
Subject: ide: Assist parsing now parallel and some of it background

Posted by [mirek](#) on Mon, 22 Jun 2020 14:08:28 GMT

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Title says it all. The "background" part is the one that updates the information during editing the file, in the past it was causing some cursor movement delays, that should not happen anymore.

"Parallel" part means that e.g. loading the main package should be now quite faster. Fortunately, this is the type of parallelism that scales well with more cores, I am now getting 9 times speedup with 2700x....

Important warning: This was a big change and the whole code is quite fragile to make it fast; I doubt I have already caught all race conditions and deadlocks already. The IDE will probably be unstable for some time now. Please report all bugs...

Mirek

Subject: Re: ide: Assist parsing now parallel and some of it background

Posted by [Novo](#) on Mon, 22 Jun 2020 14:34:10 GMT

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Thanks!

First bug report :)

Compilation of examples/CodeMetric is broken.

/Users/ssg/.local/soft/bb-worker/worker/m-upp/build/examples/CodeMetric/Analyse.h:32:25: error: use of undeclared identifier 'Parser'; did you mean 'CParser'?

```
void StoreMetric(const Parser::FunctionStat & functionStat);
```

```
    ^~~~~~
```

```
    CParser
```

/Users/ssg/.local/soft/bb-worker/worker/m-upp/build/uppsrc/Core/Parser.h:9:7: note: 'CParser' declared here

```
class CParser {
```

Subject: Re: ide: Assist parsing now parallel and some of it background

Posted by [mirek](#) on Mon, 22 Jun 2020 15:13:40 GMT

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Novo wrote on Mon, 22 June 2020 16:34 Thanks!

First bug report :)

Compilation of examples/CodeMetric is broken.

/Users/ssg/.local/soft/bb-worker/worker/m-upp/build/examples/CodeMetric/Analyse.h:32:25: error: use of undeclared identifier 'Parser'; did you mean 'CParser'?

```
void StoreMetric(const Parser::FunctionStat & functionStat);
```

```
    ^~~~~~
```

CParser

```
/Users/ssg/.local/soft/bb-worker/worker/m-upp/build/uppsrc/Core/Parser.h:9:7: note: 'CParser'
declared here
class CParser {
```

I think at this point I will just drop that example... Does anything depend on that functionality?

Mirek

Subject: Re: ide: Assist parsing now parallel and some of it background

Posted by [Novo](#) on Mon, 22 Jun 2020 15:23:16 GMT

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mirek wrote on Mon, 22 June 2020 11:13

I think at this point I will just drop that example... Does anything depend on that functionality?

Mirek

I'm personally not using this functionality.

Compilation is tested by an automated build system.

Subject: Re: ide: Assist parsing now parallel and some of it background

Posted by [Novo](#) on Mon, 22 Jun 2020 17:34:53 GMT

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I checked TheIDE with ThreadSanitizer and got a lot of data race warnings right on startup.
Haven't even tried indexing of src ...

Subject: Re: ide: Assist parsing now parallel and some of it background

Posted by [Novo](#) on Mon, 22 Jun 2020 20:44:15 GMT

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This is interesting (after full rebuild):

```
~/dvlp/cpp/code/upp/out/uppsrc/CLANGcpp17.Debug.Debug_Full.Gui.Shared$ ./ide
Heap is corrupted --memory-breakpoint__ 9209
```

Subject: Re: ide: Assist parsing now parallel and some of it background

Posted by [mirek](#) on Tue, 23 Jun 2020 08:01:27 GMT

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Novo wrote on Mon, 22 June 2020 22:44 This is interesting (after full rebuild):

```
~/dvlp/cpp/code/upp/out/uppsrc/CLANGcpp17.Debug.Debug_Full.Gui.Shared$ ./ide
```

Heap is corrupted --memory-breakpoint__ 9209

Unrelated, but should be now fixed.

Subject: Re: ide: Assist parsing now parallel and some of it background

Posted by [mirek](#) on Tue, 23 Jun 2020 08:54:56 GMT

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Novo wrote on Mon, 22 June 2020 19:34I checked TheIDE with ThreadSanitizer and got a lot of data race warnings right on startup. Haven't even tried indexing of src ...

