

# VisiWin

## Network configuration



- **VisiWin**
- **VisiWinNET**
  - Common
  - Class Library
  - Systems
  - Tools
- **Technical Informations**
- **Inosoft OPCServer**
  - Basics and helping tools
  - Protocols

# VisiWin

## Network configuration







The contents of this manual must not otherwise be used without explicit written consent from INOSOFT GmbH.

We have checked the contents of this manual for compliance with the described software. Discrepancies can, however, not be ruled out. For this reason we cannot guarantee full compliance. The contents of the manual are subject to regular checking for necessary updates/amendments. Such amendments will be made in the subsequent edition.

Suggestions for improvement are welcome.

## Legend

In order to point out particular paragraphs the following symbols are used in the INOSOFT documentations:

	<b>Attention</b>	Passages with this sign should be read – and observed – with particular attention.
	<b>Hint</b>	Important paragraph “additional information”
	<b>Tip</b>	Many roads lead to Rome; here a shortcut is to be found.
	<b>In work</b>	Functions that are in preparation or already implemented but not yet prepared for documentation.
	<b>Example execute</b>	Instructions to be carried out in an example
	<b>Observe result</b>	Results to be observed with carrying out the exemplary instructions

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INOSOFT GmbH created on

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# Contents

<b>1 Preamble</b> .....	<b>1</b>
<b>2 Introduction</b> .....	<b>2</b>
2.1 Setting up networks under Windows NT / Windows 2000 .....	3
2.1.1 Standard properties.....	3
2.1.2 Standard safety.....	3
2.1.3 Standard protocols .....	4
2.1.4 Applications .....	4
2.2 Setting up networks under Windows XP (SP1) .....	8
2.2.1 Standard properties.....	8
2.2.2 Default COM Security.....	8
2.2.3 Default protocols.....	9
2.2.4 Applications .....	9
2.3 Setting up networks under Windows XP (Service Pack 2).....	13
2.3.1 Default Settings .....	14
2.3.2 COM safety .....	14
2.3.3 Default protocols.....	16
2.3.4 Applications .....	16
2.3.5 Firewall.....	19
2.4 Setting up a VisiWinNET Client under Windows XP SP2.....	21
2.4.1 User administration .....	21
2.4.2 DCOM settings .....	21
2.4.3 Windows Firewall .....	26
2.5 Troubleshooting with DCOM-Settings .....	29

# 1 Preamble

## About this manual

This manual contains specific information on the VisiWinNET alarm system such as (amongst others) the explanation of the involved components, the operating reference of the editor, and the description of the alarm system definitions.

## Questions and Problems

For technical questions and problems please contact your responsible INOSOFT agent or the INOSOFT GmbH Support under +49 (5221) 16 66 02 or email: [Support@INOSOFT.com](mailto:Support@INOSOFT.com)

Frequent questions and problems are dealt with on our homepage under [www.inosoft.com](http://www.inosoft.com)

There you will also find a support area for direct contact with our Main Office.

## 2 Introduction

VisiWinNET allows the projection of distributed applications in a Windows network. For this purpose the VisiWin project administration offers different Client/Server project types. Moreover, it is possible for every project type to set up an OPC server on a remote computer as a data source for the application.

For proper communication within the network the safety rules for the appropriate applications must be configured. When doing this it must be taken into consideration that there are different setting alternatives with different operating systems.

The components to be configured are fundamentally the following:

Component	Application
VisiWinNET Manager	<ul style="list-style-type: none"> <li>• In the Client/Server project type</li> <li>• If a project-spanning user administration was activated</li> <li>• If remote trends are used</li> <li>• If the VisiWin engine itself acts as an OPC server for another application</li> </ul>
OPCServer	<ul style="list-style-type: none"> <li>• If the OPC server in the network runs on another computer</li> </ul>
OPCEnum	<ul style="list-style-type: none"> <li>• If at development time item definitions are to be read from an OPC server that was installed on another computer (browser interface).</li> </ul>

This Help shows the required configuration steps for the Windows XP/Windows 2000 and Windows NT operating systems.



The following documentation contains a tested configuration for the most widely used network protocol (TCP/IP). It does not lay claim to completeness, and in no way guarantees conformity with current and future safety regulations as regularly published and changed by Microsoft.

In plain language: visualization computers implemented in a corporate network are as vulnerable as any desktop computer. If necessary such subsystems must be secured against virus or worm attacks or unauthorized access by additional protective measures.

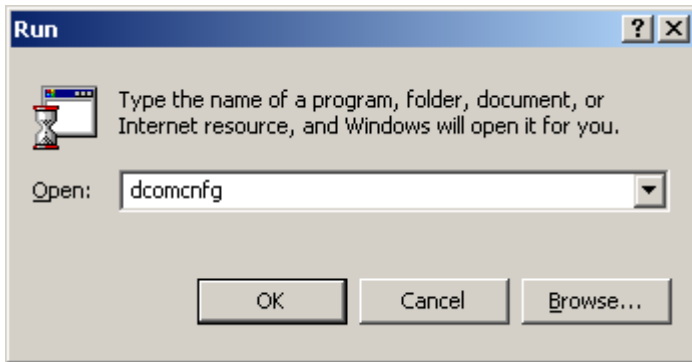
The "Windows XP-Service Pack 2" subject shows clearly the intensification of the conflict between vulnerability and running capability of existing applications. New safety mechanisms for the operating systems were implemented that in some cases brought existing networks to a standstill after installation because the old safety settings were deactivated or manipulated.

## 2.1 Setting up networks under Windows NT / Windows 2000



For Windows NT the configuration introduced here refers to Service Pack 6.

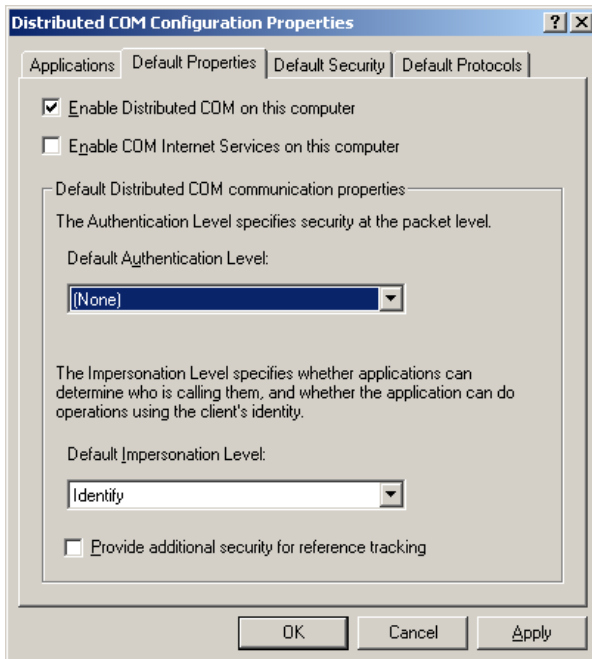
For the communication between Server and Client via DCOM to be used different settings have to be made with the computers involved in the network. For this purpose Windows provides the „dcomcnfg.exe“ program. The program can be accessed via „Start -> Run -> dcomcnfg“.



The DCOM settings described below are dependent on the network used (LAN,WAN, RAS).

### 2.1.1 Standard properties

The application is divided into four main areas that can be accessed via the tabs at the top edge.



DCOM must be activated on all participating computers.

The standard authentication level must be set to (None).

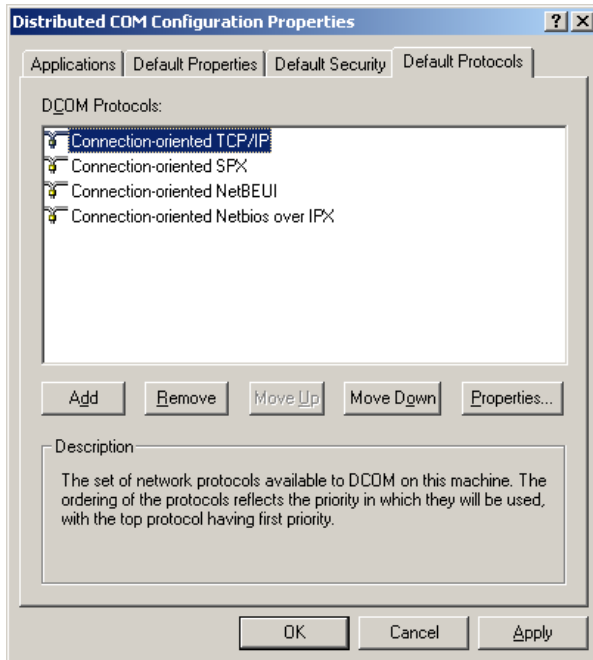
The standard identity change level must be set to "Identify".

This dialog must always be also activated with the Client party.

### 2.1.2 Standard safety

Here the standard safety for COM connections can be set (see Applications: Safety).

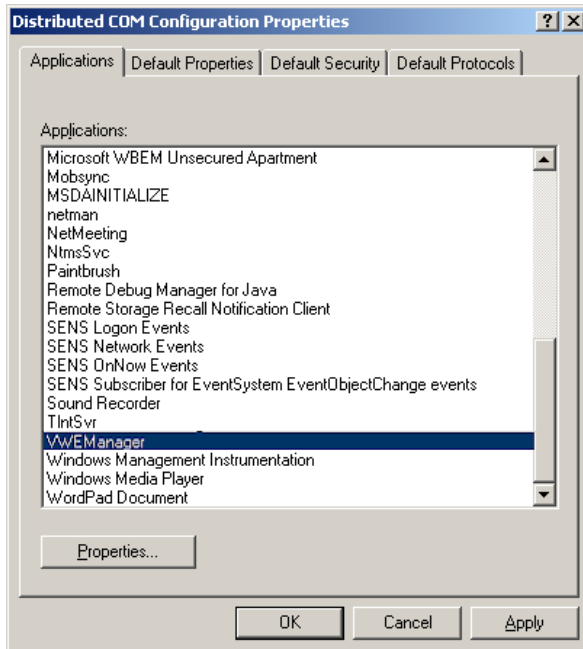
### 2.1.3 Standard protocols



In this dialog the protocols are determined that DCOM is to use for the communication. In the process the protocol in the top position has priority. That place should be taken by TCP/IP. The order can be changed via the "Up" and "Down" buttons.

