Perle WinAttach

User Guide

Part number 5500141-10

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Introduction

Traditional servers *running* commercial systems all have "system consoles".

The console is defined to be the system's primary terminal where you can:

1. Manage the system, even when it is in difficulty, without relying on the standard network
2. Shutdown and reboot the system
3. See important operator event messages concerning system and application status

In mainframes these system consoles were usually dedicated terminals with specialised wiring into the system. In medium size servers like Unix and OpenVMS a dedicated terminal was attached to a specific serial port known as the console port.

The problems of handling multiple system consoles for many servers in disparate locations led Perle to develop the CS9000 as a remote system console manager. This has now been employed by many users to handle a wide variety of computers and other devices that have a serial (RS232) console ports.

This still leaves a problem on Windows NT/ Window 2000 servers, which are increasingly being used in mission critical applications. This problem can be characterised with the question: Where is Windows NT's console?

The answer is that being single user/multiprocessing and originally based on PC type hardware, the "system console" is the single screen, mouse and keyboard at which the user would normally be using the computer. This answer works well enough for Workstation type systems, but not for servers operating in the essentially lights out environment of today's computer room.

A traditional solution to the problem has been to use one of the range of remote control tools available in today's market. These tools have the following problems:

a) When the system is in severe difficulty the GUI does not seem to work, so no remote control possibilities are available either. Thus system management tasks cannot be performed to determine the cause of the problem etc. Even when the GUI is working there is a large reliance on the network and often a high bandwidth requirement too.
b) With the GUI essentially inoperable shutdown and reboot are unavailable. The only recourse being to the systems reset or power switches.
c) Important operator messages are sent to the 3 NT event log files where they will only be seen if the system user starts the log file viewer application. Some important events are issued as popups too, but again this is compromised if the GUI is inoperable.

The mission of Perle WinAttach is to provide a serial console providing the 3 expected functions of the console as enumerated above.

Thus Perle WinAttach is a quasi console for Windows NT/2000 systems.

System Requirements

Hardware

Any system capable of running Windows NT/Windows 2000
Software
Windows NT 4.0 SP5 or above

Serial Cabling

Please refer to the Perle CS9000 User Guide for details on cabling.

System Usage

CPU

In normal conditions Perle WinAttach uses no CPU. CPU is used in response to the following events:
You use the console command line features or "MS-DOS" shell
A Windows NT event occurs and you have event sending to the console or remote monitoring system enabled.

Memory

Perle WinAttach's memory footprint varies according to tasks but should be around 1MB (VM). It's not possible to estimate actual memory usage, as this depends on Windows NT/2000 memory management and pressure from all running applications for memory.

Disk

Perle WinAttach, utilities and documentation take up about 25 MB on disk.

Installation

As with many Windows NT/2000 products Perle WinAttach installs using "InstallShield", so the installation process will feel very familiar.

It is strongly recommended that before installing Perle WinAttach you exit all Windows programs (except the Explorer or File Manager which you may be using to locate the Setup.exe program).

To install Perle WinAttach, locate the program *setup.exe* on the Perle WinAttach distribution kit and run it. You will then be taken through an installation wizard.

The Wizard does asks for the following:

Location on disk to install the Perle WinAttach software.
The default location is <Windows NT disk>:\ Program Files\PWA
The name of the folder to add to your "Start" menu. The default is "Perle WinAttach "
Your licence key. Note, if you don't have the licence handy at this time you can always enter it later (See Configuration)
Confirmation of the correct choices in 1 and 2

The Wizard now installs the software to the chosen location.

The configuration after setup has completed is as follows:

| Setting	Value
Connection	Serial
Serial Connection Options	Port=Com1, Baud Rate=9600, Data Bits=1, Stop Bits=1, Parity=None, Flow Control=Xon/Xoff, Modem Controls=Ignore
Perle WinAttach service started	Yes
Perle WinAttach service set to autostart	Yes
Event Listing (to the Console)	Enabled
Event Display	From end of file i.e. all new events
Event Logs to Display	All i.e. System, Application, Security
Event Filters	None i.e. Show all types of event
Event Format	Plain text
Audit Policy	Disabled
Sam Bypass Logon	Disabled
Screen Settings	Paging Enabled, Line Wrap Enabled Height = 25, Width = 80, Tab =8
Auto Logoff Period	20 minutes

Configuration and Startup

If you find the post installation settings to be OK and entered your key during setup there's nothing to do other than to Start the " Perle WinAttach Service" - see the subsection on this below.

Otherwise you'll want to make changes. This section explains what you can configure and how.

One principle to realise though is that apart from the event settings all other configuration choices are not dynamic i.e. you have to stop and restart the Perle WinAttach service.

Control Panel configuration applet

Perle WinAttach installs a new Control Panel applet called " PWA Admin" as shown below.
(Control Panel can be found using the Start Menu -> Settings -> Control Panel).
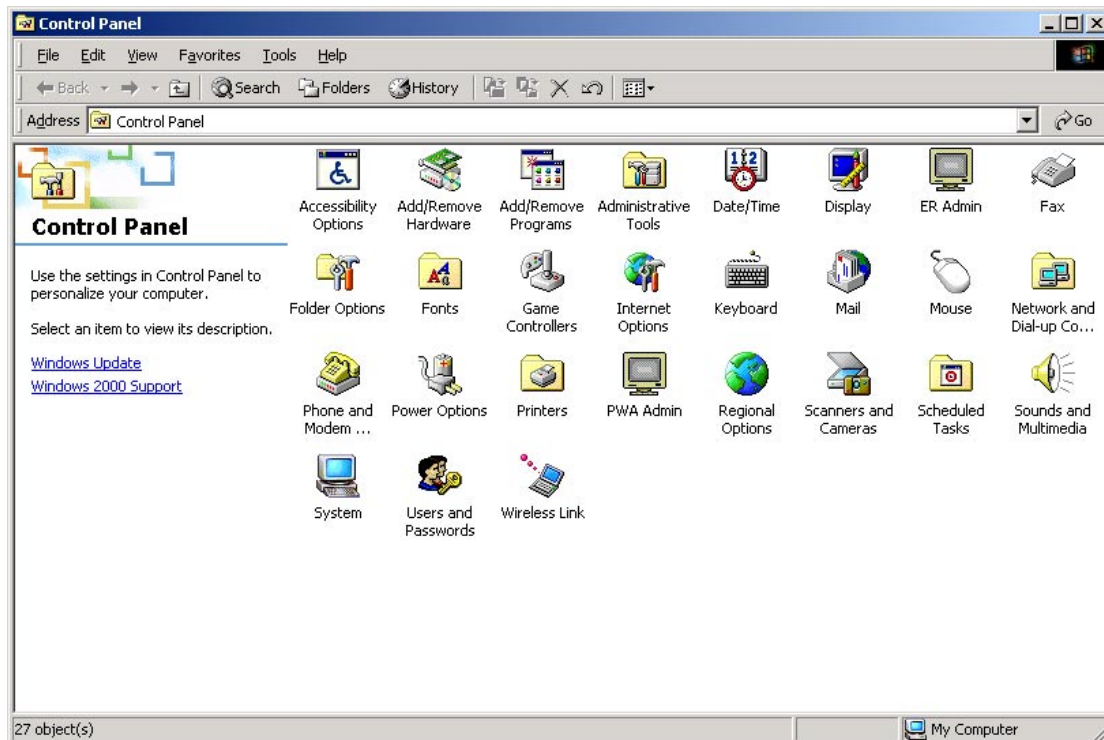
Double-click the applet to start the configuration tool. There are seven main areas:

- General - contains licence key and auto logoff period settings
- Events - allows you to choose how events will be formatted and sent
- Screen – settings for default size and characteristics of display screen
- Transport – select the communications protocol and protocol specific settings (currently only serial is available).
- Audit Policy – select which actions will generate audit events in the NT security log
- SAM Bypass Logon – set bypass login id and password.

The configuration areas are on different "tabs" of the tool.

General

This tab is used to enter or amend the licence key and set the time out period for the automatic logoff facility.

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Standalone Licensing

Normally Perle WinAttach will be licensed either:

- ♦ Standalone i.e. not included in the licensing of another product.
- ♦ As part of another product
- ♦ During an evaluation period (no physical licence required)

If required the standalone key can be entered or maintained here. The 'Stand-Alone Key' box has to be checked to display the 'Edit Stand-Alone Key' button. Pressing this button will display a dialog box where the key can be entered or maintained.

New or updated keys can be obtained from Perle Systems or one of its distributors. See the support tab for details. The key supplied will consist of five segments of five characters each and a final segment of four characters. Each segment being separated by a hyphen.