I am trying to decipher that, but so far it looks like races in GTK. Or maybe false reports of races in GTK...

Subject: Re: ide: Assist parsing now parallel and some of it background

Posted by [Novo](#) on Tue, 23 Jun 2020 12:29:16 GMT

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mirek wrote on Tue, 23 June 2020 04:01Novo wrote on Mon, 22 June 2020 22:44This is interesting (after full rebuild):

:~/dvlp/cpp/code/upp/out/uppsrc/CLANGcpp17.Debug.Debug_Full.Gui.Shared\$./ide

Heap is corrupted --memory-breakpoint__ 9209

Unrelated, but should be now fixed.

Thanks.

It prevented tests from running.

Ide on exit:

==1001757== Conditional jump or move depends on uninitialised value(s)

==1001757== at 0x5C9904: Upp::String0::IsEqual(Upp::String0 const&) const
(Core/String.h:283)

==1001757== by 0x53D0F2: Upp::AString<Upp::String0>::IsEqual(Upp::String const&) const
(Core/String.h:78)

==1001757== by 0x5143BF: Upp::operator==(Upp::String const&, Upp::String const&)
(Core/String.h:151)

==1001757== by 0x5E5BD9: SaveChangedFile(char const*, Upp::String, bool) (Core.cpp:328)

==1001757== by 0x453D6B: Ide::SaveConfig() (Config.cpp:331)

==1001757== by 0x4541C1: Ide::SaveConfigOnTime() (Config.cpp:344)

==1001757== by 0x4D5694: GuiMainFn_() (main.cpp:317)

==1001757== by 0x8F5341: Upp::AppExecute__(void (*)()) (App.cpp:442)

==1001757== by 0x4D41FA: main (main.cpp:120)

Subject: Re: ide: Assist parsing now parallel and some of it background

Posted by [mirek](#) on Tue, 23 Jun 2020 13:17:00 GMT

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Novo wrote on Tue, 23 June 2020 14:29mirek wrote on Tue, 23 June 2020 04:01Novo wrote on Mon, 22 June 2020 22:44This is interesting (after full rebuild):

```
~/dvlp/cpp/code/upp/out/uppsrc/CLANGcpp17.Debug.Debug_Full.Gui.Shared$ ./ide
```

```
Heap is corrupted --memory-breakpoint__ 9209
```

Unrelated, but should be now fixed.

Thanks.

It prevented tests from running.

Ide on exit:

```
==1001757== Conditional jump or move depends on uninitialised value(s)
```

```
==1001757== at 0x5C9904: Upp::String0::IsEqual(Upp::String0 const&) const  
(Core/String.h:283)
```

```
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```

```
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```

```
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```

```
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```
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```

```
==1001757== by 0x4D5694: GuiMainFn_() (main.cpp:317)
```

```
==1001757== by 0x8F5341: Upp::AppExecute__(void (*)()) (App.cpp:442)
```

```
==1001757== by 0x4D41FA: main (main.cpp:120)
```

How about now?

Subject: Re: ide: Assist parsing now parallel and some of it background

Posted by [Novo](#) on Tue, 23 Jun 2020 13:24:39 GMT

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mirek wrote on Tue, 23 June 2020 04:54

I am trying to decipher that, but so far it looks like races in GTK. Or maybe false reports of races in GTK...

IMHO, it is very unlikely that GTK has races. Maybe, it just requires extra-synchronization ...

ThreadSanitizer can check only code, compiled with ThreadSanitizer. That means it cannot see any problems with GTK ...

