

OsmoPCU - Bug #2407

N3101 not implemented in OsmoPCU

07/29/2017 12:11 PM - laforge

Status: Closed	Start date: 07/29/2017
Priority: Immediate	Due date:
Assignee: msuraev	% Done: 100%
Category:	Estimated time: 0.00 hour
Target version:	
Spec Reference:	
Description	
N3101 is a counter. It counts up for every time no uplink data is received for an assigned USF. Every time uplik data for an assigned USF is received, the counter is reset to zero. If the counter ever reaches N3101_MAX, then the USF is no longer placed on the downlink, T3169 started and runs to expiry. After T3169 expiration, the USF is released and can be used by other TBF/MS.	
Related issues:	
Related to libosmocore - Bug #2586: fix timer duration calculations	Stalled 10/20/2017
Related to OsmoPCU - Feature #2709: use osmo_fsm for TBF	New 12/05/2017

History

#1 - 07/29/2017 12:16 PM - laforge

bts->n3101 is actually N3101_MAX, and it is provided via PCU socket from the BTS. So we already have a configurable N3101_MAX, but we have no actual per-USF/TBF counter and related mechanism.

#2 - 10/29/2017 06:45 PM - laforge

- Assignee deleted (laforge)
- Priority changed from Normal to High

#3 - 11/30/2017 10:14 AM - laforge

- Assignee set to msuraev
- Priority changed from High to Immediate

#4 - 11/30/2017 10:50 AM - msuraev

- Status changed from New to In Progress

The counter and timer are described in 3GPP TS 44.060 §13.2 and §13.4

#5 - 12/04/2017 11:52 AM - msuraev

- Related to Bug #2586: fix timer duration calculations added

#6 - 12/04/2017 12:00 PM - msuraev

- % Done changed from 0 to 10

This change is less trivial than initially anticipated: the problem is with TBF timeout handling in OsmoPCU - there's only single osmo_timer_list which is used for handling of all the timeouts. This in turn means that TBF cannot have 2 concurrent timers running at the same time - the moment we schedule new timer, we lose the information about any pending timer for this TBF. This is both counterintuitive and unnecessary fragile which makes it hard to test and modify.

Related gerrit 5109 has been merged, gerrit 5120 and 5158 are under review. Once it's merged we'll have generic infrastructure in place for handling TBF timers. Follow-up patches will convert remaining timers to use it (including T3169) which would allow use to properly integrate N3101 support.

#7 - 12/05/2017 10:55 AM - msuraev

- *Related to Feature #2709: use osmo_fsm for TBF added*

#8 - 12/08/2017 01:29 PM - msuraev

- *% Done changed from 10 to 70*

Tested successfully with sysmoBTS, under review in gerrit 5158, 5182.

#9 - 12/18/2017 01:06 PM - msuraev

- *Status changed from In Progress to Stalled*

#10 - 12/21/2017 12:26 PM - msuraev

- *Status changed from Stalled to Resolved*

- *% Done changed from 70 to 100*

N3101 implementation has been merged, remaining patches to convert timer handling to the same infrastructure which is used for T3169 are under review.

#11 - 02/06/2018 08:27 AM - laforge

- *Status changed from Resolved to Closed*