A file with this name already exists, please use a different name.

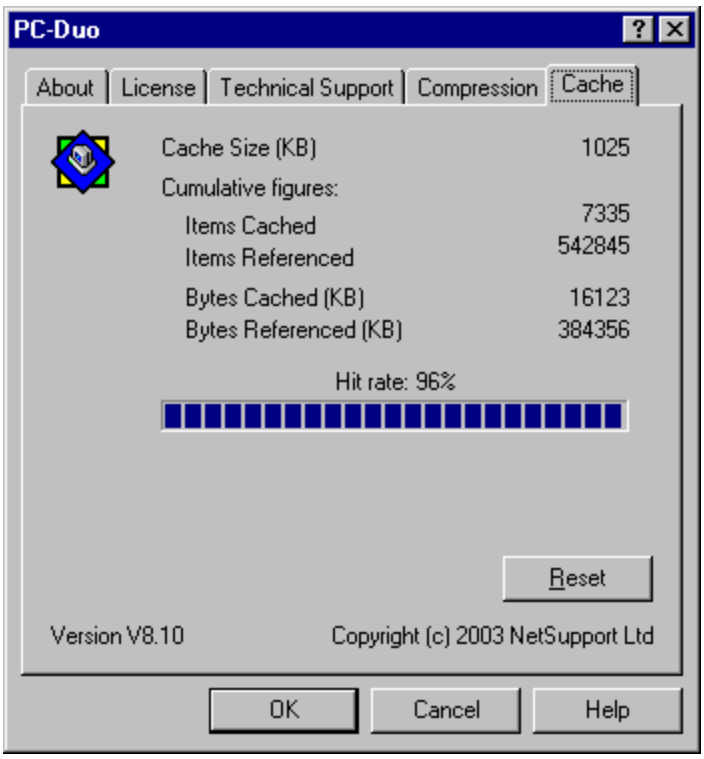
Meaning
You are trying to rename a file but have specified the name of an existing file. This may also occur if you are copying a file from a long filename machine to a short filename machine, and the new short filename already exists.

Suggestions
Choose another filename that doesn't already exist, or rename the long filename before copying it to the short filename system.

About: Cache

This dialog displays information about the usage of cache for the current connection. It is only accessible, from the View Window Help Menu, when you are actually Viewing a Client.

For more information on a particular feature, click where a appears on the picture below.



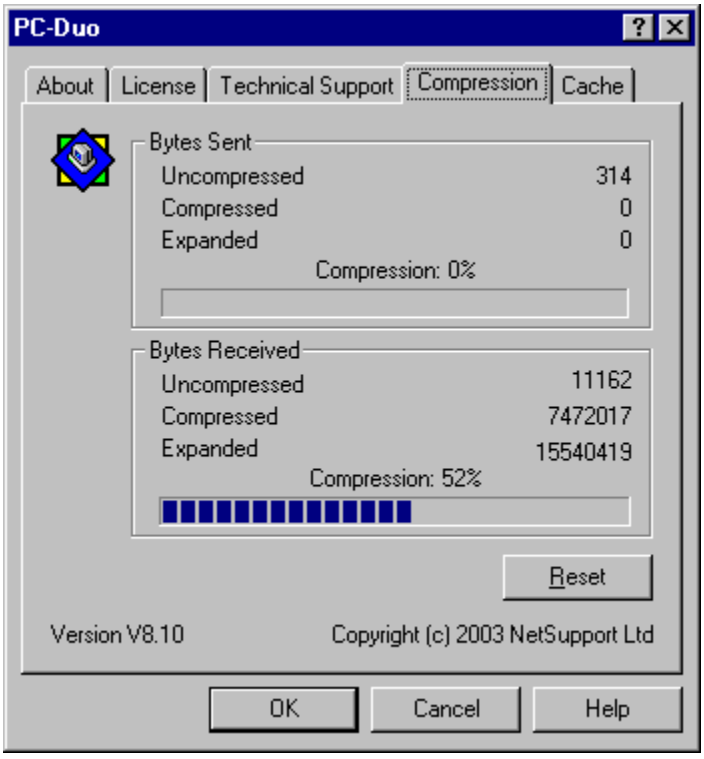
Caching helps to improve performance by storing recently received screen data. A larger cache improves performance, at the expense of using more memory at both the Client and the Control. If the cache is not the right size, a message will be displayed below the Hit Rate bar graph.

See Also
Configuring the Client Cache Size, Configuring the Control Cache Size

About: Compression

This dialog displays compression statistics for the data that has been transmitted back and forth between the Control and Client. It is accessed from the View Window, Help Menu, when you are actually Viewing a Client.

For more information on a particular feature, click where a *appears on the picture below.*

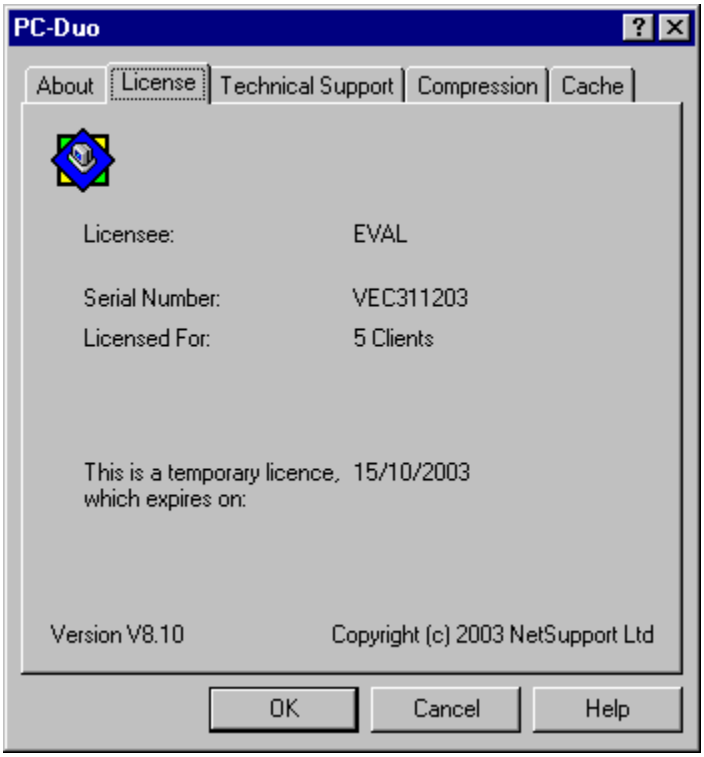


You can enable or disable Compression in the Settings for Configuration: View dialog.

About: License

This page displays details of the current PC-Duo licence.

For more information on a particular feature, click where a appears on the picture below.



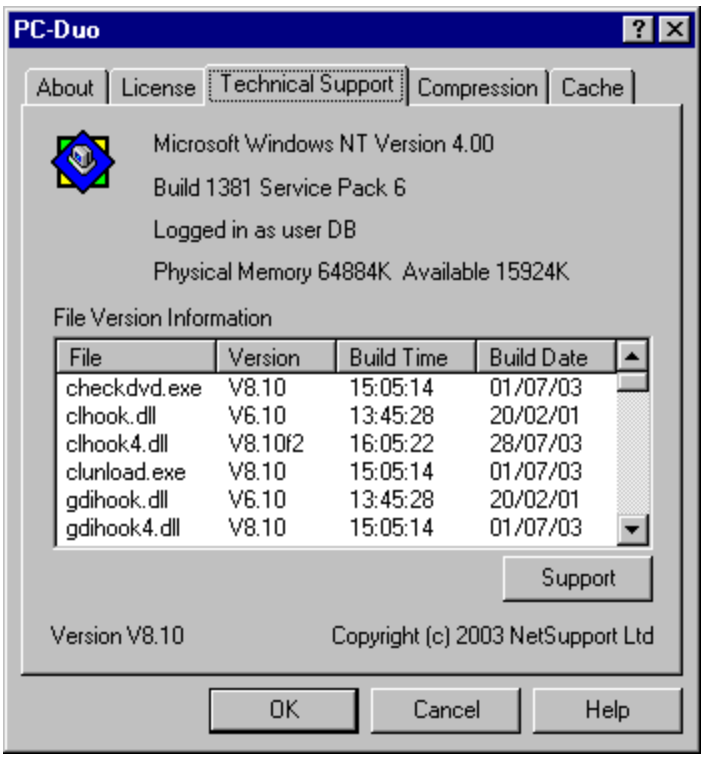
If you have a Pending Registration or another form of temporary licence, the expiry date is shown here.

See Also
Applying a Key

About: Technical Support

This dialog displays information about the type of system that the Control is running on, the amount of resources available and the version of the various PC-Duo components installed.

For more information on a particular feature, click where a appears on the picture below.



Several details of the Control's operating environment are shown here. Version numbers and build dates and times are shown for any PC-Duo components.

Adding a Client to a Group

You can add Clients to existing Groups as necessary. This allows you to ‘Group’ selected Clients together to allow easier management.

For example you may have a number of machines all associated with the Sales department. By placing each of the individual clients in a pre-defined group, you can then perform operations to all members within the group with a single action.

A Client can belong to more than one Group. For example, you may wish to create Groups based on the various departments in an organisation, as well as Groups based on the types of PCs used.

Method

- From the Control menu bar choose Client, Add to Group. (The Add to Group dialog will be displayed, enabling you to select the groups of which the Client will be a member.) Alternatively:
- Open the Groups Folder and right-click on the Group you want to add the Client to, then choose Properties from the shortcut menu. When the dialog appears, click the Members tab.

Adding a New Client

You can locate Clients using the Add a New Client dialog. This provides a more direct method of locating Clients compared to browsing for them.

This allows you to store Client information in the Clients Folder. It also allows you to store more meaningful information about the Client such as names, contact numbers and so on. Once a Client has been stored it, becomes a Known Client and can then be connected to without the need to first browse the network.

The Add a New Client dialog consists of a number of steps in which you enter the Client information. If necessary, you can also use the Browse facility within the Add a New Client dialog box to assist you in identifying available Clients.

See also
Adding a New Client: Starting

Adding a New Group

You can organise Clients in to Groups for easier access and management. For example you might group all the Clients in the Accounts department in to a single group called Accounts.

Method

1. Make sure that the required Clients have previously been connected as this will store them in the Known Clients folder and make them available for grouping.
2. From the Control Window menu, choose Group, New. Alternatively:
3. Double-click on the Create a Group icon in the Groups Folder.

This will display the Add a Group dialog. This will guide you through the process of adding or removing Clients in your new Group.

AddItem

See Also
DelItem, FindItem, GetItem, Join, SetItem, Items, Dim

Description
Adds a string to a list.

Syntax

```
Index = AddItem (stringlist, expression)
```

Notes
The string list must have been defined before the call to AddItem. Use Dim to create the list variable. The expression can be any string expression. The return value indicates the position of the new item in the list, which will always be the last item.

Example

```
Dim List

Print "Item added at index ", AddItem (List, "String1")
```

Administrator's Guide

The Control program has a number of features that are designed to help administrators tailor the behaviour of the Control program for the benefit of the users.

The following dialogs configure various aspects of the Control:

- General: Here you can define the Control name and provide a description for this Control Profile
- Connectivity: This is where you configure the transport protocols that are used for local and remote networks and test to make sure that they are operating correctly
- Security: This folder contains all of the settings such as user validation and any passwords needed to restrict access to the Control program and its functions
- Remote Control: Controls the behaviour of the View window, including the keyboard layout, whether to capture printer output from the Client, and any audio settings for verbal communication with Client users
- Control Interface: Customises user interface features, including the ability to hide the various lists (Clients, Groups, etc) or make them read-only, and to disable functions such as browsing, file transfer, remote control, and so on.
- File Transfer: Here you can configure the behaviour of File Transfer and File Manager windows, including controlling performance features such as Delta File Transfer, and whether potentially destructive operations should be confirmed.
- Start-up: This folder defines any actions that should take place when the Control program starts, e.g. dialling a remote network, or connecting to a particular Client.

It is possible to define a number of Control Profiles, each of which configures the Control program in a different way. These configurations can be password protected. Profile settings are stored in the Registry.

To add, delete, edit or select a different Control Profile, choose Tools, Configurations from the main menu. This opens the Configurations dialog, and you can do all these tasks from here. You can also create icons on the desktop, which can select a particular Profile and perform specific actions when the Control starts up.

Once connected to a Client, you can change the settings for that Client independently. Do this from the View or File Transfer windows, or select Client, Settings for Client from the main menu. Changes made to the Client can optionally be stored permanently in the current Configuration. Note that any changes to the current configuration will not affect connected Clients until you disconnect and reconnect.

Script Agent Popup Menu

Access this menu by right-clicking on an item in the Task Schedule list. It contains the following commands:

Run Now
This will run the selected Task immediately.

View log
Opens the Task log file.

Delete
Use this command to delete the selected Task.

Disable
This command disables the highlighted Task. It cannot run again until it has been enabled.

Edit Script
Use this command to open the Script in the Script Editor.

Cancel Script
This command will abort the running task as soon as possible.

Properties
Use this command to view or edit the selected Task details.

All local connections will be lost! Are you sure you want to dial remote network '*xxx*'?

Meaning
You are about to dial a remote network and any local Client connections will be lost. You have the option to abort the dialup connection and remain connected to your local Clients, or disconnect from them and dial the remote site.

Are you sure you want to delete *nnn* selected Clients?

Meaning
You have selected one or more Clients from a list view and are about to delete them. To prevent accidental deletion you must confirm the attempt by pressing **Yes** in this dialog box.

Suggestions
Make sure you really want to delete these Clients before continuing.

Are you sure you want to delete Remote Network *xxx*?

Meaning
You are about to delete a Remote Network object and must confirm this action before continuing. If you are currently dialled into the network, the connection will be hung up before the network is deleted.

Are you sure you want to delete the group '*xxx*'?

Meaning
If you proceed and delete the selected group, the members themselves are not deleted. They remain in the Known Client list so you can continue using them. Only the Group 'container' is deleted.

Are you sure you want to reboot/logout the members of group '*xxx*'?

Meaning
You must confirm the Reboot or Logout action for the Clients in the selected Group. Any applications running on the Client machines may loose unsaved information because of this action.

Tips
You can restart a Client machine in different ways depending on the operating system in use. See the topic Rebooting a Client for more details.

Are you sure you want to reboot/logout the selected Clients?

Meaning
You must confirm the Reboot or Logout action for the selected Clients. Any applications running on the Client machines may lose unsaved information because of this action.

Tips
You can restart a Client machine in different ways depending on the operating system in use. See the topic Rebooting a Client for more details.

Auto-Scroll

When Viewing a Client in a window, the Client's screen may be too large to display on-screen. The View Window includes scroll bars to enable you to display different parts of the Client's screen. In Auto-scroll mode, the scroll bars are turned off and the mouse position is used to relocate the screen.

Another alternative is to turn on Scale to Fit, which will resize the Clients screen to fit the available view Window.

Blank the Client screen when being Controlled

Purpose
This enables the Control operator to blank the screen at the Client when in Control mode. Watch and Share modes operate as normal.

Command
DOS: IPCLIENT or NBCLIENT *Clientname* /c
WIN: WCLIENTW *Clientname* /c
NT: CLIENT32 *Clientname* /c
OS/2: Not available

Example
WCLIENTW.EXE JOHN /UIP /c

Effect
When the Client is being Controlled, as opposed to being Shared or Watched, the screen at the Client will be blanked.

Use this option if you wish to be able to blank the Client's screen.

Notes
- This option must be in lower case.
- In Windows and Windows NT, this only works if the Client machine is running in 256-colour mode.
- If you want the user at the Client to be able to see what you are doing remember that you must then use Share rather than Control.

Bridge Password File and Dial back

Dialback works by associating a telephone number to call back with the password entered at the Control when it dials in to the Bridge. These passwords and associated number to dial back are stored in a text file. You can set-up multiple passwords and telephone numbers in the same file.

The password is stored in encrypted form, but the Control dialling in must enter the unencrypted version.

For a Windows Bridge, you can use the Configurator to set up the Bridge password file. To do this:

1. Start the Client Configurator
2. Select the appropriate Client Profile and choose the Edit button.
3. In the dialog, select the Dialin Bridge tab.
4. Make sure your Transport Protocol has been specified correctly, and a Security Password file has been specified.
5. In the Security section of the Dialin Bridge tab, select the Edit button to display the Contents of the Security Password file.
6. When you add to or edit a password from this list, the Add/Edit Bridge Password dialog is displayed, enabling you specify the Password and related Dialback number.

You can also create a Bridge password file manually with a text editor. The format of the lines in this file is:

Encrypted password | *Telephone number* | *Delay*

E.g.

9379473|01223234233|30
9123442|01223234244|25

Note: | is a vertical bar character, also called a 'pipe' character.

See also

CLIENT32.INI: Dialing Bridge
Switches when starting a Bridge

Browse

A means of searching the network to automatically identify all the Available Clients and their network addresses. They are then displayed in the Browse folder of the Control tree view and you can connect to them.

Once you have connected to a Client, it becomes a Known Client and is stored in the Clients Folder. These Clients can be used in later sessions without having to Browse again.

Browsing the Network

Browse helps you to discover the names and network addresses for all Available Clients.

Press the Browse button (shown above) on the Control Toolbar, click on the Browse Folder in the Control Tree View and double-click on the "Look for Clients" icon, or choose Browse from the Control Network Menu.

The Browse Network dialog will be displayed.

Cache

A means of storing recently used data in memory rather than having to regenerate or retrieve from disk.

Both Control and Client cache screen information to reduce the need to resend it over the network. The larger the cache, the more likely that the Client screen information will already be available to the Control and therefore screen updates will appear faster.

Cancelling a running task

You can abort an executing Task using one of the following methods:-

- The Main Menu Cancel command
- The Script Agent Popup Menu Cancel command, or
- The Toolbar Cancel Button

The running task will be aborted as soon as possible.

Note
If the Script is performing a Lookup or a Connect, it will be aborted *after* these functions have completed.

Cancelling a Script

Press the Cancel Script button (shown above) on the toolbar to stop a Script running within the Editor. You can do this at any time.

The Script may not stop immediately, especially if it is performing a Lookup, Connect or Dial function.

Note
Once the cancel button has been pressed, the Script will stop before the next line is executed.

Cannot communicate with the modem

Meaning
The Control was not able to communicate with the modem for one of the following reasons:

- The modem is not turned on or has stopped responding.
- The modem is not connected to the correct communications port or is incorrectly cabled.
- The command script for the currently selected modem does not correspond to the modem connected to your machine.
- The Bridge did not answer.

Cannot connect to more than *nnn* Clients

Meaning
You have reached the maximum number of concurrent connections for this network. For a Local Area Network, this is 255; but when dialling into a PC-Duo Bridge, it is 1.

Note
Network and machine resources may be exhausted before the 255 connection limit on a LAN is reached.

Suggestions
Disconnect from other Clients and try again.

Cannot contact '*xxx*'

Meaning
There was no response from the PC-Duo Bridge at the specified number.

Make sure that a Bridge is loaded on that PC and that you are dialling the correct phone number.

See Also
Setting up the PC-Duo Bridge

Cannot execute '*xxx*'

PC-Duo was unable to execute the Multimedia Player application. Make sure the program is available and you have sufficient execute rights.

Check the SlavePlayer, SlaveClass and SlaveWindow entries in the current configuration.

Cannot find window ‘*xxx*’, class ‘*xxx*’

PC-Duo was unable to locate the Multimedia Window. This is used to communicate with the Multimedia Player.

Check the SlavePlayer, SlaveClass and SlaveWindow entries in the current configuration.

Cannot load '*xxx*'

This error occurs if a Transport DLL cannot be loaded when the Control is started or if the main Control DLL cannot be loaded when the API is started.

Suggestions
Make sure the file is present in the PCD32 installation directory and you have sufficient rights to read it.

Cannot open '*xxx*'

Meaning
The specified file could not be opened.

Suggestions
Check that the file exists, and that you have permission to access it. Check also for media errors, especially on floppy disks and CDs, or a network connection to a file server may have failed.

Cannot read file *xxx* (*nnn*)

Your licence file (NSM.LIC) is missing or invalid.

Suggestions
If you have a valid NSM.LIC file on another PC, copy it to your PCD32 installation directory.

If you have purchased the software and have received a valid Product Authorisation Certificate, run the "Apply a Key" program from the PC-Duo Group, taking care to enter the information on the Certificate exactly as supplied.

If you do not have a licence, and you wish to run the software for a 30-day evaluation period, reinstall PC-Duo from the original media.

Capturing the Clients Printer Output

The Print Capture feature enables you to redirect the printer output from a Client PC to the printer at the Control.

This is useful when you are running an application on a Client, but want any printed output to be redirected to a printer used by the Control.

To set up the Control to capture a Client's printer output, you use the Settings for Configuration dialog.

See also
Settings for Configuration: Print Capture

Changes to Windows 95 and 98 System Files

On Windows 95, 98, and Millennium Edition (ME), Setup makes minimal changes to your Windows configuration when you install PC-Duo or run the "Reset Video Driver" or Client Configurator programs.

Most of these changes are needed for the Client only. The Control programs require only those changes marked with an asterisk. Note that if you want to use Control's Show feature, you must also install the Client.

Windows 98 and ME

On Windows 98 and ME, the Client is loaded when Windows starts up through Registry Key:-

```
HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\RunServices
```

Setup adds a String Value to this Key. A typical example would be:-

```
PC-Duo Client="C:\PCD32\CLIENT32.EXE * /CCLIENT32.INI"
```

Files PCDVGA.DRV, PCIMSG.DLL, and PROCHOOK.DLL are installed into the WINDOWS\SYSTEM directory. The Client is responsible for accessing the display when it starts up, so the "Reset Video Driver" program is not required when any changes are made to the display configuration.

Windows 95

On Windows 95, Setup makes the following changes to SYSTEM.INI:

[Boot] Section

`Display.drv=drivername`	Is changed to Display.drv=PCDVGA.DRV
`Display.old=Olddrivername`	Is added
`Display.pcd=PCDVGA.DRV`	Is added
`wclient=path\CLIENT32.EXE`	Is added

[386Enh] Section

`NetHeapSize=16`	* Is added unless already greater than 16
`Device=PCDVXD.386`	* Is added

Notes

Files PCDVGA.DRV, PCIMSG.DLL, and PROCHOOK.DLL are installed into the WINDOWS\SYSTEM directory. The GDI intercept driver, PCDVGA.DRV, loads the video driver defined in Display.old. This is normally the original video driver. The wclient= line initialises the Client program when Windows loads.

If you change your video setting using Windows Setup, Display.drv will be set to the new value and the PC-Duo Client will be disabled when the system reboots. If this happens, you must run the "Reset Video Driver" program from the PC-Duo Group. Press the [SYSTEM.INI] button to change the display.drv setting back to PCDVGA.DRV. This also updates Display.old with the filename of the new driver, so the new display settings will be preserved when the system reboots.

You can also load PCDVGA.DRV via the Registry. To do this, run the "Reset Video Driver" program and select [Registry]. This permits changing screen resolution without rebooting with some video cards. If you do this, the DISPLAY.DRV line in SYSTEM.INI will read Display.drv=pnpdrvr.drv.

In an emergency, such as when Windows won't start up normally, you can start to a command prompt and edit SYSTEM.INI directly to amend the Display.drv line. (Display.drv=vga.drv always works). You can then reinstall your desired video driver and then run "Reset Video Driver".

Changes to Windows NT Registry and System Files

Setup makes several changes when the PC-Duo Client is installed on Windows NT. Setup installs the following files:

In the WINNT\SYSTEM32 Directory:

GDIHOOK4.DLL (GDIHOOK.DLL for NT 3.51)
CLHOOK4.DLL (CLHOOK.DLL for NT 3.51)
PCIGINA.DLL
PCIMON.DLL which is renamed to LOCALMON.DLL

In the WINNT\SYSTEM32\DRIVERS Directory:

PCISYS.SYS (NT 4.0 only)

In the WINNT directory:

WCONTROL.INI Created when you run the Control program.

Changes to the System Registry:
To locate these entries use the find option in REGEDIT.

GDIHOOK.DLL (or GDIHOOK4.DLL on NT 4) is inserted before each listed driver in registry entry HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\<videodriver>\Device0\InstalledDisplayDrivers.

To determine the <videodriver>, look in Key:

HKEY_LOCAL_MACHINE\HARDWARE\DEVICEMAP\VIDEO

String value Device\Video0 contains the path to the display driver.

PCIGINA.DLL is loaded via the registry entry

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Winlogon\GinaDLL

The previous GINA DLL (usually MSGina) is loaded through GinaDLL.old.

Event log sources (i.e. where your event log is stored) are set up in registry keys:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\EventLog\Application\PCIapp

and

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\EventLog\System\PCIsys

The Client is installed as a service in registry key:-

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Client32\.

The Image Path registry entry in this key contains the Client command line parameters.

On NT 4 only, device driver PCISYS.SYS is installed via registry key

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\PCISys.

File SYSTEM32\LOCALMON.DLL is renamed to LOCALMON.ORG, and PCIMON.DLL is copied to this directory and renamed to LOCALMON.DLL.

An entry is added to the AUTOEXEC.NT file to enable full screen DOS box support.

Changing File Attributes

There may be times when you want to change the attributes of file, for example to make the file read only.

You can do this as follows:-

- Open a File Manager window to modify a local file or open a File Transfer window to the Client
- Navigate to the file whose attributes you want to change
- Right-click on the file and choose Properties from the File Popup Menu, Properties command
- The File Properties dialog is displayed, enabling you to change any file attributes

Changing the Print Capture settings may truncate print data captured from *xxx*. Proceed?

Meaning
There are print jobs waiting to print from the Client. If you change the Print Capture settings these outstanding jobs will be deleted.

Press Yes to proceed with the changes and delete the outstanding print jobs, press No to Cancel the operation and leave the outstanding print jobs to print.

Changing the Print Capture settings will discard print data captured from *xxx*. Proceed?

Meaning
There are print jobs captured from the Client waiting to print. If you change the Print Capture settings now these outstanding print jobs will be deleted.

Click Yes to proceed with the changes and delete the outstanding print jobs, or click No to Cancel the operation and leave the outstanding print jobs to print.

Check this item to execute an application when this task has completed successfully

Checking the syntax of a script

First, select the window that contains the Script to check. Then press the Check Syntax button (shown above) on the toolbar, or select the Run Menu, Check Syntax command.

The Script Editor will save your script if it has been changed, so you may be prompted with the Save As dialog if the script is untitled. The Script is then checked for any errors that would prevent it from running. All function blocks and loops are checked, even if those bits of code are not actually used in the flow of the running script.

You must correct any Runtime or Interpreter errors that are reported here, before the script will be allowed to run.

Checksum error receiving data from Client; expected: *nnn*, actual *nnn*

Meaning
While testing the connection to a Client incorrect data was received. During a Receive Echo test, data is sent and then echoed back by the Client. If the data received does not match the data sent this error occurs.

Suggestions
- Check the physical connection between Control and Client including the Network Interface Card.
- Check networking resources on both machines.
- If going through a Router or Bridge device check they are not filtering out packets.
- If dialling into a router, try disabling PPP compression.

Checksum error sending data to Client; expected: *nnn*, actual *nnn*

Meaning
While testing the connection to a Client incorrect data was sent. During a ReceiveEcho test data is received and then echoed back to the Client. If the data sent does not match the data received this error occurs.

Suggestions
- Check the physical connection between Control and Client including the Network Interface Card.
- Check networking resources on both machines.
- If going through a Router or Bridge device check they are not filtering out packets.
- If dialling into a router, try disabling PPP compression.

Chr

Description
Returns the character associated with the specified ANSI character code.

Syntax
```
Character = Chr (charcode)
```

Notes
Charcode is a numeric value. Numbers from 0 to 31 are the same as standard, non printable ASCII codes. For example, Chr (10) returns a line feed character.

CInt

See Also
CStr, IsNumber

Description
Returns an expression that has been converted to an Integer.

Syntax
```
Intval = CInt (expression)
```

Notes
CInt () converts a string expression to its integer alternative. The string should contain numeric characters, but the conversion will also handle non-numeric characters by ignoring them.

Clearing a log file

Description
To clear the log file associated with the currently focused editor, select **Clear Log File *xxx*** from the File Menu. The ***xxx*** is replaced by the filename of the currently focused editor window. Select this menu item and the log file will be cleared.

Note
This operation cannot be undone.

Clears the associated log file before the task is run

Click to check the syntax of the specified script

Click to launch the scripting editor, allowing you to edit this script

Client Information Box

This dialog is displayed at the Client workstation by restoring the Client icon and choosing Help, About.

The information displayed includes the Client's physical name, its transport and network address and its licence details.

Client Properties

Additional information stored at the Control concerning Known Clients such as Name, Display Name, transport and Network Address.

You can modify this information by right-clicking on the appropriate Client and choosing the Properties command from the shortcut menu.

The information in the Client Properties dialog can be displayed in the Control window by choosing the View, Details menu command.

The fields displayed are set using the View, Columns command from the Control menu Bar.

Client Properties Setting

You can store additional information about a Client PC by using the Client Properties dialog. The information specified in this dialog can then be viewed in the 'Details' List View. You choose which fields are displayed by using the View, Columns function from the Control Menu Bar.

To display the Client Properties, right-click the appropriate Client in the Control window and choose Properties from the shortcut menu.

The Client Properties dialog will be displayed. This dialog consists of three tabs:

General tab

- The Client name.
- Its Network Address.
- The transport it is using.

Details tab

- The name you want displayed at the Control for this Client.
- The Description that you want to associate with this Client.
- The Contact name.
- The Telephone Number.

System Info tab

- The version number of the PC-Duo Client software.
- The operating system on which the Client is running.

16-bit Client Switches

You can customise the performance and operation of 16-bit Clients using the Configurator.

The following lists the available switches.

Security Options
Load the Client with a Password
Disable file transfer at the Client
Allow Control to Watch only
Maintain a connection log file
Maintain a Replay File
Set a Security key
Logoff/Reboot on Disconnect
Public when logged Off
Maintain an application event log
Blank Client screen when controlled

Configuration Options
Enable incoming Broadcast Show
Disable incoming Broadcast Messages
Set the name lookup response delay
Send Physical fonts
Automatically reboot the Client on disconnect
Omit tickle packets
Keep Connection indicator on top
Use Computer Name for Clientname

Client *xxx* already connected to Control *xxx*

The Client you are trying to establish a connection to is already connected to another Control. This situation can sometimes occur if the Control machine was previously connected to the Client, but was turned off without first disconnecting. The Client should notice this after 30 seconds or so and relinquish the connection unless it has been configured to disable Tickle packets.

Suggestions

- Wait for 30 seconds or so and see if the Client responds.
- Contact the user at the other Control and ask them to release control of the Client.

Notes

Do not disable tickle packets unless there is some benefit in doing so.

You can set an Inactivity Timeout at the Client to have it disconnect if the user at the Control doesn't move her mouse or enter any keystrokes for a set period of time.

Client *xxx* does not respond

The Client did not respond to the Control's connect request.

Suggestions

- Check the Client PC is switched on and the PC-Duo Client is loaded.
- Make sure you are using the correct network transport and address for the Client.
- If the Client is using NetBIOS make sure you are using the same NetBIOS adapter on the Control.
- If the Client is located over a Router or Bridge device make sure these are not filtering out packets or blocking traffic on ports.

See Also

Technical Reference, Network configuration

Client *xxx* has disconnected

The specified Client has disconnected. This will happen if the Client machine is shut down or rebooted, if the user at the Client elects to disconnect you, or if the Inactivity timeout expires at the Client.

Suggestions

- The Client machine has been turned off, has hung or the Client has been unloaded.
- The network has failed or excessive traffic has been generated to interfere with tickle packets.
- The Client has timed out.
- There were insufficient network resources to keep the connection alive.

Notes

- Check to make sure that the Client machine is reliable and applications that run on this machine do not utilise all the processor time.
- Contact your network manager and see if anything can be done to remove bottlenecks or improve overall network performance.
- Increase or disable the Inactivity Timeout on the Client machine.
- Try configuring your network drivers to provide more resources for running applications. See the Technical Reference section for more details.

Client 'xxx' is about to disconnect due to inactivity

This Client has detected that the specified period of inactivity has been encountered. You must respond if you still want to remain connected to this Client. If you do not respond to this message, the Client will disconnect.

Suggestions
If the period of inactivity is too short for your purposes, you can change the Client Inactivity Timeout.

Client '*xxx*' is running on this machine

Meaning
The Client that you are trying to connect to is running on this machine. For obvious reasons, you can not do this.

Also, beware of creating a situation where you start a Control on a Client that you are controlling and then try to Control your machine from there. This will cause unpredictable results

Suggestions
Check to make sure the name of the Client you are trying to Connect to is correct. If you are using Quick Connect to connect to the Client, try performing a Browse (if possible) and connect from there.

Client *xxx* rejected the link

The Client you connected to rejected the connection attempt. Either the user at the Client rejected the connection or you tried to connect to a Client with an invalid Security Key.

Suggestions

Remove User Acknowledgement from the Client machine if you regularly connect when there is no one at this machine, or ask the user at this machine to press Accept when the request is displayed.

Client *xxx* unavailable (in graphics mode or logged off)

Meaning
You are trying to send a Show to a Client that is running a full-screen DOS graphics application, or an NT Client that is not logged in.

Suggestions
Either exclude this Client from the Show or (if the Client is an NT Client) ask the user at the Client machine to log it on (or take Control of the machine and log it on yourself).

CLIENT.NSM

The Control programs store Known Client's names and network addresses in this file. It is located in the PCD32 directory and can be edited or copied to other Control workstations.

Clients Overview

A PC-Duo Client program is loaded on any PCs that are to be remote controlled.

The 32-bit kit is used to install the Client program for Windows 95/98, and Windows NT. These are included in the 32-bit kit. Setup automatically selects the appropriate version for your environment.

Once the Client program has been installed and the PC has been restarted, it can be taken over from another workstation running a PC-Duo Control program.

You can use the Configurator to configure the Client to suit your requirements.

Columns Setting

This command allows you to tailor the detailed information that is shown for each Client in the Control List View. You can remove some of the headings if they are not required, or add others.

The default information for a Known Client is its name, status, description, type of transport, and network address. This command applies to all view windows, such as connected Clients, Groups and so on.

Method
Select View, Columns from the Control Main Menu.

The main Columns dialog is now displayed

The tabs shown at the top relate to each of the Client list windows that are available within the PC-Duo Control.

Select the desired tab, the left-hand window highlights columns that are available for inclusion, the right hand window shows those already included. Simply select the column name you require and then ‘Add’ or ‘Remove’.

The arrows to the far right of the window are used to adjust the order in which each column is displayed, the higher up the list represents position form the left.

Command Viewer Popup Menu

Right-click in the Command Viewer to display this popup menu. The following commands are available:

Display Help On
Right-click on an item in the tree view and select this command to display the Help for that command, statement or variable.

List Type
The menu item allows you to change the format of the list view. See the Script Editor View Menu for more details.

Hide
This command hides the Command Viewer. It can be redisplayed by pressing the Show Command Viewer button on the Script Editor Toolbar, or by selecting the Command Viewer option on the View Menu.

Configuring a Standalone DOS or Windows 3.1 Client to be a Bridge

To configure a standalone DOS or Windows 3.1 workstation to also be a Bridge to provide dial-in access to that workstation do the following:

Load the LOCALIPX program and the IPBRIDGE program in DOS as follows:

LOCALIPX
IPBRIDGE COMn /B*baudrate* /M*modem* [B*ridge parameter*]
IPCLIENT *ClientName*

Example

```
LOCALIPX
IPBRIDGE COM1 /B19200 /MHayes
IPCLIENT DAVE
```

Effect

The PC will now be available for Dial-in access.

Notes

- If you will also be running Windows 3.1 on the workstation, use the Configurator to set up the Windows Client as Standalone transport.
- Note that you do not configure the Client as a Bridge in this case as all communications will be through the DOS TSR.

Configuring a Windows Client to be a Bridge

You can configure a Windows 3.x (except for a standalone 3.1) or Windows 95 PC to act as a Bridge, so that it provides dial-in access to that PC or any Client PC on the same Network.

Method

- Start the Configurator.
- Select Configure, Client to display the Client Configuration dialog.
- Set the Client Name.
- Set the transport to be used. Use standalone for a non-networked machine but note that you must have installed support for IPX.
- Set any security options you want on this Client e.g. Disable File Transfer.
- Check the BRIDGE box.
- Select the modem you want to use. Always try "Hayes compatible" first.
- Set the Communications port and Baud rate you want to use. Always set the Baud rate to one level higher than the fastest speed at which the modem will connect.
- Set any other functions you want on the Bridge such as password or Dial back.
- Click OK when you are finished.

Your SYSTEM.INI will now be amended to automatically start a Bridge with the Client next time you start Windows. This will then make the workstation available for Dial-in Access.

Note

Once Windows has started and the Client and Bridge have been initialised, you can dynamically load and unload the Bridge by double-clicking the Client icon and choosing the Commands, Load Bridge or Commands, Unload Bridge command as appropriate.

Configuring or Profiling a Control

If a Control has been profiled then a user must enter a password before starting the control. According to their password and profile they will have different options available to them.

You must have PC-Duo Administrator rights to change a Control Profile.

Connect

See Also
Disconnect

Description
Makes a connection to a PC-Duo Client.

Syntax
```
Success = Connect (client [, password])
```

This function connects to a Client. The full name of the Client must be provided in the *client* parameter. This is not case-sensitive, so "`Test1`" is the same as "`TEST1`".

You can specify a *password* for the Client. If you do not provide a password and the Client requires one, you will be prompted for it. If the script is running unattended or from the Scripting Agent, you will not be prompted, and the return value will be FALSE.

To insert a password into the Script you must use the Insert Password function from the Edit menu, or from the Editor popup menu. The password is encrypted in order to hide it from unauthorised users.

You can specify both username and password for those Clients that have NT Security enabled. These are combined in the *password* argument. The format for this is:

```
"username/encrypted_password"
```

Example

```
If Connect ("TEST1", "USER/GBBLDYGKK") then
  Print "Connected to Client ", CurrentClient ()
Else
  Print "ERROR: ", LASTERROR, " Could not connect: ", LASTERRORSTRING
Endif
```

It is also possible to connect by specifying the Client's Network Address instead of its name. The format is slightly different. The address must be prefixed by a '>' character and followed by the appropriate Transport Code for the network.

Example

```
If Connect (">90.0.0.22<TCP>") = FALSE then
  Print "ERROR: ", LASTERROR, " Could not connect: ", LASTERRORSTRING
Endif
```

ConnectedClients

See Also

CurrentClient

Description

Returns the number of clients to which you are currently connected.

Syntax

```
Clients = ConnectedClients ()
```

Notes

If you are not connected to any clients the return value is zero, otherwise the return value indicates the number of connected clients.

Example

```
Connect ("Test1")
Print "We are connected to ", ConnectedClients (), " clients"
```

Connecting to a Client

When a connection has been established between a Control and a Client, the Client icon (in the Control window) displays a green arrow symbol to indicate it is connected.

There are several ways of connecting to Clients.

If the Client is displayed in the Clients or Browse Folder

- Select that Client and click the Connect button in the Toolbar.
- Alternatively, right-click on the appropriate Client and choose Connect from the shortcut menu.
- Using this method, you can select multiple Clients and then connect to them all simultaneously.
- You can also simply double-click on a Client to connect to it.

If you have not previously connected to the Client

- Perform a Browse to identify available Clients, then select the appropriate Client from the Browse folder and click the Connect button in the Toolbar, **or:**
- Choose the Client, Quick Connect menu command, then enter the Client name or its network address.

See Also

Quick Connect , Browsing the Network , Connecting to a Group, Adding a New Client

Connecting to a Group

You can group Clients together for easier connection and to facilitate group functions such as File Distribution. You create groups using the Create a New Group function.

Method

- Display the contents of the Groups Folder, then select the Group to which you want to connect.
- Click the Connect button in the Control window Toolbar, or right-click on the Group and choose Connect from the shortcut menu.
- You will then be connected to your selected Group and can perform Group functions such as Show and File Distribution.

See Also

Adding a New Group, Renaming a Group, Deleting a Group, Adding Clients to a Group

Connecting to Clients on different protocols

The Control program can connect to Clients over IPX, NetBIOS and TCP/IP Windows Sockets network transport protocols. These protocols can be used simultaneously, once the Control has been configured appropriately. Once this has been done, you do not need to worry about which protocol any Clients are using.

When the Control Browses the Network it uses all configured transports. Just highlight the Clients that appear in the Browse folder and choose Connect from the Client Menu.

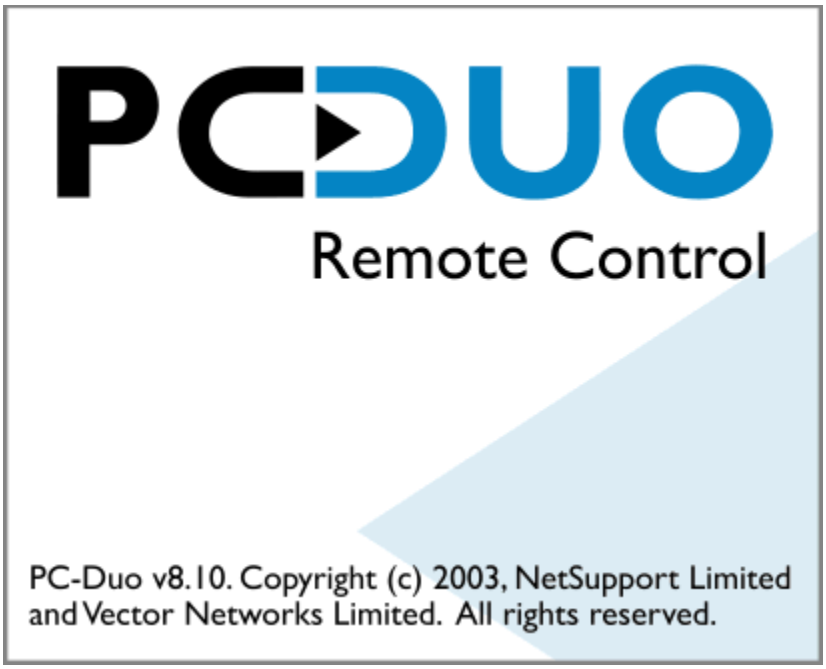
Constant Values

The following table contains all of the constant values in the Scripting Language. You cannot alter the value of these constants. If you try, a run time error will occur.

Identifier	Default Value	Description
TRUE	1	Boolean TRUE
FALSE	0	Boolean FALSE
T_IPX	1	IPX Transport Identifier
T_TCPIP	2	TCP/IP Transport Identifier
T_HTTP	3	HTTP Transport Identifier
T_NETBIOS	6	NetBIOS Transport Identifier (Add the adapter number to this value)
T_REMOTE	255	Specifies that remote transports should be loaded
FI_ATTRIB	0	Use with GetFileInfo to return the attributes of a file
FI_SIZE	1	Use with GetFileInfo to return the file size of a file
FI_DATE	2	Use with GetFileInfo to return the date of a file
FI_TIME	3	Use with GetFileInfo to return the time of a file
FA_ARCHIVE	32	Archive file attribute
FA_HIDDEN	2	Hidden file attribute
FA_RDONLY	1	Read Only file attribute
FA_SYSTEM	4	System file attribute
PLATFORM_WIN3X	1	Platform flag: Windows 3.x
PLATFORM_WIN95	2	Platform flag: Windows '95
PLATFORM_OS2	3	Platform flag: IBM OS/2
PLATFORM_NT4	4	Platform flag: Windows NT 4.0
PLATFORM_NT351	5	Platform flag: Windows NT 3.51
PLATFORM_WIN2000	6	Platform flag: Windows 2000
PLATFORM_WIN98	7	Platform flag: Windows '98
PLATFORM_NT350	8	Platform flag: Windows NT 3.50
PLATFORM_WINME	9	Platform flag: Windows ME
PLATFORM_WINXP	10	Platform flag: Windows XP
IGNORECASE	1	Ignore case when doing string comparisons
MATCHCASE	2	Match case when doing string comparisons
NOTHING	0	Assign to a variable to delete a list or set to a null value
LASTERROR	0	This variable contains the result of the last client operation. If the value is zero, then no error has occurred.
LASTERRORSTRING	""	Contains a message corresponding to the last error
ERR_OK	0	Compare against LASTERROR to identify an error
ERR_NOTCONNECTED	3	No Client(s) connected
ERR_REJECTED	5	Connection or command refused by the Client
ERR_INCORRECTPASSWORD	9	Username and password were not valid at the Client
ERR_NOCLIENTSFOUND	12	Lookup did not find any Clients
ERR_NONSELECTED	34	No Clients were selected

FILE_READ	0	Opens an existing file for Read
FILE_CREATE	1	Opens a new file for Write
FILE_OVERWRITE	2	Opens a new or existing file for Write (overwriting it)
FILE_APPEND	4	Opens an existing file for Write (appending data to it)
ONLINE	0	Dial attempt succeeded
RB_LOGOFF	0	Reboot () function will log off the current user
RB_REBOOT	1	Reboot () function will reboot/restart the Client
RB_SHUTDOWN	2	Reboot () function will shut the Client down
RB_POWEROFF	3	Reboot () function will power down the Client
HKEY_CLASSES_ROOT	0x80000000	Registry Key Root
HKEY_CURRENT_USER	0x80000001	
HKEY_LOCAL_MACHINE	0x80000002	
HKEY_USERS	0x80000003	
REG_BINARY	1	Binary Registry Value
REG_DWORD	2	DWORD Value
REG_SZ	3	String Value
REG_MULTI_SZ	4	Multi-string Value
FULLSCREEN	0	Sets View window to full screen mode
WINDOWED	1	Sets View window to windowed mode
CONTROL_VIEW	2	Sets View window to normal Control mode
MB_OK	0	MessageBox with an [OK] button
MB_OKCANCEL	1	MessageBox with [OK] and [Cancel] buttons
MB_ABORTRETRYIGNORE	2	MessageBox with [Abort], [Retry] and [Ignore] buttons
MB_YESNOCANCEL	3	MessageBox with [Yes], [No], and [Cancel] buttons
MB_YESNO	4	MessageBox with [Yes] and [No] buttons
MB_ICONSTOP	16	Displays a MessageBox with a stop icon
MB_ICONQUESTION	32	Displays a MessageBox with a question mark icon
MB_ICONEXCLAMATION	48	Displays a MessageBox with an exclamation mark
MB_ICONINFORMATION	64	Displays a MessageBox with an information icon

Contents



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Control Client Menu

The Client Menu provides access to functions such as View, File Transfer, Chat, etc. In each case, the action is performed on the Selected Client in the Control List View.

The following commands are available:

New
Manually creates a new Client allowing you to enter the name, network address etc. Note that the Client must have been installed on the target workstation with matching parameters.

Connect
Connects to the Selected Client.

Quick Connect
Connects to a Client for which you enter the name or network address.

Power On and Off
Use these commands to power on or off all of the Clients in the Group. Power On uses WakeOnLAN, Power Off uses Advanced Power Management but should be used with care as it does not perform an orderly shutdown.

Disconnect
Disconnects the selected Client.

Disconnect All
Disconnects all currently connected Clients.

View
Switches to the view window for the selected Client.

File Transfer
Opens a File Transfer Window to the selected Client.

Chat
Opens a Chat box between the Control and the selected Client.

Message
Displays a message on the screen of the selected Client.

Reboot / Logout
Reboots or in the case of NT, Logs out, the selected Client.

Execute at Client
Launches an application on the selected Client. Note that the application must be installed at the Client.

Send Ctrl+Alt+Delete
Sends the Ctrl+Alt+Delete combination to the selected Client. This should only be used for Windows NT Clients.

Edit Registry
This command allows you to examine and edit the Client's Registry.

Delete

Deletes the selected client from the Control's database of Known Clients as stored in the Clients Folder. Note that this does not remove the client from the actual Client workstation.

Rename

Renames the selected Client as stored in the Control's database of known Clients. Note that this is an alias for this Control only. The real Client name as discovered by a Browse is unaffected.

Add to Group

Adds the selected Client to a Group.

Add to Scan

This command adds the selected Client to the current Scan Group.

Settings for Client

Enables you to customise the settings to be used when viewing the selected Client. You can configure different setting for each Client but these will only apply during the current Control session.

Properties

Sets and Stores the properties associated with the Selected Client.

Control Group Menu

This menu contains commands which allow you to connect, organise and maintain Groups of Clients:

New
Creates a new Group to which you can then allocate Clients.

Connect
Connects all the Clients in the selected Group.

Power On and Off
Use these commands to power on or off all of the Clients in the Group. Power On uses WakeOnLAN, Power Off uses Advanced Power Management but should be used with care as it does not perform an orderly shutdown.

File Distribution
Transfer Selected Files from the Control workstation to all the Clients in the selected Group.

Message
Displays a message on the screen of all Clients in the selected Group.

Reboot / Logout
Reboots or the case of NT, Logs out all the Clients in the selected Group.

Execute Application
Launches an application on all Clients in the selected Group. Note that the application must be installed at the Client.

Delete
Deletes the selected group from the Controls Groups Folder. Note that this does not remove the client from the actual Client workstation.

Rename
Renames the selected Group stored in the Control's Group Folder.

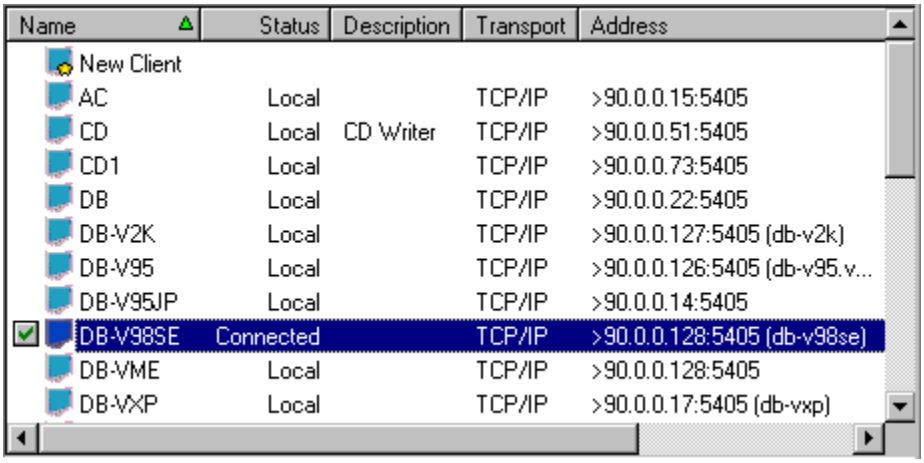
Properties
Sets the properties, name, description etc associated with the selected Group

These commands act upon the Selected Group in the List View.

Control List View

The List View displays the contents of the currently open folder in the Tree View.

For more information on a particular feature, click where a ➧ appears on the picture below.



For example, if you click on the Connected Folder, the List View will display details of any Connected Clients. Similarly, if you Browse the network for Available Clients, the results will be displayed in the Browse Folder.

Select one or more Clients and right-click on a Client Name to open the Client Popup Menu.

Right-click anywhere else to open the List View Popup Menu. This allows you to change the way the information is displayed.

You can also choose which columns to display with the Control View Menu Columns command.

Control Window Menu Bar

The Control Menu Bar contains the following menus:-

Network
This allows you to Browse the Network, change the current Control Profile and set up or connect over dial-up links.

Client
This is used to maintain, connect, select, and carry out one-to-one tasks on an individual Client.

Group
This is used to maintain, connect, select, and carry out tasks on Groups of Clients.

View
This is used to configure the contents of the Control Window.

Tools
This menu provides access to tools such as Show and Scan and File Distribution.

Window
Lists all active Client View, File Transfer and Edit Registry windows and helps you to organise them on the Control's screen.

Help
This provides access to information about the PC-Duo Control program.

Settings for Configuration

The Configure command on the Control Network Menu is used to change settings for the current Control Profile. These settings can also be accessed from the Tools Menu, Configurations dialog, through the [Settings] and [Connectivity and Startup] buttons. The Settings for Configuration tree view dialog will open. This contains the following folders:-

General
These settings include the Control Name and an optional description for this Control Profile

Connectivity
This configures the Control's transports for local and remote networks. It can use IPX, NetBIOS, and TCP/IP for local networks and when dialling a remote network. The HTTP protocol is used for Gateways.

Security
The settings in this folder include a Security Key, a password for this Control Profile, Encryption and auditing functions such as Event Logging and Replay. Non-privileged users can be catered for by restricting their abilities to change settings.

Remote Control
This folder contains settings that configure the View window, enable the capture of printer output from the Client to a printer at the Control, and configure audio communications with the Client.

Control Interface
This folder contains the settings that enable or disable the functions that are available to the Control user and configure how the Control responds to Help Requests.

File Transfer
This folder contains the settings which affect File Transfer functions and performance.

Start-up
This tab defines the actions that the Control should perform when it starts up with this Profile. For example, it can dial a Remote Network and connect to a particular Client automatically.

These settings will be used when the Control starts up with this Profile.

Control Network Menu

This menu contains the following commands:-

Browse
This allows you to search for Available Clients using the protocols specified in the current Control Profile.

Remote
This is used for setting up or connecting over dial-up links to Remote Networks or standalone workstations. Once you have set up a Remote Network you can connect to it from here.

Configure
This allows you to change settings in the current Control Profile, such as which network protocols the Control should use to access Clients. To change the permissions that a Control has, you must use the Configurations command from the Tools Menu.

Exit
Disconnects any Connected Clients and closes down the Control.

Control Network Remote Menu

The Remote command on the Control Network Menu is used to dial a standalone PC or a Remote Network. You can also create a New dial-up connection or maintain the properties of an existing one.

The Network Remote submenu contains the following commands:

Dial
Dials a PC-Duo Bridge which is running on the Remote Network.

New
Helps you to create a new Remote Network.

Delete
Deletes the highlighted Remote Network from the Remote Networks Folder in the Tree View.

Properties
Displays and allows you to change the properties of the selected Remote Network.

Modem settings such as the modem type, Baud Rate etc are set via the Tools Menu, Configurations command, Dial-In Bridge option in the drop down Network Menu on the Control Window Menu Bar.

Control Tools Menu

This menu contains the following commands:-

Show
Displays the Control's screen on the Selected Clients or Group of Clients.

Scan
Repeatedly displays each of the Selected Clients' screen on the Control.

Replay
Allows the Control to replay a remote control session that was recorded earlier.

Broadcast Message
Sends a message to all available Clients on the Network whether or not they are connected. Use with caution.

Announce
This command is used to send an Audio Announcement to one or more Clients.

File Distribution
The File Distribution window allows you to transfer files from the Control to all Selected Clients simultaneously. This differs from Group File Transfer as it enables you to work with ad hoc sets of Clients as opposed to pre-defined Groups.

File Manager
This is an Explorer-like tool for managing files on the Control.

Edit Local Registry
This command allows you to examine the Control's Registry.

Configurations
An Administrator tool for setting profiles for what functions individual Control Users have access to. You must have Network Administrator rights to be able to generate individual profiles.

Scripting
Choose this command to add, edit, delete, or run a Script. The Control Scripting Menu is displayed.

User Defined
This command allows you to add, edit, delete, or run a user-defined program such as System Snapshot.

Control View Menu

The Control View Menu contains commands which are used to change the appearance of the Control window.

Toolbar
This command allows you to hide the Toolbar, change its appearance, or customise the buttons.

Status Bar
Hides or displays the Status Bar

Large Icons
Sets the items in the List View to display as large icons with a description underneath.

Small Icons
Sets the items in the List View to display as small icons with a description on the right-hand side.

List
Sets the items in the List View to display as small icons ordered vertically.

Details
Sets the items in the List View to display as small icons with additional information such as Transport and Network Address.

Columns
This is used in conjunction with the Details setting to determine which fields will be displayed in the Detailed List View.

Show Tree
Displays or Hides the Tree View.

Settings for Current Configuration
Sets options for the Current Control Profile.

Window Menu

This menu contains the following commands:-

Tile
This command allows you to arrange open View, File Transfer and Edit Registry windows on the Control's screen so that they can all be seen. The selected windows will be sized to fit on the Control's Screen. The Tile Submenu contains the following commands:

All Windows	Displays and tiles Client View, File Transfer, and Edit Registry windows
View Windows	Displays and tiles only the Client View windows
File Transfer	Displays and tiles only the active File Transfer windows
Close All Windows	Closes all View and File Transfer windows

You can then view multiple sessions simultaneously.

Window
This section lists any open View and File Transfer windows and allows you to switch between them. Click on a window to display it on top of the other windows.

Copy

See Also

Delete, Rename

Description

Copy one or more files between client and control.

Syntax

```
Success = Copy (source, dest)
```

Notes

Using this function you can copy single or multiple files locally, from control to client, from client to client or locally on a client. The source and destination paths must be Qualified Pathnames, and must be absolute paths. When copying multiple files, you do need only specify the directory that the files are going to. You will see from the examples below how this works. The return value determines if the operation(s) was successful.

16-bit Note

In the 16-bit version of the Interpreter, you cannot copy files from client to client. If you try to do this, an error will be generated.

Example

```
Copy ("C:\TEST\*.EXE", "C:\TEMP")                // Copy multiple files
locally
Copy ("C:\TEST\DEMO.EXE", "C:\TEST\DEMOCOPY.EXE")     // Copy locally
as a new file
Copy (">C:\WINDOWS\*.DLL", "C:\WINDOWS")         // Copy files from the
current client to the local drive
Copy ("TEST2>C:\WINDOWS\*.EXE", "TEST4>C:\WINDOWS")   // Copy files
from one client to another
```

Copy the selected files/directories to the Clients?

Meaning
You have performed an operation that will Copy the selected files and/or directories to the available Clients.

This message can be suppressed by un-checking the Confirm Directory Copy box in the File Transfer tab of the Settings dialog.

Copying Files between Clients

File Transfer allows you to copy files or directories between two Clients. Connect to each Client and arrange the File Transfer windows so you can see both on-screen and simply drag files or directories from one Client to the other.

Creating a new Script

Before you can begin to write scripts, you must open a new Script edit window.

To do this, press the Create a New Script button (shown above) on the toolbar or select New from the File Menu. A new empty window will appear. To begin with, the Script name will be Untitled.

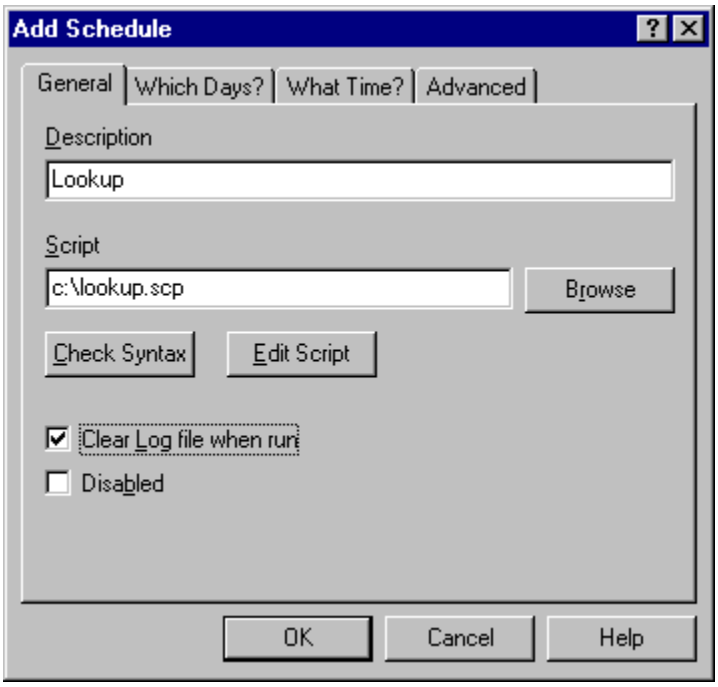
Once you have written the Script, you can save it and give it a name. The Editor will then display the name of the script.

You can use the Properties function to see the statistics for the open files at any time. Do this from either the toolbar or from the Edit Window Popup Menu.

Creating a new Task

To create a new task, simply press the Insert key, the Create New Task toolbar button, or select Add from the Script menu. The Add Schedule: General dialog will appear.

For more information on a particular feature, click where a ➧ appears on the picture below.

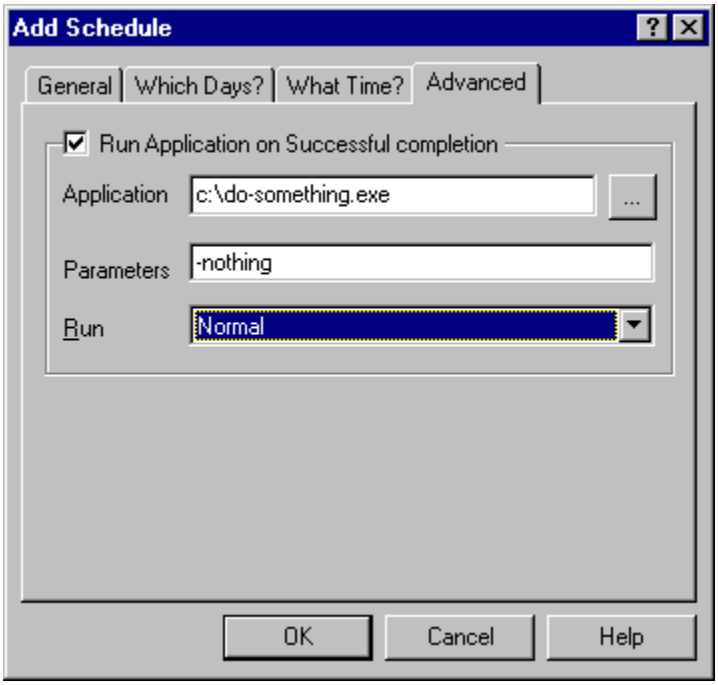


This tab is used to specify which script will run and how it should execute. Fill in the data as appropriate, and use the other tabs to define the remaining task parameters.

Add Schedule: Advanced

This tab allows you to run an application when the scheduled script has completed.

For more information on a particular feature, click where a ➧ appears on the picture below.

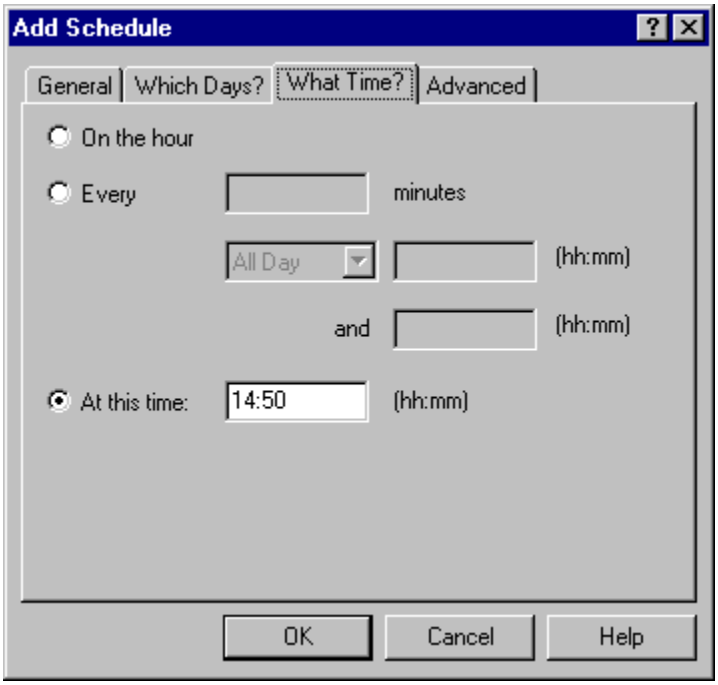


Press [OK] to add the Task to the Task List.

Add Schedule: What Time?

This tab allows you to specify the times at which the task can be run.

For more information on a particular feature, click where a ➧ appears on the picture below.



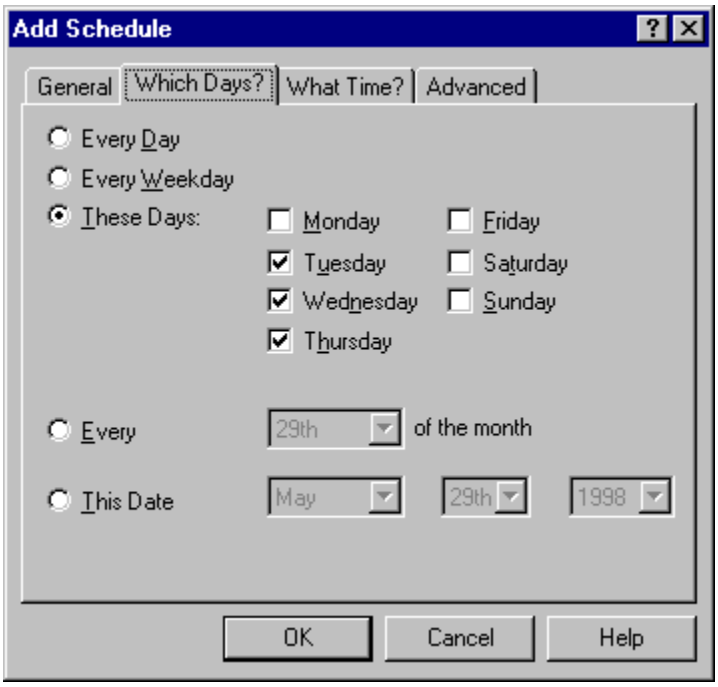
The task will now run, but you can specify some other details on the Advanced tab.

Press [OK] to save the task details.

Add Schedule: Which Days?

Once you have completed the information in the General tab of this dialog, you can proceed to set the days that the script will run on. The property tab looks like this:

For more information on a particular feature, click where a ➧ appears on the picture below.



Once you have supplied this information, continue to the What Time? tab, to define what time the task should run on the specified days.

Creating a Remote Network

Before you can connect to a Remote Network using PC-Duo Remote Communications, you must first create a Remote Network at the Control.

Methods

- Open the Remote Networks Folder in the Tree View and double-click on the New network icon.

Alternatively:

- Choose Network, Remote, New from the Control menu Bar.

The Add a Remote Network dialog will be displayed. This Dialog prompts you through the process of creating a remote Network profile.

The information that you must enter is:

- The Name that the connection will be known as
- The Telephone Number for the Bridge
- The Transport, IPX or NetBIOS to be used

You can optionally enter a description to be associated with that Remote Network connection.

Note

In order for the connection to work, you must ensure that the PC-Duo Bridge has been installed and is running on the remote PC.

CStr

See Also
CInt, IsNumber

Description
Convert a numeric value to a string value.

Syntax
```
String = CStr (expression)
```

Notes
The *expression* can be any numeric expression. The return value is the result of the *expression* converted into a string. The number representation is in decimal.

CurrentClient

See Also
ConnectedClients

Description
Returns the name of the currently selected client.

Syntax
```
Client = CurrentClient ()
```

Notes
If you are not connected to any clients, the return value will be an empty string.

Example
```
Connect ("TEST2")

Print "The currently selected client is ", CurrentClient ()
```

The Toolbar Menu

Select the Toolbar command on one of the Control's View menus to customise the Control Window Toolbar. The following commands are available:-

Standard
When enabled, this displays the standard toolbar. Use the Text Labels command below to turn the descriptive text on or off.

Quick View
This command enables the Quick View bar in the Control Window. You can click on one of the Connected Clients displayed here to open a View Window straight away.

Execute
Select this command to display the Execute toolbar.

Text Labels
Use this command to turn the descriptive text on or off. When they are on, there will be a tick against this option.

Customise
Select this command to decide which buttons should be on the Control Toolbar.

Date

See Also
Time

Description
Returns the current date as a string.

Syntax

```
Date
```

Note
The date format is returned as dd/mm/yy, regardless of your Windows Regional Settings.

Deactivating the Agent

By disabling the Scripting Agent you can create lots of tasks and not have to worry about them being executed. To disable the Agent, select **Deactivate Agent** from the Script Menu, or select **Deactivate Agent** from the taskbar icon context menu.

The title bar of the Agent will change to reflect the new state. If the Agent has been minimised and the taskbar icon is displayed, this icon will also reflect the new state.

See the topic on taskbar icons for related information.

Delete

See Also

Rename, Copy

Description

Deletes one or more files from the specified location locally or on a client machine.

Syntax

```
Success = Delete (source)
```

Notes

The *source* must be a fully qualified pathname, and must be absolute. The return value determines whether the operation was successful or not. You use this function in a similar way to the DOS delete command. Wildcards are allowed for multiple file deleting.

Example

```
Delete ("C:\TEMP\*.*")  // Delete file locally
Delete (">C:\TEMP\*")   // Deleting on current client
Delete ("TEST2>C:\TEMP\*") // Deleting on specific client
```

Delete Remote Network

The Remote Network object you are deleting has Client records associated with it. You can save these records before the object is deleted by moving them to a different network, either local or another Remote Network.

What do you want to do with the Clients?
Select what should be done with the Clients in this Remote Network object when deleted.

Delete them
Check this radio button to simply delete the Client records when the Remote Network object is deleted.

Assign them to network
Check this radio button and select a location for the Client records. The list will always contain **Local**, and will contain the names of all the other Remote Networks that have been configured. If you select **Local** the records are moved to the Known Client list.

Deleting a Client

You can delete a previously connected Client from the Clients Folder.

Method

- Display the contents of the Clients folder.
- Select the appropriate Client, then press the Delete key, **or:**
- Right-click on the Client and choose Delete from the shortcut menu, **or:**
- Select the Client and choose the Client, Delete menu command.
- A message box will then be displayed asking you to confirm this action.

Deleting a Task

To delete a task from the Task List, simply select the task and do one of the following:

- Press the DEL (Delete) key;
- Press the Delete Task Toolbar Button;
- Select the Script Agent Popup Menu, Delete command.

In all cases you will be prompted for confirmation before the selected task is deleted.

DelItem

See Also
AddItem, FindItem, GetItem, Join, SetItem, Items, Dim

Description
Removes an item from a list.

Syntax

```
Items = DelItem (list, index)
```

Notes
The return value is a numeric value, which reports the number of items remaining in the list. The *index* must be 1 (one) based, not zero based. If you specify zero, an error will occur.

Example

```
Print "After deleting item 3, there are ", DelItem (list, 3), " items
left in the list"
```

Demonstration Client '*xxx*' has been deactivated

Meaning
The Client you were connected to is a demonstration Client and has been deactivated. You must restart the Client to continue using it. The Client will again timeout after 5 minutes.

Suggestion
You should upgrade your demonstration Client license for a time expiry Client license or purchase a full copy.

Dial

See Also

Hangup, SetTransport

Description

Dials and connects to a remote bridge via a modem.

Syntax

```
Success = Dial (number [, password])
```

Notes

You can select different modem configurations by using SetConfig () to select a named configuration from the control. If this isn't done, the default "Standard" configuration is used. You can also set the number of times the bridge is redialled when the connection attempts fail, and the time between the redial attempts. This is done by setting two system variables, dial_delay and dial_retry. You must make sure that the transport is set to remote before calling Dial (). If you do not, a run time error is generated to warn you that this must be done. See the description for SetTransport () for more details. If the remote network you are dialling requires a password, you must insert an encrypted password as the optional argument. This is done from the Edit menu and by selecting Insert Password, or from the editor context menu.

Example

```
SetConfig ("RemoteSetup")     // Load a different named configuration

SetTransport (T_IPX, T_REMOTE)// Set the transport to IPX and load the
remote network stack

dial_retry = 2    // Retry the connection twice
dial_delay = 40   // Wait 40 seconds between the redial attempts

// Dial a remote network, and supply a password for the bridge security.
Note the password is encrypted!

If !Dial("9, 01234 567890", "SGGDFDAY") then
      Print "Unable to connect to remote network!"
Endif

Print "Connected to remote network"

...

Hangup ()
```

Dialling a Remote Network

As well as allowing you to take Control of workstations on the Local Network, PC-Duo also allows you to take Control of workstations on Remote Networks or standalone workstations connected via a modem or serial link.

In order to dial a Remote Network, you must first create a Profile for that connection. Then you can connect to it from the Remote Networks folder in the Control Tree View.

To Dial a Remote Network

- Open the Remote Networks Folder in the Tree View and double click on the appropriate Remote Network icon. **Or:**
- Choose the Network, Remote, Dial menu command.
- The Remote Networks dialog will be displayed. This shows the progress in making the call. If the connection is successful, you will be returned to the Control Window. Operation is then exactly the same as if you were on the Local LAN.

See also

Remote Networks

Already Dialled

Meaning
You have tried to dial a Remote Network while you are dialled into another Remote Network. You can only connect to one Remote Network at a time.

To hang up from the existing Remote Network and dial this Remote Network press Yes.
To remain connected to the existing Remote Network and abort the operation press No.

Dim

Description
Declares one or more variables so that the interpreter will recognise them in function arguments.

Syntax
```
Dim var1[ as TYPE], var2[ as TYPE]...
```

Supported values for TYPE are:-

Type	Comment
`Integer`	Declares a number variable
`List`	Declares a list variable
`String`	Declares a string variable

Notes
Use the Dim statement to declare lists before they are used to prevent run time errors. Dim can also be used to declare any variable identifier. This is needed when passing variables to functions when the variables have not been declared or have not had their type assigned.

Example
```
Dim ClientList as List, Result as Integer
```

Hints
Do not declare the type of integer variables used as loop counters. Set their type at run time by assigning a number value such as 0 or 1.

Directory '*xxx*' does not exist on *xxx*

Meaning
The specified directory could not be found on the specified machine (Control or Client).

Suggestions
Make sure the directory name entered is valid, or create the specified directory and try again.

Directory *xxx* not found

Meaning
You have specified a directory that could not be found.

Suggestions
Make sure you entered the directory name correctly and that you have the necessary access rights to it.

DirExists

See Also

FileExists

Description

Checks for the existence of a directory on the local or remote machine.

Syntax

```
Exists = DirExists (source)
```

Notes

The return value is TRUE if the specified directory was found on the specified machine, or FALSE if the directory was not found. The source argument requires a fully qualified pathname in order to work. The operation can be performed on the local machine not requiring any client connections, or on a connected client machine.

Example

```
If DirExists (">C:\TEMP") then Print "Directory C:\TEMP was found on the
current client"
```

Disable File Transfer

This prevents a Control operator from being able to transfer files to and from the Client.

Command
DOS: IPCLIENT or NBCLIENT *Clientname* /F
WIN: WCLIENTW *Clientname* /F
OS/2: PMCLIENT *Clientname* /F

Example
WCLIENTW JOHN /UIP /F

Effect
The Control will not be able to copy, view or otherwise manipulate files on the Client.

Notes
- Use the Configurator to set this option.
- Use in conjunction with Watch only to control access.

Disable receipt of Broadcast Messages

A Control can broadcast messages to all Available Clients. Some users may not wish to receive these messages.

Setting this option prevents broadcast messages from being displayed at the Client.

Command
DOS: IPCLIENT or NBCLIENT *Clientname* /I
WIN: WCLIENTW *Clientname* /U*pp* /I
OS/2: PMCLIENT *Clientname* /U*pp* /I

Example
WCLIENTW JOHN /UP /I

Effect
Prevents a Client from receiving Broadcast messages. By default this option is enabled.

Use this option if
You wish to prevent broadcast messages interrupting work on the Client.

Notes
- Use the Configurator to set this option.
- This option is particularly useful on DOS Clients where displaying a message would cause other work to be suspended.

Disable this script, preventing it from being run

Disable Tickle Packets

Purpose
Normally when a Client is connected to a Control, they send each other a tickle packet every 30 seconds. This provides a check that the other end is still active and has not been turned off or subject to a network failure.

There may be occasions when the use of tickle packets is undesirable, for example over an ISDN line where you wish the line to be dropped if there is no activity.

Setting this option turns off the tickle packets.

Command
DOS: IPCLIENT or NBCLIENT *Clientname* /O
WIN: WCLIENTW *Clientname* /U*pp* /O
OS/2: PMCLIENT *Clientname* /U*pp* /O

Example
WCLIENTW JOHN /UIP /O

Effect
Unless keystrokes or data is being sent, there will be no activity between the Client and the Control.

Use this option if
You are connecting to a Client over an ISDN line and wish to ensure that a Client can remain connected without keeping the ISDN line open.

Notes
- Use the Configurator to set this option.
- Be aware that disabling tickle packets means that the Control cannot verify that the Client is still connected, so you will not receive a warning if, for example, the Client is turned off until you send it a keystroke.
- For this to be effective, the Control must also be started with Tickle Packets Disabled.

Disabling a task

To disable a task, so that the scheduler ignores it altogether, simply select **Disable** from either agent context menu or from the task property dialog.

The icon in the task list is changed to reflect the new state. See the topic schedule list for more details about the different icons displayed.

Disconnect

See Also

Connect

Description

Disconnects from the Client.

Syntax

```
Success = Disconnect (client)
```

Notes

You must specify the full client name in *client*. The return value is TRUE if you disconnected satisfactorily, or FALSE is the script couldn't disconnect or you were not connected to the client.

Example

```
If Disconnect ("TEST2") = FALSE then
            Print "Couldn't disconnect from the client. We may not be
            connected to it!"
Endif
```

Disconnecting a Client

To Disconnect from a Client

- Select the Client(s) from which you want to disconnect.
- Choose the Client, Disconnect menu command. **Or:**
- Right-click on one of the Client icons and choose Disconnect from the shortcut menu.

Disconnecting All Clients

Instead of disconnecting Clients individually, you can choose to disconnect from all connected Clients with a single action.

To disconnect all Clients, simply choose the Client, Disconnect All menu command.

Disk *xxx* full on *xxx*

Meaning
The disk on the target machine is full, and the current operation could not be completed.

Suggestions
Delete some files on the drive in question and retry the operation.

Displays a browse window to allow you to locate the required script

Displays a browse window to search for the required executable file

Displays the date that the file was created

Displays the name of this file

Displays the size of the file

Do ... Loop

See Also
For ... Next, For Each ... Next, If ... Else ... Endif

Description
The Do loop is used to execute a set of commands until a condition is met, or while a condition is TRUE.

Syntax

```
Do Until expression
        Statement(s)
        [EXIT DO]
Loop
```

Or:

```
Do while expression
        Statement(s)
        [EXIT DO]
Loop
```

Identifier	Description
expression	An expression to evaluate

Example
The following example loops until the expression is met:

```
x = 1
Do Until x = 10
        Print "Value = ", x * 10
        x = x + 1
Loop
```

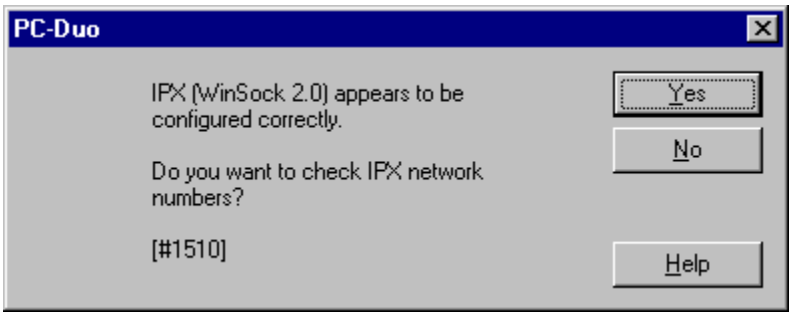
And this loops whilst the expression is TRUE:

```
x = 1
Do While x < 10
        Print "Value = ", x * 10
        x = x + 1
Loop
```

Do you want to check IPX network numbers?

Press the [Test] button in the Settings for Configuration: IPX dialog to test whether IPX is configured correctly for use by the PC-Duo Control program.

For more information on a particular feature, click where a ➧ appears on the picture below.



A usable IPX transport has been detected. Press [Yes] to determine the network numbers for all accessible IPX networks.

See Also
Technical Reference

Done. See log file for results

Your modem has been interrogated and the information returned is in file MODEM.LOG in the PCD32 directory.

You can view this file from the Settings for Configuration: Dialin Bridge dialog.

DOS Client

If a Client will be accessed whilst it is running DOS, i.e. not in a Windows DOS Box, then you must install a DOS Client. This will provide access to that workstation. You can install DOS support via the 16-bit install program.

The DOS TSR Client programs are:

- IPCLIENT for an IPX/SPX network
- NBCLIENT for a NetBIOS/NetBEUI network.

IPCLIENT OR NBCLIENT is loaded via the Command prompt or via a batch file. The real mode network drivers must have been loaded first.

You can use options when loading the Client program to tailor the access and security on the Client to meet your exact needs. You append these to the command line when loading the Client.

Notes
If you will also be accessing a DOS Client while it is in Windows you can do this but you must also install the Windows Client programs. This will recognise that the DOS Client is loaded and communicates through it.

If a DOS Client is to be accessed over a dialup comms link, you must also load the DOS Bridge TSR, either IPBRIDGE or NBBRIDGE.

DOS graphic modes supported from a Windows Control

The Windows Control supports the following DOS graphics modes:

- SVGA 800 x 600 x 16 (specify graphics mode with /G)
- EGA 320 x 200 x 16 (mode 0x0D)
- EGA 640 x 200 x 16 (mode 0x0E)
- EGA 640 x 350 x 2 (mode 0x0F)
- EGA 640 x 350 x 16 (mode 0x10)
- VGA 640 x 480 x 2 (mode 0x11)
- VGA 640 x 480 x 16 (mode 0x12)

Notes
The Windows Control does not track changes to the EGA Palette or VGA DAC Registers. Applications that use these features will display incorrect colours at the Control.

DriveSize

See Also
DriveSpace

Description
Returns the total size of a specified drive, either locally or on a client.

Syntax

```
Size = DriveSize (source)
```

Notes
The value returned by this function is determined by the value stored in the report_size variable. You specify a drive letter in the following format in *source*:

```
"C:" or ">C:" or "TEST2>C:"
```

The format for *source* is the same as a fully qualified pathname, but without anything after the drive designation. The interpreter ignores anything after this anyway, but it good practice to omit this.

Example

```
report_size = 2          // Return size in Mbytes

Print "Size of drive C: on this machine is ", DriveSize ("C:"), " Mb"
Print "Size of drive D: on the current client is ", DriveSize (">D:"), "
Mb"
Print "Size of drive C: on client TEST2 is ", DriveSize ("TEST2>C:"), "
Mb"
```

DriveSpace

See Also

DriveSize

Description

Returns the total space available of a specified drive, either locally or remotely

Syntax

```
Size = DriveSpace (source)
```

Notes

The value returned by this function is determined by the value stored in the report_size variable. You specify a drive letter in the following format in *source*:

```
"C:" or ">C:" or "TEST2>C:"
```

The format for *source* is the same as a fully qualified pathname, but without anything after the drive designation. The interpreter ignores anything after this, but it good practice to omit this.

Example

```
report_size = 2          // Return size in Mbytes

Print "Space available on drive C: on this machine is ", DriveSpace
("C:"), " Mb"
Print "Space available on drive D: on the current client is ",
DriveSpace (">D:"), " Mb"
Print "Space available on drive C: on client TEST2 is ", DriveSpace
("TEST2>C:"), " Mb"
```

Script Editor: Edit Menu

This menu provides the standard Windows text editor functions, and a few commands that are specific to Scripting:

Undo, Cut, Copy, Paste and Delete
These are the standard Windows editor functions.

Find and Replace
Allow you to search the current Script Editor window for a string, and/or replace it with another string.

Go to Line Number
Jumps to a specified line number in the focused editor window

Insert Password
Inserts an encrypted password into your script at the current caret position.

Insert Named Configuration
Inserts a Control Profile name into your script at the current cursor location.

Script Editor Popup Menu

Right-click in a Script edit window to open this popup menu. The following commands are available:

Topic Help
When you right-click over a word in the Script, it is extracted from the Script and displayed here. Select this command to display any topics in the Help File which have that keyword.

Insert Password
This command allows you to insert an encrypted password into your script.

Cut, Copy, Paste, Delete
These are the standard editing functions. These are also accessible from the Script Editor Toolbar and Edit Menu commands.

Properties
This command displays the properties of the current Script.

Editing a Script

Launch the Script Editor from within the Agent to edit a Script.

From the Task Properties dialog, press the **Edit Script** toolbar button to launch the Editor.

You can also select **Edit Script** from the Script Agent Popup Menu.

Editing a Task

To edit a scheduled Task, either

- Double-click on the item in the Task List
- Press ALT+Enter, or
- Select Properties from the Script Menu or the Toolbar.

The dialog that appears is identical to the dialog for creating a new task, except that the fields will be filled with the configuration of the selected task.

See Creating a new Task for details about the different fields.

Enable receipt of Broadcast Shows

Purpose
In the DOS environment, it is possible to Broadcast a show to all available Clients rather than just connected Clients.

This would obviously cause problems on a large network so the default is Broadcast Show disabled.

However, because of the improved performance there may be times when this is desirable. For example, in a Training Room that is isolated from the rest of the network.

Setting this option enables the feature.

Command
DOS IPCLIENT OR NBCLIENT *Clientname* /B
WIN: Not available
OS/2 Not available

Example
IPCLIENT JOHN /B

Effect
Enables the Client to receive a Broadcast Show even when not connected or selected.

Notes
- The default is disabled.
- Broadcast Show must also be enabled at the DOS Control.

Enter a description for this task

Enter the filepath of an executable file to run. This can be a **Windows Application**, **DOS batch file** or any other registered file type.

Enter the filepath of the script to execute

Enter the lower constraint time

Enter the period between executions in minutes

Enter the time at which to run the task

Enter the upper constraint time

Error Code *nnn* <error message>

Meaning
The application you tried to execute on the specified machine (Control or Client) failed to run.

Suggestions
Check the error message, rectify the problem and try again.

Error deleting '*xxx*'

Meaning
The modem log file or modem definition file could not be deleted.

Suggestions
Make sure the file is not read only or open in another application, that the diskette is not write-protected, and that you have sufficient rights to delete files.

Error in file *xxx*, line *nnn*

There is an error in the mode script file (CONTROL.MDM) at or near the line number listed. This will normally only occur if you the file has been edited.

Suggestions
Use a text editor such as Windows Notepad to edit the file and correct the problem. CONTROL.MDM contains a description of its format. If the file is corrupted, it may be necessary to reinstall the software to restore the file to its original state.

See Also
Configuring your modem

Error loading transport '*xxx*' (adapter *nnn*), operation: *nnn*, code: *nnn*

There was an error loading the network transport protocol mentioned in the message.

If this is the first time you have run the Control program, you may need to configure your Connectivity Settings.

If you have run the Control successfully before, go to Settings for Configuration: Connectivity and test each transport that is enabled. If you are using NetBIOS you may need to change the Adapter Numbers if you have changed your machine's networking configuration.

Error *nnn* deleting '*xxx*' on '*xxx*'

Meaning
There was an error deleting the file from the specified machine.

Suggestions
Make sure the file is not read only or open in another application, that the diskette is not write-protected, and that you have sufficient rights to delete files.

Error *nnn* opening file *xxx* on *xxx*

Meaning
The file specified cannot be found, or cannot be opened.

Suggestions
Check the file exists (unless you are writing to it), you have sufficient rights to access it and it is not open in another application. If the file is on a file server, the network connection may have failed.

Error *nnn* reading drive *xxx* on *xxx*

Meaning
An error occurred when reading from the specified drive on the local or Client machine.

Suggestions
- If the device is a floppy drive or CD-ROM drive make sure there is diskette/CD present
- A network connection to a file server may have failed

Notes
If the Client has been set to Authenticate the Control with NT, the Control user may not have permission to access the Client user's mapped network drives. This restriction can be removed if the Client is configured to enable the "Impersonate Logged-on NT User when Transferring Files" option in the Advanced Configurator, Security tab.

Error *nnn* reading file *xxx* on *xxx*

Meaning
There was a problem reading the specified file.

Suggestions
Check that the file exists, and that you have permission to access it. Check also for media errors, especially on floppy disks and CDs, or a network connection to a file server may have failed.

Error *nnn* renaming *xxx* to *xxx* on *xxx*

Meaning
An attempt to rename a file failed. This can also occur when copying a file - the file is copied to a file called TEMPFILE.$$$ and then renamed (to preserve the original file if the copy fails).

Suggestions
Check that you have sufficient access rights to the target file and directory and that the file is not open in another application.

Error *nnn* writing captured print output to *xxx*

Meaning
The Control cannot send captured print data to the printer.

Suggestions
Check that the printer is online and configured correctly (from Settings, Printers in the Start menu).

You can display the printer currently being used for Print Capture, along with a list of printers installed, in the Print Capture tab in the Settings dialog.

Error *nnn* writing file *xxx* on *xxx*

Meaning
The specified file could not be written.

Suggestions
Make sure the file is not read only or opened by another application and you have sufficient rights to write to files. Check also for media errors, especially on floppy disks and CDs, or a network connection to a file server may have failed.

Error *nnn*: Unable to copy file ‘<SourceFile>’ to ‘<Destination>’. <Error Message>

Meaning
An error occurred trying to copy a file. <SourceFile> is the source path of the file, <Destination> is the target machine. <Error Message> describes the nature of the problem and should give you sufficient information to sort it out.

Suggestions
A common cause of this problem is if the file on the target machine is opened by another application. Close this application and try again.

Error *nnn*: Unable to create directory '*xxx*' on '*xxx*'

Meaning
An attempt to create a directory has failed on the specified machine (Control or Client).

Suggestions
Make sure that the destination drive or network share is not write-protected. Also, make sure you are not trying to create the directory on a CD-ROM drive, and that you have sufficient access rights in the parent directory.

Error *nnn*: Unable to remove directory *xxx* from *xxx*

Meaning
You are trying to delete a directory on the local or a Client machine, and either the directory or drive is read-only. The numerical error code is displayed in the error message along with an interpretation of the error.

Suggestions
The directory may not be empty, or contain files that are read-only or op[en in another application. Check also that you have sufficient access rights to the directory and the directory in which it resides, or a network connection to a file server may have failed.

Error *nnn*: Unable to set attributes for file '*xxx*' on *xxx*

Meaning
An attempt to set the attributes for the file failed.

Suggestions
Check that the target file exists, that you have sufficient access rights to file and directory in which it resides, and that the file is not open in another application.

Error opening modem log file '*xxx*'

Meaning
This normally means that the Modem log file (MODEM.LOG in the PCD32 directory) does not exist; it will be created when you dial a Bridge with logging enabled.

Suggestions
If the file does in fact exist, check that you have sufficient rights to open and read this file and that it is not open in another application.

Error reading disk

Meaning
There was an error reading the specified disk.

Suggestions
Make sure there is media (diskette/CD) in the specified device or a network connection to a file server may have failed.

Error reading file '*xxx*'

Meaning
The specified file could not be read.

Suggestions
Check that the file exists, and that you have permission to access it. Check also for media errors, especially on floppy disks and CDs, or a network connection to a file server may have failed.

Error renaming *xxx* to *xxx*

Meaning
The specified file could not be renamed. This also occurs when updating files - they are saved to a temporary file first and then renamed in case the copy fails.

Suggestions
Check that the target file is not read-only and that you have sufficient rights to rename files. Check also for media errors, especially on floppy disks and CDs, or a network connection to a file server may have failed.

Error writing file *xxx*

Meaning
The specified file could not be written.

Suggestions
Make sure the file is not read only or opened by another application and you have sufficient rights to write to files. Check also for media errors, especially on floppy disks and CDs, or a network connection to a file server may have failed.

Executing a task

You can run a script immediately by selecting Run Now. Do this from one of the following:

- The Toolbar
- Select the Script Menu Run Now command
- Select the Script Agent Popup menu Run Now command

Any other Tasks will be postponed until this one has finished.

Exit

Description
Exit allows you to break out of a For ... Next, Do ... Loop or function statement, and continue execution of the script at the line following the statement block.

Syntax

```
Exit [style]
```

You must supply one of three arguments to this command, which are:

Style	Description
For	Exit from the current For ... Next or For Each ... Next loop
0. Do	Exit from the current Do ... Loop structure
1. Function	Exit from the current Function block

Example
These examples show where you would use the Exit command:

```
For each ClientName in ClientList
      If !Connect (ClientName) then Exit For
Next

...

Do While X < 100
      If X = 20 then Exit Do
      X = X + 1
Loop

...

Function MyFunc (X, Y)
      If X * Y = 100 then
            MyFunc = 0
            Exit Function
      Endif

      MyFunc = X * Y
End Function
```

Features

PC-Duo contains a wealth of features to assist you in supporting users and managing their desktops. Amongst these are abilities to:

- Dynamically find and list all Clients on the network
- Connect by Client name
- Connect by hostname or network address
- Connect via a database of Known Clients
- Connect to the Clients in a Group
- Connect to Clients using different network protocols simultaneously

With a wide range of user configurable security features, including:

- Individual Security Profiles for different users of the same Control program
- The ability to set which options will be available to individual Control Users
- The ability to set which options a Client will allow an individual Control User to have available
- An Audit Trail with address, file transfer, and remote control activity logging
- Password protection at the Control, Client, Bridge, and Gateway
- User present at Client before connection allowed
- Disable File Transfer
- Restrict a Control to Watch or Share modes only
- Dial back to different numbers according to password
- Limit access to Clients to Controls with a specific serial number or pre-configured password
- ‘Public when logged off' and ‘Logoff on disconnect' features allow simple, secure communal access to NT machines.
- Full data encryption up to 256-bit Advanced Encryption Standard (AES)

PC-Duo is easy to set-up and configure with:

- Configuration utilities for Clients, Controls, and Gateways
- Built in modem diagnostics

And many additional features such as:

- Supports DOS, Windows 95, Windows 98, Windows ME, Windows NT (v4.00, Server and Workstation), Windows 2000, XP, and 2003.
- Supports IPX/SPX, NetBIOS/NetBEUI and TCP/IP (Winsock and HTTP)
- Does not replace existing Windows Drivers
- Advanced data and graphics compression
- Supports all video resolutions and colour depths up to 16.7 million colours
- View multiple Clients simultaneously
- View Clients in windowed or full-screen modes
- Allows remote logon to NT machines
- Show the Control's screen to one or more Clients
- Exhibit one Client's screen to any or all of the others in a group
- Printer redirection under Windows and DOS
- Easy to use two-way file transfers with support for long file names. Drag and Drop functionality, create directories, ‘copy if newer' and more
- Limit colours sent to 16 or 256 to improve performance
- Disables wallpaper and full-window drag for improved performance
- ‘Request help' feature from the Client to the Control

File Distribution: Client Menu

The Client Menu specifies how to handle the highlighted Client:-

Set Destination
Use this command to select or create the destination directory for the file distribution. This applies to the selected Client.

Lock Directories
Prevents the Client directories from being updated when the Control's are changed.

Reset Directories
This resets the Clients' destination to the same path as the Control.

File Distribution: Directory Menu

The Directory Menu provides the following commands:-

Create
Creates a new subdirectory beneath the currently highlighted directory

Rename
Renames the selected directory.

Delete
Deletes the currently highlighted directory

Goto
Enables you to move directly to a named directory without navigating through the tree view.

Properties
Displays the attributes for the highlighted directory.

File Distribution: File Menu

The File Menu provides the following commands:-

Copy
Copies the selected files to the chosen destination.

Delete
Deletes the selected files

Rename
Renames the selected file.

Properties
Sets the file attributes for the selected file.

Close
Closes the File Transfer window.

File Distribution: Menus

The following menus are available from the File Distribution window:-

File
Select a file to work with, and you can use these commands to copy, delete, or rename it.

Client
Specifies how to use the highlighted Client during File Distribution.

Directory
Allows you to create, remove, or change working directory at the Control.

View
Sets display modes for the File Transfer windows. It is also used to set defaults such as whether to use compression, what confirmation is required on copying, sort order etc.

Tools
Enables you to view or edit the selected file.

Window
Allows you to switch between open Control windows.

Help
Opens the help at the File Distribution topic.

File Distribution: Tools Menu

The Tools menu provides the following commands:-

View File
Allows you to view the selected file.

Edit File
Allows you to edit the selected file.

These commands can be used with text files up to approximately 60KB in size.

File Distribution: View Menu

View Menu commands are used to customise the File Distribution window:-

Toolbar
Hides or displays the Toolbar.

Status Bar
Hides or displays the Status bar.

Show Details
Displays or hides file details in the List View.

Select
Enables you to select ranges of files or directories quickly without highlighting them individually.

Sort
Sets the sort options for the file List Views.

Settings
Configures File Transfer and Distribution.

File Distribution: Window Menu

This menu contains the following commands:

Tile
This command allows you to arrange open View and/or File Transfer windows on the Control's screen so that they can all be seen. The selected windows will be sized to fit on the Control's Screen. The Tile Submenu contains the following commands:

All Windows	Displays and tiles both Client View and File Transfer windows
View Windows	Displays and tiles only the Client View windows
File Transfer	Displays and tiles only the active File Transfer windows
Close All Windows	Closes all View and File Transfer windows

You can then view multiple sessions simultaneously.

Window
This section lists any open View and File Transfer windows and allows you to switch between them. Click on a window to display it on top of the other windows.

Script Editor: File Menu (with no edit windows open)

These commands are available when you do not have any editor windows open:

New
Creates a blank editor window, into which you can begin writing a Script. This window will be "Untitled" until you save or run the Script.

Open
This allows you to open an existing Script or any text file.

Recent Files
This submenu lists the 9 most recent files opened. The most recent file appears first.

Exit
Closes down the Script Editor. You will be prompted to save any files that you have opened that are not saved.

Script Editor: File Menu (with edit windows open)

This Menu appears when you have one or more Script or Log File edit windows open.

New
Creates an empty editor window, into which you can begin writing your script. This window will have the title "Untitled" until you save or run the script.

Open
This allows you to open an existing Script (or another text file), using the Windows file browser.

Close
Closes the selected Script. You will be prompted to save this file if it is unsaved, or is "Untitled".

Save
Saves the selected Script. If the file is "Untitled" then the Save As dialog box will appear.

Save As
Saves the selected Script under a different name.

Load Log File
When you have opened a Script, as indicated by the .SCP file type, this command opens the log file associated with the selected Script.

Clear Log File
This command opens the the log file associated with the selected Script, but it clears the log file first.

Print Setup
Displays the Windows Printer Setup dialog, allowing you to configure your printer.

Print
Prints the selected Script or Log File window.

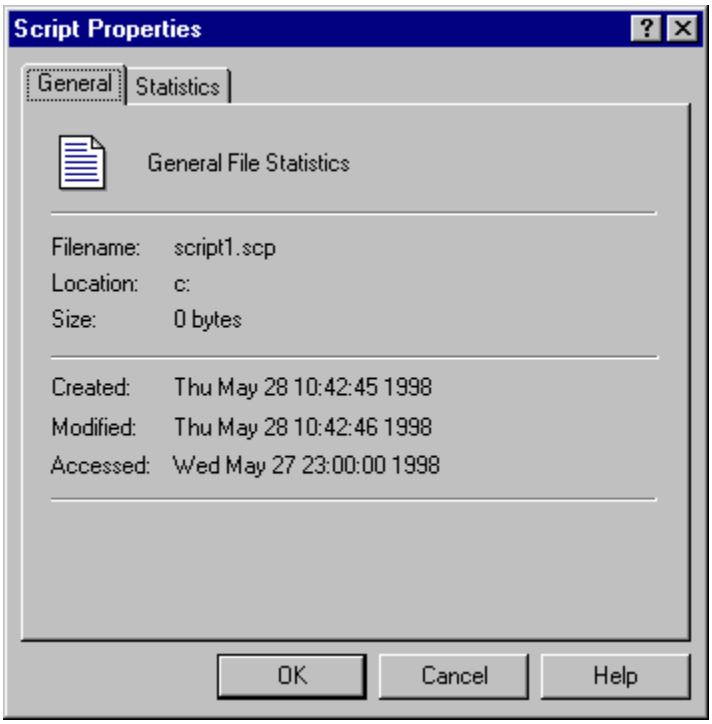
Recent Files
This command allows you to open one of the most recently-used files.

Exit
This command closes the Script Editor. You will be prompted to save any files that have not been saved, including any "Untitled" files.

Script Properties: General

Press the Properties button (shown above) on the toolbar, or select Properties from the Edit Window Popup Menu, to display details of the selected file.

For more information on a particular feature, click where a ▸ appears on the picture below.

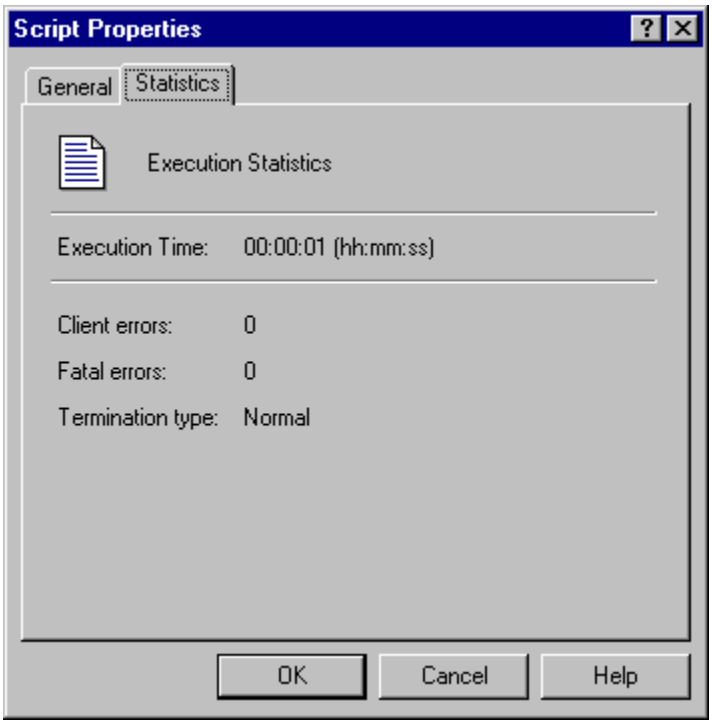


Note
The Statistics tab will appear if the selected Edit Window contains a script, identified by the file extension .SCP.

Script Properties: Statistics

The Script Properties: Statistics tab is displayed when the selected file window contains a PC-Duo Script (determined by file type .SCP).

For more information on a particular feature, click where a ➧ appears on the picture below.



This tab shows Execution Statistics for the selected Script.

File Transfer: Directory Menu

The Directory Menu provides access to the following functions:-

Create
Creates a new directory beneath the highlighted directory

Rename
Allows you to rename the selected directory.

Remove
Deletes the selected directory

Goto
Enables you to move directly to a named directory without the need to navigate through the Tree View.

Properties
Sets the Attributes for the selected directory.

File Transfer: File Menu

The File Menu provides access to the following file transfer and manipulation functions:-

Copy
Copies the selected files to the chosen destination.

Delete
Deletes the selected files.

Rename
Renames the selected file.

Execute
Allows you to run the highlighted program immediately.

Properties
Sets the file attributes for the selected file.

Close
Closes the File Transfer Window.

File Transfer: Help Menu

This menu contains the following commands:

File Transfer Window
This command displays the Help topic for the File Transfer or File Manager windows.

About
This takes you to the Control's Help, About dialog.

File Transfer: View Menu

The View Menu is used to customise the appearance of the File Transfer and File Manager windows and their contents. The following commands are available:-

Toolbar
This command allows you to specify whether or not the Toolbar and the text labels for the Toolbar buttons should be displayed.

Status Bar
Displays or hides the Status bar.

Show Details
Displays or hides file details in the file list view (the right-hand pane).

Select
Enables you to select ranges of files or directories without the need to highlight them individually.

Sort
Sets the sort options for the file list view.

Settings
Opens the Settings for Configuration: File Transfer dialog which allows you to configure the File Transfer settings.

File Transfer: Window Menu

This menu contains the following commands:-

Tile
This command allows you to arrange open View and/or File Transfer windows on the Control's screen so that they can be seen. The selected windows will be sized to fit on the Control's Screen. The Tile submenu contains the following commands:

All Windows	Displays and tiles both Client View and File Transfer windows
View Windows	Displays and tiles only the Client View windows
File Transfer	Displays and tiles only the active File Transfer windows

You can then view multiple sessions simultaneously.

Window
This section lists any open View, File Transfer, File Manager, and Edit Registry windows, and allows you to switch between them. Click on a window to display it on top of the other windows.

File transfer disabled at Client '*xxx*'

Meaning
The Client you are trying to perform a File Transfer operation on has been configured to reject any such operation. This is done for security reasons and it can only be enabled at the Client machine.

Suggestions
Use the Client Configurator to set the Client to permit File Transfer operations.

File Transfer Menu Bar

The File Transfer and File Manager window menu bars provide access to the following drop-down menus:-

File
Highlight a file to work with, and use the commands on this menu to copy, delete, or rename it.

Directory
This menu allows you to create or delete directories, and change the working directory.

View
These commands are used to set the display mode and sort order for the file list view (the right-hand pane), and also to control whether compression is used, what confirmation is required on copying or deleting files.

Tools
Allows you to view or edit the selected file or synchronise directories between the Control and the Client.

Window
Enables you to switch between open View and File Transfer windows.

Help
These commands display help for the File Transfer Window and the Control's Help About dialog.

File Transfer: Tools Menu

The Tools Menu provides access to File Transfer's editing and synchronisation capabilities.

View File
You can view files of up to 30KB without the need to start an application such as Notepad.

Edit File
You can edit Files of up to 30KB without the need to start an application such as Notepad.

Synchronise
This command provides a briefcase facility, which allows you to synchronise files and directories between the Control and a Client.

Note:
The Synchronise command is not available in the File Manager Tools Menu.

File '*xxx*' already exists. Overwrite (click No to append)?

Meaning
The file you are about to write to already exists. You can either proceed and overwrite the existing file, or click No to append data to the end of the existing file.

FileExists

See Also

DirExists

Description

Checks for the existence of a file on the local or remote machine.

Syntax

```
Exists = FileExists (source)
```

Notes

The return value is TRUE if the specified file was found on the machine, or FALSE if the file was not found. The *source* argument requires a fully qualified pathname in order to work. The operation can be performed on the local machine not requiring any client connections, or on a connected client machine.

Example

```
If FileExists (">C:\WINDOWS\SETUP.EXE") then
      Print "File C:\WINDOWS\SETUP.EXE was found on the current client"
Endif
```

FindItem

See Also
AddItem, DelItem, GetItem, Join, SetItem, Items, Dim

Description
Searches a list for a specified string, and returns the index to it

Syntax

```
Index = FindItem (list, expression [, case])
```

Notes
When you search the list, you can specify that how the strings are compared. If you do not specify the third optional argument, the string comparison is non-case sensitive. The return value is a one base index to the item found, or zero if the item was not found. You can specify on of the following values in the third option argument:

Identifier	Value	Description
0. IGNORECASE	1	Ignores the case of strings (This does not have to be specified)
1. MATCHCASE	2	Matches the case of string

Example

```
...

      found_at = FindItem(list, "String 3", MATCHCASE)

      If found_at then
            Print "Found the exact string item at index ", found_at
      Else
            Print "Did not find the exact item in the list"
      Endif
```

For ... Next Loop

See Also
For Each ... Next, **Do ... Loop**, If ... Else ... Endif

Description
The FOR loop is used to execute a set of functions a set number of times.

Syntax

```
FOR counter = init-value TO end-value [STEP step-value]
      Statement(s)
      [EXIT FOR]
NEXT
```

Identifier	Description
counter	Any numeric variable to store the loop counter
init-value	The initial value of *counter*
end-value	The final value of *counter*
step	The amount *counter* is changed each time the loop is executed. If this statement is omitted, th default step is one (1).

Notes
The *init-value* can be greater than the *end-value* and visa-versa. The EXIT FOR statement can be placed anywhere inside the FOR loop. This causes the processing of the script to continue after the NEXT statement, effectively stopping the loop.

Example
The following example creates a loop of ten repetitions and displays the loop counter in each repetition.

```
FOR I = 1 TO 10
      PRINT "I = ", I
NEXT
```

For loops can be nested inside one another, so the following example is still valid.

```
FOR a = 1 TO 10
      FOR b = 10 TO 1
            PRINT "A * B = ", (a * b)
      NEXT
NEXT
```

For Each ... Next Loop

See Also
For ... Next, **Do ... Loop**, If ... Else ... Endif

Description
The FOR EACH loop is used to execute a set of functions once for every item in a string list

Syntax

```
FOR EACH item IN list
      Statement(s)
      [EXIT FOR]
NEXT
```

Identifier	Description
item	Any string variable to store the retrieved item from the string list
list	The string list which the loop will traverse

Example
The following example creates string list using a FOR loop, and then uses a FOR EACH loop to display them:

```
DIM stringlist

FOR I = 1 TO 10
      AddItem (stringlist, "String" + CStr (I))
NEXT

FOR EACH string IN stringlist
      Print "Item -> ", string
NEXT
```

The FOR EACH loops can be nested inside one another, so the following example is still valid.

```
FOR EACH client IN ClientList
      FOR EACH pnumber IN phonelist
            PRINT "Client -> ", Client, " -> ", pnumber
      NEXT
NEXT
```

Full Screen

Press and release this button to switch between full-screen and windowed Viewing modes. In full-screen mode the Client's screen fills up the Control’s screen. Windowed mode allows you to see the View Window menus.

GetClientPlatform

See Also
GetClientVersion, **GetInstallDir**, **GetOSDir**

Description
Retrieves the platform of the specified client machine

Syntax
```
PlatformID = GetClientPlatform ([Client])
```

Notes
The *Client* argument is optional. If no arguments are specified or the client string is empty, then the currently selected Client is used. The return value is one of the following:

Identifier	Value	Description
PLATFORM_WIN3X	1	Any Windows 3.x or Windows for Workgroups platform
PLATFORM_WIN95	2	Windows '95
PLATFORM_OS2	3	OS/2
PLATFORM_NT4	4	Windows NT 4.0
PLATFORM_NT351	5	Windows NT 3.51
PLATFORM_WIN2000	6	Windows 2000
PLATFORM_WIN98	7	Windows 98
PLATFORM_NT350	8	Windows NT 3.50
PLATFORM_WINME	9	Windows Millennium Edition
PLATFORM_WINXP	10	Windows XP

Example

```
Print "Current Client Platform is ", GetClientPlatform ()

Platform = GetClientPlatform ("TEST1")

If Platform = PLATFORM_WIN95 Then
  Print "The Client is running Windows '95!"
Endif
```

GetClientVersion

See Also

GetClientPlatform, GetInstallDir, GetOSDir

Description

Retrieves the version of the specified client

Syntax

```
Success = GetClientVersion ([client], MajorVersion, MinorVersion)
```

Notes

You need to supply the names of two variables that will store the Major and Minor version numbers to this function. These must be defined by Dim before calling GetClientVersion (). The return value indicates if the function was successful or not. The *MajorVersion* variable will contain a number such as 4, and the *MinorVersion* variable will contain something like 10, indicating version 4.10. You do not need to supply *client* if you want to retrieve the information from the currently selected client. Also if this string is empty, the current client is used.

Example

```
Dim MajorVersion, MinorVersion

If GetClientVersion (MajorVersion, MinorVersion) then
      Print "Client ", CurrentClient (), " is running version ",
      MajorVersion, ".", MinorVersion
Endif
```

GetDirList

See Also

GetFileList, GetDriveList

Description

Returns a list of directories from a specified location on either the local machine or a client machine.

Syntax

```
Items = GetDirList (source, list)
```

Notes

This function returns a list of the directory names found in a specific location on the local machine, the current client or a specified client machine. The source must be a fully qualified pathname, and must be absolute. You do not supply wildcards in the *source* argument. The list that is created contains all of the directories found. The return value specifies how many directory names were added to the list.

Example

```
Dim Dirs

Print "Directories found locally in C:\ ", GetDirList ("C:\", Dirs)

For each Dir in Dirs
      Print "Directory -> ", Dir
Next
```

GetDriveList

See Also
GetFileList, GetDirList

Description
Populates a list with the drive letters available on the specified source machine.

Syntax

```
Items = GetDriveList (source, list)
```

Notes
The list that is created contains only the drive letters, not the following full colon (:). The list is populated with physical drives as well as mapped network drives. The source argument only needs to contain the client specifier of an fully qualified pathname. So to get the drive lists on the local machine specify *source* as an empty string, for the current client just specify the chevron '>'. And for a specific client, specify *source* as the client name followed by the chevron '>'. The return value contains the number of drives available on the specified machine.

Example

```
Dim Drives

Print "Number of drives on local machine ", GetDriveList ("", Drives)
Print "Number of drives on current client ", GetDriveList (">", Drives)
Print "Number of drives on specific client ", GetDriveList ("TEST2>",
Drives)
```

GetFileInfo

See Also

SetAttrib

Description

Retrieves various information about a specified file on the local or client machine.

Syntax

```
Value = GetFileInfo (source, flag)
```

Notes

You must specify a fully qualified pathname in order for the function to work. The return value varies depending on the *flag* specified. Use the values from the following table:

Identifier	Return type	Description
0. FI_SIZE	integer	Returns the size of the specified file
1. FI_ATTRIB	integer	Returns the file attributes
2. FI_TIME	string	Returns the time the file was created
3. FI_DATE	string	Returns the date that the file was created

Example

```
Print "File size = ", GetFileInfo ("c:\command.com", FI_SIZE), " bytes"
print "File attrib = ", GetFileInfo ("c:\command.com", FI_ATTRIB)
print "File time = ", GetFileInfo (">c:\command.com", FI_TIME)
print "File date = ", GetFileInfo ("TEST1>c:\command.com", FI_DATE)
```

GetFileList

See Also

GetDirList, GetDriveList

Description

Populates a list with files that match a specified wildcard in a specified location.

Syntax

```
Items = GetFileList (source, list)
```

Notes

This function returns a list of the filenames found in a specific location on the local machine, the current client or a specified client machine. The source must be a fully qualified pathname and must be absolute. The list that is returned only contains filenames, not the full path to the file. You can specify an 8.3 filemask, or a long filename mask. You can use asterisks and question marks in the wildcard, as you would in a DOS DIR. The return value indicates how many matched files were found and added to the list. Zero indicates that no files were found, or the function failed.

Example

```
Dim filelist

Items = GetFileList ("C:\windows\*.exe", filelist)
Print "Found ", items, " files matching the wildcard"
```

GetInstallDir

See Also

GetClientVersion , GetClientPlatform , GetOSDir

Description

Retrieves the path to the Client's installation directory.

Syntax

```
String = GetInstallDir ([client])
```

Notes

The *client* argument is optional. If no arguments are specified or the *client* string is empty, then the currently selected client is used. The return value is a string containing the full path to the directory where the Client is installed.

Example

```
Connect ("TEST1")
Print "Client is installed in ", GetInstallDir ()
```

GetItem

See Also
AddItem, DelItem, FindItem, Join, SetItem, Items, Dim

Description
Returns the string located at the specified index in a list.

Syntax
```
String = GetItem (list, index)
```

Notes
The interpreter will generate an error if the index you supply is greater than the number of items in the list. You should check to make sure that you know how many items there are in the list. Use the Items function to do this.

Example
```
Print "Item at index 3 is ", GetItem (List, 3)
```

GetOSDir

See Also

GetClientVersion, GetClientPlatform, GetInstallDir

Description

Retrieves the directory of the operating system on the client machine.

Syntax

```
String = GetOSDir ([client])
```

Notes

The *client* argument is optional. If no arguments are specified or the *client* string is empty, then the currently selected client is used. The return value is a string containing the full path to the directory where the operating system is installed on the client machine.

Example

```
Connect ("TEST1")
Print "The operating system is installed in ", GetOSDir ()
```

Global Variables

The following table contains all of the variables that have an effect on various scripting commands. They are accessible from any part of the script, inside and outside of sub routines.

Identifier	Default Value	Description
`dial_delay`	`30`	The time (in seconds) between redial attempts
`dial_retry`	`3`	The number of redial attempts
`report_size`	`0`	The value effects the output from functions that return the size of files. The following values are valid: 0. Return the size in bytes 1. Return the size in Kilobytes (Kb) 2. Return the size in Megabytes (Mb)

Goto

Description
Moves the execution of the script to the line following the specified label.

Syntax

```
Goto label
```

Notes
If the label doesn't exist in the current scope, an error will be generated. Only labels inside the current function block will be available. Also you can have the same label defined in different function blocks, and the interpreter will use the one in the current scope.

Example

```
Goto get_out

Print "This will not be displayed"

...

get_out:
```

Group Properties

You can view and edit additional information about Groups such as Name, Description and which Clients are members of the Group.

This information is stored in the Group Properties dialog. You can also view this information in the Control Window's Groups View, by choosing the View Details menu command.

To display the Group Properties dialog, right-click on a Group and choose Properties from the shortcut menu. Alternatively, select the appropriate Group and click on the Properties button in the Control window Toolbar.

See also
Group Properties Setting

Group Properties Setting

You can view and edit the Group Properties using the Group Properties dialog.

The Group Properties dialog consists of two tabs:

General

- The name of the Group.
- A Description for the Group.

Members

- A list of members in the Group, which you can edit if required.

