

OsmoGGSN (former OpenGGSN) - Bug #4749

Unknown/Unimplemented PCO Protocol

09/09/2020 11:30 AM - MPoslusny

Status:	New	Start date:	09/09/2020
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:			
Target version:			
Spec Reference:			

Description

Hello,

I see this message in the ggsn log often.

Unknown / Unimplemented PCO Protocol

Are these protocols really not implemented? Or is it some kind of misconfiguration / miscommunication?

BR

Marek

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MYIMSI1=9017xxxxxxxxx1
MYIMSI2=9017xxxxxxxxx2
MYIMSI3=9017xxxxxxxxx3
MYIMSI4=9017xxxxxxxxx4
MYIMSI5=9017xxxxxxxxx5
MYIMSI6=9017xxxxxxxxx6
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<000d> gtp.c:1690 gtp_create_pdp_ind: Before gtp_pdp_tidget
<000d> pdp.c:322 Begin pdp_tidget tid = 5314520000007109
<000d> pdp.c:330 Begin pdp_tidget. Not found
<000d> pdp.c:277 Begin pdp_tidset tid = 5314520000007109
<000d> pdp.c:286 End pdp_tidset
<0002> ggsn.c:447 PDP(MYIMSI1:5): Processing create PDP context request for APN 'internet'
<0002> sgsn.c:83 SGSN(127.0.0.11): Discovered
<0002> pco.c:205 PDP(MYIMSI1:5): PCO Protocol 0xc223
<0002> pco.c:221 PDP(MYIMSI1:5): Unknown/Unimplemented PCO Protocol 0xc223: 010100231074ed3cb7a8b8
0901201e3a25f8d98f0a554d54535f434841505f53525652
<0002> pco.c:205 PDP(MYIMSI1:5): PCO Protocol 0xc223
<0002> pco.c:221 PDP(MYIMSI1:5): Unknown/Unimplemented PCO Protocol 0xc223: 02010015101922904128bf
266145b66ba7e1010b81
<0002> pco.c:205 PDP(MYIMSI1:5): PCO Protocol 0x8021
<0002> ggsn.c:568 PDP(MYIMSI1:5): Successful PDP Context Creation: APN=internet(internet), TEIC=1,
IPv4=100.64.1.2, IPv6=none
<000d> gtp.c:1690 gtp_create_pdp_ind: Before gtp_pdp_tidget
<000d> pdp.c:322 Begin pdp_tidget tid = 5165220000007109
<000d> pdp.c:330 Begin pdp_tidget. Not found
<000d> pdp.c:277 Begin pdp_tidset tid = 5165220000007109
<000d> pdp.c:286 End pdp_tidset
<0002> ggsn.c:447 PDP(MYIMSI2:5): Processing create PDP context request for APN 'internet'
<0002> pco.c:205 PDP(MYIMSI2:5): PCO Protocol 0x8021
<0002> pco.c:205 PDP(MYIMSI2:5): PCO Protocol 0x000d
<0002> pco.c:205 PDP(MYIMSI2:5): PCO Protocol 0x0005
<0002> pco.c:221 PDP(MYIMSI2:5): Unknown/Unimplemented PCO Protocol 0x0005:
<0002> pco.c:205 PDP(MYIMSI2:5): PCO Protocol 0x0010
<0002> pco.c:221 PDP(MYIMSI2:5): Unknown/Unimplemented PCO Protocol 0x0010:
<0002> ggsn.c:568 PDP(MYIMSI2:5): Successful PDP Context Creation: APN=internet(internet), TEIC=2,
IPv4=100.64.1.3, IPv6=none
<000d> gtp.c:1690 gtp_create_pdp_ind: Before gtp_pdp_tidget
<000d> pdp.c:322 Begin pdp_tidget tid = 5915520000007109
```

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<000d> pdp.c:330 Begin pdp_tidget. Not found
<000d> pdp.c:277 Begin pdp_tidset tid = 5915520000007109
<000d> pdp.c:286 End pdp_tidset
<0002> ggsn.c:447 PDP(MYIMSI3:5): Processing create PDP context request for APN 'internet'
<0002> pco.c:205 PDP(MYIMSI3:5): PCO Protocol 0x8021
<0002> pco.c:205 PDP(MYIMSI3:5): PCO Protocol 0x000d
<0002> pco.c:205 PDP(MYIMSI3:5): PCO Protocol 0x000a
