

Problem

What is the C++ size in the mapping for CORBA types?

Solution

A: The C++ size depends on the architecture and is not fixed in the specifications.

For example the CORBA type `ULongLong` does not fit into a C++ `unsigned long` on 32 bit systems.

Here it is mapped to `unsigned long long` which is 8 bytes in size as `CORBA::ULongLong` is. On 64-bit systems, it is mapped to `unsigned long` because `long` is a 64-bit type there and not `int`, which is a 32-bit type there.

The [attached size_of.cpp](#) small program prints the size of every relevant C++ and CORBA type size.

Compile it using this command line:

```
g++ -I$ACE_ROOT -I$ACE_ROOT/TAO -o size_of size_of.cpp
```

and attach the output here below if it is for an architecture not already listed.

Linux RH-E 4 on INTEL PC 32 bits

```
sizeof(bool)=1
sizeof(char)=1
sizeof(short)=2
sizeof(int)=4
sizeof(long)=4
sizeof(long long)=8
sizeof(unsigned char)=1
sizeof(unsigned short)=2
sizeof(unsigned int)=4
sizeof(unsigned long)=4
sizeof(unsigned long long)=8
sizeof(float)=4
sizeof(double)=8
sizeof(long double)=12
sizeof(CORBA::Boolean)=1
sizeof(CORBA::Octet)=1
sizeof(CORBA::Char)=1
sizeof(CORBA::WChar)=4
sizeof(CORBA::Short)=2
sizeof(CORBA::UShort)=2
sizeof(CORBA::Long)=4
sizeof(CORBA::ULong)=4
sizeof(CORBA::LongLong)=8
sizeof(CORBA::ULongLong)=8
sizeof(CORBA::Float)=4
sizeof(CORBA::Double)=8
sizeof(CORBA::LongDouble)=16
```

Scientific Linux SL release 4.1 (Beryllium) on octuple AMD Opteron(tm) Processor 875 (8 dual core CPUs)

Added for AIRUB, by courtesy of [RolandLemke](#). -- [ThomasJuerges](#) - 10 Apr 2006

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sizeof(bool)=1
sizeof(char)=1
sizeof(short)=2
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sizeof(long)=8
sizeof(long long)=8
sizeof(unsigned char)=1
sizeof(unsigned short)=2
sizeof(unsigned int)=4
sizeof(unsigned long)=8
sizeof(unsigned long long)=8
sizeof(float)=4
sizeof(double)=8
sizeof(long double)=16
sizeof(CORBA::Boolean)=1
sizeof(CORBA::Octet)=1
sizeof(CORBA::Char)=1
sizeof(CORBA::WChar)=4
sizeof(CORBA::Short)=2
sizeof(CORBA::UShort)=2
sizeof(CORBA::Long)=4
sizeof(CORBA::ULong)=4
sizeof(CORBA::LongLong)=8
sizeof(CORBA::ULongLong)=8
sizeof(CORBA::Float)=4
sizeof(CORBA::Double)=8
sizeof(CORBA::LongDouble)=16
```

-- [GianlucaChiozzi](#) - 31 Mar 2006

- [size_of.cpp](#): Little utility to print the size of CORBA types in CPP mapping

Related articles

- [How can more people do development with ACS on the same machine without disturbing each other?](#)
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