
Subject: Search for constant and show it....
Posted by [Wolfgang](#) on Wed, 09 May 2012 09:00:53 GMT
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Hi,

I've got an untypical task, I have a namespace with a amount of constants (const uint16 ...) and for debugging reasons I want to search for the name of the constant by their value:

For better understanding:
namespace CanMethod
{
const uint16 PING_REQUEST = 1001;
const uint16 PING_REPLAY = 1002;
const uint16 DEVICE_STATE_REQUEST = 1003;
const uint16 DEVICE_STATE_REPLAY = 1004;
}

(the real list is larger than the examle...)

I get the value "1003" and now I want to get the String "DEVICE_STATE_REQUEST" - is this possible without to create a complete new list with all constants?

Subject: Re: Search for constant and show it....
Posted by [Wolfgang](#) on Thu, 10 May 2012 10:24:38 GMT
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none knows or isn't it possible?

Subject: Re: Search for constant and show it....
Posted by [cbpporter](#) on Thu, 10 May 2012 12:05:07 GMT
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I think it can't be done without enums.

Subject: Re: Search for constant and show it....
Posted by [dolik.rce](#) on Thu, 10 May 2012 12:36:24 GMT
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If you are allowed to modify the code defining the constants, you can use some preprocessor trick, e.g.:#ifndef flagDEBUG
#define CONSTVAL(NAME,VALUE) const uint16 NAME = VALUE
#else
VectorMap<int,String> const_values;
#define CONSTVAL(NAME,VALUE) const_values.Add(VALUE,#NAME); const uint16 NAME =

```
VALUE
#endif
```

```
namespace CanMethod
{
CONSTVAL(PING_REQUEST, 1001);
CONSTVAL(PING_REPLAY, 1002);
CONSTVAL(DEVICE_STATE_REQUEST, 1003);
CONSTVAL(DEVICE_STATE_REPLAY, 1004);
}
```

It defines the constants using a macro, just if it is in debug mode, it adds each value to a "dictionary", which you can later simply query like `const_values[1003]` to get string description "DEVICE_STATE_REQUEST", which is what you want if I understand correctly

There also might or might not be a way to do this using debug informations present in the executable. You could probably hack some solution using gdb or some of its code... But it is certainly too much work to even think of it

Best regards,
Honza

Subject: Re: Search for constant and show it....
Posted by [BioBytes](#) on Thu, 10 May 2012 19:51:50 GMT
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Hi all,

Honza's solution is smart as usual . From my side I would prefer enumeration like Wolfgang for "more C++ flavour".

Regards

Biobytes