Should TCP/IP not be shown in this list it must be added to the DCOM protocols list via the "Add" button.

### 2.1.4 Applications



Via this dialog the special DCOM properties of a particular application are configured.

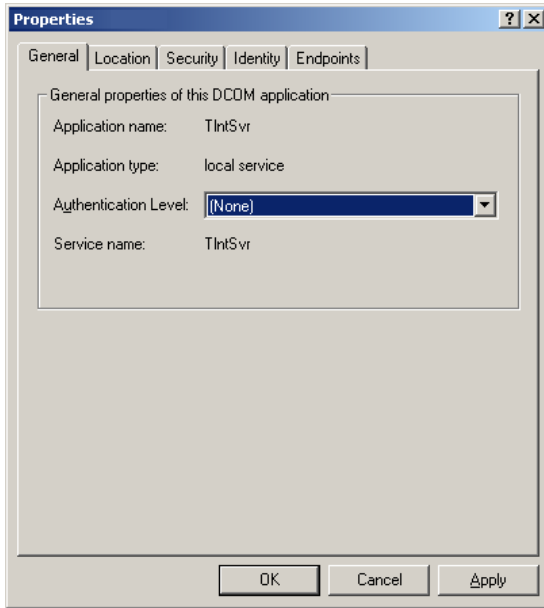
With a Client/Server application the COM server must be selected from the list. Via the properties button the DCOM properties of the COM server are accessed.



The COM server is responsible for all Client/Server applications on a computer, and therefore is only once required and configured for DCOM per system.

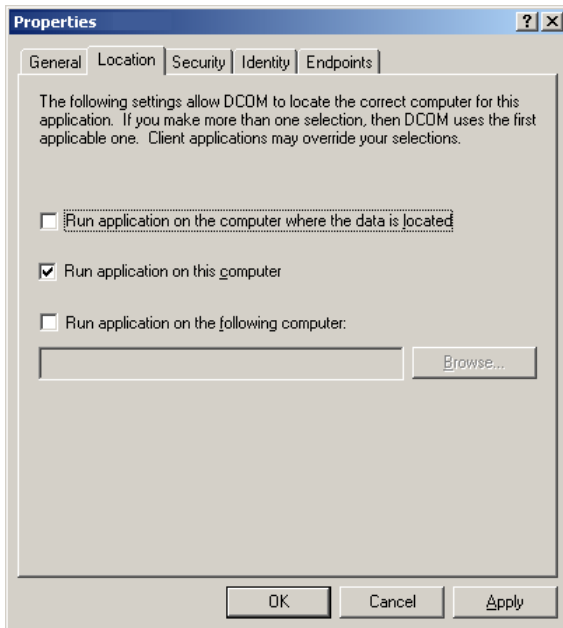
The DCOM properties configuration of the COM server is, again, divided into different dialogs.

### General



In this dialog the authentication level must be set to (None).

### Location



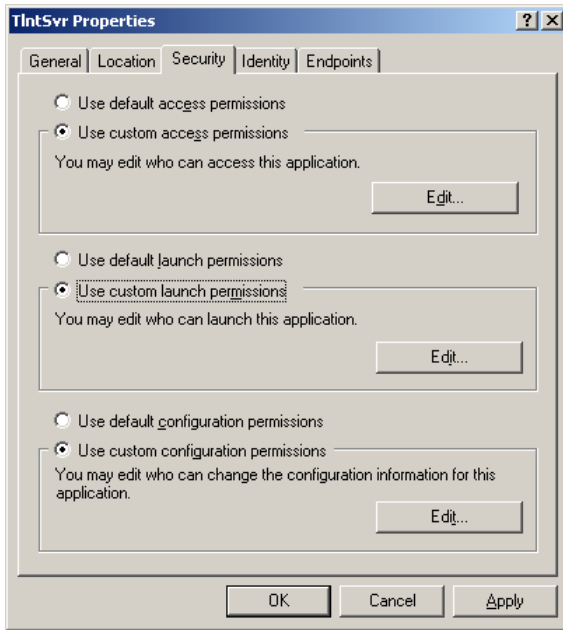
The location of a COM server is always "This computer".

This dialog is not relevant for the clearance of a COM server.

Only old client applications require an entry here if they are not in a position to directly address a computer in the network.

## Safety

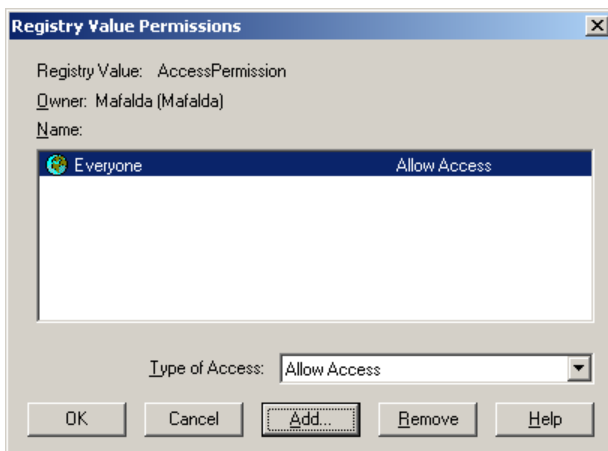
Under Windows 9x/ME only the "User-defined access rights" can be allocated here.



In this dialog user-defined access and start rights for the COM server must be allocated.

The appropriate rights are allocated via the "Edit" button.

The configuration rights are irrelevant, and need not be changed.

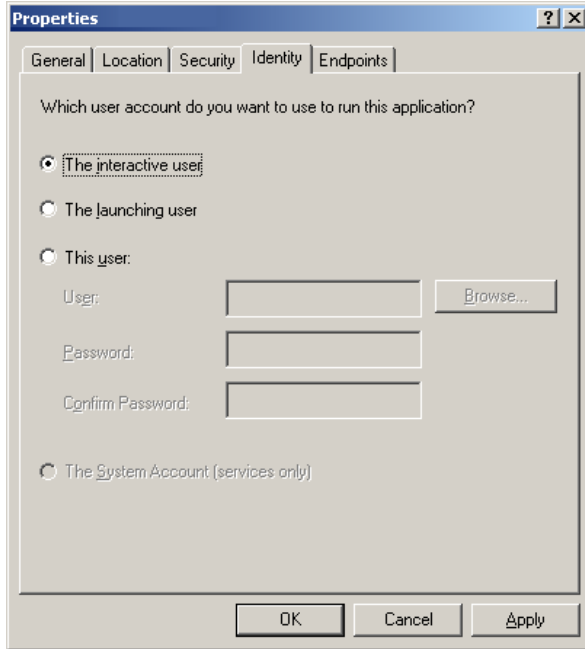


New users can be added, and appropriate rights allocated via the "Add" button.

The following settings are to be made:

- Access right:
- All (allow access)
- Start right:
- All (allow start)

### Identity

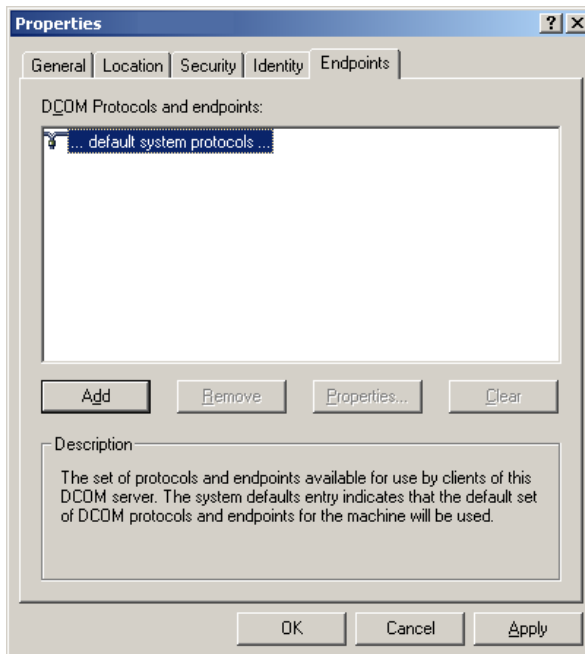


The identity must be set to "Interactive user".

The started OPC server is only available to further clients as interactive users.

All other settings start the server in an own process area. A further client application then starts the server anew and the clients do not use the same information.

### End points



Here Standard system protocols... should be set. With this the COM server uses the protocols set in the Standard protocols dialog (see 2.2.3 Standard protocols).

## 2.2 Setting up networks under Windows XP (SP1)

For the communication between Server and Client via DCOM to be used different settings have to be made to the DCOM configuration with the computers involved in the network.

Under Windows XP the DCOM configuration can be set within the component services. The component services can be opened via the system control (Start menu→Control panel→selection of list entry "Administrative tools"→selection of list entry "Component services").

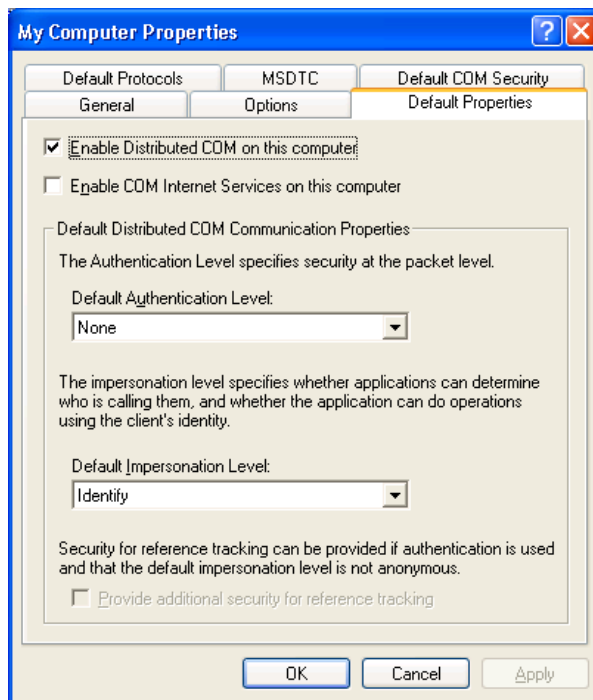
The DCOM settings described below are dependent on the used network (LAN,WAN, RAS).

