

DCOM Setup

User Manual

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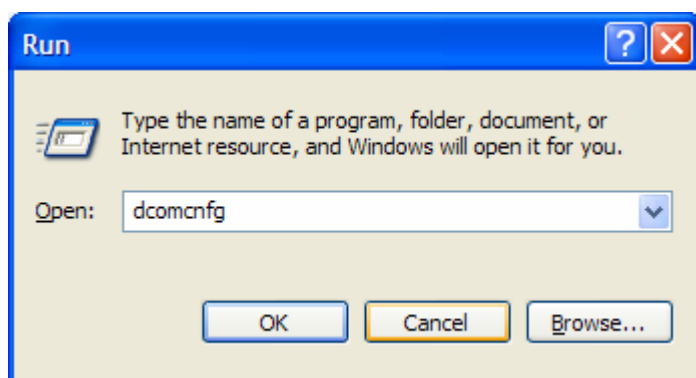
Introduction

The DCOM setup is required for correct communication of OPC Server with local and remote OPC clients.

Set-up is carried out using the *dcomcnfg.exe* program file, which you can find in the system folder, e.g. `\\winnt\\system32`. This program can set up the properties of DCOM itself and of DCOM for OPC Server, and also one property of OPC Server, which relates to hiding the network connection from those who are trying to get local connection to OPC Server.

Under Windows XP operation system you can open DCOM program in the **Start menu/Settings/Control Panel/Administrative Tools/Component Services**.

Tip: To start the DCOM program enter a command ***dcomcnfg*** to the command line and confirm by the **OK** button.



Note: Before the actual set-up, OPC Server has to be registered in the Registry of operation system.

This section is a description of setting up DCOM either for a computer with OPC Server installed (Host computer) and for a computer with OPC Client installed (Client computer). These are identical machines in the case of local communication.

Further, the set-up description is divided for Windows XP, Windows NT 4.0/2000 and Windows 9x.

Note: DCOM and its configuration file (DCOMCNFG) have to be installed under Windows 9x. You can carry out these installations from the installation CD of Merz OPC Server or using appropriate files downloaded from the website of Kontron Czech company (<http://www.kontron-czech.com>).

Warning: It is necessary to set exception for appropriate OPC Server and DCOM port in the Windows Firewall under Windows XP Service Pack 2 !!!

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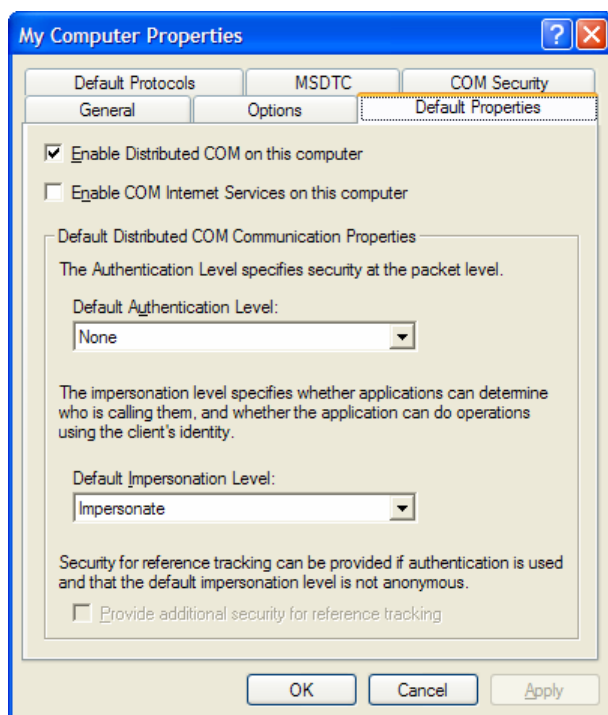
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Host Computer DCOM Setup