Valgrind-based tools can. Helgrind, for example, reports tons of this:

```
==1004525== Possible data race during read of size 4 at 0x6C47A60 by thread #4
```

```
==1004525== Locks held: none
```

```
==1004525== at 0x5BD9D45: g_private_get (in /usr/lib/x86_64-linux-gnu/libglib-2.0.so.0.6400.2)
```

```
==1004525== by 0x5B895CF: ??? (in /usr/lib/x86_64-linux-gnu/libglib-2.0.so.0.6400.2)
```

```
==1004525== by 0x5B8C17C: g_main_current_source (in  
/usr/lib/x86_64-linux-gnu/libglib-2.0.so.0.6400.2)
```

```
==1004525== by 0x59AF34E: g_task_new (in /usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
```

```

==1004525== by 0x5A18C71: ??? (in /usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
==1004525== by 0x5A18DAF: ??? (in /usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
==1004525== by 0x5A18E61: ??? (in /usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
==1004525== by 0x5B8CE8D: g_main_context_dispatch (in
/usr/lib/x86_64-linux-gnu/libglib-2.0.so.0.6400.2)
==1004525== by 0x5B8D23F: ??? (in /usr/lib/x86_64-linux-gnu/libglib-2.0.so.0.6400.2)
==1004525== by 0x5B8D532: g_main_loop_run (in
/usr/lib/x86_64-linux-gnu/libglib-2.0.so.0.6400.2)
==1004525== by 0x5A18E99: ??? (in /usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
==1004525== by 0x5BB6930: ??? (in /usr/lib/x86_64-linux-gnu/libglib-2.0.so.0.6400.2)
==1004525== Address 0x6c47a60 is 0 bytes inside a block of size 4 alloc'd
==1004525== at 0x483C893: malloc (in
/usr/lib/x86_64-linux-gnu/valgrind/vgpreload_helgrind-amd64-linux.so)
==1004525== by 0x5BD9743: ??? (in /usr/lib/x86_64-linux-gnu/libglib-2.0.so.0.6400.2)
==1004525== by 0x5BD9D63: g_private_get (in
/usr/lib/x86_64-linux-gnu/libglib-2.0.so.0.6400.2)
==1004525== by 0x5B895CF: ??? (in /usr/lib/x86_64-linux-gnu/libglib-2.0.so.0.6400.2)
==1004525== by 0x5B8C17C: g_main_current_source (in
/usr/lib/x86_64-linux-gnu/libglib-2.0.so.0.6400.2)
==1004525== by 0x59AF34E: g_task_new (in /usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
==1004525== by 0x5A05E7A: ??? (in /usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
==1004525== by 0x5A09BEC: g_dbus_connection_send_message_with_reply (in
/usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
==1004525== by 0x5A0A4DA: g_dbus_connection_send_message_with_reply_sync (in
/usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
==1004525== by 0x5A0A8DE: ??? (in /usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
==1004525== by 0x5A0C8C6: g_dbus_connection_call_sync (in
/usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
==1004525== by 0x5A0CB65: ??? (in /usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
==1004525== Block was alloc'd by thread #1
==1004525==
==1004525== -----
==1004525==
==1004525== Lock at 0x14AD088 was first observed
==1004525== at 0x4843D9D: pthread_mutex_init (in
/usr/lib/x86_64-linux-gnu/valgrind/vgpreload_helgrind-amd64-linux.so)
==1004525== by 0x8DFF18: Upp::Mutex::Mutex() (Mt.cpp:601)
==1004525== by 0x6AB669: Upp::StaticPrimitive_<Upp::Mutex>::Initialize() (Mt.h:313)
==1004525== by 0x6AB5E4: Upp::StaticPrimitive_<Upp::Mutex>::Get() (Mt.h:316)
==1004525== by 0x6A7A67: Upp::StaticMutex::Enter() (Core/Mt.h:323)
==1004525== by 0xCBC9A0: Upp::EnterGuiMutex() (CtrlMt.cpp:15)
==1004525== by 0x678070: Upp::GuiLock::GuiLock() (CtrlCore/CtrlCore.h:66)
==1004525== by 0xCC4274: Upp::Ctrl::InstallKeyHook(bool (*)(Upp::Ctrl*, unsigned int, int))
(Ctrl.cpp:712)
==1004525== by 0x7807B2: Upp::s__sF29_328_fn() (MenuBar.cpp:330)
==1004525== by 0x518D75: Upp::Callinit::Callinit(void (*)(), char const*, int) (Core/Defs.h:86)
==1004525== by 0x410D2B: __cxx_global_var_init.120 (MenuBar.cpp:328)
==1004525== by 0x411700: _GLOBAL__sub_I_CtrlLib_bltz.cpp (CtrlLib$blitz.cpp:0)