Note: Standalone Licence keys do not contain the *letters* I, O or Q.
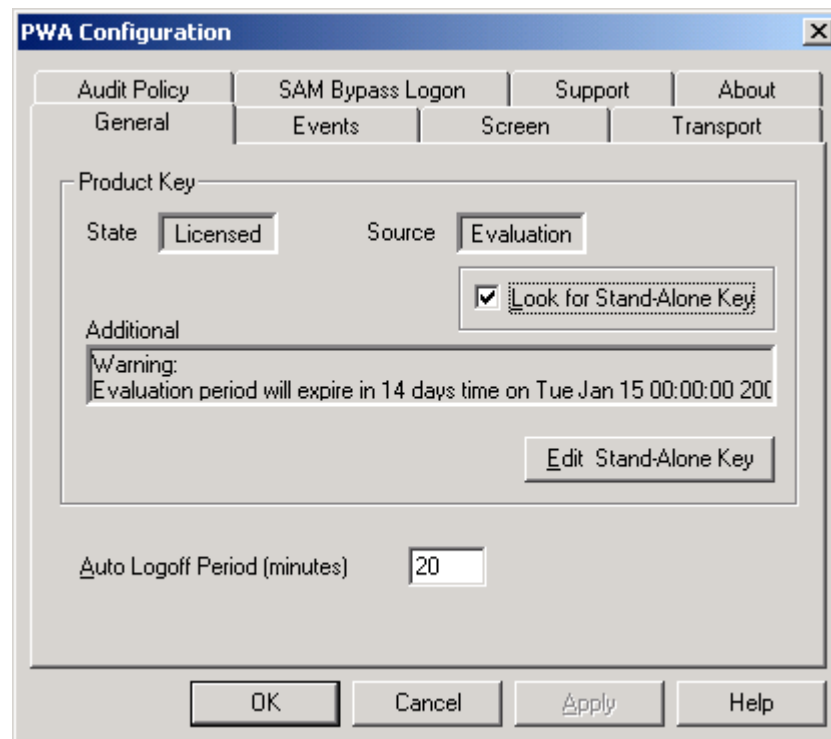
Auto Logoff Period

This field is used to update the number of minutes that Perle WinAttach will wait for input before automatically logging off a user. This auto logoff feature is incorporated as a security measure. Perle WinAttach monitors the length of time between inputs from the keyboard and when the inactive time reaches the timeout period the user's session is terminated.

Setting the period to 0 will turn off this feature.

Event Listing

This tab controls the way that events are read from 'Windows NT's event logs, and displayed on the screen, or sent to a remote monitoring system.

 As well as the standard event logs SYSTEM, SECURITY and APPLICATION, Perle WinAttach can monitor other special event logs that have been set up by applications.
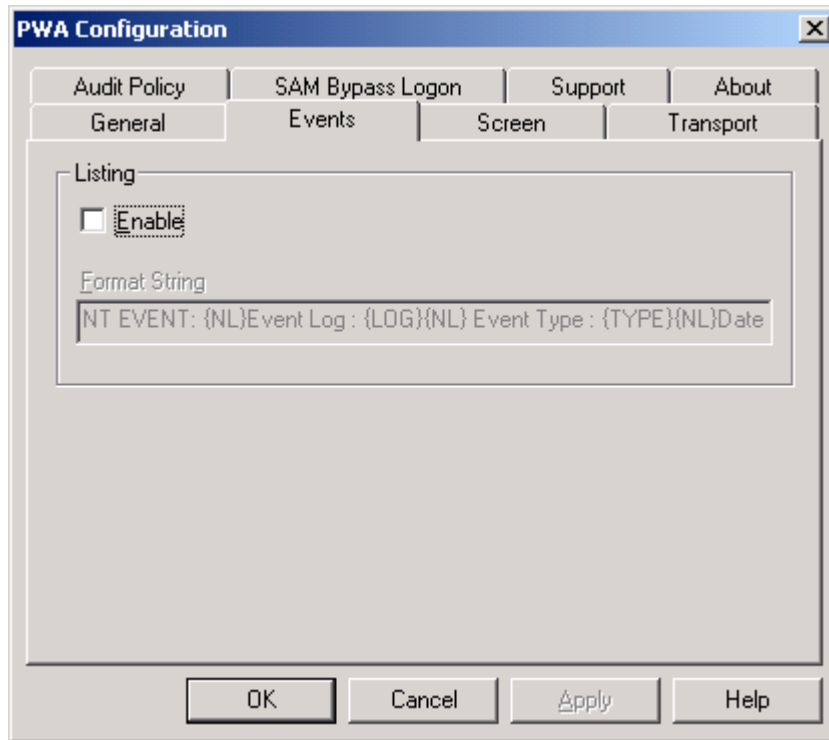
Enable (Listing)

Check this box if the listing to the Console feature is required.

Note that the Perle WinAttach shell command, Event's function to enable events will be ineffective if this check box is unchecked.

Format String

The format string represents how the events are to be displayed. The format may contain a combination of literal characters and replacement names surrounded by curly braces {}.
The following replacement names are valid:

Name	Meaning
LOG	The name of the log the event has come from: e.g. SYSTEM, APPLICATION, SECURITY
TYPE	E, W, I, S or F, as follows: E=Error (stop symbol in NT's Event viewer) W=Warning (! Symbol in NT Event viewer) I=Information (i symbol in NT Event viewer) S=Audit Success F=Audit Failure
DATE	The date NT stores for this event
TIME	The time NT stores for this event
SOURCE	The NT facility generating the event e.g. Print, Srv, Service Control Manager, NETLOGON etc. This corresponds exactly to the source field in NT's event viewer.
CATEGORY	The is exactly the same as NT Event viewers category field which is often set to "None" or occasionally a value like "Service Control"
ID	NT's event id. A unique number for each event within a given "SOURCE"
USER	The name of the user experiencing the event (if any). Usually set to N/A when no particular user is concerned

COMPUTER	The name of the NT system generating the event. This is usually the name of the computer on which Perle WinAttach is running, but it does not have to be. This is the same as the computer seen in NT's event viewer.
MESSAGE	The message text of the event, as seen in NT's event viewer.
NL	Means put a new line into the output

The basic choice is to decide whether you want the string to be easily read by humans or machines.
The default event format string after installation is as follows:

NT EVENT: {NL}
Event Log : {LOG}{NL}
Event Type : {TYPE6}{NL}
Date : {DATE}{NL}
Time : {TIME}{NL}
Source : {SOURCE}{NL}
Category : {CATEGORY}{NL}
Event ID : {ID}{NL}User : {USER}{NL}
Computer : {COMPUTER}{NL}
Parameters : {PARAMS}{NL}
Text :{NL}{MESSAGE}

This was set to make it easy to read for humans.

Note: The Event /Page command is available to display events in a human readable form.

Enable (Sender)

Check this box if the sender feature is required to send events to a remote monitoring system using the RoboMon NT event format.

Screen

The Screen Tab contains settings for the Perle WinAttach screen.
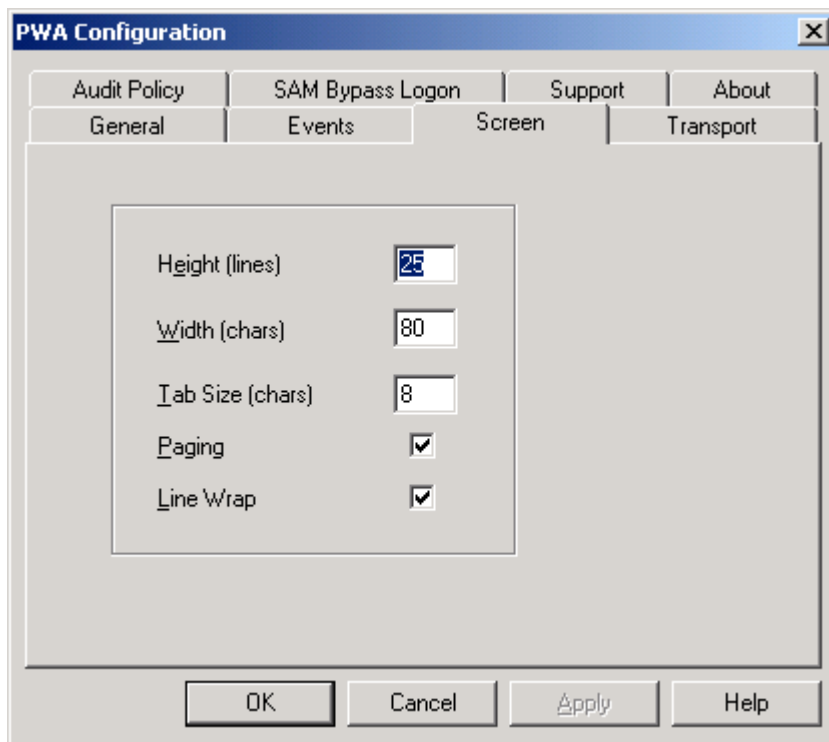
To allow for "user friendly" output, Perle WinAttach provides a screen that can be set so that output is displayed in a manageable way. Lines of output can be displayed in pages and lines too long for the screen width can be wrapped to the next line.

If a Telnet emulator is used that supports screen size negotiation then the screen size is set automatically. For other emulators and for raw tcp/ip and serial connections the screen size can be set in this tab.

Height

The height of the screen in lines. This determines the number of lines that will be displayed on a page when paging is enabled.

Width

The width of the screen in characters. This determines the number of characters that will be displayed on a line before auto wrapping to the next line if line wrapping is enabled.

Tab Size

The number of characters that a tab character is expanded to.

Paging

If this check box is ticked, then Paging is enabled. A page of output will be displayed followed by the prompt, "Press any key to continue...". Pressing a key will display the next page of output. If the check box is unchecked, then paging is disabled and output will be continuously displayed until the next command prompt.

Line Wrap

If this check box is ticked, then Line Wrap is enabled. If a line extends past the width of the screen then the extra characters will be displayed on the next line. If the check box is unchecked, the line will not wrap and extra characters may be truncated if there is not enough space to display them.

