TYX Corporation

Productivity Enhancement Systems



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How to remotely control the WRTS

Versions used:

Paws Studio: 1.26.7

Operating System: Windows 2000 SP4

Requirements:

- Paws developer Studio version 1.10.0 or above.
- Operating system supporting DCOM (NT4.0 with Sp3 or later, Win2000 or XP)
- The same version of PAWS Studio needs to be installed on both the server computer and the client computer. Only the server computer needs a valid license.

Introduction:

This document will help configuring the environment in order to use the WRTS from a remote location using the operating system settings.

There are two parts to the settings. You need to configure:

- 1. The server computer where Paws Studio is installed.
- 2. The client machine where your remote client is installed.

1 Dcom capability of PAWS RTS (Run Time System):

The WRTS (Windows Run Time System) remote usage is made possible via the **DCOM** (Distributed COM) protocol.

This enables a user to test a program remotely using a client /server and advanced security features of Microsoft DCOM.

Notes:

- 1. The WRTS is the only component that has a server that can be run remotely by a client.
- 2. As a default **Distributed COM** is <u>not</u> configured on windows systems, so making use of WRTS by a remote client is not possible.

1.1 The server system:

The server system is the computer that has Paws Studio installed on it. This installation includes the WRTS with the WRTS server. The WRTS server is registered upon installation.

You have to:

- 1. **Configure the Operating System** to allow remote usage of the WRTS server. We will go over those settings later in this documentation.
- 2. Have a full installation of PAWS Studio with a valid license.
- 3. Have a valid PAWS Studio project that has been built.

1.2 The client system:

The client system is the computer that has the WRTS client.

You have to:

- 1. Have a valid **WRTS client**. This client should be configured to be able to launch the WRTS server remotely.
- 2. **Configure the Operating System** to allow remote usage of the WRTS server. We will go over those settings later in this documentation.

- 3. Install the <u>same</u> version of PAWS Studio that you have on the server computer. However, you do not need to license that version. The reason to install PAWS Studio on this machine is related to registration issues. Those registrations are done during the installation of PAWS Studio.
- 4. Have a file with the name of the project and the correct extension: **.PAX**, or **.PAW** depending upon your configuration. This project should be located exactly in the same subfolder as it is on the server computer. This is done in order for the client to tell the WRTS server which project to load on the server computer. It is however not necessary to have a complete project. This means that the project on the server computer should be the only one that needs to be built and up to date. The .PAW file on the client does not even need to be a generated by PAWS Studio and can be as simple as an empty text file that has been renamed to **<you project name>.paw**.

It is assumed that you have a functional WRTS client that can launch the server remotely.

1.3 Secure operation of the PAWS RTS Server:

1.3.1 Configuring the Operating System for the server computer:

1.3.1.1 Configuring DCOM settings:

The settings addressed below will have to be configured on the machine where the WRTS is installed. On the machine where you want to run the WRTS server, you will need to follow the steps below:

• Install Paws Developer Studio on the Server Machine. This will install the WRTS and the WRTS server.

Note: A user doing this would need administrative privileges on the computer to install the software.

• From the Windows start menu select **Start... Run ...dcomcnfg** :



- Select MfcRts from the Applications tab of Distributed COM Configuration Properties dialog
- Click **Properties** on the window below:

Distributed COM Configuration Properties	<u>?</u> ×	
Applications Default Properties Default Security Default Protocols		
Applications: Just-In-Time Debugging Handler and CLR Remote Host logagent Logical Disk Manager Administrative Service Logical Disk Manager Remote Client Machine Debug Manager Media Player MfcRts		
MICHIS Microsoft Agent Server 2.0 Microsoft CLR Debugger Microsoft Development Environment (1) Microsoft Development Environment (2) Microsoft Document Explorer Microsoft WBEM Active Scripting Event Consumer Provider Microsoft WBEM Unsecured Apartment Mobsync MSDAINITIALIZE MSVSA 7.0 Local Event Concentrator Class MSVSA 7.0 Primary Event Collector Class		
Properties		
OK Cancel App	yly	

