

# *TruePort*

## *User guide*

*Part number: 5500030-20  
Date: 2 April 2003*

### *Navigating around this manual*



*Using this on-line manual. See page 4.*



*Fast Contents. See page 6.*



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*Quick reference. See page 106.*



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## ***About this manual***

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### ***Purpose of this manual***

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This manual tells you how to install, and use the TruePort software for managing terminals on a network.

### ***Who this manual is for***

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This manual is aimed at System Administrators who want to want to manage terminals connected to a Perle terminal server. This manual requires System Administrator level knowledge of the UNIX and Windows 2000 operating systems and networks.

## Using this on-line manual

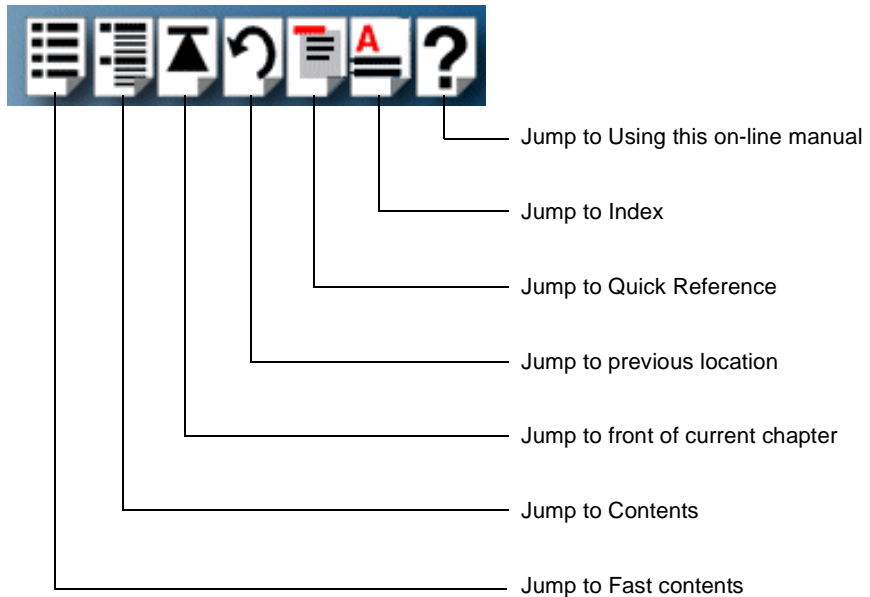
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The following is a brief guide to using this manual on-line.

### Document navigation

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This manual features document navigation hypertext buttons in the header area as shown in the next picture;



### Hypertext jumps

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You can also navigate around this manual by clicking on any cross reference or text in blue for example, [Hypertext jumps](#).

**Note**

The **Fast Contents**, **Contents** and **Index** entries are all hypertext jumps into this manual.

## Revision history

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Date	Part number	Description
June 1999	5500030-10	First issue of new TruePort Lite user manual for NCR UNIX operating system.
July 1999	5500030-11	Update of manual to include Solaris and SCO OpenServer operating systems.
November 1999	5500030-12	Update of manual to include both TruePort and TruePort Lite.
March 2000	5500030-13	Update of manual to include information on configuring LINKSTREAM terminal servers.
April 2000	5500030-14	Minor update of manual to include information on configuring LINKSTREAM terminal servers for use with Wyse 60 terminals.
September 2000	5500030-15	Update of manual to include the AIX operating system.
June 2001	5500030-16	Re-branding manual to new Perle standard.
October 2001	5500030-17	Update of manual to include the Windows 2000 operating system.
October 2001	5500030-18	Update of manual to include revised contact information.
July 2002	5500030-19	Update of manual to include revised procedures under AIX operating system.
April 2003	5500030-20	Update manual to include support of Solaris 64 bit OS

# Fast Contents

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# Chapter 1 Introduction

---

*You need to read this chapter if you want to...*

You need to read this chapter if you want to know about the TruePort device driver software.

This chapter provides an introduction to the TruePort software and some general information about how to use it.

This chapter includes the following sections;

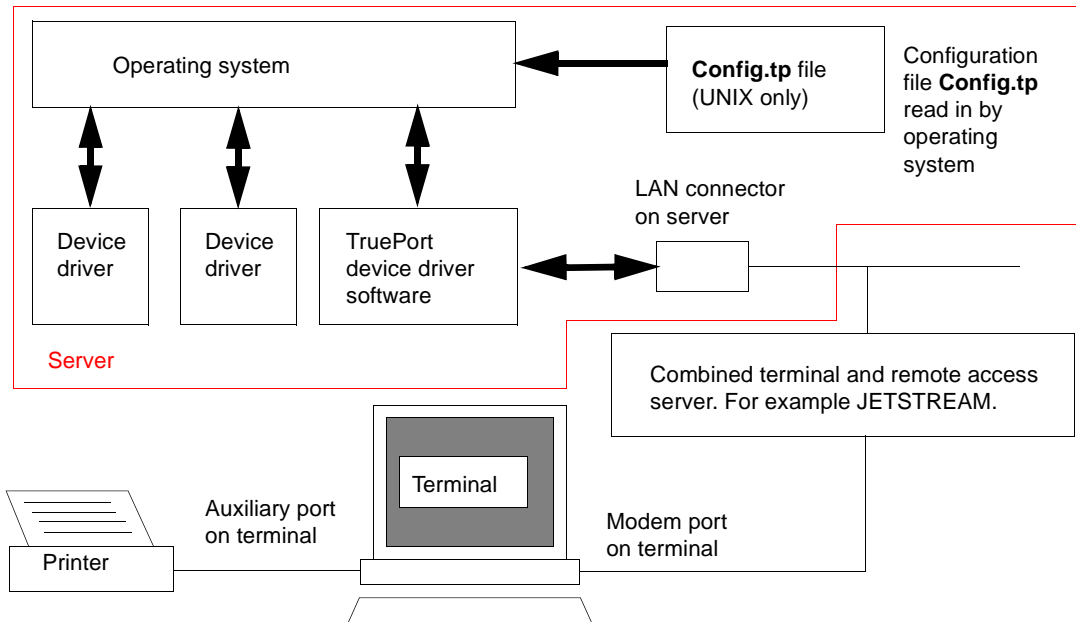
- [About TruePort](#) on page 14

## About TruePort

TruePort is a serial port emulation system for the Perle JETSTREAM, LANSTREAM, LINKSTREAM and IOLAN+ terminal server products.

You use TruePort when you want to connect extra terminals to a server using a Perle terminal server rather than a multi-port serial card. TruePort is especially useful where you want to improve security, for example to see which user is logged onto which terminal. Under UNIX, TruePort allows you to print directly from a terminal to an attached printer (transparent printing).

Currently, TruePort supports the **AIX**, **Solaris (x86) 2.6 and 2.7**, **Solaris (version 8 (SUN OS version 5.8) supporting both 32-bit and 64-bit modes)** and **Windows 2000** operating systems. In addition, the TruePort Lite version is supported under NCR UNIX 3.0x and SCO OpenServer 5.0x.



TruePort software is available in the following variants (On some operating systems only TruePort Lite is supported);

- TruePort; This mode allows complete device control and operates exactly like a directly connected serial port.  
See [Chapter 2 Installing and using TruePort](#).

- TruePort Lite; This mode is a data only mode and has no device control capabilities. See [Chapter 3 Installing and using TruePort Lite](#).

## Chapter 2 Installing and using TruePort

---

*You need to read this chapter if you want to...*

You need to read this chapter if you want to install or use TruePort.

This chapter provides the procedure for installing and using TruePort to add and remove terminals from a terminal server. In addition, it includes information on how to enable a terminal for transparent printing as well as how to start a terminal without re-booting the network server.

**Note**

The procedure for installing TruePort or depends on the operating system you are using. See the sections listed below for details.

This chapter includes the following sections;

- [Installing TruePort](#) on page [17](#)
- [Using TruePort](#) on page [54](#)

## ***Installing TruePort***

---

The procedure for installing TruePort or depends on the operating system you are using. See the sections listed below for details.

- [Installing TruePort under Solaris](#) on page **18**
- [Installing TruePort under AIX](#) on page **30**
- [Installing TruePort under Windows 2000](#) on page **39**

For information on using TruePort, see [Using TruePort](#) on page **54**.

## ***Installing TruePort under Solaris***

---

This section tells you how to install TruePort under the Solaris operating system and includes the following;

- [General setup procedure](#) on page [19](#)
- [Installing TruePort on your system](#) on page [19](#)
- [Configuring your terminal server to use TruePort](#) on page [20](#)
- [Configuring your LINKSTREAM terminal server to use TruePort](#) on page [22](#)
- [Adding ports to the config.tp file](#) on page [29](#)

Once you have completed basic installation you can perform further operations using TruePort. See [Using TruePort](#) on page [54](#) for details.

## General setup procedure

---

To install and setup the TruePort software on your system, proceed as follows;

1. Install TruePort onto your system using the procedure described in [Installing TruePort on your system](#) on page 19.
2. Configure your terminal server to use the TruePort software.

Note

For LINKSTREAM terminal servers see [Configuring your LINKSTREAM terminal server to use TruePort](#) on page 22. For all other types, see [Configuring your terminal server to use TruePort](#) on page 20.

3. Add the range of ports you require to the **config.tp** file and run them using the **addports** script. See [Adding ports to the config.tp file](#) on page 29.

You can now use your TruePort software. For details of further options following initial setup and installation, see [Using TruePort](#) on page 54.

## Installing TruePort on your system

---

To install TruePort under Solaris, proceed as follows;

1. Log in to the UNIX server as root user.

The UNIX prompt for login is now displayed

2. At the UNIX prompt, copy the supplied TruePort package file **tpsol120\_xxxx.pkg** (where xxx is "sparc" or "i386" depending on your Solaris OS environment) onto your system into the **/tmp** directory.
3. At the UNIX prompt, type **pkgadd -d /tmp/tpsol120\_xxxx.pkg all** (where xxx is "sparc" or "i386" depending on your Solaris OS environment).

The installation now creates the TruePort home directory and installs TruePort and the TruePort Administration Tools (for easy editing of the **config.tp** file).

## Configuring your terminal server to use TruePort

---

Before your system can use the TruePort software you have installed, you need to configure your terminal server (for example, a Perle JETSTREAM 8500).

**Note**

All versions of the JETSTREAM 8500, 4000 and LANSTREAM 2000 software support TruePort operation. However, the JETSTREAM 6x series software version must be 4.03 or greater.

To configure your terminal server to use TruePort proceed as shown in the following example. The example shows you how to configure a JETSTREAM 8500 (called **testjs2** in this instance) to use TruePort software on a host server (called **sunserver**);

1. At the command prompt, type **\$ telnet testjs2** and press the **Enter** key.

The following messages are now displayed

**Trying...**

**Connected to testjs2.perle.com.**

**Escape character is '^']**.

**Telnet connect to JETSTREAM testjs2**

**Perle JETSTREAM 8500  
version 2.2.7**

**Login:**

2. At the **Login** prompt, type **admin** and press the **Enter** key.

The following prompt is now displayed;

**Password:**

3. At the **Password** prompt, enter your password and press the **Enter** key.

**Note**

The next stage is illustrated using an example which shows how to configure 4 ports on a JETSTREAM 8500 terminal server. This will set the ports 1 to 4 to connect to the host sunserver without user intervention.

4. Add the host you want to the terminal server using the add host command as shown in the following example;
  - a. At the command prompt, type the following;
  - b. add host sunserver 192.152.247.61**
  - c. Press the **Enter** key.

*Configuring the terminal server ports*

You can now Configure the terminal server ports.

5. At the command prompt, do the following:
  - a. Type **set line 1 service silent raw sunserver 10000** and press the **Enter** key.
  - b. Type **set line 2 service silent raw sunserver 10001** and press the **Enter** key.
  - c. Type **set line 3 service silent raw sunserver 10002** and press the **Enter** key.
  - d. Type **set line 4 service silent raw sunserver 10003** and press the **Enter** key.
6. At the command prompt, type **save** and press the **Enter** key.
7. At the command prompt, type **logout** and press the **Enter** key.

The following message is now displayed

**Connection closed by foreign host.**

The configuration of terminal server ports is now complete.

## Configuring your LINKSTREAM terminal server to use TruePort

---

Before your system can use the TruePort software you have installed, you need to configure your terminal server (for example, a Perle LINKSTREAM).

To configure your terminal server to use TruePort proceed as shown in the following example. The example shows you how to configure a LINKSTREAM (called **testls2** in this instance) to use TruePort software on a host server;

1. At the command prompt, type **\$ telnet testls2** and press the **Enter** key.

A series of messages are now displayed ending with a the prompts shown in the next picture.

**User Identity:**

**Password:**

2. At the **User Identity** prompt, type **Manager** and press the **Enter** key.
3. At the **Password** prompt, enter your password and press the **Enter** key.

Note

The default password is “.....”.

The Main Menu is now displayed.

```
Node: NoName                               Thu 01 Jan 1970 00:03

                                     Main Menu
                                     =====

1. Configuration
2. Statistics

Select Screen: █

ctrl<a> - Log Off
-----
SYSTEM MSG: Enter option number
```

4. In the Main Menu use the **Select Screen** field to select option **1, Configuration** and press the **Enter** key.

The CONFIGURATION menu is now displayed.

- In the CONFIGURATION menu, select option **5, Channel Configuration**.

The CHANNEL CONFIGURATION menu is now displayed.

- In the CHANNEL CONFIGURATION menu, select option **2, Channel Session Parameters**.

The CONFIGURE SESSION PARAMETERS screen is now displayed.

```

Node: NoName                                     Thu 01 Jan 1970 00:08

                                CONFIGURE SESSION PARAMETERS
Channel Nr: 2                                ===== Telnet  Transparent

Internet Address: 192.65.146.100  Protocol Port Numbers: 1002  2002

Access: PVC-Master      Session Mode: Transparent      Default Port: 23

Maximum Sessions: 1      Idle Timeout: 0      TCP Window Size: 1024

AutoCall Destination: 192.65.144.23 10000
Preferred Destination: None

Data Transfer Mode Parameters:
Terminal Type           : unknown
Session Echo Mode       : Telnet Remote

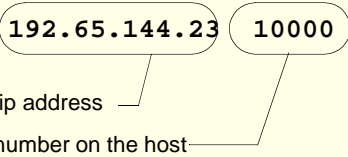
                                Accept: █
ctrl<a> - Log Off
ctrl<x> - Main Menu      ctrl<y> - Previous Menu      ctrl<z> - Last Field
-----
SYSTEM MSG: Enter 'Y' to accept this screen, 'N' to reject it

```

- In the CONFIGURE SESSION PARAMETERS screen, select the channel you want to set up and press the **Enter** key.

The CONFIGURE SESSION PARAMETERS screen is now updated with the current settings for the selected channel.

- Within the CONFIGURE SESSION PARAMETERS screen, set the parameters shown in the next table.

Parameter	Set to ...
<b>Access</b>	PVC-Master
<b>Session mode</b>	Transparent
<b>Maximum sessions</b>	1
<b>AutoCall Destination</b>	<div style="text-align: center;">  </div> <p>Host ip address</p> <p>Port number on the host</p> <p>Note that the port number of the host should be unique for each port. Use the range from 10000 upwards.</p>

**Hint**

Use the **up arrow**, **down arrow**, **left** and **right** arrow keys to move the cursor around the screen.

To change the settings for a field, highlight the current value, then hold down the **shift** key and use the **<** and **>** keys to toggle the field to the value you require.

- At the **Accept** prompt, type **Y** and press the **Enter** key to accept the values you have entered.

The CONFIGURE SESSION PARAMETERS screen is now updated.

- In the CONFIGURE SESSION PARAMETERS screen, press the **Ctrl** and **Y** keys simultaneously to return to the **CHANNEL CONFIGURATION** menu.

- In the CHANNEL CONFIGURATION menu, select option **3 Channel Strings Configuration**.