### See also:

Troubleshooting with DCOM-Settings

### 2.2.1 Standard properties

To open the standard properties navigate the component services tree as follows: "Console tree→Component services→Computer". Via the "Properties" context menu of the "My Computer" list entry in the r.h. list the appropriate dialog is opened.



DCOM must be activated on all participating computers.

The Default authentication level must be set to (None).

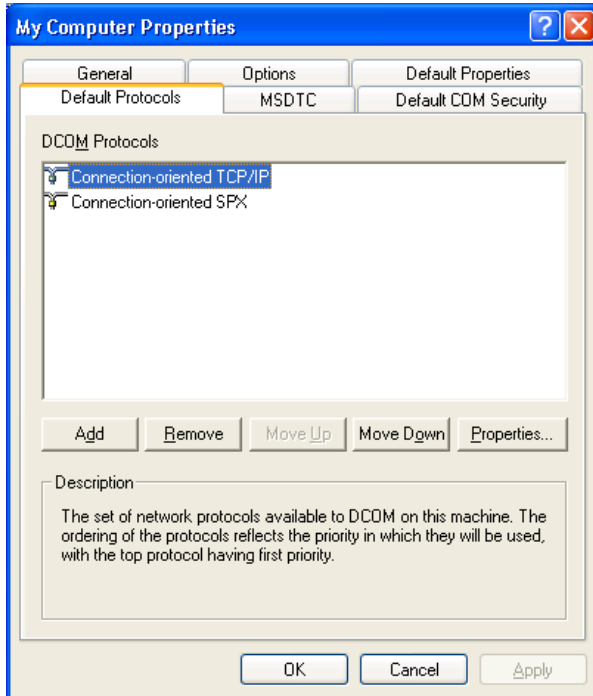
The default Impersonation level must be set to "Identify"..

This dialog must always also be activated with the client party.

### 2.2.2 Default COM Security

Here the standard safety for COM connections can be set (see Applications: Safety).

### 2.2.3 Default protocols

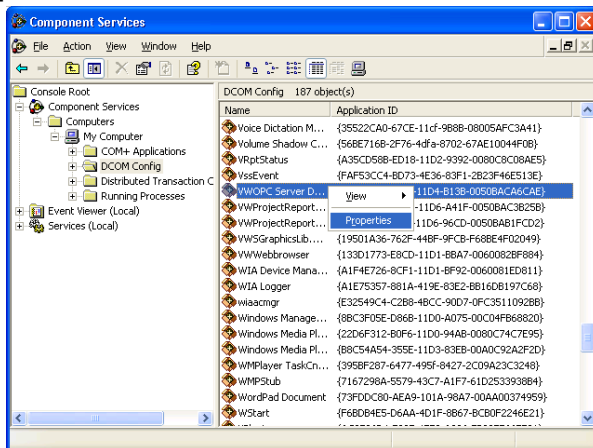


In this dialog the protocols are determined that DCOM is to use for the communication. In the process the protocol in the top position has priority. That place should be taken by TCP/IP. The order can be changed via the "Up" and "Down" buttons.

Should TCP/IP not be shown in this list it must be added to the DCOM protocols list via the "Add" button.

After this the dialog can be closed.

### 2.2.4 Applications



Back in the main window of the component services the individual applications can be configured via the entry "DCOM Config" in the tree.

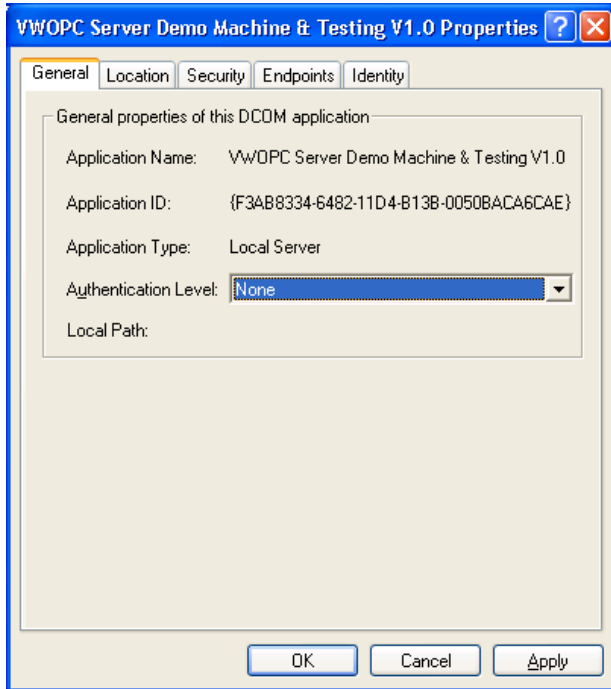
With a Client/Server application the COM server must be selected from the list. Via the "Properties" context menu the appropriate properties dialog for the COM server is opened.



The COM server is responsible for all Client/Server applications on a computer, and therefore is only once required and configured for DCOM per system.

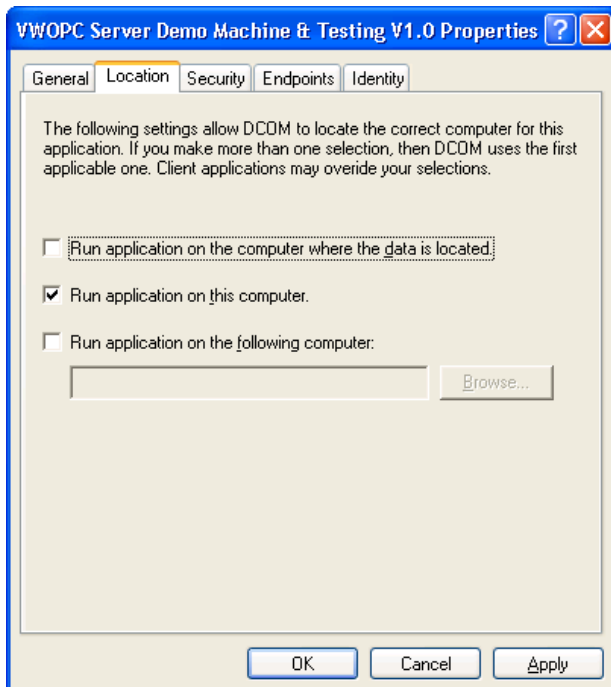
The DCOM properties configuration of the COM server is, again, divided into different dialogs.

### General



In this dialog the authentication level must be set to (None).

### Location

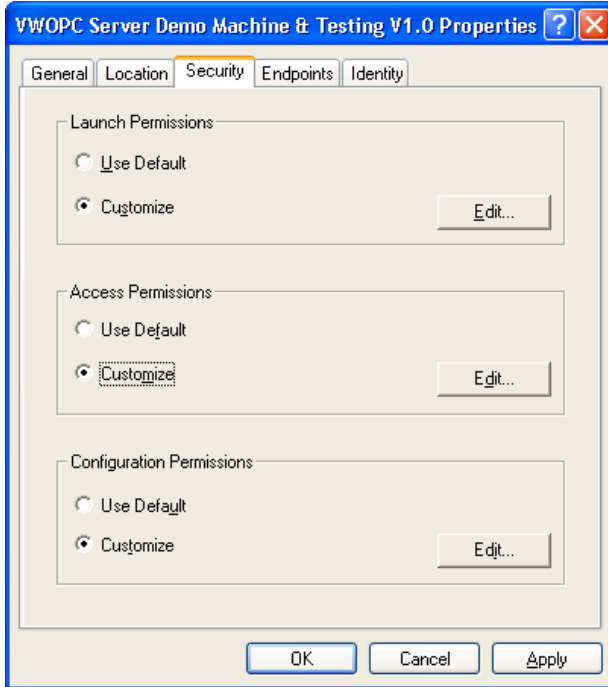


The location of a COM server is always "This computer".

This dialog is not relevant for the clearance of a COM server.

Only old client applications require an entry here if they are not in a position to directly address a computer in the network.

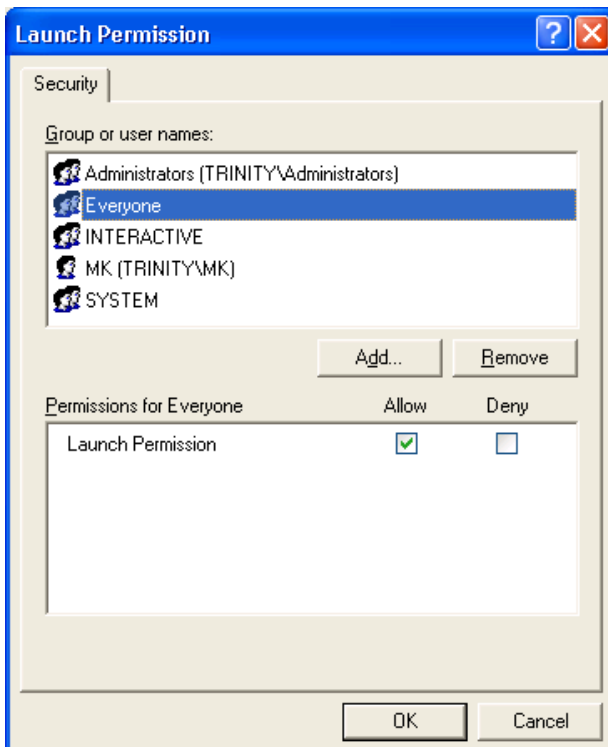
## Security



In this dialog user-defined access and start rights for the COM server must be allocated.

The appropriate rights are allocated via the "Edit" button.

The configuration rights are irrelevant, and need not be changed.

