

Re: To cast or not to cast?

Source:

<http://www.tech-archive.net/Archive/DotNet/microsoft.public.dotnet.framework.compactframework/2005-04/msg007>

- *From:* "Ilya Tumanov [MS]" <ilyatum@xxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Sun, 10 Apr 2005 16:59:49 -0700
-

It won't, but managed array (retrieved from SQL CE) should be already allocated.

Best regards,

Ilya

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```
"<ctacke/>" <ctacke_AT_OpenNETCF_com> wrote in message
news:O13JLjhPFHA.2252@xxxxxxxxxxxxxxxxxxxxxxxx
> Though fixed won't allocate any memory for you, so you're still where you
> were before.
>
>
> -Chris
>
>
> ""Ilya Tumanov [MS]"" <ilyatum@xxxxxxxxxxxxxxxxxxxxxxxx> wrote in message
> news:MFm$3ThPFHA.1564@xxxxxxxxxxxxxxxxxxxxxxxx
>> You don't need to do anything to pin memory with fixed(), fixed() will do
>> it for you:
>>
>> fixed(void *ArrayPointer = MyManagedArray) {
>> // MyManagedArray is pinned within fixed block and ArrayPointer points to
>> it.
>> // Assign it to IntPtr (might need some casting) and call native function
>> within this block.
>> }
>>
>> // MyManagedArray in longer pinned...
>>
```

Re: To cast or not to cast?

>> Best regards,
>>
>> Ilya
>>
>> This posting is provided "AS IS" with no warranties, and confers no
>> rights.
>> -----
>>> From: "Jeremy" <jezonline@xxxxxxxxxxxx>
>>> References: <umEpDi8OFHA.3880@xxxxxxxxxxxxxxxxxxxxxx>
>> <64\$0lp9OFHA.1564@xxxxxxxxxxxxxxxxxxxxxx>
>> <#t8wc#BPFHA.1268@xxxxxxxxxxxxxxxxxxxxxx>
>> <tz30okGPFHA.920@xxxxxxxxxxxxxxxxxxxxxx>
>> <eTuV9uUPFHA.2568@xxxxxxxxxxxxxxxxxxxxxx>
>> <SN73xxVPFHA.920@xxxxxxxxxxxxxxxxxxxxxx>
>> <#Hr63aWPFHA.3336@xxxxxxxxxxxxxxxxxxxxxx>
>> <VMZf79WPFHA.920@xxxxxxxxxxxxxxxxxxxxxx>
>>> Subject: Re: To cast or not to cast?
>>> Date: Sun, 10 Apr 2005 20:37:43 +0100
>>> Lines: 335
>>> X-Priority: 3
>>> X-MSMail-Priority: Normal
>>> X-Newsreader: Microsoft Outlook Express 6.00.2800.1478
>>> X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2800.1478
>>> Message-ID: <Oo3kPTgPFHA.580@xxxxxxxxxxxxxxxxxxxxxx>
>>> Newsgroups: microsoft.public.dotnet.framework.compactframework
>>> NNTP-Posting-Host: host-84-9-101-26.bulldogdsl.com 84.9.101.26
>>> Path: TK2MSFTNGXA01.phx.gbl!TK2MSFTNGP08.phx.gbl!TK2MSFTNGP15.phx.gbl
>>> Xref: TK2MSFTNGXA01.phx.gbl
>> microsoft.public.dotnet.framework.compactframework:26681
>>> X-Tomcat-NG: microsoft.public.dotnet.framework.compactframework
>>>
>>> I did a little bit of research because I'm a newbie regarding
>>> pointers/memory allocation. I found an interesting post by Brian Smith:
>>>
>> http://groups-beta.google.com/group/microsoft.public.dotnet.framework.compactframework/browse_frm/thread/d628847ac90ac8a3/b92cb386364174f7?q=unmanaged+allocate+memory&rnum=10#b92cb386364174f7
>>>
>>> I suppose I could use LocalAlloc to allocate memory. The post seems to be
>>> similar to my problem but I still don't understand how to pin managed
>> memory
>>> (by using Fixed()?), and have a pointer point to the byte array (which
>>> is
>>> probably what I would want to do) ?
>>>
>>> your help is really appreciated!
>>>
>>> ""Ilya Tumanov [MS]"" <ilyatum@xxxxxxxxxxxxxxxxxxxxxx> wrote in message
>>> <news:VMZf79WPFHA.920@xxxxxxxxxxxxxxxxxxxxxx>
>>> > Creating a new pointer is not enough. You need to allocate memory and
>>> > assign value pointing to it to the pointer.

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>>>> > You might allocate native memory via P/Invoke (which you would have to
>>>> free
>>>> > at some point).
>>>> > Or, you can obtain a pointer to a managed array you already have.
>>>> > Before you pass this pointer to a native code, you have to pin managed