Operation System Windows XP

Setting up DCOM Properties under Windows XP

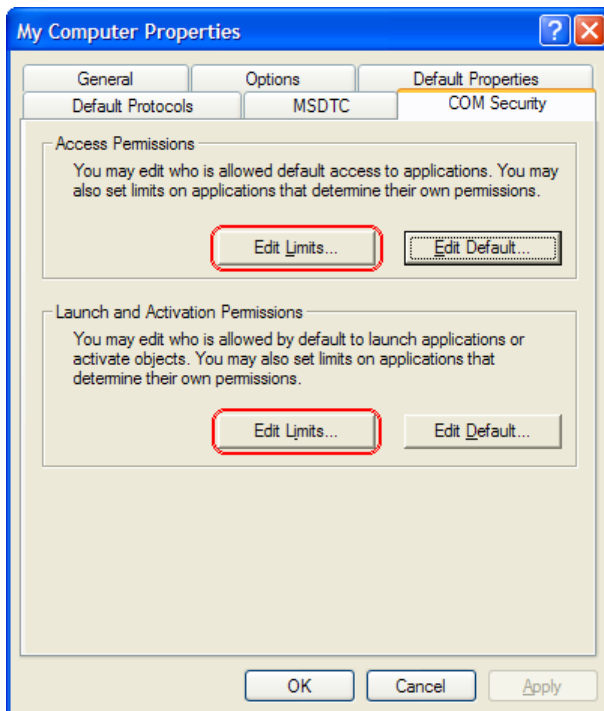
1. In the **Component Services** dialog box click on the **Component Services** folder and unpack its tree structure (**Computers / My Computer / ...**).
2. Right-click the **My Computer** folder and select **Properties** option.
3. Check the **Enable Distributed COM on this computer** in the **Default Properties** tab.
4. Set **Default Authentication Level** to **None**.
5. Set **Default Impersonation Level** to **Impersonate**.



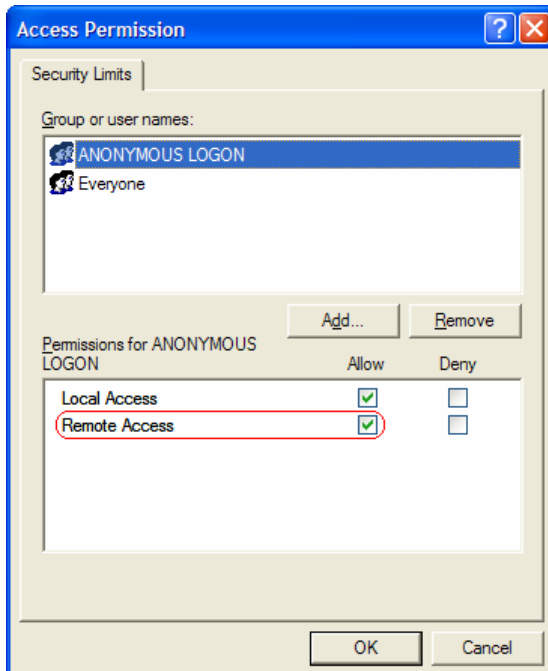
6. Set **Default Access Permission** in the **COM Security** tab. In the set-up dialog select the people who will be authorized to use the services of all the COM servers on the particular computer (these are all the COM servers in set-ups of which this property is not overwritten). The users you select and set to **Allow Access** will be able to access a running COM server.
7. Set **Default Launch Permission** in the **COM Security** tab. In the set-up dialog select the people who will be authorized to access all the COM servers on the particular computer (these are all the COM servers in set-ups of which this property is not overwritten). The users you select and set to **Allow Launch** will be able to start the COM server.
8. Confirm your settings by the **OK** button.

