

## Re: Using COM OutProc server on WinCE

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*Source:*

<http://www.tech-archive.net/Archive/WindowsCE/microsoft.public.windowsce.app.development/2006-10/msg00122>

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- *From:* "John Spaith [MS]" <[jspaith@xxxxxxxxxxxxxxxxxxxxxxxx](mailto:jspaith@xxxxxxxxxxxxxxxxxxxxxxxx)>
  - *Date:* Wed, 18 Oct 2006 10:06:43 -0700
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1) In CE 5/WM5, it is very easy to move code back and forth between device.exe & services.exe if you're not using any special device.exe stuff (like say talking right to hardware) or services.exe stuff. You can absolutely popup UI from device.exe, so putting your myservice.dll as a device driver would work and there would be no IPC needed. You're also correct about the UI code needing to be part of your driver. So in the short/med-term you'll be fine. Long term be aware that in CE 6.0 we've rewritten the kernel, device.exe is going away and everything will run in nk.exe (kernel process) and you can't popup UI from nk.exe in CE 6.0. However, when you get CE 6.0 and it's the basis of a WM device (I can't say when that'll be, but won't be for a bit) there are mechanisms to have kernel components like your myservice do IPC to a UI Based "service" running in user mode to get around the no UI in kernel limitation.

You have to have your DLL signed to run in either device or services, they key off the same signing logic as far as determining trust/untrust.

2) I'm embarrassed to say I'm pretty far removed from ISV development of services on WM, I don't know about how you get this signed for real. However I believe there is an SDK Test certificate and you can install this somehow on your development WM device as something you trust, and then sign your app with this during your development so that you don't get bogged down. I don't know anymore details on this I'm afraid.

If your service has to send notifications it's possible to do this with your app waiting on an event or other mechanisms, but at some point (it's not an exact science) your service becomes less like a service and more like some peer-to-peer type scenario.

3) i'd really like to steer you away from writing an exe, especially if it's long-running as it sounds yours is. CE 5.0x based kernels only support 32 processes, and on a lot of WM devices you're at like 20+ processes when the device boots, which is why we try to push so much stuff into services.exe even if we just need services.exe to act as the "WinMain" equivalent in starting up the service so it can startup worker threads & do its thing.

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John Spaith

Re: Using COM OutProc server on WinCE

Development Lead, Windows CE  
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"aguliani" <aguliani@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message  
[news:460CA1CC-F3E9-4C2F-BFF9-EF7C335FC60F@xxxxxxxxxxxxxxxxxxxx](mailto:news:460CA1CC-F3E9-4C2F-BFF9-EF7C335FC60F@xxxxxxxxxxxxxxxxxxxx)

Thanks for the useful reply. My original XP application that I want to port on CE and WM5 is a wireless application (like MS Windows Zero Config) and I am having myUI.exe that loads myAPI.dll and a myserver.exe that runs authentication/association engine etc so I am not sure if I merge them then I

would be able extend it in future.

Anyways I went to all the links mentioned by you and have few questions

1) On CE it seems that device.exe hosts both the wzcsvc.dll and wzcsapi.dll

so I want to know if I can also host my myserver.dll and myapi.dll also on device.exe. If yes then I guess there won't be any interprocess communication

issues. Is it correct? Also I am assuming that my UI code has to be part of

myapi.dll else I will see the same interprocess communication. Do my dll has

to be signed if it has to be hosted by device.exe?

2) If instead of device.exe I use services.exe mentioned by you then it is mentioned that my "service DLL has to be signed to be trusted and loaded by

services.exe" so does it mean that every time I change the version of my dll

have to get signature files from Microsoft? Also services.exe works on client-server model but my server(myserver.dll) has to issue notifications

to the client so I guess in that scenario services.exe won't be helpful.

Is

this correct?

3) So I might end up writing an myui.exe that will host my single dll (myserver.dll+ myapi.dll) and I want to know if it is preferred option in CE

and WM5.

Thanks  
aguliani

"John Spaith [MS]" wrote:

Re: Using COM OutProc server on WinCE

Windows CE 5.0 (general embedded) actually does have an out-of-proc COM Server (you'd need SYSGEN\_DCOM, see <http://blogs.msdn.com/cenet/archive/2005/04/27/412600.aspx> about adding components to a CE device). You're right though on WM5 you wouldn't have out of proc COM, so best not to mess with it.

I have a blog about different IPC mechanisms on CE – <http://blogs.msdn.com/cenet/archive/2005/07/13/438424.aspx>. In this case, if you have a clear differentiation between a client & server piece to this (eg part A always calls part B), then you could potentially move the server part into services.exe where you can create a special fcn to receive calls like this, this is in fact how we on CE port RPC servers -> CE. White paper on services at <http://blogs.msdn.com/cenet/archive/2004/12/15/316007.aspx>. (My long-term goal is to be able to answer any newsgroup questions via blog links :)).

For your case, have you considered a bigger rearchitecture and putting both the executables into one giant executable so you can just use in-proc COM? This would be easiest, though don't know if architecture lends itself to that or no.

—  
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Development Lead, Windows CE  
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"aguliani" <aguliani@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message [news:D67B002C-0452-4B25-A002-EB9044A99924@xxxxxxxxxxxxxxxxxxxx](mailto:news:D67B002C-0452-4B25-A002-EB9044A99924@xxxxxxxxxxxxxxxxxxxx)

I have an application that uses COM OutProc server and I have to port it to WinCE 5.0 and WinMobile 5.0 and I found out that COM

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outproc server is  
not  
supported on WinCE 5.0.  
One option for me is to remove COM and implement my  
own RPC server  
and  
client but this might take so is there any way to make  
existing code  
work  
on  
winCE. I am also using Monikers in my code.

aguliani