

**PDA**

**Process  
Data  
Acquisition**

**PDA  
Remote Post-Processing  
Feature**

User Manual  
Date: juli 2 2002 Version 1.50



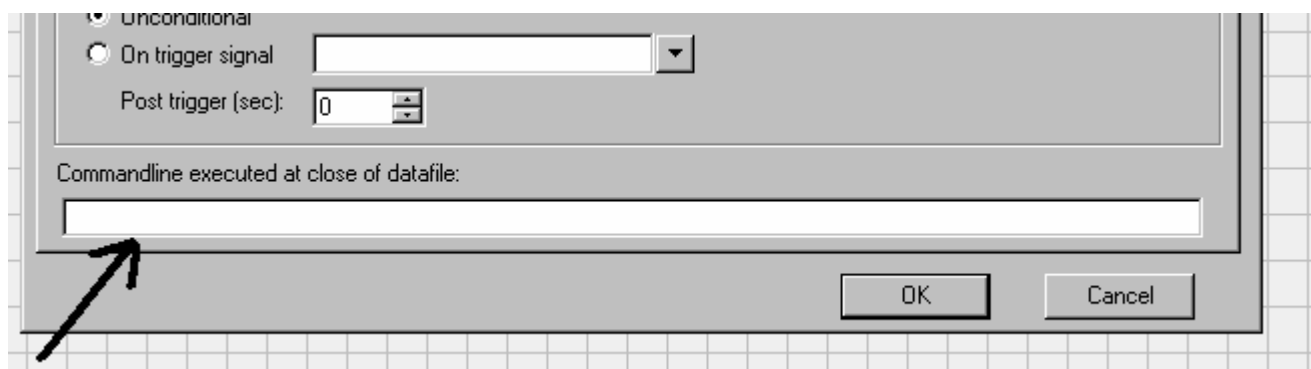
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# 1 Introduction

## 1.1 The “Commandline” edit field in the PDA Trigger dialog

Since version 3.61 of PDA, a new edit field is added to the Trigger Dialog. In this edit field the user can enter a command line which is executed at close of each data file.

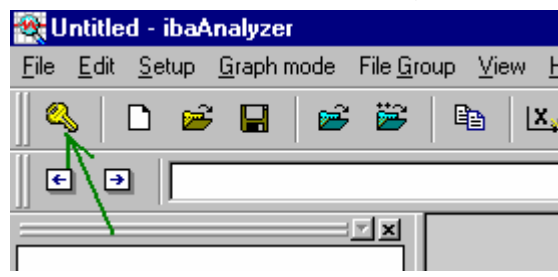
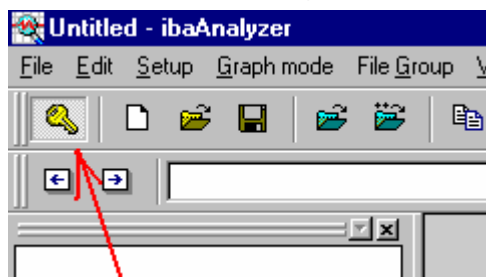


This command line makes it possible to start a post-processing task for each stored data file. The original idea behind was to start the ibaAnalyzer at close of each data file. Lets have a look at following example:


`c:\ibaAnalyzer\ibaAnalyzer.exe "%f" c:\pdo\mypdo.pdo /reuse`

This command line starts the ibaAnalyzer executable from the directory c:\ibaAnalyzer. The ibaAnalyzer gets 3 parameters :

- the “%f” parameter is the placeholder for the last closed data file. The double quotes are needed if the file name or directory name contains spaces.
- the optional second parameter is the pdo analysis file the ibaAnalyzer has to open to start the analysis
- the optional “/reuse” switch tells the ibaAnalyzer to go in a re-entrant state. Since the user want to see the new recorded data in a already opened ibaAnalyzer, the ibaAnalyzer must be made re-entrant by the “/reuse” switch. Once the ibaAnalyzer is started in the “reuse” mode an additional button appears on the ibaAnalyzer toolbar. This button acts as a toggle switch: Pushing this button **disables** the ibaAnalyzer to be updated externally with new data. Pushing the button again **enables** the external update again.



## 1.2 The remote start need

Since  mostly sells its measurement systems with an online and offline PC , iba developed 2 tools to start the post-processing on a remote PC using Microsoft® Distributed COM (DCOM)

The purpose was to start the ibaAnalyzer on the offline PC each time a data file was closed on the online PDA PC. The 2 tools, ibaRun and ibaAppStarter, are explained in the next chapter.