>>>> > memory so GC won't move the array.
>>>> > You can use GCHandle class for it or you can use unsafe code.
>>>> > I would recommend using Fixed() with unsafe pointer. That would pin
>>>> > and
>>>> > unpin the array automatically.
>>>> > GCHandle has a bug (returns incorrect pointer – there's a workaround)
>> and
>>>> > it's not automatic.
>>>> >
>>>> > Best regards,
>>>> >
>>>> > Ilya
>>>> >
>>>> > This posting is provided "AS IS" with no warranties, and confers no
>>>> > rights.
>>>> >
>>>> > -----
>>>>> > From: "Jeremy" <jezonline@xxxxxxxxxxxx>
>>>>> > References: <umEpDi8OFHA.3880@xxxxxxxxxxxxxxxxxxxxxxxx>
>>>>> > <64\$0lp9OFHA.1564@xxxxxxxxxxxxxxxxxxxxxxxx>
>>>>> > <#t8wc#BPFHA.1268@xxxxxxxxxxxxxxxxxxxxxxxx>
>>>>> > <tz30okGPFHA.920@xxxxxxxxxxxxxxxxxxxxxxxx>
>>>>> > <eTuV9uUPFHA.2568@xxxxxxxxxxxxxxxxxxxxxxxx>
>>>>> > <SN73xxVPFHA.920@xxxxxxxxxxxxxxxxxxxxxxxx>
>>>>> > Subject: Re: To cast or not to cast?
>>>>> > Date: Sun, 10 Apr 2005 01:46:03 +0100
>>>>> > Lines: 240
>>>>> > X-Priority: 3
>>>>> > X-MSMail-Priority: Normal
>>>>> > X-Newsreader: Microsoft Outlook Express 6.00.2800.1478
>>>>> > X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2800.1478
>>>>> > Message-ID: <#Hr63aWPFHA.3336@xxxxxxxxxxxxxxxxxxxxxxxx>
>>>>> > Newsgroups: microsoft.public.dotnet.framework.compactframework
>>>>> > NNTP-Posting-Host: host-84-9-101-26.bulldogdsl.com 84.9.101.26
>>>>> > Path:
>>>>> > TK2MSFTNGXA01.phx.gbl!TK2MSFTNGP08.phx.gbl!TK2MSFTNGP10.phx.gbl
>>>>> > Xref: TK2MSFTNGXA01.phx.gbl
>>>>> > microsoft.public.dotnet.framework.compactframework:26658
>>>>> > X-Tomcat-NG: microsoft.public.dotnet.framework.compactframework
>>>>> >
>>>>> > Okay, so I used the 1040 length, it doesn't seem to complain, which
>>>>> > is
>>>>> > good
>>>>> > news I guess. To make sure it stores the data correctly I'm trying
>>>>> > to
>>>>> > retrieve it and feed it back to the biometric template matching

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```
>> method.
>>> >>
>>> >> Because it takes IntPtr's for BiometricData and Signature, I tried
>>> >> creating
>>> >> new pointers and marshal copy the content that I retrieved earlier
>> into
>>> >> these pointers. I failed. I tried the following:
>>> >>
>>> >> System.IntPtr BiometricDataPtr;//create new pointer
>>> >> BiometricData = (byte[])bioData[8];//BiometricData is an array of
>>> >> type
>>> >> byte
>>> >> Marshal.Copy(BiometricData, 0, BiometricDataPtr, 1040);//copy
>>> >> content
>> of
>>> >> BiometricData in an IntPtr
>>> >>
>>> >> "Use of unassigned local variable 'BiometricDataPtr'."
>>> >> Obviously it's unused, it's meant to point to something... what am
>>> >> I
>>> >> missing here?
>>> >>
>>> >> ""Ilya Tumanov [MS]"" <ilyatum@xxxxxxxxxxxxxxxxxxxxxx> wrote in
>>> >> message
>>> >> news:SN73xxVPFHA.920@xxxxxxxxxxxxxxxxxxxxxxxxxxxx
>>> >> > You should not guess the length, you should know it. It might be
>> fixed
>>> >> or
>>> >> > native code could return it somehow.
>>> >> > Most likely you're correct and FirstBIRSample.Length contains this
>>> size.
>>> >> > You should check out the documentation for the function you're
>> calling
>>> >> to
>>> >> > make sure it's correct.
>>> >> >
>>> >> > If value of a pointer is 0, it's null pointer. It means this
>>> >> > pointer
>>> is
>>> >> not
>>> >> > valid and points to nothing.
>>> >> > Since no data is available, you could store it as DBNull.
>>> >> >
>>> >> > Best regards,
>>> >> >
>>> >> > Ilya
>>> >> >
>>> >> > This posting is provided "AS IS" with no warranties, and confers
>>> >> > no
>>> >> > rights.
>>> >> >
```

Re: To cast or not to cast?