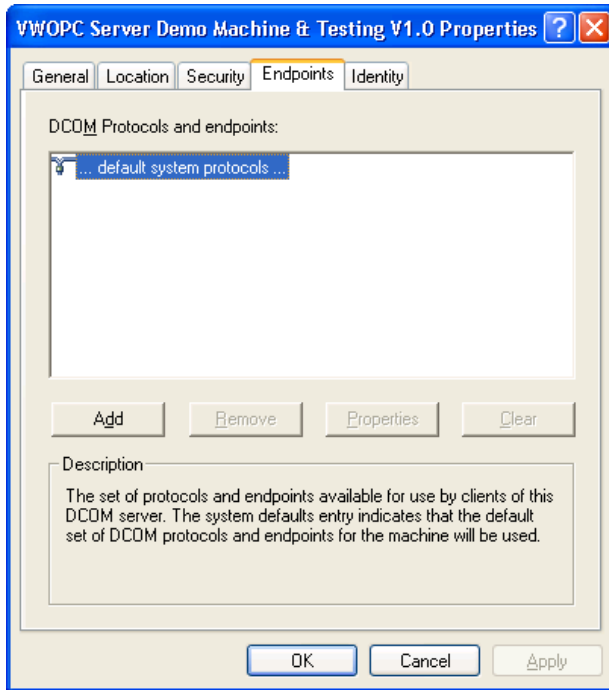


New users can be added, and appropriate rights allocated via the "Add" button.

The following settings are to be made:

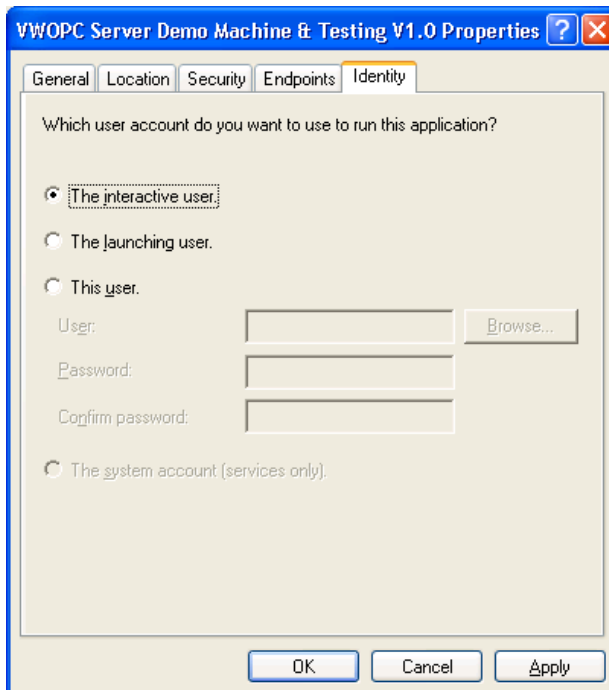
- Access right:
- Everyone (allow access)
- Start right:
- Everyone (allow start)

### End points



Here Standard system protocols... should be set. With this the COM server uses the protocols set in the Standard protocols dialog (see 2.2.3 Standard protocols).

### Identity



The identity must be set to "Interactive user".

The started OPC server is only available to further clients as interactive users.

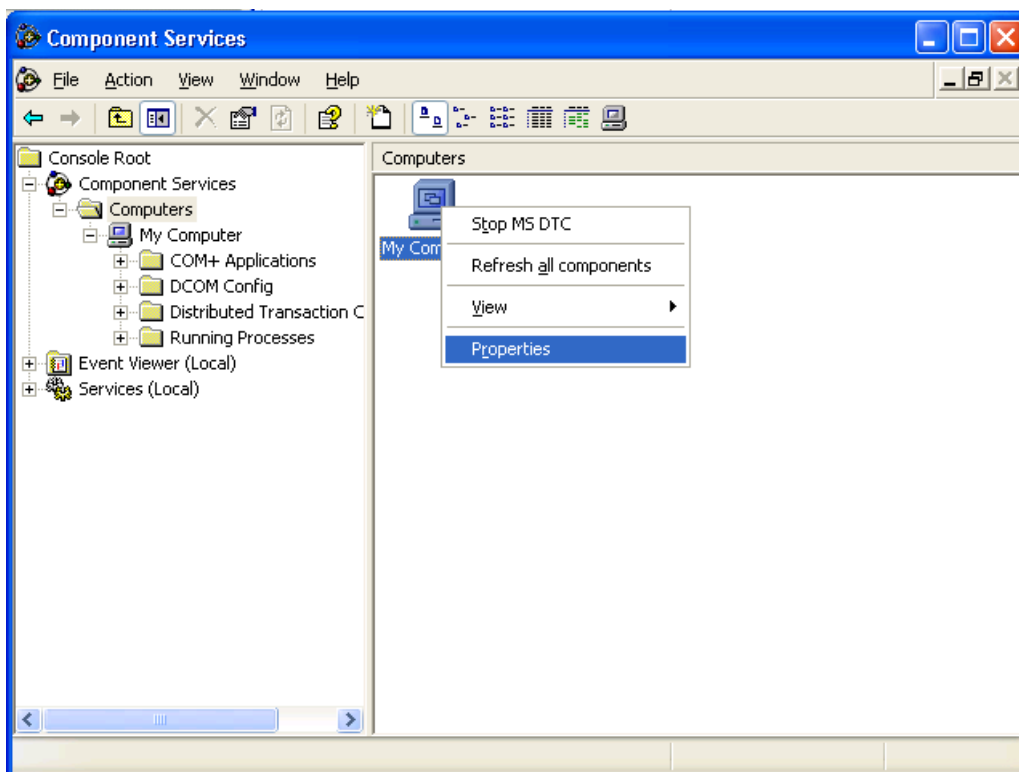
All other settings start the server in an own process area. A further client application then starts the server anew and the clients do not use the same information.

## 2.3 Setting up networks under Windows XP (Service Pack 2)

For the communication between Server and Client via DCOM to be used different settings have to be made to the DCOM configuration with the computers involved in the network.

In addition, under XP SP2 the involved software components must be released with the firewall that is activated as a standard.

Under Windows XP the DCOM configuration can be set within the component services. The component services can be opened via the system control (Start menu→Control Panel→selection of list entry "Administrative Tools"→selection of list entry "Component services").



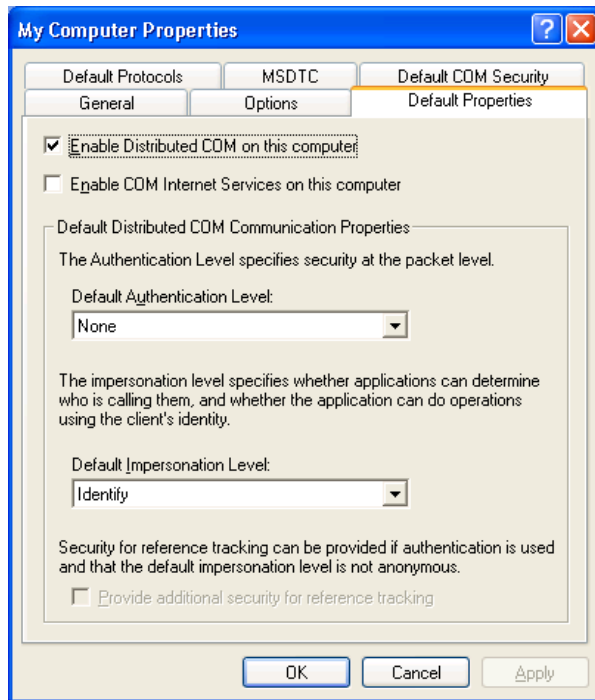
The DCOM settings described below are independent from the used network (LAN,WAN, RAS). Standardeigenschaften

### See also:

Troubleshooting with DCOM-Settings

### 2.3.1 Default Settings

To open the standard properties navigate the component services tree as follows: "Console Root→Component services→Computer". Via the "Properties" context menu of the "My Computer" list entry in the r.h. list the appropriate dialog is opened.



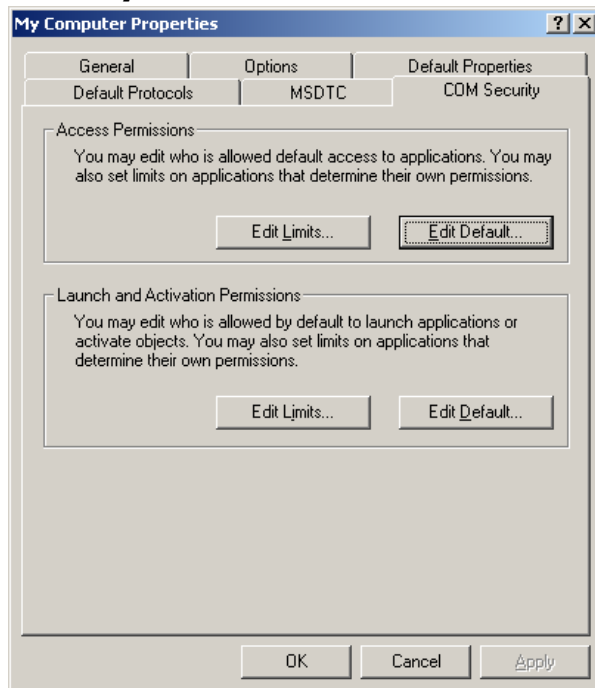
DCOM must be activated on all participating computers.

The default authentication level must be set to (None).

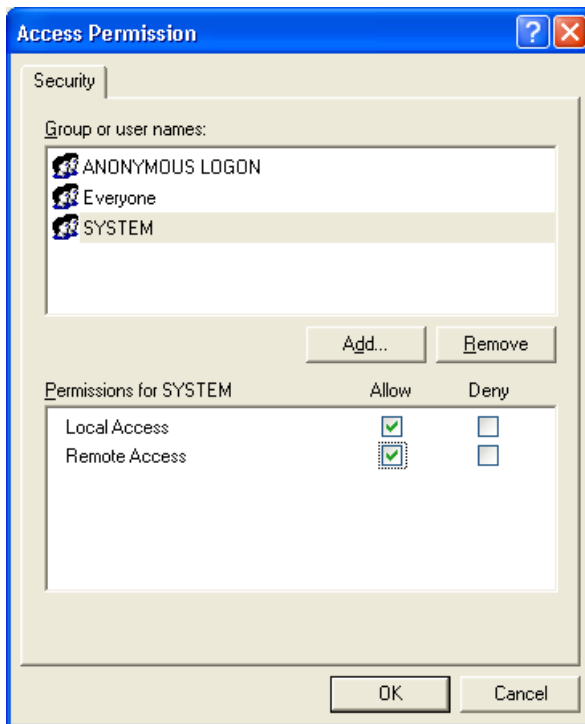
The default Impersonation level must be set to "Identify"..

This dialog must always also be activated with the client party.

