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# TTL

By default, Stingray Service Gateway in L2 BRAS mode does not change TTL packets, that is, it is transparent for utilities, such as traceroute. This is not always convenient: for example, the subscriber will not see his subscriber gateway in the output of the traceroute command.

In SSG 10.1 an additional parameter `bras_transparency` in the `fastdpi.conf` configuration file was introduced:

```
# Transparent (1) or not (0) SSG in L2 BRAS mode
# In transparent mode, L2 BRAS does not control the TTL of the packet,
it does not send ICMP Time Exceeded when the TTL is exhausted,
# therefore, for example, the traceroute utility will not recognize the
subscriber gateway when tracing.
# In non-transparent mode (0) L2 BRAS corrects the TTL of the packet and
sends ICMP Time Exceeded when exhausted.
# Default value: 1 (L2 BRAS is transparent)
# This parameter works only in the DPDK version of SSG
bras_transparency=1
```

In the case of `bras_transparency=0`, when the TTL is exhausted, the SSG will send ICMP Time Exceeded to the sender of the packet. In this case, in the IP header of the ICMP packet `srcIP` will be equal to the subscriber's gateway IP or `bras_arp_ip` if the subscriber's gateway is unknown to the SSG.

For IPv6, a virtual IPv6 address is always used `bras_ipv6_address`



In the `router` mode, the TTL is always corrected, regardless of the `bras_transparency` parameter.