<0002> pco.c:221 PDP(MYIMSI3:5): Unknown/Unimplemented PCO Protocol 0x000a:
<0002> pco.c:205 PDP(MYIMSI3:5): PCO Protocol 0x0005
<0002> pco.c:221 PDP(MYIMSI3:5): Unknown/Unimplemented PCO Protocol 0x0005:
<0002> pco.c:205 PDP(MYIMSI3:5): PCO Protocol 0x0010
<0002> pco.c:221 PDP(MYIMSI3:5): Unknown/Unimplemented PCO Protocol 0x0010:
<0002> ggsn.c:568 PDP(MYIMSI3:5): Successful PDP Context Creation: APN=internet(internet), TEIC=3,
IPv4=100.64.1.4, IPv6=none
<000d> gtp.c:1690 gtp_create_pdp_ind: Before gtp_pdp_tidget
<000d> pdp.c:322 Begin pdp_tidget tid = 5104520000007109
<000d> pdp.c:330 Begin pdp_tidget. Not found
<000d> pdp.c:277 Begin pdp_tidset tid = 5104520000007109
<000d> pdp.c:286 End pdp_tidset
<0002> ggsn.c:447 PDP(MYIMSI4:5): Processing create PDP context request for APN 'internet'
<0002> pco.c:205 PDP(MYIMSI4:5): PCO Protocol 0x8021
<0002> pco.c:205 PDP(MYIMSI4:5): PCO Protocol 0x000d
<0002> pco.c:205 PDP(MYIMSI4:5): PCO Protocol 0x0005
<0002> pco.c:221 PDP(MYIMSI4:5): Unknown/Unimplemented PCO Protocol 0x0005:
<0002> pco.c:205 PDP(MYIMSI4:5): PCO Protocol 0x0010
<0002> pco.c:221 PDP(MYIMSI4:5): Unknown/Unimplemented PCO Protocol 0x0010:
<0002> ggsn.c:568 PDP(MYIMSI4:5): Successful PDP Context Creation: APN=internet(internet), TEIC=4,
IPv4=100.64.1.5, IPv6=none
<000d> gtp.c:1690 gtp_create_pdp_ind: Before gtp_pdp_tidget
<000d> pdp.c:322 Begin pdp_tidget tid = 5004520000007109
<000d> pdp.c:330 Begin pdp_tidget. Not found
<000d> pdp.c:277 Begin pdp_tidset tid = 5004520000007109
<000d> pdp.c:286 End pdp_tidset
<0002> ggsn.c:447 PDP(MYIMSI5:5): Processing create PDP context request for APN 'internet'
<0002> pco.c:205 PDP(MYIMSI5:5): PCO Protocol 0x8021
<0002> pco.c:205 PDP(MYIMSI5:5): PCO Protocol 0x000d
<0002> pco.c:205 PDP(MYIMSI5:5): PCO Protocol 0x0005
<0002> pco.c:221 PDP(MYIMSI5:5): Unknown/Unimplemented PCO Protocol 0x0005:
<0002> pco.c:205 PDP(MYIMSI5:5): PCO Protocol 0x0010
<0002> pco.c:221 PDP(MYIMSI5:5): Unknown/Unimplemented PCO Protocol 0x0010:
<0002> ggsn.c:568 PDP(MYIMSI5:5): Successful PDP Context Creation: APN=internet(internet), TEIC=5,
IPv4=100.64.1.6, IPv6=none
<0002> ggsn.c:354 PDP(MYIMSI3:5): Deleting PDP context
<000d> pdp.c:296 Begin pdp_tiddel tid = 5915520000007109
<000d> pdp.c:303 End pdp_tiddel: PDP found
<0002> ggsn.c:354 PDP(MYIMSI5:5): Deleting PDP context
<000d> pdp.c:296 Begin pdp_tiddel tid = 5004520000007109
<000d> pdp.c:303 End pdp_tiddel: PDP found
<000d> gtp.c:1690 gtp_create_pdp_ind: Before gtp_pdp_tidget
<000d> pdp.c:322 Begin pdp_tidget tid = 5265220000007109
<000d> pdp.c:330 Begin pdp_tidget. Not found
<000d> pdp.c:277 Begin pdp_tidset tid = 5265220000007109
<000d> pdp.c:286 End pdp_tidset
<0002> ggsn.c:447 PDP(MYIMSI6:5): Processing create PDP context request for APN 'internet'
<0002> pco.c:205 PDP(MYIMSI6:5): PCO Protocol 0x8021
<0002> pco.c:205 PDP(MYIMSI6:5): PCO Protocol 0x000d
<0002> pco.c:205 PDP(MYIMSI6:5): PCO Protocol 0x0005
<0002> pco.c:221 PDP(MYIMSI6:5): Unknown/Unimplemented PCO Protocol 0x0005:
<0002> pco.c:205 PDP(MYIMSI6:5): PCO Protocol 0x0010
