Subject: Value size ?
Posted by mingodad on Sun, 13 Apr 2014 21:43:17 GMT
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I saw in several places talking about efficiency but when I look at sizeof(Value) == 48 (64bits) I'm not sure about it.

I saw that Value has a String member called "data" and also an Atomic member called "refcount" to be used in special cases, but String also has the same "refcount" for special cases, isn't it a repetition ?

I was looking at sizeof(boost::any) == 8 (64bits) and sizeof(cdiggins::any) == 16 (64bits) (http://www.codeproject.com/Articles/11250/High-Performance-D
ynamic-Typing-in-C-using-a-Repla) and wondering why we need so much memory for Value ?

It's used on collections and this size adds to the end, also I saw on database examples using ValueMap inside ValueArray.
Why construct individual maps with lots of duplicated string keys ?
Wouldn't be more efficient to have only one set of keys and an Vector<ArrayValue> let's call it ValueTable ?

```
Renderer& Renderer::operator()(const char *id, const SqlSelect& sel)
{
 ValueArray list;
 ValueMap vm;
 SqlR sql;
 sql * sel;
 while(sql.Fetch(vm))
  list.Add(vm);
 return operator()(id, list);
}
```

Subject: Re: Value size ?
Posted by mirek on Mon, 14 Apr 2014 04:00:33 GMT
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mingodad wrote on Sun, 13 April 2014 21:43I saw in several places talking about efficiency but when I look at sizeof(Value) == 48 (64bits) I'm not sure about it.

sizeof(Value) is 16 bytes. I guess you have tried in DEBUG, where there is some additional diagnostics data.

Quote:
I saw that Value has a String member called "data" and also an Atomic member called "refcount"

to be used in special cases, but String also has the same "refcount" for special cases, isn't it a repetition ?

Not at all.

Quote:
I was looking at sizeof(boost::any) == 8 (64bits) and sizeof(cdiggins::any) == 16 (64bits)

How much _total_ memory would boost::any consume if you assign it an int or "Hello world"?

Value will still use 16 bytes _total_ in both cases.

BTW, to investigate such issues further, there is benchamarks/sizeof which I use to track this. Also funny is benchamrks/idmapBench, which benchmarks (among others) ValueMap against STL (that is, high-level U++ thing against low-level STL thing).

Mirek

Subject: Re: Value size ?
Posted by mingodad on Mon, 14 Apr 2014 08:00:44 GMT
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Thanks again for the explanation !

Yes you are right I was measuring then in debug mode and otherwise it's sizeof(Value) == 16 (64bits).

And yes the "refcount" is in an internal class declaration only, the String "data" member is the real storage.

Thanks again for your time, attention and great work !
