OsmoSGSN - Bug #3403

osmo-sgsn doesn not connect properly with via SCCP when restarted

07/17/2018 06:18 PM - lynxis

Status:	New	**Start date:**	07/17/2018
Priority:	Normal	**Due date:**	
Assignee:		**% Done:**	0%
Category:	Iu interface		
Target version:			
Spec Reference:			

Description

Having a 3G setup with the ip.access.
When restarting the SGSN, the SGSN doesn't answer any IU related requests.
From the log it looks to me, the SCCP connection is not in a good state. A reset/re-sync detection might be missing.

```
Jul 17 18:00:42 osmocom systemd[1]: Started OpenBSC SGSN.
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <001b> telnet_interface.c:104 telnet at 127.0.0.1 4245
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <0022> control_if.c:886 CTRL at 127.0.0.1 4251
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <0023> gtp.c:757 GTP: gtp_newgsn() started at 192.168.56.
7
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <000e> sgsn_libgtp.c:839 Created GTP on 192.168.56.7
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <000e> sgsn_main.c:478 libGTP v1.2.1 initialized
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <0025> gsup_client.c:76 GSUP connecting to 127.0.0.1:4222
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <000f> gprs_ns.c:1628 Listening for nsip packets on 192.1
68.56.7:23000
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <000f> gprs_ns.c:1641 NS UDP socket at 192.168.56.7:23000
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <0028> sccp_user.c:370 OsmoSGSN: Creating SS7 instance
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <0028> sccp_user.c:397 OsmoSGSN: Using SS7 instance 1, pc
:0.23.4
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <0028> sccp_user.c:411 OsmoSGSN: Creating AS instance
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <0028> sccp_user.c:421 OsmoSGSN: Using AS instance as-cln
t-OsmoSGSN
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <0028> sccp_user.c:426 OsmoSGSN: Creating default route
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <0028> sccp_user.c:446 OsmoSGSN: Creating ASP instance
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <0028> sccp_user.c:481 OsmoSGSN: Using ASP instance asp-c
lnt-OsmoSGSN
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <0028> sccp_user.c:484 OsmoSGSN: Creating SCCP instance
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <001d> input/ipa.c:131 127.0.0.1:4222 connection done
Jul 17 18:00:42 osmocom osmo-sgsn[6305]: <001d> input/ipaccess.c:705 received ID get from 0/0/0
Jul 17 18:00:44 osmocom osmo-sgsn[6305]: <002a> m3ua.c:633 asp-asp-clnt-OsmoSGSN: Received NOTIFY
Type State Change:AS Inactive ()
Jul 17 18:00:44 osmocom osmo-sgsn[6305]: <0027> xua_default_lm_fsm.c:353 xua_default_lm(asp-clnt-O
smoSGSN)[0x56053f820ec0]{ACTIVE}: Ignoring primitive M-ASP_ACTIVE.confirm
Jul 17 18:00:44 osmocom osmo-sgsn[6305]: <002a> m3ua.c:633 asp-asp-clnt-OsmoSGSN: Received NOTIFY
Type State Change:AS Active ()
Jul 17 18:00:51 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
Jul 17 18:01:01 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
Jul 17 18:01:12 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
Jul 17 18:01:22 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
Jul 17 18:01:33 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
Jul 17 18:01:43 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
Jul 17 18:01:54 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
Jul 17 18:02:04 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
Jul 17 18:02:15 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
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reference 0
Jul 17 18:02:20 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 315
Jul 17 18:02:20 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 314
Jul 17 18:02:25 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
Jul 17 18:02:35 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
Jul 17 18:02:46 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
Jul 17 18:02:56 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
Jul 17 18:03:07 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
Jul 17 18:03:17 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
Jul 17 18:03:28 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
Jul 17 18:03:38 osmocom osmo-sgsn[6305]: <0028> sccp_scoc.c:1539 Cannot find connection for local
reference 0
```

Related issues:

Related to Cellular Network Infrastructure - Feature #2623: SCCP/M3UA: detect...	**New**	**11/07/2017**

History

#1 - 09/30/2018 11:40 AM - laforge

- Assignee set to laforge

#2 - 09/30/2018 11:55 AM - laforge

- Related to Feature #2623: SCCP/M3UA: detect restart of osmo-msc and osmo-sgsn added

#3 - 10/17/2018 10:20 AM - laforge

- Assignee changed from laforge to msuraev

#4 - 04/09/2019 11:22 AM - laforge

- Assignee changed from msuraev to lynxis

#5 - 04/14/2019 04:21 AM - lynxis

- Assignee changed from lynxis to laforge

laforge can you take a look? I don't know the SCCP stack. IMHO: we should send out a RESET to the connections within libsccp. But how does the other end (HNBGW) notices, that the SGSN has been restarted? In #2623 you wrote

> One could implement the classic SCCP messsages / primitives for infomring the BSC that the MSC is no longer reachable at the old point code. On the MTP-level, this is MTP-STATUS.ind from the MTP up into the SCCP stack. The SCCP stack then would use N-PCSTATE.ind (Q.711 6.3.2.3.3)

And we don't know how many HNBGW will connect to the SGSNs and what's their address in advance.

#6 - 04/15/2019 07:28 AM - laforge

- Assignee changed from laforge to lynxis

This is nothing that is handled at the SCCP level. SCCP just provides transport of RANAP messages. The logical "reset" state between a given RNC/HNBGW and the SGSN must be done on RANAP level. The fact that a given peer is no longer reachable is detected mainly if no responses to [normal] messages are received, and the RANAP RESET procedure is used to re-initialize the logical relation between two peers.

SCCP may in the future provide us hints to detect outages more reliably/directly, but that doesn't prevent us from implementing this properly.

#7 - 04/15/2019 07:29 AM - laforge

- Category set to Iu interface

#8 - 01/08/2020 10:48 PM - laforge

- Assignee deleted (lynxis)