The CHANNEL STRINGS CONFIGURATION screen is now displayed.

```
Node: NoName                               Thu 01 Jan 1970 00:09
                                           CHANNEL STRINGS CONFIGURATION   String Space: 1854
                                           =====
Channel Nr.: 2                               Channel Name: CHAN_02

Welcome String                               Status: User Defined
                                           Text: None
Command Line Prompt                          Status: User Defined
                                           Text: none

Active Session Messages                      Status: Disabled           Errors: Enabled
                                           Connect: None
                                           Disconnect: None
Passive Session Messages                     Status: Disabled
                                           Connect: None
                                           Disconnect: None

                                           Accept: Y
ctrl<a> - Log Off
ctrl<x> - Main Menu   ctrl<y> - Previous Menu   ctrl<z> - Last Field
-----
SYSTEM MSG: Enter 'Y' to accept this screen, 'N' to reject it
```

12. In the CHANNEL STRINGS CONFIGURATION screen, set the **Channel Nr** field to the channel number you are working on and press the **Enter** key.

The CHANNEL STRINGS CONFIGURATION screen is now updated to show the values for the selected channel.

13. In the CHANNEL STRINGS CONFIGURATION screen, toggle the parameters detailed in the next table to the values indicated.

Parameter	Set to...
Welcome string Status	User defined
Welcome string Text	None
Command Line Prompt Status	User defined
Command Line Prompt Text	None
Active Session Messages Status	Disabled
Passive Session messages Status	Disabled

**Hint**

Use the **up**, **down**, **left** and **right** arrow keys to move the cursor around the screen.

To change the settings for a field, highlight the current value, then hold down the **shift** key and use the **<** and **>** keys to toggle the field to the value you require.

14. In the Accept field, type **Y** and press the **Enter** key to accept your changes.
15. Repeat steps **12.** to **14.** of this procedure for each channel you want to set up.

**Note**

The port number of the host should be unique for each port.

16. In the CONFIGURE SESSION PARAMETERS screen, press the **Ctrl** and **Y** keys simultaneously to return to the **CHANNEL CONFIGURATION** menu.

**Note**

If your system is fitted with a **Wyse 60** terminal you need to do the following;

1. In the CONFIGURATION MENU select option 5, **Channel Configuration** to display the CHANNEL CONFIGURATION MENU.
2. In the CHANNEL CONFIGURATION MENU, select option 1, **Channel Interface parameters** to display the CHANNEL INTERFACE PARAMETERS window.
3. In the CHANNEL INTERFACE PARAMETERS window,
  - a. Select the **Channel Nr** (channel number) you want and then set the **DCD Control** parameter to **High**.
  - b. Set accept to **Y** and press the **Enter** key to accept your changes.
  - c. Press the **CTRL** and **Y** keys simultaneously to return to the CHANNEL CONFIGURATION MENU.

4. In the CHANNEL CONFIGURATION MENU, select option 4, **Reset / Copy Channel Parameters** and press the **Enter** key.

The RESET / COPY CHANNEL PARAMETERS screen is now displayed as shown in the next picture.

```
Node: NoName                               Thu 01 Jan 1970 00:10

                                RESET/COPY CHANNEL PARAMETERS
                                =====

Copy Interface Parameters ? .              Copy Strings ? .
Source Channel: ..                        Source Channels: ..
Destination Channels: .. to ..            Destination Channels: .. to ..

Copy Session Parameters ? .
Source Channel: ..
Destination Channels: .. to ..

Reset ? Y
Channels: 2 to 2

Accept: Y

ctrl<a> - Log Off
ctrl<x> - Main Menu   ctrl<y> - Previous Menu   ctrl<z> - Last Field
-----
SYSTEM MSG: Enter 'Y' to accept this screen, 'N' to reject it
```

5. Within the RESET / COPY CHANNEL PARAMETERS screen;
  - a. Toggle the **Reset** parameter to **Y** and press the **Enter** key.
  - b. In the **Channels** field, enter the range of channels you want to update. For example, 0 to 3.
  - c. Set the Accept field to **Y** and press the **Enter** key.

**Hint**

You can also use this screen to copy channel session and string parameters from one channel to another.

6. Press the **Ctrl** and **X** keys simultaneously to return to the main menu.
7. In the main menu, select option1, Configuration.  
The CONFIGURATION menu is now displayed.
8. In the CONFIGURATION menu, select option 2, Internet Protocol Configuration  
The INTERNET PROTOCOL CONFIGURATION menu is now displayed.
9. In the INTERNET PROTOCOL CONFIGURATION menu, select option 1, **System Internet Parameters** and press the **Enter** key.  
The INTERNET PARAMETERS screen is now displayed.

```
Node: NoName                               Thu 01 Jan 1970 00:11
                                           INTERNET PARAMETERS
                                           =====
Global RIP Status:      Enabled           Default Gateway:      0.0.0.0

ARP Retries:           1

IP Checksum:           Enabled           IP Options:           Enabled
IP Default TTL:        15                IP Priority Ratio:    24

TCP Checksum:          Enabled           TCP Options:          Enabled
TCP Max Rmxmt Timeout: 20                TCP Retry Count:      5
TCP Keep Alive Timer:  1                  TCP Keep Alive Interval: 1
TCP Keep Alive Count:  2                  TCP Set Push Flag:    Disabled

Telnet Protocol Base No: 1000           Transparent Protocol Base No: 2000
Console Protocol Port No: 23

                                           Accept: Y
ctrl<a> - Log Off
ctrl<x> - Main Menu   ctrl<y> - Previous Menu   ctrl<z> - Last Field
-----
SYSTEM MSG: Enter 'Y' to accept this screen, 'N' to reject it
```

10. Within the INTERNET PARAMETERS screen,
  - a. Set the **TCP keep alive timer** field to **1**.
  - b. Set the **Accept** field to **Y** and press the **Enter** key.
11. Press the **Ctrl** and **A** keys simultaneously to log off.

The configuration of terminal server ports is now complete.

## Adding ports to the config.tp file

---

### Introduction

TruePort administrative files and utilities are installed in the /etc/trueport directory.

#### Note

The standard installation installs 64 minor node devices (ports), however you must enable these ports before they can be used.

Each installed TTY is assigned a name by the operating system, this will be in the range 0-63 if you have no previous multi-port serial installation. You may link these names to your own TTY names if you require.

The standard installation creates the following device nodes:

```
/dev/term/0  
/dev/term/1  
/dev/term/2  
and so forth up to /dev/term/63
```

and

```
/dev/cua/0  
/dev/cua/1  
/dev/cua/2  
and so forth up to /dev/cua/63
```

To enable a range of ports, we have provided a script called **addports** that starts the TruePort service. This assumes you have added configured ports on your terminal server starting at TCP/IP port number 10000.

The **addports** script allows you to add a range of ports to the **config.tp** file and run them without having to use the tpdadm utility ([page 112](#)). You can invoke **addports** after system installation.

### Using addports

To use the addports script proceed as follows;

- At the command prompt, type **addports m n**

Where;

**m** is the first port device/device/terminal to add starting at 0.

**n** is the last port device/device/terminal to add.

for example, to add ports 0 to 15 to the **config.tp** you type **addports 0 15**.

Once the ports have been enabled, you may use them as standard UNIX serial TTY's.

Once the software is installed and configured you can add login sessions using the admintool utility see [Adding logins to serial ports using Admintool](#) on page 56 in for details.

## Installing TruePort under AIX

---

This section tells you how to install TruePort under the AIX operating system and includes the following;

- [General setup procedure](#) on page [31](#)
- [Installing TruePort on your system](#) on page [32](#)
- [Working with more than 512 ports](#) on page [33](#)
- [Configuring your terminal server to use TruePort](#) on page [34](#)
- [Configuring your JETSTREAM terminal server to use TruePort](#) on page [37](#)
- [Adding logins](#) on page [64](#)
- [Enabling and disabling logins](#) on page [64](#)
- [Listing the terminal servers on your system](#) on page [66](#)
- [Removing terminal servers](#) on page [67](#)

Once you have completed basic installation you can perform further operations using TruePort. See [Using TruePort](#) on page [54](#) for details.

### Note

The AIX serial TTY administration system is built into AIX, the user has no control over the tty names generated. All the ports will be numbered from the next available device number. In general if there are no other defined serial ports in the system, the TTY's will be created starting from **tty0**.

You can generate a list of available TTY's using the smit tty menu. See [Listing the terminal servers on your system](#) on page [66](#).

## General setup procedure

---

To install and setup the TruePort software on your system, proceed as follows;

1. Install TruePort onto your system using the procedure described in [Installing TruePort on your system](#) on page 32.

**Note**

While this version of TruePort supports up to 1024 TruePort ports between 2 daemons, the initial installation will only handle 512 ports with 1 daemon.

TruePort AIX version 4.1.0 runs the network connection for up to 512 TruePort ports in a single process. If you require more than 512 TruePort ports, you need to start a second process.

See [Working with more than 512 ports](#) on page 33.

2. Configure your terminal server to use the TruePort software using the procedure described in [Configuring your JETSTREAM terminal server to use TruePort](#) on page 37.

You can now use your TruePort software. For details of further options following initial setup and installation, see [Using TruePort](#) on page 54.

## Installing TruePort on your system

---

To install the TruePort device drivers on your system proceed as follows;

1. login to your system as super user.
2. Copy the supplied installable files onto the filesystem of the host computer, we recommend **/tmp**.

You now need to create a drivers disk, to do this;

3. At the command prompt, copy the TruePort package file to a blank floppy disk by typing **# dd if=/tmp/tpaix300.img of=/dev/fd0 bs=64k** and pressing the **Enter** key.
4. At the command prompt, type **# installp -acX all** and press the **Enter** key to Install the software.

The TruePort administrative files and utilities are now installed in the **/etc/trueport** directory and the device drivers will be loaded.

Note

You do not need to reboot at this point.

## Working with more than 512 ports

---

While this version of TruePort supports up to 1024 TruePort ports between 2 daemons, the initial installation will only handle 512 ports with 1 daemon.

TruePort AIX version 4.1.0 runs the network connection for up to 512 TruePort ports in a single process. If more than a total of 512 TruePort ports are required, a second process must be started.

**Note**

The TruePort daemon(s) can therefore become very large when the maximum number of ports is configured. Consider increasing the system swap space partition if you don't have enough physical memory to keep the process memory resident.

To enable the second daemon (and second set of 512 ports):

1. At the command prompt, enter the following:

```
# mkitab -i tpd "tpd2:2:respawn:/etc/trueport/tpd -2nd  
-config /etc/trueport/config.tp"
```

**Note**

This line has been wrapped and the command must be entered as one line.

## Configuring your terminal server to use TruePort

---

Once you have installed the TruePort device drivers and utilities in the /etc/trueport directory (see [page 32](#)) you need to configure TruePort using the smit configuration utility (for general details of the smit configuration utility, refer to your AIX user documentation). To do this;

**Hint**

To list the terminal servers on your system, see [Listing the terminal servers on your system](#) on page 66.

1. At the command prompt, type **# smit -C trueport** and press the **Enter** key.  
The Perle TruePort menu is now displayed:

```

                                Perle TruePort

Move cursor to desired item and press Enter.

List all TruePort TTY and Printer devices
Manage Terminal Servers
Manage TTY Devices
Manage Printer Devices
Delete all TruePort Devices

F1=Help          F2=Refresh      F3=Cancel      F8=Image
F9=Shell         F10=Exit       Enter=Do
    
```

- Adding a terminal server*
2. Within the Perle TruePort menu, select **Manage Terminal servers** and press **Enter**.  
The Manage Terminal Servers menu screen is now displayed.

```

                                Manage Terminal Servers

Move cursor to desired item and press Enter.

List all Terminal Servers
Add Terminal Server
Remove Terminal Server

F1=Help          F2=Refresh      F3=Cancel      F8=Image
F9=Shell         F10=Exit       Enter=Do
    
```

3. Within the Manage Terminal Servers menu, select **Add Terminal Server** and press the **Enter** key.

The Add Terminal Server screen is now displayed.

### Add Terminal Server

Type or select values in entry fields.  
Press Enter AFTER making all desired changes.

	[Entry Fields]	
* Hostname or IP address	[ Jetstream ]	
* Number of ports	[ 16 ]	#
Base TCP/IP port number	[ 10000 ]	+#
Keep alive timeout (seconds)	[ 30 ]	+#
Enable logins now ?	[ Yes ]	+

F1=Help	F2=Refresh	F3=Cancel	F4=List
F5=Reset	F6=Command	F7=Edit	F8=Image
F9=Shell	F10=Exit	Enter=Do	

4. Within the Add Terminal Server screen, use the **Entry Fields** to select or enter the values you want for each of the parameters listed in the next table;

Parameter	Action required
<b>Hostname or IP address</b>	Specify the name (or IP address) of the terminal server you wish to add.
<b>Number of ports</b>	Enter the number of ports you require.
<b>Base TCP/IP port number</b>	Enter the starting TCP/IP port number you require for the first port.
<b>Keep alive timeout (seconds)</b>	Selects how often to probe the port to make sure the port is still connected to the network. This is set to 30 by default and normally does not need setting by the user.
<b>Enable logins now?</b>	Enable the logins on all ports you have created. Default value YES. If you leave the "Enable logins now?" field as "YES" the port devices will be created and enabled for login.

A block of tty port devices is now added to the AIX system. Once a terminal server has been added you can add further terminal servers, list terminal servers or delete terminal servers.

5. Repeat steps 2. to 4. of this procedure until you have added all the terminal servers you require.

6. Edit the `/etc/trueport/config.tp` file to change the IP address to **NONE** for all entries, as shown in the next example.

Before editing:

```
/dev/tpm0    192.168.2.1    10001    30    none
/dev/tpm1    192.168.2.1    10002    30    none
/dev/tpm2    192.168.2.1    10003    30    none
```

After editing:

```
/dev/tpm0    NONE          10001    30    none
/dev/tpm1    NONE          10002    30    none
/dev/tpm2    NONE          10003    30    none
```

7. Restart the Trueport daemon, by killing the `tpd` process. You do this by sending it a `SIGHUP` for example:

```
# cd /etc/trueport
# kill -HUP `cat tpd.pid`
```

This will respawn the daemon and initialize the changes made to the `config.tp` file.

If you are running a second daemon, then also send a `SIGHUP` to that process by typing:

```
# kill -HUP `cat tpd.2nd.pid`
```

## Configuring your JETSTREAM terminal server to use TruePort

---

Before your system can use the TruePort software you have installed, you need to configure your terminal server (for example, a Perle JETSTREAM 8500).

**Note**

All versions of the JETSTREAM 8500, 4000 and LANSTREAM 2000 software support TruePort operation. However, the JETSTREAM 6x series software version must be 4.03 or greater.

To configure your terminal server to use TruePort proceed as shown in the following example. The example shows you how to configure a JETSTREAM 8500 (called **testjs2** in this instance) to use TruePort software on a host server (called **aixserver**);

1. At the command prompt, type **\$ telnet testjs2** and press the **Enter** key.

The following messages are now displayed

**Trying...**

**Connected to testjs2.perle.com.**

**Escape character is '^']**.

**Telnet connect to JETSTREAM testjs2**

**Perle JETSTREAM 8500  
version 2.2.7**

**Login:**

2. At the **Login** prompt, type **admin** and press the **Enter** key.

The following prompt is now displayed;

**Password:**

3. At the **Password** prompt, enter your password and press the **Enter** key.

**Note**

The next stage is illustrated using an example which shows how to configure 4 ports on a JETSTREAM 8500 terminal server. This will set the ports 1 to 4 to connect to the host sunserver without user intervention.

4. Add the host you want to the terminal server using the add host command as shown in the following example;
  - a. At the command prompt, type the following;
  - b. add host aixserver 192.152.247.61**
  - c. Press the **Enter** key.

*Configuring the terminal server ports*

You can now Configure the terminal server ports.

5. At the command prompt, do the following:
  - a. Type **set line 1 service silent raw aixserver 10000** and press the **Enter** key.
  - b. Type **set line 2 service silent raw aixserver 10001** and press the **Enter** key.
  - c. Type **set line 3 service silent raw aixserver 10002** and press the **Enter** key.
  - d. Type **set line 4 service silent raw aixserver 10003** and press the **Enter** key.
6. At the command prompt, type **save** and press the **Enter** key.
7. At the command prompt, type **logout** and press the **Enter** key.

The following message is now displayed

**Connection closed by foreign host.**

The configuration of terminal server ports is now complete.