## 2 The remote start tools : ibaRun and ibaAppStarter

### 2.1 What is DCOM ?

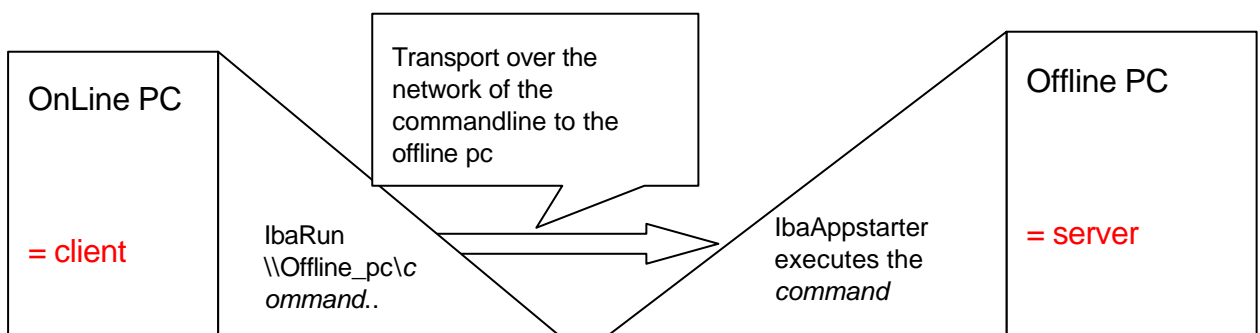
COM (Component Object Model) is the basis of OLE. COM is the standard by which software components can make use of or be used by one another, integrating features among disparate applications. For example, a user can include an illustration created with one application in a document created with another application. By linking the illustration in the document to the illustration's source file, the document's illustration is updated as its source file is edited and the link between the two is updated.

Distributed Component Object Model is network OLE that is, COM with a longer "wire." DCOM is a new technology built into Windows NT 4.0 Workstation that enables software components to work with each other across a network or across the Internet. It is a fast transport for distributed applications built with COM.

With DCOM, indirect connection (a client connecting to a server to connect to another server) is eliminated. After the pointer is established at the target server, DCOM allows the pointer to be given to the client enabling direct client/server communication. DCOM eliminates the need for objects to implement the communication protocols for accessing remote objects. DCOM centrally handles the communication for all objects.

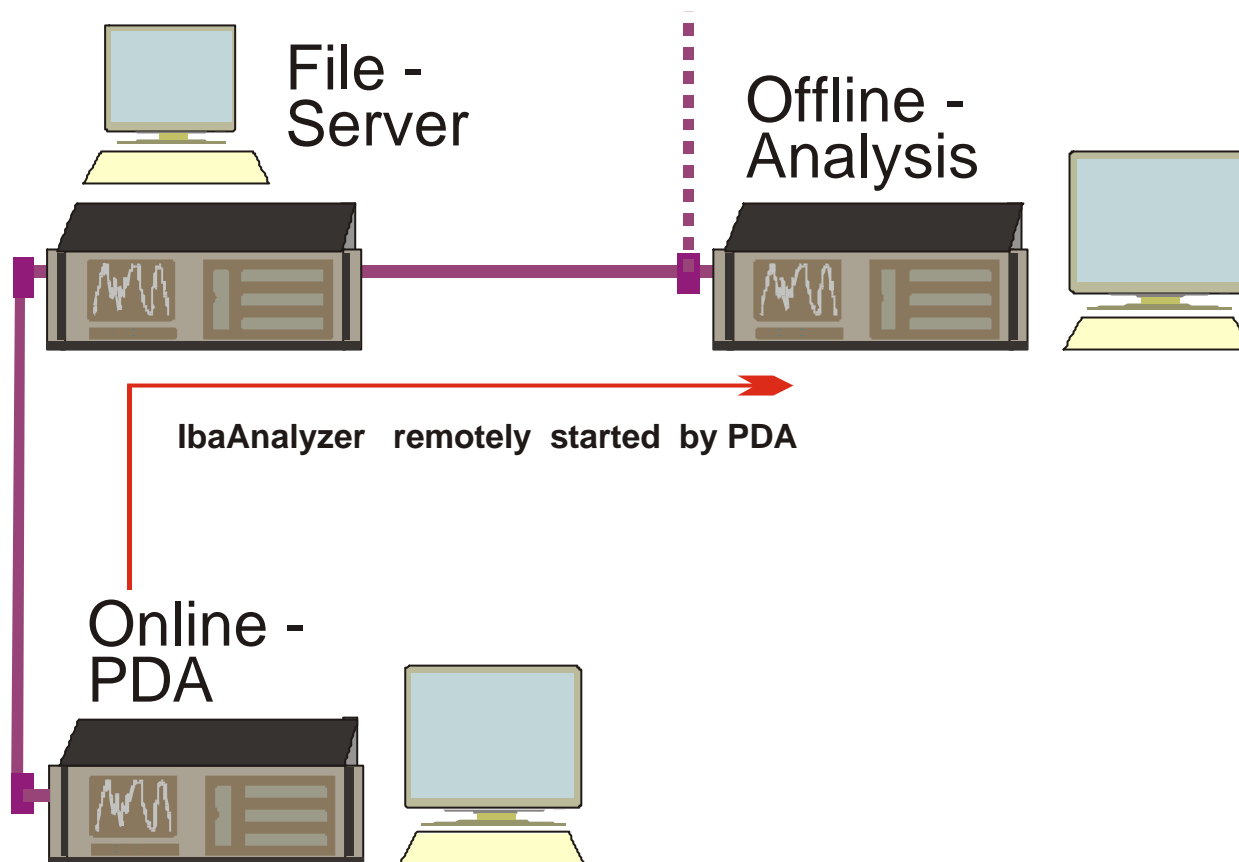
### 2.2 ibaRun and ibaAppstarter working together:

From the 2 utilities ibaRun is the client part and ibaAppStarter is the server part. IbaRun will start ibaAppStarter on the remote computer and send a commandline to ibaAppstarter . ibaAppstarter will execute this commandline on the remote machine.

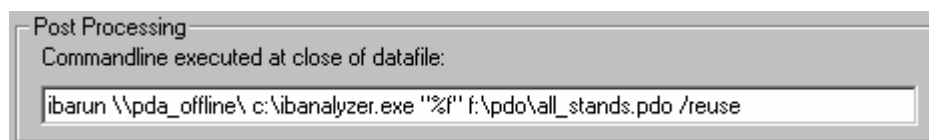


### 2.3 Some practice :

Consider the configuration in following figure which is very common for an iba Measurement System.



The PDA Online machine has to start the ibaAnalyzer on the Offline machine. In the PDA triggerdialog of the online machine, following string is entered.



This commandline which is executed at close of every data file starts the ibaRun program on the online machine. Since ibaRun is copied in the windows system directory by the setup program it can be run without an absolute path The ibaRun program gets following parameter string

**\\pda\_offline\ c:\ibanalyzer.exe "%f" f:\pdo\all\_stands.pdo /reuse**

IbaRun parses the string to first determine the PC name on which the ibaAppstarter has to be started. In this example the PC name is "pda\_offline".

The whole string after the separating "\ " is send to the ibaAppstarter to be executed locally on the remote computer

Thus on the remote computer ibaAppstarter will execute

**c:\ibanalyzer.exe "%f" f:\pdo\all\_stands.pdo /reuse** which is almost exactly the same command as already explained in chapter 1.1

## 2.4 Some points to keep in mind

- The data files must be stored on a data volume accessible with the same driveletter by both online and offline PC. PDA on the online machine replaces the “%” parameter with the full path to the last closed data file. This full path and filename is transferred to the offline PC. If Both online and offline PC’s have access to a common file server storing the data file on the server is the most suitable solution.  
Both on- and offline must have the same driveletter mapped on the same share on that particular server.  
If the system only consist of a online and offline system there might be a problem to find a shared drive accessible from both PC’s under the same driveletter.  
In this case the “**subst**” command can help.  
Suppose the data files are stored on the physical drive D: on the online machine which is shared over the network as \\pda\_online\dat\_drive.  
Mapping this drive on the offline machine as Z: makes the data files accessible for the offline machine under Z:\.  
On the online PC executing the command “**subst z: d:\**” will create a substituted Z: drive that will make the data files also accessible under Z:\ for the online PC .
- Network accessibility:  
DCOM can use any transport protocol, including TCP/IP, UDP, IPX/SPX and NetBIOS.  
But both client and target machine must run the same protocol.  
It is necessary that both PC’s can access each resources.
- DCOM security:  
In order to start a program on another computer, the client PC ( in our case the offline machine) must have a user account on the target machine. If both PC’s are logged on to the same domain the security is handled by the Windows NT domain controller.  
If both PC’s resides in a different workgroup or domain the client PC must have a user account on the target PC with the same username and password as actually logged on.

