAS L2 (PPPoE, DHCP, L2TP), Dual Stack IPv4/IPv6                               | ✗   | ✗    | ✓        |
| Router with BGP, OSPF, VRF support  | ✓   | ✓    | ✓        |
| Carrier Grade NAT with NAT Flow export in IPFIX format                              | ✗   | ✗    | ✓        |
| Mini-Firewall for blocking by ports   | ✗   | ✗    | ✓        |
| Automatic protection against DDoS attacks   | ✗   | ✗    | ✓        |
| DNS requests control  | ✗   | ✗    | ✓        |

| Regulatory Compliance                                | BNG | BASE | COMPLETE |
|--|-----|------|----------|
| Filtering by blocked Internet sites and blacklisting | ✗   | ✓    | ✓        |
| Lawful Interception (LI), metadata export by IPFIX   | ✗   | ✗    | ✓        |

| Additional modules and services                 | BNG          | BASE | COMPLETE |
|---|--------------|------|----------|
| URL Classifier Local version                    | ✗            | ✗    | ✗        |
| URL Classifier Cloud version                    | ✓            | ✓    | ✓        |
| Graphical User Interface Base version           | ✓            | ✓    | ✓        |
| GUI (Graphical User Interface) FilterUI version | ✗            | ✗    | ✗        |
| Quality of Experience Module Base version       | ✓            | ✓    | ✓        |
| Quality of Experience Module Standard version   | ✗            | ✗    | ✗        |
| SDK — DPI Tool kit for protocols customization  | Subscription |      |          |
| VAS Cloud custom protocols                      | Subscription |      |          |

| Standby  | BNG  | BASE | COMPLETE |
|--|--|------|----------|
| <b>Active-Standby:</b> the stand-by SSG is installed on an alternative route, passing no more than 5% of traffic in standby mode | 25% from main License                      |      |          |
| <b>Active-Active:</b> traffic is shared between two SSG platforms  | 100% from Main License and Support License |      |          |

✓ Yes

✗ Optional

✗ No

## License Exceeding

If the bandwidth license parameters are exceeded, SSG will process traffic **until the platform reserves are exhausted**. Once the platform capacity is exhausted, processing errors will occur and traffic

degradation will occur. You can limit the bandwidth yourself by polysizing: [Common and Virtual Channels Policing](#), this is only relevant when the total port throughput exceeds the license bandwidth parameters.

VAS Experts reserves the right to refuse technical support or project maintenance to customers who do not comply with license terms, including those who exceed the allowed traffic (including according to the built-in error monitoring system).

## Reserve SSG license

For the purpose of increasing the fault tolerance of the solution, we recommend backing up the main SSG server. Redundancy schemes and descriptions for [BRAS L3](#) and [BRAS L2](#).

Terms of use of the reserve license:

1. Use only for backup purposes of the main server
2. Constant traffic transmission no more than 5% of the license volume, in order to monitor the health of the backup server
3. Processing of all traffic of the main server only in case of an accident or maintenance of the main server

## QoE licensing



If additional modules are connected to the QoE module in the BASE package or if the QoE module in the STANDARD package is used, it is necessary to create an account in VAS Cloud and link it to the GUI. [Instructions](#).

| Options   | BASE | STANDARD |
|---|------|----------|
| DPI-based Full NetFlow and ClickStream statistics visualization   | ✓    | ✓        |
| Built-in TOP reports on Full NetFlow: high RTT and retries, by speed and traffic volume, by application protocols, by AS, by subscriber AS, by traffic classes and DSCP, by access and aggregation switches | ✓    | ✓        |
| Built-in ClickStream-based reports: URLs, hosts, subscribers, devices, IP resources   | ✓    | ✓        |
| Custom filters by categories of web resources, protocols, protocol groups, subscribers, AS, IP  | ✓    | ✓        |
| Reports export in *.xlsx, *.csv, *.pdf and *.png  | ✓    | ✓        |
| API support for integration with external systems   | ✓    | ✓        |
| Uplinks quality monitoring and cyberthreats detection   | ✓    | ✓        |
| Online reports by specific IP, Login, Host IP   | ✓    | ✓        |
| NAT Flow statistics collection, compression, custom filters   | ✓    | ✓        |
| DNS Flow statistics collection, compression, custom filters   | ✓    | ✓        |
| GTP Flow statistics collection, compression, custom filters, map view   | ✓    | ✓        |
| Setting triggers and actions for events, notification by email and telegram with a set frequency  | ✓    | ✓        |
| DDoS and BotNet attacks detection and mitigation (blackhole and flowspec). SSG BASE version is required for mitigation  | ✓    | ✓        |

Yes

Optional