# **Calling Broker ActiveX Control Remotely**

You can call Broker ActiveX Control remotely if you use it as an automation server. This means you can use the Broker component from a separate process - either on the same machine or on another machine in the network.

This chapter covers the following topics:

- Setting up the Server Environment
- Setting up the Client Environment
- Testing the Connection

# Setting up the Server Environment

To configure the security settings use **Component Services** from the **Administrative Tools** in the **Control Panel**.

Below is a step-by-step guide on how to configure the server environment:

## Step 1

Open the **Component Services** on the server.

The following dialog box will be displayed:

Component Services			
🐌 Eile Action Yiew Window Help			_ 8 ×
← → 🖿 🖬 🗙 📽 🙆 😫 🍋		E 🗰 🕮 😐	
Console Root	~	EntireX Broker ActiveX Control	0 object(s)
🖻 🙆 Component Services			
🖻 🧰 Computers			
🖻 🖳 My Computer			
🕀 🧰 COM+ Applications			
🖻 💼 DCOM Config			
🕀 🥎 AccStore Class			
🗄 🤣 Entire Connection Comms Server			
😟 🥎 EntireConnection.Terminal			
- 🍫 EntireX Broker ActiveX Control			
🗄 🧑 EntireX.NatIDL	~		
	>		

Select EntireX Broker ActiveX Control in the DCOM Config list box and choose the properties from the context menu.

The following dialog box will be displayed:

EntireX Broker ActiveX Control Properties
General Location Security Endpoints Identity
General properties of this DCOM application
Application Name: EntireX Broker ActiveX Control
Application ID: {F7AC2803-B2EB-11CF-9B17-0000C0C39393}
Application Type: Local Server
Authentication Level: Default
Local Path:
OK Cancel Apply

## Step 2

Click the **Security** tab.

EntireX Broker ActiveX Control Properties	? 🗙		
General Location Security Endpoints Identity			
Launch and Activation Permissions			
Access Permissions © Use De <u>f</u> ault © Custo <u>m</u> ize <u>Edit</u>			
Configuration Permissions C Use Default C Customize Edit			
OK Cancel Ap	ply		

In the dialog box displayed above, keep the defaults for access, launch and configuration permissions.

## Step 3

Click the **Identity** tab.

EntireX Broker ActiveX	Control Pro	operties	? 🔀
General Location Securit	y Endpoints	Identity	
Which user account do you want to use to run this application?			ation?
C The interactive user.			
The launching user.			
C This <u>u</u> ser.			
Us <u>e</u> r:			<u>B</u> rowse
Password:			
Co <u>n</u> firm password:			
C The system account (services only).			
	OK	Cancel	Apply

There are three options to define the user account to be used to run the application:

#### • The interactive user

This implies that a user with permission to launch the application must be logged on to the server machine.

#### • The launching user

This implies that an account must be created on the server machine with the same username/password as on the client machine. This account will then be used to launch the application.

#### • This user

A final option is to specify a user account to be used when launching the application.

In each case, the username/password of the client machine must also exist on the server machine.

Select one of the options and choose **OK** to return to the **Component Services**.

## Step 4

Click on My Computer and choose the properties from the context menu.



The following dialog box will be displayed; click on the **Default Properties** tab.

My Computer Prop	erties	? 🛛	
Default Protocol:	MSDTC	COM Security	
General	Options	Default Properties	
Enable Distribute	d COM on this computer		
Enable COM Internet Services on this computer			
Default Distributed	COM Communication Pro	operties	
The Authentication	Level specifies security	at the packet level.	
Default A <u>u</u> thentic	ation Level:		
Call		<b>•</b>	
The impersonation level specifies whether applications can determine who is calling them, and whether the application can do operations using the client's identity.			
Identify		•	
Security for reference tracking can be provided if authentication is used and that the default impersonation level is not anonymous. Provide additional security for reference tracking			
	ОК	Cancel <u>Apply</u>	

Choose the options as shown in the dialog box above.

## Step 5

Click on the **COM Security** tab.

My Computer Properties	?×
General OptionsDefault Properties	;
Default Protocols MSDTC COM Securi	ty
Access Permissions	
You may edit who is allowed default access to applications. You n also set limits on applications that determine their own permissions	nay
Edit Limits	
Launch and Activation Permissions	
You may edit who is allowed by default to launch applications or activate objects. You may also set limits on applications that determine their own permissions.	
Edit Limits Edit <u>D</u> efault	
OK Cancel A	oply

In the **Launch and Activation Permissions** area of the dialog box displayed above, choose **Edit Default**. The following dialog box will be displayed:

Launch Permission	? 🔀
Security Limits	
<u>G</u> roup or user names:	
Administrators (PC00E5\Ad	ministrators)
🕵 Everyone	
	Add <u>R</u> emove
Permissions for Administrators	Allow Deny
Local Launch	
Local Activation	
Remote Activation	
,	
	OK Cancel

Make sure that either the user corresponding to the client machine account, or a group to which the user belongs, has **Allow Launch** as **Type of Access**.