<0002> pco.c:221 PDP(MYIMSI6:5): Unknown/Unimplemented PCO Protocol 0x0010:
<0002> ggsn.c:568 PDP(MYIMSI6:5): Successful PDP Context Creation: APN=internet(internet), TEIC=3,
IPv4=100.64.1.7, IPv6=none
<0002> ggsn.c:354 PDP(MYIMSI4:5): Deleting PDP context
<000d> pdp.c:296 Begin pdp_tiddel tid = 5104520000007109
<000d> pdp.c:303 End pdp_tiddel: PDP found
<000d> gtp.c:1690 gtp_create_pdp_ind: Before gtp_pdp_tidget
<000d> pdp.c:322 Begin pdp_tidget tid = 5915520000007109
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<000d> pdp.c:330 Begin pdp_tidset. Not found
<000d> pdp.c:277 Begin pdp_tidset tid = 5915520000007109
<000d> pdp.c:286 End pdp_tidset
<0002> ggsn.c:447 PDP (MYIMSI3:5): Processing create PDP context request for APN 'internet'
<0002> pco.c:205 PDP (MYIMSI3:5): PCO Protocol 0x8021
<0002> pco.c:205 PDP (MYIMSI3:5): PCO Protocol 0x000d
<0002> pco.c:205 PDP (MYIMSI3:5): PCO Protocol 0x000a
<0002> pco.c:221 PDP (MYIMSI3:5): Unknown/Unimplemented PCO Protocol 0x000a:
<0002> pco.c:205 PDP (MYIMSI3:5): PCO Protocol 0x0005
<0002> pco.c:221 PDP (MYIMSI3:5): Unknown/Unimplemented PCO Protocol 0x0005:
<0002> pco.c:205 PDP (MYIMSI3:5): PCO Protocol 0x0010
<0002> pco.c:221 PDP (MYIMSI3:5): Unknown/Unimplemented PCO Protocol 0x0010:
<0002> ggsn.c:568 PDP (MYIMSI3:5): Successful PDP Context Creation: APN=internet(internet), TEIC=4,
IPv4=100.64.1.8, IPv6=none
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History

#1 - 09/09/2020 06:50 PM - laforge

On Wed, Sep 09, 2020 at 11:30:20AM +0000, MPoslusny [REDMINE] wrote:

Are these protocols really not implemented? Or is it some kind of misconfiguration / miscommunication?

They are not implemented.

- 0xc223 seems to relate to CHAP - which is an optional extension for additional subscriber authentication with external entities outside of the 3GPP CN. I know it from PPP dialup in the 1990ies.
- 0x0005 seems to be "MS Support of Network Requested Bearer Control indicator", i.e some high-end optional feature we don't support.
- 0x000a seems to be "IP allocation via NAS", i.e. LTE related, which we don't implement
- 0x0010 seems to be "IPv4 Link MTU Request" looks like the only option that looks like an old GPRS/3G network could be expected to provide it.

#2 - 10/09/2020 01:44 PM - keith

I just came across this as the log is quite full of these messages at level INFO.

TS 24.008 v15.3 does say: (10.5.6.3.1)

At least the following protocol identifiers (as defined in RFC 3232 [103]) shall be supported in this version of the protocol:

- C021H (LCP);
- C023H (PAP);
- C223H (CHAP); and
- 8021H (IPCP).

I'm not saying I'm going to implement it, just pointing to it. Lack of CHAP is not a problem I have come across to date.

Also, I noticed this: <https://portal.u-blox.com/s/question/0D52p00008HKDjYCAX/how-to-change-default-mtu-of-sarar410m02b-modem>

Where somebody is noting that the default MTU used by their SARA-R410M-02B modem is problematic, precisely when this is not specified by the network.

Otherwise, as the message is very common on a PDP ACTIVATION, we might consider changing the level to DEBUG?