## How large is a DWORD with 32- and 64-bit code?

Asked 16 years, 2 months ago Modified 2 years, 3 months ago Viewed 162k times



In Visual C++ a DWORD is just an unsigned long that is machine, platform, and SDK dependent. However, since DWORD is a double word (that is 2 \* 16), is a DWORD still 32-bit on 64-bit architectures?

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1



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asked Sep 2, 2008 at 12:50

Haim Bender

8.157 • 10 • 54 • 56

A a DWORD is not machine, platform, nor SDK dependent. – Mooing Duck Jul 16, 2013 at 17:40

## 4 Answers

Sorted by: Highest score (default)



Actually, on 32-bit computers a word is 32-bit, but the DWORD type is a leftover from the good old days of 16-bit.

**72** 

In order to make it easier to port programs to the newer system, Microsoft has decided all the old types will not change size.



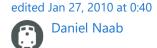
You can find the official list here: <a href="http://msdn.microsoft.com/en-us/library/aa383751(VS.85).aspx">http://msdn.microsoft.com/en-us/library/aa383751(VS.85).aspx</a>



All the platform-dependent types that changed with the transition from 32-bit to 64-bit end with \_PTR (DWORD\_PTR will be 32-bit on 32-bit Windows and 64-bit on 64-bit Windows).



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The actual ranges are listed here. - Laurie Stearn Apr 2, 2016 at 12:19

@LaurieStearn I think this article is about the data types that the Microsoft compilers use internally, not the winapi data types like DWORD . – jrh Dec 26, 2017 at 21:02

2 Yeah, the article in the answer's linked official list now has the ranges: Quote: **DWORD: A 32-bit unsigned integer. The range is 0 through 4294967295 decimal.** – Laurie Stearn Dec 27, 2017 at 3:02

DWORD is on the windows libraries equal to an "unsigned long" – jaques-sam Dec 5, 2018 at 12:23



It is defined as:

18 typedef unsigned long

DWORD;



However, according to the MSDN:



On 32-bit platforms, long is synonymous with int.



Therefore, DWORD is 32bit on a 32bit operating system. There is a separate define for a 64bit DWORD:

```
typdef unsigned _int64 DWORD64;
```

Hope that helps.

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answered Sep 2, 2008 at 12:55





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answered Sep 2, 2008 at 12:55



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it has nothing to do with Windows, it's Intel term - Abyx Jul 16, 2013 at 17:48

- @Abyx: the typedef DWORD is very Windows. rubenvb Jul 16, 2013 at 19:53
- @rubenvb, oh and why it's called DWORD and not something else like QBYTE or DUBWD ? Abyx Jul 16, 2013 at 20:47



Windows API defines DWORD sizes as follows:

• **x86:** sizeof(DWORD) = **4** 

• **x64:** sizeof(DWORD) = **4** 



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answered Aug 15, 2022 at 20:21



**2,264** • 1 • 23 • 19



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