

Re: Virtual COM port with UMDf

Source:

<http://www.tech-archive.net/Archive/Development/microsoft.public.development.device.drivers/2007-08/msg00173.html>

- *From:* "Doron Holan [MSFT]" <doronh@xxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Thu, 9 Aug 2007 20:57:47 -0700
-

it looks like UMDf does not allow you to set the device type for the device you are creating so i don't think that it is possible to write a serial port driver that works with all applications

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"Andre" <Andre@xxxxxxxxxxxxxxxxxxxxxxxx> wrote in message news:771BD3C9-CC6C-427F-BA69-3EF7E651EFD1@xxxxxxxxxxxxxxxxxxxx

Thanks for this hint. Actually I found why SerialPort does not like my virtual com port.

It requests the file type using GetFileType() and accepts only 0 and 2, i.e. FILE_TYPE_CHAR or FILE_TYPE_UNKNOWN.

However, if I create a file handle as follows:

```
HANDLE hFile = CreateFile(L"COM3", GENERIC_READ | GENERIC_WRITE, 0, NULL, OPEN_EXISTING, FILE_ATTRIBUTE_NORMAL, NULL );
```

The file type returned by GetFileType() is 1, i.e. FILE_TYPE_DISK. So how can I configure, that my device creates files of with type FILE_TYPE_CHAR?

BTW, I already handle the OnCreateFile event but I found nothing in the documentation about how to return a certain file type from the OnCreateFile method.

"Doron Holan [MSFT]" wrote:

the name of the device object itself shouldn't matter. there are many

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disasm tools for the .net framework which will show you the IDL or the source code. you can use one of these tools to see why the component is failing.

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"Andre" <Andre@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message news:46F1E8DA-DA36-40A6-919A-FE00C13BD1E8@xxxxxxxxxxxxxxxxxxxx

> What about my question? Is
> "\\.\.\UMDFCtrlDev-e4cbea35-44d3-11dc-9762-0003ffa3650f" actually
the
> device
> name which must be used in the serialcomm registry key. In the book
> "Developing Drivers with WDF" (P. Orwick, G. Smith) p. 145 it mentions
> that
> this is the "Name of the Down device" which cannot be used by > "clients".
> This
> suggests to me, that there could be another name which must be used in >
the
> registry at
[HKEY_LOCAL_MACHINE\HARDWARE\DEVICEMAP\SERIALCOMM].
>
> I would like to debug into the SerialPort component of .NET, but at the
> point of the error the source code is not available to me. Therefore, I
> have
> very little chance to see why it fails.

>
>
>
>
> "Doron Holan [MSFT]" wrote:

>
>> You would have to debug the application at this point.
>>
>> d
>>
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>>
>>
>> "Andre" <Andre@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message
>>
news:04EC096C-433D-4BFD-BE57-DB31C5AB77FD@xxxxxxxxxxxxxxxxxxxx

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>>> Hi,
>>>
>>> now I have included the steps you recommended. I am using the >>>
PortName
>>> assigned by the ports class installer as symbolic link, which works
>>> fine.
>>> To
>>> create the device name mapping I obtain the device name with method
>>> IWDFDevice::RetrieveDeviceName() and use the result which leads to
>>> the
>>> following additional serial comm device name mappings in the >>>
registry
>>>
>>>
[HKEY_LOCAL_MACHINE\HARDWARE\DEVICEMAP\SERIALCOMM]
>>> ...
>>>
"\\\\.\\UMDFCtrlDev-e4cbea35-44d3-11dc-9762-0003ffa3650f"="COM3"
>>>
>>> However, still the .NET application is not able to open this virtual
>>> com
>>> port. Again I got the error message described in the original post.
>>> Is there anything wrong with the device name? Must I retrieve it
>>> somewhere
>>> else?
>>>
>>> Regards,
>>> Andre
>>>
>>>
>>> "Doron Holan [MSFT]" wrote:
>>>
>>>> you need to write the port name to >>>>
HKLM\HARDWARE\DEVICEMAP\SERIALCOMM.
>>>> the
>>>> KMDF or WDM serial sample shows you how to do this.
unfortunately, >>>> a
>>>> UMDF
>>>> driver cannot write to this key so that it is not possible without
>>>> external
>>>> help (either you modify the ACL of the key which is bad or you have
>>>> some
>>>> other component with sufficient privileges to write to the key).
>>>>
>>>> furthermore, install your device under the ports class and use the
>>>> PortName
>>>> assigned to your driver instead of a hardcoded name (COM9). You >>>
>>> will
>>>> find
>>>> the PortName in the device node under a registry value of >>>>
"PortName" :

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>>> REG_SZ.
>>>
>>> d
>>>
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>>> rights.
>>>
>>>
>>> "Andre" <Andre@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message
>>>
news:3E3932F7-194A-439B-9572-D93CD4B9F75E@xxxxxxxxxxxxxxxxxxxx
>>>> Hello,
>>>>
>>>> I have created a UMDF driver, which creates a virtual serial com
>>>> port
>>>> in
>>>> three steps:
>>>>
m_FxDevice->CreateDeviceInterface(&GUID_DEVINTERFACE_COMPORT,NULL);
>>>>
m_FxDevice->CreateSymbolicLink(L"\\DosDevices\\Global\\COM9");
>>>>
m_FxDevice->AssignDeviceInterfaceState(&GUID_DEVINTERFACE_COMPORT,NULL,TRUE);
>>>>
>>>> I want to test this com port with a .NET application using the
>>>> SerialPort
>>>> component to access my driver. However, the GetPortNames()
method
>>>> does
>>>> not
>>>> find this serial port. Also, if I explicitly specify COM9 as >>>> >
port
>>>> name
>>>> then
>>>> the component fails to open the port and throws an exception,
>>>> stating
>>>> that
>>>> "the given port name does not start with COM/com or does not >>
>>> resolve
>>>> to
>>>> a
>>>> valid serial port. Parameter: portName"
>>>>
>>>> Must the driver take any additional steps to create a complete
>>>> virtual
>>>> serial port?
>>>>
>>>>

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