• Select to the **Location** tab in **MfcRts Properties** and you will have the following window:

MfcRts Properties
General Location Security Identity Endpoints
The following settings allow DCOM to locate the correct computer for this application. If you make more than one selection, then DCOM uses the first applicable one. Client applications may override your selections.
Run application on the computer where the data is located
Run application on this <u>c</u> omputer
Run application on the <u>following</u> computer:
Browse
OK Cancel Apply

- Verify that Run application on this computer is checked.
 Switch to the Security tab.
- Select Use custom access permissions as shown below:

MfcRts Properties
General Location Security Identity Endpoints
Use default access permissions Use custom access permissions You may edit who can access this application. Edit
 Use default Jaunch permissions Use custom launch permissions You may edit who can launch this application.
 Use default configuration permissions Use custom configuration permissions You may edit who can change the configuration information for this application.
OK Cancel Apply

• Select **Edit** within that frame.

Registry Value Permissions	×
Registry Value: AccessPermission <u>O</u> wner: clgrard (Christophe L. Grard) <u>N</u> ame:	
	_
Type of Access:	2
OK Cancel <u>A</u> dd <u>R</u> emove <u>H</u> elp	

- The name of the Owner displayed above will differ from the one that you will see in your window. It will be a function of the Operating System Login ID.
- In the **Registry Value Permission** window select **Add...**.
- In the Add Users and Groups dialog select Show Users to see all users in your domain.
- In order to add a user to the list of users who is allowed to use this COM component, select the user as shown below. In this case, the user we add to the list is **bartek**:

Add Users and Groups	×
List Names From: 🕞 TYXDOMAIN 💌	
Names:	
🕵 afi (Afi Kaymanesh) 🕵 backup (backup)	
 Bartek (Bartlomiej Blaczejczyk) bill (Bill Kurt) brian (Brian Coons) carmen (Carmen Menchaca) clgrard (Christophe L. Grard) cristina (Cristina Fratila) 	
Add Show Users Members Search	
A <u>d</u> d Names:	*
Type of Access: Allow Access	
OK Cancel <u>H</u> elp	

• Press Add.

Add Users and Groups	×
List Names From: ATYXDOMAIN	
Names:	
📓 🕵 93BBA561-331F-4556-B (System)	
Administrator (Administrator) Built-in account for administering the con	
2 afi (Afi Kaymanesh)	
Dackup (Backup)	
S bill (Bill Kurt)	
🕵 brian (Brian Coons)	
🖸 🕵 carmen (Carmen Menchaca) 📃 🔽	
Add Show Users Members Search	
A <u>d</u> d Names:	
TYXDOMAIN\bartek	
Type of Access: Allow Access	
OK Cancel <u>H</u> elp	

• If you are done with the list of authorized users, you can press **OK** on the **Add Users and Groups** window. You may chose to add more users in your environment, but in our case we will limit ourselves with this one user.

Registry Value Permissions	×
Registry Value: AccessPermission <u>O</u> wner: clgrard (Christophe L. Grard) <u>N</u> ame:	
👷 bartek (Bartlomiej Blaczejczyk) Allow Access	
Image: Image of Access: Allow Access OK Cancel	-]

- Press **OK** on the **Registry Value Permissions** window when done.
- In the Security tab from the MfcRts Properties window, select Use custom launch permissions.

MfcRts Properties	? ×
General Location Security Identity Endpoints	
 Use default access permissions Use custom access permissions You may edit who can access this application. 	
 Use default Jaunch permissions Use custom launch permissions You may edit who can launch this application. 	
 Use default configuration permissions Use custom configuration permissions You may edit who can change the configuration information for this application. 	
OK Cancel <u>Appl</u>	y

• Select **Edit** within that frame.

Registry Value Permissions	×
Registry Value: LaunchPermission <u>O</u> wner: Account Unknown <u>N</u> ame:	
CHRISTOPHE VAdministrators	Allow Launch Allow Launch Allow Launch
Image: Image of Access: Allow Law OK Cancel Add	nch

- The list of names in the **Name:** window may be different.
- In the **Registry Value Permission** dialog select **Add**.
- In the Add Users and Groups window select Show Users to see all users in your domain.
- Then select a user who would use this COM component remotely.