Transport

The Transport Tab allows the configuration of the Transport protocol to be used to communicate with the end user. Perle WinAttach currently supports only connection via a serial port.
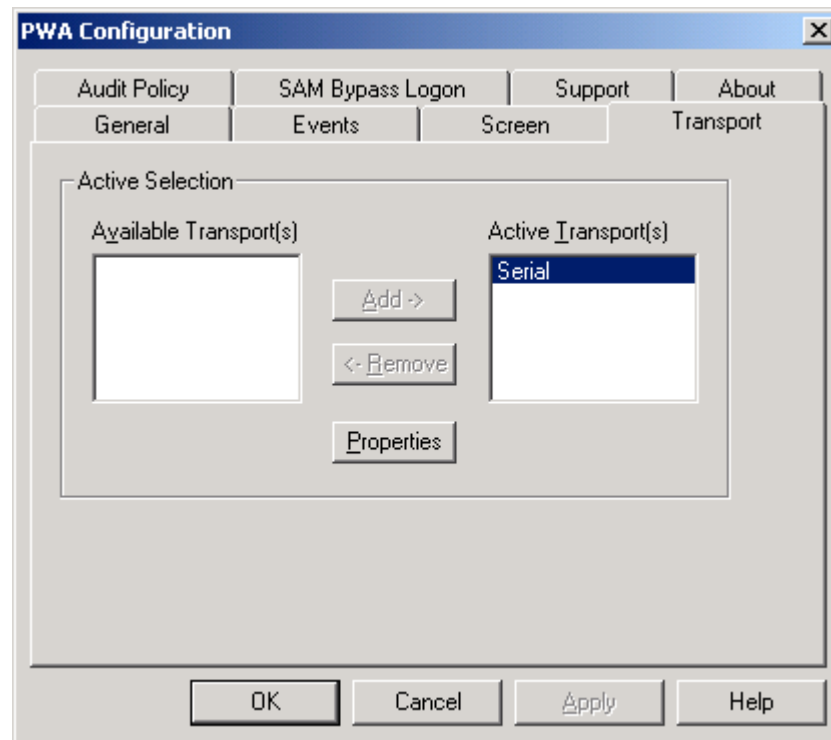
Available Transport(s)

This list contains the list of available transports that are not active.

The currently available transport types are:

Serial   -   Connection is made through an RS-232 socket.

Active Transport(s)

This list contains the list of active transports. These transports will be loaded when the Perle WinAttach service is next started and will enable end users to use either transport to communicate with Perle WinAttach.

Add ->

Click this button to move the current selected available transport to the active transport list. This can also be achieved by double clicking on the selected available transport.

<- Remove

Click this button to move the current selected active transport to the available transport list. This can also be achieved by double clicking on the selected active transport.
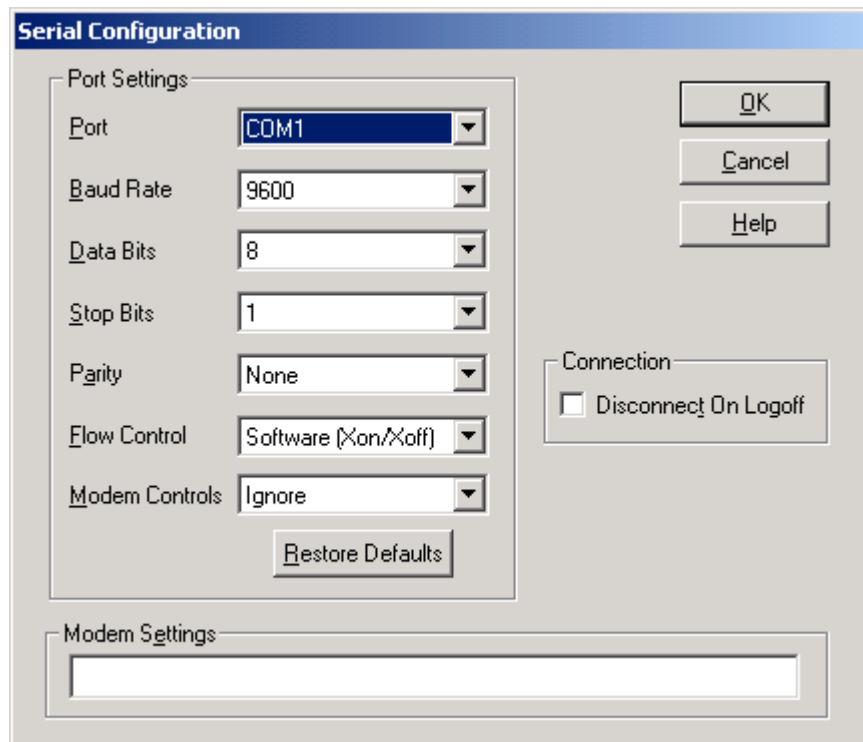
Properties

Click this button to display or alter the current selected active transport properties. See the relevant transport protocol for more details.

Serial properties

The Serial dialog box contains settings for the Serial transport Protocol. Connection is made through an RS-232 socket.

These settings must exactly match those of the CS9000 to which this system is to be connected. The default for a CS9000 is 9600,N,8,1 and no flow control.

Port

Select from the drop down list the name of the RS-232 port that will be used by the end user to connect to Perle WinAttach. Default: COM1

Baud Rate

Select from the drop down list the baud rate that the port requires for the serial connection.
Default: 9600 baud

Data Bits

Select from the drop down list the number of data bits that the port requires for the serial connection.
Default: 8

Stop Bits

Select from the drop down list the number of stop bits that the port requires for the serial connection.
Default: 1

Parity

Select from the drop down list the parity that the port requires for the serial connection.
Default: None

Flow Control

Select from the drop down list the flow control that the port requires for the serial connection.

Modem Controls

Select "Use" if modem control signals are to be monitored when a connection is established. Select "Ignore" to ignore modem control signal monitoring.
When modem control signals are used the following happens

All input is ignored and no output is sent unless the RLSD / CD (Receive-Line-Signal-Detect / Carrier Detect) line is on. If the RLSD line is dropped Perle WinAttach is logged off.
No output is sent unless the DSR (Data Set Ready) line is on.
When disconnected the DTR (Data Terminal Ready) is lowered for 0.5 seconds to tell the modem to disconnect.

Modem Settings

Enter text that is required to be sent to the device attached to the serial port when the Perle WinAttach service is started. This option can be used to send set up commands to a modem attached to the serial port.

Disconnect On Logoff

Check this box if when the user logs off, with the Logoff command, the connection is also dropped.

Audit Policy

As a further aid to security, Perle WinAttach has the capability to audit various access-related events. If so desired, Perle WinAttach can be set to maintain a record of successful/unsuccessful IP connections, successful/unsuccessful logon attempts and use of the SAM bypass login.
These logs are written to the NT Security log.

Note: Membership of the Administrators group is required to alter these settings.
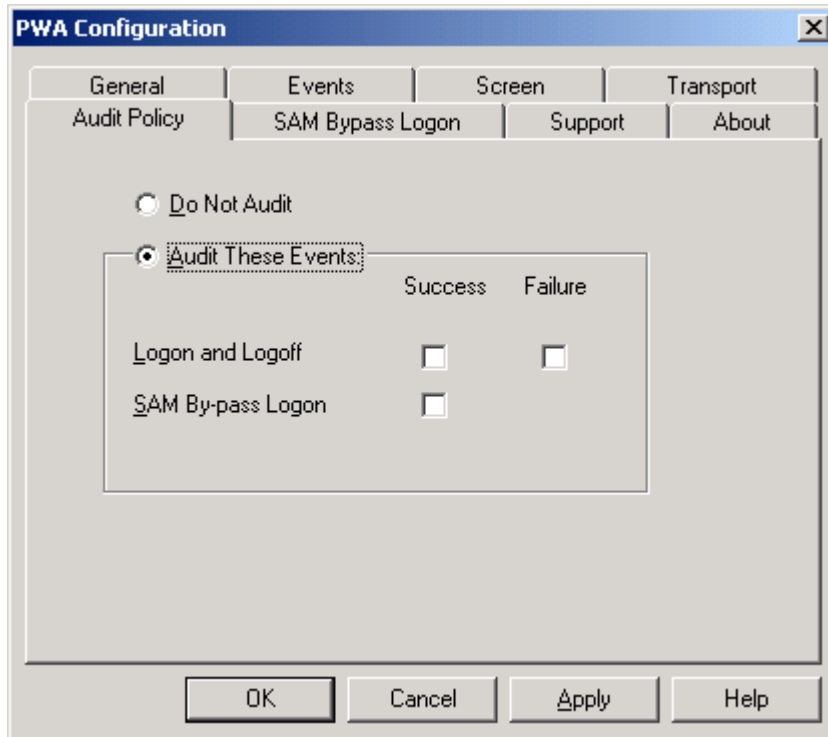
Do Not Audit

Click this button if no events are to be audited.

Audit these Events

Click this button to enable auditing of one or more of the selected events.

Success

If selected will add an event to the security log for each successful occurrence of the corresponding event.

Failure

If selected will add an event to the security log for each failed attempt or occurrence of the corresponding event.

Logon and Logoff

A user has attempted to logon or logoff from Perle WinAttach. This excludes successful attempts using the SAM By-pass User Id and password.

SAM By-pass Logon

A successful attempt to logon to Perle WinAttach using the SAM By-pass User Id and password.

SAM Bypass

If for some reason the Security Access Manager (SAM) is unavailable, an attempt to logon to Perle WinAttach as a normal user will be unsuccessful. In this situation the SAM By-pass Logon can be used to logon, thus bypassing SAM and allowing access to Perle WinAttach.

If the SAM Bypass is used to logon, the user will have the same privileges as the Local System Account.