```

```

==1004525== Address 0x14ad088 is 8 bytes inside data symbol "_ZN3UppL6sGLockE"
==1004525==
==1004525== Lock at 0x6C1AC70 was first observed
==1004525== at 0x4843D9D: pthread_mutex_init (in
/usr/lib/x86_64-linux-gnu/valgrind/vgpreload_helgrind-amd64-linux.so)
==1004525== by 0x5BD993D: ??? (in /usr/lib/x86_64-linux-gnu/libglib-2.0.so.0.6400.2)
==1004525== by 0x5BD9A17: g_rec_mutex_lock (in
/usr/lib/x86_64-linux-gnu/libglib-2.0.so.0.6400.2)
==1004525== by 0x597BAC6: ??? (in /usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
==1004525== by 0x5965681: g_file_new_for_path (in
/usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
==1004525== by 0x4EF9BCB: gtk_css_provider_load_from_path (in
/usr/lib/x86_64-linux-gnu/libgtk-3.so.0.2404.14)
==1004525== by 0x4EF9F07: ??? (in /usr/lib/x86_64-linux-gnu/libgtk-3.so.0.2404.14)
==1004525== by 0x503A30A: ??? (in /usr/lib/x86_64-linux-gnu/libgtk-3.so.0.2404.14)
==1004525== by 0x503D944: ??? (in /usr/lib/x86_64-linux-gnu/libgtk-3.so.0.2404.14)
==1004525== by 0x7D5D80: Upp::GtkSettingsString(char const*) (ChGtk3.cpp:24)
==1004525== by 0x7D5E6E: Upp::SetupFont() (ChGtk3.cpp:35)
==1004525== by 0x7D283F: Upp::ChHostSkin() (ChGtk3.cpp:285)
==1004525== Address 0x6c1ac70 is 0 bytes inside a block of size 40 alloc'd
==1004525== at 0x483C893: malloc (in
/usr/lib/x86_64-linux-gnu/valgrind/vgpreload_helgrind-amd64-linux.so)
==1004525== by 0x5BD9910: ??? (in /usr/lib/x86_64-linux-gnu/libglib-2.0.so.0.6400.2)
==1004525== by 0x5BD9A17: g_rec_mutex_lock (in
/usr/lib/x86_64-linux-gnu/libglib-2.0.so.0.6400.2)
==1004525== by 0x597BAC6: ??? (in /usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
==1004525== by 0x5965681: g_file_new_for_path (in
/usr/lib/x86_64-linux-gnu/libgio-2.0.so.0.6400.2)
==1004525== by 0x4EF9BCB: gtk_css_provider_load_from_path (in
/usr/lib/x86_64-linux-gnu/libgtk-3.so.0.2404.14)
==1004525== by 0x4EF9F07: ??? (in /usr/lib/x86_64-linux-gnu/libgtk-3.so.0.2404.14)
==1004525== by 0x503A30A: ??? (in /usr/lib/x86_64-linux-gnu/libgtk-3.so.0.2404.14)
==1004525== by 0x503D944: ??? (in /usr/lib/x86_64-linux-gnu/libgtk-3.so.0.2404.14)
==1004525== by 0x7D5D80: Upp::GtkSettingsString(char const*) (ChGtk3.cpp:24)
==1004525== by 0x7D5E6E: Upp::SetupFont() (ChGtk3.cpp:35)
==1004525== by 0x7D283F: Upp::ChHostSkin() (ChGtk3.cpp:285)
==1004525== Block was alloc'd by thread #1

```

DRD, on other side, reports a lot of problems with GTK itself, but Upp (on startup).

