ezVSP User's Manual

(Version 2.1d)

Sollae Systems Co., Ltd.

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Chapter 1

Overview

1.1 Introduction

- ezVSP, which is a program playing the same role as ezTCP/LAN in PC, provides data communication between serial port and Ethernet (TCP/IP). With the help of ezVSP you can exchange data between Ethernet and your serial port without modifying standard communication programs on your PC.

- With ezVSP you can create as many virtual serial ports as needed.

- The ezVSP program is provided for user who uses ezTCP/LAN and you should enter the key value when you run the ezVSP program for the first time. You can get a key from Sollae Systems homepage at http://www.eztcp.com/en/Support/req_reg.php.

- In order to get a key, you have to register your ezTCP/LAN product. If you have many ezTCP/LAN, it is enough to register only one.

- ezVSP is designed for Windows 2000/XP.

- ezVSP program is subject to change without prior notice. You can always check for the last ezVSP version at http://www.eztcp.com/en/Support/support.php.

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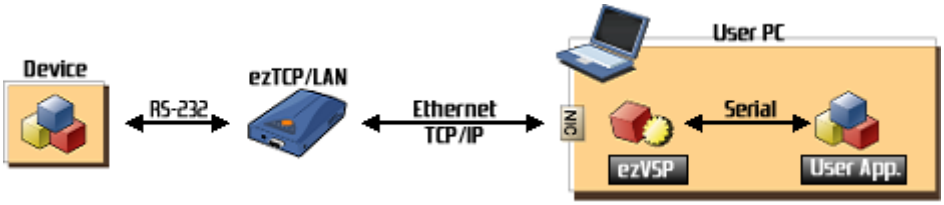

Figure 1.1 System Overview

1.2 Key Features

- Function
  - ezVSP is started automatically at Windows 2000/XP startup.
  - ezVSP supports TCP server, TCP client and UDP.
  - ezVSP supports SSL v3.0 and TLS v1.0 (in case of TCP Server and TCP Client).
  - ezVSP can create several virtual serial ports.

- H/W and S/W Requirement
  - Windows 2000/XP
  - At least 20Mbytes of disk space

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Chapter 2

Installation

2.1 Ready to install ezVSP

- Welcome

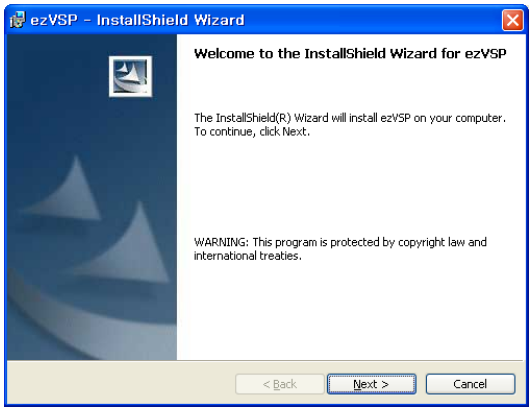

Figure 2.1.1 InstallShield Wizard. Welcome Screen

- License Agreement
  - To install ezVSP you must accept the terms of the license agreement.

Figure 2.1.2 InstallShield Wizard.License Agreement

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- Customer Information

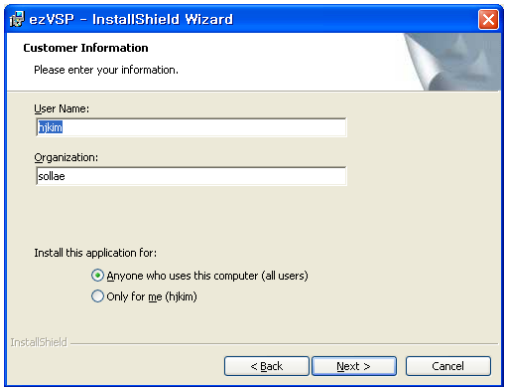

Figure 2.1.3 InstallShield Wizard. Customer Information

- Setup Type

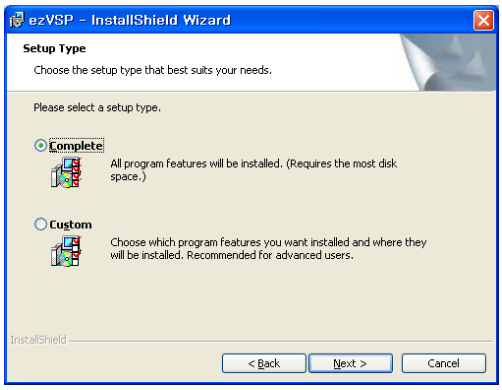

Figure 2.1.4 InstallShield Wizard. Setup Type

- Ready to install
  - Click Install to begin ezVSP installation.

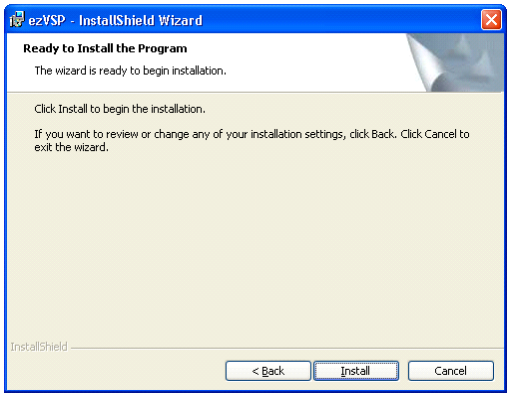

Figure 2.1.5 InstallShield Wizard. Ready to install

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2.2 Install ezVSP application

- Installing ezVSP
  - Setup installs ezVSP.

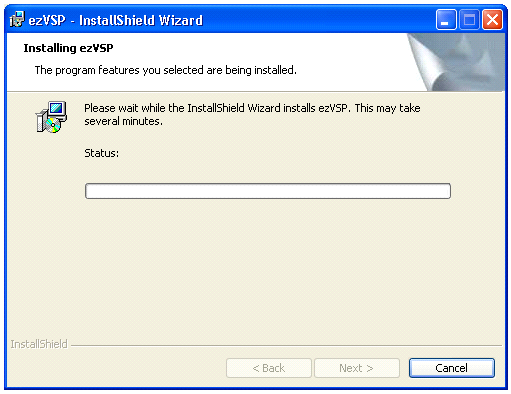

Figure 2.2.1 Installing ezVSP

- Installation completed
  - ezVSP Setup creates "C:\Program Files\SollaeSystems\ezVSP" folder and Go to ezVSP shortcut in Windows Start menu.