Add Users and Groups	×
List Names From: 🔿 TYXD0MAIN	
Names:	
Administrator (Administrator) Built-in account for administering the con afi (Afi Kaymanesh) backup (backup)	
backdp (deckdp) bartek (Bartlomiej Blaczejczyk)	
 bill (Bill Kurt) brian (Brian Coons) carmen (Carmen Menchaca) clgrard (Christophe L. Grard) 	
Add Show Users Members Search	
Add Names:	
×	
Ivpe of Access: Allow Launch	
OK Cancel <u>H</u> elp	

• Press Add to add that user in the list for Add Names:.

Add Users and Groups	×
List Names From: BTYXDOMAIN	
Names:	
Administrator (Administrator) afi (Afi Kaymanesh) backup (backup) battek (Bartlomiej Blaczejczyk) bill (Bill Kurt) brian (Brian Coons) carmen (Carmen Menchaca) clorard (Christophe L. Grard)	
I 👷 cigraid (chiistophe L. chaid)	
Add Show Users Members Search	
Add Names:	
TYXD0MAIN\bartek	
Type of Access: Allow Launch	
OK Cancel <u>H</u> elp	

• Press **OK** on the **Add Users and Groups** window when done.

Registry Value Permissions	x
Registry Value: LaunchPermission <u>O</u> wner: Account Unknown <u>N</u> ame:	
bartek (Bartlomiej Blaczejczyk) Allow Launch CHRISTOPHE/Administrators Allow Launch INTERACTIVE Allow Launch SYSTEM Allow Launch	
Type of Access: Allow Launch	-]
OK Cancel <u>A</u> dd <u>R</u> emove <u>H</u> elp	

- Press **OK** on the **Registry Value Permissions** dialog when done.
- In the MfcRts Properties window, switch to the Identity tab
- Verify that **The Launching User** is selected.

MfcRts Properties	<u>?</u> ×
General Location Security Identity Endpoints	
Which user account do you want to use to run this application?	
C The interactive user	
The Jaunching user	
C This <u>u</u> ser:	
User: Browse	
Password:	
Confirm Password:	
C The System Account (services only)	
OK Cancel App	yly

Note: Security concerns could arise with the setting on this page.

- Selecting **interactive user** requires that the logged in user on the server machine have permissions to access the COM component as selected in **Use custom access permissions** on the Security page.
- In the case where **launching user** is selected the COM component can be launched even if nobody is logged in.

More information on this is provided by Microsoft ...look in the Reference section of this document.

- Press **OK** on the **MfcRts Properties** window when done.
- In the **Distributed COM Configuration Properties** window, switch to the **Default Properties** tab.

• Verify that Enable Distributed COM on this computer is checked.

Distributed COM Configuration Properties	? ×		
Applications Default Properties Default Security Default Protocols			
Enable Distributed COM on this computer			
Enable COM Internet Services on this computer			
C Default Distributed COM communication properties	_		
The Authentication Level specifies security at the packet level.			
Default Authentication Level:			
Connect			
The Impersonation Level specifies whether applications can determine who is calling them, and whether the application can do operations using the client's identity. Default Impersonation Level: Identify			
OK Cancel App	dy		

- Press **OK** to save these settings.
- Finally **Reboot** the computer.

1.3.1.2 Folder security issues:

To ensure proper operation by the user from the client computer, you will need to make sure that the security on the folder should not prevent that user to write into the folder where the .paw project is located on the server computer.

• The following settings are set by default and should allow for that user to have the WRTS server create a file into the folder where the .paw project is located. One of the common files to be written is the PRINTER file that is redirected by default to a FILE.