As this feature has security implications it is disabled by default.

The user id and password entered on this tab are stored in encrypted form so will not be visible to unauthorised personnel.

Note: Membership of the Administrators group is required to alter these settings.

Enable
Check this box to enable the SAM By-pass Logon feature.

User Id
Enter the user id that Perle WinAttach will use to identify the user as logging on to bypass SAM.

Password
Enter the password to be used by the user logging on to bypass SAM.

Confirm Password
Because the password is not shown, re-enter the password, to confirm that the password entered is correct. The Password and the Confirm password must be identical before you can proceed.

Starting/Stopping the Perle WinAttach service

Before the Perle WinAttach product can be used its service must be started.

The Perle WinAttach Service (i.e. background process) is started and stopped using the Control Panel -> Services applet, in exactly the same way as for other services.

To launch the control panel use Start Menu -> Settings -> Control Panel. Then double click on Services to manage the services. Scroll down the list until you find " Perle WinAttach " and then click on this line to select it:
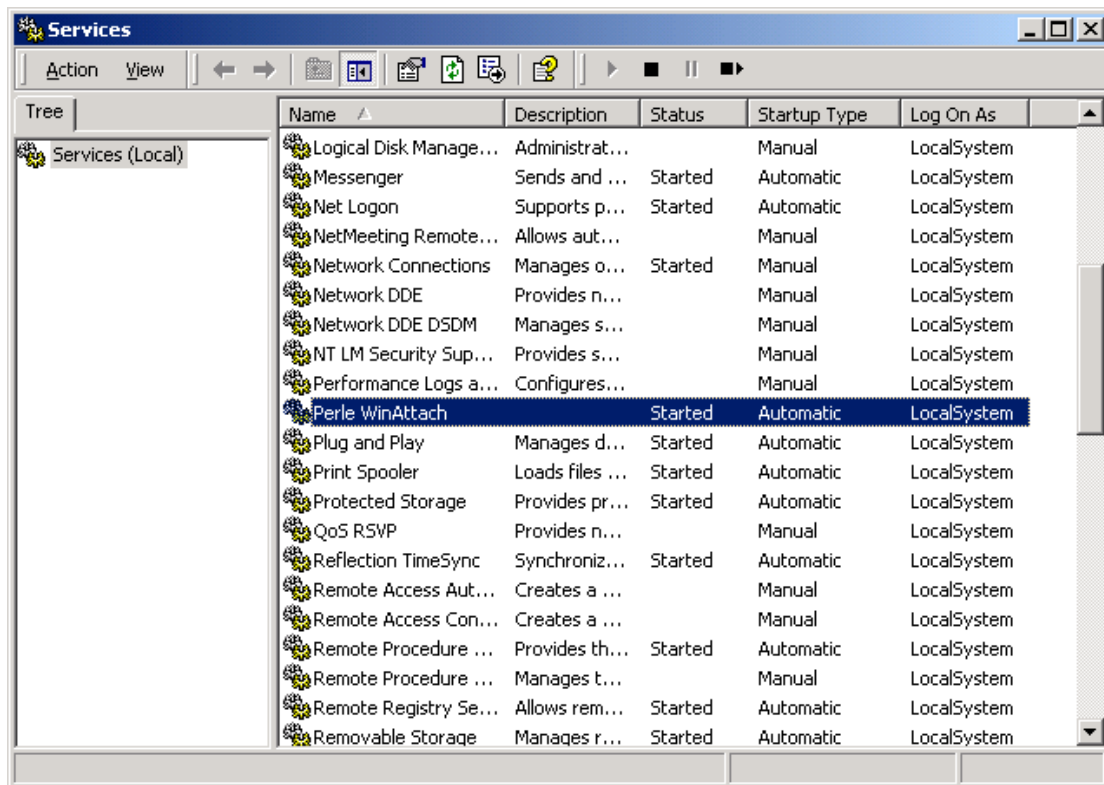
Configuring how the service behaves at boot time, starting or stopping it is then performed in the usual way.

Note: the "Services" display above is from Windows 2000. On Windows NT the display is different but the functions are very similar.

Alternatively from a CMD (MS-DOS) prompt you may enter:

C:\> NET START "Perle WinAttach"

to start the service, or

C:\> NET STOP "Perle WinAttach"

to stop the service

Events

Event settings configuration is handled in two places:

As already discussed the Event Format string and sender options are set using the Perle WinAttach Control Panel applet.
After installation, by default, Perle WinAttach is configured to send all events from all the log files to the "Console" and the remote monitoring system (if enabled). To change this behaviour requires use of the console command "Event" which is documented under "The Perle WinAttach shell - commands" later.
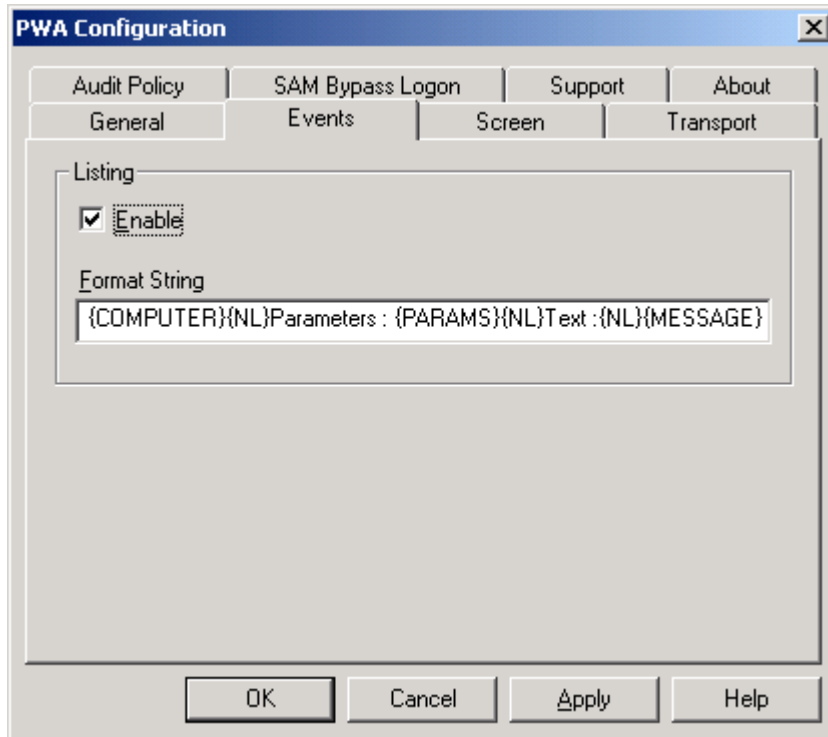
The Perle WinAttach Shell

The PWA > shell is a command interpreter completely separate to the CMD (MS-DOS) command interpreter of Windows NT/2000. It is designed to provide important management commands which are not otherwise available at a "DOS" prompt. Furthermore being directly built in to Perle WinAttach it is not reliant on the ability of NT to start a "DOS" shell - something which may not be possible if the system is in difficulty.

The Perle WinAttach shell prompts with:

PWA >

Command Line Editing/Recall

Limited line editing features are available. The following keys are involved:

Key	Function
LEFT ARROW/ RIGHT ARROW	Positions cursor along line
DELETE	Character deletion
Control-A	Toggles between overwrite mode and insert mode. By default Perle WinAttach will be in overwrite mode

A history of previous commands is maintained, actual number of commands stored being dependent on their length. Commands can be recalled from the list by using the UP ARROW and DOWN ARROW keys.

Commands

The following main command facilities are available from the WA > prompt:

- ♦ DOS   DOS shell control.
- ♦ EVENT   Event listing and sender control
- ♦ LOGOFF   Log user off system.
- ♦ HELP   Display help information.
- ♦ PROCESS   Process control
- ♦ REBOOT   Reboot system.
- ♦ REGEDIT   Manipulate the registry.
- ♦ SERVICE   Service control.
- ♦ SET   Modifies system behaviour.
- ♦ SHUTDOWN   Shut down system.
- ♦ SYSINFO   Display system information.
- ♦ THREAD   Display thread information.

Following a style similar to Windows NT/2000 (where available) these commands have options which are preceded by a "/" character. For example PROCESS /LIST would list processes whereas PROCESS /KILL would kill processes.

The rest of this section looks at each of the main command types syntax and options in turn.

Syntax notes

In the following sections:
Items surrounded by < and > characters are not to be entered literally, rather you should enter an appropriate value e.g. process /kill <pid> means put the correct pid of the process you want to kill in place of <pid>
The | symbol between two parameters e.g. <pid> | <name> indicates "or" i.e. supply one or other of the parameters.
Items surrounded by [and] characters are optional.
Some commands have more than one possible syntax depending on the options chosen. These are usually listed on separate lines.
While the commands must be entered in full the option keywords may be shortened to the smallest unique form e.g. PROCESS /LIST could be entered as PROCESS /L
In the syntax sections below one of the options is called the default option. For PROCESS this is the /list option, for example. If the command is entered with no options it is this default option which will execute i.e. PROCESS has the same effect as PROCESS /LIST.

DOS

DOS   DOS shell control.

Syntax:
       DOS [<session>]
       DOS /Escape <session> <char>
       DOS /Shell <session> <shell>
       DOS /Reset <session>

Where

/Escape   Defines a character that will cause input to stop being directed to the command shell.

/Shell   Defines which command shell should be executed. A full path to the command shell may be entered, if required.