### 2.3.2 COM safety



The dialog contains four buttons. Every button opens a dialog to set the required rights.



The settings shown are to be made in all four dialogs.

The following users are to be provided with all rights each:

“ANONYMOUS”

“Everyone”

“System”

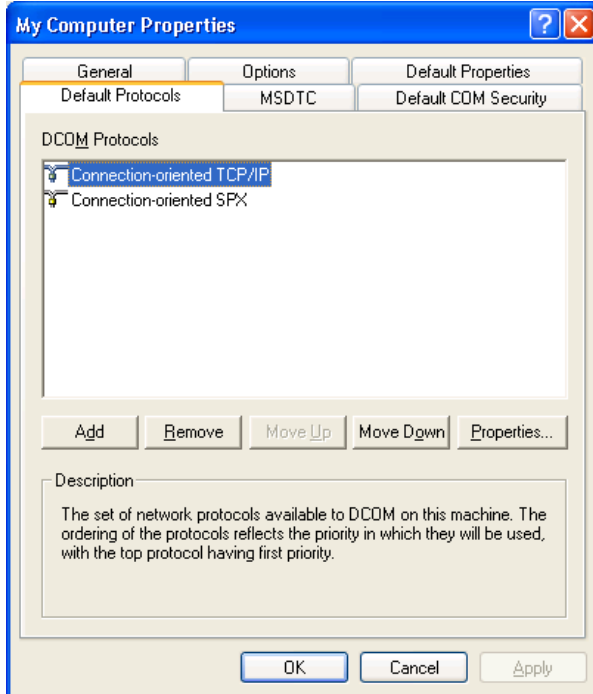
Every user must allow local as well as remote access. Within the dialogs for the start rights the local start as well as the remote start are to be activated, too.



A user not shown in the list is added in the following way:

- Click the “Add” button to open the “Add user” dialog.
- Click the “Extended” button.
- Click the now visible “Search now” button.
- Select the missing user from the list.

### 2.3.3 Default protocols

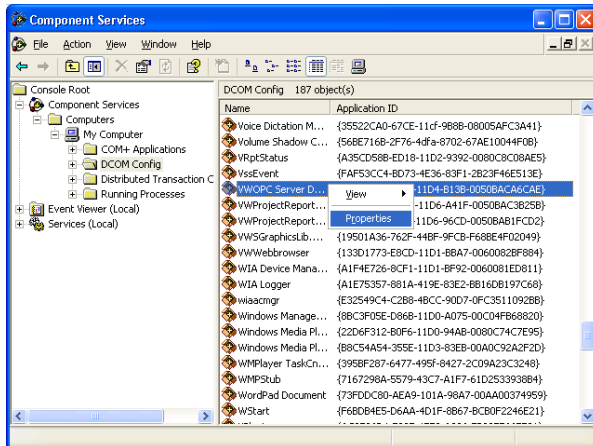


In this dialog the protocols are determined that DCOM is to use for the communication. In the process the protocol in the top position has priority. That place should be taken by TCP/IP. The order can be changed via the "Up" and "Down" buttons.

Should TCP/IP not be shown in this list it must be added to the DCOM protocols just via the "Add" button.

After this the dialog can be closed.

### 2.3.4 Applications



Back in the main window of the component services the individual applications can be configured via the entry "DCOM configuration" in the tree.

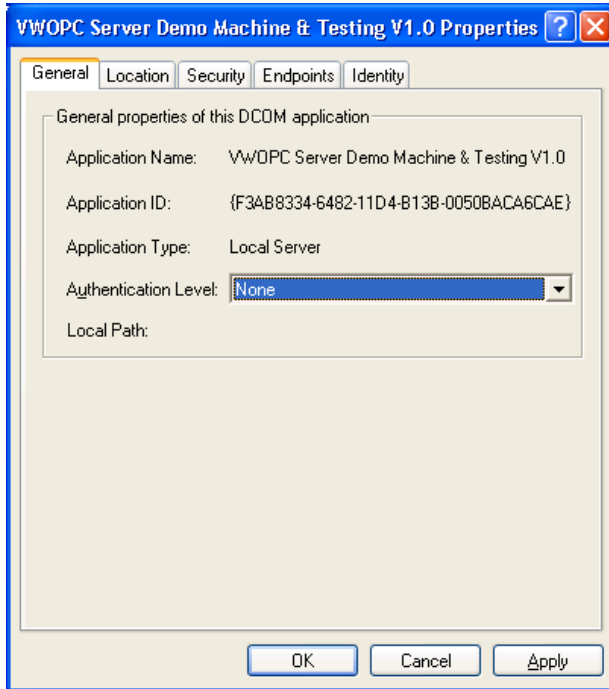
With a Client/Server application the COM server must be selected from the list. Via the "Properties" context menu the appropriate properties dialog for the COM server is opened.



The COM server is responsible for all Client/Server applications on a computer, and therefore is only once required and configured for DCOM per system.

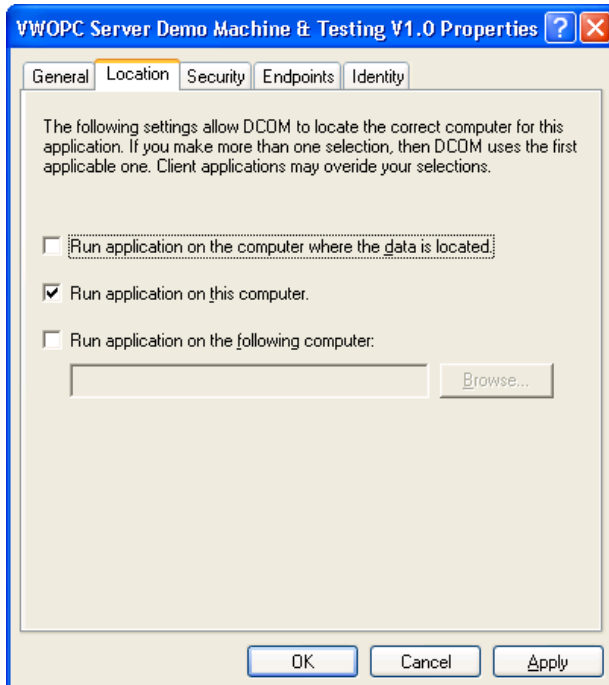
The DCOM properties configuration of the COM server is, again, divided into different dialogs.

### General



In this dialog the authentication level must be set to (None).

### Location

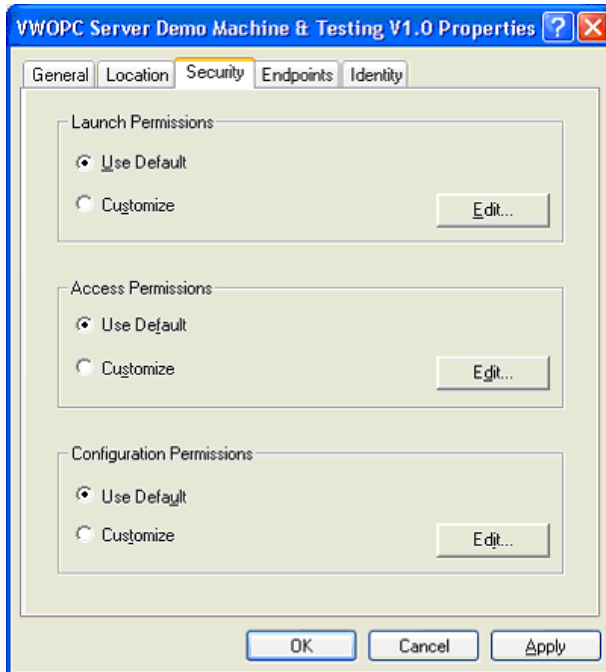


The location of a COM server is always "This computer".

This dialog is not relevant for the clearance of a COM server.

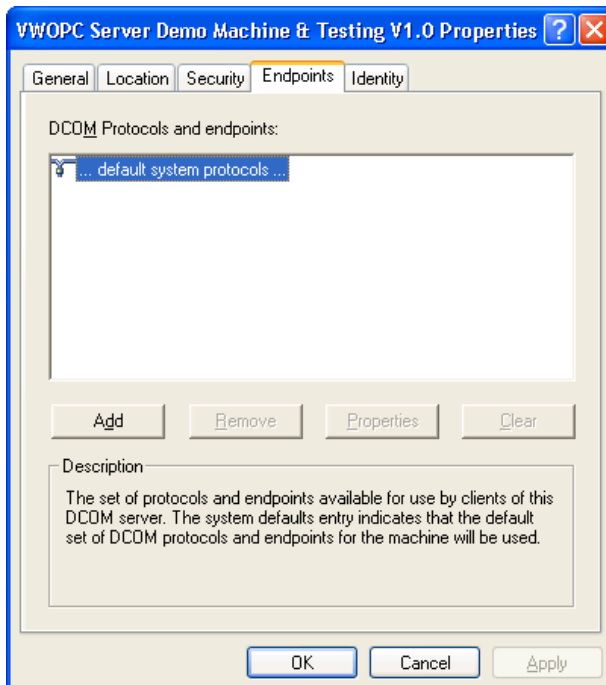
Only old client applications require an entry here if they are not in a position to directly address a computer in the network.

### Security



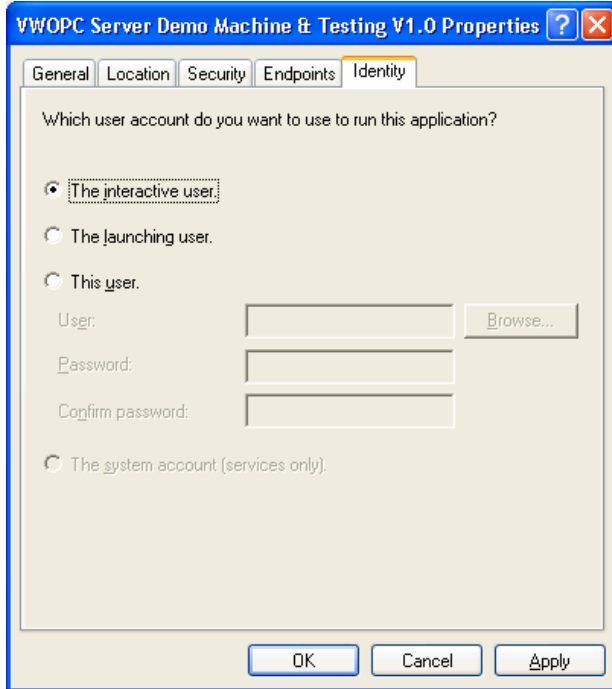
In this dialog it is necessary to make sure that the COM Server uses the previously set standard rights. All configuration settings must be set to "Standard".