See also

Group Properties

Hangup

See Also
Dial

Description
Hangs up a remote dial-up connection.

Syntax

```
Success = Hangup ()
```

Notes
If this function is called without a successful call to Dial (), the return value is FALSE. If the connection was terminated successfully then the return value is TRUE.

Example

```
...

If !Hangup() then
      Print "We couldn't terminate the remote connection!"
Endif
```

Hardware and Software Requirements

Hardware Requirements

DOS Control

- 100 % IBM compatible, 8088 or better with 200KB free RAM

DOS Client

- 100 % IBM compatible, 8088 or better with 25KB free RAM

Windows Control

- 100% IBM compatible, Intel Pentium or better

Windows Client

- 100% IBM compatible, Intel Pentium or better

Software Requirements

DOS Control & Client (depending on network protocol)

- DOS 3.3 or later
- IPXODI version 2 or later, or
- IBM LAN Support Program 1.1 or later,
- Or any other compatible NetBIOS
- A monolithic IPX, i.e. one that is bound directly to the card, may be unreliable. Please upgrade to IPXODI if you experience problems.

Windows 32-bit Control and Client

- Windows 95 and 95B (OEM Service Release 2) with WinSock2 TCP/IP
- Windows 98 and Millennium Edition
- Windows NT v4.0, Workstation or Server, on Intel PCs
- Windows 2000, Workstation or Server, on Intel PCs
- Windows XP, Workstation or Server, on Intel PCs
- Windows 2003, Workstation or Server, on Intel PCs
- NetBIOS, NetBEUI, IPX, HTTP, or TCP/IP

Windows 32-bit Gateway

- Windows NT 4.0 or higher, on Intel PCs
- HTTP

Notes

- Check the Release Notes in file README.TXT for the latest information.

Script Editor: Help Menu

This menu provides access to resources that you may need while you are working with the Script Editor:

Contents
Opens the Help File at the Contents tab.

Search
Displays the Help File Search tab, allowing you to search the keyword index.

Using Help
Displays the standard Windows help file, which explains how to use the help viewer installed on your system.

About Scripting
The Script Editor's About dialog is displayed.

Script Agent: Help Menu

This menu contains the following commands:

Contents
Opens the Help File at the Contents topic.

About Scripting
This command shows you version information for the Script Agent.

Help Request Function

A help request Window is displayed at the Control when any of the Clients connected to the Control request help from the Client Menu. This window can be minimised, but not closed. The window will disappear when the last request is cleared.

The upper pane contains a list of Clients requesting help in the order that the requests were received. As you move the highlight bar through the list of Clients, the message from the selected Client is displayed in the lower pane.

You can Share, Chat or send a Message to the selected Client by clicking on the relevant button. Clicking on [Clear] removes the Client Request from the list.

Method
From the Client, request help by double-clicking on the Client icon in the taskbar's system tray, then choosing the Commands, Request Help menu command. You can then enter your name and a message of up to 250 characters, or Cancel a request sent previously.

If no Control is connected, the message is queued and will be sent when a Control connects to the Client.

Help requests

A request sent by a user to advise a Connected Control that they require assistance. The Help request is stored in the Help requests folder in the Tree View.

The request text can be displayed by setting the List View to Detailed from the View, details command on the Control menu bar. You may also need to set the fields displayed in detailed List View to include Help Request. You do this via the View, Columns menu command.

Hex

Description

Converts a numeric value into a hexadecimal string representation.

Syntax

```
String = Hex (expression)
```

Note

0x prefixes the returned hexadecimal string. So hex (32) would return 0x20.

Hotkeys

This box shows the Hotkey combination that returns the Control's View window to windowed mode from full screen mode when viewing a Client. The default Hotkey combination is: CTRL+LSHIFT+RSHIFT. These are set in the Settings for Configuration: View dialog.

How to connect to Clients on different NetBIOS adapters

NetBIOS adapters are treated as separate transports with in the Control. The Settings for Configuration: NetBIOS dialog lists the available adapters along with a description i.e. NetBEUI or TCP/IP NetBIOS. You can set multiple NetBIOS adapter support by highlighting the appropriate adapters in the list.

When connecting to Clients over NetBIOS it is important that you select the correct adapter number at the Control. The most common NetBIOS adapter type for local networks is NetBEUI. The correct adapter may not have the same number on all PCs so it is important that it is set correctly for both Clients and Controls. For example, a Client may be using NetBEUI on adapter 0 but at the Control it could be adapter 7.

How to set the NetBIOS Adapter Number to dial a Remote Bridge

The NetBIOS Adapter Number that you use to dial a PC-Duo Bridge is configured in a slightly differently way to that used to connect to a Client. The Adapter Number used is actually the number configured at the Bridge. This is why Add a Remote Network and the Remote Network Properties dialog displays all possible NetBIOS Adapters, not just those in use at the Control.

Use the Configurator at the Bridge machine to determine the correct Adapter Number to use, and then save the same adapter number in the Remote Network properties.

If you attempt to dial a Bridge running on NetBIOS but specify an incorrect Adapter Number, the connection will fail and an error message will be displayed.

How to Show one Clients screen to a number of others (Exhibit)

The Control can Show its screen to one or more of the Connected Clients. It can also show one Client's screen to the other connected Clients (Exhibit).

Method

- Connect to the Clients you wish to Show to and the Client you wish to View.
- View the Client you wish to show.
- Select Show from the Controls Tools menu.
- Chose to Show to ‘These Clients’
- Highlight the Client you are currently Viewing and click the green tick next to it. It should change to a red cross. This Client is now excluded from the Show. If you don’t do this you will get an error saying that the Control cannot show to this Client while you are viewing it.
- Click ‘Show’ to start the Show.

The Clients screen that is being viewed is now being shown to the other Clients. You can use features such as Scale to Fit and Full Screen to show more of the Clients screen.

If this is checked, the output window is cleared every time you execute or check the syntax of a script.

If you uncheck 'Permit a user of this Configuration to *xxx*', you will be unable to change certain settings from this Configuration in future. Is this what you want to do?

Meaning
Disabling certain features in a Configuration will prevent you from re-enabling them unless you use an Administrator Configuration. Of course, this implies that you must have such a configuration set up, and know the password.

You will receive this message if you uncheck any of the following in a Configuration:

Change Settings
If you remove this option you will not be able to access any of this Configurations settings, this includes Network, Startup, View and File Transfer.

Configure User Interface
Without this option a user cannot change user interface settings such as hiding or protecting Client/Group/Remote Network lists and removing features from the toolbar and menu.

Act as an Administrator
An administrator user is able to create, delete and modify other configurations.

To re-enable any of these options you have to use another Configuration that has Administrator rights.

Click Yes to proceed, or No to leave the setting unchanged.

If...Else...Endif

See Also
For ... Next, For Each ... Next, **Do ... Loop**

Description
Conditionally executes a group of statements, depending on the result of an expression.

Syntax

```
If expression then
      Statement(s)
[Else]
      Statement(s)
Endif
```

Or

```
If expression then Statement
```

Notes
When expression is evaluated as TRUE, the flow of execution starts at the line immediately following the If statement, and continues until an Else or Endif keyword is encountered. If the expression is evaluated as FALSE, and there is an Else keyword present, the flow of execution starts at the line immediately following the Else statement. Otherwise the flow of execution continues at the line immediately following the Endif keyword.

You can use single line If statements for conditions that only require one line of statements. To do this you do not need to supply the Endif keyword, and cannot use the Else keyword.

These structures can be nested inside each other, up to a maximum depth of 10. If the structures become too deep, you may encounter problems matching the Endif keywords to the If statements.

Examples

```
If ConnectedClients () = 0 then
      Print "We are not currently connected to any clients!"
Else
      Print "We are connected to clients."
Endif

If !ConnectedClients () then Print "We are not connected to any
clients!"
```

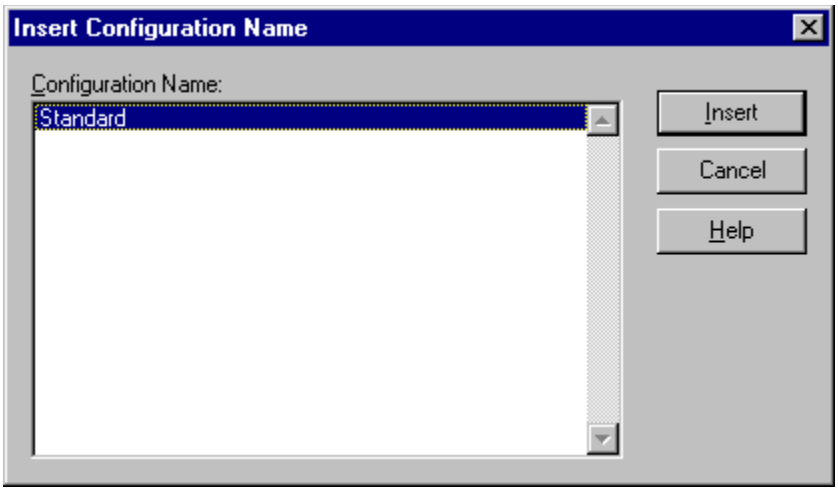
Indicates the date that the information in this was last changed

Indicates the date that this file was last opened

Insert Configuration Name

When you call the SetConfig function, you need to supply the name of a configuration to load. These configurations are defined in the Control program.

Firstly you need to position the insertion point in your script where the named configuration will go. Then, choose the Edit, Insert Named Configuration menu command to display the following dialog:

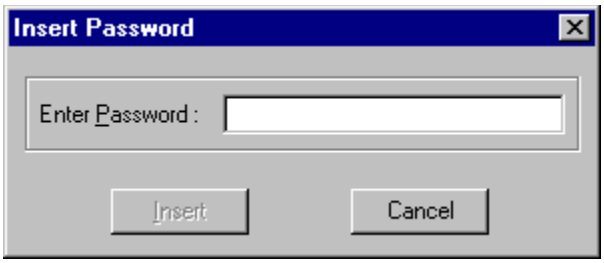


The list provided contains all of the configurations currently set up. Select **Standard** if you do not have any of your own configurations defined. Once you have selected the Named Configuration to use, press the **Insert** button.

This combination of functions is most useful when dialling remote networks. Each configuration contains the modem settings to use, if you have more than one modem for example.

Insert an Encrypted Password

When you need to connect to a Client or dial a Remote Network, you may need to specify a password. To prevent prying eyes from seeing these passwords, you are required to enter them in encrypted format. Position the caret in your script where you want the password to be inserted, and then select **Insert Password** from either the Editor context menu, or from the Edit menu. You are then prompted to enter the password:



The password you enter will not be displayed, you will see asterisks for each character typed. Press the Insert button to insert the encrypted password into your script.

InStr

Description
Search the source string for the existence of a substring.

Syntax

```
Index = InStr (source, substring [, case])
```

Notes
By default, the search is case sensitive unless you specify IGNORECASE in the third optional argument in which case the search is non-case sensitive. The return value is the character index of the *substring* within the string if a match was made. If no match could be made, then the return value is zero (0).

Example

```
Print "Substring 'TEST' found in String 'This is a test' at index ",
InStr ("This Is a test", "TEST", IGNORECASE)
Print "Substring 'TEST' found in String 'This is a test' at index ",
InStr ("This Is a test", "TEST")
```

Interpreter Error 0 - Unexpected end of file

When the script was being loaded, either the file was of zero bytes in size, or an End of file marker was found before the completion of a function statement. Make sure the file is saved and is not corrupted, and make sure there is something in the file.

Interpreter Error 1 - Cannot nest functions

You have nested one function inside another somewhere in your script.

The Scripting Language does not support this style of programming.

Interpreter Error 2 - Function name expected

You have supplied the FUNCTION declaration, but have omitted the function name.

Interpreter Error 3 - Open parenthesis '(' expected

The interpreter encountered the FUNCTION keyword and function name, but did not find an open parenthesis.

Interpreter Error 4 - Invalid characters in function name

The function name that was found after the FUNCTION keyword contained invalid characters. Anything other than alphanumeric characters, and the underscore character, will generate an error.

Interpreter Error 5 - Close parenthesis ')' expected

You have omitted a close parenthesis on the end of a function declaration.

Interpreter Error 6 - Invalid characters found in argument variable

One of the argument variables in a function declaration contained an invalid character. Only alphanumeric and the underscore '_' characters are valid.

Interpreter Error 7 - You have used functions, but have not defined the function 'MAIN'

Your script contains function blocks, and you have not created a function called 'Main'. This function is required, as this is the starting point for the interpreter. Make sure you have spelt the function correctly and it exists.

Interpreter Error 8 - Duplicate Label Found

You have declared a label twice. This occurs when the label is repeated within the same function block. You can have labels with the same name, but they must be in different functions.

Interpreter Error 9 - Duplicate Function Declaration Found

You have declared two functions with the same name. Change the name of one of these functions, by adding an underscore for example, to resolve the problem.

Interpreter Errors

When you execute or check the syntax of your script you may encounter Interpreter Errors. These errors must be resolved before the script is allowed to run. Usually the error is a result of a typing error, or omission of a parenthesis. The errors you may see look like this:

```
s:\scripts\helptest.scp : error C0007: You have used functions, but have
not defined the function 'MAIN'
```

There are three parts to the interpreter error, which are:

s:\scripts\helptest.scp	The filename of the script in which the error occurred
error C0007	The actual interpreter error number
You have used functions, but have not defined the function 'MAIN'	A text description of the error and the offending syntax

The following table contains all of the errors you are likely to encounter when developing your scripts. Chances are you will not see the majority of them. The ***xxx*** will be replace by some meaning full text in the interpreter. Click on the error message format for more detailed help for the error.

Error Number	**Error message format**
0	Unexpected end of file
1	Cannot nest functions
2	Function name expected
3	Open parenthesis '(' expected
4	Invalid characters in function name
5	Close parenthesis ')' expected
6	Invalid characters found in argument variable
7	You have used functions, but have not defined the function 'MAIN'

The Scripting Language

PC-Duo Scripting is an interpreted language, designed to allow you to automate tasks within the Control program. The language is based upon VBScript, so the structures will seem familiar if you have had any contact with VBScript before now. However, although this language is based on VBScript, it is NOT VBScript, and there are subtle differences.

Throughout this help file, several different text formats identify parts of instructions such as:

Format	Comments
identifier	Identifies a function name or reserved keyword
args	Arguments which are supplied to a function
( )	Parenthesis, must be supplied where shown
[ ]	Square brackets surround arguments which are optional
//	Anything following these two slashes are treated as comments, and are ignored by the interpreter
`example`	Fixed pitch fonts indicate a syntax description or example

Where you find an ellipsis (...) on its own line, this refers to other commands that can be placed between the preceding and following lines. Do not copy the ellipsis into your script, as the interpreter does not understand what it means.

The topics that describe individual scripting functions are formatted in a particular way to help you use the functions in your script. The following example shows how the Connect help topic is formatted:

See Also
Disconnect

Description
Establishes a connection with a remote control Client.

Syntax

```
Success = Connect (client [, password])
```

Notes

This function connects to a Client. *Client* must specify the full name of the Client.

Example

```
If Connect ("test1") = FALSE then Print "Could not connect to the client!"
```

From the example above, you can see the important areas of the topics:

- The **See Also** list includes topics that are related to the current topic, and these may provide additional useful information.
- The **Description** provides a brief outline of what the function actually does.
- The **Syntax** section displays the way in which you construct the function. Use the table above to identify the different arguments required. If the function or command returns a value, this is signified by the *xxx* = part of the syntax. This means that you can assign the return value to a variable, or use it in another function or command.
- **Notes** detail more of the arguments that the function requires and explains what the function does in more depth.
- An **Example** will be provided in most cases showing you a simple way of using the command or function.

Comments and Updates

Please send any comments or suggestions regarding the Scripting Language by e-mail to support@vector-networks.co.uk. Your requests will be taken into account and may appear in future versions. Any bugs that are reported will be acted upon as soon as possible. Feedback is greatly encouraged.

The Script Interpreter

The Scripting Interpreter is a VBScript-style language, which allows you to automate the tasks you would normally perform repetitively in the Control program. For example, you can connect to several Clients during the night and upload log files and download new datafiles. When used in conjunction with the Scripting Agent this provides a very powerful tool to aid the busy network manager.

The Scripting Interpreter gives you the basic language functions, which are documented in the following sections, and many specialised functions which are only available to the Control user. The major features are:

- A powerful structured language
- A wide range of text manipulation functions
- The ability to work with multiple connected clients
- Local and remote operations are supported
- Full logging of activities
- The ability to supplement the system log with your own log messages
- All of the security features associated with the 32-bit control are available
- Your scripts will not contain visible human readable passwords

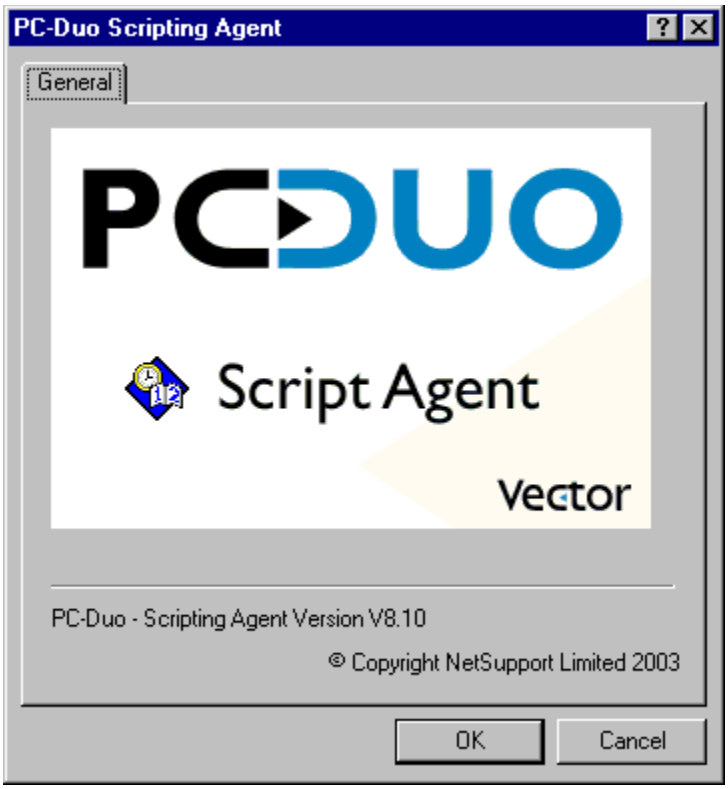
Please read the following sections before starting to develop your scripts:

- Introduction to the Scripting Language
- Language Structure
- Using Comments
- Using Qualified Pathnames

The Script Agent

The Script Agent allows you to schedule tasks to run at various dates and times. You can see the status of a Script as it runs, and the Agent user interface makes it easy to add, remove and edit tasks. You can also manually run and check the syntax of a Script from within the Agent.

For more information on a particular feature, click where a ‣ appears on the picture below.



The main features of the Agent are:

- It can run a Script at specific times and dates
- It can run Scripts repetitively at a specified intervals
- It is fully year-2000 compliant
- You can see which Scripts are running, which failed, why they failed and which tasks have been postponed
- You can prevent individual tasks from running, or disable the entire Agent

The Script Editor

The Script Editor has a wealth of features which are intended to make script development easier. You can have more than one script open at the same time. You can drag sections of code between scripts, check syntax and run the scripts all from the easy to use interface.

For more information on a particular feature, click where a ‣ appears on the picture below.

Some of the main features of the editor are:

- The ability to find errors in your script before running it
- Drag and drop functions and identifiers into your script
- View and clear the log files created by running scripts
- Insert encrypted passwords into your script

IPX network *nnn* (*nnn*) is not responding

An error occurred when the Control attempted to communicate with the specified IPX network. It normally obtains a list of network numbers from the nearest NetWare File Server, Router, or Bridge. This list can be unreliable.

The problem is reported because, it causes delays when browsing for IPX Clients if it is not corrected.

Suggestions

- You can tell the Control to ignore such network numbers by entering them in the Ignore Networks field of the Settings for Configuration: IPX dialog which is accessed from the Control Network Menu, Configure command.
- If a NetWare server on your LAN has been shut down recently try restarting the Control machine.

See Also

Technical Reference

IsNumber

See Also
CInt, CStr

Description
Returns TRUE is the expression can be converted to an integer, or FALSE if the string is non-numeric.

Syntax

```
Success = IsNumber (expression)
```

Notes
The return value is Boolean. The *expression* can be either string or integer expressions. If the *expression* is integer then the return value is TRUE. If the expression is a string value, and the contents can be converted to an integer the return value is TRUE.

Example

```
a = 10
b = "10"

Print "Return from IsNumber ", IsNumber (10)          // TRUE
Print "Return from IsNumber ", IsNumber ("10")        // TRUE
Print "Return from IsNumber ", IsNumber ("a10")       // FALSE
Print "Return from IsNumber ", IsNumber (a)           // TRUE
Print "Return from IsNumber ", IsNumber (b)           // TRUE
```

Items

See Also
AddItem, DelItem, FindItem, GetItem, SetItem, Join, Dim

Description
Returns the number of items in the specified list.

Syntax
```
Items = Items (list)
```

Notes
If there are no items in the specified list, then return value is zero (0).

Example
```
Print "There are ", Items (list), " items in the list"
```

Join

See Also
AddItem, DelItem, FindItem, GetItem, SetItem, Items, Dim

Description
Appends one string list to the end of another.

Syntax
```
Items = Join (dest, source)
```

Notes
The items in *source* are appended to the end of *dest*. The return value is the number of items in *dest* after the joining.

Example
```
Print "Total items in the joined list ", Join (List1, List2)
```

Keep on top

When a Control connects to a Client, the Client's icon "pops-up" to warn the user at the Client that they are being viewed. As windows are opened, this connection indicator can become obscured. This option keeps the connection indicator on top of all other windows.

Command
DOS: Not available
WIN: WCLIENTW *Clientname* /U*pp* /Z
OS/2: Not available

Example
WCLIENTW JOHN /UIP /Z

Effect
The user at the Client will always be able to tell if they are being watched.

Use this option if
You wish to ensure that the user at the Client machine is always aware when a Control is watching them.

Notes
Use the Configurator to set this option.

Language Structure

This description covers the guidelines and basic restrictions for writing scripts.

Variable Names
All variable identifiers must start with an alphabetic character (i.e. a..z), but the remaining characters can be alphabetic, numeric, or the underscore character. If you use invalid characters in an identifier, the interpreter will generate an error.

Defining Variables
Before you can use a variable, it must be defined. Variables must also have a value assigned to them before they can be used within a conditional statement, such as IF-THEN-ELSE. Assigning a value to a variable for the first time informs the interpreter to create this variable and it is then available for the rest of the Script, or the scope of the current function block.

If you try to use a variable that has not been defined, you will receive a run time error. See Language Runtime Errors for more details.

Variable Types
Three variable types are available. These are listed below:

Variable Type	Description
`String`	A series of characters
`Integer`	An unsigned numeric variable, with a maximum value of 4,294,967,295
`List`	Contains a series of strings in a list, which you can manipulate freely

Unlike some languages (e.g. BASIC), you do not need to suffix your variable names with special characters such as $ to indicate a variable type. Instead, types are defined statically using Dim or Function statements, or automatically while the Script is running.

Assigning Values to Variables
When you need to assign a value to a variable, you must take into account the following restrictions. The = symbol is used to assign values to variables. You can reassign any variable at any time. So if you created variable A with a numeric value, you could simply assign a string to A to use A as a string variable. The following table shows valid ways of assigning values:

Operation	Description
`A = 10`	Assigns an integer value to the variable A
`A = B`	Assigns the value of another integer variable to A (B must be valid first)
`name = "Paul"`	Assigns the string "Paul" to the variable name.
`name = firstname`	Assigns the value of string variable firstname to name (firstname must be valid first)
`name = A`	Converts the numeric value of A to its string representation and assigns it to name
`name = "Paul " + lastname`	Creates a string variable that combines a string literal and the contents of another string variable

Logic Operations
Before you can create operations that execute when a statement is TRUE or FALSE, you need to understand the Logic operations. These again are similar to BASIC in the way they work. The table below describes the operations that are available:

Operator	Description

=	Equal to (Only valid in conditional statements, otherwise = means assign)
==	Equal to
!=	Not Equal to
<	Less than
>	Greater than
<=	Less than or Equal to
>=	Greater than or Equal to
AND	Logical AND. The result is TRUE if bother operands are TRUE (non-zero)
OR	Logical OR. The result is TRUE if either operand is TRUE (non-zero)

When these operations are put together to form a conditional statement, the result is either TRUE or FALSE. This result is used by all of the conditional structures within the interpreted language.

Other Operators

As well as operators that create conditional information, the following operators are used to modify the result of a calculation.

Operator	Function	Description
*	Multiply	Multiply the left operand by the result of the right operand
/	Divide	Divide the left operand by the result of the right operand
+	Addition	Add the result of the right operand to the left operand
−	Subtraction	Subtract the result of the right operand from the left operand
( )	Parenthesis	Return the result of the arithmetic operations inside the brackets. These can contain other brackets and/or functions
&	Bitwise AND	The Bitwise-AND operator compares each bit of its first operand to the corresponding bit of its second operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0
|	Bitwise OR	The Bitwise-OR operator compares each bit of its first operand to the corresponding bit of its second operand. If either bit is 1, the corresponding result bit is set to 1. Otherwise, the corresponding result bit is set to 0

Loops

There are three different types of conditional loop available within the scripting language. Each of the loops does something until a condition is met. The table below shows the three loops available:

Loop	Description
For Each ... Next	Executes a set of instructions for each string in a List
For ... Next	Execute a set of instructions until the upper limit of the loop is reached
Do While ... Loop	Execute a set of instructions whilst a supplied expression is TRUE
Do Until ... Loop	Execute a set of instructions until a specified expression is TRUE

LCase

See Also
UCase

Description
Converts a string to lowercase

Syntax

```
newstring = LCase(expression)
```

Notes
The return string contains the converted string. If *expression* is a variable, the contents of this variable are NOT altered.

Example

```
a = "TEST STRING"
Print "Variable A converted to lowercase becomes ", LCase (a)
a = LCase (a)
```

Left

See Also
Right, Mid

Description
Copies a specified number of characters from the left hand side of a string

Syntax

```
String = Left (expression, length)
```

Notes
If the number of characters specified in *length* is greater than the number of characters in the *expression*, the entire string is returned. If *length* is zero, no characters will be returned.

Example

```
a = "This is a test string"
Print "The first 4 characters of variable A are ", Left (a, 4)
```

Len

Description

Returns the number of characters in a string

Syntax

```
Count = Len (expression)
```

Notes

Expression must be of string type. If the string is empty, the return value is zero (0).

Example

```
a = "This is a test string"
Print "Number of characters in the variable string A, ", Len (a)
```

Limitations

PC-Duo aims to make you feel that you are seated in front of the Client machine when you are remote controlling. There are some limitations however, and these are listed below.

DOS

- If a character mode application defines its own 'soft' characters (e.g. recent versions of the Norton Utilities for DOS), those characters will not be drawn correctly at the Control.

Windows 95/98/Me

- You cannot remote control the Close Program dialog (CTRL+ALT+DEL) over NetBIOS or TCP/IP. You can remote control this over IPX.
- Changing screen resolution without rebooting does not work with all video cards (see Reset Video Driver).
- Colour cursors are displayed in monochrome at the Control.
- The Client does not send the NumLock, Caps Lock and Scroll Lock lights to the Control when viewing a windowed DOS box.

Windows NT/2000/XP

- Full-screen 32-bit console applications (including the NT command prompt, CMD.EXE) are not supported. You can type, but you cannot see them.
- MS-DOS applications running in full-screen mode are supported.
- Colour cursors are displayed in monochrome at the Control.
- If you change the colour depth without restarting NT, you need to stop and restart the Client to get colours displayed correctly at the Control.

Load Client with a Password

This helps to protect the Client from unauthorised access from a Control.

Command
DOS: IPCLIENT or NBCLIENT *Clientname Encrypted_Password*
WIN: WCLIENTW *Clientname Encrypted_Password* /U*pp*
OS/2: PMCLIENT *Clientname Encrypted_Password* /U*pp*

Example
WCLIENTW JOHN 9768633 /UIP

Effect
The Control user will be required to enter a password before obtaining access to the Client.

Notes
- Use the Configurator to set this option.
- If you want to edit the command line directly, use the CALCPSW program to generate the encrypted password.
- The Control operator must enter the original password not the encrypted one.
- The Control operator can still send a message to the Client without entering the password.

Loading a log file

You can load the log file associated with the focused editor window by selecting **Load Log file *xxx*** from the File Menu. The ***xxx*** is replaced by the name of the current Script, and when you select this menu item an editor window is opened containing the log file.

If the log file has become too large (greater than 64k in size) you will receive a warning to that effect, and it is suggested that you load the log file into Notepad or other editor.

Script Agent Log Files

The Script Agent records which tasks executed, worked, and failed in a log file. This can be viewed by selecting Load Agent Log File from the Options Menu. The default text file viewer, usually Notepad, is loaded to display the file.

The log file looks like this:

```
06/01/98 - 10:54:24 > The PC-Duo Scripting Agent was started
06/01/98 - 11:45:13 > Task 'Explore' finished. Status: No Error
06/01/98 - 11:47:03 > Task 'Script with error' finished. Status: Unable to
locate source file
```

The first part of each line is the time and date at which the entry was made. The text following the > is the log message. These messages are self-explanatory and are kept simple. For detailed error information, see the Task log files.

Lookup

See Also
Dim

Description
Browses the default network protocol(s) for Available Clients

Syntax

```
Clients = Lookup (mask, list)
```

Notes
When you perform a lookup, the execution of the script is suspended until the function returns. If no clients were found in the lookup, *list* will be in the same state that it was in when you parsed it (i.e. unchanged). The return value is the number of clients found during the lookup. If you want to narrow the search, specify part of the client name in *mask*. You do not need to supply wildcards, just part of the client name. *Mask* is not case sensitive. To find all clients on the network, specify *mask* as an empty string.

Example

```
Dim ClientList

Print "Number of clients found with the prefix of TEST ", Lookup
("TEST", ClientList)

Print "Total number of all clients found ", Lookup ("", ClientList)
```

LTrim

See Also
RTrim, Trim

Description
Removes the leading white space from a string

Syntax

```
String = LTrim (expression)
```

Notes
All space and tab characters are removed from the left-hand side of the *expression*. If *expression* is a variable, the contents are not altered.

Example

```
a = " This is a test string"
Print "Trim the left of variable A, [", LTrim (a), "]"
```

Maintain a Replay File

In addition to the other security features the Client can record exactly what a Control user did during a Remote Control Session. This information is stored in a Replay File. This can be stored in a secure place such as a File Server, in order to prevent unauthorised access. It can be replayed later by a Control with the necessary file access rights.

Command
DOS: Not available
WIN: WCLIENTW *Clientname* /U*pp* Ed*path* /Eu*username*
OS/2: Not available.

Effect
Whenever the Client is remote Controlled all screen and keyboard activity will be stored in a file which can later be played back at an authorised Control.

Use this option if
You wish to be able to see exactly what a Control user did during a remote Control session.

Maintain Activity log

This is a security feature that records which Controls have connected to a Client and when they connected. An NT Client also logs File Transfer activity.

Command
DOS: IPCLIENT or NBCLIENT *Clientname /Yfilename*
WIN: WCLIENTW *Clientname /Upp /Yfilename*
OS/2: PMCLIENT *Clientname /Upp /Yfilename*

Example
WCLIENTW JOHN /UIP /Yclient.log

Effect
Every time a Control connects to the Client, an entry will be made in the Log File, recording the date, time, name and the IP or IPX address of the Control.

Use this option if
You wish to maintain a log of Client activity.

Notes
- The Log File can be on a local or a networked drive.
- Multiple Clients can share log files on networked drives.
- You can specify a list of alternative filenames by separating them with semicolons, e.g. Yx:\log;c:\log. The Client will then attempt to log to the first file, and if this fails the second, and so on. This can be useful if the Client is sometimes logged in to a file server and sometimes not.
- You must use fully qualified pathnames and the maximum length of the list is 127 characters.

Maximising the View Area

You can maximise the area available to display the Client's screen by removing the View Window menu bar, toolbar and status bar. This can be useful when the Client's screen resolution is similar to the Control's and you do not want to use Full Screen mode or Scale to Fit.

Method
Select the View Menu, Maximise View Area command.

Changing Back
To return to the normal format, right-click on the top-left corner of the View Window and select View, Restore from the popup menu.

Mid

See Also
Left, Right

Description
Returns a specified number of characters from a string

Syntax

```
String = Mid (expression, start [, length])
```

Notes
Expression must be a string, otherwise a run time error will be generated. You specify the character index that the string should be copied from in *start*. The optional third argument, *length*, specifies the number of characters to copy. If you specify more characters in length than there are in the string, the entire string to the right of *start* will be returned. If *length* is not specified, all the characters to the right of *start* are returned.

Example

```
a = "This is a test string"
Print "Copy 4 characters at index 6, [", Mid (a, 6, 4), "]"
```

MkDir

See Also
RmDir

Description
Creates a directory on the local or client machine

Syntax
```
Success = MkDir (source)
```

Notes
The *source* argument must be a Qualified Pathname, and must be absolute. If the directory was created successfully, the return value is TRUE, otherwise if an error occurred the return value is FALSE.

Example
```
MkDir ("C:\TEMP_DIR")                // Create a directory locally
MkDir (">C:\TEMP_DIR")               // Create a directory on the
currently selected client
MkDir ("TEST1>C:\TEMP\TEMP_DIR")     // Create a directory on a specific
client
```

MMPLAYER terminated unexpectedly

The Multimedia player closed down unexpectedly.

Check for any errors and try again.

Modem Diagnostics

For many users, configuring their modem for optimum performance can be an extremely trying process. To overcome this, PC-Duo includes sophisticated Modem Diagnostics that test the modem configuration and identify potential problem areas.

Modem Diagnostics can also help to optimise the performance of a Remote Network connection and can provide a hard copy record of connection information and any problems encountered.

Diagnostics are run when the Windows Control dials a Bridge. The diagnostic level is set in the Settings for Configuration: Dialin Bridge tab dialog. Depending on results of the test, the Control will advise you of possible problems and corrective action. All of the relevant information is in the dialog box. Some attention to the messages, plus your modem manual, should resolve the problem.

You can optionally record this information in log file, which you can later view. This log file can also be used for maintaining a record of connections that the Control has made. This can be useful information for Technical Support.

The Modem Log is a record of the connection information and diagnostic results for each dial up connection that you have made since last archiving or deleting the file. You can also use the modem log as an audit trail.

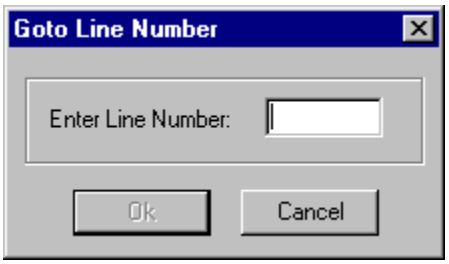
Occasional reports of 'low throughput' and 'excessive time to respond' do not always indicate a problem - we err on the side of caution. If you are satisfied with the way that PC-Duo operates over your dialup line, you can ignore these. If not, it is worth investing some time to resolve them.

Depending on the nature of the problem, you might also find the Modem Diagnostics: Terminal Window useful. This window allows you to send commands to the modem and see the response on the screen.

See Also:
Selecting and configuring the Modem

Move to a specific line number

When you receive an error message, the insertion point is moved to the line where the error occurred. Sometimes you may move the caret away from this line, and especially in large scripts, you may want to go back to that line quickly. You can do this by selecting the Script Editor: Edit menu **Go to Line Number** command.



Enter the line number and press [OK] to move the Editor to that point. If the line you specified is not visible in the Editor window, it will be scrolled into view.

If you specify a number greater than the number of lines in the script, a message will appear informing you of the valid range.

Name '*xxx*' already in use (on NetBIOS adapter #*nnn*)

When using NetBIOS, Clients and Controls must use unique names (although the same name can be used for both a Client and a Control). You will see this message if another Client or Control is using the name you are trying to use on this machine.

Alternatively the Control or Client may have previously shut down unexpectedly shut down, try restarting you computer to clear the error.

Suggestions
We recommend using the computer's ‘Machine Name’ (as specified in Control Panel's Network dialog, on the Identification tab) as the Control or Client name.

NetBIOS

A protocol used to enable Personal Computers to communicate in a Networked environment.

NetBIOS, referred to as NetBEUI in the Microsoft environment, is a non-routable protocol suitable for small LANs. Where routing is required, for example in a Wide Area Network, it is generally preferable to use another protocol such as TCP/IP.

In the Windows environment you can load multiple NetBEUI stacks by attaching them to different virtual adapters.

NetBIOS Adapter

In the Windows and OS/2 operating environment, you can have more than one network transport stack loaded. Each stack is allocated an Adapter number by the operating system. So for example, NetBEUI may be allocated Adapter 1, NetBIOS over TCP Adapter 2 and so on.

Network Addresses

All networked PCs have a Network Address for each transport protocol. These are determined by the PC's network settings. Each network card also has a unique MAC address that is built in during manufacture.

When the Control connects to a Client for the first time, it stores the Network and MAC addresses in the Known Clients database. It normally uses the stored Network Address to connect to the Client, as this avoids a delay while the Control finds the Client.

Network Addresses are in different formats for each transport.

IPX

The address format for IPX networks is:

```
>nnnnnnnn-aaaaaaaaaaaa
```

where *nn..* is the NetWare Network Number, and *aa..* is the Node Address. For example: >120-12345678.

NetBIOS

NetBIOS networks use a name only. Here, the Client typically uses its DOS Machine Name or Microsoft Networking Computer Name.

TCP

The address format for TCP/IP networks is:

```
>nn.nn.nn.nn:socket
```

where *nn..* is the PC's IP address. The socket number is only required if the Client is using a different socket number to the Control:

```
>123.124.125.250:5405
```

The Client's *hostname* can be added to the IP address:

```
>123.124.125.250 (db)
```

This is useful on DHCP networks or where the IP address is not known. If only the *hostname* is known, it must be entered in parentheses to distinguish it from the Client Name:

```
>(db)
```

No dialup link established

Meaning
An attempt to hang up the modem was made when it is not dialled.

Qualified Pathnames

Qualified Pathnames are used so that the interpreter can distinguish between operations performed on the Control and Client PCs. The pathname consists of a conventional path, preceded by a greater than symbol '>' if the operation is to be performed on the currently-selected Client. If you want to specify a Client other than the current one, precede the '>' with the Client's name.

You must have a connection to a Client before you can perform any scripted operations on it.

When would you use a Qualified Pathname?
Qualified Pathnames are used whenever a file or disk operation is performed, such as in the functions listed below:

Copy, Delete, DriveSize, DriveSpace, GetDirList, GetDriveList, GetFileList, MkDir, Open, Rename and RmDir.

DriveSize and DriveSpace do not require a full path, they only need a drive identifier. The following example shows how to specify Control and Client drives:-

Local	Client	Description
`C:`	`>C:`	Drive C on the Control and the currently-selected Client
`A:`	`TEST2>A:`	Specify the floppy drive on the local or a specified client machine

Another exception is GetDriveList. This functions needs only to know where to look, it does not need paths or drive identifiers. To create valid arguments for this function, you need only specify either the Client name (followed by a '>' greater than symbol), the '>' greater than symbol (for the current Client) or nothing for the local machine. The table below shows some possible formats:

Format	Description
`">"`	Retrieve drives from currently connected client
`"TEST1>"`	Retrieve drives from a specified connected client
`""`	Retrieve drives from the local machine

The format for a Qualified Pathname is as follows:

Format	Description
`"C:\COMMAND.COM"`	Specifies a single file on the local machine
`"C:\*.COM"`	Specifies multiple files on the local machine
`">C:\COMMAND.COM"`	Specifies a single file on the currently selected client machine
`">C:\*.COM"`	Specifies multiple files on the currently selected client machine
`"TEST1>C:\COMMAND.COM"`	Specifies a single file on a specified connected client machine
`"TEST1>C:\*.COM"`	Specifies multiple files on a specified connected client machine

Only run the task on the days specified in the checkboxes to the right

Opening an existing script

To open an existing Script, either select the File Menu, Open command, or press the Open button (shown above) on the toolbar. You will be presented with an Open dialog. Select the script to edit and press the Open button.

The default extension for Script files is .SCP.

Optimising remote connections

Performance is naturally affected when communicating with a Client over a dial up link. To get the most out of your remote connections follow these simple steps.

- Use the highest speed modems you can. The difference between a 14.4K modem and 33.6K modem is very noticeable when remote controlling a Client.
- Insure the modems are configured correctly, use the modem diagnostics and logging to check the throughput. See Modem Diagnostics.
- Use a large cache at the Client and Control. Specifying a large cache means the Control can store more areas of the screen locally without having to ask the Client to send them again.
- Make sure that data compression is turned on.
- Limit the colour depth to 16 colours. This means that all images sent from the Client to the Control are 16 colour only. A high colour bitmap can be 2 or 3 times the size of a 16 colour bitmap. This will improve performance with the only side-effect being that images won't look as good.
- Run the Client at a low resolution. The lower the resolution the less information the Client needs to send. If you can work at 640x480 or 800x600 then set the Client to this. The Control doesn't have to be at the same resolution as the Client.

Options

This dialog allows you to configure the Scripting environment.

Tab Size
Specify the number of spaces to insert when you press the TAB key. Only enabled when Insert Spaces is selected.

Insert Spaces
Inserts the specified number of spaces when you press the TAB key, rather than using tab characters.

Keep Tabs
Do not replace tab characters with spaces. Leave the tabs intact.

Yes, clear the output window
Checking this item tells the user interface to clear the output window whenever you run or check the syntax of a script.

See Also
The Options Dialog

Script Editor: Options Menu

This menu provides commands to configure the Script Editor environment.

Fonts
A dialog will be displayed listing the fonts available to the Editor. You can select any font and any style, which is then applied to all the current and future editor windows.

Options
This displays the Configuration dialog box, and allows you to alter the settings for the editor environment

Predefined Variables
This command allows you to define variables that are supplied to any Scripts that are executed.

Run Script Agent
Launches the Script Agent

Script Agent: Options Menu

This is where the options and utilities are found.

Load Agent Log File
Loads the Script Agent log file into Notepad for viewing. This contains information about the tasks that were run and when they were run.

Clear Agent Log File
Clears the Script Agent log file.

Hide when minimised
Hides the Script Agent when it is minimised and places an icon in the Windows System Tray. See also taskbar icons. This command is disabled on Windows NT 3.5x, as there is no taskbar available to hold the icon.

Script Output Popup Menu

Right-click in the Script Output Window to open this popup menu. The following commands are available:

Clear Output
This command will delete the contents of the Output Window.

Hide
This command hides the Output Window. It can be redisplayed by pressing the button on the Script Editor Toolbar, or from the View Menu, Output Window command.

Permit a Control to Watch only

Purpose
Disables ability of Control operator to enter keystrokes and mouse movements.

Command
DOS: IPCLIENT or NBCLIENT *Clientname* /W
WIN: WCLIENTW *Clientname* /U*pp* /W
OS/2: PMCLIENT *Clientname* /U*pp* /W

Example
WCLIENTW JOHN /UIP /W

Effect
This restricts all Control access to "watch only". The Control cannot influence the Client's mouse or keyboard.

Notes
- Use the Configurator to set this option.
- Use in conjunction with /F parameter to also Disable File Transfer.
- The Control does not report that this option has been set if you use Share or Control. Instead, it reverts to Watch.

Print

Description
Displays a series of values in the output window.

Syntax
```
Print [var1, ... varx]
```

Notes
The arguments for this function must be separated by commas (,). They can be integer literal, string literal, integer or string variables, but you cannot specify list variables. If you do not specify any arguments to this function, a blank line is displayed in the output window and log file. You can also perform string and integer expression evaluations in the Print function arguments, see the examples below.

Example
```
Print "This is a test string"
Print "This is an integer -> ", 10, " <-"
Print "This is a string -> ", "TEST", " <-"
Print "This is the result of a function -> ", Items (list), " <-"
Print "This is an expression evaluation -> ", 10 * 2 + (30 * 4), " <-"
```

Public when logged off

This adds an additional level of security on NT Clients that only requires the Control user's password to be entered by the Control if the Client is logged on.

Also enables the supervisor to set different passwords depending on whether the NT Client is logged on or off.

Command
DOS: Not available
WIN: Not available.
OS/2: Not available.

Example
CLIENT32 JOHN /UIP /X

Effect (No public password set)
Does not require a password to connect to the Client when it is not logged in even if a Client password has been set.

Example
CLIENT32 JOHN /UIP /X12345

Effect (Public password set)
The Control must enter the public password, in its unencrypted form, to connect to the Client when it is not logged in, rather than the normal password. When the Client is logged in, the Control must enter the normal password.

Notes
- If this option is combined with the "Logoff on Disconnect" option, the Client only logs off if it was not logged on when the Control connected.
- If this option is combined with the "Logoff on Disconnect" (/X) option, /R must precede /X.
- This option disables File Transfer and Confirm Request to Connect when the Client is not logged in.
- The Control operator must enter the original password not the encrypted one.
- The Control can still send a message to the Client without entering the password.

Reboot

See Also
WakeUpClient

Description
Tells a connected Client to logoff (NT), reboot or shutdown

Syntax
```
success = Reboot ([clientname], style)
```

Notes
You call Reboot () with an optional Client name. If you do not specify a Client name, the operation is performed on the currently selected Client. If you specify a Client, that Client will take the focus of the call. You can send one of four different reboot *styles* to a Client. These are:

Identifier	Value	Description
RB_LOGOFF	0	NT: Logs off the workstation/server. 95: Reboots the Client
RB_REBOOT	1	NT & 95: Reboot the Client machine
RB_SHUTDOWN	2	NT & 95: Causes the Client to shutdown
RB_POWEROFF	3	NT & 95: Powers off the Client

Example
```
If Reboot (RB_LOGOFF) then
  Print "The client was logged off or rebooted okay"
Endif

If !Reboot ("TEST2", RB_SHUTDOWN) then
  Print "We could not shut the client down"
Endif
```

Reboot or Log off when Control Disconnects

Purpose
Provides a mechanism whereby you can force the Client to automatically reboot or in the case of NT, Logoff, when a Control operator terminates the connection.

This option is also available manually from the Control Menu.

Command
DOS: IPCLIENT or NBCLIENT *Clientname* /R
WIN: WCLIENTW *Clientname* /U*pp* /R
OS/2: PMCLIENT *Clientname* /U*pp* /R

Example
WCLIENTW JOHN /Upp /R

Effect
When the Control disconnects the Client will reboot or, in the case of NT, Logoff.

Use this option if
You wish to leave the Client in a tidy state for each new user.

Notes
- Use the Configurator to set this option.
- Be wary of rebooting Clients in an unknown state, as data loss or corruption may occur. It is safer to reboot from the option in Control.
- Make sure that when the machine reboots it will automatically load a Client.

Reboot/Logout this Client?

Meaning
You must confirm the Reboot or Logout action. The user at the Client machine may lose unsaved work because of this action.

Tips
You can restart a Client machine in different ways depending on the operating system in use. See the topic Rebooting a Client for more details.

Rebooting or Logging out Clients

Having connected to a Group of Clients, this command will allow you to either Reboot individual Clients or all the members of a Group or under Windows NT Log out from each machine.

Method

- Select the Group, Reboot / Logout menu command. The Reboot / Logout dialog will appear.
- If you are happy to proceed then click the OK Button.

Note

It is worth making sure that all machines within the Group are available and not being used by other staff before you complete this task.

Remote Communications Overview

As well as allowing you to take Control of workstations on the Local Network, a Control can also access workstations on remote networks and standalone workstations connected via a modem or serial link.

This is achieved by loading the PC-Duo Bridge module on the remote LAN or workstation in to which you are dialling and the Remote module on the workstation that is to be used as the Control to dial out. Alternatively you can use Microsoft's Dial-up Networking in conjunction with Remote Access Service.

Between them, the Bridge and Remote modules provide an interface that allows the Control to connect to the remote Client as if it were on a LAN. However, neither the Control nor the Client needs to be physically attached to a LAN.

If a Bridge is loaded on a networked workstation all Clients on that network can be accessed by a Control running the appropriate Remote program.

The sequence of events for establishing a remote communications link is:

At the remote end
1. Turn on the modem.
2. Load the appropriate Bridge program.
3. Load the Client on the workstations to be accessed.

At the Control
1. Turn on the modem.
2. Start the appropriate Control program and choose Network, Remote, Dial.

Once a dial up or serial link has been established, operation is the same as on a LAN.

If you are using RAS then simply make the Dial-up networking connection and use the Control as normal.

The Bridge Programs
The Remote Programs
Setting up the Modem
Modem Diagnostics

Remote Networking

Connecting to a Local Area Network from an external site by means of a dial-up link.

Remotely Executing applications at Clients

This feature allows you to launch (execute) an application on an individual Client or a group of Clients without the need to Remote Control them. For example you might want to run a Setup program as part of a script or a file or software distribution exercise.

The application itself must be installed on or available to the Client PC(s).

To execute an application on an individual Client:-

- Open the Clients, Connected or Browse Folder and right Click on the desired Client, then choose Execute at Client Or
- Open the Clients, Connected or Browse Folder, highlight the required Client and choose Client, Execute from the Control Menu bar.
- When the Execute Application dialog appears, enter the full path of the application you want to run and click on OK.

The application will now be launched at the Client and the result of the operation displayed in the Results Box.

To execute an application on a Group of Clients:-

- Open the Group Folder and right Click on the desired Group, then choose Execute at Client. **Or:**
- Open the Group Folder, highlight the required Client and choose Group, Execute from the Control Menu bar.
- When the the Execute Application dialog appears, enter the full path of the application you want to run and click OK.

The application will now be launched at all the Clients in the Group and the result of the operation displayed in the Results Box.

Rename

See Also
Copy, Delete

Description
Renames a file or directory on the local or a client machine.

Syntax

```
Success = Rename (source, dest)
```

Notes
When renaming a file you must specify an absolute Qualified Pathname in the *source*. In the 32-bit interpreter, you can specify a different directory for the *dest* argument for example moving the file. Normally you only need to specify the new name of the file in *dest*. The return value allows you to determine if the operation was successful.

Example

```
Rename ("C:\TEST.TXT", "NEW_TEST.TXT")                    // Rename a
file locally
Rename ("C:\WINDOWS\WCONTROL.INI", "C:\TEMP\WCONTROL.OLD")  //
Rename/Move a file locally
Rename (">C:\TEST.TEXT", "Test Long Filename.OLD")         // Rename a
long file on the current client (32-bit only)
```

Renaming a Client

To change the Display Name a previously saved Client within the Control program. For example a PC running a Client may have a description allocated by you such as Sales 2.
This machine may move to the accounts function and as such you wish to rename it as Accounts 3.

Method

- Open the Clients folder in the Tree View and highlight the required Client.
- Right-click on the Client and Choose Rename.
- The Group name will be surrounded by a black border and will be selected, enabling you to rename it.

Note

- This only changes the stored name on the Control. It does not affect the physical name of the Client that will be displayed at another Control or if you do a Browse.

RepChar

See Also
Space

Description
Returns a string with the specified number of repeated characters.

Syntax

```
String = RepChar (char, length)
```

Notes
Although *char* can contain more than one character, only the first character is used. If *char* is empty, the return string will be empty as well. The maximum value that can be specified in *length* is 255. Anything greater than this will generate a run time error.

Example

```
String = "This is a title string"
Print title
Print RepChar ("-", Len (title))
```

Replay: File Menu

Close
This command is used to close the replay session.

Replay: View Menu

Purpose
The drop down View Menu is used to customise how the window will displayed. The commands available in the View menu are as follows:

Toolbar
Sets the display options for the Toolbar in the View Window.

Status bar
Hides or displays the Status bar at the bottom of the view window on or off.

Scale to fit
Sets the display mode for how the Client screen is displayed. Turning scale to fit on enables you to display the whole of the Client screen in the available view area.

Full Screen
Full Screen mode uses the whole of the available screen area on the Control to display the Clients screen.

Replay Window: Menu Bar

This menu contains the following commands:

File
The File Menu contains the Close command, which is used to close the replay window.

View
Configures the look and feel of the Replay window.

Window
Allows you to switch between open Control windows.

Help
This command displays the Replay Window Help topic.

Reset list to default columns?

Meaning
This will restore columns displayed in the list, and their widths, to the default setting.

Resolving Initial Network Errors

When you start the PC-Duo Control for the first time, the configured or default network transports are loaded. This may result in an error, indicating that one of these transports is not available. Use the Network Menu, Configure command to correct the Control's network configuration.

Right

See Also
Left, Mid

Description
Copies a specified number of characters from the right hand side of a string.

Syntax

```
String = Right (expression, length)
```

Notes
If the number of characters specified in *length* is greater than the number of characters in the *expression*, the entire string is returned. If *length* is zero, no characters will be returned.

Example

```
a = "This is a test string"
Print "The last 6 characters of variable A are ", Right (a, 6)
```

RmDir

See Also
MkDir

Description
Deletes a directory on the local or client machine.

Syntax

```
Success = RmDir (source)
```

Notes
The *source* argument must be a fully qualified pathname, and must be absolute. If the directory was deleted successfully, the return value is TRUE, otherwise if an error occurred the return value is FALSE. Note that this function does not delete files or directories within the *source* specified.

Example

```
RmDir ("C:\TEMP_DIR")                // Delete a directory locally
RmDir (">C:\TEMP_DIR")               // Delete a directory on the
currently selected client
RmDir ("TEST1>C:\TEMP\TEMP_DIR")     // Delete a directory on a specific
client
```

RTrim

See Also
LTrim, Trim

Description
Removes the trailing white space from a string

Syntax

```
String = RTrim (expression)
```

Notes
All space and tab characters are removed from the right hand side of the *expression*. If *expression* is a variable, the contents are not altered.

Example

```
a = "This is a test string "
Print "Trim the right of variable A, [", RTrim (a), "]"
```

Script Editor: Run Menu

From this menu you can control the execution of a script

Check Syntax

When you select this menu item, the script in the focused editor window is checked to make sure its syntax is correct. This allows you to make sure that what you are typing is understood by the interpreter, and that the script will run.

Execute

This menu item will display the name of the script in the focused editor window. By selecting Execute you will tell the editor to check the syntax of the script (as above) and then execute it. Any errors that are generated will be displayed in the Output Window.

Unattended Mode

When you want the Script Agent to run your scripts, you must make sure that no prompts are displayed and that the script handles these conditions correctly. If you connect to a Client that requires a password, for example, a dialog box would appear to prompt for the password. Select Unattended Mode to prevent these dialogs from appearing.

Run on Fridays

Run on Mondays

Run on Saturdays

Run on Sundays

Run on Thursdays

Run on Tuesdays

Run on Wednesdays

Run the task at this specific time

Run the task every day

Run this task every ***x*** minutes

Run this task on every weekday, Monday to Friday

Run this task on the hour

Running a script

First, select the window that contains the Script to run. Then press the Run Script button (shown above) on the toolbar, or select the Run Menu, Run Script command.

The Script Editor will save your script if it has been changed, so you may be prompted with the Save As dialog if the script is untitled. The Script is then checked for correct syntax. If no errors are reported, the Script will be executed.

You can stop a Script from executing at any time by pressing the Cancel Script toolbar button.

Running in Unattended Mode

When you run a Script in unattended mode, you are simulating how the script would run in the Script Agent. Unattended mode suppresses any prompts that would appear in normal mode, and the Script should take appropriate action.

For example, if you connect to a Client which requires a password, you would be prompted to enter the password in normal mode. In unattended mode, or in the Agent, this wouldn't happen.

It is recommended that you run all your Scripts in unattended mode inside the Editor, before creating a Task for the Script Agent. This allows you to track down errors more easily than looking at the problem in the log file afterwards.

To set or clear unattended mode, either press the toolbar button (shown above) or select the Run Menu, Unattended Mode command.

Runtime Error 1 - Missing Quote ' " '

This error is generated when you omit a quote from the end of a string expression.

Example
The following example shows when this error can be generated:

```
Print "This is a test string
```

Runtime Error 10 - Function 'xxx' does not return a value

You used a function that does not return a value, in an expression.

Example
The following example shows when this error can be generated:

```
Dim List
AddItem (List, "Test")

Print SetItem (List, 1, "Test2")
```

Runtime Error 13 - Insufficient arguments supplied to function 'xxx'

You called a function, but specified too few arguments. Check the arguments required for the function.

Example
The following example shows when this error can be generated:

```
Print InStr ("Test")
```

Runtime Error 14 - Too many arguments supplied to function 'xxx'

You called a function, but specified too many arguments. Check the arguments required for the function.

Example
The following example shows when this error can be generated:

```
Print CInt ("10", "20")
```

Runtime Error 15 - Expected 'THEN' keyword

When constructing an IF...THEN...ENDIF structure, you omitted the THEN keyword.

Example
The following example shows when this error can be generated:

```
If X = 10 Print "X Does equal 10!"
```

Runtime Error 16 - Keyword 'ELSE' found without a corresponding 'IF' statement

You have supplied the keyword ELSE somewhere in your script, and there isn't a matching IF statement somewhere before it.

Example
The following example shows when this error can be generated:

```
//If X = 10 then
      Print "X equals 10"
Else
      Print "X does not equal 10"
Endif
```

Runtime Error 17 - Keyword 'ENDIF' found without a corresponding 'IF' statement

You have supplied the keyword ENDIF somewhere in your script, and there isn't a matching IF statement somewhere before it.

Example
The following example shows when this error can be generated:

```
//if X = 10 then
      Print "X equals 10"
Endif
```

Runtime Error 18 - Label 'xxx' not found

You have used the GOTO command and specified a label that does not exist in this function block, or does not exist at all.

Example
The following example shows when this error can be generated:

```
MyLabel:

Goto My_Label
```

Runtime Error 19 - The statement 'xxx' requires one of the following arguments xxx

A function or command requires another keyword to complete the function reference

Example
The following example shows when this error can be generated:

```
Do until x = 10
      Exit loop
Loop
```

Runtime Error 20 - Numeric variable assignment expected

A function or structure requires that you supply a variable and assign a value to that variable in the expression.

Example
The following example shows when this error can be generated:

```
For 0 to 10
      Print "Test"
Next
```

Runtime Error 21 - Expression Expected

You must supply an expression to the structure or function defined.

Example
The following example shows when this error can be generated:

```
For
      Print "Test"
Next
```

Runtime Error 22 - Keyword 'NEXT' encountered without corresponding 'FOR' statement

You supplied the closing statement of a For ... Next or For each ... Next loop without specifying the opening statement.

Example
The following example shows when this error can be generated:

```
forr x = 1 to 10
      Print "Multiply ", 10 * x
Next
```

Runtime Error 23 - Keyword 'LOOP' encountered without corresponding 'DO' statement

You supplied the closing statement of a Do ... While or Do ... Until loop without specifying the opening statement.

Example
The following example shows when this error can be generated:

```
x = 10

doo until x = 1
      Print "Hello world"
      x = 1
Loop
```

Runtime Error 24 - You cannot use 'EXIT FOR' outside of a 'FOR ... NEXT' loop

You specified that the interpreter should exit from a For ... Next loop, outside of the for... next loop.

Example
The following example shows when this error can be generated:

```
For x = 1 to 10
      Print "Hello world"
Loop

Exit for
```

Runtime Error 25 - You cannot use 'EXIT DO' outside of a 'DO ... LOOP' statement

You specified that the interpreter should exit from a Do ... Loop statement, outside of the do ... loop statement.

Example
The following example shows when this error can be generated:

```
Do until x = 1
      Print "Hello world"
      x = 1
Loop

Exit do
```

Runtime Error 26 - Value out of range

You supplied a value to a function or expression that was either too large or too small. Check the help for the offending function.

Example
The following example shows when this error can be generated:

```
Print Chr (1234)
```

Runtime Error 27 - Invalid index. Note: Lists are 1 (one) based (NOT zero based)

You supplied an index for a list function that was zero. All lists are indexed from 1 (one).

Example
The following example shows when this error can be generated:

```
...

      Print GetItem (List, 0)
```

Runtime Error 28 - Index value out of range

The value you supplied to a list function specified an index that doesn't exist.

Example
The following example shows when this error can be generated:

```
...

      AddItem (list, "String1")
      Print GetItem (List, 3)
```

Runtime Error 29 - Source and destination arguments cannot be the same

The two arguments you supplied cannot be the same. This occurs when you try to join one list to the end of another.

Example
The following example shows when this error can be generated:

```
...

      Join (List1, List1)
```

Runtime Error 3 - Missing Parenthesis 'xxx'

This error is generated when you omit an open or close parenthesis from an argument, function or other expression

Example
The following examples show how this error can be generated:

```
    Print (10 * 2
Print "Current client is ", CurrentClient (
```

Runtime Error 30 - Variable identifier expected

You have omitted a variable identifier from a function or statement.

Example
The following example shows when this error can be generated:

```
For each in list
      Print "Item Found"
Next
```

Runtime Error 31 - You have created a conflict between the 16-bit and 32-bit interpreter. Please check the documentation for details

You have created a statement that is only valid in one of the versions of the interpreter. Some functions in the 32-bit interpreter are allowed to take more arguments than the 16-bit version. Check the help for the function that is at fault. All differences are detailed for each function that differs. Use the two read-only variables 16BIT and 32BIT to determine which version of the interpreter the script is running from.

Example
The following example shows when this error can be generated, in the 16-bit interpreter:

```
SetTransport (T_IPX, T_TCPIP, T_NETBIOS+1)
```

Runtime Error 32 - You must specify a fully qualified, absolute pathname

Whenever you supply a pathname or filename to the scripting language, it must be a fully qualified pathname, and must be absolute. The scripting interpreter does not allow or work with relative/current directories.

Example
The following example shows when this error can be generated:

```
Copy ("TEST1>C:\TEST\TEXT.RTF", "C:")
Copy ("cmd.exe", ">C:\")
```

Runtime Error 33 - Unable to open file 'xxx' for xxx

The scripting interpreter was unable to open a file for reading/writing.

Example
The following example shows when this error can be generated:

```
LoadFields (">C:\names.txt", Name, Address, PhoneNumber)
```

Runtime Error 34 - The variable 'xxx' has only been declared, and cannot be used in this way

Description
You have declared a variable using Dim and are trying to pass this variable to a function that expects this variable to contain a value.

Example
The following example shows when this error can be generated:

```
Dim List
Print "Item from list at index 2 (", GetItem (list, 2), ")"
```

Runtime Error 36 - You must load a remote network before using Dial. See SetTransport for details

Description
You are trying to use a remote function such as Dial (), without first having set up a remote transport using SetTransport ().

Example
The following example shows when this error can be generated:

```
SetTransport (T_IPX)

Dial ("0123 456789")
```

Runtime Error 4 - Type Mismatch

This error will occur if you try to use different variable types in expressions. If you try to add an integer and a string you will get this error.

Example
The following example shows when this error can be generated:

```
a = 10 + "10"
```

Runtime Error 5 - Divide by zero

If you try to divide a value by zero, this error will be generated.

Example
The following example shows when this error can be generated:

```
Print 10 / 0

a = 0
Print 10 / a
```

Runtime Error 6 - Unknown Identifier 'xxx'

You may have referenced a variable that is either not within the scope of the current function, or has not been defined.

Example
The following example shows when this error can be generated:

```
Ab = "Test String"
Print Aa
```

Runtime Error 8 - Function 'xxx' not found

You have referenced a function that has not been defined.

Example
The following example shows when this error can be generated:

```
Function Main ()
      Print "Value from my function ", MyFunc (10, 20)
End function

Function MyFunction (a, b)
      MyFunction = a * b
End function
```

Runtime Errors

When you execute or check the syntax of your script you may encounter Runtime Errors. These run time errors must be resolved before the script is allowed to run. Usually the error is a result of a typing error, or omission of a parenthesis. The errors you may see look like this:

```
S:\scripts\helptest.scp(1): error R0006: Unknown Identifier 'dunno'
```

There are three parts to the run time error, which are:

s:\scripts\helptest.scp(1)	The filename of the script and the line at which the error occurred.
error R0006	The actual run time error number
Unknown Identifier 'dunno'	A text description of the error and the offending syntax

The following table contains all of the errors you are likely to encounter when developing your scripts. Chances are you will not see the majority of them. The ***xxx*** will be replace by some meaning full text in the interpreter. Click on the error message format for more detailed help for the error.

Note: Numbers missing from the following sequence were left out intentionally.

Error Number	Error message format
1	Missing quote ' " '
3	Missing parenthesis 'xxx'
4	Type mismatch
5	Divide by zero
6	Unknown Identifier 'xxx'
8	Function 'xxx' not found
10	Function 'xxx' does not return a value
13	Insufficient arguments supplied to function 'xxx'
14	Too many arguments supplied to function 'xxx'
15	Expected 'THEN' keyword
16	Keyword 'ELSE' found without a corresponding 'IF' statement
17	Keyword 'ENDIF' found without a corresponding 'IF' statement
18	Label 'xxx' not found
19	The statement 'xxx' requires one of the following arguments xxx
20	Numeric variable assignment expected
21	Expression expected
22	Keyword 'NEXT' encountered without corresponding 'FOR' statement
23	Keyword 'LOOP' encountered without corresponding 'DO' statement
24	You cannot use 'EXIT FOR' outside of a 'FOR ... NEXT' loop
25	You cannot use 'EXIT DO' outside of a 'DO ... LOOP' statement
26	Value out of range
27	Invalid index. Note: Lists are 1 (one) based (NOT zero based)
28	Index value out of range
29	Source and destination arguments cannot be the same
30	Variable identifier expected
31	You have created a conflict between the 16-bit and 32-bit interpreter. Please check the documentation for details about the differences between the two versions.
32	You must specify a fully qualified, absolute pathname
33	Unable to open file 'xxx' for xxx
34	The variable 'xxx' has only been declared, and cannot be used in this way
36	You must load a remote network before using Dial. See SetTransport for details

Saving your script under a different name

You can save a Script under a different name by selecting **Save As** from the File Menu. This also happens when you try to save an untitled file. The Save As dialog will appear, and you must select the location and name for your new script. If you do not supply the .SCP extension to the filename, the Editor will do it for you.

Saving Script files

Click on the Save button (shown above) in the toolbar, to save a Script file. You can also choose the File Menu, Save command. Use the File Menu, Save As command to save the Script file under a different name.

You will be prompted to save any unsaved files when the Script Editor is closed down. If you select [Yes], the files will be saved. If you click [No], the files will not be saved. Press [Cancel], to abort the shut down process without saving any changes to the Script files.

Scaling to Fit

The Scale to fit feature allows you to view a remote screen within the available size of a View Window rather than providing you with a series of Scroll Bars so that you can pan around the screen.

With this feature you can now view multiple screens simultaneously to maintain overview of a number of selected PCs.

It should be noted that using Scale to fit does impact on the quality and Clarity of the View and is designed to allow you to simply monitor a screen as opposed to work on it. Try it for yourself and decide what level of scaling is acceptable for your purposes.

Method

- From the Client View Window choose View, scale to fit. **Or:**
- Click on the Scale to fit icon on the View Tool Bar.

Scan Window: Scan Menu

This menu contains commands which can be used to move backwards and forwards in the Scan sequence and also to set Auto-scan mode.

Next
Moves forwards to display the next Client in the Scan sequence.

Previous
Moves backwards to redisplay the previous Client in the Scan sequence.

Auto
Sets Auto-Scan mode, which displays each Client in turn.

Close
Ends the Scan session and closes the Scan window.

Scan: View Menu

The View Menu commands control the Scan Window displayed.

Toolbar
This provides settings such as large or small icons and text labels for the Scan Window Toolbar.

Status Bar
This turns the Scan Window Status bar on or off.

Scale to fit
Turn Scale to Fit on to display the whole of the Client's screen in the Scan Window view area.

Capture Screen
This allows you to save the screen contents to a file. The Save As dialog will open, allowing you to choose the name and location of the file. You can save the screen as a bitmap (.BMP), a Portable Network Graphic (.PNG), or a JPEG (.JPG) file.

Scan: Window Menu

This menu contains the following commands:-

Tile
This command allows you to arrange open View and/or File Transfer windows on the Control's screen so that they can all be seen. The selected windows will be sized to fit on the Control's Screen. The Tile Submenu contains the following commands:

All Windows	Displays and tiles both Client View and File Transfer windows
View Windows	Displays and tiles only the Client View windows
File Transfer	Displays and tiles only the active File Transfer windows
Close All Windows	Closes all View and File Transfer windows

You can then view multiple sessions simultaneously.

Window
This section lists any open View and File Transfer windows and allows you to switch between them. Click on a window to display it on top of the other windows.

Scanning Clients

The Scan function enables you to cycle through each connected Client in turn, in a dedicated Scan window. It is an alternative to viewing multiple clients in scaled windows, which may cause their screens to be unreadable.

Method

- Connect the Clients that you want to include in the Scan operation.
- Choose Tools, Scan from the Control menu bar. The Scan dialog will be displayed.
- Choose the Clients that you want to include in the scan and set the time interval for which each client screen will be displayed.
- Click on Scan to start the process.

Each of the selected Clients screens will be displayed in turn. You can turn Auto timing on or off from the Scan window's toolbar or choose to move forwards or backwards between individual Clients.

Script Menu

This menu is where you will manage the different scheduled tasks.

Add
Allows you to create a new scheduled task. See the section on Creating a new task for more information

Delete
Deletes the currently selected task from the schedule list. You will be prompted to confirm, before the item is deleted.

Properties
Allows you to edit the properties for the currently selected task in the schedule list.

Run Now
Executes the currently selected task in the task list, now.

Cancel Script
If a task is currently executing, this menu item is enabled and allows you to stop it.

Deactivate Agent
By checking this menu item, the Agent will be disabled so no tasks will run. Useful when setting up lots of tasks. See the section about taskbar icons for related information.

Exit
Quits the Script Agent. Any currently running tasks are aborted.

Scripting Overview

The PC-Duo Scripting Language comprises the Script Editor, the Interpreter, and the Scripting Agent. These are described further in the sections below:

Scripting Language
The Script Editor
Scripting Interpreter
The Script Agent

Select

See Also
CurrentClient

Description
Selects a new default client that will be the focus of all operations.

Syntax
```
Success = Select (client)
```

Notes
By selecting a new default client, any client operation that follows will be directed at this client. The return value is TRUE if the client was selected, or FALSE if it could not be selected. If you are not connected to the specified client, the return value will be FALSE.

Example
```
Connect ("TEST1")
Connect ("TEST2")
If !Select ("TEST1") then Print "Could not select a different client"
```

Select the constraint for the time at which to run. These items may require values in the fields to the right

Select the day on which to run

Select the month in which to run

Select this radio button to insert spaces every time you press the TAB key. Use the edit control to the left to specify the number of spaces to insert.

Select this radio button to use tab characters rather than spaces

Selecting and Configuring the Modem

When using the Control to dial a Remote Network, you need to set the modem type and Baud rate that you will be using. Normally this would be done at installation. There may however be times when you want to change the settings.

Method

- From the Control Menu Bar choose Tools, Configurations.
- Highlight the Configuration that you want to set the modem for.
- Click on the Settings button. The Settings for Configuration dialog will be displayed.
- Choose the Dialin Bridge tab.

This dialog is used to set the modem information that the Control Profile uses to communicate with a Remote Network. It also sets the Baud rate and diagnostic levels to use.

You can customise the modem setting by choosing the Edit Modem Strings button.

This dialog allows you to set up your own modem initialisation and command strings to tailor its operation to your exact needs. The results of your editing are stored in the NSM file CONTROL.MDM.

The boxes that **must** be filled in are Reset, Response, Connect Message, and Hang-up Prefix and Suffix.

See also

Settings for Configuration: Dialin Bridge

Send Physical Fonts

When a Windows Client is sending its screen to a Control, it passes the font information by reference to reduce the volume of data sent.

The Control refers to its own internal font mappings and uses the closest matching that it has to the one being displayed at the Client. In most cases, the same fonts will be available at both the Client and the Control and so what is displayed on the screen will appear identical.

However, there may be occasions when a close match cannot be found. In these cases, it is desirable that the Client sends the Control the full information that it requires to display the data in the same font.

Setting this option forces *TrueType* text to be sent as glyphs (i.e. character shapes), rather than character codes. This guarantees that they will be displayed correctly at the Control.

This will, however, have some impact on performance, especially on Dial-up lines, and is not usually required.

Command
DOS: Not available
WIN: WCLIENTW *Clientname* /U*pp* /P
NT: CLIENT32 *Clientname* /U*pp* /P
OS/2: Not available.

Example
WCLIENTW JOHN /UP /P

Effect
The Client will send the Control a description of the fonts that it is using to enable the Control to recreate and display them.

Use this option if
Fonts installed on the Client are not installed on the Control.

Sending a Message

Allows you to send a message to an individual Client a Group of Clients or all Clients on the Network.

To Send a message to an individual Client

- Open the Clients or Connected Folder in the Tree View.
- Highlight the Client you want to send a message to in the List View.
- Right-click and choose the Message command from the shortcut menu.
- The Message dialog will now be displayed. You can now choose whether you want to send the message to all Available Clients, All Connected Clients or only the currently selected Client.

To send a message to a Group of Clients

- Open the Group Folder in the Tree View.
- Highlight the Group you want to send a message to in the List View.
- Right-Click and choose Message, or choose the Group, Message menu command. The Message Dialog will now be displayed.
- You can now choose whether you want to send the message to all Available Clients, All Connected Clients or only Clients in the currently selected Group.

To send a message to all Available Clients

Use this command with care as the message will appear on the screen of every Client on the Network whether or not it is connected. It is however useful for broadcasting messages such as "The Mainframe is Down"

- Choose Tools, Broadcast Message from the Control menu bar. The Message Dialog will now be displayed.
- You can now choose whether you want to send the message to all Available Clients or All Connected Clients or only Clients in the currently selected Group.

Sent *nnn* x *nnn* byte packets in *nnn* msec = *nnn* bytes/sec

This message is displayed on completion of the Test Network command. It gives an indication of the network performance obtained when communicating with the Client. Figures below 100 Kbytes per second for the Send test and 50 Kbytes per second for the Echo test will adversely affect remote control performance.

See Also
Technical Reference

Sequence error receiving data from Client; expected: *nnn*, actual *nnn*

While testing the connection to a Client, data was received in a different order to that in which is was sent. The remote control protocol can cope with this on NetBIOS transports, but if you see this error on TCP/IP, you need to find out what is causing it and correct it.

See Also
Technical Reference

Sequence error sending data to Client; expected: *nnn*, actual *nnn*

While testing the connection to a Client, data was received in a different order to that in which is was sent. The remote control protocol can cope with this on NetBIOS transports, but if you see this error on TCP/IP, you need to find out what is causing it and correct it.

See Also
Technical Reference

Set Name Lookup response Delay

Purpose
When a Control does a Browse it sends a message to all Clients on the Network to sign in with their name and network address. In a very large network with many Clients the response time may be such that not all Clients are able to respond in time. Setting this option spreads the period over which the Clients respond allowing a greater chance of them all responding. It also spreads the potential network load.

Command
DOS: IPCLIENT or NBCLIENT *Clientname* /Ln
WIN: WCLIENTW *Clientname* /U*pp* /Ln
OS/2: PMCLIENT *Clientname* /U*pp* /Ln
Example
WCLIENTW JOHN /Upp /L6

Effect
When the Control does a browse the client will respond randomly between 1 and 6 seconds.

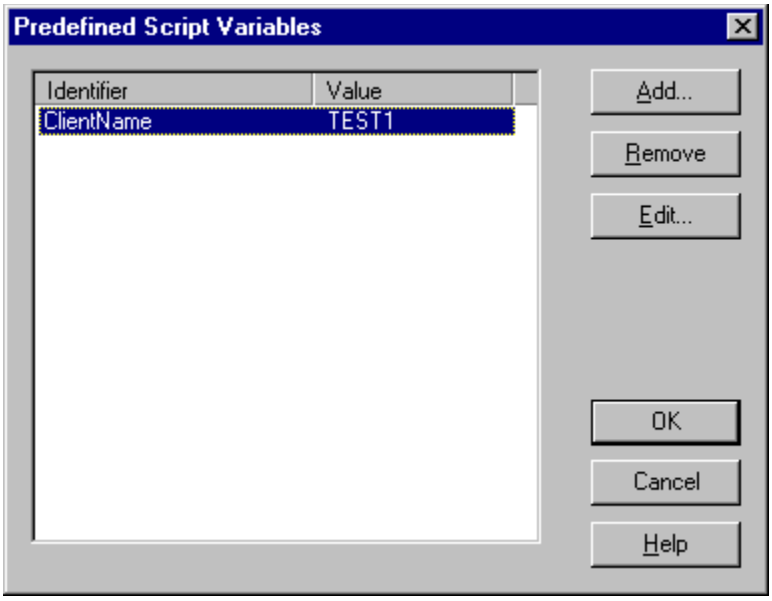
Use this option if
You wish to spread the network load of a browse.

Predefined Script Variables

When you write a Script, you have access to System Variables and those that you define yourself. You can predefine up to 10 variables that are available when you run the Script. These can be string integer values. For example, you could define variable ClientName to be "TEST1" and use this in your script to perform an operation on that Client.

Select the Predefined Variables command on the Script Editor Options Menu to display this dialog:-

For more information on a particular feature, click where a ➧ appears on the picture below.



The list you see contains all the variables already defined. You can add new variables by pressing the [Add] button. Edit or remove a variable by selecting it and then pressing the [Edit] or [Remove] button as appropriate.

When you have defined all the variables required, press [OK] to return to the Editor.

When you run the script, these variables will be defined and can be used at any point in your script.

Set Security Key

Purpose
Provides additional security that enables Controls to connect only if they have the specified security key set at this Client.

Command
DOS: Not available
WIN: WCLIENTW *Clientname* /U*pp* /C*encrypted_key*
OS/2: Not available

Example
WCLIENTW JOHN /UIP /C12345

Effect
The Control must have the same Security Key configured to be able to connect to the Client. Optionally this can be set as the Serial number.

Notes
- Use the Configurator to set this option at the Client.
- Use the option in the Control' s Configure menu to set the security key at the Control.
- This option must be in upper case.
- Specify the key as an asterisk (*) at both the Client and the Control to permit only Controls with the same serial number as the Client to connect.

SetAttrib

See Also

GetFileInfo

Description

Sets the attributes of a specified file either locally or on a Client

Syntax

```
Success = SetAttrib (source, attrib)
```

Notes

This function allows you to alter the specified files attributes. You must supply a Fully Qualified Pathname in *source*, and a combination of file attributes in *attrib*. You combine the attributes for the file by using the Bitwise-OR operator. The following constant values that represent attributes are available:

Constant Identifier	Value	Description
FA_ARCHIVE	32	Archive file attribute
FA_HIDDEN	2	Hidden file attribute
FA_RDONLY	1	Read Only file attribute
FA_SYSTEM	4	System file attribute

The following example shows how to combine the different attributes together.

Example

```
...
// Set the attribute of AUTOEXEC.BAT to Archive

If !SetAttrib ("C:\AUTOEXEC.BAT", FA_ARCHIVE) then
      Print "Unable to change this files attributes!"
Endif

// Now combine several attributes together using the Bitwise-OR

If !SetAttrib ("C:\CONFIG.SYS", FA_ARCHIVE | FA_RDONLY | FA_HIDDEN) then
      Print "Unable to change this files attributes!"
Endif
```

SetConfig

Description
Calling this function will disconnect any clients that are already connected. By default the interpreter loads the default named configuration on startup, and you should call SetConfig () at the beginning of your script.

Syntax

```
Success = SetConfig (configname)
```

Notes
You can select the named configuration from the menu option Edit | Insert Named Configuration. The list provided saves you having to remember the names of each configuration. If you enter the named configuration yourself, and it does not exist, the default configuration will be loaded.

If the function fails, for any reason, the return value is FALSE and the default configuration is loaded, otherwise if the config was changed the return value is TRUE.

Example

```
If !SetConfig ("beaker") then
      Print "We were unable to load our named configuration 'Beaker'"
Endif
```

SetItem

See Also
AddItem, DelItem, FindItem, GetItem, Items, Join, Dim

Description
Alters the item at the specified index in a list

Syntax
```
SetItem (list, index, expression)
```

Notes
Index is a one base value for the item in the list. If *index* is greater than the number of items in *list*, an error will occur. *Expression* must be of string type. There is no return value for this function.

Example
```
SetItem (list, 3, "New String 3")
```

Setting a Security Key

As an additional security feature, you can configure the Client to only accept connections from a specified Control. When a Control attempts to connect to the Client, the Client checks that the security key in use at the Control matches its own.

There are two options for the Security Key. These are:

- Only allow connections from a Control with the same serial number as the Client.
- Only allow connections from a Control with a user specified key number.

Method
Run the Client Configurator and select {Configure},{Client},{Advanced},{Security Key},{Set}.

If you want to use the Serial Number then insert an asterisk. Alternatively, insert a password. This will be encrypted and added to the Client initialisation.

At the Control select {Configure},{Set Security Key}. Insert either an asterisk or the same password that you set at the Client.

If you use an asterisk, make sure that the Control has the same serial number as the Client, otherwise it will not be able to connect.

Setting Installation Defaults

The default values used by the Windows Installer can be controlled through the file DEFAULTS.INC on disk 1. You may edit this file as desired for your particular circumstances.

For example: Setting COPY%=0 will cause SETUP to set up the icons and .INI files on the user's workstation to point to an existing installed copy on a file server.

Amending the DEFAULTS.INC file is a useful method for installing from a File Server. The options you can set are:

DEST$=
Default destination directory Note: This must be in UPPER CASE

DEST$ = MAKEPATH (MID$(GetWindowsDir, 1, 3), DIR$)

COPY%=
Whether to actually copy the files (1 = yes, 0 = no); use COPY% = 0 to reference an existing network installation

MNAME$ =
Default Client/Control Name. Use "*" for the DOS MachineName

OPTION$=
Default installation options, in the order:

Client, Control, Windows, DOS, NetBIOS, IPX, TCP/IP, Remote, Bridge

Example

```
IF WindowsVer% >= NT THEN
    OPTIONS$ = "111000010"
ELSE
    OPTIONS$ = "111100011"
ENDIF
```

CPARAMS$ =
Default Windows Client command line parameters
/C* means 'use serial number as security key', which means that only Controls with the same serial number can connect
CPARAM$ = "/C*"

SETUPCOMMS%=
Whether the modem configuration dialog is displayed if Remote and/or Bridge selected. Set this to 0 and then specify the COM port, modem and baud rate to force Set-up to a particular modem and/or configuration.
Example

```
SETUPCOMMS% = 1
DEFCOMPORT$ = "COM1"
DEFMODEM$ = "Hayes-Compatible"
DEFBAUDRATE$ = "19200"
```

You can also configure Setup program to run in unattended mode for installation where you have a Software Distribution program. Please see the Readme file for details.

Finally, in a Novell environment you can configure the Client name to be the same as the User's Log in name. See the README file for details.

Setting the Diagnostics and log file output level

Select the appropriate Log File Output option to determine how much of information logged to file MODEM.LOG in the PCD32 directory.

You can select the Extended option if you have problems establishing Dial-up links. To view, delete, archive or print the log, click on the View Log button.

There are three Output Modes:

None - Messages are displayed on the screen only and are not logged.

Basic - Logs the following information:

- Name of the modem used.
- Number Dialled.
- Results of Diagnostic Tests.
- Connection speed.

Extended - As above plus:

- Information about the modem retrieved from the modem itself.

When the log file is full, the Control will ask you to delete or archive it.

Setting the Diagnostics level

Use the Tools, Configurations, Settings for Configuration: Dialin Bridge tab dialog to set the required diagnostics levels.

There are three Diagnostic Levels:

None - No modem functions are tested.

Basic - When the modems connect, the following are checked:

- Flow Control is correctly set.
- There is a Dialin Bridge at the remote number.
- There are not excessive delays in transferring data.

Extended - As above plus:

- The PC-to-modem Baud rate is compatible with the modem-to-modem rate.
- Line reliability.
- Throughput.

Choose Extended if you have problems establishing Dial-up links, or problems connecting to or maintaining connections to, remote Clients, or if you suspect you have performance problems.

Setting up Clients for Replay Files

In order to use the Replay function the client must be configured to create a Replay File when a Control connects to it.

Method

- Start the Client Configurator utility.
- Press the Advanced button.
- Double-click on the Master Profile to display the CLIENT32.INI dialog, then display the Options tab.
- Enter the path and directory where the files are to be stored. It is advisable to make this a secure location such as on a Server to which the Control User has limited access.
- Enter the User name that will be required before the file can be replayed at a Control.

Whenever a Control connects to Client using this Profile, a file will be created to record the remote control session. This file can later be replayed at a Control with the required access rights.

See also

Using Replay Files

Setting up the Modem

At the Control

Select the Tools Menu, Configurations, Settings for Configuration: Dialin Bridge tab.

At the Client PC

- Double-click on the Client icon in the taskbar's system tray to display the Client application window.
- Choose the Commands, Load Bridge menu command.

SetTransport

Description

Sets a new default network transport protocol, on the LAN or across a dial-up link

Syntax

```
Success = SetTransport (transport [, transports])
```

32-bit Note

When you set new transports, all following client operations will be performed across these protocols. You can specify one or more transports for the scripting to work over. To specify NetBIOS, you add the adapter number to the constant value T_NETBIOS. If you specify T_REMOTE as on of the arguments, the transport is initialised for use over a dial-up connection. You must remember to set this back to local when you have finished with remote connections. If you specify more than one transport with T_REMOTE, only the first one is used the rest are ignored.

16-bit Note

You can only specify one transport for the scripting language to work over. Specify one of the constants in the table below, observing the same procedure for NetBIOS as above. You still specify T_REMOTE in the same way as above.

Use the constants in the table below to specify the transport.

Identifier	Value	Description
T_IPX	1	IPX transport
T_TCPIP	2	TCP/IP transport
T_HTTP	3	HTTP transport is used for Gateways
T_NETBIOS	6	NetBIOS transport (add adapter number to this value, range 0...7)
T_REMOTE	255	Specifies that the network is remote

Example

```
SetTransport (T_IPX, T_TCPIP, T_NETBIOS + 5)     // IPX, TCP/IP and
NetBIOS adapter 5 on the LAN
SetTransport (T_NETBIOS)                         // NetBIOS Adapter 0
SetTransport (T_IPX, T_REMOTE)                   // Load IPX for remote
connections
```

Showing Replay Files to Clients

The Control can Show its screen to one or more connected Clients. It is also possible to Show a Replay file to the connected Clients.

To do this, follow these steps:

- Connect to the Clients you wish to Show to.
- Load the Replay file via the Tools, Replay menu command.
- Pause the Replay and return to the Control window.
- Select the Tools, Show menu command.
- Chose to Show to ‘These Clients’ and click Show.
- Return to the Replay window and resume playing.

The Replay File playback is now being Shown to the connected Clients.

Showing to Clients

The Control can Show its screen either to the Selected Client or to a Group of Clients. This makes PC-Duo the ideal training tool.

In order to use the Show feature, you must install a Client on the Control PC.

To Show to an individual Client or a group of Clients

- Select the appropriate Client(s) or Group.
- Right-click on this selection and choose Connect from the Client Popup Menu
- Choose the Tools, Show menu command. The Ready to Start Showing dialog will now appear.

If you are already viewing one PC when you start a Show, you can show that Client's screen to the other PCs. For example, if you want to demonstrate an application on the Server to the Accounts department, start by viewing the Server and then start a Show to the Clients in the Accounts Group. They will all be able to see the demonstration.

To End a Show

- Bring the Control window to the foreground
- Choose End Show.

Shows where the file is located on your computer

Sorry, Dialup is not available on TCP/IP; please use RAS instead

PC-Duo does not support dialup over TCP/IP. This problem will be rectified in a future release.

Suggestions
Use another protocol, or, if dialling into a machine running Windows NT, set it up as a RAS server (by installing the Remote Access Service from Settings, Control Panel, Networks from the Start menu).

Sorry, this is not supported on versions of Windows NT before 4.0. Please refer to the help file for details on how to do this in Program Manager.

Meaning
You cannot create shortcuts using drag and drop on versions of NT older than v4. To create Control Icons with different parameters manually see Creating Icons

Sorry, '*xxx*' must be configured by editing CONTROL.MDM

Meaning
The settings for this modem cannot be edited from this dialog. Instead, you will have to modify them by editing the CONTROL.MDM file manually (this resides in the PCD32 directory). See the contents of this file for more information.

Sorry, you do not have sufficient privileges to do this

Meaning
You cannot perform certain operations if the current Configuration does not have the required privileges.

Notes

- To create a New configuration or edit an existing one you must have ‘Change User Interface’ privileges.
- To Reset or Create Icons you must be allowed to ‘Switch Configurations’.

Space

See Also
RepChar

Description
Returns a string containing the specified number of spaces

Syntax

```
String = Space (length)
```

Notes
Length has a range of 0...255. If length is greater than 255, a run time error will be generated. If length is zero, an empty string will be returned.

Example

```
Print "Print 10 spaces [", Space (10), "]"
```

Specifies that the task is run on a specific day every month

Specify the date on which to run the task

Specify the number of spaces to insert when you do not want to keep tabs

Specify the window style of the application to execute

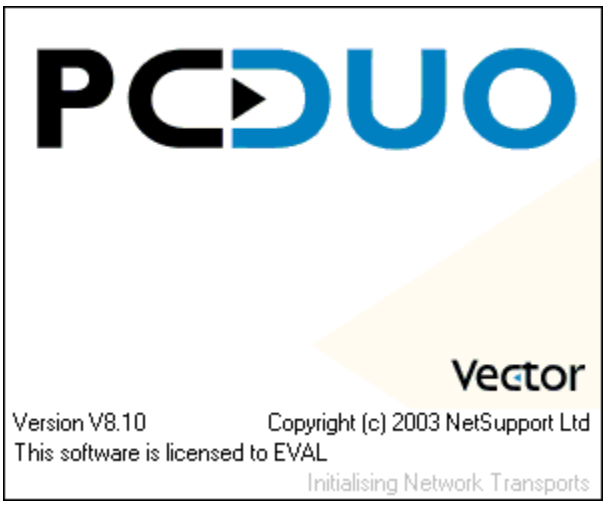
Specify the year in which to run

Specify which day of the month to run on

Starting the Control

Start the PC-Duo Control using its shortcut in the PC-Duo program group.

The Control program displays a splash screen while it starts up.



This contains the product logo, version, and licence information. When the Control has finished initialising, the splash screen disappears. The first time you start the Control, the Welcome to PC-Duo dialog will appear to help you get started.

When you finish with the Welcome screen, the Control Main Window will appear.

If the Control reports that a network problem has occurred, click here for information about how to resolve this issue before continuing.

Supply optional program arguments here

Suppress Colour palette

Purpose
The Client normally sends the EGA colour palette and VGA Digital-to-Analogue Converter (DAC) registers to the Control. With some programs or VGA cards, this may cause the Colours on the Control to display incorrectly.

This option suppresses a DOS Client from sending its EGA colour palette and DAC registers to the Control.

Command
DOS: IPCLIENT or NBCLIENT *Clientname* /0
WIN: Not available.
NT: Not available.
OS/2: Not available.

Example
IPCLIENT JOHN /0

Effect
Client colours will not be sent to Control.

Use this option if
Incorrect colours on the Control screen are causing it to be unreadable.

Notes
- /0 is a zero, not the letter O.
- This is only required for DOS Clients. Windows screens are handled differently.

Switches when starting a Bridge

You can use switches when loading the BRIDGE programs to tailor its operation to your exact needs.

When loaded with the Client, you can set parameters for the Windows Bridge using the Configurator.

For the DOS Bridge and the OS/2 Bridge, you must append the parameters to the command line.

The following parameters are available:

COM*n*
Specifies the COM port; *n* must be in the range 1-4. See also **/C** and **/I** for the DOS Bridge only.

Password
The password must be encrypted using CALCPSW. The Configurator does this for you.

/B*nnnn*
nnnn specifies the Baud rate between the Bridge PC and the modem e.g. 9600, 19200, etc.

/M*modemname*
This tells the Bridge what modem you are using. The modem name must be defined in the CONTROL.MDM file. Only sufficient characters to distinguish the modem name from any other in CONTROL.MDM need be specified. If in doubt, try the Hayes option, /MHayes. If the /M parameter is omitted the Bridge assumes a direct serial link.

/NOBRIDGE (not available on the DOS Bridge)
If you use /NOBRIDGE instead of /BRIDGE, the Bridge starts in an "uninitialised state. This means that the Com port is left free for other applications. You can then start the Bridge manually from the Client icon.

/P*passwordfile*
Specifies a file of passwords and Dial back numbers. This takes precedence over *password*, if both are specified.

/T*nn*
nn specifies an inactivity timeout, in minutes, after which the Bridge will hang-up the line. For this to be effective, you should also set an "inactivity timeout" (/T) at the Client and "disable tickle packets" /O at both the Client and the Control.

/D
Modem command strings and responses are displayed on the screen. This helps to identify problems.

Additional DOS Bridge Parameters

The DOS Bridge can also take the following command line parameters:

/C*nnn* *nnn* specifies the I/O address of the COM port if non-standard. This overrides COM*n*.

/E Load in EMS.

/I*nn* Specifies the hardware interrupt vector of the COM port if non-standard. This overrides COM*n*.

/V*nn* Set Software Interrupt Vector

/X Load in the HMA

Script Agent Taskbar Icons

Taskbar icons appear in the notification window of your taskbar, under the new user interface of Windows 95/98 and Windows NT4. This icon is only visible when the Agent has been minimised with the Hide when minimised option set.

There are two icons you will see in the taskbar.

Icon	Description
	Script Agent active icon
	Script Agent disabled icon

Double click on the icon to restore the user interface to the state it was in before it was minimised.

Right click on the Agent's icon to display its popup menu. This contains the following commands:

Show Scripting Agent
Restores the Agent to a visible window.

Disable the Agent
This prevents the Agent from running any Tasks but does not actually close it.

Close the Agent
This closes the Agent down.

TCP/IP

A protocol used to enable Personal Computers to communicate in a Networked environment.

TCP/IP stands for Transport Control Protocol/Internet protocol and is fast becoming the standard for both Local and Wide Area networking as it provides fast routable packets. It is the standard used on the Internet.

Technical Reference Overview

Hardware and Software Requirements

Changes to Windows 95 and 98 System Files

Changes to Windows NT Registry and System Files

Configuring Windows 95 and 98

Configuring Windows NT

Limitations

Troubleshooting

Error Messages

Text Cursor Position
This status line item displays the current position of the insertion point in the focused editor window.

The actual throughput is low compared to the Connection Speed

Meaning
When a connection is made to the Bridge and extended modem diagnostics are enabled, the actual data throughput obtained is compared against the reported connection speed. When the modems are working properly, these should be similar in value.

Some modems report the PC-to-modem baud rate and not the connection speed; in this case this error may be misleading and can be ignored.

Suggestions
Check you have data compression turned off on both Control and Bridge modems. This interferes with PC-Duo's own error correction and data compression techniques. We recommend that you enable error correction in the modems, however. Also, try redialling, in case you have a poor line.

See Also
Modem Diagnostics, Configuring the modem

Getting Started

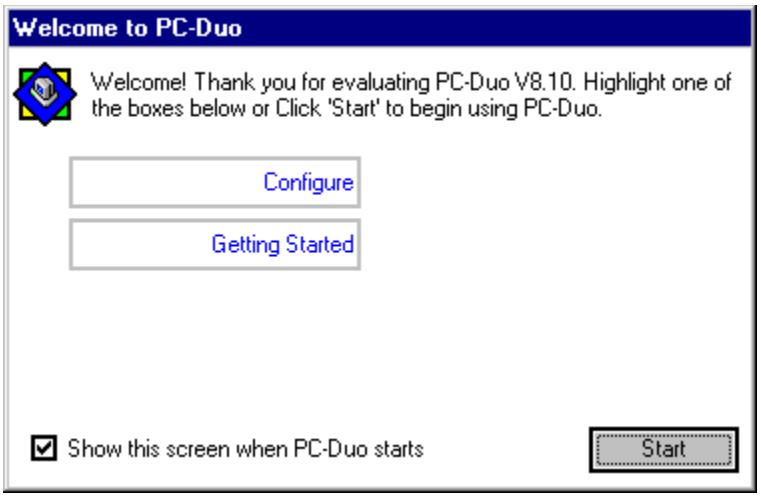
PC-Duo has been designed to be easy to install and use, so you should be up and running within a very short time.

If you are not familiar with the features of Windows Help files, click here to see How to Use Help.

This Help File contains several Guided Tours around PC-Duo. We will also explain the terminology used in the product.

The first time you start the Control program, the Welcome dialog will be displayed.

For more information on a particular feature, click where a ➧ appears on the picture below.



You can click on Configure to change the Control's configuration, or Import Known Client and Remote Network information from an older version of PC-Duo.

Press the Browse Forwards [>>] button to move to the next topic in this sequence.

The Bridge modem has XON/XOFF flow control enabled!

Meaning
The PC-Duo Bridge machine you are dialling into has XON/OFF flow control enabled on the modem. This type of flow control interferes with Remote Communications and must be disabled.

Suggestions
Check the modems at both machines and disable XON/XOFF software flow control. You should use hardware flow control instead of software flow control. Refer to your modem manual to obtain the correct commands.

See Also
Configuring your modem

The Bridge Programs

There are four versions of the PC-Duo Bridge program. The one you load depends on the operating system of the workstation you are loading it on. The versions are:

DOS	IPBRIDGE.EXE or NBBRIDGE.EXE
Windows	/BRIDGE which is a DLL that loads with the Windows Client
OS/2	/BRIDGE which is a DLL that loads with the OS/2 Client
NT	WSBRIDGE.EXE which is a standalone program

The WSBRIDGE program can be used on all versions of Windows including NT. However, when you load the Standalone Bridge you cannot also load a Client, except under NT where there are special considerations. See Windows Standalone Bridge.

When loaded on a LAN workstation, all versions of the Bridge programs provide access to all other Clients, whatever their operating system, on the same LAN.

The Bridge programs can also be loaded on standalone workstations (i.e. non-networked) to provide access to a Client running on that workstation. See the appropriate Bridge section for special considerations.

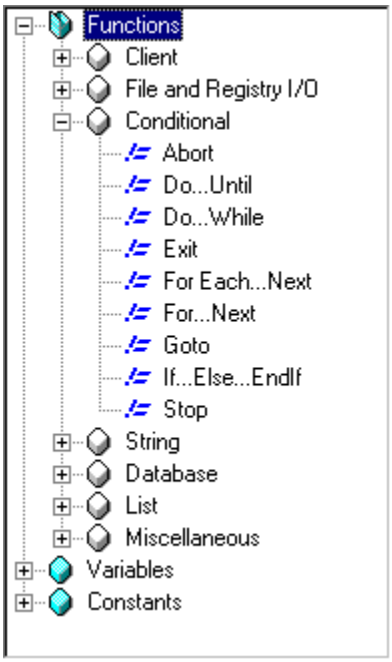
All Controls can dial into all versions of the Bridge program, whatever their operating systems.

There are a number of switches available when loading a Bridge to enable access and security to be tailored to your exact needs.

Script Editor: Command Viewer

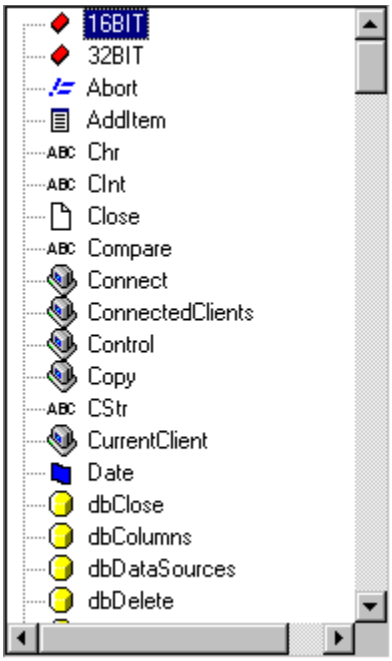
This window lists the functions, variables, and constants that are provided in the Scripting Language. You can open up the list and drag a command from here to a Script window. This helps you to build a Script quickly.

Right-click on an item to open the Command Viewer Popup Menu which can display Help for that command.



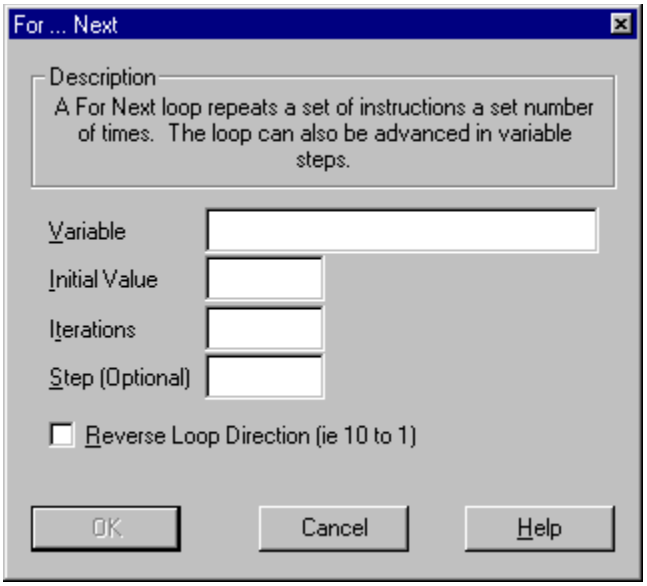
In Structured Mode (shown above), the list is displayed as a Tree View. This allows you to find commands according to their type. For example, Client-related functions are in the Client branch of the Functions tree, and loops which are controlled by a condition can be found in the Conditional branch.

If you prefer the list sorted into alphabetical order, right-click in the tree view to open the Command Viewer Popup Menu and select List Type, Flat, which then makes the Viewer look like this:



When you drag an item from the Viewer and drop it into a Script window, you will be prompted for any parameters that are required. For example:

For more information on a particular feature, click where a ➧ appears on the picture below.



The [OK] button will be disabled until any required fields have been defined. When you press [OK], the command is inserted into the Script.

Some commands can be inserted into the middle of other statements, or on a line by themselves. Commands such as If...Else...Endif or For...Next loops require more than one line. The text insertion point should be positioned at the beginning of a line before the command is added.

Press [Help] to get detailed information on the command.

Some parameters are Optional. These fields can be used to provide additional functionality. Refer to the command help for further details.

You can also drag with the right mouse button, which allows you to insert the structure of the command without prompting for the arguments. You must replace the items surrounded by square brackets before your script is allowed to run.

The Connection speed is greater than the PC to Modem baud rate

Meaning
This message is displayed by Modem Diagnostics when establishing a Remote Communications link to a Bridge. It indicates that you can improve performance by increasing the PC-to-modem Baud rate.

See Also
Configuring your modem

The Control AND Bridge modems have XON/XOFF flow control enabled!

Meaning
Both the modem at the Bridge machine and the modem configured in the Control have XON/XOFF flow control enabled. This type of flow control interferes with the operation of PC-Duo and must be disabled.

Suggestions
Check the modems at both machines and disable XON/XOFF software flow control. You should use hardware flow control instead. Refer to your modem manual to obtain the correct command strings.

See Also
Configuring your modem

The Control modem has XON/XOFF flow control enabled!

Meaning
The modem configured on the Control has XON/OFF software flow control enabled. This type of flow control interferes with the operation of PC-Duo and must be disabled.

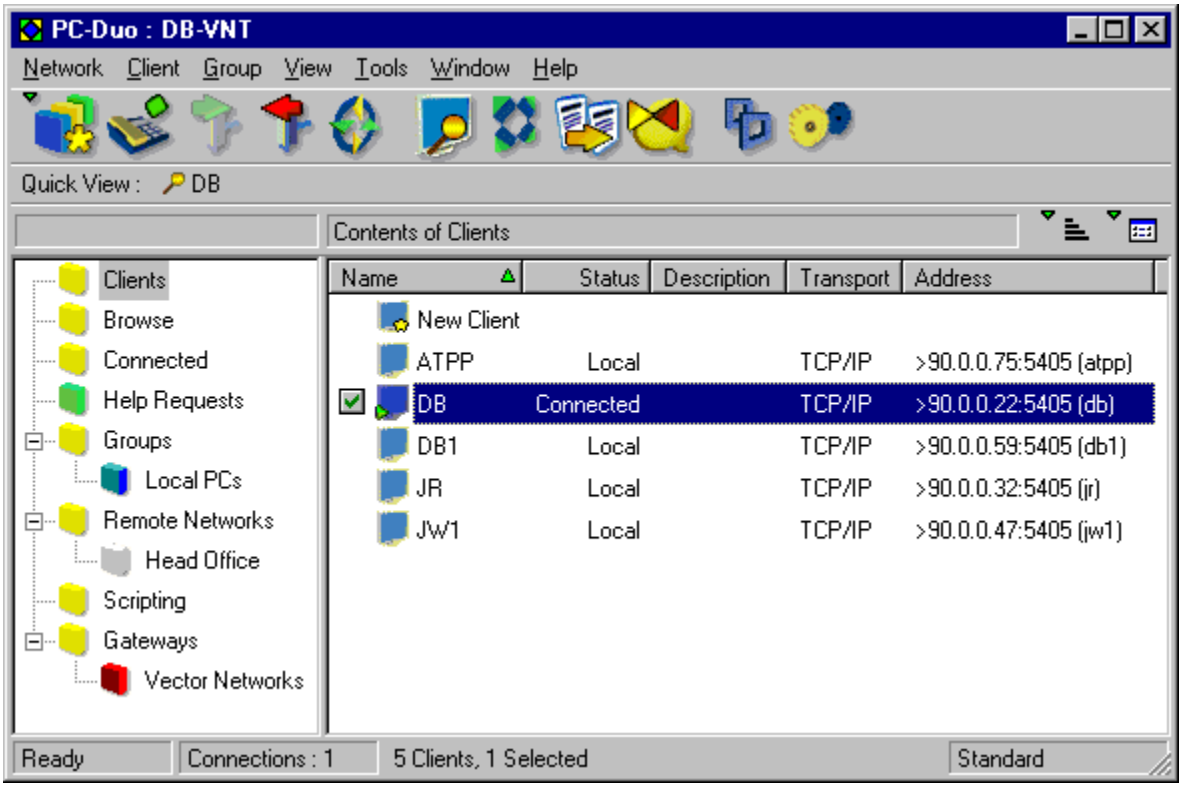
Suggestions
Check the modems at both machines and disable XON/XOFF software flow control. You should use hardware flow control instead. Refer to your modem manual to obtain the correct command strings.

See Also
Configuring your modem

The Control Window

The Control Window is displayed when you start the Control program.

For more information on a particular feature, click where a ➧ appears on the picture below.



This is the primary interface for connecting to Clients, selecting which ones to work with, and the tasks to perform. It is also used for configuring and profiling the Control, maintaining Client and Group information and setting up the environment in which the Control will operate.

The Toolbar

As with many Windows applications, the PC-Duo Control has toolbars that contains shortcuts to commonly-used features. Each button has a description underneath to help you to see what the buttons do. Other toolbars are used in the View, File Transfer, Replay, and Scan windows to help you to perform tasks quickly.

The Tree View

The Tree View provides an Explorer-like structure for creating, displaying, and organising Clients and Groups.

The List View

The List View displays the contents of the currently selected folder in the Tree View. You can change the display using commands on the View Menu. The information within the List View can be customised to show specific information relevant to you. See 'Setting Column Display Fields.

You can Hide or Display the Toolbar and Status Bar from the Control View Menu.

The CONTROL.MDM file

CONTROL.MDM contains an entry for each supported modem and each entry contains the commands and initialisation strings for the modem in question. You can add your own modems to this file, or edit existing entries.

The easiest way to do this is by using the Remote Configuration in the Windows Control.

However, you can also edit the file manually with a text editor such as Edit or Notepad. Editing the file by hand provides access to a large number of additional commands such as displaying messages and test results. In addition to standard AT Commands, the available commands are: -

@a(***nn***) Abort if specified response IS received from modem
@c(***nn***) Wait for connect response. Abort if any other response received
@d(***nn***) Wait for data carrier detect signal from modem
@f Flush any buffered response from the modem
@h(***nn***) Hangup (drop DTR for the specified time period)
@I Ignore specified response in next @c command;
multiple @I Commands before an @c command are
ignored (the last is used)
@k(***nn***) Wait for a key press (DOS only)
@m(***message***) Display a message in the progress window
@p(***nn***) Pause for the specified time period
@q Quiet (do not echo modem responses to the screen)
@v Verbose (echo modem responses to the screen)
@V Very verbose (echo modem commands and responses)
@w(***nn***) Wait for specified response (abort if timeout)
@W(***nn***) Like @w, but effective only if bridge is dialling back to control
@# Send the number to be dialled to the modem
@@ Send a literal '@' character to the modem
@; Send a literal ';' character to the modem
@r Request modem information. Requires logging set to verbose.

nn is the period in 18ths of a second to wait.

All responses need only match up to the end of the string specified

The directory *xxx* on *xxx* already contains a file called *xxx*

Meaning
You are about to overwrite a file that already exists.

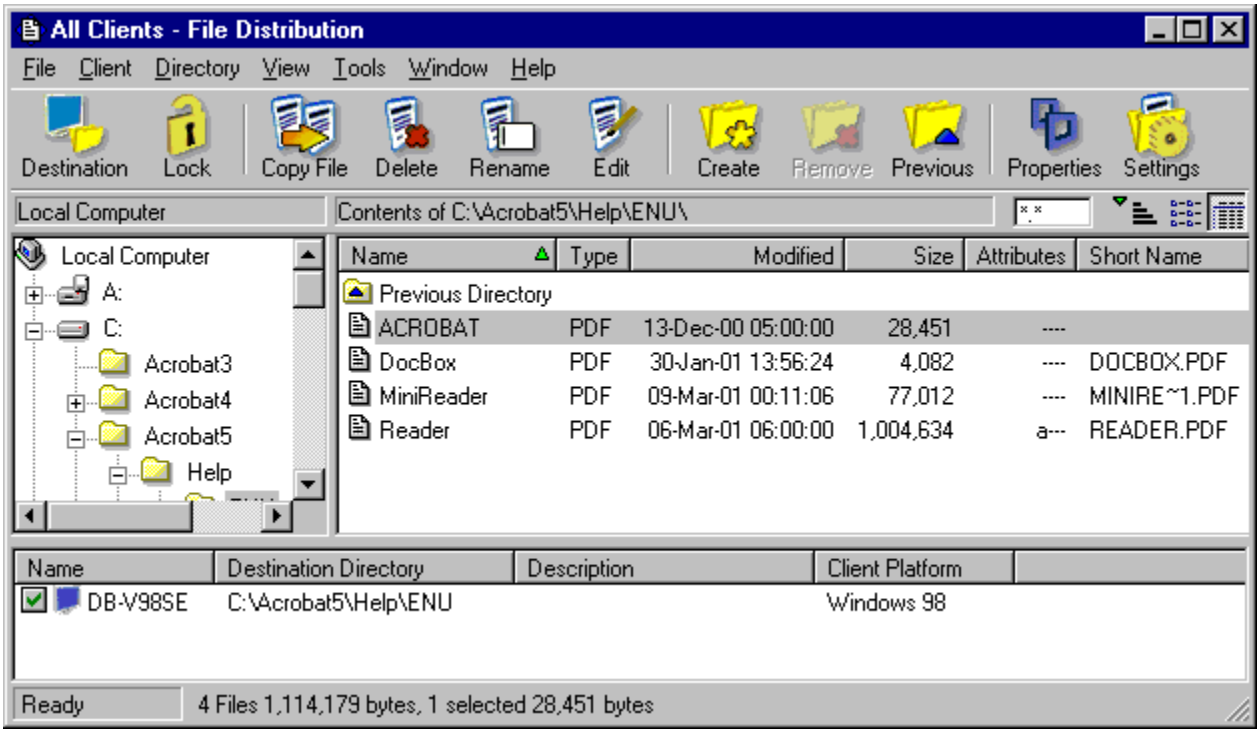
Suggestions
This message can be suppressed by un-checking the Confirm File Overwrite box in the File Transfer tab of the Settings dialog. Checking the Overwrite All checkbox in this dialog will overwrite subsequent files without further prompting)for this file transfer operation only).

System, hidden and read only files cannot be overwritten without confirming for each file. To copy a large number of such files, change the target files' attributes first, which you can do in a single operation.

File Distribution

The Tools Menu, File Distribution command is used to distribute files simultaneously to multiple Clients.

For more information on a particular feature, click where a ➧ appears on the picture below.



This dialog is also accessible from the Group Menu, when it applies to all of the Clients in a Group.

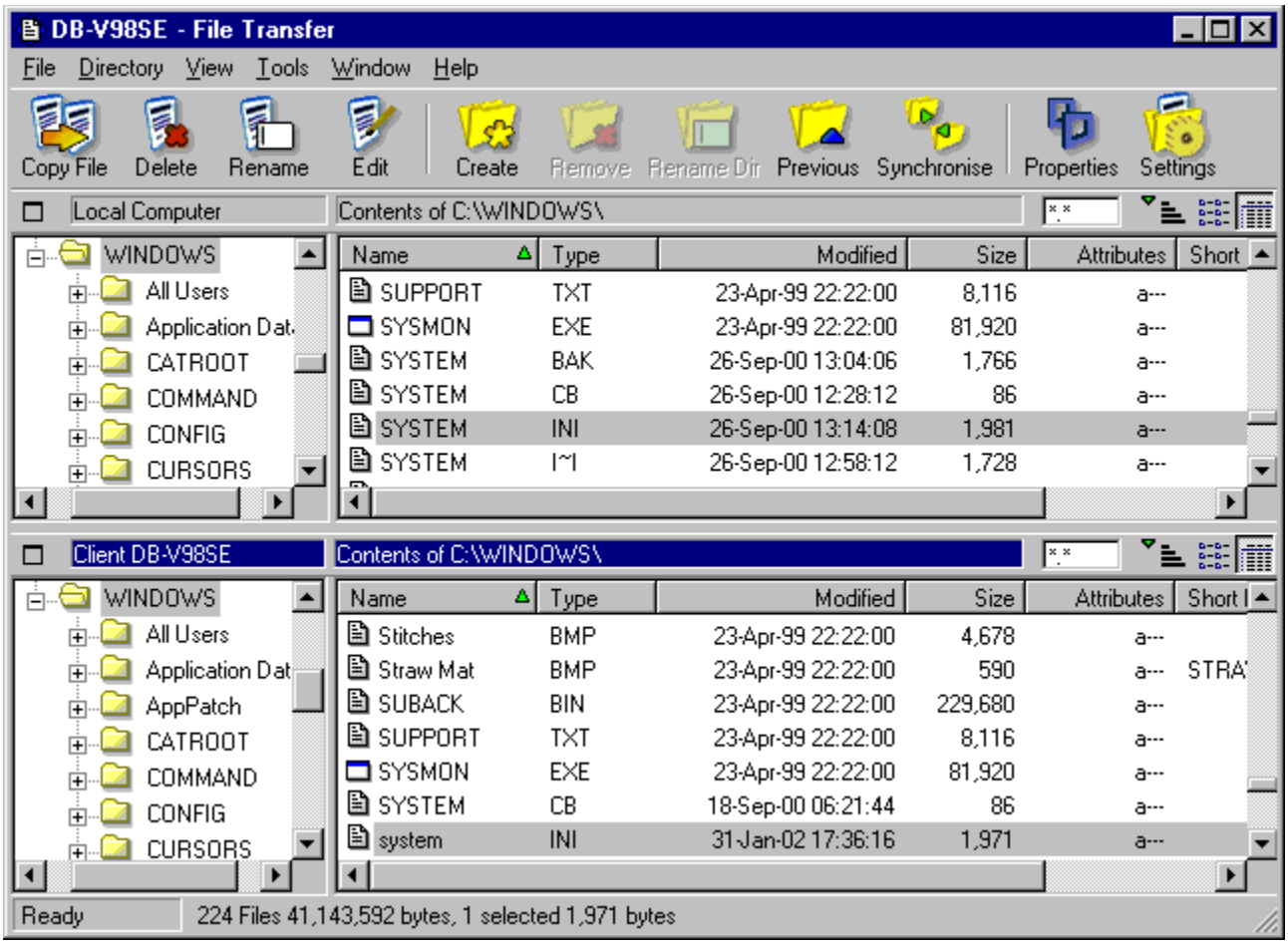
The window title bar shows the name of the Clients or Group with which you are working.

See Also
Transferring files to multiple Clients

File Transfer

Press the File Transfer button (shown above) in the Control Window Toolbar to open the File Transfer window. This window is used to perform simple file transfers between the Control and a single Client.

