

Re: create named pipe in kernel driver?

Source:

<http://www.tech-archive.net/Archive/Development/microsoft.public.win32.programmer.kernel/2005-05/msg00537.htm>

- *From:* Paul Yaroshenko <samepaul@xxxxxxxxxxxxx>
 - *Date:* Sat, 21 May 2005 13:59:45 +0300
-

Though I can give you example how to open pipes within kernel mode, but it won't help you with remoting. In kernel pipe name has different naming convention that prevents from using "remote pipes".

```
RtlInitUnicodeString(
    &pipe_name,
    L"\\??\\pipe\\YourPipeName"
);

InitializeObjectAttributes(
    &attr,
    &pipe_name,
    OBJ_CASE_INSENSITIVE | OBJ_KERNEL_HANDLE,
    NULL,
    NULL);

ret = ZwCreateFile(
    &pipe_handle,
    SYNCHRONIZE | FILE_WRITE_DATA , // or FILE_READ_DATA
    &attr,
    &iostat,
    NULL,
    FILE_ATTRIBUTE_NORMAL,
    FILE_SHARE_READ | FILE_SHARE_WRITE,
    FILE_OPEN,
    FILE_NON_DIRECTORY_FILE,
    NULL,
    0);
```

Thus whereas in user-mode form of pipe is "\\server\pipe\pipename" in kernel it is "\\??\pipe\pipename".
In addition, in kernel default security context is LocalSystem which is not allowed to access network.

varname wrote:

ok ..

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somehow I think that with a less explicit post I would've gotten the main idea of your.

second: it is my understanding that by using a pipe I can use the output of my driver (actually really a filter driver) on a remote machine aswell, without any extra code for sending it over the network. In my case, that would be a nice feature.

One of the consequences of using a ps2 mouse is (as I understand it) that windows has exclusive control over the port, i.e. I can't just CreateFile on it. So then I would have to create a second deviceobject to interact with and use IOCTLs?

"Don Burn" <burn@xxxxxxxxxxxxxxxxxx> wrote in message
[news:pcrje.231\\$NL1.31@xxxxxxxxxxxxx](mailto:news:pcrje.231$NL1.31@xxxxxxxxxxxxx)

Why in the world do you want to create a named pipe? This is totally outside of the normal approaches to communicate from a driver to user

space.

Yes people do it, with a lot of undocumented calls that can change tommorrow. People also drive down one way streets the wrong way, ignoring convention in either case is at least stupid, if not worse.

There are a heck of a lot of normal ways to get this data out, don't do things in an unconventional and stupid way.

--

Don Burn (MVP, Windows DDK)
Windows 2k/XP/2k3 Filesystem and Driver Consulting
Remove StopSpam from the email to reply

Re: create named pipe in kernel driver?

"varname" <v@xxx> wrote in message [news:d61eri\\$rlf\\$1@xxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:d61erirlf1@xxxxxxxxxxxxxxxxxxxxxxxx)

hello all,

In relation to a previous question I asked about two weeks ago (cos /

sin

in kernel driver)', I'm now at a point where I want to create a named pipe

to

'stream' the data coming from my hardware device (modified ps/2 mouse).

Creating named pipes from userland applications is straightforward

enough,

but in kernel drivers I'm getting a bit confused. Reading several

websites

I've seen people saying to use 'IoCreateFile' directly (as that is what NtCreateNamedPipeFile uses), using ZwCreateNamedPipeFile (which isn't exported it seems) and a sort of wrapper (<http://www.ntkernel.com/w&p.php?id=17> last part of page).

Could someone please shed some light on this? What is the (accepted) way to create a named pipe from a kernel driver (in DriverEntry for instance)?

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again, thanks for any assistance you can give.