PC-Duo User Manual

This book explains how to use PC-Duo version 8.10. PC-Duo provides the remote control module of PC-Duo Enterprise, and is available on the PC-Duo Enterprise CD.

PART NUMBER: ND810/02

Contents

Chapter 1: Introducing PC-Duo

PC-Duo is a sophisticated Remote Control package which enables you to access, interact with and control other PCs on local and remote networks.

It enables support staff to provide personal service to users as if they were at the same PC. This is achieved using remote control technology to display users' screens on the screens of the support staff.

As well as being able to view the user screens, support staff can interact with applications on users' PCs, and transfer and distribute files to and from these PCs. The result is faster problem resolution, satisfied users and greater cost effectiveness in support.

Training staff can similarly benefit from using PC-Duo, either in a classroom environment, or when training dispersed groups of users. As PC-Duo supports connecting to remote PCs and networks, it massively increases the scope of supporting and training activities. It also enables off-site users to access workstations, data and services at a site.

PC-Duo consists of two main applications:

- The **Control** application. Most PC-Duo operations, such as viewing and controlling other PCs, are performed by a user running the Control application.
- The **Client** application. Other PCs can be viewed and controlled when the Client application is installed on them.

Features

Some of the features of the 32-bit edition of PC-Duo include:

Installation Wizard One simple installation quickly guides you through the process of installing the Client and Control applications.

Easy-to-use Interface PC-Duo features a familiar, folder-based interface for the Control window. Commonly used operations are accessible using Toolbars, menus and context-sensitive menus. Drag-and-drop functionality is supported, such as being able to drag a Client into a Group.

Flexible ways of viewing and organizing items such as Clients, Groups and Help Requests. Additional, dedicated windows are used for tasks such as viewing Clients and transferring files, resulting in an uncluttered and immediately accessible application.

The Client application operates in the background, and usually only appears as an icon in the taskbar's system tray.

Supports all Commonly-used Connection Methods PC-Duo supports multiple protocols. You can simultaneously connect to PCs that are using different network transports, whether it be NetBIOS, IPX or WinSock TCP/IP.

Modems, ISDN (with CAPI support) and RAS are also supported, and you can connect to Clients over the Internet using TCP/IP.

Flexible Ways of Locating and Connecting to Clients You can let the PC-Duo Control search for all currently available Clients, or specify a Client's details yourself to connect straight to a Client. You can also select multiple Clients and connect to them simultaneously.

Organize Clients into Groups Organize your PC-Duo Clients into Groups based on the departments in your organization, based on their PC platforms, or any other method of grouping. You can create as many Groups as required, Clients can belong to more than one Group and you can add new members and remove existing members at any time.

Many of the operations performed on Clients can be performed on entire Groups,

Such as connecting to all the Clients in a Group simultaneously.

View and Interact with Client PCs Three modes of accessing Client PCs are provided:

- Use Watch mode to view the Client PC screen passively.
- Use Share mode to share the control of the Client PC with the Client.
- Use Control mode to disable the Client's input and have total control of their PC.

Client PC screens can be displayed in a View window or in Full Screen mode. You can scale Client PC screens to fit the View window in which they are displayed, irrespective of the Client PC's screen resolution or the View window size.

Powerful File Transfer, Management and Distribution Features PC-Duo enables you to perform operations such as copying, deleting and renaming files, and creating and deleting directories on Client PCs. You can synchronize the contents of specified directories on the Control and Client PCs, so that any new or updated files in either directory are automatically copied to the other directory.

Using PC-Duo, you can also easily distribute files to whole Groups on your network by specifying the Group to which you want to distribute the files, and selecting the files you want to distribute.

Work with Multiple Clients at the Same Time

PC-Duo offers you great flexibility by enabling you to:

- Connect to multiple Clients simultaneously, using different network transports.
- Display and arrange multiple View windows to monitor Clients.
- Distribute files to multiple Clients in one simple operation.
- Use the Scan feature to cycle through viewing selected Client PC screens in turn, in a dedicated window.
- Show the Control PC screen to multiple Clients or exhibit one Client's PC screen to other Clients.

Additionally, more than one Control can connect to the same Client at the same time.

Communication between Control and Clients

Controls and Clients can engage in two-way text conversations using a dedicated window.

Clients can request help from a Control by sending Help Request messages.

A Control can send messages to selected Clients, all Clients to which the Control is connected, to a Group of Clients, or broadcast a message to all Clients on a network.

A Control can also use PC-Duo's Audio Chat facilities to communicate with a Client. Additionally, the Announce facility allows you to send an audio message to one or more connected Clients.

System Snapshot Feature for Immediate PC Hardware Inventory PC-Duo's System Snapshot feature enables you to quickly obtain a comprehensive hardware inventory for your Client PCs. In conjunction with its Remote Control facilities, PC-Duo is an essential tool for supporting users.

This detailed inventory information includes the 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 and much more.

Security Features PC-Duo contains highly configurable security settings, which enable you to meet your exact security requirements. For example, it features multiple level security for both the Client and Control applications, in the form of Client and Control Security Profiles:

- Client Profiles enable you to govern which Controls can connect to a particular Client, to specify whether the Control needs to enter a valid user name and password to connect, and to specify which operations can be performed by Controls on the Client.
- Control Profiles determine the level of access Control users can have to Client PCs.

Additional security features are available in PC-Duo. For example, sessions in which a Control is connected to a Client can be recorded to a file and later replayed. These and other security features are described in detail in Chapter 9, “Configuring PC-Duo” and the Online Help.

Scripting and Automation Capabilities You can create your own PC-Duo Scripts using a dedicated, powerful scripting language, to automate PC-Duo tasks. The PC-Duo Script Editor lets you drag-and-drop scripting commands, and offers comprehensive on-line help for scripting functions.

After creating and testing a script, you can schedule it to be performed on specified dates and times.

Active X Web Control PC-Duo enables you to connect and control your Clients using a Web browser. This is done by accessing a Web page (on an intranet or Internet server) which features the embedded ActiveX Control.

Wake-on-LAN Power Management PC-Duo enables Client PCs to be remotely and automatically powered up and switched off by Wake-on-LAN. These capabilities are accessed using the Client menu's Power On and Power Off commands. For more information, see “Power Management” on page 54.

Chapter 2: Installing PC-Duo

You can install PC-Duo from CD or from hard disk if you have downloaded the software from the World Wide Web. If you are installing from floppy disk, ensure you insert the correct disk when you are prompted for a new disk by the Installation process.

To Start the Installation:

1. If you are installing PC-Duo from a CD which automatically runs, follow the instructions.

   If you installing from a CD and the CD does not automatically run, locate the PC-Duo directory and double-click the file Setup.exe.

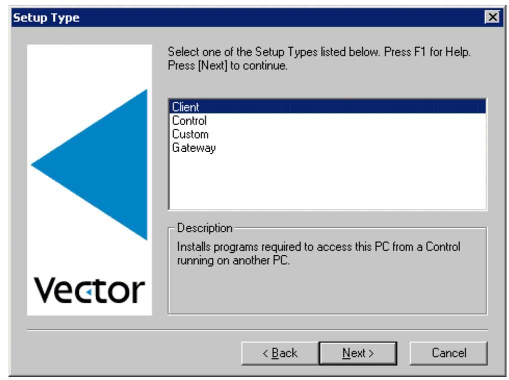
   If you are installing PC-Duo from a hard disk, locate the PC-Duo directory and double-click the file Setup.exe.

2. In the Welcome dialog, read the information, then click the Next button to continue.

3. The Software Licence Agreement is displayed. Read the terms of the Licence Agreement before installing. If you accept the terms, click the Yes button to continue. The Setup Type dialog is displayed.

Selecting a Setup Type

The Setup Type dialog enables you to choose which PC-Duo application you want to install.



To Select a Setup Type:

1. In the Setup Type list, select:

   Client to install the Client software, so this PC can be controlled from a PC-Duo Control.

   Control to install the Control software, so this PC can take control of other PCs.

   Custom to choose which components you want to install. You can use this option to install both Client and Control applications.

   Gateway to install a PC-Duo Gateway. This enables external Controls to access multiple Clients through a single IP address. For more information, see “Gateways” on page 34.

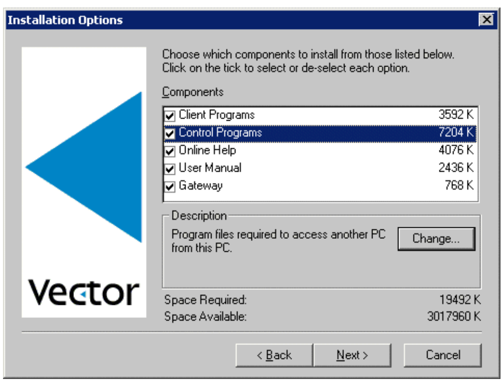
Gateways can be installed on Windows NT, 2000, XP or .NET systems only. They can be installed any PC that can be accessed from the Internet; the PC-Duo Control or Client software does not have to be installed.

2. Click the Next button to continue.

If you select a setup type of Client or Control, the Install Directory dialog is displayed. If you select a setup type of Custom, the Installation Options dialog is displayed.

Specifying Installation Options

The Installation Options dialog enables you to select which PC-Duo components you want to install.



The options available for a custom installation are as follows:

Client Programs select this option to install the PC-Duo Client. This allows this PC to be accessed by a Control running on another PC.

Control Programs select this option to install the PC-Duo Control. The Control is used to view, access and work with other PCs. (You can install both the Client and Control programs on the same PC.)

Online Help select this option to install the comprehensive online help.

User Manual select this option to install the user manuals. The manuals are in Adobe's Portable Document Format (PDF), and can be viewed using Acrobat Reader.

You can also use the Change button to further specify the details of the selected component.

To Specify which Components to Install:

1 In the Components list, deselect any components you do not want to install.
2 If you want to install only part of a component, select its entry in the list, then click Change to select the sub-components you want to install.
3 Click the Next button to continue.

Specifying the Install Directory

The Install Directory dialog enables you to specify the directory in which PC-Duo will be installed.

The default location is displayed in the Destination Folder box PC-Duo. If you want to change the location, click the Browse button, and select a new location in the Choose Folder dialog.

Click the Next button to continue.

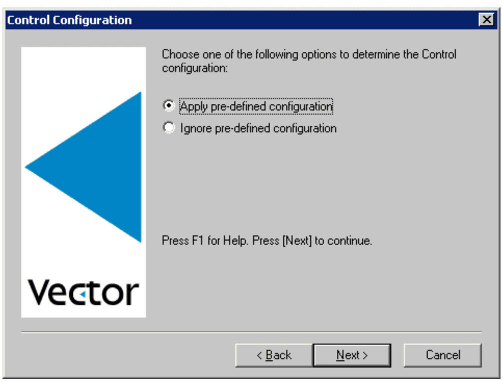
Selecting a Program Folder

The Program Folder dialog enables you to specify the folder in which the PC-Duo program icons will be created. It specifies a default location in the Program Folders text box. This is the folder in which the PC-Duo program icons will be displayed. To change the program folder:

- If the folder you want to use already exists, select the folder from the Existing Folders list.
- If you want to create a new program folder for the program icons, type the folder name in the Program Folders text box.

When the correct program folder is displayed in the Program Folders text box, click the Next button to continue.

Choosing a Control Configuration



The Control Configuration dialog is displayed when you have chosen to install the Control software. Choose:

Apply predefined configuration to install a new configuration file. You must select this option if you want to configure the Control to use System Snapshot.

Ignore predefined configuration to keep your existing Control configuration.

Click the Next button to continue.

Choosing a Client Configuration

The Client Configuration dialog is displayed only when you have chosen to install the PC-Duo Client software, and the Installation process has detected a previous Client installation, or a Client configuration file is found on your PC. Choose:

Apply pre-defined configuration to copy the configuration file from the setup directory. This option is available only when the directory from which you are running the PC-Duo setup contains a previously defined Client configuration file.

Use this option to install standard configuration files on Clients. You can define and change configuration options using the Client Configurator. For more information, see "Configuring Clients" on page 77.

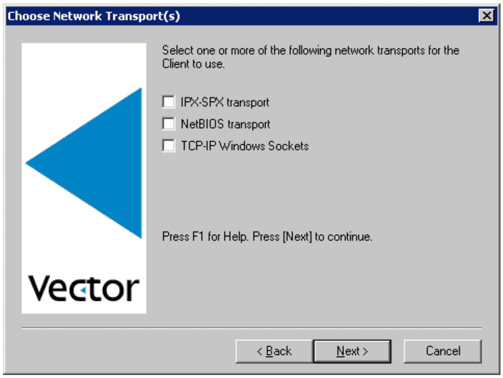
Preserve existing configuration to preserve your current configuration. This option updates the program files and icons, but preserves the existing Client settings.

Create new installation to create a new Client installation. This option updates the program files and icons, and replaces the Client settings.

Click the Next button to continue.

Choosing Network Transports

The Choose a Network Transport dialog is displayed if the Installation process is creating a new installation.



This dialog enables you to specify which network transports you want PC-Duo to use for Client communication. TCP/IP Windows Sockets is the default option. Usually, this transport gives the best overall performance.

If you run the PC-Duo Client on NETBIOS, the Choose NetBIOS Transport dialog is displayed, enabling you to specify which NetBIOS Adapter should be used. Select the NetBIOS Adapter from the list, then click the Next button to continue with the Installation process.

Click the Next button to continue.

Completing the Installation

After specifying the information required to install PC-Duo, the files are installed on your PC. When the files are installed, a final dialog is displayed. This asks whether you want to read the Release Notes or run the Client Configurator Utility.

To Complete the Installation Process:

1. If the Setup is Complete dialog is displayed, select the Release Notes or Run the Configurator application boxes if required.

   If the Setup needs to restart Windows dialog is displayed, select an option to specify when you want to restart your PC.

2. Click the Finish button to complete the Installation.

If the Installation process needs to update a file which Windows is currently using, a dialog may be displayed to inform you that Windows must be restarted. You can choose to reboot your PC now or later.

To learn how to use the Client Configurator utility, see “Configuring Clients” on page 77.

Chapter 3: Using the Client

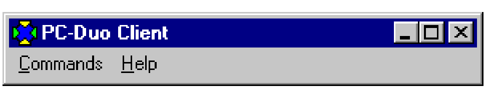
The PC-Duo Client application must be installed on all the PCs you want to access using PC-Duo.

Displaying the Client Application Window

The Client application should load automatically when Windows starts, and is usually displayed in the Taskbar's system tray. However, you can display the Client application window to access it in a similar way to other desktop applications.

To open the Client Application window, use one of the following methods:

- Double-click the Client icon in the Taskbar's system tray
- Right-click the Client icon in the Taskbar's system tray and choose the Open command from the shortcut menu.



The Client Application window (consisting of a title bar and menu bar) is displayed and a Client Application button is displayed in the Windows Taskbar. (The Client icon in the Taskbar's system tray remains displayed.)

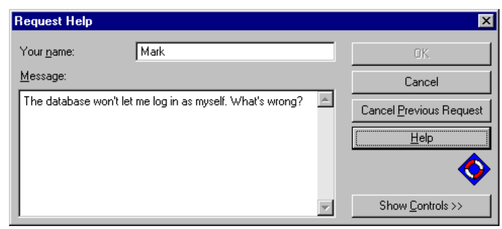
You do not need to display the Client window to use most of the features described in this chapter. The shortcut menu that appears when you right-click the Client icon in the Taskbar's system tray enables you to perform the same tasks as the Commands menu in the Client window.

Requesting Help

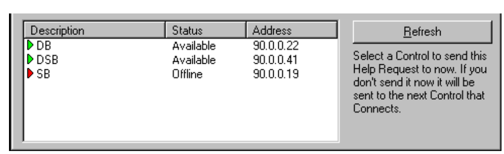
The PC user with the PC-Duo Client installed can request help using the Client application.

To Request Help:

1. Right-click the Client icon in the Taskbar's system tray to display the shortcut menu, and choose the Request Help command.
2. In the Request Help dialog, enter your name in the text field, then type your Help Request in the Message box.



3. If you want to display a list of the known and available Controls, click the Show Controls button.



4. If you want to refresh the list of known Controls, click the Refresh button. To select one of the listed Controls, click on it. (If you don't want to send the Help Request to one of the listed Controls, click the Hide Controls button.)
5. Click the OK button to send your Help Request.

Click the Cancel Previous Request button in the Request Help dialog to erase your last help request, irrespective of whether a Control has received it.

If no Controls are connected, a message box is displayed, notifying you that the Help Request will be sent as soon as a Control PC connects to the Client.

Calling a Control

Client PC users can now call a Control. This feature enables Clients to establish a connection across a firewall or proxy server. It only works for TCP/IP connections.

To Call a Control:

1. Double-click the PC-Duo Client icon in the taskbar's system tray.
2. From the Commands menu, choose Call Control. The Call Control dialog is displayed.
3. Enter the hostname or IP address of the Control you want to call, then click OK.

   Alternatively, you can select a Control from the drop-down list. This list shows the Controls which have recently connected to the Client.

The Control PC is prompted to accept or reject the Connection. If accepted, you can use the Chat facility to communicate with the Control (for more information, see “Using the Chat Feature”).

If the Client cannot call a Control, it may be because the Control application is not running on the Control PC.

Using the Chat Feature

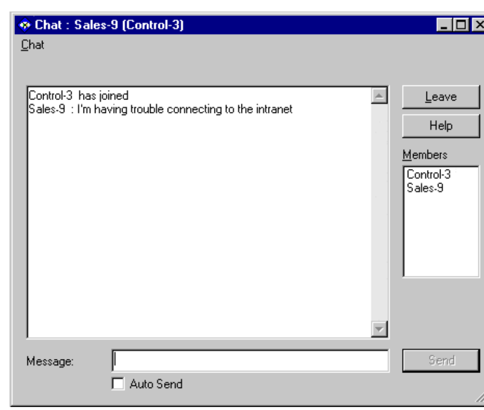
PC-Duo enables a Client to engage in a two-way text conversation with a connected Control. The conversation takes place in a dedicated window.

To Start A Chat Session:

1. Make sure a Control is connected to you, then right-click the Client icon in the Taskbar's system tray to display the shortcut menu.
2. Choose the Chat command. The Chat window is displayed.

Chatting to a Control

When you or a Control start a Chat session, a Chat window is displayed on your PC and the Control PC. The current participants are displayed in the Members list.



You can chat to all participating Clients using the large discussion box, and the Message box:

- Type your messages in the Message text box, and click the Send button to broadcast it to members of the discussion.

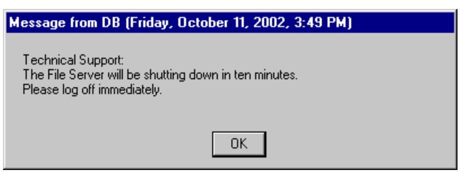
- Your messages and the messages of the Clients are displayed in the discussion box.

To end the Chat session, click the Leave button.

Receiving Messages from a Control

Client PCs can receive messages from Control PC users. These messages are automatically displayed on a Client's screen in a message box.

The Title Bar of the message box includes the name of the Control which sent the message, and the date and time when the message was sent.



After reading a message sent by a Control, click the OK button to close it.

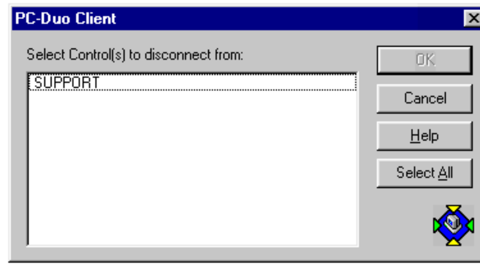
Disconnecting a Control

To Disconnect from a Control:

1 Right-click the Client icon in the Taskbar's system tray.

2 In the shortcut menu, choose the Disconnect command. A dialog is displayed listing the Controls to which you are currently connected.

3 Select the Controls which you want to disconnect from.



4 Click the OK button to disconnect from the selected Controls.

Using a Client as a Bridge

As well as enabling Client PCs to be accessed by a Control PC on the same local network, PC-Duo also enables Client PCs to be dialed into and accessed by a Control PC.

This is achieved by loading the PC-Duo Bridge module on the Client PC which a Control PC needs to communicate with.

If the Bridge module is loaded on a networked PC-Duo Client PC, all the Clients on that network can be accessed by a PC-Duo Control which is running the Remote module.

Once the Bridge module is loaded on a Client PC, a Control PC can connect to it. For more information, see “Connecting to Remote Clients and Networks” on page 33.

Loading the Bridge on a Client

To load the Bridge module on a Client, you must have already installed the Remote Comms component. You must also configure the Client's

Dialin Bridge settings using the Client Configurator. For more information, see “Configuring Clients” on page 77.

To Load the Bridge on a Client:

1 Double-click the Client icon in the Taskbar's System Tray to display the Client Application window.

2 Choose the Commands, Load Bridge menu command. The Client icon is shown with a red background to indicate the Bridge is loaded.

When you have finished using the Client as a Bridge, display the Client Application window and choose the Commands, Unload Bridge menu command. The Client icon is shown with a blue background.

Resetting a Client Video Driver

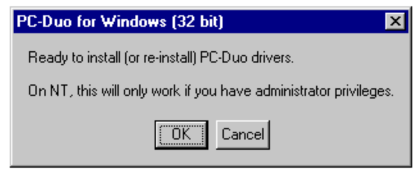
If you change the display configuration on Windows 95 or Windows NT, this can disconnect the intercept driver that PC-Duo uses to capture the Client’s display updates. Use the Reset Video Driver command to reinstate it.

In Windows 95, the PC-Duo intercept is in SYSTEM.INI. However, when you reset the video driver, you can change how the information is stored. If you choose to store the information in SYSTEM.INI, you may need to reset the video driver when you change screen resolution or other video driver settings.

To Reset a Client Video Driver on a Windows NT4 Client:

1 Make sure the PC-Duo Control application is not running, then click the Start button in the taskbar to display the Start menu.

2 Display the contents of the Programs, PC-Duo submenu, then choose the Reset Video Driver command. A message box is displayed, asking you to confirm this action.

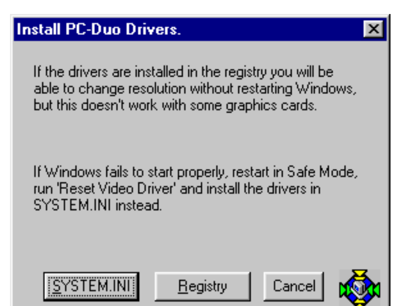


3 Read the information, then click the Yes button to reset the video driver.

To Reset a Client Video Driver on a Windows 95 Client:

1 Make sure the PC-Duo Control application is not running, then click the Start button in the taskbar to display the Start menu.

2 Display the contents of the Start, Programs menu, and display the PC-Duo Submenu.



3 Choose the Reset Video Driver command. A message box is displayed, asking you to confirm the action.

4 Read the Information, then choose where you want to store the driver information to reset the video driver.

Deactivating a Client

When necessary, you can deactivate the Client application so that the Client PC is no longer accessible to Control users.

