

Re: Why is remote system information calling ioctl for my driver?

Source:

<http://www.tech-archive.net/Archive/WindowsCE/microsoft.public.windowsce.platbuilder/2008-06/msg00388.html>

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 - *Date:* Tue, 17 Jun 2008 07:55:00 -0700
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Thanks for the excellent answer, Luca. I also found that it's keying off of the SerialPortIndex registry key to decide if the driver should be probed this way. I changed that key name to something else, and System Information is now hands off of my driver.

Marco

"Luca Calligaris" wrote:

The System Information tool calls those IOCTL's to gain information about the serial device, as it is designed to do.

IOCTL's are defined by a macro (look at windev.h):

```
#define CTL_CODE(DeviceType, Function, Method, Access) (  
((DeviceType) << 16) | ((Access) << 14) | ((Function) << 2) | (Method))
```

Your codes have DeviceType==0x1B (FILE_DEVICE_SERIAL_PORT), Access==0 (FILE_ANY_ACCESS), and Method==0 (METHOD_BUFFERED) (all this stuff is again defined in windev.h) which means that are specific for the serial driver. The 'functions' are:

```
0x001b0050 => Function == 0x50>>2 == 0x14  
0x001b0038 => Function == 0x38>>2 == 0x0E  
0x001b0040 => Function == 0x40>>2 == 0x10
```

If you look at pegdser.h you'll end up with:

```
0x001b0050 => IOCTL_SERIAL_GET_DCB  
0x001b0038 => IOCTL_SERIAL_GET_PROPERTIES  
0x001b0040 => IOCTL_SERIAL_GET_TIMEOUTS
```

From the debug output we can see that IOCTL's fail with error 87 (ERROR_INVALID_PARAMETER).

In the MDD/PDD layered architecture those IOCTL_SERIAL_GET_SOMETHING

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are basically handled in the MDD which checks the IOCTL parameters and simply returns cached data (apart for IOCTL_SERIAL_GET_PROPERTIES which actually flows down to the PDD).

From the debug output I see a 'CheckIoctlParms' function call which is not in the standard MDD layer, so I suspect that your driver is not using that layer and your implementation is not checking correctly those IOCTL's parameters. Take a look at mdd.c in the standard serial MDD2 layer to see how they are handled.

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Hi,

I'm developing a custom serial port device driver, and it seems to be working fine for the most part. I'm running into a problem wrt the remote tools -> system information feature in PB. When I run it without my driver loaded, it completes fine and I get valid system information. When I run it with my driver loaded, it looks like my driver is being opened and some ioctl calls are being attempted...

```
PID:400002 TID:210000e UARTMDB: -MDB_IOControl CheckIoctlParms
failed on
code 0x001B0050, error 87
PID:400002 TID:210000e UARTMDB: -MDB_IOControl CheckIoctlParms
failed on
code 0x001B0038, error 87
PID:400002 TID:210000e UARTMDB: -MDB_IOControl CheckIoctlParms
failed on
code 0x001B0040, error 87
```

From these errors, I can tell that the ioctl codes are:

```
0x001b0050
0x001b0038
0x001b0040
```

A few questions here:

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1. Is this normal behavior for the system information util to try to ioctl a driver?
2. Is there a way to disable this?
3. Where can I find out what IOCTLS these codes belong to?

Thanks,
Marco