Beep Properties	<u>? ×</u>
General Sharing Security	
Name Everyone	A <u>d</u> d <u>R</u> emove
J Permissions: Allo	w Deny
Full Control Modify Read & Execute List Folder Contents Read	
Advanced	
Allow inheritable permissions from parent to prop object	pagate to this
OK Cancel	Apply

• In the event that the security settings for that folder are one of the following, the user will have the right to read, but not to write into the .paw project folder:

Beep Properties	Beep Properties
General Sharing Security	General Sharing Security
Name Add Image: Second system Add Image: Second system Eemove	Name Add Image: Bartlomiej Blaczejczyk (bartek@tyx.com) Bernove Image: Bartlomiej Blaczejczyk (bartek@tyx.com) Bernove
Permissions: Allow Deny	Permissions: Allow Deny
Full Control Image: Control Modify Image: Control Read & Execute Image: Control List Folder Contents Image: Contents Read Image: Contents Write Image: Contents	Full Control Image: Control in the c
Advanced Allow inheritable permissions from parent to propagate to this object	Advanced
OK Cancel Apply	OK Cancel Apply

As a consequence, when running the .paw project from the client, you may have an error that looks like this: I/O "PRINTER", COM error, ...

🚰 HTML Rts Gui Page - Microsoft Internet Explorer	
Elle Edit View Favorites Iools Help	
→ Back + → + ⊗ 🖉 🗇 © Search 🔄 Favorites ③ Media 🚳 🔄 → → 🖅 + 📄 📸 💩	
Address (#2) C. (enterprise) source) tyte that the control htm	▼ (c ² Go Links »
Drime Ris GOI - Riscontrol Actives Control	_
Load Unioad Run Halt MI Reset	
TPS C\usr\tyx\src\lEE271689\Beep\Beep\PAW HTML GUI	
Binary files "Beep", version 20040507 RTS State	
Date stamp: Tue Sep 07 18:10:15 2004 Ready Ready	
CEN 'C:\USr\tyx\sr\EEF1689\Beep\WCEM.D Device	
CEM Module User / Kernel Model 2 Version	
Executing INITIALIZE 4 I/o 'PRINTER', COM error, 0x80040204 'Pai FaultCounter	
0	
ULmt Load	
Meas	
Run Halt	
Result Reset MI	
RTS Server Host	
Local Attach	
Server Computer Capture Input	
Machine C Detach	
2 Done	My Computer

More errors related to security are possible and it is not possible to cover them all. This section should however allow you to be sensitized to the subject and in the event of a problem, for you to look into the sharing and security issues associated to the folder where the .paw project is located.

1.3.2 Installation of Paws Studio:

- We need to have an installation of the TYX Paws Developer Studio. The version we used for the document is 1.26.7.
- You need to have a valid license for the WRTS.
- After installing all the above, you can verify that:
 - 1. The WRTS can be started.

If you are having problems with the step above, you need to work on those problems before you can proceed with the client computer. Please refer to the proper documentation to troubleshoot those issues.

1.3.3 Presence of Built Paws project:

- You will need to have a valid project that has been built.
- You should verify that:
 - 1. You can load the project from the WRTS.
 - 2. Run the project that you want to run from the client computer without unexpected problems.

If you are having problems with either one of the steps above, you need to work on those problems before you can proceed with the client computer. Please refer to the proper documentation to troubleshoot those issues.

1.4 Setting up the CLIENT computer:

1.4.1 WRTS client:

It is assumed that you have a client that can launch the WRTS remotely.

The difference between a client that can launch the WRTS locally and remotely is in the API call **Attach**:

• For a client launching a local WRTS server, the parameter can be empty.

For example, we have the following C/C++ code:

// attach tpsserver to wrts

hr = m_pTpsServerEx->Attach();

• For a client launching a remote WRTS server, the parameter has to include the IP of the computer that the WRTS server is located on.

For example, we have the following C/C++ code:

// attach tpsserver to wrts remotely

hr = m_pTpsServerEx->Attach(CComVariant("192.168.0.57"));

where 192.168.0.57 in this example is the IP of the computer running the WRTS server. You will need to use the IP of your WRTS server computer in the code for your client.

There are tutorials for WRTS clients on the <u>www.tyx.com</u> website.