When you deactivate a Client, the Client application will not automatically load the Next time you restart Windows.

After deactivating a Client, you can re-activate it at a later time to resume normal PC-Duo operations.

To Deactivate a Client:

1 Click the Start button in the Windows Taskbar to display the Start menu, then display the contents of the Start, Programs menu.

2 Locate the PC-Duo submenu, then click the Deactivate PC-Duo Client Command. The Client is deactivated.

To Activate a Client:

1 Click the Start button, then display the contents of the Start, Programs menu.

2 Locate the PC-Duo submenu, then click the Activate PC-Duo Client command to activate the Client.

Restarting the Client Application

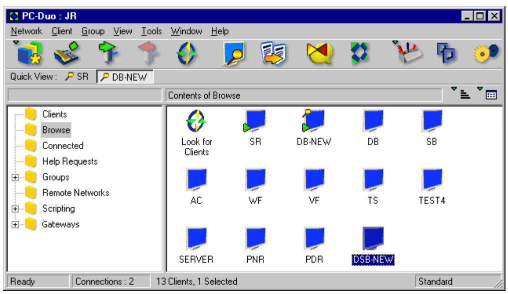
To Restart the Client Application:

1 Click the Start button in the taskbar to display the Start menu, then display the contents of the Start, Programs menu.

2 Display the PC-Duo submenu, then choose the Restart PC-Duo Client command. The Client application is restarted.

Chapter 4: Connecting and Viewing

The PC-Duo Control application enables you to access PCs on your network which are running the PC-Duo Client.



You can also work with Client PCs on remote networks in the same way.

The Control Application

The first time you start the Control application, a Welcome to PC-Duo message is displayed. This message box enables you to configure the PC-Duo Control application and read the Getting Started guide. (You can Configure the Control later. For more information, see “Using Control Profiles” on page 86.)

If you don't want to view this message box again, deselect the Show this screen when PC-Duo starts check box.

To Start the Control Application:

1 Click the Start button in the Windows Taskbar to display the Start menu, then display the contents of the Start, Programs menu.

2 Locate the PC-Duo submenu, then click the PC-Duo Control command to start the Control application.

Navigating the Control Window

The Control Application Window consists of the following areas:

The Title Bar The title bar is located at the very top of the Control window, and contains the application name and the name of the Control PC. The three buttons on the far right of the title bar enable you to minimize, maximize/restore, and close the Control Window.

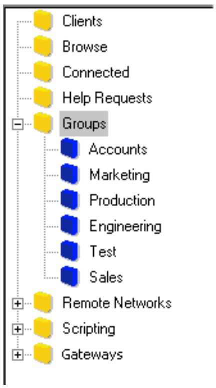
The Menu Bar The menu bar contains a series of drop-down menus which enable you to choose various tasks to perform.

The Toolbar The Toolbar is the row of buttons situated below the menu bar. The buttons in the Toolbar enable you to gain quick access to commonly performed tasks.

To find out what a Toolbar button does, position the mouse pointer over it without clicking. A tooltip is displayed alongside the mouse pointer, containing a description of the button's function.

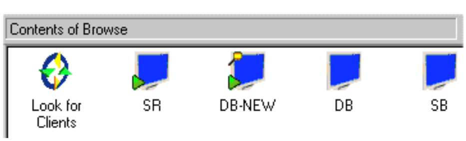
The Quick View Bar The Quick View bar is the horizontal bar located below the Toolbar. It displays the names of currently connected Clients.

The Tree View The Tree View (on the left of the Control window) enables you to view the various PC-Duo folders such as Clients, Groups and Remote Networks.



These folders are covered later in this chapter. Scripting is covered in Chapter 8, “Scripting”.

The List View The List View (on the right of the Control window) displays the contents of the currently selected folder in the Tree View as a series of icons.



The Status Bar The Status bar at the bottom of the PC-Duo Control window displays information about the number of current connections, as well as about the selected item in the Tree View or List View.

Navigating the Tree View

- To select a folder in the Tree View, click on it. The contents of the folder are displayed in the List View (on the right of the Control window).
- If a folder contains subfolders which are not displayed, a plus (+) symbol is displayed to the left of the folder. To display the contents of a folder in the Tree View, double-click the folder or click the symbol.
- If a folder contains subfolders which are displayed, a dash (-) symbol is displayed to the left of the folder. To hide the contents of a folder double-click the folder or click the symbol.

Navigating the List View

- If all items in the List View cannot be displayed, scrollbars are shown to enable you to scroll to other items in the List View.
- To select an item in the List View, click on it.
- To select multiple items in the List View:

  If the items you want to select are adjacent to one another, select the first item, then hold down the Shift key and select the last item. (All items in between are also selected).

  If the items you want to select are not adjacent to one another, select the first item, then hold down the Ctrl key and select each item.

Exiting the Control Application

To Exit the Control Application:

1 Make sure you are not connected to any Clients (the Quick View bar should not contain any Client names).

2 Choose the Network, Exit menu command or click the close button in the top right corner of the Control window to exit the Control application.

Identifying Available Clients

There are two main ways of identifying available Clients to which the Control application can connect:

- The Control can browse for available Clients on the network.
- If you know a Client's details, you can enter these details into the Add a New Client dialog.

If you have used a previous version of PC-Duo, you can import existing Client information. For more information, see “Customizing The Toolbar” on page 60.

Browsing for Clients

You don't need to know the exact name of a Client to connect to it. The PC-Duo Control can browse your network to look for all available Clients, all Clients beginning with a specific set of letters, or for a specific Client.

To Browse for Clients:

1 To open the Browse Network dialog, use one of the following methods:

- Click the Browse button in the Toolbar.
- Double-click the Look for Clients icon in the Browse List.
- Choose the Network, Browse menu command.

2 In the Browse Network dialog, enter the criteria you want to use in the text box:

- To look for all Clients on the network, make sure the text box is empty.
- To look for a specific Client, enter the Client name in the text box.
- To restrict the search to Clients beginning with specific characters, enter the characters in the text field. For example, if you enter ADMIN, any Clients named ADMIN1, ADMIN_OFFICE and ADMINISTRATOR will be found.
- To restrict the search to Clients who currently require help, select the Only Clients Requesting Help check box.

3 Click the OK button to start browsing the network.

4 When the Control has finished browsing the network, the available Clients that match the criteria you specified are displayed in the Browse List. (If no Clients are found, a message is displayed.)

Clients to which you are already connected are indicated by a green arrow symbol alongside their icons:

For information on how to connect to a Client, see “Connecting to Clients”.

Adding New Clients

An alternative to browsing for Clients is to locate Clients yourself using the Add a New Client dialog. This dialog consists of a number of steps in which you enter the Client information.

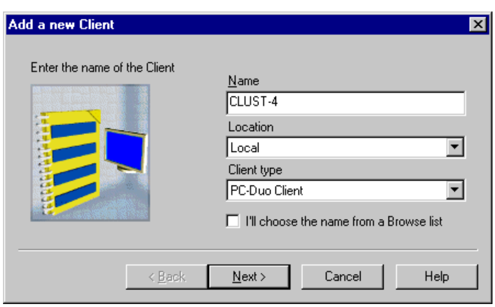
If necessary, you can also use the Browse facility within the Add a New Client dialog to assist you in identifying available Clients.

To Add a New Client:

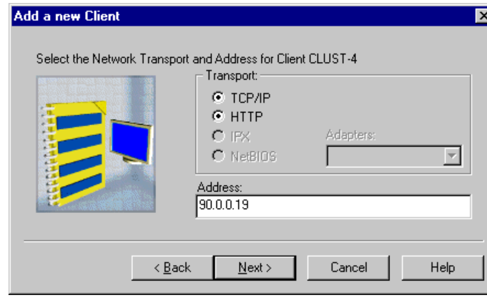
1 Click Clients in the Tree view to display Clients List.

2 To display the Add a New Client dialog, double-click the New Client  icon in the List View, or click the New button in the Toolbar and choose the Client command from the menu.

3 The first stage of the dialog enables you to enter the Client name and location, or select the Client name from a Browse List.



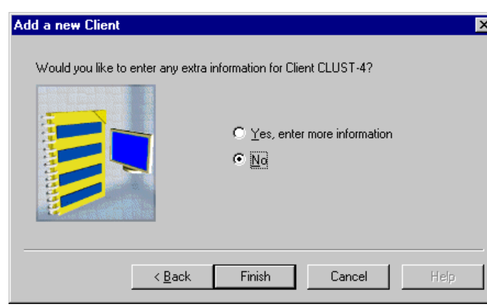
If you know the Client details, enter the Client Name, select the Client Location, and make sure the check box is deselected. Click the Next button, then specify the Network Transport and Address information for the Client.



If you do not know the Client details, select the check box, then click the Next button. The Control browses the network for Clients; this may take a few moments. When the Browse operation has finished, select the Client you want to add from the Browse List.

You can perform a more selective Browse by entering part of the Client name you are looking for in the Partial Name text box, then choosing the Refresh button to look for just the Clients matching this criteria.

4 Click the Next button to advance to the next stage in the Add a New Client dialog.



5 If you want to enter extra information for the Client, select the Yes, enter more information option. Click the Next button, enter a Display Name and Description for the Client, then click the Next button again to enter a Contact and telephone Number for the Client.

If you don't want to enter any extra information, select the No option.

6 Click the Finish button. The Client is added to the Client list.

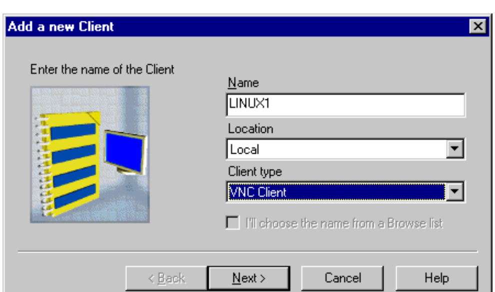
Adding VNC Clients

VNC (Virtual Network Computing) is a freeware application that enables you to view and interact with remote PCs over the Internet. In PC-Duo version 8.0 or later, Controls can connect to Linux and Apple MacIntosh systems running the VNC server application as though they are PC-Duo Clients.

To connect to a VNC Client:

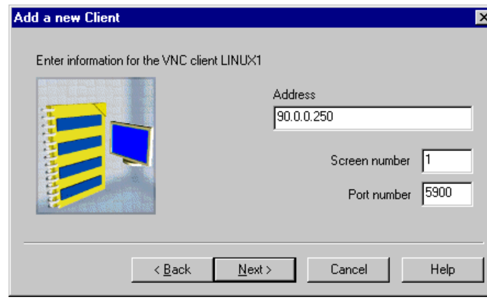
1 Click Clients in the Tree view to display Clients List.

2 Double-click the New Client  icon in the List View, or click the New button in the Toolbar and choose Client from the menu. The Add a new Client Wizard is displayed.



3 Enter the Name by which you want to refer to the Client in the Control window, and select VNC Client in the Client type list.

Click the Next button to continue.



4 In the second Wizard dialog, enter the connection details of the VNC Client:

Address specifies the IP Address of the PC you want to connect to.

Screen number specifies the number of the virtual terminal the Control connects to. You do not need to change this number.

Port number specifies the port you want the Control to use for communications with this Client. By default, port 5900 is registered for use by VNC.

Click the Next button to continue.

5 In the third Wizard dialog, select the video encoding option you want to use to display the Client screen:

Raw Encoding sends raw pixel data without any further processing. This is the simplest encoding and allows any screen data to be drawn on the viewer.

RRE Encoding Rise and Run-length Encoding creates compressed blocks of similar value pixels and sends them in small blocks of data. Each data block represents a rectangle.

CoRRE Encoding Compact RRE is similar to RRE, except that data blocks are restricted to a maximum size of 255 by 255 pixels.

Hextile Encoding splits each rectangle into 16 by 16 tiles. Each tile is then encoded as raw pixel data or using a method similar to RRE.

Use CopyRect Speeds up the video display. It enables the viewer to copy a rectangle it has already received to another screen position and so avoids having to re-send that data.

Click the Next button to continue.

6. If you want to enter contact details for the Client and its the name and description, select the Yes option and click the Next button to continue.

   If you do not want to enter any extra information, or you want to enter the information later, select the No option and click the Finish button to make the Client available from the Control.

VNC Clients count against your license connection limit in the same way as normal PC-Duo Clients.

Vector Networks does not supply the VNC Client software. However, it is available as a free download from the following URLs:

http://www.realvnc.com/

http://www.uk.research.att.com/vnc/

Viewing Client Properties

You can view and amend a Client's properties using the Client Properties dialog. The dialog can contain up to four tabs:

General contains general information about the Client such as the Client name and network address.

Details contains more information about the Client such as a Description, Contact and Telephone Number.

System Information enables you to check the PC-Duo Client Version as well as the Platform on which the Client is running. This tab is displayed only while you are currently connected to the Client.

Help Requested is displayed if you have received a Help Request from the Client. For more information, see “Receiving Help Requests” on page 42.

To View a Client's Properties:

1. In the Control window's List View, select the Client whose Properties you want to display.
2. Click the Properties button in the Toolbar.
3. In the Client Properties dialog, use the different tabs to display the Client information.
4. When you have finished, click the OK button to save your changes, or click the Cancel button to close the window without saving.

Amendments made to a Client's Properties using this dialog only affect the information about the Client which is stored by the Control. They do not affect the Client's own configuration. For example, amendments to a Client name in the Client Properties dialog only affect the way the Client is displayed in the Control window.

Connecting to Clients

When a connection is established between the Control and a Client, the Client appears as a button in the Quick View bar (the horizontal bar situated below the Toolbar). An arrow symbol is displayed alongside the Client icon in the List View to indicate the Client is connected.

There are several different ways of connecting to Clients. You can:

- Connect to Clients displayed in the Browse List.
- Use Quick Connect to connect directly to a specified Client.
- Connect to all the Clients in a Group. (For more information, see “Connecting to Groups”.)

When you connect to a Client, you may need to specify a User Name and Password before you can access it.

Connecting to Clients in the Browse List

The Browse List contains the results of the last Browse operation and can be used to connect to any Clients identified during that operation.

To Connect to a Client in the Browse List:

1 Click Browse in the Tree View to display the Browse List.

2 Select the Client you want to connect to.

3 Click the Connect  button in the Toolbar.

If the Client connects successfully, it is displayed in the Quick View bar, and an arrow is displayed alongside the Client in the List View.

You can also use this technique to connect to Clients in the Clients List, provided those Clients are still available.

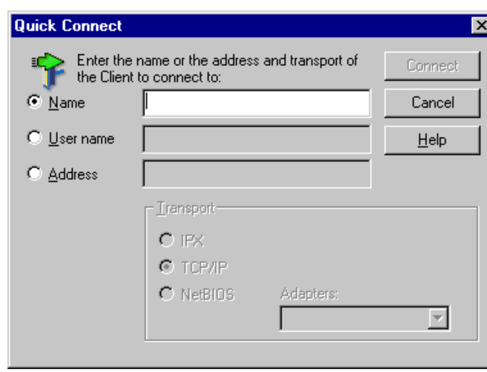
Using Quick Connect

You can use the Quick Connect feature to connect directly to a Client by specifying the Client name or network address.

Using Quick Connect is the easiest way to connect to an individual remote Client PC over the Internet. Provided you have established an Internet connection, you need only enter the Client PC's IP address in the Quick Connect dialog.

To Use Quick Connect:

1 Choose the Client, Quick Connect menu command.



2 In the Quick Connect dialog, choose one of the following options:

Name and enter the name of the Client you want to connect to.

User name and enter the Logon ID of the person you want to connect to. If the person is logged on to one Client, the Control connects immediately. If the user is logged in on more than one PC, choose the Client you want to connect to in the Select Client dialog.

Address and enter the address of the Client you want to connect to.

IPX network transport addresses are specified in the form >000001-12345678.

TCP/IP addresses are specified in the form >192.168.100.20.

NetBIOS uses the registered NetBIOS network name of Client PCs.

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3 Click the Connect button to connect to the specified Client. After a few moments, the Quick Connect dialog is closed, and the specified Client is displayed in the Connected List.

Connecting to Clients using Shell Extensions

Shell extensions enable you to access PC-Duo Control functions from within Windows Explorer. Use them to open a Control or Chat session directly from the selected Clients.

To connect to Clients from Windows Explorer:

1 In Windows Explorer locate the Clients to which you want to connect in the My Network Places or Network Neighborhood folder.

2 Right-click the Clients you want to connect to and choose:

Remote Control to start a Share mode session.

Chat to open a Chat session. (For more information, see “Using the Chat Feature” on page 40.)

Shell extensions are installed as part of the PC-Duo Control application and are enabled by default. You can enable and disable their use from the Control Interface folder in the Control Configuration. For more information, see “Using Control Profiles” on page 86.

Disconnecting from Clients

When you have finished accessing, interacting with or controlling a Client, you can disconnect from it. You can disconnect from Clients in several ways:

- Right-click the Client, then click Disconnect in the shortcut menu.
- Select the Client, then choose the Client, Disconnect menu command.
- Choose the Client, Disconnect All menu command to disconnect from all Clients.
- Select the Clients from which you want to disconnect in the List View, then click the Disconnect  button in the Toolbar.

Connecting to Clients using ActiveX

In addition to communicating with Clients from the PC-Duo Control, you can connect to and control them through a Web page using ActiveX. You can connect to any PC running the PC-Duo Client application using Internet Explorer 4.0 or later. You do not need to install the PC-Duo Control application to connect to a Client using this method. However, you must configure the Client before connecting to it. For more information, see “Configuring Clients for ActiveX Connections” on page 82.

To connect to a Client using ActiveX:

1 Open your Internet Browser.

2 In the Address field, type:

   http://*client(:port_number)*/*page.htm*

   where:

   client is the IP address of the Client you want to connect to.

   :port_number is the server port specified for the ActiveX connection in the Master Profile (You do not need to include this number if you used the default port of 80).

   page.htm is the Web page with which you want to connect to the Client. Specify SECURE.HTM if you need to supply a user name and password to access the Client, otherwise specify VIEW.HTM.

   You can now view and work with the Client using the Web page you specified.

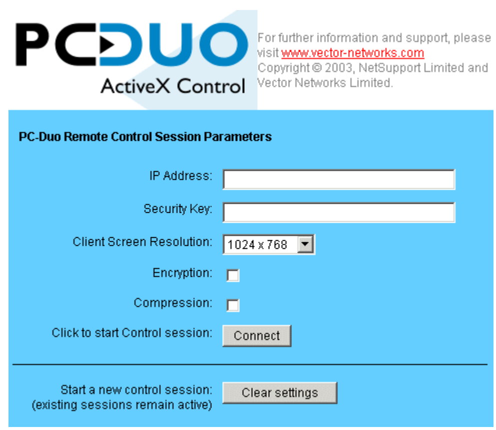
If you use this procedure on a PC where PC-Duo is not installed, you are prompted to install an ActiveX Control file (PCIAX.CAB). Click Yes to accept the installation.

Connecting to Clients through a Web Server

The VIEW.HTM and SECURE.HTM pages only allow you to connect to Clients where ActiveX is installed.

If you want to host the ActiveX Control on a Web Server, you must copy the files from the Client's Web subdirectory to the Server, and connect to the Clients using VIEWER.HTM. This page allows you to access Clients running on any accessible PCs. For example:

http://www.mysite.com/pcduo/activex/viewer.htm



To connect to a Client using VIEWER.HTM:

1 Open your Internet Browser and enter the address of VIEWER.HTM on your system.

2 Enter the IP Address of the Client you want to connect to.

3 If you are using a Security Key to control access to your Clients, enter the Security Key. (For more information, see Chapter 9, “Configuring PC-Duo”.)

4 If you want to encrypt and compress the information transferred between the Control and the Client, select Encryption and Compression.

5 Click Connect to access the specified Client.

The ActiveX Control does not have to be enabled on the Clients.

VIEWER.HTM can also be used when the Client's IP address is different to the Client address used by the Control, such as when the Client is behind a firewall.

Viewing Clients

PC-Duo provides three ways to view a Client. All three modes allow you to view a Client PC using the Control application:

Share mode Enables you to control the Client PC with your mouse and keyboard, while still offering the Client the normal level of input.

Watch mode Enables you to view the Client PC passively.

Control mode Disables the Client PC's keyboard and mouse, providing you with total control of the Client PC.

To Display a View Window for a Client:

Double-click the Client you want to view, or select the Client from the List View and click the View Client button in the Toolbar.

A View window displays the Client screen. The name of the Client is shown in the View window's title bar. Alternatively, if the Client you want to view is already connected, click the Client's button in the Quick View bar to display a View Window for that Client.

You do not need to be connected to a Client before beginning a View session; the Control automatically connects to a Client when you start a View session.

Working with View Windows

When a View window is displayed, you can use the View window's Toolbar to perform various tasks on the Client PC:

- The Share, Watch and Control buttons in the View window Toolbar enable you to switch between the various access methods. If none of the Share, Watch or Control buttons are active, a blank Client screen is displayed in the View window.
- To display different areas of the Client PC screen, move the mouse towards the edge of the View window-the View window automatically scrolls to that part of the Client PC screen.
- You can use the Scale to Fit button to display the entire Client PC screen in whatever sized View window you have. This eliminates the need to scroll to different parts of the View window.
- The Full Screen button enables you to display the Client PC in Full Screen mode. For more information, see "Viewing a Client in Full Screen Mode".
- The other buttons in the View window Toolbar are similar to their equivalents in the Control window Toolbar. The Clipboard, Audio and Mute buttons are described later in this chapter.

Annotating the Client Screen

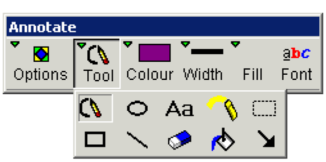
PC-Duo’s Annotate function enables both Control and Client users to draw and write on the Client screen using the mouse. Annotate includes functionality typically found in basic drawing applications, such as save, clear screen, undo, typing and drawing tools, and it enables you to illustrate chats, point out problems, and highlight areas of special interest during View and Show sessions. (For more information on Show sessions, see “Showing the Control PC to Clients and Groups” on page 31.)

To annotate a Client screen:

1 Double-click the Client you want to view, to display a Client View window.

Alternatively, if the Client is already connected, click the Client's button in the Quick View bar.

2 In the Tools menu of the View window, choose Annotate Screen. The Annotate Toolbar is displayed on the Client desktop.



3 Click the Tool button and select the annotate tool you want to use.

4 In the View screen, move the mouse pointer to the position you want to start the annotation.

5 Press and hold the left mouse button.

6 Keeping the button pressed, move the mouse pointer on the Client screen. Release the mouse button to complete the drawing.

To take a screenshot of an annotated screen, click Options in the Annotate Toolbar and select Save Screen.

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7 To close the Annotate session, click Options in the Annotate Toolbar, and select Exit.

Viewing a Client in Full Screen Mode

In Full Screen mode, the Client window fills the Control screen and the Viewing window Toolbar appears as a floating Toolbar.