## 3 Installation of the remote start tools

### 3.1 Run the setup.exe from the distribution media on both PC's

Run the setup.exe procedure on both client and target PC.

First of all both exe files are copied to the windows system directory.

Then the ibaAppstarter utility is registered.

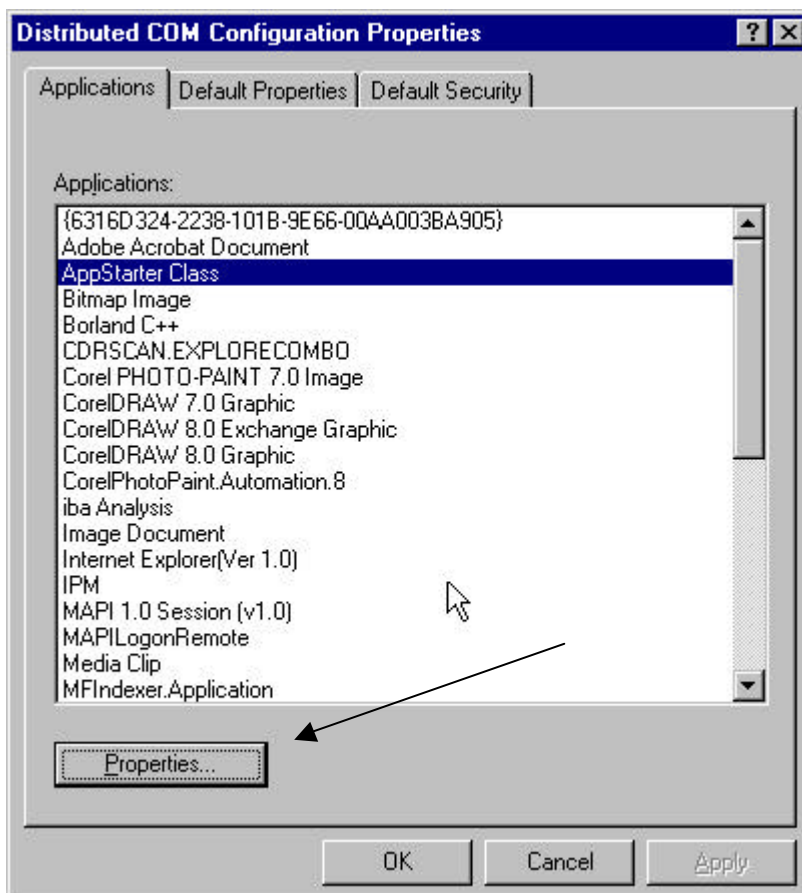
Then there is a difference between Windows NT 4.0 and Windows XP.

#### Windows NT 4.0

The DCOMCNFG tool is started.

Here a manual intervention from the user is needed.

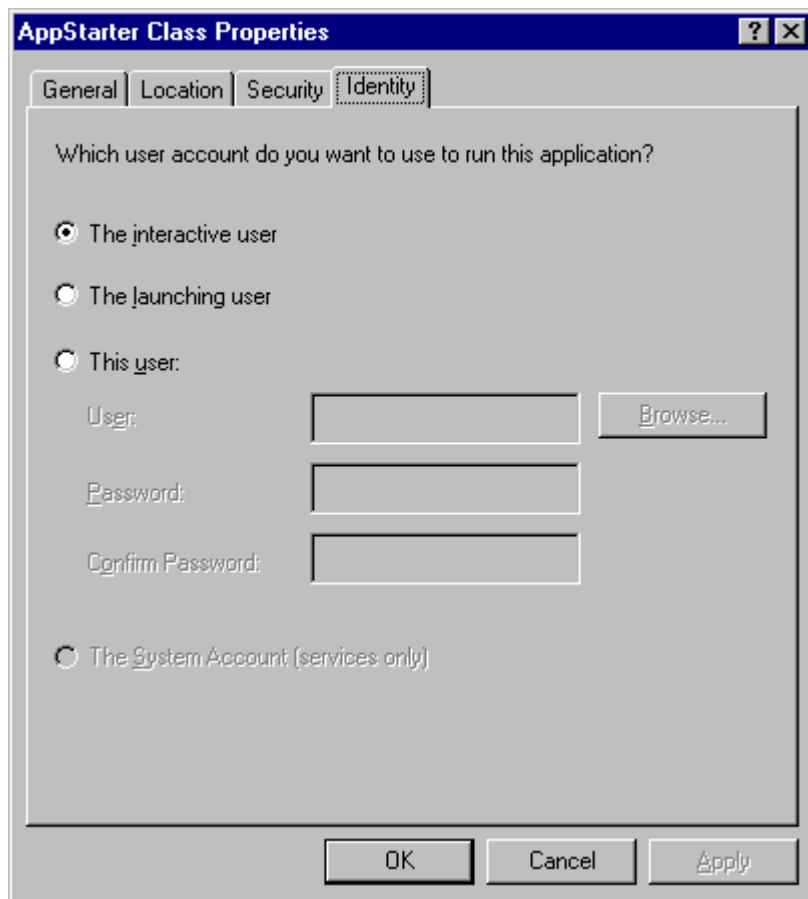
Select the "ibaAppStarter class" item and push the properties button.