Setting up Enhanced DCOM Properties under Windows XP SP2

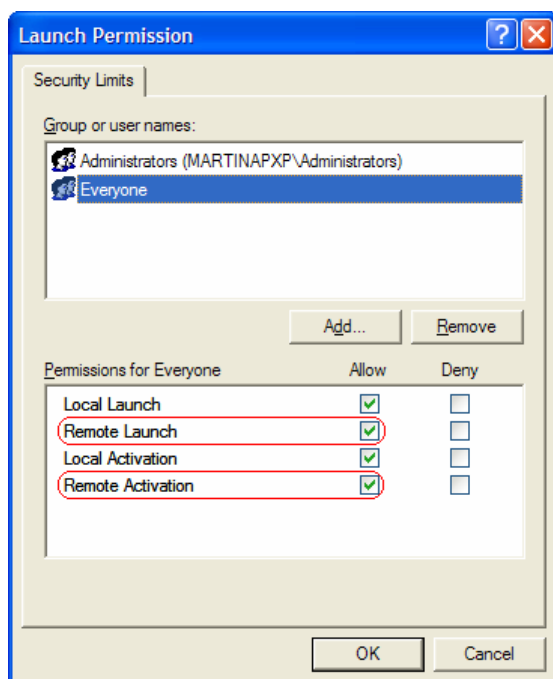
1. Configure "limits" on the **Access Permission** and **Launch Permission** using **Edit Limits** buttons in the **COM Security** tab.



2. In the **Access Permission** dialog allow **Remote Access** for user **ANONYMOUS LOGON**.



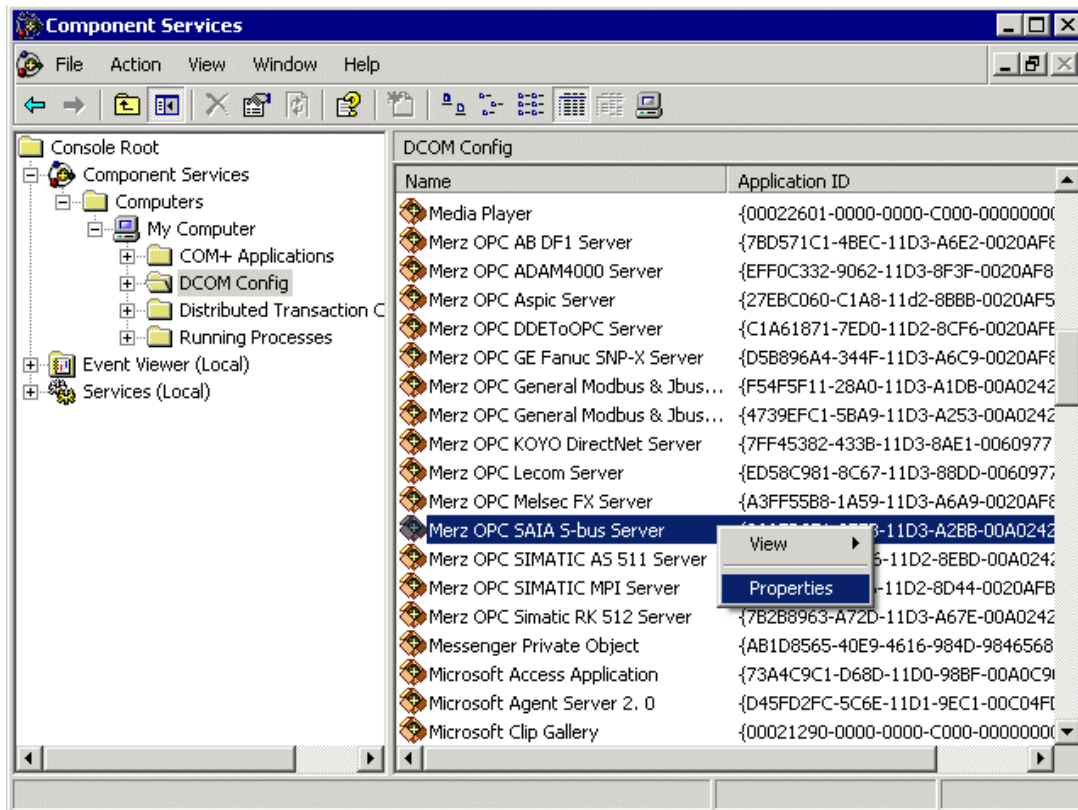
3. In the **Launch Permission** dialog allow **Remote Launch** and **Remote Activation** for user group **Everyone**.



