

OsmoBTS - Feature #2356

have per-SAPI logging in OsmoBTS DL1P / DL1C

07/10/2017 06:31 PM - laforge

Status: In Progress	Start date: 07/10/2017
Priority: Low	Due date:
Assignee: osmith	% Done: 90%
Category:	
Target version:	
Spec Reference:	
Description the L1 logging is inherently verbose, particularly for L1P. It would be nice if one could enable logging only for specific L1 SAPIs, such as SACCH, TCH, FACCH, or the like. Having different log subsystems is overkill, but maybe the 'log filter' framework can be used for this?	
Related issues: Related to OsmoBTS - Bug #2355: optimize log output of phy specific code New 07/10/2017	

History

#1 - 07/10/2017 06:31 PM - laforge

- Related to Bug #2355: optimize log output of phy specific code added

#2 - 10/29/2017 06:51 PM - laforge

- Priority changed from Normal to Low

#3 - 03/01/2018 11:17 PM - laforge

- Assignee deleted (msuraev)

#4 - 11/22/2018 11:03 AM - laforge

- Assignee set to osmith

#5 - 09/10/2019 07:14 AM - osmith

- Status changed from New to In Progress

#6 - 09/11/2019 08:48 AM - osmith

Having different log subsystems is overkill, but maybe the 'log filter' framework can be used for this?

If I understood it right, this is how we would make use of the 'log filter' framework. Set the SAPI log context before each log message and reset it afterwards (either like this or with a macro):

```
LOGP(DL1P, LOGL_ERROR, "L1 HR frame length %u != expected %u\n", payload_len, GSM_HR_BYTES);  
  
log_set_context(LOG_CTX_SAPI, TCH);  
LOGP(DL1P, LOGL_ERROR, "L1 HR frame length %u != expected %u\n", payload_len, GSM_HR_BYTES);  
log_set_context(LOG_CTX_SAPI, NULL);
```

[laforge](#): I'm wondering why this is better than simply using a separate log subsystem, can you elaborate?

#7 - 09/11/2019 02:05 PM - fixeria

```
log_set_context(LOG_CTX_SAPI, NULL);
```

If I remember correctly, you don't need to reset the context yourself as it's done by `osmo_select_main()`.
The general approach is that you set the context at the beginning of a function and forget about it (excluding some special cases).

#8 - 09/12/2019 09:33 AM - osmith

fixeria wrote:

```
log_set_context(LOG_CTX_SAPI, NULL);
```

If I remember correctly, you don't need to reset the context yourself as it's done by `osmo_select_main()`.
The general approach is that you set the context at the beginning of a function and forget about it (excluding some special cases).

Thanks! I found this related issue [#3813](#).

But still, it seems like one would re-implement the log subsystems as filter if it was done as proposed above... could somebody explain to me why this is better than directly using a different subsystem?

#9 - 09/12/2019 11:03 AM - laforge

On Wed, Sep 11, 2019 at 08:48:19AM +0000, osmith [REDMINE] wrote:

Issue [#2356](#) has been updated by osmith.

Having different log subsystems is overkill, but maybe the 'log filter' framework can be used for this?

If I understood it right, this is how we would make use of the 'log filter' framework. Set the SAPI log context before each log message and reset it afterwards (either like this or with a macro):

no, that would be crazy. The idea is that once you know which SAPI is currently processed, the log context is set. Any subsequent log statements then must relate to this SAPI. The context should be reset just before going back into the select loop, or just after returning from it, and the reset might (should) actually happen in libosmocore itself.

The point is that whenever we come out of the select loop code, we are processing one particular message, and that message relates to one specific (SAPI, BTS, TRX, IMSI, ...) and as soon as we have identified those bits, we can set the related log context for the entire duration until we go back into the select loop.

#10 - 09/16/2019 01:32 PM - osmith

- % Done changed from 0 to 90

Thanks, that explanation cleared things up.

Patches submitted: <https://gerrit.osmocom.org/q/topic:sapi-filter>

#11 - 09/19/2019 09:54 AM - osmith

- Status changed from In Progress to Feedback

Waiting for feedback on that comment: <https://gerrit.osmocom.org/c/osmo-bts/+/15539#message-c5abaebc604578ba5ade4d9ac63d407d09eacbc4>

#12 - 09/27/2019 01:36 PM - osmith

- Status changed from Feedback to In Progress