

Linux Kernel GTP-U - Feature #1943

test setup for Linux kernel GTP-U tunneling module

02/06/2017 04:46 PM - laforge

Status: New	Start date: 02/06/2017
Priority: Low	Due date:
Assignee: osmith	% Done: 0%
Category:	
Target version:	
Spec Reference:	
Description As there currently are several patch-sets under discussion (and more to come!), it is very important to establish a test suite to verify the correct operation of the Linux kernel GTP-U module in various possible configurations. The test suite should make use of libgtpnl and its utilities.	
Related issues:	
Related to OsmoGGSN (former OpenGGSN) - Bug #3208: automatic test setup for O...	In Progress 04/24/2018
Related to osmo-uecups - Feature #5012: use osmo-uecups from GGSN_Tests.ttcn	New 02/06/2021

History

#1 - 02/07/2017 12:38 AM - laforge

what I have in mind is basically something like:

live tests

- set up one link with several tunnels
- use sgsnemu or derived tool for other end of tunnel
- exchange packets between sgsnemu and tunnel
- maybe even some performance testing with varying packet sizes (what to use as peer?)
- stress testing of adding/removing links and tunnels at high rate

PCAP replay/injection tests

- use some pre-recorded GTP packets and check for decapsulation as expected
- functional testing of some features, like
 - handling of invalid GTP packets
 - handling of unknown TEID
 - handling of fragmentation
 - handling of "reserved" bits in GTP header

the actual test code could be part of the libgtpnl repository. We could start by manually executing it against proposed patches, and later maybe move towards a jenkins installation that tracks net-next and runs the tests once per day.

All of the above is just dreaming for now, I personally don't expect to have time soon to fix this. But it's still worth sharing thoughts and ideas.

#2 - 08/15/2017 05:37 PM - laforge

#3 - 08/17/2017 06:40 AM - laforge

- Assignee set to laforge

#4 - 05/30/2018 02:56 PM - laforge

- Tags set to GTP

#5 - 02/06/2021 12:15 PM - laforge

- Related to Bug #3208: automatic test setup for OsmoGGSN with kernel-gtp-u added

#6 - 02/06/2021 12:15 PM - laforge

- Related to Feature #5012: use osmo-uecups from GGSN_Tests.ttcn added

#7 - 02/06/2021 12:17 PM - laforge

- Assignee changed from laforge to osmith

- Priority changed from High to Low

Note: this ticket predates our TTCN3 test suites.

The "live tests" described above should be possible to handle via

- running existing GGSN_Tests.tcn against osmo-ggsn with kernel GTP-U (implemented in [#3208](#))
- possibly by osmo-uecaps enabled tests (see [#5012](#))

The replay/injection tests are something that should be done in GGSN_Tests.tcn, if it is not already implemented.