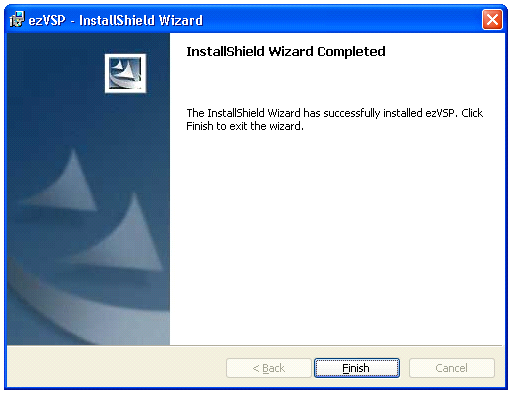

Figure 2.2.2 InstallShield Wizard. Installation Complete

- Registration
  - When you start ezVSP for the first time, you must supply the registration key.
  - You can get the key from Sollae Systems homepage. To get a key you must register a MAC address of any of your ezTCP/LAN products.
  - You can use the same MAC address and key value for ezVSP running on several PCs.

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- Click Link in the registration window or visit our homepage support page http://www.eztcp.com/en/Support/req_reg.php

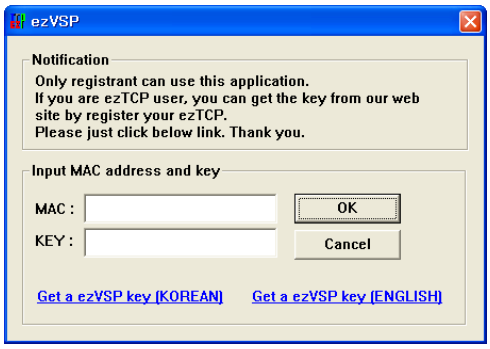

Figure 2.2.3. Registration

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Chapter 3

Settings

3.1 Virtual Serial Port Control Center

- The Application

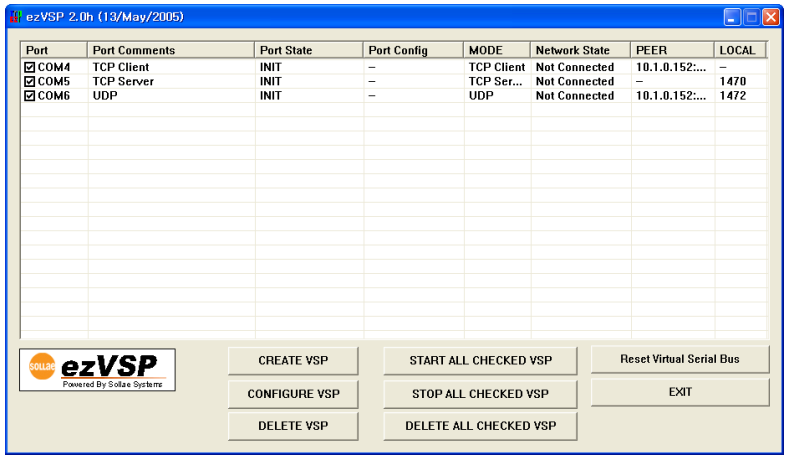

Figure 3.1.1. Main Window

3.1.1 CREATE Virtual Serial Port.

- Create environment variables to run virtual serial ports.
- Set up window

- When you click CREATE VSP, the following dialog box appears:

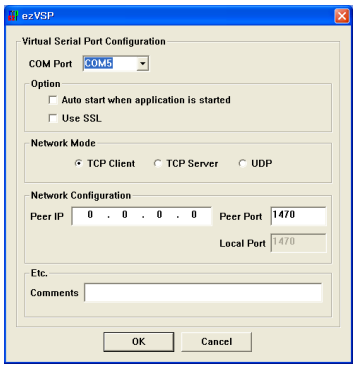

Figure 3.1.2. Set up Window

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▪ COM Port

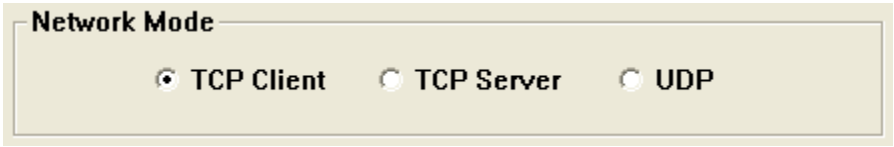
- Choose a COM port to be used as virtual serial port.

▪ Option

- When you select this option, virtual serial port is automatically created and enabled when ezVSP starts.

- When you select this option, SSL (Secure Server Layer) will be used for the specified virtual serial port for data communication over Ethernet (TCP/IP).
- SSL v3.0 and TLS v1.0 are supported.

▪ Network Mode



- Select Ethernet data communication mode. Available options include TCP Client, TCP Server, and UDP.
- SSL (Secure Server Layer) is available only in TCP mode.
- TCP Server mode does not support multiple connections.

▪ Network Configuration

- In case Network Mode is set to TCP Client, supply IP address (Peer IP)and the port number (Peer Port) of the server to be connected to ezVSP.

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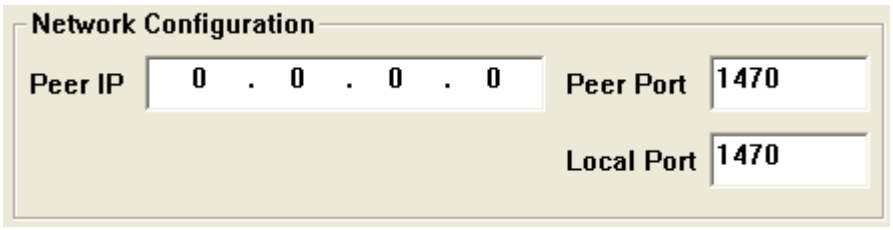
- In case Network Mode is set to TCP Server, supply the port number (Local Port) for ezVSP to listen.



