How do I GetCustomAttributes?

Asked 10 years, 2 months ago   Active 6 years, 4 months ago   Viewed 33k times

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I have tried the following code using the 2.0 framework and I get an attribute back, but when I try this on the compact framework, it always returns an empty array. The MSDN documenation says its supported, am I doing something wrong?

```csharp
Test x = new Test();
FieldInfo field_info = x.GetType().GetField("ArrayShorts");
object[] custom_attributes =
 field_info.GetCustomAttributes(typeof(MarshalAsAttribute), false);

[StructLayout(LayoutKind.Sequential)]
public struct Test
{
    [MarshalAs(UnmanagedType.ByValArray, SizeConst = 4)]
    public ushort[] ArrayShorts;
}
```

| c# | compact-framework | attributes | marshalling | getcustomattributes |

asked Aug 12 '09 at 21:41

SwDevMan81
40.4k 19 130 169

1 Answer

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EDIT 2

So I'm checking with the CF team now but I believe you've found a bug. This shows it even better:

```csharp
public class MyAttribute : Attribute
{
```

```csharp
    public MyAttribute(UnmanagedType foo)
    {
    }

    public int Bar { get; set; }
}

[StructLayout(LayoutKind.Sequential)]
public struct Test
{
    [CLSCompliant(false)]
    [MyAttribute(UnmanagedType.ByValArray, Bar = 4)]
    [MarshalAs(UnmanagedType.ByValArray, SizeConst = 4)]
    public ushort[] ArrayShorts;
}

class Program
{
    static void Main(string[] args)
    {

        FieldInfo field_info = typeof(Test).GetField("ArrayShorts");
        object[] custom_attributes =
field_info.GetCustomAttributes(typeof(MarshalAsAttribute), false);
        Debug.WriteLine("Attributes: " + custom_attributes.Length.ToString());
        custom_attributes = field_info.GetCustomAttributes(typeof(MyAttribute), false);
        Debug.WriteLine("Attributes: " + custom_attributes.Length.ToString());
        custom_attributes =
field_info.GetCustomAttributes(typeof(CLSCompliantAttribute), false);
        Debug.WriteLine("Attributes: " + custom_attributes.Length.ToString());
    }
}
```

Under the full framework I get back this:

```
Attributes: 1
Attributes: 1
Attributes: 1
```

Under CF 3.5 I get this:

```
Attributes: 0
Attributes: 1
Attributes: 1
```

So you can see it's fully capable of returning an attribute, either custom or within the BCL, just not the **MarshalAsAttribute**.

EDIT 3 Alright, I did a little more digging, and it turns out that the CF behavior is actually *correct* if you go by the spec. It goes against all logic, but it's right.

edited Jun 11 '13 at 13:38   answered Aug 12 '09 at 21:47

ctacke
62.6k   14   88   147

I'm dealing with the FieldInfo for my above example. I can try and see if PropertyInfo would work, but I'm wondering why my example doesnt work. –
SwDevMan81   Aug 12 '09 at 21:52

boo for bugs :P Do you know if there is a work around? –   SwDevMan81   Aug 14 '09 at 11:56

I guess the work around could just be to create my own custom attribute (just reinvent the wheel I guess)? Since looks like that works ok. –
SwDevMan81   Aug 14 '09 at 13:08

See my latest update - especially the blog entry I linked to. The work around is to re-tag the members with another one of your own attributes. – ctacke
Aug 14 '09 at 15:17