



ezTCP Utility

ezVSP3 User's Manual

Version 1.5

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Sollae Systems Co., Ltd.

<http://www.sollae.co.kr>

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1 Overview

- This document explains how to use ezVSP version 3.x.

1.1 What is ezVSP?

- ezVSP is a program playing the same role as ezTCP in your computer. You can use TCP/IP protocol conversion function with it. So, your serial communication program can communicate through the Ethernet with this program without any modifications.
- A serial port which is created by ezVSP is not a physical port. It is virtually created in your computer. But, you can see this port in the device manager.

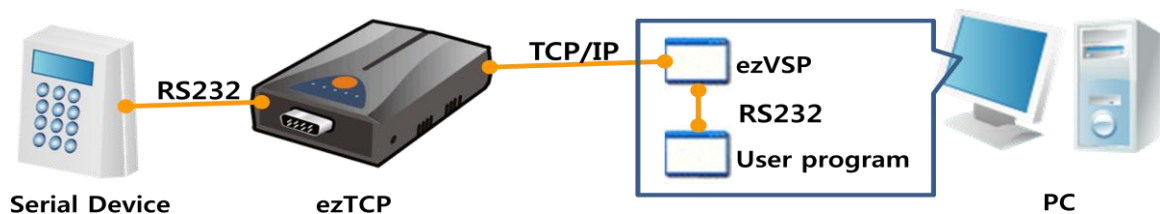


Fig 1-1 Overview of ezVSP

- ezVSP version can be changed without prior notice for removing bugs or adding new features. You can download the latest version from our website.

1.2 Key features

1.2.1 Operating system compatibility

Table 1-1 Operating system compatibility

Operating system	32-bit platform	64-bit platform
Microsoft Windows Server 2000	○	○
Microsoft Windows Server 2003	○	○
Microsoft Windows Server 2008	○	○
Microsoft Windows XP	○	○
Microsoft Windows Vista	○	○
Microsoft Windows7	○	○

1.2.2 Features

- ezVSP is started automatically at Windows startup.
- ezVSP supports TCP server, TCP client and UDP communication.
- The TCP server provided by ezVSP can make only one(1) TCP/IP connection.
- ezVSP supports SSL v3.0 and TLS v1.0 when used as TCP server or TCP client.
- ezVSP supports RFC2217 (Telnet COM Port Control Option) when used as TCP server or TCP client.
- SSL secure communication and RFC2217 (Telnet COM Port Control Option) can't be used at the same time.

1.2.3 Version compatibility

- Are you using ezVSP version 2.x?
 1. You don't have to remove old version for using new version (ezVSP version 3.x or higher). You can use two versions but can't run both of them at the same time.
 2. The information about virtual ports which is used in the old version is automatically migrated to the new version. The migration will be done when you run the new version for the first time. If you want to remove the old version, please do it after the migration has finished.
- Is it the first time to use ezVSP?
 1. Please, install ezVSP version 3.x or higher and refer to the *3. How to use ezVSP*

2 Installation

1. You can find the latest version on our website.
2. <http://www.eztcp.com/en/Support/utilities.php>

2.1 Installation procedure

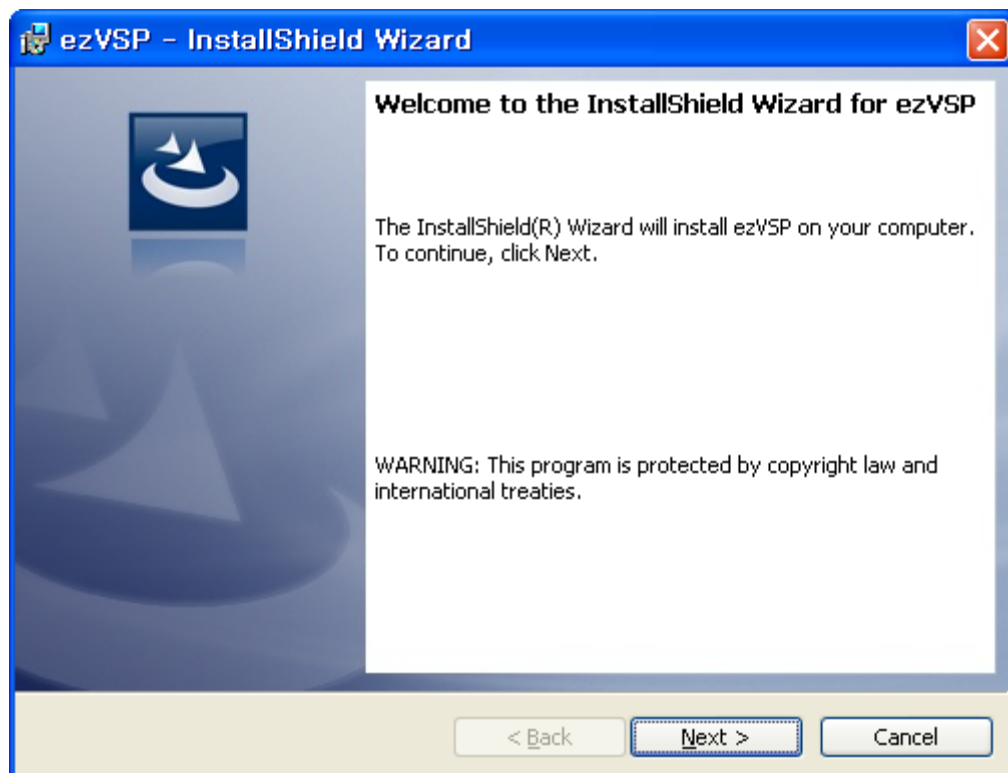


Fig. 2-1 Ready to setup

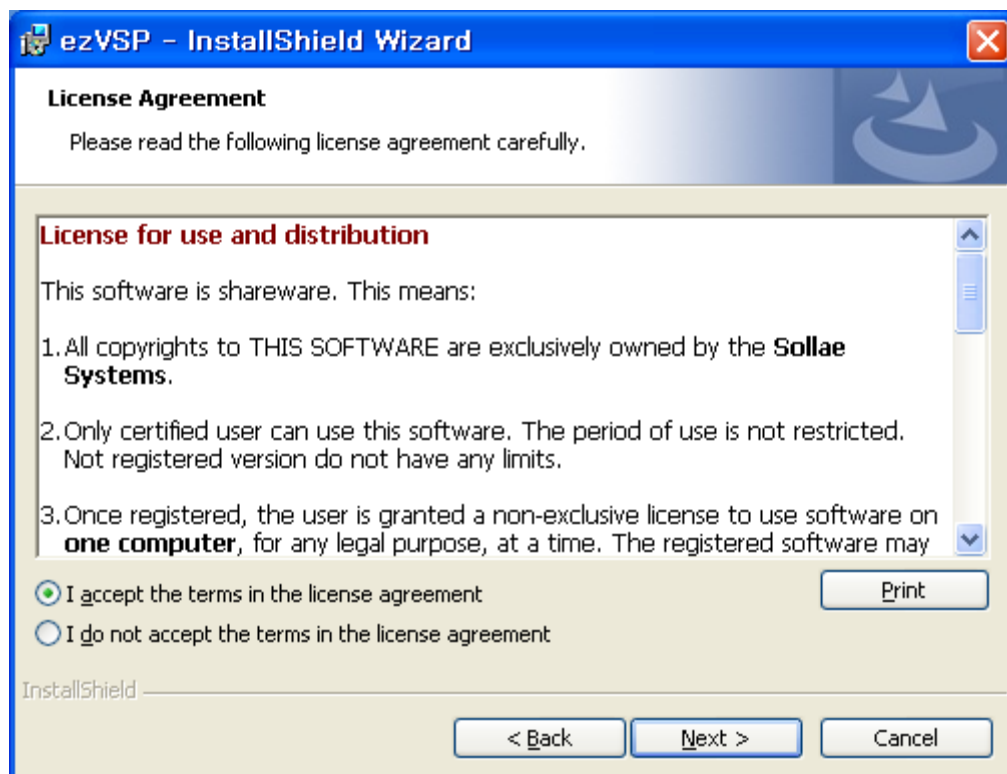


Fig. 2-2 Confirm the license agreement

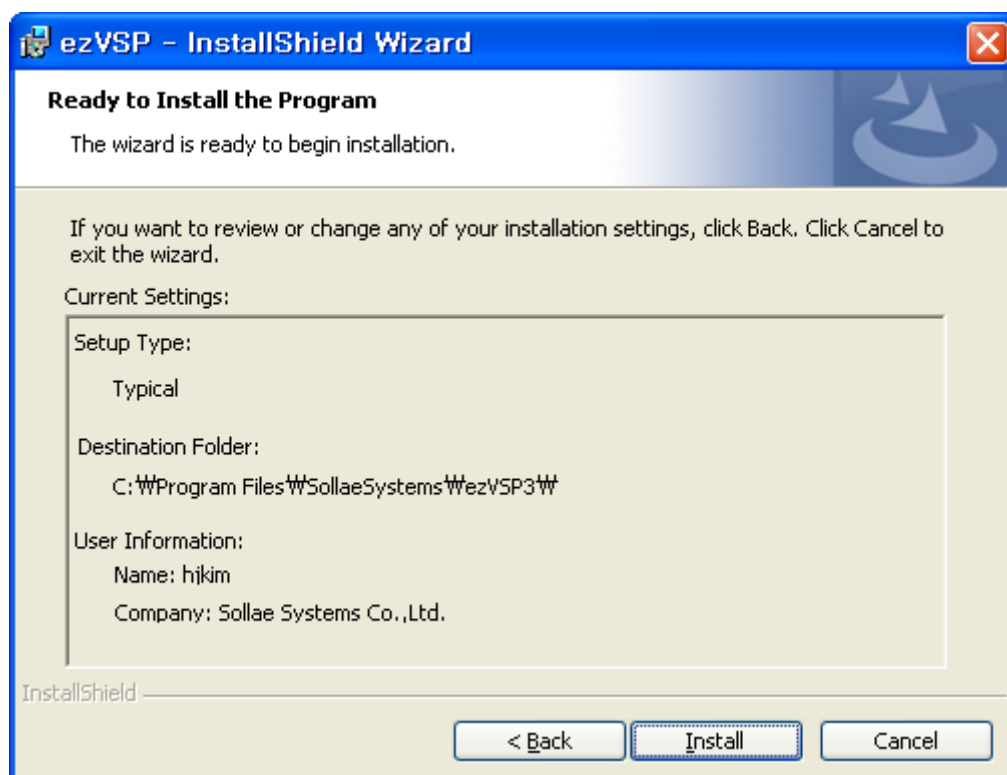


Fig. 2-3 Setup information

- ezVSP is installed in C:\Program Files\SollaeSystems\ezVSP3.