Note: Since **Everyone** includes all authenticated users, it is often desirable to add these permissions to a smaller subset of users. One suggested way to accomplish this is to create a group named "*OPC Users*" and add all user accounts to this group that will execute any OPC Server or OPC Client. Then substitute "*OPC Users*" everywhere that **Everyone** appears in these configuration dialogs.

Setting up DCOM for Merz OPC Server Properties under Windows XP

1. In the **Component Services** dialog box click on the **Component Services** folder and unpack its tree structure (**Computers / My Computer / DCOM Config /...**).
2. In the **DCOM Config** folder select the *Merz OPC Server* option. Right-click it and select **Properties** option.

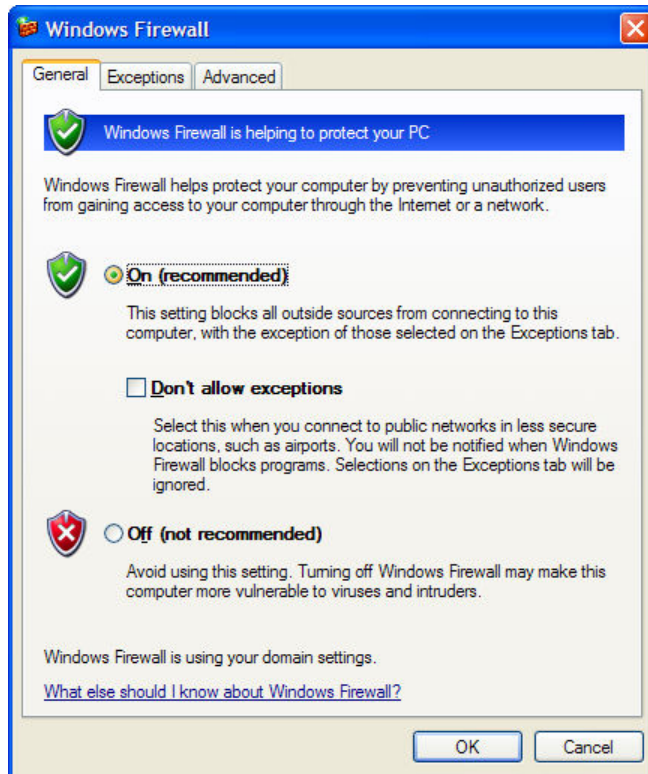


3. In the dialog *Merz OPC Server Properties* select **Location** tab and check the **Run application on this computer** option.
4. If you want to overwrite the security setting common for the whole DCOM, use the **Security** dialog for the server chosen, where you select **Use Custom Access Permission** or **Use Custom Launch Permission**. The security properties are identical with those described in [Setting up DCOM properties under Windows XP](#).
5. In the **Identity** tab set the user from whose account it will be possible to start Merz OPC Server (there is no relation to the setting of who can start and access Merz OPC Server). **The Interactive User** or **This User** option can be chosen with Merz OPC Server. The difference is that if you use the Interactive User option, you will not be able to operate Merz OPC Server if nobody has logged on the computer on which it has to be started. The **Launching User** option is not applicable since with this setting more than one Merz OPC Server installation are started for more than one user and only the installation started as the first one has access to the unshared system tools (e.g. serial interface).
6. Confirm your settings by the **OK** button.

