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DHCP Authorization Setup

L2 DHCP Mode Overview:

Video

BRAS L2 for VLAN/QinQ-networks provides the following features:

- *DHCP*: monitoring of the DHCP requests from clients; if the DHCP server reply is successfull, clients will be immediately authenticated via the Radius-protocol
- *ARP proxy* – LAN ARP requests monitoring, blocking ARP requests from the WAN
- *IP source guard* – verification that the LAN packet belongs to the same VLAN from which the DHCP registration was. If this condition is violated, the packet is dropped.
- *Local traffic interconnection* (Intra-network traffic exchange between subscribers)
- *Traffic termination* from LAN to WAN, *origination (grounding)* of the responding traffic from WAN to LAN

To perform these functions, fastDPI BRAS needs to know when a client session starts and when it ends, and also operate not only with the IP addresses of users, but also with their MAC addresses and tags of VLAN/QinQ networks. With the help of this knowledge, it is possible to filter out inappropriate requests, thereby increasing security of the local network as a whole.

FastDPI BRAS L2 is suitable for both VLANs and QinQ (double VLAN, VLAN-per-user) networks. The QinQ network is more preferable, since it allows you to uniquely identify the user in a way

independent of the user's hardware, but also for a regular VLAN network (with one VLAN packet header), where the VLAN number actually identifies not a user, but a group of users, for example, a house entrance or an entire apartment building, fastDPI BRAS allows you to implement some protection.

> BRAS L2 functions are relevant only when fastDPI is used in bridge mode.

BRAS operates primarily on the L2 level, which means that if a packet from LAN is dropped or a decision to send it back to the LAN is taken, the packet payload wouldn't be recognized.

> When implementing L2 BRAS (especially using the test bed with few test subscribers) it should be taken into account that due to architectural features and optimization for a large volume of processed traffic, BRAS may handle the subscriber base consisting of 1-2 subscribers incorrectly, that causes the appreciable delays in responses to DHCP/PPPoE packets. For a full-fledged work of L2 BRAS, it is required to load the Stingray Service Gateway with some kind of traffic in order to prevent the idle functioning of worker threads.