Subject: Re: New Core
Posted by mirek on Sat, 14 May 2016 05:52:57 GMT
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cbpporter wrote on Thu, 12 May 2016 19:29And a question: I can fully understand the 16 bit alignment for allocation and I've used a lot in the past SSE, so this is a good move.

But why make the smallest allocation size 32, not 16?

It is related to the implementation of allocator.

In short: There are small blocks and there are large blocks. At some point, I need to know if freed block is small or large. Fast method to do that is to use single bit in address - small blocks are always 32 bytes aligned, large blocks are 32 bytes misaligned. Therefore small block has to be multiple of 32.

Previous core used the same process, but 16 byte misalignment. So the smallest block was 16 bytes and alignment 8 bytes.

Of course, I have tested this (with theide and other apps) and the increase in memory consumption is negligible.