Choose **OK** in this screen and then **Apply**, and exit **Component Services** on the server.

# Setting up the Client Environment

The *EbxProxy.dll* is installed by default on the server in directory  $< drive > : \SoftwareAG \EntireX \bin.$  Copy the file from the server machine to the client machine.

The DLL must then be registered with: REGSVR32 <path>\EBXproxy.dll.

To configure the client environment use **Component Services** from the **Administrative Tools** in the **Control Panel**.

Below is a step-by-step guide on how to configure the client environment:

## Step 1

Open the **Component Services** on the client.

The following dialog box will be displayed:

Somponent Services	
🐌 Eile <u>A</u> ction <u>V</u> iew <u>W</u> indow <u>H</u> elp	_B×
Console Root Kentive X Contr	ol 0 object(s)
🚊 🙆 Component Services 🦳 🔤	
🖻 🖳 My Computer	
🗄 💼 COM+ Applications	
🛱 📲 DCOM Config	
🕀 🥎 AccStore Class	
😟 🥎 Entire Connection Comms Server	
🕀 🦘 EntireConnection. Terminal	
🚽 🥎 EntireX Broker ActiveX Control	
🔁 🥎 EntireX.NatIDL 🛛 🗹	

Select **EntireX Broker ActiveX Control** in the **DCOM Config** list box, choose the properties from the context menu and click the **Location** tab.

Step 2

EntireX Broker ActiveX Control Properties		
General Location Security Endpoints Identity		
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 <u>d</u> ata is located.		
Run application on this computer.		
Run application on the <u>following</u> computer:		
hostname or IP address <u>B</u> rowse		
OK Cancel Apply		

In the **Location** tab of the **ActiveX Control Properties** dialog box above, select the check box **Run application on the following computer:** and enter either the hostname or the IP address of the server machine.

Choose Apply and then OK.

## Step 3

Select My Computer and choose the properties from the context menu.



The My Computer Properties dialog box will be displayed. Select the Default Properties tab.

My Computer Prope	erties	? 🛛	
Default Protocols	MSDTC	COM Security	1
General	Options	Default Properties	
Enable Distributed	COM on this computer		
Enable COM Inte	rnet Services on this con	nputer	
– Default Distributed I	COM Communication Pro	nerties	
The Authentication	Level specifies security	at the packet level.	
Default Authentic	ation Level:		
Call		•	
The impersonation level specifies whether applications can determine who is calling them, and whether the application can do operations using the client's identity.			
Udentifu	ation Level:	_	
Indentity			
Security for reference tracking can be provided if authentication is used and that the default impersonation level is not anonymous.			
Provide additional security for reference tracking			
	OK	Cancel <u>A</u> pply	J

Choose the check box **Enable Distributed COM on this computer**, set the default authentication level to **Call** and the default impersonation level to **Identify**.

Choose OK.

# **Testing the Connection**

You are now ready to test the connection between the client machine and the server machine.

## **Test the TCP/IP Connection**

Test the TCP/IP connection between the client and the server (use, for example, PING).

#### **Test the Remote Call**

To test whether an application can be called remotely, you can use the OLE/COM Object Viewer:

Run the OLE/COM Object Viewer on the client.

The OLE/COM Object Viewer dialog box will be displayed:

Note: Communication and the second se	
<u>File O</u> bject <u>V</u> iew <u>H</u> elp	
<b>27</b> % <b>i i</b> M	
Object Classes     Object C	Automation Objects (40FC6ED5-2438-11CF-A3DB-080036F12502) Registry Component Categories (40FC6ED5-2438-11CF-A3DB-080036F12502) [409] = Automatio
Ready	

Select **Automation Objects** in the navigation frame to display a list of all the automation objects on the client machine.

A screen similar to the one displayed below will be displayed:



Select EntireX Broker ActiveX Control, open its context menu and choose Create Instance.

If the remote call is successful, the EntireX Broker component on the server machine will be called and the following screen will be displayed:



If you receive an error message (for example "Class not registered") please check the following:

- the TCP/IP connection (with PING)
- the security definitions on the server with Component Services
- the remote server name on the client (this can also be checked with the OLE/COM Object Viewer)

When the connection has been established, you will be able to run your application on the client. Please remember that Broker ActiveX Control must be used as automation server. For information on how to use Broker ActiveX Control with Visual Basic see *Broker ActiveX Control as an Automation Server*.