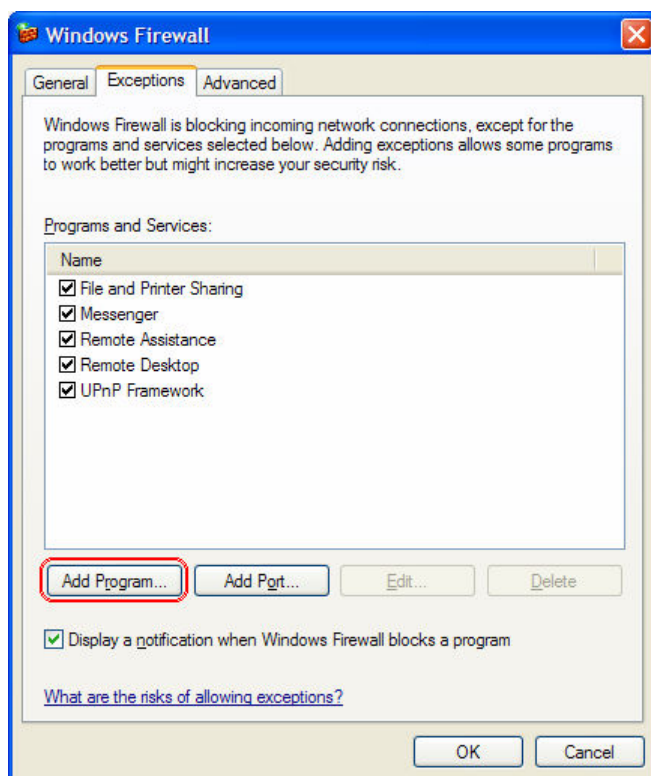
Setting up Windows Firewall under Windows XP Service Pack 2

Windows Firewall protects your computer from unsolicited connection of other network or Internet users. Since a network data communication between OPC Clients and OPC Servers is similar connection, it is necessary to permit exception on the Host computer and allow to OPC Servers accept "unsolicited communication".

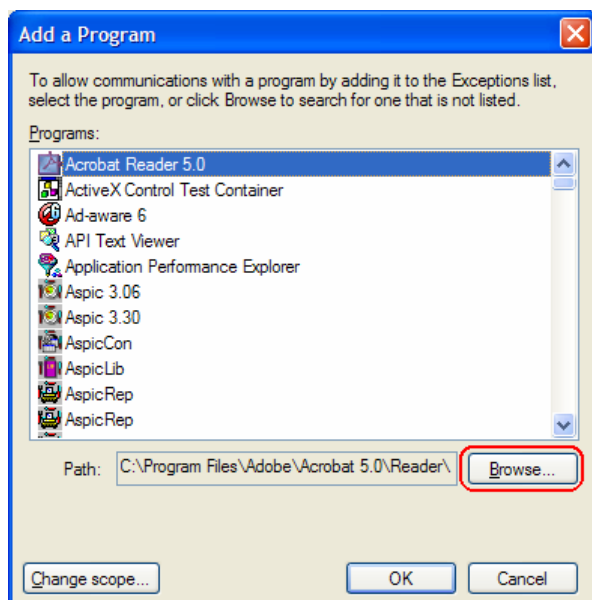
1. Open the **Start menu / Settings / Control Panel / Windows Firewall**.
2. Keep selected (or select, if it is not default setting) option **On (recommended)** in the **Windows Firewall** dialog on the **General** tab.



