

OsmoMSC - Bug #3948

OsmoMSC doesn't close SCCP connection after successful LU over luCS

04/23/2019 07:21 AM - laforge

Status:	Resolved	Start date:	04/23/2019
Priority:	Normal	Due date:	
Assignee:	laforge	% Done:	100%
Category:	luCS support		
Target version:			
Resolution:			

Description

After a UE performs a location update, OsmoMSC doesn't properly close the SCCP signaling connection.

The lu Release procedure happens as expected. However, there is no SCCP disconnect following. The MSC is expected to issue an N-DISCONNECT.req to the local SCCP provider, which then is resulting in the related signaling to the SCCP peer (RNC).

```
OsmoMSC# show cs7 instance 0 sccp connections
```

I	Local		Conn.		Remote		
O	Ref	SSN	PC	State	Ref	SSN	PC
I	000000	142	0.23.1	ACTIVE	128f85	142	0.24.3

```
OsmoMSC# show subscriber cache
```

Subscriber:

Extension: 491230000005

LAC: 23/0x17

RAN: UTRAN-Iu

IMSI: 262420000000005

TMSI: 6355C12E

Flags:

IMSI detached: false

Conf. by radio contact: true

Subscr. data conf. by HLR: true

Location conf. in HLR: true

Subscriber dormant: false

Received cancel locataion: false

MS not reachable: false

LA allowed: true

A3A8 last tuple (used 1 times):

seq # : 0

RAND : 9e 34 37 cd 27 3f 7d f0 88 4a da 37 bb c8 29 f7

SRES : 87 25 22 d2

Kc : a7 98 fd a1 7d 4e 01 30

Paging: not paging for 0 requests

SGs-state: SGs=NULL

SGs-MME: (none)

Use: 1 (attached)

Related issues:

Related to OsmoSGSN - Bug #3995: OsmoSGSN doesn't close SCCP connection after...