In those tutorials you will need to make the changes addressed above regarding the Attach API.

In this documentation, we will be using an HTML client as we'll see later on this documentation.

1.4.2 Configuring the Operating System:

• From the Windows start menu select **Start|Run|dcomcnfg** :

	٩	Set Program Access and Defaults		
	*	Windows Update		
1al	.	Programs +	Run	? ×
Ssio	1	Documents +		Type the name of a program, folder, or document, and
ofe	5	Settings +		Windows will open it for you.
8	٩	Search >	Open:	deemenfa
2	9	Help		Bun in Separate Memory Space
Ş	27	Run		
Ň	D	Shut Down		OK Cancel <u>B</u> rowse
1	Start] 🚮 🥭 😂		

- Switch to the **Default Properties** page of the **Distributed COM Configuration Properties** dialog.
- Verify Enable Distributed COM on this computer is checked.
- Switch the **Default Authentication Level** from **Connect** to **None**.
- The window should now look like this:

Distributed COM Configuration Properties	? X			
Applications Default Properties Default Security Default Protocols				
Enable Distributed COM on this computer				
Enable COM Internet Services on this computer				
Cefault Distributed COM communication properties	-			
The Authentication Level specifies security at the packet level.				
Default Authentication Level:				
(None)				
The Impersonation Level specifies whether applications can determine who is calling them, and whether the application can do operations using the client's identity. Default Impersonation Level: Identify				
OK Cancel Apply				

• Press **OK** to save these settings. You don't need to reboot.

1.4.3 Installation of Paws Studio:

You need to install the <u>same version</u> of **PAWS Studio** that was installed on the server computer. A different version may prevent you from being able to run the WRTS server from the client successfully.

The main reason to do this is associated to the files that get registered during the installation of PAWS Studio.

 \rightarrow You therefore do not need to have a valid license for this installation, even if having one is not a source of problems.

1.4.4 PAWS file on your client:

You will need two things:

1. A file that has the same name and extension as the one you intend to use on the server computer. If the file on your server computer is a real file generated by Paws Studio such as a **.paw** or a **.pax** file, the one on your client machine can be a file of any type that has been renamed to be the same as the one on your server computer.

For example: if you intend to run a project called **Beep.paw**, you will need a file called **Beep.paw** on you client computer, even if it is an empty text file, such as **untitled.txt**, that you renamed to **Beep.paw**.

This will allow the client to have a file to target when choosing a project to load. You will be *loading* this pretend project file on your client machine and the WRTS server will load the real paws project file on the server machine. You can see that file on the client machine as being some sort of image file.

2. That file has to be located in the same folder on your client computer, as you would expect to find on your server computer.

For example: if the Beep.paw project is located on the server computer under C:\usr\tyx\src\IEEE71689\Beep, you will have to have the same path on your client computer and place the "pretend" Beep.paw file in that folder. You will then have the following file on your client computer C:\usr\tyx\src\IEEE71689\Beep\Beep\Beep.paw. This is all that you will need. You won't need any other files on your client computer. You will however have a complete project in that location on your server machine that has also been built.

1.5 Running the WRTS from the client:

- We will be running a version of the HTML client that enables the possibility to launch a remote WRTS server. The file we will use is **RtsControl.htm**. Some versions that are part of the PAWS Studio distribution may be different and not offer the ability to connect to a remote WRTS server.
- With the correct version of **RtsControl.htm**, you need to make a few changes in the content of that file. Namely, you need to add the IP address of your server computer in the right place. In the block:

<SELECT id=selHost name=selHost size=3

style="HEIGHT: 80px; LEFT: 40px; POSITION: absolute; TOP: 30px; WIDTH: 140px">

<OPTION value="" selected>Local</OPTION>

<OPTION value="MACHINE_A">Machine A</OPTION>

<OPTION value="MACHINE_B">Machine B</OPTION>

</SELECT>

you need to replace **"MACHINE_A"** with the IP address that you want to use associated to the WRTS server machine and **Machine A** with the correct description. You will have the following line instead:

<OPTION value="192.168.100.109">Server Computer</OPTION>

where you will want to adjust the IP address to what is relevant in your case.