The only Upp-related error I saw so far is this:

```

==1005305== Probably a race condition: condition variable 0x1484d88 has been signaled but the
associated mutex 0x1484d60 is not locked by the signalling thread.
==1005305== at 0x48487EB: pthread_cond_broadcast@* (in
/usr/lib/x86_64-linux-gnu/valgrind/vgpreload_drd-amd64-linux.so)
==1005305== by 0x97DEF4: Upp::ConditionVariable::Broadcast() (Mt.h:265)
==1005305== by 0x94AD20: Upp::CoWork::Pool::ExitThreads() (CoWork.cpp:39)
==1005305== by 0x94B0FC: Upp::CoWork::Pool::~~Pool() (CoWork.cpp:71)
==1005305== by 0x60AEA26: __run_exit_handlers (exit.c:108)

```



```

==1005305== by 0x60AEBDF: exit (exit.c:139)
==1005305== by 0x608C0B9: (below main) (libc-start.c:342)
==1005305== cond 0x1484d88 was first observed at:
==1005305== at 0x4846F6B: pthread_cond_init@* (in
/usr/lib/x86_64-linux-gnu/valgrind/vgpreload_drd-amd64-linux.so)
==1005305== by 0x97E0B8: Upp::ConditionVariable::ConditionVariable() (Mt.h:267)
==1005305== by 0x94AEDB: Upp::CoWork::Pool::Pool() (CoWork.cpp:54)
==1005305== by 0x94AAA7: Upp::CoWork::GetPool() (CoWork.cpp:17)
==1005305== by 0x94BBE8: Upp::CoWork::Finish() (CoWork.cpp:287)
==1005305== by 0xC2F2AD: Upp::BufferPainter::FinishFillJob() (BufferPainter.h:296)
==1005305== by 0xC109C4: Upp::BufferPainter::Finish() (Render.cpp:450)
==1005305== by 0x7FFD80: Upp::ImagePainter::GetResult() (Painter/Painter.h:376)
==1005305== by 0x7F2012: Upp::ImagePainter::operator Upp::Image() (Painter/Painter.h:377)
==1005305== by 0x7CBD0D: Upp::MakeElement(Upp::Size_<int>, double, Upp::Image const&,
double, Upp::Color, Upp::Function<void (Upp::Painter&, Upp::Rect_<double> const&)>)
(Ch.cpp:281)
==1005305== by 0x7CBFB7: Upp::MakeButton(int, Upp::Image const&, double, Upp::Color,
unsigned int) (Ch.cpp:290)
==1005305== by 0x7C8391: Upp::MakeButton(int, Upp::Color, double, Upp::Color, unsigned int)
(Ch.cpp:297)
==1005305== mutex 0x1484d60 was first observed at:
==1005305== at 0x4844C36: pthread_mutex_init (in
/usr/lib/x86_64-linux-gnu/valgrind/vgpreload_drd-amd64-linux.so)
==1005305== by 0x8DFF18: Upp::Mutex::Mutex() (Mt.cpp:601)
==1005305== by 0x94AEC0: Upp::CoWork::Pool::Pool() (CoWork.cpp:54)
==1005305== by 0x94AAA7: Upp::CoWork::GetPool() (CoWork.cpp:17)
==1005305== by 0x94BBE8: Upp::CoWork::Finish() (CoWork.cpp:287)
==1005305== by 0xC2F2AD: Upp::BufferPainter::FinishFillJob() (BufferPainter.h:296)
==1005305== by 0xC109C4: Upp::BufferPainter::Finish() (Render.cpp:450)
==1005305== by 0x7FFD80: Upp::ImagePainter::GetResult() (Painter/Painter.h:376)
==1005305== by 0x7F2012: Upp::ImagePainter::operator Upp::Image() (Painter/Painter.h:377)
==1005305== by 0x7CBD0D: Upp::MakeElement(Upp::Size_<int>, double, Upp::Image const&,
double, Upp::Color, Upp::Function<void (Upp::Painter&, Upp::Rect_<double> const&)>)
(Ch.cpp:281)
==1005305== by 0x7CBFB7: Upp::MakeButton(int, Upp::Image const&, double, Upp::Color,
unsigned int) (Ch.cpp:290)
==1005305== by 0x7C8391: Upp::MakeButton(int, Upp::Color, double, Upp::Color, unsigned int)
(Ch.cpp:297)

```

Subject: Re: ide: Assist parsing now parallel and some of it background

Posted by [mirek](#) on Tue, 23 Jun 2020 15:02:27 GMT

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Novo wrote on Tue, 23 June 2020 15:24mirek wrote on Tue, 23 June 2020 04:54

I am trying to decipher that, but so far it looks like races in GTK. Or maybe false reports of races in GTK...