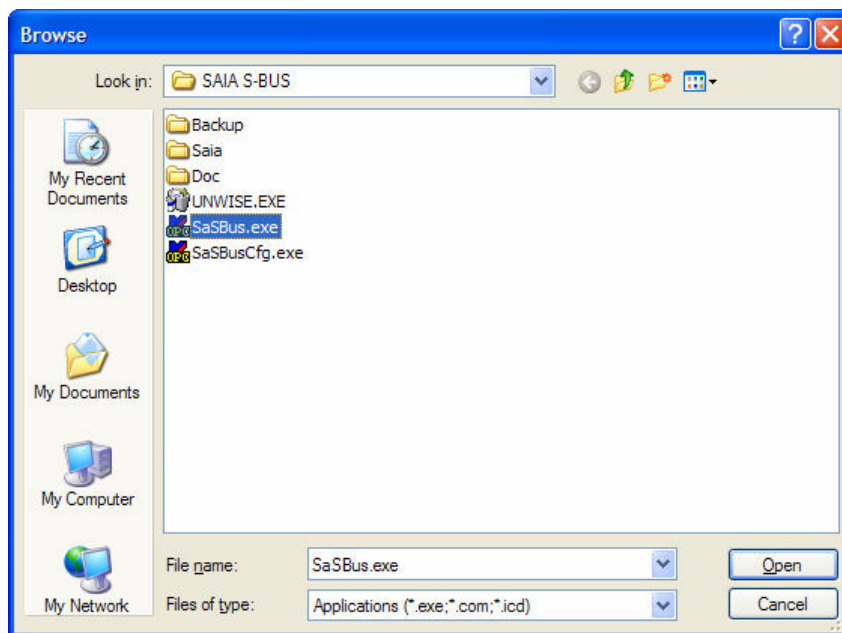
3. The list in the **Exceptions** tab includes programs and services with permitted exception for communication through the firewall. To add Merz OPC Server press the **Add Program** button.



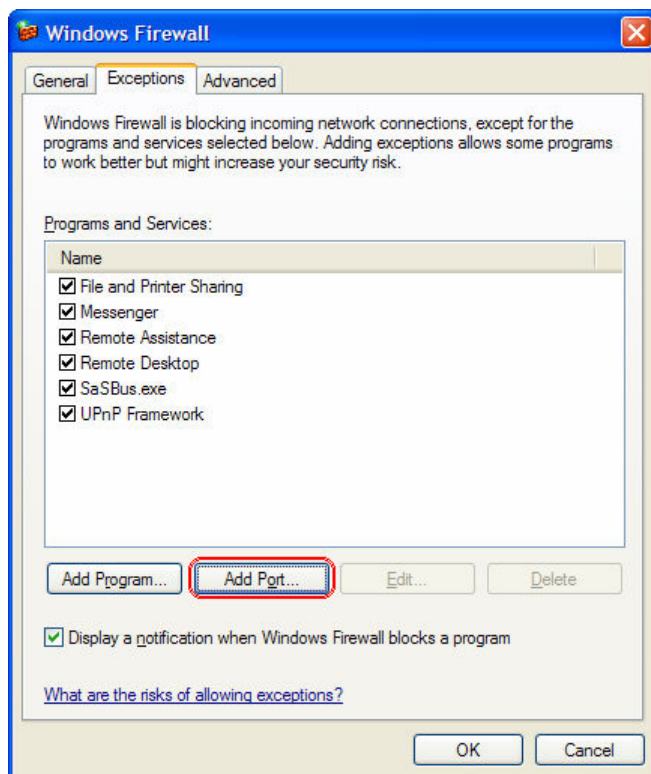
4. The **Add a Program** dialog includes a list of applications on the machine. Since this list show not all of applications, it is necessary to browse for OPC Server using the **Browse** button.



5. In the Browse dialog open folder, where Merz OPC Server was installed, and select the file name of OPC Server (for example: *SaSBus.exe*).



6. In the **Exceptions** tab use the **Add Port** button to add TCP port 135, which is necessary for DCOM communications.