You can now perform other system management tasks using TruePort as required. See [Installing TruePort under AIX](#) on page 30 and [Using TruePort under AIX](#) on page 63.

## ***Installing TruePort under Windows 2000***

---

This section tells you how to install TruePort under the Windows 2000 operating system and includes the following;

- [General setup procedure](#) on page [40](#)
- [Configuring your JETSTREAM terminal server to use TruePort](#) on page [41](#)
- [Configuring your LINKSTREAM terminal server to use TruePort](#) on page [43](#)
- [Installing TruePort on your system](#) on page [50](#)

Once you have completed basic installation you can perform further operations using TruePort. See [Using TruePort under Windows 2000](#) on page [69](#) for details.

## General setup procedure

---

To install and setup the TruePort software on your system proceed as follows;

1. Configure your terminal server to use the TruePort software. For JETSTREAM terminal servers see [Configuring your JETSTREAM terminal server to use TruePort](#) on page 41. For LINKSTREAM see [Configuring your LINKSTREAM terminal server to use TruePort](#) on page 43.
2. Install the TruePort software onto your system. See [Installing TruePort on your system](#) on page 50.

**Note**

We recommend using the default TruePort settings for each terminal server on your network and their associated serial ports. If you wish to change these settings see [Using TruePort under Windows 2000](#) on page 69.

**Note**

To remove ports or devices, see [Removing ports or devices](#) on page 76.

## Configuring your JETSTREAM terminal server to use TruePort

---

Before your system can use the TruePort software (when installed), you need to configure your terminal server. This section describes how to configure a Perle JETSTREAM, To configure a LINKSTREAM see [Configuring your LINKSTREAM terminal server to use TruePort](#) on page 43..

### Note

All versions of the JETSTREAM 8500, 4000 and LANSTREAM 2000 software support TruePort operation. However, the JETSTREAM 6x series software version must be 4.03 or greater.

To configure your terminal server to use TruePort proceed as shown in the following example. The example shows you how to configure a JETSTREAM 8500 (called **testjs2** in this instance) to use TruePort software on a host server (called **w2kserver**);

1. At the command prompt, type **\$ telnet testjs2** and press the **Enter** key.

The following messages are now displayed

**Trying...**

**Connected to testjs2.perle.com.**

**Escape character is '^J'.**

**Telnet connect to JETSTREAM testjs2**

**Perle JETSTREAM 8500  
version 2.2.7**

**Login:**

2. At the **Login** prompt, type **admin** and press the **Enter** key.

The following prompt is now displayed;

**Password:**

3. At the **Password** prompt, enter your password and press the **Enter** key.

### Note

The next stage is illustrated using an example which shows how to configure 4 ports on a JETSTREAM 8500 terminal server. This will set the ports 1 to 4 to connect to the host sunserver without user intervention.

4. Add the host you want to the terminal server using the add host command as shown in the following example;

- a. At the command prompt, type the following;

- b. add host w2kserver 192.152.247.61**

*Configuring the  
terminal server  
ports*

c. Press the **Enter** key.

You can now Configure the terminal server ports.

5. At the command prompt, do the following:
  - a. Type **set line 1 service silent raw w2kserver 10000** and press the **Enter** key.
  - b. Type **set line 2 service silent raw w2kserver 10001** and press the **Enter** key.
  - c. Type **set line 3 service silent raw w2kserver 10002** and press the **Enter** key.
  - d. Type **set line 4 service silent raw w2kserver 10003** and press the **Enter** key.

6. At the command prompt, type **save** and press the **Enter** key.

7. At the command prompt, type **logout** and press the **Enter** key.

The following message is now displayed

**Connection to host lost.**

The configuration of terminal server ports is now complete.

## Configuring your LINKSTREAM terminal server to use TruePort

---

Before your system can use the TruePort software (when installed), you need to configure your terminal server. This section describes how to configure a Perle LINKSTREAM, To configure a JETSTREAM see [Configuring your JETSTREAM terminal server to use TruePort](#) on page 41.

To configure your terminal server to use TruePort proceed as shown in the following example. The example shows you how to configure a LINKSTREAM (called **testls2** in this instance) to use TruePort software on a host server;

1. At the command prompt, type **\$ telnet testls2** and press the **Enter** key.

A series of messages are now displayed ending with a the prompts shown in the next picture.

**User Identity:**

**Password:**

2. At the **User Identity** prompt, type **Manager** and press the **Enter** key.
3. At the **Password** prompt, enter your password and press the **Enter** key.

Note

The default password is “.....”.

The Main Menu is now displayed.

```
Node: NoName                               Thu 01 Jan 1970 00:03
                                           Main Menu
                                           =====
1. Configuration
2. Statistics

Select Screen: █

ctrl<a> - Log Off
-----
SYSTEM MSG: Enter option number
```

4. In the Main Menu use the **Select Screen** field to select option 1, **Configuration** and press the **Enter** key.

The CONFIGURATION menu is now displayed.

- In the CONFIGURATION menu, select option **5, Channel Configuration**.

The CHANNEL CONFIGURATION menu is now displayed.

- In the CHANNEL CONFIGURATION menu, select option **2, Channel Session Parameters**.

The CONFIGURE SESSION PARAMETERS screen is now displayed.

```
Node: NoName                                     Thu 01 Jan 1970 00:08

                                CONFIGURE SESSION PARAMETERS
Channel Nr: 2                                ===== Telnet  Transparent

Internet Address: 192.65.146.100  Protocol Port Numbers: 1002  2002

Access: PWC-Master      Session Mode: Transparent      Default Port: 23

Maximum Sessions: 1      Idle Timeout: 0      TCP Window Size: 1024

AutoCall Destination: 192.65.144.23 10000
Preferred Destination: None

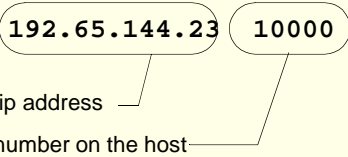
Data Transfer Mode Parameters:
Terminal Type           : unknown
Session Echo Mode      : Telnet Remote

                                Accept: █
ctrl<a> - Log Off
ctrl<x> - Main Menu      ctrl<y> - Previous Menu      ctrl<z> - Last Field
-----
SYSTEM MSG: Enter 'Y' to accept this screen, 'N' to reject it
```

- In the CONFIGURE SESSION PARAMETERS screen, select the channel you want to set up and press the **Enter** key.

The CONFIGURE SESSION PARAMETERS screen is now updated with the current settings for the selected channel.

- Within the CONFIGURE SESSION PARAMETERS screen, set the parameters shown in the next table.

Parameter	Set to ...
<b>Access</b>	PVC-Master
<b>Session mode</b>	Transparent
<b>Maximum sessions</b>	1
<b>AutoCall Destination</b>	<div style="text-align: center;">  </div> <p>Host ip address</p> <p>Port number on the host</p> <p>Note that the port number of the host should be unique for each port. Use the range from 10000 upwards.</p>

**Hint**

Use the **up arrow**, **down arrow**, **left** and **right** arrow keys to move the cursor around the screen.

To change the settings for a field, highlight the current value, then hold down the **shift** key and use the **<** and **>** keys to toggle the field to the value you require.

- At the **Accept** prompt, type **Y** and press the **Enter** key to accept the values you have entered.

The CONFIGURE SESSION PARAMETERS screen is now updated.

- In the CONFIGURE SESSION PARAMETERS screen, press the **Ctrl** and **Y** keys simultaneously to return to the **CHANNEL CONFIGURATION** menu.

- In the CHANNEL CONFIGURATION menu, select option **3 Channel Strings Configuration**.

The CHANNEL STRINGS CONFIGURATION screen is now displayed.

```
Node: NoName                               Thu 01 Jan 1970 00:09
                                           CHANNEL STRINGS CONFIGURATION   String Space: 1854
                                           =====
Channel Nr.: 2                               Channel Name: CHAN_02

Welcome String                               Status: User Defined
                                           Text: None
Command Line Prompt                          Status: User Defined
                                           Text: none

Active Session Messages                      Status: Disabled           Errors: Enabled
                                           Connect: None
                                           Disconnect: None
Passive Session Messages                     Status: Disabled
                                           Connect: None
                                           Disconnect: None

                                           Accept: Y
ctrl<a> - Log Off
ctrl<x> - Main Menu   ctrl<y> - Previous Menu   ctrl<z> - Last Field
-----
SYSTEM MSG: Enter 'Y' to accept this screen, 'N' to reject it
```

12. In the CHANNEL STRINGS CONFIGURATION screen, set the **Channel Nr** field to the channel number you are working on and press the **Enter** key.

The CHANNEL STRINGS CONFIGURATION screen is now updated to show the values for the selected channel.

13. In the CHANNEL STRINGS CONFIGURATION screen, toggle the parameters detailed in the next table to the values indicated.

Parameter	Set to...
Welcome string Status	User defined
Welcome string Text	None
Command Line Prompt Status	User defined
Command Line Prompt Text	None
Active Session Messages Status	Disabled
Passive Session messages Status	Disabled

**Hint**

Use the **up**, **down**, **left** and **right** arrow keys to move the cursor around the screen. To change the settings for a field, highlight the current value, then hold down the **shift** key and use the **<** and **>** keys to toggle the field to the value you require.

14. In the Accept field, type **Y** and press the **Enter** key to accept your changes.
15. Repeat steps **12.** to **14.** of this procedure for each channel you want to set up.

**Note**

The port number of the host should be unique for each port.

16. In the CONFIGURE SESSION PARAMETERS screen, press the **Ctrl** and **Y** keys simultaneously to return to the **CHANNEL CONFIGURATION** menu.

**Note**

If your system is fitted with a **Wyse 60** terminal you need to do the following;

1. In the CONFIGURATION MENU select option 5, **Channel Configuration** to display the CHANNEL CONFIGURATION MENU.
2. In the CHANNEL CONFIGURATION MENU, select option 1, **Channel Interface parameters** to display the CHANNEL INTERFACE PARAMETERS window.
3. In the CHANNEL INTERFACE PARAMETERS window,
  - a. Select the **Channel Nr** (channel number) you want and then set the **DCD Control** parameter to **High**.
  - b. Set accept to **Y** and press the **Enter** key to accept your changes.
  - c. Press the **CTRL** and **Y** keys simultaneously to return to the CHANNEL CONFIGURATION MENU.
4. In the CHANNEL CONFIGURATION MENU, select option 4, **Reset / Copy Channel Parameters** and press the **Enter** key.

The RESET / COPY CHANNEL PARAMETERS screen is now displayed as shown in the next picture.

```
Node: NoName                               Thu 01 Jan 1970 00:10

                                RESET/COPY CHANNEL PARAMETERS
                                =====

Copy Interface Parameters ? .              Copy Strings ? .
Source Channel: ..                        Source Channels: ..
Destination Channels: .. to ..            Destination Channels: .. to ..

Copy Session Parameters ? .
Source Channel: ..
Destination Channels: .. to ..

Reset ? Y
Channels: 2 to 2

Accept: Y

ctrl<a> - Log Off
ctrl<x> - Main Menu   ctrl<y> - Previous Menu   ctrl<z> - Last Field
-----
SYSTEM MSG: Enter 'Y' to accept this screen, 'N' to reject it
```

5. Within the RESET / COPY CHANNEL PARAMETERS screen;
  - a. Toggle the **Reset** parameter to **Y** and press the **Enter** key.
  - b. In the **Channels** field, enter the range of channels you want to update. For example, 0 to 3.
  - c. Set the Accept field to **Y** and press the **Enter** key.

**Hint**  
You can also use this screen to copy channel session and string parameters from one channel to another.

6. Press the **Ctrl** and **X** keys simultaneously to return to the main menu.
7. In the main menu, select option1, Configuration.  
The CONFIGURATION menu is now displayed.
8. In the CONFIGURATION menu, select option 2, Internet Protocol Configuration  
The INTERNET PROTOCOL CONFIGURATION menu is now displayed.
9. In the INTERNET PROTOCOL CONFIGURATION menu, select option 1, **System Internet Parameters** and press the **Enter** key.  
The INTERNET PARAMETERS screen is now displayed.

```
Node: NoName                               Thu 01 Jan 1970 00:11
                                           INTERNET PARAMETERS
                                           =====
Global RIP Status:      Enabled           Default Gateway:      0.0.0.0

ARP Retries:           1

IP Checksum:           Enabled           IP Options:           Enabled
IP Default TTL:        15               IP Priority Ratio:    24

TCP Checksum:          Enabled           TCP Options:          Enabled
TCP Max Rermt Timeout: 20             TCP Retry Count:      5
TCP Keep Alive Timer:  1               TCP Keep Alive Interval: 1
TCP Keep Alive Count:  2               TCP Set Push Flag:    Disabled

Telnet Protocol Base No: 1000          Transparent Protocol Base No: 2000
Console Protocol Port No: 23

                                           Accept: Y
ctrl<a> - Log Off
ctrl<x> - Main Menu   ctrl<y> - Previous Menu   ctrl<z> - Last Field
-----
SYSTEM MSG: Enter 'Y' to accept this screen, 'N' to reject it
```

10. Within the INTERNET PARAMETERS screen,
  - a. Set the **TCP keep alive timer** field to **1**.
  - b. Set the **Accept** field to **Y** and press the **Enter** key.
11. Press the **Ctrl** and **A** keys simultaneously to log off.

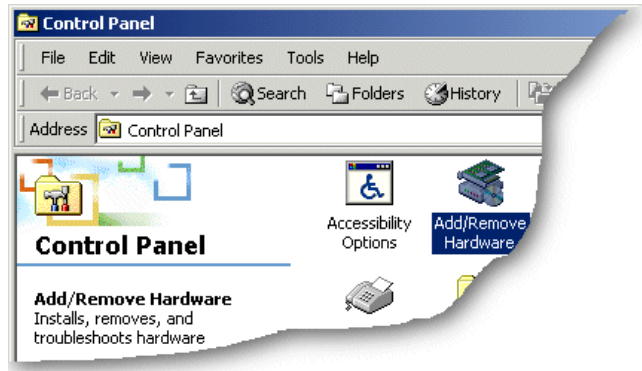
The configuration of terminal server ports is now complete.

## Installing TruePort on your system

---

To install the TruePort software on your system proceed as follows;

1. In the Windows desktop, click on the **Start** button and select **Settings > Control Panel**  
The control panel window is now displayed.



2. In the control panel window, double click on the **System** icon.  
The System Properties tabbed window is now displayed.




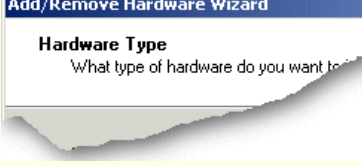


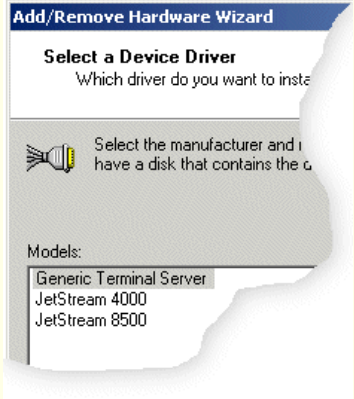

The System Properties tabbed window is now displayed.

3. In the System Properties tabbed window, click on the **Hardware** tab.



4. In the hardware page now displayed, click on the **Hardware Wizard** button.  
The Add/Remove Hardware Wizard is now displayed.
5. Using the instructions given in the next table, use the Add/Remove Hardware Wizard to perform the TruePort software installation.