IMHO, it is very unlikely that GTK has races. Maybe, it just requires extra-synchronization ...

Well, the first error reported by sanitizer

=====

WARNING: ThreadSanitizer: data race (pid=27062)

Read of size 8 at 0x7b04000096a0 by thread T1:

#0 strlen <null> (libtsan.so.0+0x31275)

#1 pthread_setname_np ../sysdeps/unix/sysv/linux/pthread_setname.c:38

(libpthread.so.0+0x1391c)

#2 <null> <null> (libglib-2.0.so.0+0x7415d)

Previous write of size 8 at 0x7b04000096a0 by main thread (mutexes: write M505):

#0 malloc <null> (libtsan.so.0+0x2ae03)

#1 g_malloc <null> (libglib-2.0.so.0+0x51ab8)

#2 main /home/cxl/upp.src/uppsrc/ide/main.cpp:120 (debugide+0x51ee31)

Location is heap block of size 13 at 0x7b04000096a0 allocated by main thread:

#0 malloc <null> (libtsan.so.0+0x2ae03)

#1 g_malloc <null> (libglib-2.0.so.0+0x51ab8)

#2 main /home/cxl/upp.src/uppsrc/ide/main.cpp:120 (debugide+0x51ee31)

Mutex M505 (0x000001f35198) created at:

#0 pthread_mutex_init <null> (libtsan.so.0+0x2c5ad)

#1 Mutex /home/cxl/upp.src/uppsrc/Core/Mt.cpp:601 (debugide+0xbc27ac)

#2 Upp::StaticPrimitive_<Upp::Mutex>::Initialize() /home/cxl/upp.src/uppsrc/Core/Mt.h:313
(debugide+0x81c9ca)

#3 Upp::StaticPrimitive_<Upp::Mutex>::Get() /home/cxl/upp.src/uppsrc/Core/Mt.h:316
(debugide+0x81c901)

#4 Upp::StaticMutex::Enter() /home/cxl/upp.src/uppsrc/Core/Mt.h:323 (debugide+0x816818)

#5 Upp::EnterGuiMutex() /home/cxl/upp.src/uppsrc/CtrlCore/CtrlMt.cpp:15
(debugide+0x12d2658)

#6 GuiLock /home/cxl/upp.src/uppsrc/CtrlCore/CtrlCore.h:66 (debugide+0x7d5614)

#7 Upp::Ctrl::InstallKeyHook(bool (*)(Upp::Ctrl*, unsigned int, int))

/home/cxl/upp.src/uppsrc/CtrlCore/Ctrl.cpp:712 (debugide+0x12de181)

#8 Upp::s__sF29_328_fn() /home/cxl/upp.src/uppsrc/CtrlLib/MenuBar.cpp:330
(debugide+0x97a71c)

#9 Callinit /home/cxl/upp.src/uppsrc/Core/Defs.h:86 (debugide+0x583742)

#10 __cxx_global_var_init.120 /home/cxl/upp.src/uppsrc/CtrlLib/MenuBar.cpp:328
(debugide+0x41311f)

#11 _GLOBAL__sub_I_CtrlLib_bltz.cpp

/home/cxl/.cache/upp.out/uppsrc/CtrlLib/CLANG_TS.Debug.Debug_Full.Gui.Shared/CtrlLib\$blitz.c
pp (debugide+0x413fc5)

#12 __libc_csu_init <null> (debugide+0x154e76c)

Thread T1 'dconf worker' (tid=27064, running) created by main thread at:


```
#0 pthread_create <null> (libtsan.so.0+0x2bcee)
#1 <null> <null> (libglib-2.0.so.0+0x9240f)
#2 main /home/cxl/upp.src/uppsrc/ide/main.cpp:120 (debugide+0x51ee31)
```

SUMMARY: ThreadSanitizer: data race (/usr/lib/x86_64-linux-gnu/libtsan.so.0+0x31275) in
__interceptor_strlen

This looks like "dconf worker", which I think is DBus related, is trying to set the name of thread to a value set by main gtk thread and passed by the heap. The only U++ code referenced is our locked mutex, which is really only listed because it is being locked at the same time...