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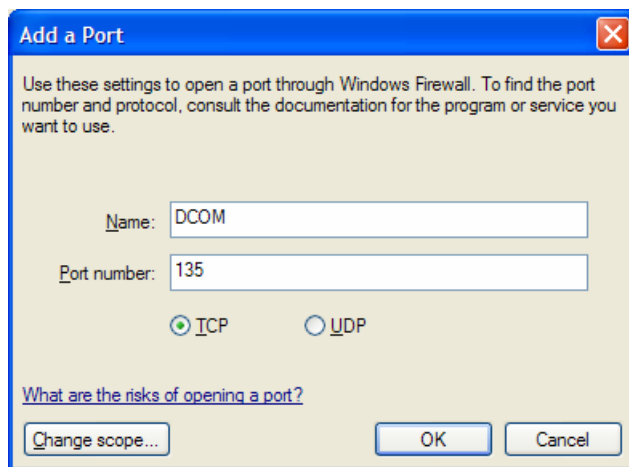
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7. In the **Add a Port** dialog, fill out the fields as follows:

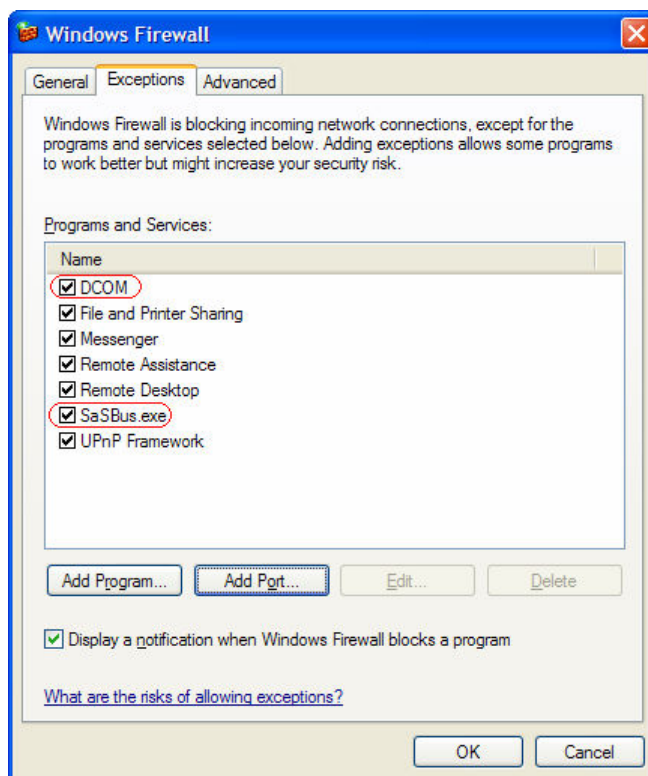
Name: DCOM

Port number: 135

Choose the TCP radio button



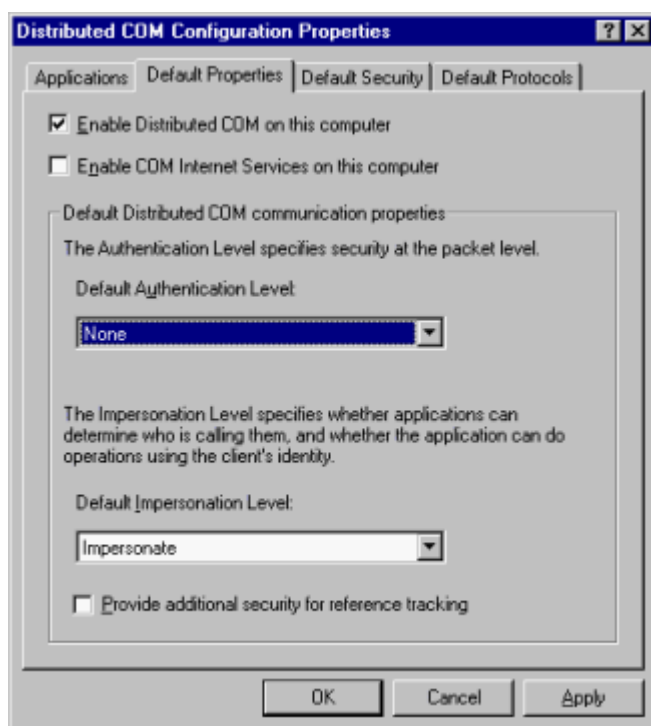
8. By this way are both necessary items - Merz OPC Server and DCOM port inserted into the list of programs and services in the **Exception** tab.