In this Wizard page	Do the following...
	<ol style="list-style-type: none"> <li>1. In the Add/Remove Hardware Wizard, select <b>Add/Troubleshoot a device</b> and press the <b>Next &gt;</b> button. The Choose a Hardware Device page is now displayed.</li> </ol>
	<ol style="list-style-type: none"> <li>2. In the Choose a Hardware Device page, scroll up the list of devices and click on <b>Add a new device</b>, then click on the <b>Next &gt;</b> button. The <b>Find New Hardware</b> page is now displayed.</li> </ol>
	<ol style="list-style-type: none"> <li>3. In the Find New Hardware page, select <b>No, I want to select the hardware from a list</b> and click on the <b>Next &gt;</b> button. The Hardware Type page is now displayed.</li> </ol>
	<ol style="list-style-type: none"> <li>4. In the <b>Hardware Type</b> page, select <b>Multiport serial adaptors</b> and click on the <b>Next &gt;</b> button.</li> </ol>

In this Wizard page	Do the following...
	<p>The Select a Device Driver page is now displayed.</p> <ol style="list-style-type: none"> <li>In the <b>Select a Device Driver page</b> click on the <b>Have Disk</b> button.</li> </ol> <p>A message window is now displayed which prompts you for the driver and location you want to use.</p> <ol style="list-style-type: none"> <li>In the message window, enter or select the server you want for example, Jetstream 8500. If the required server type is not shown, select the <b>Generic Terminal Server</b> option.</li> </ol> <p>Now click on the <b>OK</b> button to accept settings and close the window.</p> <p>The <b>Select a Device Driver page</b> is now updated to show the new server you have selected.</p> <ol style="list-style-type: none"> <li>In the <b>Select a Device Driver page</b>, select the Terminal server you want , then click on the <b>Next &gt;</b> button.</li> </ol> <p>The Start Hardware Installation page is now displayed.</p>
	<ol style="list-style-type: none"> <li>In the Start Hardware Installation page, click on the <b>Next &gt;</b> button to accept your choice.</li> </ol> <p>If the version of TruePort you are installing has not been tested by Microsoft, a digital signature not found window is now displayed as shown in the next picture.</p>



9. In the Digital Signature Not Found window, click on the **Yes** button to continue. A completion message page is now displayed as shown in the next picture.



10. In the completion message page, click on the **Finish** button to complete the new configuration.

After the you have finished adding cards to the system all connected port devices will now be detected. Windows 2000 will try to install the latest driver for the ports from its database or will prompt you for one if one cannot be found.

## Using TruePort

---

The procedure for using TruePort or depends on the operating system you are using. See the sections listed below for details.

- [Using TruePort under Solaris](#) on page [55](#)
- [Using TruePort under AIX](#) on page [63](#).
- [Using TruePort under Windows 2000](#) on page [69](#)

For information on installing TruePort, see [Installing TruePort](#) on page [17](#).

## Using TruePort under Solaris

---

### General procedure for using TruePort

---

The general procedure for using the TruePort is as follows;

1. Install the TruePort software on your UNIX server. See [Installing TruePort](#) on page 17.
2. If required add logins to any serial ports you require. See [Adding logins to serial ports using Admintool](#) on page 56.
3. If required, remove any terminals from the specified ports on the remote access server (for example, a Perle JETSTREAM). See [Removing terminals using Admintool](#) on page 60.
4. Repeat steps 1. to 3. as needed to manage the terminals on your network.

## Adding logins to serial ports using Admintool

You can add a login on a serial port, using the Solaris admintool. To this proceed as follows;

**Note**

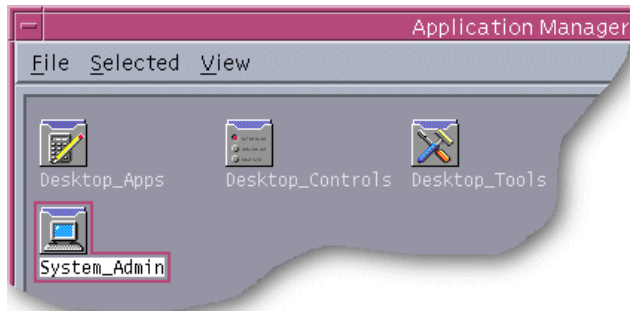
The following example assumes you are using the Sun graphical user interface.

1. In the Solaris desktop, single click on the **Application Manager** toolbar icon shown in the next picture.

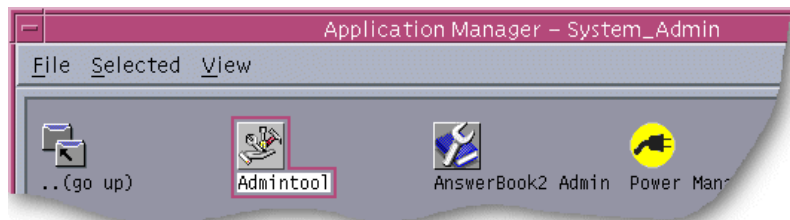
Double click here to start Application Manager.



The Application Manager window is now displayed.

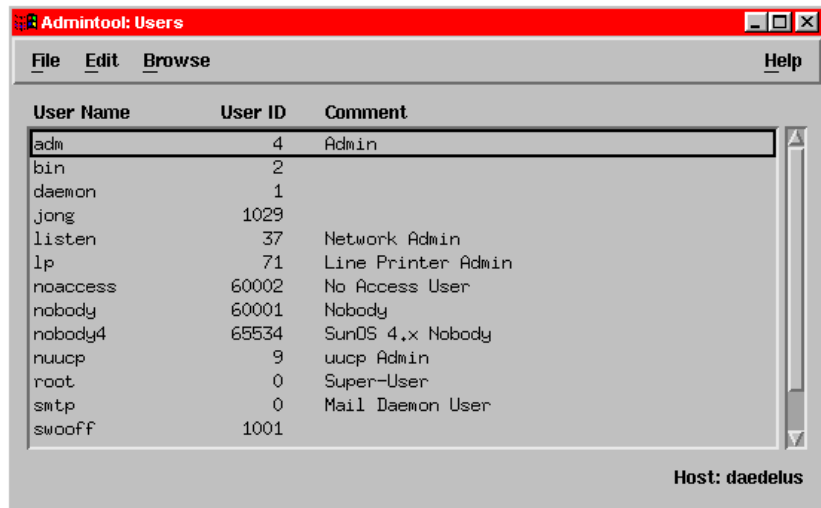


2. In the Application Manager window, double click on the **System\_Admin** folder. The System\_Admin window is now displayed.



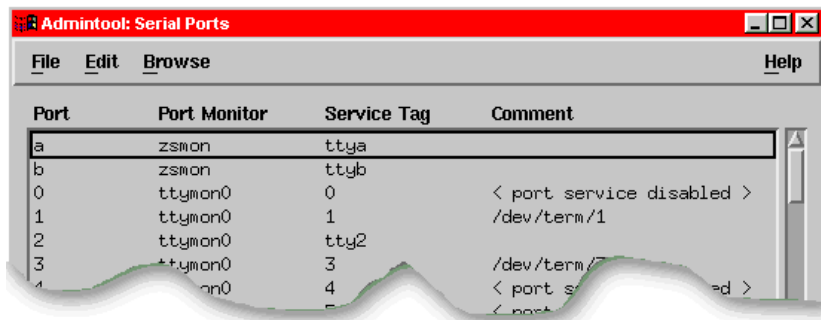
3. In the System\_Admin window, double click on the **Admintool** icon.

The main Admintool window is now displayed as shown in the next picture.



- In the Admintool menu, click on **Browse > Serial Ports**.

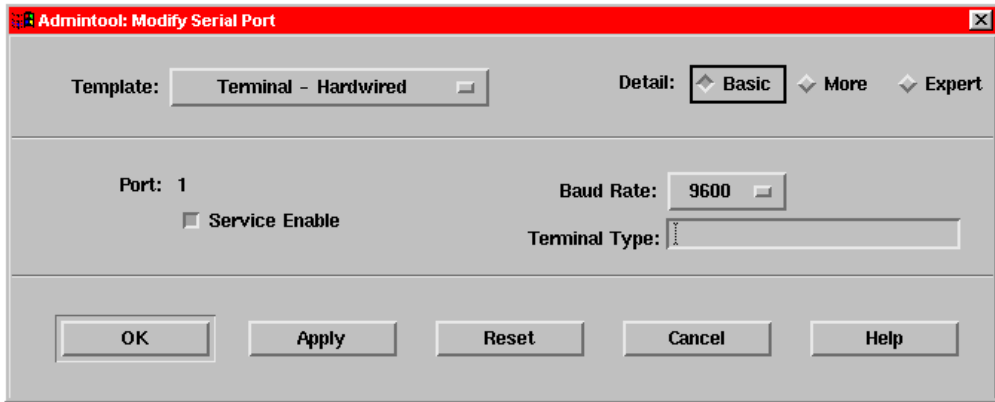
The Serial Ports window is now displayed.



- In the Serial Ports window, double click on the serial port you want to modify. Alternatively, click on the port to highlight it, then in the Serial Ports menu click on **Edit > Modify**.

The Modify Serial Port window is now displayed.

- In the Modify Serial Port window, display basic information only by clicking on the **Basic** button in the **Detail** field.



- In the Modify Serial Port window, click on the **Template** selector and choose the type of device you want to connect to the currently selected serial port. For example, to attach a terminal to the serial port, select **Terminal-Hardwired**.

**Hint**

For details of the parameters in this field click on the help button to invoke the Solaris on-line help about this window.

- In the Modify Serial Port window, click in the **Service Enable** checkbox (displaying a tick) to enable the currently selected serial port.
- In the Modify Serial Port window, click on the **Baud Rate** selector and choose the Baud rate you want. For example, 9600.

**Note:**

Because the system does not support the selection of baud rates above 38.4 kbps, TP has permanently remapped some of the lower baud rates to support higher card speeds (see remapping chart below)

Original Speed (bps)	Is mapped to (Kbps)
50	57.6
110	115.2
134	230.4

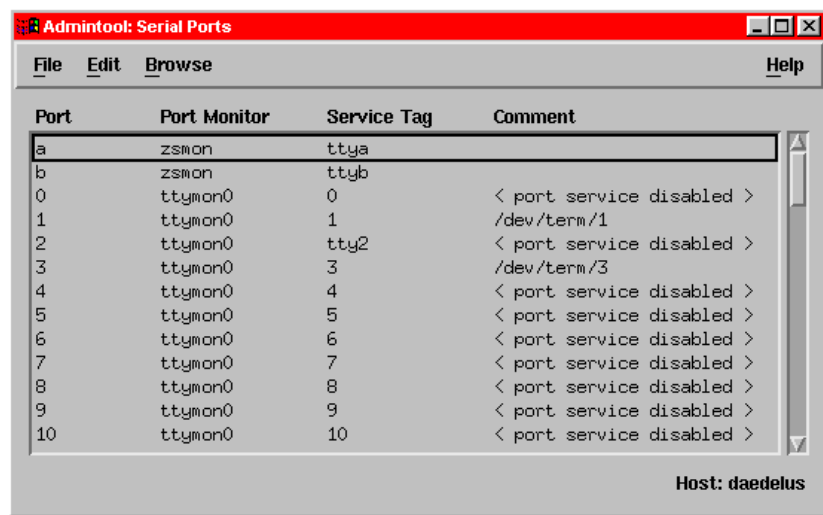
10. In the **Terminal Type** field, enter the terminal type you want.

**Note**

The terminal type you enter must be a valid terminal type as defined by the **termcap** file. See the Solaris user documentation or online help for further details.

11. In the Modify Serial Port window, click on the **OK**

The currently selected serial port now has a terminal session enabled at the specified baud rate, even parity, 7 data bits and 1 stop bit. The Serial Ports window is now updated to show this as shown in the next picture.

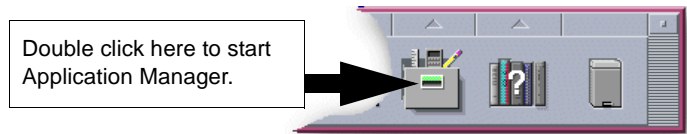


12. Repeat steps 5. to 11. until you have configured all the TruePort serial ports you require.

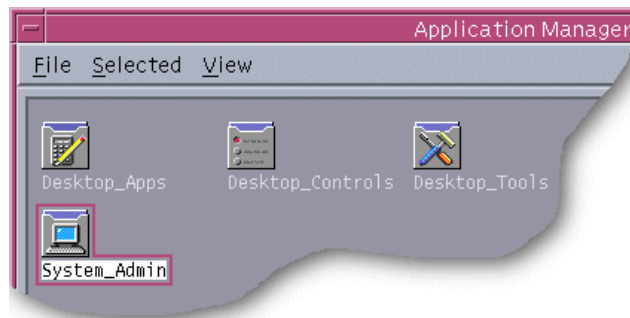
## Removing terminals using Admintool

To remove any TruePort serial ports configured as terminals proceed as follows;

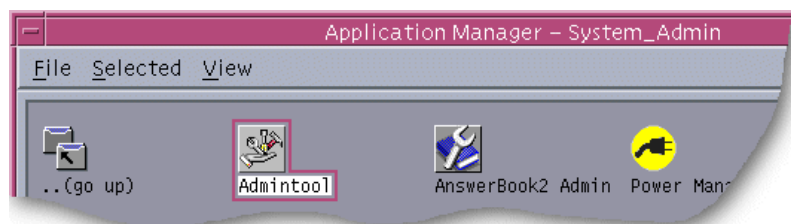
1. In the Solaris desktop, single click on the **Application Manager** toolbar icon shown in the next picture.



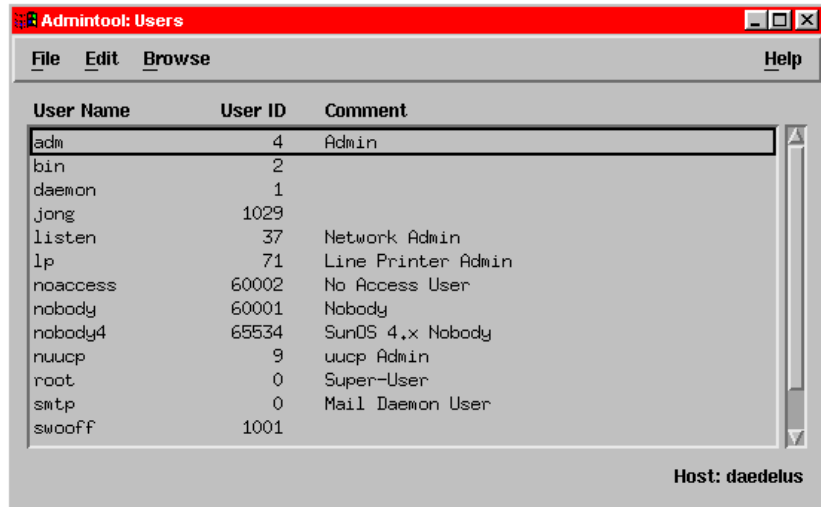
The Application Manager window is now displayed.



2. In the Application Manager window, double click on the **System\_Admin** folder.  
The System\_Admin window is now displayed.

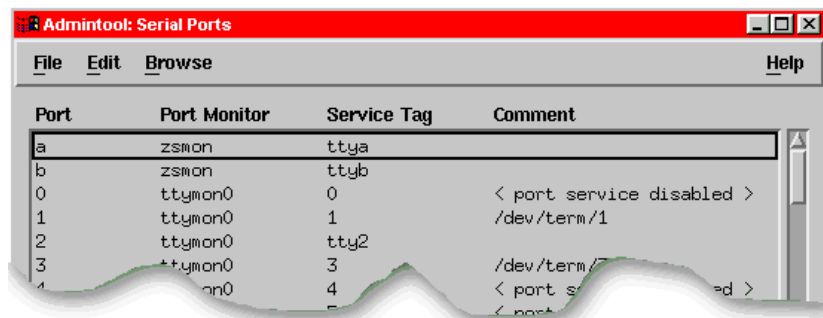


3. In the System\_Admin window, double click on the **Admintool** icon.  
The main Admintool window is now displayed as shown in the next picture.