/Reset	Clears a current shell process and returns to original settings.
<session>	Numeric identifier specifying which command shell instance the command applies to. It must be in the range 1 to 4. If not specified then the default value is 1.
<char>	The character used to switch back to the local prompt. The default value is Ctrl-D.
<shell>	The name of the command shell to execute. Default value is CMD.EXE.

Explanation

Allows the user to access a CMD, often known as an "MS-DOS" shell.

It is possible to ask DOS to start other shells, see the syntax for an explanation.

When DOS is entered, by default a CMD shell is started. The user is connected to this shell where they can type standard DOS command line commands.

When the user has finished with the DOS shell they may type "exit" at the prompt, which closes the shell down, or Ctrl-D which connects back to the " PWA " shell while leaving the CMD shell still running.   In the latter case typing DOS again reconnects to the existing shell.

More than one "DOS" shell can be created at a time by entering a number following the DOS command e.g. DOS 2 creates a second DOS shell. Typing DOS on its own is the same as typing DOS 1.

By default DOS grants access to the specified command shell instance. The command shell's standard input and output channels are linked directly to the console interface.

Note: No support for graphical applications is given. This includes most full screen editors including notepad, edit and many third party editors including some "vi" for NT. In the case of edit this is due to the fact that despite being essentially a non-gui editor it is calling GUI window functions.

Example

```
PWA > dos

Invoking command shell no. 1.
Escape character is 'Ctrl-D'

Microsoft(R) Windows NT(TM)
(C) Copyright 1985-1996 Microsoft Corp.

D:\WINNT\System32>net start
These Windows NT services are started:

   Alerter
   Computer Browser
   EventLog
   FTP Publishing Service
   Gopher Publishing Service
   License Logging Service
   Messenger
   Net Logon
   NT LM Security Support Provider
   Plug and Play
   Remote Procedure Call (RPC) Service
   RoboCentral NT Console
   RoboMon Process Wizard Server
   RoboMon Rule Server
   RoboMon TCP/IP Server
   Server
   SNMP
   Spooler
   SQLExecutive
   SWEEP for Windows NT
   SWEEP for Windows NT Network
   SWEEP for Windows NT Update
   TCP/IP NetBIOS Helper
   Unison JOBMON for maestro
   Unison Netman for maestro
   Unison Token Service for maestro
   Workstation
   World Wide Web Publishing Service

The command completed successfully.


D:\WINNT\System32>^D

Control returned to PWA

PWA >
```

Event

EVENT   Event listing and sender control

Syntax:

         Event /A[dd]   [/L[og]:<log>] [/T[ype]:<type>]
         Event [/C[urrent]]
         Event /E[nable]
         Event /D[isable]
         Event /I[gnore] [/L[og]:<log>] [/T[ype]:<type>]
         Event /P[age] [/L[og]:<log>] [/T[ype]:<type>] [<filter>]
         Event /R[eset]   [/L[og]:<log>]
         Event /S[uspend]
         Event <filter>... [/L[og]:<log>] [/T[ype]:<type>]

Where

/Add   Modifies the event listing filter(s) to display events matching the specification.
         If specified on its own, If specified on its own, the command applies to all events types and all
logs.
         This switch cannot be used with /Current, /Disable, /Enable, /Suspend, /Reset or /Ignore.

/Current Displays current filter settings
         This is the default if no switches are specified

/Enable Event listing is turned on.
         Events are passed through the previously set filters. The initial default is display events of all
         types and from all logs.
         This switch cannot be used with any others.

/Disable Event listing is turned off completely.
         All new events will be ignored.
         This switch cannot be used with any others.

/Ignore Modifies the event listing filter(s) to disable listing of events matching the specification.
         This switch cannot be used with /Current, /Disable, /Enable, /Suspend, /Reset, /Add or /Page.

/Page   Causes events to be displayed in a user readable form. Filter switches (described below) can
         be specified to restrict the events displayed.
         Any filtering that is used only applies to the /Page command and will not alter the permanent
         settings set by other switches.
         This switch cannot be used with /Current, /Disable, /Enable, /Suspend, /Reset, /Add or
         /Ignore

/Suspend Has the same effect as /Disable except that new events are NOT discarded. /Enable will start
          listing from the point it stopped.
         This switch cannot be used with any others.

/Reset   Causes all events to be redisplayed i.e. from the beginning of the log file(s).
         This switch cannot be used with /Disable, /Enable or /Suspend, /Add, /Ignore or /Page.

/Log   Applies command to a specific event log.
         If not present the command applies to all event logs.

<log>   The name of one or more log files. If multiple names are specified they must be separated with
         commas (,).
         Valid values are : 'APPLICATION', 'SECURITY' , 'SYSTEM' or a special event log that has
         been set up by an application.

/Type   Applies command to a specific event types.
              If not present the command applies to all event types.

<type> The name of one or more event types. If multiple types are specified they must be separated with commas (,).
              Valid values are : 'INFORMATION', 'WARNING', 'ERROR', 'AUDIT_SUCCESS' or 'AUDIT_FAILURE'.

<filter> This can be one of the following switches, which can be used with the /Page switch or other filter switches to restrict what events are to be displayed in a user readable form. The filter switches do not alter the permanent filtering set by other switches.

/FD[ate]: [<date>]	: Events generated on this date
/FB[egin]:[<date>]	: Events from and including this date.
/FE[nd]:[<date>]	: Events to and including this date.
/FT[ype]:<type>	: Events that match these types.
/FS[ource]:<source>	: Events that match this source.
/FC[ategory]:<category>	: Events that match this category
/FU[ser]:<user>	: Events that match this user.
/FN[ode]:<node>	: Events that match this computer node name.
/FI[d]:<EventId>	: Events that match this Event Id.

<date> A date, the format of which is dependant on the regional setting set for the logged in user in the regional settings control panel. The format will be one of the following
                    mm-dd-yyyy
                    dd-mm-yyyy
                    yyyy-mm-dd
Two digit years and abbreviated defaults are accepted (e.g. 3-5, -6, --2). With the missing dd, mm or yyyy defaulting to the current system date values. If no date is specified the date defaults to the current system date.

<source>, <category>, <user>, <node> are string values representing the appropriate value. Surround the value in double quotes (") if the value contain spaces.

<EventId> A decimal integer representing the event Id.

Explanation
The event command allows control of which Windows NT/2000 events (if any) are sent to Perle WinAttach or the ability to review past events.
Windows NT/2000 groups its events into the three categories: System, Application and Security or in a special application event category. The events are stored in separate log files in the Windows NT/2000 directory structure.

Normally these events are viewed through the Windows NT/2000 Event View tool (Start Menu -> Programs -> Administrative Tools -> Event Viewer. Which requires the event viewer to be started up and have a user watching it constantly. Furthermore each separate Windows NT/2000 system would need to have its own event viewer started, making the process of watching for events even more difficult.

It is possible however that NT events are not required for all the event logs, or all events etc. The event command allows for this by turning on selective filtering of which events will be issued.

By default when Perle WinAttach is installed all events (for all event files and all types) are turned on

If a logged in user wishes to review previous events the /Page switch along with the filter switches can be used to display a selection of events, one page at a time, in a human readable form.

Example

```
PWA > event /enable
PWA > service /start ups

NT EVENT: #system#E#27/10/2000#15:16:50#UPS#None#2481 #N/A#TRENT#The UPS service
 is not configured correctly.##
UPS is now starting. Please wait.
UPS failed to start. The error code returned was 2481.
WA >
NT EVENT: #system#E#27/10/2000#15:16:50#Service Control Manager#None#7024 #N/A#T
RENT#The UPS service terminated with service-specific error 2481.##

 PWA > event /suspend
 PWA > service /start ups
UPS is now starting. Please wait.
UPS failed to start. The error code returned was 2481.
PWA > event /enable
ER >
NT EVENT: #system#E#27/10/2000#15:17:14#UPS#None#2481 #N/A#TRENT#The UPS service
 is not configured correctly.##

NT EVENT: #system#E#27/10/2000#15:17:14#Service Control Manager#None#7024 #N/A#T
RENT#The UPS service terminated with service-specific error 2481.##

PWA > event /fsource UPS /fdate:27-10-2000

27/10/2000 15:16:50   System:-Error
Source: UPS   Category: None   Id: 2481
User: N/A   Computer: TRENT
----- Message -----
The UPS service is not configured correctly.

------------------

27/10/2000 15:17:14   System:-Error
Source: UPS   Category: None   Id: 2481
User: N/A   Computer: TRENT
----- Message -----
The UPS service is not configured correctly.

------------------

PWA >
```

Explanation

Event /enable ensures that all events are being sent to the console. Because there are no other parameters the command applies to all event types in all logs

Service/start ups attempts to start the UPS service, but as this service is incorrectly configured is issues both errors to the screen and generates NT events, which become intermingled.

Event /suspend suspend WA from displaying any events which arrive in NT's event logs on the screen

Service /start ups again attempts to start the UPS service, which still cannot start and so generates an error message " UPS failed to start. The error code returned was 2481.". Events are still sent to the NT event log files, but WA does not display them on the console as event display is suspended.

Event /enable turns on event processing by the WA again and it now catches up on all event which were sent to NT's event log files during the time it was suspended.

Event /fsource UPS /fdate:27-10-2000 displays all events of source UPS for the 27 October 1998.

Help

HELP   Displays help information

Syntax: Help [<command>]

Where

<command>   The name of a Perle WinAttach shell command.