### End points



Here Standard system protocols... should be set. With this the COM server uses the protocols set in the Standard protocols dialog (see 2.2.3 Standard protocols).

## Identity



The identity must be set to “Interactive user”.

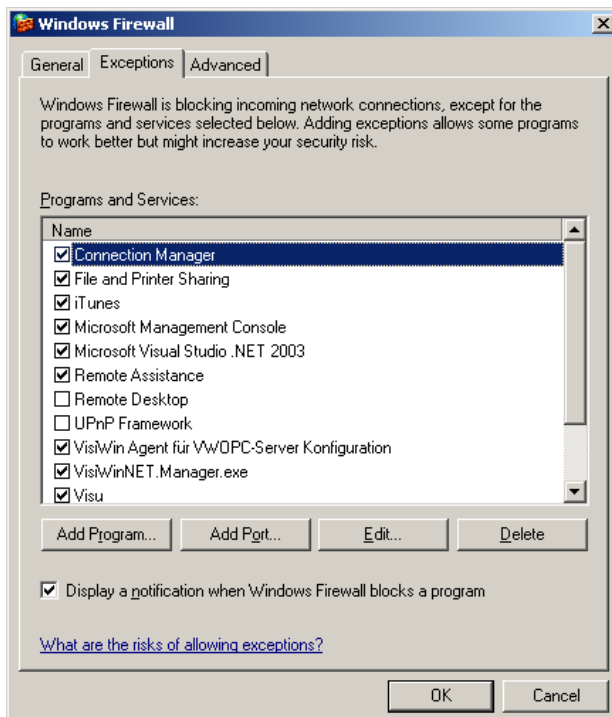
The started OPC server is only available to further clients as interactive users.

All other settings start the server in an own process area. A further client application then starts the server anew and the clients do not use the same information.

### 2.3.5 Firewall

As announced earlier further settings need to be made with the Windows XP Firewall.

The appropriate configuration dialog is to be activated via the “Windows Firewall” menu entry in the system control.

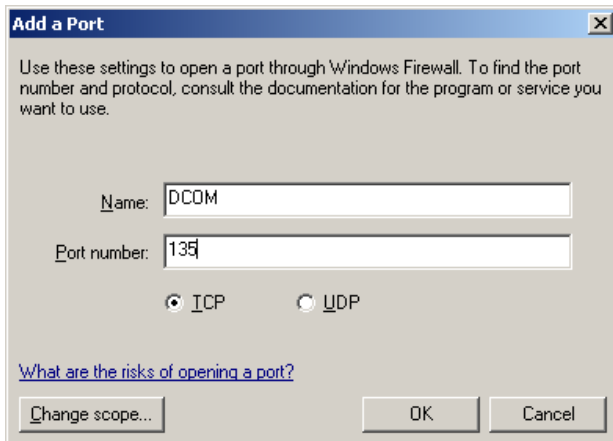


The “Exceptions” index card allows the user to determine programs and ports that are not to be supervised by the firewall.

Via the “Program” button a dialog is opened that allows selecting individual programs not to be supervised by firewall functions.

Through the “Search” button individual application on the hard disc can be searched for. Typical applications to be selected here are::

- OPCEnum.exe (Windows\System32)
- OPCServer.exe (Installation index)
- VWNManager (VisiWin-Installation index)

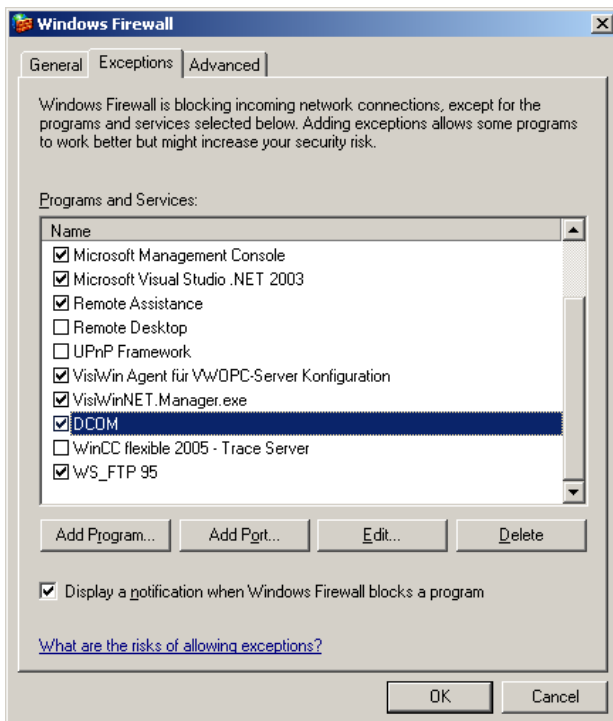


The "Port" button opens a dialog allowing to release a port. Here the following settings are to be made:

Name: DCOM

Port number: 135

The TCP option is to be activated.



After finished entry the dialog presents itself as follows. Individual releases can be temporarily activated or deactivated via the control boxes. If the network function is no longer required on the computer the releases can be reassessed via the "Delete" button.



With the first start of a DCOM access the firewall demands a confirmation of the allowed access.

## 2.4 Setting up a VisiWinNET Client under Windows XP SP2

The changed security principles in Windows XP SP2 require changes in the DCOM settings and the user administration for the Client-Server operation of VisiWinNET.

### See also:

Troubleshooting with DCOM-Settings

### 2.4.1 User administration



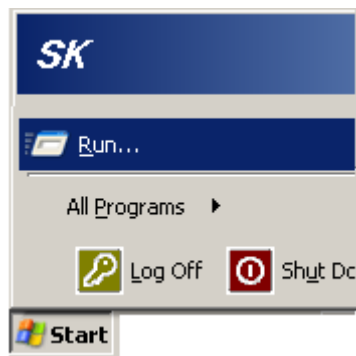
**The setting "admit everyone/everything" no longer works in Windows XP SP2. Therefore, the user logged on with the Client must be installed on the Server computer, too, with an identical password.**

### 2.4.2 DCOM settings

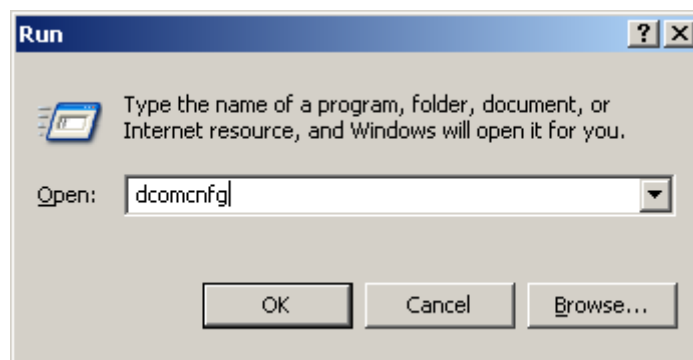
In the DCOMCNFG.EXE program the general DCOM properties are now set under "Component services\Computer\Desktop" with the r.h. mouse button under properties:

Click on **Start** in the task bar

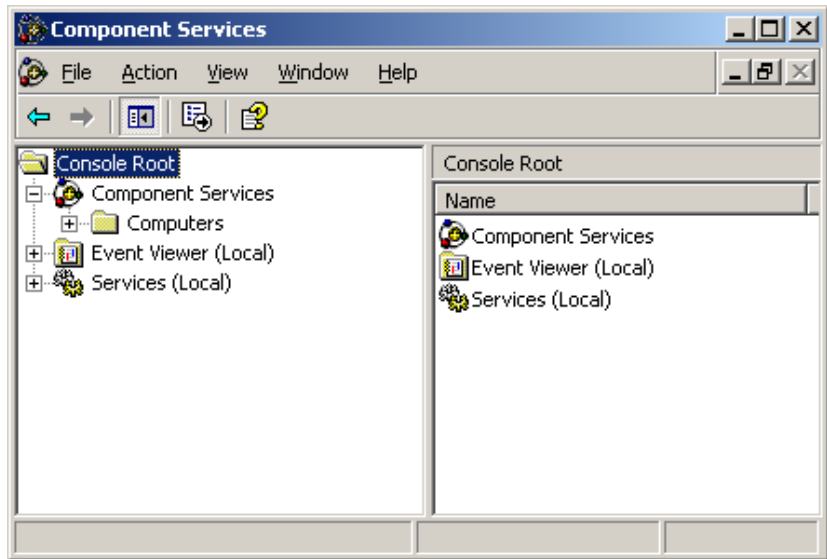
Click on menu item **Execute**



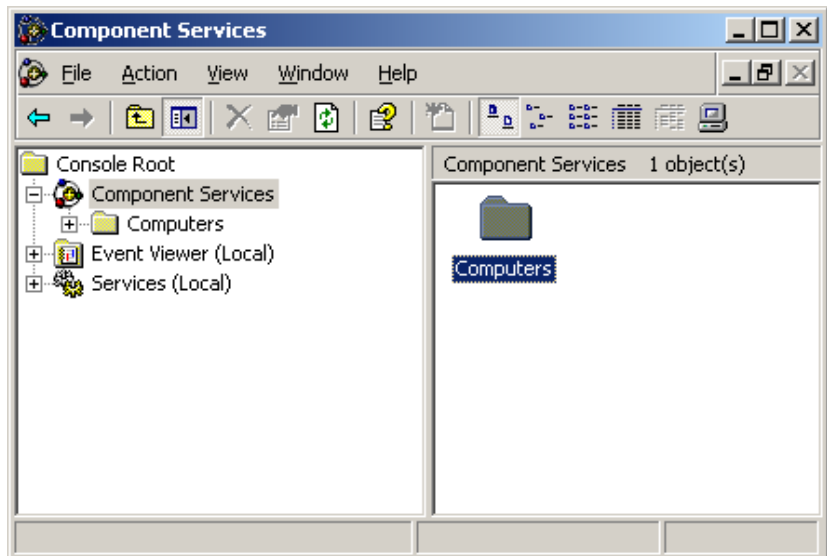
Enter **dcomcnfg** abd confirm with **OK**