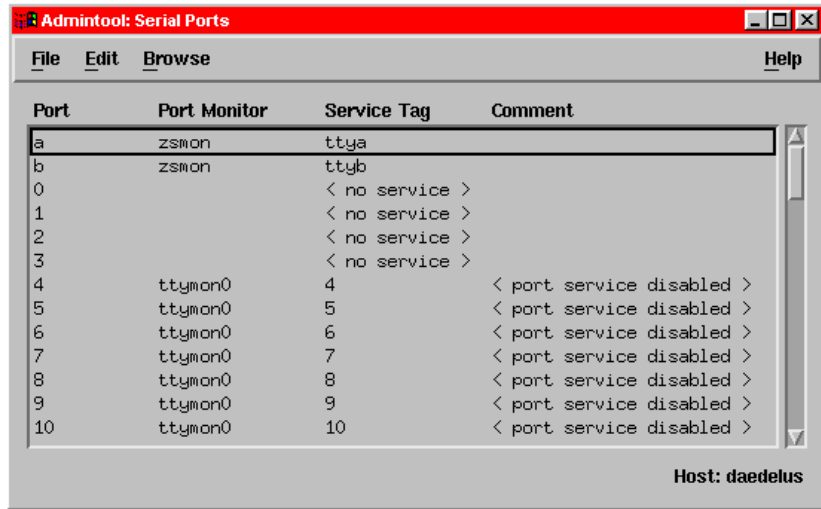
- In the Admintool menu, click on **Browse > Serial Ports**

The Admintool window is now updated to show the serial ports available on the system as shown in the next picture.



- In the Admintool window, single click on the terminal you want to remove to highlight it.
- In the Admintool menu, click on **Edit > Delete**.

The terminal entry for the serial port is now deleted and the Admintool window updated.



7. Repeat steps 5. to 6. until you have removed all the TruePort terminal entries you require.

## Using TruePort under AIX

---

### General procedure for using TruePort

---

The general procedure for using the TruePort is as follows;

1. Install the TruePort software on your UNIX server. See [Installing TruePort under AIX](#) on page [30](#).
2. Add logins to any serial ports you as required. See [Adding logins](#) on page [64](#).
3. If required, remove any terminals from the specified ports on the remote access server (for example, a Perle JETSTREAM). See [Removing terminal servers](#) on page [67](#).
4. Enable or disable any logins as needed using the procedures in [Enabling and disabling logins](#) on page [64](#).

**Hint**

To list all TruePort TTY and printer devices on your system, see [Listing TruePort TTY and printer devices](#) on page [65](#).

To list the terminal servers on your system, see [Listing the terminal servers on your system](#) on page [66](#).

To delete all TruePort devices from your system see [Deleting the TruePort devices on your system](#) on page [68](#).

5. Repeat steps [1.](#) to [4.](#) of this procedure as needed to manage the terminals on your network.

## Adding logins

---

When using TruePort under the AIX operating system, logins are automatically enabled by default when you add a terminal server. See [Configuring your terminal server to use TruePort](#) on page 34.

### Hint

To list all of the TTY's created and their TruePort attributes (terminal server name or address / port number) see [Listing the terminal servers on your system](#) on page 66.

### Note

The AIX serial TTY administration system is built into AIX, the user has no control over the tty names generated. All the ports will be numbered from the next available device number. In general if there are no other defined serial ports in the system, the TTY's will be created starting from **tty0**.

You can generate a list of available TTY's using the smit tty menu. See [Listing the terminal servers on your system](#) on page 66.

## Enabling and disabling logins

---

Once you have created tty ports, you can enable or disable individual tty ports using the standard AIX tty administration smit menus. See your AIX user documentation for details.

## Listing TruePort TTY and printer devices

---

To list all TruePort TTY and printer devices and show which Terminal Server and TCP/IP port they are associated with proceed as follows:

1. At the command prompt, type **# smit -C trueport** and press the **Enter** key.

The Perle TruePort menu is now displayed;

```
Perle TruePort
Move cursor to desired item and press Enter.
List all TruePort TTY and Printer devices
Manage Terminal Servers
Manage TTY Devices
Manage Printer Devices
Delete all TruePort Devices

F1=Help      F2=Refresh   F3=Cancel    F8=Image
F9=Shell     F10=Exit    Enter=Do
```

2. Within the Perle TruePort menu, select **List all TruePort TTY and Printer devices** and press **Enter**.

A screen is now displayed listing all the TruePort TTY and printer devices on your system.

## Listing the terminal servers on your system

---

To list the terminal servers on your system proceed as follows;

1. At the command prompt, type **# smit -C trueport** and press the **Enter** key.

The Perle TruePort menu is now displayed;

```

                                     Perle TruePort
Move cursor to desired item and press Enter.
List all TruePort TTY and Printer devices
Manage Terminal Servers
Manage TTY Devices
Manage Printer Devices
Delete all TruePort Devices

F1=Help          F2=Refresh      F3=Cancel      F8=Image
F9=Shell         F10=Exit       Enter=Do
```

*Adding a terminal server*

2. Within the Perle TruePort menu, select **Manage Terminal servers** and press the **Enter** key.

The Manage Terminal Servers menu screen is now displayed.

### Manage Terminal Servers

Move cursor to desired item and press Enter.

```

List all Terminal Servers
Add Terminal Server
Remove Terminal Server

F1=Help          F2=Refresh      F3=Cancel      F8=I
F9=Shell         F10=Exit       Enter=Do
```

3. Within the Manage Terminal Servers menu, select **List all Terminal Servers** and press the **Enter** key.

A screen showing a list of terminal servers is now displayed.

## Removing terminal servers

---

To remove a terminal server from your system proceed as follows;

1. At the command prompt, type **# smit -C trueport** and press the **Enter** key.

The Perle TruePort menu is now displayed;

```
Perle TruePort
Move cursor to desired item and press Enter.
List all TruePort TTY and Printer devices
Manage Terminal Servers
Manage TTY Devices
Manage Printer Devices
Delete all TruePort Devices

F1=Help      F2=Refresh   F3=Cancel    F8=Image
F9=Shell     F10=Exit     Enter=Do
```

2. Within the Perle TruePort menu, select **Manage Terminal servers** and press **Enter**.

The Manage Terminal Servers menu screen is now displayed.

```
Manage Terminal Servers
Move cursor to desired item and press Enter.
List all Terminal Servers
Add Terminal Server
Remove Terminal Server

F1=Help      F2=Refresh   F3=Cancel    F8=Image
F9=Shell     F10=Exit     Enter=Do
```

3. In the Manage Terminal Servers menu, select **Remove Terminal Server** and press **Enter**.

A screen showing a list of terminal servers is now displayed.

4. Within the list screen select the item you want to remove from the list and press **Enter**.

A popup screen is now displayed asking you to confirm removal.

5. Within the popup, select yes and press the **Enter** key to remove the selected terminal server from the list.

## Deleting the TruePort devices on your system

---

To delete the all ports and terminal servers from your system proceed as follows;

To remove a terminal server from your system proceed as follows;

1. At the command prompt, type **# smit -C trueport** and press the **Enter** key.

The Perle TruePort menu is now displayed;

```

                                Perle TruePort
Move cursor to desired item and press Enter.
List all TruePort TTY and Printer devices
Manage Terminal Servers
Manage TTY Devices
Manage Printer Devices
Delete all TruePort Devices

F1=Help          F2=Refresh      F3=Cancel      F8=Image
F9=Shell         F10=Exit       Enter=Do
```

2. Within the Perle TruePort menu, select **Delete all TruePort Devices** and press the **Enter** key.

A popup screen is now displayed asking you to confirm deletion.

3. Within the popup, select yes and press the **Enter** key.

All TruePort devices are now deleted from your system and a screen showing a list of deleted devices is now displayed.

## Using TruePort under Windows 2000

---

### General procedure for using TruePort

---

The general procedure for using the TruePort is as follows;

1. Install the TruePort software on your server. See [Installing TruePort under Windows 2000](#) on page [39](#).
2. If required add any serial ports you want to your terminal server. See [Adding serial ports](#) on page [70](#).
3. Configure any serial ports you add using the procedure given in [Configuring serial ports](#) on page [73](#).
4. Remove any terminals or devices from your network as required. See [Removing ports or devices](#) on page [76](#).
5. Repeat steps [2](#). to [4](#). as needed to manage the terminals on your network.

## Adding serial ports.

---

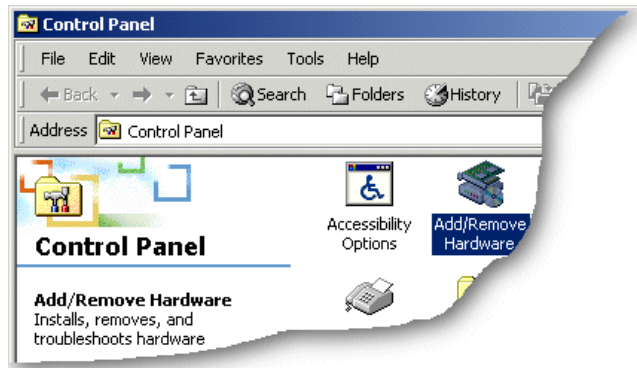
To add ports to a terminal server within the TruePort software under Windows 2000, proceed as follows;

### Note

Under normal conditions, we recommend using the default TruePort settings for each terminal server on your network. If you want to use settings other than the default, use the procedures defined in this section to proceed.

1. In the Windows 2000 desktop, click on the **Start** button and select **Settings > Control Panel**

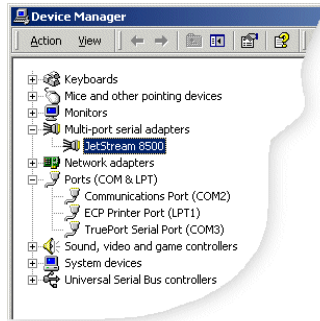
The control panel window is now displayed.



2. In the Control Panel window, click on the **System** icon.  
The System Properties tabbed window is now displayed.
3. In the System Properties window, click on the **Hardware** tab.  
The hardware page is now displayed.

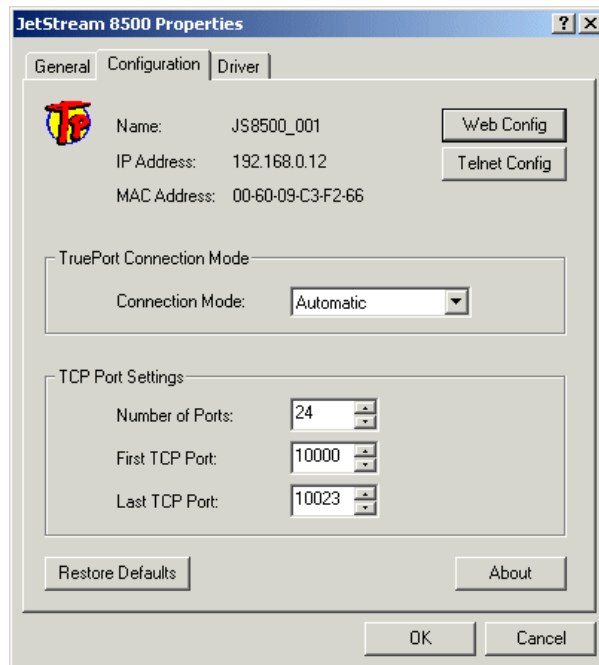
- In the Hardware page, click on the **Device Manager** Button.

The Device Manager window is now displayed showing the terminal server(s) and their associated ports.



- In the Device Manager window, double click on the terminal server to which you want to add ports.

The Properties tabbed window is now displayed.



- Within the **Properties** window, click on the **Configuration** tab. Then in the configuration page now displayed, set the fields and buttons shown in the next table as required;

Item	Description
<b>Web Config</b>	Launches web based configuration software for your server if available (only possible if connection to terminal server has been made).
<b>Telnet Config</b>	Launches telnet software for terminal server if available (only possible if connection to terminal server has been made).
<b>TruePort connection mode</b>	<p>Sets TruePort to either <b>Automatic</b> mode, <b>Full</b> mode or <b>Lite</b> mode.</p> <p><b>Full mode</b> allows complete device control and operates exactly like a directly connected serial port. See <a href="#">Chapter 2 Installing and using TruePort</a>.</p> <p><b>Lite mode</b> is a data only mode and has no device control capabilities. See <a href="#">Chapter 3 Installing and using TruePort Lite</a>.</p> <p>Automatic tries to use <b>Full</b> mode first, otherwise it defaults to <b>Lite</b> mode.</p>
<b>TCP ports settings</b> <b>Number of ports</b>	Selects the number of ports you want to configure as serial ports on the terminal server.
<b>First TCP port</b>	Sets first TCP port address, normally 10,000.
<b>Last TCP port</b>	Sets the last TCP port address. Set to first TCP port plus the number of ports. Note if you set number of ports on first TCP port, last TCP port is set automatically.

7. Within the **Properties** window, click on the Click on **OK** button to save and apply changes.

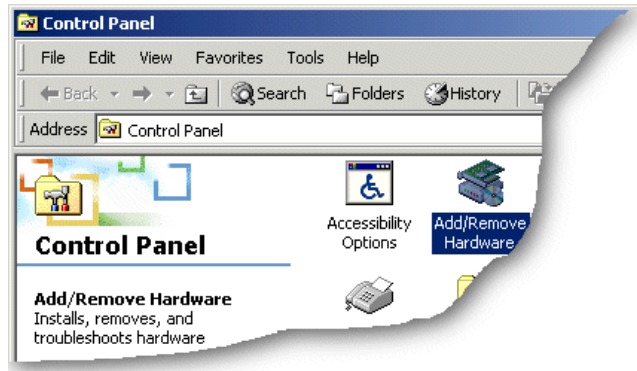
## Configuring serial ports

---

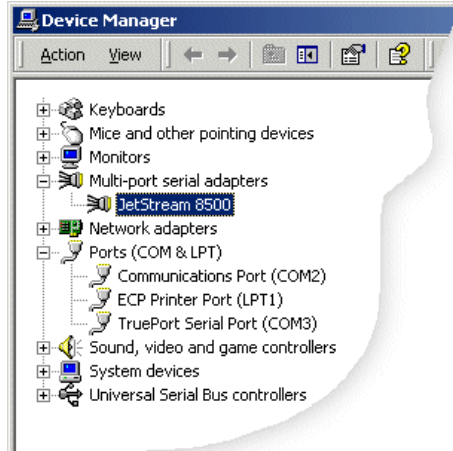
To configure TruePort serial ports under Windows 2000, proceed as follows;

1. In the Windows 2000 desktop, click on the **Start** button and select **Settings > Control Panel**

The control panel window is now displayed.



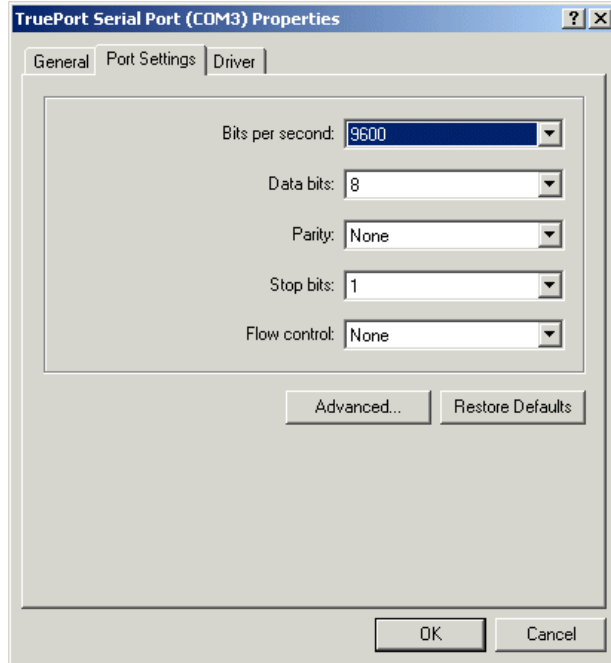
2. In the Control Panel window, click on the **System** icon.  
The System Properties tabbed window is now displayed.
3. In the System Properties window, click on the **Hardware** tab.  
The hardware page is now displayed.
4. In the Hardware page, click on the **Device Manager** Button.  
The Device Manager window is now displayed.



5. In the Device Manager window, click on the **Multiport serial adapters** icon to display the currently installed devices.
6. In the Device Manager window, double click on the serial port whose properties you want to view or change.

The device Properties tabbed window is now displayed.

7. In the device Properties window, click on the **Port Settings** tab to display the Port Settings page.



8. In the Port Settings page, set the **Port Number**, **Baud Rate** and other configuration parameters you require and then click on the **OK** button to save changes and close the window.

**Note**

To change a port name, click on the **Advanced** button, then in the Advanced settings window now displayed select the port name you want.

