Subject: Improved heap diagnostics
Posted by mirek on Sun, 16 Mar 2008 14:47:38 GMT
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Debug mode heap diagnostics improved. Write before/past block checks are now more accurate.

Memory leaks now list a "memory breakpoint" value. Add this value to commandline (e.g. "--memory-breakpoint__ 107749") and the U++ will stop at corresponding "new" statement with segmentation fault (something you can catch with debugger and see the call stack). (Of course, if you are about to detect the real culprit, the code must do exactly the same thing..)

Also:

void  MemoryIgnoreLeaksBegin();
void  MemoryIgnoreLeaksEnd();

supress any memory allocated in between to be considered a memory leak. This can be nested and is thread specific.

Mirek

Subject: Re: Improved heap diagnostics
Posted by masu on Sun, 16 Mar 2008 16:51:06 GMT
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Hi Mirek,

FreeBSD does not have flag MAP_ANONYMOUS, but MAP_ANON, so we have to distinguish it from PLATFORM_POSIX.

Matthias

Subject: Re: Improved heap diagnostics
Posted by mirek on Sun, 16 Mar 2008 18:14:17 GMT
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Like this:

```
void *SysAllocRaw(size_t size)
{
 LTIMING("SysAllocRaw");
 if(sPeak) *sPeak = MemoryProfile();
 sKB += int(((size + 4095) & ~4095) >> 10);
#ifdef PLATFORM_WIN32
```

```
 void *ptr = VirtualAlloc(NULL, size, MEM_RESERVE|MEM_COMMIT, PAGE_READWRITE);
#else
#ifdef PLATFORM_LINUX
 void *ptr =  mmap(0, size, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS,
-1, 0);
#else
 void *ptr =  mmap(0, size, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANON, -1, 0);
#endif
#endif
 if(!ptr)
  Panic("Out of memory!");
 return ptr;
}
```

?

Mirek

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Subject: Re: Improved heap diagnostics
Posted by masu on Sun, 16 Mar 2008 18:20:55 GMT
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Seems reasonable if other POSIX platforms also have MAP_ANON instead of MAP_ANONYMOUS. But I don't know  .

By the way, there are also some #ifdef _DEBUG missing in sources where new functions are used.

Matthias

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Subject: Re: Improved heap diagnostics
Posted by mirek on Sun, 16 Mar 2008 19:53:41 GMT
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masu wrote on Sun, 16 March 2008 14:20Seems reasonable if other POSIX platforms also have MAP_ANON instead of MAP_ANONYMOUS. But I don't know  .

I guess, when we get there, we will see  In fact, the only other platform to support is Solaris (on Mac, it is MAP_ANON AFAIK).

Quote:
By the way, there are also some #ifdef _DEBUG missing in sources where new functions are used.

Matthias

Well, rather missing "inline"...

Mirek

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Subject: Re: Improved heap diagnostics
Posted by masu on Wed, 19 Mar 2008 21:19:27 GMT
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luzr wrote on Sun, 16 March 2008 20:53Well, rather missing "inline"...

... and missing header guard for Defs.h.

Matthias

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