- In case Network Mode is set to UDP, supply the IP address (Peer IP) and port number (Peer Port) of the host to which ezVSP transmits UDP packets and the port number (Local Port) for ezVSP to bind.

▪ Etc.

- You can provide an optional comment for each virtual serial port.

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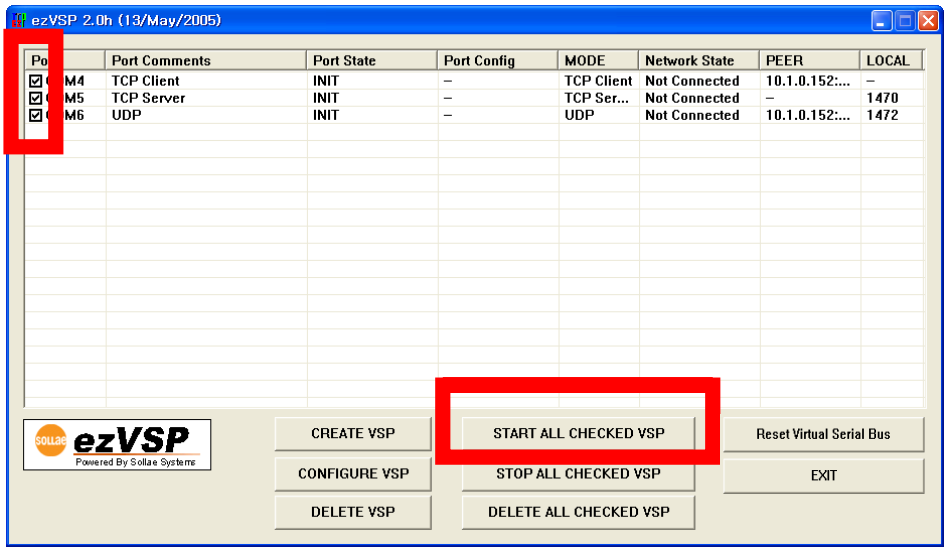
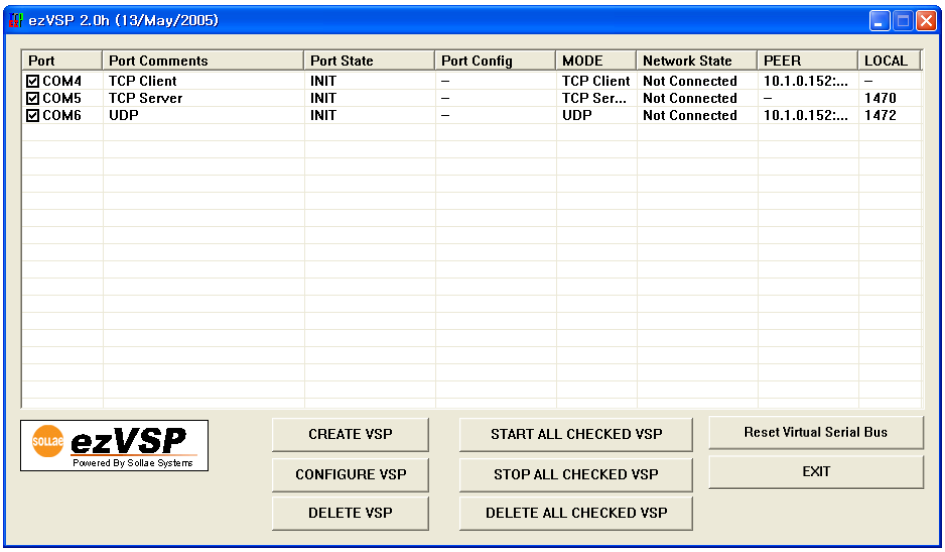
3.1.2 START Virtual Serial Port.

- Start virtual serial ports with environment variables you have created (See 3.1.1. CREATE Virtual Serial Port).



- To start a port, select the check box next to it in the Main Window and click START ALL CHECKED VSP to start all selected ports.

3.1.3 Status of Virtual Serial Port



- You can check the status of each virtual serial port in the Main Window.
- The meaning of each item is explained below:

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Port

- The name of the COM port of virtual serial port.

Port Comments

- Optional comment for this port.

Port State

- The state of virtual serial port.

INIT	Initialized status before starting virtual serial port
CREATED	Virtual serial port is started
OPEN	Virtual serial port is started and being used by a serial communication program
CLOSE	Virtual serial port was started, but a serial communication program has stopped using it.
CREATE ERROR	An error was detected when starting virtual serial port.
ERROR	Virtual serial port was started and an error was detected when used by a serial communication program.

Port Config

- Port settings of serial communication program which uses this virtual serial port.
- In OPEN state, a virtual serial port configured as 19200bps, No parity, 8bits data, 1 stop bit is displayed as follows:

MODE

- Network Mode used for this virtual serial port.

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Network State

- TCP/IP network state.

Not Connected	TCP/IP network is not connected.
Connected	TCP/IP network is connected.
Error	An error was detected during TCP/IP connection or data communication.
Connecting	TCP/IP network is being connected. (Only TCP Client mode).
SSL Connecting	TCP/IP network is being connected using SSL. (Only TCP Client mode with enabled SSL)
Listen	Waiting for TCP/IP connection. (Only TCP Server mode)
Bind	Normal bind state (Only UDP mode).

PEER

- IP address and port number of the connected server (TCP Client mode).

LOCAL

- Local port number for Listen or Bind (TCP Server or UDP mode).