Now a tab window appears.

Select the "Identity " tab and select "The interactive User" option.

Hit the OK button twice to leave the DCOMCNFG utility



This is the end of the installation

### Windows XP

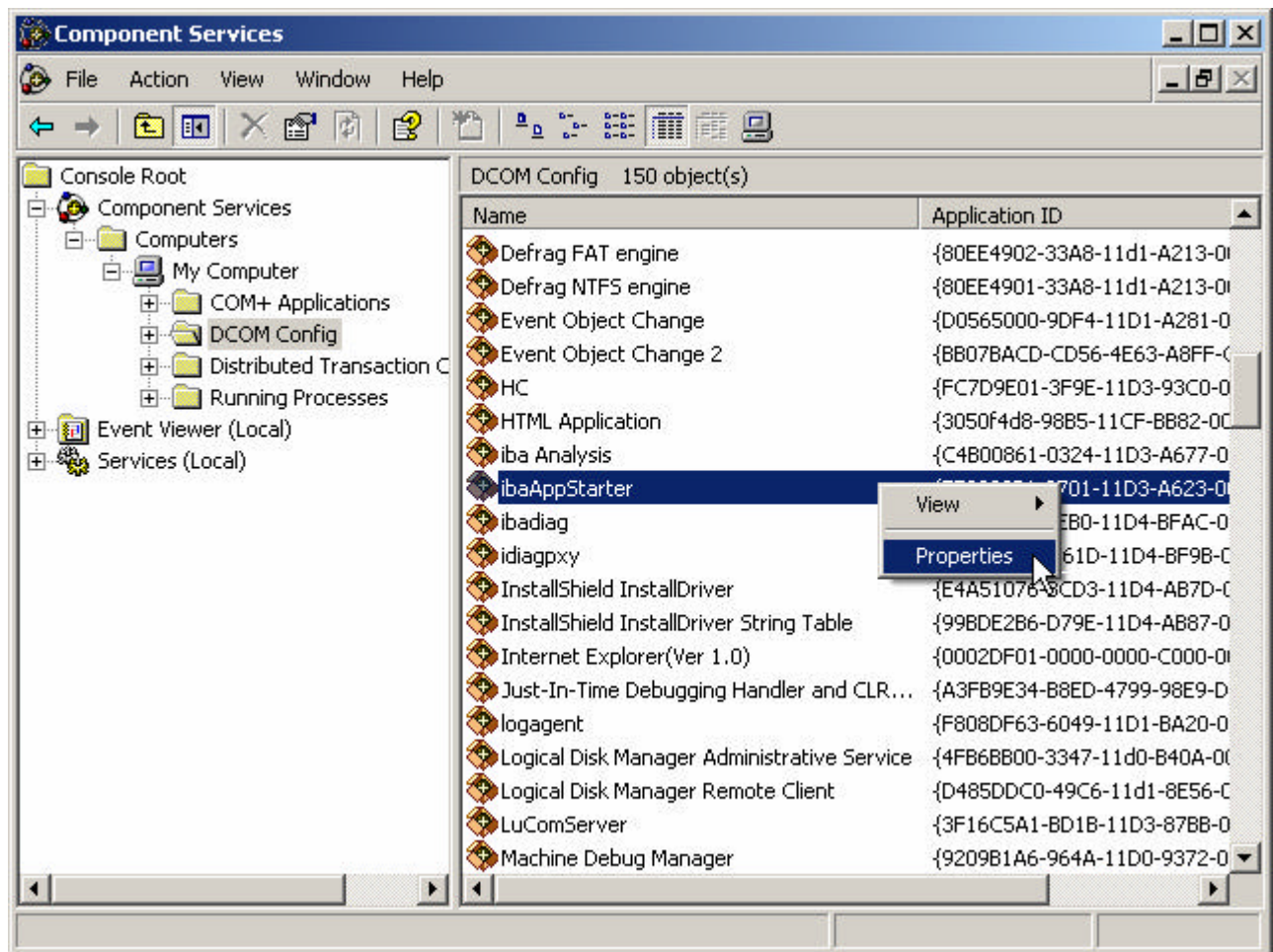
The Component Services utility is started.