To View a Client in Full Screen Mode:

1 Display the View Window for the Client you want to view in Full Screen mode.

2 Click the Full Screen button in the View window Toolbar. A message box is displayed.

3 Read the information in the message box, then click the OK button. The View window fills the Control PC screen and displays a floating Toolbar.

4 When you have finished viewing the Client in Full Screen mode, click the Full Screen button a second time to restore the window to its original size.

Working with Multiple View Windows

You can have multiple View windows displayed simultaneously, enabling you to view several Clients at a time.

To Display Multiple View Windows:

In the Control window or View window, choose the Window, Tile, View Windows menu command. All the View windows are arranged and automatically scaled so that you can see the entire PC screen of each Client.

Another way of viewing multiple Client PC screens is to use the Scan operation. For more information, see “Scanning Clients”.

Using the Clipboard

You can use the clipboard to transfer data between Client and Control PCs.

To Transfer Data from a Control to a Client:

1. On the Control PC, cut or copy the data you want to transfer to the clipboard.
2. In the Control window, display the View window for the Client you want to paste text to.
3. In the View window Toolbar, click the Clipboard button to display a drop-down Menu.

4. Choose the Send Clipboard command from this menu.

   You can now use the View window to control the Client's PC to select an application and paste in the transferred clipboard contents.

To Transfer Data from a Client to a Control:

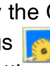
1. Use a View window to control the Client PC, and cut or copy the data to the Client PC clipboard.
2. Click the View window Toolbar's Clipboard button to display the drop-down menu, then choose the Retrieve Clipboard command.
3. Paste the transferred clipboard contents into an application on the Control PC.

You can also use the commands in the View window's Client, Clipboard submenu to send and retrieve clipboard data.

Some data formats may not transfer as expected using the Clipboard facility.

You can disable the clipboard facility on a Client using the Options tab in the Client Configurator's CLIENT32.INI dialog. For more information, see “Configuring Clients” on page 77.

Displaying the View Settings for a Client

To display or amend the View settings for a Client, display the Client’s View window, then click the Settings  button in the View window Toolbar. The Settings dialog is displayed; the View settings are contained in the View tab.

To close the Client Properties dialog, click the OK button or Cancel button.

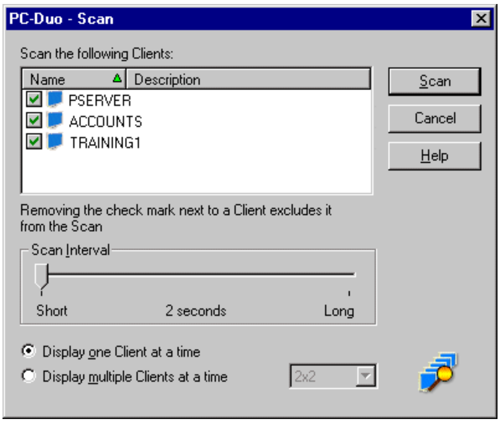
Scanning Clients

You can use the Scan operation to display the screens of selected Clients in a dedicated window.

To Scan Selected Clients:

1. In the main Control window, ensure you are connected to the Clients you want to scan.

2 Choose the Tools, Scan menu command to display the Scan dialog.



3 The Scan dialog contains a list of connected Clients, with checks displayed alongside them to indicate they will be included in the Scan Operation. To exclude a connected Client from the Scan operation, click the check box alongside the Client.

4 Drag the slider at the bottom of the Scan dialog to change the Scan Interval - this can be set to between 2 and 60 seconds (the currently specified Time is indicated below the slider).

5 Select a display option to specify how you want the Client screens to be displayed. Choose:

Display one Client at a time to display the Clients serially.

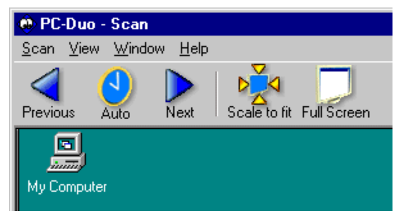
Display multiple Clients at a time to tile the Client views. Select an entry in the list to specify the maximum number of Clients you want to display simultaneously.

6 Click the Scan button to begin the Scan operation. The Scan window is displayed.

You cannot select a Group and then choose the Tools, Scan menu command. However, you can select a specific Group in the Tree View to display all its member Clients in the List View, and then select all these Clients before choosing the Tools, Scan command.

Using the Scan Window

The Scan window automatically cycles through selected Client PC screens one at a time, in turn:



- To cycle through Client PC screens manually, click the Auto button in the Scan window Toolbar. This button is a toggle button; click it again to resume the automatic cycling.
- When scanning Clients manually, click the Previous and Next buttons in the Scan window Toolbar to display the preceding and following Client screens.
- The Scale to Fit button displays the entire Client PC screen in whatever sized Scan window you have, eliminating the need to use the scroll bars to view different areas of the Client PC screen.
- The Full Screen button displays the Scan window in Full Screen mode. The Scan window fills the Control PC screen and a floating Toolbar is displayed. (Click the Full Screen button again to exit Full Screen mode.)

- To end the Scan operation, choose the Scan, Close command, or if the Scan window is displayed in Full Screen mode, click the Close button in the Scan window Toolbar.

Working with Groups

Clients can be organized into Groups. Many of the operations performed on Clients can be performed on an entire Group, such as connecting to all the Clients in a Group simultaneously.

If you have used a previous version of PC-Duo, you can import existing group information. For more information, see “Customizing The Toolbar” on page 60.

To Create a Group:

1. Select Groups in the Tree View, then double-click the Create a Group  icon.

   Alternatively, click the New Button in the Toolbar and choose the Group command in the drop-down menu.

2. In the Add a group dialog, enter a Name and Description for the Group you want to create, then choose the Next button to go to the Group Members dialog.

3. The Group Members dialog enables you to add Clients to the Group you have created:

   - To add a Client to your Group, select the Client in the Available Clients list, then choose the Add button. The Client is displayed in the Group Members list.
   - To add all the Clients in the Available Clients list to your Group, choose the Add All button. All available Clients are displayed in the Group Members list.
   - If you want to remove a Client from the group, select the Client in the Group Members list and click the Remove button. The Client is displayed in the Available Clients list.

4. When you have finished adding Clients to your Group, click the Finish button. The new Group is displayed in the Group List.

Adding Clients to Groups

You can add Clients to existing Groups as necessary.

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

To Add Clients to a Group:

1. Select Clients in the Tree View, so that the Clients List is displayed. (Remember, the Clients List shows the Clients to whom you have previously connected, or have manually added to the Clients List.)
2. Select all the Clients you want to add to the Group.
3. Right-click any of the selected Clients and select the Add to group option. In the Add to group submenu, select the group that you want to add the Client to. The Client is added to the Group.

If there are more Groups than can be displayed in the Add to group submenu, choose the More command in this submenu to display the Add Client(s) to Group dialog.

Removing Clients from Groups

To Remove a Client from a Group:

1. In the Tree View, select the Group from which you want to remove a Client.
2. In the List View, right-click the Client you want to remove.
3. In the shortcut menu, choose the Remove from Group command.

You can also remove Clients from a Group using the Group Members tab of the Group Properties dialog. For more information, see “Displaying Group Properties”.

Renaming Groups

To Rename a Group:

1. Select Groups in the Tree View, then select the Group in the List View.
2. Choose the Group, Rename menu command. The Group name is displayed in a black border, enabling you to edit it.
3. Edit the Group name, then press the Enter key to save your changes.

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 is displayed and the Group name is selected, enabling you to rename the Group.)

Displaying Group Properties

You can view a Group's properties using the Group Properties dialog. This dialog contains two tabs:

General displays the Group Name and description.

Members lists the Clients that belong to the Group.

You can edit the information contained in these tabs. For example, you can use the General tab to change the Group's description, or use the Group Members tab to add and remove Clients.

To Display a Group's Properties:

1. Select Groups in the Tree View, then locate the Group in the List View.
2. Right-click the Group to display the shortcut menu, then choose the Properties command to display the Group Properties dialog.
3. When you have finishing viewing the contents of the Group Properties dialog, click the OK button to close the dialog.

You can also display the Group Properties dialog by selecting the Group, then choosing the Group, Properties menu command.

Connecting to Groups

After you have organized Clients into Groups, you can connect to all of the Clients in a Group in one procedure.

To Connect to a Group:

1. Display the Group to which you want to connect in the Tree View, or in the List View.
2. Right-click the Group to display the shortcut menu, then choose the Connect command. The Control connects to all the available Clients in the Group. This may take a few moments.

You can also connect to a Group by selecting the Group, then choosing the Group, Connect menu command.

Deleting Groups

To Delete a Group:

1. Display the Group that you want to delete in the Tree View, or in the List View.
2. Right-click the Group, then choose the Delete command from the Shortcut menu.

You can also delete a Group by selecting it in the List View, then choosing the Group, Delete menu command.

When you delete a Group, it has no effect on the Clients that belong to the Group.

Viewing and Arranging Lists

The contents of the List View such as Clients, and Groups can be displayed in different formats and sorted in various orders to make them easier to view and find.

There are four types of view with which you can display the contents of the List View:

Large Icons Displays the items as large icons above the item names, which are listed from left to right.

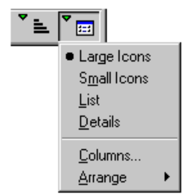
Small Icons Displays the items as small icons to the left of the item names, which are listed from left to right.

List Displays the items as small icons to the left of the item names, which are listed from top to bottom.

Details Displays the items as small icons to the left of the item names, with related details for each item displayed in adjacent columns. For example, when viewing Clients in the List View, details such as the Client Status, Description, Client Version and Platform are displayed.

To Change the View Format:

Click the View button on the right of the Control window to display a drop-down menu.



Choose a command from this menu to apply a View format. (The current View type format is indicated by a circle.)

The View format can also be changed using the Large Icons, Small Icons, List and Details commands in the View menu or by right-clicking an empty part of the List View and choosing a command from the shortcut menu.

You can have different format settings for each type of list. For example, Clients may be displayed as Small Icons, while Groups are displayed as Large Icons.

When you position the mouse over an item without clicking, a Tooltip is displayed containing the item's details, irrespective of the current View format.

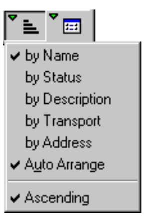
Changing the Sort Order

Items in the List View, such as Clients and Groups can be sorted into different orders:

- Lists of Clients can be sorted by Name, Status, Description, Transport or Address, in ascending or descending order.
- Groups can be sorted by Name, Description, or by the number of Group members.

To Change the Sort Order:

1 Click the Sort button above the List View to display a menu.



2 Choose a command from the menu to change the sort order. (The current sort order for the selected List is indicated by a check mark.)

3 If you want to change the order direction, display this menu again and choose the Ascending command. This command is a toggle; if the Items are in ascending order, the Ascending command is checked.

You can also change the item order by right-clicking an empty part of the List View to display the shortcut menu, then choosing a command from the Arrange submenu.

When the List View is displayed in Details view, you can click on the column headings (such as Name and Description) to sort the order by the entries in that column.

Clicking on a column heading a second time toggles the order direction; the Current order direction is indicated by a small arrow on the right of the Column heading (an up arrow indicates the List is sorted in Ascending order).

The View, Columns menu command enables you to specify which columns are displayed, and in what order, in the Details View.

Showing the Control PC to Clients and Groups

PC-Duo enables you to show the Control PC's screen to individual Clients or to an entire Group. This feature is especially useful in a training environment as it enables all Clients to see the screen that is being demonstrated.

To use the Show feature on the Control PC, you must also have the PC-Duo Client application installed.

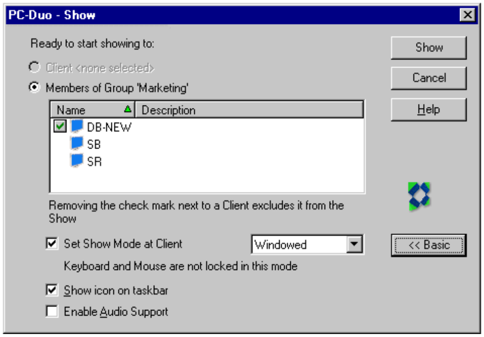
To Show the Control PC to Clients and Groups:

1 Ensure you are connected to the Clients or Group to which you want to show your screen.

2 Select the Clients or Group to which you want to show your screen.

3 Click the Show  button in the Toolbar.

4 In the Show dialog, select the These Clients option, and deselect any Clients which you don't want to display your screen to.

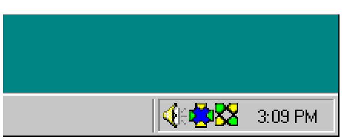


5 Click the Show button to begin the Show session.

The Show dialog is retitled Showing to indicate that a Show operation is in progress, and both the dialog and the Control window automatically minimize (the Control application is displayed as a button in the Taskbar).

6 When you have finished showing your screen, click the Control application button in the Taskbar to restore the Control window, then click the End button in the Showing dialog.

If you select the Show icon on task bar option at the bottom of the Show dialog, the minimized Control window is displayed as a small icon in the Taskbar's system tray.



Double-click this icon to display the Showing dialog.

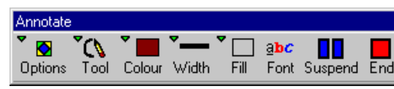
If you are Viewing a Client while Showing the Control screen to another Client, you can show a Client's screen to another Client.

Using Annotate in a Show Session

The Annotate function enables you to draw and write on the Control screen during a Show session. Use it to illustrate training and highlight areas of special interest during sessions.

To annotate a Show session:

1 Double-click the Annotate icon in the system tray or right-click the Show icon in the Show window Toolbar. The Annotate Toolbar is displayed.



2 Select a Tool and Colour, and use the left mouse button to draw on the Control screen.

Click the Suspend button if you do not want to show your the screen to the Clients as you draw. This freezes the Show session, but enables you to continue working in the background. When you have finished, click Suspend again to restart the Show and update the Show window at the Clients.

Arranging Windows

The Control window and any other PC-Duo windows (such as File Transfer and View windows) can be arranged using the commands in the Windows, Tile submenu.

To Arrange Multiple Windows:

Ensure the Control window is the active, then choose a command from the Window, Tile menu:

All Windows arranges all PC-Duo windows, including the Control window, so that they fill the screen.

View Windows arranges all View windows so that they fill the Control PC screen.

File Transfer Windows arranges all File Transfer windows so that they fill the Control PC screen.

Close All Windows closes all other PC-Duo windows except for the Control window.

When working with multiple File Transfer or View windows, refer to a window's title bar to check which Client is displayed in a window.

You can use the Window, Tile, All Windows menu command to similarly arrange all PC-Duo windows (including the Control window, any File Transfer Windows and any View windows).

Connecting to Remote Clients and Networks

As well as allowing you to take control of Clients on the local network, PC-Duo enables you to take control of Clients on Remote Networks.

If you have used a previous version of PC-Duo, you can import existing Remote Network information. For more information, see “Customizing The Toolbar” on page 60.

Adding New Remote Networks

To Add a New Remote Network:

1 Click the New button in the Toolbar to display the drop-down menu, then choose the Remote Network command.

2 In the Add a Remote Network dialog, enter a Name and Description for the Remote Network you want to add, then click the Next button to advance to the next stage.

3 Enter the phone number of the Remote Network in the Phone Number text box, then make sure the Network Transport settings for the Network you are dialing into are correct.

4 Choose the Finish button to add the new Remote Network.

Connecting to Remote Networks

Before you can connect to a remote network, the Remote Network must have the appropriate Bridge module loaded on the Client PC you are dialing (see “Loading the Bridge on a Client” on page 11), and the PC-Duo Client application must be installed on the PCs you want to access on the Remote Network.

To Connect to a Remote Network:

1 Ensure the Control PC is connected to a modem, the modem is turned on.

2 Choose the Network, Remote, Dial menu command to display the Remote Networks dialog.

3 Select the Remote Network to which you want to connect from the list, then choose the Dial button.

When the remote connection is established, the Control can work with Clients on the remote network in the same way as on a local network.

You can create several Remote Networks, but a Control can connect to only one Remote Network and only one Remote Client at a time.

Displaying Remote Network Properties

You can display the properties of a Remote Network using the Remote Network Properties dialog. This dialog contains the Name, Description, Telephone Number and Network Transport for the Remote Network.

To Display a Remote Network's Properties:

1. Select Remote Networks in the Tree View, then locate the Remote Network in the List View.
2. Right-click the Remote Network to display the shortcut menu, then choose the Properties command from the submenu.

   When the Remote Network Properties dialog is displayed, the Name, Description, Telephone Number and Network Transport details are displayed.
3. When you have finished viewing the contents, click the OK button or the Cancel button to close the Remote Network Properties dialog.

You can also display the Remote Network Properties dialog by selecting the Remote Network, then choosing the Network, Remote, Properties Menu command.

Deleting Remote Networks

To delete a Remote Network:

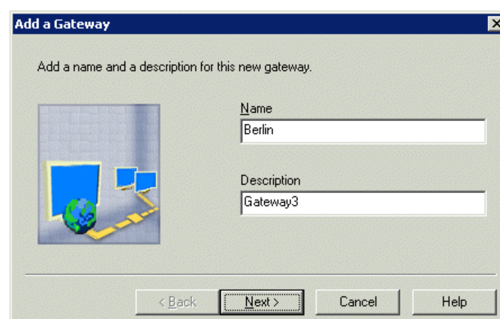
1. Select Remote Networks in the Tree View, then locate the Remote Network in the List View.
2. Right-click the Remote Network then choose the Delete from the shortcut menu to delete this Remote Network. The Network Clients are removed from the list of known Clients.

Gateways

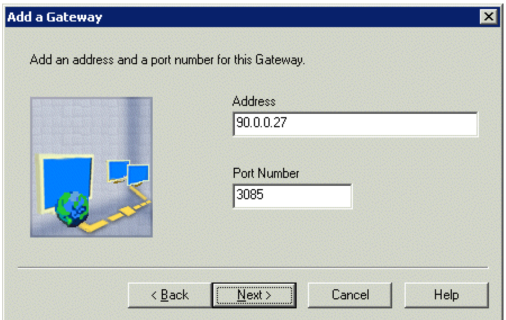
Gateways enable Controls to access multiple Clients across the Internet. Each Gateway provides a single IP address through which Controls connect to Clients on an internal network, and a configurable port to listen for Client-Control communications. Use Gateways when you want to allow external Control PCs to access Clients through an Internet Firewall.

To register a Gateway with a Control:

1. Click Gateways in the Tree view to display Gateways List.
2. In the List View, double-click Add a Gateway to display the Gateway Wizard.



3. Enter the Name by which you want to refer to the Gateway, and a Description of what it is used for. Click the Next button to continue. The second Wizard dialog is displayed.
4. In the Address field, enter the domain name or IP address of the Gateway.



5 By default, Gateways use port 3085 to listen for communications between Clients and Controls. This is registered for use by PC-Duo. If you want to use a different port to transmit and receive PC-Duo data, enter the port number in the Gateway Port field.

If you change the port number of a Gateway, you must also specify the same port setting for all Controls and Clients using the Gateway.

Click the Next button to continue. The third Wizard dialog is displayed.

6 Click the Set button to display the Security dialog. Enter the key. The key must be from 8 to 15 characters long and can contain any alpha-numeric characters. Click the OK button to validate the key and save it.

Gateway Keys control access to Clients. To access a Client through a Gateway, a Control's Gateway Key must match the Gateway Key specified for the Client and one of the Keys defined for the Gateway. For more information on specifying Gateway Keys for Clients, see "Configuring Clients for Gateway Connections" on page 83.

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7 The encrypted key is displayed in the Gateway Wizard. Click the OK button to complete the Wizard and add the Gateway to the Control.

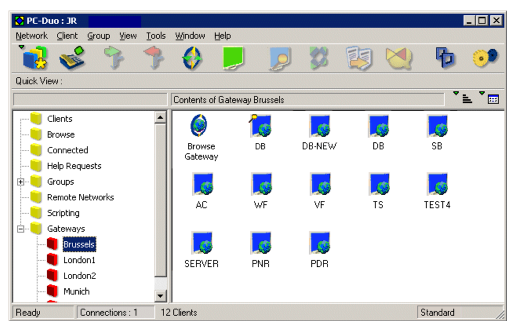
To update Gateway properties:

1 In the Control's Tree View, right-click the Gateway you want to update, and choose Properties from the shortcut menu. The Gateway Properties dialog is displayed.

2 Change the details you want to update, and click the OK button to save your changes and close the dialog.

Accessing Clients through a Gateway

When you have registered a Gateway with a Control, you can use the Control to access Clients across the Internet. Controls can perform actions on Internet Clients in the same way as Clients connected through internal networks.



Controls can access only those Clients that are configured with the same Gateway Key as the Control itself. The enables you to maintain Client security because you can control which Clients are available through the use of different Gateway Keys for different sets of Client users.

In addition, the Gateway Keys on Clients and Controls must both match a Gateway Key on the Gateway itself. This three-part security means that only authorized users can access your Clients through the Internet and prevents other users of PC-Duo from accessing PCs within your system.

To access a Client through a Gateway:

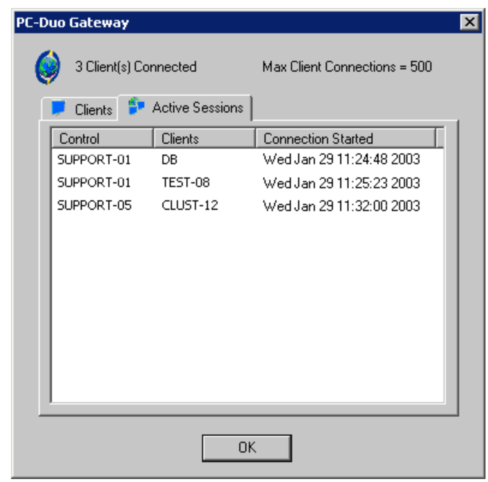
1. In the Control's Tree View, expand the Gateways entry and click the Gateway through which you want to access the Client.
2. In the Gateway View, double-click Browse Gateway to list the Clients that match the Control's Gateway Key and that are currently online.

   The Browse Gateway dialog is displayed.
3. In the Browse Gateway dialog, enter the criteria you want to use to search for Clients:
   - To list all Clients that match the Control's Gateway Key, clear the text field.
   - To look for a specific Client, enter the Client name in the text field.
   - To restrict the search to Clients whose names begin with specific characters, enter the characters in the text field. For example, if you enter ADMIN, any Clients named ADMIN1, ADMIN_OFFICE and ADMINIS-TRATOR will be found.
   - To restrict the list to Clients that currently require help, select the Only Clients Requesting Help check box.
4. Click the OK button to browse for Clients that are configured with the same Gateway Key as your Control. The Clients are displayed in the Browse View.

You can now connect to Clients by selecting their entries in the Control's Gateway View and selecting the Connect icon in the Control Toolbar. For more information, see "Connecting to Clients".