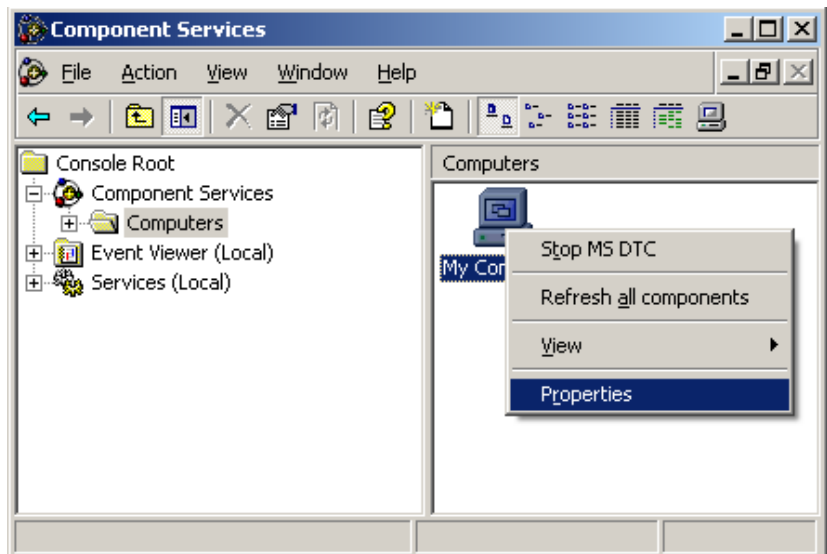
Double-click on **Component services** in r.h. window area



Double-click on **Computer** in r.h. window area

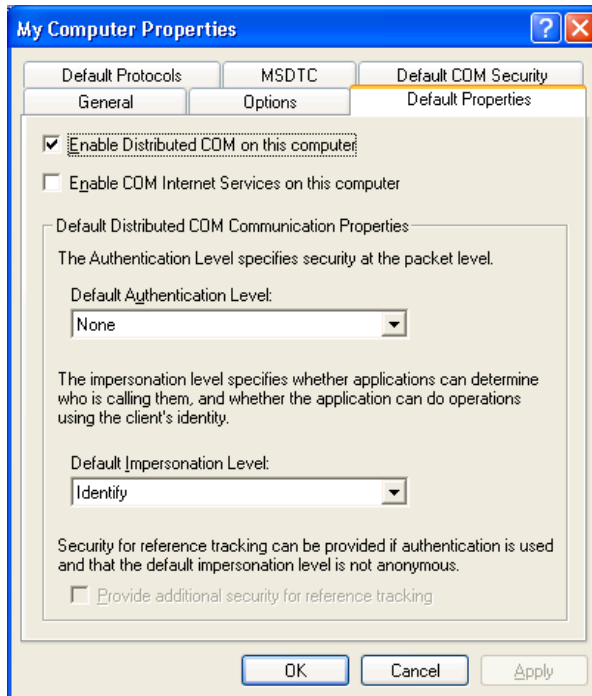


Click with r.h. mouse button on **Desktop**  
Click on menu item **Properties**



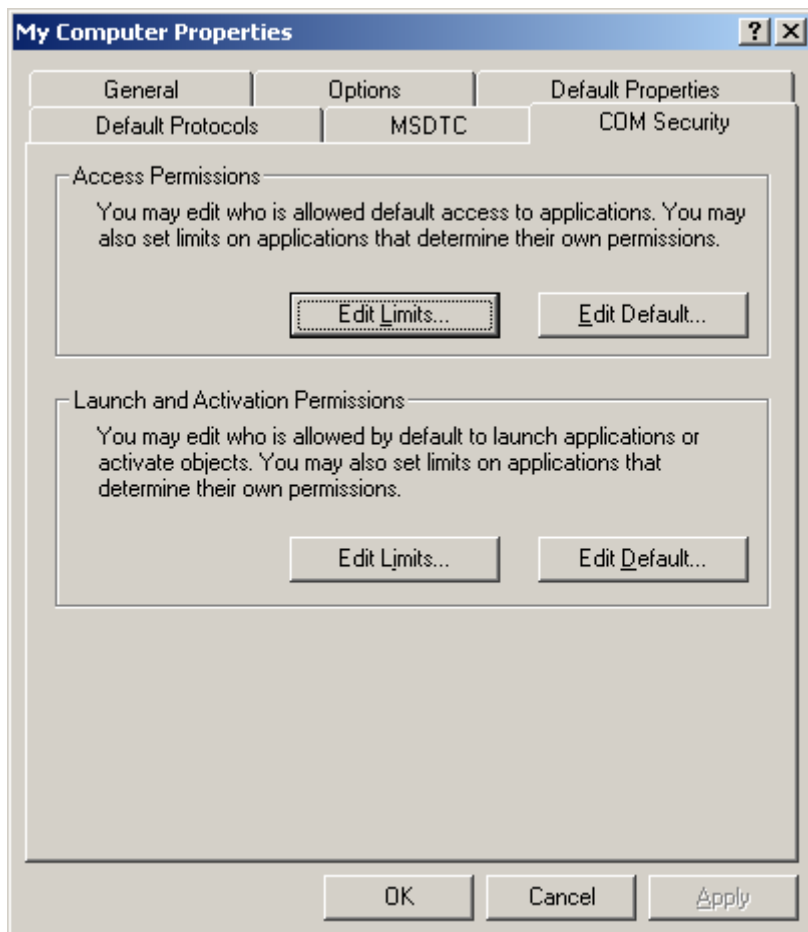
With the standard properties the **Default authentication level** must be set to **“None”**, and the **default impersonation level** to **“Identify”**.

Furthermore, **DCOM** must be activated on this computer.



Under **COM Security** in the **Access rights**

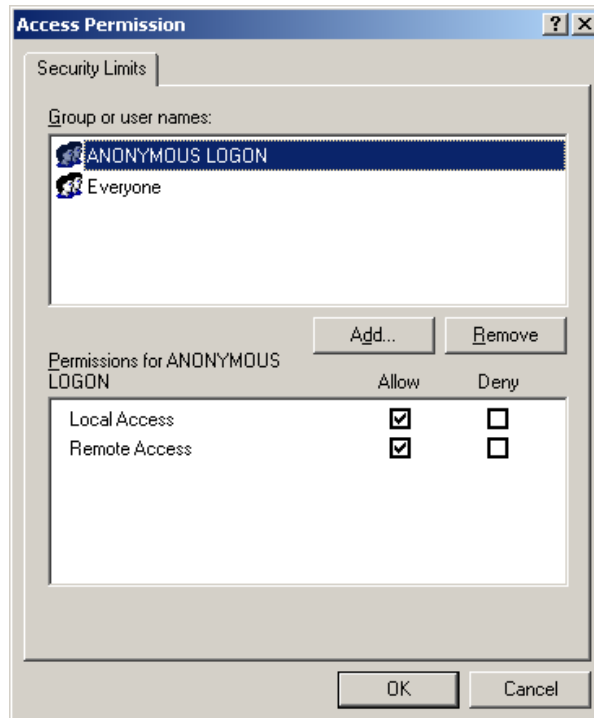
- edit the **Limits**
- edit the **Standard**



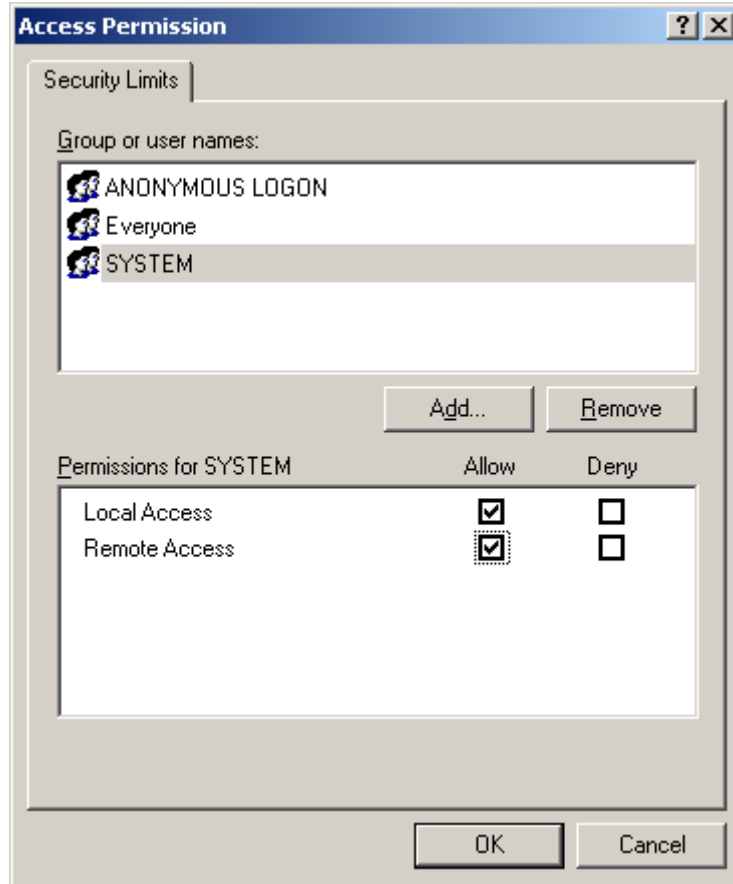
For the **Everybody** group all **Access** must be **allowed**