For more information on a particular feature, click where a ➧ appears on the picture below.



The File Transfer Window, shown above, is divided in to several areas. Below the window title and menu bar is the File Transfer toolbar. Beneath this are the Directory Tree View (on the left-hand side) and the File List View (on the right-hand side) for both the Control (above) and the Client (below). The left-hand Tree View shows the Control or Client's directory structure. The right-hand List View shows the contents of those directories.

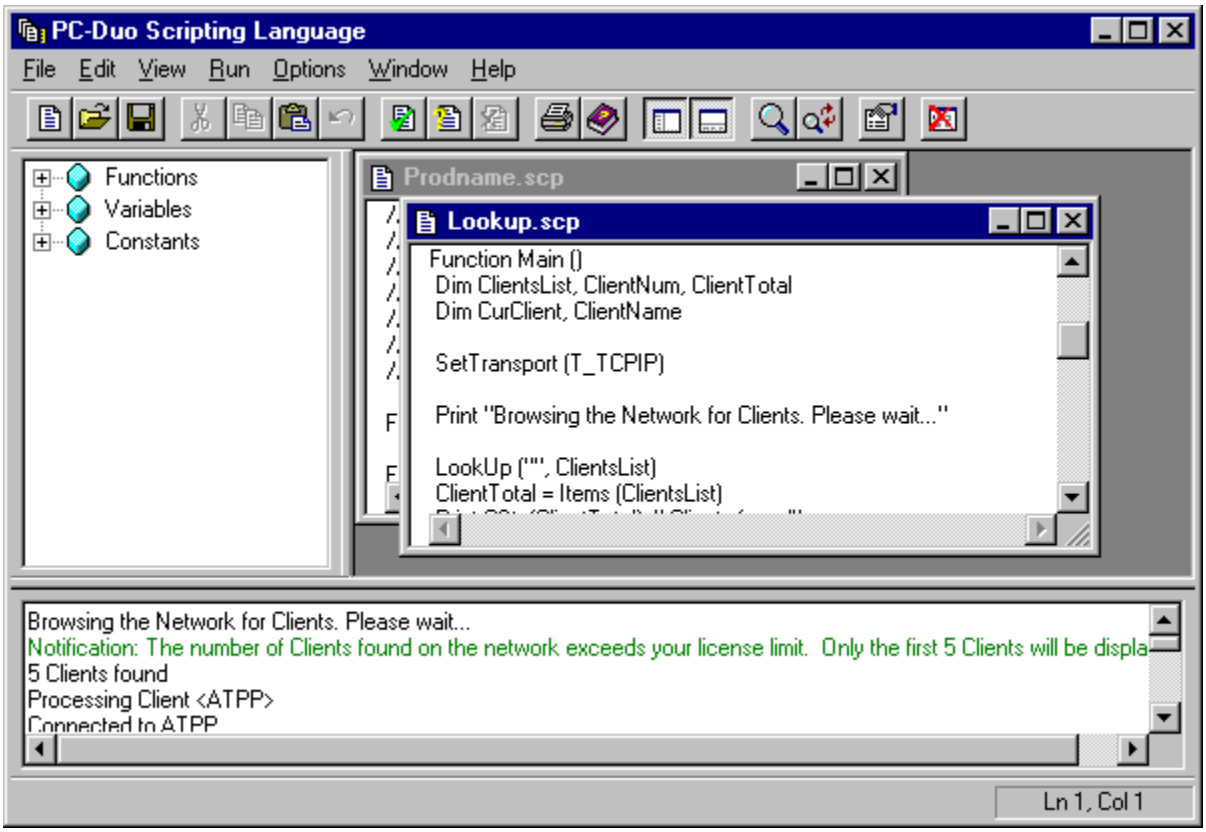
You can transfer files using the mouse to drag them from one location to another. It is best to navigate to the destination directory first, and then select the files in the source directory.

The bar above each pane contains the current directory for the Control and Client, respectively. It also contains controls that allow you to change the file wildcard (normally "*.*"), the sort order, and the type of list view. The detailed view is shown above.

The Script Editor

You use the Script Editor program to develop and test your scripts. The main editor window looks like this:-

For more information on a particular feature, click where a ‣ appears on the picture below.

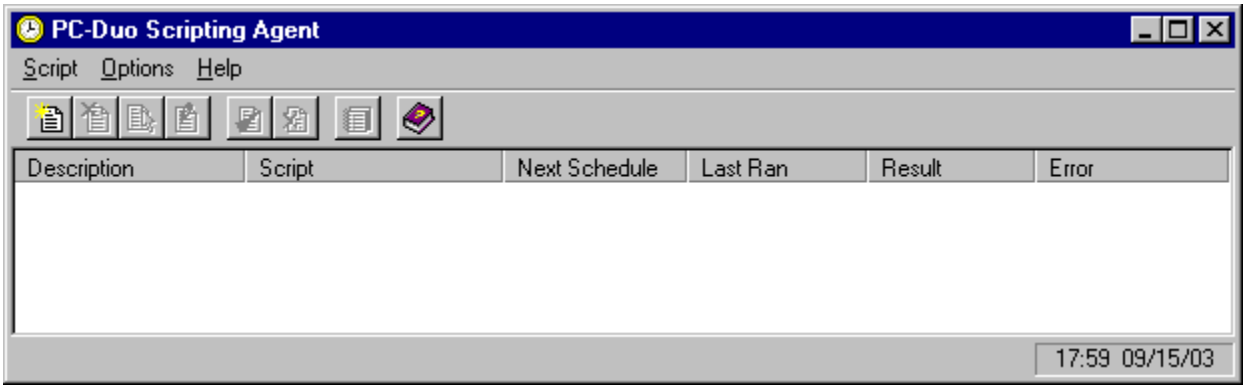


Open script files are displayed in the right-hand pane. You can drag and drop functions and symbols from the left-hand pane into your script. When you test or run a script, and errors are displayed in the bottom pane.

The Script Agent

The Script Agent main window displays your scheduled tasks.

For more information on a particular feature, click where a ➧ appears on the picture below.



Currently running tasks, waiting tasks, postponed tasks and disabled tasks are shown with different coloured icons to indicate their states.

Script Editor: Menus

The Script Editor provides access to the following menus:

File
This menu allows you to open an existing script or create a new one.

Edit
This menu is available while you are editing a Script.

View
This menu allows you to control the Script Editor's appearance.

Run
This menu is only available while you are editing a Script.

Options
This menu lets you change the appearance of your script, as well as access Predefined Variables and the Script Agent.

Window
This menu is only available while you are editing a Script.

Help

Popup Menus

Popup menus are accessible by pressing the right mouse button on an item in one of the Script Editor windows:

Editor Window
Command Viewer
Output Window

Script Agent: Menus

You use the Script Agent's menu commands to add, delete, and disable tasks, and control other scheduler functions.

Script
This menu allows you to manage scheduled tasks.

Options
This is where the options and utilities are found.

Help
The help menu provides access to the various resources needed when developing with the Script Editor and Script Agent.

The name is invalid (must start with a letter)

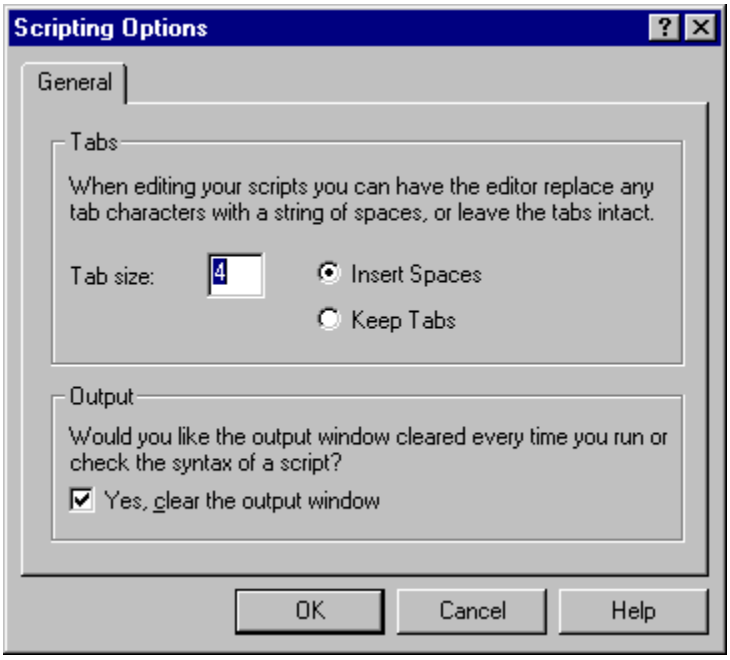
Meaning
You have attempted to create a new Configuration, but the name you supplied was invalid. The name must begin with a letter.

Suggestions
Check to make sure you didn't accidentally enter a leading space or other non-printing character.

Script Editor: Options

Select the Script Editor Options menu, Options command to configure the Script Editor environment.

For more information on a particular feature, click where a ➧ appears on the picture below.



Change the Tabs and Output window settings, and press [OK] to return to the Editor.

The OS/2 Bridge

Purpose
The OS/2 Bridge is a native OS/2 application that provides dial-in access to or through an OS/2 Workstation.

It is loaded with the OS/2 Client.

Command (in STARTUP.CMD)
Start PMCLIENT *Clientname* [password] /U*pp* /BRIDGE COM*n* [B*ridge parameter*]

Example
Start PMCLIENT JOHN /UIP /BRIDGE COM2 /B19200 /Mhayes

Effect
As the OS/2 Client loads it will also load the Dial-in Bridge. A Control started with Remote Communications enabled will be able to dial in via COM2 and take control of the Client on this machine or any workstation on the same network that also has a Client loaded.

Use this option if
You wish a Control to be able to dial into this machine over a dial up or serial link.

Notes
- You cannot load the OS/2 Bridge without also loading the OS/2 Client.
- If you installed from Win-OS/2, you can use the Configurator to set this option.
- If you installed using INSTOS2.CMD, you must edit STARTUP.CMD manually as described in the README.OS2 file.
- After dialling into the Bridge, the Control can connect to any machine on the network.
- If you use /NOBRIDGE instead of /BRIDGE, the Bridge must be started manually from the Client's menu. This leaves the serial port free for other use until you start the Bridge. The Bridge can be stopped and restarted from the Client's menu.

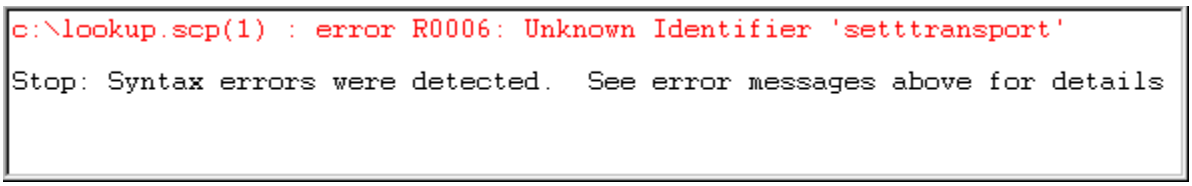
Script Output Window

Script progress messages and any errors from the execution of the Script is displayed in the Output Window. The messages take different formats depending on the type of information being displayed.

This is a list of the different formats used:

`C:\lookup.scp(1) : error ...`	This indicates a fatal error occurred in your script. This must be rectified before the script will be allowed to run. See the section on Runtime Errors for more details.
`No errors detected`	Normal, informative messages from the scripting interpreter. Either generated by the interpreter or from the use of a Print statement.
`Notification : Client reject ...`	Informative errors from the API. These inform you of problems related to Clients.

The layout of the output window is very simple, and looks like this:



The Remote Programs

Remote modules are used to direct a Control to operate over Remote Communications rather than over the LAN. This capability is built in to the 32-bit Control.

To make a connection over a dial-up link, perform the following steps:

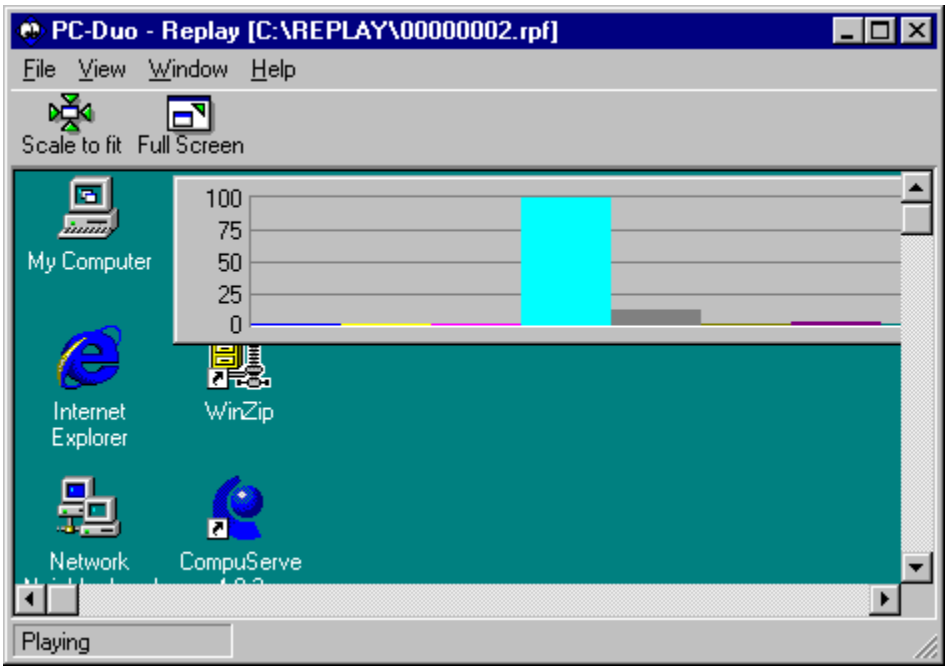
Method

- Ensure that you have configured the details for the Remote Network.
- Choose the Network, Remote, Dial menu command.
- When the Remote Networks dialog appears, select the Remote Network to which you want to connect.
- Click the Dial button.

The Replay Window

The Replay Window is used for replaying remote control sessions that were recorded on suitably configured Control or Client PCs. It allows you to see exactly what the Control operator did on the Client.

For more information on a particular feature, click where a ‣ appears on the picture below.

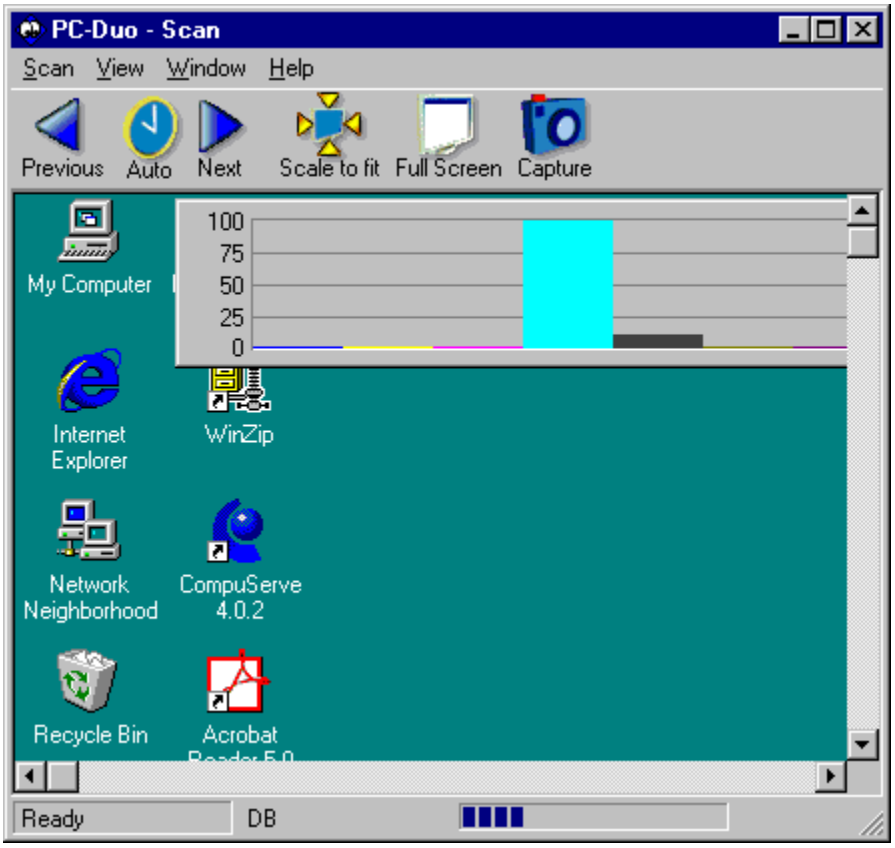


The Replay Control Panel is used to control the player. It is similar to the controls on a compact disk player or video recorder.

The Scan Window

Press [Scan] in the Tools Menu, Scan dialog to start scanning the Selected Clients.

For more information on a particular feature, click where a ➧ appears on the picture below.



The Scan Window is a special type of View Window that cycles through displaying each selected Client's screen for a predetermined period. You can use the Scan and View menu commands or the toolbar buttons to control the Scan operation.

See Also
Scanning Clients

The Task Schedule List

This is where the status of all of your scheduled jobs are displayed. For example:

Description	Script	Next Schedule	Last Ran	Result	Error
Lookup	c:\lookup.scp	Today at 11:45	June 1st 1...	Success	No Error
Upgrade all clients	c:\upgrade.scp	Today at 14:00	Disabled	Success	
Script with error	c:\error.scp	Today at 11:47	Waiting	Error	Unable to l...
Explore	c:\lookup.scp	Today at 11:45	June 1st 1...	Success	No Error

The coloured icon to the left of each task indicates the task's state.

Icon	Description
	This is the normal state. The script is ready to run, and no errors have been detected.
	The task has been postponed. This happens when two or more tasks are scheduled to run at exactly the same time. Tasks nearer to the top of the list will be executed first.
	This task has been disabled and will not be executed.
	This task is currently running.
	The small red icon is added to the other state icons to indicate the task generated an error for one reason or another. You will normally encounter this with the normal state icon, but it can also be added to the others.

You can use various accelerator keys in this window. Pressing the INS (Insert) key will take you to the create a new task dialog. Press the DEL (Delete) key to remove a task from the list. Press ALT+Enter to display the properties of the selected task.

Right-click in the Task List to open the Task List Popup Menu. This contains commands that are appropriate for the task selected. These commands are also available from the Main Menu and Toolbar.

The time for the Bridge to respond seems excessive

This message is displayed by Modem Diagnostics when establishing a link to a Remote Network through a Bridge . It indicates that performance over the dialup link may be slow.

Suggestions
Check that data compression is disabled in both Control and Client modems, that the PC-to-modem Baud rate is not too high, and that the modems are compatible. You may also find that dialling the link again resolves the problem.

See Also
Configuring your modem

The Script Editor Toolbar

The toolbar provides quick and easy access to many of the functions in the Script Editor.

For more information on a particular feature, click where a ➧ appears on the picture below.

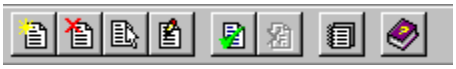
The functions of the buttons are as follows:

New	Creates a new empty Script file
Open	Opens an existing Script file
Save	Saves the current Script file
Cut	Removes the current selection and places it in the clipboard
Copy	Copies the current selection into the clipboard
Paste	Inserts the contents of the clipboard at the current position
Undo	Undoes the last edit operation
Run Script	Runs the current Script
Check Syntax	Checks the syntax of the current Script
Cancel Script	Stops the currently-executing Script
Print	Prints the current Script
Help	Opens the Help
Command Viewer	Hides or displays the Command Viewer on the left-hand side of the Script Editor window
Output Window	Hides or displays the output pane at the bottom of the Script Editor window
Find	Search the Script for a string
Find and Replace	Searches the Script for a string and replaces it with another
Properties	Display the properties of the current Script
No User Interaction	Prevents user interaction dialogs from appearing when a Script is running

The Script Agent Toolbar

The toolbar provides quick and easy access to many of the functions in the Script Agent. You can add, remove and edit the tasks, launch the Script Editor, and view the log files.

The toolbar looks like this:



The buttons read from left to right as follows:

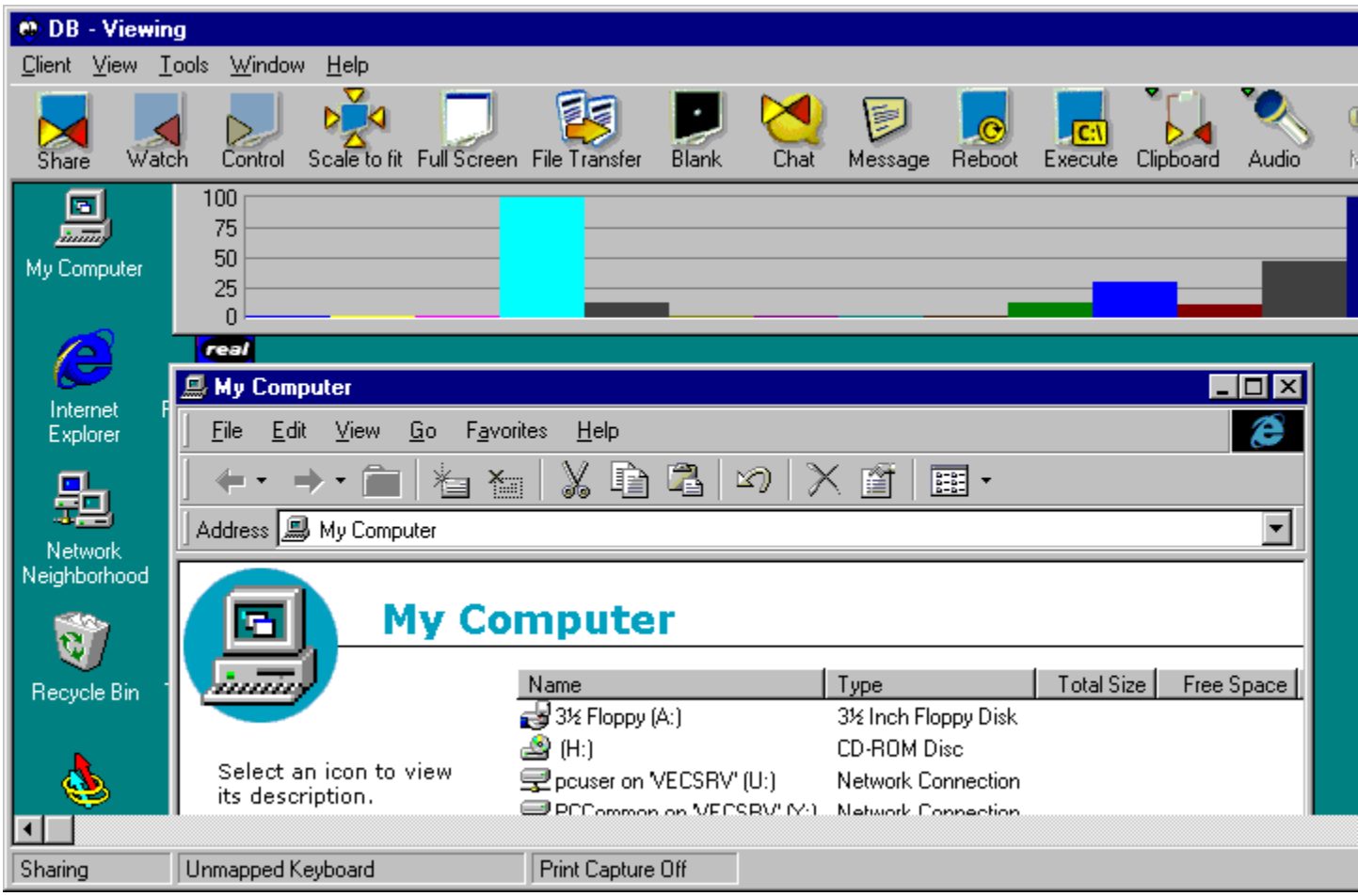
Create a new Task	Creates a new scheduled Task

Delete Task	Removes the selected Task from the Schedule List
Edit Task	Edits the properties of the selected task
Edit Script	Launches the Script Editor to edit the selected script
Execute Task	Executes the selected Task immediately
Cancel Task	Stops the execution of the current Task
View log file	Views the log file for the selected Task
Help File	Displays the Help File Contents

The View Window

Highlight a Client in the Control List View and press the View Client button (shown above) in the Control Main Window Toolbar to open a View Window in the default remote control access mode. This allows you to view the Client's screen.

For more information on a particular feature, click where a ➧ appears on the picture below.



You can have multiple View windows open and active on screen simultaneously: Each Client is displayed in its own View Window.

If you have enabled the Quick View Toolbar in the Control Main Window, and the Client is already Connected, just click on the Client's Quick View icon.

The Windows DLL Bridge

Purpose
The Windows DLL Bridge is the most generally used. It is loaded with a standard Windows Client to provide access to all workstations on the network. You use the Client Configurator to set-up the Bridge. Choose Configure, Client and check the Bridge Box.

The Windows DLL Bridge can also be used to provide access to Standalone Windows workstations.

The Windows DLL Bridge cannot be used on a Windows NT workstation. In this circumstance, you should use the Windows Standalone Bridge or NT's own built in Remote Access Service (RAS).

Command
WCLIENTW Clientname /U*pp [client parameters]* /BRIDGE COM*n* [Bridge parameters]

Example
WCLIENTW DAVE /UIP /BRIDGE COM2 /B19200 /Mhayes

Effect
This loads an IPX Client called Dave and initialises an IPX Bridge on COM2 running at 19200 baud, and using a Hayes or Hayes compatible modem.

A Control started with Remote Communications enabled will be able to dial in via COM2 and take control of the Client on this machine or any workstation on the same network that also has a Client loaded.

Use this option if
You wish to provide dial in access to this workstation or a Client on the same Network.

Notes

- Use the Client Configurator to configure the Bridge.
- The /BRIDGE option will initialise the Bridge as Windows starts. This will capture the Com port. If you wish to have the Bridge available but not loaded, then replace the /BRIDGE command with /NOBRIDGE. You can then start the Bridge at any time from the Client icon within Windows.

The Windows Standalone Bridge

Purpose
The Windows Standalone Bridge is used when you want access to the network through a Windows workstation but do not wish to have a Client on that workstation.

It also provides an alternative means of setting up an IPX or NetBIOS Bridge on an NT workstation. You can also use NT's own RAS facility instead.

Command
WSBRIDGE /U*pp* /BRIDGE COM*n* [Bridge parameters]

Example
WSBRIDGE /UIP /BRIDGE COM2 /B19200 /Mhayes

Effect
This loads an IPX Bridge on COM2 running at 19200 baud and using a Hayes compatible modem. A Control started with Remote Communications enabled will be able to dial in via COM2 and take control of workstation on the same network that also has a Client loaded.

Use this option if
You do not wish to run a Client on the Bridge machine, or the Bridge machine is running Windows NT and you do not wish to use RAS.

Notes
- Do not use the Standalone Bridge if you also wish to run a Client on the Bridge machine. Load the Bridge with the Windows Client instead.
- The Bridge supports one protocol at a time, either IPX or NetBIOS. It does not support TCP/IP.
- The Standalone Bridge is a 16-bit Windows program and cannot therefore be run as a service on NT.
- When running on Windows NT, the IPX Bridge cannot 'see' a Client running on the same machine. If possible, we recommend running RAS instead.

There are no printers installed on ‘*xxx*’ matching '*xxx*'

Meaning
In order to capture print output from the Client, the Client must have a printer driver installed that matches that requested by the Control.

For more details, see the Print Capture tab in the Settings dialog.

There are no Remote Networks set-up at the moment

You cannot dial a PC-Duo Bridge until you have created a Remote Network.

The Add a Remote Network dialog enables you to create a new Remote Network.

There is already a group called '*xxx*'. Please choose a different name

Meaning
You are trying to create a new Group that has the same name as an existing Group. You must supply a new Group name before you can continue.

Suggestions
Choose a different Group name, or delete the existing Group and try again.

There was no response from the Bridge!

Meaning
You dialled a Bridge but it did not respond. This may be because:

- The Remote machine is not switched on.
- The Bridge modem is not set to answer calls.
- The line was busy.

Suggestions
Try the connection two or three time to make sure that the Bridge machine is consistently unavailable. You will then need to contact someone responsible for the Bridge machine and ask him or her to check its configuration.

This displays the amount of time it took for your script to execute

This displays the way in which your script terminated

This license has not been activated. Run 'winst32 /a' to activate

Meaning
Under certain circumstances you must activate PC-Duo before you can use it. This is usually done at install time. If you copy a licence file manually without going through the activation process first you will get this error.

Suggestions
Reinstall PC-Duo or run "WINST32 /a" to activate the license (WINSTxx is located in the PCD32 installation directory).

This value indicates the number of client errors that occurred whilst your script was executing

This value indicates the number of fatal errors that your script generated

Time

See Also
Date

Description
Returns a the current time as a string

Syntax

```
Time
```

Notes
The time is returned in the format HH:MM:SS

Time and Date

This status line item displays the current time and date.

Transferring Files to a single Client

The Control contains a wide range of File transfer functions including the ability to:-

- Transfer Files to or from an individual Client.
- Transfer files between Clients.
- Transfer Files from a Control to multiple Clients simultaneously, (File Distribution)

This function transfers files to an individual Client.

Methods

- Open the Clients or Browse folder in the Tree View and highlight the required Client then
- Right Click on the Client and Choose File Transfer Or
- Choose Client, View from the Control Menu bar Or
- Click on the File Transfer icon in the Control tool Bar Or
- If you are viewing the Client choose Tools, File Transfer from Control View Menu or click on the File Transfer button in the View Toolbar.

The File Transfer Window to that Client will now be opened. From this window you can perform all of the file management functions.

You can simultaneously View the Client and Transfer Files.

Transferring Files to multiple Clients

PC-Duo contains a wide range of File Transfer functions, including:

- Transferring files to or from an individual Client.
- Transferring files between Clients.
- Transferring files from a Control to multiple Clients simultaneously (this is known as File Distribution).

This function transfers files to a predefined Group or an arbitrary selection of connected Clients.

To Distribute Files to a Predefined group of Clients:-

- Open the Group folder in the Tree View and highlight the required Group.
- Choose Group, File Distribution from the Control Menu bar.

To Distribute Files to an Arbitrary group of Clients:-

- Open the Clients, Browse or Connected folder in the Tree View.
- Connect the required Clients.
- Choose Tools, File Distribution from the Control menu bar.

The File Distribution window will open. From here, you can perform all of the File Distribution functions.

Transport *xxx* is not enabled; to enable it, select 'Configure' from the 'Network' menu

Meaning
The Client you are trying to connect to is using a transport that is not enabled in the Control.

Suggestions
- To enable the transport in the Control, select Configure from the Network Menu and check the various transports in the Settings for Configuration: Connectivity folder.
- Alternatively, reconfigure the Client and select a transport that is enabled in the Control. Then Browse for this Client to update the Control's stored information.

Trim

See Also
LTrim, RTrim

Description
Removes leading and trailing white space from the expression

Syntax

```
String = Trim (expression)
```

Notes
All space and tab characters are removed from the left and right hand sides of *expression*. *Expression* must be of string type.

Example

```
a = " Test String "
Print "Remove spaces from variable A [", Trim (a), "]"
```

UCase

See Also
LCase

Description
Converts a string to uppercase.

Syntax

```
Newstring = UCase (expression)
```

Notes
The return string contains the converted string. If *expression* is a variable, the contents of this variable are NOT altered.

Example

```
a = "test string"
Print "Variable A converted to uppercase becomes ", UCase (a)
a = UCase(a)
```

Unable to connect to Client *xxx*

Meaning
You have tried to connect to a Client and the specified Client name could not be found on the Network.

Suggestions
Confirm the name of the Client machine you are connecting to, or perform a Browse to find the machine on the network.

Unable to exchange 2KByte buffer with Bridge

Meaning
An attempt to send 2 Kbytes of data to the Bridge and receive the copy sent back failed. This test checks the reliability of the connection and failure indicates a modem or flow control problem.

Suggestions
- Check that hardware flow control is enabled in both modems.
- Check that the PC-to-modem cable is correct (you need a straight-through cable that includes the RTS and CTS lines).
- Check that the PC to modem baud rate is not set too high above the connection speed.
- Check that the modems are compatible (try another modem at one end or the other).

See Also
Configuring your modem

Unable to receive 2KByte buffer from Bridge

Meaning
An attempt to receive 2 Kbytes of data sent by the Bridge failed. This test checks the reliability of the connection and failure indicates a modem or flow control problem.

Suggestions
- Check that hardware flow control is enabled in both modems.
- Check that the PC-to-modem cable is correct (you need a straight-through cable that includes the RTS and CTS lines).
- Check that the PC to modem baud rate is not set too high above the connection speed.
- Check that the modems are compatible (try another modem at one end or the other).

See Also
Configuring your modem

Unable to send 2KByte buffer to Bridge

Meaning
An attempt to send 2K bytes of data to the Bridge failed. This test checks the reliability of the connection and failure indicates a modem or flow control problem.

Suggestions
- Check that hardware flow control is enabled in both modems.
- Check that the PC-to-modem cable is correct (you need a straight-through cable that includes the RTS and CTS lines).
- Check that the PC to modem baud rate is not set too high above the connection speed.
- Check that the modems are compatible (try another modem at one end or the other).

See Also
Configuring your modem

Uninstalling

It is best to deactivate the Client (using the "De-activate Client" shortcut in the PC-Duo program group) and reboot the system before running the uninstallation, as an active Client will lock system files. These locked files will require the system to be rebooted before Windows can delete them.

Having deactivated the Client, it can be reactivated using the "Activate Client" shortcut in the PC-Duo program group. On Windows NT, it is necessary to reboot after deactivating before the Client can be reactivated.

Run the "Uninstall PC-Duo".shortcut from the PC-Duo program group to uninstall PC-Duo. Windows 95 and Windows NT users can also select the PC-Duo option in Control Panel - Add/Remove Programs. The Uninstall program deletes the program files and the install directory, removes the program shortcuts, and deletes any Control Profiles from the Registry.

Unloading a Client

To unload the Client, do one of the following, depending on the platform:

Windows 95..ME

Browse to the PCD32 install directory and double-click on the program CLUNLOAD.EXE.

The Client can be restarted by the command:-

```
C:\PCD32\CLIENT32.EXE *
```

Windows NT

Open Control Panel, Services, highlight the Client32 service and press [Stop].
Or, open a Command Prompt and type:-

```
NET STOP CLIENT32
```

The Client can be restarted using Control Panel or by clicking on the Restart PC-Duo Client shortcut in the PC-Duo Program Group.

DOS

At the DOS Prompt, type:-

```
(IP|NB)CLIENT /U
```

The Client TSR may not be able to unload if another TSR has been loaded after it. Uninstall any other TSRs first.

Use Computer name for Client name

Purpose
Instead of entering a client name you can use this command to default the Client name to be the same as the Computer name. Use this option if you wish to autoname the Client.

Command
DOS: IPCLIENT or NBCLIENT *
WIN: WCLIENTW * U*pp*
OS/2: PMCLIENT * /U*pp*

Example
WCLIENTW * /Upp /R

Effect
When the Client initialises it will use the computer or machine name of the workstation it is loading on.

Note
- Use the Configurator to set this option.

User Functions

As with most programming languages, you can create function blocks within PC-Duo Scripting. This allows you to re-use blocks of code by calling a single function instead of repeating the code. For example, you might create a function to connect to a Client and log all of the available information about it. This could then be called by a higher level or Main function once for each of the Clients in a List, perhaps as returned by the Lookup () function.

When you decide to use Script functions, the following guidelines apply:

- You MUST create a Main function block
- All statements must be inside function blocks
- Any statements outside of a function block are ignored
- All variables and labels that are created inside a function block are available only to that function
- Function names must be unique
- Function declarations must be followed by open and close parenthesis, and optional arguments.

Function Syntax

```
Function Name (argument [as Type][, argument [as Type]...]) [as Type]
...
End Function
```

Functions should have unique names. They can take up to 10 arguments, which can have their *Types* specified. The Function return value *Type* can also be specified.

Creating a Function

To create a simple function, choose a name that identifies what the function does. Then, use the following format:

```
Function MyFunction ()
...
End Function
```

Replace the **...** with scripting commands as required.

If the function needs one or more arguments, create it like this:

```
Function MyFunction (argument1, argument2)
...
End Function
```

Argument variables are only available inside the function block, for example:

```
MyString = "Test"
MyNumber = 3

MyFunction (MyString, MyNumber)
```

Any changes to the variables within MyFunction do not affect the variables in the calling function.

Returning a Result

You can also have your function return a value by treating the function name like a variable. This allows you to return a result to the calling function. For example:

```
ReturnValue = MyFunction (10, 20)
```

```
...
Function MyFunction (argument1, argument2)
 MyFunction = argument1 * argument2
End Function
```

This example multiplies the two arguments together and returns a result by assigning it to "variable" MyFunction.

Declaring Function Variable Types

The arguments in the examples above do not have a specific *Type* when the functions are created. Similarly the Function return values do not have a defined *Type*. This means that you could potentially call the functions with string, list, or integer values for *argument1* and *argument2* and use the IsList, IsNumber, and IsString commands to decide which is which. In practice, this is likely to be confusing, so we recommend that you specify types for both Function arguments and results. For example:

```
Function MyFunction (argument1 as Integer, argument2 as Integer) as Integer
 MyFunction = argument1 * argument2
End Function
```

Now, this example requires Integer arguments and returns an Integer result. Argument typing allows a Function to be called with arguments that may not have a value, and hence an automatic Type, assigned to them.

Creating the Main function

If you use functions, then you must create a Function called Main before your Script will run. This serves as the Script's starting point. If you do not create this Function, you will receive Interpreter Error C0007. The Main Function does not require any arguments and should be created like this:

```
Function Main ()
...
End Function
```

This function block can be placed anywhere in the Script: It does not have to be the first Function. The Script starts executing the first command found within the Main function block.

Using Comments

You should always comment your Script, so that you or anyone else can see how it works. The Scripting language uses the C-style single line comment, which starts with two forward slashes //. These can be placed anywhere on a line in your script, and anything following the // will be interpreted as a comment.

The following example shows different uses of comments:

Example

```
// ASC.SCP - Function to convert a character into an integer
// Copyright (c) 2000, Vector Networks Limited
// All Rights Reserved
//
// Revision History:
//  5.3 31-Jul-00 DB  - Created.

//  There is no Scripting function to return the integer value of a
//  character. This makes (signed) comparisons impossible, and
//  hence strings cannot be sorted. The Asc () function makes up
//  for this by performing the conversion the hard way...

Function Asc (Character as String) as Integer
Dim Result as Integer

    Result = 0

    If IsString (Character) Then
        For x = 0 to 255
            If Chr (x) = Character then
                Result = x
                Exit For
            Endif
        Next
    Endif

    Asc = Result
End Function
```

Using Compression Efficiently

Compression can be configured to three different settings, on, off or always. See Settings . When compression is turned on screen data and file transfer operations are compressed, however if a file is transferred that is already stored compressed (such as a zipped file or certain graphic files) PC-Duo will stop trying to compress it further after 64 Kbytes. If Always Compress Files is turned on then the file is compressed no matter what its internal structure is, this can be useful for encrypting the file.

The compressing and decompressing of the information takes time. On a dial up link the overhead of compressing and decompressing is minimal compared to the transfer speed of the modems. However, on a local LAN, if either the Control and/or Client are low specification machines the time taken to compress, transfer the data and then decompress can be greater than just sending the information directly. In this case it is probably better to turn compression off.

You can use the Compression tab in the About box to determine if file and screen information is being compressed efficiently. Time copying files of known sizes to determine if compression is speeding up your connection to the Client.

Using the Security Features effectively

PC-Duo has a number of security features that can be used to restrict access to the Control and Client. Knowing how these work together and their limitations is useful when planning your security policy.

Firstly we recommend that if you want to restrict access to or protect a Client you do it at the Client, not at the Control.

There are a number of reasons for this. If the machine contains sensitive information that you want to protect it is likely that the machine will have some physical security measures (i.e. located in a locked room or restricted area) or it has some local security measures (i.e. runs NT using NTFS). It doesn't matter how good the Client's security is if people can just walk up to the machine and access the information.

If you just set the access restrictions at the Control, then a determined user will be able to get round this protection either by manually editing the Control's User Profiles or by installing a clean PC-Duo Control which, by default has no restrictions, and use that to access the Clients.

Within these limitations we recommend the following measures to secure a PC-Duo Client. They are ranked from most secure to least secure.

- Physically protect access to the machine.
- Use a secure operating system such as NT and use its security to protect the machine locally. i.e. use NTFS and user profiles for NT.
- Set a password for the Client.
- Set a security key at the Control and Client. This only allows Controls to connect to Clients with the same security key. You can use this for example to provide someone in a department with access to their departments machines only.
- Use the audit log/event log so you can determine who has connected.
- Disable features at the Client that you know you don't need. For example disable File Transfer if you know people don't need it or set Watch Only if you don't want people to manipulate the screen. See the Configurator for more information.
- For NT use 'Logoff On Disconnect' so that when a user connects to the Client they have to log into NT to gain access. When they then disconnect the machine will be logged out.
- Password protect the Controls.
- Set restrictions at the Control for accessing certain features like File Transfer, Viewing, Show etc.

See also
Administrators Guide

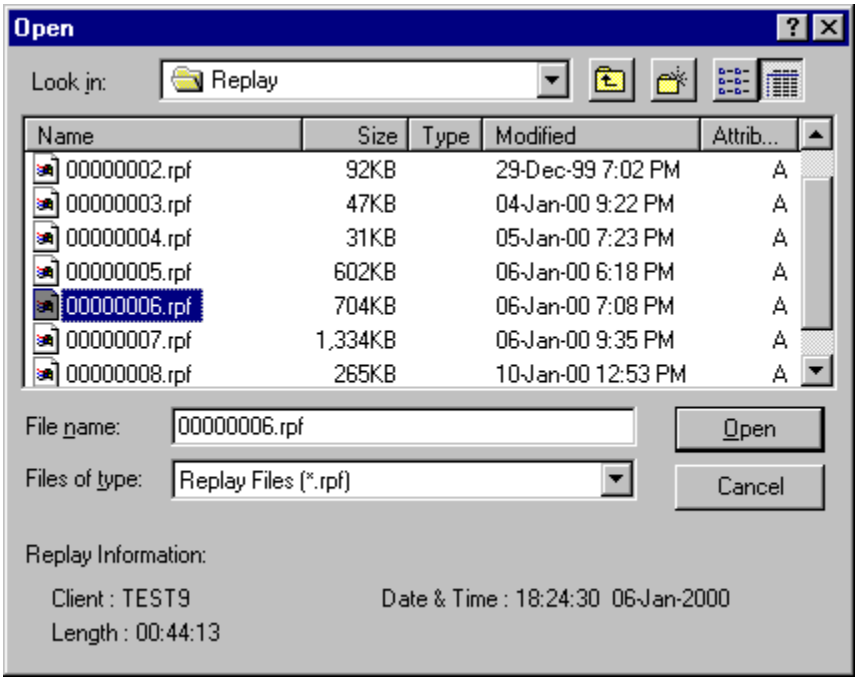
Using printer *xxx* for print capture on Client *xxx*

Meaning
This message reports the print driver in use at the Client when Print Capture is in effect. Captured data must be sent to this type of printer (or a model with compatible control codes) in order to print correctly.

For more details, see the Print Capture tab in the Settings dialog.

Tools Menu: Replay

Press the Replay button (shown above) on the Control Toolbar or select the Tools Menu, Replay command to display the Open Replay File dialog. This allows you to to select the appropriate Replay File.



Highlight a Replay File to display its attributes at the bottom of the dialog.

Press [Open] and the Replay Window will be displayed.

Notes
Both Client and Control can be configured to record remote control sessions for later replay.

Using the Client cache efficiently

PC-Duo can store areas of the Client screen in local memory, this way the Control can determine whether it needs to get the area from the Client (relatively slow) or from local memory (fast), this is commonly referred to as a cache.

The Client and Control use the same size cache, the size of the cache for the Client is set via the Configurator, the size of the Control cache is set in the View settings. The lower of the Control and Client values is used.

Use the Cache tab of the About box to determine how efficiently the cache is currently working. If the hit rate is low then not many items have been requested from the cache (or your remote control session has not been very intensive). You could save memory by reducing the size of the cache. If the hit rate is high then the cache is being used heavily, in this case you may like to increase the size of the cache to speed up the remote control session.

The cache on the Control is created for each Client when it is viewed, bear this in mind if you regularly view multiple Clients screens. If each Client has a 4 MB cache and you view 6 of them the Control will allocate 24 MB of memory. If the total size of all the caches exceeds you physical memory size then the operating system will start paging memory to disk, this will affect the performance of the cache.

If you have Clients with different cache sizes set, configure the Controls to be as big as the largest Client setting. That way the Control will always allocate the largest cache the Client can support.

See also
About Cache

Using Drag and Drop

The Scripting Editor provides a comprehensive drag and drop system for creating scripts quickly. From the Command Window, which is attached to the left-hand side of the environment, you can drag all the commands and identifiers that are available in the scripting language.

Versions of xxx and xxx do not match

Meaning
The version of the PC-Duo Bridge that you are attempting to connect to is too old. Update the software to the latest version and try again.

Script Editor: View Menu

The View Menu allows you to control the Script Editor's appearance.

Toolbar
This command allows you to control whether the Script Editor toolbar is displayed or not.

Status Line
This command allows you to control whether the Script Editor's Status line is displayed or not.

Command Viewer Type
The Command Viewer gives ready access to the commands, functions, structures, and variables that can be used in a Script. In Structured mode, the Script Editor displays the Command Viewer in a Tree View. This format groups commands, functions, etc. together in different branches, making it easier to find items of a particular type. In Flat mode, the commands, etc. are listed in alphabetical order. This makes it easier to find a specific item.

Output Window
Use this command to display or hide the Output Window. This is attached to the bottom of the Script Editor display.

Command Window
Use this command to display or hide the Command Window. This is attached to the left-hand side of the Script Editor display.

View Window: Client Menu

The Client Menu in the View Window is used to select the mode in which the Client will be Remote Controlled. It can also be used for suspending viewing the Client screen and closing the View session. The commands available from the View window's Client menu are as follows:

Share
The Clients screen will be displayed at both the Control and the Client. Both the users at the Control and the Client will be able to enter Keystrokes and mouse movements.

Watch
The Client's screen will be displayed at both the Control and the Client. Only the user at the Client will be able to enter keystrokes and mouse movements.

Control
The Client's screen will be displayed at both the Control and the Client. Only the user at the Control will be able to enter keystrokes and mouse movements. The user at the Client will be locked out.

Stop Viewing
Suspends the display of the Client screen at the Control.

Send Message
Displays a message on the Clients screen

Reboot / Logout
Reboots or in the case of NT Logout this Client.

Execute at Client
Displays a dialog box to enable you to execute an application at the client.

Send Ctrl+Alt+Delete
Send this keystroke combination to the Client.

Clipboard
This command allows you to copy the Clipboard contents between the Client and the Control. The Clipboard Popup Menu will appear, allowing you to choose which way to transfer the data.

Blank Screen
Select this command to blank the Client's screen. When blanked, a tick is shown next to the command on the menu.

Close
Closes the View Window for this Client.

View Window: Help Menu

This menu contains the following commands:-

View Window
This command opens the Help at the View Window topic.

About
This displays the Control's Help, About dialog.

View Window: Menu Bar

The available menus are:

Client
The Drop down Client Menu in the View Window is used for selecting the one to one functions to be applied to this Client.

View
The drop down View Menu is used to configure the display options for this particular Clients View Window.

Tools
Provides access to the File transfer and Chat Windows for this Client.

Window
This provides the same commands as in the Control Window Menu.

Help
This command provides access to the online help.

View Window: Tools Menu

The View Window Tools Menu used to start a File transfer session to the Client you are currently viewing or to open a Chat session with it.

File Transfer
Opens a File Transfer window to this Client. You can simultaneously view the Client and Transfer Files to it.

Chat
Opens a Chat window with this Client will be opened. You can simultaneously Chat and view the Client.

Annotate Screen
Starts the Annotate Tool. This allows you to highlight areas of interest on the screen.

Capture Screen
This allows you to save the screen contents to a file. The Save As dialog will open, allowing you to choose the name and location of the file. You can save the screen as a bitmap (.BMP), a Portable Network Graphic (.PNG), or a JPEG (.JPG) file.

View Window: View Menu

This menu is used to customise how the View Window is displayed.

Toolbar
Sets the display options for the View Window Toolbar.

Status bar
Hides or displays the Status bar at the bottom of the View Window.

Scale to fit
This scales the Client's screen so that it fills the View Window area.

Full Screen
Uses all of the available screen area on the Control to display the Client's screen.

Maximise View Area
Hides the View Window menu bar, status bar and toolbar. This makes the maximum possible area available to display the Client's screen without switching to Full Screen mode or using Scale to Fit.

Settings for Client
This allows you to change the View, Print Capture, and Audio settings for this View Window.

View Window: Window menu

Tiles open Client or File Transfer windows. You can then view multiple Clients or File Transfer sessions simultaneously. The individual windows will be sized to fit on the Screen of the Control. You can also use these commands to switch between individual windows or close all open windows.

Tile

All Windows	Displays and tiles both Client View and File Transfer Windows
View Windows	Displays and tiles only the Client View Windows
File Transfer	Displays and tiles only the active File Transfer Windows

Window

Choosing a named Window brings that Window to the fore. For example, choosing TEST1 - Viewing would make the View Window for Test1 the Active window and display it on top of all others.

View Window Client Settings

This command allows you to configure all settings relating to the View Window for the current Client.

Method

- Click on the Select button in the View window's Toolbar, **or** choose the View Settings for Client menu command.
- The View tab of the Settings for Client dialog will now be displayed. can now configure which options will be enabled when you start a View Session.

BIOS Keyboard
Checking this option causes the Control to emulate keystrokes on the Client, at the BIOS level rather than the Hardware level. Use this if an application at the Client does not appear to be correctly accepting keystrokes from the Control. Only use this option if you are experiencing problems with the default low-level Keyboard option.

Confirm Switch to Full Screen
When this box is checked, you will be prompted to confirm switching to full screen mode.

Full Screen
Checking this options will force the Control to view a Client in full screen mode rather than a windowed mode.

Scale to Fit
Check this option if you want the contents of the view window to be shrunk to fit the sizeable frame.

Scroll bars
You can turn off scroll bars on the view windows by checking this option. This is useful when using Auto Scroll, as you gain a little extra workspace.

Use Compression
Check this box to enable compression when viewing a Client's screen. This state of this checkbox is also reflected in the General tab of this property dialog.

Wallpaper
Check this box if you want the Client's wallpaper to be visible when viewing. Normally this is turned off to improve performance, so expect the screen update speed to be impacted by selecting this option.

Hotkeys
When you are viewing a Client in Full Screen mode, Hotkeys provide a way of returning to the possibly hidden user interface. If the screen resolution at the Client is smaller than the resolution of the Control, you can simply click your mouse button outside the view window to stop viewing and display the view window again. Check the boxes in this group to determine the keys that are used as Hotkeys.

Keyboard Layout
Select a keyboard layout from the list provided to be used at the Control during viewing. These layouts map keys on the Control to keys on the Client machine. If both Client and Control are using the same keyboard layout, you should select **Unmapped Keyboard** from the list. You can edit CONTROL.KBD to add your own keyboard layout if none of the ones provided work in your situation.

Auto Scroll Speed
When you are viewing a Client's screen, the Control can automatically scroll the contents when the mouse moves close to the edges of the window. Adjusting the sliding control sets the speed at which the view scrolls, from not at all to very fast.

Scroll Delay
When Auto Scroll is enabled, you can change the delay before the scroll is activated. If you want the view to scroll as soon as the mouse is at an edge of the screen, move the slider towards **Min**. If you prefer a longer delay before the Auto Scroll takes effect, move the slider towards **Max**.

Mouse Delay
Adjusting the mouse delay allows you to reduce the rate at which mouse updates are sent from the Control to the Client when controlling or sharing. Move the slider control towards **Infinite** to reduce the rate and conserve bandwidth, or towards **Min** for the best mouse response. This is useful on dial-up or very slow networks.

Default Mode
When you view a client by default you start viewing in Share Mode. If you prefer to start viewing in a different way, change the style from the list provided.

Cache Size
The Control contains a cache to help improve overall performance. The cache sizes range from 1 MB to 16 MB and a separate cache is allocated to each Client connection. If you are running applications on the Client that uses lots of or large bitmaps increase the cache size to improve the performance.

Max Colour Depth
When you connect to a Client, you can restrict the colour depth that is sent. This is done to reduce the amount of traffic between Client and Control. Reduce the Colour Depth to **16 colours** if you are using applications that do not rely on anything other than the standard 16-colour palette.

Change DOS Font
Use this dialog to select the font to use when displaying DOS screens. This will be either from DOS Clients or from a Windows Client Full Screen DOS Box.

Change Japanese Font
Use this dialog to select the font to use when displaying Japanese DOS screens.

Viewing a Client

Purpose

Displays the View Window for the Selected Client and enables you to remote Control it or undertake other one-to-one functions.

Method

Open the Clients or Browse folder in the Tree View and highlight the required Client, then:

- Right-click on the Client and choose the View command from the shortcut menu. **Or:**
- Choose the Client, View menu command. **Or:**
- If the Client is already connected, click on its button in the Quick View bar.

The View Window for that Client will now appear with its screen displayed.

Viewing a Client Full Screen

The View Full screen feature removes all Toolbars and maximises the View window. What you then see on your screen should exactly match the remote PC.

Method

- Choose the View, Full screen menu command from the View window, **or:**
- Click on the Full Screen icon on the View window Toolbar.

By default, the Control program will provide you with a floating Toolbar whilst in Full Screen mode.

You are warned at this time which keystrokes must be entered when you are without the floating Toolbar, so that you can return to the menu once in Full Screen mode.

Viewing more than one Client simultaneously

The new 32-bit Control can View more than one Client's screen at a time. There are two ways of doing this.

Use the Scan feature to cycle through the various Client screens. Useful if you want to keep an eye on a large number of Clients.

Alternatively, if you tile multiple View windows on your desktop. This method is suitable if you only wish to view a small number of Clients simultaneously. To tile multiple View windows, choose the Window, Tile, View Windows menu command.

With the Scale to Fit feature turned on, you will be able to monitor all the Clients simultaneously. To see more of the Client’s screen you can choose the View, Maximise View Area menu command. This removes the menu, toolbar and status bar. To turn this option off, click on the icon to the left of the window's title bar, then choose the View, Restore View menu command.

Warning: *xxx* is too long to display it all

Meaning
The file you are trying to view is too long to be displayed. The Control's Edit File dialog can handle a maximum of 30k bytes.

Suggestions
Transfer the file to a working directory the Control machine and view it with Notepad or WordPad.

What is PC-Duo

PC-Duo is a fully featured Remote Control package that provides a wide range of access to workstations on both local and remote networks as well as to standalone i.e. non-networked machines.

Support is available for all versions of Windows 95, Windows 98, Windows Me, Windows NT, Windows 2000, Windows XP, DOS and OS/2. A PC-Duo Control running on any platform (except DOS) can take over a Client running on any other platform.

There are five components that make up the product. These are:

- The Control Programs
- The Client Programs
- The Gateway
- The Communications Programs
- The Utility Programs

All components, in Windows , OS/2 and DOS format, are included with the standard package.

The main functions are:

Remote Control
Watch, Share or Control the screen and keyboard of a Client PC.

Message
Send a message to one or more Clients.

Chat
Conduct two way chat sessions between a Control and Client.

File Transfer
Transfer and manipulate files between a Control and Client.

File Distribution
Transfer files to multiple Clients simultaneously.

Remote Communications
Take control of workstations via dial up, ISDN or direct serial link.

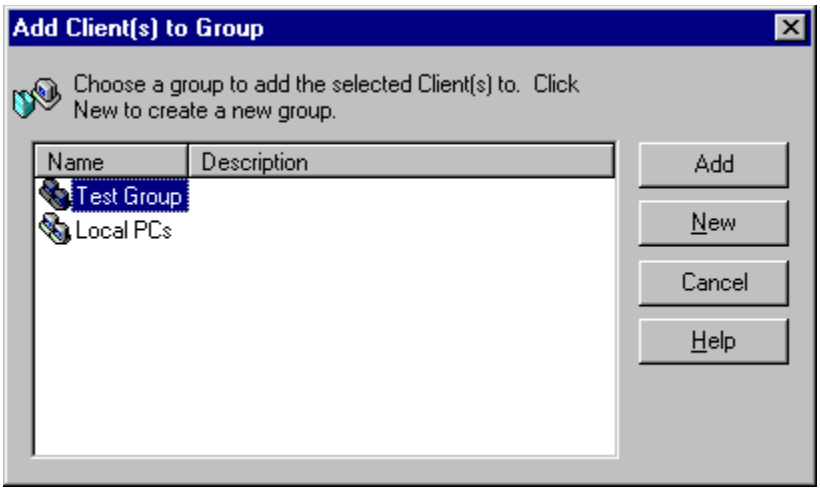
Show
Display the Control's screen on a Client or multiple Clients.

PC-Duo also includes a wide range of Security, configuration and automation options.

See Also
Features

Add Clients to Group

Select one or more Clients in the Control List View and choose the Client Menu, Add to Group command to display this dialog. You can create a new Group or add the Clients to an existing group.



Group list
This displays the Client groups that have already been created. Select one of these to add the currently selected Clients to.

Add
Press this button to add the currently selected Clients to the selected Client group.

The PC-Duo Bridge requires a password

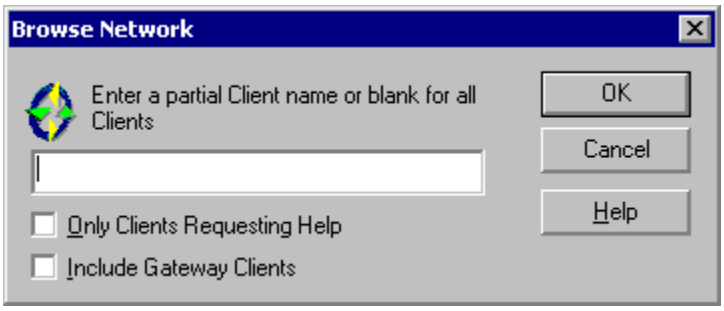
The Bridge that you are dialling at the Remote Network has been configured to ask for a password. You must enter either the Bridge password or a password from the Dialback list if one has been created.

See Also
Dialling a Remote Network

Browse Network

When you Browse the Network, all the Available Clients that are found on your network will be added to the Browse folder in the Control List View. Only Clients that are using the transports you have configured in the Control will be detected. Once a list of Clients has been generated you can then begin working with them.

For more information on a particular feature, click where a ➧ appears on the picture below.



Click on [OK] or press Enter to display all Available Clients, or type the first few characters to Browse for a particular subset of Client names. For example typing "Ni" will display available Clients named "Nick", "Nigel", "Nikki" etc.

You can look specifically for any Clients that are requesting Help by selecting that checkbox.

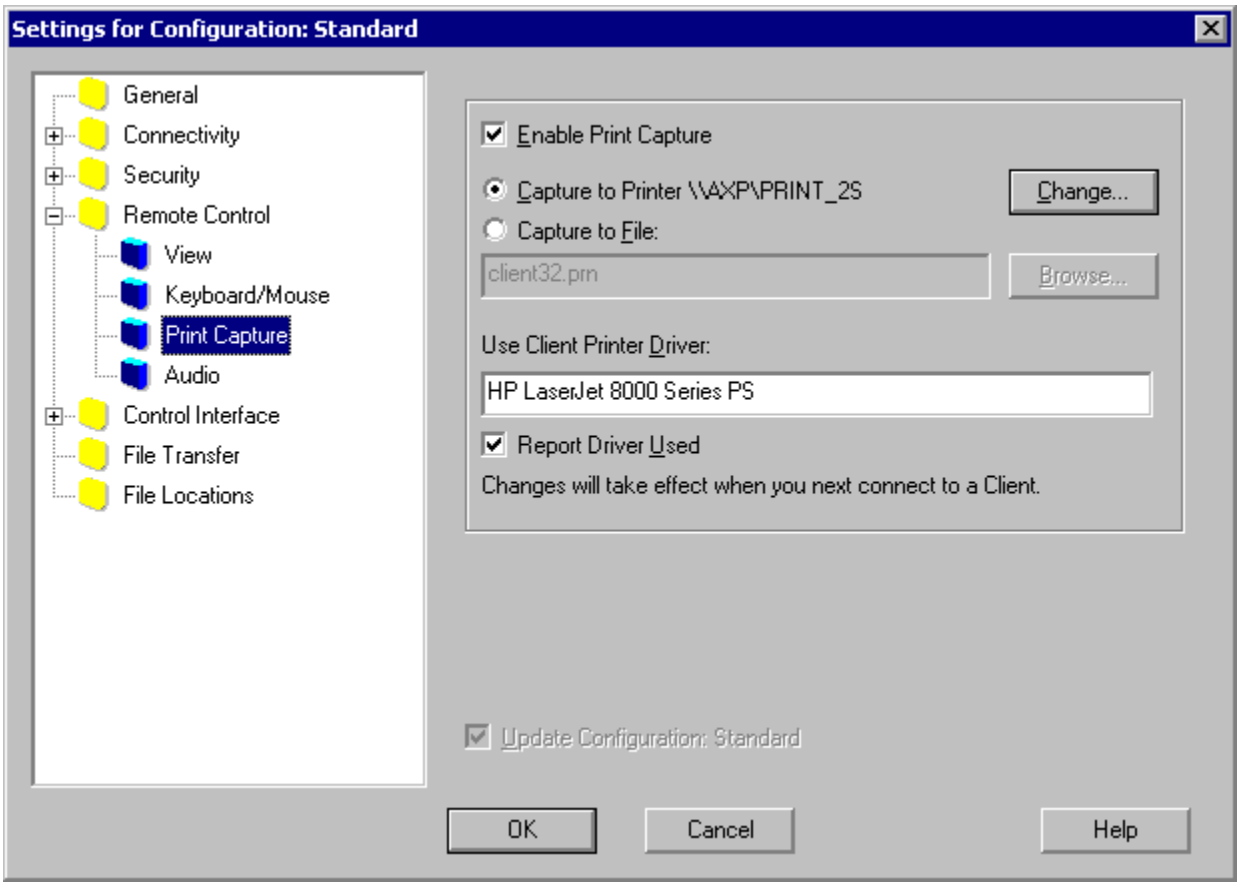
The Control transmits a Lookup message on all of the network transports specified in the current Control Profile. Any Available Clients receiving this message respond with their name, network address and transport. These Clients are added to the Browse Folder in the Control Tree View and their details are displayed in the List View. You can then Connect and work with these Clients directly or organise them into groups for later use.

When you connect to a Client, its details are automatically stored in the Clients folder in the Tree View. These Clients are 'Known Clients' and you can subsequently connect to them without having to Browse the Network.

Settings for Configuration: Print Capture

This page configures the Control to capture the Client's print output for printing at the Control. It can be displayed from the Control's View Menu, Settings for Current Configuration, the Tools Menu, Configurations command, and the View window, View Menu, Settings command. The latter is the most useful when you are actually viewing a Client.

For more information on a particular feature, click where a ‣ appears on the picture below.



Print Capture redirects printer output from a local printer at the Client to a printer or file at the Control. You use this when running an application on a Client but want any printed output to be redirected to a printer that is close to you.

Notes

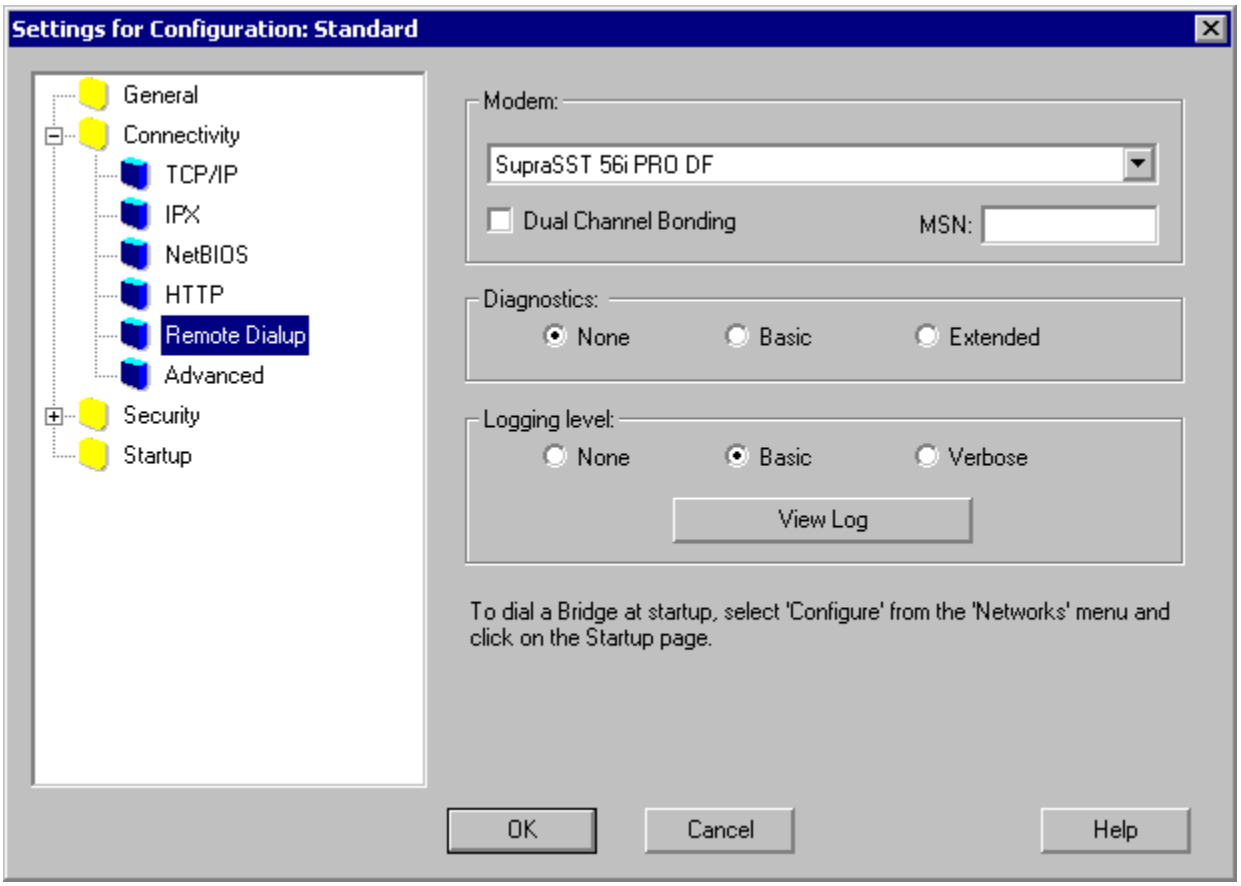
- Print output from Windows programs is captured only from the port to which the default printer is attached. Note that the Client may change this when Print Capture is enabled, as described above.
- The Windows Client captures print output from DOS programs from all LPT ports (LPT1, LPT2 and LPT3).
- The Windows NT Client captures print output from DOS programs from the port to which the default printer is attached.
- If you experience problems with the Windows Client, try:
- Disable 'fast printing direct to port' at the Client
- Removing any connection to a network printer at the Client.
- Print to port LPT1.DOS at the Client
- Change the printing priority at the Client to Low in Print Manager, Options, Background printing.
- To capture printed output from DOS programs running under Windows 95, open Printers,

Settings, <Your printer>, Properties, Details, Port Settings and ensure that Spool MS-DOS print jobs is *not* checked.

Settings for Configuration: Remote Dialup

This page configures the dialup settings for the Remote Networks used by this Control Profile. Before you can dial a remote network, you must enter information about your modem.

For more information on a particular feature, click where a ▸ appears on the picture below.

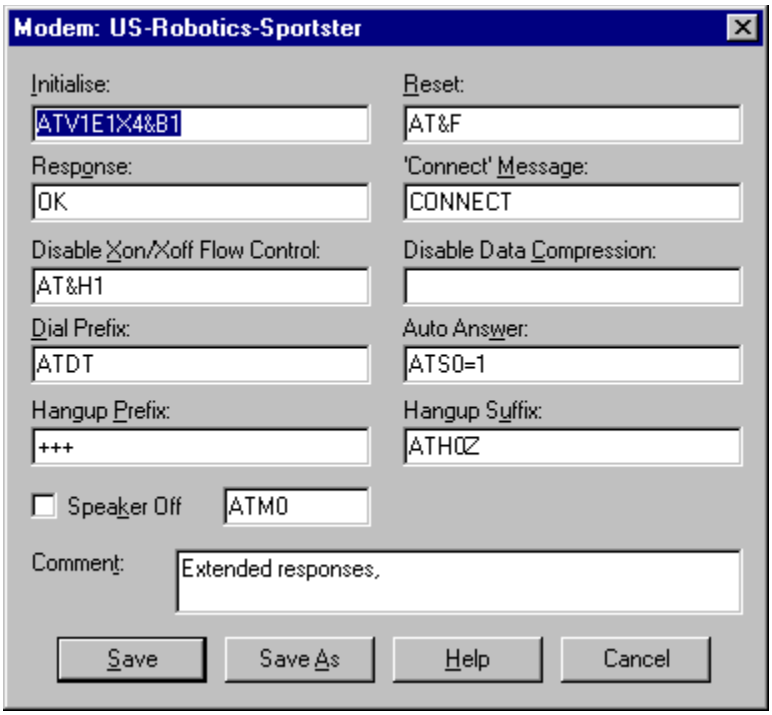


Additional modem settings can be configured using Start, Settings, Control Panel, Modems.

Edit Modem Configuration

If your modem is not already supported, or it does not appear to be working correctly, check the modem programming commands in your modem manual. You may need to change the commands that are sent to the modem.

For more information on a particular feature, click where a ‣ appears on the picture below.



This example shows the commands used for a US-Robotics modem.

Notes:

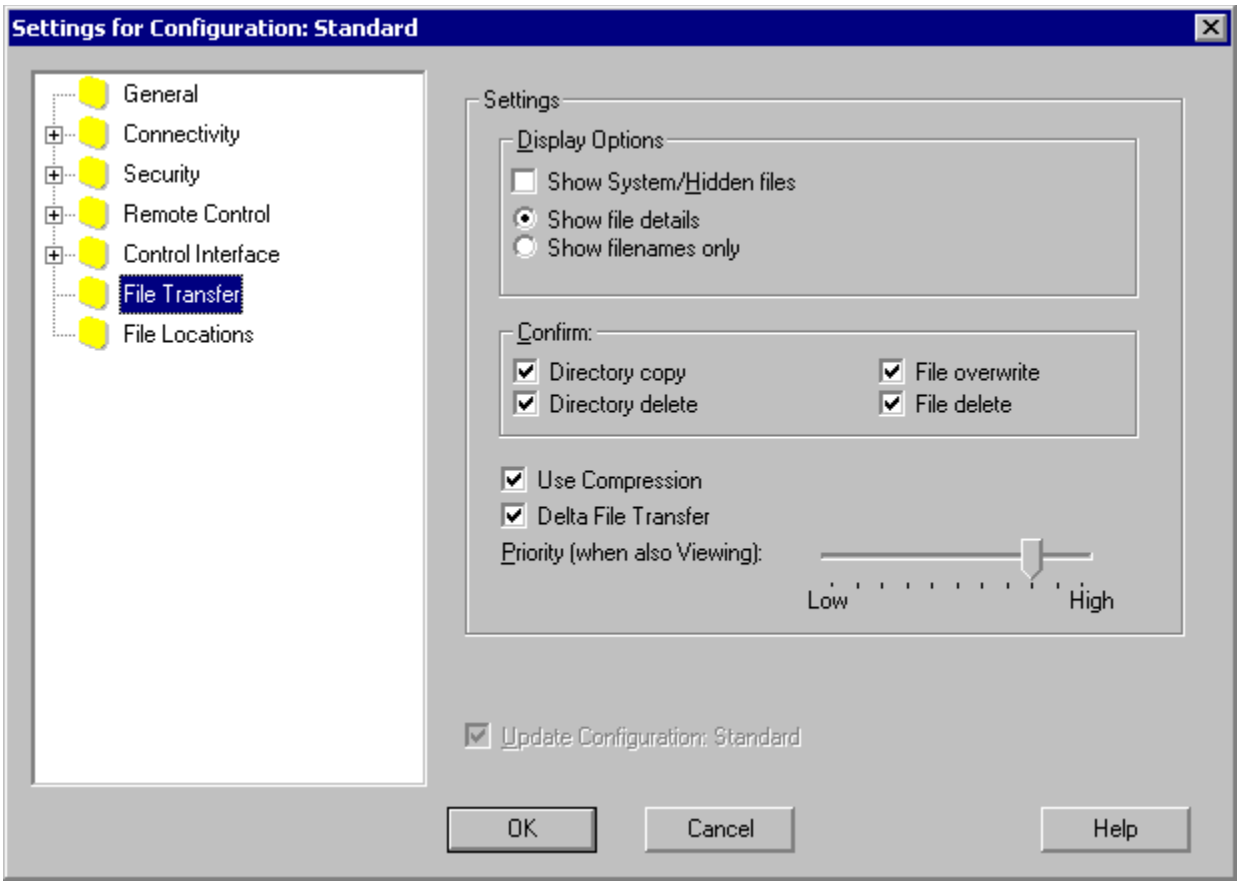
The only values that *must* be provided are: Reset; Response; 'Connect' Message; Hangup Prefix; and Hangup Suffix.
Auto Answer is required when the modem will be used by a Bridge or by a Control with Dialback.
If the Control is already using compression, modem data compression may reduce performance.
You can use the 'Connect' message field to limit your connection to pre-defined connection types, for example to "CONNECT 9600".

See Also
The terminal window

Settings for Configuration: File Transfer

This page configures the Control's File Transfer and File Manager settings. You can alter the way in which file information is displayed, and set safety features such as confirmation before performing a damaging operation such as deleting a file.

For more information on a particular feature, click where a ➧ appears on the picture below.

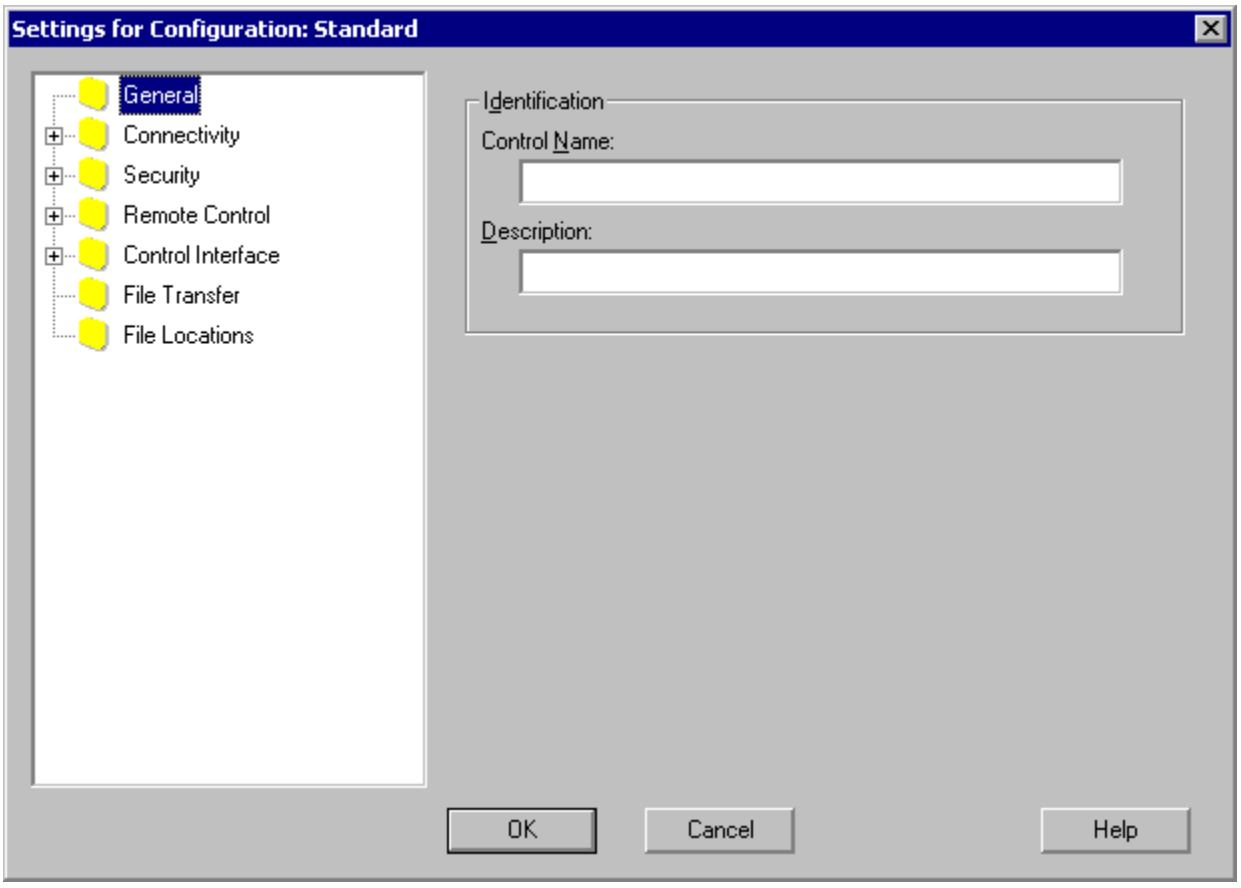


You can also configure File Transfer for the current Client through the Settings command on the File Transfer window's View Menu.

Settings for Configuration: General

Press the Settings button (shown above) on the Control Toolbar, or click on [Settings] in the Configurations dialog to change the Control Profile. The General page is also accessible from the [Connectivity and Startup Settings] button. It allows you to specify the Control's name and give this Control Profile a description.

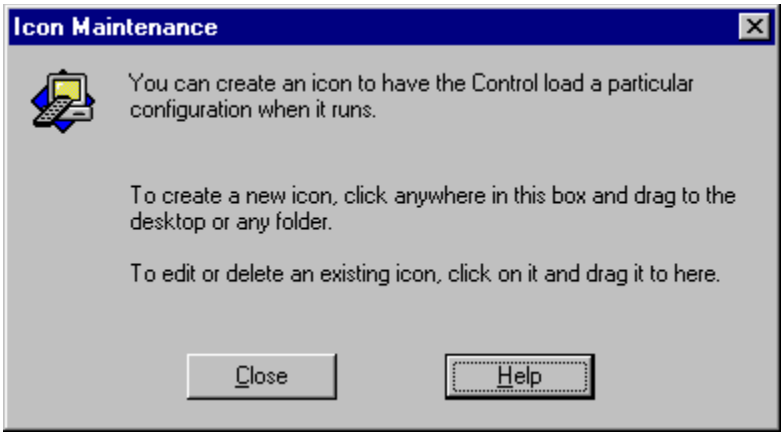
For more information on a particular feature, click where a ▸ appears on the picture below.



Enter any new values for the various fields on this and the other pages and click [OK] to store them in the selected Profile.

Icon Maintenance

Press the [Icons] button on the Configurations or Settings for Configuration: Startup dialogs to create a shortcut on your desktop that starts the Control with a specific Profile.



This allows you to create shortcuts that perform actions automatically when the Control starts up. For example, the Control can connect to a Client and start viewing.

To create an icon, click and hold the left mouse button anywhere other than on a button and drag the mouse to your desktop or a folder. The mouse pointer will change depending on its location. If the mouse is over a window that does not accept drag and drop files, the pointer will change to a No Entry sign. When you have chosen a location, release the mouse button.

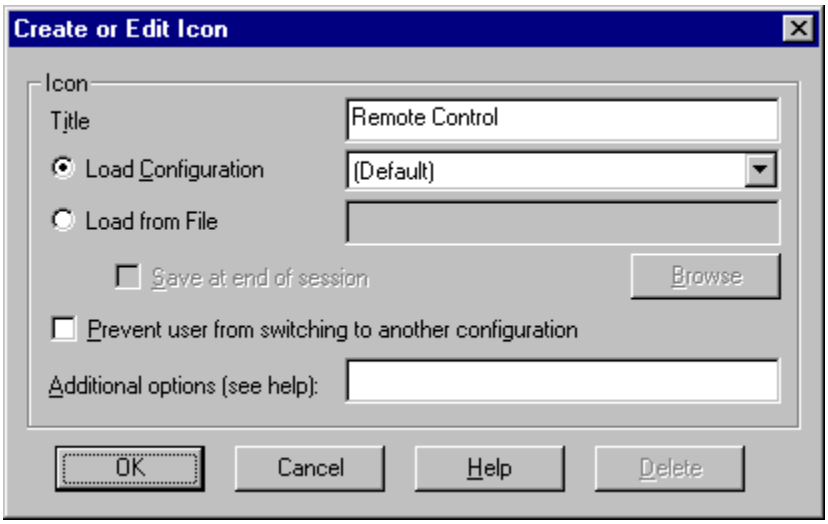
To delete or edit an existing shortcut, click on the icon and drag it and drop it in this dialog.

The Create or Edit Icon dialog will appear.

Create or Edit Icon

Drag and Drop to or from the Control Icon Maintenance dialog to create, delete, or edit a shortcut for the Control program.

For more information on a particular feature, click where a ➧ appears on the picture below.



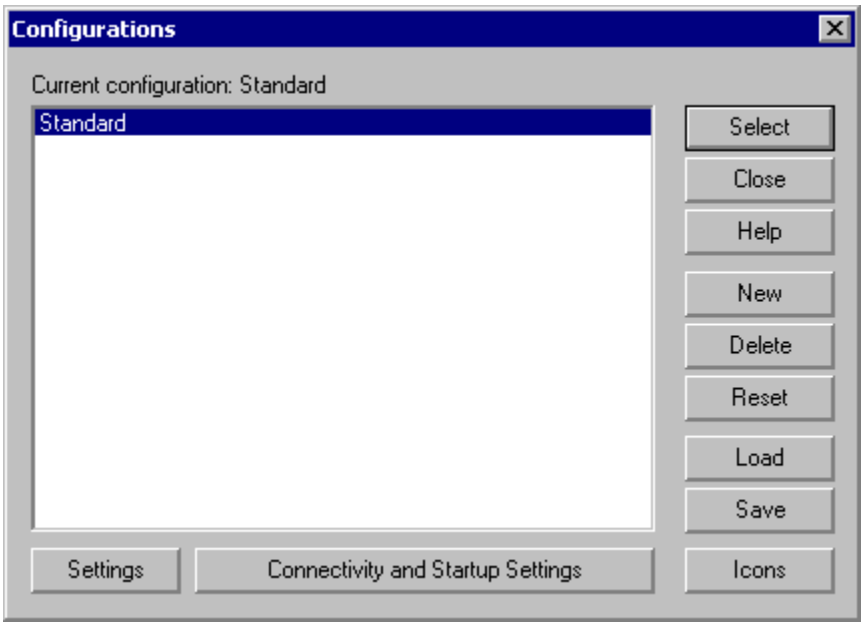
This dialog allows you to configure the shortcut so that the Control will perform certain actions when it is started using this icon.

Configurations

Each Control Profile contains settings such as Remote Networks for different sites, or limited privileges for certain users, so the Control's features can be restricted according to the Profile selected. You can create additional Profiles which have different access and functionality levels for different Control users.

Press the Configurations toolbar button (shown above), or choose the Tools Menu, Configurations command to create a new Control Profile or modify an existing Profile.

For more information on a particular feature, click where a ➧ appears on the picture below.



The current Profile is highlighted in the list and its name is displayed at the top of the dialog.

To change to a different Profile, double-click on the new Profile name or click once on the name and press [Select]. The Control will disconnect from any Clients or Remote Networks before re-initialising. You will be prompted to confirm before this happens.

Click [New] to create a new Profile

First highlight a Profile in the list. Press [Delete] to delete it, or [Reset] to return it to default settings, losing any changes that you have made. Press [Settings] to modify it, or [Save] to save the Profile to a file. You can also load a Profile from a file by pressing [Load].

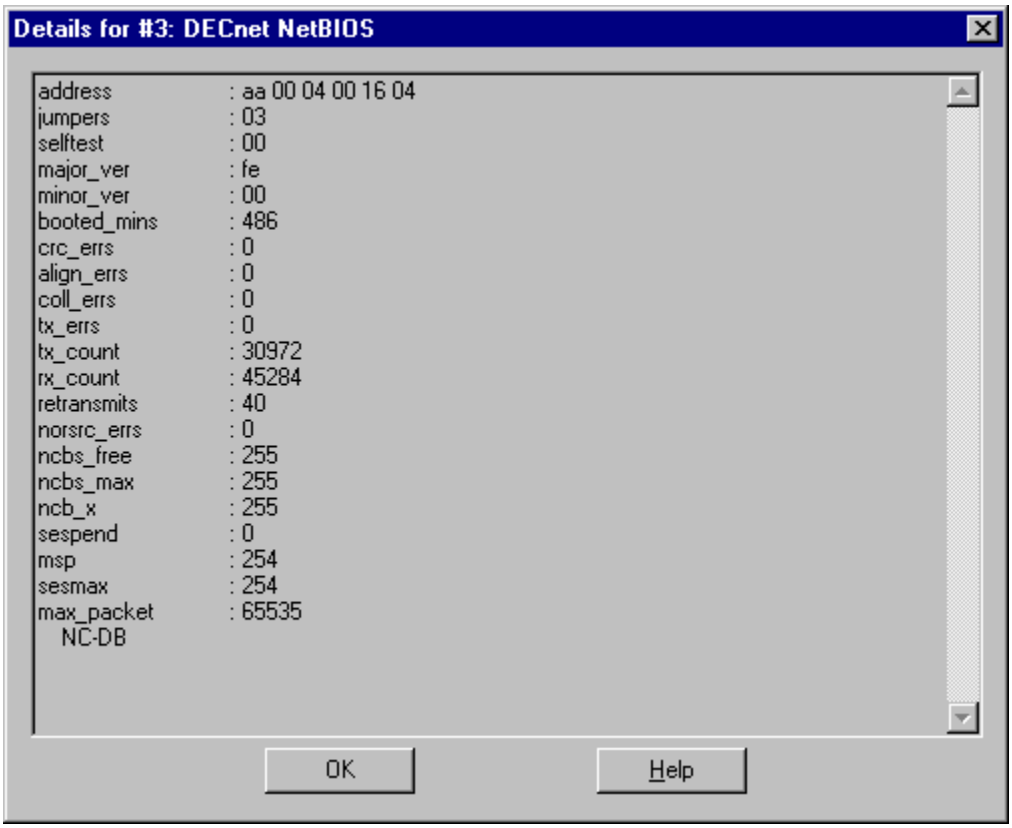
You cannot delete the current Profile, and you can't give yourself permissions that you did not have when you started the Control.

Click [Icons] to create a desktop shortcut that will run a Control with this profile.

Details for NetBIOS Adapter

Press [Details] in the Test NetBIOS Drivers dialog to display detailed status information for the selected NetBIOS Adapter.

For more information on a particular feature, click where a ➧ appears on the picture below.



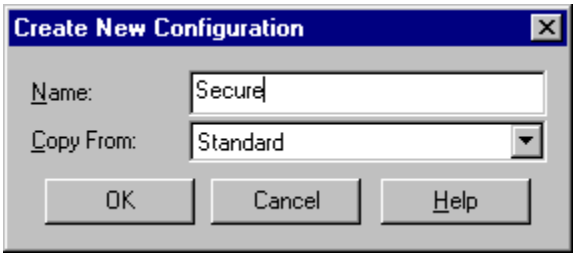
This dialog displays Adapter Status information for the selected NetBIOS Adapter.

The Adapter number and protocol are displayed at the top of the window.

Create New Configuration

Click on [New] in the Configurations dialog to create a new Control Profile.

For more information on a particular feature, click where a ➧ appears on the picture below.



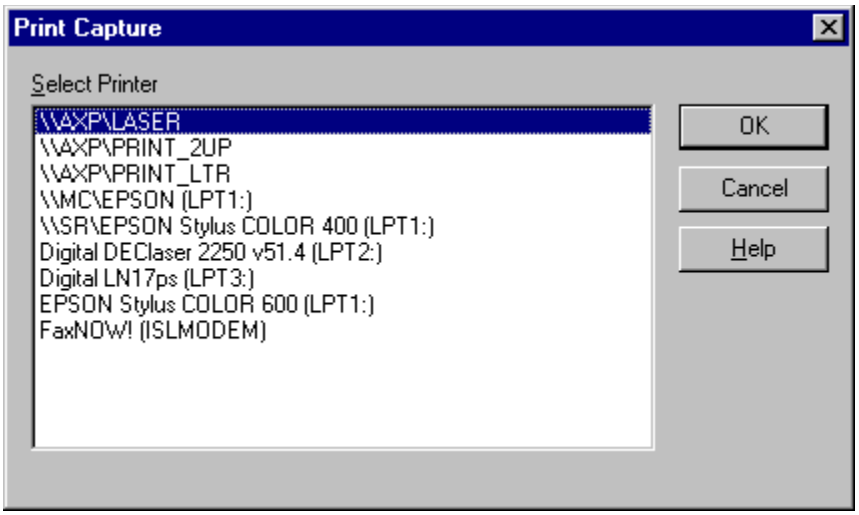
Enter the name for the new Profile. The name is not case sensitive and must be unique.

You can base the new Profile on an existing one by making a selection in the Copy From list. Alternatively, you can create a new Profile with default settings by selecting (None).

The new Profile will be added to the Configurations List. You can change its settings from there.

Print Capture

Press the Print Output [Change] button in the Settings for Configuration: Print Capture dialog to list the printer drivers configured on the Control PC.



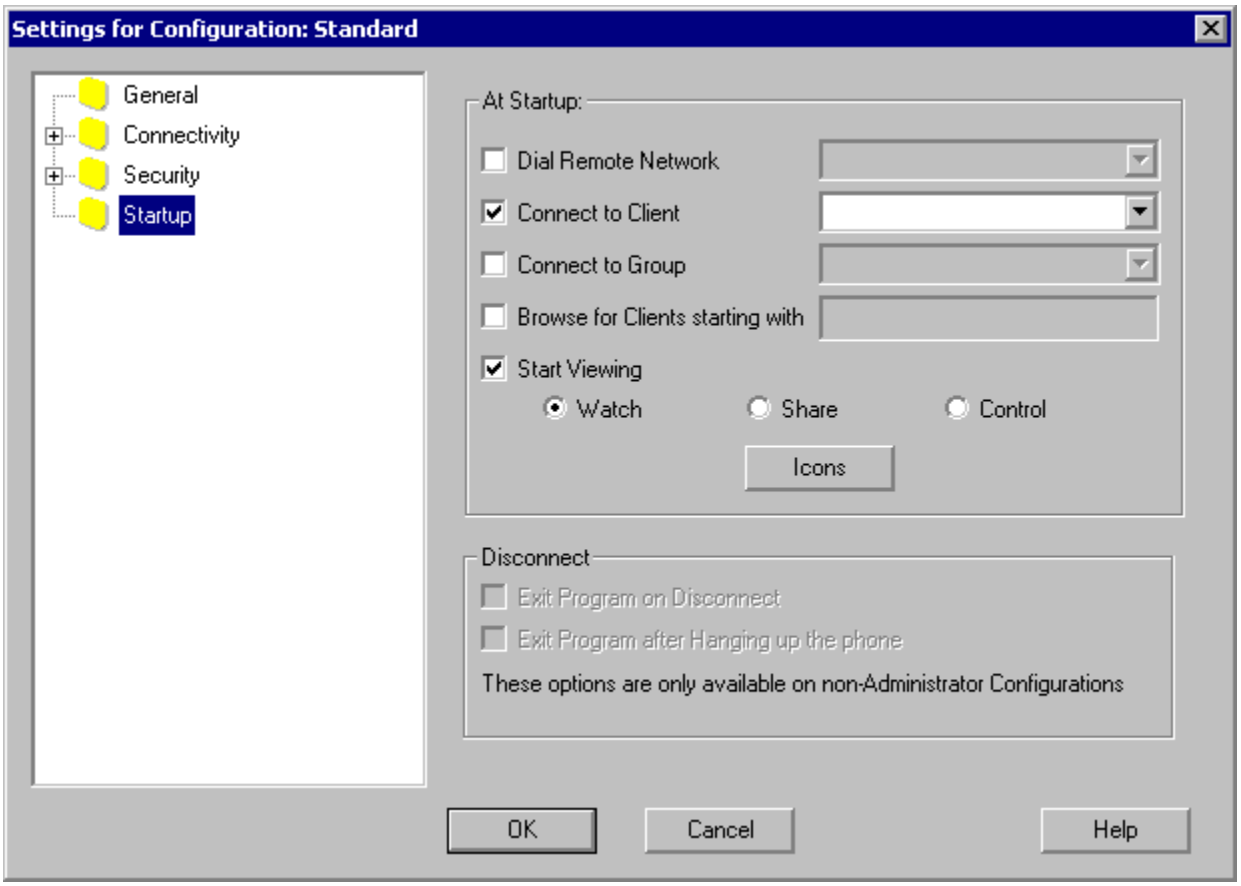
This list displays the local and network printers that are configured on the Control PC. For local printers, the port is shown in parentheses after the printer name. For example, "Digital LN17ps (LPT3:)" is attached to the third printer port on the Control.

Select the printer to be used when capturing print output from a Client and press [OK].

Settings for Configuration: Startup

Highlight a Control Profile in the Configurations dialog and press [Connectivity and Startup Settings]. This page allows you to view or change the settings that affect how the Control program starts up.

For more information on a particular feature, click where a ➧ appears on the picture below.



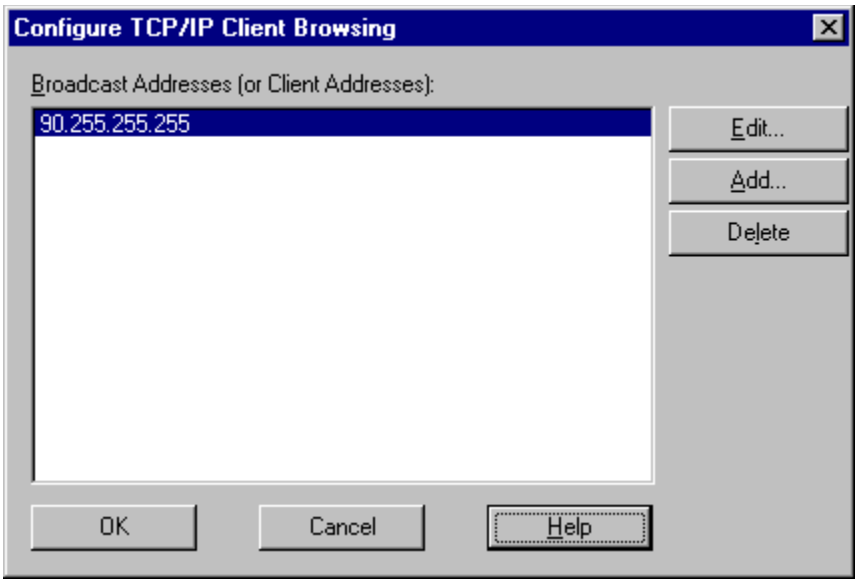
These options enable you to perform a repetitive task that you would normally do every time you start the Control with this Profile. For example, the Control can be configured to dial a Remote Network, connect to a Client or Group, or even Browse the Network.

See also:
Some of these features can also be performed using the Control's Command Line Syntax.

Configure TCP/IP Client Browsing

On TCP/IP, the PC-Duo Control uses the default broadcast address for its subnet when it is Browsing for Clients. If you have a TCP/IP network with multiple subnets or address ranges, then you may need to configure a Broadcast Address for each network.

For more information on a particular feature, click where a ➧ appears on the picture below.



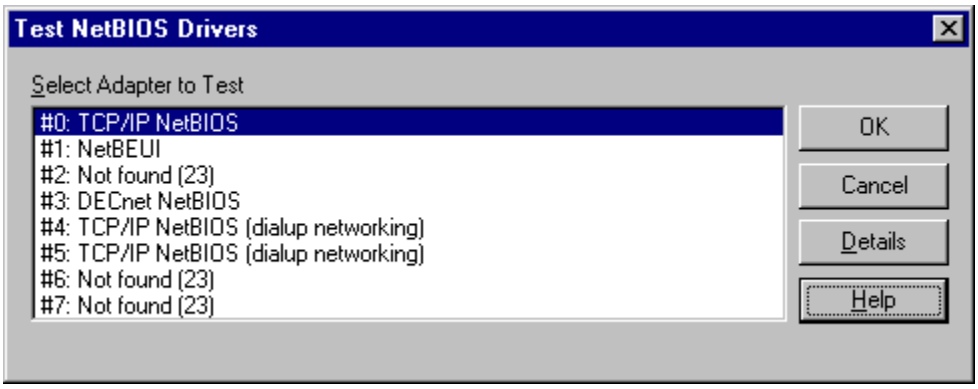
This list supersedes the Control's default broadcast address. Once you have defined an entry here, broadcast messages will be sent *to these addresses only*.

Press [Add] to add a new address, or highlight an existing address and press [Edit] to edit it or [Delete] to delete it.

Test NetBIOS Drivers

Press the [Test] button in the NetBIOS page in the Control's Settings for Configuration: Connectivity or the Configurator's CLIENT32.INI: Connectivity folders to list the available NetBIOS transports.

For more information on a particular feature, click where a ➧ appears on the picture below.



This dialog displays all of the NetBIOS Adapters that have been detected on this PC.

Test an individual NetBIOS Adapter by selecting it from the list and pressing [OK].

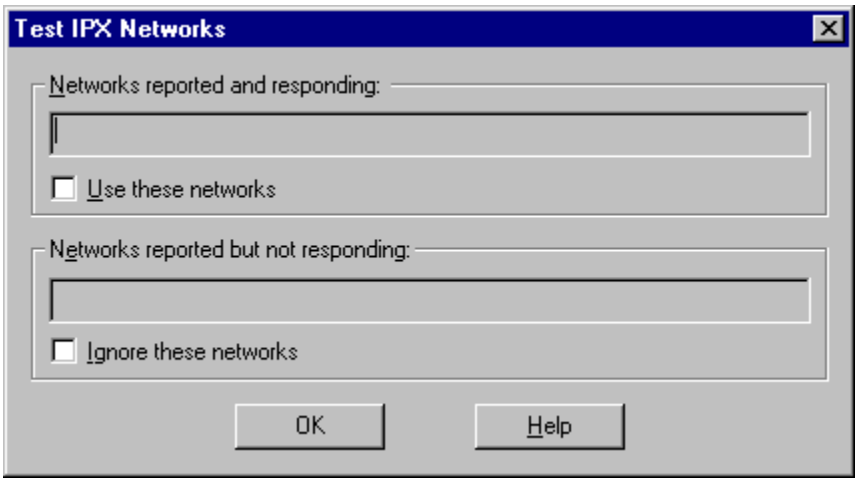
Highlight an Adapter and click [Details] to display additional information from the Adapter.

Click Cancel to return to the previous dialog.

Test IPX Networks

Press the [Test] button in the IPX page of the Control's Settings for Configuration: Connectivity or the Configurator's CLIENT32.INI: Connectivity folder to list the accessible IPX networks.

For more information on a particular feature, click where a ➧ appears on the picture below.



Any networks that appear in the "Networks reported and responding" list are safe for the Control to use.

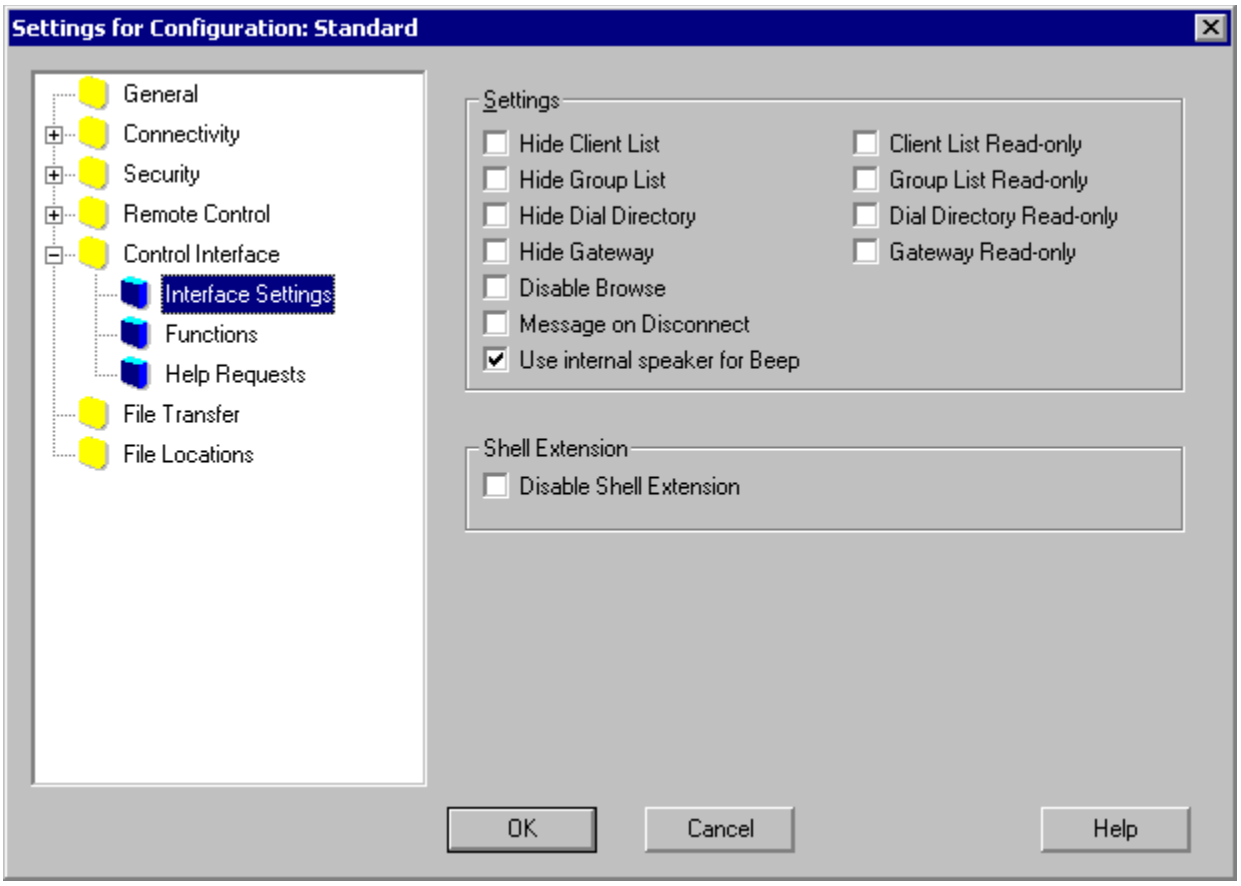
Some IPX networks may not respond. These appear in the "Networks reported but not responding" list, and may not be not safe to use. If they are not ignored, they can cause delays when the Control is browsing for IPX Clients.

See Also
Testing NetBIOS Networks

Settings for Configuration: Control Interface

The Control Interface folder contains configuration settings that affect how the Control program appears when this Control Profile is used. This page allows you to prevent non-privileged users from changing the stored Client information.

For more information on a particular feature, click where a ▸ appears on the picture below.

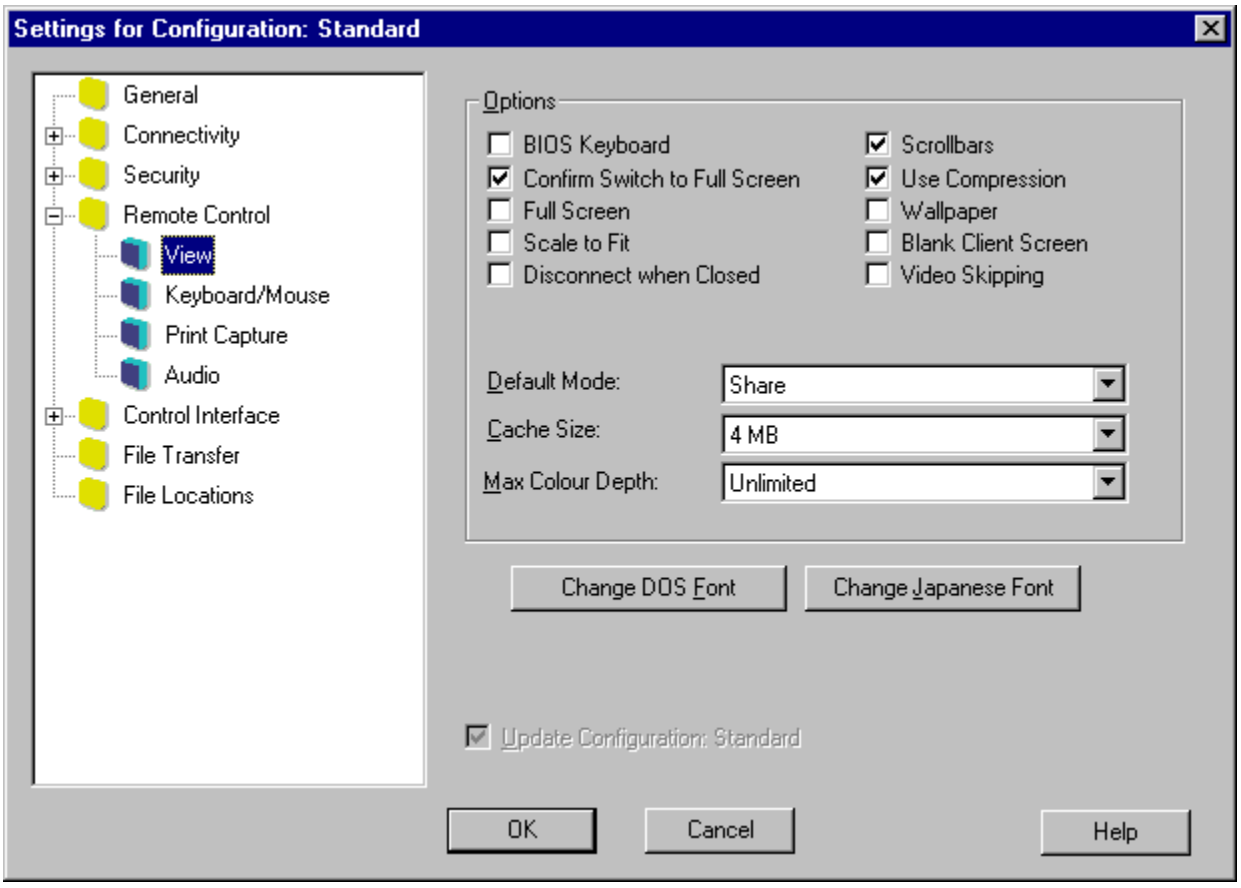


These options allow you to configure the different components available in this Control Profile.

Settings for Configuration: View

The View page configures the Control for remote control of Clients. It can be displayed from the Control's View Menu, Settings for Current Configuration, the Tools Menu, Configurations command, and the View window, View Menu, Settings for Client command. The latter is the most useful when you are actually viewing a Client.

For more information on a particular feature, click where a ➧ appears on the picture below.



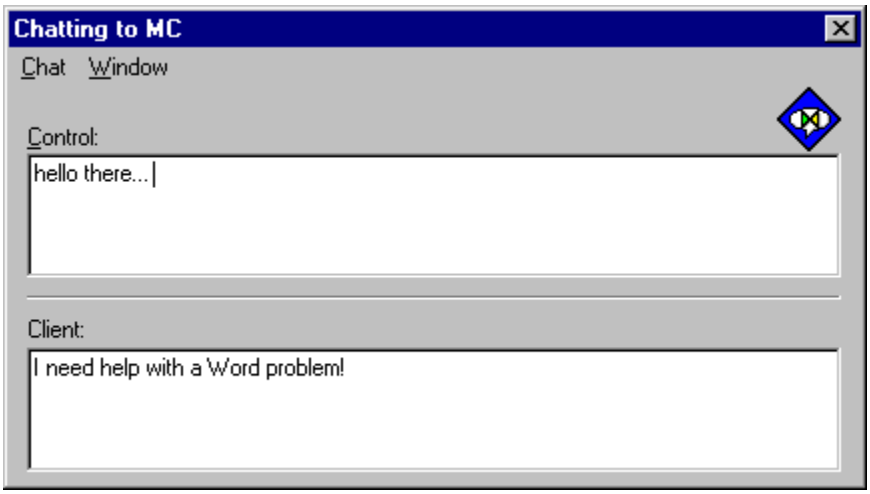
The fonts that are used in DOS boxes can be selected here.

See Also
Cache Statistics

Chatting to a Client

With a Client selected in the Control List View, press the Chat button (shown above) in the Control's Main Window toolbar. The Chatting to Client dialog opens on both Control and Client PCs, allowing you to have a conversation with the Client user.

For more information on a particular feature, click where a ‣ appears on the picture below.



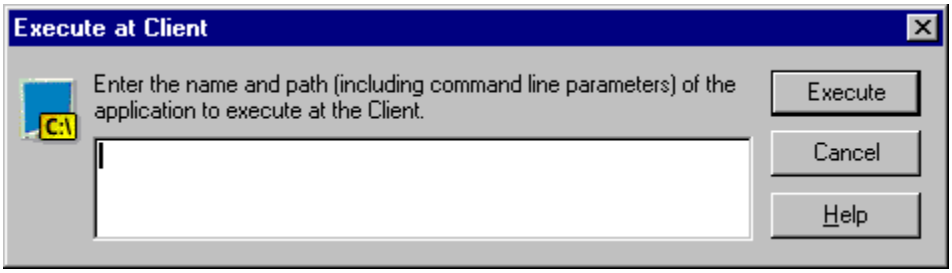
The window caption displays the name of the Client.

Both users can can end the Chat by clicking on the [X] Close Dialog Button or by selecting the Chat Menu, Close command.

Notes:
You can also start Chatting by right-clicking on a Client in the List View and choosing Chat from the Client Popup Menu, or when Viewing the Client, by pressing the Chat button in the View Window Toolbar or selecting the View Window: Tools Menu, Chat command.

Execute at Client

Press the Execute button (shown above) in the Control View Window toolbar to execute a command at the Client. The Execute at Client dialog will appear



Enter the name and path of the application to run in the large edit box, this can also include program arguments. Once you have entered an application to run, press [Execute]. When the application has finished, a dialog box will appear informing you of the result.

See Also
Executing an application at the Client

Send message to Client

Allows you to send a message to the Client you are currently viewing. The message will appear on the client machine and will be visible until the user dismisses it.

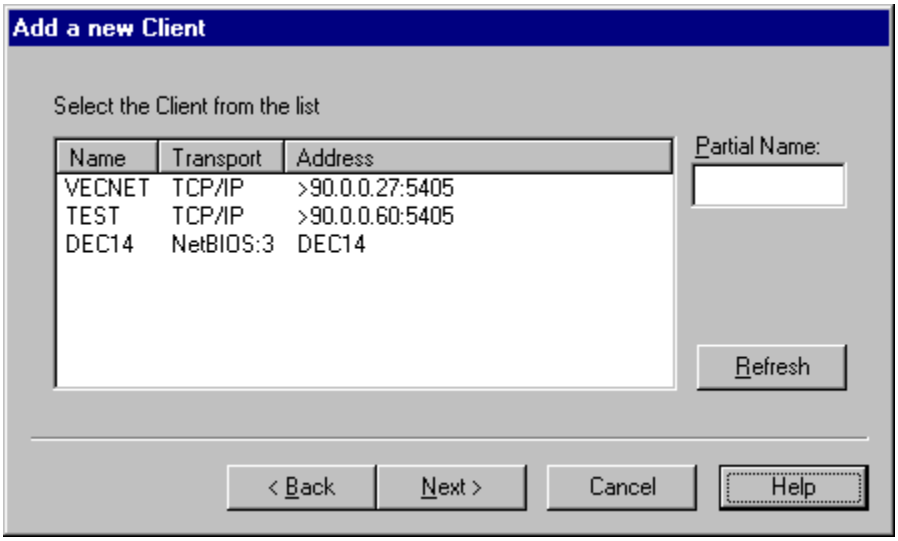
Enter the message to send in the large edit field and press the **Send** button.

See Also
Sending a message

Add a new Client: Select

The Control Browses the Local network for Available Clients and displays their names for you.

For more information on a particular feature, click where a ➧ appears on the picture below.



Select a Client from the list and press [Next>] to continue.

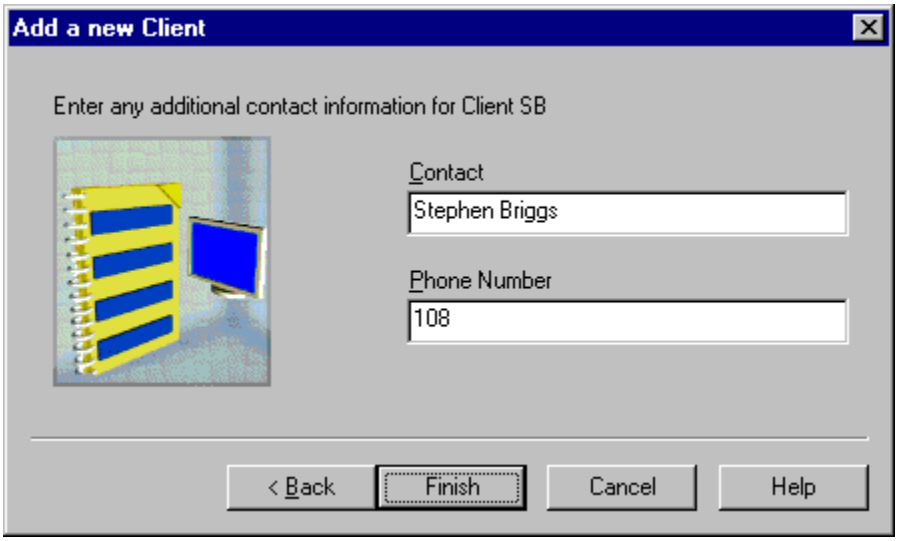
If there are too many Clients in the list, restrict the search by entering a partial name, and press [Refresh] to Browse again.

See Also
Adding a new client

Add a new Client: Contact

This dialog allows you to enter a contact name and phone number for the new Client.

For more information on a particular feature, click where a ➧ appears on the picture below.

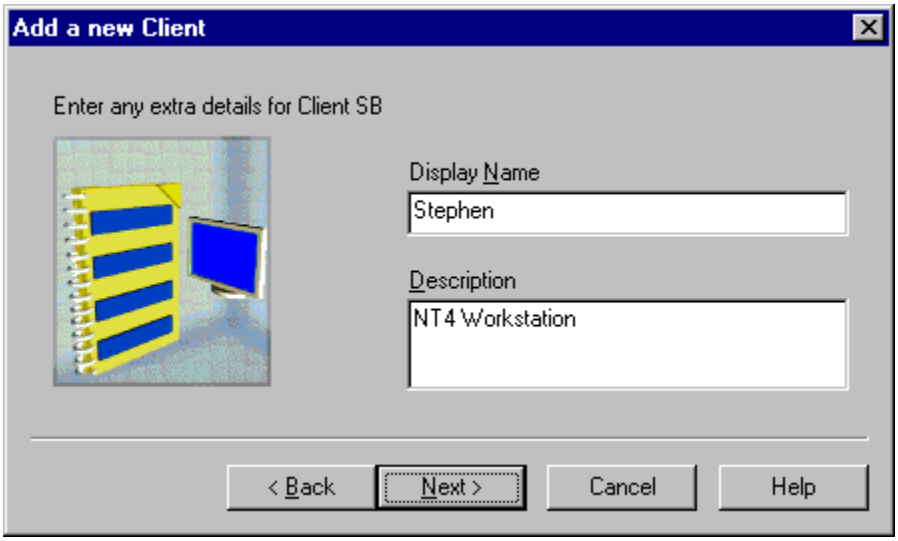


Enter the contact details as desired and press [Finish] to complete the new Client definition or press [<Back] to make changes.

Add a new Client: Details

This dialog allows you to provide extra information for the new Client.

For more information on a particular feature, click where a ➧ appears on the picture below.