Monitoring Gateways

Each Gateway automatically tracks the connections made between Controls and Clients across the Internet. You can monitor the Internet connections made across a Gateway using the PC-Duo Gateway dialog.



To display the Internet connections for a Gateway:

1. Double-click the Gateway icon in the Windows system tray, or right-click the icon and choose Open from the shortcut menu. The Gateway dialog is displayed.
2. In the Gateway dialog, select the Clients tab to list the currently connected Clients. Select the Active Sessions tab to list the current Control sessions.

3 When you have finished, click the OK button to close the dialog.

You can also view the details of Internet connections in each Gateway’s Event log. For more information, see “Configuring Gateways” on page 95.

Starting a Control from the Command Line

PC-Duo applications can be started from the command line. This enables you to embed PC-Duo within other applications. Optional parameters also enable you to create customized shortcuts that automatically open a remote control View session with a specified Client.

To open the Control from a command line, navigate to the directory in which PC-Duo is installed, and type:

PCICTLUI

with any of the following parameters:

/CClient<Transport> Specifies the name or IP address of the Client you want to connect to. If you specify the Client name, the Control must have previously connected to the Client. If you specify the Client’s IP address, it must be preceded by the > character. For example: /C>90.0.0.32<TCP>.

The <Transport> parameter enables you to specify the transport with which you want to connect to the specified Client. You can specify *IPX*, *TCP* or *NBn*, using the numbered stack n from 0-7.

Repeat the /C option for each Client you want to connect to.

If you are entering the parameter at a command prompt, you must include the parameter string in quotation marks. For example, /C”>90.0.0.32<IPX>”.

/A Opens a Control session and starts a Chat session with the Clients specified by the /C parameter.

/Dphone_number Dials the specified Bridge on startup.

/E Automatically ends the remote control session when the View window is closed.

/F Prevents the user from changing Profiles

/Ggroup_name Connects to all available Clients in the specified Group on startup.

/Lprofile_file Loads a Control Profile from a configuration file.

/Nprofile_name Loads the named Control Profile.

/Rreplay_file Displays the specified Replay File.

/Uxxx When /D is specified, this option specifies the Bridge protocol to be used. You can enter *IPX*, *TCP* or *NBa*, where *a* is the NetBIOS adapter number used by the Bridge.

/Vmode Opens a PC-Duo Control session for the Clients specified by the /C parameter. Enter:

- /VW to open the Clients in Watch mode.
- /VS to open the Clients in Share mode.
- /VC to open the Clients in Control mode.

/W Saves the Profile loaded by the /L option

Chapter 5: Communicating

PC-Duo offers several methods of communicating between Controls and Clients:

- Controls can engage in text conversations with one or more Clients using a dedicated Chat window.
- A Control can send messages to selected Clients, all Clients to which the Control is connected, to a Group of Clients, or broadcast a message to all Clients on a network.
- A Control can also use PC-Duo's Audio Chat facilities to communicate with a Client. Additionally, the Announce facility allows you to send an Audio message to one or more connected Clients.
- Clients can request help from a Control by sending Help Request messages.

Sending Messages

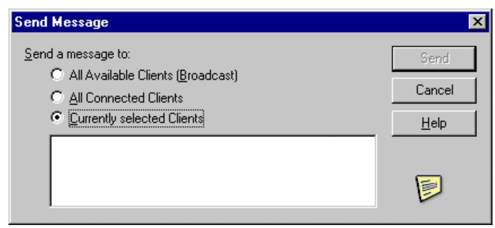
PC-Duo enables you to send messages to:

- All available Clients on the network, irrespective of whether or not they are connected.
- All currently connected Clients (the Clients displayed the Quick View bar, and those Clients with an arrow symbol displayed alongside their icons in the List View).
- The Clients currently selected in the Control window's List View.

Sending Messages to Clients

To Send a Message to a Client:

1. In the Control window's Tree View, select Clients.
2. In the List View, right-click the Client to which you want to send the message.
3. In the shortcut menu, choose the Message command to display the Send Message dialog.



4. Ensure the Currently selected Clients option is selected, then type your message in the text box.
5. Click the Send button to send your message to the Client.

Sending Messages to Groups

To Send a Message to a Group:

1. In the Control window's Tree View, select Groups.
2. Right-click the Group to which you want to send the message, then choose the Message command from the shortcut menu.

3 In the Send Message dialog, ensure the Members of Group Option is selected, then type your message in the text box.

4 Click the Send button to send your message to the Group.

Sending Messages to All Clients on the Network

You can broadcast message to all available Clients on the network, even if they are not currently connected.

To Send a Message to All Clients on the Network:

1 Choose the Tools, Broadcast Message menu command.

2 Choose the Client group you want to send the message to.

3 In the Send Message dialog, type your message in the text box.

4 Click the Send button to send your message to all available Clients.

Using the Chat Feature

Using PC-Duo, you can engage in a text conversation between selected Clients and the Control. The conversation takes place in a dedicated window.

Windows 95 Clients must install WinSock2 before they can use the multiple-Client Chat feature. You can download the Winsock.dll from the Microsoft Web site.

Starting a Chat Session

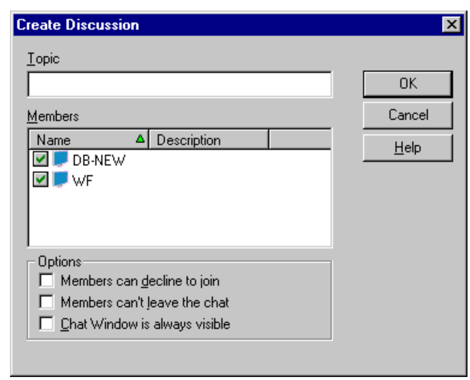
You do not need to be connected to a Client before starting a Chat session with them.

To Start a Chat Session:

1 In the List View of the Control window, select the Clients that you want to communicate with.

If you are already connected to the Client, you can also start a chat session by clicking the Chat button in the View window or the File Transfer window's Toolbar.

2 Click the Chat  button in the Toolbar. The Create Discussion dialog is displayed.

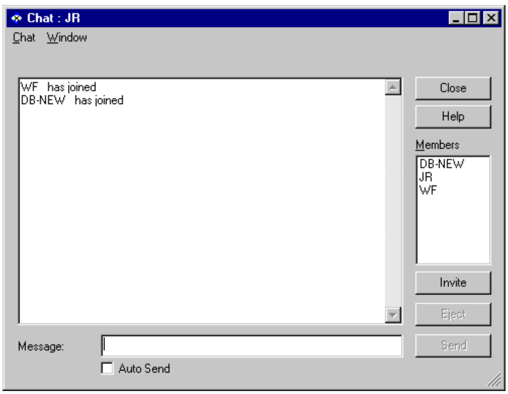


3 If you want to give a name to the discussion, type the name in the Topic box.

4 Deselect any Clients that you want to exclude from the discussion, then click the OK button to display the Chat window.

Chatting to Clients

When you start a Chat session, a Chat window is displayed on all selected Clients, and the current participants are displayed in the Members list.



You can chat to all participating Clients using the large discussion box, and the Message box:

- Type your messages in the Message text box, and click the Send button to broadcast it to members of the discussion.
- Your messages and the messages of the Clients are displayed in the discussion box.

To add new Clients to the discussion, click the Invite button, select their entries in the Add Members dialog and click the Add button.

To remove Clients from the discussion, select their entries in the Members list, and click the Eject button.

To end the Chat session, click the Close button.

Audio Chat and Announcements

PC-Duo enables a Control user to chat to a Client user in real-time using a microphone, soundcard and speaker.

Additionally, you can broadcast an audio message to one or more connected Clients using the Announce feature.

The Audio settings for the Control can be configured using the Settings for Configuration dialog-accessed via the Settings button in the Control window Toolbar. For more information about configuring Controls, see “Amending Control Profile Settings” on page 88.

The Client's audio settings can be customized using the CLIENT32.INI dialog's Audio tab. This dialog is accessed using the Client Configurator. For more information, see “Configuring Clients” on page 77.

Using Audio Chat

PC-Duo's Audio Chat facility enables you to have two-way conversations between a Control and a Client. You can also use this feature when performing a Show (see “Showing the Control PC to Clients and Groups” on page 31), to provide a commentary to the demonstration.

Audio chats are initiated using the Audio button in the relevant View or Show window's Toolbar.

When you click the Audio button, a drop-down menu is displayed.

The commands in the Audio button's menu perform the following actions:

On activates a Chat session. When a Chat session is activated, the window's status bar displays the volume levels being received.

Off terminates a Chat session.

Talk Only means the Audio is sent in one direction only, from the Control to the Client.

Listen Only stops the Control user from being heard by the Client.

Additionally, you can use the Mute button in the Toolbar to turn the speaker and microphone off. (This button acts as a toggle; click it again to reactivate the speaker and microphone.)

An Audio Chat may automatically deactivate if another application on the Control PC or Client PC needs to use the soundcard. (A message box is displayed to inform you of this.)

Making Audio Announcements

To Make an Audio Announcement:

1 In the Control window, choose the Tools, Announce menu command.

2 In the Announce dialog, choose These Clients, and deselect any Clients you do not want to talk to.

3 Click the Announce button. A message box is displayed to say inform you that you can now make your announcement.

4 Make the announcement, and click the OK button when you have finished.

Receiving Help Requests

Help Requests can be sent by Client PC users to notify a connected Control that they require assistance.

If there is no Control connected to the Client when they send a Help Request, the Request will be received the next time a Control connects to the Client.

When a Help Request has been received by a Control, it is stored in that Control's Help Requests list. A Control stores only one Help Request per Client.

Working with Help Requests:

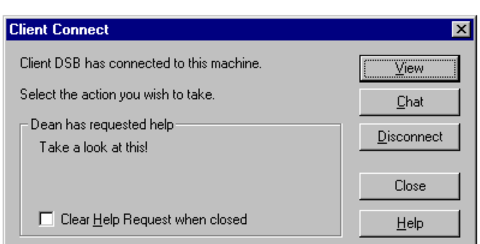
- The Help Requests icon in the Tree View changes to a green icon when a Help Request is received.
- To list the Clients who have sent Help Requests, select Help Requests in the Tree View to display the Help Requests list.
- To view the messages in the Help Requests list, choose the View, Details menu command to display the list in Details view. The Help Request messages are displayed in the Help Message column.

- You can also view a Help Request from a Client by right-clicking on the Client in the Help Requests list and choosing Properties from the shortcut menu. When the Client Properties dialog is displayed, click the Help Requested tab to display their Help message.
- To resize the Help Message column drag the right edge of the column title.
- To clear a Help Request after assisting a user, right-click the Client in the Help Requests list, then choose the Clear Help command from the shortcut menu.

  You can also click the Clear button in the Help Requested tab of the Client Properties dialog to clear a request for help.

Responding to Calls from Clients

When Clients use their Call Control facility to contact a Control, the Client Connect dialog is displayed at the Control PC.

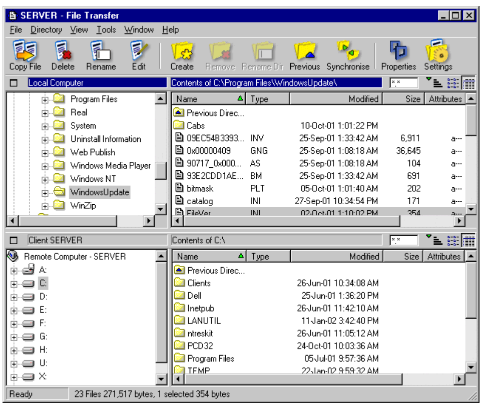


The buttons in this dialog enable you to view the Client in a View window, Chat to the Client, or Disconnect the Client.

The check box at the bottom of the dialog enables you to delete the Client's latest Help Request. Click the Close button to close the dialog.

Chapter 6: Transferring Files

PC-Duo offers comprehensive file transfer features. File transfer sessions between the Control and a Client take place in the File Transfer window.



You can perform a number of file maintenance operations on either the Control PC or Client PC, including copying, deleting and renaming files, and creating and deleting directories.

You do not need to be connected to a Client before beginning a File Transfer session; the Control automatically connects to a Client when you start a File Transfer Session.

To Display the File Transfer Window:

Use one of the following methods:

- Select the Client with whom you want to transfer files, then click the File Transfer button in the Toolbar. 
- Select the Client, then choose the Client, File Transfer menu command.

Using the File Transfer Window

When you start a File Transfer session with a Client, the File Transfer window is displayed. This window contains views of both the Control and Client PCs:

- The menus in the File Transfer window contain a number of commands that enable you to perform operations in the File Transfer window.
- The Toolbar contains a row of buttons which provide quick access to common tasks.
- Beneath the Toolbar is the Control Pane. This displays the drive and directory structure of the Control PC.
- The Client Pane, in the bottom half of the window, beneath the Control Pane, displays the contents of the Client PC.
- The currently active pane is indicated by the pane title (above the pane) being the same color as the File Transfer window's title bar. Only one pane (the Control Pane or the Client Pane) can be active at a time.
- To switch between Control and Client Panes, click inside the Pane you want to activate.
- Both the Control Pane and the Client Pane are divided into:

  The Tree View (on the left) of each pane displays the Drive and Directory structure of the PC.

The List View (on the right) displays the items, such as files and subdirectories, which are contained in the drive or directory that is selected in the Tree View.

Working with the Tree View

To select a drive or directory in a Tree View, click on it. The contents of the selected item are displayed in the List View.

If the selected drive or directory contains subdirectories which are not displayed in the Tree View, a plus (+) symbol is displayed to the left of the item. (The drive or directory must be selected before this symbol is displayed.)

To display the contents of a drive or directory in the Tree View, either double-click the drive or directory, or click the symbol to its left.

If the contents of the selected drive or directory are displayed in the Tree View, a dash (-) symbol is displayed to the left of the item. To hide the contents of the selected drive or directory, either double-click the drive or directory, or click the symbol to its left.

Working with the List View

To select an item in a List View, click on it.

To select multiple items in a List View, then:

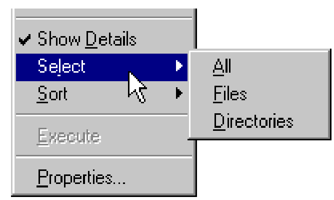
- If the items you want to select are adjacent to one another, select the first item, hold down the Shift key and select the last item. All items in between are also selected.
- If the items you want to select are not adjacent to one another, select the first item, then hold down the Ctrl key and select each of the other items.

To select all the items, right-click anywhere on the List View to display the shortcut menu, then choose a command from the Select Submenu. Choose:

All to select all files and subdirectories in the current directory.

Files to select all files in the current directory.

Directories to select all subdirectories in the current directory.



To display the contents of the drive or directory that is one level up from the current directory, double-click the Previous directory item at the top of the List View.

Applying a Filter to Files in List View

You can filter the contents of a Control or Client's List View so that only file names that meet specified criteria are displayed. Filter settings applied to one pane do not affect the other pane.

Filter settings remain applied to a Control or Client Pane until you reset them, or close the File Transfer window.

To Apply a Filter to Files in a List View:

1. Click in the Filter text box above the pane whose List View you want to filter.
2. Replace the default filter (*.*) with your own.

For example, if you wanted to view all files whose names begin with the letters MKT, type MKT*.* in the Filter text box.

3 Press the Return key to apply the filter.

To Reset a Filter to Files in a List View:

1 Click in the Filter text box above the pane whose List View you want to reset.

2 Type *.* in the Filter text box. This default filter means no filter is applied to the files in the current List View.

3 Press the Return key to reset the filter.

Changing the View Format in a File Transfer Window

The contents of the List Views on the right of the Control Pane and Client Pane can be displayed in different formats. You can also sort the contents of the List Views to make them easier to navigate.

There are two types of view with which you can display the contents of a List View in a File Transfer window:

To change to Details view, click the Details  button above the pane you want to change.

To change to Name Only view, click the Name Only  button above the pane you want to change.

Alternatively, you can change the view type using the View, Show Details menu command, or by right-clicking in the pane's List View and choosing the Show Details command from the shortcut menu.

When you position the mouse over a file in the List View, a Tooltip displays the item's details, regardless of the current View format.

Changing Sort Orders in a File Transfer Window

The contents of List Views in a File Transfer window can be sorted using the following options:

By Name The contents are sorted by file name

By Type The contents are sorted by file extension. (This is not applicable to drives and directories in the List View)

By Modified Date The contents are sorted according to the date they were last modified

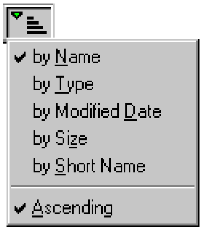
By Size The contents are sorted according to the size of the file. (This is not applicable to drives and directories in the List View)

By Short Name The contents are sorted using the truncated version of their names (to 8 characters for the file name and 3 for the file extension)

Ascending The contents are to be sorted in ascending (A-Z) order. Choose this option again to sort the contents in descending (Z-A) order.

To Change the Sort Order:

1 Click the Sort Order button above the pane you want to work with. A drop-down menu is displayed, containing the Sort Order commands.



2 Choose the sort order you want to apply from this drop-down menu. (The current sort order is indicated by a check symbol.)

3 If you want to change the order direction, redisplay the menu and choose the Ascending command. This command is a toggle command - if the items are in ascending order, the ascending command is checked.

When the List View is displayed in Details view, you can also click the Column headings to sort the order by the column’s contents.

Clicking on a column heading a second time reverses the sort order; the order is indicated by an arrow on the right of the column heading by which the List View is sorted (An up arrow indicates the list is sorted in ascending order).

Copying Files and Directories

You can use the File Transfer window to copy files and directories to and from the Client PC.

To Copy Files and Directories from the Control PC to the Client PC:

1 In the Client Pane's Tree View, select the destination drive or directory to which you want to copy the items.

2 Select the items you want to copy from the Control Pane's List View.

3 Click the Copy File  button on the Toolbar.

4 A message is displayed asking you to confirm the operation. Check the files and the destination are correct, then click the Yes button to copy the files to the Client PC.

To Copy Files and Directories from the Client PC to the Control PC:

1 In the Control Pane's Tree View, select the destination drive or directory to which you want to copy the items.

2 Select the items you want to copy in the Client Pane's List View.

3 Click the Copy File button on the Toolbar.

4 A message is displayed asking you to confirm the operation. Check the files and the destination are correct, then click the Yes button to copy the files to the Control PC.

Renaming Files

To Rename a File:

1 In the Control or Client Pane's List View, select the file you want to Rename.

2 Click the Rename  button in the Toolbar.

The file name is displayed with a black border enabling you to edit it.

3 Type the new name for the file, then press the Enter key to rename it.

You can also rename a selected file by clicking on it a second time; by right-clicking on it and choosing Rename from the shortcut menu; or by choosing the File, Rename menu command.

Deleting Files and Directories

You can delete files and directories from either the Control PC or a Client PC using the File Transfer window.

To Delete a File:

1. Ensure the correct pane is active.
2. Select the files you want to delete.
3. Click the Delete  button in the Toolbar.
4. In the Delete Files message, click the Yes button to confirm the Operation.

To Delete a Directory:

1. Ensure the correct pane is active, then select the directory you want to delete.
2. Click the Remove button in the Toolbar. The Remove Directory dialog is displayed.
3. Select the Include Contents check box, then click the Yes button to confirm the Operation. If you don't select the Include Contents check box, the directory is deleted only if it is empty.

You can also delete the selected directory using the Directory, Delete menu command, or by right-clicking on the directory and choosing the Remove Command from the shortcut menu.

You cannot remove more than one directory at a time (excluding any subdirectories). If you have several directories selected in a List View when performing a Remove operation, only the last selected directory is removed.

Creating Directories

To Create a Directory:

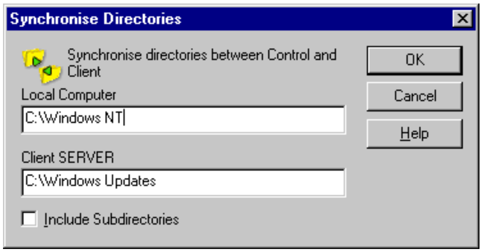
1. Ensure the correct pane is active.
2. In the Tree View, select the drive or directory in which you want to create the new directory.
3. Click the Create  button in the Toolbar.
4. In the Create Directory dialog, enter a name for the directory, then click the OK button.

Synchronizing Directories

PC-Duo enables you to synchronize the contents of selected directories on the Control and Client. When you synchronize two directories, any new or updated files in either directory are automatically copied to the other directory.

To Synchronize Directories:

1. In the Tree View of the Control Pane, select the directory you want to synchronize with the Client.
2. In the Tree View of the Client Pane, select the directory you want to synchronize with the Control.
3. Click the Synchronise  button in the Toolbar.
4. In the Synchronise Directories dialog, check the displayed paths of the two directories you selected. If you want to include subdirectories, select the Include Subdirectories check box.



5 Click the OK button. In the warning message, click the Yes button to continue.

The Directory Synchronization Progress dialog is displayed, showing the progress of the synchronization operation.

6 When the operation is complete, the results are displayed in the Directory Synchronization Results dialog. Read the information in this dialog, then click the OK button.

Arranging Multiple File Transfer Windows

In the same way that you can connect to more than one Client at a time, you can also have more than one File Transfer window open simultaneously. These File Transfer windows can be arranged using the commands in the Window, Tile submenu.

To Arrange Multiple File Transfer Windows:

1 Ensure a File Transfer window or the Control window is the active window.

2 Choose the Window, Tile, File Transfer Windows menu command. All open File Transfer windows are arranged to fill the Control PC screen.

When working with multiple File Transfer windows, use the File Transfer window's title bar to check which Client is displayed.

Ending a File Transfer Session

You can end a File Transfer Session with a Client and still remain connected to the Client.

To End a File Transfer Session:

1 Ensure the File Transfer window for the Client is displayed.

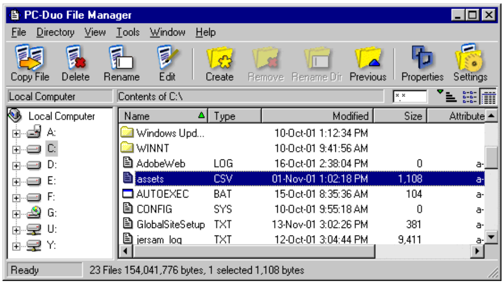
2 In the File Transfer window, choose the File, Close menu command or click the close button in the top right corner of the File Transfer window.

If you disconnect from a Client with which you have been transferring files, the File Transfer window for that Client is closed automatically.

Managing Files on the Control PC

You can manage the files on the Control PC using the File Manager window. This is similar to the File Transfer window, but only displays the contents of the Control PC.

To display the File Manager window, choose the Tools, File Manager menu command.



When you have finished working with the File Manager window, click the Close button in the top right corner of the File Manager window, or choose the File, Close menu command.