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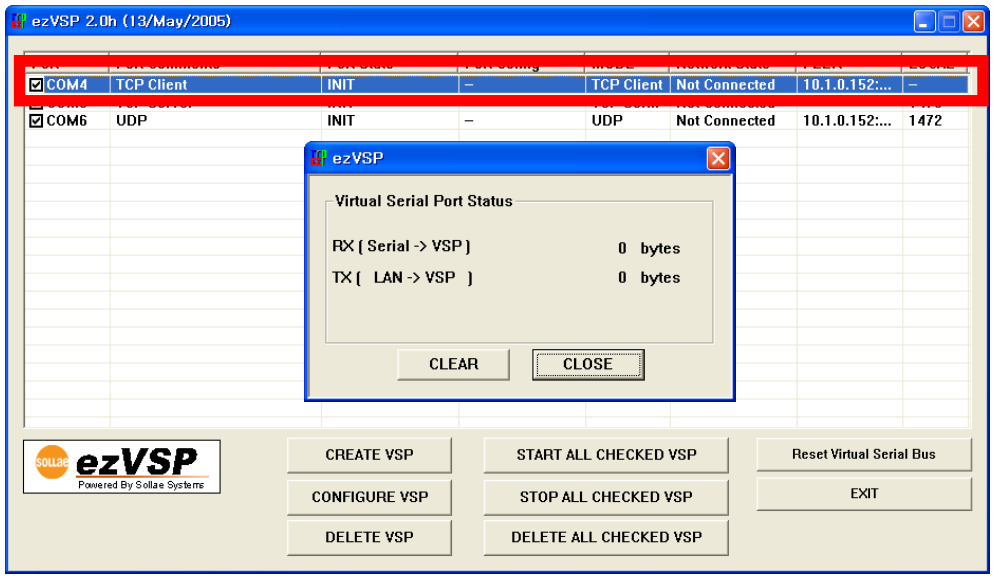
3.1.4 Data Statistic

- You can check the statistics of data exchanged through virtual serial port.



- Double-click the virtual serial port for which you want to check statistics. The dialog box shown in the figure above is displayed.

RX (Serial -> VSP)	The amount of data sent from RS-232 communication program to ezVSP through the selected virtual serial port.
TX (LAN -> VSP)	The amount of data sent from TCP/IP communication program or equipment to ezVSP through the selected virtual serial port.

3.1.5 Stop Virtual Serial Port

- This function is used to stop an opened virtual serial port.
- You cannot change settings of an opened virtual serial port.
- If you want to change settings of a virtual serial port, you should stop it first.
- If an RS-232 communication program is using the selected virtual serial port, you should close the virtual serial port before stopping.

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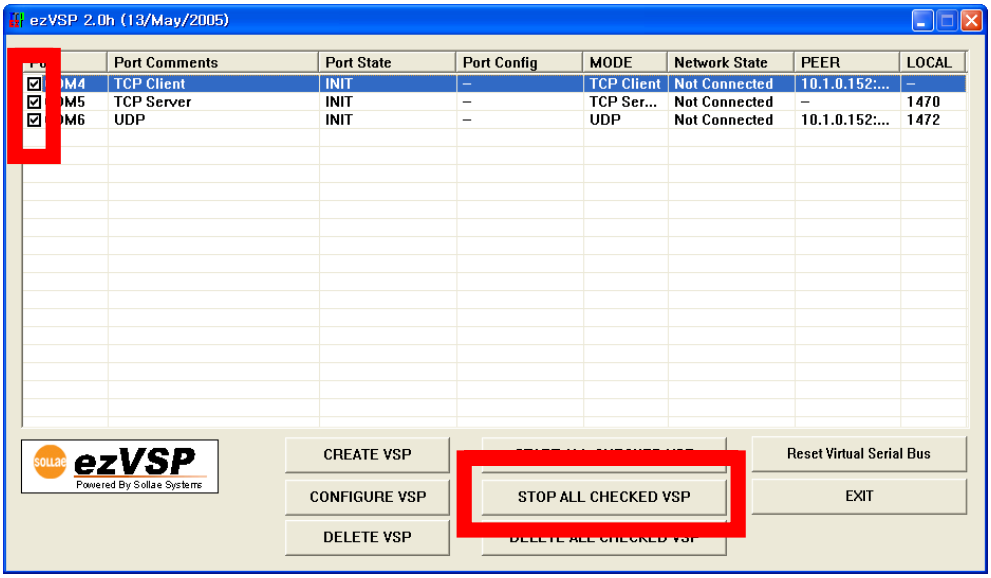
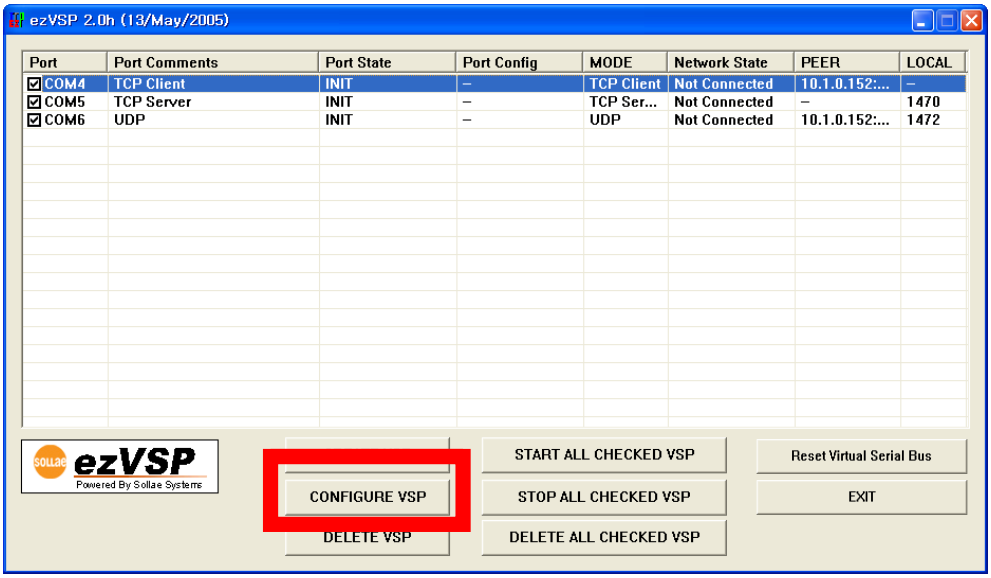


- Select the check box next to virtual serial ports you want to stop in the Main Window and click STOP ALL CHECKED VSP to stop all the selected ports.