4. Click Install button for next step.

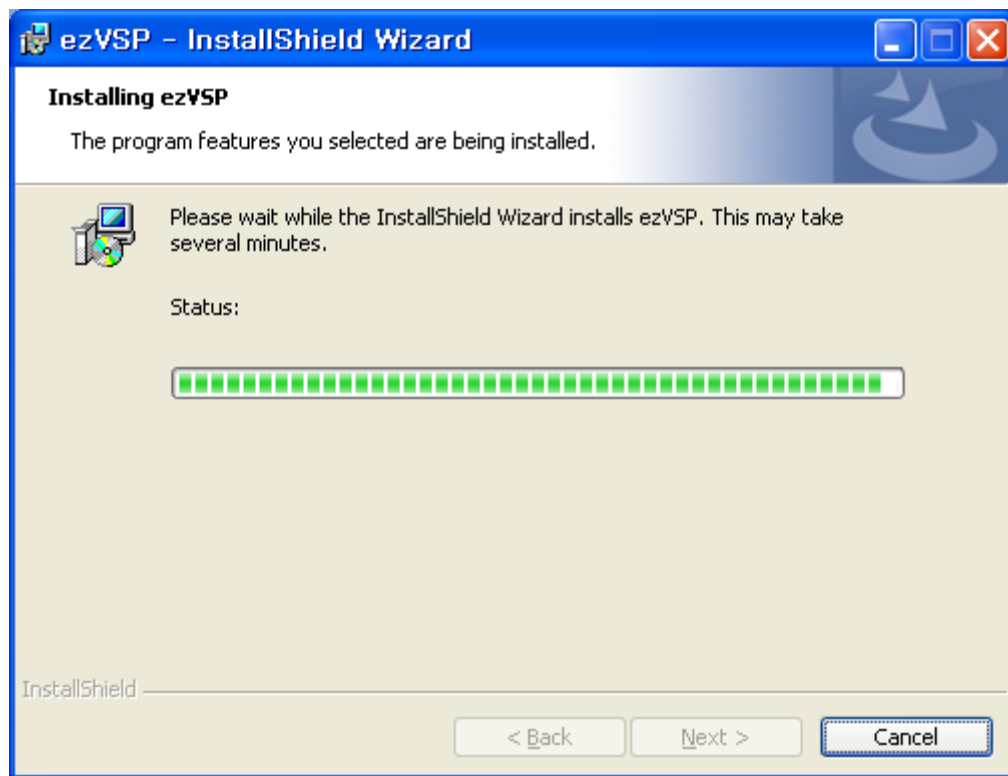


Fig. 2-4 Installing(1)

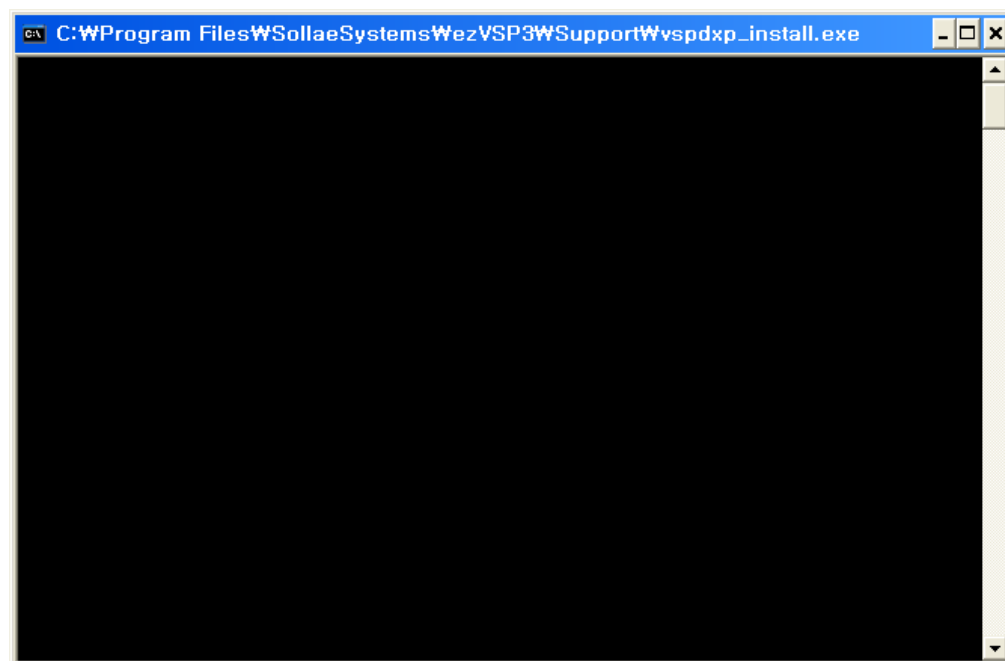


Fig. 2-5 Installing(2)

5. A device driver for virtual com ports is installed to user's computer during installation procedures. It may take several minutes depending on your system.



Fig. 2-6 Installing(3)

6. After installing the device driver, a DLL for virtual com ports is installed to user's computer.

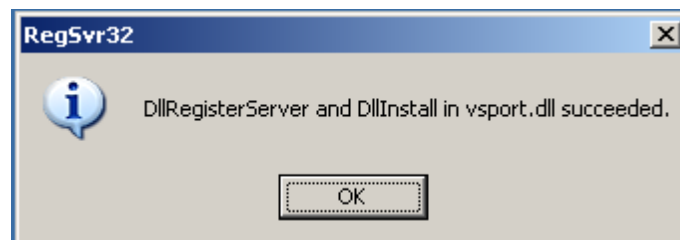


Fig. 2-7 Installing(4)

7. Click OK button for next step.

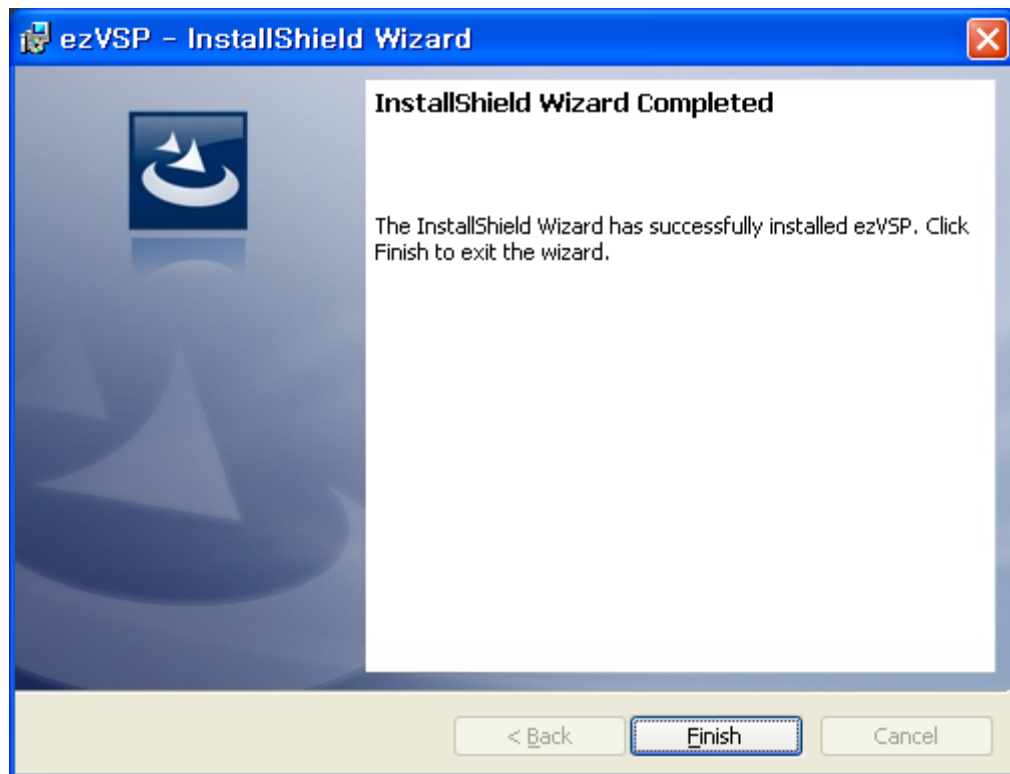


Fig. 2-8 Installation completed

3 How to use ezVSP

3.1 Registration

8. ezVSP is provided for users who use ezTCP
9. You should enter the MAC address of ezTCP and the KEY when you run ezVSP for the first time.