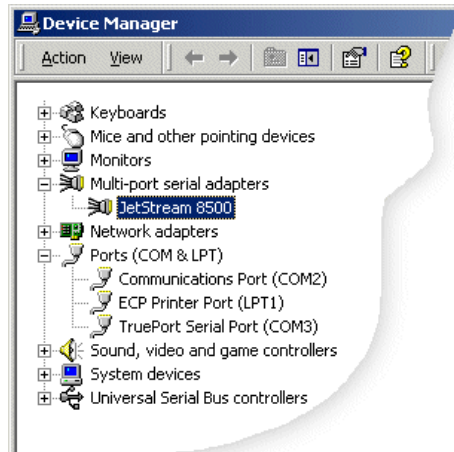
The configuration process is now complete.

## Removing ports or devices

---

To remove serial ports or terminal servers under Windows 2000, proceed as follows;

1. In the Windows 2000 desktop, click on the **Start** button and select **Settings > Control Panel**  
The control panel window is now displayed.
2. In the Control Panel window, click on the **System** icon.  
The System Properties tabbed window is now displayed.
3. In the System Properties window, click on the **Hardware** tab.
4. In the Hardware page now displayed, click on the **Device Manager** Button.  
The Device Manager window is now displayed.



5. Within the Device Manager window, highlight the serial port or terminal server you want to remove and press the **Delete** key.

## Chapter 3 Installing and using TruePort Lite

---

*You need to read this chapter if you want to...*

You need to read this chapter if you want to install or use TruePort Lite to manage terminals on your system.

This chapter provides information on how to install TruePort Lite, add and remove terminals from a terminal server. In addition, it includes information on how to enable a terminal for transparent printing as well as how to start a terminal without re-booting the network server.

This chapter includes the following sections;

- [Installing TruePort Lite](#) on page [78](#)
- [Using TruePort Lite](#) on page [86](#)

**Note**

The procedures in this manual assume you have made any physical hardware connections required. For further information refer to the user documentation supplied with your hardware.

**Note**

To install and use this product under Windows 2000, see [Chapter 2 Installing and using TruePort](#).

To select Lite mode under Windows 2000, see [Adding serial ports](#) on page [70](#) in [Chapter 2 Installing and using TruePort](#).

## Installing TruePort Lite

---

The procedure for installing TruePort Lite depends on the operating system you are using. See the sections listed below for details.

- [Installing TruePort Lite under NCR UNIX](#) on page **79**
- [Installing TruePort Lite under Solaris](#) on page **80**
- [Installing TruePort Lite under SCO OpenServer](#) on page **80**
- [Installing TruePort Lite under AIX](#) on page **81**

For information on using TruePort Lite, see [Using TruePort Lite](#) on page **86**.

Note

To install and use this product under Windows 2000, see [Chapter 2 Installing and using TruePort](#).

To select Lite mode under Windows 2000, see [Adding serial ports](#) on page **70** in [Chapter 2 Installing and using TruePort](#).

## Installing TruePort Lite under NCR UNIX

---

To install TruePort Lite under NCR UNIX, proceed as follows;

1. Log in to the UNIX server as root user.

The UNIX prompt for login is now displayed

2. At the UNIX prompt, copy the supplied TruePort Lite package file **tpncr102.pkg** onto your system into the **/tmp** directory.
3. At the UNIX prompt, type **pkgadd -d /tmp/tpncr102.pkg all**

The installation now creates the TruePort Lite home directory and installs TruePort Lite and the TruePort Administration Tool (for easy editing of the **config.tp** file). In addition the installation adds a port monitor called **trumon**. You can use this monitor to add logins to TruePort ports.

## ***Installing TruePort Lite under Solaris***

---

To install TruePort Lite under Solaris, proceed as follows;

1. Log in to the UNIX server as root user.

The UNIX prompt for login is now displayed

2. At the UNIX prompt, copy the supplied TruePort Lite package file **tpsol110.pkg** onto your system into the **/tmp** directory.
3. At the UNIX prompt, type **pkgadd -d /tmp/tpsol110.pkg all**

The installation now creates the TruePort Lite home directory and installs TruePort Lite and the TruePort Administration Tool (for easy editing of the **config.tp** file).

## ***Installing TruePort Lite under SCO OpenServer***

---

To install TruePort Lite under SCO OpenServer, proceed as follows;

1. Log in to the UNIX server as root user.

The UNIX prompt for login is now displayed

2. At the UNIX prompt, copy the supplied TruePort Lite package file **tpsco100.pkg** onto your system into the **/tmp** directory.
3. At the UNIX prompt, type **pkgadd -d /tmp/tpsco100.pkg all**

The installation now creates the TruePort Lite home directory and installs TruePort Lite and the TruePort Administration Tool (for easy editing of the **config.tp** file).

## Installing TruePort Lite under AIX

---

This section tells you how to install TruePort Lite under the AIX operating system and includes the following;

- [General setup procedure](#) on page [82](#)
- [Installing TruePort Lite on your system](#) on page [82](#)
- [Configuring your terminal server to use TruePort Lite](#) on page [83](#)
- [Listing the terminal servers on your system](#) on page [103](#)
- [Removing terminal servers](#) on page [104](#)
- [Configuring your IOLAN+ terminal server to use TruePort Lite](#) on page [85](#)
- [Adding logins](#) on page [101](#)
- [Enabling and disabling logins](#) on page [101](#)

Once you have completed basic installation you can perform further operations using TruePort Lite. See [Using TruePort Lite under AIX](#) on page [100](#) for details.

### Note

The AIX serial TTY administration system is built into AIX, the user has no control over the tty names generated. All the ports will be numbered from the next available device number. In general if there are no other defined serial ports in the system, the TTY's will be created starting from **tty0**.

You can generate a list of available TTY's using the smit tty menu. See [Listing the terminal servers on your system](#) on page [103](#).

### Note

If you are using TruePort with IOLAN+ terminal servers, the configuration process for TruePort and TruePort Lite is identical.

If you are using TruePort with JETSTREAM terminal servers, then TruePort (full mode) offers additional device control facilities.

## General setup procedure

---

To install and setup the TruePort software on your system, proceed as follows;

1. Install the TruePort onto your system using the procedure described in [Installing TruePort Lite on your system](#) on page 82.
2. Configure your terminal server to use the TruePort software using the procedure described in [Configuring your terminal server to use TruePort Lite](#) on page 83.

**Note**

For IOLAN+ terminal servers see [Configuring your IOLAN+ terminal server to use TruePort Lite](#) on page 85 (For all other types, see [page 83](#)).

You can now use your TruePort software. For details of further options following initial setup and installation, see [Using TruePort Lite under AIX](#) on page 100.

## Installing TruePort Lite on your system

---

To install the TruePort Lite device drivers on your system proceed as follows;

1. login to your system as super user.
2. Copy the supplied installable files onto the filesystem of the host computer, we recommend **/tmp**.

You now need to create a drivers disk, to do this;

3. At the command prompt, copy the TruePort package file to a blank floppy disk by typing **# dd if=/tmp/tpaix300.img of=/dev/fd0 bs=64k** and pressing the **Enter** key.
4. At the command prompt, type **# installp -acX all** and press the **Enter** key to Install the software.

The TruePort Lite administrative files and utilities are now installed in the **/etc/trueport** directory and the device drivers will be loaded.

**Note**

You do not need to reboot at this point.

## Configuring your terminal server to use TruePort Lite

Once you have installed the TruePort Lite device drivers and utilities in the /etc/trueport directory (see [page 82](#)) you need to configure TruePort Lite using the smit configuration utility (for general details of the smit configuration utility refer to your AIX user documentation). To do this proceed as follows;

**Hint**

To list the terminal servers on your system, see [Listing the terminal servers on your system](#) on page 103.

1. At the command prompt, type **# smit -C trueport** and press the **Enter** key.  
The Perle TruePort menu is now displayed:

```

Perle TruePort

Move cursor to desired item and press Enter.

List all TruePort TTY and Printer devices
Manage Terminal Servers
Manage TTY Devices
Manage Printer Devices
Delete all TruePort Devices

F1=Help      F2=Refresh   F3=Cancel   F8=Image
F9=Shell     F10=Exit    Enter=Do

```

*Adding a terminal server*

2. Within the Perle TruePort menu, select **Manage Terminal servers** and press the **Enter** key.

The Manage Terminal Servers menu screen is now displayed.

```

Manage Terminal Servers

Move cursor to desired item and press Enter.

List all Terminal Servers
Add Terminal Server
Remove Terminal Server

F1=Help      F2=Refresh   F3=Cancel   F8=Image
F9=Shell     F10=Exit    Enter=Do

```

3. Within the Manage Terminal Servers menu, select **Add Terminal Server** and press the **Enter** key.

The Add Terminal Server screen is now displayed.

Hint  
You only need to change parameters marked with an \*, leave other parameters at defaults.

### Add Terminal Server

Type or select values in entry fields.  
Press Enter AFTER making all desired changes.

	[Entry Fields]	
* Hostname or IP address	[iolan1]	
* Number of ports	[16]	#
Base TCP/IP port number	[10000]	+#
Keep alive timeout (seconds)	[30]	+#
Enable logins now ?	[Yes]	+
F1=Help	F2=Refresh	F3=Cancel
F5=Reset	F6=Command	F7=Edit
F9=Shell	F10=Exit	Enter=Do
		F4=List
		F8=Image

- Within the Add Terminal Server screen, use the **Entry Fields** to select or enter the values you want for each of the parameters listed in the next table;

Parameter	Action required
<b>Hostname or IP address</b>	Specify the name (or IP address) of the terminal server you wish to add.
<b>Number of ports</b>	Enter the number of ports you require.
<b>Base TCP/IP port number</b>	Enter the starting TCP/IP port number you require for the first port.
<b>Keep alive timeout (seconds)</b>	Selects how often to probe the port to make sure the port is still connected to the network. This is set to 30 by default and normally doesn't need user adjustment.
<b>Enable logins now?</b>	Enable the logins on all ports you have created. Default value YES. If you leave the "Enable logins now?" field as "YES" the port devices will be created and enabled for login.

A block of tty port devices is now added to the AIX system. Once a terminal server has been added you can add further terminal servers, list terminal servers or delete terminal servers.

- Repeat steps 2. to 4. of this procedure until you have added all the terminal servers you require.

## Configuring your IOLAN+ terminal server to use TruePort Lite

To configure an IOLAN+ terminal server for TruePort Lite proceed as follows;

**Note**

This product uses the dedicated virtual circuit mode on the IOLAN serial ports. Please note - this is different to the configuration for IOLAND.

1. Install the IOLAN+ terminal server on your system using the procedures given in the IOLAN+ user documentation.
2. Login to the IOLAN and select **Admin mode** and enter the **PORT SETUP MENU**.

```

PORT SETUP MENU
REMOTE-ADMIN

Hardware      Flow ctrl    Keys
Speed         [9600 ]     Flow ctrl   [XON/XOFF]   Hot   [^]   Intr  [^C]
Parity        [None]     Input Flow  [Enabled ]   Quit  [^@]  Kill  [^U]
Bit           [8]        Output Flow [Enabled ]   Del   [^@]  Sess  [^@]
Stop          [1 ]
Break         [Disabled] IP Addresses
Monitor DSR   [No ]     Src   [   ]   Mask  [   ]
Monitor DCD   [No ]     Dst   [   ]

User          Options      Access
Name [   ]   Keepalive   [No ]   Access   [Remote ]
Terminal type [vt100 ] Rlogin/Telnet [Telnet] Authentication [None ]
TERM [   ]   Debug options [No ]   Mode      [Raw ]
Video pages   [0]        Map CR to CR LF [No ]   Connection [None ]
CLI/Menu     [Menu]     Hex data      [No ]   Host      [   ]
Reset Term   [No ]     Secure        [No ]   Remote Port [0 ]
             MDTD      [No ]   Local Port [10004]
    
```

3. Within the IOLAN+ **PORT SETUP MENU**, set the **Hardware** configuration parameters as required for example, baud rate, parity and so on. Then set the **Access** parameters as detailed in the next table;

**Note**

Each IOLAN port is configured to use a unique remote TCP port in the range 10001-10024.

Access parameter	Set to...	Access parameter	Set to...
<b>Access</b>	Remote	<b>Connection</b>	None
<b>Authentication</b>	None	<b>Host</b>	Not used
<b>Mode</b>	Raw	<b>Local Port</b>	10001 (10001 for the first port, 10002 for the second and so on).

You can now perform system management tasks using TruePort as required. See [Installing TruePort Lite under AIX](#) on page 81 and [Using TruePort Lite under AIX](#) on page 100.

## Using TruePort Lite

---

The procedure for using TruePort Lite depends on the operating system you are using. See the sections listed below for details.

- [Using TruePort Lite under NCR UNIX, Solaris and SCO OpenServer](#) on page **87**
- [Using TruePort Lite under AIX](#) on page **100**

For information on installing TruePort Lite, see [Installing TruePort Lite](#) on page **78**.

Note

To install and use this product under Windows 2000, see [Chapter 2 Installing and using TruePort](#).

To select Lite mode under Windows 2000, see [Adding serial ports](#) on page **70** in [Chapter 2 Installing and using TruePort](#).

## *Using TruePort Lite under NCR UNIX, Solaris and SCO OpenServer*

---

This section tells you how to use TruePort Lite and includes the following;

- [General procedure for using TruePort Lite](#) on page **88**
- [Configuring your terminal server to use TruePort Lite](#) on page **89**
- [Configuring your LINKSTREAM terminal server to use TruePort Lite](#) on page **91**
- [Adding ports to the config.tp file](#) on page **97**
- [Enabling ports for transparent printing](#) on page **98**
- [Deleting ports](#) on page **98**
- [Starting a port without re-booting the UNIX server](#) on page **99**.

## General procedure for using TruePort Lite

---

The general procedure for using the TruePort is as follows;

1. Install the TruePort software on your UNIX server. See [Installing TruePort Lite](#) on page [78](#).
2. Configure your terminal for the TruePort Lite service.

**Note**

For LINKSTREAM terminal servers see [Configuring your terminal server to use TruePort Lite](#) on page [89](#). For all other types, see [Configuring your LINKSTREAM terminal server to use TruePort Lite](#) on page [91](#).

3. Add the ports you want to use. See [Adding ports to the config.tp file](#) on page [97](#).
4. If required, enable transparent printing on the terminals of your choice. See [Enabling ports for transparent printing](#) on page [98](#).
5. If required delete the specified ports on the remote access server (for example, a Perle JETSTREAM). See [Deleting ports](#) on page [98](#).
6. Repeat steps [1.](#) to [5.](#) as needed to manage the ports on your network.

**Note**

For details of the command syntax used in this chapter see [TruePort Administration Tool \(tpadm\) commands](#) on page [112](#) in [Chapter 4 Quick reference](#).

## Configuring your terminal server to use TruePort Lite

---

Before your system can use the TruePort Lite software you have installed, you need to configure your terminal server (for example, a Perle JETSTREAM 8500).

**Note**

All versions of the JETSTREAM 8500, 4000 and LANSTREAM 2000 software support TruePort Lite operation. However, the JETSTREAM 6x series software version must be 4.03 or greater.

To configure your terminal server to use TruePort Lite proceed as shown in the following example. The example shows you how to configure a JETSTREAM 8500 (called **testjs2** in this instance) to use TruePort Lite software on a host server (called **sunserver**);

1. At the command prompt, type **\$ telnet testjs2** and press the **Enter** key.

The following messages are now displayed

**Trying...**

**Connected to testjs2.perle.com.**

**Escape character is '^']**.

**Telnet connect to JETSTREAM testjs2**

**Perle JETSTREAM 8500  
version 2.2.7**

**Login:**

2. At the **Login** prompt, type **admin** and press the **Enter** key.

The following prompt is now displayed;

**Password:**

3. At the **Password** prompt, enter your password and press the **Enter** key.

**Note**

The next stage is illustrated using an example which shows how to configure 4 ports on a JETSTREAM 8500 terminal server. This will set the ports 1 to 4 to connect to the host sunserver without user intervention.

4. Add the host you want to the terminal server using the add host command as shown in the following example;
  - a. At the command prompt, type the following;
  - b. add host sunserver 192.152.247.61**
  - c. Press the **Enter** key.

*Configuring the terminal server ports*

You can now Configure the terminal server ports.