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```
>>> >> > -----
>>> >> > From: "Jeremy" <jezonline@xxxxxxxxxxxx>
>>> >> > References: <umEpDi8OFHA.3880@xxxxxxxxxxxxxxxxxxxxxxxx>
>>> >> > <64$0lp9OFHA.1564@xxxxxxxxxxxxxxxxxxxxxxxx>
>>> >> > <#t8wc#BPFHA.1268@xxxxxxxxxxxxxxxxxxxxxxxx>
>>> >> > <tz30okGPFHA.920@xxxxxxxxxxxxxxxxxxxxxxxx>
>>> >> > Subject: Re: To cast or not to cast?
>>> >> > Date: Sat, 9 Apr 2005 22:32:29 +0100
>>> >> > Lines: 159
>>> >> > X-Priority: 3
>>> >> > X-MSMail-Priority: Normal
>>> >> > X-Newsreader: Microsoft Outlook Express 6.00.2800.1478
>>> >> > X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2800.1478
>>> >> > Message-ID: <eTuV9uUPFHA.2568@xxxxxxxxxxxxxxxxxxxxxxxx>
>>> >> > Newsgroups: microsoft.public.dotnet.framework.compactframework
>>> >> > NNTP-Posting-Host: host-84-9-101-26.bulldogdsl.com 84.9.101.26
>>> >> > Path:
>>> TK2MSFTNGXA01.phx.gbl!TK2MSFTNGP08.phx.gbl!TK2MSFTNGP14.phx.gbl
>>> >> > Xref: TK2MSFTNGXA01.phx.gbl
>>> >> > microsoft.public.dotnet.framework.compactframework:26653
>>> >> > X-Tomcat-NG: microsoft.public.dotnet.framework.compactframework
>>> >> >
>>> >> > Thanks a lot for that! Before going to the UInt16 problem, I
>> better
>>> > try
>>> >> to
>>> >> > solve that IntPtr problem.
>>> >> >
>>> >> > Managed to use Marshal.Copy. Not sure how I should 'guess' the
>>> length
>>> > of
>>> >> the
>>> >> > Byte array to copy to. When I type FirstBIRSample.BiometricData
>>> (which
>>> >> is
>>> >> > the IntPtr) in the command window, it returns to me: 2372256 -
>>> >> > is
>>> this
>>> >> the
>>> >> > size?
>>> >> > I 'assumed' the size would be 1040 (which is stored in
>>> >> > FirstBIRSample.Length).
>>> >> >
>>> >> > Second Part: Seems like the FirstBIRSample.Signature (also a
>>> pointer)
>>> >> is
>>> >> > 0,
>>> >> > how should I store this?
>>> >> >
>>> >> > Thanks so much!
>>> >> >
```

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>>>>>> ""Ilya Tumanov [MS]"" <ilyatum@xxxxxxxxxxxxxxxxxxxx> wrote in
>>> message
>>>>>> news:tz30okGPFHA.920@xxxxxxxxxxxxxxxxxxxxxxxxxxxx
>>>>>> While storing UInt16 as Int is OK, it will take more space.
>>>>>> The
>>>>>> problem
>>>>>> you're having is caused by range check. You might consider
>>>>>> using
>>>>>> unchecked() to disable it.
>>>>>>>
>>>>>>> System.Runtime.InteropServices.Marshal class allows you to
>>>>>>> copy
>>> data
>>>>> from
>>>>>>> the pointer to the array. Look into Copy() methods of that
>> class.
>>>>>>>
>>>>>>> Best regards,
>>>>>>>
>>>>>>> Ilya
>>>>>>>
>>>>>>> This posting is provided "AS IS" with no warranties, and
>>>>>>> confers
>>> no
>>>>>>> rights.
>>>>>>> -----
>>>>>>>> From: "Jeremy" <jezonline@xxxxxxxxxxxx>
>>>>>>>> References: <umEpDi8OFHA.3880@xxxxxxxxxxxxxxxxxxxxxxxx>
>>>>>>>> <64\$0lp9OFHA.1564@xxxxxxxxxxxxxxxxxxxxxxxx>
>>>>>>>> Subject: Re: To cast or not to cast?
>>>>>>>> Date: Fri, 8 Apr 2005 10:44:39 +0100
>>>>>>>> Lines: 91
>>>>>>>> X-Priority: 3
>>>>>>>> X-MSMail-Priority: Normal
>>>>>>>> X-Newsreader: Microsoft Outlook Express 6.00.2800.1478
>>>>>>>> X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2800.1478
>>>>>>>> Message-ID: <#t8wc#BPFHA.1268@xxxxxxxxxxxxxxxxxxxxxxxx>
>>>>>>>> Newsgroups:
>>>>>>>> microsoft.public.dotnet.framework.compactframework
>>>>>>>> NNTP-Posting-Host: host-84-9-101-26.bulldogdsl.com
>>>>>>>> 84.9.101.26
>>>>>>>> Path:
>>>>> TK2MSFTNGXA01.phx.gbl!TK2MSFTNGP08.phx.gbl!TK2MSFTNGP14.phx.gbl
>>>>>>>> Xref: TK2MSFTNGXA01.phx.gbl
>>>>>>>> microsoft.public.dotnet.framework.compactframework:26572
>>>>>>>> X-Tomcat-NG:
>> microsoft.public.dotnet.framework.compactframework
>>>>>>>>
>>>>>>>> Thanks so much for the replies Alex and Ilya!
>>>>>>>>
>>>>>>>> I changed the types in sql. It wasn't happy with UInt16

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>>>>>>> base.
>>>>>>>> Pointer itself is not important, most likely you need to
>> store
>>>>>>> whatever
>>>>>>>> it's pointing to.
>>>>>>>>>
>>>>>>>>> Best regards,
>>>>>>>>>
>>>>>>>>> Ilya
>>>>>>>>>
>>>>>>>>> This posting is provided "AS IS" with no warranties, and
>>> confers
>>>>> no
>>>>>>>> rights.
>>>>>>>>>
>>>>>>>>> -----
>>>>>>>>> From: "Jeremy" <jezonline@xxxxxxxxxxxx>
>>>>>>>>> Subject: To cast or not to cast?
>>>>>>>>> Date: Fri, 8 Apr 2005 00:21:17 +0100
>>>>>>>>> Lines: 25
>>>>>>>>> X-Priority: 3
>>>>>>>>> X-MSMail-Priority: Normal
>>>>>>>>> X-Newsreader: Microsoft Outlook Express 6.00.2800.1478
>>>>>>>>> X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2800.1478
>>>>>>>>> Message-ID: <umEpDi8OFHA.3880@xxxxxxxxxxxxxxxxxxxxxxxx>
>>>>>>>>> Newsgroups:
>>> microsoft.public.dotnet.framework.compactframework
>>>>>>>>> NNTP-Posting-Host: host-84-9-101-26.bulldogdsl.com
>>> 84.9.101.26
>>>>>>>>> Path:
>>>>>>> TK2MSFTNGXA01.phx.gbl!TK2MSFTNGP08.phx.gbl!tk2msftngp13.phx.gbl
>>>>>>>>> Xref: TK2MSFTNGXA01.phx.gbl
>>>>>>>>> microsoft.public.dotnet.framework.compactframework:26546
>>>>>>>>> X-Tomcat-NG:
>>>> microsoft.public.dotnet.framework.compactframework
>>>>>>>>>
>>>>>>>>> Hi,
>>>>>>>>>
>>>>>>>>> I'm trying to convert the following types into types
>>>>>>>>> that
>> I
>>>> can
>>>>>> insert
>>>>>>>> in
>>>>>>>>> an
>>>>>>>>> SQL database (via a webservice). None of these however
>>>>>>>>> are
>>>>>>>>> accepted
>>>>>>>>> by
>>>>>>>>> Sql
>>>>>>>>> (i.e., there is no OleDbType for them). I could only use

>>>
>>>
>>>
>>
>
>

• **Follow-Ups:**

- ◆ **Re: To cast or not to cast?**
◇ From: Alex Feinman [MVP]

• **References:**

- ◆ **To cast or not to cast?**
◇ From: Jeremy
- ◆ **RE: To cast or not to cast?**
◇ From: "Ilya Tumanov [MS]"
- ◆ **Re: To cast or not to cast?**
◇ From: Jeremy
- ◆ **Re: To cast or not to cast?**
◇ From: "Ilya Tumanov [MS]"
- ◆ **Re: To cast or not to cast?**
◇ From: Jeremy
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◇ From: "Ilya Tumanov [MS]"
- ◆ **Re: To cast or not to cast?**
◇ From: Jeremy
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◇ From: "Ilya Tumanov [MS]"
- ◆ **Re: To cast or not to cast?**
◇ From: Jeremy
- ◆ **Re: To cast or not to cast?**
◇ From: "Ilya Tumanov [MS]"
- ◆ **Re: To cast or not to cast?**
◇ From: <ctacke/>

- Prev by Date: **why there isn't freelibrary api in NETCF library?**
- Next by Date: **Re: Bitmap GetPixel() returning the incorrect value**
- Previous by thread: **Re: To cast or not to cast?**
- Next by thread: **Re: To cast or not to cast?**
- Index(es):
 - ◆ **Date**
 - ◆ **Thread**