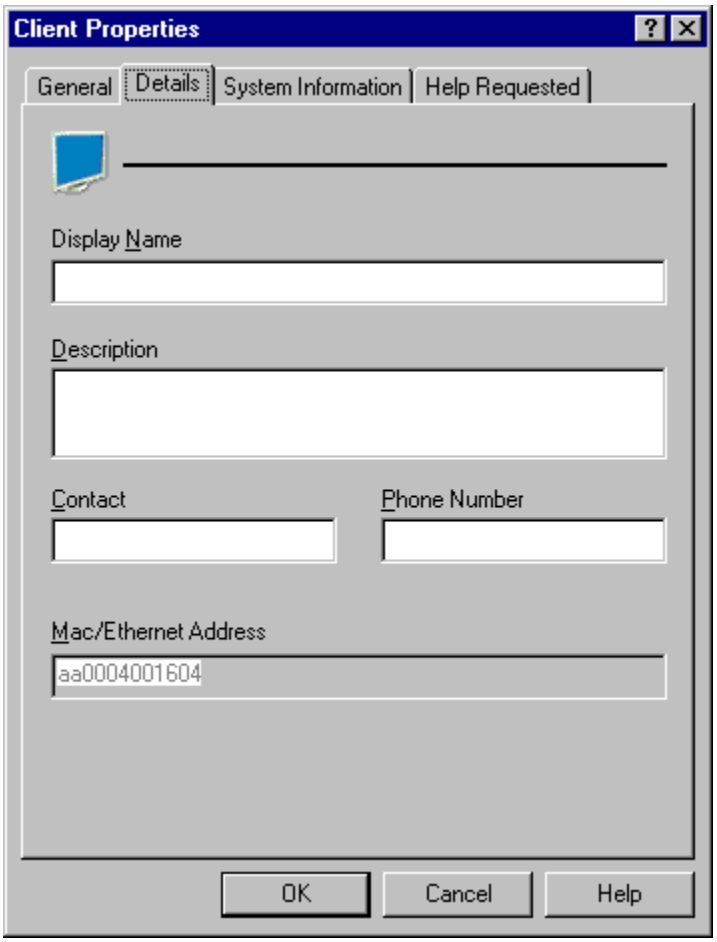


Enter the display name and description, and press [Next>] to continue or [<Back] to go back one step.

Client Properties: Details

Right-click on a Client in the Control List View and select Properties from the Client Popup Menu to display the Client Properties tab dialog. The Details tab displays optional information for this Client.

For more information on a particular feature, click where a ➧ appears on the picture below.

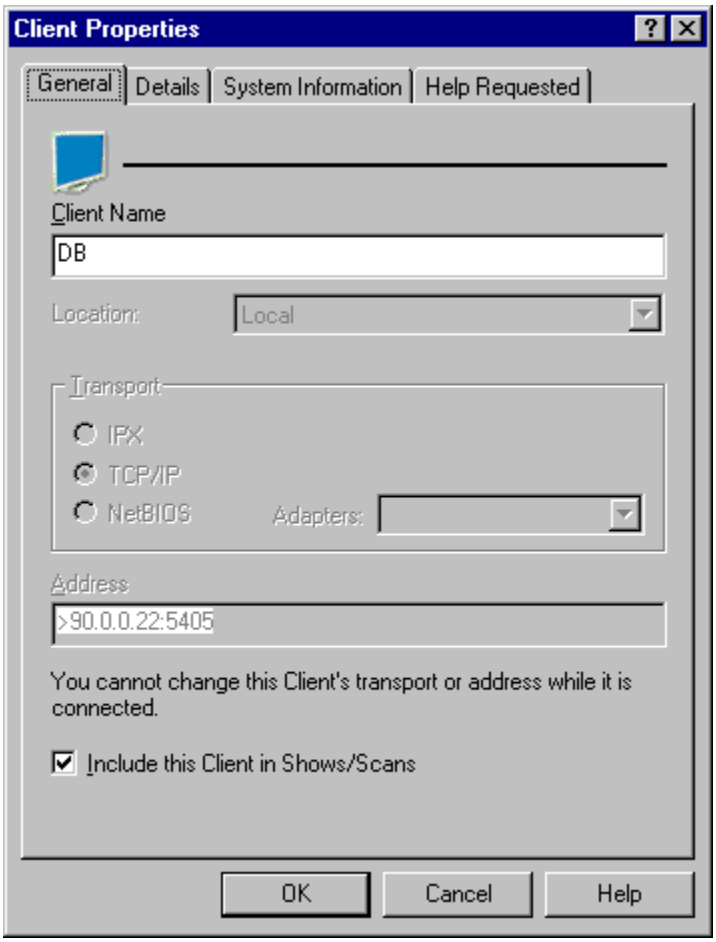


Details about the person responsible for the Client machine and descriptions can be entered or displayed here. All of these fields are optional.

Client Properties: General

Right-click on a Client in the Control List View and select Properties from the Client Popup Menu to display this tab dialog. You can also highlight the Client and press the Properties button (shown above). This page displays information about the selected Client.

For more information on a particular feature, click where a ➧ appears on the picture below.



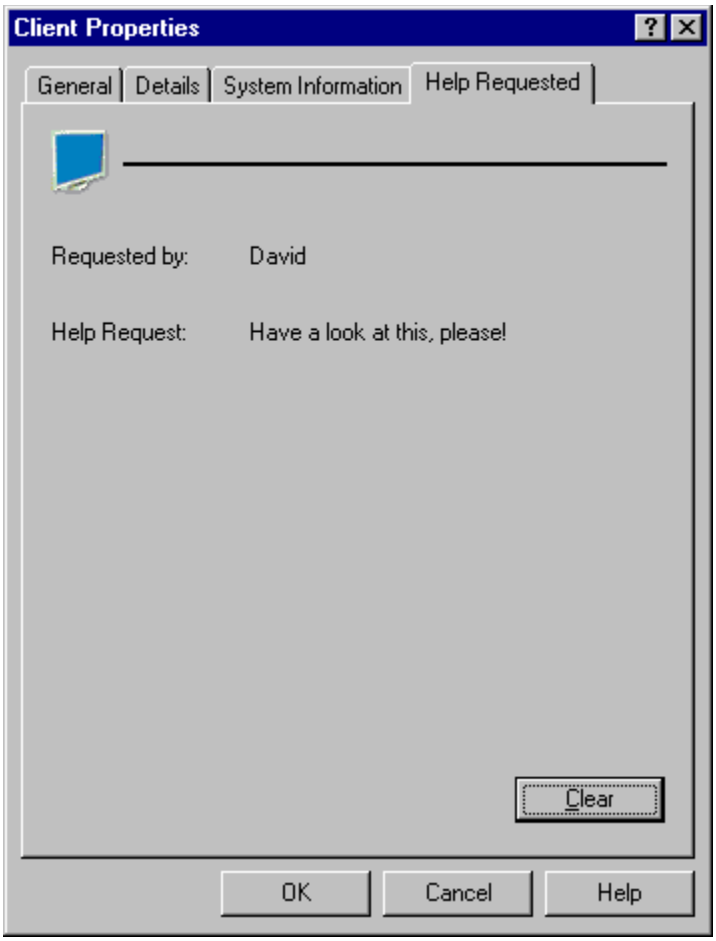
Some of these fields, such as the address and transport, are greyed-out and cannot be altered when the Control is connected to the Client. Some tabs are only displayed if the Client is Connected, or has Requested Help.

See Also
Adding a new client

Client Properties: Help Requested

Right-click on a Client in the Control List View and select Properties from the Client Popup Menu to display the Client Properties tab dialog. The Help Requested tab is displayed when the Client user has requested help.

For more information on a particular feature, click where a ➧ appears on the picture below.



Help can be requested at any time. The requests are collected when the Control connects to the Client, and are stored in the Help Requests folder in the Control Tree View. Access them by opening the folder and right-clicking on each Client.

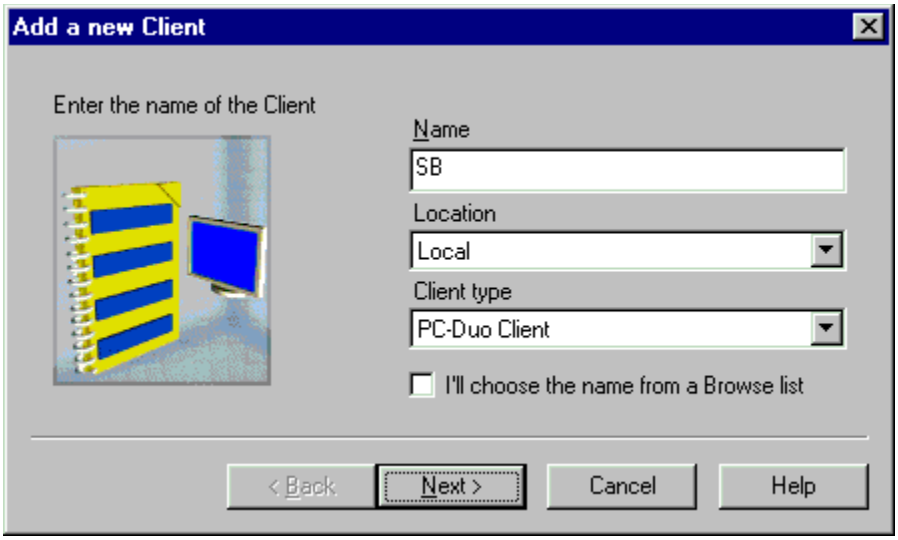
See Also
Help Requests

Add a new Client: Name

{button ,JI(`',`Add_a_new_Client__Starting')} How to get here

This is the start of the sequence that you use to enter a new Client into the Known Clients database. When you have finished, the database should contain enough information for the Control to connect to this Client without Browsing first. You can also store extra information such as a description and contact details.

For more information on a particular feature, click where a ➧ appears on the picture below.



Use the Client Type list to specify whether the new Client is PC-Duo or VNC.

If you want to add some Clients from the Local network, you can just select the "I'll choose the name from a Browse list" check box and press [Next>] to Browse for Available Clients.

If you only want to add one Client, or can't Browse because this is a VNC Client or it is on a Remote Network, you can simply enter the new Client's Name here. This is normally the Client's Machine Name. Use the Client's Help, About command if you are not sure which name to use. Select the appropriate network from the Location drop-down list. The transport and telephone number for a Remote Network will be displayed.

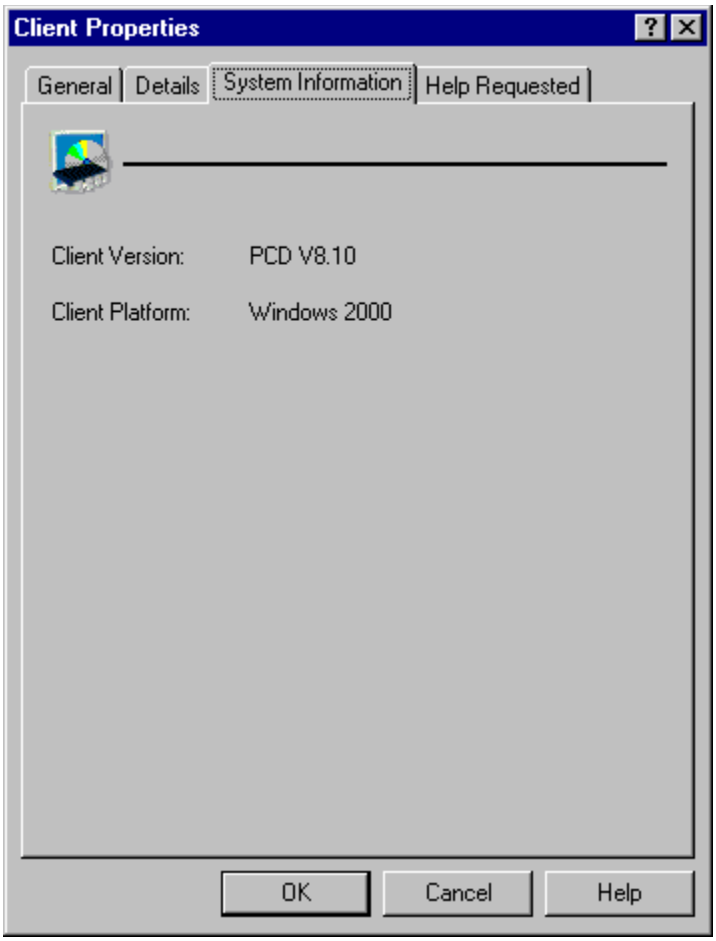
Press [Next>] to enter the network address for a PC-Duo or VNC Client.

See Also
Adding a new client

Client Properties: System Information

Right-click on a Client in the Control List View and select Properties from the Client Popup Menu to display the Client Properties tab dialog. The System Information tab is only available while the Control is connected to the Client. It displays information about the Client.

For more information on a particular feature, click where a ➧ appears on the picture below.

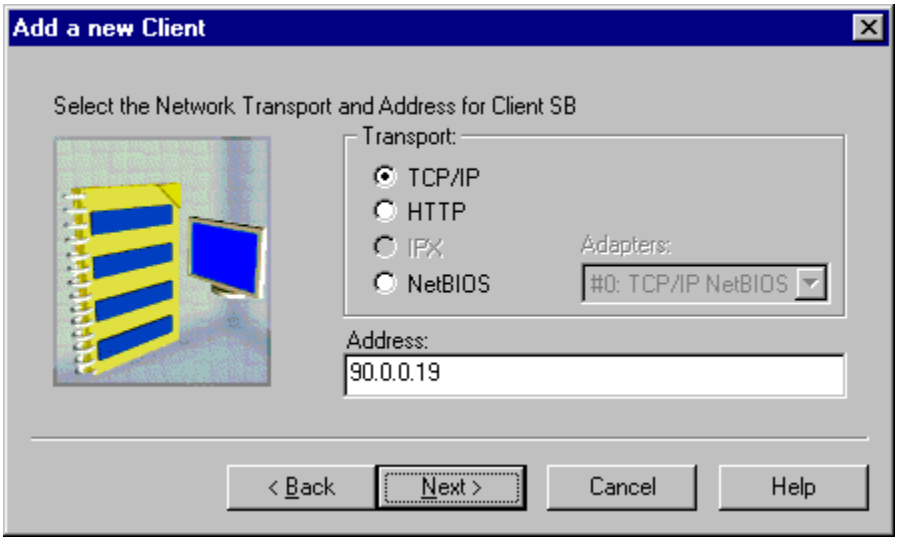


See Also
Creating a new client

Add a new Client: Transport

You can enter the network transport protocol and address manually using this dialog.

For more information on a particular feature, click where a ➧ appears on the picture below.



Select the transport that the Client is using, and if necessary, add the Client's network address.

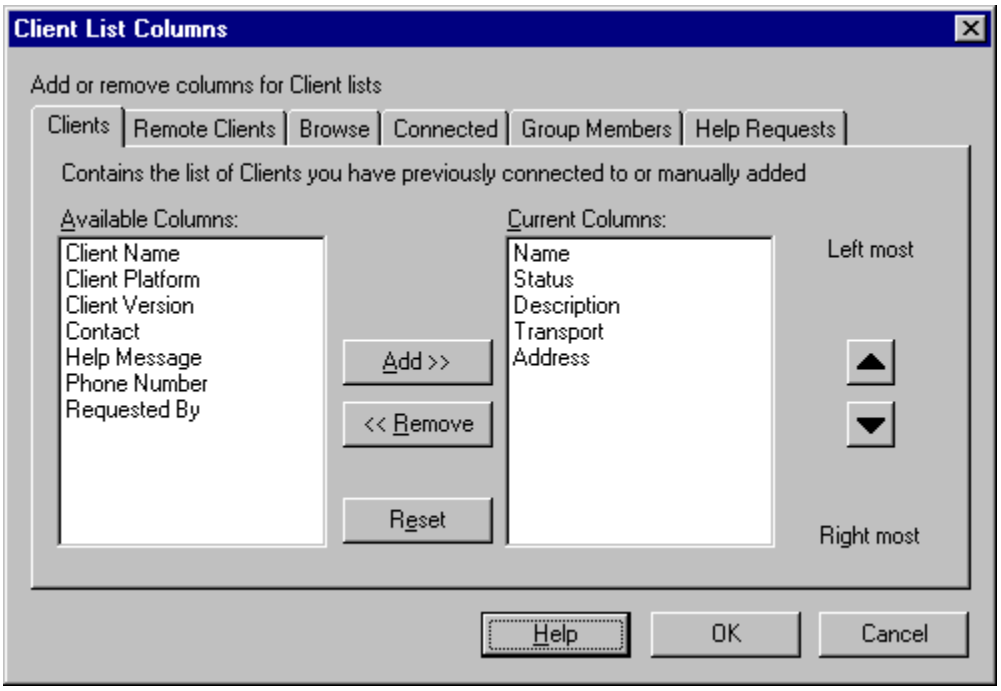
Press [Next>] to continue or [<Back] to go back one step.

Note
On DHCP networks, you can use TCP/IP hostname format instead of the IP address.

Client List Columns

Select the List View Popup Menu Columns command to display this dialog. It allows you to configure the columns that are displayed in the Control List View.

For more information on a particular feature, click where a ‣ appears on the picture below.



Choose the view that you want to configure by selecting the appropriate tab. This enables you to display the columns that you are most interested in. The available tabs are:

- Clients
- Remote Clients
- Browse
- Connected
- Group Members
- Help Requests

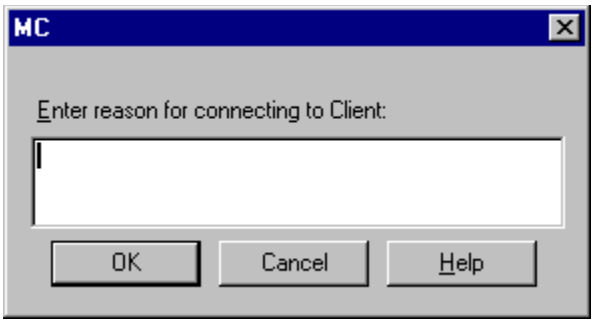
Once the views have been configured, press [OK] to make the changes take effect or [Cancel] to abandon any changes.

Delete files?

You are about to delete one or more files of the local machine or a Client. To confirm the deletion click the Yes button, or click No to abort this operation.

Enter Reason for Connecting to Client

When the Control is configured to Prompt for Additional Information when connecting, this dialog will be displayed before the Client connection is established.



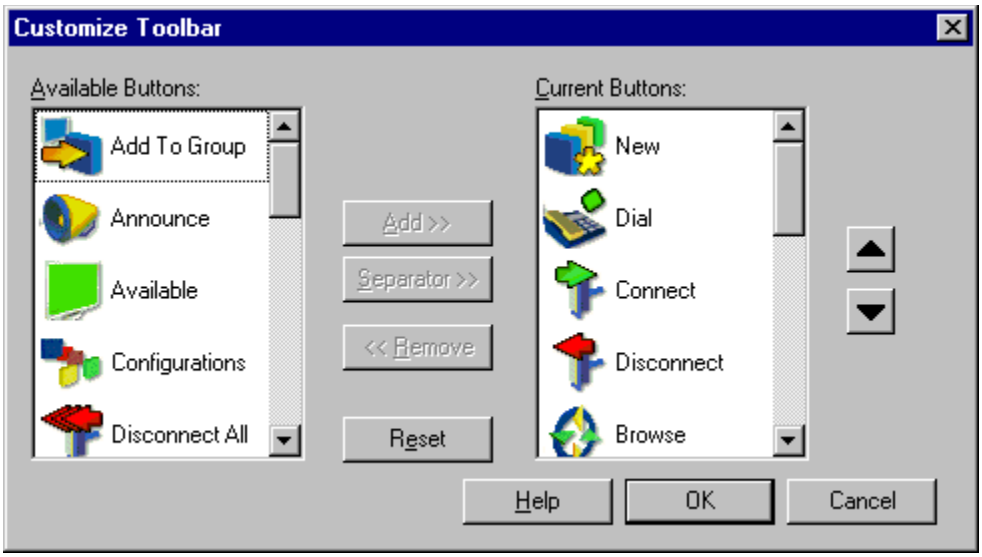
Enter the reason for connecting to the Client and press [OK] to continue.

This information is shown to the Client user if the Client is configured for user acknowledgement. The user will know why you intend to connect and has the option to refuse the connection.

Customise Toolbar

The Control Main Window and View Window Toolbars can be customised to include the buttons that you use most frequently. Select the Toolbar command from the appropriate View Menu, and then Customise. The Customise Toolbar dialog will appear.

For more information on a particular feature, click where a ➧ appears on the picture below.



The Available and Current Buttons lists contain the buttons that are available to be added to the Toolbar and those already on the Toolbar. The buttons shown here are for the Control Main Window.

Separators can also be used to group buttons together visually.

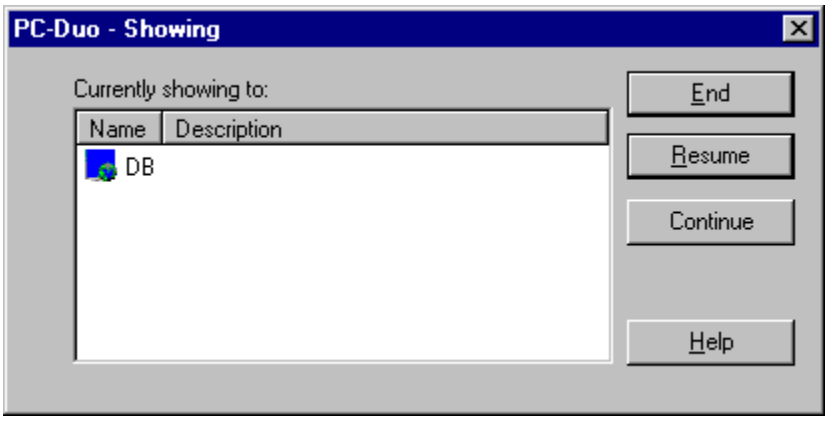
The buttons that are actually displayed may be different if features such as File Transfer are disabled in the current Control or Client configurations.

See Also
The Toolbar Menu

End the show?

You have stopped showing your screen to the Clients listed. The Clients are still displaying the Control's screen at the point when the Show was suspended. You can resume or end the Show from here.

For more information on a particular feature, click where a ➧ appears on the picture below.

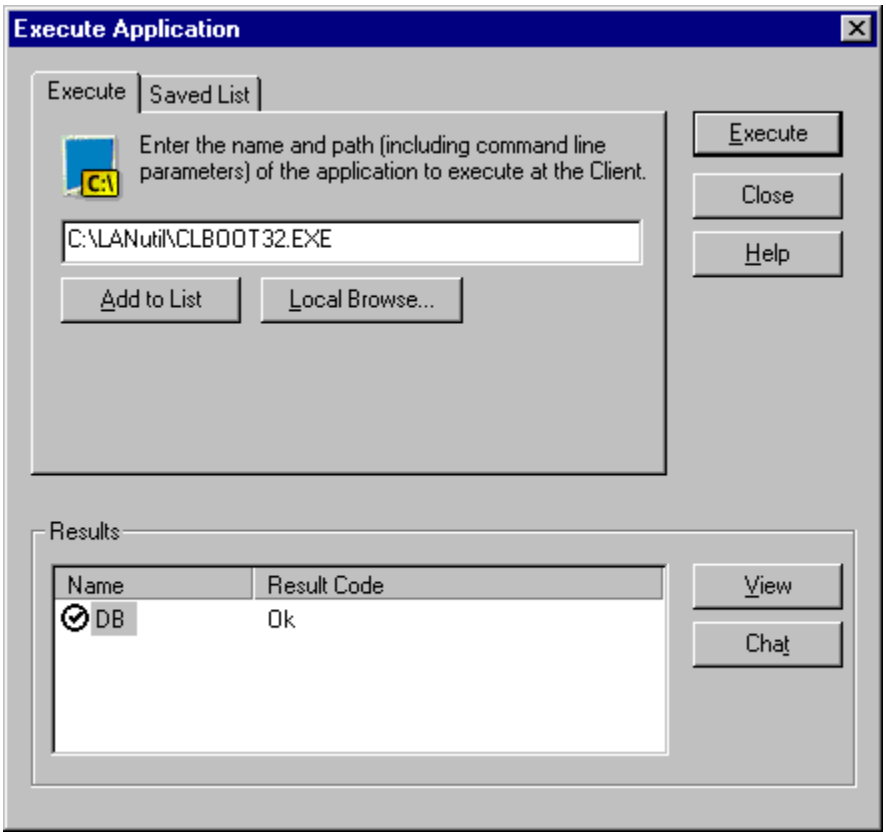


Press [Continue] if you want to perform some additional steps on the Control without displaying them at the Clients. The Show will resume when you double-click the Control's icon.

Execute Application

You can execute an application on one or more selected Client machines. If you selected multiple Clients from the current view, their names will appear in the Results list.

For more information on a particular feature, click where a ➧ appears on the picture below.



Specify the application that you want to execute on the Clients, including any program arguments. You can also save the command line so that you can re-use it later.

Once you have chosen the application to run, press [Execute]. Your command will be executed on the Clients in the order they appear in the Results list.

Select a Client from the Results list and press [View] or [Chat] buttons to open up a View Window or start Chatting.

See Also
Chatting to a Client

File Properties

Highlight one or more files or directories in the File Transfer or File Manager windows and press the Properties button (shown above) in the Toolbar to display information about the selection. File properties are shown below.

For more information on a particular feature, click where a *appears on the picture below.*

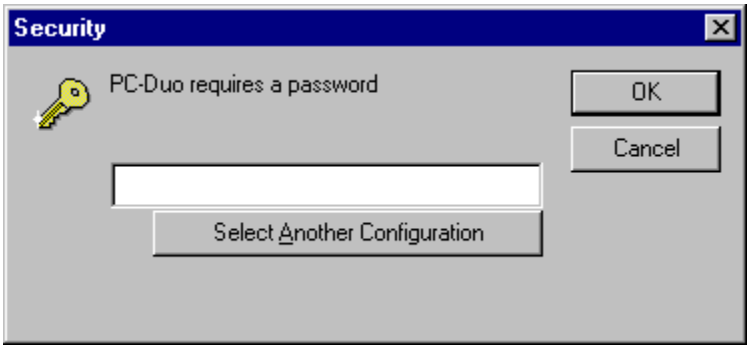
If you selected multiple files, the summary displays the total size and attributes for those files.

If you selected one or more directories, the summary shows the number and total size of the files in those directories.

You can change the attributes of the files by setting or clearing the attribute check boxes.

Security: PC-Duo Requires a Password

The PC-Duo Control program has been configured to require a password before it can be started.



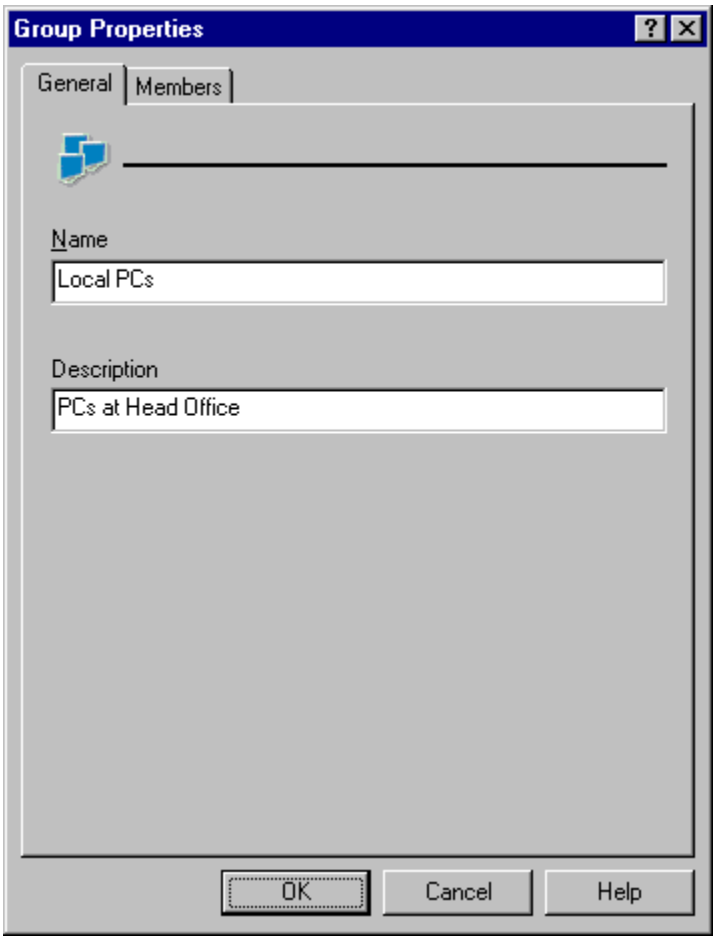
An Administrator has configured the Control Profile so that it requires a password.

You may have to select a different Profile to continue.

Group Properties: General

Right-click on a Group in the Control List View and select the Properties command to display this tab dialog.

For more information on a particular feature, click where a ➧ appears on the picture below.



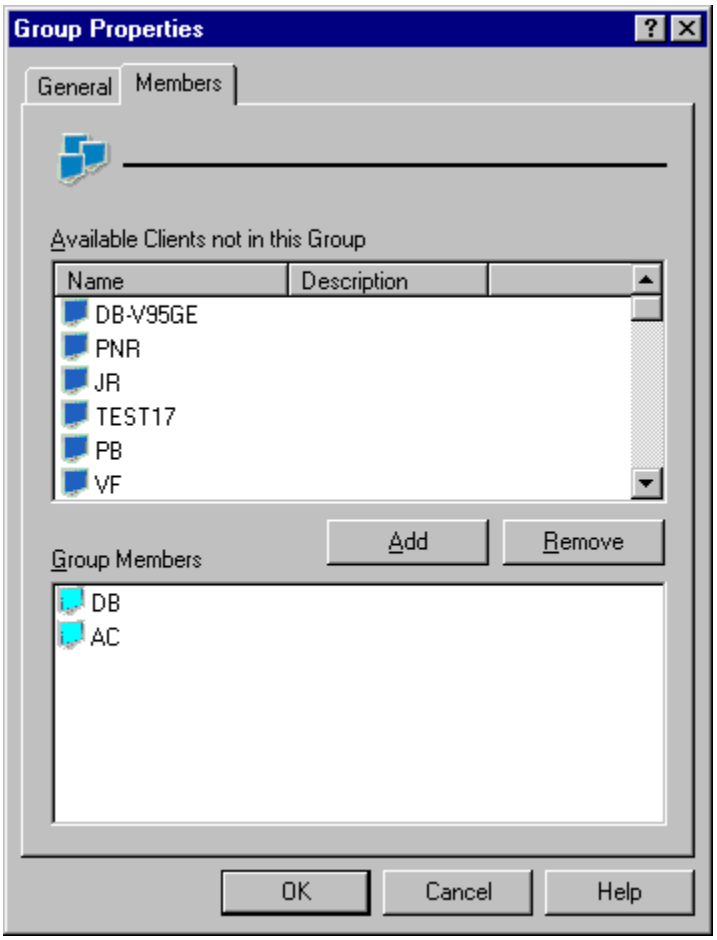
This displays the name and description of the selected Group.

See Also
Creating a new group

Group Properties: Members

Right-click on a Group in the Control List View and select the Properties command to display this tab dialog.

For more information on a particular feature, click where a ➧ appears on the picture below.



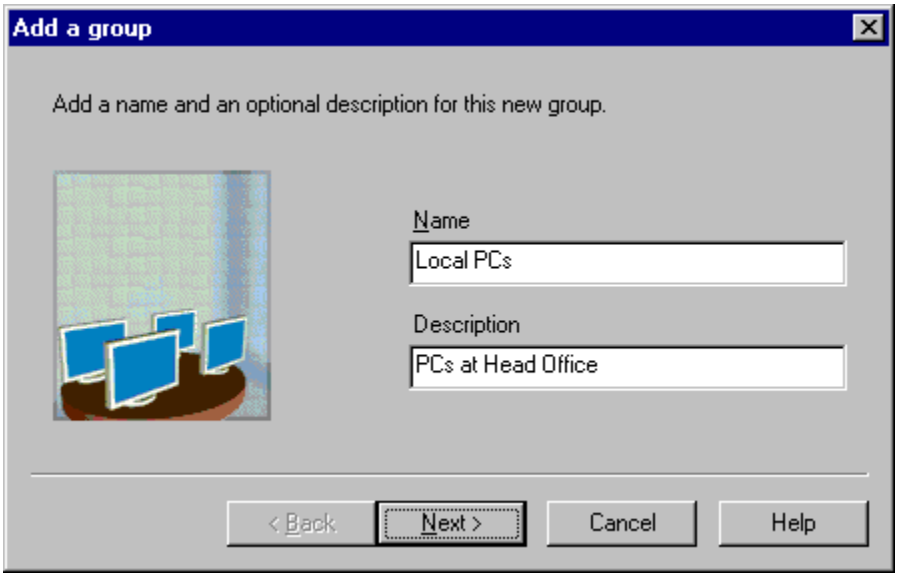
The Clients that are members of the Group and those Available Clients that are not are both listed here. Highlight Clients in either list and press [Add] or [Remove] as appropriate to add them to the Group of remove them from it

See Also
Creating a new group

Add a new Group: Name

Double-click on the Create a Group icon (shown above) in the Groups Folder, or choose the Groups Menu, New command to add a new Group. Each Group can have one or more member Clients. Any Client can also be a member of more than one Group.

For more information on a particular feature, click where a ➧ appears on the picture below.



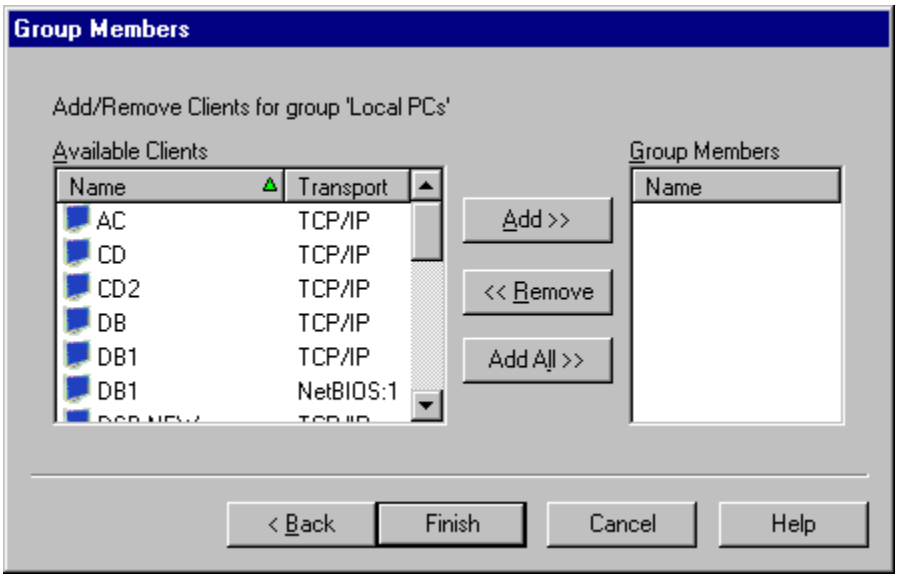
Enter the Name for this Group and an optional Description, and press [Next] to continue creating the Group.

If you have Selected one or more Clients already in the Control List View, you can add them directly to the new Group.

Add a new Group: Group Members

Press [Next>] in the Add a new Group: Name dialog and your Known Client list will be displayed. Select any that are to be added to the new Group

For more information on a particular feature, click where a ‣ appears on the picture below.



If you do not select any Clients, an empty group will be created that you can add clients to later.

Press [Finish] to complete the Group creation or [Back] to change the Group Name or Description.

Add a new Group: Selected Clients

If you have Selected one or more Clients already, you can add them directly to the new Group.

For more information on a particular feature, click where a ➧ appears on the picture below.

Select one of the options and press [Next>] to continue.

Group File Transfer - Connect to Clients

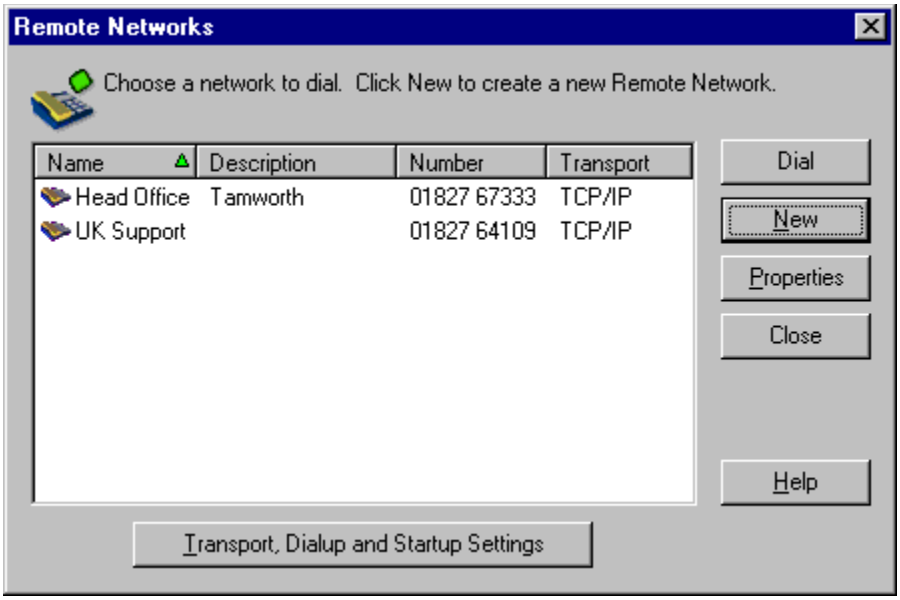
You can use the Group File Transfer feature to transfers files to either a pre-defined Group, or a selection of connected Clients.

See also
File Distribution

Remote Networks

Press the Dial button (shown above) in the Control Main Window Toolbar to open the Remote Networks dialog.

For more information on a particular feature, click where a ➧ appears on the picture below.



This dialog is displayed when you have not selected a Remote Network in the Control Tree View. The list contains all of the known Remote Networks.

Select one of the listed Remote Networks and press [Dial] to dial it, or press [Properties] to view or edit the settings.

See Also
Dialling a Remote Network

Security - Please Login

Enter a valid username for the Client to which you are trying to connect. These are configured at the Client, and may or may not be valid NT user IDs.

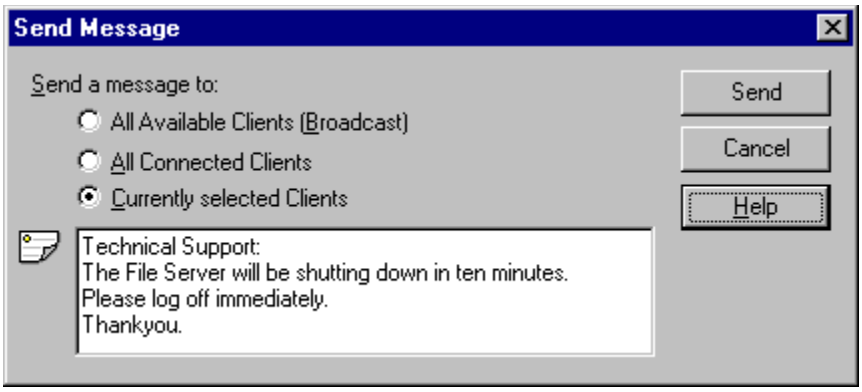
The Client will then accord you the privileges associated with the username you enter (for example, file transfer may be disabled or read-only), or the user at the Client machine may need to acknowledge your request to connect).

Remember Password
If this is checked, the Control will attempt to use the same username and password when you connect to other Clients. Don't do this if you are concerned that an unauthorised user might use your machine while you are away from your desk.

Send Message

Use the Client Menu, Message command to send a message to all Available Clients (Broadcast Message), to all of the currently Connected Clients, or the currently Selected Client. You can also use the Group Menu, Message command to send the message to all members of the currently selected Group.

For more information on a particular feature, click where a ➧ appears on the picture below.



Select one of the Send to: radio buttons, enter the message text, and press [Send] to send it. If you are not already connected to any of the Clients, the Control will connect before the message is sent.

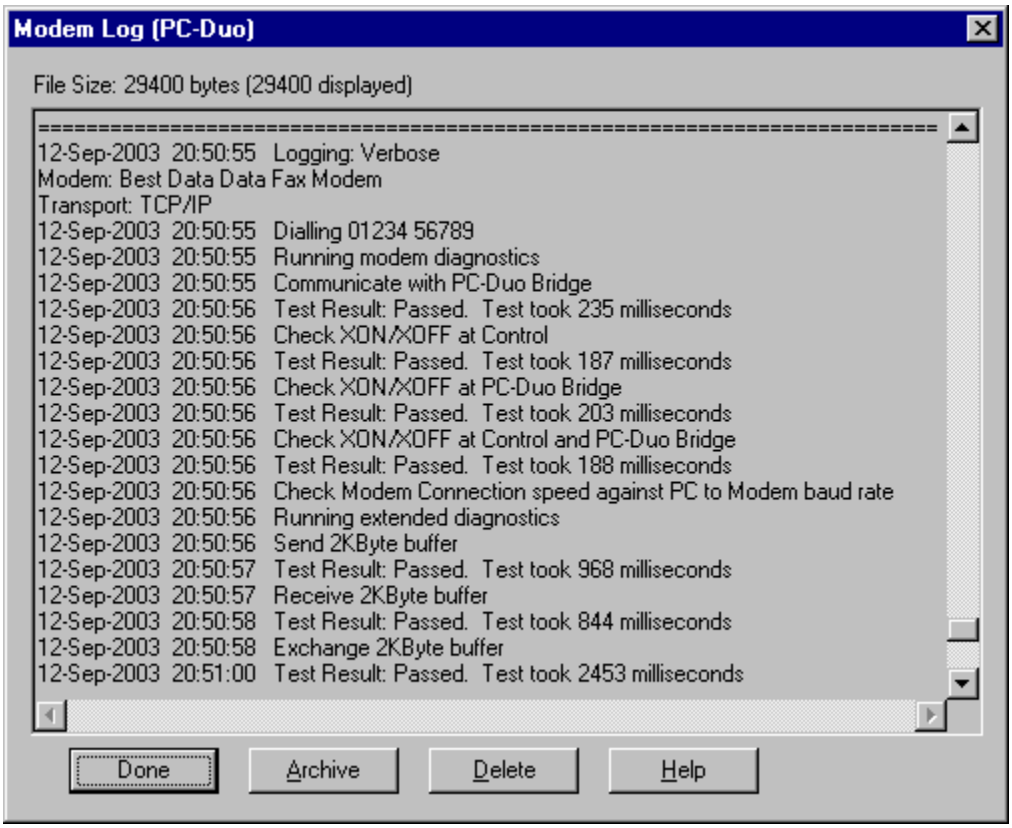
Messages are displayed on the Client until the user dismisses them.

See Also
Sending a Message

Modem Log

Press [View Log] in the Settings for Configuration: Dialin Bridge dialog to display the log for the last Remote Communications session.

For more information on a particular feature, click where a ➧ appears on the picture below.



This data is saved in file MODEM.LOG. You can scroll up to see the log information from any previous sessions.

The amount of detail recorded in the log file varies depending on the Logging Level setting in the Settings for Configuration: Dialin Bridge dialog.

When the file becomes too large to view, you can archive or delete the contents by pressing the appropriate buttons.

Overwrite file?

This dialog will appear when you are about to overwrite files that already exist on the destination machine. You can tell the Control to overwrite the files, cancel the transfer operation or leave the files alone.

Yes
Press **Yes** if you are sure you want the file on the destination machine to be overwritten.

No
If you press **No** and you are copying multiple files, the transfer operation will proceed and attempt to copy the next file, but not copy the current file.

Cancel
If you are copying multiple files and you press **Cancel**, the file transfer operation will be aborted. This and all the other files that were going to be copied will be abandoned.

Overwrite All
Check this box to automatically overwrite all remaining files in this transfer operation.

Print Capture - Capture to

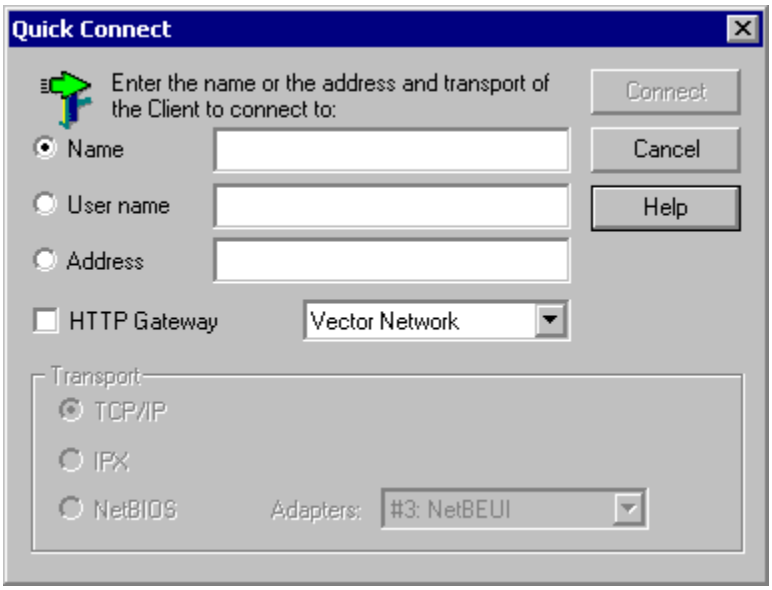
Specify the file to which all printer output will be captured. This file will contain the printer control codes for the printer driver used at the Client, and can later be printed by copying it directly to the printer (e.g. from a command prompt, copy myfile.prn lpt1).

See Also
Capturing a Clients print output

Quick Connect

Press the Quick Connect button (shown above) on the Control Toolbar, or choose the Client Menu, Quick Connect command to connect to a new Client without first having to Browse the Network. You can connect using the Client's name or network address.

For more information on a particular feature, click where a ➧ appears on the picture below.



Enter the Client's Name and click on [Connect]. The Control will search the network transports configured in the current Profile for that Client name.

If you are looking for a particular user, but don't know where they are, select the User name radio button and enter their user name. Press [Connect] to find them. If they are logged in on one PC only, the Control will connect straight away. If the same user is logged in on more than one PC, they will be listed in the Select Client dialog.

Alternatively, you can select a transport protocol and enter the Client's network address. This is more complicated than using the name, but is usually quicker, as it eliminates the broadcast used by the Control to find the Client's name.

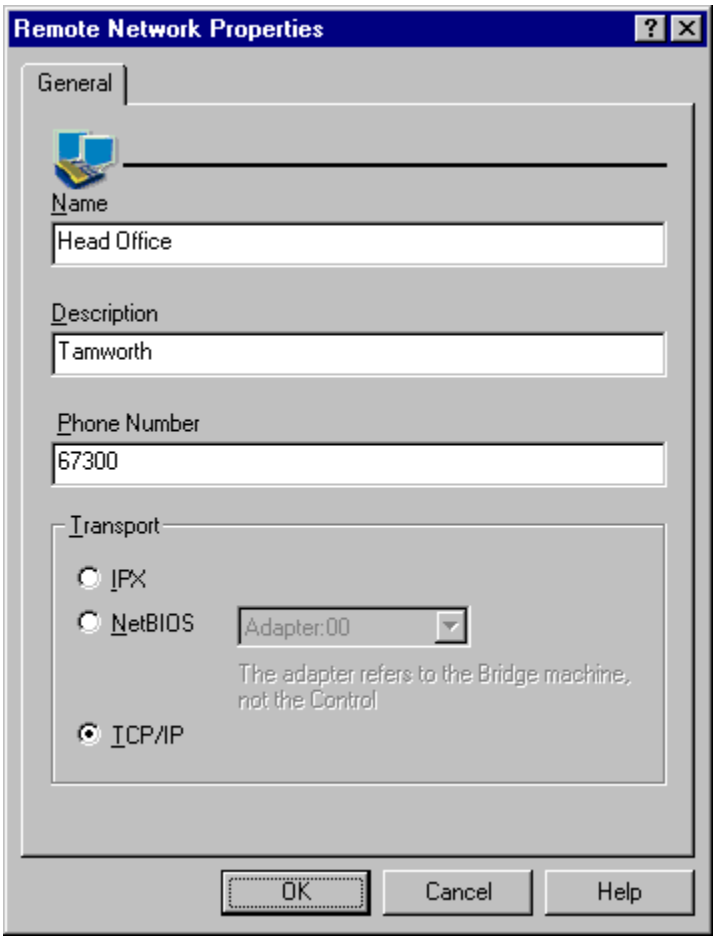
If a Client responds, the Control connects to it immediately and displays it in the Connected Clients folder in the List View.

See Also
Adding a Client to a Group, Creating a new Client.

Remote Network Properties: General

Right-click on a Remote Network in the Control Tree View, or select a Remote Network and choose the Network, Remote Menu Properties command, to display the details for the selected Network.

For more information on a particular feature, click where a ➧ appears on the picture below.



You can change the properties by typing the new values as required.

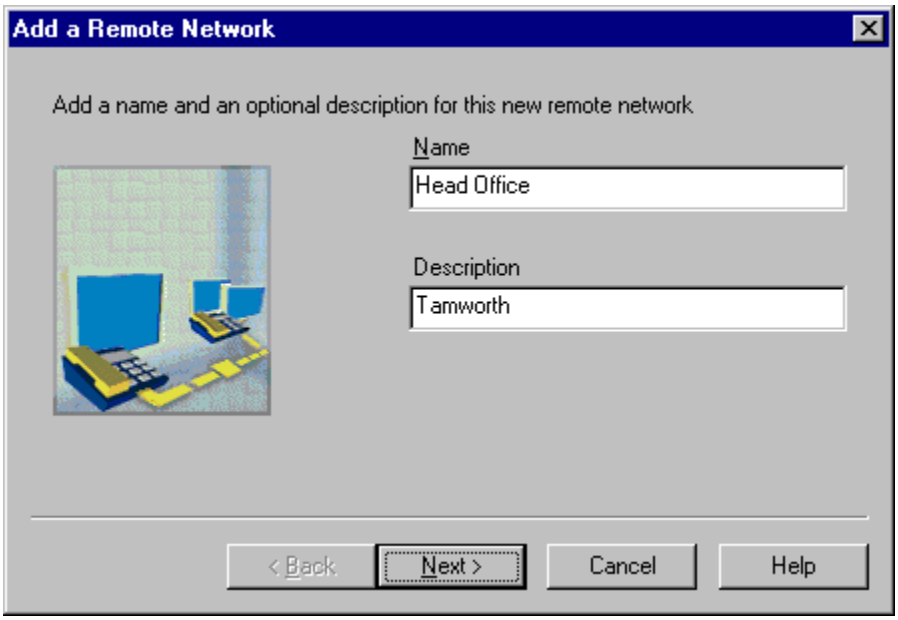
If you have to dial an additional number to obtain an outside line, you can include the prefix here or in the Settings for Configuration: Dialin Bridge tab for the Control Profile.

Add a Remote Network: Name

{button ,JI(`',`Add_a_new_Client__Starting')} How to get here

This is the start of the sequence that you use to enter the information required to access Clients on a Remote Network using PC-Duo Remote Communications.

For more information on a particular feature, click where a ➧ appears on the picture below.



Click [Next>] to continue.

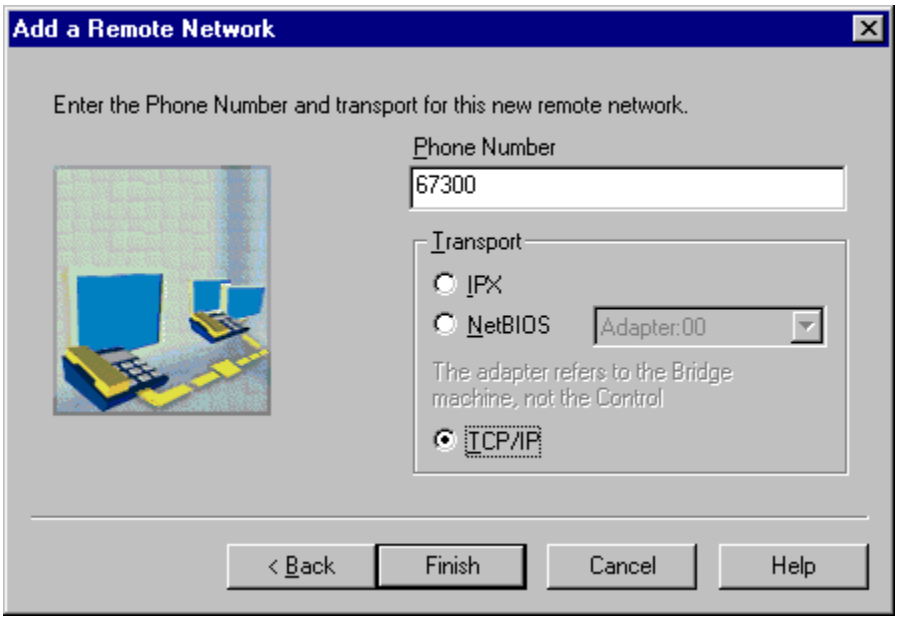
You can create several Remote Networks, but a Control can only connect to one at a time.

See Also:
Remote Communications Overview

Add a Remote Network: Details

Enter the telephone number for the PC-Duo Bridge at the remote site. You must also specify which network transport the Bridge is using.

For more information on a particular feature, click where a ‣ appears on the picture below.



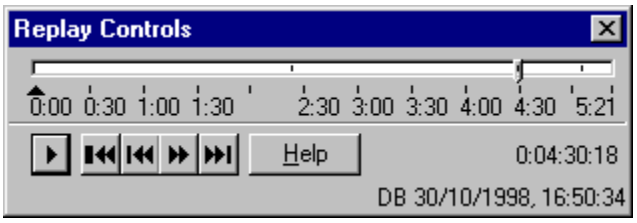
You must choose the correct network transport for the Bridge. It supports IPX, NetBIOS, and TCP/IP. If you choose NetBIOS, you must specify the NetBIOS Adapter number to be used at the Bridge PC, *not* at the Control.

Specify the Modem through the Dial-In Bridge settings for the current configuration.

If your Clients are running on TCP/IP, you can also use Remote Access Service (RAS).

The Remote Network details are stored in file REMOTE.NSM.

Replay: Control Panel



This dialog contains the controls for playing a recorded Client session. The replay time index that indicates where in the replay file you currently are, and displays information about the file being played. Use these controls in the same way you would for a video recorder.

Stop and Play

The **Stop** button is shown when you are playing a replay file and the **Play** button when the replay is stopped. Only one of these buttons is displayed at a time. The file is played until the end is reached or the **Pause Marker** is encountered.

Rewind

Start playing the file from the beginning if it is already playing otherwise moves the replay index to the beginning of the file.

Skip to Previous marker

Moves the replay index to the previous activity marker or to the beginning of the file if there isn't one. These markers are added at points when lots of activity was recorded at the Client.

Frame Advance

Advance the replay index to the next frame. Press and hold this button to Fast-Forward though the replay file.

Skip to Next marker

Moves the replay index to the next activity marker or to the end of the file if there isn't one.

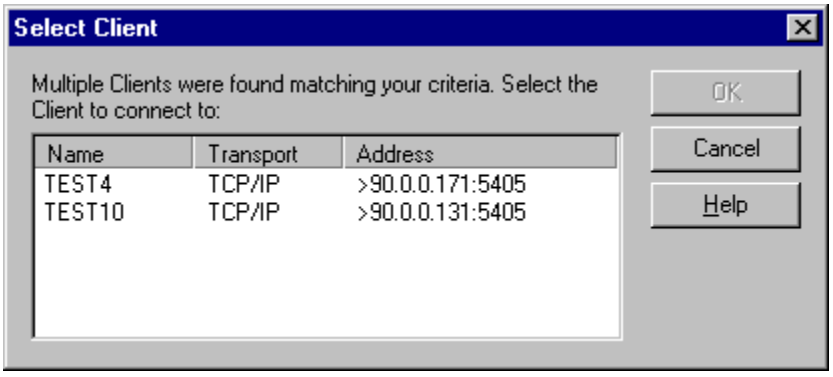
Other Information
The current time index is displayed to the right of these controls in the HH: mm: SS.MS format. The name of the Client that the replay was recorded on, the date and time are displayed at the bottom of the window.

Replay Marker
This marker can be positioned anywhere within the time frame of the replay file. The marker is the small black triangle beneath the time index control. Click and drag this to the position where you want the file to stop playing. When the marker is encountered the replay stops, and you can then press play to continue past it.

Select Client

More than one Client with the specified name were found, possibly on different transports.

For more information on a particular feature, click where a ➧ appears on the picture below.



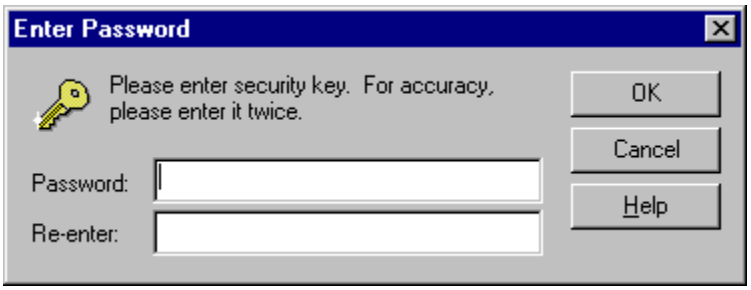
This is most likely to happen when you are using the Control to Connect to a User name, but that User name is in use on more than one PC-Duo Client.

Select the correct Client from the list and press [OK] to Connect.

Set Security Key

Before you can connect to a Client that has Security Key, you must first store it in the Control Profile. The Control's Security Key must match the Key set at the Client, or any attempt to connect will be rejected. Similarly, a Gateway requires a Gateway Key to be defined or it will not permit the Control to browse it for any Clients that are using the same Gateway Key.

For more information on a particular feature, click where a ➧ appears on the picture below.



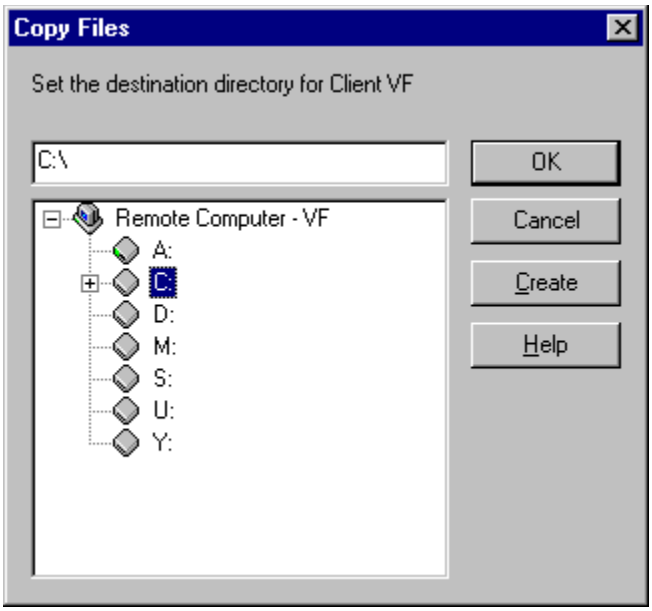
Enter an asterisk (*) in both fields to use the serial number of this Control as the Security Key. In this case, both Control and Client must have the same licence key serial number.

If you need to connect to different Clients with different Security Keys, use a different Control Profile for each Security Key.

See Also
Setting a Security Key

File Distribution: Set Destination

Use this command to select the destination directory for the file distribution. This applies to the currently selected Client.



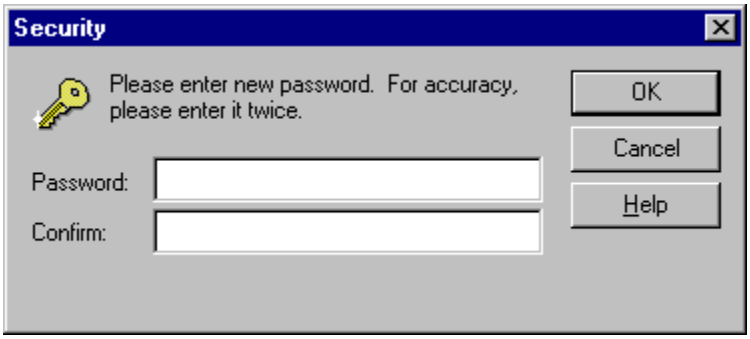
Type the path into the top field or find the correct directory in the lower pane.

Press [Create] to create a new directory at the selected location on the Client.

Press [OK] to continue.

Security: Set Password

This dialog is used to enter a new Control or Configurator password.



This password will be used when the Control starts up or the Configurator opens a protected CLIENT32.INI file.

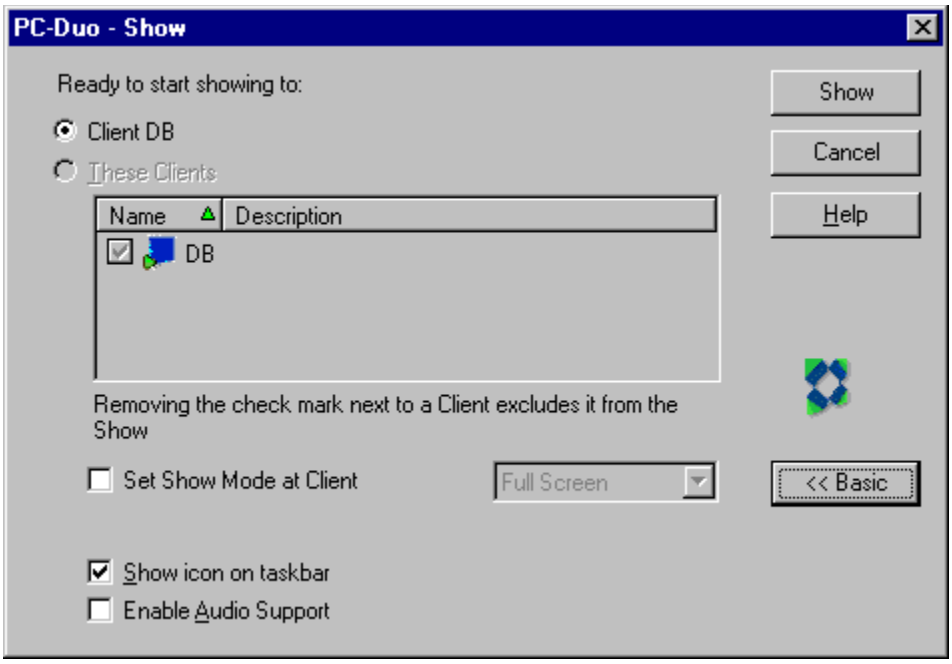
If the user does not supply the correct password, they will not be allowed to continue.

Passwords are not case sensitive. Use something that you will remember easily.

Ready to Start Showing

You can Show the Control's screen to any Connected Clients. If multiple Clients are connected, a list of their names is displayed so that you can Include or Exclude them from the Show.

For more information on a particular feature, click where a ‣ appears on the picture below.



If you have only one Client connected (and Selected), then its name will be displayed at the top of the dialog. If more Clients are connected, then you can Show to some or all of the Connected Clients by selecting the ‘These Clients’ radio button. The Clients' names and descriptions are listed in the main window by . Individual machines can be selected by highlighting the tick next to each desired Client.

If the Client is Included in the Show, the check box is displayed with a green tick ☑. The check box contains a red cross
☒ if it is excluded. Click the check boxes to include or exclude Clients from the Show, and press [Show] to start.

If you select the "Show icon on taskbar" check box, the Control Window is minimised to an icon in the Windows System Tray (this feature is not available on Windows NT 3.51).

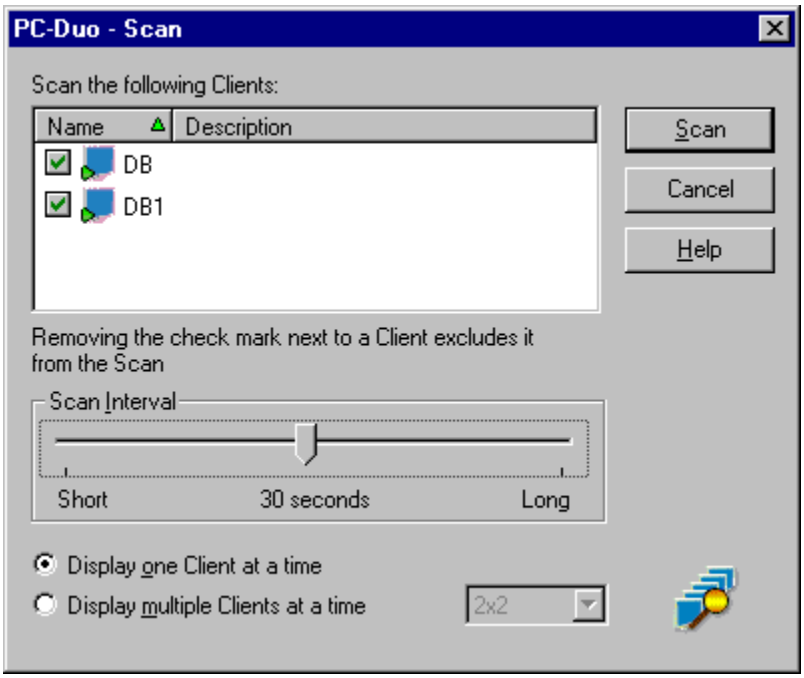
Press [Show] to begin or [Cancel] to return to the Control.

See Also
Showing your screen to Clients

Tools Menu Scan

Scanning displays the screens of one or more Clients in turn, allowing you to monitor their activities. This is useful in training and security-sensitive environments.

For more information on a particular feature, click where a ‣ appears on the picture below.



The ‣ and
‣ buttons indicate whether each Client is included or excluded from the Scan, respectively. Click on the button to change the tick to a cross and back.

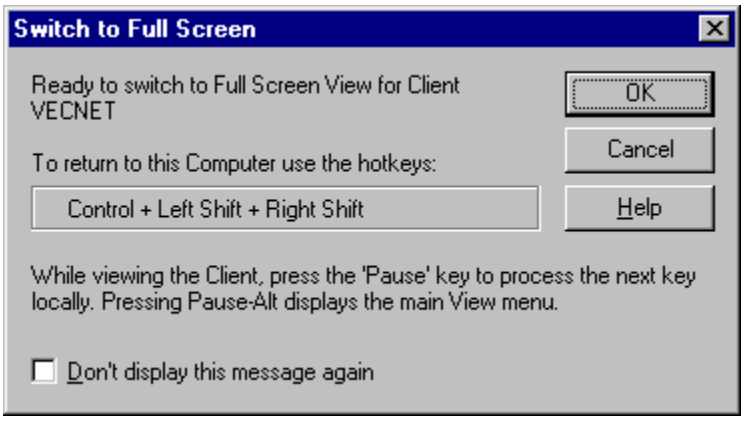
When you have selected all of the Clients that you want to include, and decided how many to display at the same time, press the [Scan] button to start scanning. The Scan window will open, displaying the first Client's screen(s).

See Also
Scanning Clients

Switch to Full Screen

When you are viewing a Client you can maximise the viewing area by making the View Window "full screen" on the Control. This dialog is displayed to confirm the switch to Full Screen mode.

For more information on a particular feature, click where a ➧ appears on the picture below.



In Full Screen mode, a Floating Toolbar is displayed over the Client's screen. If the Client is running at a lower screen resolution than the Control, the View Window will be positioned at the top left corner of the Control's display. If the Client's resolution is higher, the View Window will have scroll bars.

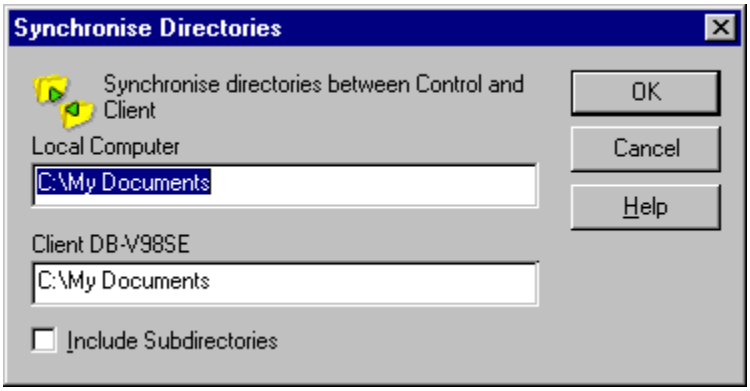
When you are in Full Screen mode, you need a way to return to your local computer. Press the Hotkey combination shown to switch back to Windowed mode. This combination can be changed in the Settings for Configuration: View dialog.

See Also
Maximising the View Area

Synchronise Directories

PC-Duo enables you to synchronise the contents of selected directories on the Control PC and Client PC. When you synchronise two directories, any new or updated files in either directory will be copied to the other directory automatically.

First select the two directories you want to synchronise in the File Transfer Window, then click on the Synchronise button (shown above) in the File Transfer Toolbar. The Synchronise Directories dialog will be displayed.



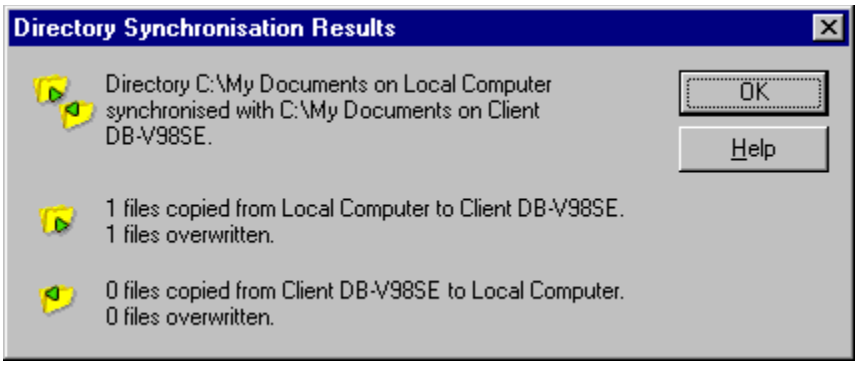
Check the paths of the two directories that have been selected. You can also include all subdirectories in the synchronisation process by selecting the Include Subdirectories check box.

Press [OK] to begin.

The Directory Synchronisation Progress dialog is displayed. When synchronisation has completed, the results will be shown in the Directory Synchronisation Results dialog.

Directory Synchronisation Results

After you have synchronised directories, the results will be displayed in the Directory Synchronisation Results dialog.



Read the information to make sure the operation has performed successfully, and then press [OK] to return to the File Transfer Window.

See also
Synchronise Directories

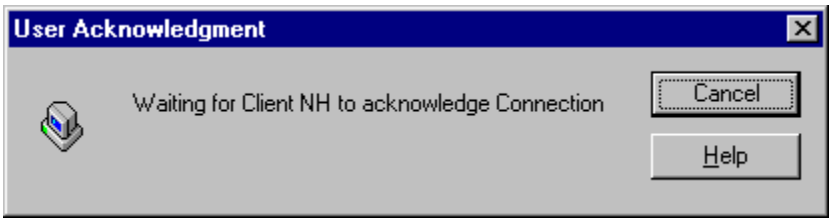
Modem Diagnostics: Terminal Window

When you are configuring your modem, you need to make sure the command strings you have entered make your modem do the right things. This window also allows you to try different command strings that are provided in your modem manual. Any text entered in the large edit window is sent directly to the modem that you configured.

If your modem is not configured to echo characters back, you can have them displayed by selecting **Local Echo** from the **Options** menu. You can use the standard Windows editing functions to Cut, Copy and paste the text in the edit window. The buttons down the right hand side of the window send the relevant command strings already defined to your modem, so you can see if they work as expected. If there isn't a command string defined for a function, the relevant button will be disabled.

See the topic Edit Modem Configuration for details about the different strings available for testing.

Waiting for User Acknowledgement



The Client you are connecting to has User Acknowledgement configured. This dialog is displayed until the user at the Client machine accepts your attempt to connect.

If no one is at the Client, you can abort the connection attempt by pressing the Cancel button.

While script is performing file operations

Meaning
You are running a script which is copying a file (or performing some other file operation) on the Client. If you wish to proceed, you can either stop the script or wait for it to finish the file operation in progress.

Cannot do xxx while the File Transfer window is open

The Control cannot perform the requested action while the File Transfer window for the Client in question is open.

To proceed, cancel any file copy in progress and close the File transfer window.

Suggestions
Pre-v4.x, OS/2, and DOS Clients cannot perform View and File Transfer operations concurrently. Ensure that an up-to-date version of the PC-Duo Client is installed on the Client machine.

Cannot do xxx on Client xxx while you are Showing to it

The Control cannot perform the requested action while a Show is in progress or suspended.

To proceed, select Tools, Show from the menu and end the Show.

Cannot do xxx on Client while you are Viewing it

The Control cannot perform the requested action while the View Window for the Client in question is open.

To proceed, cancel any file copy in progress and close the View Window.

Suggestions
Pre-v4.x, OS/2, and DOS Clients cannot perform View and File Transfer operations concurrently. Ensure that an up-to-date version of the PC-Duo Client is installed on the Client machine.

Are you sure you want to send Ctrl+Alt+Delete to Clients ‘xxx’?

Meaning
Only Windows NT Clients respond to this command (by displaying the Windows NT Security dialog).

You cannot connect to a Client while Show is running or Suspended

The Control cannot connect to a Client while a Show is in progress or suspended.

To proceed, choose the Tools, Show menu command and end the Show.

Error nnn: Unable to delete file ‘xxx’ from ‘xxx’

Meaning
There was an error deleting the file from the specified machine.

Suggestion
Make sure the file is not read only or open in another application, the diskette is not write-protected and you have sufficient rights to delete files.

Dial another remote network?

Meaning
Your attempt to dial a remote network failed. You can opt to dial again, or to switch to working on the local network.

Dial Remote Network ‘xxx’ and connect to Client ‘xxx’?

The Client to which you wish to connect resides on a remote network. This which requires the Control to dial the Bridge at that site in order to make the connection. You will lose any connections to Clients on the local network if you do this.

Application ‘xxx’ ran successfully at Client ‘xxx’

Meaning
The application you ran at the Client was executed successfully. Note that this does not necessarily mean that the application completed successfully - just that it started up OK.

Enter the directory to Goto

Meaning
You can type a directory name in this box to position the directory tree in the left-hand pane to the directory in question .

You are currently connected to Remote Network ‘xxx’

The Client to which you wish to connect resides on the local network, but you are currently dialled into a Remote Network . The Control must hang-up the phone (and disconnect from the currently connected Client) before it can connect to Clients on the local network.

Error opening file xxx

Meaning
The file specified cannot be found, or cannot be opened.

Suggestions
Check the file exists, you have sufficient rights to access it and it is not open in another application. If the file is on a file server, the network connection could possibly have failed.

No files specified!

Meaning
You must specify at least one file to import.

Please select one or more files from the list.

All connections will be lost on remote network ‘xxx’. Are you sure you want to Hang-up?

Meaning
You are trying to disconnect from a Remote Network and you are being asked for confirmation before this is done. Any Clients that you are connected to on the Remote Network will be disconnected.

Specify the transport for the Client List File xxx

The Control needs to know which transport protocol is required to access the Clients in the specified file. You can change individual Client icons by hand after the import completes, if required.

Configuration ‘xxx’ not found

You specified a Control Profile that does not exist when creating a Control icon.

Suggestions
Select **Configure** from the Network menu, go to the startup tab, and open the Icons dialog. Then drag the offending icon from the desktop to this dialog to edit it.

There is no disk in drive ‘xxx’ on ‘xxx’

Meaning
You have tried to access a floppy drive or CD-ROM drive that does not have a disk in it.

Suggestions
Insert the relevant media into the specified drive and try the operation again.

Directory xxx does not contain a WCONTROL.INI file

The Control reads the WCONTROL.INI file to obtain a list of CLF/GLF files to import. This file normally resides in your WINDOWS directory.

If you no longer have this file, leave the box blank and the Control will build a list of files in the specified directory. You will then have to enter the transport protocol for each file you elect to import.

You cannot perform a Scan while Show is suspended

The Control cannot perform a Scan while a Show is in progress or suspended.

To proceed, choose the Tools, Show menu command and end the Show.

You cannot perform a Show while a Scan is running

The Control cannot perform a Show while the Scan window is open.

Close the Scan window and try again.

Not a valid PC-Duo Replay file

Meaning
The file you have selected is not a valid Replay File. It has either become corrupted or is not a PC-Duo Replay File.

Suggestions
Check the selected file and its location to make sure that it is a valid Replay File.

You cannot modify a Clients Include Status during a Show

The Control cannot include or exclude a Client while a Show is in progress or suspended.

To proceed, choose the Tools, Show menu command and end the Show.

Warning: ‘xxx’ is not a text file. Edit it anyway? (data will be lost)

Meaning
The file you are about to edit does not appear to be a plain text file. If you proceed and edit this file, the contents may be unreadable and the result will be a truncated file.

Suggestions
Transfer the file to a working directory the Control machine and open it with it’s associated application.

The PC-Duo Bridge is using the modem

You are trying to dial a Remote Network whilst running a Bridge on this machine. Only one program can use the modem connection at a time. If you want to proceed with the call, the Bridge can be unloaded whilst you make the call and loaded again after the call is complete.

Suggestions
You can unload the Bridge if it is not being used.

Connection Failed. Do you want to remain connect to Remote Network ‘xxx’?

Meaning
This Named Configuration dials a Remote Network at start up and connects to a Client. This Client was not available on the Remote Network and you have the option to remain dialled up or hang-up the phone.

Suggestions
You can alter the Startup settings to specify a different Client name to connect to. You can browse for Clients on the Remote Network while you are connected it.

There is already a Remote Network called 'xxx'. Please choose a different name.

Meaning
You are attempting to create or rename a Remote Network object and have supplied the name of an existing Remote Network. You cannot proceed using the name supplied.

Suggestions
You must supply a different Remote Network name, or cancel the operation.

Are you sure you want to send Ctrl+Alt+Delete to the selected Clients?

Meaning
Only Windows NT Clients respond to this command (by displaying the Windows NT Security dialog).

Warning: ‘xxx’ is too long. Edit it anyway? (data will be lost)

Meaning
The file you are about to edit is too large (more than 30K bytes) for the internal editor. If you proceed with this action, the file will be truncated and data will be lost.

Suggestions
Transfer the file to a working directory the Control machine and view it with Notepad or WordPad.

One of the directories for Synchronisation is a root directory. Are you sure you want to Synchronise ‘xxx’ and ‘xxx’?

Meaning
You are about to synchronise a root directory, which is a potentially destructive operation, as it will overwrite any files / subdirectories which are newer on one machine than on the other (and vice-versa).

Drive ‘xxx’ on ‘xxx’ is write protected

Meaning
The specified drive at the specified location is write protected and cannot be written to.

Suggestions
Make sure that the drive is write-enabled if it is a floppy disk. Also, make sure you have sufficient access rights to write to a shared network drive.

Script Editor: Window menu

The Window Menu contains the usual Window manipulation functions, allowing you to alter the positions of child windows, or to close them all.

Any currently-open Script file windows are appended to this menu, allowing you to select a specific file.

Windows 95 Networking Requirements

This section sets out the Networking requirements for running PC-Duo under Windows 95.

NetBEUI and NetBIOS
If you are using PC-Duo in a Windows 95 environment configured for NetBIOS support as the default then no further changes are required to either the Client or the Control workstations.

If NetBEUI is not the default NetBIOS Adapter, then you must make sure that the Control and Client are configured to use an alternate NetBIOS Adapter.

Use NBSTATUS to determine NetBIOS Adapter Numbers and then set the Adapter Number using the Configurator.

Note
We do not advise running the Client on NetBIOS over TCP/IP - it will hang, GPF or reboot the machine.

IPX
Make sure that all machines are using the same frame type. You can check/change this in Control Panel, Network, IPX/SPX Compatible Protocol, Properties, Advanced, Frame Type.

If you have an NE2000 card or compatible, and you experience unreliable or slow connections, you need to use real mode NDIS driver. This is because there is a "problem" with the enhanced mode driver supplied by Microsoft for this card.

You can change this by running the Windows command {Control Panel},{Network},{NE2000}, {Properties},{Driver Type}. If you are using the Enhanced mode NDIS driver, change to the Real mode NDIS driver. This uses about 10k of DOS memory.

If you have a PCI Ethernet card, and you experience unreliable or slow connections try using the real mode NDIS driver. Alternative solutions are using the card in NE2000 compatible mode if it supports it or switching to another protocol.

If your system completely locks up, expand file nwlink.vxd from the release disks and copy it to your win95\system, directory. The version of this file shipped with Windows 95 and Windows 95B contains a "problem", but it does not seem to affect all machines. This affects both the Control and the Client.

TCP/IP
If you are using PC-Duo in a Windows 95 environment configured for TCP/IP support then no further changes are required to either the Client or the Control workstations.

Connecting by hostname on Windows 95B seems to take forever if you have configured a Domain Name Server in {Control Panel},{Network} but the server is not available.

Dial-up Networking
Both the Client and the Control work correctly over Windows 95 Dial-up networking with all protocols.

You can use Windows 95's Dial-up Networking to dial into your Internet service provider (TCP/IP only), a RAS server or any other PPP server. See the RAS section for Setup information.

If using IPX make sure that all machines are using the same frame type. See Windows 95 - IPX.

Windows 3.x Clients

If a Client will be accessed whilst it is in Windows 3.x you must install a Windows Client. This will then provide access to that workstation in Windows and DOS boxes under Windows. You install a Windows Client via the Setup program.

For Windows and Win95 the Client program is WCLIENTW.EXE. It is loaded via the [Boot] section in SYSTEM.INI and takes the following format:

```
WCLIENT=path\WCLIENTW.EXE Clientname /Upp [parameters]
```

Setup configures this for you when you install PC-Duo. Any subsequent change or customisation is accomplished using the Configurator.

You can use switches when loading the Client program to tailor the access and security on the Client to meet your exact needs.

The Configurator automatically creates the Commands for loading a Windows Client and amends your SYSTEM.INI entries for you.

Notes
If a Windows 3.1x Client is to be accessed over a Comms link, the Setup and Configuration programs will also append the Bridge commands to WCLIENTW.EXE.

If support is also required for when the Client exits Windows to DOS, you must load a DOS Client, either IPCLIENT or NBCLIENT before starting Windows. The Windows Client will then communicate through the DOS TSR.

Windows NT Client

If a Windows NT PC is to be accessed and controlled, you must install the 32-bit Client application.

The Client is loaded via the Registry as a service before the NT Login. This provides the capability for Remote Login to NT Clients.

Setup configures this for you when you install PC-Duo. Any subsequent changes or customisations are accomplished using the Configurator.

Notes
Any problems loading or running the Client are recorded in the **System Event Log**, and can be viewed with the Event Viewer program supplied with NT. Look for entries of type **Error** from source **PCISYS**. The file WINNT\SYSTEM32\PCIMSG.ERR may also contain error information.

If a Windows NT Client is to be accessed over a Comms link then we recommend that you use the NT Remote Access Service (RAS). Alternatively, you can use a Windows Bridge on another workstation on the Network or the Standalone Bridge on the NT workstation to be accessed.

Windows NT Client - Full Screen DOS Box Support

The Windows NT Client supports full-screen DOS applications using a TSR, NTFSDB.EXE, which must be loaded in each DOS session.

Setup adds NTFSDB.EXE to WINNT\SYSTEM32\AUTOEXEC.NT, which is the file run when a DOS session initialises. You can remove or comment out this line if you do not want to use this feature. This will make more memory available to your DOS applications.

NTFSDB uses about 12k of DOS memory, and usually loads high. To get a list of NTFSDB command line options, type NTFSDB /?. If you want to use any of these, or disable full screen DOS box support, edit AUTOEXEC.NT manually.

PC-Duo does not currently support 32-bit console applications, nor does the NT 32 bit command processor (CMD.EXE). You can get around the latter problem in one of the following ways:

- Set up an icon to run the DOS application from the desktop
- Start your DOS application from a command window, then press <Alt+Enter>. When the DOS application terminates, press <Alt+Enter> again to return to Windowed mode
- Set up an icon to run COMMAND.COM. Note that if you do this, you lose the 'command line recall' facility
- Use a third party DOS shell

If you see an "out of environment space" message when using a COMMAND.COM icon, append "/E:1024" to the icon's command line.

If you want to set your PATH or any other environment variable, from a batch file, use NT's FORCEDOS command, e.g. FORCEDOS setpath.bat

Windows NT Networking Requirements

This section sets out the Networking requirements for running PC-Duo under Windows NT.

NetBEUI and NetBIOS

If you are using PC-Duo in a Windows NT environment configured for NetBEUI and/or NetBIOS support as the default protocol then no further changes are required to either the Client or the Control workstations.

If NetBEUI is not the default then you must make sure that the Control and Client are configured to use an alternate NetBIOS Adapter.

Use NBSTATUS to determine NetBIOS Adapter numbers, or use the Windows Control Panel's Network dialog to check the NetBIOS Interface.

IPX

To run a Client or Control on IPX, ensure that you have installed IPX support.

To run a Control under IPX , you must install "Client Service for NetWare" from {Control Panel},{Network}. If you do not actually use a NetWare server, you may experience annoying delays in DOS boxes after you do this. This can be prevented by using {Control Panel},{Services} to stop the Client Service for NetWare and set its Startup type to Disabled.

If you are using Novell's IntranetWare Client for NT, you must install the PC-Duo NT Client **after** installing the Novell Client.

We have encountered some problems with some NE2000 compatible Ethernet cards. The symptoms are poor performance and Clients disconnecting for no reason. We have no workaround for this - we believe that the problem lies in the NT drivers.

Make sure that all machines are using the same frame type. You can check/change this in {Control Panel},{Network},{IPX/SPX Compatible Protocol},{Properties},{Advanced},{Frame Type}.

TCP/IP

If you are using PC-Duo in a Windows NT environment configured for TCP/IP support then no further changes are required to either the Client or the Control workstations.

Note that if your machine has more than one IP address, the Client will only report the first in the Application Event Log and in the about box. It will listen on all IP addresses, however.

Dial-up Networking (RAS)

The Windows Standalone Bridge can be run on NT with certain limitations. This section discusses running PC-Duo over RAS.

RAS can be used both as a dial-in server and for dial-out.

You can also dial into a RAS server using Windows 95 Dial-up Networking or from Windows 3.x with Trumpet Winsock, which supports TCP/IP only. You can also use RAS to dial into your Internet service provider or any other PPP server.

Dialling out from NT 3.51

If your modem is not supported, try Generic 144 PCMCIA Modem

If you have problems establishing a connection, try editing file WINNT\SYSTEM32\RAS\MODEMS.INF and put the following at the start of the [Responses] section:

```
CONNECT_EC=<cr><lf>CARRIER <carrierbps><cr><lf><ignore>
```

This stops RAS from changing the PC-to-modem baud rate.

IPX

If you do not have a NetWare server on the LAN to which the RAS server is connected, you must assign a non-zero IPX network number to that LAN on the RAS server machine and any other machines that assign this number must use the same value.

On NT 4, this is done from {Control Panel},{Network},{Protocols},{NWLink IPX/SPX Compatible Transport},{Properties}.

On NT 3.51, you have to set registry entry HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\NwLnkIpx\NetConfig\NE20001\Network Number to the required *hex-ASCII* string value. Replace NE20001 with your particular network card.

If you do not have a NetWare server on the LAN to which the RAS server is connected, you must also set nets= in the [IPX] section of WCONTROL.INI on the *Control* machine.

The Control's Browse function may not work - see Lookup does not find the loaded Clients.

When dialling out from an NT machine, you may need to set the Frame Type in {Control Panel},{Network}, {NWLink IPX/SPX Compatible Transport},{Configure}. Select Remote Access Wan Wrapper from the Adapter list.

NetBIOS

With the link dialled up, run NBSTATUS on the Control machine to determine the correct NetBIOS Adapter number to use at the Control to connect to Clients over the link.

Under NT, you can also check NetBIOS Adapter numbers in {Control Panel},{Network},{Services}, {NetBIOS Interface}.

TCP/IP

Ensure that your gateway and DNS or WINS server are correctly set up in {Control Panel},{Network}, {TCP/IP Protocol},{Configure} or {Properties}. Test this using PING.EXE.

Wrong password

You have supplied an incorrect password to a Client during the connection attempt.

The Client will reject your connection attempt until you supply the correct password.

Suggestions
Check to make sure you have spelt the password correctly. PC-Duo passwords are not case sensitive, so UPPER and lower case characters are treated the same. Spaces are significant, however.

Wrong version Client installed on Client machine

Despite what it says, this message means that the version of the PC-Duo Client installed on this PC does not match the version of the Control that you are using.

Suggestions
Reinstall PC-Duo on this machine.

‘*xxx*’ error (adapter *nnn*), operation: *nnn*xH, code: *nnn*xH

Meaning
An unexpected Network error has occurred.

Suggestions
Use the Control Panel's Network icon to check that your machine's networking support is configured correctly.

See Also
Technical Reference

xxx failed to run at Client. Error Code *nnn*

Meaning
You attempted to run an application on the selected Client machine that could not be executed successfully. The error code supplied is the DOS error code of the failed operation. If you do not specify a path to the file, the Client will attempt to find the application in the *path* environment on the Client machine, and the operating system directories.

Suggestions
Check to make sure that the application name you entered is valid. Try supplying the full path to the application filename if you haven't already done so.

'*xxx*' has disconnected, is not responding or has timed out

Meaning
The specified Client has either disconnected, stopped responding or has timed out. If there was a period of inactivity that exceeded the timeout specified on the Client machine, you should increase this value.

Suggestions
- The Client machine has been turned off, has hung or the Client has been unloaded
- The network has failed or excessive traffic has been generated to interfere with tickle packets
- The Client has timed out
- There was insufficient network resources to keep the connection alive.

Tips
- Check to make sure that the Client machine is reliable and applications that run on this machine do not utilise all the processor time.
- Contact your network manager and see if anything can be done to remove bottlenecks or improve overall network performance.
- Check the Inactivity Timeout on the Client machine to make sure that it is not disconnecting too soon after detecting the Control is missing.
- Try configuring your network drivers to provide more resources for running applications. See the Technical Reference section for more details.

xxx has wrong version of CLIENT installed

Meaning
The version of the PC-Duo Client installed on the target machine is not compatible with this version of the Control.

Suggestions
Update the Client on the target machine or try running the corresponding (older) version of the PC-Duo Control on this machine.

xxx is a demonstration Client. It will deactivate after 5 minutes use

Meaning
You are connecting to a demonstration Client instead of a full or evaluation Client. Demonstration Clients time-out after 5 minutes of use and must be restarted.

Suggestions
You should upgrade your demonstration Client for a time expiry Client license or purchase a full copy.

xxx is in use by another program or window

The Control is unable to use the specified communications port as another application is currently using it.

This may also occur if you are already running another Control and that has dialled a Remote Network, or if there is a Bridge running on this machine.

Suggestions
Shut down any applications or NT Services that may be using the communications port. If you are running a Bridge, you can unload it by displaying the Client application window and choosing the Commands, Unload Bridge menu command.

xxx is in use. Please select a different configuration and try again

Meaning
You are trying to delete the Configuration that is currently in use. The operation will be aborted.

Suggestions
If you really want to delete this configuration, select another configuration (creating it if necessary) to be the current one and then try deleting this configuration again.

xxx is not a valid serial port (use com1 - com4)

Meaning
An invalid serial port has been specified in the Settings for Configuration: Dialin Bridge dialog.

Suggestions
Select Settings, Control Panel, System, Device Manager from the Start menu to check the valid ports on your machine.

‘*xxx*’ is not configured correctly (*xxx*)

Meaning
There was a problem initialising the specified Network transport.

Suggestions
Use Control Panel, Network to check that the transport protocol in question is installed and configured correctly.

See Also
Technical Reference

xxx is wrongly configured (no modem specified)

The PC-Duo Bridge that you are attempting to connect to does not have a modem configured correctly.

Configure a modem on the Bridge machine using the Configurator and try again.

xxx ran successfully at Client

Meaning
The application you ran at the Client was executed successfully. Note that this does not necessarily mean that the application completed successfully - just that it started up OK.

You are currently performing a Scan. Are you sure you want to exit?

You are in the process of Scanning one or more Clients and are about to close the Control program.

Click You must confirm that you want to Exit from the Control. All Clients will be disconnected.

You are currently performing a Show. Are you sure you want to exit?

Meaning
You are in the process of performing a Show to a number of Clients and are about to close the Control program down. You are being asked to confirm this action before continuing.

Exiting will stop the Show and release the Clients.

You cannot save as '*xxx*'; please choose another name

Meaning
To avoid potential confusion, the settings for modem 'Hayes Compatible' cannot be changed. Please save under a different name.

You do not have sufficient rights to modify the Client list

Meaning
The Control Profile that you are currently using has its Client List set to read-only. This means that you cannot add new Clients to the list or remove any.

Suggestions
Ask your Network Administrator to enable this feature for you, or ask them to make the necessary changes to the Client list.

You do not have sufficient rights to modify the Group list

Meaning
The Control Profile that you are using has the Group List set as read-only. You cannot modify this list.

Suggestions
Ask your administrator to enable this feature for you, or ask them to make the necessary changes to the Group list.

You do not have sufficient rights to modify the Remote Networks list

Meaning
The Control Profile that you are currently using has its Remote Networks List set as read-only. This means that you cannot modify the contents of this list.

Suggestions
Ask your Network Administrator to enable this feature for you, or ask them to make the necessary changes to the Remote Network list.

You have reached the License limit for the number of concurrent connections

Meaning
Your licence entitles you to establish a certain number of concurrent connections. You have reached this limit. No further connections can be made unless you disconnect from other Clients first.

Suggestions
- Disconnect from other Clients first.
- Contact your vendor and inquire about upgrading your license.
- If this is an evaluation copy of PC-Duo, contact your vendor for details of turning this into a full version.

Your demonstration period has expired (dd/mm/yyyy)

The temporary license for this copy of PC-Duo has expired. Evaluation and Pending Registration Licences typically expire 30 days after installation.

Suggestions
If you intend to continue using PC-Duo you should contact your supplier and purchase a fully licensed copy (you know it makes sense).

Program not Available

Windows Help could not start the requested program. It is not available on this system.

Concepts

Most PC-Duo activities are initiated by a user running the Control application. This user, known as a "Control", can scan the network for controllable PCs, known as "Clients". Once this has been done, the Control can perform one or more of the operations described below.

Available Clients

A Client is activated by loading a Client program. The Windows Client is loaded when Windows starts up. Once loaded, the Client becomes *Available* for access by a Control.

A range of Security Features are provided to control access to Clients. For example, a Client can be configured to require a Control user to specify a password before a connection can be established.

A Control can Connect to one or more Clients, or it can Send and Broadcast Messages or Show its Screen contents to all Available Clients. Individual Clients can be configured to Ignore Broadcast Messages or Accept Broadcast Shows from a Control.

Bridge

The PC-Duo Bridge is a module which is loaded on a Client in order to provide dial-in access to that Client or to any other Client on the same Remote Network. The Client can be a standalone or networked workstation.

Broadcast Packet

A packet that is addressed to all workstations on a network rather than to a specific network address.

Chat

This is a text discussion between the Control and one or more Clients.

Client

The Client is the PC-Duo component which allows remote control access to a PC. When the Client program has been started, the PC becomes *Available* for access by a *Control*.

Client Groups

You can collect Clients together into Groups for faster and easier access. You can connect to all of the Clients in the Group at once and carry out operations such as File Distribution to all of the Clients simultaneously. Groups are stored in the Groups folder in the Control Tree View.

Client Profile

The Client configuration contains one or more *Profiles*. These are maintained using the Configurator. The Master Profile defines the majority of the Client's configuration settings. Any other Profiles provide a list of alternative accessibility and security settings. When a Control user attempts to connect to the Client, the Profile list is searched to establish whether the Control's request can be accepted. The connection will be affected by any restrictions set for that Profile. If no suitable Profile is found, the connection attempt will be rejected.

Connected Clients

When a connection has been established, the Client is listed in the Quick View bar. The Control can send a Message or Show its Screen contents to the Connected Clients only, rather than to all Available Clients. In addition, Control can select one of the Connected Clients for special attention. Connected Clients can Request Help from the Control. This request appears on the Control screen immediately.

The Control or any of the Connected Clients can open a two-way Chat session in which text typed by either user is displayed on both screens. This allows a simple dialogue to take place.

The Control can also restrict the output from Chat, Exhibit, Message and Show functions to a subset of the Connected Clients without disconnecting the others.

Control Mode
When a Client is being Viewed in *Control Mode*, only the Control user can type or use the Client's mouse. If there is a user at the Client PC, anything they type or do with the mouse is ignored.

Control Profile
This is a named configuration which is available for use by the Control program. It contains details of the transports required to access Clients, as well as security settings. Profiles are created using the Control Tools Menu. You can create Profiles with different access and functionality levels for different Control users.

File Distribution
This function can be used to transfer files simultaneously to multiple Clients or to a Group.

File Transfer
A Control can perform a variety of file maintenance operations between itself and the Selected Client. These include copying, deleting, and renaming files, creating or deleting directory trees, changing file attributes. These functions are controlled from the File Transfer dialog.

Gateway
The PC-Duo Gateway provides a simple mechanism to access Clients that are located behind an Internet Firewall. Suitably configured Clients register with a Gateway when they start up. A Control can then browse the Gateway for any registered Clients that are using a matching Gateway Key.

Gateway Key
This is an encrypted, 7-15 character string that Controls and Clients use when they are connected to a PC-Duo Gateway. While the Gateway can store several Keys, each Client and Control can only use one Key to register with a Gateway. Controls browsing the Gateway can only see Clients using a matching Gateway Key.

Group Chat
The Control user can create a discussion group, including one or more of the Connected Clients.

Known Clients
A Control can Browse the network for Available Clients. When the Control connects to a Client, it stores its name in the *Known Clients* database. This can be viewed in the Clients Tree View folder.

Clients can also be collected into *Groups*. Up to *12* Known Clients or a Group of Clients can be can be chosen for simultaneous *connection* using Connect/Disconnect or Group Connect.

Long Filenames
16-bit operating systems such as DOS and Windows 3.1 limited file names to 8 characters with a dot followed by a three character file type or extension. 32-bit operating systems such as Windows 95 and NT allow file names to be up to 255 characters long.

PC-Duo supports long filenames in File Transfer. They are converted to short filenames when files are transferred to a short filename only system.

MAC Address
This is the physical address that was allocated to the network interface card when it was manufactured. It is normally in the format of twelve hexadecimal digits, e.g. 0000F8323507. The PC-Duo Control stores a Client's MAC address in the *Known Clients* list when it connects to that Client. The Control or a Script can

then use this to power-up the Client if its network adapter supports Advanced Power Management (Wake on LAN).

Network Administrator
This is one or more persons with sufficient access rights to create Control Profiles for other Control users.

Remote Access Service
The Remote Access Service (RAS) is supplied with Windows NT and provides a server which permits standalone PCs to connect to the server's network using *Dial-Up Networking*. RAS supports IPX, NetBEUI and TCP/IP network transports. Once the dial-up connection has been made, the PC becomes part of the server's network.

Remote Communications
This is the term given to dial-up access using PC-Duo. This allows a Control to dial a *Bridge* running at a remote site. The Bridge provides access to Clients running on IPX, NetBIOS, or TCP/IP networks. This is similar to Microsoft's Remote Access Service (RAS) but uses a different protocol.

Remote Control Access Modes
PC-Duo provides three remote-control access modes: *Control*, *Share*, and *Watch*. All three modes allow the Control user to view the Client's screen. In Control, mode, the Client's keyboard and mouse are disabled, so that only the Control user can enter commands. The Client's screen can also be blanked. In Share mode, both Control and Client users can use their keyboard and mouse. In Watch mode, the Control's keyboard and mouse are disabled. All three modes can be used during a normal remote control session and also when Exhibiting (Showing) one Client's screen to the other Connected Clients.

Clients can be configured to disable Control keyboard or mouse input.

Remote Network
A Remote Network allows you to access Clients at the remote site using PC-Duo *Remote Communications*. You can create many Remote Networks (using Add a Remote Network), but a Control can only connect to one at a time.

Scan
This provides an alternative way to monitor a number of Clients. The Control cycles around the Selected Clients, displaying each screen in turn.

Screen Scrape Mode
This mode is useful to view applications such as Web applications and games that do not use the Windows GDI interface to display their output on the Client's screen. In this mode, the Client reads the screen contents directly from the display adapter and sends the pixels to the Control. This is not as efficient as intercepting the GDI commands and usually places a much higher load on the network connection between the Client and the Control. Remote control performance is not as good, but the application can be seen.

Selected Client
The Control can easily Select any one of the Connected Clients by highlighting it in the Control List View. When a Connected Client is *Selected*, the Control can send a Message or Show its Screen to that Client only. The Control can access the Client in *Control*, *Share*, or *Watch* modes, or it can *Exhibit* the Client's screen to the other Connected Clients.

The Control can also perform File Management operations on the Client, or transfer files between the Control and the Selected Client. Clients can be configured to allow or refuse file accesses from a Control.

Share Mode

When a Client is Viewed in *Share Mode*, the Client and Control users can *both* type and use the mouse.

Show

A Control can display its screen contents on one or more Connected Clients. This can be useful for training. In Show mode, the keyboard and mouse on each Client is disabled. The Ready to Start Showing dialog can be used to restrict the Show output to a subset of the Connected Clients without disconnecting the others.

Tickle Packets

Normally when a Client is connected to a Control, they send each other a tickle packet every 18 seconds. This allows them both to check that the connection is still working and the other is still active. There may be occasions when the use of tickle packets is undesirable, for example over ISDN, where the line could be dropped if there was no activity. You can disable tickle packets for both the Client and the Control.

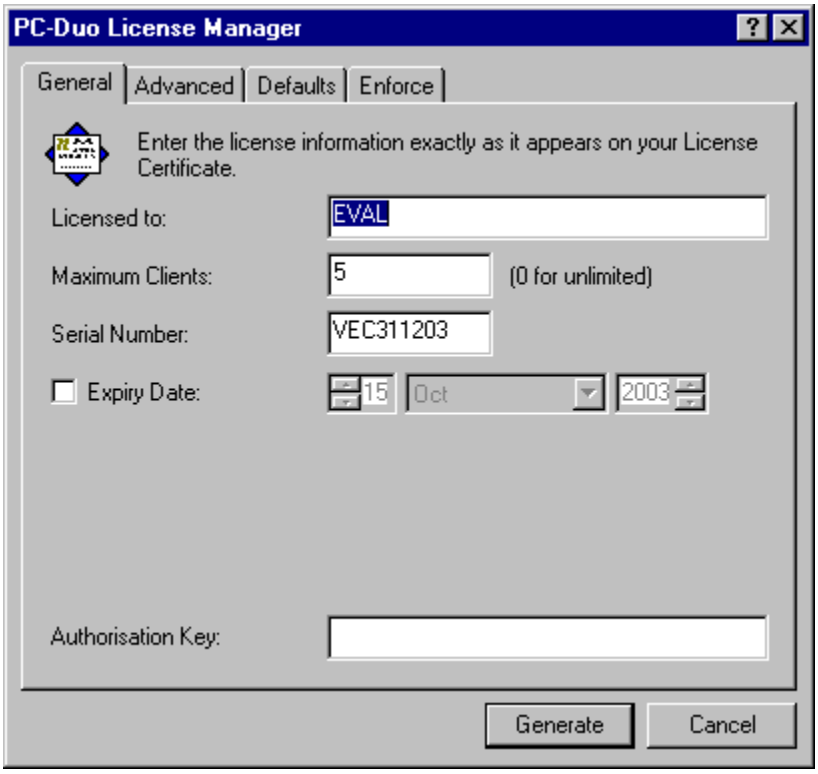
Watch Mode

When a Client is being Viewed in *Watch Mode*, only the Client user can type or use the Client's mouse. Anything the Control user types or does with the mouse is ignored by the Client.

Apply a Key: General

Double-click on the "Apply a Key" icon in the PC-Duo Group to apply a new licence.

For more information on a particular feature, click where a ➧ appears on the picture below.



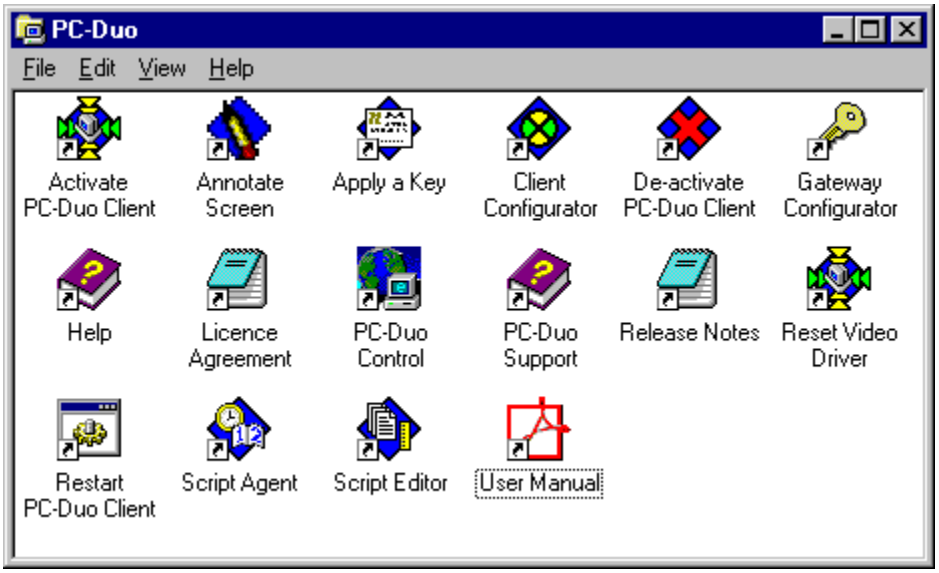
The General tab shows details of the current licence. Enter the new key details exactly as they are on your Product Authorisation Certificate. Check the Advanced, Defaults, and Enforce tab settings if your certificate tells you to.

Lastly, press [Generate] to apply the key and write a new licence file, NSM.LIC.

If this produces an error message. Check that you have entered the details correctly.

The PC-Duo Group

For more information on a particular feature, click where a ➧ appears on the picture below.



The PC-Duo Group contains icons for all of PC-Duo's Windows programs except for the Windows Client, which is loaded automatically when Windows starts.

New Features

The following features are new in PC-Duo v8.1:-

General Features

- The Gateway Configurator includes a new communications timer
- Domain names can be used in place of the Gateway IP address in Client Configurator or the Control's Add a Gateway Wizard.

Remote Control

- The ability to configure Screen Scrape mode on or off in the Client Profile
- A Screen Capture feature has been added to the View and Scan Windows. It allows you to capture the contents of the Client's screen to a file in Bitmap, JPEG, or Portable Network Graphic formats. The new commands are accessible from the View Window Tools Menu and the Scan Window Clients Menu. A Capture button can be added to the View Window Toolbar
- The Annotate Screen feature is now available in the View Window as well as during Show. An Annotate button can be added to the View Window Toolbar.
- The Annotate Screen tool is also available for use at the Client from its shortcut in the PC-Duo Program Group

Security Features

- Logoff on disconnect for Windows 95, 98, and ME.
- The Chat feature can be disabled at the Client. This disables the Client's Client Menu, Chat command and prevents the Client User from initiating a Chat

The following features were new in PC-Duo v8.0:-

General Features

- New Gateway module facilitates access through Internet Firewalls
- New Gateways folder in the Control Tree View stores access details
- New HTTP transport used by Control and Client to access Gateways
- Redesigned configuration dialogs for the Control and Client
- Support for Virtual Network Computing (VNC) Clients
- New Control Command Line options
- Small Icons can be used to reduce the size of the Control, View, File Transfer, and Registry Editing toolbars
- Dual-Channel ISDN Bonding and Multiple Subscriber Numbers (MSN) are available for Remote Networks
- The Client's system tray icon shows when a Bridge is loaded

Remote Control

- Shell Extensions allow Remote Control and Chat from Network Neighborhood
- Send Beep in Chat

File Transfer

- Improved Delta File Transfer enhances performance

Security

- Improvements to User Acknowledgement
- New Client Logoff, Lock, and Reboot Options
- The Client can force the Control to use at least a minimum level of encryption

Security Features

PC-Duo can provide invisible network access to Client PCs. It is important that a range of access controls are available so that you can make an appropriate choice for your site. The following options are available:-

- Audit Trailing
- Built-in access restrictions
- Multiple Client Profiles
- Multiple Control Profiles
- Data Encryption
- Key-controlled access restrictions
- Password-protection of the Client
- Password-protection of the Control
- NT Security
- Replay Logging
- Security Keys for Client and Control
- User Acknowledgement at the Client

These are described in more detail next.

Audit Trailing

The PC-Duo Client can log operations to a file on all platforms, or to the Application Event Log on Windows NT, 2000, and XP. These are enabled through the CLIENT32.INI: Security dialog in the Configurator. The log can help to maintain an Audit Trail for the Client.

Audited events include:-

- Client Startup, including name, version, transport, and address (IPX and TCP/IP)
- Control Connect, including the Control name and address (IPX and TCP/IP)
- Login attempts, including the supplied user name, if the Client is configured for NT Security
- Remote Control sessions
- File Transfers, including reading, writing, renaming, and deleting files
- Control Disconnect
- Reboot and Shutdown

The Control can be configured to log similar events to a file using the Settings for Configuration: Logging dialog.

All log entries include the date and time as well as the Client or Control name and any other relevant information. This allows the log files to be shared by more than one Client or Control.

Built-in Restrictions

The Client can be configured to require Client user acknowledgement before a Control connection can be established. Similarly, a Control user can be prevented from using Remote Control or File Transfer functions.

These restrictions are applied using the Configurator. See CLIENT32.INI: Security for example.

Data Encryption

Encryption can be applied to all exchanges between the Client and Control. This makes it essentially impossible for an eavesdropper to monitor these exchanges. Encryption is enabled at the Control using the Settings for Configuration: Security dialog. Supplied algorithms range from 56-bit DES to 256-bit AES.

Key-controlled Restrictions

When you order a PC-Duo licence key, you can specify whether the key should enforce Disable File Transfer or Watch Only restrictions. Licence keys are applied using the Apply a Key program in the PC-Duo program folder.

Lock Workstation on Disconnect

Logging off an NT Client may be undesirable, especially if it is performing a task which will take some time or is at the other end of an unreliable connection. The Client can lock instead.

Logoff on Disconnect

This option allows a Control to force the NT Client to logoff when it disconnects.

NT Security

Windows NT, 2000, and XP Clients can be configured to authenticate a Control's username and password using NT Security. The Control must be a valid NT user to connect to the Client.

Password Protection

PC-Duo stores all passwords in an *encrypted* form. Passwords can be applied to Clients, Controls, and Bridges. In its simplest form, password protection restricts access to those Control users who know the correct *unencrypted* password for a Client. When a Control attempts to make a connection to a password-protected Client, the user will be challenged to enter the correct password. Failure to enter the correct password will prevent the Control user from using any remote control functions other than Message.

Client and Bridge passwords are applied using the Configurator CLIENT32.INI: Security and CLIENT32.INI: Dialin Bridge dialogs.

The 32-bit Control can also be password-protected through its Control Profile. In this form, the correct password must be entered before the Control will perform any functions at all.

Reboot on Disconnect

This option allows a Control to force a Windows 3.x or 95 Client to reboot when it disconnects.

Replay Logging

PC-Duo provides a Replay function as a security feature. When a Control Views a Client that has been configured for Replay, all activity undertaken during the remote control session is recorded in a file. This file can be stored in a secure location. The Control can also make use of the facility to record a remote control session. The resulting files can later be replayed through the Tools Menu Replay command.

Security Key

The access controls described above do not prevent a Control user from accessing any specific Client PCs. Given a compatible network transport and the correct username and password, any Control user potentially has full access to all Clients. A Security Key will prevent an unauthorised Control from connecting to a Client at all. In its simplest form, the Client will only allow connections from Controls which have a matching licence key serial number, but arbitrary Security Keys can also be applied.

The Client's Security Key is applied using the Configurator, CLIENT32.INI: Connection dialog. The Settings for Configuration:Security dialog is used to set a corresponding Security Key in the Control Profile.

User Acknowledgement

When enabled, this option requests the Client user to approve or reject a connection attempt by a Control. You can use this option to prevent a Control from accessing a Client while there is no user present. User Acknowledgement can be disabled when a Windows NT Client is logged off.

Control Help Menu

The Help Menu contains the following commands:

Contents
Displays the Contents of this Help File.

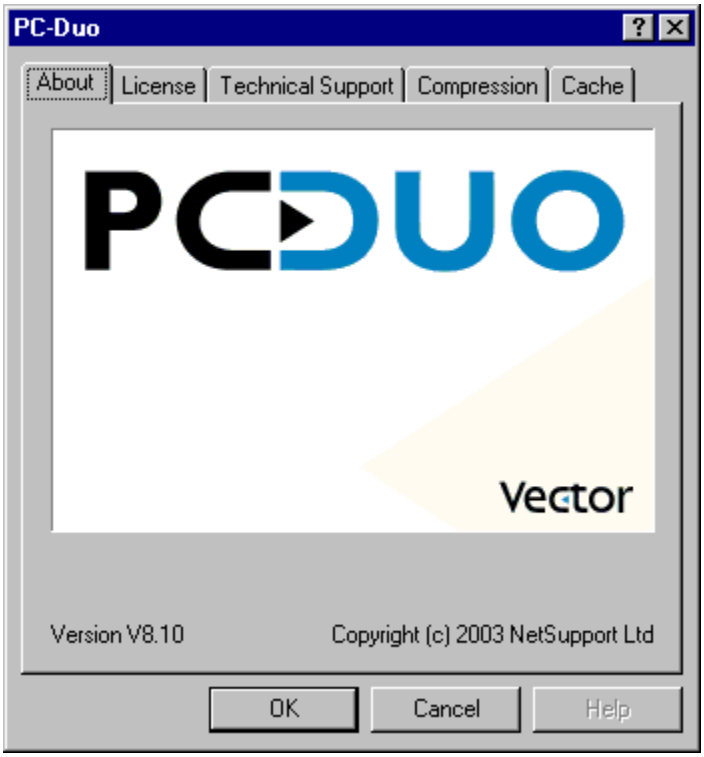
Getting Started
Takes you on a Guided Tour of the PC-Duo Control. program.

Help, About
Gives you information about the operation and performance of the Control program.

About PC-Duo

This dialog shows you the current version of PC-Duo software.

For more information on a particular feature, click where a ➧ appears on the picture below.



You can also access information on the current configuration and performance of the Control program.

Use the Browse Buttons to see the various dialog tabs.

Vector Networks

Contact details

Vector Networks Limited
4 Mercury Park
Amber Close
Tamworth
Staffordshire
B77 4RP
United Kingdom

Tel: +44 1827 67333
Fax: +44 1827 67068

Vector Networks, Inc.
3425-D Corporate Way
Duluth,
Georgia,
GA 30096
U.S.A.

Tel: 770 622 2850
Fax: 770 495 6214

Support: sales@vector-networks.co.uk
Web-site: http://www.vector-networks.com/

TCP/IP Transport Settings

The Client and Control have some common settings for TCP/IP:-

Use TCP/IP
Select this check box if you want to use the TCP/IP Windows Sockets protocol. This protocol is used in local and wide area networks, including the Internet. You may also need to specify a *Port* number.

Port
This port is used by the Control to communicate with Clients on TCP/IP. The default is port 5405, but you can configure Clients on your network to use a different port number if required. This can provide additional security, as any other Control users must know which port the Clients are using before they can be accessed. You can also specify the port number when Adding a new Client or connecting to a Client.

Test
Press this button to check the configuration and version of the TCP/IP stack installed. The Windows Sockets version and current state are displayed.

The Control's TCP/IP settings also include the following:-

Connect by Hostname (DHCP/WINS)
Normally the Control connects to a TCP/IP Client using the IP Address stored in the Known Clients database rather than by name. However, if your environment uses Dynamic Host Configuration Protocol (known as DHCP), the address may change whenever the Client PC is restarted. Select this option forces the Control to connect by hostname. The Client's Hostname is resolved using the Windows Internet Naming Service (WINS) or if WINS fails, a Domain Name Server (DNS).

IPX Transport Settings

The Client and Control have some common settings for IPX:-

Use IPX
Check this box to enable the IPX transport protocol. This protocol is most commonly used to network PCs in a Novell NetWare environment. It is routable and can be used on local and wide area networks.

Test
Press this button to check the IPX network configuration. This determines if the IPX network stack is available and configured correctly. The Control can also check which network numbers respond.

The Control's IPX settings also include the following:-

Record Clients' Network Numbers
When you connect to a Client the Control records its network number. The Control normally obtains a list of network numbers from the nearest NetWare Server, Router, or bridge, but if the Server becomes unavailable, these network numbers will be invalid. Select this option to record the network numbers. This allows the Known Clients file (CLIENT.NSM) to be copied and used by Control machines which may be located on a different network segment. Deselect this option to store the network numbers as zero.

Use Networks
The Control normally obtains a list of network numbers from the nearest NetWare server or bridge. On some networks, there is no NetWare server to ask or the list generated is unreliable. Enter one or more network numbers to use, which replaces the normal discovery mechanism. The numbers can be in decimal or hexadecimal (indicated by a leading "0x"), and must be separated by commas. For example:-

```
1,2,0x34db1d69
```

You can also use the **Test** function to determine these values automatically.