Note: Obtaining the Server Machine's IP Address:

- On the server machine, open a Command Window.
- Execute command **ipconfig** /all

Note the IP Address of the Server Computer.

Example: **IP Address..... 192.168.100.109** as can be seen from the following window:

C:\WINDOWS\System32\cmd.exe	- 🗆 ×
Microsoft Windows XP [Version 5.1.2600] (C) Copyright 1985-2001 Microsoft Corp.	-
C:\Documents and Settings\dominic>ipconfig /all	
Windows IP Configuration	
Host Name : dominic-xp Primary Dns Suffix : tyx.com Node Type : Hybrid IP Routing Enabled : No WINS Proxy Enabled : No DNS Suffix Search List : tyx.com Ethernet adapter Local Area Connection:	
Connection-specific DNS Suffix . : tux.com	
Description	Com :53 :53
	-

Now you need to save the changes and you are ready to use the HTML client.

• To use the client, we need to drag the **RtsControl.htm** file into Microsoft Internet Explorer. This HTML client does not work with Netscape. You will see something like this:

🚈 HTML Rts Gui Page - Microsoft Internet Explorer	<u>_ ×</u>
File Edit View Favorites Tools Help	
↓→ Back • → • ② ② ③ ▲ Address ○ ○ ○ ○	
DHTML RTS GUI - RtsControl ActiveX Control	
🕮 × 💷 🛛 💐 🔶	
Load Unioad Run Halt MI Reset	
TPS	HTML CLI
	Detached
	Device
	Fault Counter
ULmt	
Meas	
LL.mt	Run Halt
Result	Reset MI
RTS Server Host	
Local Attach Server Computer	Capture
Machine B Machine C	Input
C Done	My Computer

- In the **RTS Server Host** window, select **Server Computer**.
- Press ATTACH.

🚈 HTML Rts Gui Page - Microsoft Internet Explorer				
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DHTML RTS GUI - RtsControl ActiveX Control				
TFS	HTML GUI			
	Unloaded			
	Device			
	Fault Counter			
ULmt	Load			
Meas	Unioad			
LLmt				
Peoult	Halt			
	Heset MI			
RTS Server Host Local Attach Server Machine Machine B Machine C Detach	Capture Input			
Done	My Computer			

- If all goes well, you should see the **LOAD** button become active. If not, you will need to go over the steps above again and verify that your client is suited to run a remote WRTS server.
- At this point, you need to press **LOAD** and select the pretend .paw file that is located exactly in the same folder on your client computer as it is on your server computer. In our case, we will load **C:\usr\tyx\src\IEEE71689\Beep\Beep.paw**.

🚰 HTML Rts Gui Page - Microsoft Internet Explorer	
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Load Unioad Run Halt MI Reset	-
TPS Church Merch EEE 71689 Been Been PAW	
Binary files "Been" version 20040507	
Date stamp: Tue Sep 07 18:10:15 2004 Read	
Built In LEX Information CEM 'C:\usr\tyx\src\IEEE71689\Beep\WCEM.D Device	
CEM Module User / Kernel Model 2 Version	
Fault Counter	
LLmt Run	Halt
Result	MI
RTS Server Host	1
Server Machine Capture	
Machine B Input	
	_

- We are now ready to run the project.
- If you press **Run**, the project will be running on the server machine.

HTML	Rts Gui Page	- Microsoft Internet Explorer			- U ×
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Address	C:\usr\tyx\:	src\Clients\ActiveXHtml1\Distributed\Rt:	sControl.htm	▼ (* 60	Links "
DHT	ML RTS	GUI - RtsControl Acti	veX Control		
		a 🗙 🚛 🗴 🤅	4		
	Lo	ad Unload Run Halt	MI Reset		
					1
	TPS C	:\usr\tyx\src\IEEE71689\Beep\Be	eep.PAW	HTML GUI	
	DMM Setu	ip Is	<u>-</u>	RTS State	
	DMM Rese			Finish	
	DCP Rese			Device	
	DMM Rese			DCP	
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	RT	S Server Host	Alt t		
	Lo	ocal	Attach	Capture	
	M	achine B	Detach	Input	
	IM		Dotach		
	,				
					-
🙆 Done				My Computer	