Here a manual intervention from the user is needed.

Select Component Services -> My Computer -> DCOM Config -> ibaAppStarter.

Right click on ibaAppStarter and select properties.

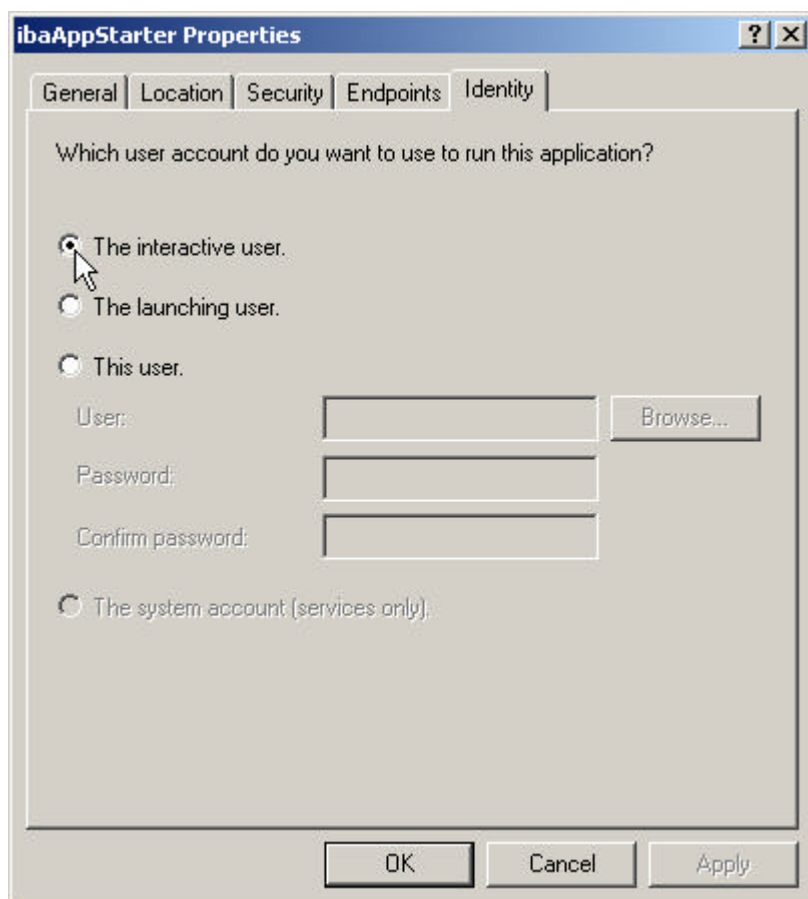




Now a tab window appears.

Select the "Identity " tab and select "The interactive User" option.

Click the OK button and leave the Component Services utility



Finally you have to change the local security settings.