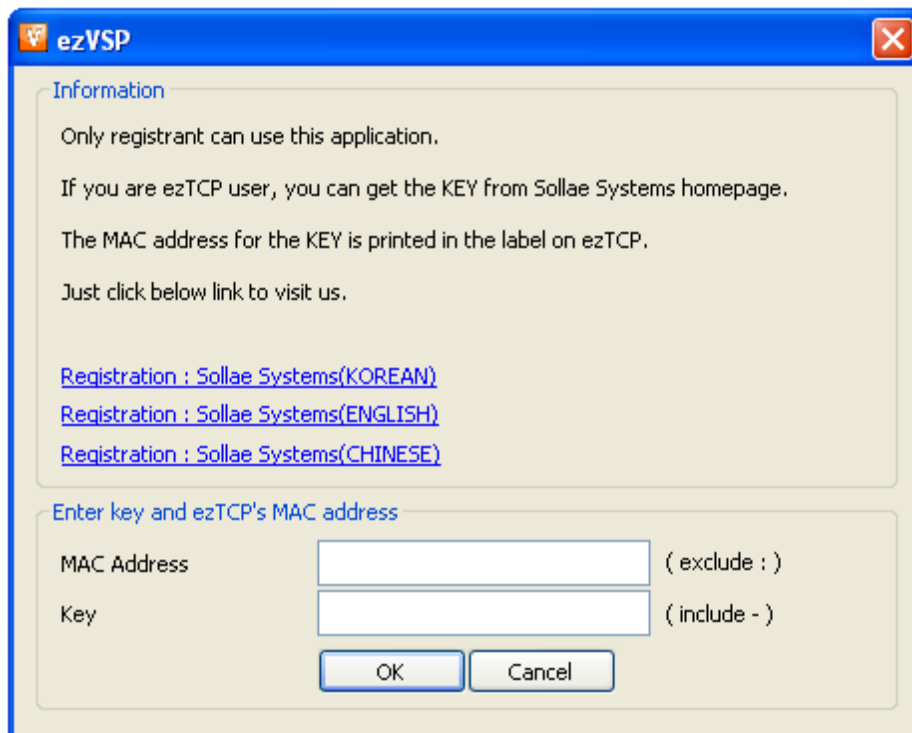


Fig. 3-1 Enter KEY

10. If you don't have any KEY, then you should get a KEY from our website. In order to get a KEY, you have to register the MAC address of your ezTCP.
11. When you want to get a KEY, just click [Registration link] on the dialog. It leads you to our website.
12. If you are using ezVSP version 2.x, then the dialog box doesn't show up.

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- FAQ **FAQ**
- Q&A
- Firmware History
- Latest Firmware revision

ezVSP

- ezVSP Registration**

RSS

- RSS

Survey

- Customer Satisfaction Survey

ezVSP registration

Your information is protected by SSL

Registration form

:: MAC ADDRESS

:: Company

:: Name

:: Country

:: E-MAIL

:: Tel

:: FAX

:: OS

:: ezTCP Model name

:: Purchase date

* You can see the key right after pressing this button !!

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 PH +82.32.245.2323 | FX +82.32.245.2327 | MAIL TO sales@eztcp.com

Fig. 3-2 Registration(1)

- Please fill all the fields. And then click Request Registration button.
- The KEY will be sent to your email address. So, please make sure that email address is available.
- The KEY is generated by using the MAC address. So, please remember the pair of the MAC address and the KEY.

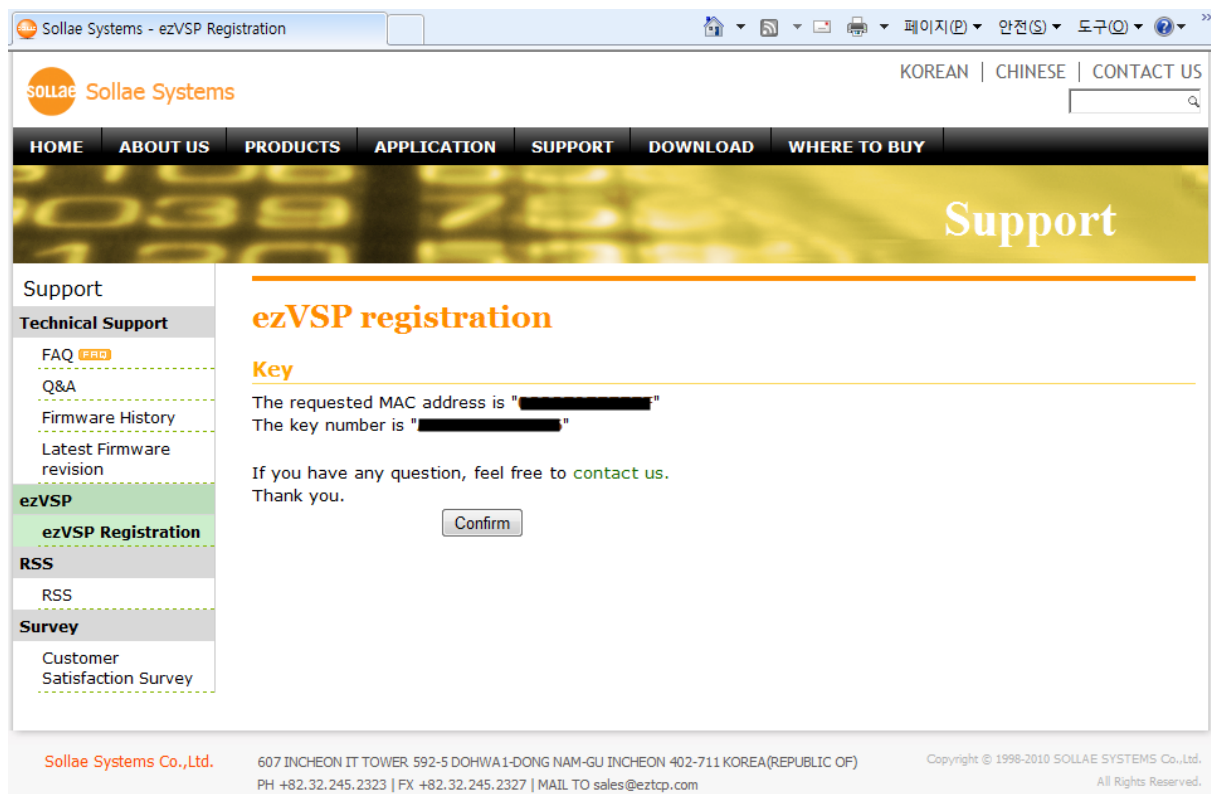


Fig. 3-3 Registration(2)

3.2 Start and Exit the program

3.2.1 Start the program

16. ezVSP is started automatically at Windows startup and then it is minimized to system tray.

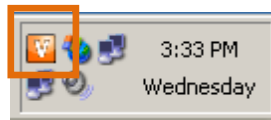


Fig. 3-4 Tray icon

3.2.2 Popup menus

17. You can see popup menus when you click the right button on the tray icon.

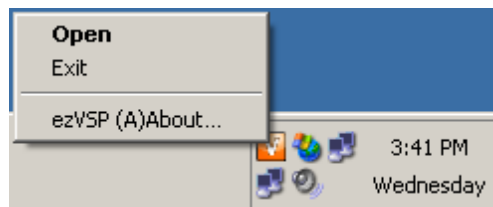


Fig. 3-5 Popup menus

Table 3-1 Popup menus

Menu	Function
Open	This menu shows the main window on your screen. (You can also double-click the tray icon.)
Exit	This menu exits the program.
ezVSP (A)About...	This menu shows the version information.

