batman-adv - Feature #419

BLA: redundant and superficial GW check

09/14/2020 11:24 AM - Linus Lüssing

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Priority:	Normal	**Due date:**	
Assignee:	batman-adv developers	**% Done:**	0%
Category:		**Estimated time:**	0.00 hour
Target version:			

Description

The source address check in batadv_recv_unicast_packet() here is both superficial and redundant:

```
 989         /* packet for me */
 990         if (batadv_is_my_mac(bat_priv, unicast_packet->dest)) {
 991                 /* If this is a unicast packet from another backgone gw,
 992                  * drop it.
 993                  */
 994                 orig_addr_gw = eth_hdr(skb)->h_source;
 995                 orig_node_gw = batadv_orig_hash_find(bat_priv, orig_addr_gw);
 996                 if (orig_node_gw) {
 997                         is_gw = batadv_bla_is_backbone_gw(skb, orig_node_gw,
 998                                                           hdr_size);
 999                         batadv_orig_node_put(orig_node_gw);
1000                         if (is_gw) {
1001                                 batadv_dbg(BATADV_DBG_BLA, bat_priv,
1002                                            "%s(): Dropped unicast pkt received from another b
ackbone gw %pM.\n",
1003                                            __func__, orig_addr_gw);
1004                                 goto free_skb;
1005                         }
1006                 }
1007
```

https://git.open-mesh.org/batman-adv.git/blob/f2a2e0310dc1c570bdd1439553e897649b000292:/net/batman-adv/routing.c#l1000

Redundant, because the sender is already supposed to perform this check, so no need to do it again on reception.

Superficial, because it only works if:

- The BLA backbone gateway we share a LAN with is a direct neighbor of us.
- The BLA backbone gateway we share a LAN with transmits the packet via its primary interface to us.

In all other cases, like received via multiple hops or via a secondary interface from the other BLA gateway does not work.

Suggestion:

- Either remove this check.
- Or turn the according batadv_dbg() into a pr_warn_ratelimited() to help in spotting potential bugs

(This check initially made it hard to reproduce the issue this patch is supposed to fix: https://patchwork.open-mesh.org/project/b.a.t.m.a.n./patch/20200914012136.5278-2-linus.luessing@c0d3.blue/. Initially it was easy to reproduce in a physical setup but then difficult to reproduce in a virtual one, because they had different configurations regarding primary vs. secondary interfaces.)