3.1.6 Configure Virtual Serial Port

- This function is used to change settings for a virtual serial port.
- You cannot change settings for an opened virtual serial port .



- Select a virtual serial port for which you want to change settings in the main window and click CONFIGURE VSP. The following dialog box is displayed:

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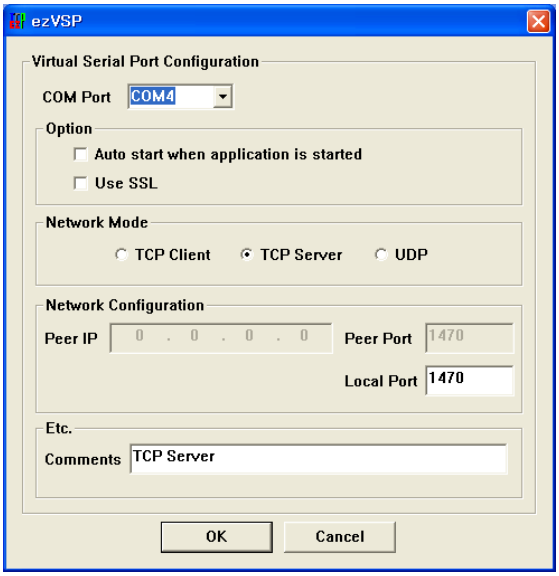
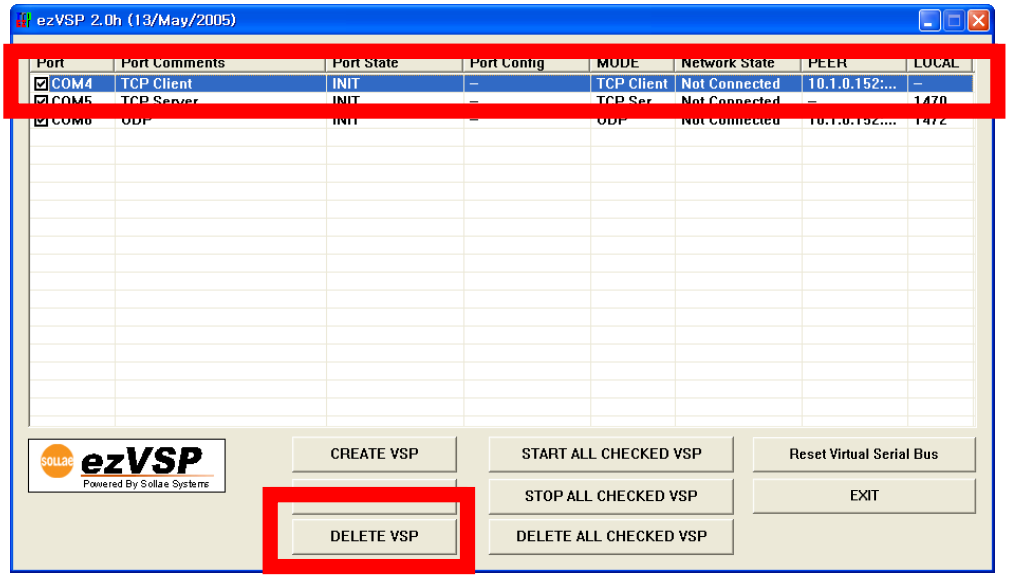


■ For explanation of items see 3.1.1. CREATE Virtual Serial Port.

3.1.7 Delete Virtual Serial Port

■ This function is used to delete a virtual serial port.

■ You cannot delete an opened virtual serial port.



■ Select a virtual serial port you want to delete in the Main Window and click

to delete the selected port.

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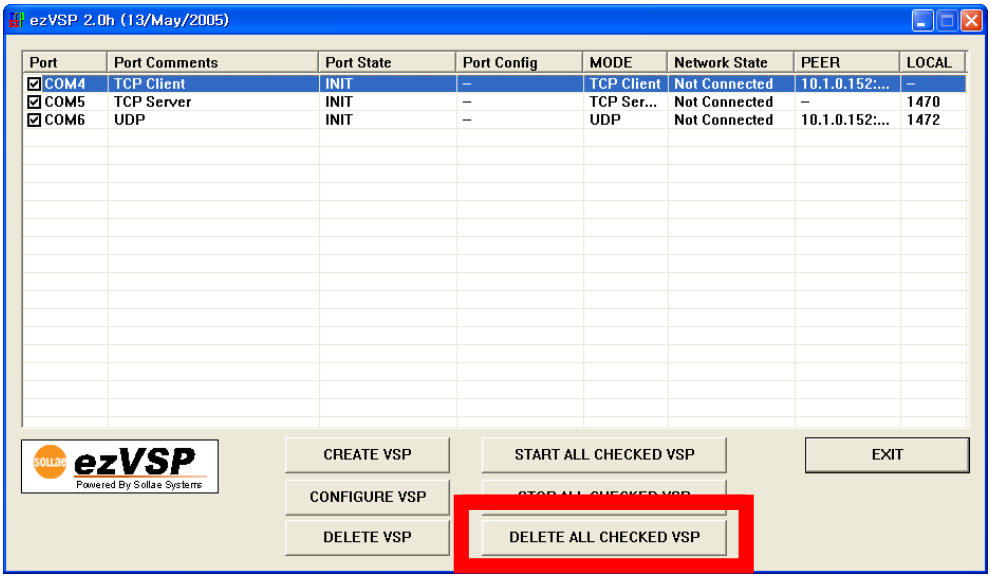
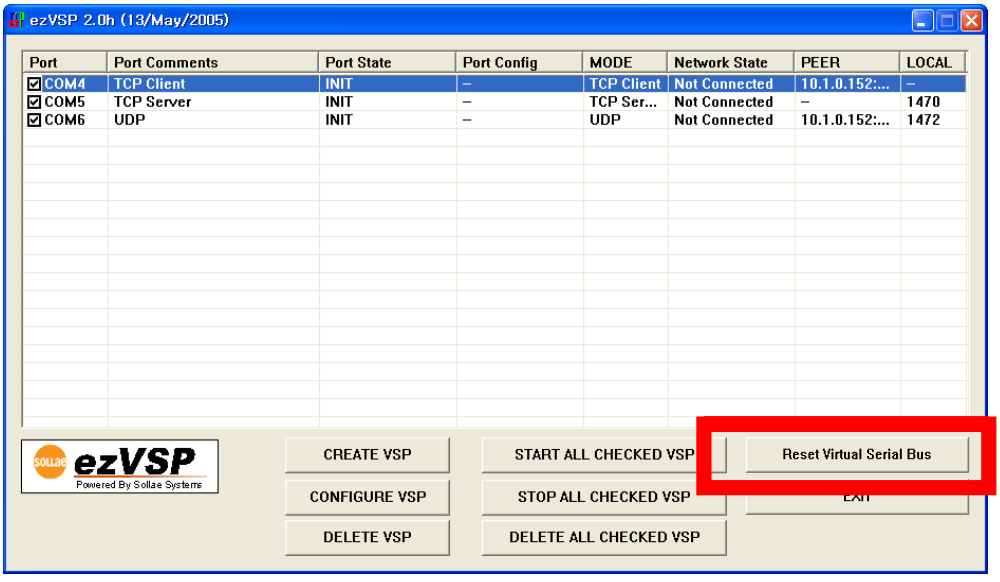