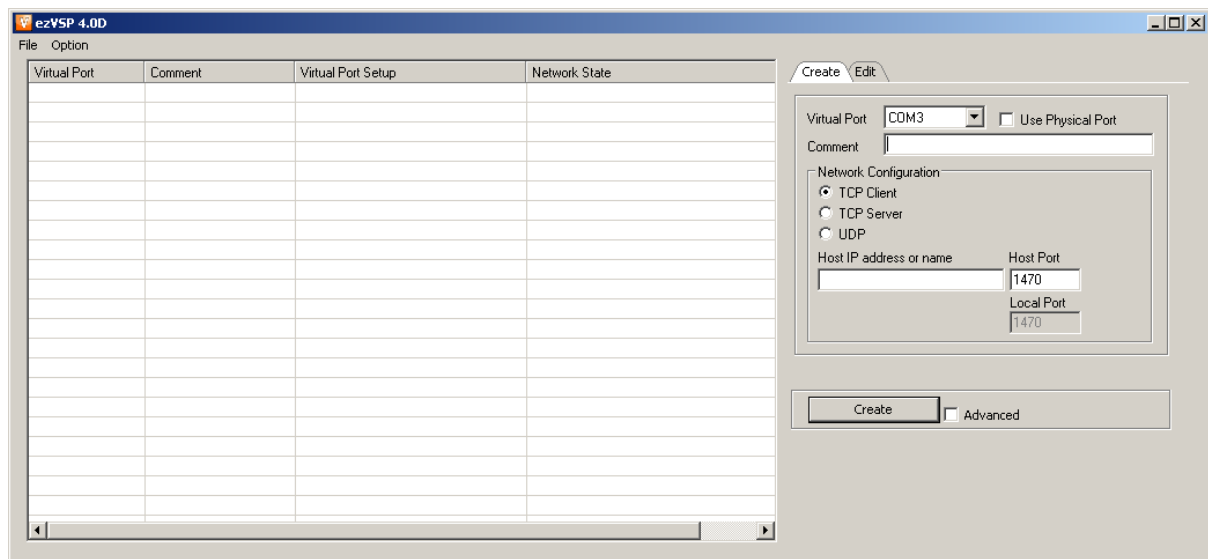


Fig. 3-6 Main window

3.2.3 Exit the program

18. The only way to terminate ezVSP is using Exit in the popup menus.

3.3 Create virtual ports

3.3.1 Basic settings

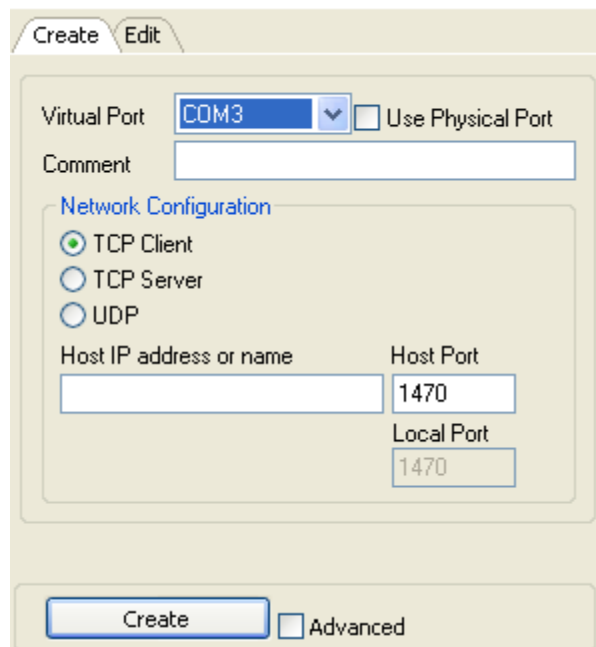


Fig. 3-7 Basic settings

19. Whenever you want to create a new virtual port, first you have to select Create tab and then fill basic settings.

Table 3-1 Basic settings

Field	Comment
Virtual Port	Select a port number.
Use Physical Port	Use a physical COM port name on your PC.
Comment	Brief explanation for the virtual port.
Network Configuration	Select one among TCP Client, TCP Server or UDP.
Host IP address or name	- This field is only valid when the Network Configuration is TCP Client or UDP. - It is remote host's IP address or domain name.
Host Port	- This field is only valid when the Network Configuration is TCP Client or UDP. - It is remote host's port number of TCP or UDP.
Local Port	- This field is only valid when the Network Configuration is TCP Server or UDP. - It is the virtual port's port number of TCP or UDP.

3.3.2 Advanced settings

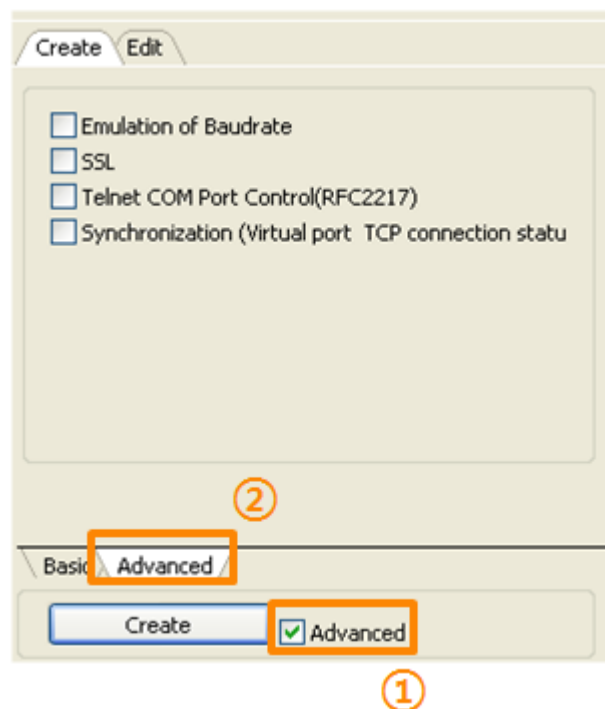


Fig 3-8 Advanced settings

20. First click Advanced checkbox and then select Advanced tab then you can see the above window.

Table 3-2 Advanced settings

Field	Comment
Emulation of Baud rate	- It enables or disables emulation of data transfer speed, according to current virtual port Baud rate value.
SSL	- This field is only valid when the Network Configuration is TCP Client or TCP Server. - You can't use this field with Telnet COM Port Control. - It allows ezVSP to use SSL encryption algorithm for sending or receiving data through TCP/IP.
Telnet COM Port Control(RFC2217)	- This field is only valid when the Network Configuration is TCP Client or TCP Server. - You can't use this field with SSL. - It allows ezVSP to send or receive COM port's settings (Baud rate, data bit, stop bit, and parity) and states (RTS, CTS, DTR, DSR). Please refer the below document for more detail information about this field. http://www.eztcp.com/Support/an/an-eztcp-telcom-en-v13.pdf
Synchronization (Virtual port TCP connection status)	- When a virtual port is opened, it starts to make a TCP/IP connection. - When a virtual port is closed, it starts to close a TCP/IP connection.

3.3.3 Create virtual ports

21. You can create a new virtual port by clicking Create button.
22. The below example is showing how to make a virtual port as a TCP Server.

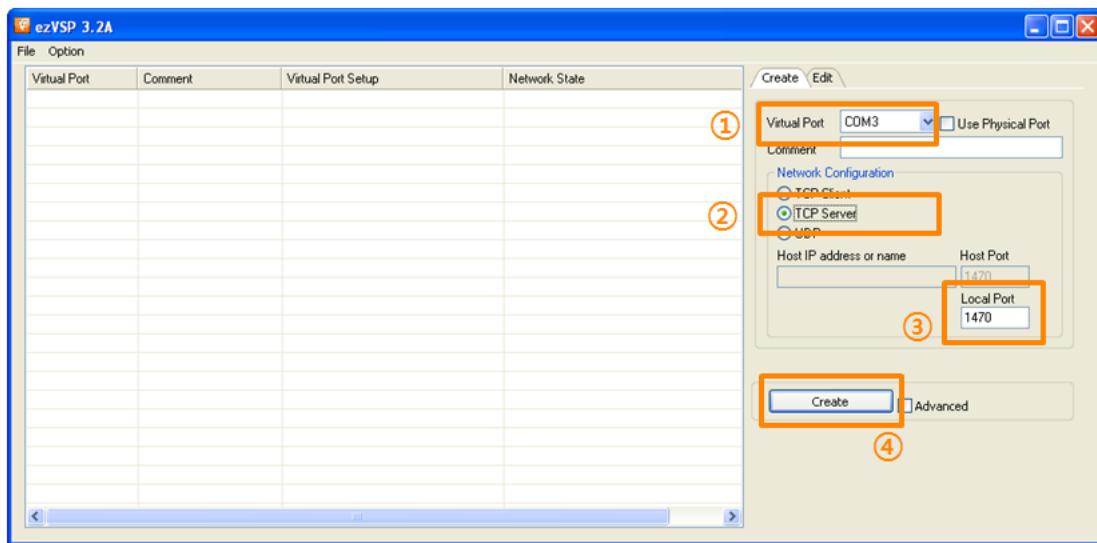


Fig. 3-9 Example of creating a virtual port(1)

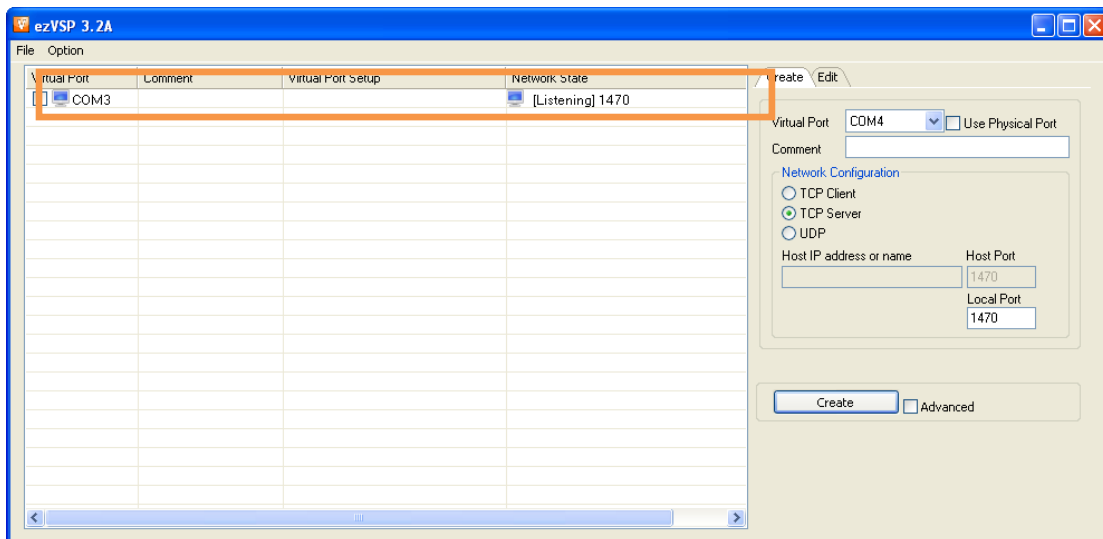


Fig. 3-10 Example of creating a virtual port(2)

23. The virtual port is available right after it is created. Also, it starts network communication.

3.4 Change virtual port setting

24. If you want to change virtual port settings then click one of virtual ports you want to change in ezVSP main windows then you can see the Edit tab automatically.

