

Smuxi - Bug # 1062: Crash when persistency is sqlite and number of messages is large enough

Status:	Closed	Priority:	Urgent
Author:	Felipe Sateler	Category:	Engine
Created:	05/24/2015	Assigned to:	Mirco Bauer
Updated:	06/06/2015	Due date:	
Complexity:	Medium		
Found in Version:			
Subject:	Crash when persistency is sqlite and number of messages is large enough		
Description:	<p>When I use persistency sqlite, I get crashes on frontend reconnect. This only appears to happen when a certain amount of messages are stored: if I clean up the buffer store, the problem goes away.</p> <p>Attached are the gdb log and debug log (from make run-server).</p> <p>I have noticed (but cannot guarantee this is always the case), that the crashes tend to occur when the frontend is starting up, if connection is lost and the frontend reconnects, the crash is less frequent.</p> <p>If there is anything else I can do to help debug this issue, do not hesitate to ask.</p>		

Associated revisions

05/28/2015 10:31 PM - Mirco Bauer

Engine: handle exceptions of SQLite message buffer during sync (refs: #1062)

Non-volatile backends have higher chances of race conditions and other serious bugs that can lead to crashes because their complexity is much higher. For that reason Smuxi handled exceptions of Db4o and should also do for all other non-volatile ones like SQLite.

06/06/2015 03:31 AM - Mirco Bauer

Server, Frontend-GNOME: use Boehm as GC instead of SGen (closes: #1062)

Mono 3.2.8 (and possibly newer versions) SEGVs in Mono.Data.Sqlite when the GC is SGen and huge datasets are read from more than one thread at the same time using different databases. With Boehm this does not happen. Since Smuxi switched to SQLite by default this is a show stopper for the 1.0 release and thus Boehm will be used to workaround this issue till the Mono SGen GC or the Mono.Data.Sqlite binding will be fixed in a later Mono version. Or the used SQLite binding will be replaced with sqlite-net [0] or Hyena's SQLite binding [1].

[0]: <https://github.com/praeclarum/sqlite-net>
[1]: <https://github.com/GNOME/hyena/tree/master/Hyena.Data.Sqlite>

History

05/24/2015 10:40 PM - Felipe Sateler

Forgot to say that both client and server are git from today.

05/24/2015 11:13 PM - Mirco Bauer

Felipe Sateler wrote:
> if I clean up the buffer store, the problem goes away.

How do you clean up your buffer store, do you delete the sqlite files or do you truncate the Messages table?

05/25/2015 12:03 AM - Felipe Sateler

I move the ircbuffers folder away.

05/25/2015 10:06 AM - Mirco Bauer

- Category set to Engine
- Assigned to set to Mirco Bauer
- Priority changed from Normal to Urgent
- Target version set to 1.0
- Complexity set to Medium

05/28/2015 03:05 AM - Felipe Sateler

A new datapoint: connecting with "low bandwidth mode" makes smuxi not crash. This also suggests the problem is when syncing a relatively large number of messages.

05/28/2015 08:56 PM - Mirco Bauer

Felipe Sateler wrote:

> A new datapoint: connecting with "low bandwidth mode" makes smuxi not crash. This also suggests the problem is when syncing a relatively large number of messages.

Indeed, what are your buffer settings then? Please provide all numbers from Preferences -> Interface -> General -> Message Buffer

05/28/2015 09:15 PM - Felipe Sateler

Buffer Lines: 6999
Engine Buffer Lines: 6999
Persistency: SQLite (recommended)
Volatile Buffer lines: 10000
Persistent Buffer Lines: 50000

05/28/2015 11:51 PM - Mirco Bauer

- Status changed from New to Assigned

I can finally reproduce this issue with your history and auto-connect + auto-join. it seems to be a stress/race issue.

```
<pre>
meebey@redhorse:~$ mono -V
Mono JIT compiler version 3.2.8 (Debian 3.2.8+dfsg-9)
Copyright (C) 2002-2014 Novell, Inc, Xamarin Inc and Contributors. www.mono-project.com
TLS:      __thread
SIGSEGV:  altstack
Notifications: epoll
Architecture: amd64
Disabled:  none
Misc:     softdebug
LLVM:     supported, not enabled.
GC:       sgen
meebey@redhorse:~$ dpkg -l|grep libsqlite3
ii  libsqlite3-0:amd64      3.8.7.4-1      amd64      SQLite 3 shared library
ii  libsqlite3-0:i386      3.8.7.4-1      i386       SQLite 3 shared library
ii  libsqlite3-dev:amd64   3.8.7.4-1      amd64      SQLite 3 development files
meebey@redhorse:~$
```

</pre>

05/29/2015 04:41 PM - Felipe Sateler

```
<pre>
Version table:
 3.8.10.2-1 0
    500 http://httpredir.debian.org/debian/ sid/main amd64 Packages
*** 3.8.9-2 0
    100 /var/lib/dpkg/status
</pre>
```

I am now updating to 3.8.10.2-1, if that doesn't make a difference I will try downgrading to the version in jessie

05/29/2015 06:23 PM - Felipe Sateler

No, updating to 3.8.10.2-1 does not fix the issue.

05/29/2015 08:36 PM - Felipe Sateler

And 3.8.7.1-1+deb8u1 does not fix it either.

05/29/2015 10:01 PM - Mirco Bauer

Too bad, then this issue must have been there since day one guess. Odd that nobody hit it in the past 6 months of testing SQLite (on the Smuxi cloud)

06/06/2015 02:40 AM - Mirco Bauer

```
<pre>
00:33:39 <fsateler> meebey: FWIW, I have been running under Boehm and all is well :)
00:33:45 <fsateler> since we discovered this
00:33:51 <meebey> fsateler: how many days?
00:35:43 <fsateler> active (running) since Fri 2015-05-29 19:52:26 CLT; 6 days ago
00:36:22 <meebey> fsateler: how often did it crash with sgen?
00:39:43 <fsateler> each time the frontend connected to the server
00:39:48 <meebey> fsateler: aahhh!
00:39:59 <meebey> fsateler: so it is fixed/workarounded guaranteed
</pre>
```

06/06/2015 02:40 AM - Mirco Bauer

So Smuxi 1.0 will be shipped with using Mono on Boehm as GC instead of SGen

06/06/2015 03:33 AM - Mirco Bauer

- Status changed from Assigned to Closed
- % Done changed from 0 to 100
Applied in changeset commit:"b4b87f46ec4457ca8da31329bb9f784c6e119fc1".

06/06/2015 03:35 AM - Mirco Bauer

What happens on Windows using .NET needs to be evaluated. If the binding is doing something bad then the issue should also show up on Windows, if Mono's GC is the issue then the crash shouldn't be reproducible on .NET

06/06/2015 12:04 PM - Mirco Bauer

Reported Mono upstream here: https://bugzilla.xamarin.com/show_bug.cgi?id=30864

06/06/2015 12:06 PM - Mirco Bauer

- File thread-dump.txt added

Files			
gdb.txt	49.2 KB	05/24/2015	Felipe Sateler
server.log	420.2 KB	05/24/2015	Felipe Sateler
thread-dump.txt	3 KB	06/06/2015	Mirco Bauer