Ignore Networks
This list of network numbers is generated in the same way as for **Use Networks** except that when browsing, network numbers are ignored. You can also use the **Test** function to determine these values automatically.

NetBIOS Transport Settings

Use NetBIOS
Check this box to enable the use of the NetBIOS transport. NetBIOS is a family of non-routed protocols which are normally only used on local area networks. Common examples of NetBIOS protocols are DECnet and NetBEUI. Select which of the available NetBIOS protocols should be used by choosing one or more Adapters.

Adapters
The various NetBIOS protocols are accessed through their Adapter Numbers. This list box contains the NetBIOS Adapters that have been detected in this PC. Select one or more Adapters that are to be used. Adapter numbers are not constant and vary according to the order of installation of drivers. Consequently, they vary from one PC to another and from one Client to the next.

Test
Press this button to determine which NetBIOS protocols are available on this PC.

OK Button
Press this button to accept the current settings and continue.

Cancel
Click here to abandon the operation without making any changes.

Help

Click here to display this Help topic.

Close
Click on this button to close the dialog.

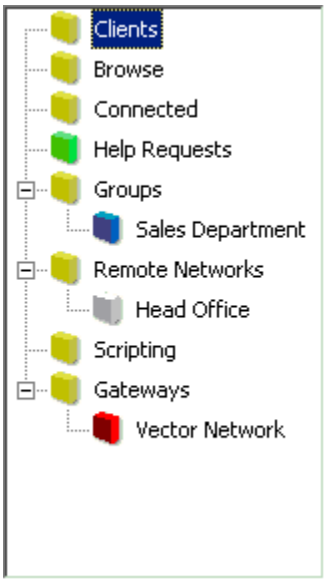
What's This?

Sorry, but What's This? help has not been implemented yet. Use the [Help] button for assistance on dialog fields and controls.

Control Tree View

Click on one of the folders in this part of the Control Main Window to display the contents in the List View pane.

For more information on a particular feature, click where a ➧ appears on the picture below.



Click on the ⊞ and
⊟ icons to open or close nested folders.

Right-click on a Group to open the Groups Popup Menu.
Right-click on a Network to open the Networks Popup Menu.
Right-click on a Gateway to open the Gateways Popup Menu.

Click on one of the box icons to display the corresponding folder or Group in the List View.

Double-click on a Client in the Clients folder to connect to it and start Viewing. Click on a Client and press the Connect button, or right-click on it and choose Connect from the Clients Popup Menu to Connect.

When you connecting to a Client, its details are stored in the Clients folder.

You can organise individual Clients into Groups. All of the Clients in a Group can be connected and worked on simultaneously without the need to connect and select them individually.

Clients that have to be connected over a dial-up link to a remote site are stored in the Remote Networks folder. Each Network's Properties contains information concerning the number to dial and the type of connection. These Clients can be on a remote network or just standalone workstations with no network.

Control Caption

The Control's name is displayed here,
indicating that this is the Control Window.

Control Toolbar

The Control Toolbar contains buttons for the most frequently used tasks and tools.

For more information on a particular feature, click where a ➧ appears on the picture below.

Select a Client, Group, or Network and click on a button to activate that function.

Click on a button to activate that function. The buttons are greyed-out when they are not appropriate.

Leave the mouse over a button to see a brief description of the function. This is known as a *Tooltip*.

You can customise which buttons appear here. Disabled functions are not visible on the Control's toolbars.

The Status Bar

The Control Status Bar is displayed at the bottom of the Control Main Window. It shows the current status of the Control, the number of Connected Clients, and the number of items in the open folder. During a Dial-up connection it will also show communications details.

List View Controls

These buttons allow you to change the appearance and sort order of the items shown in the Control List View.

Press the left-hand button to change the sort order.

Press the right-hand button to change the appearance.

Quick View

Click on one of the Connected Clients listed here to display that Client's View Window.

Tree View Widgets

These icons indicate the types of objects in the Control's Tree View and List View panes.

Icon	Description	Icon	Description
	Opens a nested item		Shows a folder
	Closes a nested item		Contains a Group of Clients
			Indicates some Help Requests
			Contains a Remote Network
	Indicates a Client		Is used for a Gateway
	Indicates a Connected Client		Is used for a Script
	Indicates a Selected Client		Is used for a Gateway
	Indicates a Group of Clients		Indicates a Remote Network
	Indicates a Client that is included in Chat, Scan, or Show functions		Indicates a Client that has been excluded from Chat, Scan, or Show functions

Tree View Folders

Clients
This folder contains all Known Clients that have been connected during the current or previous sessions. You can quickly and easily connect to any Client in this folder without first Browsing the Network or entering the network address of the Client.

Browse
Clients listed here were discovered by Browsing the Network.

Connected
Any Client that is currently Connected will be displayed in this folder.

Help Requests
Any Client user can log a request for help. When a Control next connects to that Client, the Help Request is stored in this folder. This happens immediately if the Client is already connected to a Control. The folder icon turns green to show that there are some requests in the folder.

Groups
This folder contains any Groups of Clients that you have created. Click on the icon to display the Groups, and click on the
icon to see which Clients are members of that Group. Right-click to open the Groups Popup Menu.

Remote Networks
Access details such as the telephone number for any dial-up links to remote networks are stored here. Click on the icon to display the Networks, and click on the
icon to see which Clients can be accessed on that Network. Right-click to open the Networks Popup Menu.

Scripting
Scripts that have been defined in this Control Profile are shown here.

Gateways
This folder contains any Gateways that have been defined in this Control Profile. Right-click on a Gateway to open the Gateways Popup Menu.

File Transfer Toolbar

The File Transfer Toolbar contains the most frequently used tools.

Select a file or directory and click on a button to activate that function.

The buttons are greyed-out when they are not appropriate.

Leave the mouse over a button to see a brief description of the function. This is known as a *Tooltip*.

Back

Click here to go back to the previous step.

Finish

Press this button to exit from the Wizard,
saving any changes that you have made.

Phone Number

Enter the telephone number of the remote Bridge here.
You can include a prefix needed to obtain an outside line.

Transport

The remote Bridge will be running on IPX, NetBIOS, or TCP/IP.
Specify the transport (and NetBIOS adapter number) here.

Next

Click here to continue to the next step.

Name

Enter the name for the Remote Network here. The name will be displayed in the Remote Networks folder in the Control Tree View.

Description

You can enter more details here.

Control Profiles

The Control Profiles are listed here.
The current Profile is highlighted.
Highlight another Profile and click
[Select] to change to that Profile.

Current Configuration: xxx

The name of the current Control Profile is shown here.

Settings

Press this button to change the selected Control Profile.
The Settings for Configuration dialog will appear.

Connectivity and Startup Settings

Click here to change the Transport and Startup settings for the selected Control Profile.

Select
Highlight a Profile in the list and click this button to change to the selected configuration.

New
Select an existing Profile and click here to create a new Profile based on it.

Delete

Highlight a Profile in the list and click on this button to delete it.

You cannot delete the current Profile.

Reset

Click here to restore the highlighted Profile to default settings.
Any changes you have made to this configuration will be lost.

Icons

Click here to create a shortcut on your desktop that will load a Control program with the selected Control Profile.

Name
Enter a name for the new configuration here.

Copy From
Select an existing Profile from this list.

Control Identification

Control Name
This is the name which the Control program uses to identify itself when connecting to Clients. If you leave this field empty, the Control will use the Machine Name.

Description
You can enter a description for this Control Profile here.

Control Security Settings

Password
Click on the [Set] button to password protect the Control program. Anyone starting the Control using this Profile must enter this password or the Control will not run.

Security Key
Click on [Set] to change the Control's Security Key. This is used whenever you connect to a Client. The key entered here must match the Security Key on the Client, or you will not be allowed to access the Client machine.

Prompt for Additional Information when connecting
Select this box if you want to supply a reason for connecting to a Client. This message is displayed at the Client when the Client has User Acknowledgement enabled. It shows the user why you are connecting to their PC.

Try last username before displaying login prompt
Select this checkbox to save usernames and passwords from successful connect attempts. They will be tried the next time the Control tries to connect to the Client. If the details are still valid, this eliminates the need to enter them again.

Use Compression
When this check box is selected, all data sent to and from the Client will be compressed. This typically reduces the amount of network bandwidth required for the remote control session and improves performance over a slow connection. However, compression and expansion increase the processor load at both Control and Client and this can reduce performance in a fast network.

Use Encryption
Select this check box to enable encryption on all keyboard, mouse, screen, and file data transfers. Several algorithms are available:-

- 56-bit Data Encryption Standard (DES)
- 64-bit Blowfish
- 128-bit Twofish
- 256-bit Advanced Encryption Standard (AES)

Select an algorithm appropriate to your security requirements. Longer key length algorithms typically require additional processing power and so give reduced performance remote control.

The Control will warn you when connecting if the selected encryption algorithm is not supported, such as by an older version Client.

Control Advanced Settings

Tickle Period
This setting controls the period in seconds between the keepalives or tickle packets that are sent to the Client to make sure that a Control to Client connection is still operational. If the Client does not respond, the Control will close down the connection. You can disable tickle packets altogether by entering 0 (zero).

Name Lookup Delay
This setting controls the delay in seconds between broadcast packets when a Control is Browsing the Network for Available Clients. This value is used in conjunction with **Name Lookup Attempts** to change the time required to Browse. The Control is more likely to miss Clients if this value is too small.

Name Lookup Attempts
This controls the number of times the Control broadcasts a name lookup packet when it is Browsing the Network for Available Clients.

Reducing the Name Lookup Delay and the number of Name Lookup Attempts will send less broadcasts on the network, and the browse will complete more quickly. However, do not specify values of Name Lookup Delay and Name Lookup Attempts such that the result when multiplied together is less than 4 seconds.

Transport

The appropriate network transport protocol for the Client is displayed or selected here.

IPX
The IPX protocol is used in NetWare local and wide area networks.

TCP/IP
This protocol is used on the Internet and in local and wide area networks.

HTTP
The HTTP Protocol is used for communications through the Gateway.

NetBIOS
This is the standard for Microsoft local area networks. It is not always available on wide area networks. Windows 95 or NT PCs often have more than one NetBIOS protocol installed, so you also need to choose the correct *NetBIOS Adapter Number* for a specific protocol.

NetBIOS Adapter Numbers
This box lists the NetBIOS adapter numbers and protocols that are available on this PC. DECnet and NetBEUI are common NetBIOS protocols. Select the adapter that corresponds to the NetBIOS protocol used by the Client. Adapter numbers vary from machine to machine, but the names remain constant.

Name
Enter the Client's name here.

Address

Enter the Client's network address here.
Click here for examples of addresses.
Select the appropriate transport protocol
from the Transport list below.

Connect

Highlight one or more Clients in the Control List View and press this button to connect to them.

Name or Address

You can connect to a Client by Name, Username, or Address.
Select the appropriate option and fill in the necessary details.

Clients

This folder contains the Known Clients that have been or are connected to this Control.

Browse

These are Clients that were discovered by Browsing the Network.

Connected

All currently connected Clients are displayed here.

Help Requests

This folder contains any Clients that have Requested Help.

Groups

This folder contains all of the Groups that you have defined.
Click on a Group to display the Clients in the List View.

Remote Networks

This folder contains all of the Remote Networks that you have defined.

Group Folder

Click on this icon to display the members of this Group.

Remote Network Folder

Click here to see the Clients on this Remote Network.

NetBIOS Adapter Number

The Adapter Number for each NetBIOS transport is shown here.

NetBIOS Adapter Name

When a particular NetBIOS protocol is recognised, its name is shown here.

OK
Click on this button to test the network transport.

NetBIOS Adapter Status

This box contains the detailed Adapter Status response from the selected NetBIOS transport. The information displayed here varies according to the adapter that was interrogated.

Networks reported and responding

This lists the network numbers (in hexadecimal) that were reported by a NetWare or NT Server and responded correctly. These networks are safe for the Control to use.

Use these networks

Check this box to allow the Control use these networks when part of a Client's IPX address.

Networks reported but not responding

This lists the network numbers (in hexadecimal) that were reported by a NetWare or NT Server but responded incorrectly or not at all. These networks are not safe for the Control to use.

Ignore these networks

Check this box to prevent the Control from using these networks when Browsing or connecting to Clients.

Yes
Press this button to test the IPX Networks.
The Test IPX Networks dialog will appear.

Scan
Press this button to start Scanning.

Scan the following Clients

This list displays the currently Connected Clients and their descriptions, if any.

Scan Interval

Drag the slider to control how long each Client's screen is displayed.
The scan period can be set between 2 and 60 seconds per Client.

Name
Enter a name for the Group here.
This appears in the Groups List view.

Description

Enter a description for the Group here.
This is displayed in the Control List View
in Details mode and also in Group Properties.

Available Clients not in this group

Any Known Clients that are *not* already members of this Group are displayed here.

Highlight a Client and press [Add] to add it to the Group.

Add

Select one or more of the Available Clients
and press [Add] to add them to this group.

Remove

Select one or more Clients from the Group Members list and press [Remove] to remove them from the Group.

Group Members

The Clients that are members of this Group are displayed here.
Select a Client and press [Remove] to remove it from the Group.

Add a New Client: Starting

To Display the Add a New Client Dialog

Double-click on the New Client icon (shown left) in the Clients folder, or:

Select the Client Menu, New command, or:

Press the New button (shown left) in the main toolbar and choose Client from the New Popup Menu.

The Add a New Client: Name dialog will appear.

Name

Enter the new Client name here. This is the name that the Client responds to. It may be different to the name that is displayed in the Control List View.

Location

Specify the Client's location from this drop-down list. The Client may be local or on a Remote Network. The Transport and telephone number for a Remote network is displayed underneath the list box.

I'll choose the name from a Browse list
Select this check box and press [Next>] to
Browse the Local Network for Available Clients.

Machine Name

All computers on Microsoft-style networks have a name which identifies them uniquely. This is usually the DOS Machine Name, if they run DOS, or the Windows ComputerName.

Transport

The Client's transport setting is displayed here.

Address

You can view or enter the Client's network address here. If you Browsed the Network, or the Client has been connected, its address will be entered automatically. If you remove the address, the next time you try to connect, the Control will attempt to locate the Client using its name. The address will then be updated automatically. This is useful if the address changes.

Partial Name
Enter the first part of the Client name here and press the [Refresh] button.

Refresh

Enter the first part of the Client name in the Partial Name field and press the [Refresh] button to Browse again.

Contact

A contact name for this Client can be entered or displayed here.

Phone Number

A contact phone number for this Client can be entered or displayed here.

Include this Client in Shows/Scans

When a Client is connected, you can use this check box to include or exclude the Client from subsequent Shows and Scans. You can also toggle this state in the Control List View.

Display Name

A Client Name can be entered or displayed here. When defined, this name replaces the Client Name which is displayed in the Control List View.

Description

A description for the Client can be entered or displayed here. It is also displayed in the List View in Detail mode, and in the Client Properties: Details dialog.

Status
This column shows the status of the Known Clients.

Multi-Column Display

You can change column widths by dragging the dividers at the top.
You can choose which columns are displayed from the View Menu.
You can also click on the column headings to sort according to the information in that column. Click again to reverse the sort order.

Name

This column contains the names of all Known Clients.
If you have defined a Display Name, that is shown here.

Description

The Client Description is displayed here if one has been defined.

Transport

The Client's network transport protocol is shown here.

Address

The Client's Network Address is shown here.

The List View Popup Menu

This menu allows you change the List View display.

It contains the following commands:-

Large Icons, Small Icons, List, Details
These are alternative ways to display the Clients and their associated information.

Columns
This allows you to customise the columns in the display.

Arrange
Allows you to change the sort order of the display. You can also click on the column headings to sort according to the information in that column. Click again to reverse the sort order.

The Client Popup Menu

The Client Popup Menu provides access to functions such as View, File Transfer, Chat, etc. In each case, the action is performed on the Selected Client in the Control List View.

The following commands are available:

Connect
Connects to the Selected Clients.

Disconnect
Disconnects the Selected Client.

Included
A tick by this option shows whether the Selected Clients are included in a Show and Scan.

Power On and Off
Use these commands to power on or off all of the Clients in the Group. Power On uses WakeOnLAN, Power Off uses Advanced Power Management but should be used with care as it does not perform an orderly shutdown.

View
Switches to the view window for the selected Client.

File Transfer
Opens a File Transfer Window to the selected Client.

Chat
Opens a Chat box between the Control and the selected Client.

Message
Displays a message on the screen of the selected Client.

Reboot / Logout
Reboots or in the case of NT, Logs out, the selected Client.

Execute at Client
Launches an application on the selected Client. Note that the application must be installed at the Client.

Send Ctrl+Alt+Delete
Sends the Ctrl+Alt+Delete combination to the selected Client. This should only be used for Windows NT Clients.

Delete
Deletes the selected client from the Control's database of Known Clients as stored in the Clients Folder. Note that this does not remove the client from the actual Client workstation.

Rename
Renames the selected Client as stored in the Control's database of known Clients. Note that this is an alias for this Control only. The real Client name as discovered by a Browse is unaffected.

Add to Group
Adds the selected Client to a Group.

Client Settings

Enables you to customise the settings to be used when viewing the selected Client. You can configure different setting for each Client but these will only apply during the current Control session.

Properties

Sets and Stores the properties associated with the Selected Client.

The Groups Popup Menu

Right-click on a Group in the Control Tree View to open this popup menu.

The following commands are available:-

Connect
Connects to all of the Clients in the Selected Group.

Power On and Off
Use these commands to power on or off all of the Clients in the Group. Power On uses WakeOnLAN, Power Off uses Advanced Power Management but should be used with care as it does not perform an orderly shutdown.

File Transfer
Allows you to distribute files to the Selected Clients.

Message
Displays a message on the screen of the Clients.

Reboot / Logout
Reboots the Clients, or logs them out, on Windows NT.

Execute at Client
Launches an application on all of the Clients. Note that the application must be installed at the Clients.

Send Ctrl+Alt+Delete
Sends the Ctrl+Alt+Delete combination to the selected Client. This should only be used for Windows NT Clients.

Delete
Deletes the selected Group from the Control's Groups Folder.

Properties
Sets and Stores the properties associated with the Selected Group.

The Networks Popup Menu

Right-click on a Remote Network in the Control Tree View to open the Networks Popup Menu.

The following commands are available:-

Dial
Attempts to dial the Remote Network.

Delete
Deletes the selected Network.

Properties
Displays information on this Remote Network.

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Add a Remote Network: Starting

Double-click on the New Network icon (shown left) in the Remote Networks folder, or

Select the Network Menu, New command, or

Press the New button (shown left) in the main toolbar and choose Remote Network from the New Popup Menu.

The Add a Remote Network: Name dialog will appear.

The New Popup Menu

Press the New button (shown above) in the Control Toolbar to open this menu.

The following commands are available:-

Client
This command starts the Add a New Client Wizard.

Group
This command starts the Add a New Group Wizard.

Remote Network
This command starts the Add a Remote Network Wizard.

Script Object
This command starts the Script Object Wizard.

Show
Press this button to begin the Show.

Client xxx

Select this radio button to Show the Control's screen to the named Client only, even if you are connected to several Clients. If you are connected to multiple Clients and none are selected, this button is disabled.

Show to These Clients

Select this radio button to Show the Control's screen to the Clients listed below. If you are connected to one Client only, this list is disabled.

Show Client List

All of the Connected Clients and their descriptions are displayed here.
If the Client is Included in the Show, the check box is displayed with a green tick . The check box contains a red cross
 if it is excluded.
Click the check box to include or exclude a Client from the Show.

Show icon on taskbar

You can hide the Control from your screen for the duration of a Show so that the Clients receiving the Show will not see it. Instead, a small icon is displayed in the System Tray.
Click this icon to display the Control's windows again.

System Tray Icons

Several components of PC-Duo minimise themselves to icons in the taskbar's system tray (usually located in the bottom right corner of the screen):

Both Client and Control icons are displayed here.

Icon	Description
	This allows you to access your Volume Controls
	This is the Client's icon when the Bridge is not loaded.
	This is the Client's icon when the Bridge is loaded.
	This is the Control's icon when it is minimised during a Show.
	This icon opens the Annotate Screen Tool
	This is the Script Agent's Icon
	This is the Gateway's Icon

The Client's icon is displayed when it is running provided it has not been configured for Quiet Mode or with a "Quiet Client" key.

The Control's icon is only displayed here during a Show. Double-click it to suspend the Show

The Script Agent is displayed here when the "hide when minimised" option is activated.

Start
Press this button to start the Control.

Show this screen when PC-Duo starts
Deselect this check box if you want the Control to start without displaying the Welcome Dialog.

View README.TXT

File README.TXT contains information that could not be included in the printed documentation or Help.
Click here to view the file.

Getting Started

Click here to display the Getting Started help topic.

Configure

Click in this box to change the Control's configuration settings.
The Settings for Configuration: General dialog will appear.

Welcome!
The version of PC-Duo
Control that you are running is shown here.

Previous Installation Location

Enter the location of your previous installation here or press the [Browse] button to find it.
The default location is:-

```
C:\PCD32
```

Browse
Press this button to locate a folder of directory.

WCONTROL.INI Location

If you had a previous installation, the WCONTROL.INI file is normally stored in your WINDOWS directory. Enter the location here or press [Browse] to find it. Leave blank if you do not have a WCONTROL.INI.

Select files to import

Select each item in the list displayed that you want to import.
Known Clients and Group file names are in the form XXLOCAL.*
where XX is "IP" for IPX, "NB" for NetBIOS, and "TC" for TCP/IP.
Remote Clients include the telephone number in place of "LOCAL".

Set Transport
Press this button if you need to change the transport setting.

Import Clients List

The contents of the selected Client file are displayed here.
You must select the transport for all of these Clients.

Location

This list is enabled when you are setting the transport for a Known Client file. By default, the Clients will be on the Local network, but can also be changed so that they belong to a Remote Network. Remote Networks will only appear in this list if you have included a CONTROL.DIR and have selected one or more transports for them.

Client File Name
The name of the Client File is displayed here.

Import Dial Directory

The Dial Directory entries that were found in the CONTROL.DIR file are displayed here. You must specify a transport for at least one network before the file can be imported.

Import Complete

The number of Clients, Groups, and Remote Networks that were imported are shown here.

How to Use Help

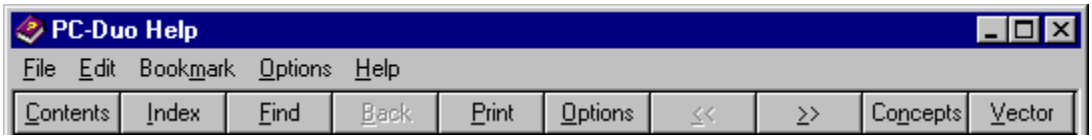
Starting Help
You can activate the PC-Duo Help by double-clicking on its icon in the PC-Duo Program Group, or while running the Control program, by pressing the F1 key or clicking on a [Help] button in a dialog box.

Help Files
Windows Help files are hypertext documents that link different topics together through Jumps or Popups.

Jumps and Popups
A Jump is shown in green and is underlined - for example: click here for an example of a Jump. Popups have a dotted underline, and produce a small window which pops up in front of the one you are looking at. For example, click here for an example of a popup.

Hotspots
Most of the Help topics contain pictures or screen-shots. These are intended to show you what the display should look like. In addition to being simple pictures, most of them also have "hot-spots". These are areas of the picture which provide access to more detailed information. Moving the mouse cursor over a hot-spot in the picture will change the normal arrow pointer into a pointing hand. Click the left mouse button when the hand appears and you can activate a Jump or a Popup. Several of the popups here actually contain a Jump.

Try it on this picture:



Contents Button
Press [Contents] to return to the Contents topic.

Index Button
Most of the Help topics in this file also have index entries. You can search for these using the [Index] button.

Find Button
You can search the Help for a particular word of phrase using the [Find] button.

Back Button
Press the [Back] button to return to the previous topic.

Print Button
The [Print] button will print the current Help topic on the default printer.

Browse Sequences
Many of the topics have been collated into sequences that you can browse, forwards or backwards, using the Browse Buttons in the toolbar.

Browse Buttons
These look like this:

Press the button with the right-pointing chevrons ">>" to move forwards in the sequence, or the one with the left-pointing chevrons "<<" to move backwards. These buttons will only work when you are in a topic that is in a sequence. They are greyed-out when you are not on a browse sequence.

Concepts Button

Press the [Concepts] button to display the Concepts topic.

Vector Button

Press the [Vector] button to display our contact details.

Guided Tours

This help file contains some guided tours to assist you.

Browse Forwards

Press this button to move forwards
through the sequence of help topics.

Browse Backwards

Press this button to move backwards
through the sequence of help topics.

Guided Tours

This Help File can take you on a number of guided tours. These tours are built as Browse Sequences. Once you have started, you can use the Browse Buttons to move forward or backward through the Tour.

The following Guided Tours are available:

- Applying a Key
- Using the Control
- Adding a New Client
- Adding a VNC Client
- Adding a New Group
- Adding a New Remote Network
- Adding a New Gateway
- Editing the Registry
- Configuring the Client
- Configuring the Control
- System Snapshot
- Scripting
- Remote Communications
- Technical Reference
- Troubleshooting
- Error Messages

This is a Jump

Press the [Back] button in the toolbar above,
or type ALT+B to return to the previous topic.

This is a Popup

Click again to return to the previous topic.

Minimise Button

Press this button to minimise the window.

Maximise Button
Press this button to maximise the window.

Find Button

Press the [Find] button to search the Help for a particular word of phrase.

Contents Button

Press this button to return to the Contents topic.

Index Button

Most of the Help topics in this file also have keywords or index entries. Search for these using the [Index] button.

Print Button

The [Print] button will print the current Help topic on the default printer.

Concepts Button

Press this button to display the Concepts topic.

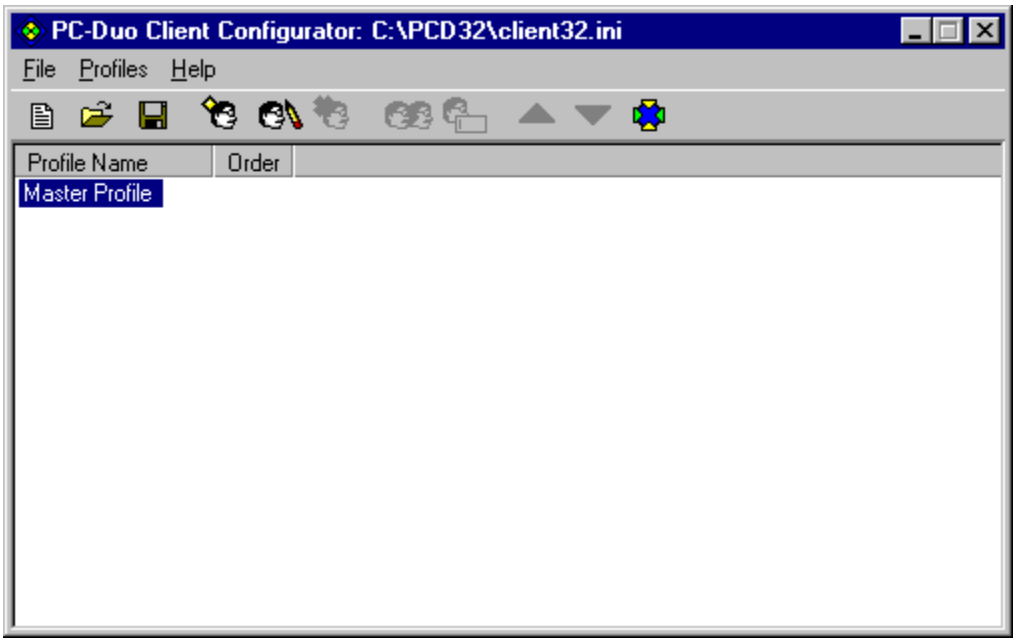
Vector Button

Press the [Vector] button to display our contact details.

Configurator: Advanced Mode

The Configurator allows you to change the Client's configuration. Most Client settings are stored in one or more CLIENT32.INI files, but as these may be shared between several Clients, some machine-specific settings are provided through the Client command line. Use the File Menu, Client Parameters command to examine and change these settings.

For more information on a particular feature, click where a ➧ appears on the picture below.



This dialog is used to examine or change the settings stored in CLIENT32.INI files.

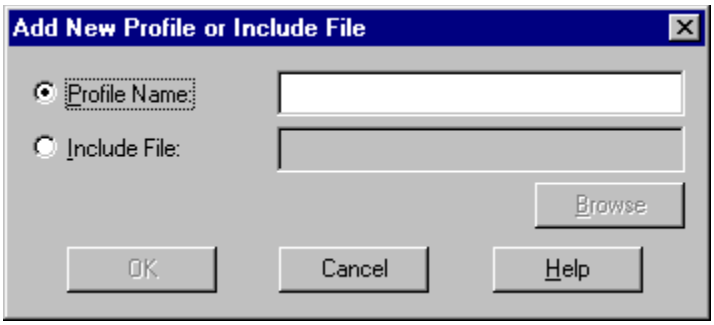
Press the Add button in the Toolbar to create a new Section or highlight an existing Profile and press the Edit button to examine or change the settings.

When a Control tries to connect, the Client works through the Profiles from the top down until it finds one that permits the Control access or it reaches the end of the list. If it does not find a suitable Profile, the Control is not allowed to connect.

Configurator: Add New Profile

First, select a Profile in the list. The new Profile will be added after this. Then, choose the Configurator Profile Menu, Add command or press the Add Profile button in the Configurator Toolbar to add a new Profile to the current CLIENT32.INI file.

For more information on a particular feature, click where a ➧ appears on the picture below.



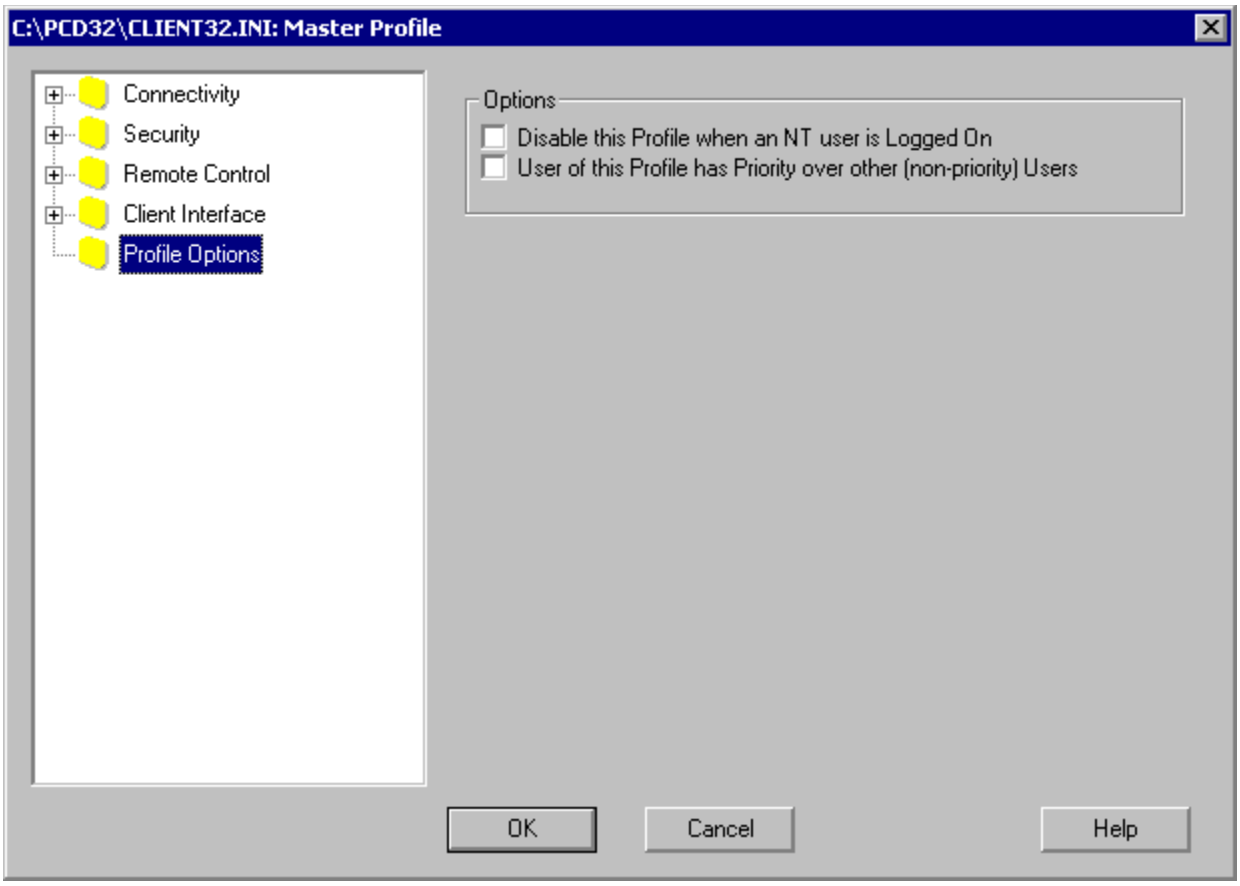
Enter the new Profile name and press [OK] to return to the Configurator: CLIENT32.INI dialog.

You can also use this dialog to include another CLIENT32.INI file in the current one. To do this, select "Include File" and enter the path to the file or [Browse] to locate it.

CLIENT32.INI: Profile Options

Select a Client Profile in the Advanced Mode Configurator and press [Edit] to open the CLIENT32.INI: Connectivity folder. Click on Profile Options to display this page. It allows you to configure the behaviour of multiple Profiles.

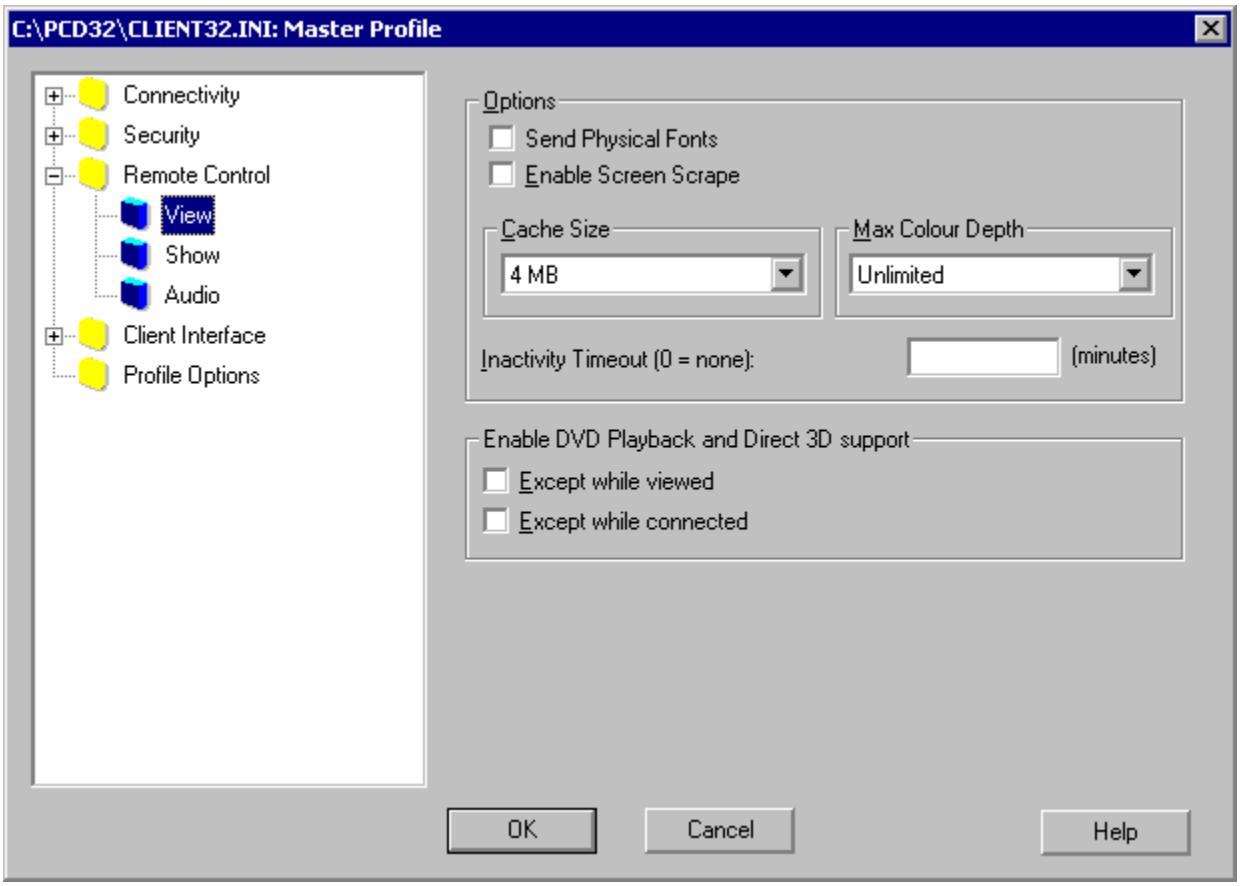
For more information on a particular feature, click where a ➧ appears on the picture below.



CLIENT32.INI: Remote Control

Select a Profile in the Advanced Configurator dialog and press [Edit] to display the CLIENT32.INI: Connectivity folder. Click on Remote Control to display this page.

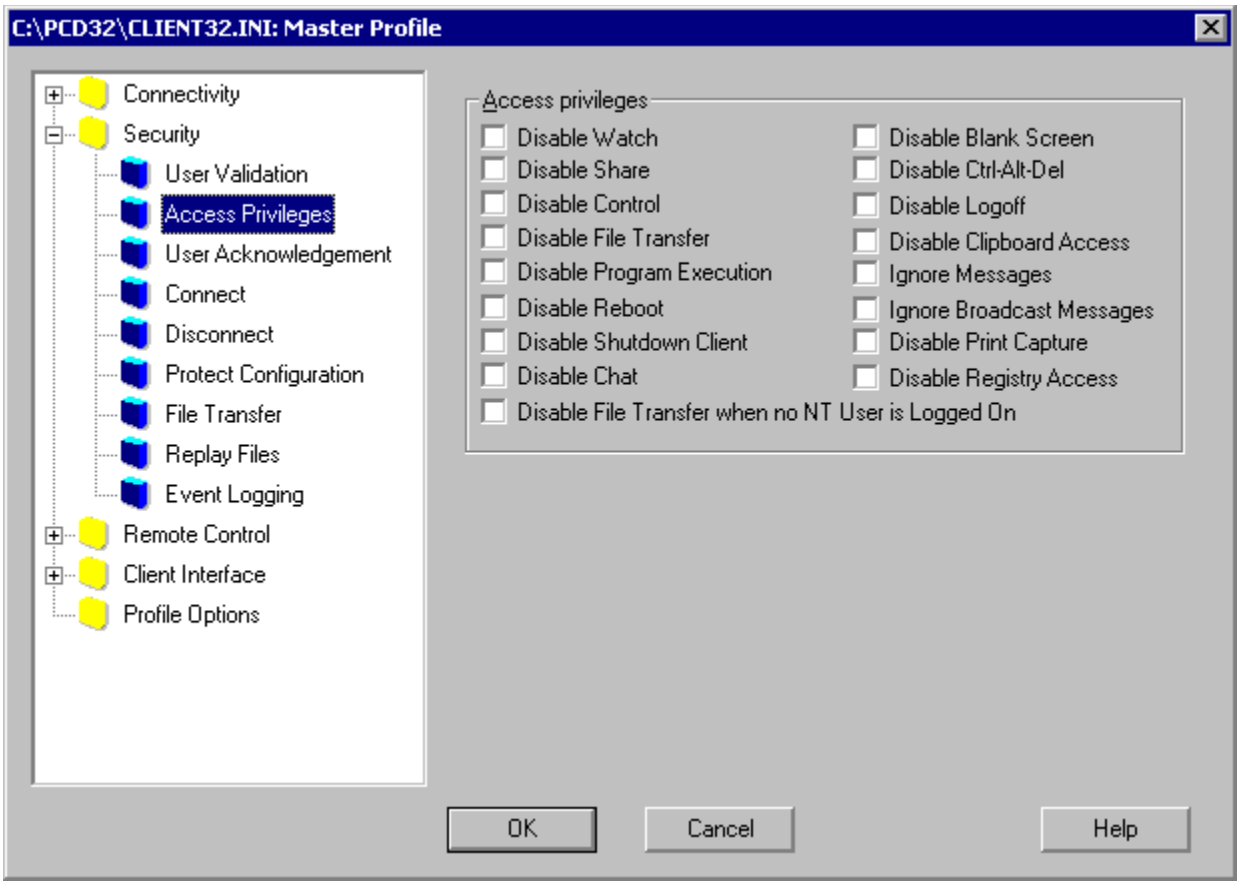
For more information on a particular feature, click where a ➧ appears on the picture below.



CLIENT32.INI: Access Privileges

Select a Profile in the Advanced Mode Configurator dialog and press [Edit] to display the CLIENT32.INI: TCP/IP folder. Open the Security folder and click on Access Privileges to display this page. It allows you to disable individual remote access features.

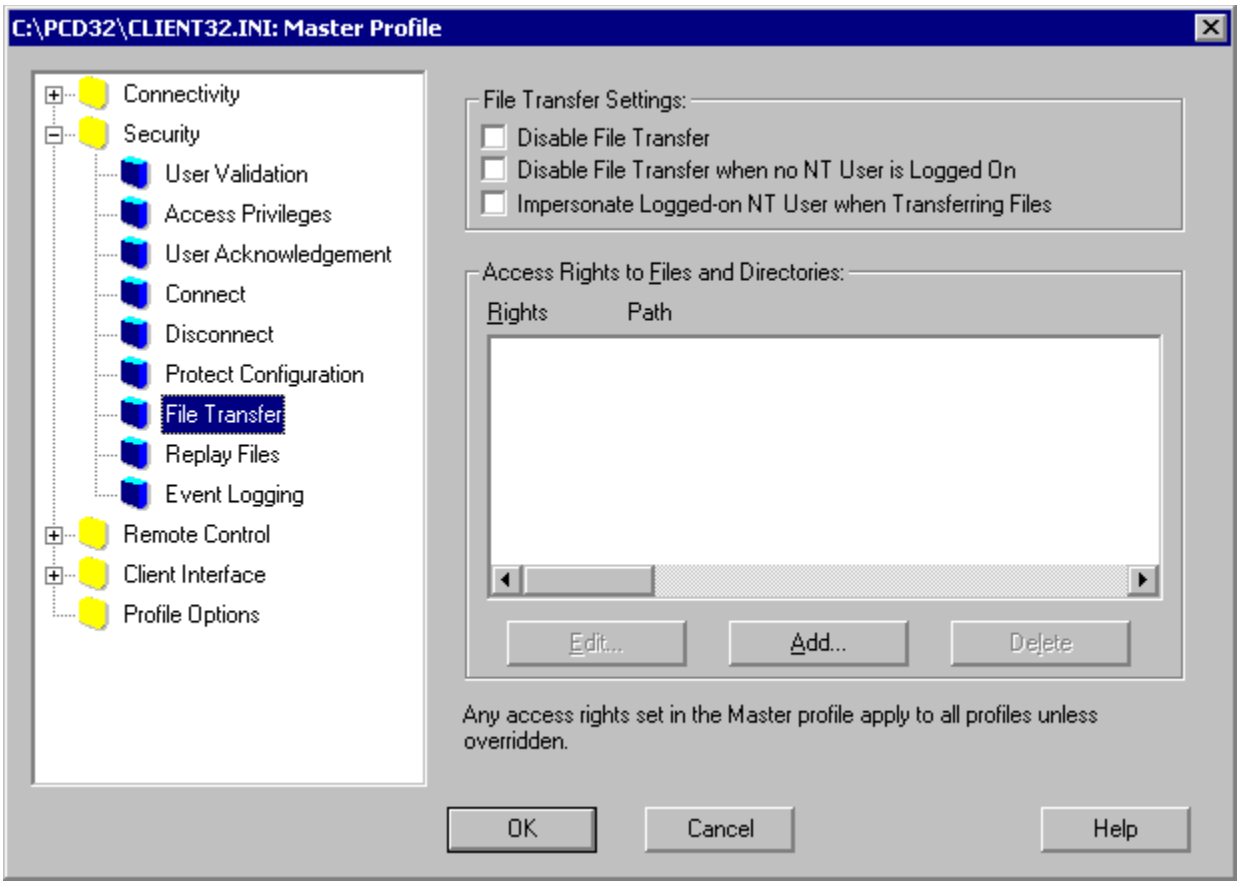
For more information on a particular feature, click where a ➧ appears on the picture below.



CLIENT32.INI: File Transfer

Select the Master Profile in the Configurator: Advanced Mode dialog and press [Edit] to display the CLIENT32.INI: Connectivity folder. Click on Security and then File Transfer to display this page. It is used to configure file access at the Client.

For more information on a particular feature, click where a ▸ appears on the picture below.

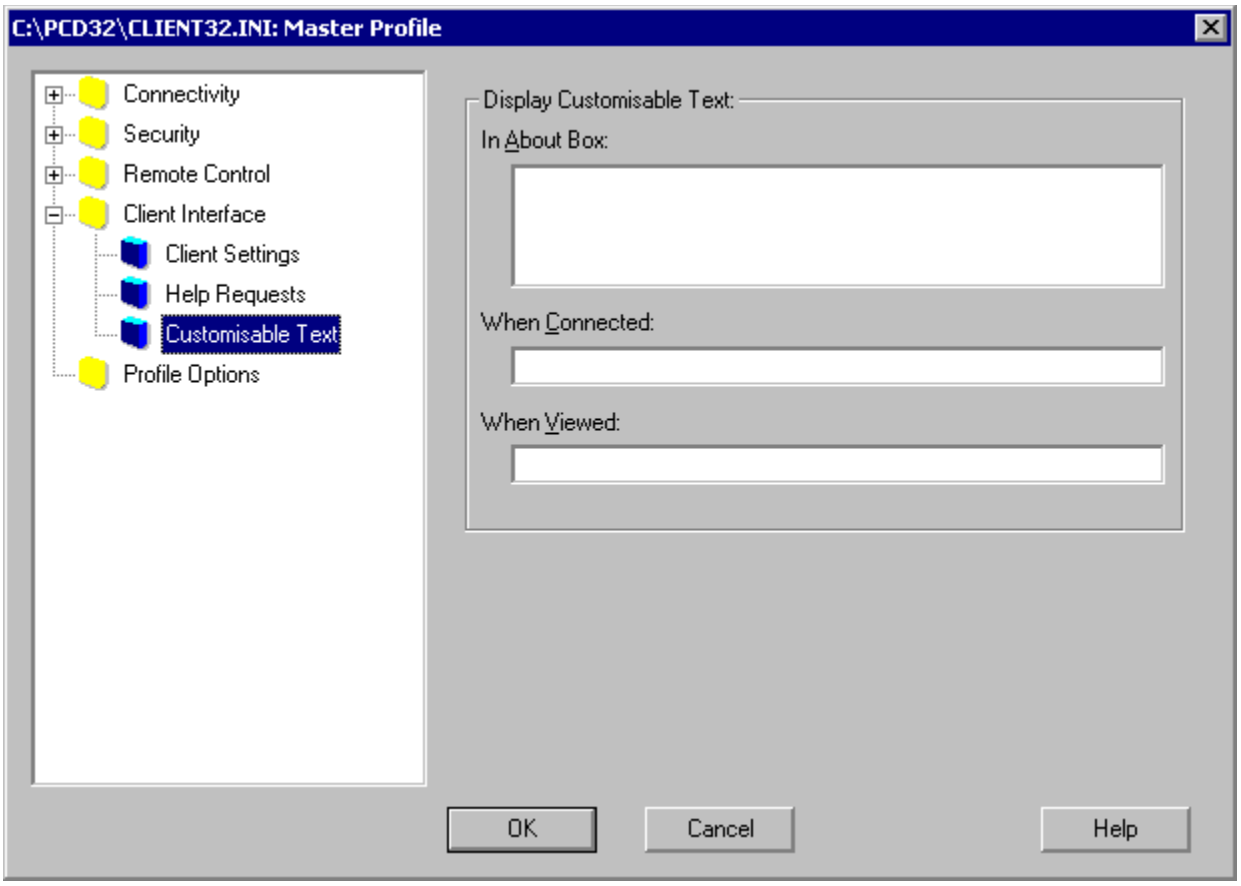


It allows you to examine and change the file access controls that are applied to this Client Profile.

CLIENT32.INI: Customisable Text

Select the Master Profile in the Configurator: Advanced Mode dialog and press [Edit] to display the CLIENT32.INI: Connectivity folder. Click on Client Interface to open that folder and then Customisable Text to display this page.

For more information on a particular feature, click where a ➧ appears on the picture below.

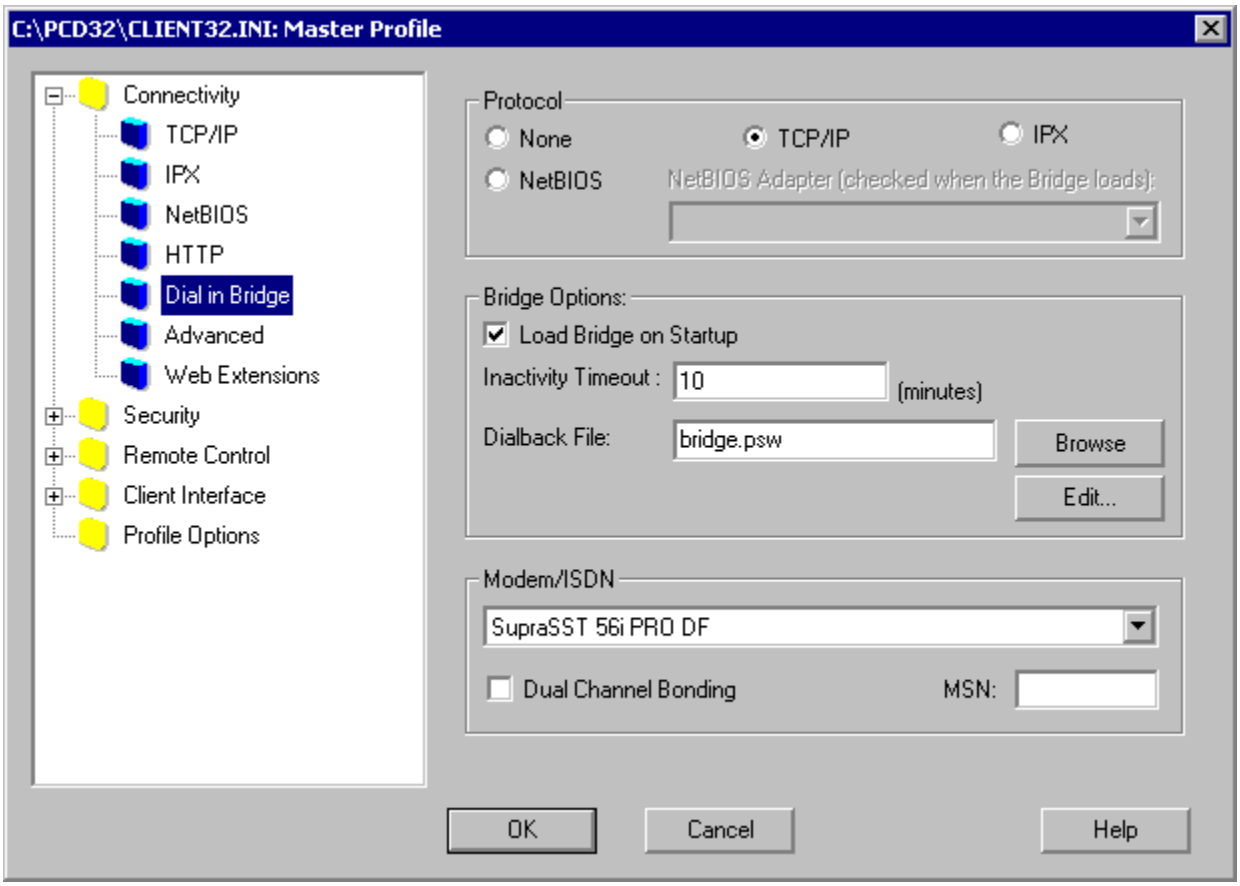


These settings allow you to provide messages that are displayed when the Client is being used.

CLIENT32.INI: Dialin Bridge

Select the Master Profile Section in the Configurator: Advanced Mode dialog and press [Edit] to open the CLIENT32.INI: Connectivity folder. Click on Dialin Bridge to display this page.

For more information on a particular feature, click where a ➧ appears on the picture below.



These settings allow you to control which Bridge protocol is used to permit remote Controls dialin access to this Client.

Initialise

This field contains the commands to enable command echo and verbose responses.
The default value is: ATV1E1

You can add additional commands to this field to override your modem defaults.

Reset

This field contains the command to reset your modem.
The default value is: AT&F

Response

This response indicates that the command completed successfully.
The default value is: OK

Connect

The modem returns this response when a connection is established.
The default value is: CONNECT

You do not need to enter the full response, only the portion that you need to wait for.

Disable Xon/Xoff Flow Control

This command disables Xon/Xoff or software flow control, and enables RTS/CTS or hardware flow control.
The default value is: empty

If this is not your modem's default setting, then this box *must* be completed if Remote Comms is to work properly.

Disable Data Compression

This command disables data compression.
The default value is: empty

If your modem does not default to data compression disabled,
then we recommend that you complete this box to make it do so.

Dial Prefix

This command tells the modem to dial the following number.
The default value is: ATDT
Use ATDP for Pulse Dialling.

Do not enter the telephone number to be dialled.
This is sent via Manual Dial or Dial Directory options.

Auto-Answer

This command enables Auto-Answer mode.
The default value is: ATS0=1

Hangup Prefix

This command returns your modem to command mode during a call.
The default value is: +++

Hangup Suffix

This command tells the modem to hang up and disables Auto-Answer mode.
The default value is: ATH0Z

Speaker Off

Check this box to turn the modem speaker off. The speaker is normally enabled until the modem to modem connection is established.

Speaker Off

This command turns the modem speaker off.
The default value is: ATM0

Comment

You can store notes regarding this configuration here.

Save

Press this button to save the revised configuration, replacing the previous one.

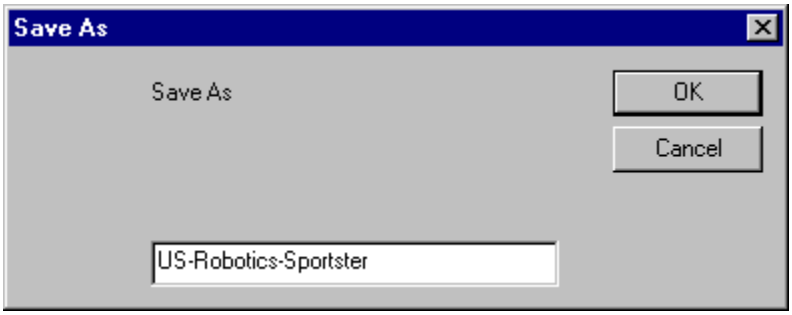
Note: You can't save the "Hayes-compatible" entry. The button is greyed-out.
Use the [Save As] button to save the configuration with a different name.

Save As
Press this button to save the configuration under a different name.

Modem name
This field contains the name of the selected modem.

Save As

For more information on a particular feature, click where a ➧ appears on the picture below.



Enter the new modem name, then press [OK].

Notes:
Names should not contain embedded spaces or tabs. Use '-' or '_' instead.
You cannot save the "Hayes-compatible" configuration. Use a different name.

Modem Name

Enter the new modem name here, then press [OK].

CLIENT32.INI Profiles

The order of Profiles in the CLIENT32.INI file is important. The Master Profile is at the top and cannot be moved as it contains general settings. Profiles nearer the top have a higher priority. You can use the Move Up and Move Down buttons to reorder the remaining Profiles.

Edit
Highlight a Profile and press this button to open the CLIENT32.INI Connectivity folder.

Add

Press this button to add a new Section to CLIENT32.INI.
It will be added after the currently-highlighted Section.

Delete

Highlight a Section and press this button to delete it.
You will be prompted to confirm deletion.

Move Up

Highlight an item in the list and press this button to move it upwards. This gives it a higher priority.

Move Down

Highlight an item in the list and press this button
to move it downwards. This gives it a lower priority.

Copy

Press this button to copy the highlighted Section, creating a new one. The new Section name is the same as the original but with a 2 at the end.

Rename
Press this button to rename the highlighted Section.

Add Profile

Press this button to add a new Profile to the CLIENT32.INI file or include another file.

Include File

Select this radio button to include another existing CLIENT32.INI file in the current one.

Profile Name

Select the Profile Name radio button to enable this field.
Then enter a name for the new Client Profile here.

Include File Name

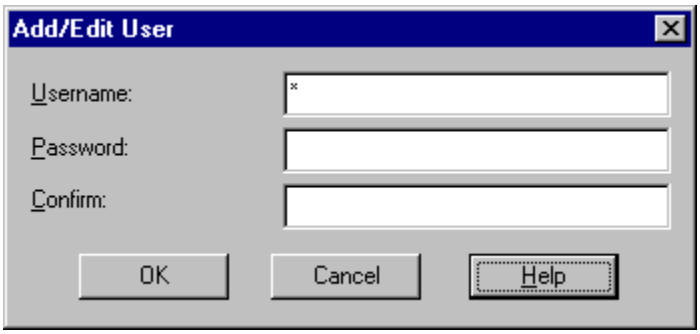
Select the Include File radio button to enable this field. Then enter the name of the file to include here or press the [Browse] button to locate the CLIENT32.INI file.

Browse
Press this button to locate the file
that is to be included in the Profile.

Configurator: Add/Edit User

This dialog is used to add specific users to the current Client Profile, Valid Users list, and also to specify access controls for a Control log file.

For more information on a particular feature, click where a ➧ appears on the picture below.



If you need to enter a Domain Name for any users that are not registered in the local domain, use the format:-

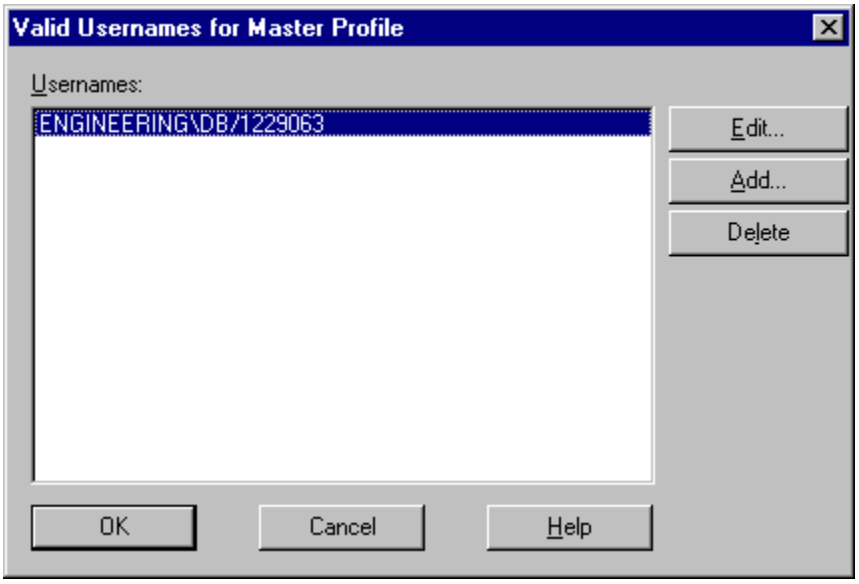
```
domain\username
```

In a Client Profile, you can permit any user to access this Client by entering an asterisk '*' as the username.

Configurator: Valid Users for Profile

This dialog allows you to add specific Usernames to a Client Profile.

For more information on a particular feature, click where a ➧ appears on the picture below.



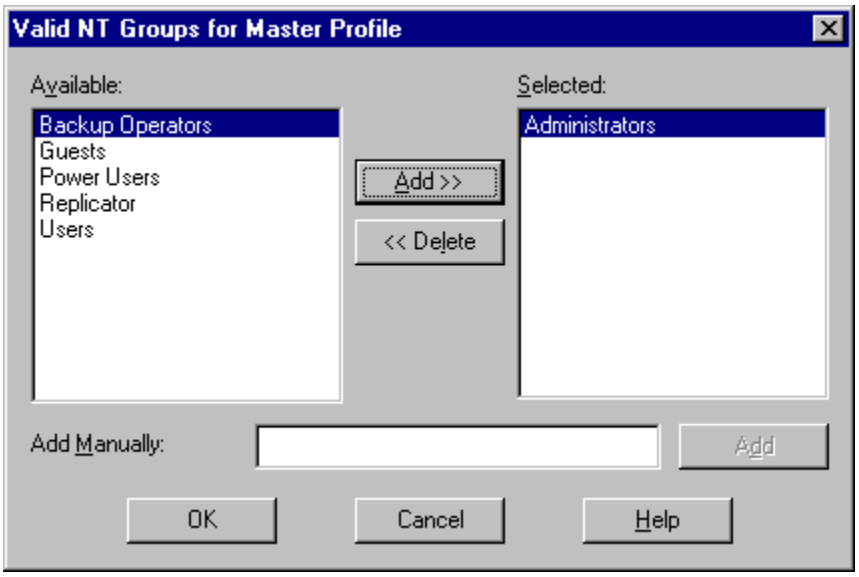
Press [Add] to add a new Username.

Highlight an existing Username and press [Edit] to change it, or Delete to delete it.

Configurator: Valid NT Groups

This dialog allows you to add NT User Groups to the current Client Profile. Any members of these Groups will be permitted access to the Client.

For more information on a particular feature, click where a ➧ appears on the picture below.



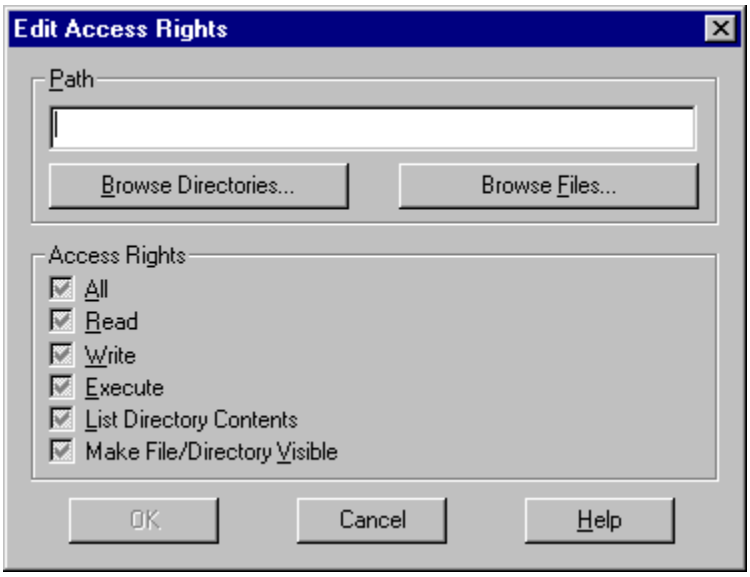
Highlight one or more Available Groups and press [Add] to add them to the Selected Groups list.

Use the Add Manually box to add a Group that is not known to the local PC.

Configurator: Edit Access Rights

When you are configuring File Transfer settings for a Client Profile, this dialog allows you to control access to particular directories or files on the Client.

For more information on a particular feature, click where a ➧ appears on the picture below.

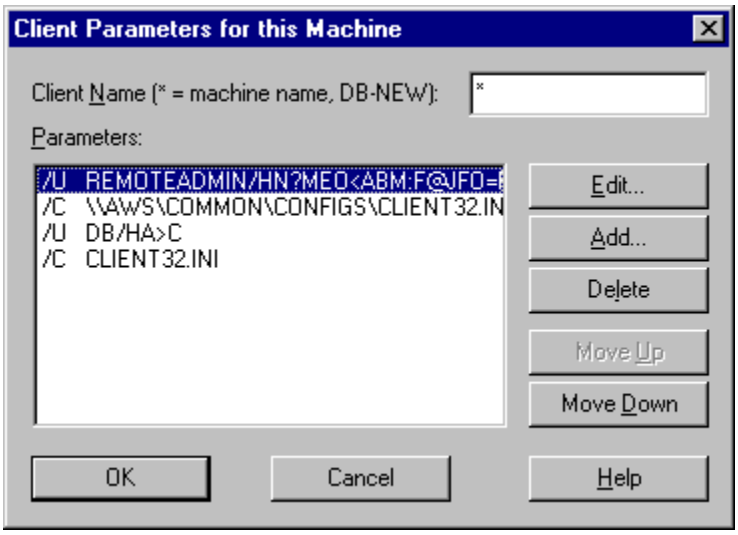


You can specify access rights to directories or individual files. Enter the path, or use the [Browse ...] buttons to find the correct location, select the appropriate Access Rights checkboxes, and press [OK] to save the settings.

Configurator: Client Parameters

Choose the Configurator File Menu, Client Parameters command to examine or change the Client's command line parameters. These specify the Client's name and which CLIENT32.INI file(s) it should use.

For more information on a particular feature, click where a ➧ appears on the picture below.



Press [Add] to add a new CLIENT32.INI file parameter. Highlight an existing parameter an press [Edit] to change it, or [Delete] to delete it. You can also change the order of CLIENT32.INI files using the [Move Up] and [Move Down] buttons.

You can specify more than one CLIENT32.INI file. In this case, the Client will use the first one that it can open successfully. That allows a networked Client to use a shared file on a File Server but fall back to a local file should the server be inaccessible when the Client starts up.

Note
Where a shared CLIENT32.INI file is accessed from a network path, it is necessary to specify any /U username and password option *before* the corresponding /C option. This provides the Client with the necessary credentials before it tries to open the file. User credentials are normally required for CLIENT32.INI files located on Windows NT, 2000, and XP servers.

Configurator File Menu

This menu allows you to select a different CLIENT32.INI file and change the Client's Command Line:-

New
Choose this command to create a new CLIENT32.INI file.

Open
Use this command to open an existing CLIENT32.INI file.

Close
This closes the current CLIENT32.INI file.

Save
This saves the current file.

Save As
This allows you to save the current file in a different location or with a new name.

Restart Client
Use this command to restart the Client after changing and saving its configuration.

Exit
Closes the Configurator.

Configurator Help Menu

This menu contains the following commands:-

Contents
Opens the Help at the Configurator Topic.

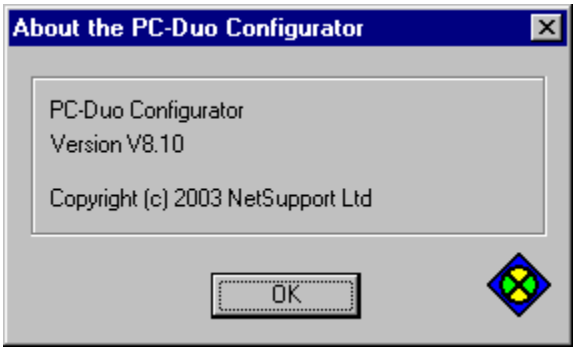
Getting Started
Displays the Getting Started Help Topic.

About the Configurator
This displays the Configurator's Help, About information.

About the PC-Duo Configurator

Choose the Configurator Help, About command to display this dialog.

For more information on a particular feature, click where a ➧ appears on the picture below.



It shows the Configurator's version number.

Client Parameters

The individual parameters and options in the Client's command line are shown here.

Edit

Highlight an entry in the Client Parameters list and press this button to edit it. The Add/Edit Client Parameter dialog will open.

Add

Press this button to add a new CLIENT32.INI file to the Client Parameter list. The Add/Edit Client Parameter dialog will open.

Delete

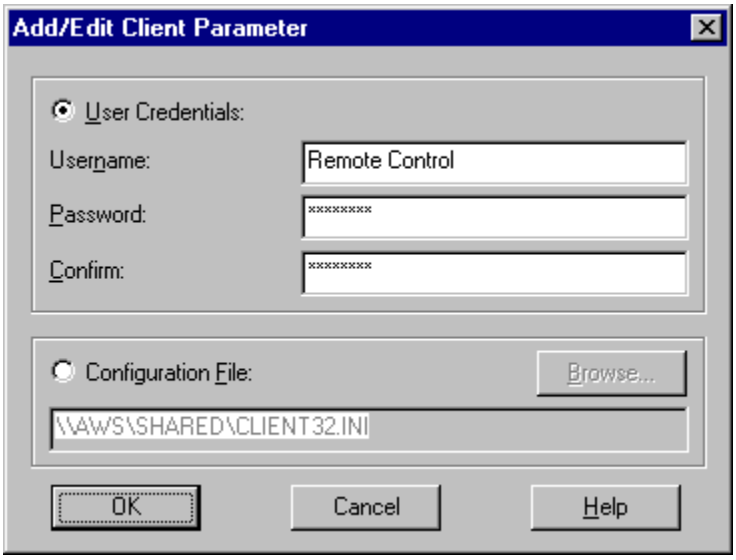
Highlight an entry in the Client Parameter list and press this button to delete it. You will be prompted to confirm before the item is deleted.

Name

The Client name is specified here. The default asterisk symbol (*) means that the Client will use the PC's machine name or Computer Name.

Configurator: Add/Edit Client Parameter

Highlight an entry in the Client Parameters list and press [Edit] to edit it.



This dialog allows you to select a different CLIENT32.INI file or specify any username and password required to access it.

Note
You cannot do both of these at the same time. If a username and password are required to access the file, then you will need to use this dialog twice: once to specify the User Credentials; and a second time to define the configuration file path.

User Credentials

Username
Enter the Username required to access the server or file here.

Password
Enter the password for the above Username here.

Confirm
Type the password again here.

Configuration File

Enter the path to the new Client Configuration file here, or press [Browse] to locate it.
Use a UNC path for a file on a server.

Allow Connection From

The default behaviour of the Client is to permit connection attempts from Controls regardless of their network addresses. This box allows you to restrict access to Controls with specific IP (TCP/IP) or IPX addresses. The same is not possible on NetBIOS networks, as they operate in a different way.

IPX
Enter any valid IPX addresses here.

TCP/IP
Enter any valid IP addresses here. It is also possible to specify a range of IP addresses using the format:-

```
90.0.0.12-25
```

Use a semi-colon ';' to delimit multiple addresses in a list.

Client Disconnect Options

These options determine how the Client will behave if the Control connected while it was logged off, but disconnected while logged on.

Lock the Workstation if not initially logged on (NT)
Select this check box if you want the Client to lock the workstation.

Logoff if not initially logged on
Select this check box if you want the Client to log the current user off on Windows NT and above.

Restart if not initially logged on
Use this option if you want a Windows 95/98/ME Client to reboot when the Control disconnects.

The above settings are ignored if the Control connected while the Client was already logged on.

Logoff if user has changed
This option can be used in combination with the other options above. When selected, the Client will log off when a Control disconnects if the logged-on user has changed during the remote control session.

CLIENT32.INI
The path to the CLIENT32.INI file is shown here.
The default location is the installation directory.

Password

Enter the password or Security Key here.
It will be echoed to you as asterisks "***".

Confirm
Type the password or Security Key again here for confirmation.

Select Another Configuration

Press this button to start the program Control with a different Profile.

Try Last Username

Select this checkbox to save usernames and passwords from successful connect attempts. They will be tried the next time the Control tries to connect to the Client. If the details are still valid, this eliminates the need to enter them again.

Startup Settings

Dial Remote Network
Check this box if you want to dial a Remote network when the Control starts. When this item is checked the list of remote networks configured is enabled. Select one of these networks to continue.

Connect to Client
Check this box to connect to a Client when the Control starts. All of the clients in your Known Clients List will be displayed here, with the transport appended to the name. For example, TEST1<TCP>.

Connect to Group
Check this box to connect to a group of Clients when the Control starts. All of the groups created will be displayed in this list.

Browse for Clients starting with
When the Control starts it can perform a Browse using the information supplied. Enter a partial Client name or leave this blank to find all available Clients. The Clients found will appear in your Browse folder in the Tree View.

Start Viewing
When you have checked one of the Connect boxes above, you have the option to view the Client when the control starts. Check this box to enable the three buttons below. This allows you to choose the way in which the Client is viewed.

Watch
Start Watching the Client or Clients when the Control starts.

Share
Start Sharing the Client or Clients when the Control starts.

Control
Start Controlling the Client or Clients when the Control starts.

Icons
Press this button to create an icon on your desktop that starts a Control with this Profile. This means that you can have several shortcuts that automatically connect to one or more Clients when run.

Disconnect Settings

Exit Program on Disconnect

When this check box is selected, the Control will exit when it disconnects from a Client. This option is normally used when connecting to a Client at startup. You can also configure the Control to disconnect when the View Window is closed. See Settings for Configuration: View for more details.

Exit Program after Hanging up the phone

Use this check box to close the Control once a dial-up to a Remote Network is bung up. This option is useful when dialling a Remote Network automatically when the Control starts up.

Note:

It can be simpler to use the Control's Command Line Syntax to start it from an external program.

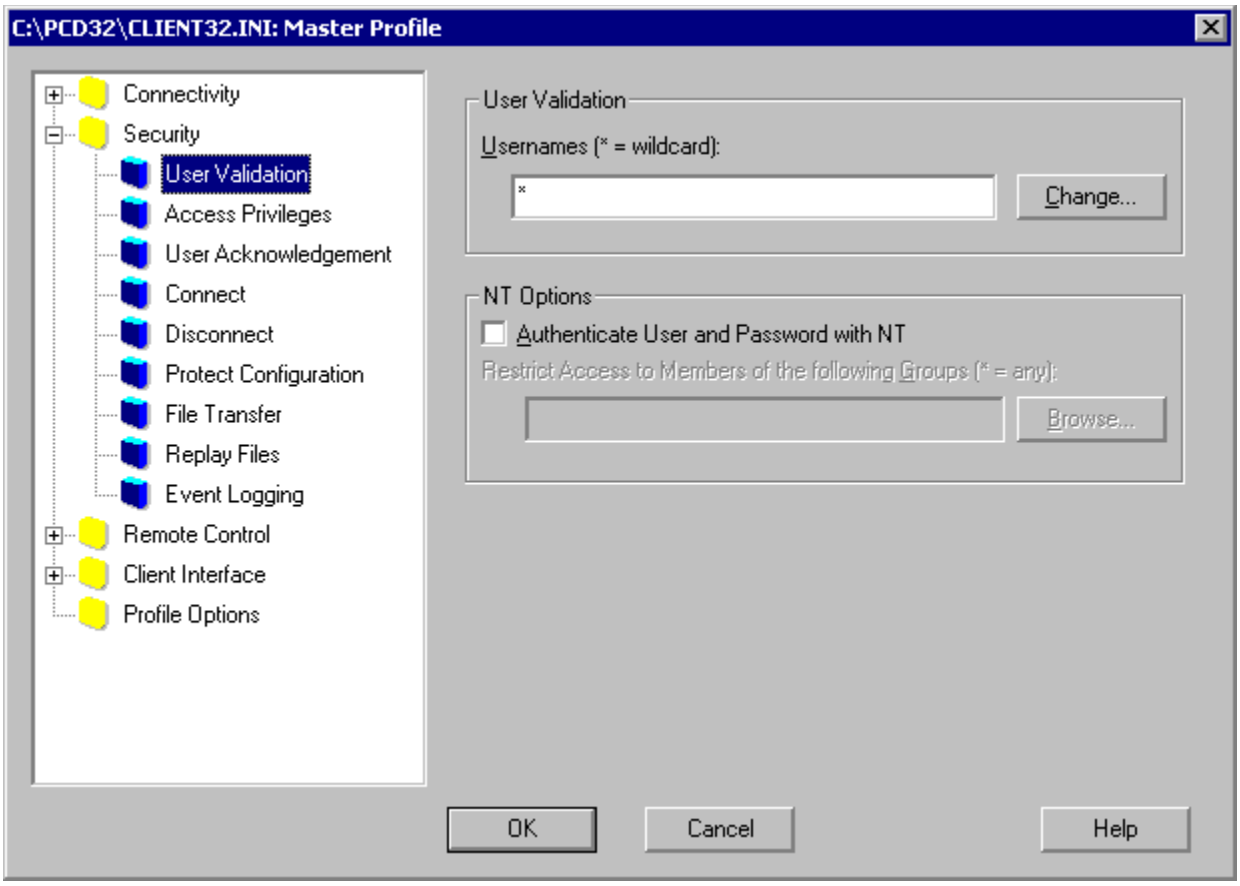
Connection Reason

Enter the reason why you are connecting to this Client here and press [OK] to continue.

CLIENT32.INI: Security

Select a Client Profile in the Configurator: Advanced Mode dialog and press [Edit] to display the CLIENT32.INI: Connectivity dialog. Click on Security to open this folder. Some settings are only enabled when you select the Master Profile Section.

For more information on a particular feature, click where a ➧ appears on the picture below.



This page allows you to decide which Control users are allowed to Connect through this Client Profile. You can also restrict the functions available using the settings in the Remote Control and Client Interface folders.

Configurator Profiles Menu

This menu allows you to add a new Client Profile, modify existing Profiles, and change the Client's command line parameters:-

Add
Highlight an existing Client Profile. Then use this command to create a new Profile following the selected one.

Edit
Double-click on an existing Profile or highlight it and use this command to examine or change the settings.

Delete
Highlight an existing Profile and use this command to delete it.

Move Up
This command moves the currently highlighted Profile up the list, increasing its priority.

Move Down
This command moves the currently highlighted Profile down the list, decreasing its priority.

Copy
Highlight an existing Profile and use this command to copy it. The new Profile's name will based on that of the highlighted one.

Rename
This command allows you to rename the selected Profile.

Client Parameters
Use this command to change the Client's command line.

Configurator Toolbar

The toolbar provides easy access to the common Configurator functions.

For more information on a particular feature, click where a ➧ appears on the picture below.

These functions are also accessible through the Configurator File or Profile Menu commands.

Create a New Configuration File

Press this button to create a new CLIENT32.INI file.
The current CLIENT32.INI file will be closed.

Open an Existing Configuration File

Press this button to open an existing CLIENT32.INI file.
The current CLIENT32.INI file will be closed.

Save the Current Configuration File

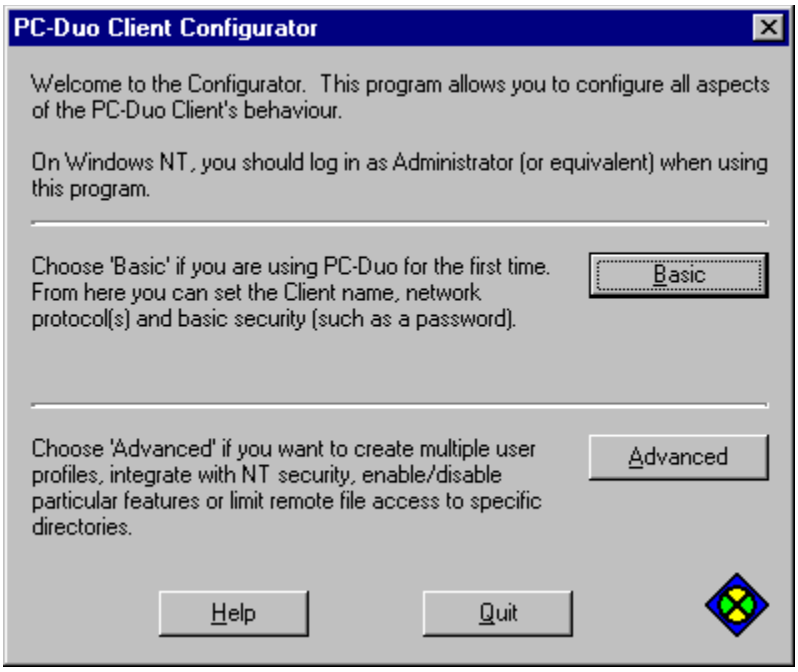
Press this button to save the current settings. You can apply changes by restarting Windows or the NT Client.

Display Name

A name entered here will be displayed in the Client list instead of the Client name supplied earlier. This name can be more descriptive, for example "Internet Gateway" instead of "AWS".

Welcome to the Configurator

This dialog is displayed when you start the Configurator. You can select Basic or Advanced mode operation.



The Basic Mode Configurator can be used when the only Client Profile in the CLIENT32.INI file is the Master Profile. It allows you to examine and change the Client's Connectivity, Security, and Audio settings.

The Advanced Mode Configurator can be used to create additional Client Profiles. It also allows you to change the Client's command line and Connectivity, Security, Remote Control, Client User Interface, and Profile Options settings.

Advanced

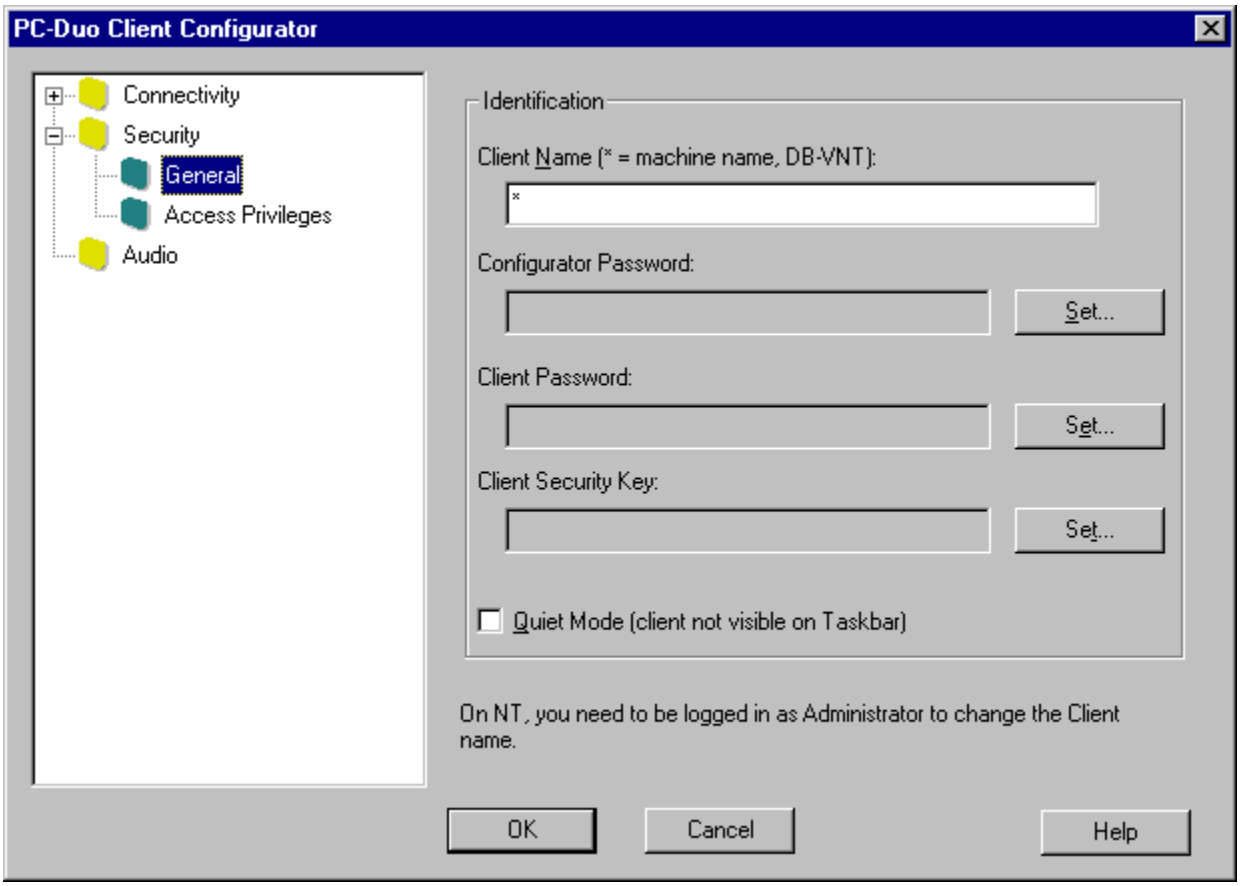
Press this button to open the Configurator in Advanced Mode.

Click the Quit button to exit the Configurator

Configurator: Basic Mode

The General page is only accessible in the Basic Mode Configurator. It allows you to set the Client Name, define passwords for the Client and Configurator, and set a Security Key.

For more information on a particular feature, click where a ➧ appears on the picture below.



You can switch to Advanced Mode by pressing [OK] or [Cancel] and then [Advanced].

Client User Validation

Usernames
This field is used to restrict access to one or more specific users. Press [Change] to view or edit the list. The default setting, an asterisk '*', allows any Control to connect, subject to any additional settings, such as NT Security.

Client NT Options

Authenticate User and Password with NT

Select this check box to enable use of NT Security. Any Controls attempting to connect must enter a valid NT username and password. This is only available for Clients running on Windows NT, 2000, and XP.

Restrict access to Members of NT Groups

You can restrict access to members one or more specific user Groups. Press [Browse] to view or edit this list.

Available NT Groups

The NT Groups that are known on this PC are listed here.
Select one or more and press [Add] to add them to the
Selected NT Groups list.

Selected NT Groups

Connection to the Client is restricted to members of one of the NT Groups listed here. Select one or more and press [Delete] to remove them from this list.

Add

Press the [Add] button to add the highlighted or specified NT Groups to the Selected Groups list.

Delete
Press this button to remove the highlighted NT Groups from the Selected Groups list.

Add Manually

Enter the name of the NT Group here and press [Add] to add it to the Selected Groups list.

Domain
If the User is registered in another Domain, enter the Domain Name here.

Username

Enter the new username here.
Use '*' to specify any users.

Use domain\user format to specify
a user in a different domain.

Edit

Press this button to edit the selected Username.
The Add/Edit User dialog will be displayed.

Add

Press this button to add a new Username.
The Add/Edit User dialog will be displayed.

Delete

Press this button to delete the selected Username.
You will be prompted to confirm deletion.

Usernames

This list contains any usernames that have been specified for this Profile. The format is:-

`Domain\User/`*`encrypted password`*

Client Logging Options

Enable Logging
Select this check box to enable Client event logging. The Client logs events such as startup, connect attempts, file transfers, and so on.

Log to NT Event Log
On Windows NT, the default behaviour is to add entries to the Event Log. Client startup is logged to the System Event Log, while more general events are logged to the Application Event Log.

Log to File
Non-Windows NT Clients can log events to a file. To enable this option, enter the log file name here or press [Browse] to locate an existing directory or file.

Append to Log File
When this check box is selected, the Client will append each event to the log file. This can make the log file quite large when the Client has been running for some time. Deselect this check box if you want the Client to overwrite the log file when it starts up.

Client Remote Control Options

These options restrict the Remote Control (i.e. Viewing) capabilities. See also the more general Remote Access options on the CLIENT32.INI: Options tab.

Send Physical Fonts
The Windows Client normally sends text as font settings plus characters. The Control uses the font characteristics to find a close match for its display. However, this may not be possible if the Client is using a TrueType font that is not available on the Control. Use this setting to send text as "Glyphs" or shapes rather than characters.

Enable Screen Scrape
Select this checkbox to prevent the PC-Duo Client from using the normal GDI intercept method of viewing the screen contents. It will operate in "Screen Scrape" mode, reading the display contents from the adapter memory. This method is less invasive than the intercept method, but it is also less efficient and has a considerable effect on remote control performance. It can provide a way to view a Client that would otherwise crash when the intercept driver is used.

Cache Size
This is the amount of dynamic memory that the Client can use to store display objects such as bitmaps. Use a larger value to improve performance when you are viewing applications which use bitmaps.

Max Colour Depth
This setting can improve performance over slow network links. It is used to reduce the colour depth that the Client sends to the Control. If used, this process will lose colour information.

Inactivity Timeout
Specifying a non-zero timeout (in minutes) will force the Client to disconnect a Control if it is connected but does nothing for some time. A zero timeout disables this feature.

Client Receive Show Options

These settings control how this Profile deals with a Control Showing its screen to the Client.

Disable Receive Show
Select this option to prevent the Client from receiving a Show from a Control.

Show to a Window
This option enables Show to a Window on the Client, rather than full-screen.

Scale to Fit
Select this option to scale the Show to fit in the available space (either full-screen or in a window).

Scrollbars
This option enables scroll bars in the Show window, allowing the Client user to adjust the view.

Autoscroll Speed
This slider controls the rate at which the Client will autoscroll the Control's screen during a Show.

Scroll Delay
This slider controls how long the Client will wait when the Control's mouse goes off-screen during a Show before it starts auto scrolling the Show display.

Add

Select one or more of the Available Clients, and press [Add] to add them to the Group.

Remove

Select one or more Clients from the Group list and press [Remove] to move them back from the Group to the Available Clients list.

Add All to Group

Press this button to add all of the Clients in the Available Clients list to the Group.

Add Selected Clients to Group

Yes, add them to this new Group
Select this radio button to add all of the Selected Clients to the new Group.

No, I'll choose from a list of Clients
Allows you to select the Clients to add to the Group in the next page.

No, I'll add members later
This option allows you to create an empty Group. You can add Clients at a later time.

Configurator: Getting Started

The Configurator is used to maintain the PC-Duo Client. It will operate in two modes: Basic and Advanced.

Basic
Press this button to open the Configurator in Basic Mode.

Client Identification Settings

Client Name
Enter the Client name here. If you use and asterisk (*), the Client will use the PC's machine name or Computer Name.

Configurator Password
If a Configurator password is set, you will be prompted to enter the password before the Configurator will start. Press [Set] to encrypt a password.

Client Password
You can enter an encrypted Client password here, or press [Set] to encrypt a new password.

Security Key
If the other logon settings permit access, the Control's Security Key setting must match this Key or the Connect request will be rejected.

Quiet Mode
When this setting is selected, the Client's icon is not normally visible, either when idle or when a Control is Connected.

Client Basic Access Privileges

These options configure how the Control's connect request is handled.

User Acknowledgement Required
Select this check box to enable User Acknowledgement. When a Control attempts to connect using this Profile, the local logged-on user will be prompted to accept or reject the connection.

Disable File Transfer
This check box prevents the Control from using File Transfer at any time.

Disable Remote Program Execution
This check box prevents the Control from executing programs on the Client using the Client Menu, Execute at Client command. It does not prevent the Control from running programs under remote control.

Disable Remote Registry Access
This check box prevents the Control from accessing the Registry on the Client.

Watch Only
This prevents the Control from using Control or Share remote control access modes.

Disable Receive Show
Use this option to prevent Controls from Showing their screens to this Client.

Disable Remote Reboot
Use this option to prevent a Control from rebooting this Client (or logging it off on Windows NT) using the Client Menu, Reboot / Logout command.

Client Remote Access Options

These settings allow you to configure the Client so that specific remote control functions are disabled when this Profile is used.

- Disable Watch
- Disable Share
- Disable Control
- Disable File Transfer
- Disable Program Execution
- Disable Reboot
- Disable Shutdown Client
- Disable Chat
- Disable File Transfer when no NT User is logged on
- Disable Blank Screen
- Disable CTRL+ALT+DEL
- Disable NT Logoff
- Disable Clipboard Access
- Ignore Messages
- Ignore Broadcast Messages
- Disable Print Capture
- Disable Registry Access

Client Record Replay Options

These settings configure the Client to record remote control sessions for replay by a Control program.

Record Replay Files
Select this check box to enable replay recording.

Prefix Files with Client Name
Select this check box when Clients record to a shared location such as a file server. The Replay file names will be based on the Clients' names followed by the starting date and time.

In Directory
This field contains the path to the replay files directory. This can be in a secure area on a file server. Press [Browse] to locate the correct location.

As User
If any username or password are required, they are entered here. Press the [Set] button to enter the details in the correct format.

Client Advanced Settings

Tickle Period

When otherwise idle, the Client sends keepalive or "tickle" packets to indicate that it is still talking to the Control. The period is specified in seconds. Use a value of 0 (zero) to disable tickle packets.

Profile Name
The name of the Client Profile in the CLIENT32.INI file is shown here.

Send

Press [Send] to send the message to the Selected Clients or Group.
This button is disabled until you have entered a message to send.

Message Text
Enter your message here. You can enter up to
four lines. Use CTRL+M to move to the next line.

Send Message To Options

All Available Clients
Select this radio button to broadcast the message to all currently Available Clients.

All Connected Clients
Select this radio button to send the message to all currently Connected Clients.

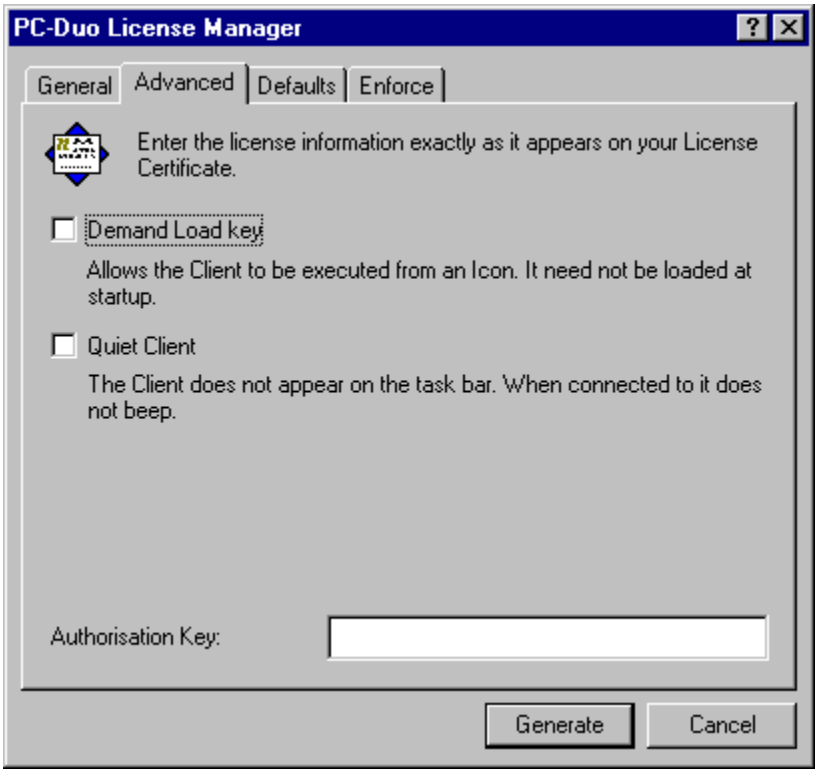
Currently Selected Clients
This radio button sends the message to all Selected Clients in the Control List View.

Members of Group
Select this radio button to send the message to all members of the currently-selected Group.

Apply a Key: Advanced

The Advanced tab allows you to configure Demand Load and Quiet Mode Clients.

For more information on a particular feature, click where a ➧ appears on the picture below.



Select the Demand Load and/or Quiet Client check boxes only if these are indicated on your Certificate.

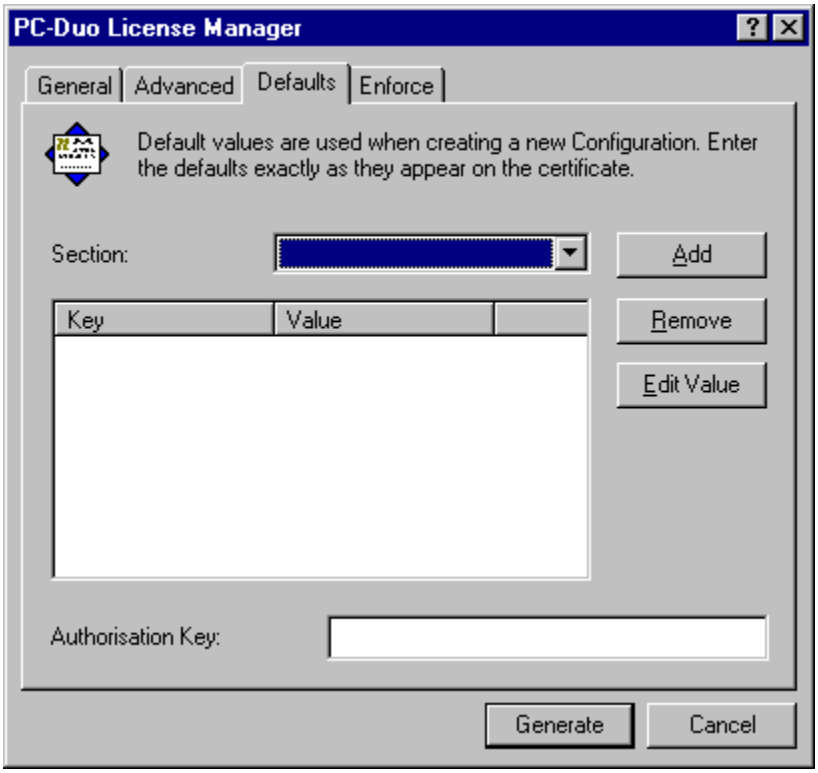
Check the Defaults and Enforce tab settings if your certificate tells you to.

Lastly, press [Generate] to apply the key and write a new licence file, NSM.LIC.

Note
These Demand Load and Quiet Mode settings are fixed by the licence and cannot be changed. However, these features can also be configured on individual Clients using the Advanced Mode Configurator.

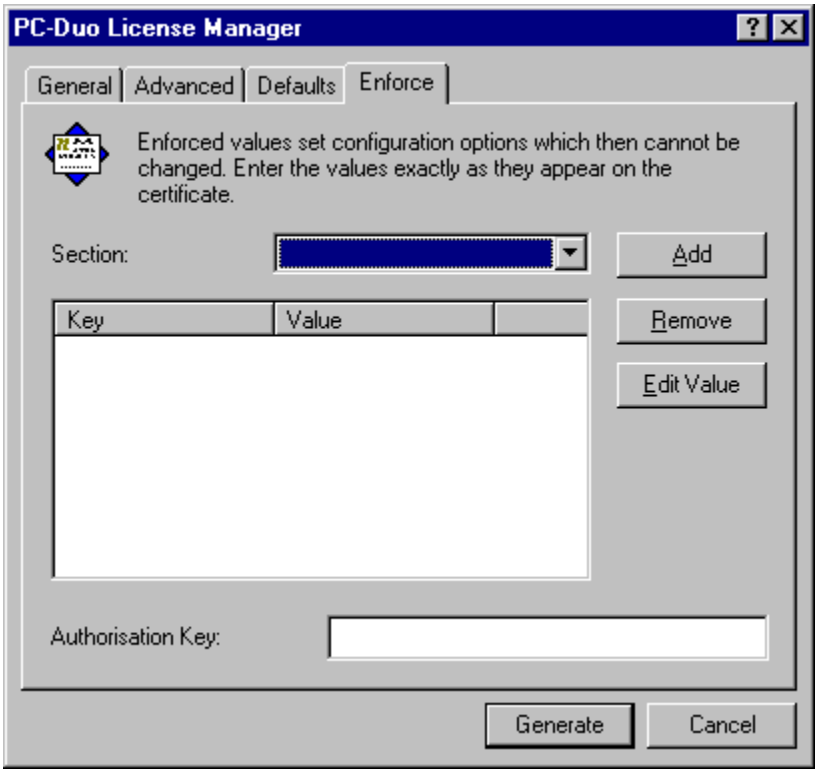
Apply a Key: Defaults

The Defaults and Enforce tabs are used to pre-configure Client Profiles for the Configurator.

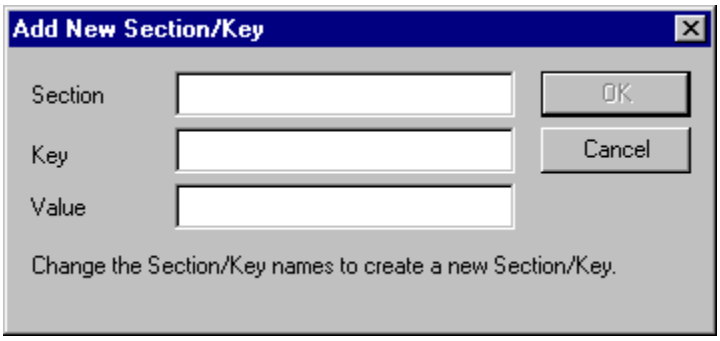


Apply a Key: Enforce

Any configuration settings entered here cannot be changed by the Configurator.



Apply a Key: Add New Section/Key



Apply a Key: Licence Details

Licensed to
Enter the Licensee Name here. It must be in UPPER CASE.

Maximum Clients
Enter the maximum number of Clients permitted by your licence.

Serial Number
This should also be entered exactly as on the licence certificate.

Expiry Date
A permanent key has no expiry date. If you have a temporary key, select the Expiry Date check box on the left, and then select the appropriate expiry date.

Authorisation Key

This is a 32-bit number, expressed in hexadecimal.
Enter the value, exactly as it is on your key document.
For example: 0x12345678.

Generate

Press this button to validate the key details and generate a new licence file.

Demand Load Key

Select this checkbox if you have requested a Demand Load Key. Otherwise leave it clear.

If the Quiet Client check box is selected, the Client icon will not be displayed in the Client PC's Taskbar

File Distribution: Help Menu

This menu allows you to get Help on:-

Group File Transfer Window

This command allows you to get Help on Group File Transfer.

About

This takes you to the Control's Help, About dialog.

About: Operating System

This list contains information on the Control's environment. It includes:

- The operating system and version
- The platform build number and any installed service packs
- The User the Control is currently logged in as
- The system processor type, Intel or Alpha
- The amount of physical memory installed and the amount available

About: File Version Information

This list displays the PC-Duo components that are installed on the Control.

Each line shows the filename, version number, and the build time and date.

Support E-Mail

Click here to send a message to the Technical Support e-mail address. This is:-
support@vector-networks.co.uk

Software Version

The version of PC-Duo is shown here.

About: Licence Details

Licensee
This is the name of the company or person to whom this licence is registered. Evaluation kits are licensed to "EVAL".

Serial Number
This is the licence's unique serial number. It is blank for evaluation kits.

Licensed For
This is the maximum number of Clients permitted under this licence.

If this is an temporary or evaluation licence, the expiry date will be shown. None of the PC-Duo programs will function after this date.

Copyright

The software copyright information is displayed here.

About: Bytes Sent

These are the statistics on the compression of data sent to the Client by the Control.

Uncompressed
Not all data is compressed. This figure shows the total number of bytes that were sent without compression.

Compressed
This figure shows the total number of bytes sent after compression.

Expanded
This figure shows the total number of bytes sent before compression.

About: Bytes Received

These are the statistics on the compression of data being received by the Control from the Client.

Uncompressed
Not all data is compressed. This figure shows the total number of bytes that were received uncompressed.

Compressed
This figure shows the total number of bytes received before decompression.

Expanded
This figure shows the total number of bytes received after decompression.

About: Cache Statistics

Cache Size (KB)
This is the size of cache that was allocated for this connection. If the Control and the Client have different cache size settings, it is the smaller of the two.

Items Cached
This is the number of items stored in the cache. It is incremented by one each time an item is added.

Items Referenced
This figure shows the number of times any item was found in the cache.

Bytes Cached (KB)
This is the size of the items stored in the cache. It is increased when a new item is stored in the cache.

Bytes Referenced (KB)
This figure shows the cumulative size of the items that were found in the cache.

Hit Rate
This percentage gives some indication of the effectiveness of the current cache. Bigger numbers are better.

If the cache is not the right size, a message will be displayed below the Hit Rate bar graph.

Settings for Configuration: View Options

BIOS Keyboard
This option causes DOS Clients to emulate keystrokes at the BIOS level rather than at the hardware interrupt level. You should only use this setting if an application at the Client does not appear to be accepting keystrokes from the Control.

Confirm Switch to Full Screen
When this box is selected, you will be prompted to confirm switching to full-screen mode.

Full Screen
Check this option to view a Client in full-screen mode rather than windowed mode.

Scale to Fit
Check this option if you want the Client's screen shrunk to fit the View Window.

Disconnect when Closed
When this check box is selected, the Control will disconnect from the Client when the View Window is closed. This can be useful if you normally only use remote control and forget to disconnect from a Client when you have finished working with it. You can also configure the Control to exit when the View Window is closed. See Settings for Configuration: Startup for more details.

Scrollbars
You can turn off scroll bars on the view windows by deselecting this check box. This can be helpful with Auto-Scrolling, as it gives you a little more workspace.

Use Compression
This check box controls data compression when Viewing. Compression is compute-intensive, and you may obtain better performance by disabling it on a fast network or with slow PCs. This checkbox is also accessible in the Settings for Configuration: General tab.

Wallpaper
Check this box if you want to leave the Client's wallpaper visible while viewing. Normally, wallpaper is turned off to improve performance, but this may disturb the Client user. Screen update speed will be reduced if this option is enabled.

Blank Client Screen
Select this check box to blank the Client's screen when you are viewing it.

Video Skipping
This check box enables Video Skipping. This can be used to improve remote control performance.

Hotkeys

When you are Viewing a Client in full-screen mode, the Control Hotkeys provide a way to switch back to windowed mode. If the Client's screen resolution is lower than the Control's, you can simply click your mouse button outside the view window to display the view window and stop viewing. These check boxes determine which keys are used as Hotkeys.

Keyboard Layout

This list provides alternative keyboard layouts that can be used when the Control is Viewing a Client. The layouts map keys on the Control's keyboard to others on the Client.

The default setting is Unmapped Keyboard. This is used when both Client and Control have the same keyboard layout.

Auto Scroll Speed

When you are viewing a Client's screen, the Control can automatically scroll the View when the mouse moves close to the edges of the window. This sliding control sets the speed at which the view scrolls, from not at all to very fast.

Scroll Delay

When Auto-Scroll is enabled, this sliding control changes the delay before scrolling starts. If you want the View to scroll as soon as the mouse is at an edge of the screen, move the slider towards Min. If you prefer a longer delay, move the slider towards Max.

Mouse Delay

This slider allows you to control the rate at which mouse position updates are sent from the Control to the Client when Controlling or Sharing. This is useful on dial-up or very slow networks. move the slider control towards Infinite to reduce the rate and conserve bandwidth, or towards Min for the best mouse response.

Default Mode

When you start viewing a Client, by default you start in Share Mode. If you prefer to start viewing in a different mode, choose from this drop-down list.

Cache Size

The Control and Client use a cache to help improve performance when the Client is running applications that use lots of or large bitmaps. The cache size can be in the range from 1MB to 16MB. A separate cache is allocated to each connected Client. Increase the cache size to improve performance.

Max Colour Depth

This setting restricts the colour depth of the screen data that is sent to the Control when it is viewing a Client. It is used to reduce the amount of traffic between Client and Control. Reduce the colour depth to 16 colours if you are using applications that do not rely on anything other than the standard 16-colour palette.

Change DOS Font

Press this button to change the font used when the Control is viewing a DOS application running on the Client, either on DOS, or in a full-screen DOS box. Windows uses a graphic character set to displaying DOS screens then the higher the resolution that you are running Windows in, the larger the font size you will need to set to get an accurate representation of a DOS Screen.

Change Japanese Font

Use this dialog to select the font to use when displaying Japanese DOS applications.

Update Configuration

If the Update Configuration check box is selected, the current Control Profile will be updated with any changes made in this tab.

Don't display this message again
If you often use Full Screen mode, you may not want to see this dialog every time. Check this box to hide the message in future.

Accelerator Keys

Pause, ALT
When Viewing, press Pause followed by ALT to access the Control's View Window Menu Bar.

You can then use the left and right arrow keys to select a menu and the up and down arrow keys to select a command.

View Window: Toolbar

The View Window toolbar contains buttons for many of the most frequently used functions. You can add or remove the toolbar buttons by right-clicking on a blank space in the toolbar and selecting the Customise command from the Toolbar Popup Menu. The buttons are also affected by any features that have been disabled in the Settings for Configuration: User Interface dialog. The buttons can be displayed with or without their text labels. Switch these on and off using the View Menu, Toolbar command.

For more information on a particular feature, click where a ➧ appears on the picture below.

Leave the mouse over a button to display its Tooltip.

Suspend viewing by releasing the Share, Watch or Control button. Close the View window by selecting the Client Menu, Close command.

Floating Toolbar

The View Window toolbar is converted to a floating toolbar when you are viewing a Client in full-screen mode. You can drag the toolbar to a convenient position on the screen using the mouse.

There are large and small floating toolbars. You can convert between them using the Expand and Shrink arrow buttons at the right-hand end.

You can close a full-screen View window by pressing the Close button. This is the left-most button on both floating toolbars.

Close

Press this button to close the View Window.
The Client will still be connected.

File Transfer
Press this button to open the File Transfer window.

Chat
Press this button to start Chatting to the Selected Client.

Message
Press this button to send a message to the Client.

Execute

Press this button to execute a command at the Client. The Execute at Client dialog will open.

Share, Watch, and Control Buttons

These buttons allow you to change the remote control access mode quickly. For example, press the Control button to take control of the Client. Release the button to suspend viewing.

Scale to Fit

Press this button to scale the Client's screen so that it fills the View Window.

CONTROL.KBD

You can edit the file CONTROL.KBD to add your own keyboard layout if none of the ones provided work in your situation.

Keyboard Layout

Normally the Control and the Client will be using the same Keyboard Layout, for example US English. There may be circumstances in which they are using different keyboards, for example English and German. In this case you must configure the Control to use the same Keyboard layout as the Client, otherwise incorrect characters may be displayed.

The key mappings i.e. what is sent from the Control to the Client is stored in file CONTROL.KBD. You can edit this file to set your own mappings.

Client Program Options

Icon in System Tray
When selected, this checkbox transfers the minimised Client toolbar button into Windows' System Tray.

Always on Top
Select this checkbox if you want the Client's icon to be visible, on top of any other program windows, at all times.

Hide When Idle
When this is selected, the Client's icon is not visible unless a Control is connected.

Quiet Mode
When this setting is selected, the Client's icon is not normally visible, either when idle or when a Control is Connected.

Disable Disconnect
This checkbox controls whether the Disconnect command is activated on the Client's Commands menu.

Disable Request Help
Select this checkbox to disable the Client's Request Help feature.

Silent Mode (no refresh)
This setting avoids the screen "flash" that occurs when a Control starts viewing the Client.

Beep while being Viewed
If you need to alert the Client user to the presence of a viewing Control, enter a non-zero value here. The Client will make an audible beep every so often seconds.

Hotkeys for Request Help

The default Client Help Request Hotkeys combination is ALT+LSHIFT+RSHIFT.

You can change the combination here by selecting different checkboxes.

Display Customisable Text

You can configure the Client to display three messages here.

The "In About Box" message is displayed in the Client's Help, About dialog.

Similarly, the "When Connected" message will be displayed while a Control is connected to the Client, and the "When Viewed" message is displayed when the Control is actually viewing the Client's screen.

Dialin Bridge Transport Protocol

These settings allow you to enable and configure the PC-Duo Dialin Bridge.

None
This disables the Dialin Bridge.

TCP/IP
This enables the Dialin Bridge on TCP/IP.

IPX
This enables the Dialin Bridge on IPX.

NetBIOS
This enables the Dialin Bridge on NetBIOS. You should also select a NetBIOS Adapter from the list below. The Bridge checks this Adapter when it starts up. The actual Adapter number used to access Clients is specified in the Control's Add a Remote Network: Details or Remote Network Properties dialogs.

Bridge Options

These settings allow you to configure the security settings for the PC-Duo Dialin Bridge.

Load Bridge on Startup
Select this checkbox to load the Bridge when the Client starts up. Clear the checkbox if you want to configure the Bridge but don't want the Client to load it, and thereby allocate the serial port, until it is required.

Dialback File
You can create and update a Dialback password file using these fields. Press [Browse] to locate an existing file or specify the name and directory for a new one. Press the [Edit] button to update the password list. The Contents of Bridge Password File dialog is displayed.

Inactivity Timeout
If defined, this setting configures the Bridge to disconnect after a period of inactivity (specified in minutes).

CLIENT32.INI: File Access Rights

Disable File Transfer
This check box disables File Transfer when this Client Profile is used.

Disable File Transfer when no NT user is Logged On
Similarly, the "Public when Logged Off" feature of older versions prevented a Control user from opening the File Transfer window while a Client was logged off. This feature is preserved in this check box. If it is deselected, a Control user that is permitted to connect to this Client while it is logged off will be permitted to use File Transfer or File Distribution functions.

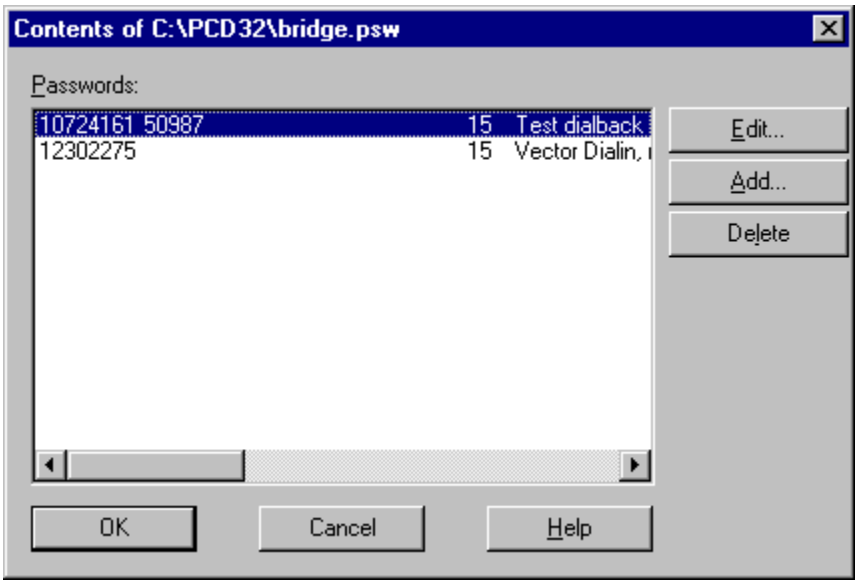
Impersonate Logged-on NT User when transferring files
The default behaviour is for the Client to use the logon credentials that were supplied by the Control user. However, this may interfere with the current logged-on user. Conversely, this can prevent the Control user from accessing the Client's mapped network drives. If either of these problems occur, select this check box to configure the Client to use the local user's credentials instead of the Control's.

Access Rights to Files and Directories
This list contains a list of files or directories, together with any access controls that have been applied. Press [Add] to add a new entry to the access control list. Highlight an existing entry and press [Edit] to edit it, or [Delete] to delete it.

Contents of Bridge Dialback File

Press the [Edit] button in the CLIENT32.INI: Dialin Bridge dialog to examine or change the Bridge's Dialback Password List.

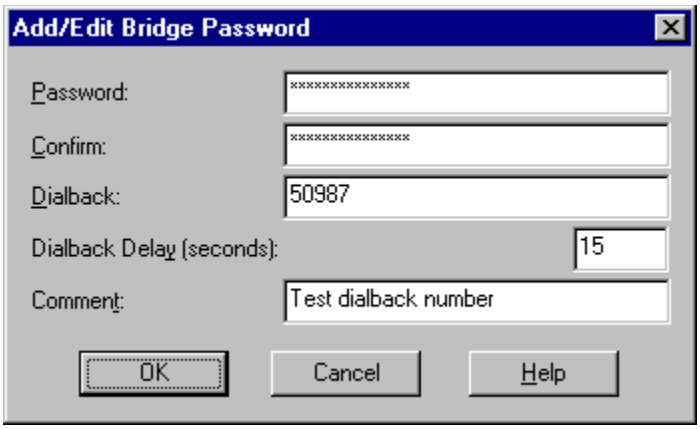
For more information on a particular feature, click where a ➧ appears on the picture below.



Press the [Add] button to add a new password, or highlight an existing Password entry in the list and press the [Edit] button to edit the entry. The Add/Edit Bridge Password dialog will be displayed.

Add/Edit Bridge Password

Highlight a password entry in the Contents of Bridge Password File dialog and press the [Edit] button to edit the password entry.



Leave the Dialback number blank if you do not want this password to cause the Bridge to Dialback to the Control.

Edit

Highlight an existing Password entry in the list and press this button to edit the entry. The Add/Edit Bridge Password dialog will be displayed.

Passwords

Bridge passwords are listed here in encrypted form, together with any Dialback phone number, delay and comments.

Add

Press this button to add a new password to the list.
The Add/Edit Bridge Password dialog will be displayed.

Delete

Highlight a Password entry in the list and press this button to delete it.

The Bridge Password file path is shown here.

Bridge Password Parameters

Password
Enter the new Bridge password here. It will be echoed to you as asterisks.

Confirm
Enter the new password again here to confirm it.

Dialback
If you want this password to Dialback to the Control, enter the Control's phone number here. If you do not want this password to dial back, leave the field blank.

Dialback Delay
When a Dialback number has been provided, this field controls the delay between the Bridge hanging up the phone and dialling back to the Control. The default value, 15 seconds, should be sufficient for most applications. Increase it if the Bridge modem is slow to reset.

Comment
Any comment which is entered here can be seen in the Contents of Bridge Password File dialog.

Activate PC-Duo Client

This program is used to reactivate the Client program when it has been deactivated for some reason. It will restore the settings that Setup created (or preserved).