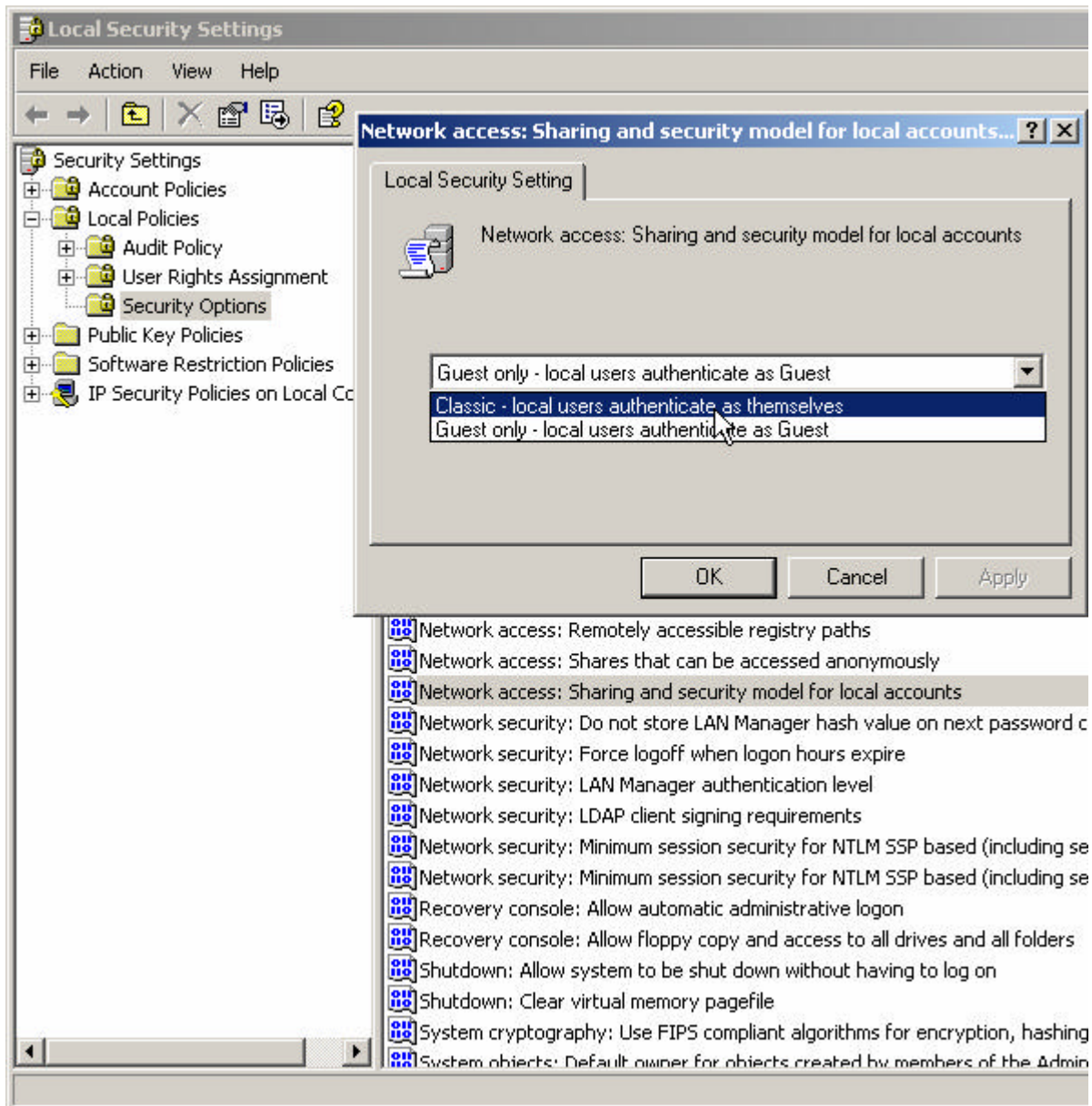
To open the local security settings click on the windows start button -> All Programs -> Administrative tools -> Local security policy.

A window like the screenshot will appear.

Select Local Policies -> Security Options in it.

Then double click on Network access: Sharing and security model for local accounts.

Select Classic in the dropdown box.



This is the end of the installation

### 3.2 Verify installation

Open a MS DOS command prompt window on the client machine and try to start e.g. notepad on the target machine by entering following command

`ibarun \\targetname\notepad.exe` where *targetname* is the name of the target machine.

This command should start the "notepad" editor on the target machine.

If not, please look in the troubleshooting items in chapter 4.

