

libosmcore - Feature #3617

support routing control and user plane over different NS links

10/02/2018 05:09 PM - laforge

Status: Resolved	Start date: 10/02/2018
Priority: High	Due date:
Assignee: laforge	% Done: 100%
Category: libosmgb	
Target version:	
Spec Reference:	
Description	
it's somewhat hidden in the NS spec (TS 48.016) that at least when the SNS-CONFIG procedure is in use, the SGSN can configure different NS links, e.g. one with data weight 0 and another one with control weight 0. This means that the control and data plane are to be running on different links.	
This requires significant architectural changes in libosmgb and its data model to support.	
Related issues:	
Related to OsmoSGSN - Feature #3373: Support for SNS auto-configuration (SIZE...	Stalled 07/01/2018
Related to OsmoPCU - Feature #3372: Support for SNS auto-configuration (SIZE ...	Resolved 07/01/2018

Associated revisions

Revision 047f3872 - 02/26/2019 11:18 AM - laforge

NS: Add support for GPRS NS IP Sub-Network-Service (SNS)

The NS implementation part of the Gb implementation libosmgb so far implemented a rather classic dialect of Gb, with lots of heritage to FR (Frame Relay) transports. At least since Release 6 of the NS specification, there's an IP Sub-Network Service (SNS), which

- permits for dynamic configuration of IP endpoints and their NS-VCs
- abandons the concept of a NSVCI on IP transport
- forbids the use of RESET/BLOCK/UNBLOCK procedures on IP transport

This commit introduces BSS-side IP-SNS support to libosmgb in a minimally invasive way. It adds a corresponding SNS FSM to each NS instance, and implements the new SIZE/CONFIG/ADD/DELETE/CHANGE_WEIGHT procedures very closely aligned with the spec.

In order to use the SNS flavor (rather than the classic one), a BSS implementation should use `gprs_ns_nsisip_connect_sns()` instead of the existing `gprs_ns_nsisip_connect()`.

This implementation comes with a set of TTCN-3 tests in `PCU_Tests_RAW_SNS.ttcn`, see Change-ID `I0fe3d4579960bab0494c294ec7ab8032feed4fb2` of `osmo-ttcn3-hacks.git`

Closes: OS#3372

Closes: OS#3617

Change-Id: I84786c3b43a8ae34ef3b3ba84b33c90042d234ea

History

#1 - 10/02/2018 05:10 PM - laforge

- Related to Feature #3373: Support for SNS auto-configuration (SIZE / SNS-CONFIG procedure) added

#2 - 10/02/2018 05:10 PM - laforge

- Related to Feature #3372: Support for SNS auto-configuration (SIZE / SNS-CONFIG procedure) added

#4 - 02/18/2019 04:21 PM - laforge

- Status changed from New to In Progress

- % Done changed from 0 to 60

This is part of the laforge/gb-sns branch of libosmocore.git

#5 - 02/22/2019 10:33 PM - laforge

- % Done changed from 60 to 80

part of <https://gerrit.osmocom.org/#/c/libosmocore/+/13014/>

#6 - 02/23/2019 02:25 PM - laforge

- % Done changed from 80 to 90

We now also have a TTCN-3 test verifying this functionality in <https://gerrit.osmocom.org/#/c/osmo-ttcn3-hacks/+/13012/>

I expect related patches to be merged soon.

#7 - 02/27/2019 12:23 AM - laforge

- % Done changed from 90 to 100

patches now merged.

#8 - 03/01/2019 10:51 PM - laforge

- Status changed from In Progress to Resolved