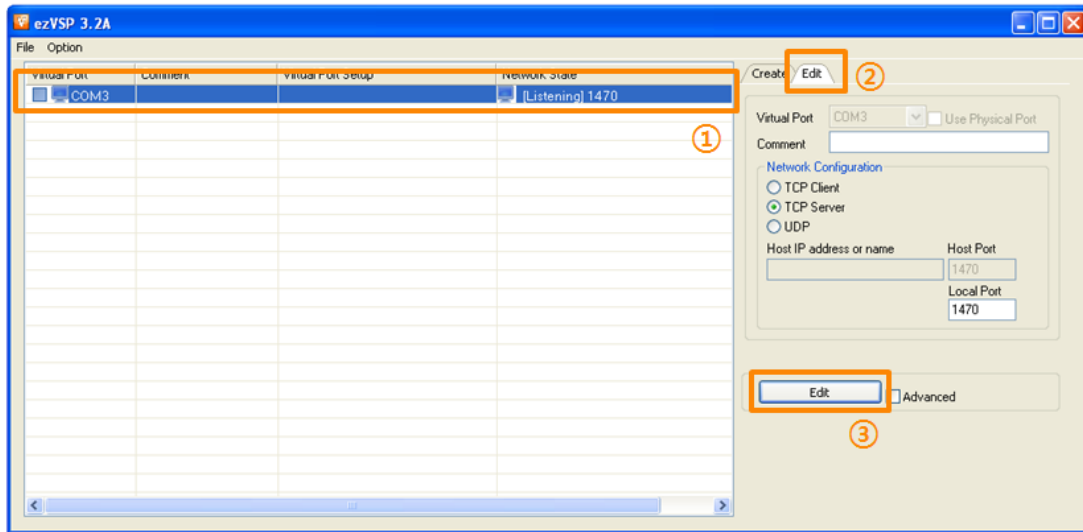


Fig. 3-11 Change virtual port setting

25. You can change all the fields except for the Virtual Port field. After you are finished, click the Edit button.

3.5 Additional functions

3.5.1 Data bypass

Overview

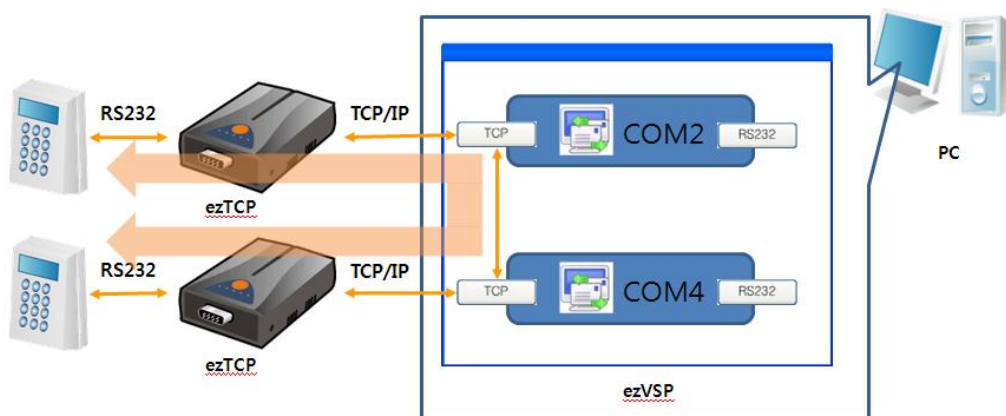


Fig. 3-12 Data bypass overview

26. Two remote serial devices are communicating with each other by using virtual port's TCP/IP function.
27. This function is very useful when a remote device is using DHCP and doesn't support DNS and DDNS functions.

28. A virtual port which is using for data bypass function can't receive a data from user's serial communication program.

Make data bypass

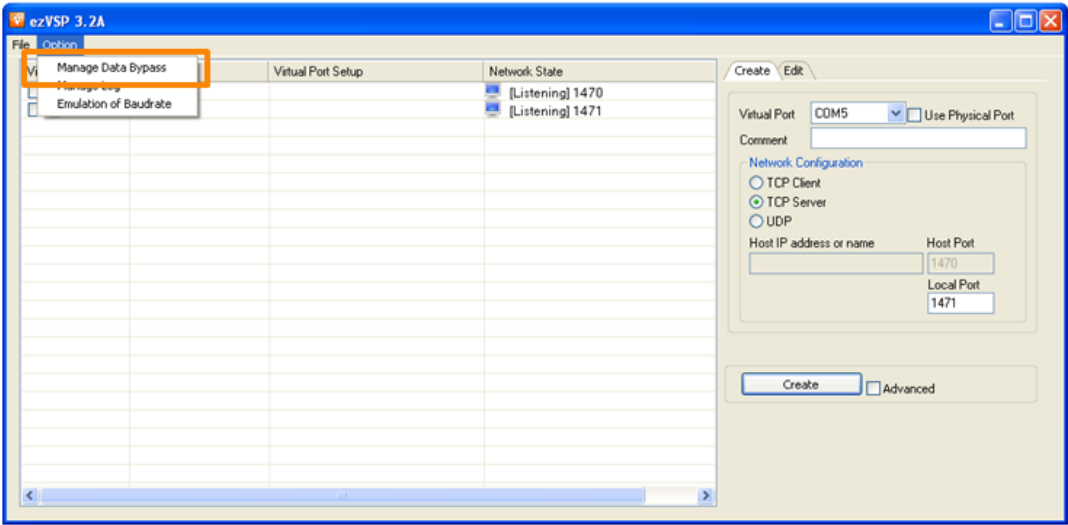


Fig. 3-13 Manage data bypass(1)

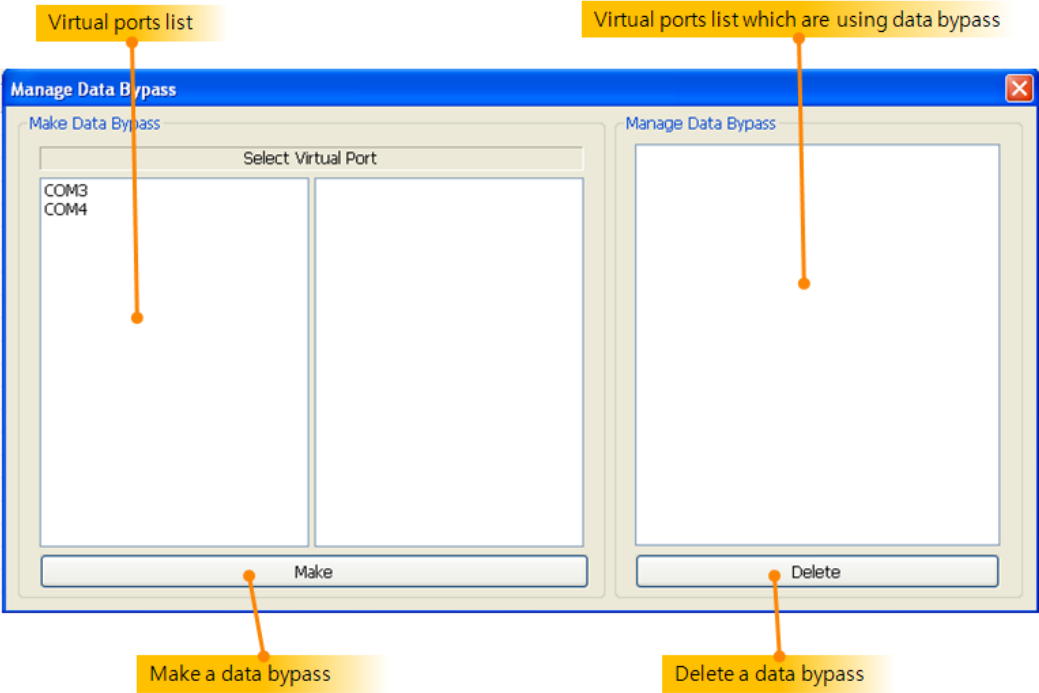


Fig. 3-14 Manage data bypass(2)

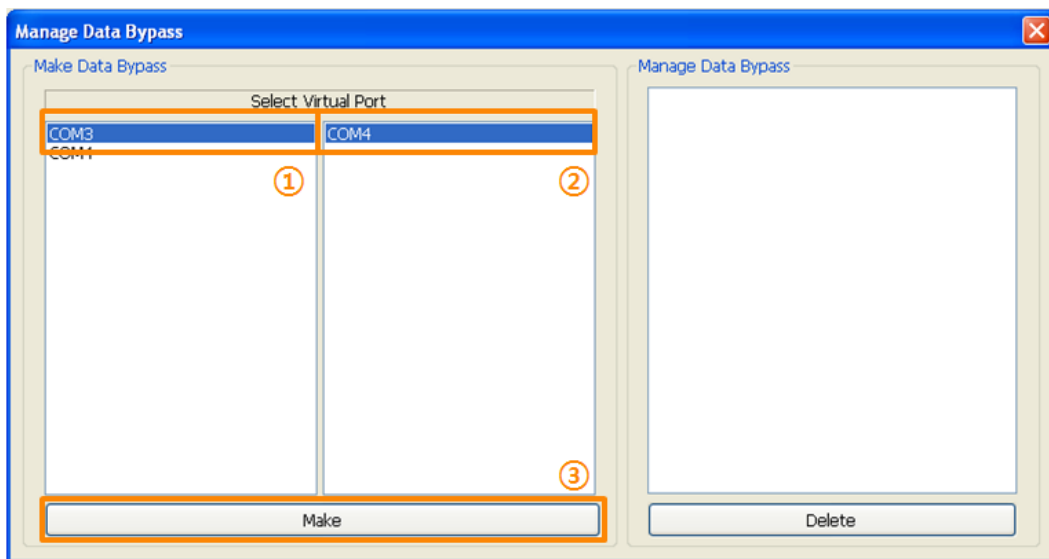


Fig. 3-15 Manage data bypass(3)