Note that it is not necessary to activate the Client after installation. Setup does this automatically. Simply reboot to start the Client.

Apply A Key

This program is used to apply a new licence key.
It is used when you buy a licence.

Client Configurator

Use this program to reconfigure the PC-Duo Client.

Deactivate Client

Use this program to deactivate the Client.
This will remove all PC-Duo
entries in the system Registry or SYSTEM.INI file.
You can restore the original settings using the
Activate Client program.

PC-Duo Control
Double-click on this icon to start the Control program.

PC-Duo Help
Double-click on this icon to open the Help Contents.

PC-Duo User Manual
If you have the Adobe Acrobat Reader installed,
this icon will use it to display the User Manual.

Release Notes

This icon will display the README.TXT file. This contains important information and any news items that were too late-breaking to be included in the User Manual.

Reset Video Driver

This program is used to restore the PC-Duo
Client's GDI intercept settings. This is not normally necessary
unless the display properties have been changed.

Restart PC-Duo Client

This icon is only created on Windows NT. It can be used to stop and restart the Client32 Service.

Script Agent

This icon starts the Script Agent program.

Script Editor
This icon starts the Script Editor program.

Uninstall PC-Duo

Double-click on this icon to uninstall PC-Duo.
Remember to Deactivate the Client before you attempt to uninstall.

This is the name of the PC-Duo Program Folder.

The Client is not installed on this machine

Meaning
You will get this message if you run the Client Configurator on a PC which does not have a PC-Duo Client installed or activated.

Error reading Registry Key

Description
You are running a Script which attempts to read a Registry Key, but your account does not have the privileges required to access the Key in the Registry.

Solution
Log in using an account which has the necessary access rights.

Error writing Registry Key

Description
You are running a Script which attempts to write into a Registry Key, but your account does not have the privileges required to access the Key in the Registry.

Solution
Log in using an account which has the necessary access rights.

Error reading Registry Value

Description
You are running a Script which attempts to read a value from the Registry, but your account does not have the privileges required to access the data in the Registry.

Solution
Log in using an account which has the necessary access rights.

Error writing Registry Value

Description
You are running a Script which attempts to write a value into the Registry, but your account does not have the privileges required to access the data in the Registry.

Solution
Log in using an account which has the necessary access rights.

Settings for Configuration: Connect

These options disable or hide features that are related to connecting to and locating Clients.

Hide Client List
Check this option to disable the display of Known Clients for security reasons. The **Clients** branch is removed from the Tree View and all menu commands and toolbar buttons that allow you to manipulate Client records are removed.

Hide Group List
Check this box to disable the display of Groups for security reasons. The **Groups** branch is removed from the Tree View, and all Group-related menu commands and toolbar buttons are removed.

Hide Dial Directory
Check this box to disable all Remote Networks functions. The **Remote Networks** branch is removed from the Tree View, and all related menu items and toolbar buttons are removed.

Disable Browse
Check this box to disable the Browse function. The **Browse** branch is removed from the Tree View, the toolbar button is removed and the related menu item is removed.

Client List read-only
Check this box to remove the ability to alter the Known Client List. The **Clients** branch is still available in the Tree View, but you cannot modify existing Clients or create new ones.

Group List read-only
Check this box to remove the ability to alter the Groups list. The **Groups** branch is still available in the Tree View, but you cannot modify existing Groups or create new ones.

Dial Directory read-only
Check this box to remove the ability to alter the Remote Networks list. The **Remote Networks** branch is still available in the Tree View, but you cannot modify existing Networks or create new ones.

Message on Disconnect
Select this checkbox to send a message to the Client when the Control is about to disconnect.

Settings for Configuration: Remote Control

The following items disable the different View functions within the Control program:-

- Disable Control
- Disable Share
- Disable Watch
- Disable Show

When functions are disabled, their buttons disappear from the Control Toolbars.

Settings for Configuration: Restrict Functionality

These check boxes allow you to disable the following features in the Control:-

- Disable File Transfer
- Disable Chat
- Disable Send Message
- Disable Broadcast Message
- Disable File Manager
- Disable Reboot
- Disable Logoff
- Disable Replay
- Disable Execute
- Disable Registry Editing
- Disable Blank Screen

When functions are disabled, their buttons disappear from the Control Toolbars.

Disable Duplicate Client Check

When selected, this check box stops the Control looking for and updating existing addresses in the Known Clients list. This option is useful in situations where a firewall provides access to a number of Clients through a single address. IP Port Mapping is one such example.

Permit a user of this Configuration to:

These settings restrict the items that users of this Control Profile can modify. They can only be changed by a user acting as a Network Administrator.

Act as an Administrator
When this check box is selected, users of this Control Profile can make any configuration changes that they wish. This should be selected for at least one Profile, to allow them to alter other Profile settings.

Change Settings
This check box is only accessible when the "Act as an Administrator" setting has been cleared. Clear this check box to prevent users of this Control Profile from changing any settings.

Configure User Interface
This check box is only accessible when the "Act as an Administrator" setting has been cleared, but Change Settings is selected. Clear this check box to prevent users of this Control Profile from altering any settings that affect the Control's User Interface.

Enable Print Capture

Check this box to enable Print Capture. The Client's printer output will be captured and printed at the Control.

Settings for Configuration: Printer Output

These options specify where the printed output will be redirected to on the Control. This can be either a local or network printer, or a file.

Printer *xxx*
Select this radio button to redirect the Client printing to a local or network printer. The name of the default printer is displayed in place of the "*xxx*".

Change
Press this button to list the printers installed on the Control PC.

File
By selecting this button, you can redirect the Client printing to a file that can be printed later. This file can on a local or network path.

Browse
A file browse window will appear when you press this button allowing you to find a location for the capture file.

Settings for Configuration: Printer Driver

For Windows programs, the Windows and Windows NT Clients try to use the correct driver for the Control's default printer (by changing the default printer on the Client machine, although not all applications notice this). For this to work, you need to install the appropriate printer driver on the Client and assign it to LPT1, LPT2 or LPT3.

On Windows 95 and Windows NT, the user can change the printer name (in Control Panel, Printers or Start, Settings, Printers). To handle this situation, and because printer and driver names vary between Windows 3.x, Windows 95 and NT, you can specify a list of printer names and drivers in this field. For example:

HP DeskJet 520,DESKJETC; HP DeskJet...

Where:
HP DeskJet 520 is a printer name that the Client might recognise
DESKJETC is the name of the driver file for this printer at the Client (optional, .DRV assumed)
HP DeskJet is another printer name that the Client might recognise

When Print Capture is enabled, the Control sends this information to the Client, and the Client then looks for the closest match in the drivers installed on the Client machine. The NT Client ignores the name of the driver file; the Windows and Windows 95 Clients match this preferentially, using the printer name only in the event of a tie.

Report Driver Used

When you connect to a client a dialog box will appear informing you of the printer driver that has been used. If no matching drivers were found you would be informed whether you check this box or not.

Settings for Configuration: File Transfer Options

Use Compression
Check this box to enable the use of compression. All data sent to and from the Client will be compressed. This can provide a performance improvement over slower links.

Delta File Transfer
When enabled, Delta File Transfer eliminates unnecessary data transfers by comparing data blocks in files which are present in both source and destination locations. This can also improve performance over slow links.

Priority (when also viewing)
When you are transferring files and viewing a Clients' screen at the same time, each operation impacts the performance of the other. You can reduce the priority of File Transfer to make viewing more responsive and vice-versa. Slide the control to the left to give higher priority to File Transfer, or to the right to give remote control higher priority. If you are not viewing a Client, this setting is ignored.

Settings for Configuration: File Transfer Display

Show System/Hidden files
Check this box to display all files with System and Hidden attributes. By default, this option is unchecked.

Show file details
Select this option to display multiple columns of information for each file in the list. These show the file size, modified date, attributes and short filename. You can toggle between this state and the filenames only state, by using the list style buttons in the File Transfer User Interface.

Show filenames only
Select this option to only display filenames in the file lists. This allows you to display more files at the same time than with file details. You can toggle between this state and the Details State, by using the list style buttons in the File Transfer User Interface.

Settings for Configuration: File Transfer Sort Options

Sort By

You can order the file lists in different ways, by selecting one of these options:

- By name
- By type
- By date and time
- By size
- By short name

Ascending

Select this radio button to display the list in ascending order. This displays the oldest file first if By date and time is selected; the smallest file first if By size is selected or in reverse alphabetical order if By name is selected.

Descending

Select this radio button to display the list in descending order. This displays the newest file first if By date and time is selected, the largest file first if By size is selected or in alphabetical order if By name is selected.

Settings for Configuration: File Transfer Confirm

When you perform potentially dangerous file operations, such as deleting a directory or file you can make the Control display a Confirmation dialog box. This helps prevent accidental loss of data. If you are familiar with the User Interface, you can turn these options off as required. By default, all the confirmation settings are turned on.

Directory copy
Make the user confirm before copying a directory structure.

Directory delete
Make the user confirm before deleting a directory structure.

File overwrite
Display a confirmation dialog before overwriting one or more files.

File delete
Display a confirmation dialog before deleting one or more files.

Modem/ISDN Settings

Modem
Select one of the installed modems from this drop-down list. If there are no modems installed, you can add one using Start, Settings, Control Panel, Modems.

If you have an ISDN line, you can use the additional settings:-

Dual Channel Bonding
Select this check box to use both lines on an ISDN Terminal Adapter for the same Client-Control channel.

Multiple Subscriber Numbers (MSN)
ISDN lines can be used with more than one telephone or subscriber number. This field allows you to specify which numbers should be used to dial. Similarly, when a call is received, the telephone number is notified. Use this field to restrict responses to one or more specific telephone numbers.

Settings for Configuration: Modem Diagnostics

None
Select this option to perform no diagnostics on your modem. Use this if the **Basic** or **Extended** settings prevent your modem from communicating properly.

Basic
When the modems connect, the Control checks the following:
- Flow control is correctly set (XON/OFF is disabled, etc)
- There is a PC-Duo Bridge at the remote number
- There are not excessive delays in transferring data

Extended
The Extended setting performs the same checks as for Basic and includes:
- The PC to Modem baud rate is compatible with the Modem to Modem baud rate
- Line reliability
- Throughput

Logging Level

None
Select this option to display the progress messages on the screen only.

Basic
Selecting Basic logs the following information to MODEM.LOG:
- The name of the modem used
- The number dialled
- Results of Diagnostic tests
- Connection speed

Verbose
Selecting Verbose records the same information as Basic, but includes the following:
- Information about the modem retrieved from the modem itself

Use this option is you are having problems establishing dial-up links.

View Log
Opens a window that displays the MODEM.LOG file generated by Extended and Verbose Diagnostic and Logging settings.

View Window: Status Bar

The Control's current status and Audio volume level are shown here.

View Window: Client Area

The Client's screen is displayed here when you are Viewing.

Scan Window: Menus

The Scan Window contains the following menus:-

Scan
This menu allows you to change your position in the scan sequence and also close the Scan window.

View
This menu allows you to change the display.

Window
This menu allows you to tile or switch between active windows.

Help
This menu provides access to the online help and the Control's Help, About dialog.

Scan Window: Toolbar

You can use the Scan Window Toolbar to control the Scan operation.

Press the Previous or Next buttons to move backwards or forwards in the Scan sequence.

Press Auto to scan the selected Clients automatically.

Press Scale to fit or Full Screen to change the way the Scan window is displayed. In Full Screen mode, the Scan Window Floating toolbar is used.

The Capture button allows you to capture the selected Client's screen to a file.

Scan Window: Client Area

The Clients' screens are shown here.

Status

The status bar shows which Client is being displayed.
Auto mode displays a progress bar for each Client.

Done
Press this button to close this dialog.

Archive

Press this button to archive the current log file. The file is saved in the same location as the original log file, but will have an incrementing decimal file extension, such as MODEM.003. The active log file is emptied and ready for use.

Delete

Press this button to delete the current log file. You will be prompted to confirm before the file is deleted. The active log file is then empty and ready for use.

Modem Log

The Modem Log contains the commands that were sent to the modem and the responses that were received, if any. It includes the numbers dialled, connection statistics, and any errors that may have occurred.

Replay
The replay file name is displayed here.

Replay Window: Toolbar

For more information on a particular feature, click where a ➧ appears on the picture below.

The Replay Window toolbar (shown above) contains buttons for the most frequently-used tools. Click on a button to activate that function.

Tooltips are available: position the cursor over a button will display a brief description of its function.

Replay Window: Client Area

The Client's recording is displayed here.
Use the [Scale to Fit] or [Full Screen]
buttons to change the window size.

Status:
The state of the player is displayed here.

Full Screen

Press this button to switch the Replay Window between Full Screen and Windowed Modes.

Error Messages

Press the [Help] button in an error message box to display the relevant information.

For ease of access here, error messages are stored in alphabetical order. For example, for message: Client *xxx* does not respond can be found under 'C' below:

Please that that any error messages which begin with a variable such as the Client name (without being prefixed by the word "Client" in the error message) feature here with the variable represented as '*xxx*'. For example, *xxx* is a demonstration Client. It will deactivate after 5 minutes use can be found under 'X'.

A - C

D - E

F - R

S - T

U - X

Y - Z

Client Version

The PC-Duo Client's software version number is shown here.

Client Platform
This field shows the Client PC's operating system and version.

Clear

This button is active when the Control is connected to the Client. It allows the Control user to cancel the user's help request after providing assistance.

Requested by
The name of the person requesting help,
this is not necessarily the Client's name.

Help Request

This is the message sent by the Client user.

Chat Menu

Send Beep
If you want to alert the user at the Client, you can send a beep using this command. Both users can also do this by typing CTRL+G.

Help
This command displays the Help for the Chatting to dialog.

Close
Use this command to close the Chatting to dialog both at the Control and the Client. The user at the Client machine can also close the session down.

Control

The Control's part of the conversation is shown here. Characters are sent as they are typed. You do not have to do anything to send the message. The backspace key can be used for editing, but you cannot use the mouse or cursor arrow keys to change position.

Client

Any response from the Client user will appear here.
The Control cannot type in this edit window.

Disconnect

Highlight one or more Connected Clients in the Control List View and press this button to disconnect from them.

Remote Networks

This list displays details of the Remote Networks that have been defined.

Name
This field contains the Remote Network name, as defined in the Add a Remote Network dialog.

Description
This field contains the Remote Network description, as defined in the Add a Remote Network dialog.

Number
This field contains the telephone number for the Remote Network, as defined in the Add a Remote Network, Details dialog.

Transport
This field contains the transport setting for the Remote Network, as defined in the Add a Remote Network, Details dialog.

Dial
Select one of the listed Remote Networks and press this button to establish a connection to that network.

New

If if there isn't a suitable Remote Network already, press the [New] button to create a new one, using the Remote Network Wizard.

Properties

Select a Remote Network and press this button to edit its properties. Any changes will take effect immediately so you can reconfigure a Network and then dial it straight away.

Transport Settings

Highlight a Remote Network and press this button to configure its Transport, Dialup and Startup settings.

Error Messages A - C

A

A file with this name already exists
All connections will be lost on remote network ‘xxx’
Another program is currently using the specified communication device
Application ‘xxx’ ran successfully at Client ‘xxx’
Are you sure you want to delete *nnn* Scripts?
Are you sure you want to delete *nnn* selected Clients?
Are you sure you want to delete Remote Network *xxx*?
Are you sure you want to delete the group '*xxx*'?
Are you sure you want to delete the Script?
Are you sure you want to reboot/logout the members of group '*xxx*'?
Are you sure you want to reboot/logout the selected Clients?
Are you sure you want to send Ctrl+Alt+Delete to Clients ‘xxx’?
Are you sure you want to send Ctrl+Alt+Delete to the selected Clients?
Audio already in use
Audio error
Audio hardware error

B

Bad audio format

C

Cannot communicate with the modem
Cannot connect to more than *nnn* Clients
Cannot contact ‘*xxx*’
Cannot do xxx on Client while you are Viewing it
Cannot do xxx on Client xxx while you are Showing to it
Cannot do xxx while the File Transfer window is open
Cannot execute ‘*xxx*’
Cannot find window ‘*xxx*’, class ‘*xxx*’
Cannot include/exclude a Client during a Show/Scan
Cannot load ‘*xxx*’
Cannot open ‘*xxx*’
Cannot read file *xxx* (*nnn*)
Checksum error receiving data from Client
Checksum error sending data to Client
Client *xxx* already connected to Control *xxx*
Client *xxx* cannot be powered on
Client *xxx* does not respond
Client *xxx* has disconnected
Client *xxx* is about to disconnect due to inactivity
Client ‘*xxx*’ is running on this machine
Client *xxx* rejected the link
Client *xxx* unavailable (in graphics mode or logged off)
Configuration ‘xxx’ not found
Connection Failed. Do you want to remain connect to Remote Network ‘xxx’?

Error Messages D - E

D

Delete the current Key?
Delete the selected Values?
Demonstration Client ‘*xxx*’ has been deactivated
Dial another remote network?
Dial Remote Network ‘xxx’ and connect to Client ‘xxx’?
Directory xxx does not contain a WCONTROL.INI file
Directory ‘*xxx*’ does not exist on *xxx*
Directory xxx not found
Disk xxx full on *xxx*
Drive ‘*xxx’* on ‘*xxx*’ is write protected

E

Enter the directory to Goto
Error Code *nnn*
Error creating file
Error deleting ‘*xxx*’
Error in file *xxx*, line *nnn*
Error loading transport ‘*xxx*’ (adapter *nnn*)
Error *nnn* deleting ‘*xxx*’ on ‘*xxx*’
Error *nnn* opening file *xxx* on *xxx*
Error *nnn* reading drive *xxx* on *xxx*
Error *nnn* reading file *xxx* on *xxx*
Error *nnn* renaming *xxx* to *xxx* on *xxx*
Error *nnn* writing captured print output to *xxx*
Error *nnn* writing file *xxx* on *xxx*
Error *nnn*: Unable to copy file ‘<SourceFile>’ to ‘<Destination>’
Error *nnn*: Unable to create directory ‘*xxx*’ on ‘*xxx*’
Error *nnn*: Unable to delete file ‘*xxx*’ from ‘*xxx*’
Error *nnn*: Unable to remove directory *xxx* from *xxx*
Error *nnn*: Unable to set attributes for file '*xxx*’ on *xxx*
Error opening file xxx
Error opening modem log file ‘*xxx*’
Error reading disk
Error reading file ‘*xxx*’
Error reading Registry Key
Error reading Registry Value
Error renaming *xxx* to *xxx*
Error writing file *xxx*
Error writing Registry Key
Error writing Registry Value

Error Messages F - R

F

File is not a valid Registry File
File transfer disabled at Client '*xxx*'
File Transfer NOT available
File '*xxx*' already exists. Overwrite?

I

Invalid Background
Invalid Directory
Invalid Name
IPX network *nnn* (*nnn*) is not responding

M

MMPLAYER terminated unexpectedly

N

Name '*xxx*' already in use
No dialup link established
No files specified!
Not a valid PC-Duo Replay file
No valid TAPI device configured

O

One of the directories for Synchronisation is a root directory

P

Print Capture has been disabled at the Client workstation

R

Reset list to default columns?

Error Messages S - T

S

Sent *nnn x nnn* byte packets in *nnn* msec = *nnn* bytes/sec
Sequence error receiving data from Client
Sequence error sending data to Client
Sorry, Dialup is not available on TCP/IP
Sorry, this is not supported on versions of Windows NT before 4.0
Sorry, '*xxx*' must be configured by editing CONTROL.MDM
Sorry, you do not have sufficient privileges to do this
Specify the transport for the Client List File xxx

T

TAPI Error
TCP/IP is not enabled, run the Configurator to enable it
The actual throughput is low compared to the Connection Speed
The PC-Duo Bridge is using the modem
The Bridge modem has XON/XOFF flow control enabled!
The Client is not installed on this machine
The Connection speed is greater than the PC to Modem baud rate
The Control AND Bridge modems have XON/XOFF flow control enabled!
The Control is not responding
The Control modem has XON/XOFF flow control enabled!
The directory *xxx* on *xxx* already contains a file called *xxx*
The name is invalid
The time for the Bridge to respond seems excessive
The transport DLLs are older than the Control
The user-defined tool was not found
There are no printers installed on '*xxx*' matching '*xxx*'
There are no Remote Networks set-up at the moment
There is already a group called '*xxx*'
There is already a Remote Network called 'xxx'
There is already a Script Object called *'name'*
There is no disk in drive 'xxx' on 'xxx'
There was an error executing the User Defined Tool
There was no response from the Bridge!
This license has not been activated
Transport *xxx* is not enabled
Tried to compare a Key but there are no other Clients connected to compare with

Error Messages U - X

U

Unable to connect to Client *xxx*
Unable to exchange 2KByte buffer with Bridge
Unable to load Script file
Unable to locate the Script Editor program!
Unable to receive 2KByte buffer from Bridge
Unable to send 2KByte buffer to Bridge
Using printer *xxx* for print capture on Client *xxx*

V

Versions of xxx and xxx do not match

W

Waiting for User Acknowledgement
Warning: 'xxx' is not a text file
Warning: *xxx* is too long to display it all
Warning: 'xxx' is too long. Edit it anyway?
Wrong password
Wrong version Client installed on Client machine

X

'*xxx*' error (adapter *nnn*), operation: *nnn*xH, code: *nnn*xH
xxx failed to run at Client. Error Code *nnn*
'*xxx*' has disconnected, is not responding or has timed out
xxx has wrong version of CLIENT installed
xxx is a demonstration Client. It will deactivate after 5 minutes use
xxx is in use by another program or window
xxx is in use. Please select a different configuration and try again
xxx is not a valid serial port (use com1 - com4)
'*xxx*' is not configured correctly (*xxx*)
xxx is wrongly configured (no modem specified)
xxx ran successfully at Client

Error Messages Y

Y

You are currently connected to Remote Network ‘xxx’
You are currently performing a Scan. Are you sure you want to exit?
You are currently performing a Show. Are you sure you want to exit?
You cannot connect to a Client while Show is running or Suspended
You cannot modify a Clients Include Status during a Show
You cannot perform a Scan while Show is suspended
You cannot perform a Show while a Scan is running
You cannot save as '*xxx*'; please choose another name
You do not have sufficient rights to modify the Client list
You do not have sufficient rights to modify the Group list
You do not have sufficient rights to modify the Remote Networks list
You have reached the License limit for the number of concurrent connections
You must specify the Gateway Address and Gateway Key to use the HTTP Protocol
Your demonstration period has expired

Partial Name
Enter the first part of the Client name here or just press [OK] to browse for all Available Clients.

Configurator: Edit Access to Path

You can enter the path here, or use the [Browse ...] buttons to find the correct location. You need to use the correct button:-

Use [Browse Files...] if you want to apply access controls to one or more files.

Use [Browse Directories...] if you want to apply access controls to all of the files in a directory.

Configurator: Access Rights

All
This checkbox permits full access to the specified file or directory.

Read
Select this checkbox to restrict the Control's access to Read only.

Write
Select this checkbox to permit Write access to the path.

Execute
This checkbox allows the specified file to be executed (but not read).

List Directory Contents
Select this checkbox to permit the contents of a directory to be listed.

Make File/Directory Visible
Select this checkbox to make a file or directory visible to the Control.

Available Columns

Any columns that are available for the selected List View but are not currently being shown will be listed here. To add a column to those being displayed, select it and press [Add].

Current Columns

The columns that currently selected for display in the List View are listed here. To remove a column from the display, select it and press [Remove].

Add
Select an item from the Available Columns list and press this button to add it to the Current Columns.

[<<Remove]
Select an item from the Current Columns list and press this button to remove it from the display. It will be moved to the Available Columns list.

Reset

Press this button to restore the default column settings for the selected List View. These settings are used when PC-Duo is first installed.

Move Left

Select an item in the Current Columns list and press this button to move it one place to the left in the List View.

Move Right

Select an item in the Current Columns list and press this button to move it one place to the right in the List View.

To create an icon, click and hold the left mouse button here and drag the mouse to your desktop or a folder.

Title
The title that appears under the icon is entered or shown here.

Load Configuration

Select this radio button and choose a Control Profile from the drop-down list. This configuration will be loaded when the Control starts up. Select '(Default)' to use the current configuration.

Prevent user from switching to another configuration

When the Control program is started with this Profile, this option prevents the user from changing to a different Profile. This security feature can be applied by system administrators.

Control Command Syntax

When it is started from a shortcut or desktop icon, the Control program, PCICTLUI.EXE, can be passed several parameters through command line options. These options override any settings in the Control Profile

Command Option	Example	Description
/A	/A	Starts Chatting with the connected Clients
/Cclient_name	/Cserver01	Connect to one or more Client(s) on startup (see below)
/Dphone_number	/D0123456789	Dial a PC-Duo Bridge on startup
/E	/E	Ends the remote control session when the View Window is closed (used with /V below)
/F	/F	Prevent the user from changing to a different Profile
/Ggroup_name	/Glocal_PCs	Connect to all of the Available Client(s) in the specified Group on startup
/Lprofile_file	/L"TEST.CFG"	Loads a Control Profile from a configuration file
/Nprofile_name	/N"Standard"	Loads the named Control Profile
/Rreplay_file	/R"12345.RPF"	Display a Replay File
/Uxxx	/UNB3	Specifies which Bridge protocol should be used
/Vx	/Vc	Automatically opens a View Window to the Client. Optional x specifies the mode (the default is Share): C = Control Mode, S = Share Mode, W = Watch Mode See also the /E option, above.
/W	/W	Saves the Profile loaded through the /L option

The /Cclientname option can be repeated when the Control should connect to more than one Client. Instead of a Client Name, you can also use its network address provided this is preceded with a '>' character.

The /U option is intended for use with the /D option when it defines which Bridge protocol (IPX or NetBIOS) should be used. The protocol for the /U option can be "IPX", "TCP" or "NB*a*", where *a* is the NetBIOS adapter number that should be used by the Bridge.

Delete

Press this button to delete the icon. This will remove the shortcut from the desktop or folder.

Troubleshooting

Hopefully, you will have few problems loading and running PC-Duo. However as with any network application, this is dependent on your workstations being correctly configured. This Section sets out the symptoms of potential problems and provides basic suggestions on how to tackle them. You should always check the Release Notes for any news items that could not be included here.

You should be aware that it is not a good idea to install more than one remote control product at a time on any PC. In attempting to do the same thing in different ways, they frequently interfere with each other, and this can cause operating system instability such as a STOP Error or blue screen. If you experience such a problem, make sure that you have not installed a second remote control product by mistake.

Assert Failure
Fonts are not Displayed Correctly
Full-screen DOS Clients are not Displayed Correctly
Print Capture does not work

For specific error messages, please refer to Error Messages.

See also
Dr Watson, Submitting a Problem Report.

Submitting a Problem Report

We hope that you will not have any problems installing or using PC-Duo. However, in the event that you do have some trouble, please check any Error Messages and have a look in the Troubleshooting section to see if a solution is already documented. You should also check the Release Notes for any relevant items that could not be included here.

If you don't find a solution there, you should report your difficulty to your supplier. In order to assist you, they will need a description of the problem, and some configuration information.

Please have the following details ready:-

- The version of PC-Duo (use the Help Menu, About command)
- The PC that you are using it on, including manufacturer and processor speed
- The versions of DOS, OS/2, Windows, Windows for Workgroups, Windows 95, 98, or Windows NT that are installed (including any Service Packs)
- The network transport and version that is being used
- The display adapter and display driver that are fitted to the PC
- The error messages and a description of the fault
- Whether or not the fault is reproducible
- What actions have you taken, if any, to investigate or eliminate the fault.

You may need to submit copies of the PC's configuration files (normally AUTOEXEC.BAT, CONFIG.SYS, SYSTEM.INI, and any network startup batch files).

If you have a copy of Dr Watson, any log entries for the problem can also be invaluable.

If the problem occurs on Windows NT, look for a file called PCIMSG.ERR in the WINNT\SYSTEM32 directory. If this file exists, it probably contains relevant error messages.

This information will help your supplier to help you, and will also give us valuable information to improve PC-Duo in future versions.

Assert Failure

Unusual error conditions are reported using an Assert Failure message. The message describes the program location where the error occurred. This is a filename and a line number, such as c\wcunpack.c, line 676. This information is important. Make a note of it, and then follow the instructions. If you have a copy of Dr Watson, run it before you continue.

Possible Cause
This error can be produced if PC-Duo Setup did not install the driver files correctly.

Possible Solution
Check the time stamp on files PCDVGA.DRV and PROCHOOK.DLL in your WINDOWS\SYSTEM directory. These should be the same as the files in the PCD32 installation directory (e.g. CLIENT32.EXE). If the date and time do not match, run Setup again to reinstall the Client software.

See also Submitting a Problem Report.

Dr Watson

Dr Watson is a debugging program for Windows. There are different versions for 16- and 32-bit Windows.

The 16-bit version, DRWATSON.EXE, was shipped in the Windows 3.1 Resource Kit. It can be used on Windows 3.x and Windows 95. It is best run from the Startup Group, and will catch most program errors such as General Protection Faults (GPFs) automatically, adding entries to file DRWATSON.LOG in the WINDOWS directory.

Both 16- and 32-bit versions of Dr Watson are included with Windows NT v3.51 and v4.0. The 16-bit DRWATSON.EXE can be started from the Startup (Common) group. It will catch faults in 16-bit programs (such as the 16-bit PC-Duo Control), providing they are not set to run in a separate address space, and add entries to file DRWATSON.LOG in the WINDOWS directory. The 32-bit version is called DRWTSN32.EXE. This has to be set to be the default application debugger (by running DRWTSN32.EXE -i) in order for it to catch faults in 32-bit programs (such as the PC-Duo NT Client), logging them to file DRWTSN32.LOG in the WINNT directory.

Click here to run the 16-bit Dr Watson (if it is available on this system, this will only work on Windows 95 or NT).

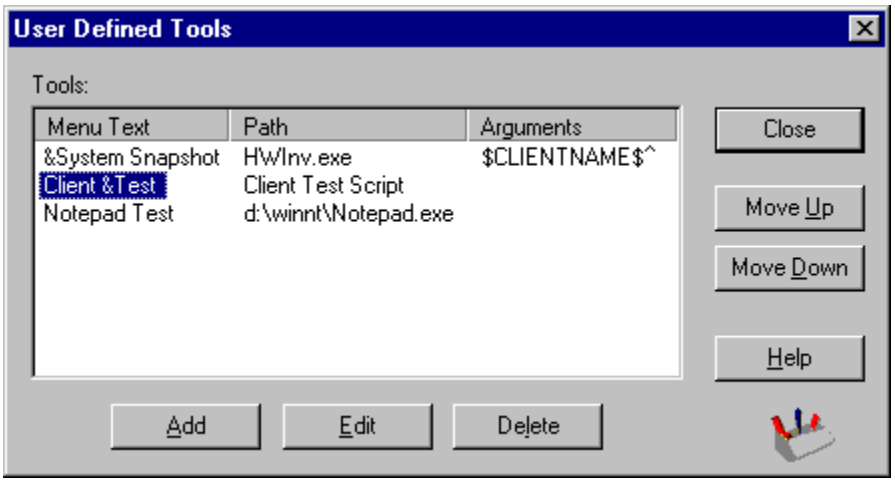
Click here to set the 32-bit Dr Watson as your default application debugger, (this will only work on Windows NT).

User Defined Tools

You can link to and integrate additional tools with the PC-Duo Control application. These tools appear on the Tools Menu and in the User Defined Tools dialog.

To display the User Defined Tools dialog, choose the Tools Menu, User Defined, Edit command.

For more information on a particular feature, click where a ➧ appears on the picture below.



Use the following links to find out more about working with User Defined Tools:

Adding or Editing a User Defined Tool
Copying User Defined Tool Settings to Other Control PCs

User Defined Tools: Copying to Other PCs

If necessary, you can copy the User Defined Tool settings on one Control PC to other Control PCs.

The User Defined Tool settings are stored in the file **TOOLS.NSM**, located in your PC-Duo installation directory. You can simply copy this file to another PC's PC-Duo installation directory in order to transfer the User Defined Tools settings to it. After doing so, the PC receiving this file will need to restart the PC-Duo Control in order to access the new User Defined Tools.

Notes

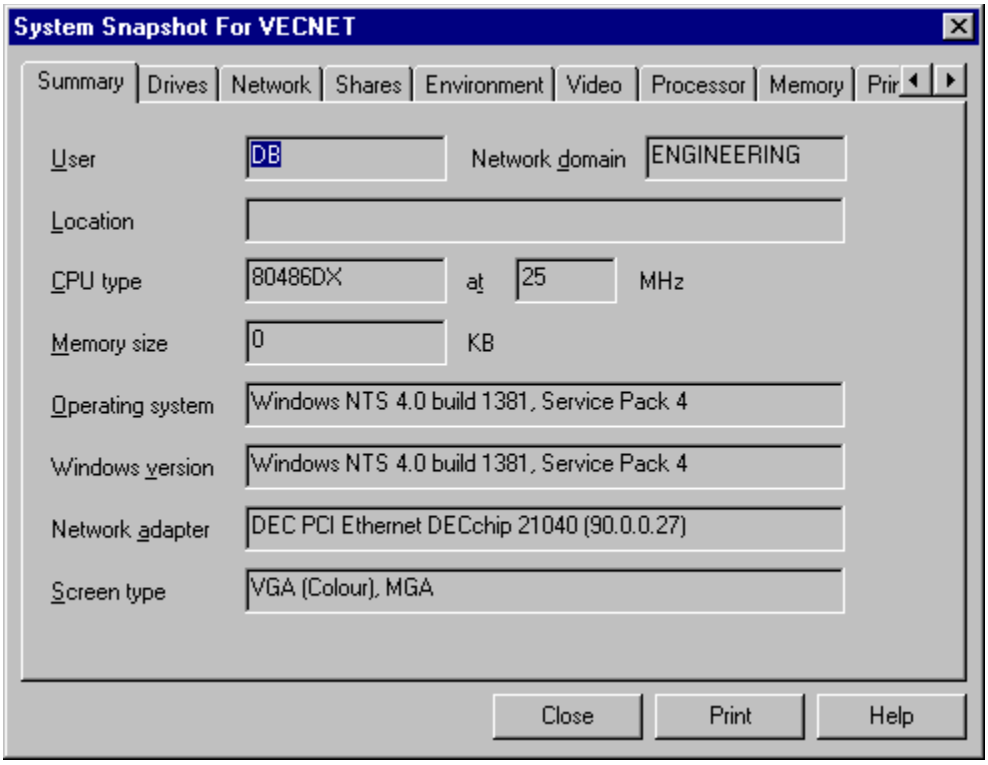
- You should bear in mind that one PC's User Defined Tools may not necessarily work on another PC - the User Defined Tools may be path and file references which are specific to one PC and not the other.
- If you attempt to copy the **TOOLS.NSM** file to another PC, you should use the Edit Tool dialog's Browse button to verify the file paths for each of the User Defined Tools.

System Snapshot Overview

PC-Duo's System Snapshot feature enables you to quickly obtain a detailed inventory of your Client PCs' hardware configurations.

This information is presented in the System Snapshot dialog, organised by category into a number of tabs. You can view this information immediately and use it to assist users and resolve problems, and additionally print a copy of all the information. You can even save a copy of the information to a file:

For more information on a particular feature, click where a ➧ appears on the picture below.



You do not need to connect to a Client before obtaining a System Snapshot - the Control will automatically connect and disconnect in order to obtain the Snapshot information. (If you were already connected to a Client, then you will remain connected when the System Snapshot has completed.)

Use the following links to find out how to work with System Snapshot feature:

{button ,JI(`',`System_Snapshot__Performing')} Performing a System Snapshot

{button ,JI(`',`System_Snapshot__Printing')} Printing the System Snapshot Information

{button ,JI(`',`System_Snapshot__Customizing')} Customizing the System Snapshot Operation

Performing a System Snapshot

To Perform a System Snapshot
1 In the Control window, select the Client which you want to snapshot.

2 From the Tools menu, choose the User Defined, System Snapshot command.

3 The System Snapshot information will now be copied from the Client - a message box will appear briefly to display this operation's progress. After a moment, the System Snapshot dialog will be displayed.

4 The information in this dialog is organised into several tabs. You can right-click on any of the tabs in this dialog to display a list of all the tabs in a shortcut menu - clicking on any of the tabs in the list will display the relevant information.

Notes
- In order to use this feature on your networked PCs, they need to be running the Client v4.15 or above.

Printing System Snapshot Information

You can print the System Snapshot information in order to generate a detailed hardware inventory report of a Client PC. You also have the option of saving the System Snapshot information as a text file.

To Print the System Snapshot Information
1 Make sure the System Snapshot dialog is displayed for the appropriate Client.

2 Choose the Print button (at the bottom of the System Snapshot dialog).

3 A message box will now be displayed, asking if you want to save a copy of the report file. If you wish to save the report as a text file, then choose Yes - the Save As dialog will be displayed, enabling you to specify the name and location of the report file.

4 The Print dialog will now be displayed. Select the appropriate options then choose the OK button to print the file. The file will now print and the System Snapshot dialog remains displayed.

System Snapshot: Customizing

The System Snapshot Feature comes pre-configured as a User Defined Tool. As such, you can change the name of the Snapshot's menu command as displayed in the User Defined submenu. You can also edit the Arguments which are passed to the System Snapshot program.

To Customise the System Snapshot Feature
1 Display the Tools menu, then choose the User Defined, Edit command.

2 When the User Defined Tools dialog appears, select the System Snapshot item from the list box, then click on the Edit button. The System Snapshot settings will now be displayed in the Edit Tool dialog.

3 If you want to change the name of the System Snapshot menu command, as displayed in the User Defined submenu, then edit the text in the Menu Text box. (The **&** symbol means the following letter acts as a shortcut to activate this menu command, providing the menu is already displayed).

4 The Path value should usually be left alone - this refers to the location of the System Snapshot program file (**HWINV.EXE**). This file will be located in your PCD32 installation directory.

5 The Arguments value refers to the parameters which are passed to the System Snapshot program. By default, this setting will be **$CLIENTNAME$^**. The **$CLIENTNAME$** part of the argument refers to the currently selected Client when you start a System Snapshot operation. If appropriate, you can append this setting (after the **^**) with an explicit directory path to specify where the System Snapshot information files are stored. However, as the Control defaults to looking for these files in the Client's Installation directory, you should not need to.

6 The Wait for program to finish check box should be selected so that the Control window will temporarily be inaccessible while viewing the System Snapshot information. However you can deselect this option in order to work with the Control while one or more System Snapshot dialogs are displayed.

Menu Text

Enter the text here that you want to use for the Tools Menu command. Prefix any letter with an ampersand '&' character to use that letter as a shortcut to activate the command when the Menu is visible. It will be displayed with an underline.

Specify the file you want to use as a User-Defined Tool here. You can use the Browse button on the right of the Path box to select the file. This file would typically be an application file, but if you want to locate a different file type then change the Open dialog's Files of type setting.

Arguments

Enter any parameters that you want to pass to the program as command line arguments. You can use Command Line Tokens here.

Select the Wait for program to finish check box if you want the Control to be inactive while the User Defined Tool is running.

If the Wait for program to finish check box is selected, then the Control displays a warning message box stating the Tool presently running, and gives you the option of stopping the Tool to return to using the Control window. (However, the best method of stopping an active Tool is to close the Tool itself, rather than terminating it from this message box.)

When you are satisfied with the User Defined Tool settings, choose the OK button.

Use the Delete button to delete the currently selected User Defined Tool.

The Tools list in the User Defined Tools dialog displays the User Defined Tools available on this Control PC, along with the file path and any arguments the Tool uses.

Click the Close button when you have finished adding, editing or deleting the User Defined Tools.

Use the Move Up and Move Down buttons to change the position of the currently selected Tool in the User Defined submenu.

System Snapshot

Use the tabs at the top of the System Snapshot dialog to display the various categories of Hardware Inventory information. You can use the arrows on the right of the tabs to scroll the full list of tabs, or right-click on any of the tabs and choose a category to display from the shortcut menu.

Each tab of the System Snapshot dialog contains Hardware Inventory information such as CPU type and speed, memory, operating system, service pack information, printers, screen type and display driver, drive size and free space, network domain, network card etc.

Close

Use this button to close the System Snapshot dialog and return to the Control window.

Print

You can print the System Snapshot information in order to generate a detailed hardware inventory report for the Client PC. You also have the option of saving the System Snapshot information as a text file.

Deleting a Group

You can delete a Group from the Groups Folder.

Method

- Display the contents of the Groups folder.
- Select the appropriate Group, then press the Delete key, **or:**
- Right-click on the Group and choose Delete from the shortcut menu, **or:**
- Select the Group and choose the Group, Delete menu command.
- A message box will then be displayed asking you to confirm this action.

Renaming a Group

You can rename Groups in a similar fashion to renaming directories in Explorer.

Method

- Select Groups in the Tree View, then select the appropriate Group in the List View.
- Choose the Group, Rename menu command. The Group name will be surrounded by a black border and will be selected, enabling you to edit it.
- Edit the Group name as required, then press the Enter key to rename the Group.

Notes

- You can also rename the selected Group by clicking on it a second time, or by right-clicking on it and choosing the Rename command from the shortcut menu.
- The black border will then be displayed and the Group name will be selected, enabling you to rename the Group.

See also

Deleting a Group, Adding a New Group

RegCloseKey

Also See
RegCreateKey, RegOpenKey

Description
This function closes the handle associated with an open Registry Key. You should use this function whenever you no longer need to access the Key. Any Registry handles that are still open when your script terminates will be closed automatically.

Syntax

```
Success = RegCloseKey (Handle)
```

Notes
You cannot close any of the pre-defined System Key handles that are listed below. The return value indicates if the operation succeeded or failed. If you specify a handle that is invalid you will receive a runtime error.

Constant
```
HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
HKEY_USERS
```

Example
This example closes an open Key.

```
// Let's close the handle now we've finished using it.

If !handle then
 RegCloseKey (handle)
Endif
```

RegDeleteKey

Also See
RegDeleteValue, RegSetValue, RegGetValue

Description
Deletes a Key from the Registry on the local or Client machine.

Syntax

```
success = RegDeleteKey (KeyRoot, SubKey)
```

Notes
You cannot delete keys with subkeys on Windows NT. You cannot delete any of the pre-defined system key handles that are listed below. The return value indicates if the Registry Key was deleted successfully. If you specify a handle that is invalid you will receive a runtime error.

Constant

```
HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
HKEY_USERS
```

To delete a Key that you have already opened/created, specify this handle as the KeyRoot and specify SubKey as an empty string.

Example
This example creates a key in the local Registry and then deletes it.

```
// Create a temporary key for this demonstration

Handle = RegCreateKey (HKEY_LOCAL_MACHINE, "SOFTWARE\MySubKey")

// Check the handle is not NULL before attempting to delete it

If Handle then
 Print "Result from deleting Key is ", RegDeleteKey (Handle, "")
Else
 Print "Could not create temporary Registry Key"
Endif
```

RegDeleteValue

Also See
RegGetValue, RegSetValue, RegEnumValues

Description
This function removes a named value from an open Registry key.

Syntax

```
success = RegDeleteValue (KeyRoot, ValueName)
```

Notes
The KeyRoot must be a valid key handle, either created by RegOpenKey or RegCreateKey, or one of the pre-defined handles. If ValueName is not a valid value name, the function will return FALSE.

Example
This example enumerates a set of values within a Registry key, and then deletes all of the values.

Warning: This example could be destructive if performed on a required Registry key!

```
Dim ValueNames

// Open a Registry key, enumerate, and delete any values

handle = RegOpenKey (HKEY_LOCAL_MACHINE, "SOFTWARE\OurKey")

If !handle then
 Exit function
Endif

If !RegEnumValues (handle, ValueNames) then
 Exit function
Endif

For Each ValueName in ValueNames
 RegDeleteValue (handle, ValueName)
Next

RegCloseKey (handle)
```

RegGetValue

Also See
RegDeleteValue, RegSetValue

Description
Retrieves the data and type for a specified value name associated with an open registry key.

Syntax

```
data = RegGetValue (KeyRoot, ValueName, type[, error])
```

Notes
The return value from this function can be either a string or a numeric value. You should use the type argument to decide what to do with the data once it has been retrieved. If an error occurs the return value will be zero, but you cannot rely on this to detect an error as the return value may actually be zero. You should in this case, supply the optional error argument to enable you to check for an error. The type argument will contain one of the following values to indicate the type of data returned:

Constant	Description
REG_BINARY	A binary string has been returned, this string will be expanded to an ASCII string
REG_DWORD	A numeric value has been returned
REG_SZ	A string value has been returned
REG_MULTI_SZ	A string has been returned in which each entry is separated by a CR-LF character pair

Example
The following example works on Windows NT, but can be modified to work on other platforms. The registered user for the operating system is returned and displayed.

```
Handle = RegOpenKey (HKEY_LOCAL_MACHINE, "SOFTWARE\Microsoft\Windows
NT\CurrentVersion")

If !handle then
 Print "The specified registry key does not exist"
 Exit function
Endif

Dim type, error

Print "Registered User: ", RegGetValue (handle, "RegisteredOwner", type,
error)
RegCloseKey (handle)
```

RegSetValue

Also See
RegDeleteValue, RegGetValue

Description
Stores data in the value field of an open registry key. This function can also set the type of the value name that you are updating.

Syntax

```
success = RegSetValue (KeyRoot, ValueName, Type, value)
```

Notes
KeyRoot must be a valid handle for a key that the value name belongs to. You must set type to be one of the valid registry data types that are listed in the table below. The value argument can be either a numeric or string value, a list variable will generate an error.

Constant	Description
REG_BINARY	A binary string has been supplied, and will be converted to a series of DWORD values
REG_DWORD	A numeric value has been specified
REG_SZ	A string value has been specified
REG_MULTI_SZ	A string has been specified in which each entry is separated by a CF-LF character pair

Examples
This example sets three data values in the same key, a string, a numeric and a binary string.

```
Handle = RegCreateKey (HKEY_LOCAL_MACHINE, "SOFTWARE\OurKey")

If !handle then

Print "Could not create the required key"
 Exit function
Endif

Print "String Result:  ", RegSetValue (handle, "String Data", REG_SZ, "This
is a string")
Print "Numeric Result: ", RegSetValue (handle, "Numeric Data", REG_DWORD,
1234)
Print "Binary Result:  ", RegSetValue (handle, "Binary Data", REG_BINARY,
"0x0010 0x0011 0x0012 0x0013")

RegCloseKey (handle)
```

RegEnumValues

Also See
RegEnumKeys

Description
This function enumerates all of the values within a specified registry key.

Syntax

Success = RegEnumValues (*KeyRoot, NameList[, DataList, TypeList]*)

Notes
You need to supply a Registry key handle that has been opened or created successfully. You must also supply at least one list to store the value names. If you also need the data associated with that value, you must supply a second list that will contain a series of strings and numeric values. You can also supply an optional third list that will contain the data type associated with the value, you can also use the IsString and IsNumeric functions to determine the data type if required.

Example
The following example enumerates a key in the Registry, retrieves a list of values and value data and displays them. Note that this example may require the Registry key to be changed to work on your system.

```
handle = RegOpenKey (HKEY_LOCAL_MACHINE,
"SOFTWARE\Microsoft\Windows\CurrentVersion")

If !handle then
 Print "Unable to open the required registry key"
 Exit function
Endif

Dim NameList, DataList

RegEnumValues (handle, NameList, DataList)

Index = 1

For Each Name in NameList
 Print "Value Name = ", Name, " [Value = ", GetItem (DataList, Index), "]"
 Index = Index + 1
Next

NameList = NOTHING
DataList = NOTHING

RegCloseKey (handle)
```

RegEnumKeys

Also See
RegEnumValues

Description
Enumerates all the Registry keys in the same branch as the specified Registry Key.

Syntax

```
Success = RegEnumKeys (KeyRoot, KeyList)
```

Notes
You must specify a Registry key handle that has been opened or created successfully. The list you provide will contain the Key names that appear in the Registry under the specified root Key.

Example
This example opens the key that contains software application data and displays these key names.

```
handle = RegOpenKey (HKEY_LOCAL_MACHINE, "SOFTWARE")

If !handle then
 Print "Unable to open required key"
 Exit function
Endif

Dim KeyNames

If RegEnumKeys (handle, KeyNames) then
 For Each KeyName in KeyNames
  Print "Key Name = ", KeyName
 Next
Endif

KeyNames = NOTHING

RegCloseKey (handle)
```

RegCreateKey

Also See
RegOpenKey, RegCloseKey

Description
Creates a Registry Key on either the local or a Client machine. The value that is returned is used in subsequent Registry functions.

Syntax

```
handle = RegCreateKey (KeyRoot, SubKey)
```

Notes
The value that is returned is a handle that must be used when accessing the Key that you have just created in other Registry functions. You must specify the valid handle of a key that is to be used as the parent key in KeyRoot. This value can be one of the pre-defined values (shown in the table below) or the handle of a key that has already been opened.

Constant
```
HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
HKEY_USERS
```

SubKey must be a string containing the name of the Key to create. This Key must be a subkey of the Key identified in the KeyRoot argument. If you want the Registry key to be created on a Client, you must follow the same procedure as with Qualified Pathnames. If the root Key that you specify is other than ones listed in the table above, this Key will override any location information specified in the subkey. For example, if you have created/opened a Key on the local machine and then specify a subkey that specifies a Client, the root key location will take precedence.

Example
This example attempts to open an existing Key, and handles a failure by creating the Key is necessary.

```
If (handle = RegOpenKey (HKEY_LOCAL_MACHINE, "SOFTWARE\MySubKey")) == NULL
then
 If !RegCreateKey (HKEY_LOCAL_MACHINE, "SOFTWARE\MySubKey") then
  ...
 Endif
Endif

// The handle variable now contains a valid registry key handle

...

// Let's close the handle now we've finished using it.

RegCloseKey (handle)
```

RegOpenKey

Also See
RegCloseKey, RegCreateKey

Description
Opens a key in the Registry of the local or Client machine. The value that is returned by this function is used in other registry functions.

Syntax

```
handle = RegOpenKey (KeyRoot, SubKey)
```

Notes
The value that is returned is a handle that must be used when accessing the Key you have just opened in other Registry functions. You must specify the valid handle of a Key that is to be used as the parent key in KeyRoot. This value can be one of the pre-defined values (shown in the table below) or the handle of a key that has already been opened.

Constant
```
HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
HKEY_USERS
```

SubKey must be a string containing the name of the key to open. This key must be a sub key of the key identified in the KeyRoot argument. If you want the Registry Key to be opened on a Client machine, you must follow the same procedure as with Qualified Pathnames. If the root Key that you specify is other than ones listed in the table above, this Key will override any location information specified in the subkey. For example, if you have created/opened a Key on the local machine and then specify a subkey that specifies a Client, the root key location will take precedence.

Example
This example attempts to open an existing key, and handles a failure by creating the key is necessary.

```
If (handle = RegOpenKey (HKEY_LOCAL_MACHINE, "SOFTWARE\MySubKey")) == NULL
then
 If !RegCreateKey (HKEY_LOCAL_MACHINE, "SOFTWARE\MySubKey") then
  ...
 Endif
Endif

// The handle variable now contains a valid Registry Key handle

...

// Let's close the handle now we've finished using it.

RegCloseKey (handle)
```

Configuring Windows 95/98

The 32-bit Setup procedure should be used to install PC-Duo on Windows 95/98. (The 16-bit Setup can install 16-bit DOS and Windows Control programs on Windows 95/98, but this is not recommended.)

Windows 95/98 can support IPX, NetBIOS and Windows Sockets transports (simultaneously), so any suitable options can be installed. It is not possible to run PC-Duo's DOS TSRs in a DOS Box under Windows 95.

PC-Duo Setup will make the normal changes to Windows system files. If multiple transports are selected, Setup will create icons for the appropriate Control programs, but it can only select one transport for the Windows Client, in the following order of priority:

- NetBIOS
- IPX
- TCP/IP

The Reset Video Driver program can transfer the PCDVGA.DRV display driver entry between SYSTEM.INI and the Registry. In the Registry, both PCDVGA.DRV and the original display driver are loaded through key:

```
HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\Class\Display\0000\DEFAULT
```

Run the Windows Registry Editor REGEDIT.EXE, and look for "drv" and old_drv" values.

When it is loaded this way, PCDVGA.DRV supports the use of the Quick Resolution Change feature in Windows 95 Plus and Windows 98.

Changing the Network Settings

To change the network settings for Windows 95/98, double-click on the Network icon in the Windows Control Panel. This will display the Network dialog.

From here, you can configure IPX, NetBIOS, and TCP/IP network stacks. After doing so, it is necessary to restart Windows 95 in order for any changes to take effect.

Setting the IPX Frame Type

Windows 95 defaults to using "Auto" frame type for IPX packets. This listens for packets coming from a NetWare File Server, and uses the same frame type. This can result in PCs using different frame types. For reliable operation, PC-Duo needs all PCs to use the same Frame Type.

Select the IPX/SPX-compatible protocol from the list in the Network dialog, then click the Properties button. Click on the Advanced tab.

Highlight the Frame Type entry, then set the value from the list; we recommend Ethernet 802.3.

Finding a NetBIOS Adapter

Windows 95/98 supports multiple NetBIOS interfaces or "adapters". A NetBIOS application such as PC-Duo chooses which NetBIOS to use by specifying a "NetBIOS Adapter Number". PC-Duo Setup will leave the NetBIOS Client and Control configured to use the "default" NetBIOS adapter 0 (zero).

The Configurator can identify most common NetBIOS transports, but you should be aware that the numbers allocated to any NetBIOS adapters other than the default can change from one Windows 95 startup to the next. To avoid problems, you should make sure that you have set a default NetBIOS transport. Ideally, this should be the same for all PCs, or a Control will not be able to Lookup or Connect

to all of the Clients.

To set a default NetBIOS, display the Network dialog (accessed via Control Panel). You can use NetBEUI, PATHWORKS DECnet, or TCP/IP. We do not recommend using the "IPX/SPX-compatible transport with NetBIOS". Select the NetBIOS transport and click the Properties button. Then select the "Advanced" tab.

Check the "Set this protocol to be the default protocol" box at the bottom and click OK to apply the change. This check-box will be greyed out if the particular transport is unsuitable (e.g. if it is not a NetBIOS adapter).

Configuring Windows NT

Windows NT is a significantly different environment to Windows 3.1, 3.11, and 95/98.

The 32-bit PC-Duo Setup should be used to install the Control or Client. It will install the 32-bit PC-Duo components for Windows NT.

You must be logged in as Administrator in order to install the PC-Duo Client on Windows NT.

NT Services

When thePC-Duo Windows NT Client is installed, it is configured to run as an NT Service. This allows it to load when NT starts, rather than after a user logs in. The Client can then be stopped and started using the Service Manager (Control Panel, Services), and reconfigured using the Configurator.

The configuration changes that PC-Duo Setup makes are stored in the Registry, not in SYSTEM.INI. These entries can be removed using the "De-activate PC-Duo Client" icon in the PC-Duo Group.

No changes are required for the PC-Duo 16-bit Control, but the Windows NT Client must load some additional drivers during startup. Display drivers are loaded from the Registry. To find the appropriate entries, use the Registry Editor, REGEDT32.EXE, and look for key:

```
\HKEY_LOCAL_MACHINE\HARDWARE\DEVICEMAP\VIDEO
```

In the right-hand window, the device\video0 value contains the key for the real display driver. Double-click on it to see the full contents. It will look something like:-

```
\REGISTRY\Machine\System\ControlSet001\services\<driver>\device0
```

Follow this path. "\REGISTRY\Machine" means look in the Registry under \HKEY_LOCAL_MACHINE, and <driver> is the name of the display driver (e.g. s3). You should see an InstalledDisplayDrivers entry on the right. This contains a list of drivers. Double-click on it to expand the list into a box. It should contain one or more "gdihook" entries. GDIHOOK.DLL is used by the Windows Client to communicate with the NT display sub-system. If there are no GDIHOOK entries there, run the "Reset Video Driver" icon from the PC-Duo Group.

In order to handle CTRL+ALT+DEL logon requests on Windows NT for PC-Duo Control users, Setup installs a "GINA" (Graphical Identification and Authentication) DLL. This is loaded through Registry key:-

```
\HKEY_LOCAL_MACHINE\Software\Microsoft\Windows NT\CurrentVersion\WinLogon
```

PCIGINA.DLL is loaded by GinaDLL, with the original DLL being loaded by GinaDLL.old.

Setup and the "Activate NT Client" icon both arrange to load the Windows NT Client through Registry key:-

```
\HKEY_LOCAL_MACHINE\System\CurrentControlSet\services\Client32
```

This key contains settings for the 32-bit NT Client. The values are updated using the Configurator.

Keyboard and Mouse lockout in Control Mode is implemented through key:-

```
\HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\Session Manager\DOS Devi
ces
```

The keyboard intercept is enabled by value KEYBOARDCLASS0, and the mouse by POINTERCLASS0.

On NT4, an additional driver is loaded as a service, through key:-

```
\HKEY_LOCAL_MACHINE\System\CurrentControlSet\services\PCIsys
```

Lastly, Client Event Log messages are enabled through keys:-

```
\HKEY_LOCAL_MACHINE\System\CurrentControlSet\services\EventLog\Application\PC
Iapp
\HKEY_LOCAL_MACHINE\System\CurrentControlSet\services\EventLog\System\PCIsys
```

Changing the Network Settings

To change Windows NT's network settings, double-click on the Network icon in Control Panel. This will display the Network dialog. On NT4, select the Protocols tab to configure IPX/SPX frame types, or the Services tab to configure NetBIOS adapters.

It will be necessary to restart Windows NT in order for any changes to take effect.

Setting the IPX Frame Type

Windows NT defaults to using "Auto" frame type for IPX packets. This listens for packets coming from a NetWare File Server, and uses the same frame type. This can result in PCs using different frame types. For reliable operation, PC-Duo needs all PCs to use the same Frame Type.

Run Control Panel, Network as above, and select the Protocols tab. Select the NWLink IPX/SPX Compatible Transport and click on the Properties button. Then select the "Advanced" tab. Select a Frame Type (we recommend Ethernet 802.3), click OK to make the change, and restart NT.

Finding a NetBIOS Adapter

Windows NT supports multiple NetBIOS interfaces or "adapters". A NetBIOS application such as PC-Duo chooses which NetBIOS to use by specifying a "NetBIOS adapter number". PC-Duo Setup will leave the NetBIOS Client and Control configured to use the "default" NetBIOS adapter 0 (zero). However, this may not be the correct adapter. The Configurator can identify most common NetBIOS transports, or you can do it by hand. To find the correct adapter, use Control Panel, Network, as above, and select the Services tab.

Highlight the "NetBIOS Interface" line (as above) and press [Properties]. This will list the NetBIOS adapters that are available.

This shows the "Network Route" for each NetBIOS Adapter. You can scroll through this list. The NetBIOS Adapter number is shown in the "Lana Number" column. The Network Route shows the internal transport names. In the display above, the Network Routes that lead to "Lance -> Lance1" are on the local network. Routes like "NetBT -> NdisWan4" are NetBIOS adapters running over a Wide Area Network or Dial-up Networking link. You can use these adapters with the PC-Duo Control to create special Control icons for Clients on remote networks.

Identify the transport from the table below, and then use the Configurator to to set the correct LANA number in the Client or Control Configuration dialog. Check "Alternate NetBIOS No.", put the Lana Number in the box, and then click OK to save the setting.

Internal Network Name	**NetBIOS Transport**
Nbf	NetBEUI
NetBT	RFC 1001/1002 NetBIOS on TCP/IP
NwlnkNb	NWLINK NetBIOS on IPX
PATHWORKS or Decdnp	DECnet NetBIOS

See also
Protecting your Windows NT Installation

Protecting your Windows NT Installation

Windows NT occasionally corrupts the Registry when a new software package is installed. To protect yourself against this event, you should maintain an up-to-date Emergency Repair Disk.

You can easily make a new one by running RDISK.EXE from Start, Run, or from the File Manager File Menu, Run. Specify the /S command line option so RDISK backs up the system's security information as well as the main Registry contents.

Windows NT will not start if the Registry is corrupted, so you should also maintain an alternate bootable system. If your NT system disk is in DOS FAT format, this can be a bootable DOS system, but this will not allow you to run NT Backup, for example. Otherwise, or if the system disk is NTFS, then the alternate boot must be Windows NT. This can be a minimal installation of the same or a different version of NT. For example, we test software on NT 3.51 and 4.0, so our NT systems typically have these two versions as alternate boot configurations. They can be on the same disk but in different directories, or on different disks.

If you cannot do this, and you are running on an Intel PC, then you can make a bootable floppy disk set. You can recreate these by running WINNT32 /OX from inside Windows NT, or WINNT /OX from DOS. Both of these programs are located on the NT CD-ROM. These disks will allow you to boot Windows NT and repair the system using your Emergency Repair Disk.

Fonts are not Displayed Correctly

Symptom
The fonts on the Client and Control screens do not match.

Possible Cause
This is probably because the Windows Client is using a screen font that is not available on the Control. Control will use the nearest match that is available to the Windows Font Mapper, but this could have different font metrics to the Client's font. This is particularly likely with applications like terminal emulators which often have their own screen fonts.

Possible Solutions
Try using the Send Physical Fonts option (/P) at the Client. This will only work with TrueType fonts.

Make sure that whatever screen fonts are used on a Client are also available on the Control. Find out which fonts are being used on the Client, copy them into the \WINDOWS\SYSTEM directory on the Control and then use Windows Control Panel to install them. The Control will then be able to use them.

Notes
If the font files are actually in use on the Client, Windows may have them open for exclusive access. This will prevent you from using File Transfer to copy them onto the Control. You may have to stop the application, and may have to stop and restart Windows on the Client to get access to the font files.

Full-screen DOS Clients are not Displayed Correctly

Symptom
The Windows Control does not display a full-screen DOS Client correctly.

Possible Cause
When the Client is running a full-screen DOS application, the Windows Control makes the Client's screen display as large as possible by using the largest available fixed-pitch font that will fit on the screen. This may be a Windows font instead of an OEM (or DOS) font. As a result, graphics such as line-drawing characters may not be displayed correctly.

Possible Solutions
You can change the font that the Control uses to display full-screen DOS Clients;
In the case of a Windows Client running a full-screen DOS box, you should find that switching to a windowed DOS box corrects the display. Do this by pressing ALT+Return.

File Distribution: Toolbar

The Toolbar contains shortcuts to many of the most frequently used tasks and tools. Click on a button to go straight to that task or function.

The buttons are greyed-out when they are not appropriate.

Leave the mouse over a button to see a brief description of the function. This is known as a *Tooltip*.

Refer to the File Distribution: View Menu for details on how you can customise it to reflect the functions that you use most.

Description

Enter a description for the script here. It will be displayed in the Control's Scripting folder or the Script Agent's task list.

Script
Enter the path and name of the script file here, or press [Browse] to locate the file.

Browse
Press this button to locate the script file.

Check Syntax

Press this button to check the syntax of the script before adding it to the task list. The button will be greyed-out until a script filename has been defined.

Edit Script

Press this button to launch the Scripting Editor. This allows you to modify the script if necessary. The button will be greyed-out until a script file has been defined.

Clear Log file when run

When this checkbox is selected, the log file will be emptied before the script is executed.

Disabled

Select this checkbox to prevent the task from being executed. You can enable it later.

Add Schedule: Days

Use these settings to determine when the task can run:

Every Day
The task will run every day (i.e. Monday to Sunday).

Every Weekday
The task will run on every weekday (i.e. Monday to Friday).

These Days
Specify which individual days the task should run on.

Every x of the month
Specify that the task should run on one specific day every month.

This Date
Run the task on this date only.

Add Schedule: Time

On the hour
Specifies that the schedule runs every hour, on the hour for the days specified.

Every
Specify the period between executions of the schedule, in minutes.

The drop down list box provides additional constraints on the execution period. These are:

All Day	Executes all day, every x minutes
Before	Executes every x minutes, before the time specified
After	Executes every x minutes, after the time specified
Between	Execute every x minutes, between the times specified
Not Between	Execute every x minutes all day, but NOT between the times specified

At This Time
Executes the schedule only at the time specified.

Add Schedule: Run Application

Run Application on Successful completion
Select this check box if you want the application to run only if the scheduled Script completes without errors.
Leave the check box clear if the specified application should run regardless of whether the Script generated any errors or not.

Application
Enter the filename and path to the application that should be executed. You can also enter any registered file type to open the file with its associated application. For example, specifying a .TXT file would open the file with Notepad.

Use the browse [...] button to locate the application or file to open.

Parameters
Enter any command line parameters required by the application.

Run
You can run the application in a Normal, Minimized, or Maximized Window.

Script Variables

Any predefined Script variables and their current values are displayed here. Press [Add] to create a new variable. Highlight an existing variable and press [Edit] to edit it, or [Remove] to delete it.

Add

Press this button to create a new variable. The Add/Edit Script Variable dialog will be displayed.

Remove

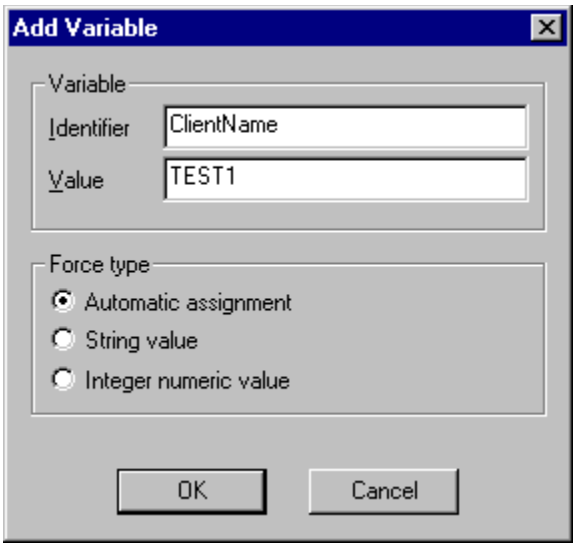
Highlight an existing variable and press this button to delete it.

Edit

Highlight an existing argument and press this button to edit it. The Add/Edit Script Argument dialog is displayed.

Add/Edit Variable

Press [Add] in the Predefined Script Variables dialog to create a new variable, or highlight an existing Variable and press [Edit] to edit it. The Add/Edit Variable dialog is displayed.



The name of the Variable is entered or displayed in the Identifier field. When you are creating a new Variable, you must observe the rules for variable names as defined in the language structure. The Value field can contain either an Integer numeric value or a String.

The type of the variable can be forced to be String or Integer. By default, "Automatic assignment" is selected, and the Variable's type depends upon an interpretation of the value. If it contains numeric characters and they can be converted to a Integer numeric value, the variable's type becomes Numeric. If the value cannot be converted to an integer, the identifier becomes a String variable.

Select "String value", and regardless of the value, the variable will become a String. Similarly, you can select "Integer numeric value". In this case, if the value cannot be converted to an integer, the variable is set to 0 (zero).

Tabs

This setting allows you to control what happens when you press the tab key in an Editor window. The Editor can insert one or more spaces, or it can keep the original tab characters. Spaces allow you to structure the script more clearly. You can also specify the number of spaces to be used when not using tab characters.

Output

Select this check box to clear the output window at the bottom of the Editor window automatically every time a script is executed. Clear the check box to leave the contents of this window as it is. You can clear the contents when necessary.

File Properties

The following information is displayed:

Filename	The name of the file, without the path
Location	The full path to the file
Size	The file size in bytes
Created	The date when the file was created
Modified	The last time the file was modified
Accessed	The last time the file was accessed

Script Function

The Function name is shown here.

Description

The Script Function is described here.

Parameters

The Script Function's parameters and types are listed here.
You must define all of the required parameters before the
[OK] button will be enabled.

Script Execution Statistics

The following details are displayed:

Execution Time
The amount of time it took for the Script to run.

Client Errors
These are non-fatal errors reported during the execution of a Script.

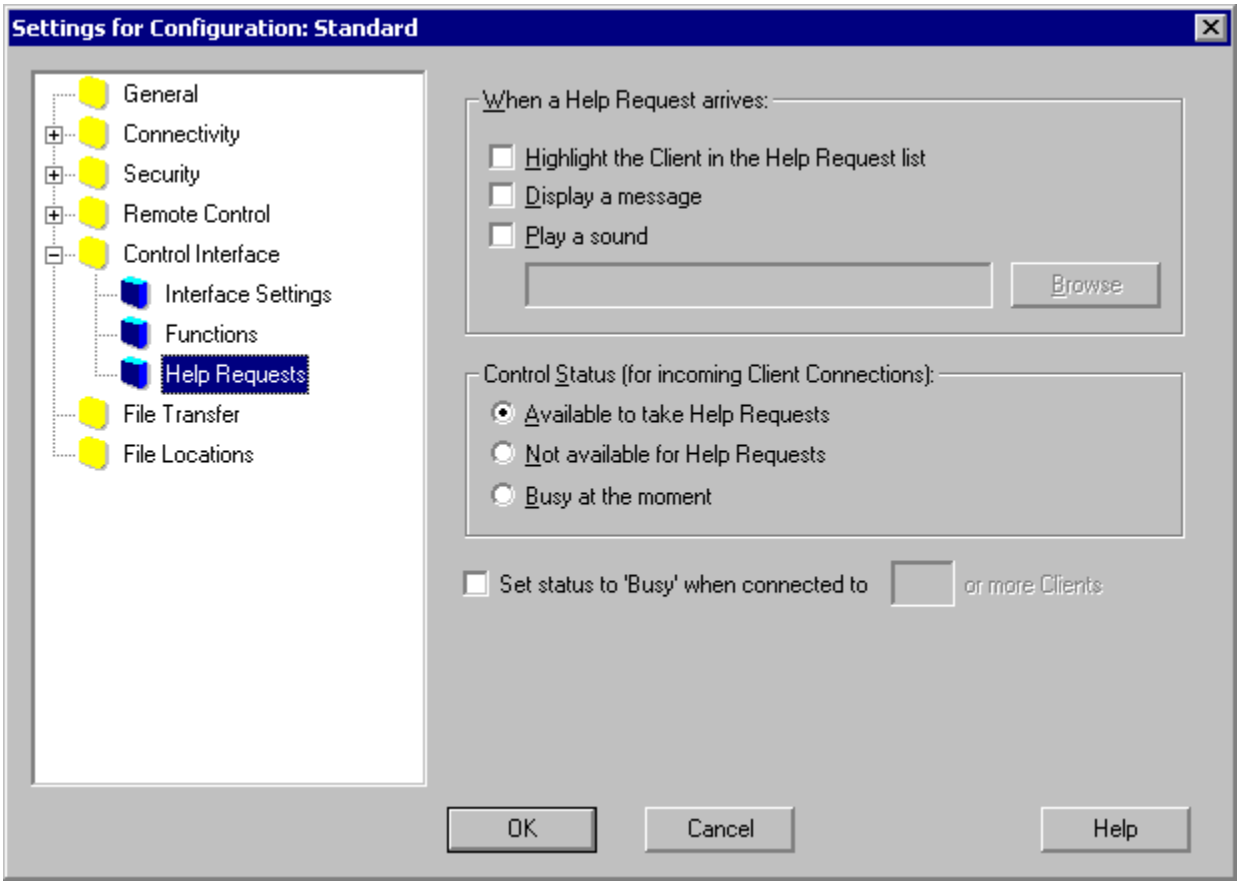
Fatal Errors
The number of errors that caused the Script to terminate, this is usually zero or one.

Termination Type
This is the way in which the script terminated. It can be Normal, User Terminated or Runtime Error.

Settings for Configuration: Help Requests

This page is used to configure how the Control deals with incoming Help Requests.

For more information on a particular feature, click where a ➧ appears on the picture below.

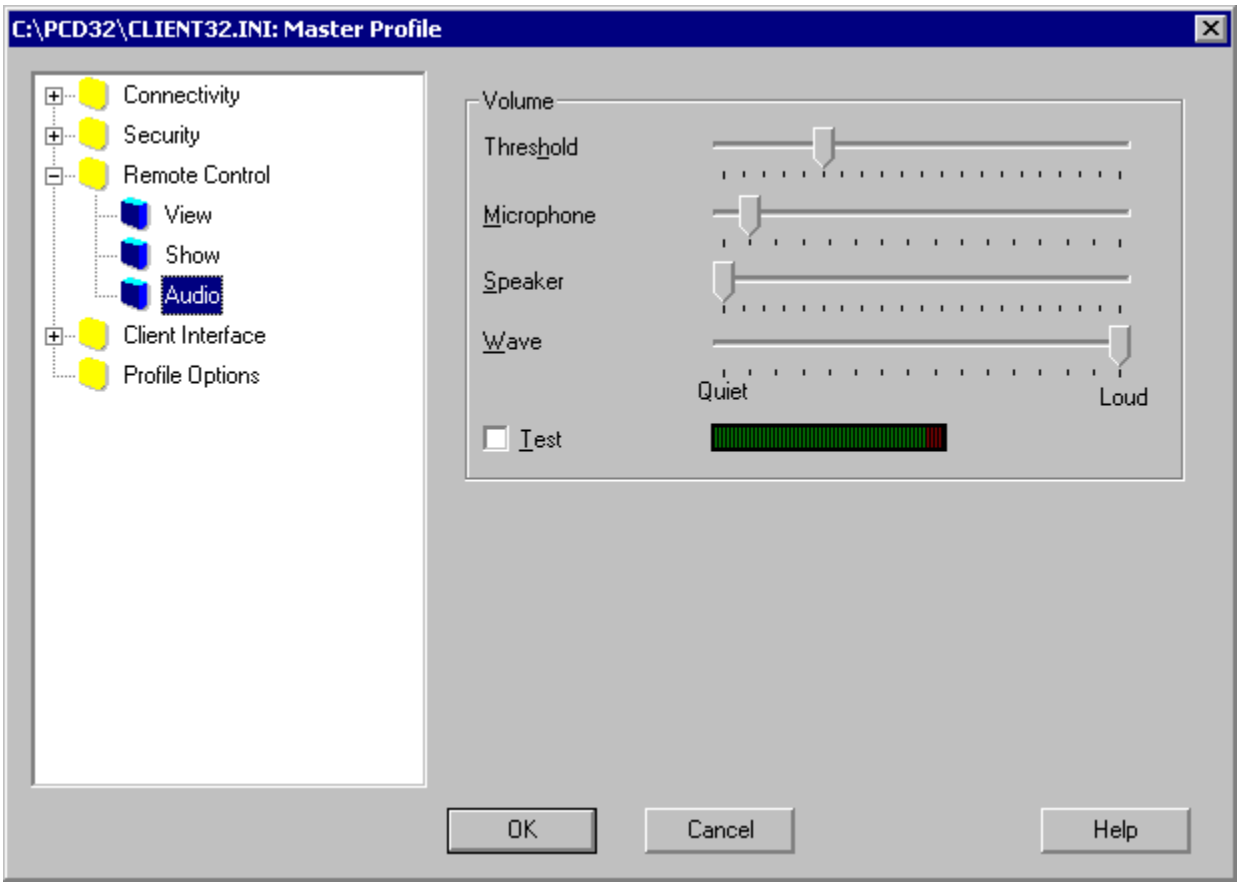


You can also use the Available toolbar button (shown above) to toggle between Available (displayed in green) and Unavailable (displayed in red).

CLIENT32.INI: Audio

This page is used to configure the Client for two-way Audio communication with a viewing Control user. The Control has a very similar Settings for Configuration: Audio dialog which provides additional settings.

For more information on a particular feature, click where a ➧ appears on the picture below.

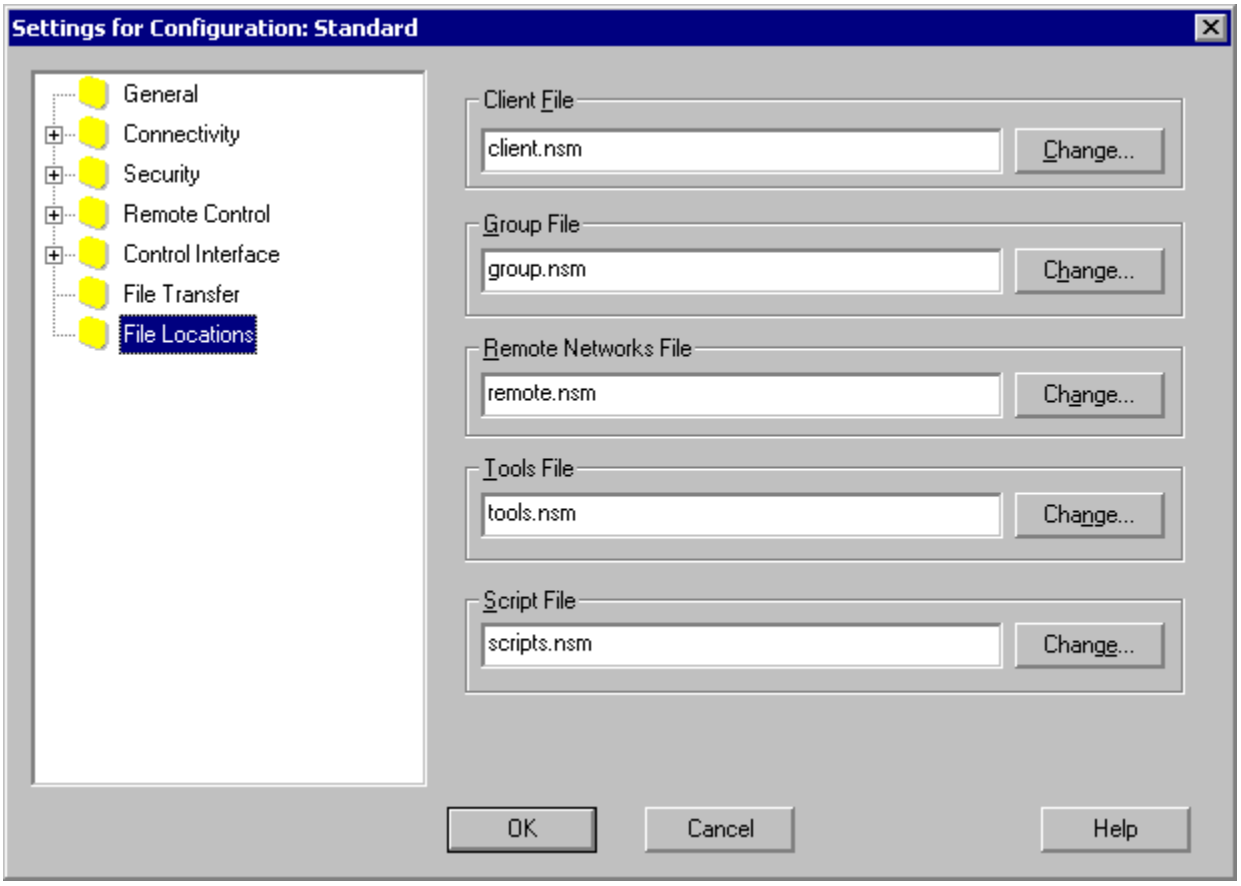


Use the Test check box to test the current settings.

Settings for Configuration: File Locations

This page allows you to specify alternate names and locations for the main Control data files.

For more information on a particular feature, click where a ➧ appears on the picture below.



These files are normally stored in the Control's PCD32 install directory.

Error creating file

You are trying to create a file, but you do not have the necessary rights to do so.

Solution
Login as a user with the required access rights and try again.

Print Capture has been disabled at the Client workstation

You cannot capture print output from the Client because Print Capture is disabled in the Client Profile.

Suggestions

- If the Client has multiple Client Profiles, try logging in as a different User at the Client.
- Use the Client Configurator, Advanced Mode, to change the Print Capture settings in the CLIENT32.INI: Options dialog.

The Transport DLLs are older than the Control

One or more of the transport DLLs IPCTL32.DLL, TCCTL32.DLL, NBCTL32.DLL, and NBCTLAx.DLL are older than the installed PC-Duo Control.

Suggestion
Reinstall the PC-Duo Control or contact your supplier for an update.

TCP/IP is not enabled, run the Configurator to enable it

You have configured a feature that requires TCP/IP support, but TCP/IP has not been enabled in the Client Profile.

Solution
Use the Client Configurator, Advanced Mode and enable TCP/IP support in the CLIENT32.INI: Connectivity tab..

The Control is not responding

You are trying to connect to a Control from a Client, but the Control is either not on or the user has refused your connection request.

Suggestion
Try connecting to another Control, or use the Request Help facility to contact the Control user and advise them of your need for assistance.

TAPI Error

An unexpected error has occurred with the Modem (TAPI device).

Suggestion
If this error message occurs, please report your configuration and the circumstances to your vendor.

No Valid TAPI Device Configured

You do not have a valid Modem (TAPI device) configured for the Control to use to dial a Remote Network, or for the Client to use for the Dialin Bridge.

Solutions

- Check your Modem settings using Start, Settings, Control Panel, Modems
- Then, configure the modem(s) accordingly:
- The Control's Modem is set in the Settings for Configuration: Dialin Bridge dialog
- The Client's Modem is configured using the CLIENT32.INI: Dialin Bridge dialog.

Another program is currently using the specified communication device

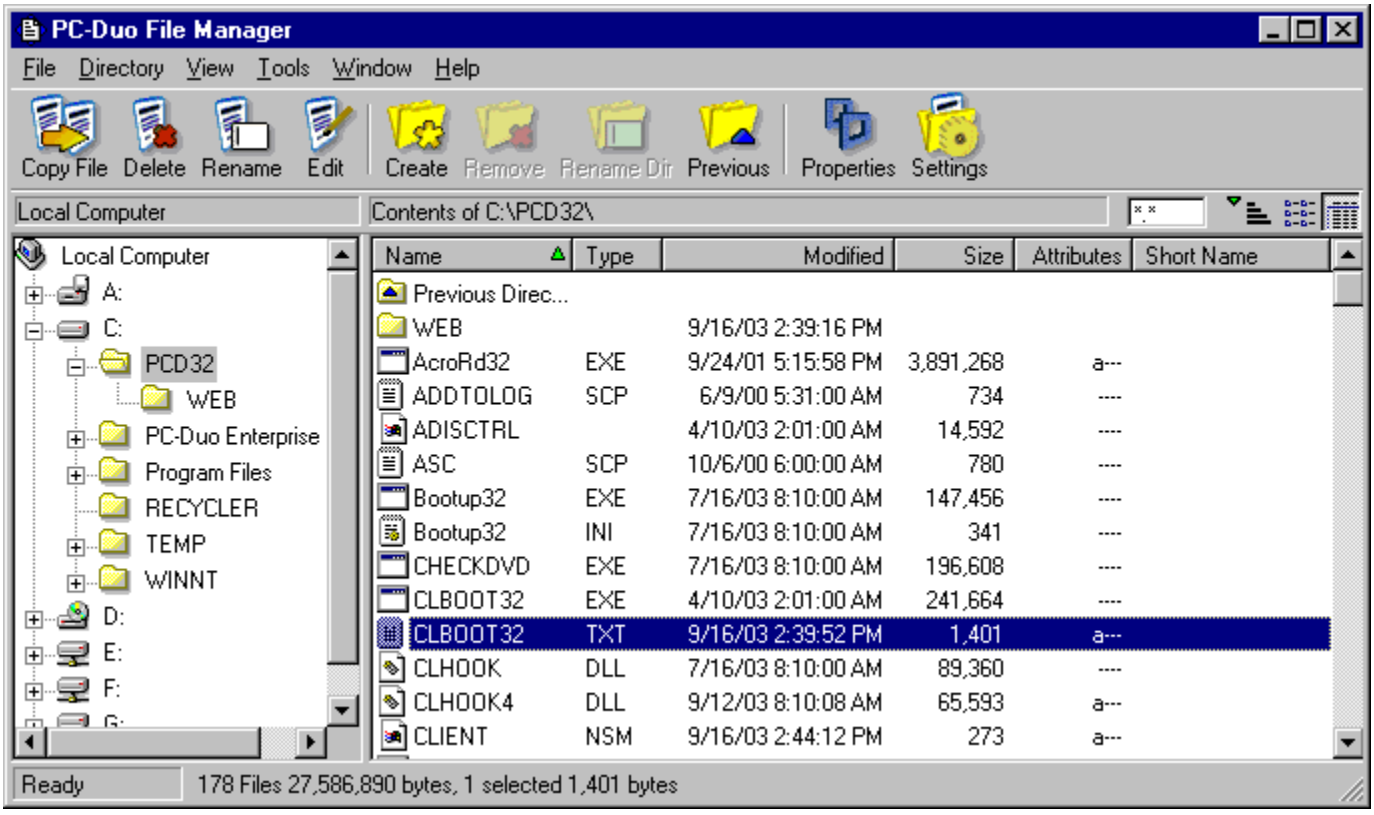
You are attempting to dial a Remote Network, but another program on this workstation is already using the modem specified in the Settings for Configuration: Dialin Bridge dialog.

Suggestion
Close all other programs and then try dialling the remote network again.

File Manager

Select the Tools Menu, File Manager command to open the File Manager Window. This allows you to perform Windows Explorer-like operations from within the Control.

For more information on a particular feature, click where a ➧ appears on the picture below.



Audio Hardware Error

An unknown problem has occurred with the Client's audio hardware. Audio support will be disabled for this remote control session.

Solution
Check that the Client's audio hardware is properly installed and running. This is normally accessible through Start, Settings, Control Panel, Multimedia.

Audio already in use

You are trying to use the audio functions in PC-Duo but the audio system is already in use by another application.

Solution
Close the other application and try again.

Bad Audio Format

Meaning
You have selected an Audio Format that is either unsupported or not available on your workstation.

Solution
Select a different format in the Settings for Configuration: Audio, Select Audio Transmission Format dialog.

Note
PC-Duo supports only 8 bit data transmission rates.

Audio Error

A problem has occurred with your audio system.

Suggestions

- Check that Windows audio support has been installed. This is normally accessible through Start, Settings, Control Panel, Multimedia.
- Check the Settings for Configuration: Audio, Select Audio Transmission Format dialog.

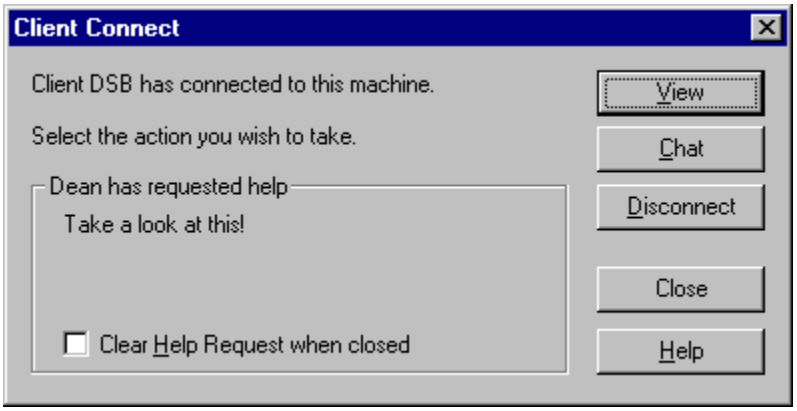
Note

PC-Duo supports only 8 bit data transmission rates.

Client Connect

This dialog is displayed when a Client makes a connection or sends a Help Request to the Control.

For more information on a particular feature, click where a ➧ appears on the picture below.

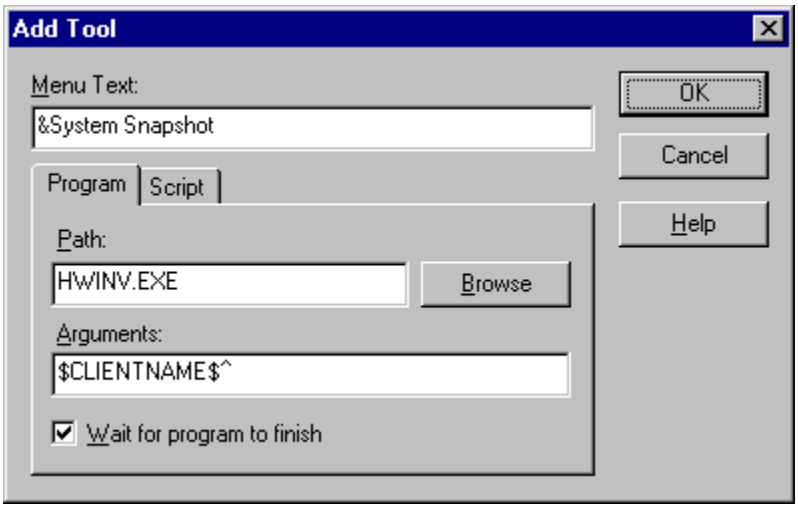


Select the course of action you wish to take and press the appropriate button.

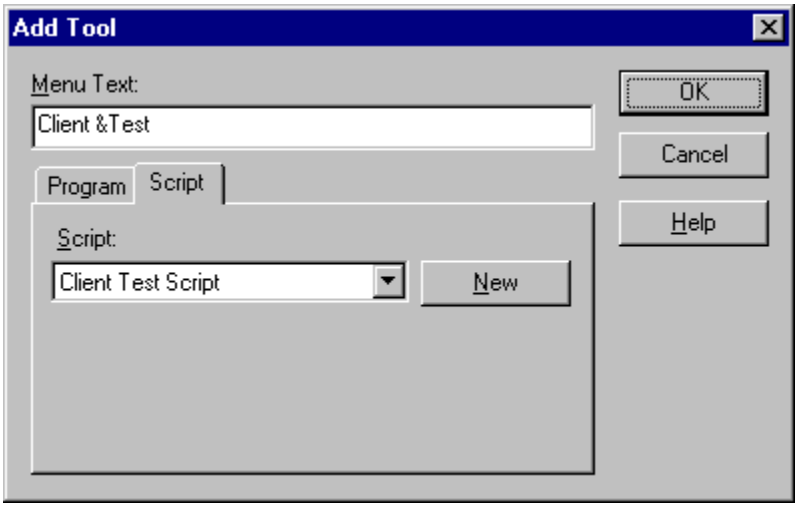
Add/Edit Tool

Use the Tools Menu, User-Defined, Edit command to open the User Defined Tools dialog. Press the Add button in to add a new menu entry or highlight an existing entry and press Edit to edit it.

For more information on a particular feature, click where a ➧ appears on the picture below.



Enter the Tools menu text and then enter the details of the external program (above) or Script (below).

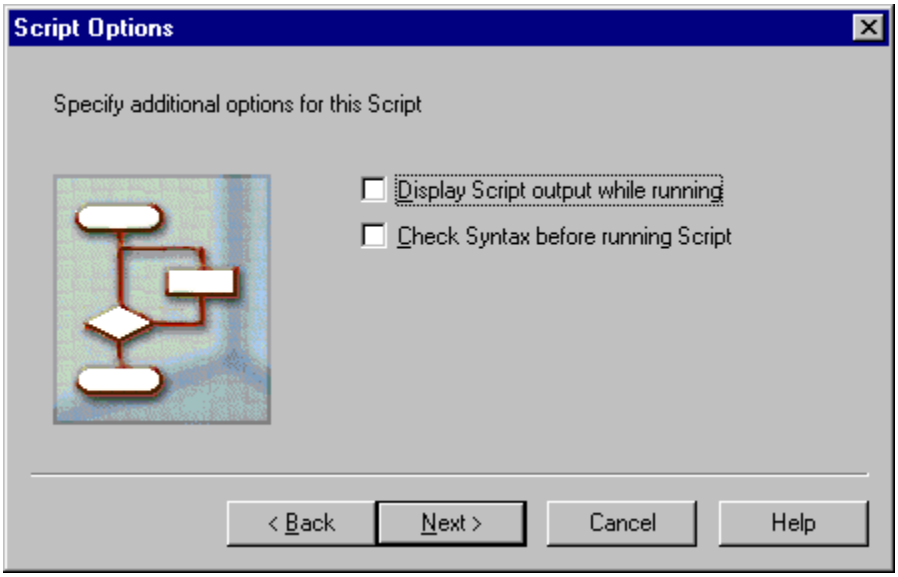


See also
Command Line Argument Tokens

Script Options

This dialog allows you to specify options for when the Script is executed.

For more information on a particular feature, click where a ➧ appears on the picture below.



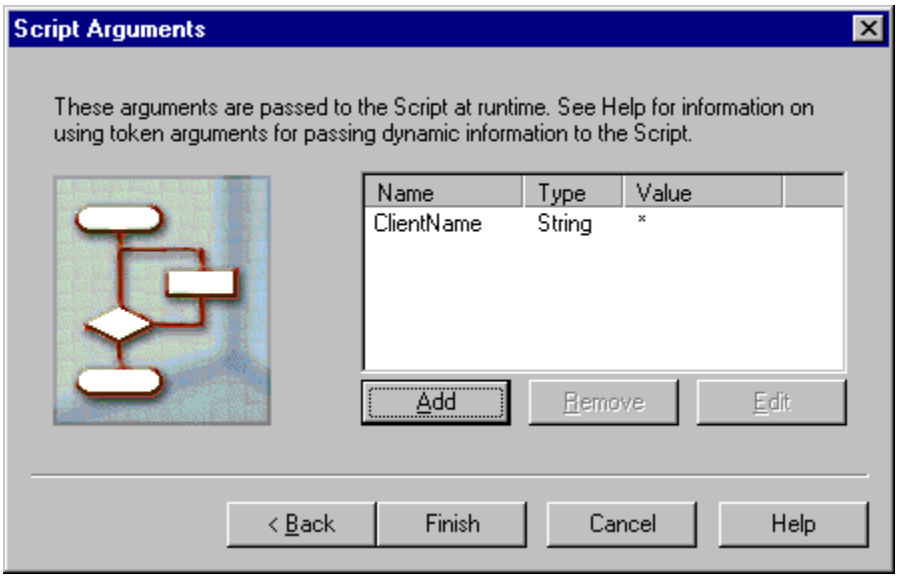
Select the appropriate check boxes and press [Next>] to continue.

You can view and modify these settings an existing Script using the Script Properties: General dialog

Defining Script Arguments

This is the last step in the Script Object Wizard. Here, you can specify any pre-defined variables that are required by the Script.

For more information on a particular feature, click where a ➧ appears on the picture below.



Press [Add] to create a new argument, or highlight an existing argument and press [Edit] to edit it. The Add/Edit Script Argument dialog is displayed.

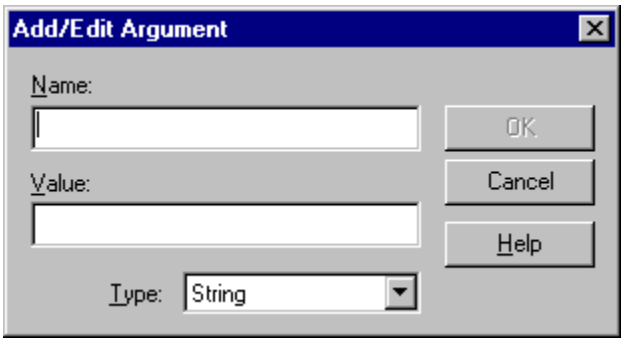
Press [Finish] to save the Script details in file SCRIPTS.NSM. This is normally in the Control's install directory.

You can view and modify the Arguments for a defined Script using the Script Properties: Script Arguments dialog.

Add/Edit Script Argument

Press the [Add] or [Edit] buttons in the Add A Script Wizard, Arguments or Script Properties: Script Arguments dialogs to add a new Script Argument or edit an existing one.

For more information on a particular feature, click where a ➧ appears on the picture below.

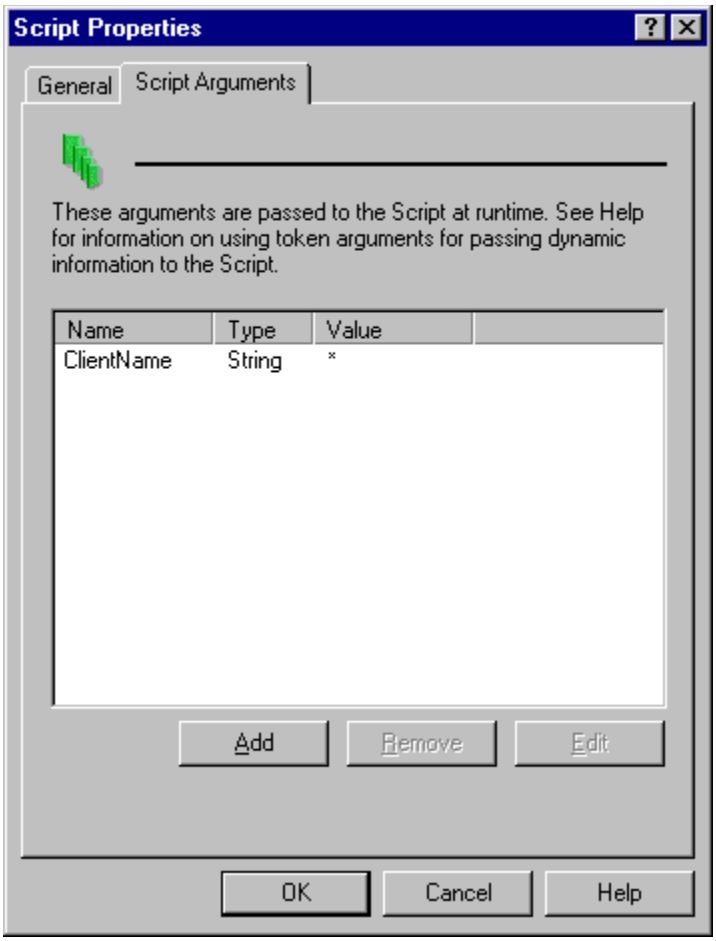


See also
Command Line Argument Tokens

Script Properties: Script Arguments

Right-click on an entry in the Control Scripts folder and select Properties to display the Script Properties tab dialog. The Script Arguments tab allows you to view and modify the pre-defined variables for this Script.

For more information on a particular feature, click where a ➧ appears on the picture below.



Press [Add] to create a new argument, or highlight an existing argument and press [Edit] to edit it. The Add/Edit Script Argument dialog is displayed.

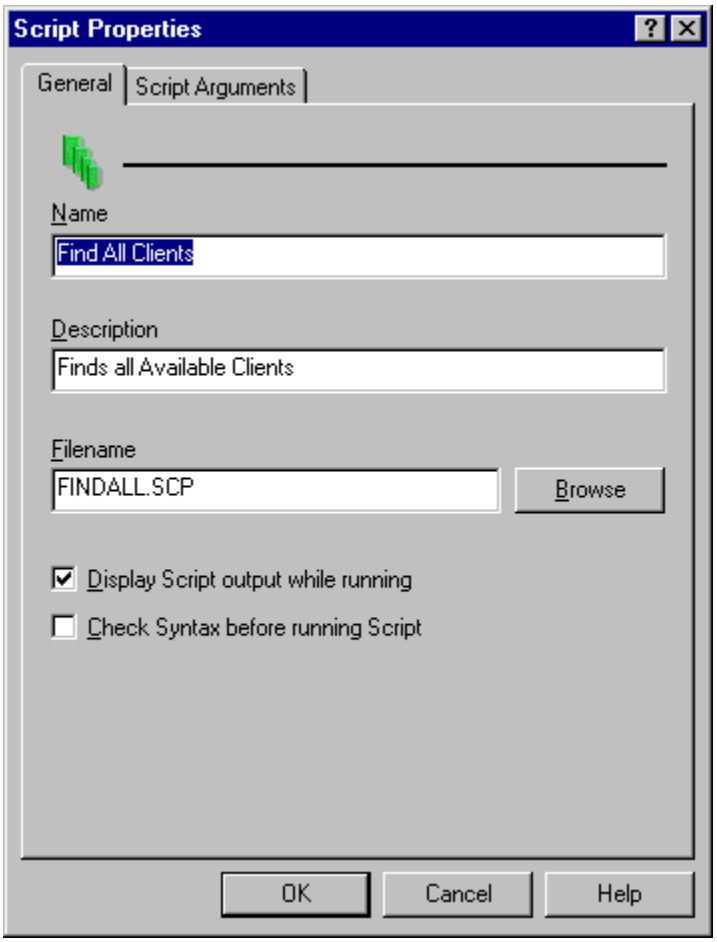
Press [Remove] to delete the highlighted argument.

These settings are stored in file SCRIPTS.NSM. This is normally in the Control's install directory.

Script Properties: General

Right-click on an entry in the Control Scripts folder and select Properties to display the Script Properties tab dialog.

The General tab allows you to view and modify settings for this Script.

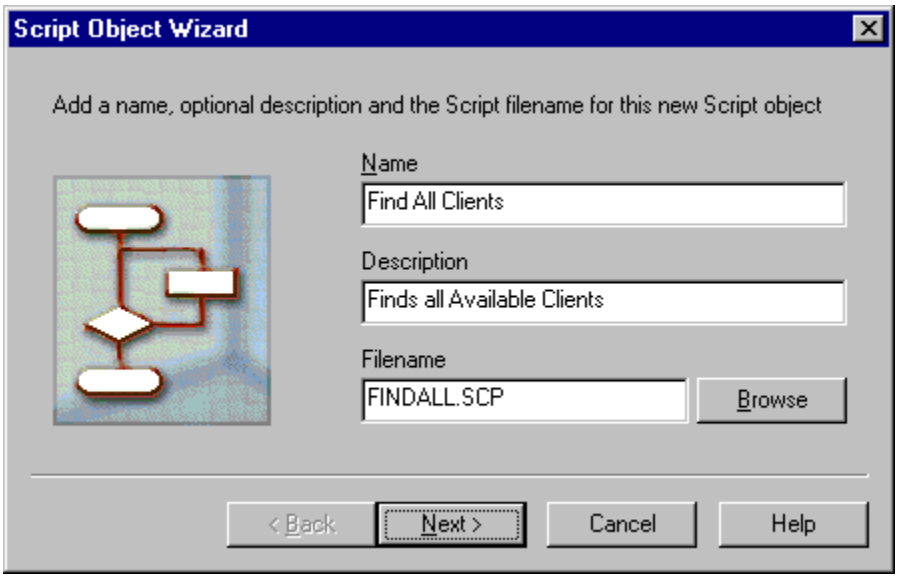


These settings are stored in file SCRIPTS.NSM. This is normally in the Control's install directory.

Script Object Wizard

Double-click on the New Script icon (shown above) in the Scripts folder of the Control List View, press the [New] Toolbar Button select the Add a Script Object from the New Popup Menu, or use the Tools, Scripting Menu to define a new Script so that the Control can run it.

For more information on a particular feature, click where a ➧ appears on the picture below.



Enter the Name, a description (optional), and the Filename and press [Next>] to continue.

Client xxx is about to disconnect due to inactivity

This Client is reporting that the specified period of inactivity has been reached. You must press [OK] if you want to remain connected to this Client. If you do not respond to this message promptly, the Client will disconnect.

Suggestions
If the Client times out too quickly, use the Client Configurator to change the Client Inactivity Timeout in the CLIENT32.INI: Remote Control dialog.

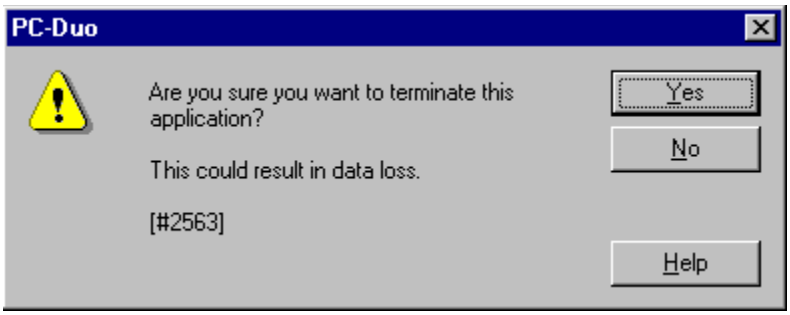
Cannot include/exclude a Client during a Show/Scan

You are trying to change the include/exclude status of a Client whilst you have an active Show or Scan running.

Solution
End the Show or Scan, then include or exclude the Client.

Are you sure you want to terminate this application?

You have started a User-Defined program from the Tools Menu, but have pressed the [Terminate] button before the program has finished.



Press [Yes] to terminate the application. This could result in loss of data, however.

Press [No] to wait until the program finishes.

Note
If the program is likely to take a long time to finish, you can deselect the "Wait for program to finish" checkbox in the Edit Tool dialog. This will take effect the next time you start the application.

The user-defined tool was not found

Meaning
The User-defined tool could not be started because the program file was not found.

Suggestions
Check that the launch path of the Defined Tool is correct and that the tool you are attempting to launch is available.

There was an error executing the User Defined Tool

Meaning
You have been unsuccessful in launching selected Defined Tool.

Suggestions
- Check that the path of your defined tool is correct.
- Check that the tool you are attempting to launch is available.
- Check that you have sufficient security rights to launch this tool.

Are you sure you want to delete *nnn* Scripts?

Are you sure you want to delete the selected Script Objects?

Press [Yes] to delete the Objects.

Note:
This will not delete the actual Script files.

Are you sure you want to delete the Script?

Are you sure you want to delete the selected Script Object?

Press [Yes] to delete the Object.

Note:
This will not delete the actual Script file.

Unable to locate the Script Editor Program!

The Control was unable to locate the Script Editor program which is required to edit a Script.

Suggestion
The Script Editor may not have been installed. If file PCISRCUI.EXE is not in the same installation directory as the Control program PCICTLUI.EXE, then it will be necessary to run Setup again to install the Scripting components.

Unable to load Script file

You have created a Script Object, but when you try to run it, the Script File cannot be found.

Solution
Check and correct the path and file name for the Script Object using the Script Properties: General dialog.

There is already a Script Object called 'name'

You are trying to create a new Script Object, but there is already one with the same name.

Solution
Choose a different name.

Script Syntax Error

This message will be displayed if the Script that you attempted to execute contained a syntax error.

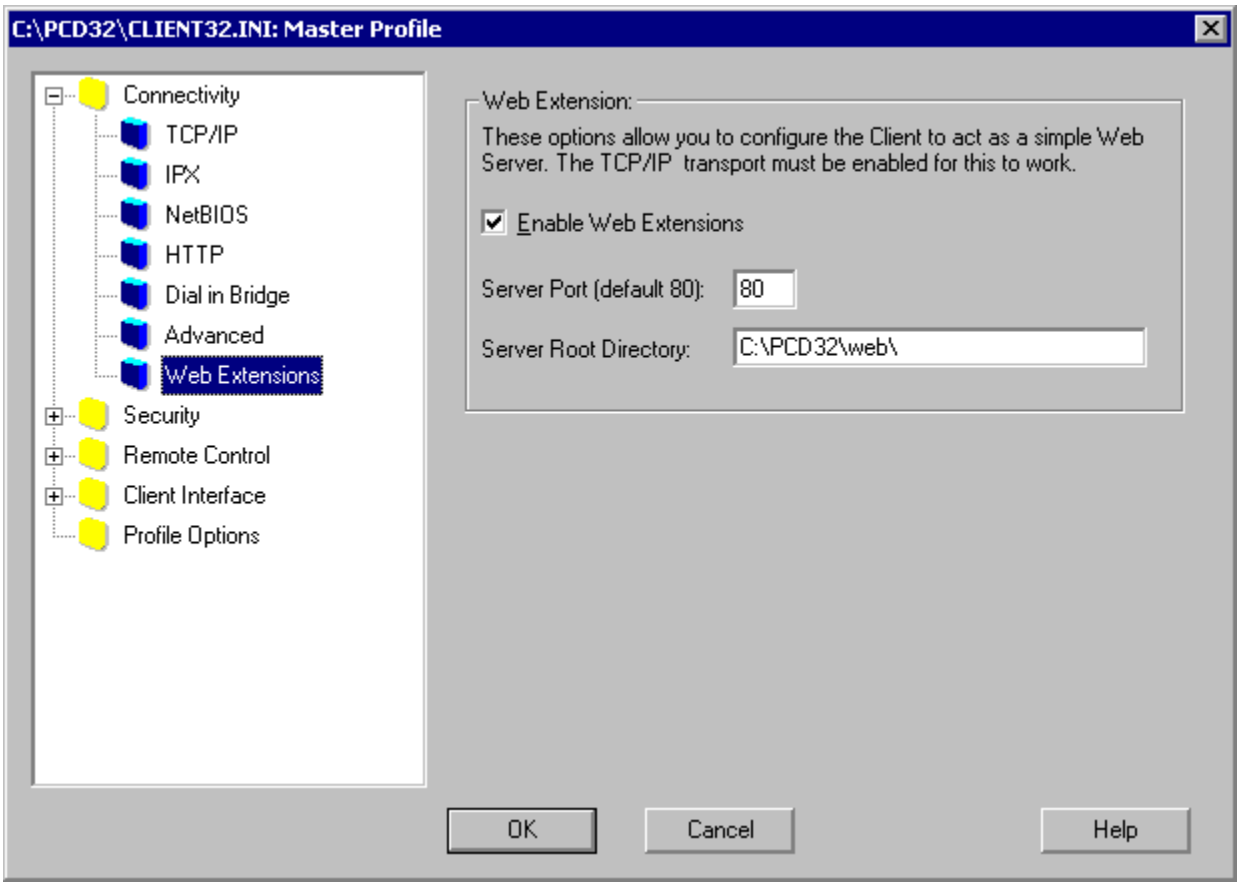
The error description and location in the Script File are shown.

Use the Script Editor to correct the error. You can do this by right-clicking on the entry in the Scripts Folder and selecting the Edit command from the Scripts Popup Menu.

CLIENT32.INI: Web Extensions

This page is used to enable and configure access to the Client using Microsoft's Internet Explorer Web Browser and the PC-Duo ActiveX Control.

For more information on a particular feature, click where a ‣ appears on the picture below.



The default port number is 80. This will clash with any Internet or Web Server that is already running on the Client.

Notes

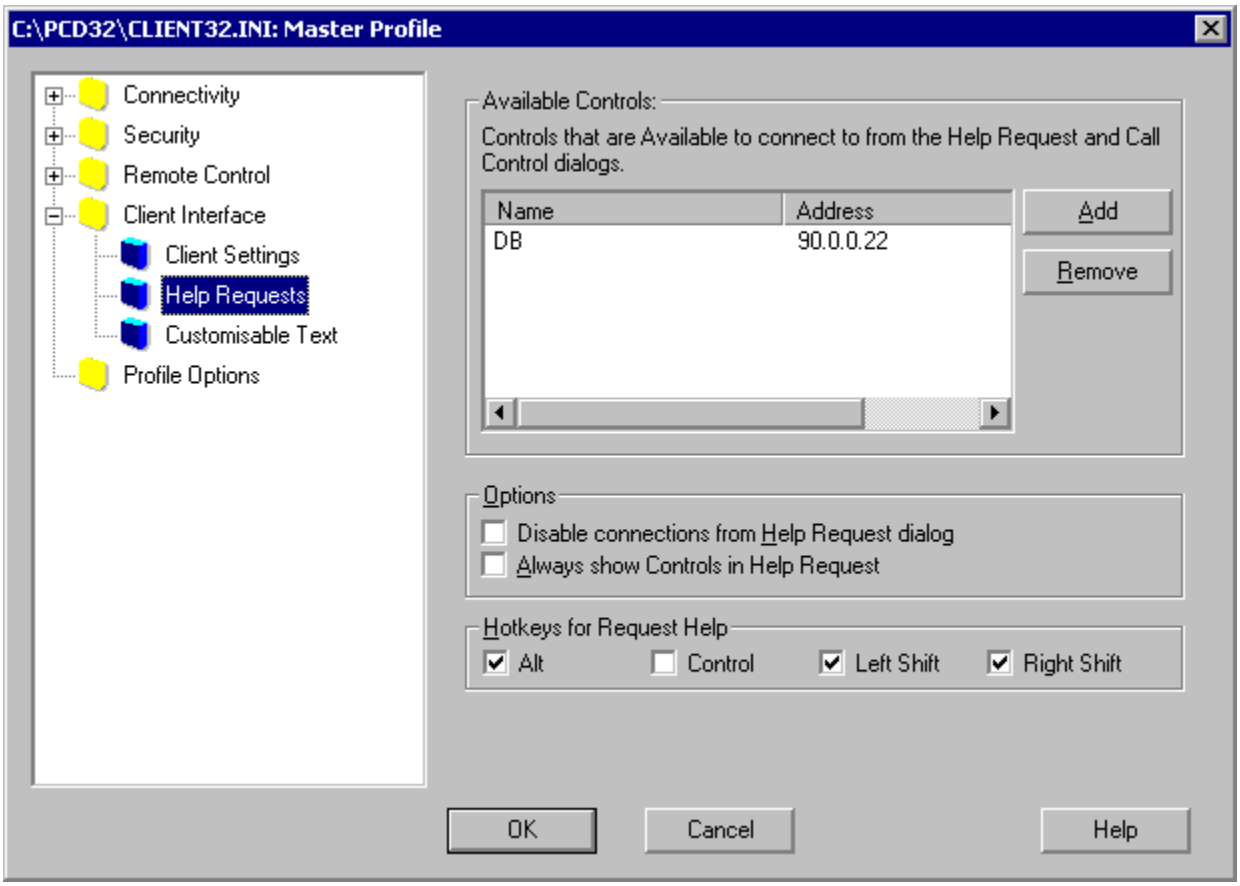
‣ When enabled, the Client can operate as a Web Server, providing access to the ActiveX Control files as well as any simple HTML and graphic files in its root directory

‣ The ActiveX Control files are normally installed with the PC-Duo Client. They can also be installed with the Control for use with Internet Explorer on the Control PC. In that case, it is not necessary for a Client to send the ActiveX Control 'CAB' file to the Browser.

CLIENT32.INI: Help Requests

This page allows you to define the names and addresses of any Controls that can be contacted by the Client user if they need assistance.

For more information on a particular feature, click where a ➧ appears on the picture below.

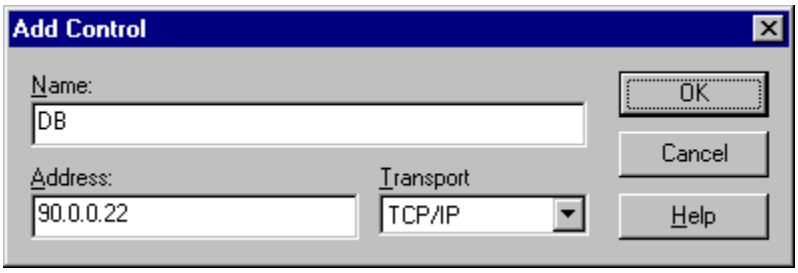


Controls added here are stored in the CONTROLS.NSM file. This file can be copied to the PCD32 install directory of other Clients.

Configurator: Add Control

Press the [Add] button in the Client Configurator, Advanced Mode, CLIENT32.INI: Client Connect dialog to add the name, address,and transport settings for a new Control.

For more information on a particular feature, click where a ‣ appears on the picture below.

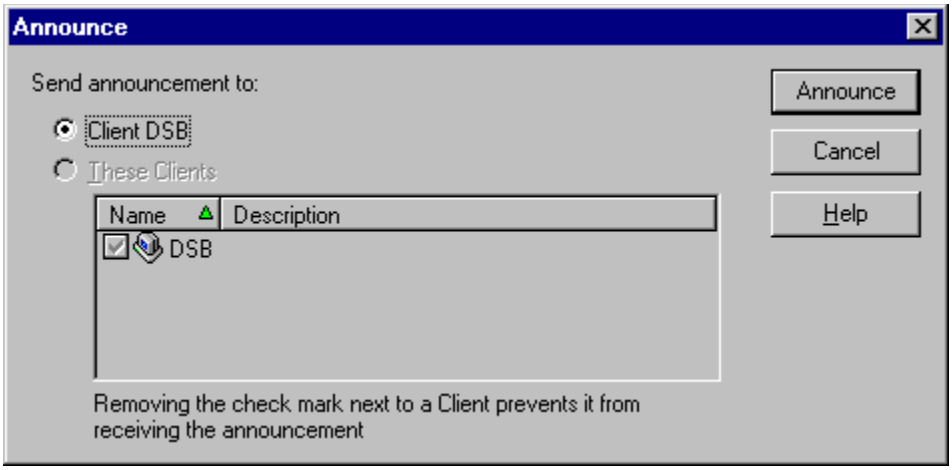


Press [OK] to save the details. They are stored in file CONTROLS.NSM in the PCD32 install directory. This file can be copied to the install directories of other Clients.

Once this has been done, the [Show Controls] button will be displayed in the Client's Request Help dialog.

Announce

Use this command to send an audio announcement to one or more Connected Clients.



Select or deselect Clients as appropriate, and press [Announce] to make an audio announcement.

Note
The Clients must have Audio support enabled for them to hear the announcement.

Send/Collect Work - Tried to create a new Send/Collect Work operation, but the description has already been used

Tried to create a new Send/Collect Work operation, but the description is already in used by another Send/Collect Work operation.