Explanation

For ease of getting around on line (without other documentation) the most useful command has to be help. When used in its simplest form just type help to get the list of all available commands.

```
PWA > help
Perle WinAttach supports the following commands.
For more information on a specific command, type HELP command-name.

DOS        DOS shell control.
EVENT      Event listing control
LOGOFF     Log user off system.
HELP       Display help information.
PROCESS    Process control
REBOOT     Reboot system.
SERVICE    Service control.
SET        Modifies system behaviour.
SHUTDOWN   Shut down system.
SYSINFO    Display system information.
THREAD     Display thread information.

PWA >
```

To get more detail on a particular command, type help <command> for example:

```
PWA > help process

PROCESS    Process control

Syntax : The process command has the following syntax :

        Process /List [<name>]
        Process /Kill <pid>|<name>

Where

/List    : Display details of all active processes.
           This is the default switch.
           A process name may be specified, to restrict the display.
           The process name may contain the wildcard characters "*%".

/Kill    : Stops the specified process.

<pid>    : Process ID.

<name>   : Process name.

PWA >
```

Logoff

LOGOFF   Logs user off console.

Syntax:

Logoff /Console
Logoff /Foreground

Where

/Console   Logs the user off Perle WinAttach.
                  This is the default.

/Foreground   Logs off the user currently using the main keyboard and screen.

Explanation

It is important to log off when finished with the console session, as otherwise another user might be able to gain access to your session and so your access rights.

Events continued to be displayed at the console event when it is logged off, unless an event /disable has been performed before logging off.

Example

```
PWA > logoff

Perle WinAttach - Version 2.0

Produced for Perle Systems by Heroix Corporation Ltd.

Creators of Multi-platform systems monitoring solutions.
© 2002 Heroix Corporation Ltd.
All rights reserved.

Authorised users only.

Login ID :
```

Note: Perle WinAttach has an auto-logoff facility, which logs off the user after a period of inactivity. The default inactive period is 20 minutes but this can be altered via the SET command or through the control panel applet.

Perle WinAttach transports have an option to allow disconnection to occur at logoff.

Process

PROCESS   Process control

Syntax :

        Process /List [<name>]
        Process /Kill <pid>|<name>

Where

/List   Display details of all active processes.
        This is the default switch.
        A process name may be specified, to restrict the display.
        The process name may contain the wildcard characters "*%".

/Kill   Stops the specified process.

<pid>   Process ID.

<name> Process name. This may include wildcards if multiple processes are to be killed (be careful)

Explanation

There are essentially two components here. Firstly the /list option allows viewing of process resource usage, including memory, CPU etc, to identify which processes may be responsible for any system problems or overheads.

The /kill option allows the removal of that process. Kill works in 3 stages:
Ask the process to exit gracefully
If it does not exit gracefully after a timeout period the user is asked whether he want to terminate it anyway and then the process is deleted forcefully.
If the next level of process deletion does not work Perle WinAttach upgrades its privileges (user permissions allowing) and removes the process. This option allows the killing of rogue services, which would otherwise be protected by Windows NT. Note that NT's task manager cannot kill services so protected.

Example

```
PWA > process /list win*
Process          PID CPU Working Flts Virtual  Pool  Pool    Page Thread Handle
                      %  Set Kb /Sec      Kb    Kb NP Kb File Kb  Count  Count
---------------- --- --- ------- ---- ------- ----- ----- ------- ------ ------
WINLOGON          35   0     120    0   19588    18    15     508      2     47
WINWORD          275   0   12328    0   61404    50    10    5312      4    208

PWA >
```

Reboot

REBOOT   Allows the operator to reboot the machine.

Syntax : Reboot

Explanation

You will be asked to confirm reboot of the system. Type yes and the system reboot is begins.

It's worth noting that when you reboot an NT system from it's GUI if there are any programs running at that time they will be asked to exit nicely. If they do not, popup messages appear asking you if you want to terminate them. As Perle WinAttach is expecting to operate without GUI access, NT's reboot is called in such away that it will force programs to exit, if they don't exit gracefully. Thus no GUI access is required.

After the system has been shut down by the reboot it should automatically restart. During this time you will have no console access until Windows NT has restarted and its Service manager has restarted the Perle WinAttach service.

Note: If you want Perle WinAttach to be running after the reboot, it is vital that its service is set for Automatic start.

Example

```
PWA > reboot

WARNING !

Running this command will reboot the machine.
All currently running applications will be terminated.
Are you sure (Y\N) : Y

.

.

.
```

RegEdit

REGEDIT   Allows the operator to alter the registry.

Syntax :
        RegEdit
        Regedit <command> [<switches>] [<parameters>]

Explanation

Regedit is in fact a sub shell in its own right, with its own command set and help.
It can be used in two ways either by specifying regedit on its own to enter the regedit shell, or by supplying the whole command sequence. Which means that on completion of the command control returns to the standard shell.

The regedit shell makes the analogy between the registry and a file system. Here keys are treated in the same way a directories, values are likened to files, in as much as they are identified by their names and have data that can be viewed. Just as there are text and binary files, there are different types of values and their data will be displayed in different format

Using the disk metaphor this way the user is able to navigate through the registry and view, update, create or remove keys and values in the same way as they could manipulate directories and files.

In summary the commands available are :

CD	Specify the default key.
DIR	Display a list of keys and values.
DEL	Delete keys or values.
EXIT	Return to the WA command shell.
EXPORT	Save the contents of a key to file.
FIND	Locate items.
HELP	Display help information on REGEDIT commands.
IMPORT	Load key contents from file.
MOD	Modify value data.
NEW	Create new keys and values.
REPLACE	Change occurrences of text in key names, value names and data.

A full discussion of these commands is given in the chapter : "The RegEdit Shell".

Important Using RegEdit incorrectly can cause serious problems, including corruption that may make it necessary to re-install the operating system. Using RegEdit to edit entries in the registry is equivalent to editing raw sectors on a hard disk. If you make mistakes, your computer's configuration could be damaged. You should edit registry entries only for settings that you cannot adjust through the user interface, and be very careful whenever you edit the registry directly.

Example

```
PWA > regedit dir HKEY_LOCAL_MACHINE
Listing of HKEY_LOCAL_MACHINE

Type           Name

<KEY>          HARDWARE :
<KEY>          SAM :
<KEY>          SECURITY :
<KEY>          SOFTWARE :
<KEY>          SYSTEM :


PWA >
```

Service

SERVICE   Service controls.

Syntax : The service command has the following syntax :

        Service /List [<name>]
        Service /Start <name> [<parameter>]
        Service /Stop <name>
        Service /Pause <name>
        Service /Continue <name>
        Service /Startup <name> <start type>

Where

/List   Display details of all installed services. This is the default switch.
        An optional service name may be specified, in which case the list is restricted to details of that
        service. The service name may contain the wildcard characters "*%".

/Start   Start the service specified by name.
        An optional parameter may be specified. This parameter will be passed to the service as
        though it had been started with command line arguments.

/Stop   Stop the service specified by name.

/Pause   Pause the service specified by name.

/Continue Resume the service specified by name.

/Startup Change the start type for the service specified by <name>.

<start type>   Start type for the service. Must be one of the following:

AUTOMATIC   -   Service will start when system starts.
                Services will start only if machine has more than 12Mb of RAM
MANUAL   -   Allows service to be started by a user or depenadant service.
DISABLED   -   Prevents a service being started by a user or depenadant service.

Explanation

The service command has two main features
Service /list is intended to provide a list of services installed in the system together with their current
running states and startup states. While a service list may also be obtained from the DOS command
"net start" this only lists the running services and so is unhelpful in determining whether a service has
died or been stopped etc. unless it's name is clearly known. The listing highlights services with a *
character if they were set to be "Automatically" started but are currently not running

All the other options provide control of the services, including starting and stopping.

Set

SET   Modifies system behaviour.

Syntax : The set command has the following syntax :

       Set /Popup [<mode>]
       Set /S[creen] [<setting>] [<new value>]
       Set /T[imeout] [<timeout value>]

Where

/Popup   Alters the handling of popups that result from application and system errors.
       If <mode> is not specified then the current setting is displayed.
       The /popup switch affects two registry values - see the reference section for details.

<mode> Method for handling hard error popups. Must be one of the following:

NORMAL   Restores the default operating mode that serialises the errors and waits for a response

NO_SYSTEM   If the error does not come from the system, then popups are displayed in the normal
                 manner.
                 System errors are sent directly to the event log.
                 No intervention is required and the popup is not seen.

UNATTENDED All are sent directly to the event log. Popups are not seen.

/Screen Alters the WA screen settings. If <setting> is not specified then the current settings are
       displayed.

<setting>   The Setting that is to be set or displayed. If <value> is not specified then the current
                 setting is displayed.
                 Must be one of the following:

                 HEIGHT   The screen height in lines. Used for paging.

                 WIDTH The screen width in characters. Used for line wrapping.

TAB_SIZE   The number of characters that a tab character expands to.

PAGING   If set to on, a prompt to continue is displayed when a screen of output has been
displayed.

LINE_WRAP   If set to on, lines extending past the width of the screen will be wrapped onto the next
line

<new value>   The Value which the setting is to be set to. For the HEIGHT, WIDTH and
                 TAB_SIZE the value is a decimal value. For PAGING and LINE_WRAP the value
                 can be either "ON" or "OFF".

/Timeout   Alters the Perle WinAttach Auto Logoff Period. If <timeout value> is not specified
                 then the current value is displayed.