29. Select a virtual port on the left side to make a data bypass and then click Make button.

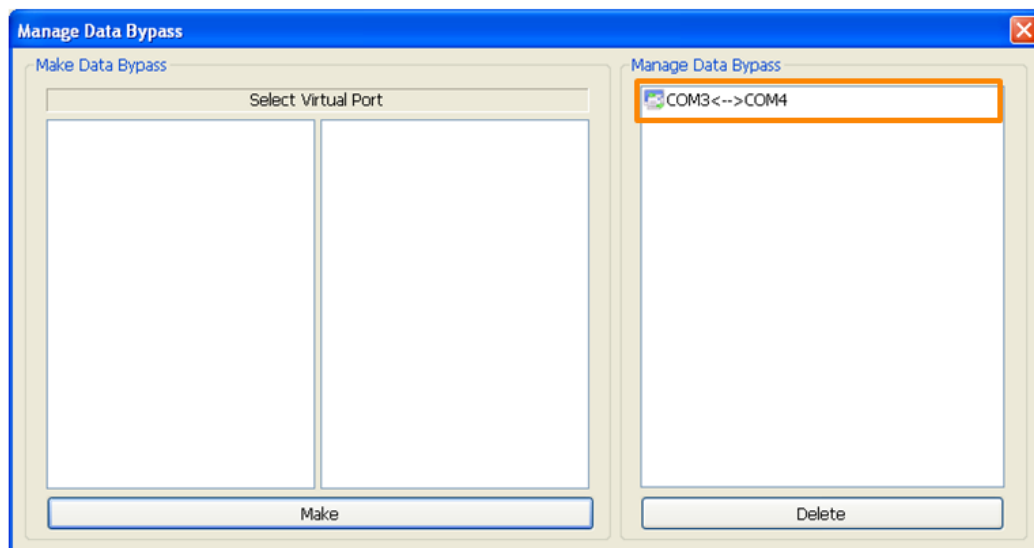


Fig. 3-16 Manage data bypass(4)

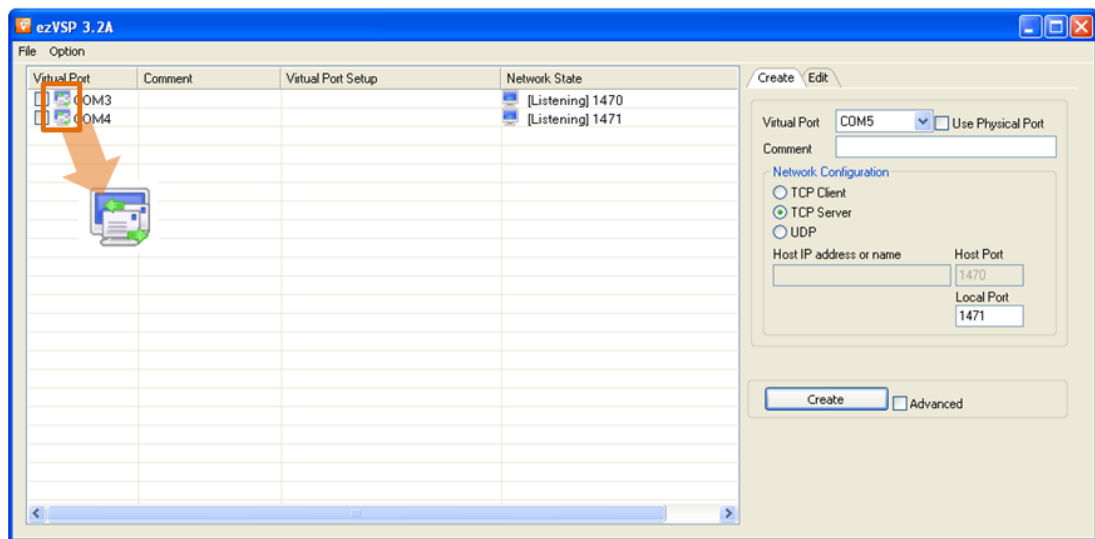


Fig. 3-17 Manage data bypass(5)

Delete data bypass

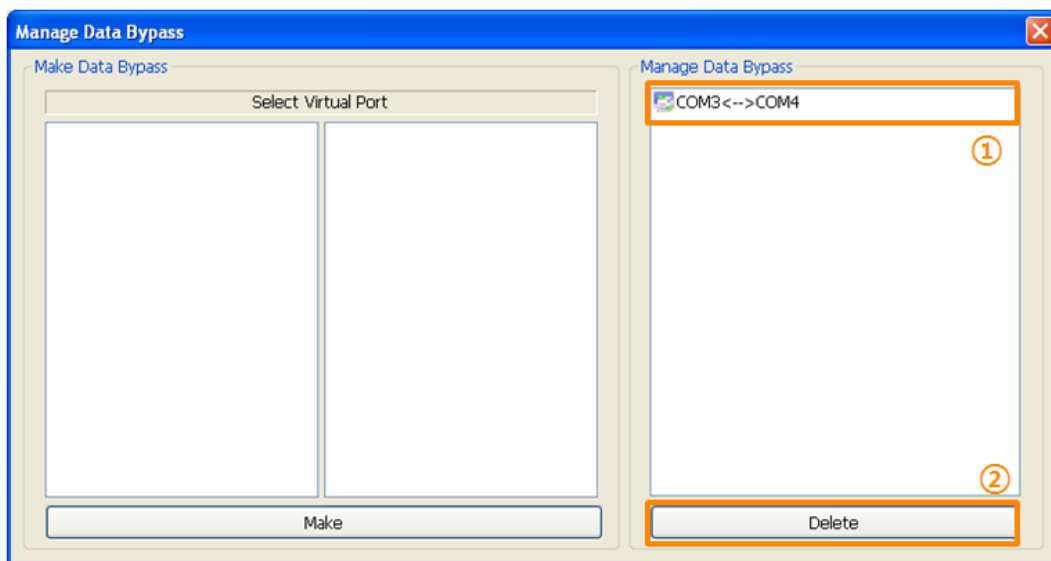


Fig. 3-18 Manage data bypass(6)

30. Select a data bypass on the right side to delete and then click Delete button.

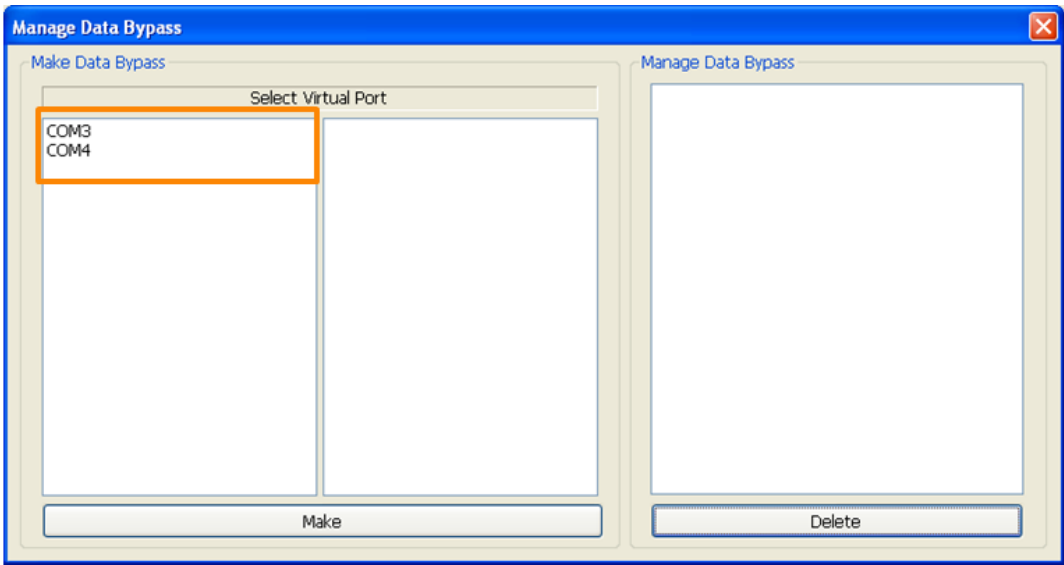


Fig. 3-19 Manage data bypass(7)

3.5.2 Log

Overview

- 31. Two log files will be stored in ezVSP installation folder. One is about a data, the other is about a system event. All file names are automatically generated by ezVSP.
- 32. If the size of any log file is over 5MB then new file will be created.

Table 3-3 Naming rule

	Filename	Example
Data log	[Virtual port name] YYYY-MM-DD_HH-MM-SS_DATA.log	[COM2] 2010-06-09_10_13_22_DATA.log
System log	[Virtual port name] YYYY-MM-DD_HH-MM-SS_SYS.log	[COM2] 2010-06-09_10_13_22_SYS.log

- 33. YYYY-MM-DD_HH-MM-SS represent timestamp.
- 34. Below figure shows a log file format.