Mirek

Subject: Re: ide: Assist parsing now parallel and some of it background

Posted by [Novo](#) on Tue, 23 Jun 2020 17:43:04 GMT

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mirek wrote on Tue, 23 June 2020 09:17

How about now?

uninitialised value is gone.

I do not see Upp::ConditionVariable::Broadcast() problem anymore.

Almost all complains of DRD are related to Upp::Ctrl::Create(Upp::Ctrl*, bool) -->

g_task_run_in_thread() now.

I guess this issue can be ignored.

Thanks.

Subject: Re: ide: Assist parsing now parallel and some of it background

Posted by [Novo](#) on Tue, 23 Jun 2020 17:56:20 GMT

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Novo wrote on Tue, 23 June 2020 13:43mirek wrote on Tue, 23 June 2020 09:17

How about now?

uninitialised value is gone.

I do not see Upp::ConditionVariable::Broadcast() problem anymore.

Almost all complains of DRD are related to Upp::Ctrl::Create(Upp::Ctrl*, bool) -->

g_task_run_in_thread() now.

I guess this issue can be ignored.

Thanks.

Actually, these messages look similar to what ThreadSanitizer is reporting:

WARNING: ThreadSanitizer: data race (pid=1166000)

Write of size 8 at 0x7b1800026040 by main thread (mutexes: write M538):

```
#0 free <null> (ide+0x442cc8)
#1 <null> <null> (libglib-2.0.so.0+0x4e991)
#2 Upp::Ctrl::Create(Upp::Ctrl*, bool)
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/CtrlCore/GtkCreate.cpp:74:2 (ide+0x139755a)
#3 Upp::TopWindow::Open(Upp::Ctrl*)
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/CtrlCore/GtkTop.cpp:129:2 (ide+0x139d035)
#4 Upp::TopWindow::Open()
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/CtrlCore/GtkTop.cpp:149:2 (ide+0x1387182)
#5 SelectPackageDlg::Load(Upp::String const&)
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/ide/SelectPkg.cpp:681:4 (ide+0x4dbe7d)
#6 SelectPackageDlg::OnBase()
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/ide/SelectPkg.cpp:360:3 (ide+0x4dfbdd)
#7 Upp::CallbackN<> Upp::callback<SelectPackageDlg,
SelectPackageDlg>(SelectPackageDlg*, void (SelectPackageDlg::*)())::'lambda'():operator()()
const /home/ssg/dvlp/cpp/code/upp/git/uppsrc/Core/CallbackNP.i:38:36 (ide+0x6d2b40)
#8 Upp::Function<void ()>::Wrapper<Upp::CallbackN<> Upp::callback<SelectPackageDlg,
SelectPackageDlg>(SelectPackageDlg*, void (SelectPackageDlg::*)())::'lambda'()>::Execute()
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/Core/Function.h:17:50 (ide+0x6d29af)
#9 Upp::Function<void ()>::operator()() const
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/Core/Function.h:76:65 (ide+0x635e5b)
#10 Upp::ArrayCtrl::SetCursor0(int, bool)
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/CtrlLib/ArrayCtrl.cpp:1429:3 (ide+0x993bca)
#11 Upp::ArrayCtrl::SetCursor(int)
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/CtrlLib/ArrayCtrl.cpp:1449:9 (ide+0x98e059)
#12 Upp::ArrayCtrl::FindSetCursor(Upp::Value const&, int, int)
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/CtrlLib/ArrayCtrl.cpp:2410:6 (ide+0x9a80f1)
#13 SelectPackageDlg::SyncBase(Upp::String)
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/ide/SelectPkg.cpp:699:11 (ide+0x4e1fd1)
#14 SelectPackageDlg::Run(Upp::String)
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/ide/SelectPkg.cpp:311:3 (ide+0x4e18d2)
#15 SelectPackage(char const*, char const*, bool, bool)
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/ide/SelectPkg.cpp:724:17 (ide+0x4e63b5)
#16 Ide::OpenMainPackage() /home/ssg/dvlp/cpp/code/upp/git/uppsrc/ide/ide.cpp:157:13
(ide+0x520147)
#17 GuiMainFn_() /home/ssg/dvlp/cpp/code/upp/git/uppsrc/ide/main.cpp:306:20
(ide+0x5c7190)
#18 Upp::AppExecute__(void (*)())
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/Core/App.cpp:442:3 (ide+0xc71a85)
#19 main /home/ssg/dvlp/cpp/code/upp/git/uppsrc/ide/main.cpp:120:1 (ide+0x5c57dc)
```