<timeout value>   The number of minutes that Perle WinAttach will wait for input before it will
                 automatically logoff the current session Setting the value to "0" will disable Auto
                 Logoff.

Explanation

Frequently the last thing you want from a remote NT server is that when an application crashes it produces a POPUP saying press CANCEL to debug or OK to terminate the application. That's because there is no one there to say OK (or CANCEL) to the popup and this means that the application won't completely die, and thus cannot be easily restarted, either automatically or remotely.

By switching off these popups you can deal with these issues.

Shutdown

SHUTDOWN   Allows the operator to shut down the machine.

Syntax : Shutdown

Explanation

You will be asked to confirm shutdown of the system. Type yes and the system shutdown is called.

It's worth noting that when you shut down an NT system from it's GUI if there are any programs running at that time they will be asked to exit nicely. If they do not, popup messages appear asking you if you want to terminate them. As Perle WinAttach is expecting to operate without GUI access, NT's shutdown is called in such away that it will force programs to exit, if they don't exit gracefully. Thus no GUI access is required.

After the system has been shut down, to restart it you'll have to go to the physical system and either press reset or power cycle the system.

Note: If you want Perle WinAttach to be running after the restart it is vital that its service is set for Automatic start.

Example

```
PWA > shutdown

WARNING !

Running this command will shut down the machine.
All currently running applications will be terminated.
Are you sure (Y\N) : Y

.

.
```

Sysinfo

SYSINFO   Displays system information.

Syntax : The sysinfo command has the following syntax :

    Sysinfo /System
    Sysinfo /CPU
    Sysinfo /Drives
    Sysinfo /Memory
    Sysinfo /PageFile
    Sysinfo /Summary

Where

/System	Displays static system, O/S version and build information.
/CPU	Displays information relating to CPU usage.
/Drives	Displays information on assigned disk drives.
/Memory	Displays information on memory usage.
/Pagefile	Displays information relating to pagefile usage.
/Summary	Equivalent of /System /CPU /Memory. This is the default option.

Explanation

The data derived for the output comes from a range of sources in Windows NT, including some perfmon counters, system calls and the registry.

The purpose is to be able to get overview information on the health and status of the system.

Example

```
PWA > sysinfo /disk
Disk   Free   %  Disk   Avg. Queue   Read   Write  Reads Writes Bytes
       Mb Free Busy % Length        Time % Time % /Sec  /Sec   /Sec
----   ------ ---- ------ ---------- ------ ------ ----- ------ -----
C:        34   67     0           0      0      0     0      0     0
D:       464   19     0           0      0      0     0      0     0
_Tot     498   20     0           0      0      0     0      0     0

PWA >
```

Thread

THREAD   Displays thread information.

Syntax : The thread command has the following syntax :

       Thread /List [<process name>]
Where

/List	Display details of all active threads. This is the default switch. A process name may be specified, to restrict the display of threads to those processes that match the name. The process name may contain the wildcard characters "*%".

<process name> Process name. This may include wildcards.

Explanation
This command allows resource information for individual threads to be viewed, so CPU usage, context switching, state etc. can be reviewed to see if a particular thread is causing the server problems.

Example

```
PWA > thread PWA

Thread               PID  TID CPU Contex Curr State        Wait
                              %  Sw/Sec Pri               Reason
-------------------- ---- ---- --- ------ ---- ----------- ------------
PWA-0                170   44  0      0   24 5-PWAit       6-UserReqst
PWA-1                170   91  0      0   26 5-PWAit       6-UserReqst
PWA-2                170  110  1      5   24 2-Running
PWA-3                170  412  0      0   16 5-PWAit       6-UserReqst
PWA-4                170  361  0      0   24 5-PWAit       5-Suspended
PWA-5                170  122  0      4   26 5-PWAit       6-UserReqst
PWA-6                170  150  0      0   24 5-PWAit       5-Suspended
PWA-7                170  369  0      0   26 5-PWAit       6-UserReqst
PWA-8                170  305  0      0   24 5-PWAit       5-Suspended
PWA-9                170  399  0      0   24 5-PWAit       5-Suspended
PWA-10               170  125  0      0   24 5-PWAit       5-Suspended
PWA-11               170  404  0      0   24 5-PWAit       5-Suspended
PWA-12               170  401  0      0   24 5-PWAit       5-Suspended
PWA-13               170  115  0      0   24 5-PWAit       5-Suspended
PWA-14               170  155  0      0   24 5-PWAit       5-Suspended
PWA-15               170   98  0      0   26 5-PWAit       6-UserReqst
PWA-16               170  413  0      0   24 5-PWAit       6-UserReqst
PWA-17               170  126  0      1   24 5-PWAit       6-UserReqst

PWA >
```

The RegEdit Shell

The following commands make up the regedit sub shell.

The commands can be envoked in either of two ways, either by:

specifying regedit on its own to enter the regedit shell. From where multiple regedit commands can be executed.

Return to Perle WinAttach shell by envoking the exit command.

Example

```
PWA > regedit
Regedit > cd HKEY_LOCAL_MACHINE\software\heroix
Regedit > dir
Listing of hkey_local_machine\software\heroix

Type            Name

<KEY>           RoboCentral :
<KEY>           ER :
<KEY>           RoboEDA :
<KEY>           RoboMon :
<KEY>           TEMP_KEY :

Regedit > exit
PWA >
```

Or

by supplying the whole command sequence. Which means that on completion of the command control returns to the standard shell.

Example

```
PWA >
PWA > regedit cd HKEY_LOCAL_MACHINE\software\heroix
PWA> regedit dir
Listing of hkey_local_machine\software\heroix

Type            Name

<KEY>           RoboCentral :
<KEY>           ER :
<KEY>           RoboEDA :
<KEY>           RoboMon :
<KEY>           TEMP_KEY :


PWA >
```

The regedit shell makes the analogy between the registry and a file system. Here keys are treated in the same way a directories, values are likened to files, in as much as they are identified by their names and have data that can be viewed. Just as there are text and binary files, there are different types of values and their data will be displayed in different format.

Using the disk metaphor this way the user is able to navigate through the registry and view, update, create or remove keys and values in the same way as they could manipulate directories and files.

The commands available are :

CD	Specify the default key.
DIR	Display a list of keys and values.
DEL	Delete keys or values.
EXIT	Return to the Perle WinAttach command shell.
EXPORT	Save the contents of a key to file.
FIND	Locate items.
HELP	Display help information on REGEDIT commands.
IMPORT	Load key contents from file.
MOD	Modify value data.
NEW	Create new keys and values.
REPLACE	Change occurrences of text in key names, value names and data.

Important Using RegEdit incorrectly can cause serious problems, including corruption that may make it necessary to re-install the operating system. Using RegEdit to edit entries in the registry is equivalent to editing raw sectors on a hard disk. If you make mistakes, your computer's configuration could be damaged. You should edit registry entries only for settings that you cannot adjust through the user interface, and be very careful whenever you edit the registry directly.

CD

CD   Specify or display the current default key.

Syntax :   CD   [<key>]

Where

<key>   The key specification.

Explanation

The CD command is used to navigate around the registry. The key specified will be used as a default value by all other regedit commands requiring a key path.

Key paths follow a similar format to file paths in MS-DOS. Keys are separated from sub-keys and values by backslashes (\). Keys may be specified by either a full path or a relative path. Paths may include the parent key specifier (..) and the current key specifier (.).

At the highest level the Windows NT registry consists of special keys, with fixed names known as hives. To maintain the analogy with file systems Regedit has the concept of a registry root to specify the location of the hives. The registry root is referenced as a single backslash (\).

If a key is not specified then the current default key will be displayed.

The initial default key is the registry root.

As the registry hives are referenced often, there are also a series of mnemonics for the registry hives. The mnemonics are:

HKCR   HKEY_CLASSES_ROOT
HKCC   HKEY_CURRENT_CONFIG
HKCU   HKEY_CURRENT_USER
HKLM   HKEY_LOCAL_MACHINE
HKU   HKEY_USERS

Note: The key containing Windows NT's performance data, HKEY_PERFORMANCE_DATA, is not accessible by this shell.

Example

```
Regedit > cd HKEY_LOCAL_MACHINE
Regedit > cd
HKEY_LOCAL_MACHINE

Regedit >
```

DEL

DEL   Delete keys or values.

Syntax : Del [/N[oprompt]] <name>

Where

/Noprompt   Perform each deletion without prompting the user.

<name>   Deletion restricted to items matching this name.
                 The name may contain the wildcard characters "*%".

Explanation

This regedit command performs, logically, the same task as its MS-DOS equivalent

This command will remove items from the registry whose name matches the name supplied. The name to match may include wildcard symbols.

If the name supplied it not a full path then the name is assumed to be relative to the current default key.

By default the user will be prompted to confirm deletion but this can be by-passed by the /Noprompt switch

Note: Deleting a key will delete all items in the branch below it

Example

```
Regedit > dir
Listing of hkey_local_machine\software\heroix

Type           Name

<KEY>          RoboCentral :
<KEY>          ER :
<KEY>          RoboEDA :
<KEY>          RoboMon :
<KEY>          TEMP_KEY :

Regedit > del temp_key
Warning. Deleting a key removes all sub-keys and values below it.
Delete hkey_local_machine\software\heroix\TEMP_KEY (Y\N) : y

Regedit >
```

DIR

DIR   Display a list of keys, values and value data.

Syntax :   Dir   [/S[ubkeys]] [/B[rief]] [<name>]

Where

/Subkeys   Listing will also show matches found within sub-keys.