Suggestion
Rename your new Send/Collect Work operation, or delete the old operation and try again.

File Transfer NOT available

You have tried to open a File Transfer Window, but it cannot be opened, because File Transfer has been disabled in one or both of the Client's Profile (see the CLIENT32.INI: Options or File Transfer dialogs) or in the Control's Settings for Configuration: User Interface dialog.

Solution
Enable File Transfer.

Reset Send/Collect Log

This will clear the log of the details of when the task was last run.

Invalid name

The name you have chosen for a description is not valid, possibly because it contains invalid characters such * ? etc.

Solution
Choose a valid name, removing any invalid characters.

Invalid Directory

The directory that you have specified in the path is not valid.

Solution
Specify a valid path or use Browse to locate an existing directory.

Invalid Background

You are trying to save a background for use with a saved layout but the file you have chosen is not in the correct format.

Solution
Choose a different file for the background making sure that it is a BMP file with a colour depth less than 24-bit.

Send/Collect Work - File with that name has already been added

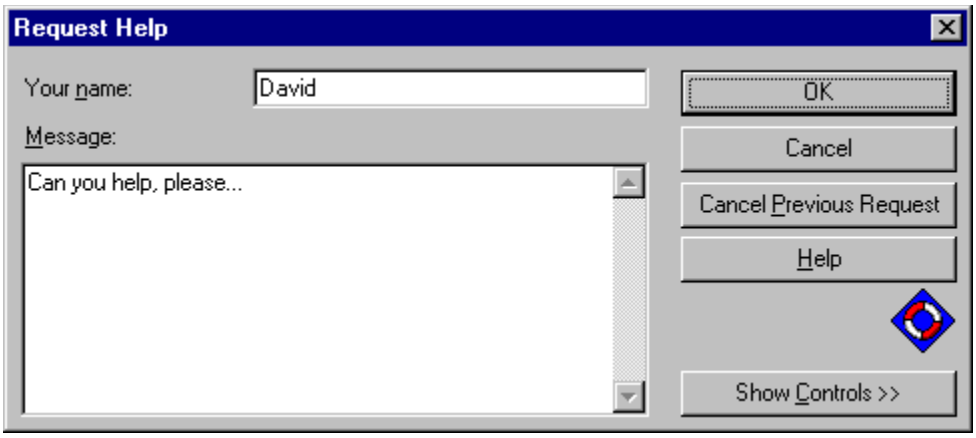
The Send/Collect Work feature already contains a file with this name.

Suggestion
Rename the file and try again.

Request Help

Use the Client's Commands Menu, Request Help command to queue a Help request for the attention of a Control user. The Request Help dialog allows you to create a new Help Request or to cancel an outstanding request.

For more information on a particular feature, click where a ➧ appears on the picture below.



Enter your name and a message and press [OK] to store the message.

Press [Show Controls] to display the Available Controls.

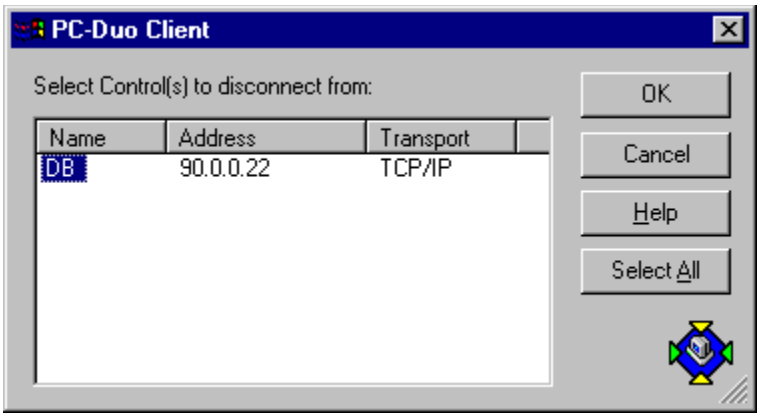
If you have a request outstanding, it will be displayed. You can cancel it by pressing [Cancel Previous Request].

See also
Call Control command

Select Controls

The Client can open a Chat with or disconnect a Connected Control using the Commands Menu, Chat and Disconnect Control commands, respectively. When more than one Control is connected, the Select Control dialog is displayed.

For more information on a particular feature, click where a ➧ appears on the picture below.



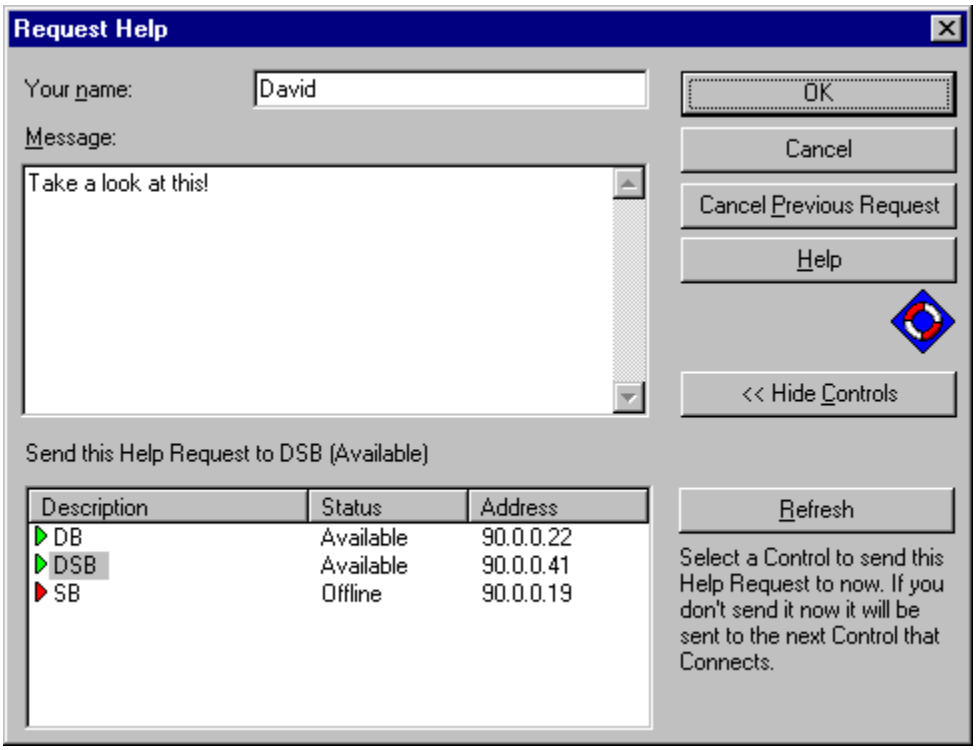
Select one or more Controls, or press [Select All] to select all of them, and then press [OK] to continue.

The Chat feature can be disabled in the Client Configurator, Advanced Mode, CLIENT32.INI: Options dialog. Disconnect Control can be disabled in the Configurator's CLIENT32.INI: Customise dialog.

Request Help

Press the [Show Controls] button in the Client's Request Help dialog to display the known and Available Controls.

For more information on a particular feature, click where a ▸ appears on the picture below.

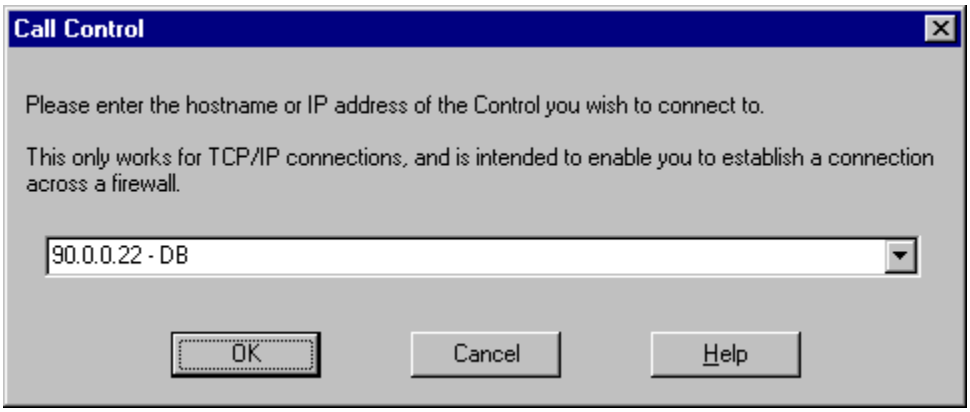


Click on one of the listed Controls and press [OK] to send your Help Request to that Control, or press [Hide Controls] and then [OK] to store the request until later.

Call Control

Use the Client's Commands Menu, Call Control command to send a Connect Request to a particular Control. The Call Control dialog will open.

For more information on a particular feature, click where a ➧ appears on the picture below.

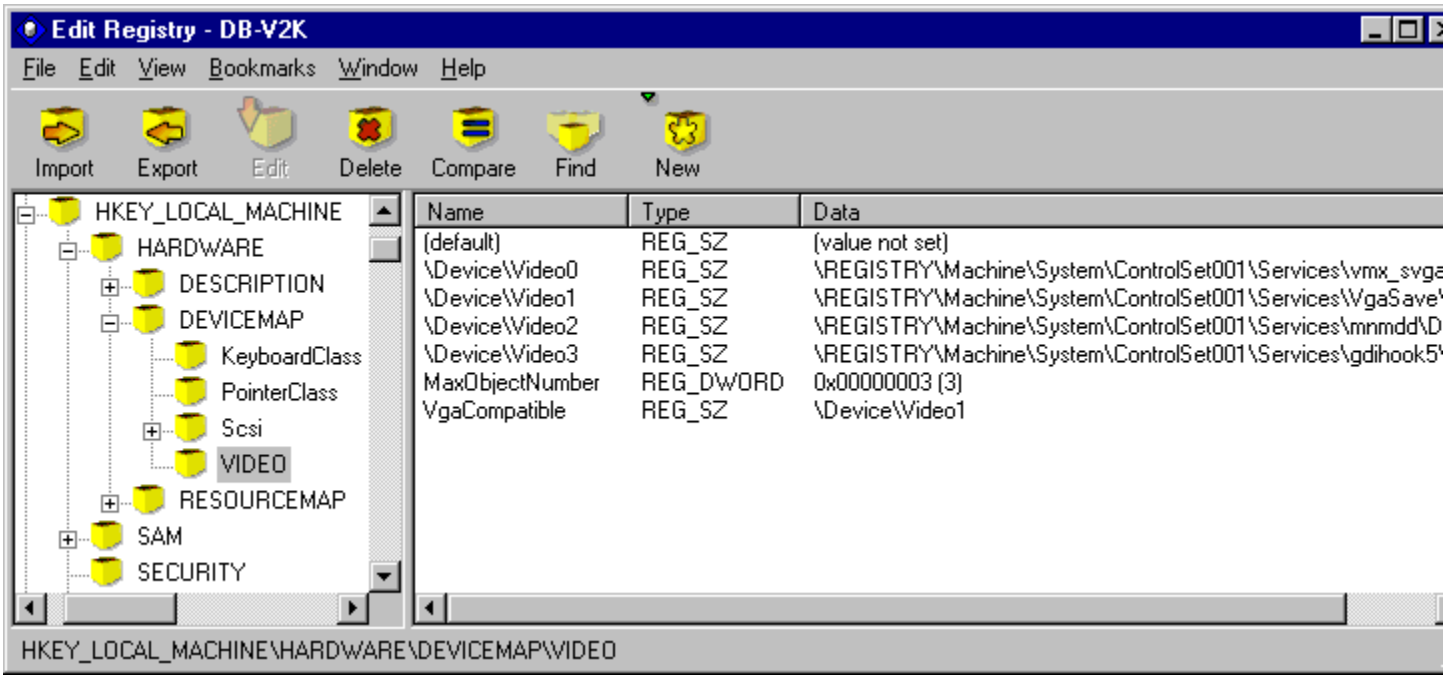


Select a Control from the drop-down list and press [OK] to Connect.

Edit Registry

Press the Registry button (shown above) on the Control Toolbar, or select the Client Menu, Edit Registry command to open the Edit Registry Window. This allows you to examine or edit the Client's Registry. A similar "Edit Local Registry" command on the Control Tools Menu allows you to edit the Control's Registry.

For more information on a particular feature, click where a ▸ appears on the picture below.



Edit Registry: File Menu

This menu contains the following commands:-

Import
This allows you to import data into the Registry from an existing Registry (.REG) file.

Export
This allows you to export data from the Registry to a new Registry (.REG) file.

Close
Closes the Edit Registry window.

Edit Registry: Edit Menu

This menu contains the following commands:-

New
Highlight a Key in the tree view (left-hand pane) and use this command to create a new Key or Value.

Delete
Select a Key in the tree view or a Value the list-view (right-hand pane) and use this command to delete it.

Rename Key
Highlight a Key in the tree view (left-hand pane) and use this command to rename it.

Compare Values
You can use this command to compare the Control's Registry with a Client, or vice versa.

Find
Use this command to search the Registry for a string.

Edit Registry: View Menu

This menu contains the following commands:-

Toolbar
Allows you to configure the Edit Registry Toolbar.

Status Bar
Allows you to display or hide the Edit Registry Status Bar.

Refresh
Use this command to refresh the contents of the Edit Registry view window.

Edit Registry: Bookmarks Menu

This menu allows you to manage your Registry Bookmarks. It contains the following commands:-

Add
Highlight a Key in the Registry and select this command to add a new Bookmark for this location.

Edit
Select this command to display the Edit Bookmarks dialog.

Bookmarks
The defined Bookmarks are shown here. Click on one to go to the stored location in the Registry.

Edit Registry: Window Menu

This menu contains the following commands:-

Tile
This command allows you to arrange open View and/or File Transfer windows on the Control's screen so that they can be seen. The selected windows will be sized to fit on the Control's Screen. The Tile submenu contains the following commands:

All Windows	Displays and tiles both Client View and File Transfer windows
View Windows	Displays and tiles only the Client View windows
File Transfer	Displays and tiles only the active File Transfer windows

You can then view multiple sessions simultaneously.

Window
This section lists any open View, File Transfer, and File Manager windows, and allows you to switch between them. Click on a window to display it on top of the other windows.

Edit Registry: Help Menu

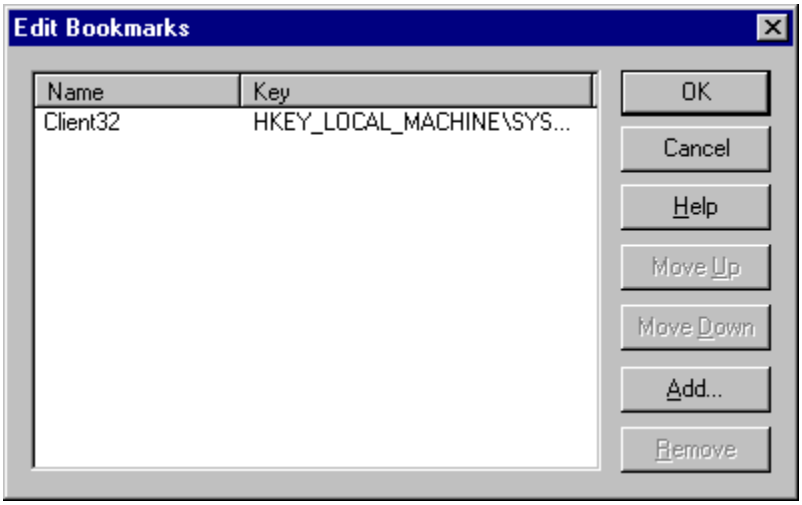
The Help Menu contains the following commands:

Edit Registry Window
Opens the PC-Duo Help at the Edit Registry topic.

Help, About
Gives you information about the operation and performance of the Control program.

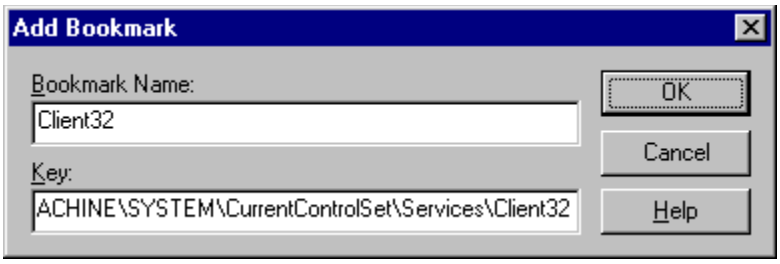
Edit Bookmarks

Use this dialog to organise your Registry Bookmarks.



Add Bookmark

Right-click on a Registry Key in the Edit Registry window and select Add Bookmark from the Edit Registry Popup Menu to display this dialog. It allows you to define a new Bookmark.

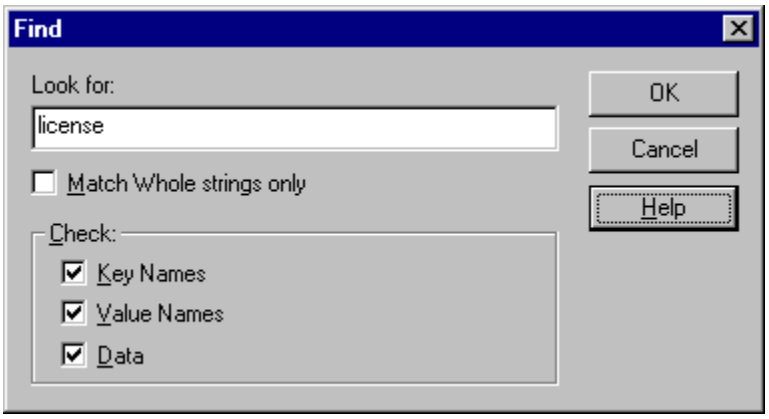


Enter an name for the Bookmark and press [OK] to save it.

Bookmarks are displayed in the Edit Registry: Bookmarks Menu.

Edit Registry: Find

Press the Find button (shown above) on the Edit Registry Toolbar or select the Edit Menu, Find command to search the Registry for a string.



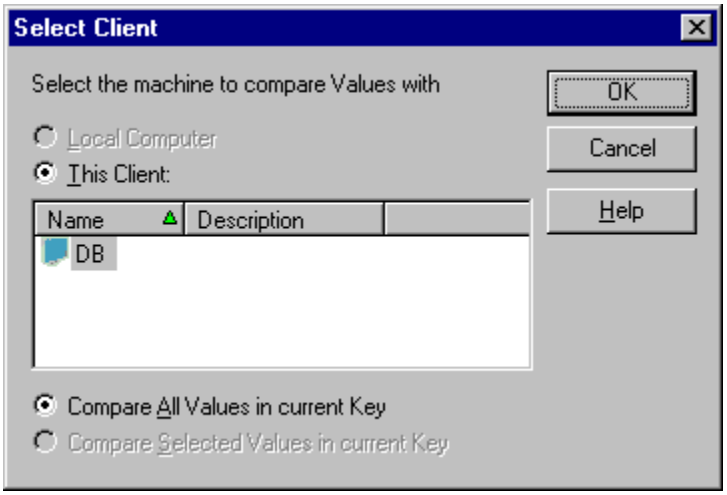
Enter a target string, select the appropriate check boxes, and press [OK] to start the search.

Results are shown in the Find Results dialog.

Select Client

Select a Key or some Values in the Edit Registry Window and press the Compare button (shown above) on the Edit Registry Toolbar, or select the Edit Menu, Compare Values command to open this dialog. It allows you to select a target for the comparison.

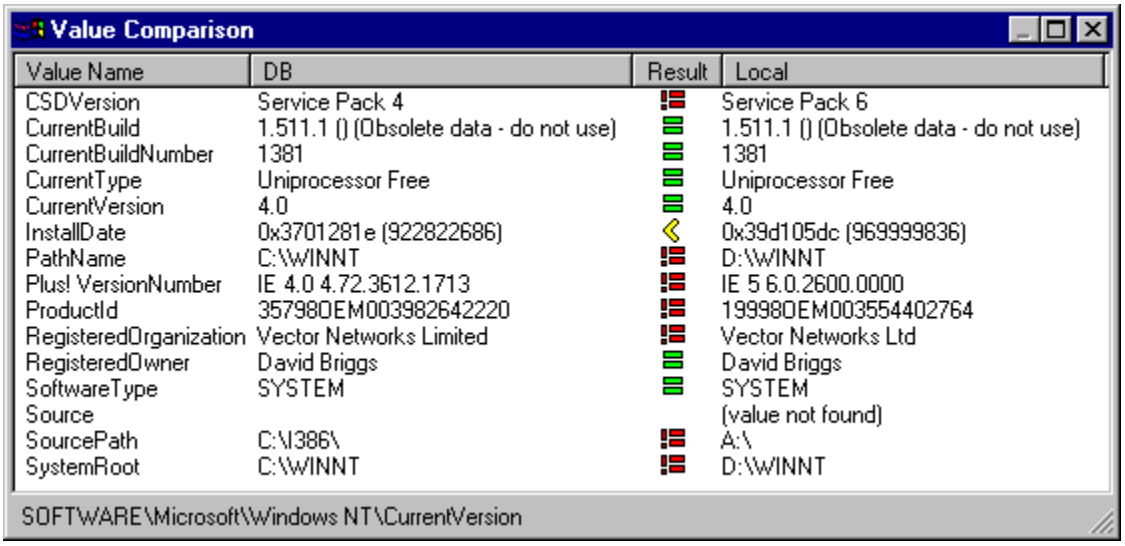
For more information on a particular feature, click where a ➧ appears on the picture below.



You can compare the Control's Registry with a Client, or you can compare one Client's Registry with another (connected) Client.

Registry Value Comparison

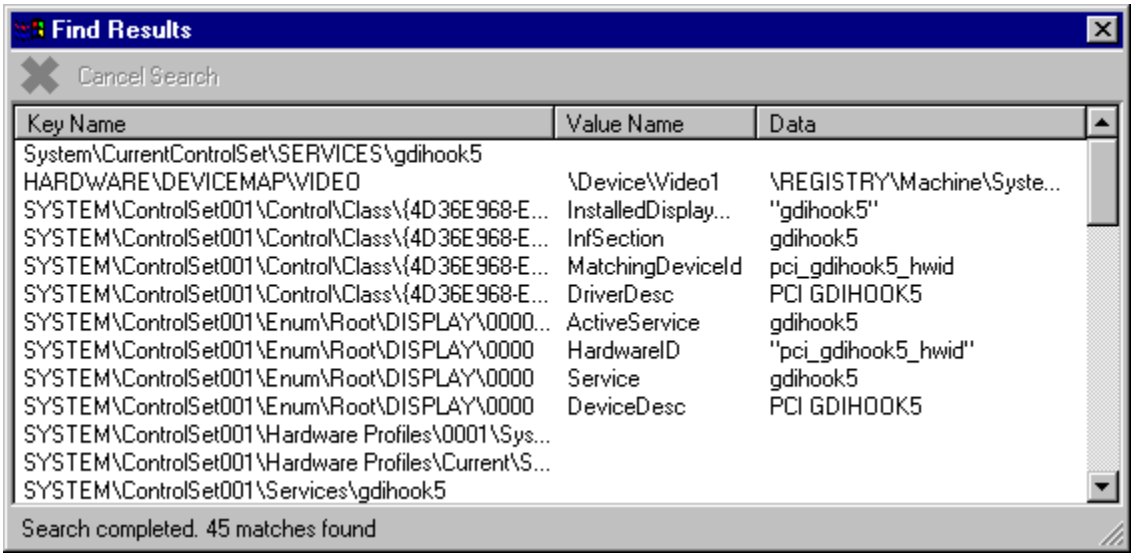
Navigate to a Key in the Registry on the Control or a Client, and press the compare button in the Edit Registry toolbar to compare the values. The Value Comparison dialog shows the results, in this case comparing a Key on Client DB with the same Key on the Control.



The Result column shows whether or not the values were the same. Strings are compared for equality, but different numeric values will be compared and the Results show which is greater than the other.

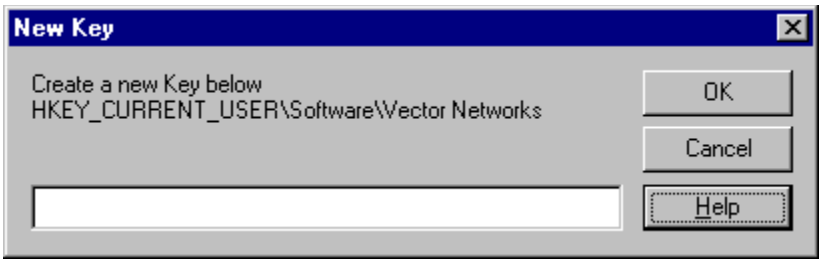
Find Results

The results from a Registry search are shown in the Find Results dialog.



New Key

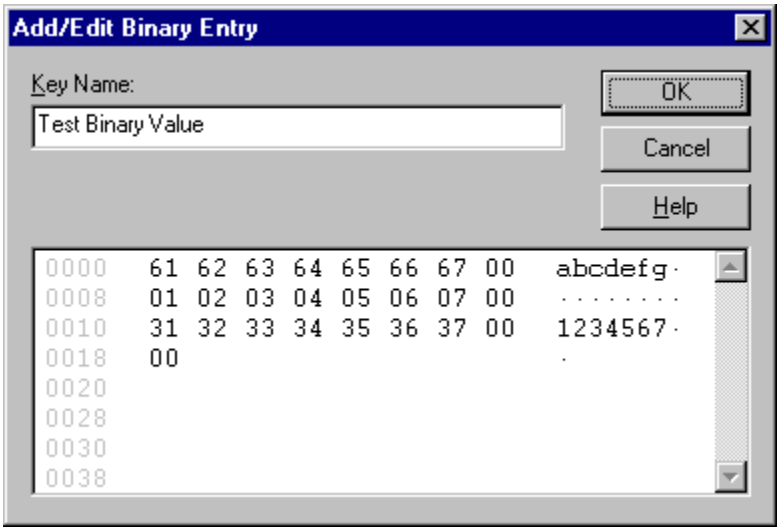
Select the Edit Registry: New Popup Menu, Key command to create a new Registry Key below the selected parent Key. The New Key dialog will be displayed.



Enter the name for the new Registry Key and press [OK] to create it.

Add/Edit Binary Value

This dialog allows you to define a new binary value or edit an existing one.

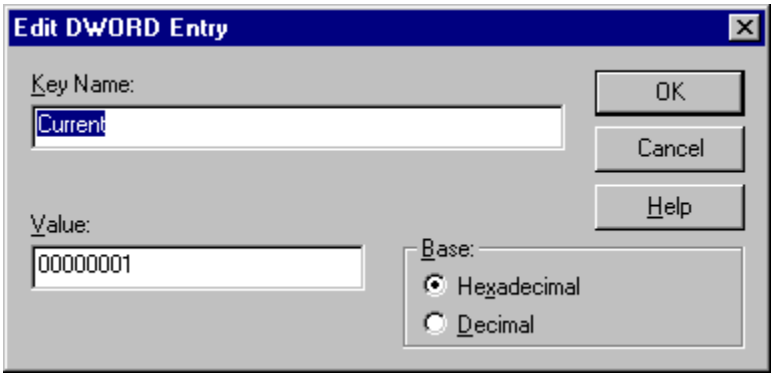


Enter a name for the new Value and type in the value below.

You can type values in hexadecimal using the number keys, or simply type characters by positioning the cursor in the appropriate place in the dialog box.

Edit DWORD Value

This dialog allows you to add a new DWORD Value or edit an existing one.

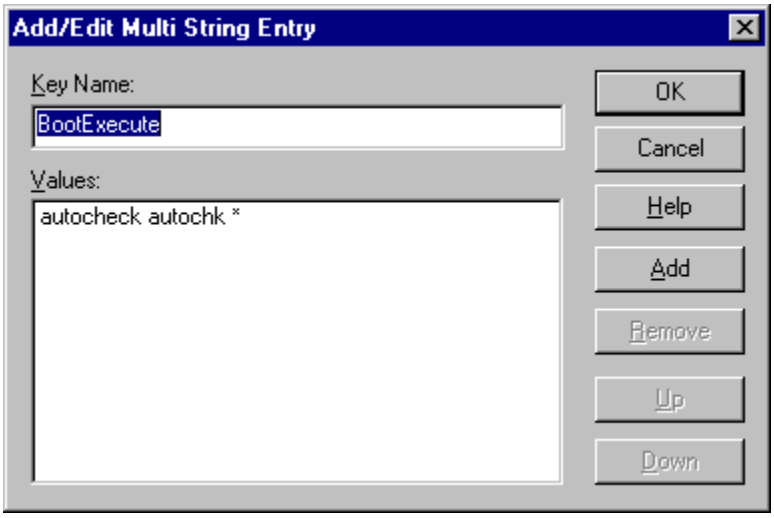


Enter the new Value Name and the new Value.

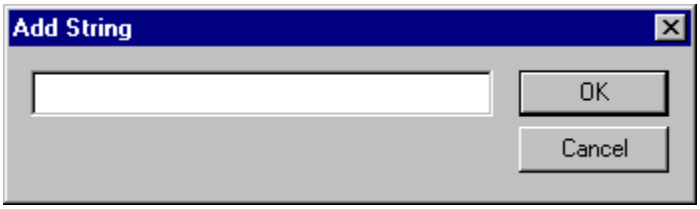
You can display and enter the value in Decimal or Hexadecimal by selecting the appropriate radio button.

Add/Edit Multi-String Value

This dialog allows to you add, rename, or edit a multi-string value.

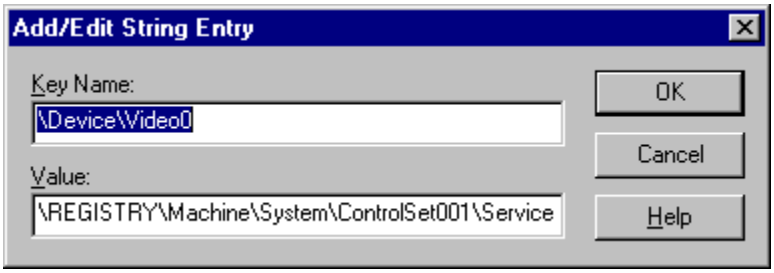


Press [Add] to add a new String. The Add String dialog will appear:-



Add/Edit String Value

This dialog allows you to create a new String Value in the Registry, or edit or rename an existing Value.



Enter the new Value Name and value and press [OK] to save it.

Compare Error: Unable to open Key

This message is displayed if the Registry Compare operation failed because the target Key could not be located in the Selected Client's Registry.

Tried to compare a Key but there are no other Clients connected to compare with

You are attempting to compare a Registry Key with another workstation, but this has failed as you are not connected to any Clients.

Suggestion
Connect to a suitable Client, and then retry the compare operation.

File does not appear to be a valid Registry File

You attempted to import a Registry File, but this has failed.

Suggestion
Ensure that the Registry File you are attempting to import exists, is accessible on the specified import path, and contains valid Registry data.

Delete the current Key?

This warning is displayed before any data is deleted from the Registry on either the Control or a Client.

Press [Yes] to continue with the deletion, or [No] to leave the Key as it was.

WARNING:
The Registry contains information that is vital for correct operation. Registry editing should be done with great care.

Note
On Windows NT, you can take a backup of the Registry using the Emergency Repair Disk utility, RDISK.EXE.

Delete the selected Values?

This message is displayed if you are about to delete a Value from the Registry on the Control or Client.

Press [Yes] to continue with the deletion, or [No] to leave the Value as it was.

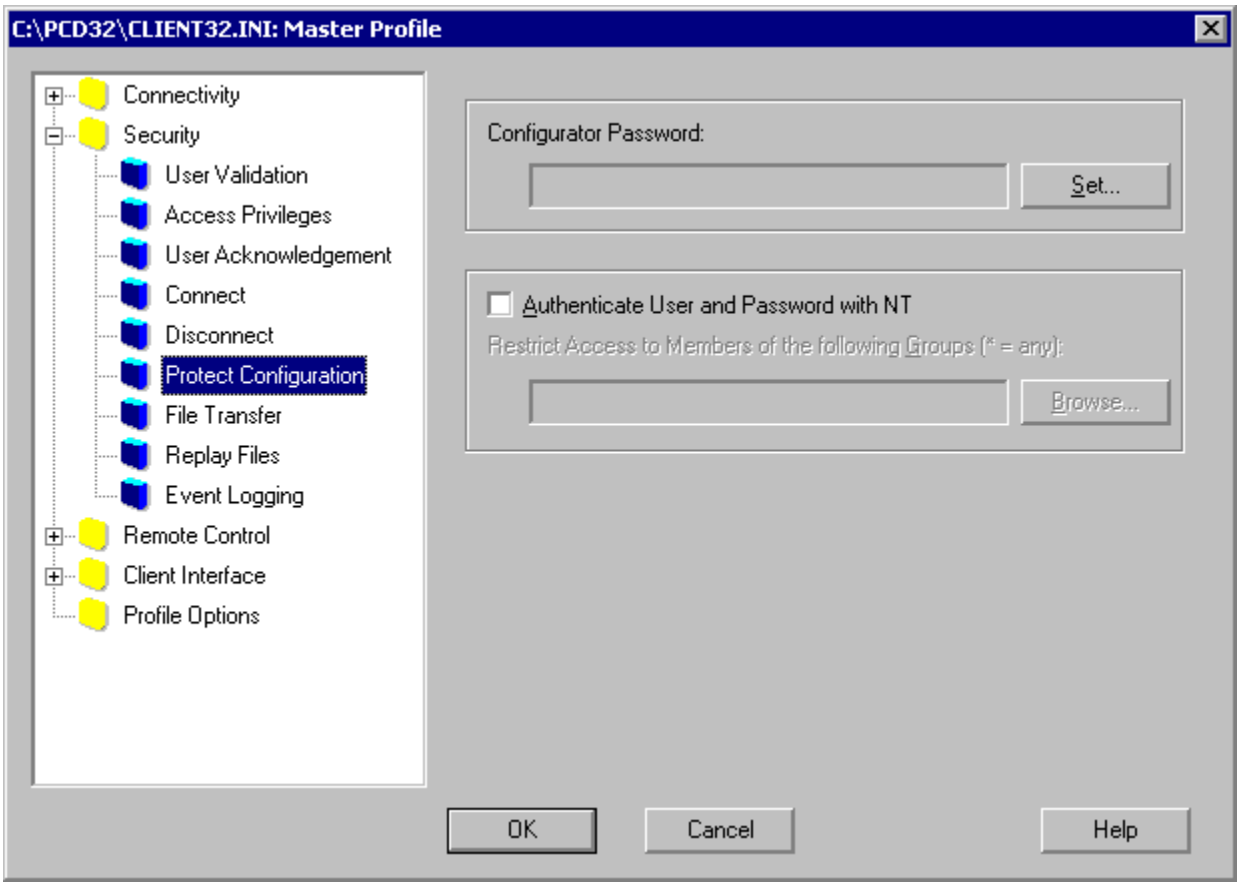
WARNING:
The Registry contains information that is vital for correct operation. Registry editing should be done with great care.

Note
On Windows NT, you can take a backup of the Registry using the Emergency Repair Disk utility, RDISK.EXE.

CLIENT32.INI: Protect Configuration

Use this page to restrict access to the Configurator. You can specify a password and/or an NT account which will be checked whenever this Control Profile is opened in the Configurator.

For more information on a particular feature, click where a ‣ appears on the picture below.



If you select "Authenticate User and Password with NT" for NT Clients, then the Configurator will prompt for a username and password.

Note
Any NT account used in this manner must have the "Act as part of the operating system" right. On NT, this can be granted in the User Manager, Policies Menu, User Rights command. Select the "Show Advanced User Rights" check box to display it. On Windows 2000, use Control Panel, Administrative Tools, Local Security Policy, Local Policies, User Rights Assignment. Double-click on "Act as part of the operating system" in the right-hand pane and then use the [Add] button to open the Select Users or Groups dialog. Once granted, it is necessary for the user to log in before the right is recognised.

Only Clients Requesting Help

Select this checkbox if you want to restrict the Browse so that only those Clients requesting Help are displayed.

Scripts Popup Menu

Access this menu by right-clicking on the entry in the Scripts Folder. The following commands are available:-

Run
This command will run the selected Script. This method will not define any tokens that the Script may require to determine Client or Group names.

Edit
Select this command to open the Script in the Script Editor.

View Script Log
This command will open the Script Log file in Notepad.

Delete
Select this command to delete the Script.

Properties
This command displays the Script Properties tab dialog.

Command Line Argument Tokens

When the Control program runs a Script or a User-defined program from the Tools Menu, it can substitute some tokens in the command line. The following tokens are supported:-

Token	Example	Description
`$CLIENTNAME$`	`DB(90.0.0.22:5405_TCP/IP)`	The name and address of the highlighted Client in the format NAME(ADDRESS_TRANSPORT)
`$GROUPNAME$`		
`$PROMPT`		

Control Scripting Menu

Select the Scripting option from the Control Tools Menu. This menu contains commands which allow you to configure and run Scripts from the Control program.

Add Script Object
Use this command to start the Script Object Wizard. This helps you to define a new Script Object so that it can be run by the Control.

Run Script
Highlight an entry in the Control Scripts folder and use this command to run it. If you have any replaceable Tokens defined in the Script's Arguments, you should first highlight the appropriate Client in the Browse, Clients, or Connected folders, and then select this command.

Edit Script
Highlight an entry in the Control Scripts folder and use this command to open the Script in the Script Editor.

View Script Log
This command will open the selected Script's log file in Notepad.

Delete Script
Highlight an entry in the Control Scripts folder and select this command to delete it.

Script Properties
Highlight an entry in the Control Scripts folder and select this command to display or modify its settings.

Name
Enter a name for the Script here. It will be displayed in the Control Scripting folder.

Filename
Enter the Script filename here
or press [Browse] to locate it.

Display Script Output

Select this check box if you want the progress of the running Script to be displayed in a window.

Check Syntax

Select this check box to perform a syntax check before the Script runs.

Script Arguments

The defined Script Arguments are displayed here. Press [Add] to define a new Argument. The Add/Edit Script Argument dialog is displayed. Highlight an existing Argument and press [Edit] to modify it, or [Remove] to delete it.

Add

Press [Add] to create a new Script argument. The Add/Edit Script Argument dialog is displayed.

Audio Volume Settings

Threshold
Use this slider to control the lowest sound level that is sent through.

If this is set too high, the user at the other end will hear broken up sounds. If it is set too low, more data than strictly necessary will be transferred, reducing remote control performance.

Microphone
Use this slider to control the level of voice input.

Speaker
Use this slider to control the level of speaker output.

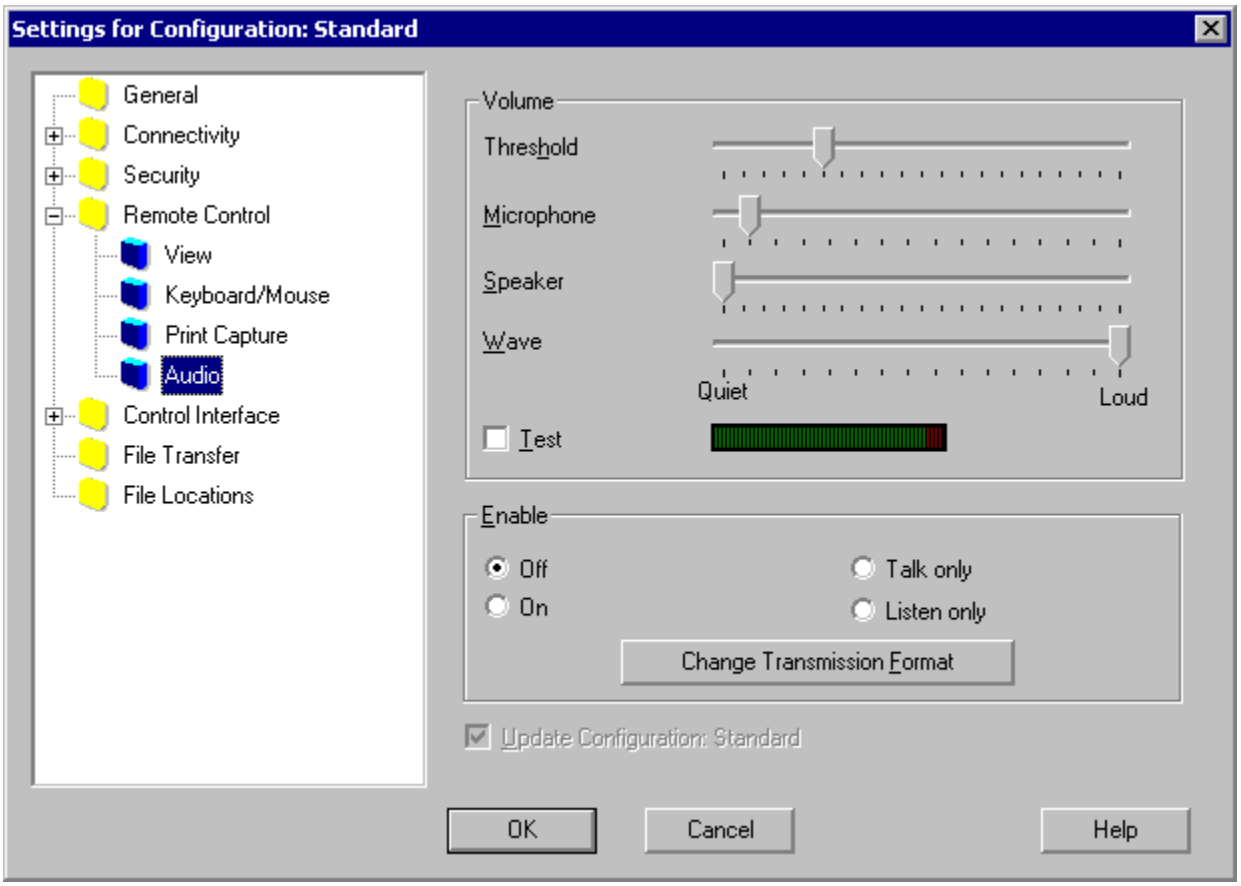
Wave
Use this slider to control the level of local Sounds (Wave output).

Test
Select this check box to test the microphone level.

Settings for Configuration: Audio

This dialog is used to configure the Control's Audio support. The Client has a similar CLIENT32.INI: Audio dialog.

For more information on a particular feature, click where a ➧ appears on the picture below.



This dialog changes the permanent Audio settings. Use the View Window Toolbar buttons, or the View Window, View Menu, Settings for Client command to change the settings for the current session only, or permanently, if the Update Configuration check box is selected.

The current volume level is displayed on the View Window Status Bar.

Remember that you can access your local Volume Controls by double-clicking on the loudspeaker icon in the System Tray.

Settings for Configuration: Record Replay Files

Select the Record Replay Files check box to enable Replay recording by the Control and specify the output location or press [Browse] to locate the directory for the resulting Replay Files.

When this configuration is used, the Control will record all remote control sessions in the specified location.

This setting takes effect when you next open a remote control View Window.

The Replay Files can be viewed later using the Tools Menu, Replay command.

Enable Audio Transmission

Off
Select this radio button to disable two-way Audio transmission between the Client and Control.

On
This radio button enables Audio transmission between the Client and Control. Use the following radio buttons to permit two-way transmission, or limit it to one-way, in one or other direction.

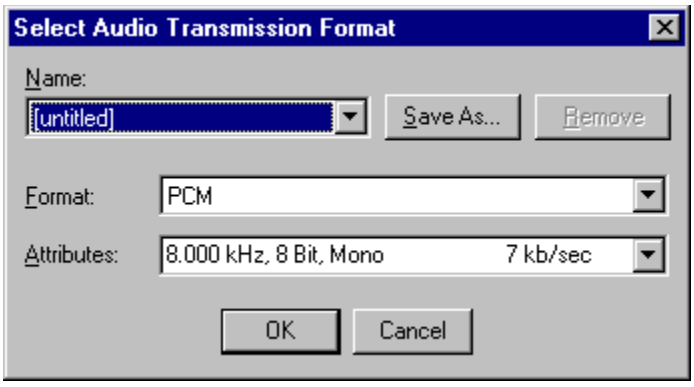
Talk Only
Select this button if you do not want to hear any sounds from the Client.

Listen Only
Select this button if you do not want to send any sounds to the Client.

Change Transmission Format
Press this button to change the sound transmission format. The Select Audio Transmission Format dialog will be displayed.

Select Audio Transmission Format

Press the [Change Transmission Format] button in the Settings for Configuration: Audio dialog to display this dialog. It allows you to change the audio transmission format to suit your sound card.



PC-Duo supports a variety of 8- and 16-bit mono data formats.

Notes
Higher resolution or sampling rates will increase the data transfer requirements and may reduce remote control performance. Some formats may not be supported by older version Clients.

New Scripting Functions

Some new functions have been added to this release. Use the links below to find out more about them.

Miscellaneous Functions

HexToInt

String Functions

MsgBox

Clipboard

Press this button to copy the Clipboard contents between the Client and the Control. The Clipboard Popup Menu will appear, allowing you to choose which way to transfer the data.

Audio

Press this button to display the Audio Popup Menu.

Mute

Press this button to mute Audio output temporarily.
Press the button again to switch Audio on again.

Blank Screen

Press this button to blank the Client's screen.

Reboot
Press this button to reboot the Client.

Audio Popup Menu

Press the Audio button on the View Window toolbar to display this menu. It allows you to change the current audio settings. The following options are available:-

On
Select this option to enable audio support.

Off
Select this option to disable audio support.

Talk Only
Select this option to restrict audio support to talking to the Client only.

Listen Only
Select this option to restrict audio support to listening to the Client only.

Settings
This command opens the Settings for Configuration: Audio dialog, allowing you to change the audio settings temporarily, for this session only, or permanently, if the Update Configuration check box is selected.

Client Name
The Client's name is shown here.

Edit Registry Toolbar

This toolbar contains buttons for the most frequently-used functions.

For more information on a particular feature, click where a ➧ appears on the picture below.

Highlight a Key or Value in the Edit Registry window and press the appropriate button.

Broadcast Addresses

Browse packets will be broadcast to all of the addresses in this list only.
They can be subnet broadcast addresses or individual Client addresses.

Edit

Highlight an entry in the Broadcast Address list and press this button to edit it.

Add
Press this button to add a new Broadcast Address to the list.

Delete

Highlight an entry in the Broadcast Address list and press this button to delete it.

Tools

Press this button to display the Tools Popup Menu. This allows you to add, edit, delete, and run user-defined tools such as System Snapshot.

Available

When in this state, the Control is ready to accept Help Requests from Clients. Press the button to switch between the Available and Unavailable states.

Available Buttons

The buttons that are available to be added to the Toolbar are listed here. Both the icon and the button's text label are shown.

Current Buttons

The buttons that are already on the Toolbar are listed here, together with their text labels. Separators are shown by a horizontal broken line.

Add

Highlight an item from the Available Buttons list and press this button to add it to the Current Buttons list. The new button will be inserted after the selected item in the Current Buttons list.

Separator

Press this button to insert a separator after the selected item in the Current Buttons list.

Remove

Highlight an item in the Current Buttons list and then press this button to remove it. It will be moved back to your Available Buttons list (separators are just removed).

Reset

Press this button to reset the Current Buttons list to the default buttons.

Up

Press this button to move the selected Toolbar button one position higher in the Current Buttons list.

Down

Press this button to move the highlighted Toolbar button one position lower in the Current Buttons list.

Remove

Highlight an existing argument
and press [Remove] to delete it.

Edit

Highlight an existing argument and press [Edit] to edit it. The Add/Edit Script Argument dialog is displayed.

Client Commands Menu

When restored from its icon, the Client offers the following commands on its Commands Menu:-

Chat
When a Control is connected and viewing, this command opens up a Chat dialog box, allowing two-way text communication between the Control and Client users.

Request Help
Select this command to queue a Help Request for the attention of a Control user or to cancel an outstanding Help request.

Call Control
Use this command to send a Connect request to an available Control.

Disconnect
When enabled, this command allows the Client user to disconnect a Control.

Switch Desktop
This command is used to switch between logon and logged on desktops on Windows NT. It is normally disabled.

Load Bridge
This command allows a pre-configured Bridge to be loaded.

Unload Bridge
This command unloads the Bridge, allowing other programs access to the modem.

Name
Your name is entered or shown here.

Message

Enter the text of your Help Request here.
If you already have a Help Request pending,
the message will be displayed here.

Cancel Previous Help Request

Press this button to cancel the stored Help Request (shown left).

Select Control(s) to Disconnect from

The Connected Controls are listed here. Select one or more of them and press [OK] to disconnect.

Select All
Press this button to select all of the listed items.

Name
Enter the Control Name here.

Address

Enter the Control's address here, using the appropriate format for the network transport.

Transport
Select the appropriate Control Transport from this list.

Edit Registry: New Popup Menu

Press the New button (shown above) in the Edit Registry Toolbar, or right-click on a Key in the Edit Registry dialog tree view (the left-hand pane) and select New from the Edit Registry: Popup Menu to create a new Key or Value in that Key in the Registry. You can also right-click in the list view (right-hand pane) to create a new Value in the displayed Key.

You can create the following new items:-

Key

String Value

DWORD Value

Binary Value

Multi-string Value

Edit Registry: Popup Menu

Right-click on a Key in the Edit Registry window tree view (the left-hand pane) to display this Menu.

The following commands are available:-

New
This command opens the New Popup Menu.

Delete
This command deletes the selected Key. You will be prompted to confirm deletion.

Rename Key
Use this command to rename a Registry Key.

Compare Values
You can use this command to compare the Control's Registry with a Client, or vice versa.

Find
Use this command to search the Registry for a string.

Add Bookmark
You can store Registry Bookmarks. These make it easy for you to return to a particular Key.

Local Computer

The Control's drives and directories are displayed in a Tree View. The List View in the right-hand pane shows the contents of the selected directory.

Local Files

The List View in the right-hand pane shows the contents of the selected directory.

Status Bar

File Transfer status is shown here.

The Remote Pane

This pane shows the Clients to whom the files will be distributed.

Control

See Also
Share, SetWindowMode, WaitEndView, Watch

Description
Opens a View Window in Control Mode.

Syntax
```
Success = Control ()
```

Notes
The return value determines if the View window was opened successfully. When the Script Editor adds this function to a Script, it will also copy WaitEndView () which is used to wait for the View Window to close. You may want to add a call to SetWindowMode to change the View Window to or from full-screen mode.

Example

```
// Start a remote control session and wait for it to end

  Control ()
  SetWindowMode (CONTROL_VIEW)
  WaitEndView ()
```

WaitEndView

See also
Control, SetWindowMode, Share, Watch

Description
Use this function to wait until a View Window is closed.

Syntax
```
Success = WaitEndView ()
```

Notes
When the Script Editor adds one of the remote control functions to a Script, it will also insert WaitEndView () which is used to wait for the View Window to close.

Example

```
// Start a remote control session and wait for it to end

If (Share () = TRUE) then
  SetWindowMode (CONTROL_VIEW)
  WaitEndView ()
Endif
```

Share

See Also
Control, SetWindowMode, WaitEndView, Watch

Description
Opens a View Window in Share Mode.

Syntax
```
success = Share ()
```

Notes
The return value determines if the View window was opened successfully. When the Script Editor adds this function to a Script, it will also copy WaitEndView () which is used to wait for the View Window to close. You may want to add a call to SetWindowMode to change the View Window to or from full-screen mode.

Example

```
// Start a remote control session and wait for it to end

  Share ()
  SetWindowMode (FULLSCREEN)
  WaitEndView ()
```

Watch

See Also
Control, Share, SetWindowMode, WaitEndView

Description
Opens a View Window in Watch Mode.

Syntax
```
success = Watch ()
```

Notes
The return value determines if the View window was opened successfully. When the Script Editor adds this function to a Script, it will also copy WaitEndView () which is used to wait for the View Window to close. You may want to add a call to SetWindowMode to change the View Window to or from full-screen mode.

Example

```
// Start a remote control session and wait for it to end

If (Watch () = TRUE) then
  SetWindowMode (WINDOWED)
  WaitEndView ()
Endif
```

SetWindowMode

See Also
Control, Share, WaitEndView, Watch

Description
When a View Window is open, sets it to Windowed or Full-Screen modes.

Syntax
success = SetWindowMode (*window_mode*)

Notes
The following window_mode constants are available:-

Constant	Default	Comment
FULLSCREEN	0	sets Full-Screen mode with a floating toolbar
WINDOWED	1	sets Windowed mode with no toolbar
CONTROL_VIEW	2	opens a Control-style view window with a toolbar

FULLSCREEN mode normally starts with a floating toolbar. WINDOWED mode normally starts without a toolbar. To obtain one, click on the System Menu icon (at the left hand end of the View window caption or title bar), select the View command, and then Restore View. This will change the View into a normal Control-style View window with a toolbar. You can also obtain this window style using CONTROL_VIEW.

Example

```
// Start a remote control session and wait for it to end

  Share ()
  SetWindowMode (CONTROL_VIEW)
  WaitEndView ()
```

Close

See also
Open, EOF

Description
Closes an open file.

Syntax
```
status = Close (handle)
```

Notes
Handle is returned by the Open function.

Example
```
Handle = Open (FileName, FILE_READ)
If Handle != 0 Then
  Print "File ", FileName, " opened for read. Handle = ", Handle
  ...
  Close (Handle)
Endif
```

EOF

See also
Close, Open

Description
Checks whether a file open for read has reached end-of-file. It returns TRUE when the end of file has been reached.

Syntax
```
status = EOF (handle)
```

Notes
It is only valid to call this function to test files that have been opened for read.

Example
```
Handle = Open (FileName, FILE_READ)
If Handle != 0 Then
  Print "File ", FileName, " opened for read. Handle = ", Handle
  Do Until EOF (Handle)
    Line = ReadLine (Handle)
    LineNo = LineNo + 1
    Print "Line ", LineNo, ": ", Line
  Loop

  Close (Handle)
Endif
```

Open

See also
Close, EOF

Description
Opens a file for reading or writing.

Syntax
```
Status = Open (filename, mode)
```

Notes
You can open files on both Control and Client PCs by specifying the appropriate Qualified Path. The *mode* parameter specifies the action to be taken.

Mode Parameter	Description
FILE_CREATE	Opens a new file for writing. It will fail if the file exists already
FILE_OVERWRITE	Opens a new or existing file for writing
FILE_READ	Opens an existing file for reading
FILE_APPEND	Opens an existing file for writing, appending data to it

Pass the *handle* value to EOF, Read, ReadLine, Write, WriteLine, and Close functions.

Example
```
If FileExists (FileName) then
  Handle = Open (FileName, FILE_APPEND)
Else
  Handle = Open (FileName, FILE_CREATE)
Endif

If Handle != 0 Then
  Print "File ", FileName, " opened for write. Handle = ", Handle
  ...
  Close (Handle)
Endif
```

Read

See also
Close, EOF, Open, ReadLine

Description
Reads a specified number of characters from a file which has been opened for read into a string variable.

Syntax
```
string = ReadLine (handle, chars)
```

Notes
It is only valid to call this function to test files that have been opened for read. This function can be used for files which do not contain lines delimited by CR/LF characters.

Example
```
Handle = Open (FileName, FILE_READ)
If Handle != 0 Then
  Print "File ", FileName, " opened for read. Handle = ", Handle
  Do Until EOF (Handle)
    Line = Read (Handle, 32)
    LineNo = LineNo + 1
    Print "Line ", LineNo, ": ", Line
  Loop

  Close (Handle)
Endif
```

ReadLine

See also
Close, EOF, Open, Read

Description
Reads a line from a file which has been opened for read into a string variable.

Syntax
string = ReadLine (*handle*)

Notes
It is only valid to call this function to test files that have been opened for read. Use Read to read a fixed number of characters from the file.

Example
```
Handle = Open (FileName, FILE_READ)
If Handle != 0 Then
  Print "File ", FileName, " opened for read. Handle = ", Handle
  Do Until EOF (Handle)
    Line = ReadLine (Handle)
    LineNo = LineNo + 1
    Print "Line ", LineNo, ": ", Line
  Loop

  Close (Handle)
Endif
```

Write

See also
Close, Open, WriteLine

Description
Writes one or more comma-delimited arguments to a file which has been opened for writing.

Syntax
```
status = Write handle, [arg1 ... argx]
```

Notes
The format of the Write function is similar to Print. Separate the arguments with commas ','. Do not use (parentheses). Use this function to write data to a file without appending a trailing CR/LF. Use the WriteLine function to write to a file with a trailing CR/LF.

Example
```
If FileExists (FileName) then
  Handle = Open (FileName, FILE_OVERWRITE)
Else
  Handle = Open (FileName, FILE_CREATE)
Endif

If Handle != 0 Then
  Print "File ", FileName, " opened for write. Handle = ", Handle
  Write Handle, FileName, " opened for write. Handle = ", Handle
  Close (Handle)
Endif
```

WriteLine

See also
Close, Open, Write

Description
Writes one or more arguments to a file which has been opened for writing.

Syntax
```
status = WriteLine handle, [arg1 ... argx]
```

Notes
The format of the WriteLine function is similar to Print. Separate the arguments with commas ','. Do not use (parentheses). The line is terminated by CR/LF characters as is normal for a PC text file. Use the Write function to write to a file without a trailing CR/LF.

Example
```
If FileExists (FileName) then
  Handle = Open (FileName, FILE_OVERWRITE)
Else
  Handle = Open (FileName, FILE_CREATE)
Endif

If Handle != 0 Then
  Print "File ", FileName, " opened for write. Handle = ", Handle
  WriteLine Handle, "File ", FileName, " opened for write. Handle = ", Handle
  Close (Handle)
Endif
```

IsInteractive

See Also
Input

Description
This function allows the Script to determine whether or not it is running in interactive mode and can safely perform operations that might ask for user input.

Syntax
```
IsInteractive
```

Notes
This command returns a TRUE result if the Script is running in the Script Editor, whether user input is enabled or disabled. It returns FALSE if the Script is running in the Script Agent, RUNSCRIP.EXE, or the Control program.

IsList

See Also
IsNumeric, IsString, IsUndefined

Description
This function returns TRUE if the variable specified contains a List. It returns FALSE if the variable contains a number, a string, or is empty or undefined.

Syntax
```
status = IsList (variable)
```

IsNumeric

See Also
IsList, IsString, IsUndefined

Description
This function returns TRUE if the variable specified contains a number. It returns FALSE if the variable contains a list, a string, or is empty or undefined.

Syntax
```
status = IsNumeric (variable)
```

IsString

See Also
IsList, IsNumeric, IsUndefined

Description
This function returns TRUE if the variable specified contains a string. It returns FALSE if the variable contains a list, a number, or is empty or undefined.

Syntax
```
status = IsString (variable)
```

IsUndefined

See Also
IsList, IsNumeric, IsString

Description
This function returns TRUE if the variable specified is Undefined. It returns FALSE if the variable contains a list, a number, or a string.

Syntax
```
status = IsUndefined (variable)
```

Notes
This is the normal state of all variables that have been declared using the Dim statement, but have not had any value assigned to them.

GetConnectedClients

See Also
GetAllClients, GetClientsInGroup, Lookup

Description
This function returns a list containing details of the Connected Clients.

Syntax
```
clients = GetConnectedClients (ClientList)
```

Notes
The *clients* value is the number of clients returned in the list *ClientList*. Each list element is in the same format as that returned by GetAllClients, GetClientsInGroup, GetConnectedClients, and Lookup (i.e. NAME|ADDRESS<TRANSPORT>).

Example
```
Dim ClientList as List

...

    status = GetConnectedClients (ClientList)
    Print "There are ", status, " Client(s) connected"
    For Each Client in ClientList
        Print "Client ", x, ": ", Client
    Next
```

produces output:-

```
There are 1 Client(s) connected
Client 1: DB|>90.0.0.22:5405<TCP>
```

Exec

See Also
GetInstallDir, GetOSDir

Description
This command runs a program on the Control or the selected Client.

Syntax
```
success = Exec (command_line)
```

This command does not wait until the command has completed. It will return a FALSE result if the command could not be executed.

Notes
The *command_line* parameter must include a fully qualified path to the required program. When the command is executed, this path will provide the working directory. If the Script is running on the current selected Client, the command_line should start with ">". To execute a command on a named Client, the Client name should go before the ">".

Example
The following command runs Windows Notepad to display the README.TXT file in the Client's install directory:

```
 status = Exec (">" + GetOSDir("") + "\notepad.exe " + GetInstallDir("") +
"\readme.txt")
```

GetAllClients

See also
GetClientAddress, GetClientName, GetClientTransport

Description
This function returns a list containing details of all Known Clients.

Syntax
```
status = GetAllClients (client_list)
```

Notes
The *status* value contains the number of Known Clients returned in *client_list*. Each element in the list contains the details of one Client. This is in the same format as that returned by GetClientsInGroup, GetConnectedClients, and Lookup (i.e. NAME|ADDRESS<TRANSPORT>).

Example:-

```
Dim ClientList as List

status = GetAllClients (ClientList)
If status > 0 Then
  For Each Client in ClientList
    Print Client
  Next
Endif
```

Produces output:-

```
DB|>90.0.0.22 (DB)<TCP>
```

GetClientAddress

See Also
GetClientName, GetClientTransport

Description
This function is used to extract the address from the details for a single Client.

Syntax
Address = GetClientAddress (*ClientDetails*)

Notes
The format for the Client details is the same as that returned by GetAllClients, GetClientsInGroup, GetConnectedClients, and Lookup.NAME|ADDRESS<TRANSPORT>)

Example
```
Dim ClientList as List, x

x = 0

status = GetAllClients (ClientList)
Print "There are ", status, " Known Clients"
For Each Client in ClientList
    x = x + 1
    Print "Client ", x, ": ", GetClientName (Client)
    Print "  Address: ", GetClientAddress (Client)
Next
```

GetClientName

See Also
GetClientAddress, GetClientTransport

Description
This function is used to extract the name part from the details for a single Client.

Syntax
```
Name = GetClientName (Client)
```

Notes
The Client details are in the format returned by GetAllClients, GetClientsInGroup, GetConnectedClients, and Lookup (i.e. NAME|ADDRESS<TRANSPORT>)

Example
```
Dim ClientList as List, x

x = 0

status = GetAllClients (ClientList)
Print "There are ", status, " Known Clients"
For Each Client in ClientList
    x = x + 1
    Print "Client ", x, ": ", Client
    Print "  Name: ", GetClientName (Client)
Next
```

GetClientsInGroup

See also
GetClientAddress, GetClientName, GetClientTransport

Description
This function returns a list containing all of the Clients in a particular Group.

Syntax
status = GetClientsInGroup (*client_list*)

Notes
The *status* value contains the number of Clients returned in *client_list*. Each element in the list contains the details of one Client. This is in the same format as that returned by GetAllClients, GetConnectedClients, and Lookup (i.e. NAME|ADDRESS<TRANSPORT>).

For example:-

```
Dim ClientList as List

status = GetClientsInGroup ("Sales Admin", ClientList)
If status > 0 Then
  For Each Client in ClientList
    Print Client
  Next
Endif
```

Produces output:-

```
SALES1|>90.0.0.101 (SALES1)<TCP>
```

GetClientTransport

See Also
GetClientAddress, GetClientName

Description
This function is used to extract the address from the details for a single Client.

Syntax
Transport = GetClientTransport (*ClientDetails*)

Notes
The format for the Client details is the same as that returned by GetAllClients, GetClientsInGroup, GetConnectedClients, and Lookup.(i.e. NAME|ADDRESS<TRANSPORT>)

Example
```
Dim ClientList as List, x

x = 0

status = GetAllClients (ClientList)
Print "There are ", status, " Known Clients"
For Each Client in ClientList
    x = x + 1
    Print "Client ", x, ": ", GetClientName (Client)
    Print "  Transport: ", GetClientTransport (Client)
Next
```

GetGroups

See also
GetAllClients

Description
This function returns a list containing all of the defined Groups.

Syntax
```
status = GetGroups (group_list)
```

Example

```
Dim GroupList as List

status = GetGroups (GroupList)
For Each Group in GroupList
    Print Group
Next
```

Produces output:-

```
Sales Admin
```

Message

Description
This function allows you to send a text message to a Client.

Syntax
```
success = Message (clientname, messagetext)
```

Notes
The *clientname* parameter should be ">" to send a message to the selected Client. To send a message to another connected Client, pass the Client's name instead.

Example
```
 status = Message (">", "The Server is shutting down in 5 minutes.")
```

Abort

See Also
Stop

Description
This command forces the running Script to exit.

Syntax

```
Abort (value)
```

This command does not return any status.

Notes
If the Script is running under RUNSCRIP.EXE, then you can provide a value that is used as the program's exit status. This allows the Script to communicate with a batch program.

Example

```
If errorno != 0 then
 Print "Script aborting!"
 Abort (errorno)
Endif
```

Stop

See Also
Abort

Description
This command stops the Script.

Syntax

```
Stop
```

This command does not return any status.

Example

```
If errorno != 0 then
 Print "Script stopping!"
 Stop
Endif
```

Input

See Also
IsNumeric

Description
This function allows a Script to prompt for user input.

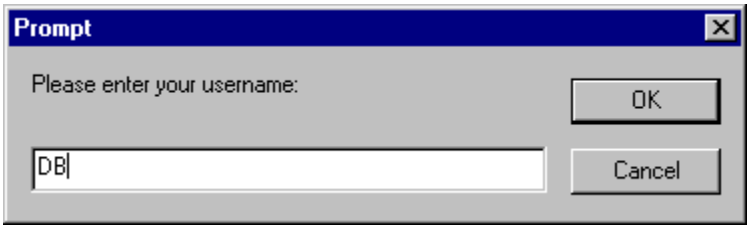
Syntax
```
Input (Prompt, Response)
```

Notes
Both *Prompt* and *Response* are string variables. If the user input is actually supposed to be numeric, use IsNumeric and CInt to convert the string into an Integer.

Example
```
Dim username

...
    Input ("Please enter your username:", username)
```

This produces a dialog like this:



Wait

See Also
WaitEndView

Description
Use this function to insert a delay of a number of seconds into the Script.

Syntax
```
Wait (seconds)
```

Edit Registry Menu Bar

The Edit Registry Menu Bar contains the following menus:-

File
This menu contains commands to import and export Registry data.

Edit
Use the commands on this menu to create new Keys or Values, rename or compare existing ones, or search the Registry for a string.

View
This menu is used to configure the contents of the Edit Registry Window.

Bookmarks
Use these commands to edit or use your Registry Bookmarks.

Window
Lists all active Client View, File Transfer, and Edit Registry windows and helps you to organise them on the Control's screen.

Help
Provides access to the online Help for the Edit Registry window and also the Control's Help About command.

Registry Tree View

The Registry structure is shown here as an expandable tree.

Registry List View
Any Values below the highlighted
Registry Key are displayed here.

Edit Registry: Status Bar

The current selected Registry Key is shown here.

Configurator Password

If a Configurator password is set, you will be prompted to enter the password before the Configurator will start.

Press the [Set] button to set a Configurator password.

Configurator NT Options

Authenticate User and Password with NT
Select this check box to enable use of NT Security. Any user attempting to configure this Client must enter the username and password of a valid NT account which has been granted the "Act as part of the operating system" right.

Restrict access to Members of NT Groups
You can restrict access to members one or more specific user Groups. Press [Browse] to view or edit this list.

CLIENT32.INI: Enable Web Extensions

Enable Web Extensions
Select this check box to enable Web Extensions support. The PC-Duo Client will listen for Internet Explorer Web Browser requests on the TCP/IP Port specified below.

Server Port
This field defines the port for incoming Web Browser requests. The Client will listen on this Port. The default port number is 80. This should not normally be changed.

Server Root Directory
This field contains the root directory for the Client's ActiveX Control, HTML, and graphics files. If left blank, the Client defaults to using the WEB subdirectory below its installation directory.

Password

Enter the new Security Key here. It will be echoed as asterisks '****".
Enter it again in the field below.

Re-enter
Enter the Security Key again here for confirmation.

Client Help Request Options

These settings affect the Client's ability to request help from Controls:

Disable connections from Help Request Dialog
This setting disables the Client's Help Request, Show Controls button.

Always show Controls in Help Request
This setting is equivalent to always pressing the Client's Help Request, Show Controls button.

Control List

This list shows the known Controls' names, addresses, and transports.

Add

Press this button to add a Control to the Controls list. The Add Control dialog is displayed.

Remove
Press this button to remove a Control from the Controls list.

Show Controls

This button is displayed when one or more Controls have been added to the Client's Control List. Press it to display the Available Controls.

Hide Controls

Press this button if no Controls are available to help with your request. You will be returned to the Request Help dialog.

Available Controls

When this dialog opens, the listed Controls are checked to see if they are Available. Their status is shown here.

Refresh
Press this button to refresh the Available Controls list opposite.

Connected Client

The name of the Client is shown here.

View

Press this button to open a View Window to the Connected Client.

Chat
Press this button to open a Chat Window to the Connected Client.

Disconnect
Press this button to Disconnect the Connected Client.

Clear Help Request when closed

Select this check box to clear the Client's Help Request when this dialog is closed.

Control List

Select a Control from this drop-down list and press [OK] to connect to it.

Help Message

If the Client sent a Help Request when it Connected to the Control, the message is displayed here.

Load

Press this button to load a Profile from a file.

Save
Press this button to save the selected Profile to a file.

Load Configuration From File

Select this radio button to load a Control Profile that has been saved to a file.

Save at End of Session

Select this check box if you want the Profile to be saved in the Registry when the Control exits.

Reset
Press this button to reset the statistics.

Including other Script files

It is possible to write general purpose functions that can be used repeatedly. Instead of adding the function to each Script, it may be convenient to place the function in a separate file. This file can then be included where necessary using the $INCLUDE "filename" command.

For example
File ADDTOLOG.SCP contains the function AddToLog () which writes a date and time stamp and a message at the end of a log file. Whenever this function is needed, the Main Script file can be modified to include the line:-

```
$INCLUDE "ADDTOLOG.SCP"
```

Once that has been done, the functions in the $INCLUDE files can be called.

We would recommend that any $INCLUDE lines are placed near the beginning of the Main Script file so that they are easy to find.

Obsolete Topic

This Help topic is no longer in use and should not be displayed.

If you require assistance, please contact PC-Duo support.

Script Argument Name
Enter the Argument Name here
and the Value in the field below.

Script Argument Value
You must enter a Value here and set the Type in the field below.

Script Argument Type

Set the Argument Type as Number or String from this drop-down list.

Client *xxx* cannot be powered on

It is not possible to power on the specified Client because its MAC Address is not known.

Suggestions

- If the Client PC is already switched on, then connect to it using the PC-Duo Control. This will store the Client's MAC Address for later use.
- You can add the Client's MAC Address to the Client Properties, Details dialog.

See Also

MAC Address

No Stored MAC Address for Client

It is not possible to power-up a Client PC unless its MAC Address has first been stored in the Known Clients list.

It is necessary for the Control to connect to a Client in order for the MAC Address to be stored.

dbClose

See also
dbOpen, dbRelease

Description
This function is used to close an open ODBC data source.

Syntax
```
dbClose ()
```

Notes
You can only have one ODBC data source open at any time.

Example

```
If dbOpen ("ClientDatabase", "DB", "DBPWD") Then
  ...
  dbClose ()
Endif
```

dbOpen

See also
dbClose

Description
This function is used to open an existing ODBC data source.

Syntax

```
dbOpen (DataSourceName, [username[, password]])
```

Notes
DataSourceName is a string containing the name of an existing ODBC data source. The optional *username* and *password* strings can be used to provide access control information for the data source.

Example

```
dbOpen ("ClientDatabase", "DB", "DBPWD")
dbTables (TableList)
For Each Table in TableList
    Print Table
Next
dbClose ()
```

dbDataSources

See Also
dbDrivers, dbTables

Description
This function will return the names of all known ODBC data sources in a list.

Syntax
```
status = dbDataSources (SourceList)
```

Notes
The status return value contains the number of data sources found. Their names are placed in *SourceList*.

Example

```
dbDataSources (SourceList)
For Each Source in SourceList
    Print "Data Source Name = ", Source
Next
```

dbTables

See Also
dbColumns, dbDataSources

Description
This function will return the names of the tables in an ODBC data source in a list.

Syntax
```
status = dbTables (TableList)
```

Notes
The *status* return value contains the number of tables found. Their names are placed in *TableList*.

Example

```
dbOpen ("ClientDatabase", "DB", "DBPWD")
dbTables (TableList)
For Each Table in TableList
    Print Table
Next
dbClose ()
```

dbDrivers

See Also
dbDataSources, dbTables

Description
This function will return the names of all known ODBC drivers in a list.

Syntax
```
status = dbDrivers (DriverList)
```

Notes
The *status* return value contains the number of drivers found. Their names are placed in *DriverList*.

Example

```
dbDrivers (DriverList)
For Each Driver in DriverList
    Print "Driver Name = ", Driver
Next
```

dbColumns

See Also
dbDataSources, dbTables

Description
This function will return the names of the tables in an ODBC data source in a list.

Syntax
```
status = dbColumns (TableName, ColumnList)
```

Notes
The *status* return value contains the number of columns found. Their names are placed in *ColumnList*.

Example

```
dbOpen ("ClientDatabase", "DB", "DBPWD")
dbColumns (TableName, ColumnList)
For Each Column in ColumnList
  Print Column
Next
dbClose ()
```

WakeOnLAN

This is an Advanced Power Management feature that allows a PC-Duo Control to Power On a Client PC that is currently switched off. It requires a suitable network adapter and support in the PC's BIOS.

WakeOnLAN is currently restricted to Clients on TCP/IP networks. The Control must know the Client's MAC Address before the Client can be powered on.

The following hardware, BIOS and operating system requirements may need to be set up on the Client:

- A network card which supports Remote Power Management (sometimes called Wake-on-LAN). Many cards over a year old will not have Power Management capabilities. Many new low-cost cards will not support Power Management.
- A motherboard which also supports Power Management.
- A dedicated Power Management cable installed and connected from the network card and the motherboard.
- In the PC’s BIOS Power Management, you must enable the "LAN Wakeup" option (or similar).
- Additionally, some network cards provide configuration utilities which enable you to specify the Power Management settings. These options are sometimes dependent upon the operating system being used.

Sample Scripts

Several Sample Scripts have been added or updated. The complete set is now as follows:

Script	Version	Comment
ADDTOLOG.SCP	v5.3	AddToLog () function
ASC.SCP	v5.3	Asc () function
CLIENTNAME.SCP	v6.0	Convert_Client_Params () function
DIALTEST.SCP	v6.11	Modem Repetitive Dial Test Script
FCOMPARE.SCP	v7.01	FileCompare () function
FFREE.SCP	v5.01	First Free Client Script
FILEIO.SCP	v5.01	File Read and Write Script
FINDALL.SCP	v7.01	Find All Available/Known Clients/in a Group
FLUPDATE.SCP	v6.0	Update Client File(s) Script
GRPFLUPD.SCP	v7.01	Group File Update Script
GTCTLDIR.SCP	v7.01	GetControlDir () function
GTCTLFL.SCP	v5.3	GetControlFile () function
GTGROUP.SCP	v7.01	GetGroup () function
GTREMOTE.SCP	v7.01	GetRemote () function
HOSTNAME.SCP	v6.0	RUNSCRIP Script to set Clients' hostnames
LICDCOLL.SCP	v6.0	Client Licence data collector Script
LICDNLSR.SCP	v6.0	Client Licence data analyser Script
LINSTR.SCP	v7.01	LInStr () - Replacement for InStr () function
LOOKUP.SCP	v5.01	Client Lookup Script
MSGBOX.SCP	v6.10	MsgBox () usage examples
ODBCDEMO.SCP	v6.0	Simple ODBC database reporter
PARSE.SCP	v7.01	Path parsing functions
PRODNAME.SCP	v5.32	ProductName () function
RINSTR.SCP	v7.01	RInStr () function
STEST.SCP	v5.31	Remote Control Test Script
STRXCMP.SCP	v6.0	Case In/Sensitive String comparison functions
TOKENS.SCP	v7.0	Token parsing functions
TYPES.SCP	v6.10	ValueType () function
WINDOWS.SCP	v6.0	GetWindowsDir and GetWinSysDir functions
XCOPY.SCP	v5.32	XCopy () function demonstrator

Script files that are new or updated in this version are highlighted.

Compare

Description
This function performs a case-insensitive comparison between two strings.

Syntax
```
status = Compare (string1, string2)
```

Notes
The result is -1 if *string1* is less than *string2*, 0 if the strings are identical, or +1 if *string1* is greater than *string2*.

WakeUpClient

See Also
Reboot

Description
This function allows a Script to power on a Client using either its MAC address or its name.

Syntax
```
WakeUpClient (name_or_address, type)
```

The type constant specifies whether the name_or_address variable contains a MAC address or a Client name:

Constant	Example	Comment
WU_CLIENTNAME	DB	DB is a Client Name
WU_MAC_ADDRESS	123456789abc	The MAC address, in hexadecimal

Notes
This function will only work for Clients that are on the local TCP/IP subnet. In order for the Client Name method to work, the Client's MAC address must be in the Known Clients database. This normally occurs when a Control connects to it.

Example

```
SetTransport T_TCPIP)

WakeUpClient ("DB", WU_CLIENTNAME)
```

or

```
WakeUpClient ("123456789abc", WU_MAC_ADDRESS)
```

MAC Address

Once the Control has connected to this Client, its MAC address is displayed here.

Restart Client

Press this button to restart the Client after any configuration changes have been made and saved.

dbRelease

See Also
dbExecute, dbSelect

Description
The dbExecute and dbSelect statements return a handle to their results. When you have finished with it, you must release the handle using dbRelease (handle).

Syntax
```
DbRelease (handle)
```

Example

```
dbOpen (database)
Dim Handle

Handle = dbExecute "Select * From Clients"
...
dbRelease (h)
dbClose()
```

dbExecute

See Also
dbRelease, dbFetch, dbFetchList

Description
This runs a SQL command against an open ODBC data source and returns a handle to it that can be used in dbFetch and dbFetchList.

Syntax
```
dbExecute "SQL Statement"
```

Example

```
Dim Handle
Dim NameList as List, IpList as List
Dim PlatformList as List, VerList as List

dbOpen ("database")

// Select everything from Clients

Handle = dbExecute "Select * from Clients"

DbFetchList Handle, 2, IpList, 1 NameList, 3 PlatformList, 4, VerList

For Each Platform, ip, name, ver in platformlist, iplist, namelist, Verlist
  Print platform, ip, name, ver
Next
dbClose()
```

dbSelect

See Also
dbExecute, dbFetch, dbFetchList, dbRelease

Description
This function takes the name of a table in the database, and allows you to select columns from that table and put them into order. The data can then be retrieved using dbFetch or dbFetchlist.

Syntax
```
dbSelect ("Tables","Columns","Where","Order_by")
```

Example

```
Dim Handle
Dim NameList as List, IpList as List
Dim PlatformList as List, VerList as List

dbOpen ("database")

Handle = dbSelect ("Clients", "Clientname,IPAddress,ID,Platform", "",
"ClientName")

dbFetchList Handle, 2, IpList, 1, NameList, 3, PlatformList, 4, VerList
For Each Platform, ip, name, ver In PlatformList, IpList, NameList, VerList
  Print Platform, ip, name, ver
Next

dbRelease (Handle)
dbClose ()
```

dbFetchList

See Also
dbColumns, dbExecute, dbFetch, dbRelease

Description
This function is used to fetch the results of a dbSelect or dbExecute command from the database. Unlike dbFetch, this function returns the various items from each row into separate lists, and does not need dbGetData to retrieve the data. It takes the search handle returned by dbSelect or dbExecute as a parameter. The number and order of the lists provided to dbFetchList must match the number and order of Columns selected from the database for correct results to be produced.

Syntax
```
dbFetchlist handle, column1, list1, column2, list2, ...
```

Example

```
Dim Handle
Dim NameList as List, IpList as List
Dim PlatformList as List, VerList as List

dbOpen ("database")

Handle = dbExecute "Select * from Clients"

dbFetchList Handle, 1, IpList, 2, NameList, 3, PlatformList, 4, VerList

For Each Platform, ip, name, ver in PlatformList, IpList, NameList, VerList
  Print Platform, ip, name, ver
Next

dbRelease (Handle)
dbClose ()
```

dbFetch

See Also
dbExecute, dbFetchList, dbGetData, dbSelect

Description
This function is used to fetch the results of a dbSelect or dbExecute command from the database, one row at a time. It takes the search handle returned by dbSelect or dbExecute as a parameter. It should be used in conjunction with dbGetData.

Syntax
```
dbFetch (handle)
```

Example

```
Dim Handle as Integer
Dim ClientList as List
Dim ClientAddress as String, ClientName as String

dbOpen ("database")

Handle = dbExecute "Select ClientName, IPAddress FROM Clients"

Do While dbFetch (Handle)
  ClientName = dbGetData (Handle, 1)
  ClientAddress = dbGetData (Handle, 2)
  Print "Client = ", ClientName, " IP Address ", ClientAddress
Loop

dbRelease (Handle)
dbClose ()
```

dbGetData

See Also
dbColumns, dbExecute, dbFetch, dbSelect, dbRelease

Description
This function is used in conjunction with dbFetch. It retrieves data from a specified column in the search results using the handle returned by dbFetch.

Syntax
```
dbGetData (handle, column)
```

Example

```
Dim Handle as Integer
Dim ClientList as List
Dim ClientAddress as String, ClientName as String

dbOpen ("database")

Handle = dbExecute "Select ClientName, IPAddress FROM Clients"

Do While dbFetch (Handle)
  ClientName = dbGetData (Handle, 1)
  ClientAddress = dbGetData (Handle, 2)
  Print "Client = ", ClientName, " IP Address ", ClientAddress
Loop

dbRelease (Handle)
dbClose ()
```

dbDelete

See Also
dbInsert, dbExecute

Description
This function will delete records which meet specified criteria from a database table.

Syntax

```
dbDelete (TableName, "FieldName=Value")
```

Notes
You should use caution when running functions designed to delete data from a Database. We recommend you test any such functions on a copy of your database before running them on a live database.

Example

```
dbDelete (tblClients, "ClientName='TEST1'")
```

dbFind

See Also
dbExecute, dbFetch, dbGetData, dbSelect

Description
This function finds records in a table which match a specified condition.

Syntax
```
dbFind TableName, Condition
```

Example

```
dbFind "tblClients", "ClientName=SALES"
```

dbInsert

See Also
dbDelete, dbExecute

Description
The dbInsert function adds an entry into a specified table and field.

Syntax

```
dbInsert TableName, FieldName, Value
```

Notes
You should use caution when running functions designed to modify from a Database. We recommend you test any such functions on a copy of your database before running them on a live database.

Example

```
dbInsert "tblClients","ClientName","NEWPC"
```

dbUpdate

See Also
dbExecute, dbFetch, dbInsert

Description
This function enables you to update a single field where a specified condition is met.

Syntax

```
dbUpdate (TableName, ColumnName, Condition)
```

Example

```
dbUpdate ("tblClients", "IPAddress", "ClientName=SALES1")
```

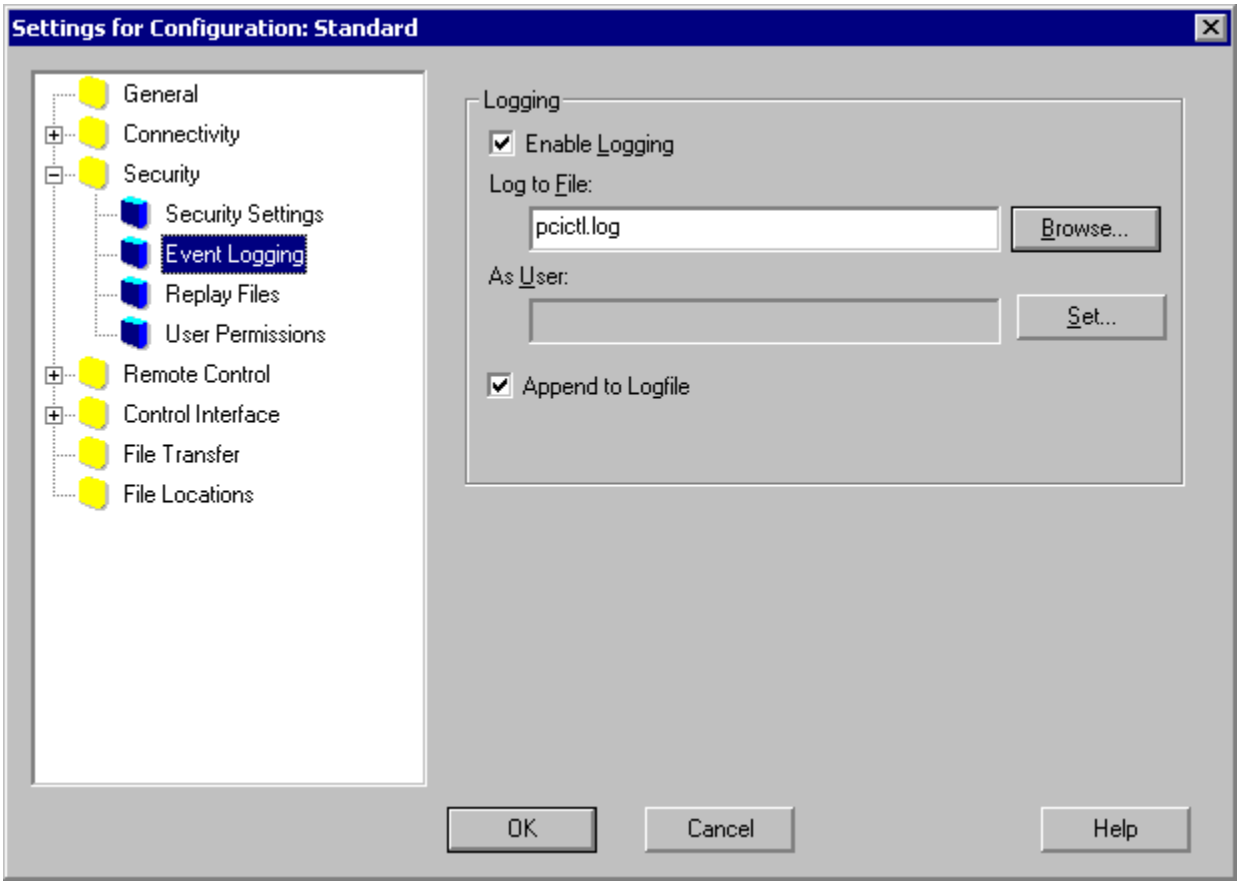
Scan Options

These settings allow you to control the Scan Window configuration.
You can display from 1 to 16 Clients simultaneously (in a 4*4 grid).

Settings for Configuration: Event Logging

You can use this page to enable remote control activity logging for the Control.

For more information on a particular feature, click where a ➧ appears on the picture below.



The log file format and contents are similar to the Client's log file.

You can record remote control sessions for later reviewing using the Replay Files page.

Settings for Configuration: Logging Options

Enable Logging
Select this check box to enable Control logging.

Log to File
The Control Log is written to a file. You can specify the file name here.

As User
If the file is located on a Server, you may have to enter a username and password to access the file. Press [Set] to open the Add/Edit User dialog.

Append to Logfile
Select this check box to preserve the log contents from one Control session to the next.

Username
Enter the target username here.

Enable Audio Support

If the Control is configured for Audio, you can choose to Enable Audio Support during the Show. This allows the Control to speak to the Clients

Show Mode at Client

Select this check box if you want to choose between Full-screen and Windowed modes at the Clients.

Full-screen mode disables the Clients' keyboard and mouse while windowed mode does not.

Enter the name and path

Type in the name and path of the application that you want to execute on the Client(s), including any program arguments. If the program can be found using the Client's PATH environment variable, then you only need enter the application name. Otherwise, enter the full command line.

Local Browse

Press this button if the program you want to Execute at the Client(s) is also located on the Control.

Add to List

Press this button to add the execute command to the Control's saved list.

Results

The selected Clients and the results of the application execution are listed here. The Result Code shows whether the application was executed successfully or not. If so, the result will be shown as 'OK'. Otherwise the DOS error code will be displayed.

View

Select a Client from the result list and press this button to open a View window. This allows you to see what is happening on the Client.

Chat

Select a Client from the Results list and press this button to open a Chat window.

Saved List

Use this tab to save commands for later execution.
Press [Add] to create a new entry, [Edit] to update
an existing entry or [Remove] to delete one.

HexToInt

Description
Converts a hexadecimal string into a integer value.

Syntax
```
result = HexToInt (expression)
```

Note
The hexadecimal string expression can be prefixed by 0x, but this is not necessary for correct conversion.

MsgBox

See Also
Input

Description
This function allows a Script to display a standard Windows MessageBox.

Syntax
```
MsgBox (Message, Style)
```

Notes
Message is a string variable. *Style* indicates the general MessageBox format. Both the buttons and the icon displayed can be controlled by combining suitable pre-defined constant values.

Example
```
Dim Button

...
  Button = MsgBox ("Press [OK] to continue", MB_OK | MB_ICONINFORMATION)
```

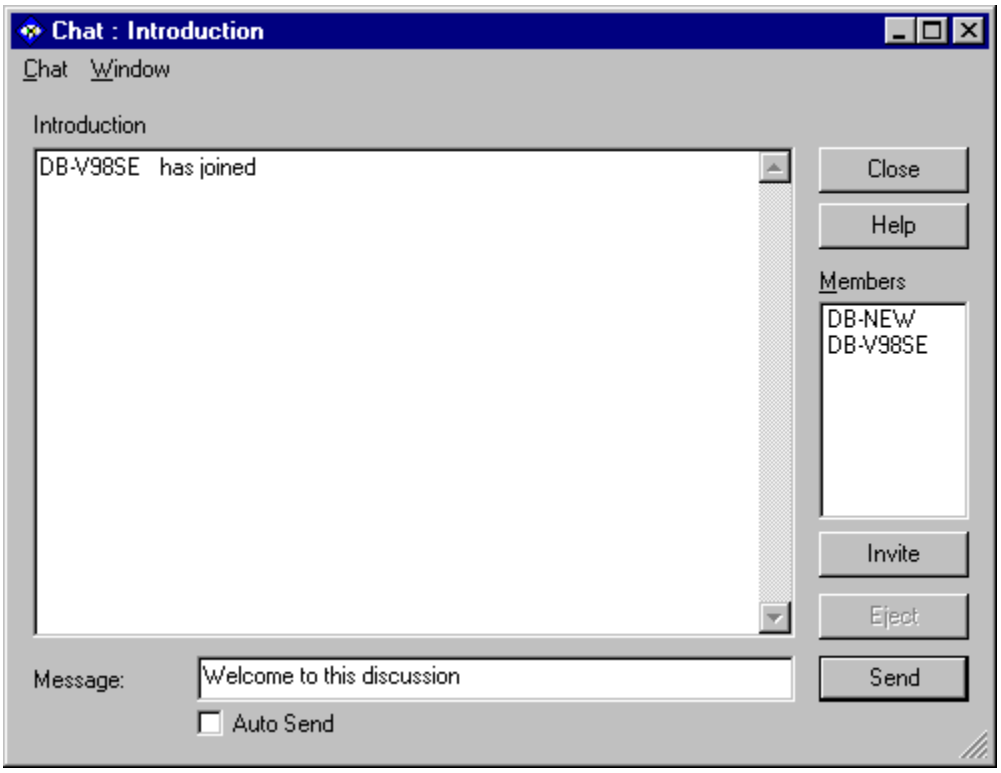
This produces a dialog like this:

A variety of MessageBox styles are supported. For more information, look at Sample Script MSGBOX.SCP.

Group Chat Dialog

This dialog is displayed at the Control when a discussion group has been created. The Clients see a similar dialog.

For more information on a particular feature, click where a ➧ appears on the picture below.



Type your message text in the Message field and press [Send] or Enter to add it to the discussion history. It is sent to all of the group members. Use the Auto Send check box in cases where you want to send a block of text that is larger than the buffer.

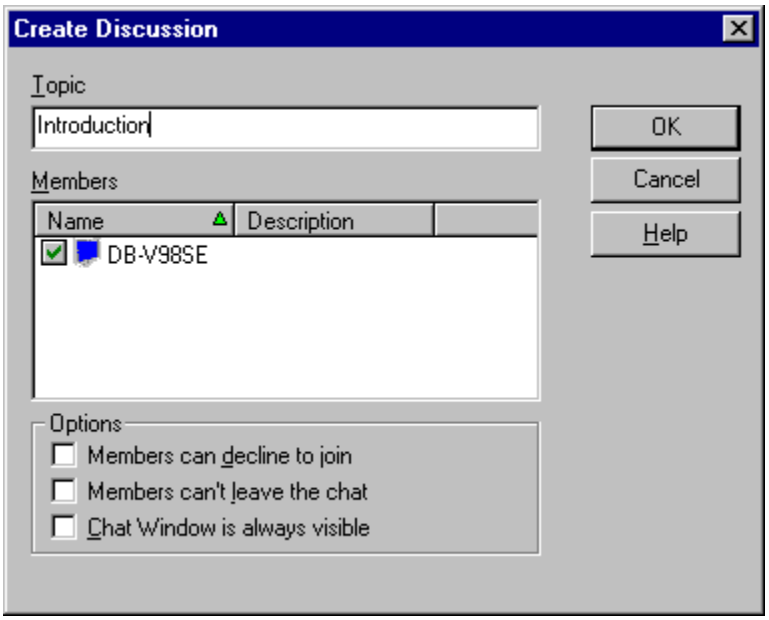
You can invite new Clients to join the discussion once they have been Connected.

To remove one or more Clients from the group, highlight them in the Members list and press [Eject].

Group Chat

With one or more Clients selected in the Control List View, press the Chat button (shown above) in the Control's Main Window toolbar to create a new discussion group.

For more information on a particular feature, click where a appears on the picture below.



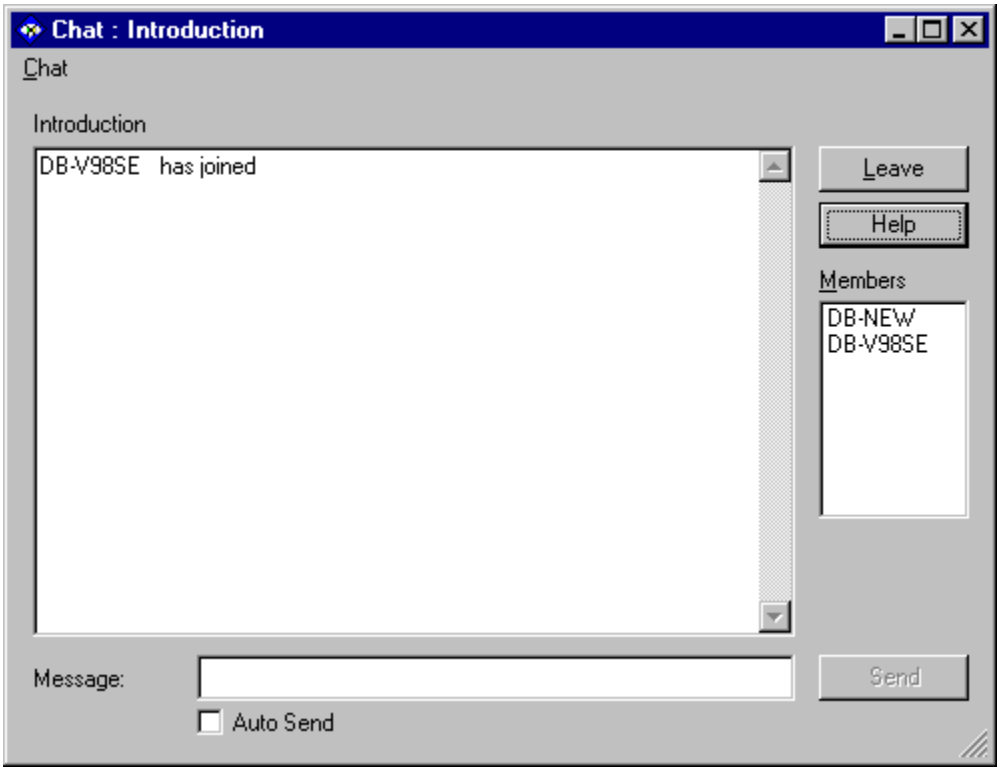
If you are connected to an old version Client, the Chatting to dialog is displayed.

Enter a topic title, include or exclude the Clients, and press [OK] to start the discussion.

Group Chat

This dialog is displayed at the Client when a discussion group has been created.

For more information on a particular feature, click where a ➧ appears on the picture below.



Type your message text in the Message field and press [Send] or Enter to add it to the discussion history. It will be sent to the other group members.

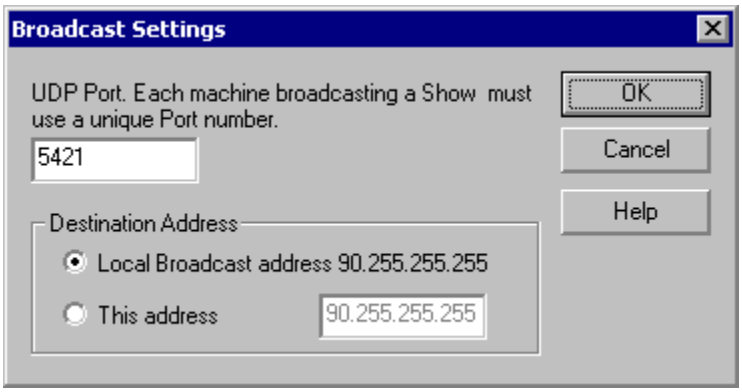
Use the Auto Send check box when you want to send a block of text that is larger than the buffer.

You can leave the group by pressing the [Leave] button. However, this may be disabled by the Control.

Broadcast Settings

Enable Broadcast Show and press the [Settings] button on the Settings for Configuration: TCP/IP page to configure the Control for Broadcast Show on a TCP/IP network.

For more information on a particular feature, click where a ➧ appears on the picture below.



Note
Broadcast Show uses only one address and so all Clients must be on the same subnet to receive the Show.

UDP Port

The Control uses this port number to send screen updates to the Clients when Broadcast Show is enabled.

The default port number is 6000.

Where more than one Control can be Showing its screen at any time, each Control must use a different port number to avoid clashes.

Destination Address

The address that the Control uses for a Broadcast Show is displayed here. It should normally be set to the broadcast address for the local TCP/IP subnet.

Network Technology

Select the closest match to the local network technology. This Control uses this setting to optimise the Broadcast Show for the local environment.

Broadcast Addresses

The Control uses a Broadcast Address when it is Browsing a TCP/IP network for Available Clients and also during a Show when Broadcast Show is enabled. The default address is calculated from the IP address:-

Network Type	Address Range	Subnet Mask	Broadcast Address
Class A	1.x.x.x - 127.x.x.x	255.0.0.0	x.255.255.255
Class B	128.x.x.x - 192.x.x.x	255.255.0.0	x.x.255.255
Class C	193.x.x.x - 255.x.x.x	255.255.255.0	x.x.x.255

Broadcast addresses are usually the last address in a subnet. For example, the broadcast address for Class A network 90.0.0.0 would be 90.255.255.255, and that for Class C network 192.168.100.0 would be 192.168.100.255.

If you have a multi-subnet network, additional broadcast addresses can be specified using the [Settings] button in the Browsing section of the Settings for Configuration: TCP/IP dialog.

Broadcast Show uses only one address and so all Clients must be on the same subnet. This can be configured by pressing the [Settings] button in the Broadcast Show section of the Settings for Configuration: TCP/IP dialog.

Transport Code

Transport codes are needed when a Script makes a connection using the Client's network address.

Transport Code	Network Type
<IPX>	Novell IPX/SPX
<NBa>	NetBIOS + adapter
<TCP>	TCP/IP Windows Sockets

Example

```
status = Connect (">123.124.125.250:5405 (db)<TCP>", username)
```

Note
The codes used for NetBIOS networks include their Adapter Number, which can be in the range 0 to 7. NB0 means NetBIOS Adapter Number 0.

Advanced/Basic

Use this button to display or hide the Advanced Settings fields.

Discussion Topic

Enter a title for the Discussion Group here.

Discussion Members

The selected Clients are listed here.
Click on the tick buttons to exclude
individuals from the discussion.

Discussion Options

Members can decline to join
When this box is selected, each Client is asked if they want to join the discussion.

Members can't leave the Chat
Select this check box to prevent Clients from leaving until the discussion is finished.

Chat Window is always visible
This keeps the Chat window on top of any other open windows.

Discussion History

The discussion history contents are displayed here.
You can save the history to a file or copy a selection
to the clipboard using Chat Menu commands.

Members

The members of the Discussion Group are listed here.

Invite

If you have additional Clients connected that are not already members of the group, you can press this button to invite one or more of them to join in the discussion. The Add Members dialog is displayed.

Eject
Highlight one of the Discussion Group members and press this button to eject them from the Group.

Auto-Send

The message buffer can hold up to 160 characters. Use this check box to send the buffer contents automatically if it fills up before you press [Send]. This can happen if you paste a large block of text into the message field.

Chat Menu

Save
Use this command to save the entire discussion history to a text file.

Copy
Highlight a block of text in the discussion history window and use this command to copy the details into the Clipboard.

Send Beep
This command will produce a beep at the Client PC. You can use it to attract the attention of the Client user.

Close
Use this command to close the discussion dialog.

Support
Press this button to open the
Support Contacts Help File.

Import

Press this button to import values into the Registry from a standard-format .REG file.

Export

Press this button to export the selected Key from the Registry into a standard-format .REG file.

Edit

Highlight a Value in the Edit Registry window and press this button to edit it. You can change the name and contents.

Delete
Highlight a Value in the Edit Registry window and press this button to delete it.

Compare

Press this button to compare the selected Registry Key with that on the Control or another Client. The Select Client dialog allows you to choose which.

Find
Press this button to search the Registry for a string. The Find dialog is displayed.

New
Select an existing Key and press this button to open the New Popup Menu.

Traffic Lights

These "lights" flash when data is being received from the Client (top light) or sent to it (bottom light) by the Control.

Discussion Group Title

The Discussion Group title is shown here.

Leave

Press this button to leave the Discussion Group.
If it is greyed-out, the Control User has decided
not to allow members to leave the group.

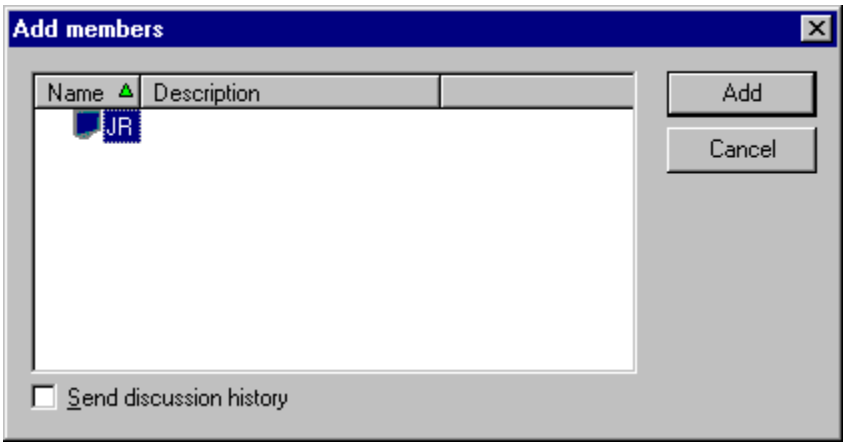
Message

You can type your message text here. Press the [Send] button or press Enter to add the message to the discussion. Use the Auto Send check box if your message text is longer than the buffer.

Add Members

You can invite additional Clients to join an existing Discussion Group. First, connect to them and then press the [Invite] button in the Discussion Group dialog.

For more information on a particular feature, click where a ➧ appears on the picture below.



Select one or more Clients in the list and press [Add]. They will be added to the Discussion Group.

Select the Send discussion history check box to send them a copy of the current history.

Add Clients List

Any Clients eligible to join the Group are listed here.
Highlight one or more and press the [Add] button.

Add

Select one or more Clients in the list and press this button to add them to the Discussion Group.

Send Discussion History

Select this check box to send a copy of the Discussion Group history to the new members.

.

Script

Select an existing Script from this drop-down list or press the [New] button to create a new Script.

New

Press the [New] button to create a new Script Object. The New Script Wizard will open.

Settings for Configuration: Configuration Files

Client File
This file contains the names and address details for all Known Clients. The default name is CLIENT.NSM.

Group File
This file contains the Group assignments for all Clients. The default name is GROUP.NSM.

Remote Networks File
This file contains the dialling address details for all Remote Networks. The default name is REMOTE.NSM.

Scripts File
When a Script is configured for use by the Control, any details are stored in this file. The default name is SCRIPTS.NSM.

Tools File
User-defined tool program settings are stored in this file. The default name is TOOLS.NSM.

Settings for Configuration: When a Help Request Arrives

Highlight the Client in the Help Request List
When a Help Request arrives, the Control Main Window will be displayed, with the Help Requests folder opened.

Display a message
When a Client requests assistance, the Control displays a message, allowing you to View, Chat, or Disconnect.

Play a sound
Select this check box and browse to play a particular sound (.WAV) file when a Client requests help.

Settings for Configuration: Help Request Status

Use these radio buttons to indicate whether the Control is available for incoming Client Connections and Help Requests.

Available to take Help Requests
The Control will accept incoming Client Connect and Help Requests.

Not Available to take Help Requests
The Control will accept incoming Client Connect and Help Requests.

Busy at the moment
The Control is temporarily unavailable.

Busy

Use this check box to flag that this Control is not available to attend to a new Help Request when it already has so many Clients connected.

Select the Machine to Compare Values with

These radio buttons allow you to select a second Registry to compare with the first. If you have one Client connected, you can only compare its Registry with the Control's and the "This Client" radio button will be disabled. If you have more than one Client connected, you can compare any two.

Connected Clients

The Clients that are available for Registry comparison are listed here, if there are any. Select the "This Client" radio button above, and then select one Client from this list.

Compare All or Selected Values

These radio buttons determine whether you are comparing selected Values or all Values in a Registry Key. The Compare Selected Values radio button is greyed out if no Values were selected before the Compare button was pressed.

File Properties

MS-DOS Name
If the selected file has a long filename, MS-DOS and Windows 3 have a different interpretation of the filename. This is known as a short or 8.3 format filename.

Location
This displays the location of the selected file, either on the local machine or on the current Client. The path of the file is also displayed which is always in long filename format.

Size
The total size in bytes of the selected file or files. If you have selected multiple files, the total size of all files will be displayed.

Modified
This is the time and date that the selected file was last modified.

File Attributes

You can alter the attributes of the selected files by selecting or de-selecting the check boxes in the File Properties dialog:-

- Read Only
- Archive
- Hidden
- System

If you have selected more than one file, the check boxes could have three states. If it is clear, none of the selected files have the attribute set. If it contains a tick, all of the files have the attribute set. If it contains a tick with a grey background, some files have the attribute and others do not. Leave it like this if you do not want to change this attribute on any of the files.

Contents of
The Current Directory path is shown here.

Wildcard

The file wildcards used to obtain the list view contents are shown here. To change them, click in this field and type a new pattern.

List View Controls

These buttons allow you to change the File List View appearance and sort order.

Client Computer

The Client's drives and directories are displayed in a Tree View. The List View in the right-hand pane shows the contents of the selected directory.

Client Files

The List View in the right-hand pane shows the contents of the selected directory on the Client.

Changes to Windows 2000 and XP Registry Settings

Setup makes several changes when the PC-Duo Client is installed on Windows 2000 or XP. Setup installs the following files:

In the WINNT\SYSTEM32 Directory:

```
CLHOOK4.DLL
GDIHOOK5.DLL
GDIHOOK5.INF
GDIHOOK5.SYS
PCIGINA.DLL
PCIMSG.DLL
```

In the WINNT\SYSTEM32\DRIVERS Directory:

```
GDIHOOK5.SYS
PCISYS.SYS
```

System changes are achieved by self-registering files GDIHOOK5INST.DLL (in the install directory) and PCIGINA.DLL.

Changes to the System Registry:
To locate these entries use the find option in REGEDIT.

The mirror driver, GDIHOOK5.DLL is loaded through Registry key:-

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E968-E325-
11CE-BFC1-08002BE10318}
```

There are normally several drivers that can be installed using one or more of these numbered configurations. Additional configuration settings are stored in Key:-

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Gdihook5
```

and its subkeys. These values should not be altered.