5. At the command prompt, do the following:
  - a. Type **set line 1 service silent raw sunserver 10000** and press the **Enter** key.
  - b. Type **set line 2 service silent raw sunserver 10001** and press the **Enter** key.
  - c. Type **set line 3 service silent raw sunserver 10002** and press the **Enter** key.
  - d. Type **set line 4 service silent raw sunserver 10003** and press the **Enter** key.
6. At the command prompt, type **save** and press the **Enter** key.
7. At the command prompt, type **logout** and press the **Enter** key.

The following message is now displayed

**Connection closed by foreign host.**

The configuration of terminal server ports is now complete.

## Configuring your LINKSTREAM terminal server to use TruePort Lite

---

Before your system can use the TruePort Lite software you have installed, you need to configure your terminal server (for example, a Perle LINKSTREAM).

To configure your terminal server to use TruePort Lite proceed as shown in the following example. The example shows you how to configure a LINKSTREAM (called **testls2** in this instance) to use TruePort software on a host server;

1. At the command prompt, type **\$ telnet testls2** and press the **Enter** key.  
A series of messages are now displayed ending with a the prompts shown in the next picture.

**User Identity:**

**Password:**

2. At the **User Identity** prompt, type **Manager** and press the **Enter** key.
3. At the **Password** prompt, enter your password and press the **Enter** key.

Note

The default password is “.....”.

The Main Menu is now displayed.

```
Node: NoName                               Thu 01 Jan 1970 00:03

                                     Main Menu
                                     =====

1. Configuration
2. Statistics

Select Screen: █

ctrl<a> - Log Off
-----
SYSTEM MSG: Enter option number
```

4. In the Main Menu use the **Select Screen** field to select option **1, Configuration** and press the **Enter** key.

The CONFIGURATION menu is now displayed.

- In the CONFIGURATION menu, select option **5, Channel Configuration**.

The CHANNEL CONFIGURATION menu is now displayed.

- In the CHANNEL CONFIGURATION menu, select option **2, Channel Session Parameters**.

The CONFIGURE SESSION PARAMETERS screen is now displayed.

```

Node: NoName                                     Thu 01 Jan 1970 00:08

                                CONFIGURE SESSION PARAMETERS
Channel Nr: 2                                ===== Telnet Transparent

Internet Address: 192.65.146.100   Protocol Port Numbers: 1002 2002

Access: PVC-Master      Session Mode: Transparent      Default Port: 23

Maximum Sessions: 1      Idle Timeout: 0      TCP Window Size: 1024

AutoCall Destination: 192.65.144.23 10000
Preferred Destination: None

Data Transfer Mode Parameters:
  Terminal Type           : unknown
  Session Echo Mode      : Telnet Remote

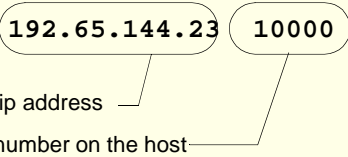
                                Accept: █
ctrl<a> - Log Off
ctrl<x> - Main Menu      ctrl<y> - Previous Menu      ctrl<z> - Last Field
-----
SYSTEM MSG: Enter 'Y' to accept this screen, 'N' to reject it

```

- In the CONFIGURE SESSION PARAMETERS screen, select the channel you want to set up and press the **Enter** key.

The CONFIGURE SESSION PARAMETERS screen is now updated with the current settings for the selected channel.

- Within the CONFIGURE SESSION PARAMETERS screen, set the parameters shown in the next table.

Parameter	Set to ...
<b>Access</b>	PVC-Master
<b>Session mode</b>	Transparent
<b>Maximum sessions</b>	1
<b>AutoCall Destination</b>	<div style="text-align: center;">  </div> <p>Host ip address</p> <p>Port number on the host</p> <p>Note that the port number of the host should be unique for each port. Use the range from 10000 upwards.</p>

**Hint**

Use the **up arrow**, **down arrow**, **left** and **right** arrow keys to move the cursor around the screen.

To change the settings for a field, highlight the current value, then hold down the **shift** key and use the **<** and **>** keys to toggle the field to the value you require.

- At the **Accept** prompt, type **Y** and press the **Enter** key to accept the values you have entered.

The CONFIGURE SESSION PARAMETERS screen is now updated.

- In the CONFIGURE SESSION PARAMETERS screen, press the **Ctrl** and **Y** keys simultaneously to return to the **CHANNEL CONFIGURATION** menu.

- In the CHANNEL CONFIGURATION menu, select option **3 Channel Strings Configuration**.

The CHANNEL STRINGS CONFIGURATION screen is now displayed.

```
Node: NoName                               Thu 01 Jan 1970 00:09

                                CHANNEL STRINGS CONFIGURATION      String Space: 1854
                                =====
Channel Nr.: 2                               Channel Name: CHAN_02

Welcome String                               Status: User Defined
                                             Text: None
Command Line Prompt                          Status: User Defined
                                             Text: none

Active Session Messages                      Status: Disabled           Errors: Enabled
      Connect: None
      Disconnect: None
Passive Session Messages                    Status: Disabled
      Connect: None
      Disconnect: None

Accept: Y

ctrl<a> - Log Off
ctrl<x> - Main Menu   ctrl<y> - Previous Menu   ctrl<z> - Last Field
-----
SYSTEM MSG: Enter 'Y' to accept this screen, 'N' to reject it
```

12. In the CHANNEL STRINGS CONFIGURATION screen, set the **Channel Nr** field to the channel number you are working on and press the **Enter** key.

The CHANNEL STRINGS CONFIGURATION screen is now updated to show the values for the selected channel.

13. In the CHANNEL STRINGS CONFIGURATION screen, toggle the parameters detailed in the next table to the values indicated.

Parameter	Set to...
Welcome string Status	User defined
Welcome string Text	None
Command Line Prompt Status	User defined
Command Line Prompt Text	None
Active Session Messages Status	Disabled
Passive Session messages Status	Disabled

**Hint**

Use the **up**, **down**, **left** and **right** arrow keys to move the cursor around the screen. To change the settings for a field, highlight the current value, then hold down the **shift** key and use the **<** and **>** keys to toggle the field to the value you require.

14. In the Accept field, type **Y** and press the **Enter** key to accept your changes.
15. Repeat steps **12.** to **14.** of this procedure for each channel you want to set up.

**Note**

The port number of the host should be unique for each port.

16. In the CONFIGURE SESSION PARAMETERS screen, press the **Ctrl** and **Y** keys simultaneously to return to the **CHANNEL CONFIGURATION** menu.

**Note**

If your system is fitted with a **Wyse 60** terminal you need to do the following;

1. In the CONFIGURATION MENU select option 5, **Channel Configuration** to display the CHANNEL CONFIGURATION MENU.
2. In the CHANNEL CONFIGURATION MENU, select option 1, **Channel Interface parameters** to display the CHANNEL INTERFACE PARAMETERS window.
3. In the CHANNEL INTERFACE PARAMETERS window,
  - a. Select the **Channel Nr** (channel number) you want and then set the **DCD Control** parameter to **High**.
  - b. Set accept to **Y** and press the **Enter** key to accept your changes.
  - c. Press the **CTRL** and **Y** keys simultaneously to return to the CHANNEL CONFIGURATION MENU.
4. In the CHANNEL CONFIGURATION MENU, select option 4, **Reset / Copy Channel Parameters** and press the **Enter** key.

The RESET / COPY CHANNEL PARAMETERS screen is now displayed as shown in the next picture.

```

Node: NoName                               Thu 01 Jan 1970 00:10

                                RESET/COPY CHANNEL PARAMETERS
                                =====

Copy Interface Parameters ? .              Copy Strings ? .
Source Channel: ..                        Source Channels: ..
Destination Channels: .. to ..            Destination Channels: .. to ..

Copy Session Parameters ? .
Source Channel: ..
Destination Channels: .. to ..

Reset ? Y
Channels: 2 to 2

Accept: Y

ctrl<a> - Log Off
ctrl<x> - Main Menu      ctrl<y> - Previous Menu      ctrl<z> - Last Field
-----
SYSTEM MSG: Enter 'Y' to accept this screen, 'N' to reject it

```

5. Within the RESET / COPY CHANNEL PARAMETERS screen;
  - a. Toggle the **Reset** parameter to **Y** and press the **Enter** key.
  - b. In the **Channels** field, enter the range of channels you want to update. For example, 0 to 3.
  - c. Set the Accept field to **Y** and press the **Enter** key.

**Hint**

You can also use this screen to copy channel session and string parameters from one channel to another.

6. Press the **Ctrl** and **X** keys simultaneously to return to the main menu.
7. In the main menu, select option1, Configuration.  
The CONFIGURATION menu is now displayed.
8. In the CONFIGURATION menu, select option 2, Internet Protocol Configuration  
The INTERNET PROTOCOL CONFIGURATION menu is now displayed.
9. In the INTERNET PROTOCOL CONFIGURATION menu, select option 1, **System Internet Parameters** and press the **Enter** key.  
The INTERNET PARAMETERS screen is now displayed.

```

Node: NoName                                     Thu 01 Jan 1970 00:11
                                           INTERNET PARAMETERS
                                           =====
Global RIP Status:      Enabled           Default Gateway:      0.0.0.0

ARP Retries:           1

IP Checksum:           Enabled           IP Options:           Enabled
IP Default TTL:        15               IP Priority Ratio:    24

TCP Checksum:          Enabled           TCP Options:          Enabled
TCP Max Rmxmt Timeout: 20               TCP Retry Count:     5
TCP Keep Alive Timer:  1                 TCP Keep Alive Interval: 1
TCP Keep Alive Count:  2                 TCP Set Push Flag:   Disabled

Telnet Protocol Base No: 1000           Transparent Protocol Base No: 2000
Console Protocol Port No: 23

                                           Accept: Y
ctrl<a> - Log Off
ctrl<x> - Main Menu   ctrl<y> - Previous Menu   ctrl<z> - Last Field
-----
SYSTEM MSG: Enter 'Y' to accept this screen, 'N' to reject it

```

10. Within the INTERNET PARAMETERS screen,
  - a. Set the **TCP keep alive timer** field to **1**.
  - b. Set the **Accept** field to **Y** and press the **Enter** key.
11. Press the **Ctrl** and **A** keys simultaneously to log off.

The configuration of terminal server ports is now complete.

### *Adding ports to the config.tp file*

---

To add a terminal to a specified port on the remote access server (for example, a Perle JETSTREAM) proceed as follows;

1. At the unix prompt, type **tpadm -a "portnumber" -p "ttyname"** and press the **Enter** key.  
Where "portnumber" is the TCP/IP port number configured for the port on the remote access server and "ttyname" is the TTY name for the port.
2. Repeat step **1.** until you have added all the terminals you want.
3. At the UNIX prompt, start the terminal you have added by typing **tpadm -s "portnumber"**  
Where "portnumber" is the TCP/IP port number configured for the port on the remote access server.

You can now use the terminals you have added.

## Enabling ports for transparent printing

---

To add a terminal to a specified port on the remote access server with transparent printing enabled, proceed as follows;

### Syntax

1. At the unix prompt, type **tpadm -a** "portnumber" **-p** "ttyname" **-t** "termtype" and press the **Enter** key.

Where "portnumber" is the TCP/IP port number configured for the port on the terminal server, "ttyname" is the TTY name for the port and "termtype" is a terminal type listed in the file "printcap.tp".

#### Note

To specify a printer port name using this command, you append the letter "p" to the device name.

For example, if your main tty name is;

**/dev/ttyX0**

then the transparent print port will be;

**/dev/ttyX0p**

2. Repeat step 1. until you have enabled all the terminals you want for transparent printing.
3. At the UNIX prompt, start the terminal you have added by typing **tpadm -s** "portnumber"

Where "portnumber" is the TCP/IP port number configured for the port on the remote access server.

You can now print directly from the auxiliary port of the terminal you have added.

## Deleting ports

---

To Remove a terminal from a specified port on the remote access server (for example, a Perle JETSTREAM) proceed as follows:

- At the unix prompt, type **tpadm -d** "portnumber" and press the **Enter** key.

Where "portnumber" is the TCP/IP port number configured for the port on the terminal server. We recommend that you use the range 10000+.

The selected terminal has now been removed from the configuration file.

#### Note

The TruePort software for this port continues to run until the next system re-boot. You can stop the software immediately by finding the PID of the TruePort daemon for this port and using the **kill PID** command.

Do not stop the software using the **kill -9** command as this prevents the software from doing a tidy up before it exits.

## Starting a port without re-booting the UNIX server

---

To start a terminal (which uses a specified TruePort daemon entry) proceed as follows;

- At the UNIX prompt, type **tpadm -s** "portnumber"  
Where "portnumber" is the TCP/IP port number configured for the port on the remote access server.

## Using TruePort Lite under AIX

---

### General procedure for using TruePort Lite

---

The general procedure for using the TruePort Lite is as follows:

1. Install the TruePort Lite software on your UNIX server. See [Installing TruePort Lite under AIX](#) on page [81](#).
2. Add logins to any serial ports you as required. See [Adding logins](#) on page [101](#).
3. If required, remove any terminals from the specified ports on the remote access server (for example, a Perle JETSTREAM). See [Removing terminal servers](#) on page [104](#).
4. Enable or disable any logins as needed using the procedures in [Enabling and disabling logins](#) on page [101](#).

**Hint**

To list all TruePort TTY and printer devices on your system, see [Listing TruePort TTY and printer devices](#) on page [102](#).

To list the terminal servers on your system, see [Listing the terminal servers on your system](#) on page [103](#).

To delete all TruePort devices from your system see [Deleting the TruePort devices on your system](#) on page [105](#).

5. Repeat steps [1.](#) to [4.](#) of this procedure as needed to manage the terminals on your network.

## Adding logins

---

When using TruePort Lite under the AIX operating system, logins are automatically enabled by default when you add a terminal server. See [Configuring your terminal server to use TruePort Lite](#) on page 83.

### Hint

To list all of the TTY's created and their TruePort attributes (terminal server name or address / port number) see [Listing the terminal servers on your system](#) on page 103.

### Note

The AIX serial TTY administration system is built into AIX, the user has no control over the tty names generated. All the ports will be numbered from the next available device number. In general if there are no other defined serial ports in the system, the TTY's will be created starting from **tty0**.

You can generate a list of available TTY's using the smit tty menu. See [Listing the terminal servers on your system](#) on page 103.

## Enabling and disabling logins

---

Once you have created tty ports, you can enable or disable individual tty ports using the standard AIX tty administration smit menus. See your AIX user documentation for details.

## Listing TruePort TTY and printer devices

---

To list all TruePort TTY and printer devices and show which Terminal Server and TCP/IP port they are associated with proceed as follows:

1. At the command prompt, type **# smit -C trueport** and press the **Enter** key.

The Perle TruePort menu is now displayed;

```
Perle TruePort
Move cursor to desired item and press Enter.
List all TruePort TTY and Printer devices
Manage Terminal Servers
Manage TTY Devices
Manage Printer Devices
Delete all TruePort Devices

F1=Help      F2=Refresh   F3=Cancel    F8=Image
F9=Shell     F10=Exit    Enter=Do
```

2. Within the Perle TruePort menu, select **List all TruePort TTY and Printer devices** and press **Enter**.

A screen is now displayed listing all the TruePort TTY and printer devices on your system.

## Listing the terminal servers on your system

---

To list the terminal servers on your system proceed as follows;

1. At the command prompt, type **# smit -C trueport** and press the **Enter** key.

The Perle TruePort menu is now displayed;

```
Perle TruePort
Move cursor to desired item and press Enter.
List all TruePort TTY and Printer devices
Manage Terminal Servers
Manage TTY Devices
Manage Printer Devices
Delete all TruePort Devices

F1=Help      F2=Refresh   F3=Cancel    F8=Image
F9=Shell     F10=Exit    Enter=Do
```

*Adding a terminal server*

2. Within the Perle TruePort menu, select **Manage Terminal servers** and press the **Enter** key.

The Manage Terminal Servers menu screen is now displayed.

```
Manage Terminal Servers
Move cursor to desired item and press Enter.
List all Terminal Servers
Add Terminal Server
Remove Terminal Server

F1=Help      F2=Refresh   F3=Cancel    F8=Image
F9=Shell     F10=Exit    Enter=Do
```

3. Within the Manage Terminal Servers menu, select **List all Terminal Servers** and press the **Enter** key.

A screen showing a list of terminal servers is now displayed.