Operation System Windows NT 4.0/2000

Setting up DCOM Properties under Windows NT 4.0/2000

1. Check the **Enable Distributed COM on this computer** in the **Default Properties** tab.
2. Set **Default Authentication Level** to **None**.
3. Set **Default Impersonation Level** to **Impersonate**.
4. Set **Default Access Permission** in the **Default Security** tab. In the set-up dialog select the people who will be authorized to use the services of all the COM servers on the particular computer (these are all the COM servers in set-ups of which this property is not overwritten). The users you select and set to **Allow Access** will be able to access a running COM server.
5. Set **Default Launch Permission** in the **Default Security** tab. In the set-up dialog select the people who will be authorized to access all the COM servers on the particular computer (these are all the COM servers in set-ups of which this property is not overwritten). The users you select and set to **Allow Launch** will be able to start the COM server.



Setting up DCOM for Merz OPC Server Properties under Windows NT 4.0/2000

1. Select the *Merz OPC Server* in **Applications** and click the **Properties** button.
2. Check the **Run Application on this computer** in **Location**.
3. If you want to overwrite the security setting common for the whole DCOM, use the **Security** dialog for the server chosen, where you select **Use Custom Access Permission** or **Use Custom Launch Permission**. The security properties are identical with those described in [Setting up DCOM properties under Windows NT 4.0/2000](#).
4. In the **Identity** tab set the user from whose account it will be possible to start Merz OPC Server (there is no relation to the setting of who can start and access Merz OPC Server). **The Interactive User** or **This User** option can be chosen with Merz OPC Server. The difference is that if you use the Interactive User option, you will not be able to operate Merz OPC Server if nobody has logged on the computer on which it has to be started. The **Launching User** option is not applicable since with this setting more than one Merz OPC Server installation are started for more than one user and only the installation started as the first one has access to the unshared system tools (e.g. serial interface).

Operation System Windows 9x

Setting up DCOM Properties under Windows 9x

1. Check the **Enable Distributed COM on this computer** in the **Default Properties** tab.
2. Set **Default Authentication Level** to **None**.
3. Set **Default Impersonation Level** to **Impersonate**.
4. Set **Default Access Permission** in the **Default Security** tab. In the set-up dialog select the people who will be authorized to use the services of all the COM servers on the particular computer (these are all the COM servers in set-ups of which this property is not overwritten). The users you select and set to **Grant Access** will be able to access a running COM server on the network or start (and access) a local COM server.
5. Check the **Enable Remote Connection** item in the **Default Security** tab.

Setting up DCOM for Merz OPC Server Properties under Windows 9x

1. Select the *Merz OPC Server* in **Applications** and click the **Properties** button.
2. Check the **Run Application on this computer** in **Location**.
3. If you want to overwrite the security setting common for the whole DCOM, use the **Security** tab for the server chosen, where you select **Use Custom Access Permissions**. The security properties are identical with those described in [Setting up DCOM properties under Windows 9x](#).

Client Computer DCOM Setup

Setting up DCOM under Windows 9x/NT 4.0/2000/XP

1. Check the **Enable Distributed COM on this computer** in the **Default Properties** tab.
2. Set the **Default Authentication Level** to **None**, if the OPC Client does not set this value by itself within its initialization.
3. Set the **Default Impersonation Level** to **Impersonate**, if the OPC Client does not set this value by itself within its initialization.

Setting up the Hidden Network Connection under Windows 9x/NT 4.0/2000/XP

1. Select the *Merz OPC Server* in **Applications** and click the **Properties** button.
2. Check the **Run Application on the following computer** in the **Location** tab and select the computer desired. This option results in the situation when the OPC Client, which is trying to start Merz OPC Server locally, will actually start it on the remote computer selected without having to know so. Then all the DCOM for Merz OPC Server settings have to be done on the remote computer selected.