Introducing the File Manager Window

The File Manager window contains two panes:

- The Tree View on the left of each pane displays the drive and directory structure of the PC.
- The List View on the right displays the files and subdirectories which are contained in the drive or directory which is selected in the Tree View.

Navigating the File Manager Window

Navigating the Tree View

To select a drive or directory in the Tree View, click on it. The contents are displayed in the List View (on the right).

If the selected drive or directory contains subdirectories which are not displayed, a plus (+) symbol is displayed to the left of the item.

To expand the contents of a drive or directory so that its subdirectories are visible in the Tree View, double-click the entry or click the plus symbol.

If a drive or directory contains subdirectories which are displayed, a dash (-) symbol is displayed to the left of the item.

To hide the contents of a drive or directory so that its subdirectories are not displayed in the Tree View, double-click the drive or directory, or click the dash symbol.

Navigating the List View

To select an item in the List View, click on its entry.

To select multiple items in the List View, then:

- If the items you want to select are adjacent, select the first item, hold down the Shift key, then select the last item. All items in between are also selected.
- If the items you want to select are not adjacent to one another, select the first item, then hold down the Ctrl key and select each of the other items.

To select all the items in the List View, right-click anywhere on the List View to display the shortcut menu, then choose a command from the Select submenu:

All selects all files and subdirectories in the current directory.

Files selects all files in the current directory.

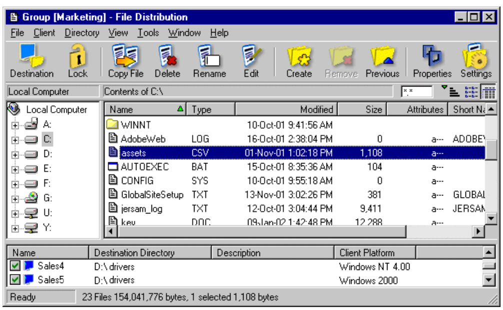
Directories selects all subdirectories in the current directory.

To display the contents of the drive or directory that is one level up from the current directory, double-click the previous directory item at the top of the List View.

Distributing Files to Groups

Using PC-Duo, you can easily distribute files to whole Groups on your network. To do this, specify the Group to which you want to distribute the files, then select the files you want to distribute in the Group File Transfer window.

The Group File Distribution window is similar to the standard File Transfer windows that are used to copy files to and from individual Clients.



The top part of the Group File Distribution window is the Control Pane. This displays the drive and directory structure of the Control PC, and enables you to select the files you want to distribute to the Group.

In the bottom part of the Group File Distribution window is the Group pane. This lists the Clients in the Group to which you are going to distribute the files, and also shows the current Destination Directory for each Client. This is the location on the Client PC to which the files will be copied.

To Distribute Files to a Group:

1. Select the Group in the Group List.
2. Choose the Group, File Distribution menu command to open the Group File Distribution window.
3. In the Control Pane (the top part of the Group File Transfer window), select the files that you want to distribute to the Group.
4. In the Group pane (the bottom part of the window), check the Destination Directory path of each Client in the Group.

   If you want to change the Destination Directory for a Client, right-click the Client and choose the Set Destination command from the shortcut menu, then use the Copy Files dialog to specify a new Destination Directory.
5. Ensure the Destination Directories for all Clients in the Group are correct, then click the Copy File command in the Toolbar.
6. When the confirmation message is displayed, click the Yes button to distribute the files. A Copy Progress dialog is displayed, showing the progress of the distribution operation.

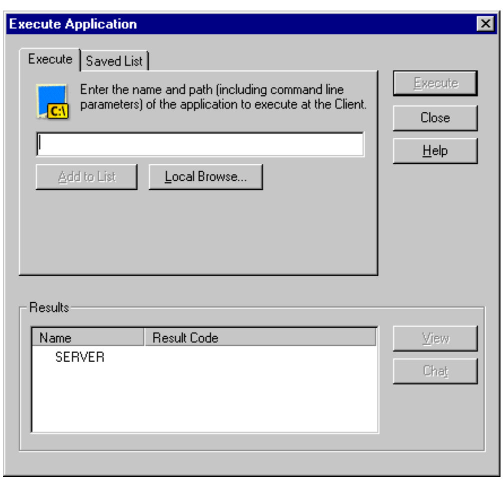
Chapter 7: Advanced Features

PC-Duo enables you to start an application on individual Clients and Groups of Clients.

This facility could be used to execute a setup application and install software on Client PCs.

Executing Applications on a Client

You can execute an application on any Client PC even if you are not connected to it before starting the application.



To Execute Applications on Individual Clients:

1 Right-click the Client on which you want to execute an application.

2 Choose the Execute at Client command from the shortcut menu.

3 In the Execute Application dialog, enter the path, name and any parameters for the application you want to execute, then click the Execute button.

The application is executed on the Client PC. After a few moments, the result of the operation are displayed in the bottom section of the Execute Application dialog.

Executing an Application on a Group of Clients

To Execute Applications on a Group of Clients:

1 Right-click the Group that contains the Clients on which you want to execute an application.

2 Choose the Execute at Client command from the shortcut menu.

3 In the Execute Application dialog, enter the path, name and any parameters for the application you want to execute, then click the Execute button.

The Control attempts to execute the application on all Clients in the Group. After a few moments, the results of the operation are listed in the bottom section of the Execute Application dialog.

Capturing the Print Output on Client PCs

The Print Capture feature enables you to redirect the printer output from a Client PC to the printer at the Control. Use this feature when you are running an application on a Client, but want to redirect printed output to a printer used by the Control.

You can configure the Print Capture facility before or while you are connected to a Client.

To Capture a Client's Print Output:

1. In the Control window's List View, right-click the Client to display the shortcut menu.
2. Choose the Client Settings command from the shortcut menu.
3. In the Settings for Client dialog, click Print Capture.
4. Select the Enable Print Capture check box to enable the print capture options.
5. Select a print capture option to redirect the print output. Choose:

   Capture to Printer to redirect the print output to a printer. To select a different printer, click the Change button.

   Capture to File to redirect the print output to a file. Enter a filename with an extension of PRN, or click the Browse button to locate an existing file.
6. Click the OK button to return to the Control window.

The Print Capture feature may already be enabled by the Profile used by your Control. For more information, see “Using Control Profiles” on page 86.

Rebooting And Logging Out Clients

When you are connected to a Client, you can reboot or log the user off their Client PC by sending the equivalent of an Alt+Ctrl+Del key press. If the Client is running Windows NT4, 2000, or XP, this action causes the Client to log off. If the Client is running Windows 95, 98, or Me, this action causes the Client to reboot.

To Reboot or Log Out Clients:

1. Select the Clients, or Group which you want to log out or reboot.
2. Right-click the selection to display the shortcut menu, then choose the Reboot / Logout command. The selected Clients or Group are rebooted or logged out.

   Alternatively, if the View window is displayed for the Client you want to reboot, you can also click the Reboot button in the View window Toolbar to reboot the Client.

To shut down a Client rather than reboot it, display the View window for the Client, then click the Start button and choose the Shutdown command in the Client's View window. The Client automatically disconnects after a few moments.

Power Management

Wake-on-LAN technology in PC-Duo enables you to activate and switch off remote PCs using the Power On and Power Off commands in the Client menu.

To use the Power Management features, you must first configure the Client PCs.

Client Requirements for Remote Power Management

You may need to set up the following hardware, BIOS and operating system features before using power management on remote PCs:

- A network card, which supports Remote Power Management (sometimes called Wake-on-LAN). Note that many older cards and low-cost cards do not support Power Management.
- A motherboard which 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 its equivalent.
- Some network cards provide configuration utilities, which enable you to specify the Power Management settings. These options are sometimes dependent on the operating system being used.

Using Power Management

The Power On facility only works with Clients for which the MAC Address is known by the Control application.

A Client's MAC Address is picked up by the Control application when you connect to the Client. (This only applies to TCP/IP Clients.)

To check whether the MAC Address is stored for a Client, view the Details tab in the Client Properties dialog.

A known Client is listed in the Control PC's CLIENT.NSM file, along with its MAC Address.

To Activate a Remote PC:

1. In the Control application's Client View, select the PCs you want to activate.
2. Choose the Client, Power On menu command.

To Shut Down a Remote PC:

1. In the Control application's Client View, select the PCs you want to deactivate.
2. Choose the Client, Power Off menu command.

To activate or deactivate a Group of PCs:

1. Select the Group from the Tree View
2. Choose Power On or Power Off from the Group menu.

You can perform Power Management operations from within PC-Duo Scripts. See “Power Management Scripts” on page 72 for more details.

Working With User-Defined Tools

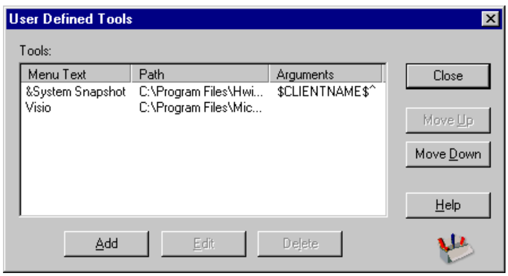
You can integrate external tools and applications with the PC-Duo Control application. These tools can then be accessed using the Tools, User Defined submenu in the Control window. PC-Duo Scripts can also be configured as User Defined Tools.

You can customize the PC-Duo Control Toolbar and add a Tools button that enables you to access your User Defined Tools more easily.

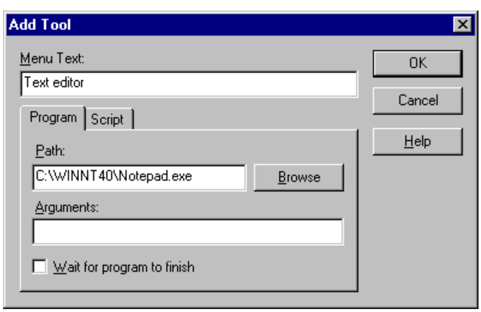
Adding User Defined Tools

To Add a User Defined Tool:

1 In the PC-Duo Control window, choose the Tools, User Defined, Edit menu command. The User Defined Tools dialog is displayed.



2 Click the Add button.



3 In the Add Tool dialog, enter the text you want to use as the menu command name in the Menu Text box.

In the Menu Text box, you can prefix a letter of the name with an ampersand (&) character, so that you can use the letter as a shortcut to activate that menu command when the menu is displayed.

4 To reference a file as your User Defined Tool, click the Browse button to select the file.

5 Enter any parameters you want to pass in the command line in the Arguments box.

6 Select the Wait for program to finish check box if you want the PC-Duo Control to be inactive while the tool is running.

If the Wait for program to finish check box is selected, the PC-Duo Control displays a message to inform you that the Tool is running, and gives you the option of stopping the Tool and returning to PC-Duo Control. (However, it is better to stop an active Tool by closing the Tool itself, rather than by terminating it from this message dialog.)

7 Click the OK button. The tool is displayed in the User Defined Tools dialog.

8 Click the Close button. The Tool is now accessible from the Tools, User Defined submenu.

You can specify a PC-Duo Script as a User Defined Tool, using the Add Tool dialog's Script tab.

Editing and Deleting User Defined Tools

To Edit a User-Defined Tool:

1 From the Tools menu, choose the User Defined, Edit command to display the User Defined Tools dialog.

2 In the Tools list, select the User Defined Tool you want to edit.

3 Click the Edit button. The Edit tool dialog is displayed, enabling you to change the Tool settings.

4 Click the OK button to return to the User Defined Tools dialog.

To Delete a User-Defined Tool:

1 Choose the Tools, User Defined, Edit command to display the User Defined Tools dialog.

2 In the Tools list, select the Tool you want to delete.

3 Click the Delete button to delete the selected Tool, then confirm this action.

See “Customizing The Toolbar”, for information on how to add a Tools button to the Control window Toolbar. You can then display the User Defined Tools dialog by clicking the Tools button, and choosing Edit from the drop-down menu.

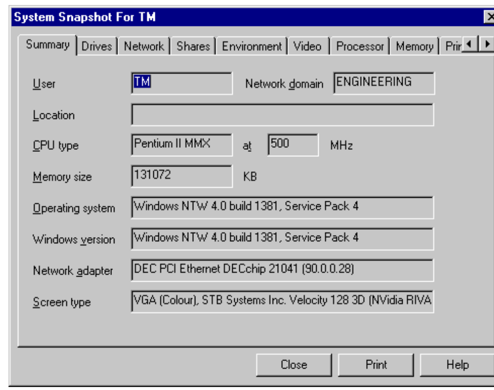
Copying Tool Settings to other Control PCs

If you want to use your user-defined tools settings on any Control, you can copy the settings. The User Defined Tool settings are stored in the TOOLS.NSM file, located in your PC-Duo installation directory. You can copy this file to another PC's PC-Duo installation directory 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 to access the new User Defined Tools.

Defined Tools may not work on another PC because the User Defined Tools may use path and file references which are specific to one PC. If you copy the TOOLS.NSM file to another PC, use the Edit Tool dialog's Browse button to verify the file paths for each of the User Defined Tools.

Performing a System Snapshot

PC-Duo's System Snapshot feature enables you to quickly obtain a detailed inventory of your PC-Duo Clients' hardware configurations.



This detailed hardware inventory includes information about their 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 and much more! This information is presented in the System Snapshot dialog, organized 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.

To perform the System Snapshot operation on a Client, the PC must be running the PC-Duo Client v4.15 or above.

If you are not connected to the Client from which you want to obtain a System Snapshot, PC-Duo automatically connects and disconnects the Client to obtain the Snapshot information. (If you are already connected to the Client, the Client remains connected when the System Snapshot is complete.)

To Perform a System Snapshot:

1 In the PC-Duo Control window, select the Client which you want to Snapshot.

2 From the Tools menu, choose the User Defined, System Snapshot command.

   The System Snapshot information is copied from the Client and a Message dialog displays the operation's progress.

   The System Snapshot dialog is then displayed.

   The information in this dialog is organized into several tabs. Right-click any of the tabs in this dialog to display a list of all the tabs in a shortcut menu. Click any of the tabs in the list to display the relevant information.

Refer to "Troubleshooting the System Snapshot Feature" if you encounter any problems or error messages when attempting to perform a System Snapshot.

Printing the System Snapshot Information

You can print the System Snapshot information to generate a detailed hardware inventory report for 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 Display the System Snapshot dialog for the Client.

2 Click the Print button at the bottom of the System Snapshot dialog. A message dialog is displayed.

3 If you want to save the report as a text file, click the Yes button in the message dialog. The Save As dialog is displayed, enabling you to specify the name and location of the report file.

4 When the Print dialog is displayed, select the options then click the OK button to print the file. The file is printed and the System Snapshot dialog remains displayed.

Customizing the System Snapshot Feature

The System Snapshot Feature is 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 Customize the System Snapshot Feature:

1 In the PC-Duo Control, choose the Tools, User Defined, Edit menu command.

2 In the User Defined Tools dialog, select the System Snapshot item from the list, then click the Edit button. The System Snapshot settings are displayed in the Edit Tool dialog.

3 If you want to change the name of the System Snapshot menu command, edit the text in the Menu Text Box. (Use the & symbol to identify the following letter as a shortcut for this menu command when the menu is displayed).

4 The Path value should usually be left unchanged. It refers to the location of the System Snapshot program file (HWINV.EXE), which is located in the PC-Duo installation directory.

5 Use the Arguments value to specify the parameters that are passed to the System Snapshot program.

By default, this setting is $CLIENTNAME$^. The $CLIENTNAME$ part of the argument refers to the currently selected Client when you start a System Snapshot operation. If you want to store the System Snapshot information files in a specific location, append the directory path after the ^ . However, because PC-Duo defaults to looking for these files in the Client's installation directory, you should not need to change this parameter.

6 Select the Wait for program to finish check box to make the PC-Duo Control window temporarily inaccessible while viewing the System Snapshot information.

Deselect this option if you want to work with the Control while one or more System Snapshot dialogs are displayed.

Troubleshooting the System Snapshot Feature

The following messages may be displayed when attempting to perform a System Snapshot.

Incorrect password, please try again

Explanation: An incorrect user name or password was entered when the Control attempted to connect to the Client to retrieve the System Snapshot information.

User Action: You are reprompted to enter the correct user name and password for this Client.

Failed to connect to Client. Wrong username or password

Explanation: You cancelled an attempt to connect to a Client after failing to enter the correct user name and password.

User Action: Try again with correct user name and password, as used to connect to the Client ordinarily using PC-Duo.

Command line provided: ^ Usage:Client^ [Directory]

Explanation: No Client was selected when performing a System Snapshot.

User Action: Select the Client in the PC-Duo window and then perform a System Snapshot.

Hardware inventory files not found on Client. Cannot open [Directory]\LUHDWCHK.LOG

Explanation: The Hardware inventory files used to perform the System Snapshot cannot be found on the Client. Check the path which is displayed-this path should be the location of the Client's PC-Duo Installation directory. If this is not the case, then edit the System Snapshot settings using the User Defined Tools dialog-these settings may contain an incorrect directory at the end of the arguments line. See “Customizing the System Snapshot Feature” for more information. Alternatively, the Client PC may not be running the PC-Duo Client v4.15 or above, and therefore you will not be able to perform a System Snapshot on this Client.

User Action: Take appropriate steps to upgrade the Client to the latest version.

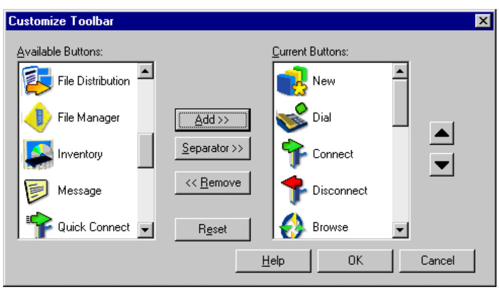
Application [Directory]\HWInv.exe not found. Check path and try again.

Explanation: The HWInv application is not in the directory specified in the Tool definition.

User Action: Update the Tool path, or move HWInv.exe to the specified location.

Customizing The Toolbar

The Customize Toolbar dialog enables you to select which buttons you want to display in the Control window's Toolbar.



You can also use this dialog to customize the View window's Toolbar.

To display the Customize Toolbar dialog:

- If you want to customize the Control window Toolbar, choose the View, Toolbar, Customize menu command in the Control window. The Customize Toolbar dialog is displayed.
- If you want to customize the View window Toolbar, right-click a View window, and choose the Customize command from the shortcut menu.

You can also display the Customize Toolbar dialog by right-clicking on the Control window Toolbar, then choosing the Customize command from the shortcut menu.

Using the Customize Toolbar Dialog

The Available Buttons list (on the left of the dialog) contains buttons which are available for adding to the Toolbar. (This list does not contain any buttons which are already featured on the Toolbar.)

The Current Buttons list (on the right of the dialog) shows you which buttons are currently featured on the Toolbar. The buttons in this list appear from top to bottom in the order the buttons appear on the actual Toolbar from left to right.

To add a button to the Toolbar, select the button from the Available Buttons List, then click the Add button. (The added button is featured in the Current Buttons list.)

To remove a button from the Toolbar, select the button from the Current Buttons List, then click the Remove button. (The removed button is featured in the Available Buttons list.)

To change the position of a button on the Toolbar, select a button in the Current Buttons list, then use the up arrow and down arrow buttons (on the right of the dialog) to change the position of the button in the Toolbar.

To add a small gap to the left of a Toolbar button, select the appropriate button in the Current Buttons list, then click the Separator button.

To reset the Toolbar to the default buttons, click the Reset button. In the confirmation dialog, click the Yes button.

When you have finished customizing the Toolbar, click the OK button to return to the Control window.

Applying a New Authorization Key

You can apply a new PC-Duo authorization key using the License Manager dialog.

To Apply a New License Key:

1. Click the Start button in the Windows taskbar to display the Start menu.
2. Display the Programs, PC-Duo submenu, then choose the Apply a Key command.
3. In the Licence Manager dialog, ensure the General tab is selected.
4. Enter the new authorization key in the Authorization Key text box at the bottom of the General tab.
5. Click the Generate button to apply the key and close the License Manager dialog.

Uninstalling PC-Duo

If you want to uninstall PC-Duo, you can do so using the Uninstall PC-Duo icon in the Start menu's PC-Duo folder. The Client application must be de-activated before PC-Duo can be uninstalled.

Usually, you do not need to uninstall PC-Duo before installing a new version.

To Uninstall PC-Duo:

1. Ensure no PC-Duo applications are running, such as the Control Application, Script Agent or Script Editor.

   If the PC-Duo Client application is running, then display the Start menu and choose the Programs, PC-Duo, De-activate PC-Duo Client to deactivate it. (For more information, see “Deactivating a Client” on page 13.)
2. Click the Start button in the taskbar to display the Start menu, then choose the Programs, PC-Duo, Uninstall PC-Duo command.
3. When the message box is displayed, asking you to confirm this action, click the Yes button, then follow any prompts which are displayed to uninstall PC-Duo.

Chapter 8: Scripting

PC-Duo includes powerful Scripting facilities which enable you to automate routinely-performed tasks.

To use the Scripting facility, you need to have installed the Scripting component when installing PC-Duo. For more information, see Chapter 2, “Installing PC-Duo”. If the Scripting component has been installed, you can use the Script Editor to create new Scripts, and the Scripting Agent to schedule those Scripts.

The PC-Duo Control application does not need to be running to run scheduled Scripts from the Scripting Agent.

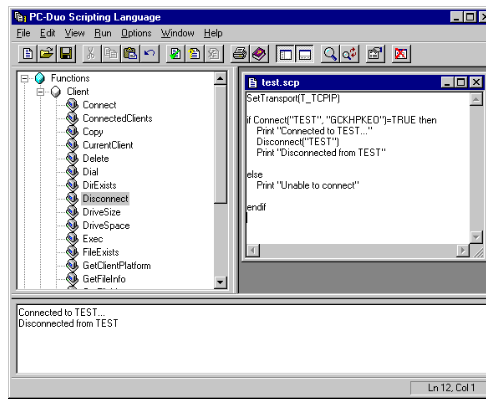
If the Control window is running while you are running Scripts using the Script Editor or Scripting Agent, any activities performed using Scripts will not be displayed in the Control window. For example, if you run a Script which connects to a Client, that Client will not be indicated as being connected in the Control window.

PC-Duo also enables you to run and edit Scripts from the Control Application. For more information, see “Running Scripts from the Control”.

The Script Editor

The PC-Duo Script Editor enables you to create and edit Scripts which can automate tasks. After creating a Script in Script Editor, use the Scripting Agent to specify when the Script is scheduled to run.

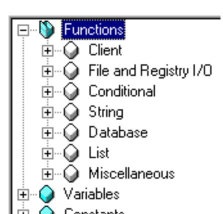
To start the Script Editor, click the Start button in the Taskbar to display the Start menu, then choose the Programs, PC-Duo, Script Editor command.



The Script Editor window is divided into the following areas:

The Command Viewer is the left pane in the Script Editor window. It looks similar to the Tree View in the PC-Duo Control window.

The folders list all of the functions, variables and constants that are available in the PC-Duo scripting language.



