

OsmoSGSN - Bug #3696

Intermittent Connection Drop

11/15/2018 12:37 AM - manatails

Status: New	Start date: 11/15/2018
Priority: Normal	Due date:
Assignee: lynxis	% Done: 0%
Category:	
Target version:	
Spec Reference:	
Description	
I've set up a mini 3G RAN with the newest git repo.	
The phone works fine and successfully creates a PDP context, but data only works for a few minutes before it stops.	
Tested with a Samsung Galaxy S8 and an iPhone SE	

History

#1 - 11/15/2018 12:47 AM - manatails

The following are the logs from SGSN and GGSN at the time of disconnection

From SGSN:

```
<000e> sgsn_libgtp.c:175 PDP Create PDP Context
<0018> iu_client.c:530 handle_co(dir=4, proc=0)
<0018> iu_client.c:530 handle_co(dir=1, proc=11)
<0018> iu_client.c:530 handle_co(dir=2, proc=1)
<0018> iu_client.c:507 handle_co_initial(dir=1, proc=19)
<0018> iu_client.c:530 handle_co(dir=2, proc=6)
<0002> gprs_gmm.c:208 GMM_ATTACH_REQ_FSM(gb_gmm_req)[0x221bd60]{Init}:
Event IU Security Command Complete received. not permitted
<0018> iu_client.c:599 Error in cn_ranap_handle_co (-1)
<0018> iu_client.c:530 handle_co(dir=1, proc=20)
<0018> iu_client.c:530 handle_co(dir=4, proc=0)
<0018> iu_client.c:530 handle_co(dir=1, proc=11)
<0018> iu_client.c:530 handle_co(dir=2, proc=1)
<0018> iu_client.c:507 handle_co_initial(dir=1, proc=19)
<0018> iu_client.c:530 handle_co(dir=2, proc=6)<0002> gprs_gmm.c:208
GMM_ATTACH_REQ_FSM(gb_gmm_req)[0x221bd60]{Init}: Event IU Security
Command Complete received. not permitted
<0018> iu_client.c:599 Error in cn_ranap_handle_co (-1)
<0018> iu_client.c:530 handle_co(dir=1, proc=20)
<0018> iu_client.c:530 handle_co(dir=4, proc=0)
<0018> iu_client.c:530 handle_co(dir=1, proc=11)
<0018> iu_client.c:530 handle_co(dir=2, proc=1)
<0023> gtp.c:2800 Packet from 192.168.27.46:2152, length: 95 content: 32
ff 00 57 00 00 00 05 11 b4 00 00 45 00 00 53 ad fc 40 00 38 06 7b 5c 17
23 dd 7e c0 a8 64 02 01 bb cf 8c 78 70 5c a6 c2 6b 46 39 80 18 01 fc 05
54 00 00 01 01 08 0a 9f 6b cd 80 ff ff 61 96 15 03 03 00 1a 6e ec c9 35
4b a9 48 c5 23 b0 fa 35 a5 d6 e7 e5 5b 95 f0 38 45 0a cf c8 97 d1 :
Unknown PDP context, GTPv1
<0023> gtp.c:2800 Packet from 192.168.27.46:2152, length: 64 content: 32
ff 00 38 00 00 00 05 11 b5 00 00 45 00 00 34 ad fd 40 00 38 06 7b 7a 17
23 dd 7e c0 a8 64 02 01 bb cf 8c 78 70 5c c5 c2 6b 46 39 80 11 01 fc dd
ce 00 00 01 01 08 0a 9f 6b cd 80 ff ff 61 96 : Unknown PDP context, GTPv1
```

GGSN

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<0002> ggsn.c:735 PDP: Successful PDP Context
Creation: APN=internet(internet), TEIC=1, IPv4=192.168.100.2, IPv6=none
<000d> gtp.c:2761 Packet from 192.168.27.49:2152, length: 24 content: 32
1a 00 10 00 00 00 00 11 b4 00 00 10 00 00 00 05 85 00 04 c0 a8 1b 31 :
```

Received Error Indication

<0002> ggsn.c:372 PDP: Deleting PDP context

<000d> gtp.c:2755 Packet from 192.168.27.49:2152, length: 24 content: 32
1a 00 10 00 00 00 00 11 b5 00 00 10 00 00 00 05 85 00 04 c0 a8 1b 31 :

Unknown PDP context

<000d> gtp.c:2117 Packet from 192.168.27.49:2123, length: 52 content: 32
12 00 2c 00 00 00 01 4c 0a 00 00 0e 13 10 00 00 00 05 14 05 85 00 04 c0
a8 1b 31 85 00 04 c0 a8 1b 2a 87 00 0e 00 00 00 00 00 00 00 00 00 00 00
00 00 00 : Unknown PDP context: 1

<000d> gtp.c:2800 Packet from 192.168.27.42:2152, length: 72 content: 32
ff 00 40 00 00 00 01 00 00 00 00 45 00 00 3c 6f 51 40 00 40 06 08 fb c0
a8 64 02 d8 3a c5 8a cb 5a 01 bb 7a dc a8 09 00 00 00 00 a0 02 ff ff ce
3c 00 00 02 04 05 b4 04 02 08 0a ff ff c7 58 00 00 00 00 01 03 03 06 :

Unknown PDP context, GTPv1

<000d> gtp.c:2800 Packet from 192.168.27.42:2152, length: 72 content: 32
ff 00 40 00 00 00 01 00 01 00 00 45 00 00 3c 6f 52 40 00 40 06 08 fa c0
a8 64 02 d8 3a c5 8a cb 5a 01 bb 7a dc a8 09 00 00 00 00 a0 02 ff ff cd
42 00 00 02 04 05 b4 04 02 08 0a ff ff c8 52 00 00 00 00 01 03 03 06 :

Unknown PDP context, GTPv1

<000d> gtp.c:2800 Packet from 192.168.27.42:2152, length: 72 content: 32
ff 00 40 00 00 00 01 00 02 00 00 45 00 00 3c 6f 53 40 00 40 06 08 f9 c0
a8 64 02 d8 3a c5 8a cb 5a 01 bb 7a dc a8 09 00 00 00 00 a0 02 ff ff cb
4d 00 00 02 04 05 b4 04 02 08 0a ff ff ca 47 00 00 00 00 01 03 03 06 :

Unknown PDP context, GTPv1

As the data works much more reliably with GGSN reaction to Error Indication packets disabled, I believe it has something to do with the creation of Error Indication. But it is not limited to such because:

From 3GPP:

"if the GGSN receives a GTP-U Error Indication (from the RNC) it shall not release the related PDP context locally but the GGSN shall notify the SGSN that the RAB in RAN is invalid. This needs the GGSN to be updated."

I reviewed the related code from GGSN and currently osmo-ggsn only seems to remove the PDP context locally without acknowledging the SGSN

#2 - 11/19/2018 07:59 AM - manatails

- File *error_indication.pcap* added

Attaching the relevant packet capture

#3 - 05/08/2019 12:14 PM - laforge

- Project changed from Cellular Network Infrastructure to OsmoSGSN

- Assignee set to lynxis

Files

error_indication.pcap	9.03 KB	11/19/2018	manatails
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