On Windows 2000 only, PCIGINA.DLL is loaded by Registry entry:-

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows
NT\CurrentVersion\Winlogon\GinaDLL
```

The previous GINA DLL is loaded through GinaDLL.old. On Windows 2000 this is normally MSGINA.DLL. PCIGINA is not loaded through the Registry on Windows XP, as this interferes with fast user switching.

Event log message sources are defined by Registry Keys:-

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\EventLog\Application\PCI
app
```

and

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\EventLog\System\PCIsys
```

The Client is installed as a Service in Registry Key:-

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Client32\

The ImagePath string value contains the Client's command line parameters.

Device driver PCISYS.SYS is installed as a device driver in Registry Key:-

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\PCISys

An entry is added to the AUTOEXEC.NT file to enable full screen DOS box support.

End
Press this button to end the Show.

Resume
Press this button to resume the Show.

Continue

Press this button to perform work on the Control without displaying the results at the Clients. The Show remains suspended until you double-click the Control icon again, when it resumes. The Clients' keyboards and mice remain locked until the Show ends.

Annotate Screen Tool

While viewing a Client, or during a Show, the Annotate tool can be used to highlight areas of special interest on the screen.

Press the Annotate button (shown above) in the View Window Toolbar, or during a Show, double-click on the similar Annotate Screen icon in the System Tray to open the Annotate Tool.

Use the Options button to save all of the screen or a selection from it to a file, clear all annotations from the screen, undo and redo an annotation, and close the Annotate Screen tool.

The Tool button allows you to choose various drawing, typing, and selection tools. Similarly, the Colour, Width, Fill and Font buttons give you a selection of settings to use.

The Suspend and End buttons are used during a Show. Press the Suspend button to stop the Show temporarily or resume it again, and the End button to stop the Show completely.

Shrink the Toolbar

Press this button to display the small toolbar.

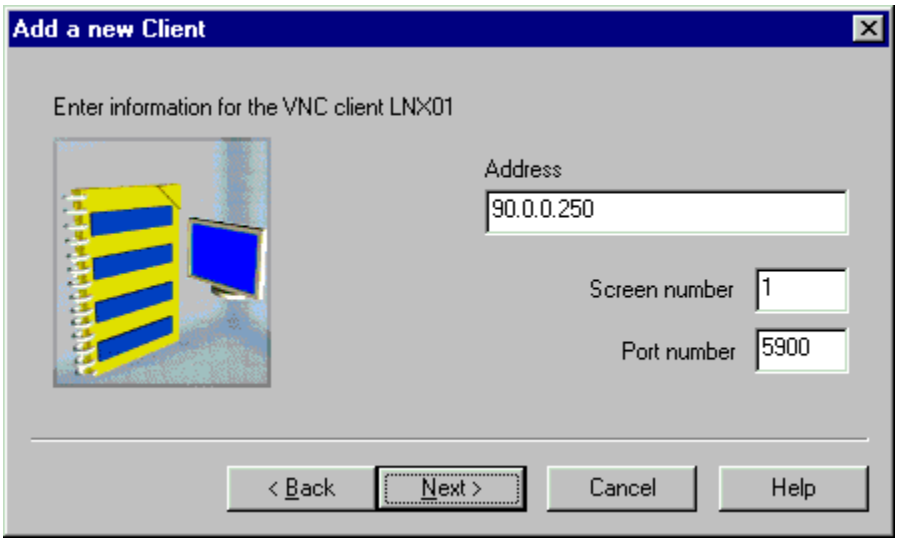
Expand the Toolbar

Press this button to display the full size toolbar.

Add a New Client: VNC

This dialog is displayed when you have selected "VNC Client" in the Add a New Client: Name dialog. It allows you to specify the Client's TCP/IP address details.

For more information on a particular feature, click where a ➧ appears on the picture below.

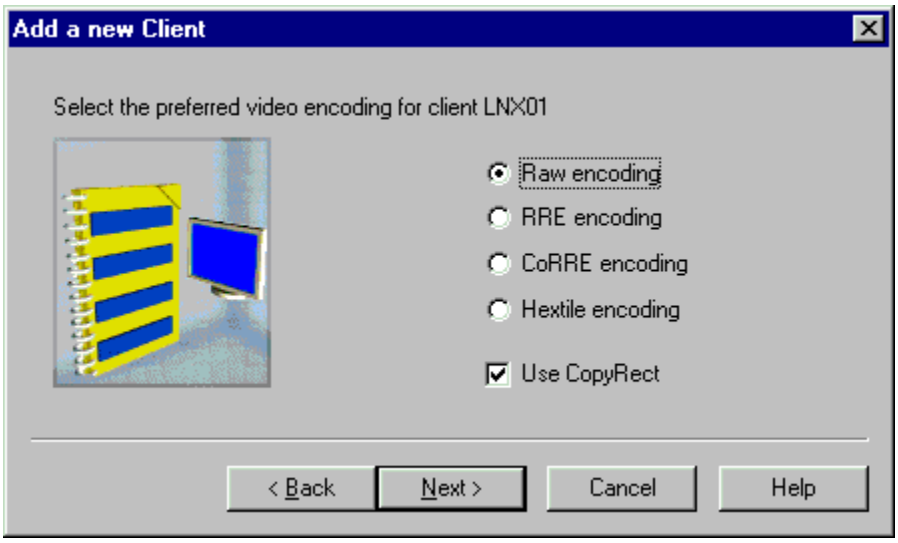


Enter the Client's IP address, screen and port numbers and press Next> to continue.

Add a New Client: Encoding

This dialog allows you to specify the encoding method that should be used to communicate with the VNC Client.

For more information on a particular feature, click where a ➧ appears on the picture below.

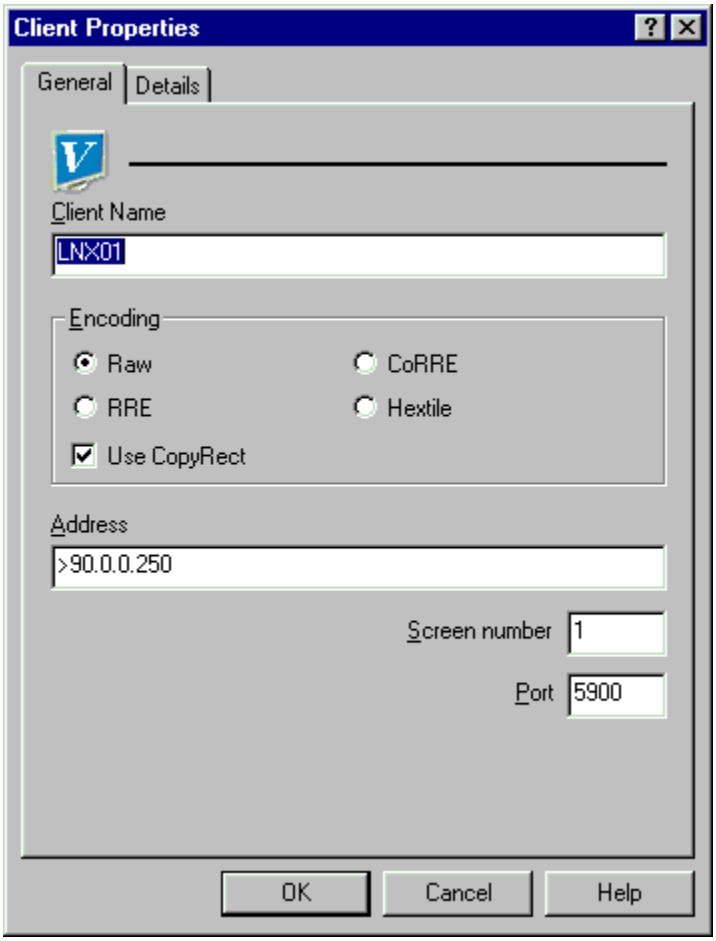


Press Next> to continue.

Client Properties: VNC

This dialog allows you to examine and change the stored details for a VNC Client.

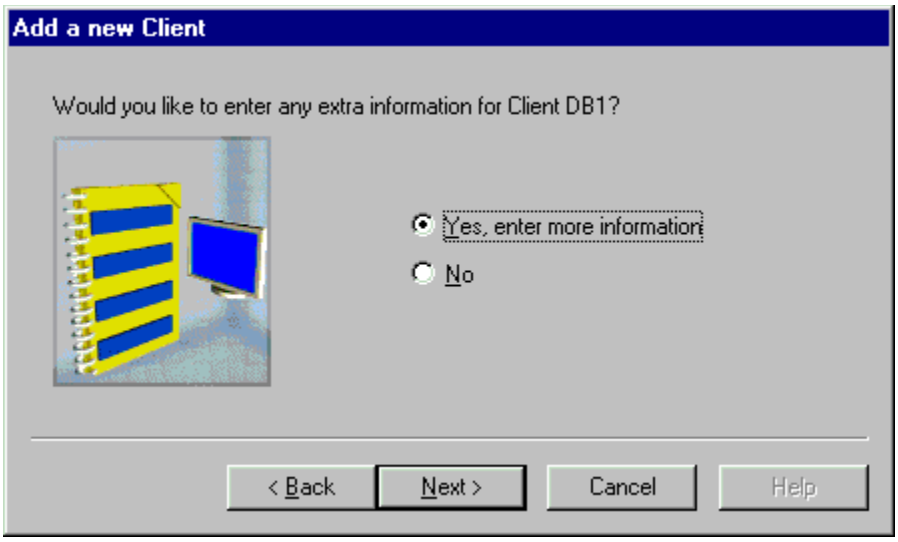
For more information on a particular feature, click where a ➧ appears on the picture below.



Add a New Client: More?

Once you have entered the Client's Name and Address details, the PC-Duo Control has enough information to connect to the Client. You can add further information that can be displayed in the Control List View.

For more information on a particular feature, click where a ➧ appears on the picture below.



Select Yes and press [Next>] to continue, or No and [Finish] to exit the Add a New Client Wizard.

ActiveX Control

If you need to be able to access Clients from a remote location but you don't have a PC-Duo Control, it may be possible for you to connect using Internet Explorer and the PC-Duo ActiveX Control. This can be hosted on a PC-Duo Client or on a separate Web Server.

Web Page	Host	Comments
`secure.htm`	Client*	Provides access where the Client has a Security Key
`view.htm`	Client*	Provides access to the Client that is hosting the page
`viewer.htm`	Any Web Server	Provides access to Clients at any (other) address

*The Client must be configured to permit this form of access using web pages view.htm and secure.htm.

If the ActiveX Control is hosted on the Client, you can connect to it using Internet Explorer v4 or later by entering the Client's IP address. For example:-

`http://90.0.0.124/view.htm`

The Client will install the ActiveX Control file (PCIAX.CAB) if it is not already on the local machine and will then use it to connect back to the Client using the address specified in the view.htm web page. If the Client has a Security Key, use secure.htm instead as that allows you to enter the Security Key.

You can also host the ActiveX Control on a normal Web Server by copying the files from the Client's Web subdirectory to the Server. However, it is not possible to use the normal view.htm and secure.htm pages as they rely on the Client to replace name and address tokens in the HTML data stream with its own details. You should use viewer.htm instead. For example:-

`http://www.vector-networks.com/pcduo/activex/viewer.htm`

This page allows you to access Clients running on any accessible PCs. Enter the Client's IP address and press [Connect] to start. The ActiveX Control does not have to be enabled on the Clients. Unlike view and secure.htm, viewer.htm can be used where the Client's IP address is different to the address that the Control uses to access it, such as when the Client is behind a firewall.

VNC Encoding

The data encoding used by the VNC Client is shown here. This is the method used to represent rectangles of pixel data. The following encoding methods are available:-

Raw Encoding
In this encoding, raw pixel data is sent without any further processing. This is the simplest encoding and it allows any screen data to be drawn by the viewer.

RRE Encoding
Rise and Run-length Encoding allows blocks of similar value pixels to be compressed and sent in a small block of data. Unlike run-length encoding, RRE is two-dimensional, so each data block represents a rectangle.

CoRRE Encoding
Compact RRE is similar to basic RRE, but data blocks no larger than 255 * 255 pixels are used.

Hextile Encoding
This method splits each rectangle into 16 * 16 tiles. Each tile is then encoded either as raw pixel data or using a method that is similar to RRE.

Use CopyRect
This feature allows a rectangle that has already been sent to the viewer to be copied into another position on the screen and avoids having to re-send that data.

VNC Parameters

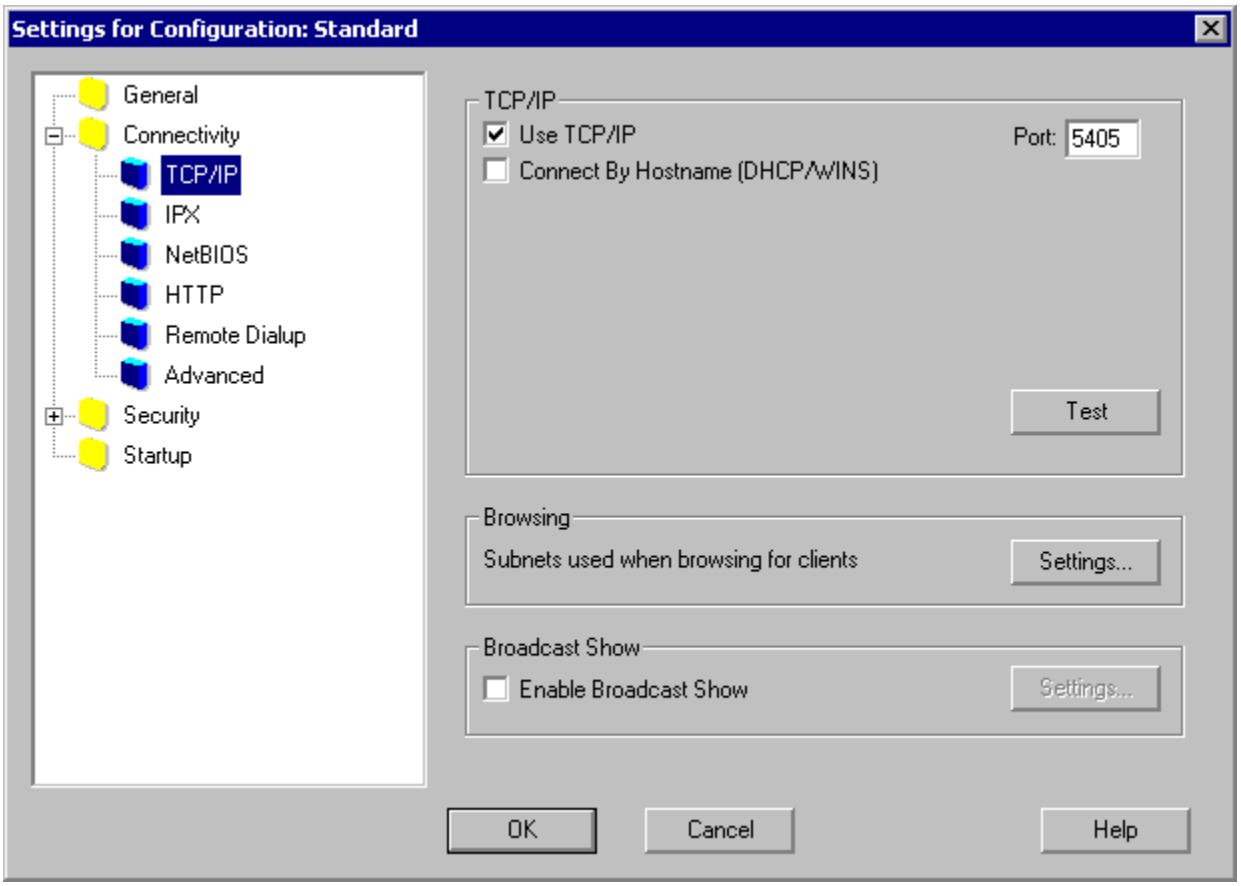
The VNC Client's TCP/IP Port number and screen number are shown here.

Client Type
Select the Client type from this drop-down list.

Settings for Configuration: Connectivity

The Connectivity folder contains pages relating to local and remote network access. This page configures the Control for operation on a TCP/IP network such as the Internet.

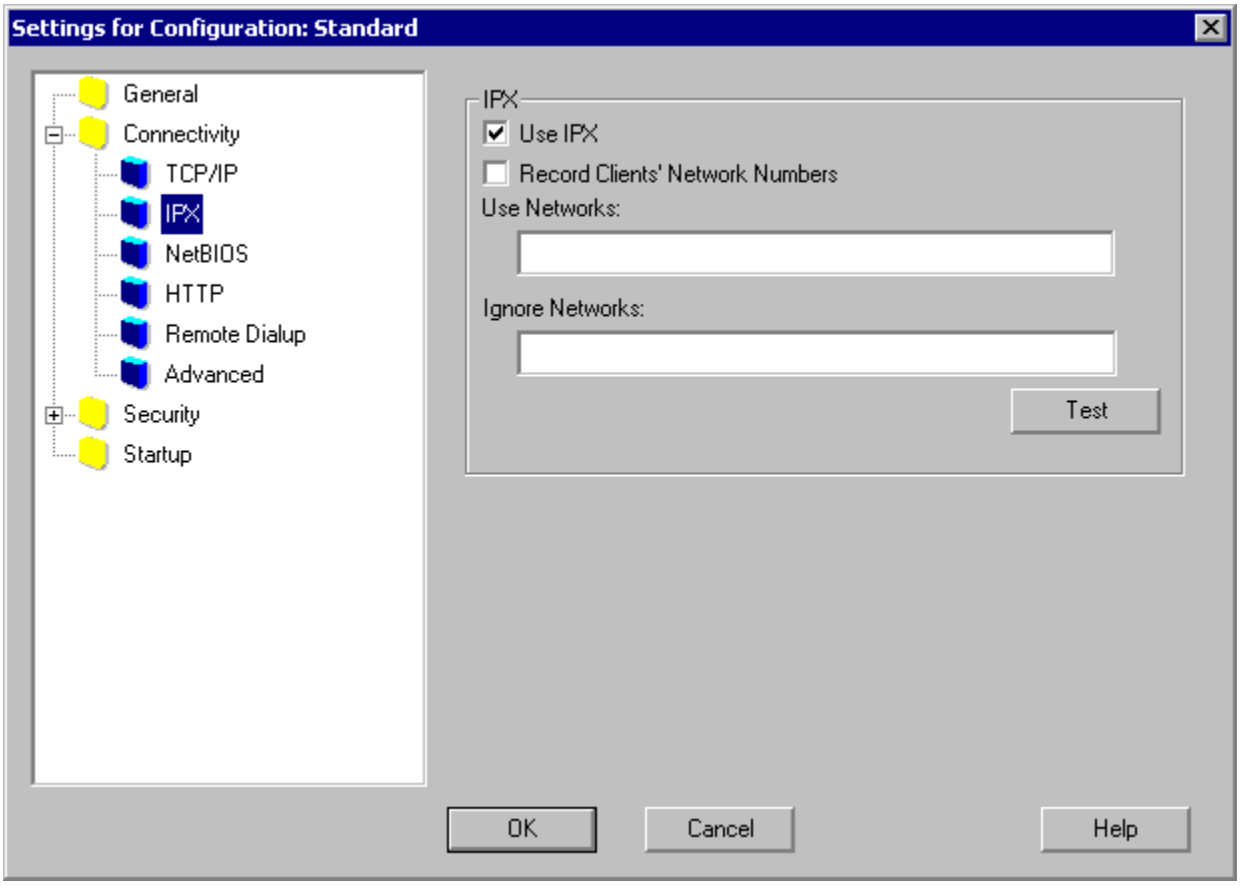
For more information on a particular feature, click where a ‣ appears on the picture below.



Settings for Configuration: IPX

This page configures the Control for operation on an IPX network such as is used by Novell NetWare.

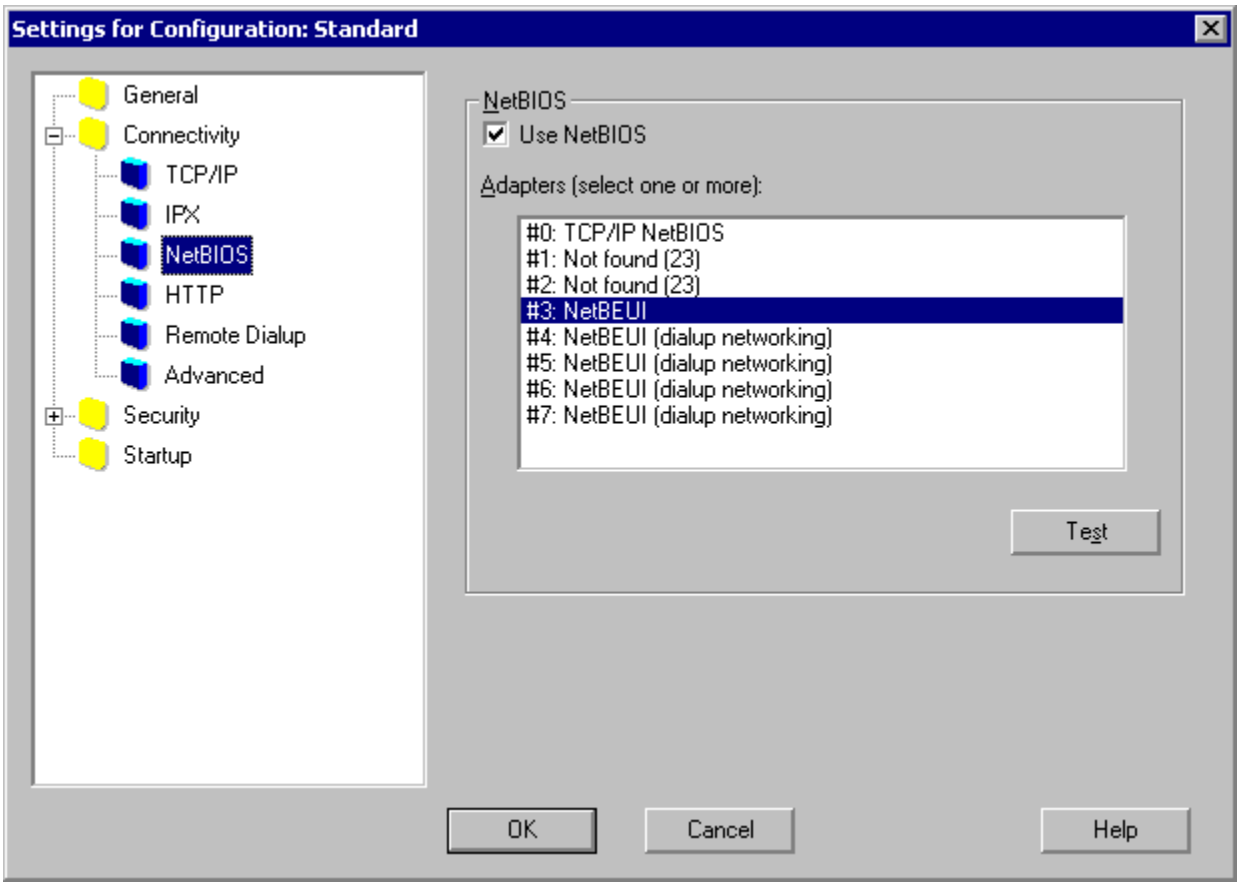
For more information on a particular feature, click where a ➧ appears on the picture below.



Settings for Configuration: NetBIOS

This page configures the Control for operation on NetBIOS networks such as are used by older versions of Windows.

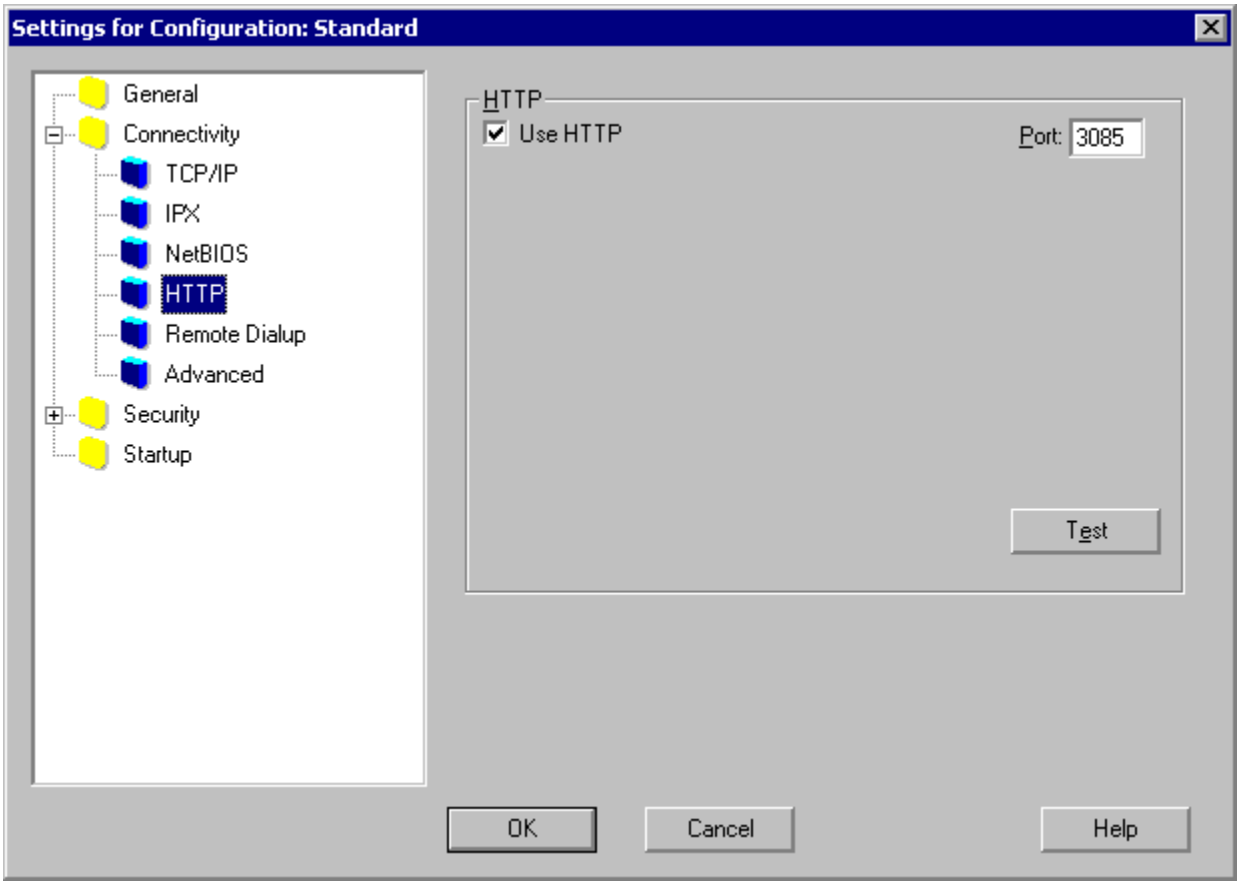
For more information on a particular feature, click where a ➧ appears on the picture below.



Settings for Configuration: HTTP

This page configures the Control for operation with a PC-Duo Gateway.

For more information on a particular feature, click where a ➧ appears on the picture below.



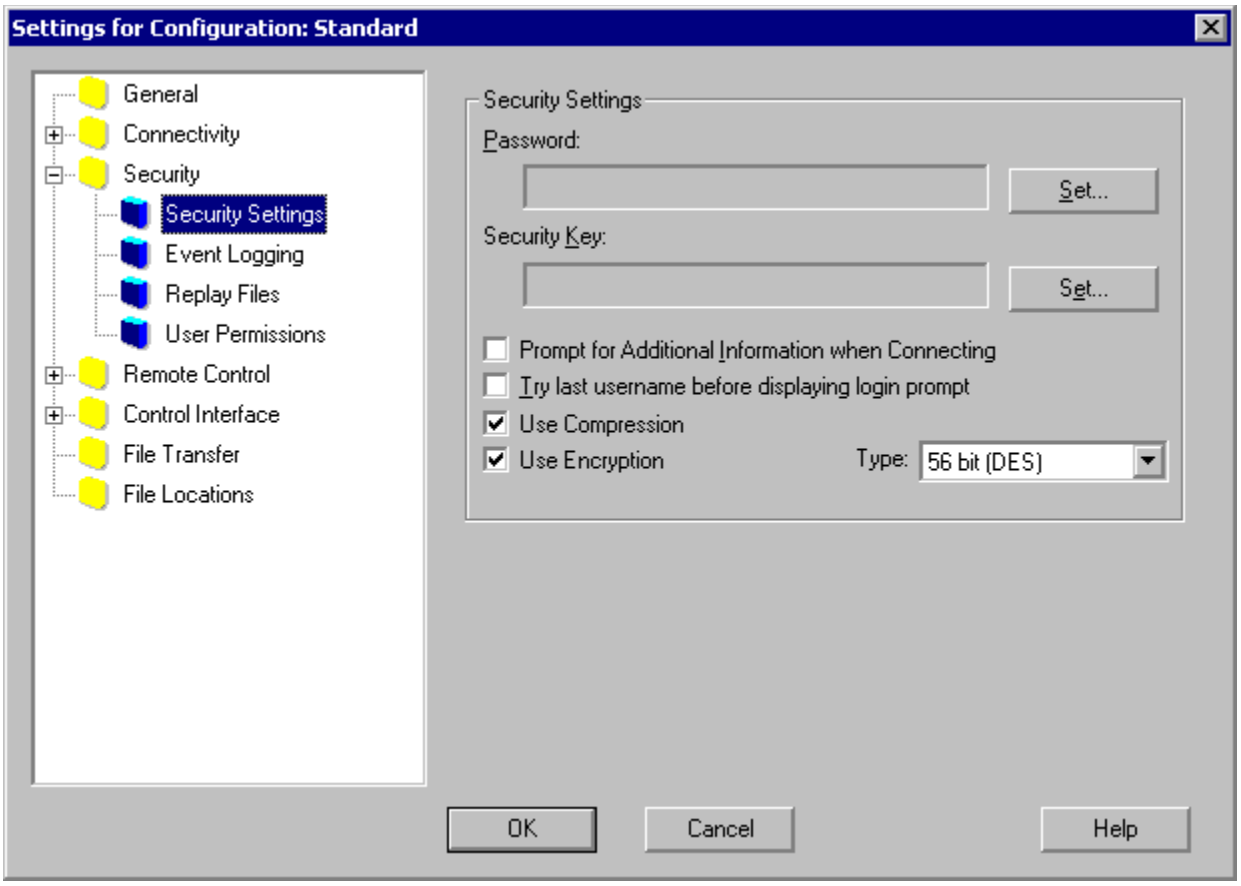
A Control can communicate with several Gateways, providing their Gateway Keys match.

Settings for individual Gateways are stored in the Gateways Folder in the Control Tree View.

Settings for Configuration: Security

The Security folder contains the pages relating to access controls and auditing. This page configures the Control's basic security settings. It is accessible through the [Settings] and [Connectivity and Startup Settings] buttons on the Configurations dialog.

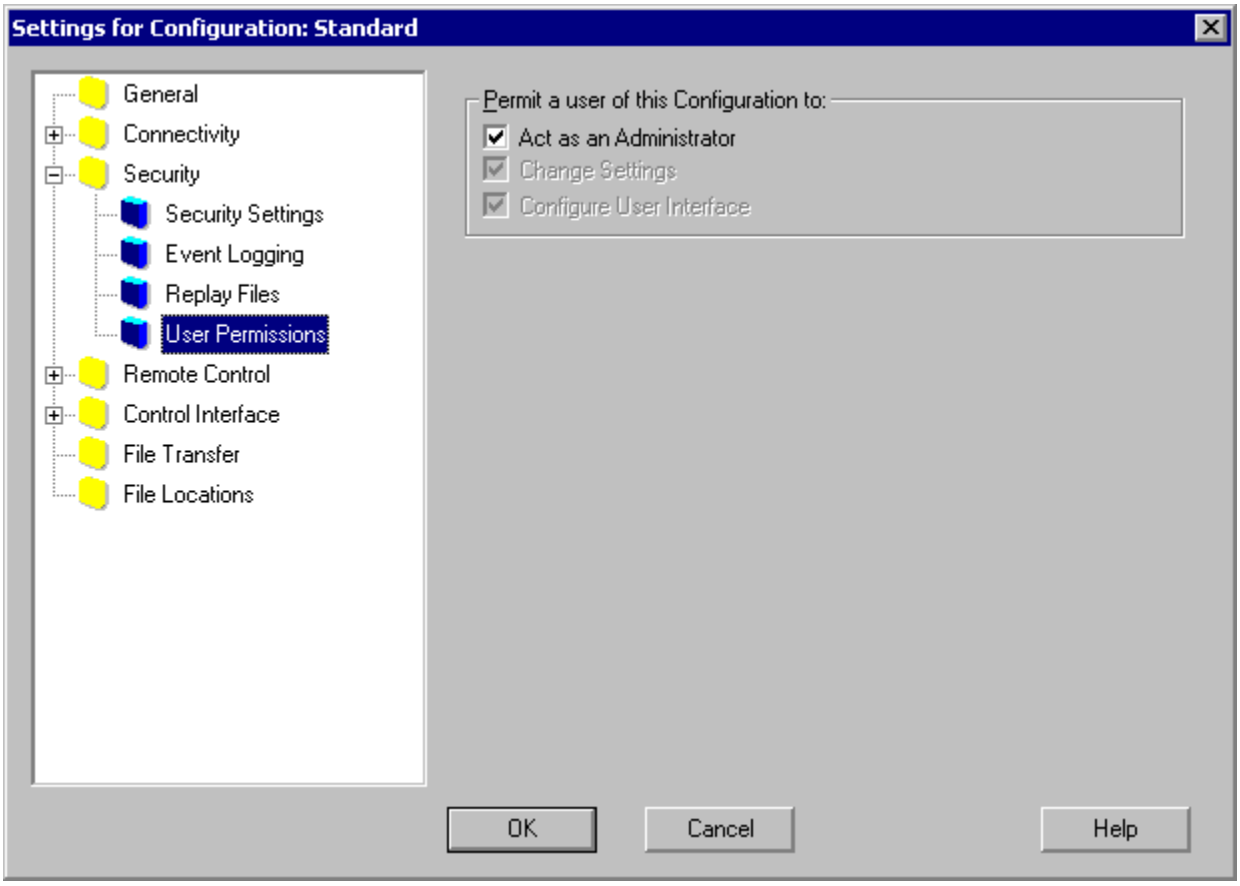
For more information on a particular feature, click where a ➧ appears on the picture below.



Settings for Configuration: User Permissions

This page allows you to restrict the changes that can be made to this Control Profile.

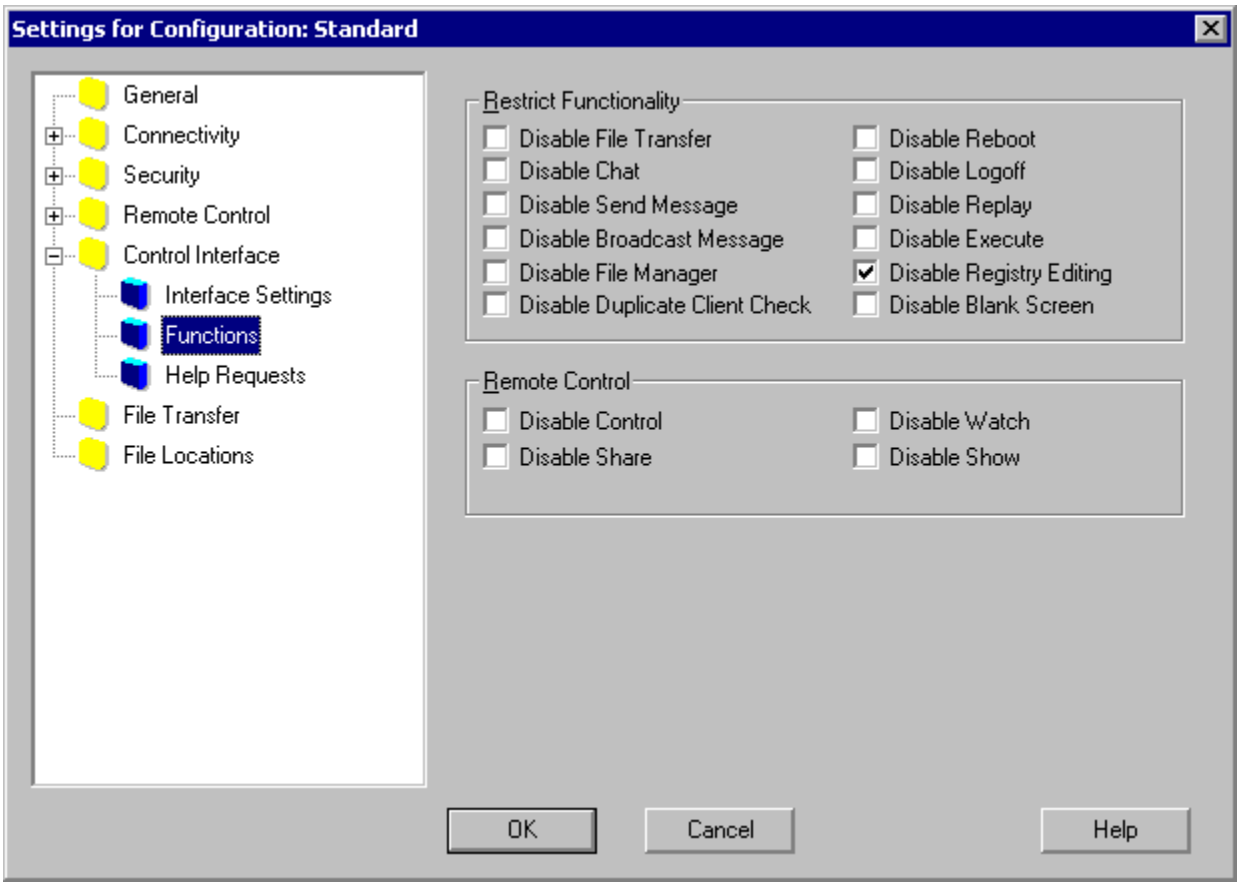
For more information on a particular feature, click where a ➧ appears on the picture below.



Settings for Configuration: Functions

This page allows you to prevent non-privileged users from using specific functions. Disabled functions are not visible on the Control's toolbars.

For more information on a particular feature, click where a ➧ appears on the picture below.

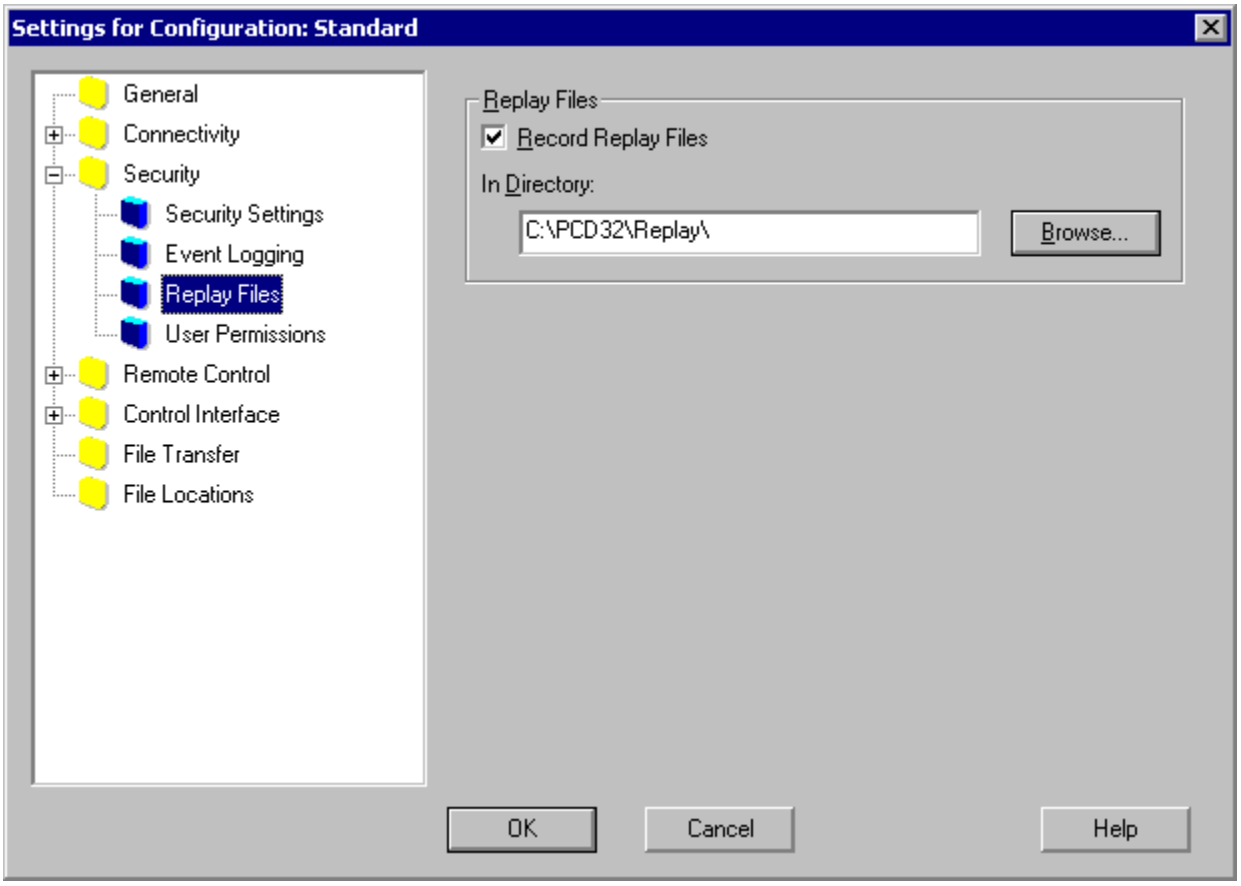


You can prevent the user from making changes to the Control configuration using the Settings for Configuration: User Permissions page.

Settings for Configuration: Replay Files

You can record remote control sessions for later review using this page.

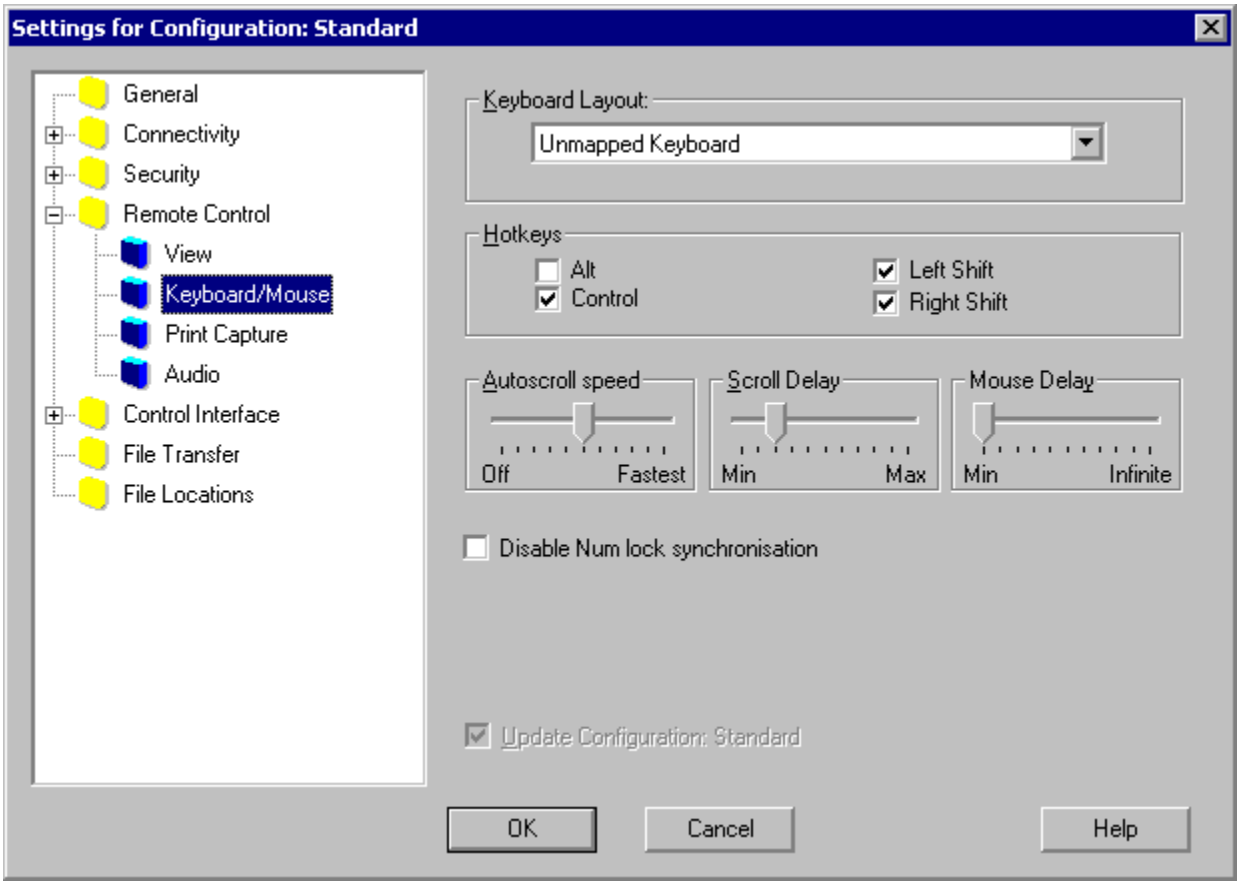
For more information on a particular feature, click where a ➧ appears on the picture below.



Replay Files can be viewed using the Tools Menu, Replay command.

Settings for Configuration: Keyboard/Mouse

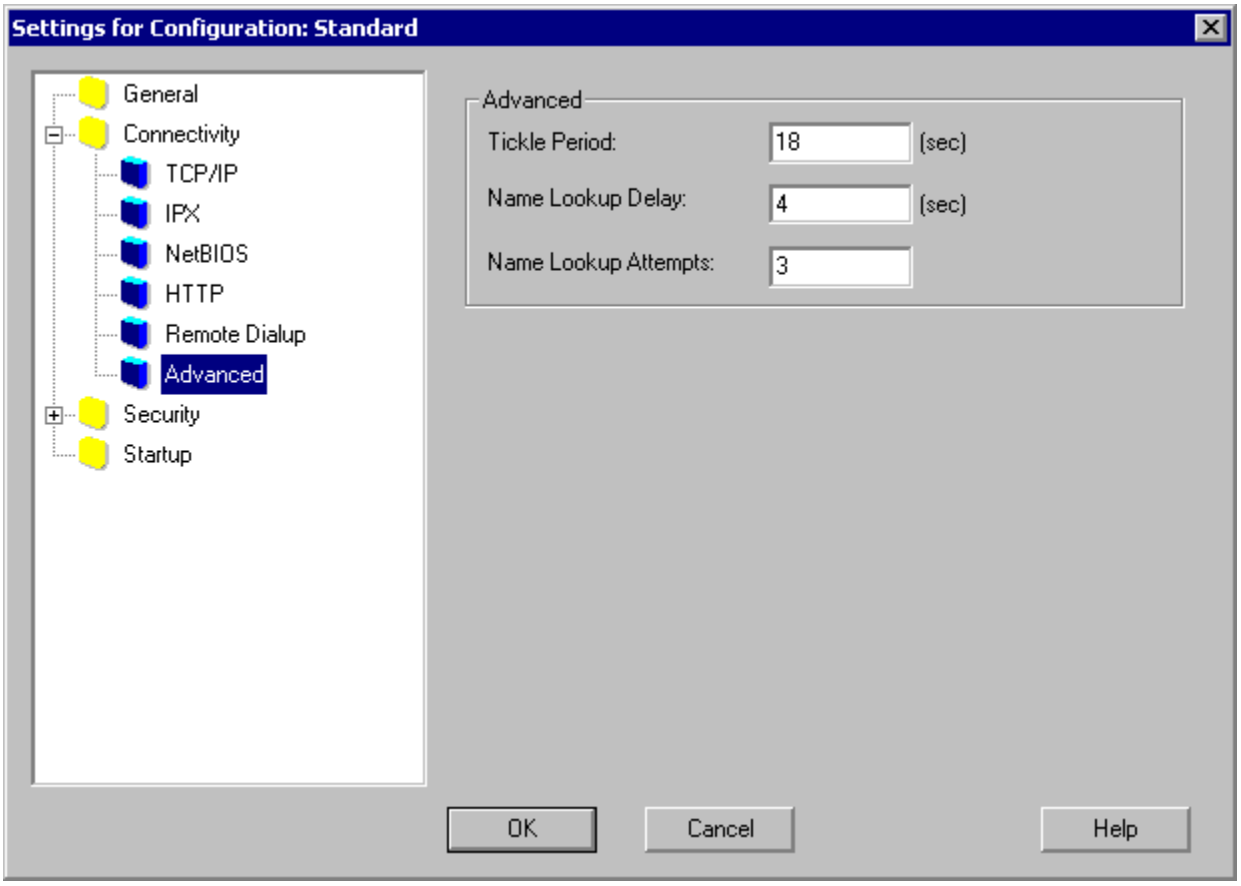
Mouse and keyboard settings are configured on this page.



Settings for Configuration: Advanced

This page configures the advanced settings for this Control Profile.

For more information on a particular feature, click where a ➧ appears on the picture below.



You must specify the Gateway Address and Gateway Key to use the HTTP Protocol

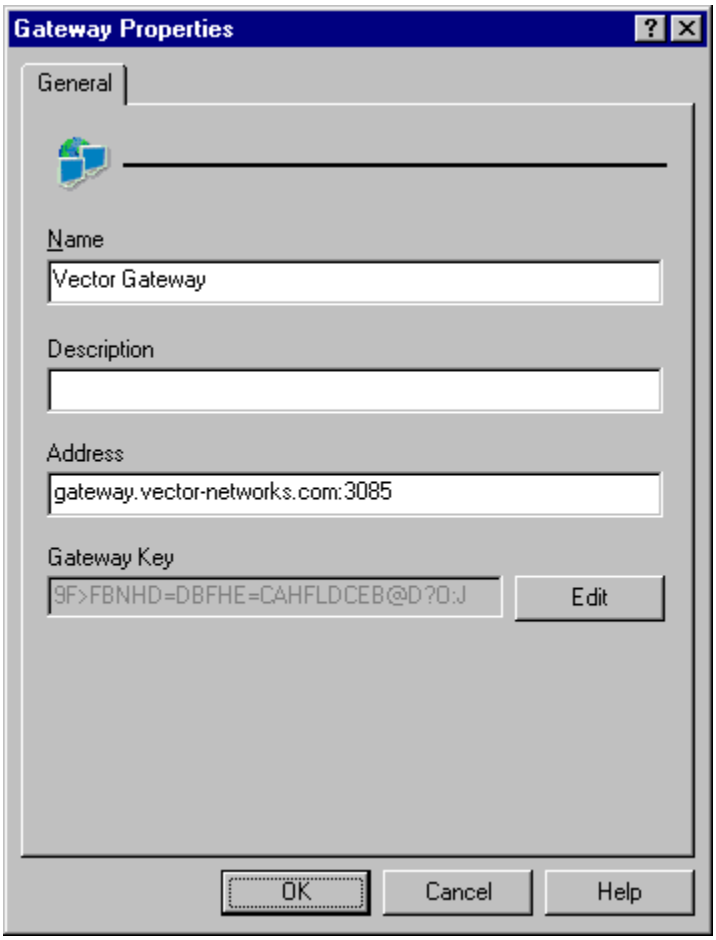
The Client requires the Gateway Address and a valid Gateway Key in order to access a Gateway using the HTTP protocol.

Please enter both values and press [OK] to save them.

Gateway Properties

Right-click on a Gateway in the Control Tree View and select Properties to display this dialog. It allows you to view and edit the details stored in the current Control Profile.

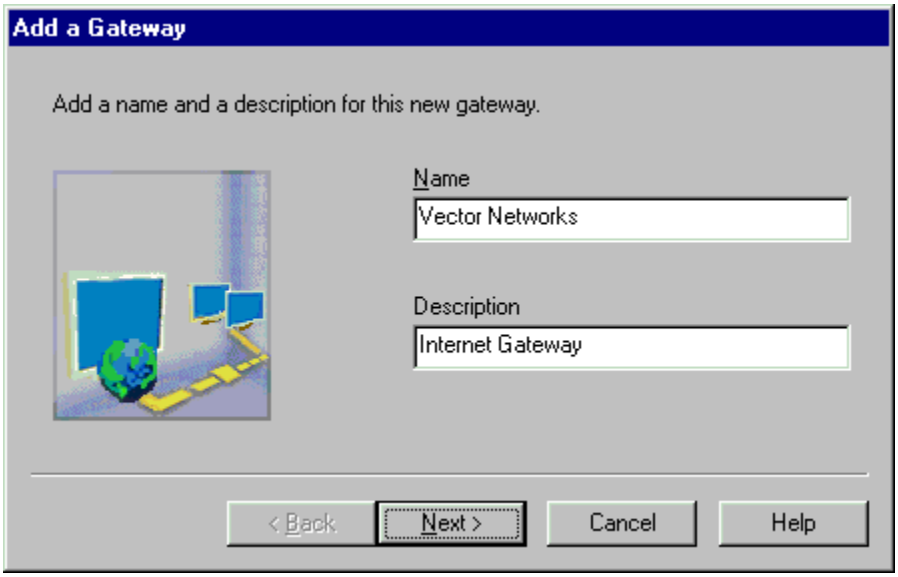
For more information on a particular feature, click where a ➧ appears on the picture below.



Add a Gateway: Name

Double-click on the Add a Gateway icon (shown above) in the Control's Gateways folder or select Gateway from the New popup menu to start the Add a Gateway Wizard. This allows you to enter the access details for a new Gateway.

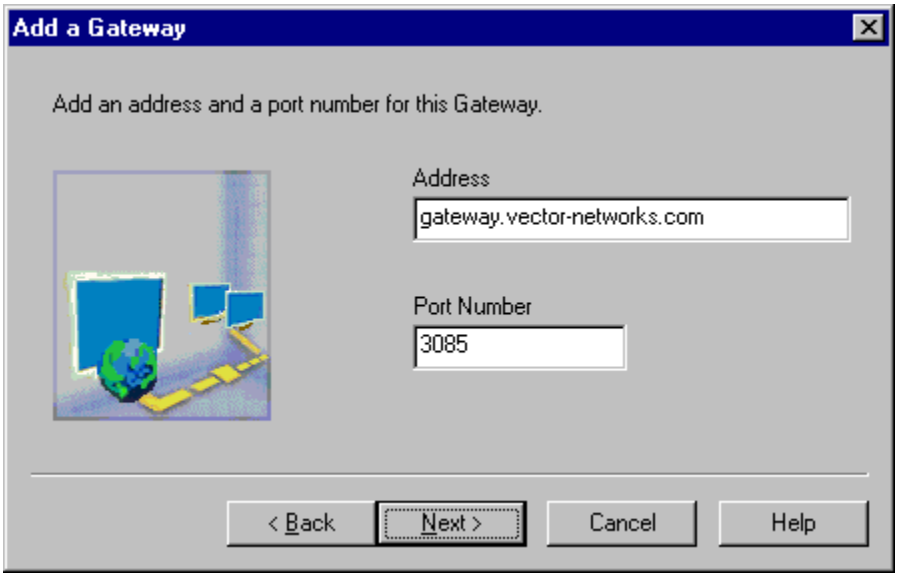
For more information on a particular feature, click where a ➧ appears on the picture below.



Add a Gateway: Address

Enter the Gateway's domain name or IP address here. This address must be accessible to the Control.

For more information on a particular feature, click where a ➧ appears on the picture below.

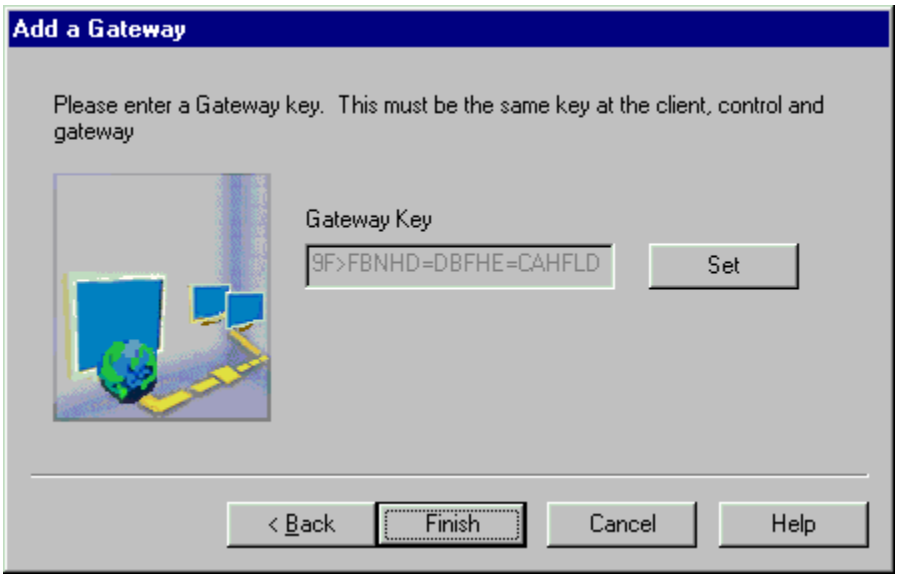


The default port number used by both Clients and Controls to access a Gateway is 3085. This has been registered for use by PC-Duo. You may wish to change it for security reasons. If you do, you must also change the port used by the Gateway and the Clients.

Add a Gateway: Key

Press the [Set] button to enter the Gateway Key for this Gateway. This must match one of the Keys that have been configured at the Gateway.

For more information on a particular feature, click where a ➧ appears on the picture below.



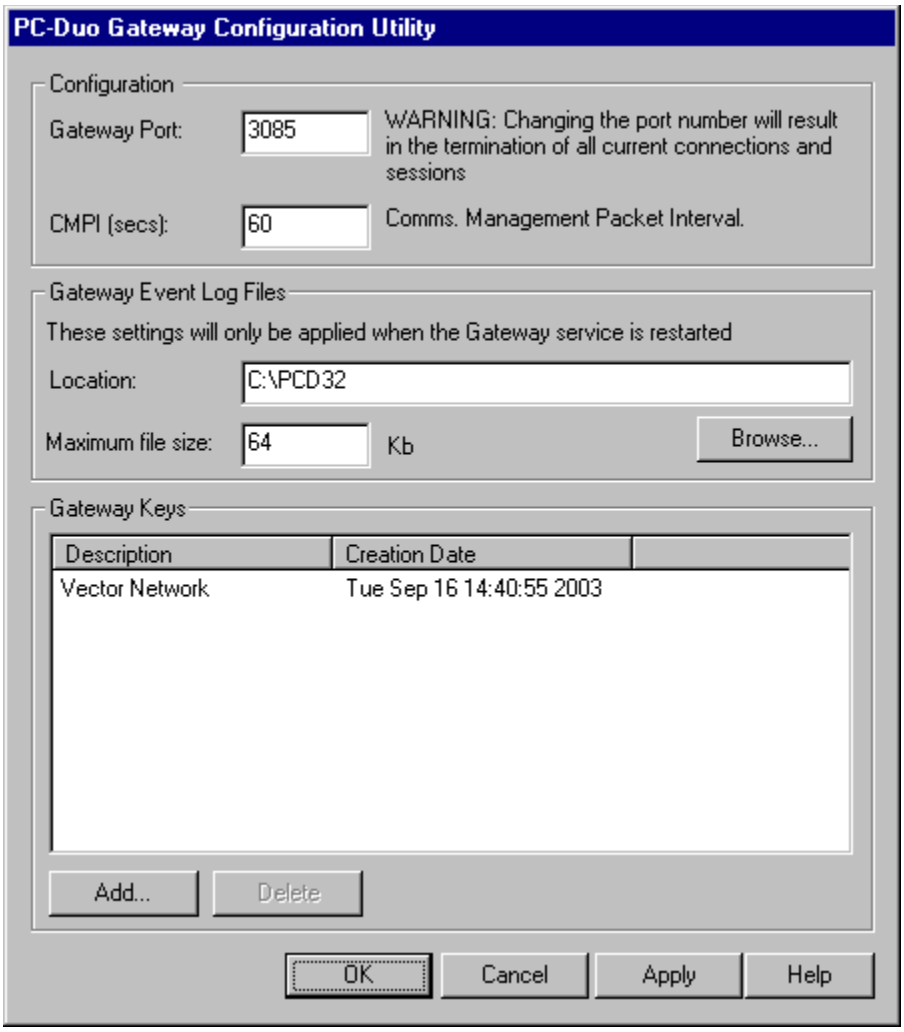
When the Control Browses the Gateway for currently registered Clients, only those Clients that are using an *identical* Gateway Key to the Control will be displayed. Any other Clients will not be displayed and cannot be accessed by the Control.

Note
The Control can only store one Gateway Key in a Control Profile. If you need to use more than one Key for any Gateway, such as to access different sets of Clients, you must create an additional Control Profile for each Gateway, Key combination.

Gateway Configurator

To configure the Gateway, run the Gateway Configurator from its shortcut in the PC-Duo program group or right-click on the Gateway's icon in the System Tray and select Configure Gateway from the popup menu.

For more information on a particular feature, click where a ➧ appears on the picture below.



Press [Add] to add a new Gateway Key, or highlight an existing Key and press [Delete] to remove it.

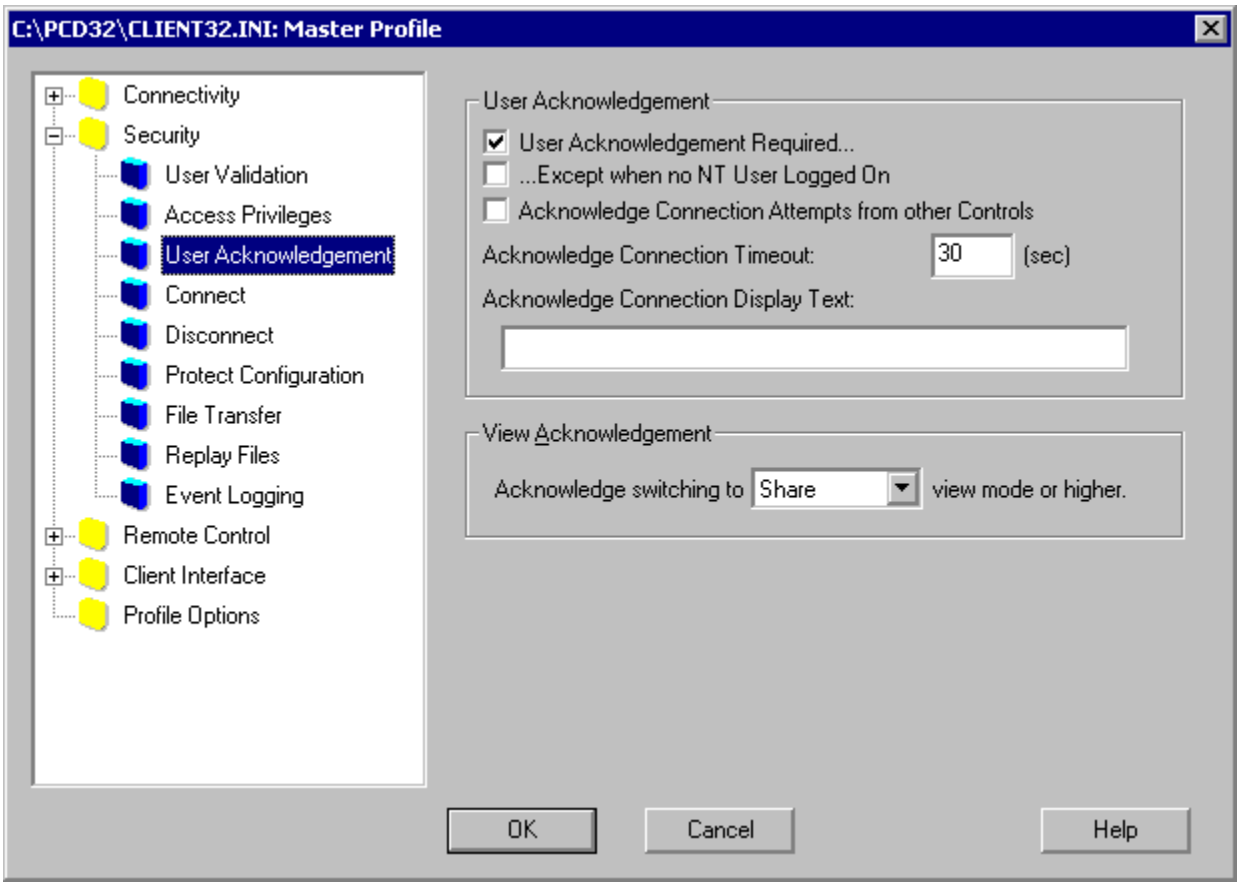
You can monitor the status of a running Gateway by double-clicking on its icon. The Gateway Status dialog is displayed.

Note
The default port number used by the Gateway is 3085. If you change the value, perhaps for security reasons, you must also change the port number used to access this Gateway by any Controls and Client.

CLIENT32.INI: User Acknowledgement

This page is used to configure the level of user acknowledgement that is required to permit access to this Client.

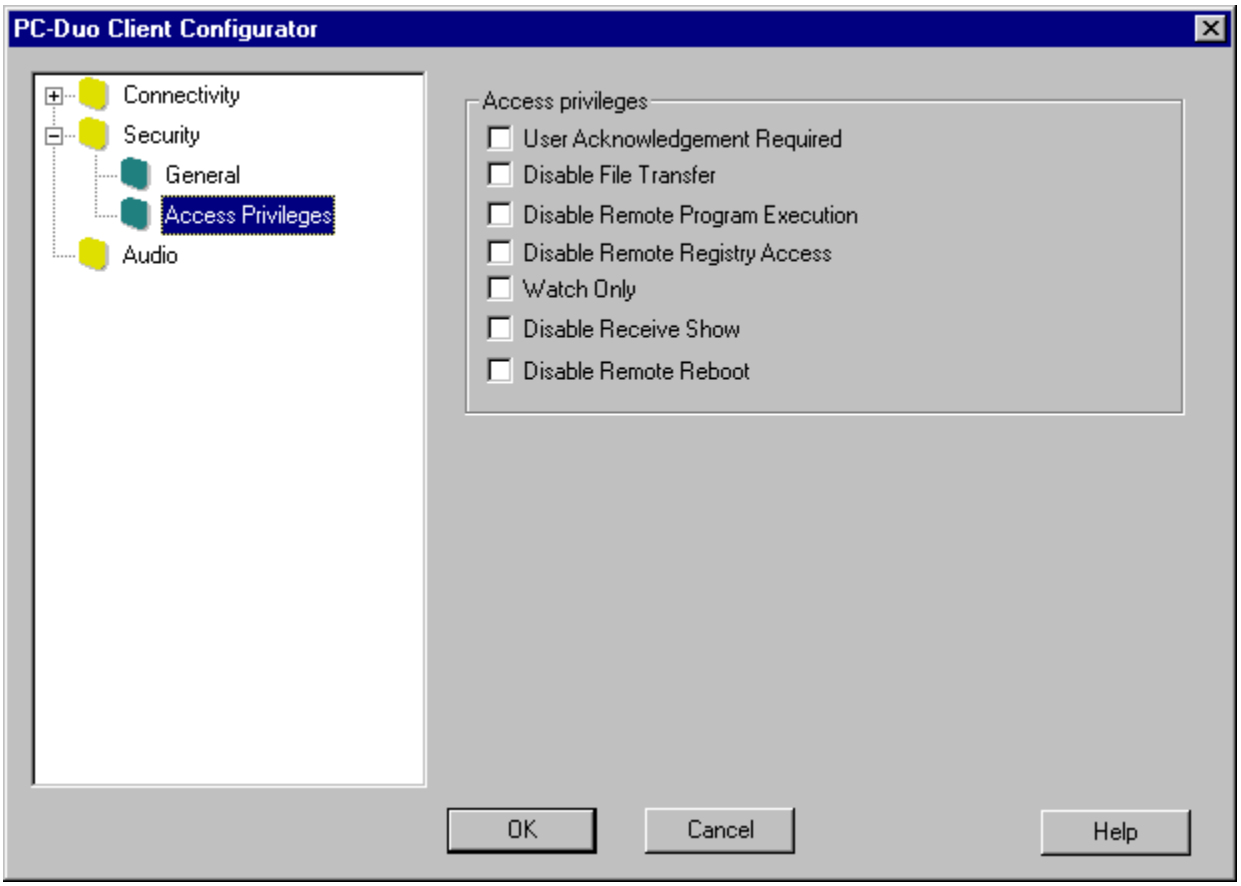
For more information on a particular feature, click where a ➧ appears on the picture below.



Configurator: Access Privileges

The Access Privileges page is only accessible in the Basic Mode Configurator. It allows you to restrict access to the Client.

For more information on a particular feature, click where a ➧ appears on the picture below.

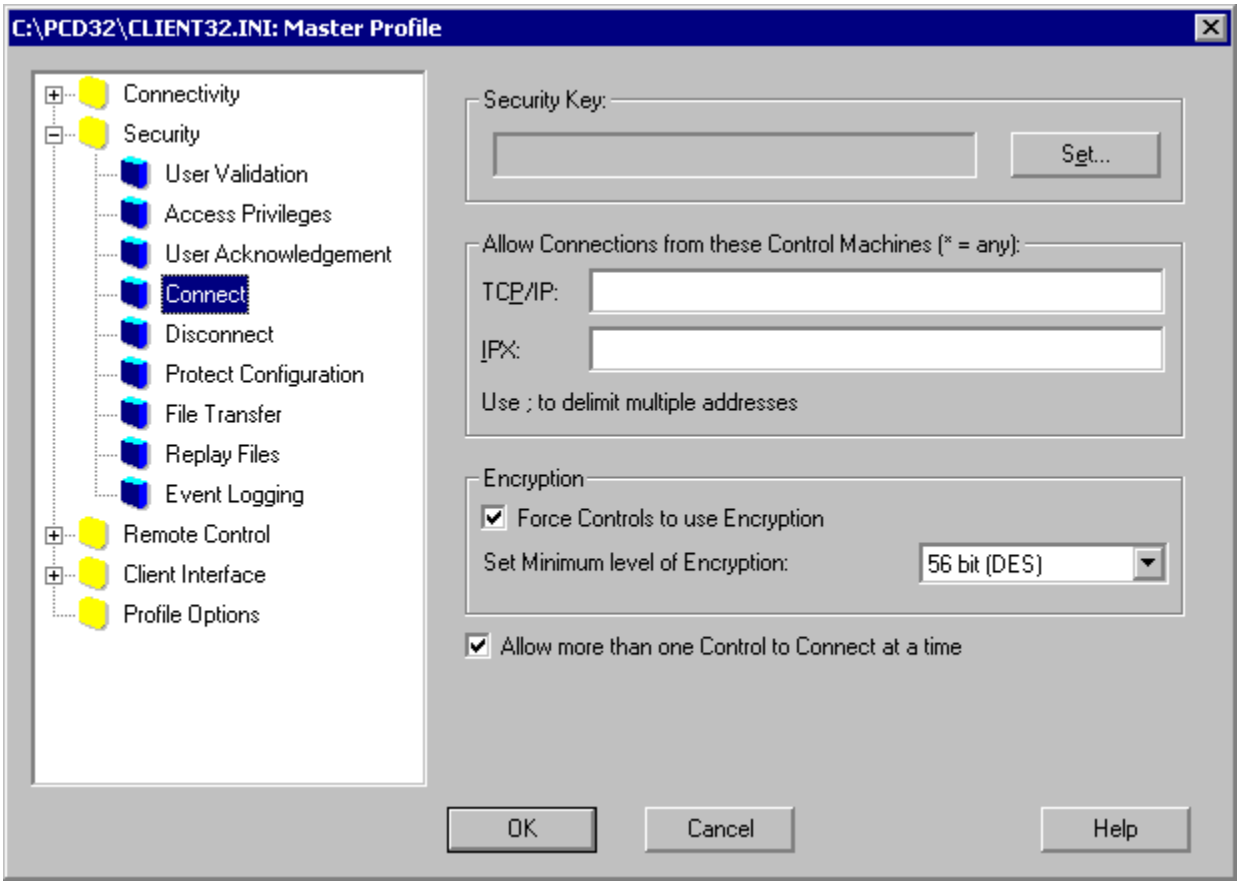


The Advanced Mode Configurator provides additional security settings.

CLIENT32.INI: Connect

This page restricts the Controls that are permitted to connect to this Client.

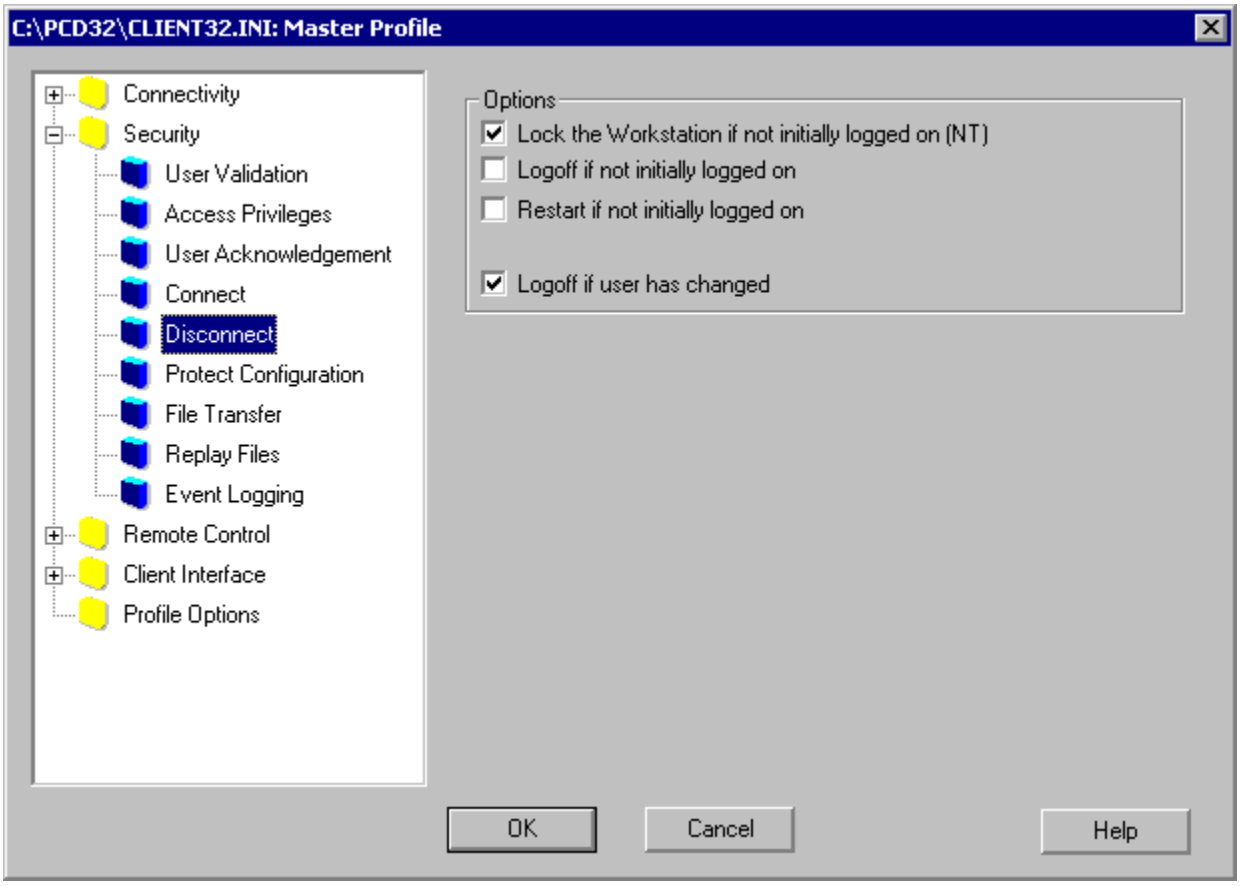
For more information on a particular feature, click where a ➧ appears on the picture below.



CLIENT32.INI: Disconnect

This page controls how the Client behaves when a Control disconnects.

For more information on a particular feature, click where a ➧ appears on the picture below.

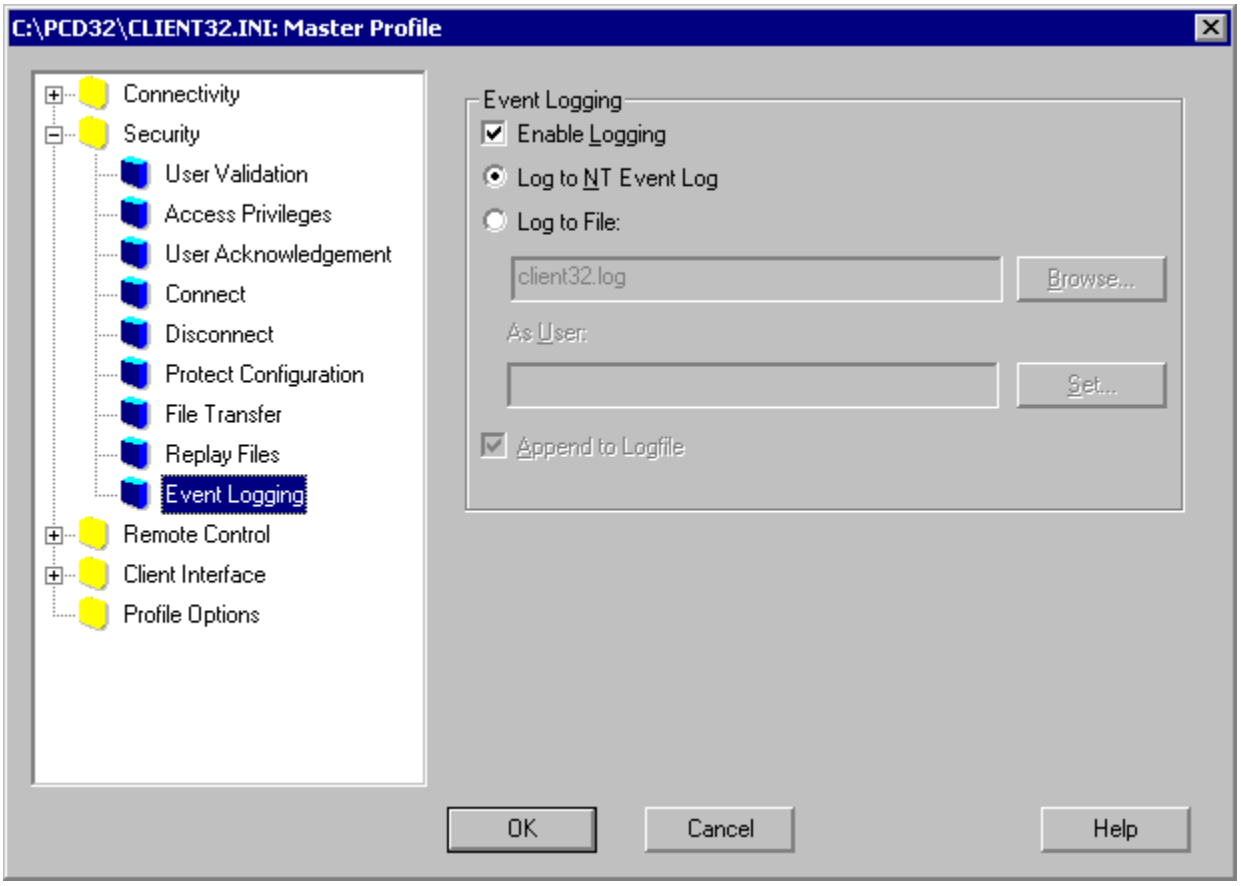


You can use the Advanced Configurator to create multiple Client Profiles and disable some of them if a Control tries to connect while a user is logged on at the Client.

CLIENT32.INI: Event Logging

This page is used to enable Client event logging to the Event Log (on Windows NT) or to a log file.

For more information on a particular feature, click where a ➧ appears on the picture below.

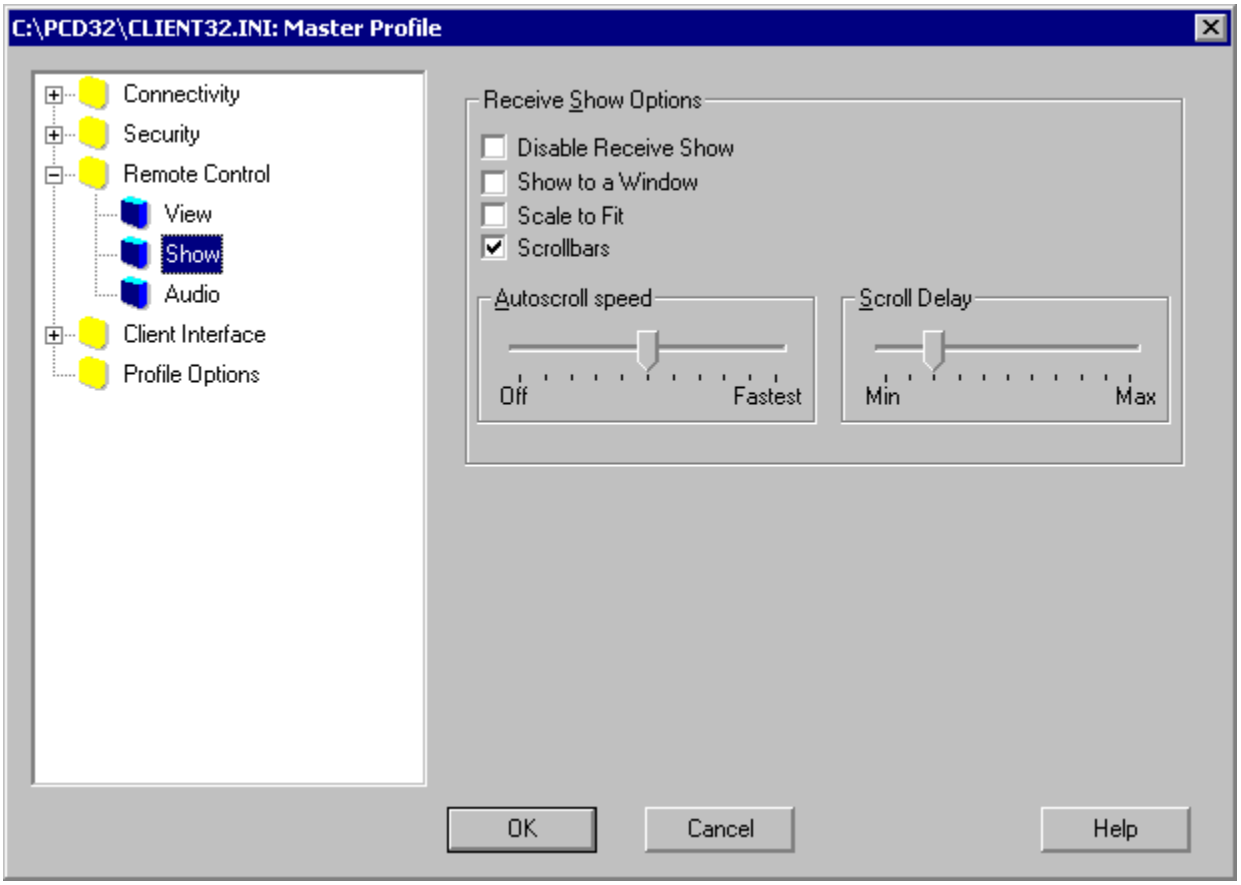


The log file can be located in a secure location on a file server and shared between a group of Clients. In this case, it is likely that the "As User" credentials will be required to access the server.

CLIENT32.INI: Receive Show Options

This page allows you to configure the Client to Receive a Show from a Control.

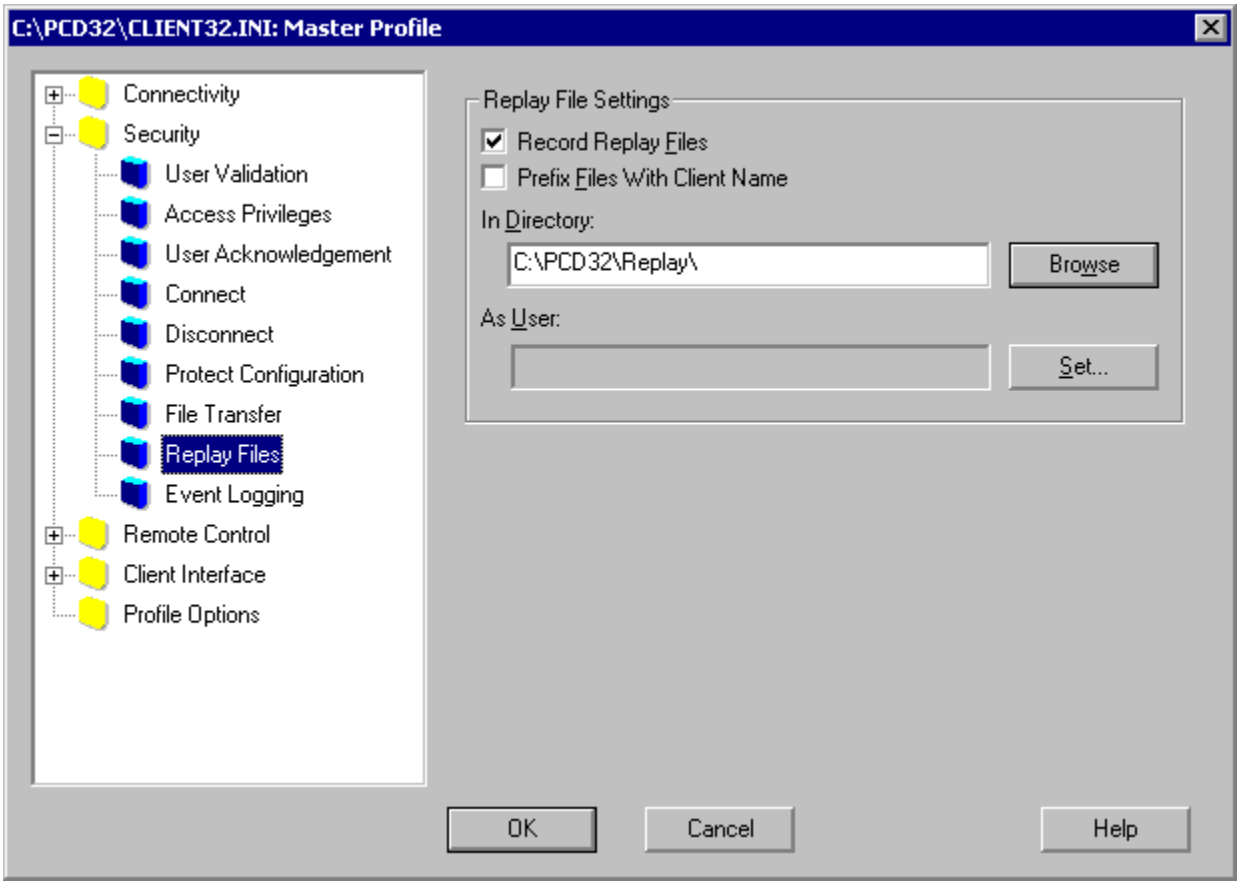
For more information on a particular feature, click where a ➧ appears on the picture below.



CLIENT32.INI: Replay Files

This page is used to configure recording of remote control sessions for later replay by a Control program.

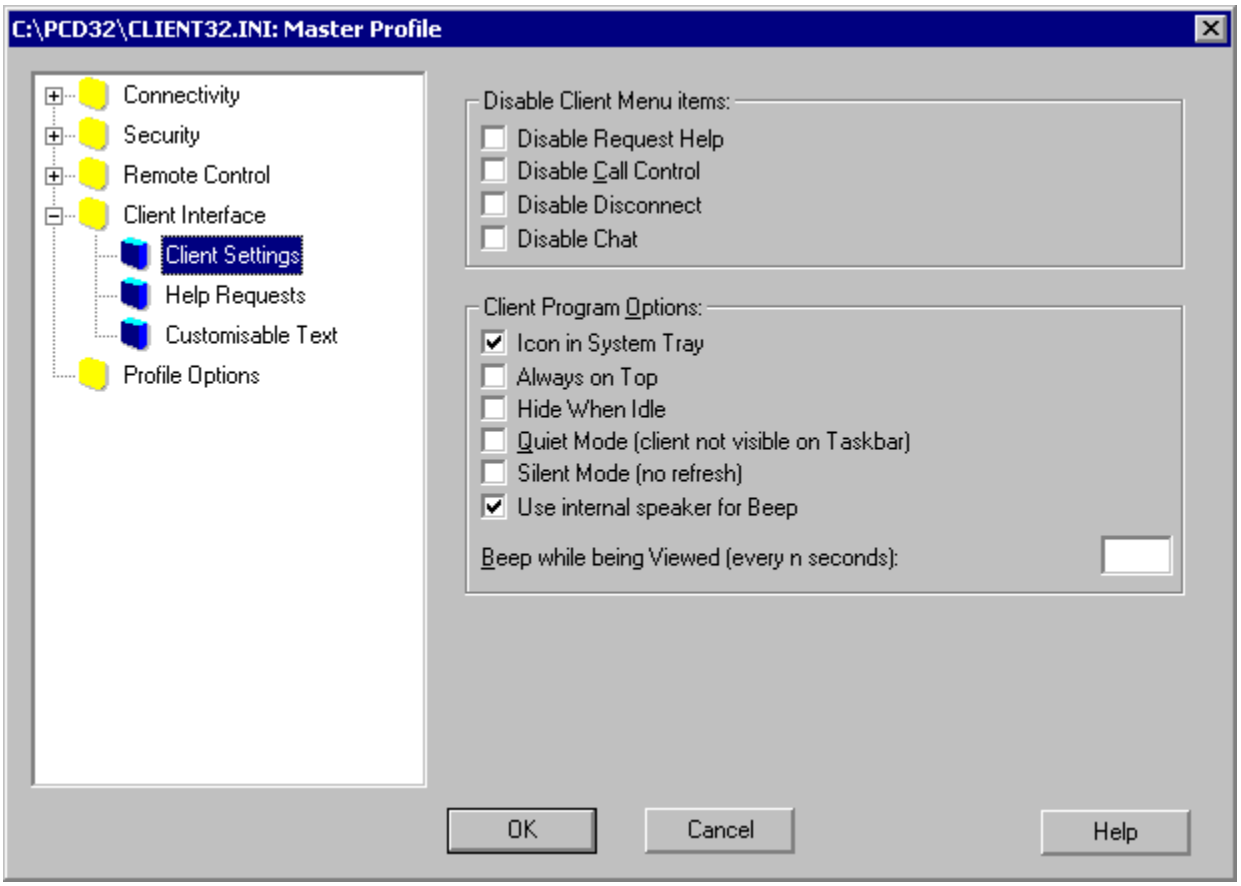
For more information on a particular feature, click where a ➧ appears on the picture below.



CLIENT32.INI: Client Settings

The Client Interface folder contains settings relating to the Client's appearance and functionality when it is running.

For more information on a particular feature, click where a ➧ appears on the picture below.

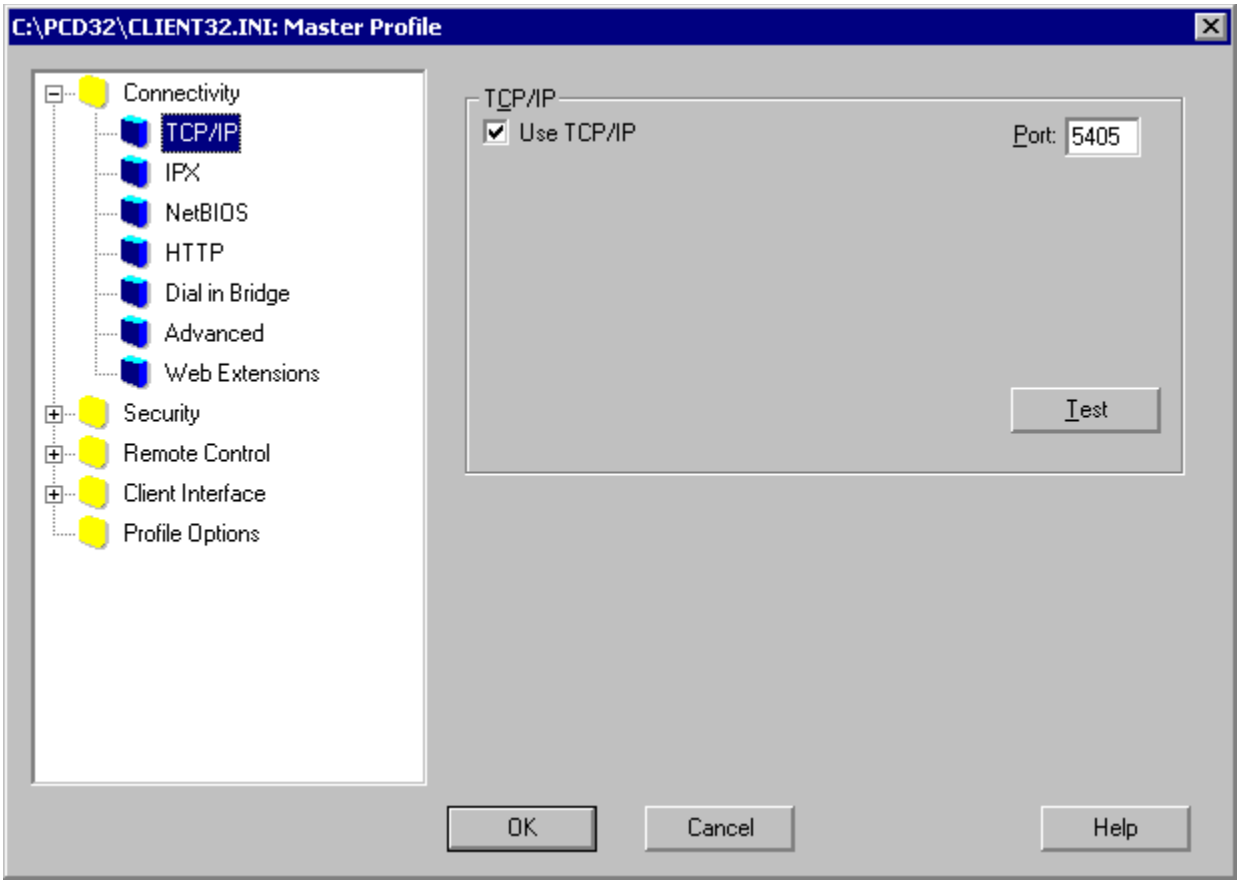


CLIENT32.INI: Connectivity

Select the Master Profile in the Advanced Mode Configurator and choose the Profile Menu, Edit command, or press the Edit toolbar button to display the Connectivity folder. It contains pages relating to local and remote network access to the Client.

The TCP/IP page is also available in the Basic Mode Configurator. It configures the Client for operation on a TCP/IP network such as the Internet.

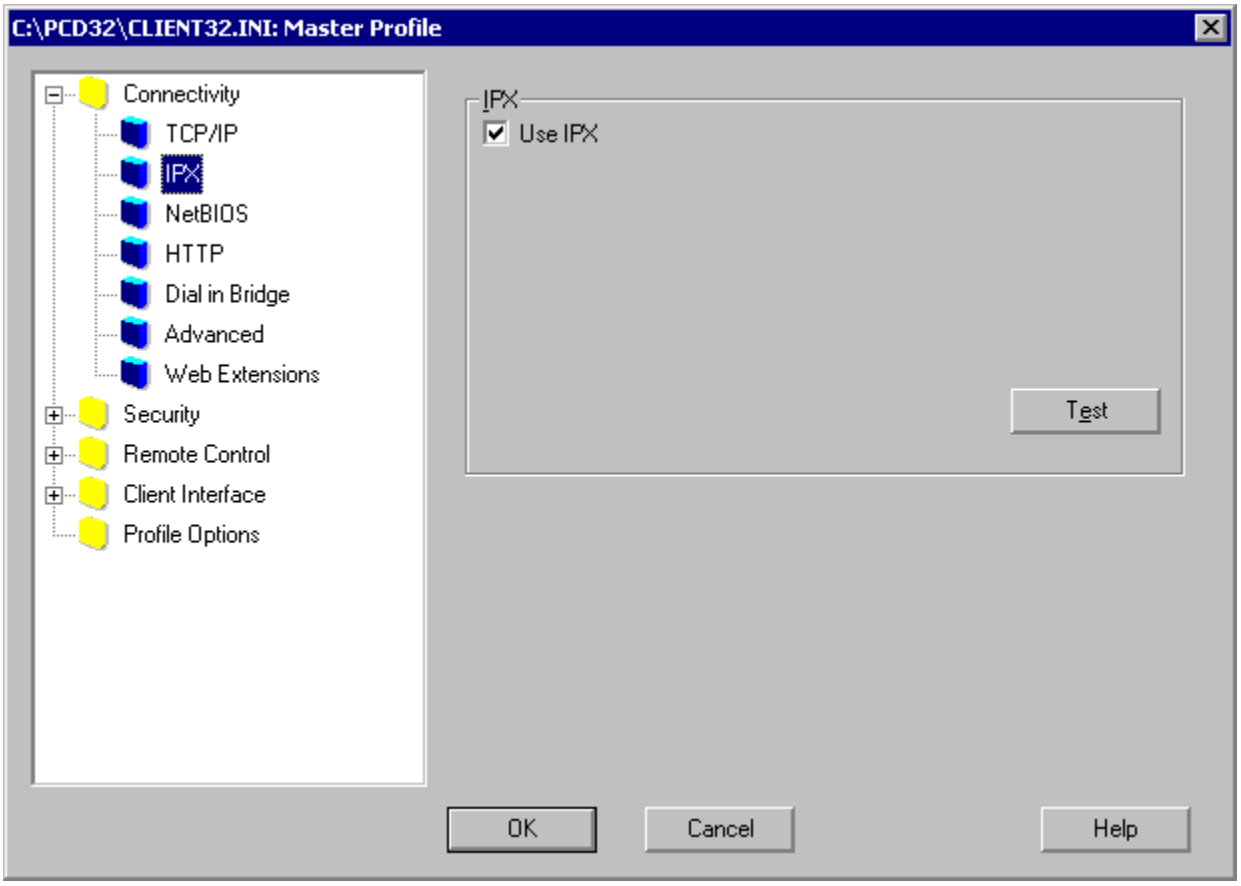
For more information on a particular feature, click where a ➧ appears on the picture below.



CLIENT32.INI: IPX

This page configures the Client for operation on IPX networks such as are used by NetWare.

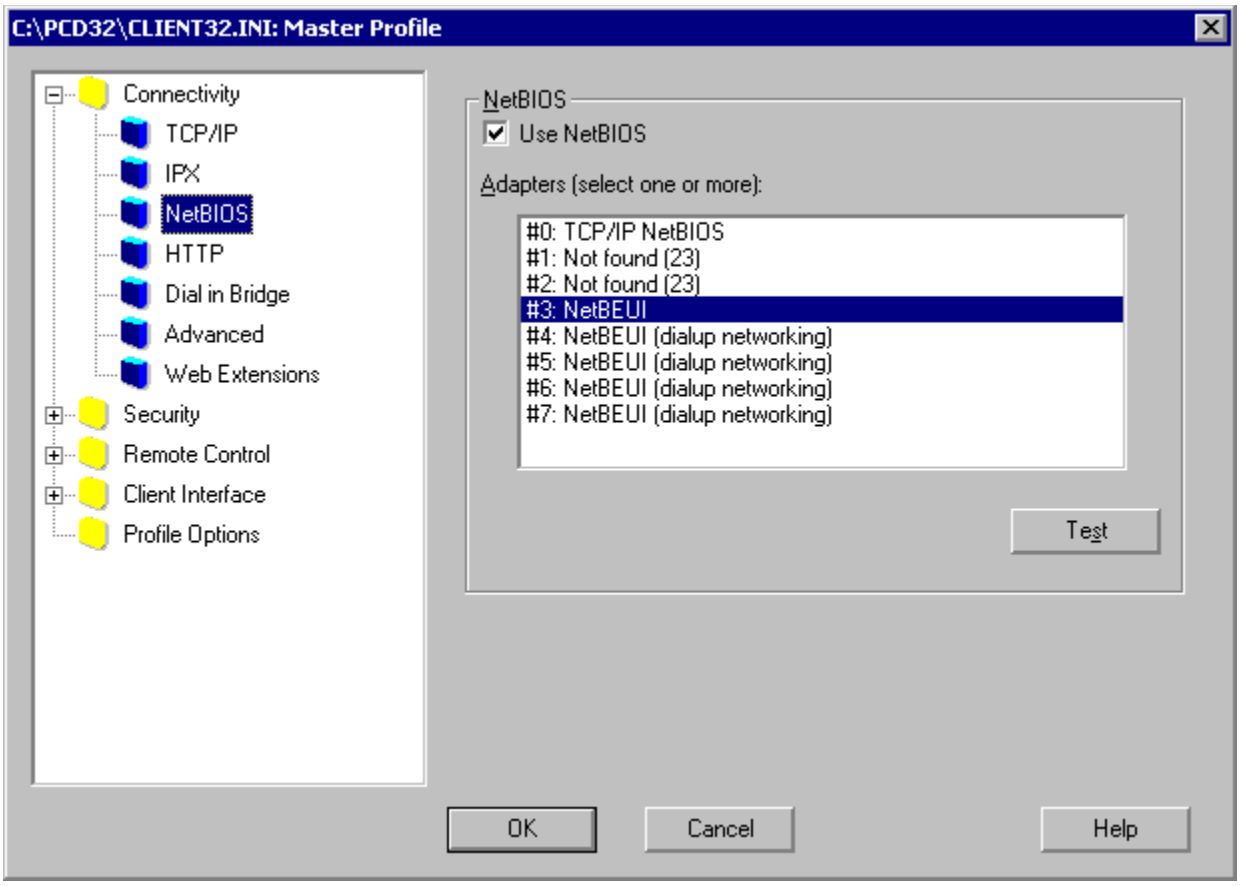
For more information on a particular feature, click where a ➧ appears on the picture below.



CLIENT32.INI: NetBIOS

Select the Master Profile Section in the Configurator: Advanced Mode dialog and press [Edit] to open the CLIENT32.INI: Connectivity folder. This page configures the Client for operation on NetBIOS networks such as are used by older versions of Windows.

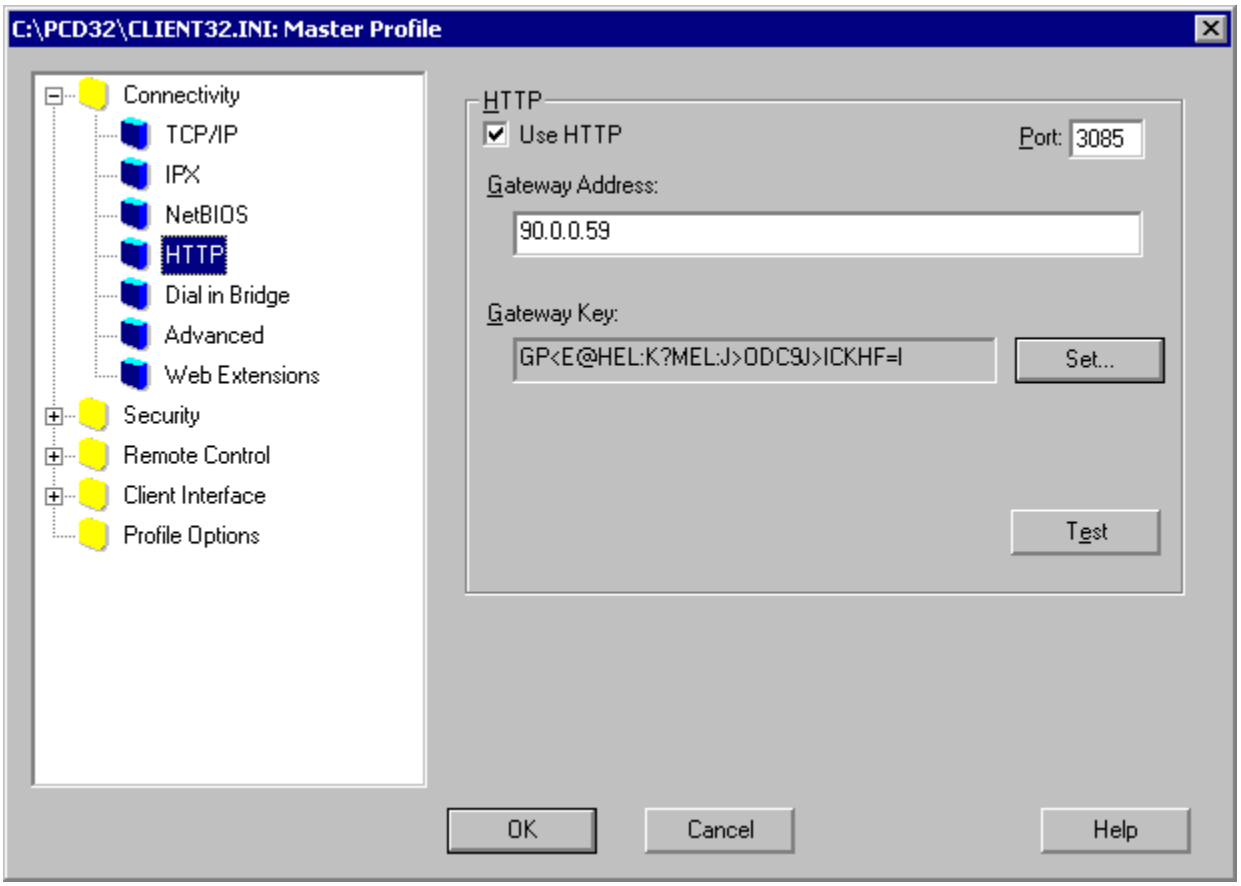
For more information on a particular feature, click where a ▸ appears on the picture below.



CLIENT32.INI: HTTP

Select the Master Profile Section in the Configurator: Advanced Mode dialog and press [Edit] to open the CLIENT32.INI: Connectivity folder. This page configures the Client for operation with a PC-Duo Gateway.

For more information on a particular feature, click where a ➧ appears on the picture below.



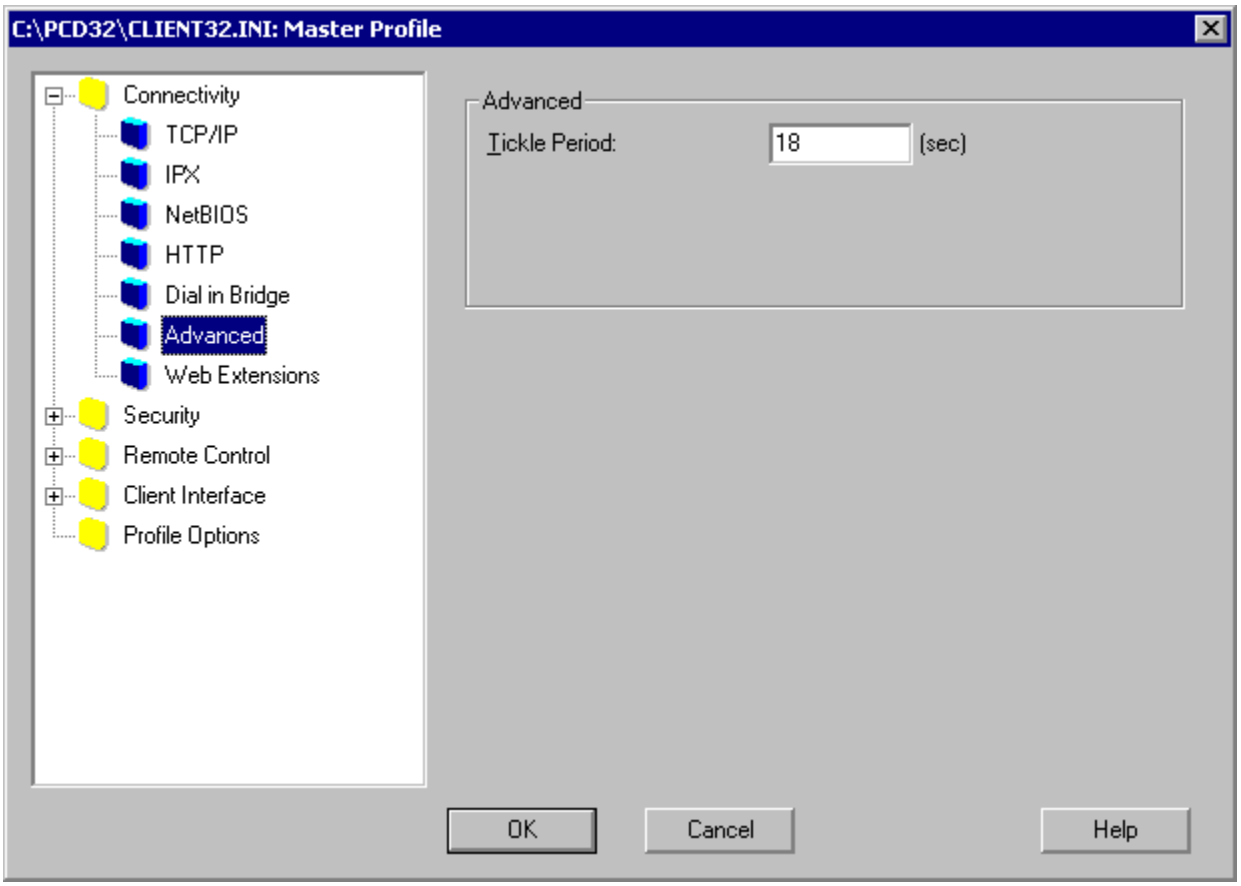
Each Client can only register with one Gateway. The Gateway must recognise the Gateway Key defined above.

You can enable other transports for local or remote network operation.

CLIENT32.INI: Advanced

Select the Master Profile Section in the Configurator: Advanced Mode dialog and press [Edit] to open the CLIENT32.INI: Connectivity folder. Click on Advanced to display this page.

For more information on a particular feature, click where a ➧ appears on the picture below.



HTTP Transport Settings

The Client and Control have some common settings for the HTTP transport:-

Use HTTP
Select this check box to enable the HTTP protocol that is used to communicate with the Gateway.

Port
The Gateway normally listens for Clients and Controls on port number 3085. The value can be changed here.

Test
Press this button to check that the HTTP transport is working.

The Control stores further settings for individual Gateways in the Gateways Folder. The Client has some additional settings that must be defined here:-

Gateway Address
The Client can only register with one Gateway, using the IP address or domain name specified here. This must be or resolve to a fixed address that can be accessed directly by the Client.

Gateway Key
A Control can only "see" Clients registered with a Gateway if they are both using the same Gateway Key. Press the [Set] button to open the Security dialog to enter and encrypt a suitable Key.

Client Profile Options

These options determine whether this Profile will be used when a Control tries to connect.

Disable this Profile when Logged On
Select this option to disable any access to the Client through this Profile when a user is logged on at the Client

User of this Profile has Priority over other Users
When you have shared access enabled, this option is used to force access to be given to this Control in preference to those permitted by other Profiles.

Security Key

If the other logon settings permit access, the Control's Security Key setting must match this Key or the Connect request will be rejected.

Client Force Encryption

Force Controls to use Encryption

Select this check box and choose a minimum level of encryption from the list to force data encryption to be used whenever a Control connects to this Client. If the Control is using a higher-level encryption algorithm that is also supported by the Client, then that encryption method will be used. If the Control does not support the same level of encryption, the connection attempt will be rejected. Therefore, encryption will always be at least as strong as the level specified here.

Allow more than one Control to Connect

Select this check box to allow multiple Controls to connect to this Client at the same time.

Disable Num Lock Synchronisation

When this check box is selected, the Control does not adopt a Client's Num Lock setting during a remote control session. This is particularly useful when running the Control on a laptop.

Settings for Configuration: Shell Extension

Disable Shell Extension

Select this check box to disable the use of the Control program to Remote Control or Chat to Clients selected from Network Neighborhood or Computers Near Me.

Gateway Name
The name of the Gateway is displayed here.

Gateway Description

Any optional Gateway description can be seen here.

Gateway Address

The Gateway's Address is shown here. This must be a fixed IP address or a valid Internet domain name.

Gateway Key

The Key used by both Client and Control to access the Gateway is shown here. Press [Edit] to enter a new Key.

Include Gateway Clients

A normal Browse will exclude any Clients that are accessed through a Gateway. Select this checkbox to include these Clients as well as any others.

Gateway Overview

The Gateway module facilitates access to Clients that may be located behind an Internet Firewall. The Gateway and its Configurator program can be installed on Windows NT, 2000, XP, or .NET systems. Once installed, the Gateway Configurator is used to define one or more Gateway Keys. These are similar to the Security Key that can be used by existing Controls and Clients. A single Gateway can recognise several Gateway Keys but it will only permit access when it, the Control, and the Client, all have *identical* Gateway Keys. When the Gateway has been configured, it can be started by rebooting the system or using command "NET START GATEWAY32".

The Gateway must be accessible from both Clients and Controls using a static IP address. The Gateway uses a single configurable port number to listen for both Clients and Controls. The default, port 3085, has been registered for use by PC-Duo. Where the Gateway is located on the far side of a Firewall, it will be necessary to permit HTTP traffic on the selected port number to pass through the Firewall. The Gateway is a passive recipient in this communication, acting as a connection "broker" between Clients and Controls.

Clients and Controls can be configured in the normal way to use the "HTTP" transport, which is used to communicate with the Gateway. They can use any other available transports (IPX, NetBIOS, or TCP/IP) simultaneously, so normal local and remote network access is unaffected. Both Clients and Controls must be configured with a "Gateway Key" that is recognised by the Gateway. The Gateway will only permit access when both Control and Client are using *identical* Gateway Keys. Once configured and restarted, a Client will attempt to register with the Gateway. If this fails, it will make repeated attempts every 30 seconds.

A new Gateways folder has been added to the Control Tree View. The Add a Gateway Wizard, accessible from the New toolbar button, is used to define the name, address, and port details for new Gateways. Once this has been done, the Control can Browse each Gateway for any registered Clients by double-clicking on its icon in the Gateways folder.

The Gateway must be licensed using a valid NSM.LIC file. The Gateway will limit the number of simultaneous connections to Clients according to the maximum number specified by the licence.

Shell Extensions

Shell Extensions permit the user to start Remote Control and Chat (or Discussion Group) sessions by right-clicking on a PC in Network Neighborhood or Computers Near Me. Windows starts the appropriate function using a Control Command.

This feature is installed with the Control. In order for the function to succeed, the selected Client must have a PC-Duo Client installed and running. The Client must be using the Machine Name as its Client Name. This is the default setting.

You can disable Shell Extensions using the Settings for Configuration: Control Interface dialog.

Virtual Network Computing

Virtual Network Computing (VNC) is the name given to an Open Software, free, remote control product. PC-Duo can remote control VNC Clients running on Unix or Apple Mac systems. This facility is not currently available for VNC Clients running on Windows systems.

VNC Clients do not have a way to respond to the Control's Browse requests, so it is necessary to use the "Add a New Client" Wizard to define the VNC Client's name, address, and encoding method. Select "VNC Client" from the Client type list, and you can enter the relevant details.

Remote Control is limited to viewing a VNC Client in Share Mode. Advanced features such as Chat, Message, and File Transfer are not available.

Gateways Folder

This folder contains any Gateways that have been defined in this Control Profile.

Scripting Folder

Scripts that have been defined in this Control Profile are shown here.

The Gateways Popup Menu

Right-click on a Gateway in the Control Tree View to open the Gateways Popup Menu.

The following commands are available:-

Open
Attempts to Browse the Gateway for registered Clients.

Delete
Deletes the selected Gateway.

Rename
Renames the selected Gateway.

Properties
Displays information on this Gateway.

Client User Acknowledgement Options

User Acknowledgement Required
Select this check box to enable User Acknowledgement. When a Control attempts to connect using this Client Profile, the local logged-on user will be prompted to accept or reject the connection.

...Except when no NT User is Logged On
This option is enabled when the User Acknowledgement check box is selected. It will not be possible for a local user to accept a connection when the Client is logged off if there is no-one there. If you want to permit access to logged off PCs, select this check box. If it is deselected, a Control will not be able to connect using this Client Profile.

Acknowledge Connection Attempts from other Controls
When this check box is selected, an acknowledgement dialog will be displayed on the Client's screen when another Control attempts to connect. This allows the connected Control or the local user to decide whether or not to accept the new connection.

Acknowledge Connection Timeout
Values in the range 0..255 seconds can be specified, where 0 = no timeout. The timeout starts when a Control or Script attempts to connect to the Client. If the Client user has not accepted or rejected the connection when the timeout expires, the User Acknowledgement dialog at the Client is closed and the Control or Script is informed that the connection was rejected.

Acknowledge Connection Display Text
The text entered here is displayed on the Client's screen when a Control attempts to make a connection. You can use a number of tokens here. They are replaced with values provided by the Control and can show the Client user who is trying to connect to their PC.

Client View Acknowledgement Options

View Acknowledgement
Select a level here to prompt the Client user to acknowledge a change in the level of remote control access such as from Watch to Share Mode or Share to Control Mode. The default setting is "None", which disables the feature.

Client Acknowledgement String Tokens

The following tokens can be used in the "Acknowledge Connection Display Text" box. This allows a user-configurable message to be displayed at the Client when a Control attempts to connect and can be used to identify the Control user:-

Token	Comment
`$COMPUTERNAME$`	The Control PC's computer name
`$FULLNAME$`	The Control user's full name (Windows NT and above only)
`$LOGINNAME$`	The Control's logged on username
`$USERDOMAIN$`	The Control user's network domain

Gateway Configuration Options

Gateway Port
The port number used to access this Gateway is entered here. The default value is 3085.

CMPI
The Communications Management Packet Interval determines how often the Gateway checks the accessibility of the Clients that have connected to it. The default value is 60 (seconds).

Gateway Log File

The Gateway Log File location and its maximum allowed size are entered here. Use the [Browse] button to choose a new location.

Gateway Keys

The descriptions and creation dates of the Keys that are available for use by any Clients and Controls to access this Gateway are listed here.

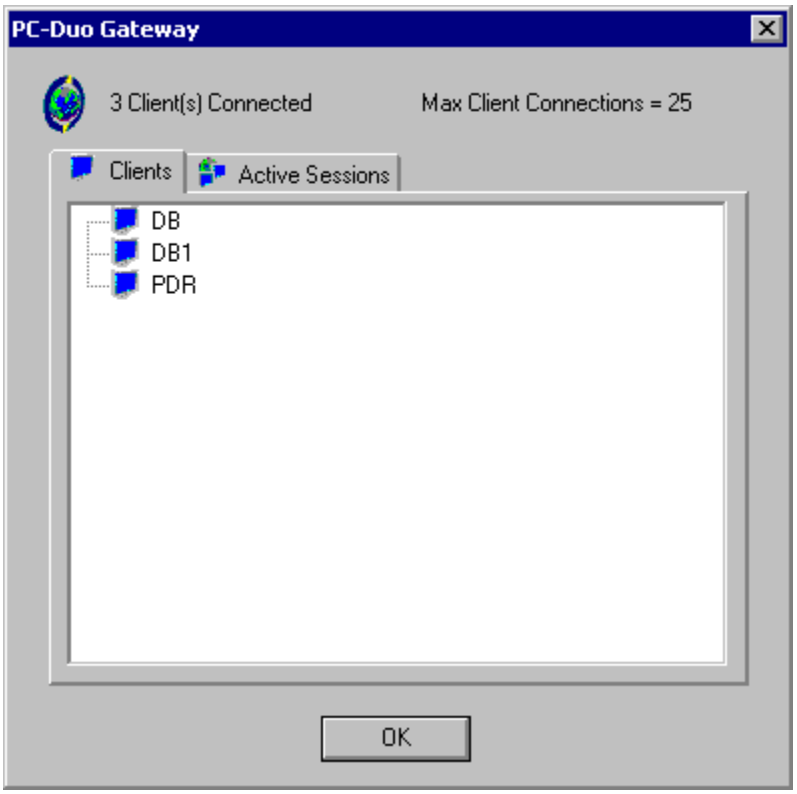
The Gateway can store the details of many Keys, but each Control can only "see" and connect to Clients that are using the same Gateway Key as itself.

Apply
Press this button to store the new Gateway settings.

Gateway Status

Double-click on the Gateway's icon in the System Tray to open the Status Dialog. This shows which Clients are currently registered with this Gateway. The list is refreshed at regular intervals.

For more information on a particular feature, click where a ‣ appears on the picture below.

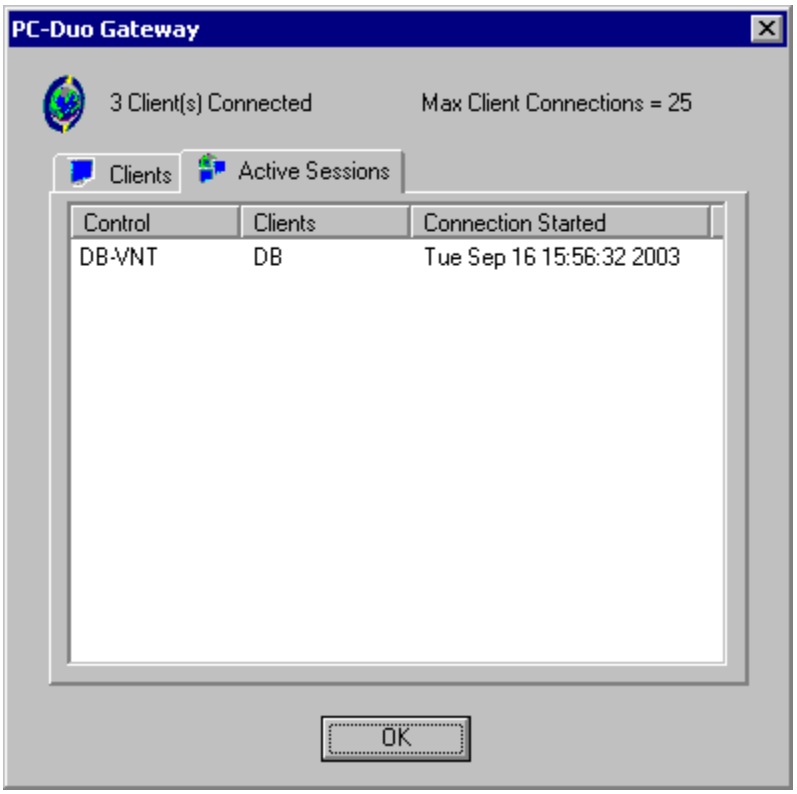


Press [OK] to close the dialog.

Gateway Activity

This page shows any active sessions between Controls and the Clients registered on this Gateway. It is refreshed at regular intervals.

For more information on a particular feature, click where a ➧ appears on the picture below.



Press [OK] to close the dialog.

Gateway Client Count

The number of Clients currently registered with this Gateway and the maximum number of connections permitted by the licence are shown here.

Gateway Client

The Clients that are currently registered with the Gateway are listed here. This list is dynamic and is updated regularly.

Gateway Session List

Any active sessions between Controls and the Clients registered on this Gateway are listed here. The list shows the names of both Clients and Controls, and also the local time when each session started.

Gateway Configurator

This icon starts the Gateway Configurator.

Licence Agreement

This icon runs Notepad to display the Licence Terms file LICENCE.TXT.

Support Contacts

This icon is used to open up a file that contains user-defined contact information.

Client Disable Menu Items

Disable Request Help
This setting disables the Client's Commands Menu, Request Help command.

Disable Call Control
This setting disables the Client's Commands Menu, Call Control command.

Disable Disconnect
This setting disables the Client's Commands Menu, Disconnect command.

Disable Chat
This setting disables the Client's Commands Menu, Chat command.

Browsing

If your network has multiple subnets or addresses, you may have to configure Broadcast Addresses for each network. When you Browse for Clients, Lookup messages are broadcast to these addresses. Press the [Settings] button to configure the Control's Broadcast Addresses.

Broadcast Show

During a Show, the Control sends screen updates to each Client in turn. Consequently, Show performance deteriorates as more Clients are included. Select this check box to use UDP Broadcast packets instead. These are sent to all Clients simultaneously so performance is not affected by the number of Clients. Press the [Settings] button to configure Broadcast Show.

HTTP Gateway

Check this box and select a Gateway from the list to connect to a Client that is registered with that Gateway.

Logout
Press this button to log out the Client.

Ctrl+Alt+Del
Press this button to send a CTRL+ALT+DEL to the Client.

Capture

Press this button to save the screen contents to a file. The Save As dialog will open, allowing you to choose the name and location of the file.

You can save the screen as a bitmap (.BMP), a Portable Network Graphic (.PNG), or a JPEG (.JPG) file.

Annotate
Press this button to open the Annotate Screen tool.

Screen Scrape

Press this button to switch the View Window display into and out of Screen Scrape mode. This mode is useful to view Web applications and games that do not use the Windows GDI interface to display on the Client's screen.

Enable DVD Playback Support

Some DVD players and Direct Draw programs are not compatible with the mirror driver that the PC-Duo Client uses to intercept display output on Windows 2000, XP, and .NET Clients. PC-Duo Client Setup disables DVD playback and the use of Direct 3D software. Use these settings if it is essential to play DVDs or run Direct 3D programs on this Client.

Except while viewed

This checkbox allows DVD players and Direct 3D software to operate normally unless the PC-Duo Client is actually being viewed by a Control.

Except while connected

This checkbox allows DVD players and Direct 3D software to operate normally unless the PC-Duo Client is connected to a Control.

Annotate Screen
Double-click on this icon to start the Annotate Screen Tool.