As well as using the contents of the Command Viewer as a useful reference, you can drag commands from the Command Viewer into your Script windows.

Script Windows enable you to view or create Scripts. (When you first start the Script Editor application, no Script windows are displayed, although space is provided for them on the right of the Script Editor application window.)

Script windows can be minimized, restored and maximized inside the Script Editor window. When the active Script window is maximized, the Script window title bar merges with the Script Editor window's title bar.

The Output Window is in the bottom pane of the Script Editor window. It displays information about the Scripts in use, such as progress messages and syntax errors.

Using the Script Editor

Use the Script Editor to create and work with script files:

- To create a new Script, choose the File, New menu command or click the New button in the Toolbar.
- To open an existing Script, choose the File, Open command or click the Open button in the Toolbar, then use the Open dialog to open the appropriate script file.
- A list of recently opened Scripts is displayed in the File, Recent Files submenu. You can select a Script from this list to open it in a Script window.
- You can have more than one Script window open at a time, and arrange them using the commands in the Script Editor’s Window menu.

Writing and Editing Scripts

View, write and edit PC-Duo Scripts in Script windows:

- You can have several Script windows open at a time, so that you can view different Scripts simultaneously, and copy and paste commands between them.
- You can drag selected text to a different location in the current Script window, or to another Script window.
- To add a command to a Script, type the command, or display the command in the Command Viewer, then drag it into the Script window.
- If you are not sure about the operation of a command listed in the Command Viewer, right-click the command and choose the Display Help On Command from the shortcut menu. A Help window displays information on the selected command.

Checking and Running Scripts

You can check your Scripts for errors and run them from within the Script Editor application:

- To check your Scripts for syntax errors, choose the Run, Check Syntax menu command, or click the Check Syntax button in the Toolbar. The Script Editor checks your Script for errors, and displays the results in the Output window at the bottom of the Script Editor window.
- To run your Script in the Script Editor application, choose the Run, Execute menu command, or click the Execute button in the Toolbar. The progress and results of the Script are displayed in the Output window.

Saving Scripts

The Script Editor automatically saves the current Script when you run it.

- To save a Script, choose the File, Save command or click the Save button in the Toolbar. If this is the first time you have saved the Script, you are prompted for a file name for the Script
- To save a Script under a different file name, use the File, Save As command.
- When you save a Script under a different file name, the original Script file remains unchanged. This command is useful for creating a new Script based on an existing Script.

The Scripting Language

The PC-Duo scripting language is a powerful interpreted language similar to VBScript. It enables you to automate tasks you need to perform regularly.

The scripting language offers:

- Easy to understand, structured syntax.
- A wide-range of text manipulation functions.
- The ability to work with multiple connected Clients.
- Support for local and remote operations.
- Full logging of activities.
- The ability to supplement the system log with your own log messages.
- All of the security features associated with the Control application.
- Scripts that can contain encrypted passwords (using the Script Editor's Edit, Insert Password menu command).

An important point to remember when working with Scripts is that a PC-Duo Script needs to be self-contained; each Script acts as an individual PC-Duo Control.

For example, if you connect to a Client at the start of a Script, you must disconnect from it later in the same Script. (If you try to use a second Script to disconnect from the same Client, it would not regard that Client as being connected.)

Working with Variables

Three variable types are available for use in the scripting language:

Integer An unsigned numeric variable

String A series of characters

List A series of strings in a list. A range of functions is supplied for populating, managing and searching Lists. These functions are listed in the Script Editor's Command Viewer, under Functions, List.

You must define variables before using them. You must assign a value to Integer and String variables before using them in conditional statements.

Assigning a value to a variable for the first time forces the Script interpreter to create this variable, and the variable is then available for the rest of your Script. If you try to use a variable that has not been defined, an error is generated.

When you need to assign a value to a variable, the = symbol is used:

Assignment	Description
A = 10	Assigns an integer value to the variable A

Assignment	Description
A = B	Assigns the value of another integer variable to A
Firstname = "Nick"	Assigns the string "Nick" to the variable firstname
Firstname = A	Converts the numeric value of A to its string representation and assigns it to firstname
Name = "Nick " + lastname	Creates a string variable from two strings which are concatenated using the + symbol

Using Logic Operators

Use logic operators to test whether a result is TRUE or FALSE:

Operator	Description
= =	Equal to
=	Equal to-this is only valid in conditional statements, otherwise it means assign
!=	Not equal to
<	Less than
>	Greater than
AND	The result is TRUE if both operands are TRUE
OR	The result is TRUE if either operand is TRUE

When these operations are used to form a conditional statement, the result is either TRUE or FALSE. This result is used by all conditional structures within the scripting language.

Using Other Operators

You can use the following operators to modify the result of a calculation:

Operator	Description
*	Multiplies the left operand by the right operand
/	Divides the left operand by the right operand
+	Adds the right operand to the left operand
-	Subtracts the right operand from the left operand
( )	Returns the result of the arithmetic operations inside the parentheses. These can contain other parentheses as well as functions
&	Bitwise AND compares each bit of the first operand to the corresponding bit of its second operand. If both bits are 1, the result is set to 1. Otherwise, the Result is set to 0
|	Bitwise OR Compares each bit of its first operand to the corresponding bit of its second operand. If either bit is 1, the result bit is set to 1. Otherwise, the result is set to 0

Using Loops

There are four different types of conditional loop available within the Scripting language. Each of the loops does something until a condition is met:

Do While... Loop Performs a set of instructions whilst a supplied expression is TRUE

Do Until... Loop Performs a set of instructions until a specified expression is TRUE

For... Next Used to execute a group of statements a specified number of times, until the upper limit of the loop is reached, or there are no more strings in a list.

For Each... Next Executes a set of functions once for every item in a string list. These loops can be nested inside one another.

Syntax examples for each of these statements are available in the online Help.

Using Condition Statements

You can conditionally execute a group of statements depending on the result of an expression. To do this, use the If... Else... Endif statements.

For example:

If connectedclients () = FALSE then

Print "We are not currently connected to any Clients!"

Else

Print "We are connected to Clients."

Endif

Using Comments

You can use comments in your PC-Duo Scripts to improve the readability of your Scripts. The scripting language uses the C style of single line comments, which consists of two forward slash (//) characters. These can be placed anywhere on a line in your script. Anything on this line following the two forward slash characters is interpreted as a comment.

Some Useful PC-Duo Scripting Functions

The real benefits of using PC-Duo Scripting are the built-in functions, which enable you to connect to, perform operations on and retrieve information from Client PCs.

To help you get started, some examples of useful functions are described here:

SetTransport

Sets a new default network transport protocol to be used by all following Client operations.

Example: SetTransport (T_TCPIP)

Connect

Connects to the specified Client.

Example: If Connect ("TEST1") = TRUE then Print "Connected to test1"

You can specify the name or IP address of the Client you want to connect to. If you specify the Client name, the Control must have previously connected to the Client.

If you specify the Client's IP address, it must be preceded with the > character. For example:" >nnn.nnn.nnn.nnn".

The optional <Transport> parameter enables you to specify the transport with which you want to connect to the specified Client. You can specify *IPX*, *TCP* or *NBn*, using the numbered stack n from 0-7.

ConnectedClients

Returns the number of Clients that you are currently connected to.

Example: Print "You are connected to ", ConnectedClients ( ), " Clients."

Mkdir

Creates a directory on the specified PC.

Example: Mkdir ("TEST1>C:\SALES\UPDATE")

Copy

Copies files to and from Control and Client.

Example: Copy ("C:\SALES\INFO*.DOC", "test1>C:\SALES\UPDATE")

Control, Watch and Share

These functions enable you to start a remote control session from a Script. They are used in conjunction with the WaitEndView function, which waits for the View Window to close before proceeding with the Script.

Example: Nowviewing = Share ( )

LoadFields

Populates a List with a series of entries from a text file.

Example: LoadFields("D:\Support\clientprop-erties.txt", ClientName)

Disconnect

Disconnects from the Client.

Example: Disconnect ("TEST1")

Creating User Functions

You can create your own functions in the PC-Duo scripting language. This enables you to create your own blocks of code that can be called repeatedly from another part of a Script.

For example, you can create a function that connects to a Client and retrieves information from it. You can then call the same function several times for different Clients.

When working with your own functions in a Script, use the following guidelines:

- You must create a function called Main in your Script. This main function can be placed anywhere in a Script, but is the first part of the Script to be run.
- When a Script features user functions, all statements in a Script must be inside a function block.
- The variables created inside a function are only available to the function in which they were created.
- Function declarations must be followed by parentheses.
- Any function arguments must go inside the parentheses that follow a function.
- You can have up to ten arguments in a function.
- Function arguments are only available from within the function and should be regarded as being read-only within the function to which the arguments are being passed.
- You do not need to specify a function's argument types.
- Use $INCLUDED to call functions defined in other Script files. For an example of its use, see ADDTOLOG.SCP in the sample scripts included with PC-Duo.

Use the following format when creating the Main function:

```
Function Main ()

...

End Function
```

Use the following format when creating your own functions:

```
Function myfunction ()
...
End Function
```

Use the following format when creating a function which has arguments passed to it:

```
Function myfunction (argument1, argument2)
...
End Function
```

Use the following format to call a function:

```
Returnvalue = myfunction (10, 20)
```

Accessing Databases from Scripts

PC-Duo enables you to access ODBC-compliant databases from Scripts. Before connecting to a database using a Script, you must create a Data Source Name (DSN) for the database you want to access.

A Data Source is a collection of information used to connect an application to a database. It enables you to refer to a Data Source Name, rather than an explicit path to a database file.

The following instructions explain how to create a DSN for a Microsoft Access database. Note that the manner in which a DSN is created varies slightly for other database formats.

To Set up a DSN for an Access Database:

1 Display the Windows Control panel, then double-click the ODBC Data Sources icon. The ODBC Data Source Administrator dialog is displayed.

In Windows 2000 and Windows XP, the ODBC Data Source Administrator dialog is accessed from Control Panel, Administrative Tools, Data Sources (ODBC).

2 Select the System DSN tab.

3 Click the Add button. The Create New Data Source dialog is displayed.

4 Select the appropriate driver for your database, then click the Finish button.

5 The ODBC Microsoft Access Setup dialog is displayed. Enter a Data Source Name, then click the Select button.

6 Use the Select Database dialog to browse to the location of your Database. After selecting the Database, click OK to return to the ODBC Microsoft Access Setup dialog.

7 Click OK to return to the ODBC Data Source Administrator dialog, then click OK again. You have now created a DSN for your Database.

DSNs are PC-specific. If you want to share your data-driven scripts with other users, they must also create a DSN for their database.
Depending on your Database format and security, you may need to define additional user name and password access permissions for a DSN.

Using Database Functions in Scripts

Once you have configured a DSN for a database, you can access that database from PC-Duo Scripting using dedicated Database functions. These functions are listed in the Script Editor's Command Viewer under Functions, Database.

The major database functions are described here. Use caution when running functions designed to modify or delete data from a Database. We recommend you test functions on a copy of your database before running them on a live database.

Several example scripts, some of which use database functions, are supplied with PC-Duo.

Opening Databases

To retrieve and manipulate data from a Script, you must first open the database. The dbOpen function opens the database referred to by a specified DSN:

```
dbOpen("mydata")
```

You can also supply a user name and password as well, as shown here:

```
dbOpen("mydata", "NH", "KLDGWD")
```

Closing the Current Database

The dbClose function closes the currently open DSN:

```
dbClose()
```

Returning Available Database Drivers and DSNs

The dbDrivers and dbDataSources functions return all drivers and data sources on a system.

```
dim mydrivers as list

dim mydsns as list

dbDrivers(mydrivers)

dbDataSources(mydsns)

print "ODBC Drivers:"

For each buffer in mydrivers

    print " ", buffer

next

print "Data Sources:"

for each buffer in mydsns

    print " ", buffer

next
```

Executing SQL Statements

The dbExecute command enables you to run SQL commands:

```
dbExecute "SELECT ClientName from
tblClients"
```

Your SQL statements are not limited to SELECT statements. Using the dbExecute function, you can also perform UPDATE queries and other powerful SQL operations. For more information, see “Creating SQL Statements”.

Listing the Columns in a Table

The dbColumns function enables you to retrieve column names (field names) in a specified table. dbColumns takes two parameters: the name of the table, and the name of the list variable you want to populate with the column names:

```
dbColumns("tblclients",columnlist)

for each column in columnlist

    print column

next
```

Retrieving Data to a List

The dbFetchList function retrieves data from an open database and puts it into a list variable:

```
dbFetchList h, 2, iplist, 1, namelist, 3, plist, 4,
idlist
```

Returning the Number of Records Matching a Criteria

The dbFind function returns the number of records which meet a specified (SQL) criterion:

```
numMatches = dbFind "tblClients",
"ClientName LIKE 'NH'"
Print numMatches
```

You can pass multiple conditions to the dbFind function, with the conditions being separated by commas.

Returning the Data from a Table Column

The dbGetData function returns the data for a column:

```
dbGetData ("h","clients")
```

Adding Entries to a Table

The dbInsert function adds an entry into a specified table and field:

```
dbInsert "tblClients","ClientName","NH"
```

Releasing the Handle to the Current Database

The dbRelease function frees up the handle to the current database:

```
dbRelease(h)
```

Listing the Tables in a Database

The dbTables function takes a list variable as a parameter, and populates it with the available tables in the database:

```
dim tablelist as list

dbOpen("Scriptingdbase")

dbTables(tablelist)

For each table in tablelist

    Print table

Next

dbClose()
```

Selecting and Sorting Records

The dbSelect function selects and sorts records which match a specified criteria. The following example selects all the Client names from the Client table and orders them by ClientName:

```
dbSelect("tblClients",
"ClientName","","ClientName")
```

Deleting Records from a Table

The dbDelete function deletes the specified Client from the Clients table:

```
dbDelete("tblClients", "ClientName='TEST1'")
```

For more information on using database scripting functions, refer to the online Help.

Creating SQL Statements

Some of Scripting's database functions enable you to use SQL (Structured Query Language) to retrieve and modify data stored in a database.

Constructing Basic SQL Statements

Most SQL statements contain three parts:

The action stage Specifies the operation you want to perform on the data. For example, "SELECT"

The target stage Selects the database fields and tables on which the action is performed. For example, "* FROM tblClients" (all records from the table called tblClients).

The criteria stage Specifies which records from the selection are to be included or excluded in the action. For example, "WHERE ClientName LIKE'VEC%'"

For example:

```
SELECT * FROM tblClients WHERE ClientName
LIKE 'VEC%'
```

This SQL statement selects all the records from the tblClients table, where the ClientName field starts with the letters 'VEC'.

In addition to using SELECT statements to retrieve data, PC-Duo enables you to use UPDATE statements and DELETE statements to modify the data in your database.

Operator	Description
=	Equal to
<>	Not equal to
<	Less than
>	Greater than
<=	Less than or equal to
>=	Greater than or equal to
LIKE	A more flexible version of "equal to"

Using Wildcards in SQL Statements

The percent symbol (%) can represent any character (number, letter, or punctuation), or set of characters in a string.

Logical and Compound SQL Operators

You can use the following logical and compound Operators to create SQL Statements:

Operator	Description
AND	Joins two or more conditions, and displays a row only if that row's data satisfies ALL conditions listed.
OR	Joins two or more conditions, and returns a row if any of the conditions listed hold true.
IN	Simplifies creating compound statements by enabling you to create a list of possible matches.
BETWEEN	Specifies the outer values of a range.
NOT	Usually positioned before Operators such as IN, BETWEEN or LIKE, NOT is used to exclude criteria.

AND and OR operators can be combined in a single SQL statement. In such cases, SQL evaluates all of the conditions, then evaluates the ANDs, and then evaluates the ORs (where both operators evaluate left to right).

Power Management Scripts

You can make use of PC-Duo's Power Management features from scripts.

Waking up Clients from a Script

To wake up a remote PC using its Client name, use the following function. You must substitute the Client PC name in place of *nameofclient*:

```
WakeUpClient(nameofclient,
WU_CLIENTNAME)
```

Alternatively, you can wake a remote PC using its MAC address. For example:

WakeUpClient ("0080c7046819",WU_MAC_ADDRESS)

Switching off Clients from a Script

There are several options available for shutting down PCs from a Script. When studying the examples below, replace *nameofclient* with the name of the remote PC you want to switch off.

To reboot a remote PC:

Reboot(nameofclient, RB_REBOOT)

To log off a remote Windows NT4, 2000 or XP system:

Reboot(nameofclient, RB_LOGOFF)

To shut down Windows on a remote PC:

Reboot(nameofclient, RB_SHUTDOWN)

To switch off a remote PC (without shutting down Windows):

Reboot(nameofclient, RB_POWEROFF)

To switch off or power down the currently connected Client in a Script, omit the Client name parameter, for example:

Reboot(RB_RB_REBOOT)

Reboot(RB_LOGOFF)

Reboot(RB_SHUTDOWN)

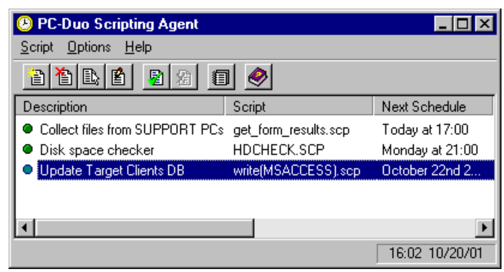
Reboot(RB_POWEROFF)

Exiting The Script Editor

You can exit the Script Editor using the File, Exit menu command, or by clicking on the close button in the top right corner of the Script Editor application window.

The Scripting Agent

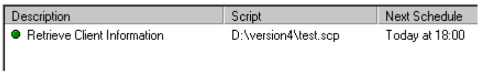
Scripting in PC-Duo offers many advantages over manually performing tasks. As well as freeing up the Control user, the ability to schedule when Scripts run enables you to perform tasks overnight when your network or the Client PCs may not be in use.



The PC-Duo Scripting Agent enables you to schedule the Scripts created in the Script Editor. To start the Scripting Agent, click the Start button in the Taskbar to display the Start menu, then choose the Programs, PC-Duo, Script Agent command.

If the Script Editor application is displayed, you can start the Scripting Agent by choosing the Options, Run Scripting Agent menu command.

The Scripting Agent window displays all the Scripts Schedules which are managed by the Scripting Agent.



Additional details are displayed alongside each Script Description in the Script List:

- The file and path of the Script file.
- The date and time the Script is next scheduled to run.
- The date and time the Script was last run.
- The Result produced by the Script the last time it was run.
- Any error generated by the Script the last time it was run. (If an error was generated, a small red symbol is displayed to the left of the Script Schedule).

Adding a New Script Schedule

You can add new Script Schedules using the Add Schedule dialog. This dialog contains four tabs:

General enables you to specify a Script file and give the Script a description.

Which Days? is where you specify the dates when a Script is to be run.

What Time is where you specify the times when a Script is to be run on the specified date(s).

Advanced gives you the option of running an application after the Script has finished running.

To Add a New Script Schedule:

1. Display the Scripting Agent window, then choose the Script, Add command, or click the Add button in the Toolbar.
2. In the Add Schedule dialog, ensure the General tab is displayed.
3. Enter a description for the Script Schedule (not the Script itself) in the Description text box.
4. Enter the file name of the Script in the Script text box. If you are not sure of the exact file name, click the Browse button (on the right of the text box), and select the file name from the Open dialog.
5. Click the Which Days? tab, then use the options to specify when you want to run the Script you selected in the General tab.
6. Click the What Time? tab and use the options to specify the times on which you want to run the Script.
7. If you want to run a specific application after the Script has finished running, click the Advanced tab, then select the Run Application on Successful completion check box, and enter the name of the Application in the Application box. (Use the ellipsis (...) button to browse for the application file name.)
8. When you have finished specifying the schedule information, click the OK button to return to the Scripting Agent window. The Script Schedule is displayed in the Script List.

Viewing Script Schedule Properties

You can view and amend Script Schedules using the Properties for Schedule dialog. Its options are identical to those in the Add Schedule dialog.

To View Script Schedule Properties:

1. In the Scripting Agent window, choose the Script, Properties command, or click the Properties button in the Toolbar.

2 In the Properties for Schedule dialog, use the General tab to view or change the Script Schedule's Description, and the Script file on which the Schedule is based.

3 Use the Which Days? And What Time? tabs to view or change the Script Schedule.

4 Use the Advanced tab to specify an application to be run after the Script has Finished running.

Deleting Script Schedules

When you delete a Script Schedule, you are not deleting the Script file on which the Schedule is based.

To Delete a Script Schedule:

1 In the Script List in the Scripting Agent window, select the Script Schedule you want to delete.

2 Choose the Script, Delete command, or click the Remove button in the Toolbar.

3 In the confirmation dialog, click the Yes button to delete the schedule.

Viewing Log Files

The Scripting Agent stores two types of log files:

Scripting Agent Log File records events relating to the Script Agent application, such as when the application has been started and closed, and which Scripts were run.

Individual Script Log Files record whether the Script ran successfully and any error messages. These files are created when each Script is run.

You can view both types of Log File from the Scripting Agent application.

Viewing Scripting Agent Log Files

The Scripting Agent records when it was started and closed, which Scripts were run, whether the Scripts ran successfully and any error messages that were generated. To view the Scripting Agent's log file, choose the Options, View Log File command.

Viewing Script Log Files

You can use the Scripting Agent to display a Script's own, individual log file. To view a Script's log file, select the Script in the Script List, then click the View Log button in the Toolbar.

You can also view a Script's log file by right-clicking on the Script in the Script List, then choosing View Log from the shortcut menu.

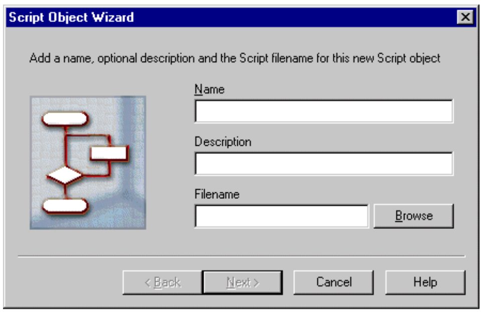
Minimizing And Exiting the Scripting Agent

You can exit the Scripting Agent using the Script, Exit menu command, or by clicking the close button in the top right corner of the Script Agent application window. However, you must leave the Scripting Agent application running for it to perform its scheduled tasks.

Use the Options, Hide when minimized command to display Script Agent as a small icon in the Taskbar's system tray. When the Scripting Agent is minimized, there is less chance of the Script Agent being closed accidentally.

If you want to maximize the Scripting Agent application when it is minimized, double-click the Scripting Agent icon in the Taskbar's system tray.

Running Scripts from the Control



You can run Scripts directly from the Control application in two ways:

- By selecting the Scripting folder in the Control window's Tree View, and double-clicking on a Script in the List View.
- By selecting a Script in the List View, and choosing the Tools, Scripting, Run Script menu command.