2 Appendix: Steps to ensure that remote access of WRTS Server is turned off:

• From the Windows start menu select **Start|Run|dcomcnfg**:



- Switch to the **Default Properties** page of the **Distributed COM Configuration Properties** dialog.
- Select MfcRts from the Applications tab of Distributed COM Configuration Properties dialog and click on Properties.

Distributed COM Configuration Properties				
Applications Default Properties Default Security Default Protocols				
Applications: Just-In-Time Debugging Handler and CLR Remote Host logagent	<u> </u>			
Logical Disk Manager Administrative Service Logical Disk Manager Remote Client Machine Debug Manager Media Player MfcBts				
Microsoft Agent Server 2.0 Microsoft CLR Debugger Microsoft Development Environment (1) Microsoft Development Environment (2) Microsoft Document Explorer Microsoft WBEM Active Scripting Event Consumer Provider Microsoft WBEM Server Microsoft WBEM Unsecured Apartment Mobsync MSDAINITIALIZE MSVSA 7.0 Local Event Concentrator Class				
MSVSA 7.0 Primary Event Collector Class	<u> </u>			
OK Cancel App	dy.			

- Switch to the Security tab.
 Verify that Use Default access permissions is selected.
 Verify that Use Default launch permissions is selected.

MfcRts Properties
General Location Security Identity Endpoints
Use default acc <u>ess permissions</u> Use custom acce <u>ss permissions</u> You may edit who can access this application. Edit
Use default launch permissions Use custom launch permissions You may edit who can launch this application. Edjt
 Use default configuration permissions Use custom configuration permissions You may edit who can change the configuration information for this application.
OK Cancel Apply

- Press **OK**.
- Then on the Distributed COM Configuration Properties switch to the Default Security tab.

Distributed COM Configuration Properties						
Applications Default Properties Default Security Default Protocols						
Default Access Permissions						
You may edit who is allowed to access applications that do not provide their own settings						
Edit Default						
Default Launch Permissions						
You may edit who is allowed to launch applications that do not provide their own settings.						
Edit Default						
Default Configuration Permissions						
You may edit the list of users that are allowed to modify OLE class configuration information. This includes installing new OLE servers and adjusting the configuration of existing OLE servers.						
Edit Default						
OK Cancel Apply						

• Within the **Default Access Permissions** frame, click on **Edit Default**.

Registry Value Permissions	×
Registry Value: DefaultAccessPermission <u>O</u> wner: ionel (Ionel Zolog) <u>N</u> ame:	
Type of Access:	-
OK Cancel Add Help	

- Verify that only intended users are given default access permissions.
- If unintended users exist, select them and click **Remove** to restrict access.
- Press **OK** to save these settings.
- Within the **Default Launch Permissions** frame, click on **Edit Default**.

Registry Value Permissions	×
Registry Value: DefaultLaunchPermission <u>D</u> wner: Account Unknown <u>N</u> ame:	
INTERACTIVE Allow Launch SYSTEM Allow Launch TESTPC\Administrators Allow Launch	
Ivpe of Access: Allow Launch	T

• Verify that only intended users are given default access permissions.

• If unintended users exist, select them and click **Remove** to restrict access.

<u>Note:</u> It is ok to allow **INTERACTIVE**, **SYSTEM** and **Administrators** to have access and launch permissions.

- Press **OK** to save these settings.
- Press **OK** on the **Distributed COM Configuration Properties** dialog to save all settings.
- Finally **Reboot** the Client Computer.
- You can then verify that your WRTS client on the client machine cannot launch the WRTS server on the server machine.

3 References:

Using DCOM Config (DCOMCNFG.EXE) on Windows NT & Windows 2000 Systems.

http://support.microsoft.com/default.aspx?scid=kb;EN-US;176799