Previous write of size 8 at 0x7b1800026040 by thread T21:

```
#0 calloc <null> (ide+0x4428f0)
#1 g_malloc0 <null> (libglib-2.0.so.0+0x57d30)
```

Mutex M538 (0x0000027ca0c8) created at:

```
#0 pthread_mutex_init <null> (ide+0x4454bd)
```

```

#1 Upp::Mutex::Mutex() /home/ssg/dvlp/cpp/code/upp/git/uppsrc/Core/Mt.cpp:601:2
(ide+0xc506ac)
#2 Upp::StaticPrimitive_<Upp::Mutex>::Initialize()
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/Core/Mt.h:313:46 (ide+0x8b63da)
#3 Upp::StaticPrimitive_<Upp::Mutex>::Get()
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/Core/Mt.h:316:38 (ide+0x8b6317)
#4 Upp::StaticMutex::Enter() /home/ssg/dvlp/cpp/code/upp/git/uppsrc/Core/Mt.h:323:31
(ide+0x8b02c8)
#5 Upp::EnterGuiMutex() /home/ssg/dvlp/cpp/code/upp/git/uppsrc/CtrlCore/CtrlMt.cpp:15:10
(ide+0x1350079)
#6 Upp::GuiLock::GuiLock() /home/ssg/dvlp/cpp/code/upp/git/uppsrc/CtrlCore/CtrlCore.h:66:15
(ide+0x8709c4)
#7 Upp::Ctrl::InstallKeyHook(bool (*)(Upp::Ctrl*, unsigned int, int))
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/CtrlCore/Ctrl.cpp:712:10 (ide+0x135b6a1)
#8 Upp::s__sF29_328_fn() /home/ssg/dvlp/cpp/code/upp/git/uppsrc/CtrlLib/MenuBar.cpp:330:2
(ide+0xa0ffca)
#9 Upp::Callinit::Callinit(void (*)(), char const*, int)
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/Core/Defs.h:86:83 (ide+0x627646)
#10 __cxx_global_var_init.119
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/CtrlLib/MenuBar.cpp:328:1 (ide+0x42d0f9)
#11 _GLOBAL__sub_I_CtrlLib_bltz.cpp
/home/ssg/dvlp/cpp/code/upp/out/uppsrc/CtrlLib/CLANGcpp17tsan.Debug.Debug_Full.Gui.Shared
.Usemalloc/CtrlLib$blitz.cpp (ide+0x42de3b)
#12 __libc_csu_init <null> (ide+0x15cbddc)

```

Thread T21 'pool-ide' (tid=1166023, running) created by main thread at:

```

#0 pthread_create <null> (ide+0x443f3b)
#1 <null> <null> (libglib-2.0.so.0+0x9f11a)
#2 Upp::Ctrl::PopUp(Upp::Ctrl*, bool, bool, bool, bool)
/home/ssg/dvlp/cpp/code/upp/git/uppsrc/CtrlCore/GtkCreate.cpp:153:2 (ide+0x1398e23)
#3 ShowSplash() /home/ssg/dvlp/cpp/code/upp/git/uppsrc/ide/About.cpp:109:23
(ide+0x5936c5)
#4 GuiMainFn_() /home/ssg/dvlp/cpp/code/upp/git/uppsrc/ide/main.cpp:282:4 (ide+0x5c6f7d)
#5 Upp::AppExecute__(void (*)()) /home/ssg/dvlp/cpp/code/upp/git/uppsrc/Core/App.cpp:442:3
(ide+0xc71a85)
#6 main /home/ssg/dvlp/cpp/code/upp/git/uppsrc/ide/main.cpp:120:1 (ide+0x5c57dc)

```

In this case it is Thread T21 'pool-ide' and Upp::Ctrl::Create(Upp::Ctrl*, bool) again ...