To add more Scripts to the Scripting folder, use the Script Object Wizard. To start the Wizard, choose the Tools, Scripting, Add Script Object menu command. You can then name and locate a Script to add to the Scripting folder.

If you want to amend the Script Object settings, use the Tools, Scripting, Script Properties menu command. You can also launch the Script Editor to edit your Scripts by choosing the Tools, Scripting, Edit Script menu command.

Chapter 9: Configuring PC-Duo

The behavior of both Clients and Controls in PC-Duo is determined by profiles. These give administrators a high degree of control over the actions that users can take, and the security measures employed on both Clients and Controls. Furthermore, because the system can support multiple profiles, they also give administrators the flexibility to define individual and group profiles, and so place restrictions only where they are needed. This first section in this chapter describes how to create and work with profiles for Clients; the following section describes how to create and apply profiles for Controls.

Client profiles always take precedence over Control profiles. This enables PC-Duo to support users who handle sensitive information, without compromising their ability to maintain data security.

Configuring Clients

PC-Duo Clients use a configuration file, called CLIENT32.INI, to store their settings. Use the PC-Duo Client Configurator application to specify the Client settings.

Using the Configurator, you can specify the following Security features:

Use NT Security Windows NT4, 2000 and XP Clients can be configured to ensure that Controls which want to connect to the Clients are valid users.

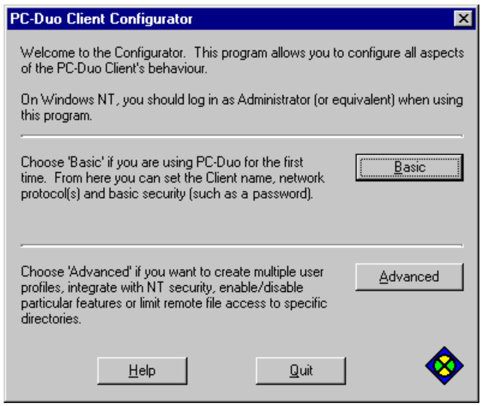
Security Keys Given a compatible network transport, and the correct user name and password, a Control user may be able to access Clients on your network. However, a Security Key prevents any unauthorized Control from connecting to Clients. In its simplest form, the Client allows connections only from Controls which have a matching license serial number. Arbitrary Security Keys can also be applied.

Audit Trailing All Clients can use the Client log file to record operations performed on them by Controls. Windows NT, 2000 and XP Clients can also record Control operations in the Application Event Log.

User Acknowledgement The User Acknowledgement option enables Clients to approve attempted connections by Controls. This enables Client users to refuse connections when they are busy or working on sensitive data. Normally, this option also prevents Control users from accessing Client PCs when no user is present. However, it can be disabled when a Windows NT4, 2000 or XP Client is logged off.

Customizable Restrictions You can customize Client Profiles to implement a wide variety of restrictions on the actions that Control users are allowed to perform. These include Disable Watch, Share, or Control of the Client, Blank Client Screen, Disable file transfer (while still allowing connecting and viewing), Restrict Drive / Directory / File Access, Keep connection indicator on top (ensures the connected indicator does not become obscured on the Client desktop) and Force Compression and Encryption to ensure connection security.

When you start the Client Configurator, you are prompted to use either the Basic Configurator or the Advanced Configurator:



The Basic Configurator enables you to specify the Client's Connectivity, Security and Audio settings. Use this method if you are new to PC-Duo, or if you want to specify only the network transports or basic security settings for a Client.

The Advanced Configurator Provides full access to the Client configuration. Use the Advanced Configurator to create multiple Client Profiles, to set up access restrictions, or to configure advanced security options. You can also use the Advanced Configurator to specify the individual Client Parameters for a PC.

Starting the Client Configurator

If you have just installed the PC-Duo Control application, you can start the Client Configurator at the end of the Installation Process (see “Completing the Installation” on page 8). Alternatively, you can start the Configurator at any time from the Start menu.

To Start the Client Configurator:

1 Click the Start button in the Windows Taskbar to display the Start menu, then display the contents of the Programs menu.

2 In the PC-Duo submenu, choose the Client Configurator command. The Client Configurator Welcome dialog is displayed.

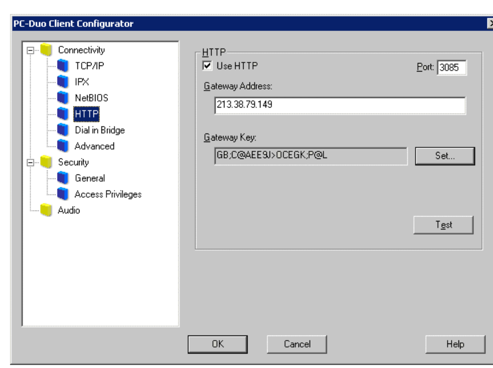
3 Read the information in the dialog and click the Basic button or the Advanced button.

Do not use the Basic Configurator when the Client is using multiple Client Profiles. A warning message is displayed if you start the Basic Configurator when the Client has multiple Profiles.

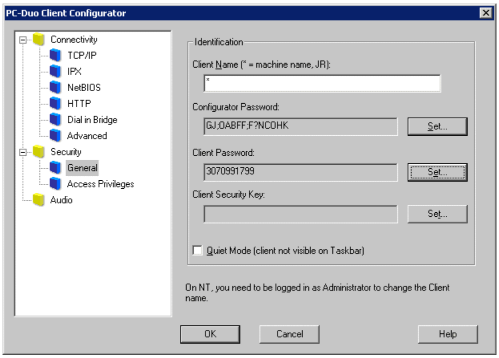
Using the Basic Configurator

The Basic Configurator allows you to view and amend the basic configuration settings for the Client. The information in the Basic Configurator dialog is contained in three folders:

Connectivity Specifies the network transports on which Clients can communicate with Controls. When you specify the network transports, click the Test buttons to check the information is correct.



Security Specifies passwords and other security options for the Clients using this configuration.



Audio enables you to configure microphone and speaker volume levels for use in Audio Chats.

To Configure Clients using the Basic Configurator:

1 Choose Client Configurator in the PC-Duo Program Folder.

2 In the PC-Duo Client Configurator dialog, click the Basic button to open the Basic Configurator dialog.

3 Specify the options and settings in the Connectivity, Security and Audio pages of the dialog.

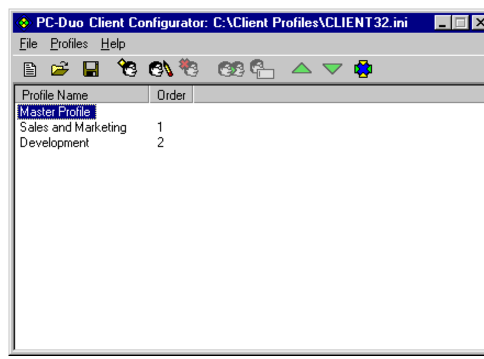
4 When you have finished, click the OK button to save your settings and close the dialog.

A message dialog is displayed asking if you want to restart the Client application on the PC. Click the Yes button to restart the application and apply the changes immediately. Click the No button to continue with the current settings.

Using the Advanced Configurator

The Advanced Configurator allows you to create multiple Client Profiles, set up Client access restrictions and configure advanced security options for Clients. Use the Toolbar of the Advanced Configurator window to create new configuration files, to open existing configuration files, and to save the current configuration file.

Clients can be set up with pointers to more than one configuration file. For example, they can reference a configuration file which is stored on a server by default, and access a local configuration file when the remote file is unavailable. This enables multiple Clients to share the same configuration file.



To specify which configuration files are referenced by Client PCs, use the Advanced Configurator to edit the Client Parameters. For more information, see “Selecting Configuration Files”.

CLIENT32.INI configuration files are usually stored in the directory in which PC-Duo was installed.

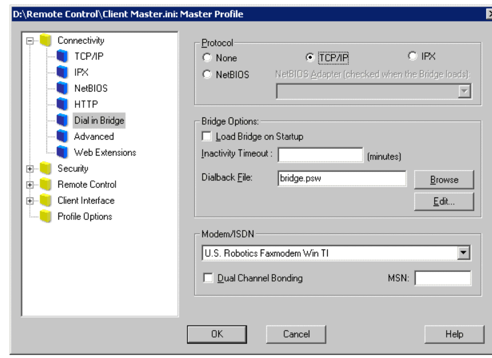
Working with Client Profiles:

- A configuration file consists of one or more sections known as Profiles. Each Profile contains configuration information for the Clients that use the configuration file.
- The Master Profile at the top of the list cannot be moved, as it contains the general settings for the Client. (The Master Profile contains more settings than other Profiles.)
- Other Profiles can be created, which contain different settings for specified Control users. By default, most editable settings are inherited from the Master Profile (for example, inherited check box settings are shown as a check with a gray background) so you need update only the settings you want to change.
- The Advanced Configurator window lists Client Profiles in priority order, with Profiles at the top having the highest priority. When a Control tries to connect to the Client, the Client starts from the top of the list and tests each Profile until it finds a Profile that permits access to that Control, or until it reaches the end of the list. (If the Client does not find a suitable Profile, the connection is denied.)
- To change the order of Client Profiles in the Advanced Configurator window, select a Profile and click the Move Up or Move Down button in the Toolbar.

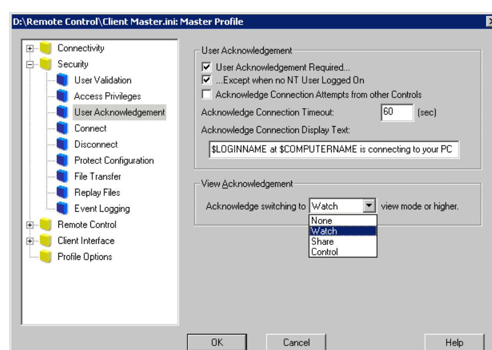
Viewing and Editing Client Profiles

Use the Advanced Configurator to view and edit the individual Profiles that make up a configuration file. The Master Profile contains five folders, which are divided into separate pages:

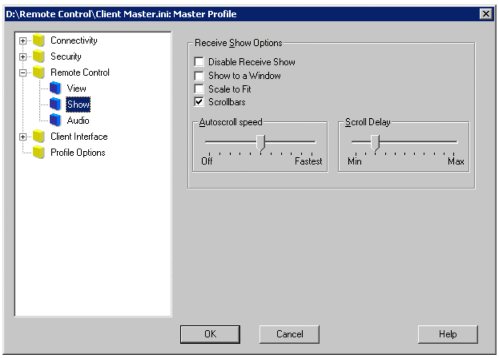
Connectivity Specifies the network transports with which Controls can connect to Clients. It also specifies the network protocol and security options for Clients that provide dialin access for Controls on remote networks, and the Web Extension settings that enable the Client to act as a simple Web Server.



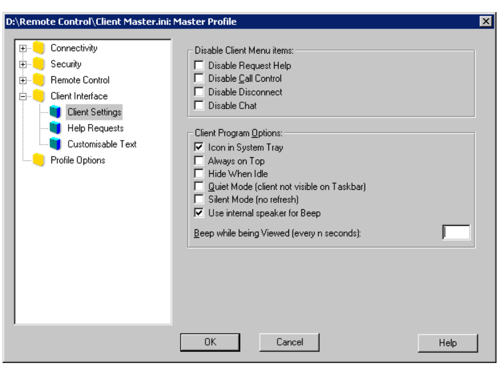
Security Specifies which users are able to access change and use this profile. The folder also contains pages that control the ability to log events transfer files and replay Control sessions, and that specify the access privileges of Control users who connect to Clients using this profile.



Remote Control Specifies how the Client can be viewed and whether the Control screen can be displayed on Clients. It also enables you to configure volume levels for Audio Chats.



Client Interface Controls the behavior of the Client application on the PC where it is installed. It also enables you to specify the messages displayed on Clients when a Control connects to them, and when the Client PCs are being viewed by a Control.



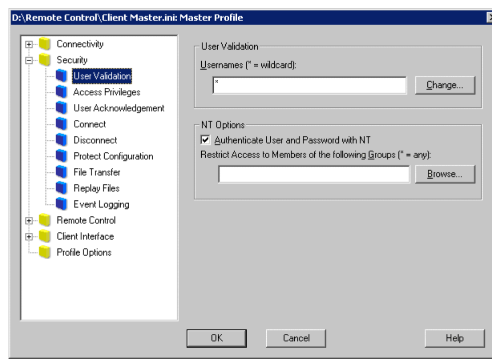
Profile Options To specify when Controls can access these Clients with this profile.

To View or Edit a Client Profile:

1 In the Advanced Configurator window, select the Client Profile you want to work with, then click the Edit  button in the Toolbar.

The Profile dialog is displayed. Its title contains the path of the current CLIENT32.INI file, and the name of the Profile you are currently viewing. The dialog enables you to view and edit the various settings for this Client Profile.

2 Select the User Validation page in the User Validation folder.

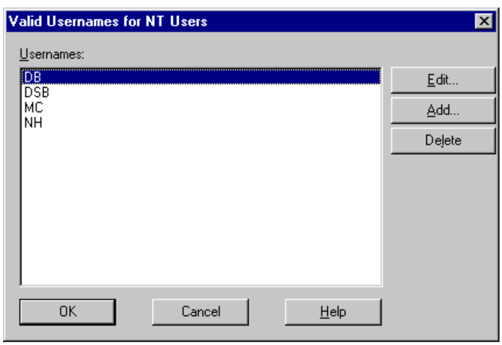


3 If you want all Control users to be able to access Clients that use this profile, enter an asterisk (*) in the Usernames field.

If you want to use Windows NT Security to control Client access, enter an asterisk (*) in the Usernames field, and select the Authenticate User and Password with NT check box. Any Control users attempting to connect to Clients using this profile must enter a valid NT username and password.

Alternatively, to enter the names of NT groups, use the Restrict Access to Members of the following Groups field. Click the Browse button to select the groups.

If you want to restrict the Profile to specific Control users, click the Change button to open the Valid Usernames dialog, and enter the names of users who can access Clients that use this Profile.



4 Use the other pages in the Profile dialog to control which features are available when the specified Controls connect to the Client.

5 When you have finished editing the Profile, click the OK button to return to the Advanced Configurator window.

The Copy  button in the Toolbar enables you to create a copy of the currently selected Client Profile.

You can use the Rename  button in the Toolbar to rename the currently selected Client Profile.

Configuring Clients for ActiveX Connections

In addition to communicating with Clients from the PC-Duo Control, you can connect to them and control them through a Web page using ActiveX. You can connect to any PC running the PC-Duo Client application using Internet Explorer 4.0 or later. You do not need to install the PC-Duo Control application to connect to a Client using this method.

To enable Web Extensions on a Client:

1 Choose the Client Configurator command from the PC-Duo Program folder, then click the Advanced button to open the Client Configurator dialog.

2 Double-click the Master Profile to open the settings dialog.

3 Click the Web Extensions page in the Connectivity folder and select the Enable Web Extensions check box.

4 By default, the ActiveX connection uses Server Port 80. If you are already using port 80 to run a personal Web server or IIS, type the next available port number in the Server Port field.

5 Click the OK button to close the dialog.

6 Save the Master Profile and close the Client Configurator window.

7 Restart all the Clients that you want to access using ActiveX.

For information on how to connect to a Client using ActiveX, see “Connecting to Clients using ActiveX” on page 22.

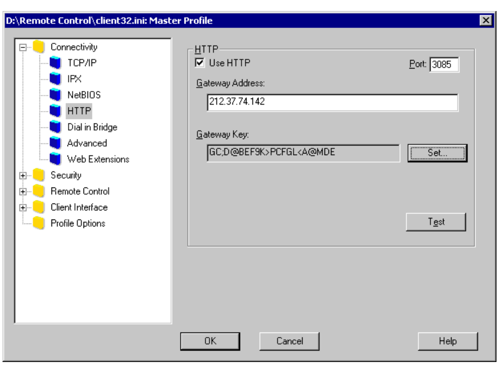
Configuring Clients for Gateway Connections

Gateways enable Controls to access multiple Clients across the Internet. Each Gateway provides a single IP address through which Controls connect to Clients on an internal network, and a configurable port to listen for Client-Control communications. If you want to enable Controls to communicate with your Clients across a Gateway, the Client profile must specify the port that the Gateway is using, and a Gateway Key to identify which Controls are allowed to access the Clients.

To configure a Client profile for a Gateway connection:

1 Open the Client Configurator, and double-click the Master profile to open the settings dialog.

2 Click the HTTP page in the Connectivity folder and select the Use HTTP check box.



3 By default, PC-Duo uses port 3085 for communications between Controls and Clients. If you want to use a different port to transmit and receive data, enter the new port number in the Gateway Port field.

4 In the Gateway Address field, enter the domain name or IP address of the Gateway you want to use.

5 Click the Set button to display the Security dialog. Enter the key. The key must be from 8 to 15 characters long and can contain any alphanumeric characters. Click the OK button to validate the key and save it.

Gateway Keys control access to Clients. Any Control attempting to access a Client through a Gateway must be configured with a Gateway Key that matches the Gateway Key of the Client and one of the Keys defined for the Gateway itself.

6 Click the OK button to close the dialog.

7 Save the Master Profile and close the Client Configurator window.

You can specify different Gateway Keys for different Clients by using separate CLIENT32.INI files. This enables you to create different Internet-Client groups and to assign different Controls to them.

Adding New Client Profiles

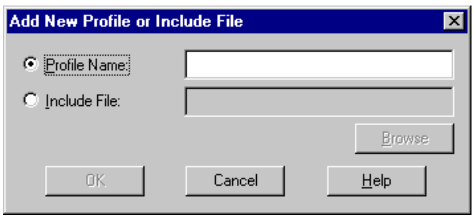
To Add a New Profile:

1 Open the Client Configurator from the Windows Start menu, then click the Advanced button to open the Client Configurator window.

2 In the Client Configurator window, select the entry in the profiles list below which you want to add the new Profile.

3 Click the Add  button in the Toolbar.

4 In the Add New Profile or Include File dialog, ensure the Profile Name option is selected, then enter a name for the Client Profile in the text field.



5 Click the OK button to close the dialog and add the Profile to the Client Configurator window. Double-click the Profile to edit its settings.

You can also add a new Client Profile by selecting an existing Profile and choosing the Profiles, Add menu command.

Deleting Client Profiles

To Delete a Client Profile:

1 Select the Client Profile you want to delete from the Client Configurator window.

2 Click the Delete  button in the Toolbar.

3 In the confirmation dialog, click the Yes button to delete the Client Profile.

You can also delete a Client Profile by selecting the Profile and choosing the Profiles, Delete menu command.

Selecting Configuration Files

By default, a separate CLIENT32.INI configuration file is stored on each PC when you install the Client kit. However, to reduce the maintenance overhead, you can use central configuration files to ensure that Clients use the same configuration parameters.

To create a centrally stored configuration file:

1 Create a share which can be accessed by all Clients that will use the central configuration file.

2 Save the configuration file (CLIENT32.INI) to the share.

To configure Clients to use a central configuration file:

1 Open the Client Configurator from the Windows Start menu, and click Advanced.

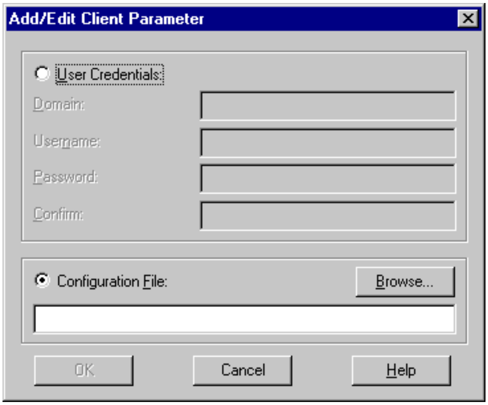
2 In the Client Configurator window, choose Client Parameters in the Profiles menu to open the Client Parameters for this Machine dialog.

3 If the central file is located on a PC running Windows NT4, 2000, or XP:

a Click Add to open the Add/Edit Client Parameter dialog.

b Select the User Credentials option, then enter the Username and Password details of the user account which this PC can use to access the central configuration file.

c Click the OK button to save your changes and close the dialog. The user details are displayed in the Client Parameters for this Machine dialog.

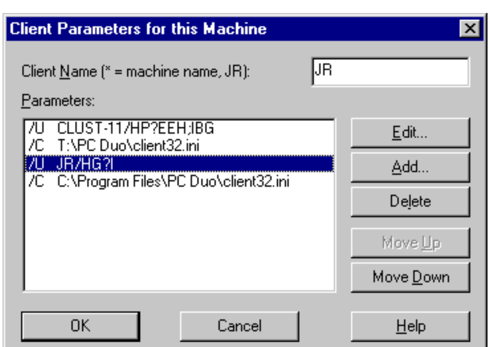


You do not need to supply user credentials when the configuration file is located on a PC running Windows 95, 98 or Me.

4 Click Add to open the Add/Edit Client Parameter dialog again.

5 Select the Configuration File option and enter the location and name of the configuration file, or click Browse to search for the file.

6 Click OK to save your changes and close the dialog. The location details are displayed in the Client Parameters for this Machine dialog.



7 Click the OK button to save your changes and close the dialog.

You can specify more than one configuration file parameter. This enables a networked Client to use a shared CLIENT32.INI file by default, and to use a local file if the server is not available when it starts.

Because the Client must open a session on the server before it can locate the configuration file, the user credentials parameter must always precede the associated location parameter if it is required. To reorder the list, select a parameter and click Move Up or Move Down.

Disconnecting Controls from Clients

If Clients need the ability to disconnect from connected Controls, you can remap the Client's Request Help hot key combination to disconnect it without warning. This removes the need to use the Client's Commands Disconnect menu command, which can be prevented by Control users.

This procedure removes the Client's ability to use a hot key combination (ALT+LSHIFT+RSHIFT, by default) to request help from a Control.

To enable the hot key disconnect:

1 Open the CLIENT32.INI file and locate the [Client] section of the configuration file.

2 Add the following line to the [Client] section:

```
DisconnectHotkey=1
```

3 To reset the configuration file's checksum, open the Client Configurator in Advanced Mode, then open and save the file.

4 Restart the Client32 Service to apply the change using the Restart Client shortcut, or RESTART.BAT.

Exiting the Advanced Configurator

To Exit the Advanced Configurator:

1 Choose the File, Exit menu command, or click the close button in the top right corner of the Advanced Configurator window.
2 If a message dialog is displayed, asking if you want to save the changes to the Configuration file, click the appropriate button.
3 If you have made any changes, a warning message is displayed. Select the Restart option to apply your changes.

Using Control Profiles

Control Profiles are named configurations used by the Control application. They store security settings as well as additional settings, such as the network transports required to access Clients. They also enable a Control user with PC-Duo administrator rights to set up profiles for other Control users. These profiles contain permissions which determine the level of access which Control users can have to Client PCs.

The Control profiles are stored as registry entries under Windows. Normally, they can be amended only by a PC-Duo Administrator with the required access levels. Under Windows NT, 2000 and XP, Administrator privilege is required to amend the User Profiles.