/Brief   Suppresses the listing of values and their data.

<name>   Restricts listing to items matching this name.
                  The name may contain the wildcard characters "*%".

Explanation

This regedit command performs, logically, the same task as its MS-DOS equivalent

The listing will display items whose name matches the name supplied. The name to match may include wildcard symbols. If the /Subkeys switch is specified then matching will be performed recursively on the contents of any sub-directories.

Note: A word of warning about using the Subkeys switch.
Performing a dir of large parts of the registry, from hive level for example, will take quite some time.

Being a system recovery tool, Perle WinAttach runs at a very high priority. Therefore running an intensive command such as this may cause the application to grab larger amounts of CPU time than normal.

Example

```
Regedit > dir
Listing of hkey_local_machine\system\setup

Type            Name

<STRING>        CmdLine : "setup -newsetup"
<STRING>        FileDeletionListFilename : "D:\WINNT40S\delete.lst"
<MULTI STRING>  NetcardDlls : "MSNCDET.DLL" "amdncdet.dll" "mdgncdet.dll"
<STRING>        OsLoaderPath : "\"
<DWORD>         SetupType : 0x0 (0)
<STRING>        SystemPartition : "\Device\Harddisk0\Partition1"
<BINARY>        SystemPrefix : 85 1b 00 00 00 00 35 e4
<DWORD>         SystemSetupInProgress : 0x0 (0)
<STRING>        uniqueid : "D:\WINNT40S\MBI"
<DWORD>         UpgradeInProgress : 0x0 (0)

Regedit >
```

EXIT

EXIT   Return to the Perle WinAttach command shell.

Syntax :   Exit

Explanation

This command is used to return to the main Perle WinAttach shell.
Settings, such as current default key are maintained until the user logs off.

EXPORT

EXPORT   Save the contents of a key to file.

Syntax : Export <file name> [<key name>]

Where

<file name>   Full path name of the file to create.

<key name>   Specifies the key to copy.

Explanation

This command offers the ability to backup portions of the registry. This is useful safeguard before performing sensitive operations. The specified key and all items in the tree below it are written to file.
I f no key is specified then the current default key is used.

If the file name does not contain a complete path then the file will be created in the %systemroot%\system32 directory.

Example

```
Regedit > export backup.reg HKEY_LOCAL_MACHINE\Software\Heroix
Regedit >
```

FIND

FIND   Locate items.

Syntax : Find [/T[ype]:<objects>] [/S[tart]:<name>] <name>
               [/C[ase]] [/W[hole]]
Where

/Type   Restricts the search to objects of the specified type(s).
         The default is /Type=ALL

<objects>   Objects to search. If multiple objects are specified they must be separated with
                   commas (,).
                   Valid values are : 'ALL', 'KEYS', 'VALUES or 'DATA'

/Start   Start the search from key <name>.
         The default value is the current default key.

<name> Restricts listing to items matching this name.
        The name may contain the wildcard characters "*%"

/Case   Makes the search case sensative.
         The default is case insensative.

/Whole Search must match the whole object
        The default is to match only part of an object.

<text>   Restricts listing to items matching this name.
         The name may contain the wildcard characters "*%".

Explanation

This command allows searches to be performed on key name, value names and value data.
The search text can included wildcards to allow partial text matching.
Searches can also be limited to certain object types by use of the /Type switch.

If a start key is not specified then the search will begin at the current default directory.

Note: Although all value data can be examined the find command is only really applicable to string
data types.

Example

```
Regedit > Find InstallDir /START:HKEY_LOCAL_MACHINE\SOFTWARE\Heroix
---------- HKEY_LOCAL_MACHINE\SOFTWARE\Heroix\RoboCentral\INSTALLDIR
"D:\RoboCentral"

---------- HKEY_LOCAL_MACHINE\SOFTWARE\Heroix\RoboCentral NT Console\INSTALLDIR
"D:\Heroix\ER"

---------- HKEY_LOCAL_MACHINE\SOFTWARE\Heroix\RoboEDA\INSTALLDIR
"D:\Heroix\RoboEDA"

---------- HKEY_LOCAL_MACHINE\SOFTWARE\Heroix\RoboMon\Config\INSTALLDIR
"D:\Program Files\RoboMon"

Regedit >
```

HELP

HELP   Display help information on REGEDIT commands.

Syntax : Help [command]

Explanation

Identical in format and operation to the standard Perle WinAttach HELP command. This version offers specific help on regedit edit commands.

IMPORT

IMPORT   Load key contents from file.

Syntax :   Import <file name> [<key name>]

Where

<file name>   Full path name of the file to read.

<key name>   Specifies the key to load.

Explanation

This command allows the user to restore portions of the registry previously backed up with the EXPORT command.

The contents of the file will be used to overwrite the current contents of the specified key.
If the key does not exist it will be created, assuming that its parent exists.
Any items in the tree below the specified key that were not included in the backup will be lost.

I f no key is specified then the current default key is used.

If the file name does not contain a complete path then the file is assumed to be located in the %systemroot%\system32 directory.

Example

```
Regedit > import backup.reg HKEY_LOCAL_MACHINE\Software\Heroix
Regedit >
```

MOD

MOD   Modify value data.

Syntax : Mod <name> <data>

Where

<name> The item whose contents are to be modified.
         If the item is a key then the contents of the default value will changed.

<data>   The new data to be written.

Syntax and Explanation

This command will assign the given data to the specified registry item.

The data will be automatically converted to the correct format for the named item.

For 'BINARY' types please specify the data in hex, preceded by 0x. E.g. 0xFFFFFFFF

For 'MULTI_STRING' types please specify the data as a series of quoted strings separated by commas. E.g. "String 1","String 2","String 3"

Note: There cannot be any white-space either side of the commas.

If the item is a key then the data will be written to the default value. The default value is the item located directly under the key and has no name. The value will be assigned the type 'STRING'.

Example

```
Regedit > mod HKEY_LOCAL_MACHINE\SOFTWARE\HEROIX "New data."
Regedit > dir
Listing of hkey_local_machine\software\Heroix

Type            Name

<STRING>        (Default) : "New data."
<KEY>           RoboCentral :
<KEY>           ER :
<KEY>           RoboEDA :
<KEY>           RoboMon :

Regedit >
```

NEW

NEW   Create new keys and values.

Syntax :   New [/T[ype]:<object>] <name> [<data>]

Where

<name>   The name of the new item.

/Type   Defines what type of object to create.
                     The default value is 'STRING'.

<object>   Object type.
                     Valid values are : 'KEY', 'BINARY', 'DWORD, 'STRING', 'EXPAND_STRING' and
                     'MULTI_STRING'

<data>   The new data to be written.
                     If the new item is a key then <data> will be stored in the default value.

Explanation

This command creates new keys and values. By default it will create a 'STRING' value with the given
name. Optionally, data can be specified as well. As with the mod command if the item being created is
a key then the data will be written to the default value. The default value is the item located directly
under the key and has no name.

For 'BINARY' types please specify the data in hex, preceded by 0x. E.g. 0xFFFFFFFF

For 'MULTI_STRING' types please specify the data as a series of quoted strings separated by
commas. E.g. "String 1","String 2","String 3"

Note: There cannot be any white-space either side of the commas.

Example

```
Regedit > new /T:BINARY new_bin 0x0a120c340d
Regedit > new /T:MULTI_STRING new_mstr "string 1","String 2","String 3"
Regedit > dir
Listing of hkey_local_machine\software\Heroix

Type            Name

<STRING>        (Default) : "New data."
<BINARY>        new_bin : 0a 12 0c 34 0d
<MULTI STRING>  new_mstr : "string 1,String 2,String 3"
<KEY>           RoboCentral :
<KEY>           ER :
<KEY>           RoboEDA :
<KEY>           RoboMon :
```


REPLACE

REPLACE   Change occurrences of text in key names, value names and data.

Syntax :	Replace [/N[oprompt]] [/T[ype]:<objects>] [/S[tart]:<name>]
	[/C[ase]] [/W[hole]] <search value> <new value>
Where	

/Noprompt	Perform each replacement without prompting the user.
/Type	Limits the objects examined during search and replace actions. Multiple types are separated with commas (,). The default value is /Type=ALL
<object>	Defines what items to examine. Valid values are : 'ALL' 'KEYS', 'VALUES or 'DATA'
/Start	Start the search from key <name>. The default value is the current default key.
/Case	Makes the search case sensative. The default is case insensative.
/Whole	Search must match the whole object The default is to match only part of an object.
<search text>	The text to locate. The text may contain the wildcard characters "*%".
<new text>	The replacement text.

Explanation

Similar in format to the find command except each matching occurrence of the search text will be replaced with the new text.
The search text can included wildcards to allow partial text matching.
Searches can be limited to certain object types by use of the /Type switch.

If a start key is not specified then the search will begin at the current default directory.

Use the /Type switch to limit the search either to key names, value names or value data.
To specify multiple types, separate each type with a comma but no white-space.

E.g.   /Type:Keys,Values

By default the user will be prompted before each replacement but this can be overridden by the /Noprompt switch.

Example

```
Regedit > replace /TYPE:DATA "D:\Heroix\ER" "C:\Heroix\ER"
Modify hkey_local_machine\software\heroix\ER\InstallDir (Y\N) : y

Regedit >
```

Contacting Perle Systems

For contact information and support pages for Perle Systems see our website at http://www.perle.com.
For e-mail support use the following e-mail address: ptac@perle.com

Consult the on-line help or the Perle WinAttach User Guide