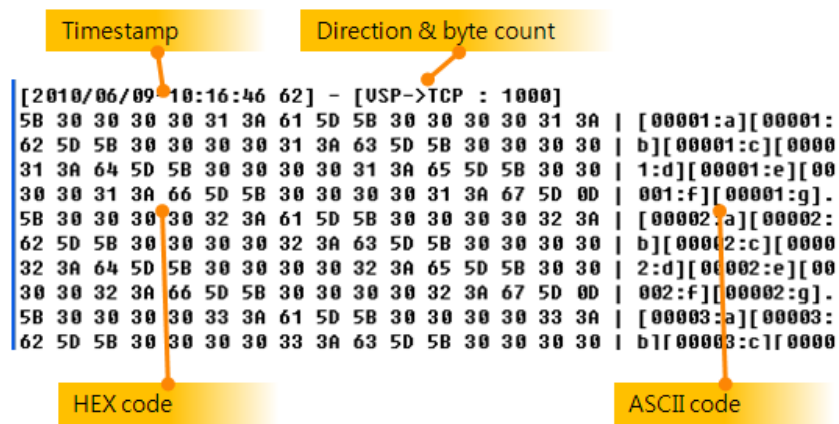


Fig. 3-20 Data log file format

Table 3-4 The contents of a data log file

	내용
Timestamp	The time of data receiving or sending.
Direction & byte count	VSP->TCP : A virtual port has sent a data to TCP port. TCP->VSP : A virtual port has sent a data to serial port. And total number of bytes of a data.
HEX code	The HEX code of a data.
ASCII code	If the HEX code is between 0x31 and 0x128 then print its ASCII code. Otherwise, "." Is printed.

Start log

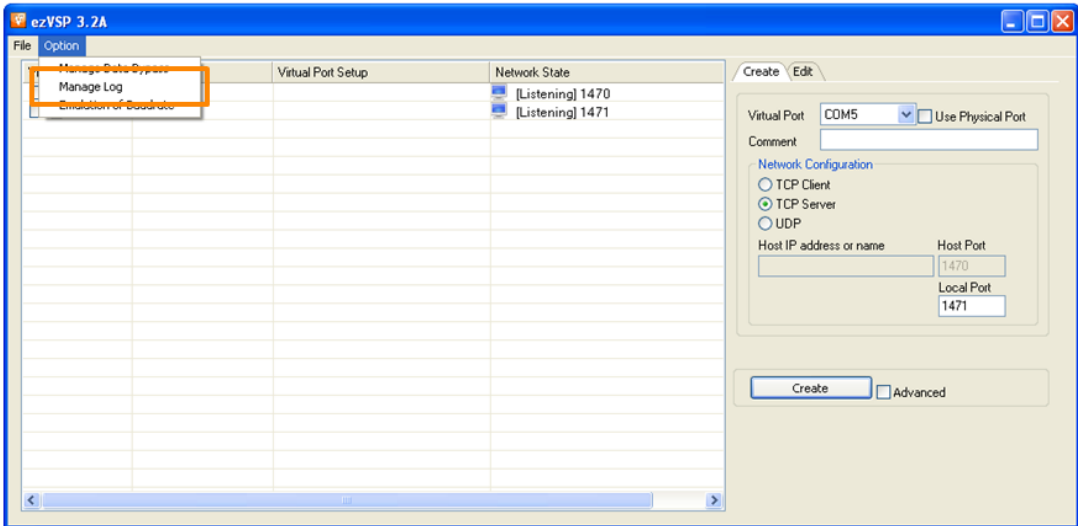


Fig. 3-21 Log(1)

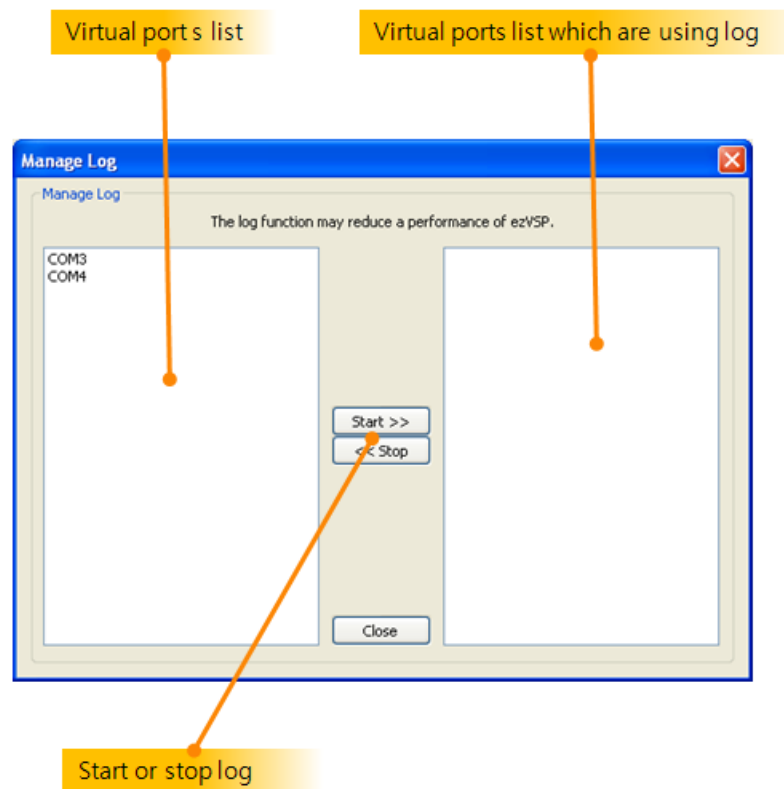


Fig. 3-22 Log(2)

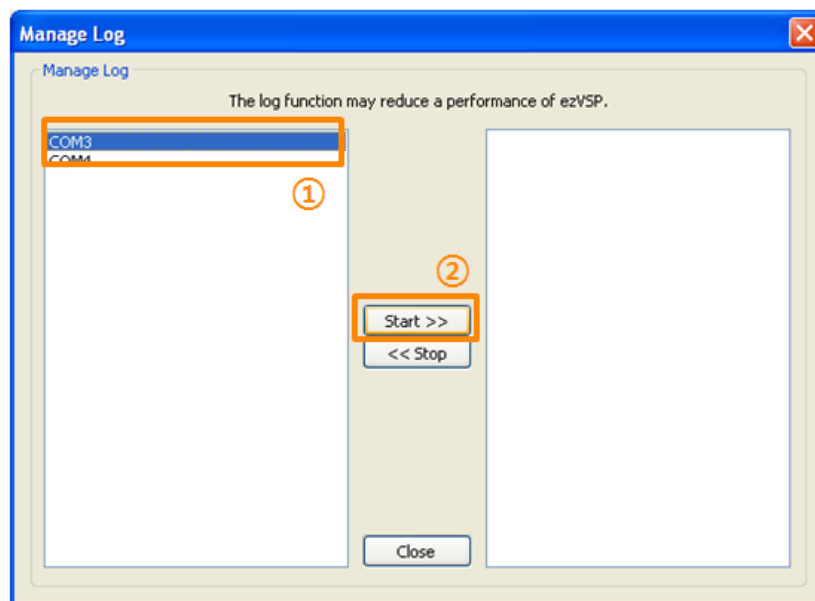


Fig. 3-23 Log(3)

35. Select a virtual port on the left side to save a log file and then click Start>> button.

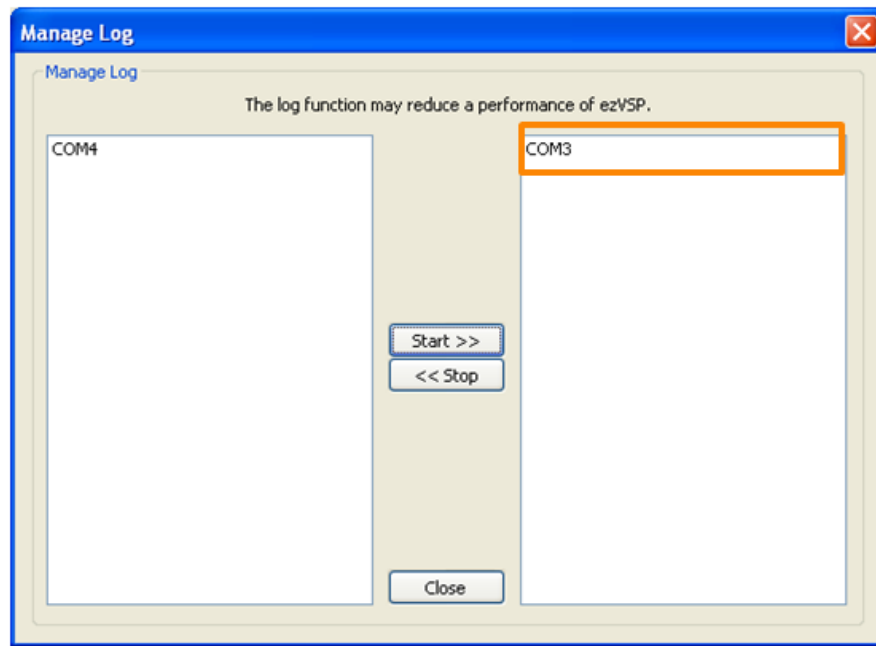


Fig. 3-24 Log(4)

