

OsmoBTS - Bug #4179

Race condition: OsmoBTS sends empty INFO_ind to PCU socket, if not all SI arrived from BSC via RSL

08/29/2019 11:53 AM - osmith

Status: New	Start date: 08/29/2019
Priority: Normal	Due date:
Assignee: osmith	% Done: 0%
Category:	
Target version:	
Spec Reference:	
Description	
Involved components:	
OsmoBSC --A-bis OML/RSL-- OsmoBTS --/tmp/pcu_bts socket-- OsmoPCU	
I wrote a fix for #3854 , and to make sure that it works, I'm writing a TTCN3 test that verifies INFO_ind arriving at the PCU socket.	
The test suite emulates both the BSC and PCU, and connects both at the same time. The BTS sends an INFO_ind containing empty values, such as CellId = 0, unless I'm forcing a sleep before the test suite connects to the PCU socket.	
In wireshark I saw that the BTS does not wait before all system information types (SI) are arriving:	
<pre>- SI3 - SI2 - pcu socket: "Sending info" - SI4</pre>	
I'm preparing a separate patch that introduces the sleep, and when reverted, it can reproduce the problem.	
Related issues:	
Related to OsmoBSC - Bug #3000: OsmoBSC issues "RSL Connect" command too earl...	New 02/25/2018
Related to OsmoPCU - Bug #3854: OsmoPCU uses wrong CellID in BSSGP	Resolved 03/21/2019

History

#1 - 08/29/2019 11:54 AM - osmith

- Related to Bug #3000: OsmoBSC issues "RSL Connect" command too early -> race conditions added

#2 - 08/29/2019 11:54 AM - osmith

- Related to Bug #3854: OsmoPCU uses wrong CellID in BSSGP added

#3 - 08/29/2019 12:38 PM - osmith

- Sleep patch: <https://gerrit.osmocom.org/c/osmo-ttcn3-hacks/+/15327>
- Test that reproduces the problem (with reverted sleep patch): <https://gerrit.osmocom.org/c/osmo-ttcn3-hacks/+/15328>

#4 - 09/04/2019 09:29 AM - osmith

As noted in the meeting yesterday, a few ttcn3-bts-test and ttcn3-bts-test-latest tests started to fail lately:

- TC_pcu_socket_connect_multi (Unexpected unix domain connect result)
- TC_pcu_socket_connect_si3gprs (SI3 indicates no GPRS despite PCU socket connected)
- TC_si_sched_13_2bis_2ter_2quater (Error: Insufficient SI in array)

(The new test TC_pcu_socket_verify_info_ind is only failing in latest, and this is expected.)

I found, that they started to fail since the sleep commit mentioned above:

<https://gerrit.osmocom.org/c/osmo-ttcn3-hacks/+15327> ("bts: f_init_pcu: sleep before connect")

As I ran TC_si_sched_13_2bis_2ter_2quater, I found several log messages like this one in osmo-bts.log:

```
20190904083328552 DL1P <0007> sysinfo.c:160 PH-RTS-IND: Unable to determine actual BS_AG_BLKES_RES value as SI3
is not available yet, fallback to 1
20190904083328552 DL1P <0007> sysinfo.c:160 GSMTAP: Unable to determine actual BS_AG_BLKES_RES value as SI3 is
not available yet, fallback to 1
```

I think, that this is another race condition bug in the testsuite or OsmoBTS: the additional sleep introduced by the patch should not make anything fail, if everything correctly waited for messages indicating that information is available.

So... in order not investing too much time into this (I'm really getting side-tracked from [#3925](#), which I'm originally working on), I'm going to revert that sleep commit for now. This makes TC_pcu_socket_verify_info_ind fail in master, until this issue ([#4179](#)) is resolved.

Revert: <https://gerrit.osmocom.org/c/osmo-ttcn3-hacks/+15401>