The **Anonymous logon** must be added if not already present

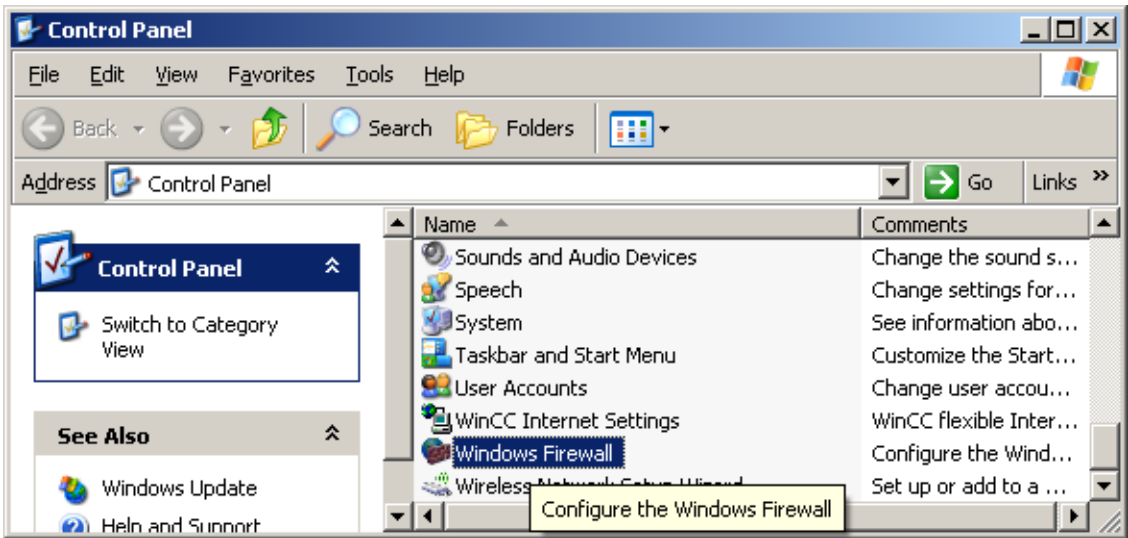
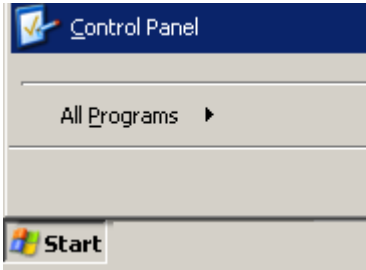
There, too, **allow all access**



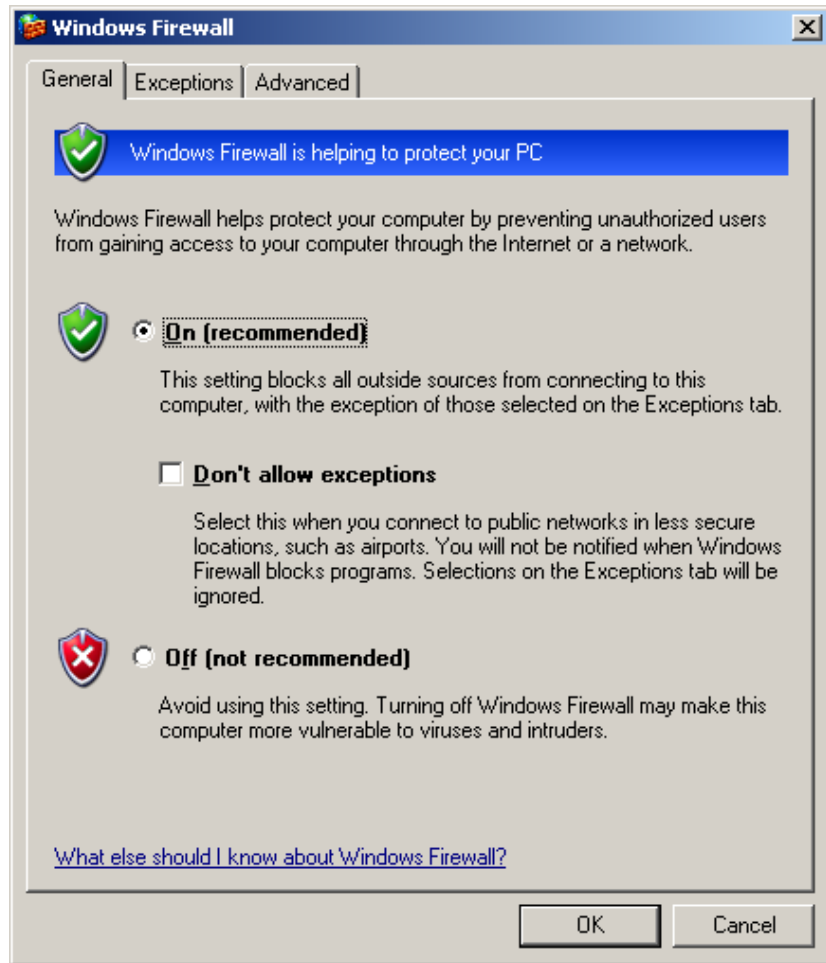
For the **SYSTEM** group  
**Remote access** must  
 be **allowed**, too



### 2.4.3 Windows Firewall

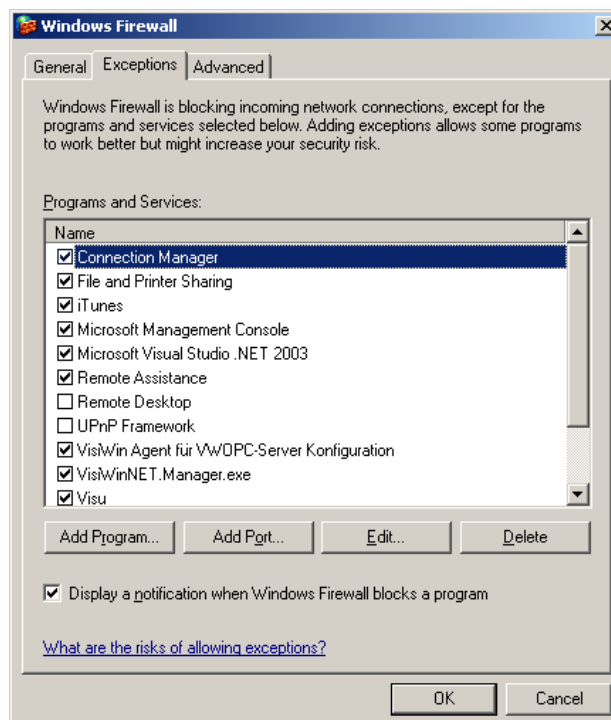


Either the Firewall now activated as a standard must be completely deactivated (**Inactive** option) ...

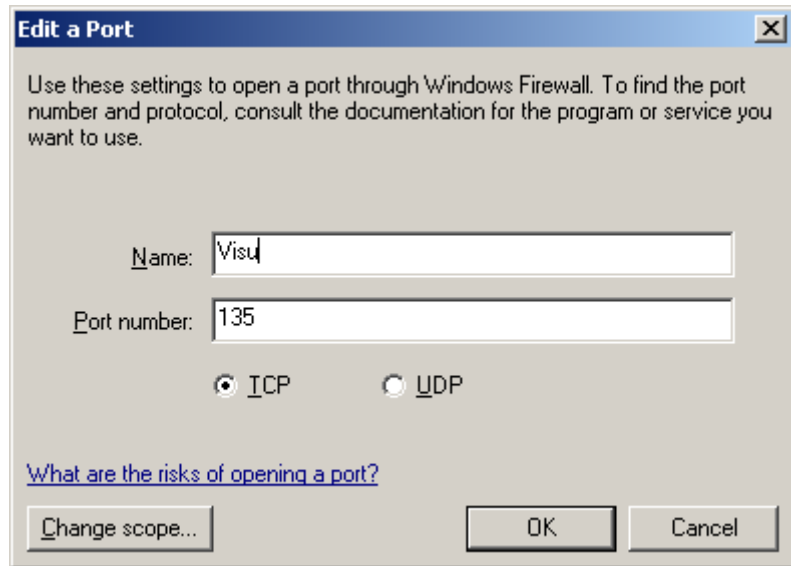


... or the TCP Port 135 and the visualization program must be released from the blockade by the Firewall.

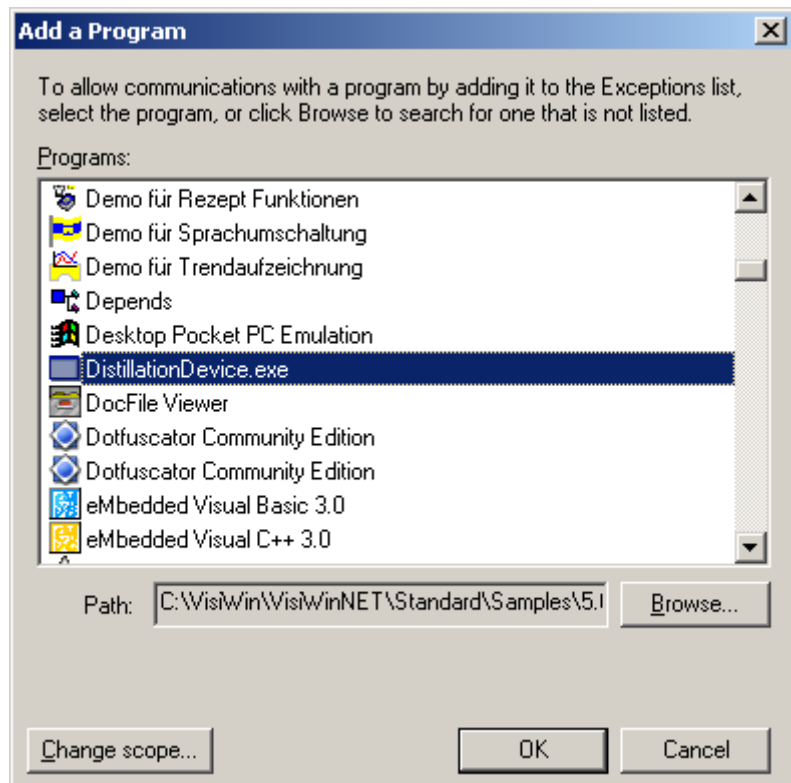
On the **Exceptions** tabulator confirm the **Program** and **Port** buttons



Name is any (here: Visu), enter port number **135**, select **TCP** option



Select the visualization program with the **Browse** button



## 2.5 Troubleshooting with DCOM-Settings

It can occur with some systems that parts of the DCOM settings are not displayed under Windows XP or settings are not permanently stored. Apparently, the „MS DTC“ Windows service is affected by the installation of programs. For these cases Microsoft has published a patch instruction under the link

<http://support.microsoft.com/?scid=kb%3Ben-us%3B891801&x=15&y=9>