## Removing terminal servers

---

To remove a terminal server from your system proceed as follows;

1. At the command prompt, type **# smit -C trueport** and press the **Enter** key.

The Perle TruePort menu is now displayed;

```

                                     Perle TruePort
Move cursor to desired item and press Enter.
List all TruePort TTY and Printer devices
Manage Terminal Servers
Manage TTY Devices
Manage Printer Devices
Delete all TruePort Devices

F1=Help          F2=Refresh      F3=Cancel      F8=Image
F9=Shell         F10=Exit       Enter=Do
```

2. Within the Perle TruePort menu, select **Manage Terminal servers** and press **Enter**.

The Manage Terminal Servers menu screen is now displayed.

```

                                     Manage Terminal Servers
Move cursor to desired item and press Enter.
List all Terminal Servers
Add Terminal Server
Remove Terminal Server

F1=Help          F2=Refresh      F3=Cancel      F8=Image
F9=Shell         F10=Exit       Enter=Do
```

3. Within the Manage Terminal Servers menu, select **Remove Terminal Server** and press the **Enter** key.

A screen showing a list of terminal servers is now displayed.

4. Within the list screen select the item you want to remove from the list and press the **Enter** key.

A popup screen is now displayed asking you to confirm removal.

5. Within the popup select yes and press the Enter key.

The selected terminal server is now removed from the list.

## Deleting the TruePort devices on your system

---

To delete the all ports and terminal servers from your system proceed as follows;

To remove a terminal server from your system proceed as follows;

1. At the command prompt, type **# smit -C trueport** and press the **Enter** key.

The Perle TruePort menu is now displayed;

```
Perle TruePort
Move cursor to desired item and press Enter.
List all TruePort TTY and Printer devices
Manage Terminal Servers
Manage TTY Devices
Manage Printer Devices
Delete all TruePort Devices

F1=Help      F2=Refresh   F3=Cancel    F8=Image
F9=Shell     F10=Exit    Enter=Do
```

2. Within the Perle TruePort menu, select **Delete all TruePort Devices** and press the **Enter** key.  
A popup screen is now displayed asking you to confirm deletion.
3. Within the popup, select yes and press the **Enter** key.

All TruePort devices are now deleted from your system and a screen showing a list of deleted devices is now displayed.

## Chapter 4 Quick reference

---

*You need to read this chapter if you want to...*

You need to read this chapter if you want information about the command menus under AIX, the command syntax for the config.tp file and TruePort Administration Tool.

This chapter provides a quick guide to the command menus under AIX, the config.tp file and TruePort Administration command syntax.

This chapter includes the following sections;

**Note**

When using TruePort or TruePort Lite under AIX you can only use the menus detailed on [page 107](#).

- [AIX command menus](#) on page [107](#)
- [addports script \(TruePort only\)](#) on page [110](#)
- [config.tp file syntax](#) on page [111](#)
- [TruePort Administration Tool \(tpadm\) commands](#) on page [112](#)

**Note**

Unless otherwise indicated the information in the chapter applies to both TruePort and TruePort Lite modes.

## AIX command menus

---

This section provides a quick guide to the smitt configuration utility menus used by TruePort and TruePort Lite under the AIX operating system and includes the following;

- [Perle TruePort menu screen](#) on page **108**
- [Perle TruePort menu map](#) on page **108**

**Note**

Details of the generic AIX menus are beyond the scope of this manual and are not included. See your AIX user documentation for further details.

## Perle TruePort menu screen

```

Perle TruePort

Move cursor to desired item and press Enter.

List all TruePort TTY and Printer devices
Manage Terminal Servers
Manage TTY Devices
Manage Printer Devices
Delete all TruePort Devices

F1=Help      F2=Refresh   F3=Cancel   F8=Image
F9=Shell     F10=Exit    Enter=Do
    
```

## Perle TruePort menu map

The Perle TruePort menus within the smitt configuration utility allow you to perform various port management tasks with your system. These are outlined in the next table.

Menu option		Description
<b>List all TruePort TTY and Printer devices</b>		Lists all TruePort TTY and printer devices and shows which Terminal Server and TCP/IP port they are associated with.  See <a href="#">page 65</a>
<b>Manage Terminal servers &gt;</b>	<b>List all Terminal Servers</b>	Allows you to list all terminal servers present on your system.  See <a href="#">page 66</a>
	<b>Add Terminal Server</b>	Allows you to add a terminal server to your system.  See <a href="#">page 34</a>
	<b>Remove Terminal Server</b>	Allows you to remove a terminal server from your system.  See <a href="#">page 67</a>

Menu option	Description
<b>Manage TTY Devices</b>	Displays the generic AIX TTY administration menu. See your AIX user documentation for details.
<b>Manage Printer Devices</b>	Displays the generic AIX printer administration menus. See AIX manual for details.
<b>Delete all TruePort Devices</b>	Deletes all TruePort devices on your system.  See <a href="#">page 68</a> .

## ***addports script (TruePort only)***

---

The **addports** script allows you to add a range of ports to the **config.tp** file and run them without having to use the **tpdadm** utility. You can invoke **addports** after system installation. The commands and syntax for the **addports** tool are listed below.

For details of the **tpadm** utility, see [TruePort Administration Tool \(tpadm\) commands](#) on page [112](#).

### ***addports m n***

---

#### *Function*

---

Invokes the TruePort Administration tool **tpadm** to add entries to the **config.tp** file and once added, run them.

#### *Syntax*

---

**addports m n**

Where;

**m** is the first port device/device/terminal to add starting at 0.

**n** is the last port device/device/terminal to add.

#### *Example*

---

**addports 0 15**

This example adds ports 0 to 15 to the **config.tp** file and also runs them.

## config.tp file syntax

**Note**

If you use **addports** to enable TruePort you do not need to use the **tpadm** utility. See [addports script \(TruePort only\)](#) on page 110.

The line in a typical **config.tp** configuration file used to control a terminal looks like this;

```
tpd -tty /dev/term/X0 -port 1000 -aux /dev/term/X1p -term wy6 -ka 30 -trace 3
```

The command syntax of the **config.tp** configuration file is described in the next table.

Command	Example	Description
<b>-tty</b> "ttyname"	<b>-tty /dev/term/X0</b> or <b>-tty /dev/ttyX0</b>	"ttyname" is the TTY name for the port. This must be the complete path name starting with /dev/term/. We recommend that you use the name range X0-X255.
<b>-port</b> "portnumber"	<b>-port 1000</b>	"portnumber" is the TCP/IP port number configured for the port on the remote access server. We recommend that you use the range 10000+.
<b>-trueport</b>	<b>-trueport</b>	Enables TruePort mode (not TruePort Lite) for full device control.
<b>-aux</b> "ttyname"	<b>-aux /dev/term/X1p</b> or <b>-aux /dev/ttyX1p</b>	"ttyname" is the TTY name for the printer port. This must be the complete path name starting with /dev/term/. We recommend that you use the TTY name range X0p-X255p.
<b>-term</b> "termtype"	<b>-term wy6</b>	"termtype" is a terminal type listed in the file "printcap.tp". If -aux is defined, -term is required.
<b>-ka</b> "seconds"	<b>-ka 30</b>	"seconds" is the number of seconds to wait on an idle connection before sending a keep-alive message.
<b>-trace</b> "1-4"	<b>-trace 3</b>	"1-4" is the trace level for debugging purposes, the default is 1.

## TruePort Administration Tool (tpadm) commands

---

This section describes the commands and syntax for the TruePort Administration tool. Details are listed in the following sections;

- [tpadm -a -p](#) on page 112
- [tpadm -a -p -t](#) on page 113
- [tpadm -d](#) on page 114
- [tpadm -s](#) on page 114

### **tpadm -a -p**

---

#### *Function*

---

Adds a terminal to the specified port number.

#### *Syntax*

---

**tpadm -a "portnumber" -p "ttyname"**

Where "portnumber" is the TCP/IP port number configured for the port on the remote access server. We recommend that you use the range 10000+.

"ttyname" is the TTY name for the port. We recommend that you use the name range X0-X255.

#### *Example*

---

**tpadm -a 10003 -p X0**

## ***tpadm -a -p -t***

---

### *Function*

---

Adds a terminal to the specified port number and enables transparent printing for that terminal

### *Syntax*

---

**tpadm -a "portnumber" -p "ttyname" -t "termtype"**

Where "portnumber" is the TCP/IP port number configured for the port on the remote access server. We recommend that you use the range 10000+.

"ttyname" is the TTY name for the port. We recommend that you use the name range X0-X255.

"termtype" is a terminal type listed in the file "printcap.tp". If -aux is defined, -term is required.

### *Example*

---

**tpadm -a 10003 -p X0 -t vt100**

## ***tpadm -d***

---

### *Function*

---

Removes the terminal at the specified port number.

### *Syntax*

---

**tpadm -d** "portnumber"

Where "portnumber" is the TCP/IP port number configured for the port on the remote access server. We recommend that you use the range 10000+.

### *Example*

---

**tpadm -d 10003**

**Note**

The port number you use must exist in the **config.tp** configuration file.

When you remove a terminal using this command, it does not stop the software running, it just deletes the entry for this terminal in the **config.tp** configuration file.

## ***tpadm -s***

---

### *Function*

---

Starts the specified TruePort daemon entry.

### *Syntax*

---

**tpadm -s** "portnumber"

Where "portnumber" is the TCP/IP port number configured for the port on the remote access server. We recommend that you use the range 10000+.

### *Example*

---

**tpadm -s 10002**

## Appendix A Contacting Perle

---

*You need to read this appendix if you want to contact Perle for technical support or any other queries about this product.*  
*you need to read this appendix if you want to...*

This appendix includes the following sections;

- [Making a technical support query](#) on page **116**
- [Repair procedure](#) on page **119**
- [Feedback about this manual](#) on page **120**
- [Contacting Perle technical support](#) on page **121**

*Internet access*

[Click here to access the our website at the following URL:](#)  
<http://www.perle.com>

*Email*

[Click here to email](#) Perle at the following address;  
**Email: [ptac@perle.com](mailto:ptac@perle.com)**

## ***Making a technical support query***

---

This section contains the following information about making a query;

- [Who to contact](#) on page [116](#)
- [Information needed when making a query](#) on page [117](#)
- [Making a support query via the Perle web page](#) on page [118](#)

### ***Who to contact***

---

If you bought your product from a registered Perle supplier, you must contact their Technical Support department; they are qualified to deal with your problem.

If you are a registered Perle supplier, and bought your product from Perle, contact Perle Technical Support using the details given in [Contacting Perle technical support](#) on page [121](#).

## Information needed when making a query

---

When you make a technical support enquiry please have the following information ready;

**Hint**

Print out this page and fill in the table provided with the basic information you need.

Item	Write details here
Product name and version	
Problem description	
Operating system version	
Driver version	
Details of any other cards installed in your system	
Your name	
Company Name	
Country	
Phone number	
Fax number	
Email address (if available)	

## ***Making a support query via the Perle web page***

---

If you have an internet connection, please send details of your problem to Technical Support using the email links provided on the Perle web site in the 'Support' area.

See also [Contacting Perle technical support](#) on page 121 for email links and other contact details for the Perle technical support centres.

[Click here to access our website at the following URL:  
http://www.perle.com](http://www.perle.com)

## Repair procedure

---

Before sending a unit for repair, you must contact your Perle supplier. If, however, you bought your product directly from Perle you can contact directly. See [Contacting Perle technical support](#) on page 121 for contact information.

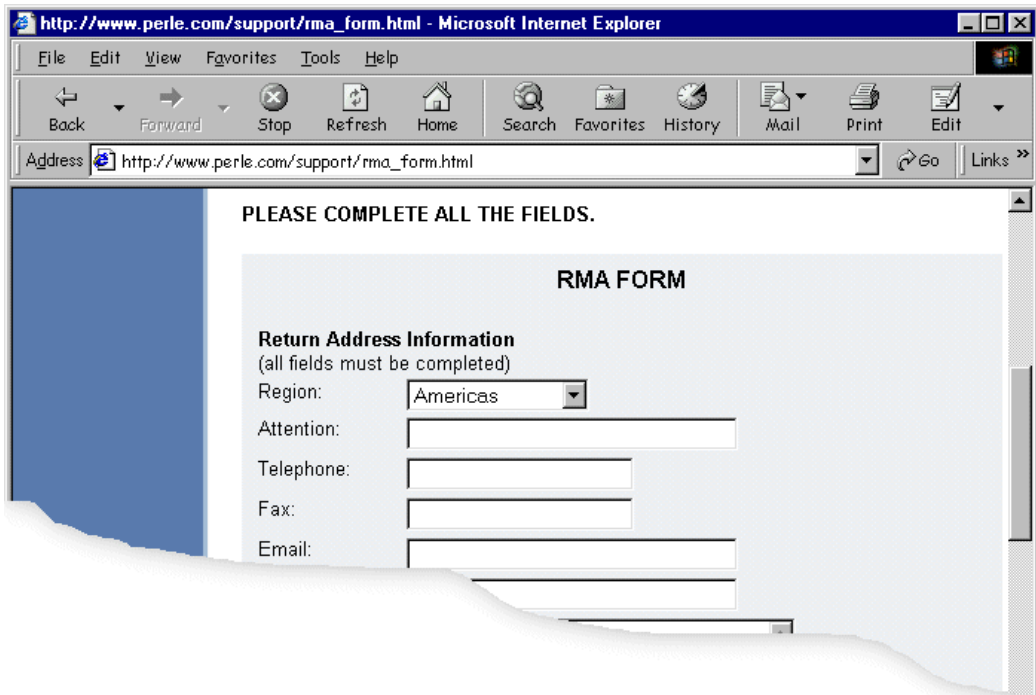
Customers who are in Europe, Africa or Middle East can submit repair details via a website form shown in the next picture. This form is on the Perle website, [www.perle.com](http://www.perle.com), in the **Support** area.

Click here to access our web site at the following URL:  
[http://www.perle.com/support/rma\\_form.html](http://www.perle.com/support/rma_form.html)

In the USA and Asia contact the office shown in the Technical Support section.

### Website RMA (Return Material Authorisation) Form

---



The screenshot shows a Microsoft Internet Explorer browser window displaying the RMA Form. The address bar shows the URL [http://www.perle.com/support/rma\\_form.html](http://www.perle.com/support/rma_form.html). The page content includes a blue sidebar on the left and a main content area with the following text:

PLEASE COMPLETE ALL THE FIELDS.

**RMA FORM**

**Return Address Information**  
(all fields must be completed)

Region:

Attention:

Telephone:

Fax:

Email:

## ***Feedback about this manual***

---

If you have any comments or suggestions for improving this manual please email Perle using the following address;

**Email:** [ptac@perle.com](mailto:ptac@perle.com)

Please include the **title**, **part number** and **date** of the manual (you can find these on the title page at the front of this manual).

## Contacting Perle technical support

---

**Note**

Perle offers free technical support to Perle Authorised Distributors and Registered Perle Resellers.

To access technical support please visit the Perle website at [www.perle.com/support](http://www.perle.com/support).

If you are unable to find the information you require, please feel free to contact our technical support teams by email using the addresses shown in the next table.

<b>Region</b>	<b>Address</b>	<b>Email</b>
<b>North America</b>	Perle Systems Ltd. 60 Renfrew Drive Markham Ontario Canada L3R OE1	Email: <a href="mailto:ptac@perle.com">ptac@perle.com</a>
<b>Europe</b>	Perle Systems Europe Ltd. 3 Wintersells Road Byfleet Surrey KT14 7LF UK	Email: <a href="mailto:ptac@perle.com">ptac@perle.com</a>
<b>Asia</b>	Perle Asia Pacific (Pte) Ltd. 190 Middle Road #19-05 Fortune Centre Singapore 188979	Email: <a href="mailto:ptac@perle.com">ptac@perle.com</a>
<b>Worldwide</b>	Perle Systems Ltd. 60 Renfrew Drive Markham Ontario Canada L3R OE1	Email: <a href="mailto:ptac@perle.com">ptac@perle.com</a>

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