- Select check boxes next to virtual serial ports you want to delete in the Main Window and click DELETE ALL CHECKED VSP to delete all the selected ports.

3.1.8 Reset Virtual Serial Bus

- The CREATE ERROR occurred when start virtual serial ports then the Reset Virtual Serial Bus program can solve that problem.



- Click Reset Virtual Serial Bus then The following program is displayed:

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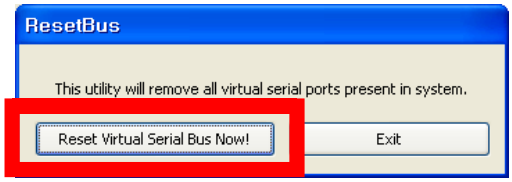
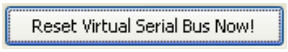
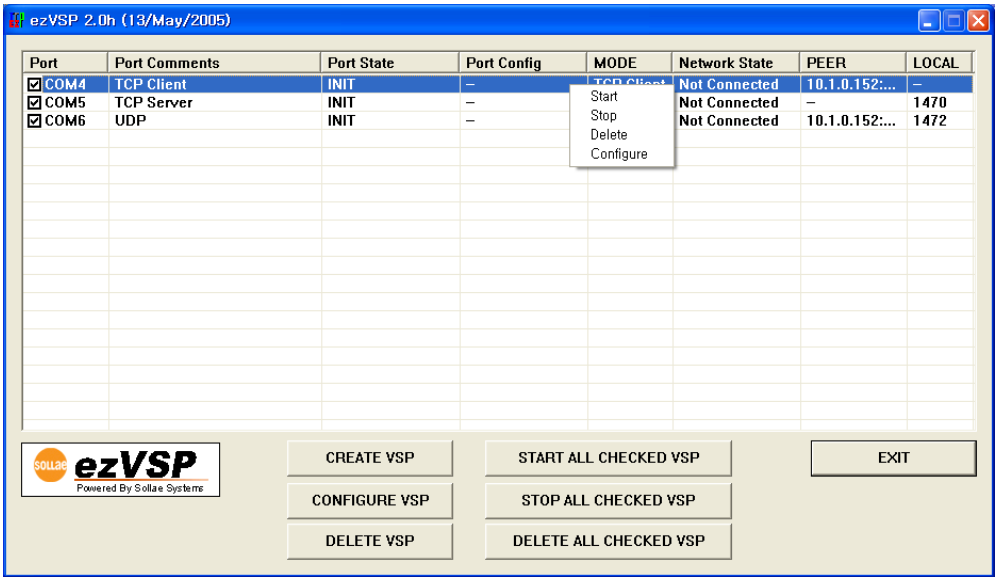


- Click 

then it will remove all virtual serial ports present int system.

3.1.8 Pop up menu

- Right-click a virtual serial port you want in the Main Window to display popup menu.
- With popup menu commands you can control the selected virtual serial port.



- Popup menu commands are described above.

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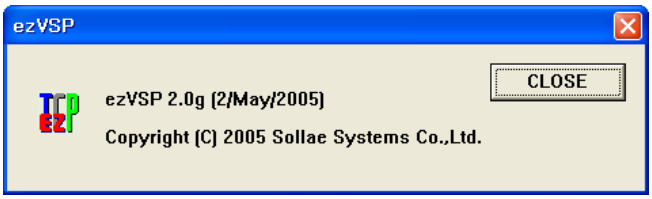
3.2 About

- About



  - You can check the current ezVSP version.
  - ezVSP program is subject to change without prior notice due to reasons of function update, bug revision, etc.
  - You can download the latest ezVSP version from http://www.eztcp.com/en/Support/support.php

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Chapter 4

Messages

4.1 Note

4.1.1 Using Virtual Serial Port

- To use virtual serial port, you have to create and start a specific COM port first (See 3.1.1 and 3.1.2.).

4.1.2 Start network connection

- If network mode is set to to TCP Server or UDP, Listen or Bind beings after virtual serial port has started.
- If network mode is set to TCP Client, TCP/IP connection with the peer host is established after virtual serial port has started.

4.1.3 TCP Server

- TCP server provided by ezVSP does not support multiple connections.

