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Subject: Some fixes in InVector.hpp and Vcont.cpp  
Posted by [kasome](#) on Thu, 25 Sep 2014 11:56:34 GMT  
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Hi, all

I try to compile U++ to the dynamic library (by using the .def file to generate the .dll with the .lib), and it can work on windows7 except some modification should be made.

In the InVector.hpp

change

```
extern thread__ int64 invector_cache_serial_;  
extern thread__ int  invector_cache_blk_i_;  
extern thread__ int  invector_cache_offset_;  
extern thread__ int  invector_cache_end_;
```

to

```
#ifndef flagSO  
extern thread__ int64 invector_cache_serial_;  
extern thread__ int  invector_cache_blk_i_;  
extern thread__ int  invector_cache_offset_;  
extern thread__ int  invector_cache_end_;  
#else  
static thread__ int64 invector_cache_serial_;  
static thread__ int  invector_cache_blk_i_;  
static thread__ int  invector_cache_offset_;  
static thread__ int  invector_cache_end_;  
#endif
```

In the Vcont.cpp

change

```
thread__ int64 invector_cache_serial_;  
thread__ int  invector_cache_blk_i_;  
thread__ int  invector_cache_offset_;  
thread__ int  invector_cache_end_;
```

to

```
#ifndef flagSO  
thread__ int64 invector_cache_serial_;  
thread__ int  invector_cache_blk_i_;  
thread__ int  invector_cache_offset_;  
thread__ int  invector_cache_end_;  
#endif
```

Hope that helps, and the modified code was uploaded as attachment.

## File Attachments

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- 1) [InVector.hpp](#), downloaded 335 times
  - 2) [Vcont.cpp](#), downloaded 348 times
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Subject: Re: Some fixes in InVector.hpp and Vcont.cpp

Posted by [mirek](#) on Thu, 25 Sep 2014 13:29:46 GMT

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kasome wrote on Thu, 25 September 2014 13:56Hi, all

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In the InVector.hpp

change

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```
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extern thread__ int64 invector_cache_serial_;
extern thread__ int  invector_cache_blk_i_;
extern thread__ int  invector_cache_offset_;
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#else
static thread__ int64 invector_cache_serial_;
static thread__ int  invector_cache_blk_i_;
static thread__ int  invector_cache_offset_;
static thread__ int  invector_cache_end_;
#endif
```

In the Vcont.cpp

change

```
thread__ int64 invector_cache_serial_;
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thread__ int  invector_cache_offset_;
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to

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#ifndef flagSO
thread__ int64 invector_cache_serial_;
thread__ int invector_cache_blk_i_;
thread__ int invector_cache_offset_;
thread__ int invector_cache_end_;
#endif
```

Hope that helps, and the modified code was uploaded as attachment.

I doubt this change maintains the current behaviour.

What is the error reported?

Mirek

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Subject: Re: Some fixes in InVector.hpp and Vcont.cpp  
Posted by [kasome](#) on Sat, 27 Sep 2014 04:35:39 GMT  
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Hi Mirek,

Thanks for the reply, I already upload the entire UppDLL project in the following download link, which can be compiled by using VS2012

<http://www.mediafire.com/download/05ejdu5dm0uoddc/TestUppDLL.rar>

Just use VS2012 to open the following two solution file and run on Windows 7

TestUppDLL\WithModification\UppLib\_WithModification.sln -----> no crash

TestUppDLL\WithoutModification\UppLib\_WithoutModification.sln -----> crash

The only difference between "UppLib\_WithModification" and "UppLib\_WithoutModification" is the modification of InVector.hpp and Vcont.cpp as mentioned.

Notice:

Do not use or test the compiled U++ dll on the Windows XP or before Windows Vista, the reason is the following:

Rules and Limitations for TLS

Quote:On Windows operating systems before Windows Vista, `__declspec( thread )` has some limitations. If a DLL declares any data or object as `__declspec( thread )`, it can cause a protection fault if dynamically loaded. After the DLL is loaded with LoadLibrary, it causes system failure whenever the code references the `__declspec( thread )` data. Because the global variable space for a thread is allocated at run time, the size of this space is based on a calculation of the requirements of the application plus the requirements of all the DLLs that are statically linked.

When you use LoadLibrary, you cannot extend this space to allow for the thread local variables declared with `__declspec( thread )`. Use the TLS APIs, such as `TlsAlloc`, in your DLL to allocate TLS if the DLL might be loaded with LoadLibrary.

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Subject: Re: Some fixes in InVector.hpp and Vcont.cpp

Posted by [mirek](#) on Sat, 27 Sep 2014 10:01:04 GMT

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I am well aware of that; but that is only interesting if you are using "LoadLibrary" (instead of adding .dll with linker).

In that case thread variables indeed cannot work, but that would require much more changes than just this. And it would have serious impact on performance too.

But the real problem is that proposed patch is simply wrong, it just generates hard to spot bugs.

(OTOH, congratulation on the project).

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Subject: Re: Some fixes in InVector.hpp and Vcont.cpp

Posted by [mirek](#) on Sat, 27 Sep 2014 16:22:15 GMT

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I wanted to test your code with VS 2013, but I am stuck with this error:

```
1>----- Build started: Project: UppLib, Configuration: Debug Win32 -----
```

```
1> Xml.cpp
```

```
1>c:\program files (x86)\windows kits\8.1\include\um\rpcnsip.h(34): error C2146: syntax error :  
missing ';' before identifier 'LookupContext'
```

```
1>c:\program files (x86)\windows kits\8.1\include\um\rpcnsip.h(34): error C4430: missing type  
specifier - int assumed. Note: C++ does not support default-int
```

(The "Xml.cpp" file is (originally) Core/Rpc/Xml.cpp)

I am perhaps too unfamiliar with VS to find out what is going wrong here... Any ideas?

Mirek

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Subject: Re: Some fixes in InVector.hpp and Vcont.cpp

Posted by [kasome](#) on Sat, 27 Sep 2014 18:32:51 GMT

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Hi Mirek,

Performing the following steps:

VS2012:

modify

C:\Program Files (x86)\Windows Kits\8.0\Include\um\Objidl.h

change

#include "rpc.h"

to

#include "C:\Program Files (x86)\Windows Kits\8.0\Include\shared\rpc.h"

VS2013:

modify

C:\Program Files (x86)\Windows Kits\8.1\Include\um\Objidl.h

change

#include "rpc.h"

to

#include "C:\Program Files (x86)\Windows Kits\8.1\Include\shared\rpc.h"

Somehow, when VS2012/VS2013 read the line #include "rpc.h", it will try to include the wrong file MSVS\_Ultimate++\upp\uppsrc\Core\Rpc\Rpc.h, and that cause error.

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