New

05/10/2019

History

#1 - 04/23/2019 07:30 AM - laforge

A subsequent transaction, such as a MO call fails as follows:

```
Tue Apr 23 09:28:04 2019 DVLR <000e> vlr_lu_fsm.c:749 vlr_lu_fsm(IMSI-2624200000000028:MSISDN-4912300000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x6120000156a0]{VLR_ULA_S_WAIT_LU_COMPL}: state_chg to VLR_ULA_S_DONE
```

```

Tue Apr 23 09:28:04 2019 DMM <0002> vlr_lu_fsm.c:741 RAN_conn(IMSI-26242000000028:MSISDN-491230000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x612000015520]{RAN_CONN_S_AUTH_CIPH}: Received Event RAN_CONN_E_ACCEPTED
Tue Apr 23 09:28:04 2019 DSMPP <000c> smpp_smsc.c:656 [msc_tester] Tx ALERT_NOTIFICATION (491230000028/3/1): A
available
Tue Apr 23 09:28:04 2019 DMM <0002> ran_conn.c:146 RAN_conn(IMSI-26242000000028:MSISDN-491230000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x612000015520]{RAN_CONN_S_AUTH_CIPH}: state_chg to RAN_CONN_S_ACCEPTED
Tue Apr 23 09:28:04 2019 DMM <0002> ran_conn.c:276 RAN_conn(IMSI-26242000000028:MSISDN-491230000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x612000015520]{RAN_CONN_S_ACCEPTED}: Received Event RAN_CONN_E_UNUSED
Tue Apr 23 09:28:04 2019 DMM <0002> ran_conn.c:297 RAN_conn(IMSI-26242000000028:MSISDN-491230000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x612000015520]{RAN_CONN_S_ACCEPTED}: state_chg to RAN_CONN_S_RELEASING
Tue Apr 23 09:28:04 2019 DRANAP <000d> iu_client.c:771 sccp_sap_up(N-DATA.indication)
Tue Apr 23 09:28:04 2019 DRANAP <000d> iu_client.c:805 N-DATA.ind(0, 00 13 40 40 00 00 06 00 03 40 01 00 00 0f
40 06 00 62 f2 24 00 17 00 3a 40 08 00 62 f2 24 00 17 00 00 00 10 40 0e 0d 05 24 01 03 50 59 02 05 f4 89 19 e
5 f1 00 4f 40 03 00 00 17 00 56 40 05 62 f2 24 09 26 )
Tue Apr 23 09:28:04 2019 DRANAP <000d> iu_client.c:530 handle_co(dir=1, proc=19)
Tue Apr 23 09:28:04 2019 DRANAP <000d> iu_client.c:536 Got InitialUE_Message but this is not a new conn
Tue Apr 23 09:28:04 2019 DRANAP <000d> iu_client.c:599 Error in cn_ranap_handle_co (-1)
Tue Apr 23 09:28:09 2019 DMM <0002> fsm.c:287 RAN_conn(IMSI-26242000000028:MSISDN-491230000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x612000015520]{RAN_CONN_S_RELEASING}: Timeout of T0
Tue Apr 23 09:28:09 2019 DMM <0002> ran_conn.c:329 RAN_conn(IMSI-26242000000028:MSISDN-491230000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x612000015520]{RAN_CONN_S_RELEASING}: Timeout while releasing, discarding right now
Tue Apr 23 09:28:09 2019 DMM <0002> ran_conn.c:330 RAN_conn(IMSI-26242000000028:MSISDN-491230000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x612000015520]{RAN_CONN_S_RELEASING}: Terminating (cause = OSMO_FSM_TERM_TIMEOUT)
Tue Apr 23 09:28:09 2019 DVLR <000e> ran_conn.c:330 vlr_lu_fsm(IMSI-26242000000028:MSISDN-491230000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x6120000156a0]{VLR_ULA_S_DONE}: Terminating in cascade, depth 2 (cause = OSMO_FSM_TERM_PARENT, caused by: RAN_conn(IMSI-26242000000028:MSISDN-491230000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x612000015520])
Tue Apr 23 09:28:09 2019 DVLR <000e> ran_conn.c:330 vlr_lu_fsm(IMSI-26242000000028:MSISDN-491230000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x6120000156a0]{VLR_ULA_S_DONE}: Removing from parent RAN_conn(IMSI-26242000000028:MSISDN-491230000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x612000015520]
Tue Apr 23 09:28:09 2019 DVLR <000e> vlr_lu_fsm.c:1415 vlr_lu_fsm(IMSI-26242000000028:MSISDN-491230000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x6120000156a0]{VLR_ULA_S_DONE}: fsm_lu_cleanup called with cause OSMO_FSM_TERM_PARENT
Tue Apr 23 09:28:09 2019 DVLR <000e> fsm.c:517 vlr_lu_fsm(IMSI-26242000000028:MSISDN-491230000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x6120000156a0]{VLR_ULA_S_DONE}: Deferring: will deallocate with RAN_conn(IMSI-26242000000028:MSISDN-491230000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x612000015520]
Tue Apr 23 09:28:09 2019 DMM <0002> fsm.c:533 RAN_conn(IMSI-26242000000028:MSISDN-491230000028:TMSI-0x8919E5F1:UTRAN-Iu-0:LU) [0x612000015520]{RAN_CONN_S_RELEASING}: Deallocated, including all deferred deallocations

```

#2 - 05/05/2019 04:07 PM - laforge

FYI: this is what makes most MSC_Tests_lu.* testcases fail so far, as all of them expect a proper lu release procedure, including the SCCP disconnect.

#3 - 05/10/2019 06:54 AM - laforge

- Status changed from New to Resolved
- Assignee set to laforge
- % Done changed from 0 to 100

this problem appears to be resolved after the neels/ho branch merge. We do have the same issue in the SGSN, will create a separate issue for it.

#4 - 05/10/2019 06:56 AM - laforge

- Related to Bug #3995: OsmoSGSN doesn't close SCCP connection after successful LU over luPS added

Files

File Name	Size	Date	Author
msc.log	32 KB	04/23/2019	laforge
msc_release_bug.pcap	5.49 KB	04/23/2019	laforge
ttn3.log	265 KB	04/23/2019	laforge