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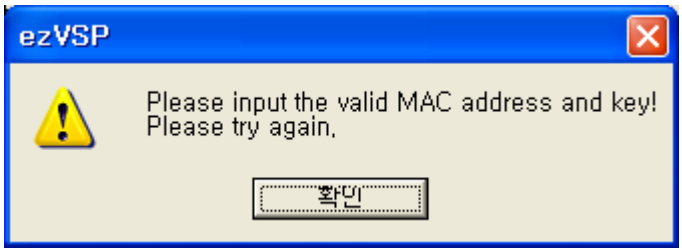
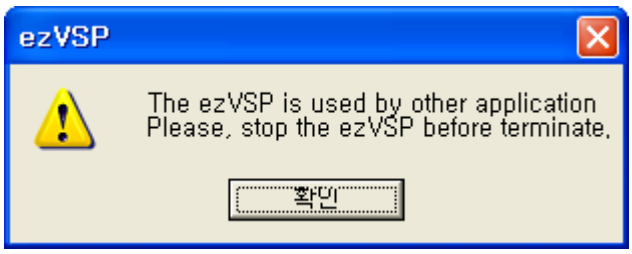
4.2 Error Messages

- 

  - When you install and run ezVSP for the first time, you should supply MAC address and a key for your ezTCP/LAN (See 2.2).
  - If you supply an invalid MAC address, the above message is displayed.
  - Supply a correct MAC address for your ezTCP/LAN.

-

  - When you install and run ezVSP for the first time, you should supply MAC address and a key for your ezTCP/LAN (See 2.2).
  - If you supply an invalid key, the above message is displayed.
  - Supply a correct key value for your ezTCP/LAN.

- 

  - The above message is displayed when you try to terminate ezVSP while there is an active virtual serial port registered in the Main Window.
  - You should stop all registered virtual serial ports in the Main Window before you quit ezVSP.

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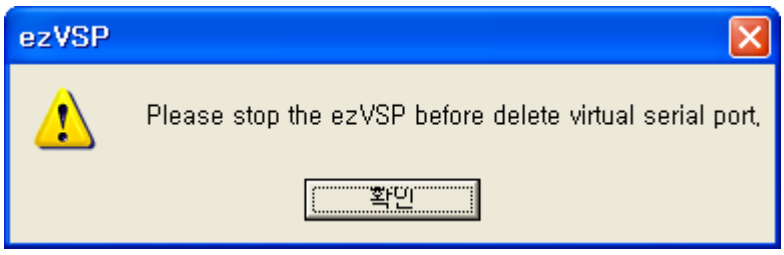
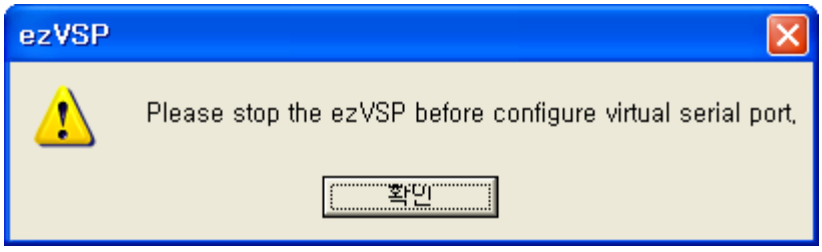
-

  - This message is displayed when you try to stop virtual serial port being used by RS-232 communication program.
  - You should stop using the port by RS-232 communication program before you stop virtual serial port.

- 

  - This message is displayed when you try to delete an active virtual serial port.
  - You should stop the virtual serial port before you delete it.

- 

  - This message is displayed when you try to configure an active virtual serial port.
  - You should stop the virtual serial port before configuring.

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Chapter 5

Example

5.1 Application with ezTCP/LAN

■ Abstract

- Install ezTCP/LAN between a PC and serial device through LAN for data communication as shown in the figure below.

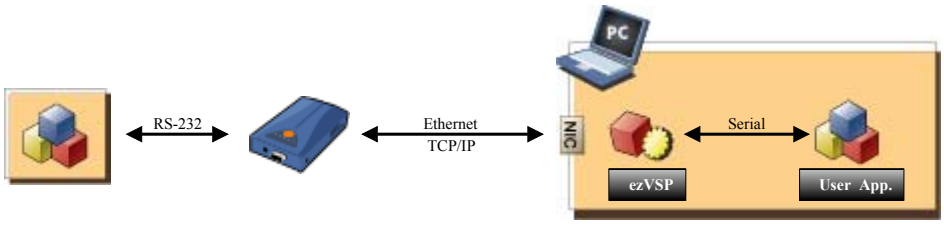

Figure 5.1.1 Application Abstract

■ Configure PC IP address

- Default ezTCP settings are as follows:

Local IP Address	10.1.0.1
Subnet Mask	255.0.0.0
Gateway IP Address	0.0.0.0
Local Port	1470

- Change the IP address of your PC to match the subnet of your ezTCP/LAN.
- If you want to use the IP address of your PC, change the network configuration of your ezTCP/LAN to match the PC subnet.