Control users are able to access only the PC-Duo functions which their profile permits; users without Administrator rights cannot change their profile. As a result, you can create secure, password-protected Control Profiles which determine the levels of access Control users can have to Client PCs. For example, one Control user may be profiled to have Connect and Watch functionality only, whereas another Control user may have full functionality.

Client profiles always take precedence over Control profiles. This enables PC-Duo to support users who handle sensitive information without compromising their ability to maintain confidentiality.

Security features which you can implement in Control Profiles include the following:

Password (Settings page) Sets an encrypted password, which must be entered before a profile can be selected.

Security Key (Settings page) Sets a security key, which is sent to Clients when the Control attempts to connect to them. If the Control’s security key does not match the Client’s key (if one has been set), the connection is refused.

Prompt for Additional Information when Connecting (Settings page) When the User Acknowledgement required option is set at the Client, this setting defines an additional message, which is displayed at the Client. For example, it could be the name and telephone number of the Control user who is trying to connect.

Use Compression (Settings page) Select this option to ensure that all data sent using this Control profile is compressed.

Use Encryption (Settings page) Select this option to ensure that all data sent using this Control profile is encrypted, including any keystrokes. Select an entry in the Type list to specify what type of encryption you want to use.

Because only 56 bit (DES) encryption was available in previous versions of PC-Duo, you must use this option when a profile is used to connect to Clients running older versions of the software.

In PC-Duo version 8, you can specify a minimum level of encryption for remote control sessions in the Client configuration. The Client informs the Control when the connection is established. If the Control is already using a higher-level encryption algorithm that is also supported by the Client, the higher encryption level is automatically used. If the Control supports only lower levels of encryption, the connection is refused.

Blank Client Screen (View page) Blanks the Client PC screen when it is being controlled, so the Control user can perform actions without being observed at the Client.

Change Settings (User Permissions page) Prevents Control users from changing their default settings.

Configure User Interface (User Permissions page) Prevents Control users from changing the functionality that is available to them.

Additionally, you can implement a wide variety of restrictions for a Control Profile in the Control Interface folder:

Hide Client List / Client List Read Only (Interface Settings page) PC-Duo maintains a list of Clients to which the Control has previously been connected, along with their network addresses. The Hide Client List option prevents the list from being displayed in the Control application. The Client List Read-only option prevents the list from being amended.

Hide Group List / Group List Read Only (Interface Settings page) The Hide Group List option prevents the Group list from being displayed in the Control application. The Group List Read-only option prevents the list being amended.

Hide Dial Directory (Interface Settings page) Disables all Remote Networks functions. The Remote Networks branch is removed from the Tree View, and all related menu items and Toolbar buttons are removed.

Dial Directory Read-only (Interface Settings page) Prevents users from changing the Remote Networks list.

Disable Browse (Interface Settings page) Prevents the discovery of Clients by browsing.

Disable Share / Disable Watch / Disable Control (Functions page) These options limit the functions which the Control user is able to perform when connected to Clients.

Disable Show (Functions page) Prevents Control users from displaying their screens on Client PCs.

Disable File Transfer (Functions page) Disables PC-Duo's File transfer capabilities for this Control profile.

Disable Chat (Functions page) Prevents the Control user from using the Chat feature.

Disable Send Message / Disable Broadcast Message (Functions page) Disables the message functions at the Control.

Disable File Manager (Functions page) Prevents Control Users from opening the PC-Duo File Manager.

Disable Reboot (Functions page) Disables the ability for the Control to remotely reboot Clients.

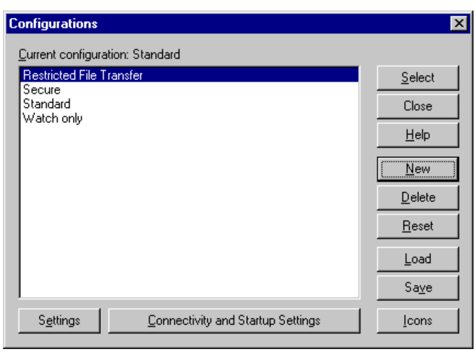
Disable Replay (Functions page) Prevents the Control from displaying Replay files. The Replay function is an option that records all activity while a Control is connected to the Client. It can be used to check and audit Control activities.

Disable Execute (Functions page) Prevents the Control from running applications on Clients.

Disable Registry Editing (Functions page)
Prevents the Control from editing the Client registry except under remote control.

Disable Blank Screen (Functions page)
Prevents the Control from blanking out Client screens during a Control session.

Working with Control Profiles



To Select a Control Profile:

1. Disconnect the Control from all Clients.
2. In the Control window, choose the Tools, Configurations menu command. The Configurations dialog is displayed. It lists the available Control Profiles. (Your current Profile is displayed above the list.)

You cannot change your Control Profile if you are not an Administrator, or your User Permissions do not allow you to change your Control settings.

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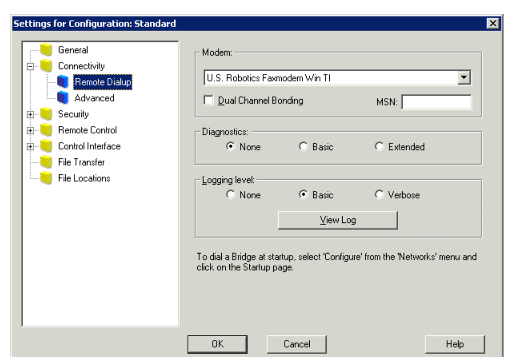
3. Select the Profile you want to use, and click the Select button.
4. In the message dialog, read the information, then click the Yes button to use this Profile. You may also be required to enter a password to use this Profile.
5. To return to the Control window, click the Close button.

Amending Control Profile Settings

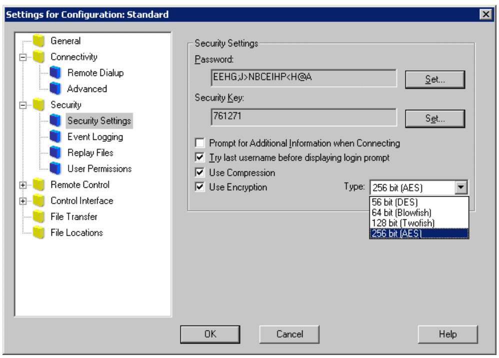
You can amend the settings for a Profile using the Settings for Configuration dialog. The dialog contains seven folders:

General Specifies the name by which the Control identifies itself to Clients. It also enables you to record a description of the profile.

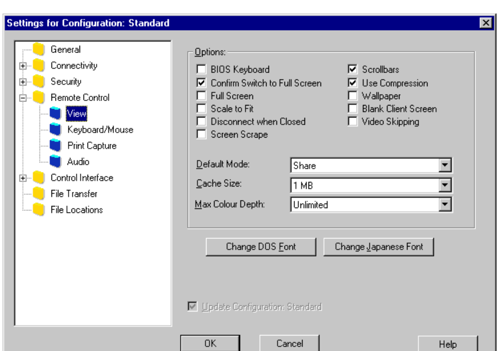
Connectivity Specifies the settings used to start and maintain connections with Clients and remote Networks.



Security Specifies the password required to access the Control Profile and the Security Key that controls which Clients the Control can access. It also specifies whether the Control has access to administrative functions, logs events and records actions performed on Clients during Control sessions.



Remote Control Specifies the keyboard, mouse, and printer functions that the Control user can access on Client PCs when running remote control sessions. It also specifies the Control's audio settings and the level of detail shown in the Client screen when it is displayed on the Control PC.



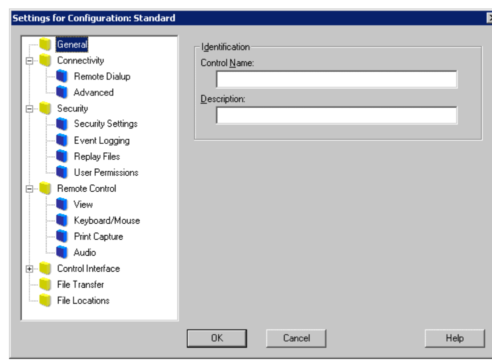
Control Interface Specifies which options and functions are available to the Control user. It also specifies how Help Requests from Clients are handled by the Control.

File Transfer Specifies which options are available when using File Transfer windows.

File Locations Specifies alternative names and locations for the Main Control data files.

To Amend a Control Profile's Settings:

1 In the Configurations dialog, select the Profile you want to work with, and click the Settings button.



2 In the Settings for Configuration dialog, amend the options.

3 Click the OK button to save your changes and return to the Configurations dialog.

You can also display the current Profile settings directly from the Control window by clicking the Settings  *button in the Control window Toolbar.*

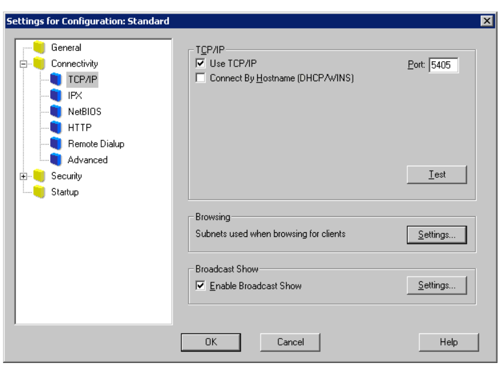
Connectivity And Startup Settings

A separate dialog is used to display the Control's Connectivity and Startup settings. Like other Control configuration information, this information is specific to each Profile. Use it to specify the network transports with which the Control can access Clients. You can also use it to configure the Control to automatically perform the following actions when it is started:

- Connect to a specified Client.
- Connect to a specified Group.
- Perform a Browse operation.
- Dial a Remote Network.
- Begin viewing the specified Client or Group.

To specify Connectivity and Startup Settings:

1 In the Configurations dialog, select the Profile you want to work with, and click the Connectivity and Startup Settings button.



2 In the Settings for Configuration dialog, amend the options.

3 Click the OK button to save your changes and return to the Configurations dialog.

The Control initializes more quickly if its profile is configured to use only those transports that are used by Clients.

To display the current Profile's Connectivity and Startup options, choose the Network, Configure menu command in the Control window.

Resetting Control Profiles

You can return a Profile's settings to their original, default values.

To Reset a Profile:

1 In the Configurations dialog, select the Profile you want to work with.

2 Click the Reset button. A warning message is displayed.

3 Click the Yes button to reset the Profile settings to their original values.

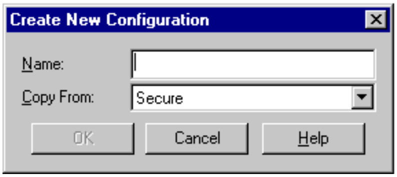
Creating Control Profiles

PC-Duo enables you to create your own custom Profiles.

To Create a New Control Profile:

1 Display the Configurations dialog, then click the New button on the right of the dialog.

2 In the Create New Configuration dialog, enter a name for this New Profile in the Name box, then use the Copy From list to select the Profile on which you want to base the new Profile.



3 Click the OK button to create the Profile. The Profile is displayed in the Configurations dialog.

Configuring Controls to Record Control Sessions

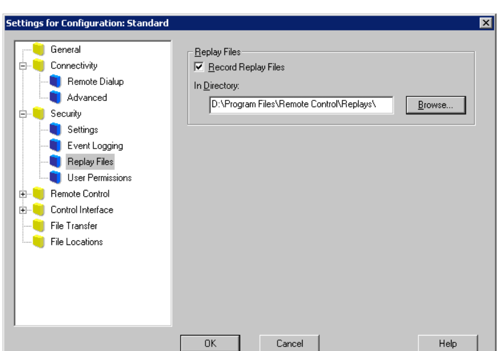
As an aid to security and auditing, you can record the actions taken by Controls when they Share or Control a Client.

To Modify a Control Profile to Record Control Sessions:

1 In the Control Window, choose the Tools, Configurations menu command to open the Configurations dialog.

2 In the Configurations dialog, select the profile you want to edit and click the Settings button.

3 In the Settings for Configuration dialog, select the Replay Files page in the Security folder.



4 Select the Record Replay Files check box, and enter the location of the Control session recording.

5 Click the OK button to save your changes.

6 In the Configurations dialog, click the Select button to apply the updated profile to the current Client, then click the Close button to close the dialog.

For information on how to display a recording, see "Recording and Replaying Control Sessions".

Creating Shortcut Icons for Profiles

Once you have created a Profile, you can use PC-Duo to create a shortcut icon which can be used to start the Control application using this Profile.

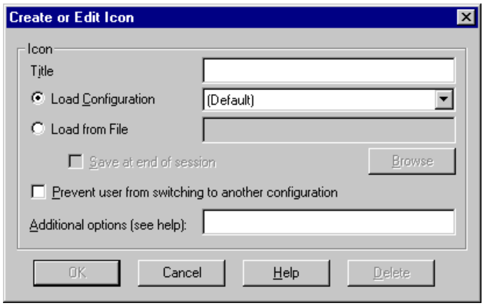
To Create a Shortcut Icon for a Control Profile:

1 In the Configurations dialog, click the Icons button.

2 In the Icon Maintenance dialog, position the mouse pointer over a blank part of the Icon Maintenance dialog, left-click and hold the mouse button, then drag the mouse pointer to where you want the shortcut icon to appear:

- If you want the icon to appear on the Windows desktop, drag the mouse pointer to an empty part of the desktop and release the mouse button.
- If you want to add the icon to the Start menu, drag the mouse pointer over the Start button to display the Start menu, then navigate to the submenu and release the button.

3 The Create or Edit Icon dialog is displayed. Use this dialog to specify a Title for the icon, then select the Profile you want to use when starting the Control application from this icon.



4 If you want to prevent the user from accessing other Profiles, select the Prevent user from switching to another configuration check box.

5 Click the OK button to close the Create or Edit Icon dialog, then click the Close button in the Icon Maintenance dialog.

Deleting Control Profiles

To Delete a Control Profile:

1 Choose the Tools, Configuration menu command in the Control application to open the Configurations dialog.

2 Select the Profile you want to delete from the Configurations dialog.

3 Click the Delete button. A message dialog is displayed, asking you to confirm this action. Click the Yes button to delete the Profile.

You cannot delete a Profile that is currently in use. If you want to delete that Profile, you must first select another Profile.

Recording and Replaying Control Sessions

PC-Duo Clients can be configured to automatically record the actions performed when a Control connects to it. The recorded file can then be replayed by a Control.

You can also configure a Control to record Remote Control sessions, using the options in the Settings for Configuration dialog's Print Capture page.

Configuring Clients to Record Control Sessions

You can amend a Client's configuration file to specify where recorded Remote Control sessions are stored.

To Configure a Client to Record Control Sessions:

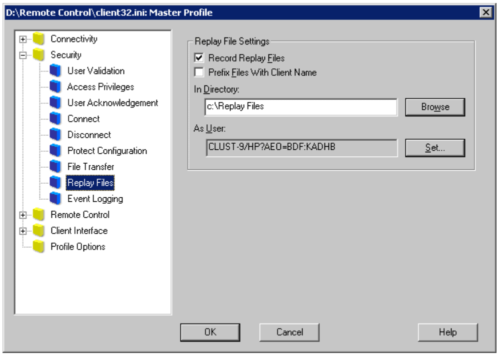
1 In the Windows Start menu, choose the Programs, PC-Duo Client Configurator command.

2 In the PC-Duo Client Configurator dialog, click the Advanced button.

3 In the Client Configurator window, choose the File, Open menu command, and select the CLIENT32.INI file.

4 Select Master Profile in the list, then click the Edit  button in the Toolbar.

5 In the Master Profile dialog, select the Replay Files page in the Security folder.



6 Select the Record Replay Files check box, and use the In Directory text box to specify where the files are saved. Alternatively, click the Browse button to select the directory.

7 If you want to restrict access to the recordings, click the Set button to enter a user name and password for the recordings directory.

8 Click the OK button to return to the Configurator window. Click the Save button in the Configurator Toolbar, then exit the Configurator application.

If the CLIENT32.INI file is used by more than one Client, click the Set button and use the Add/Edit User dialog to specify the Clients for which you want to record Control sessions.

You may want to store recorded Control sessions in a secure area on a server.

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9 Restart the Clients to enable Control recording. Control sessions recordings are stored in the specified directory with an extension of .RPF.

Replaying Control Sessions

You can replay a recorded Control session using the PC-Duo Control application. (It does not need to be the same Control that recorded the session.) When viewing a Control session, remember you are watching a recording of the actions performed by a Control. The actions are not repeated on the Client.

To Replay a Control Session:

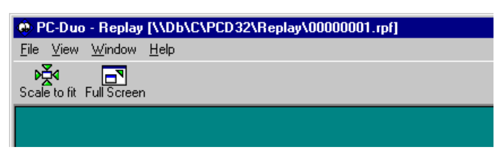
1 In the Control window, choose the Tools, Replay menu command.

2 In the Open dialog, locate and select the file you want to replay. When you select a Replay file, information about the file is displayed at the bottom of the dialog.

3 Click the Open button. The recorded control session is displayed in the Replay window.

Using the Replay Window

The Replay window is used to display recorded Control sessions.



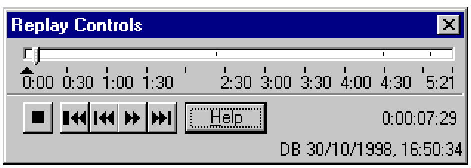
The Replay window has two buttons in its Toolbar:

- The Scale to Fit button enables you to display all of the recorded session in the Replay window. This eliminates the need to scroll to different parts of the window.

- The Full Screen button enables you to make the Replay window fill the entire Control screen.

These buttons act as toggles. Click them a second time to return the Replay window to its previous state.

The Replay Controls window is also displayed when you are replaying a Control session.



The Replay Controls window enables you to navigate the Control session which is being displayed in the Replay window:

- The gauge bar at the top of the Replay Controls window shows the progress of the recording. This gauge is divided into set intervals, with units of minutes and seconds.
- Information about the current Control session is displayed at the bottom of the Replay Controls window.
- The buttons enable you to control the display of the replay:

  Play / Stop Starts and stops the Control session. The button changes to Stop when the Control session is playing. The button changes to Play when the Control session is stopped.

  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 Moves the replay index to the previous activity marker, or to the beginning of the file. These markers are added at points where lots of activity was recorded at the Client.

  Frame Advance Advances the replay index to the next frame. Click and hold this button to Fast-Forward though the replay file.

  Skip to Next Moves the replay index to the next activity marker, or to the end of the file.

When you have finished watching the Control session, choose the File, Close command to exit the Replay window.

Security for Dial-Up Links

Dial-up support is provided by the PC-Duo Bridge programs. These enable access to Client PCs on which the Bridge utility is running, or to any PC on a network which has a Client loaded and Bridge utility running.

Because the PC-Duo Bridge claims the serial port, it is very secure. It has been tested with products that use the serial port as a back door to gain access to a PC, and has proven to effectively lock these out. The Bridge utility can be configured to support the following security functions:

Access Password Requires the user at the Control PC to enter a password before access is permitted. The password is encrypted at the Client end. This feature is in addition to any Client password restrictions already in effect.

Dial-Back This function causes the Dialin Bridge to dial-back the Control PC according to the password entered by the Control when attempting to connect. You can associate different telephone numbers to different passwords, enabling you to set multiple dial-back numbers.

Configuring Gateways

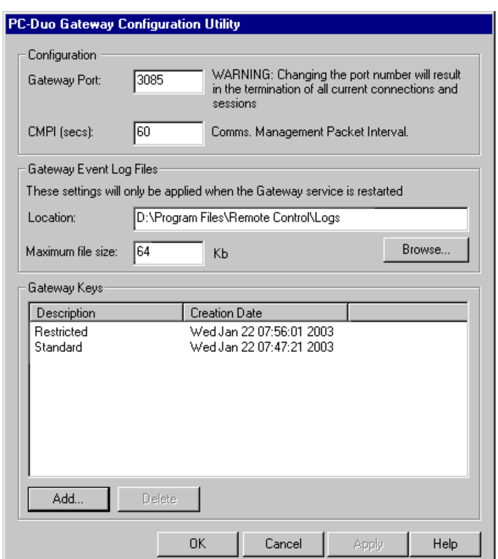
Gateways enable Controls to access multiple Clients on a private network through a single IP address. Use the Gateway Configuration Utility to define the settings of a Gateway, and to specify the Gateway Keys that can be used to access Clients through the Gateway PC.

To configure a Gateway:

1 Right-click the Gateway icon in the Windows system tray and choose Configure Gateway from the shortcut menu.

Alternatively, if the Gateway is not running, click the Start button in the Windows Taskbar and choose Gateway Configurator from the PC-Duo Program Group.

The Gateway Configuration Utility dialog is displayed.



2 By default, PC-Duo Gateways use port 3085 to communicate with Controls and Clients. If you want to use a different port to transmit and receive data, enter the new port number in the Gateway Port field.

If you change the port number of a Gateway, you must also specify the same port setting for all Controls and Clients using the Gateway.

You must allow access to the specified port in any firewalls protecting the Gateway.

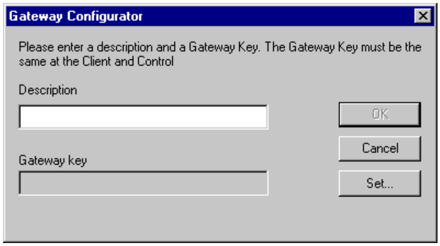
3 When a Control is connected to a Client through a Gateway, the Client automatically sends a network packet to the Gateway at a specified interval to maintain the connection. To change the frequency at which Clients send a keep-alive packet to the Gateway, enter a new value in the CMPI field.

4 Each Gateway automatically records details of the Control sessions performed through it. If you want to change the directory in which the Gateway log file is stored, enter the directory path in the Location field.

5 If you want to specify a size limit for the Gateway log file, enter the limit in the Maximum file size field.

6 To define a key that can be used to access Clients through the Gateway:

a Click the Add button. The Gateway Configurator dialog is displayed. Enter a Description for how the key is used, and click the Set button.



b In the Gateway Key dialog, enter the key for this Gateway. The key must be from 8 to 15 characters long and can contain any alpha-numeric characters. Click the OK button to validate the key and save it.

Gateway Keys control access to Clients. To access a Client through a Gateway, the Control's Gateway Key must match the Gateway Key specified for the Client and one of the Keys defined for the Gateway.

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c The key is displayed in the Gateway Configurator dialog. Click the OK button to add the key to the Gateway.

7 Click the OK button to apply your changes and close the Gateway Configuration Utility dialog.

For more information on using Gateways, see “Gateways” on page 34.

Appendix A: Technical Support

For Technical Support enquiries, contact your reseller. Alternatively, contact the Vector Networks Technical Support departments using the following details:

US or Canada

Telephone: 770 622 2850

Toll Free: 800 330 5035

Fax: 770 495 6214

Email: support@vector-networks.com

Rest of the World

Telephone: +44 (0) 1827 67333

Fax: +44 (0) 1827 67068

Email: support@vector-networks.co.uk

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