## 4 Troubleshooting

### 4.1 DCOM configuration problems

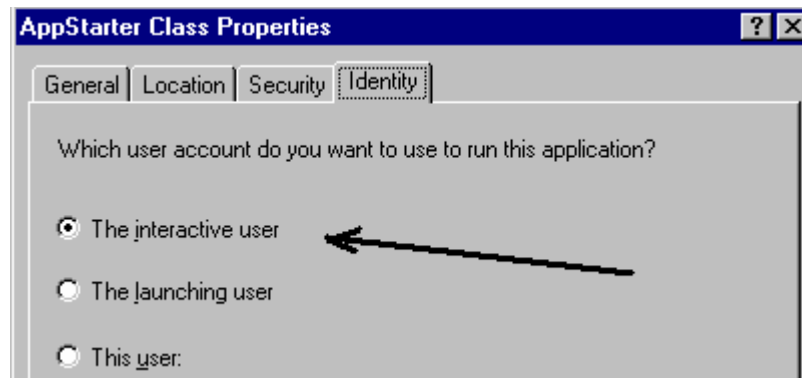
Symptom :

After trying to start an application on the target machine nothing happens.  
No messages boxes are shown, even after a long time.

Possible cause:

The DCOM on the target machine is setup wrong.  
Run DCOMCNFG.EXE on the target machine again and check if the identity property of ibaAppstarter is set to Interactive User  
To run this tool, click Start, click Run, and then type dcomcnfg.

For Windows XP, dcomcnfg.exe redirects to the Component Services.



### 4.2 Account and Security Problems

Symptom :



Cause:

This is a security problem.

For example the PDA online machine is logged on locally as user PDA with password PDAPASSWORD. To start a program on the target machine which resides in another domain or workgroup a user account with username PDA and password PDAPASSWORD must exist on the target PC.

If the client PC tries to start a program on the target with a invalid account the above message box appears.

Make sure that you have setup the local security policies correctly in Windows XP.



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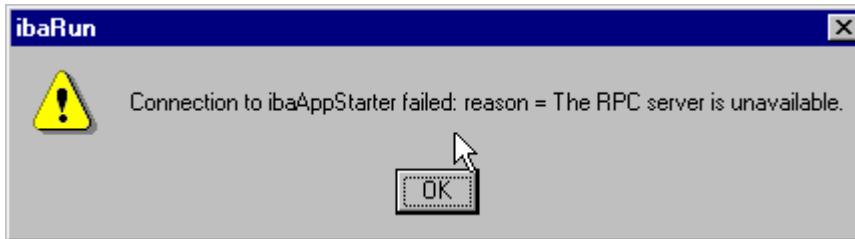
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### 4.3 Network problems

Symptom :



Cause:

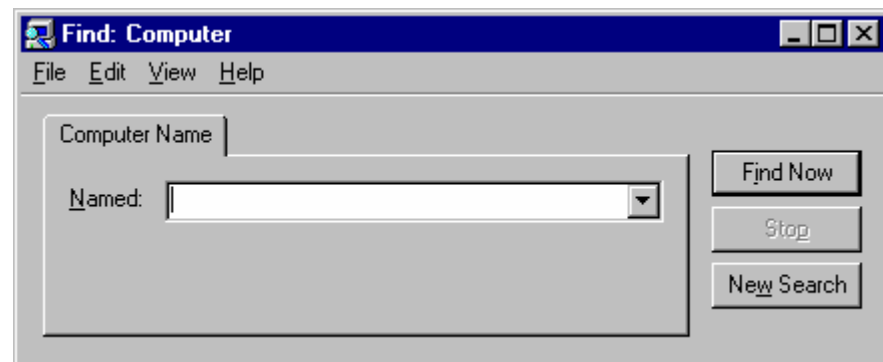
The target machine you try to connect is not available.

For instance, the target may be shut down, there may be a network hardware problem, there may be no common transports, or the target may not exist.

This can be checked in the „explorer’s“ network neighborhood.

Both client and target PC should be listed in the network neighborhood .

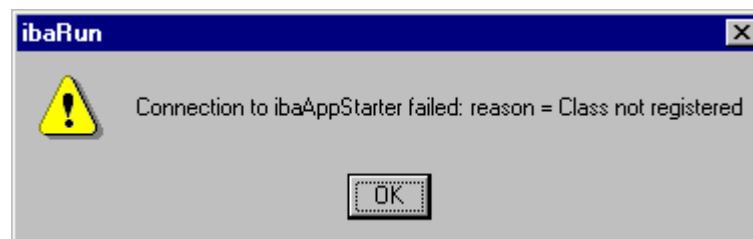
If not try to find the target computer with .



If the target can not be found over the net, contact your network administrator.

### 4.4 Registry problems

Symptom :



Cause:

The ibaAppStarter is not registered on the target machine or client machine. Try to reinstall the remote run tools on both machines.(see chapter 3)