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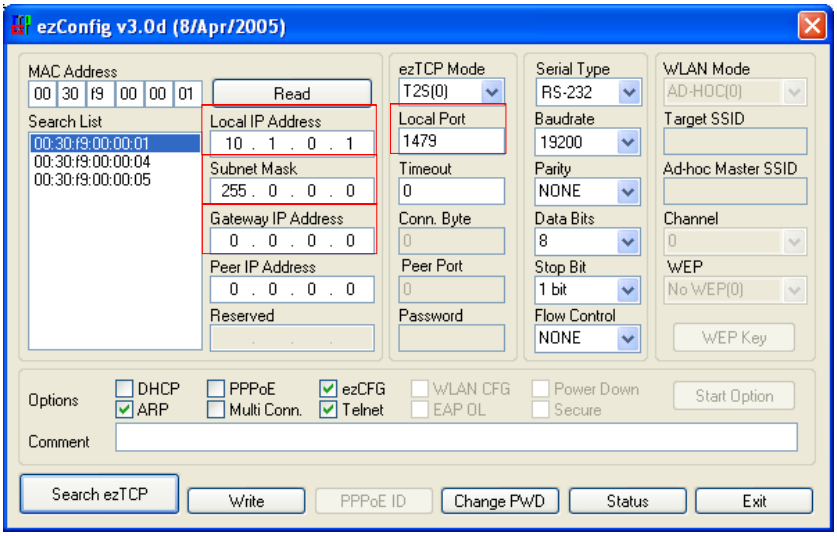
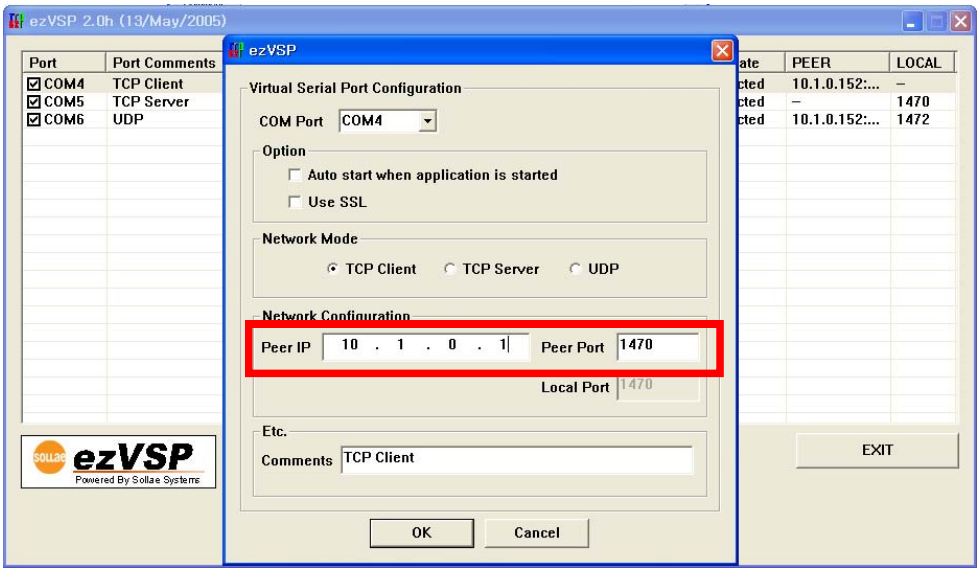
■ ezTCP/LAN Settings



- Check that your network is configured for the same subnet as your PC.
- Set local TCP listening port number for ezTCP/LAN.

■ ezVSP Settings



- Supply local IP address and local port number configured for ezTCP to create virtual serial port.
- Start the created virtual serial port than TCP/IP connection is established.
- Use an RS-232 communication program to open it for a test.

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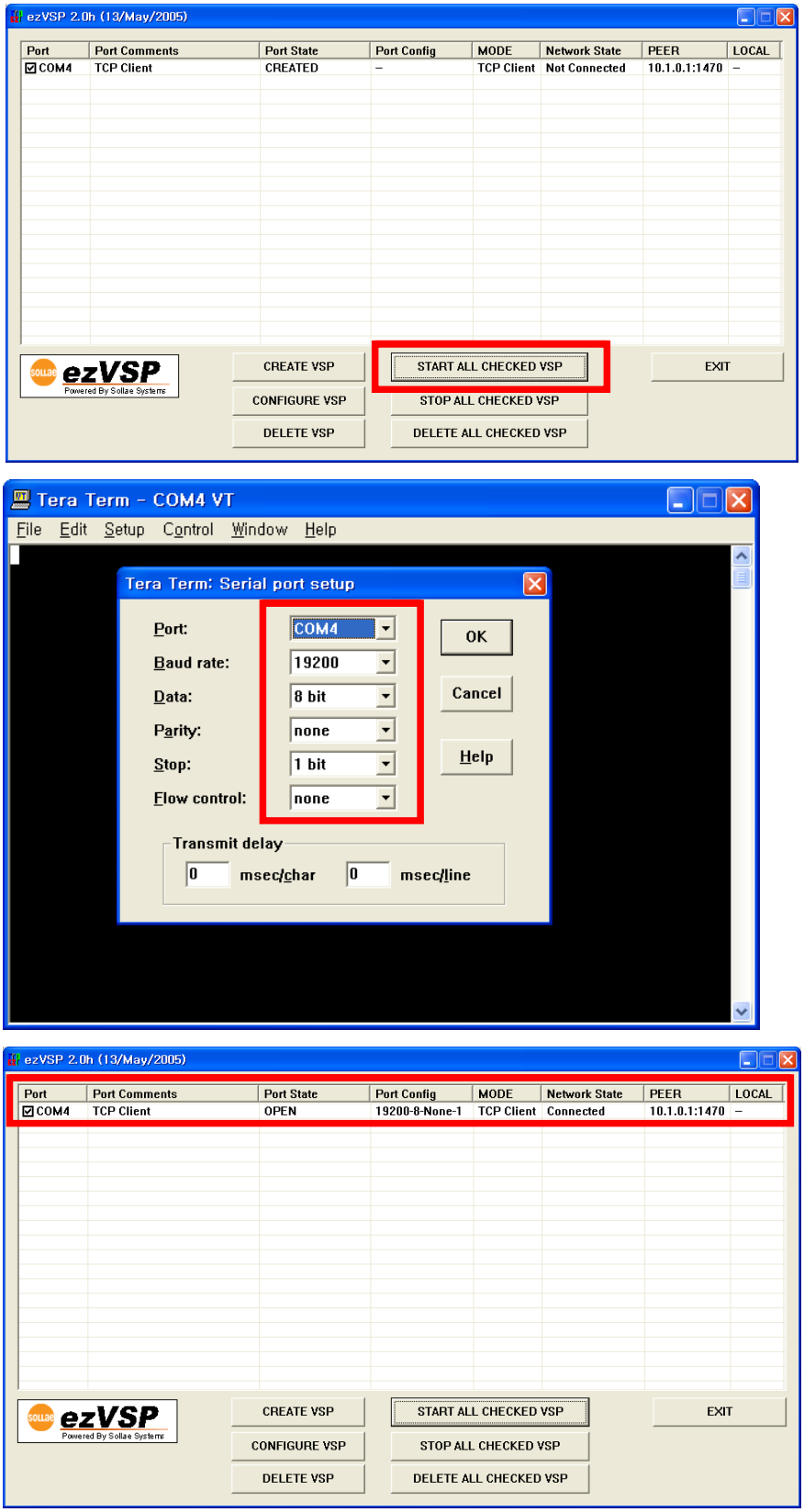

- When TCP/IP connection is completed, you can start data communication through your virtual serial port.

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Chapter 6

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