Stop log

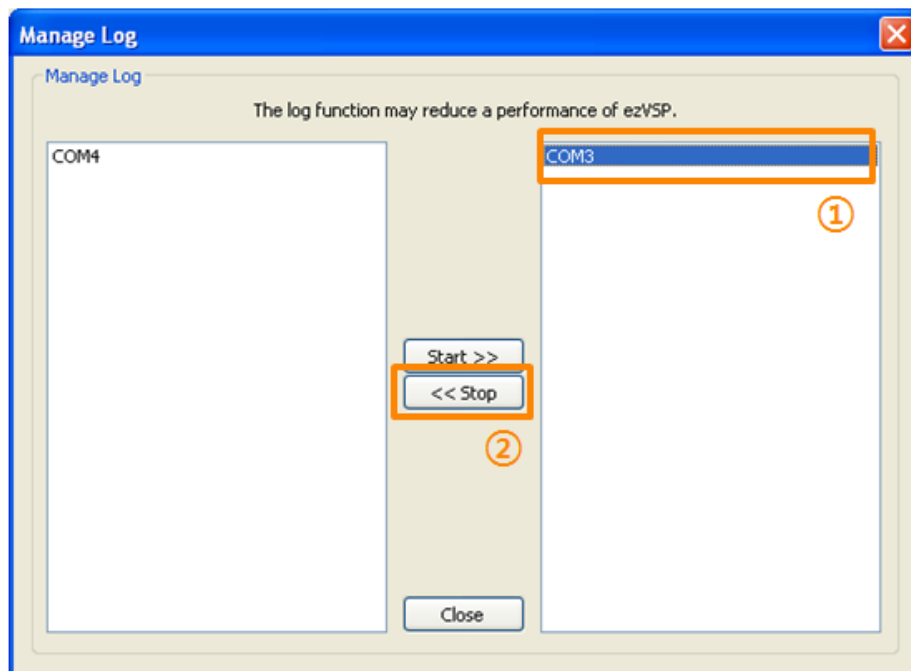


Fig. 3-25 Log(5)

36. Select a virtual port on the right side to stop and then click <<Stop button.

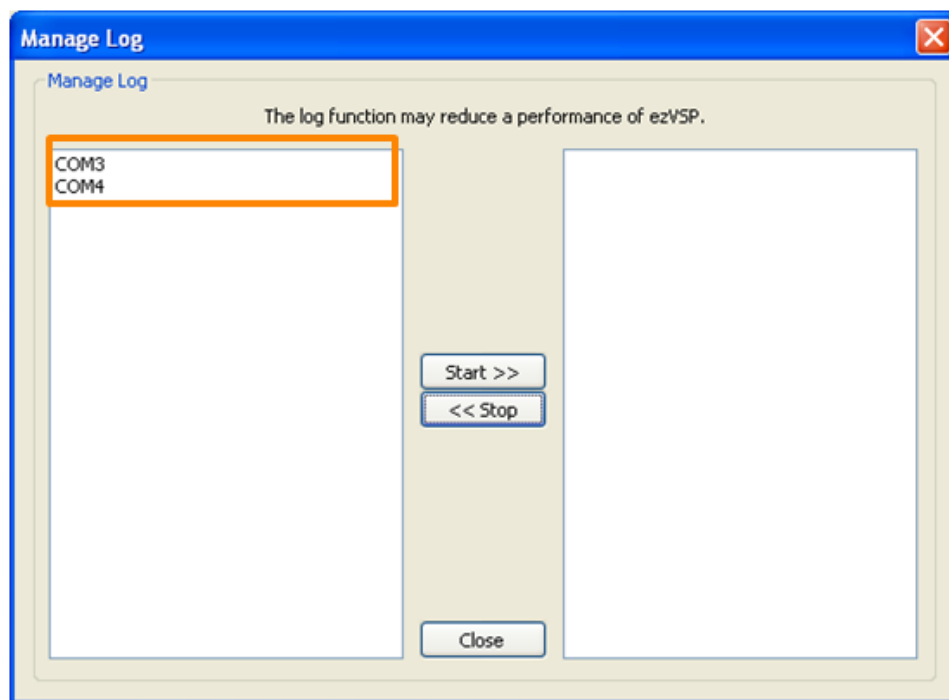


Fig. 3-26 Log(6)

3.5.3 Emulation of baudrate

Overview

37. A virtual port data transfer speed is faster than its Baud rate value. This function enables or disables emulation of data transfer speed, according to current virtual port Baud rate value.

Start emulation of baud rate

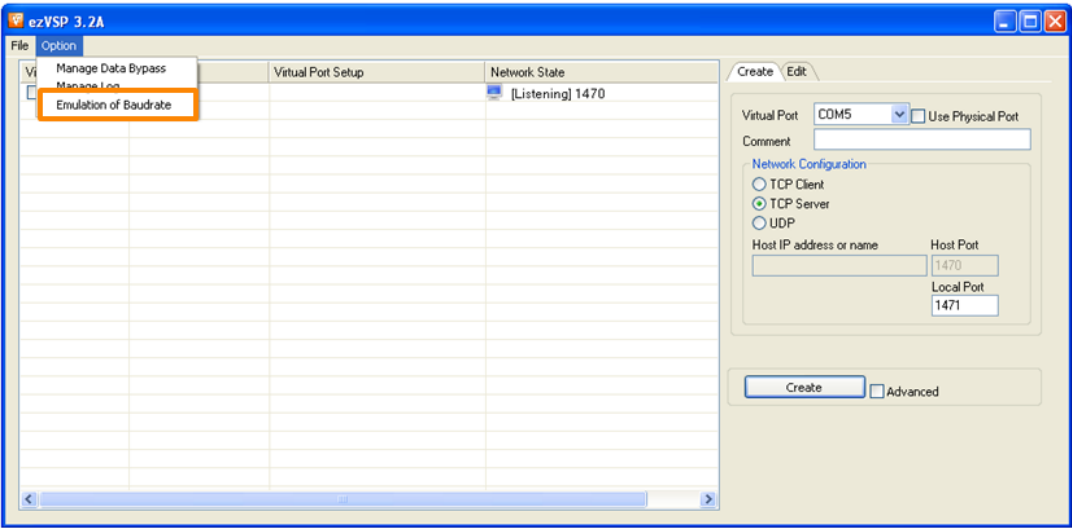


Fig. 3-27 Emulation of baud rate(1)

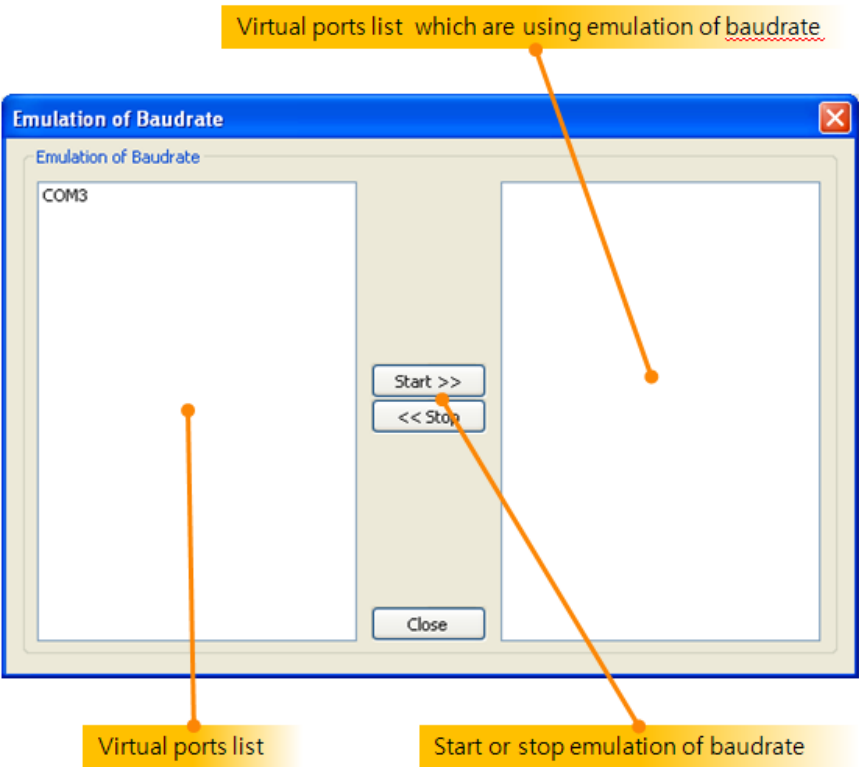


Fig. 3-28 Emulation of baud rate(2)

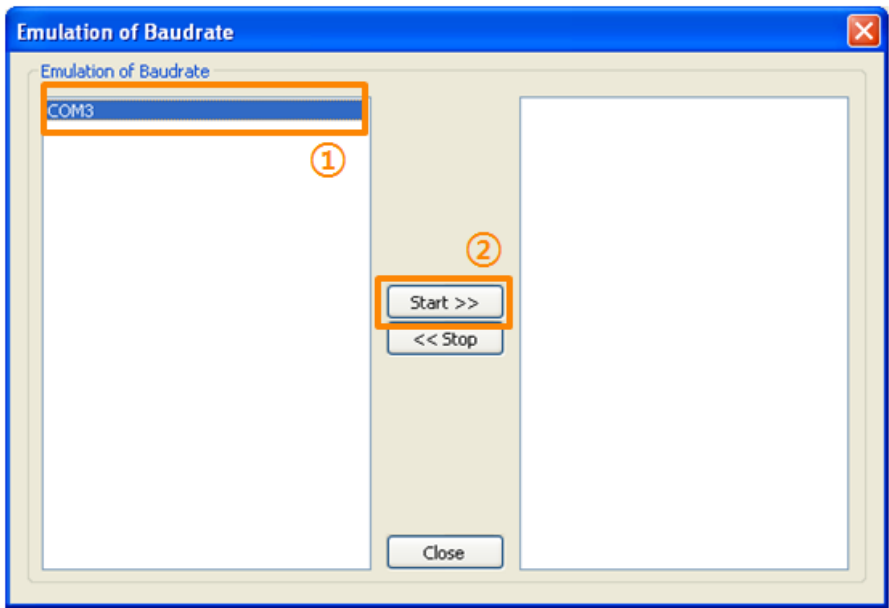


Fig. 3-29 Emulation of baud rate(3)

38. Select a virtual port on the left side to start emulation of baud rate and then click Start>> button.

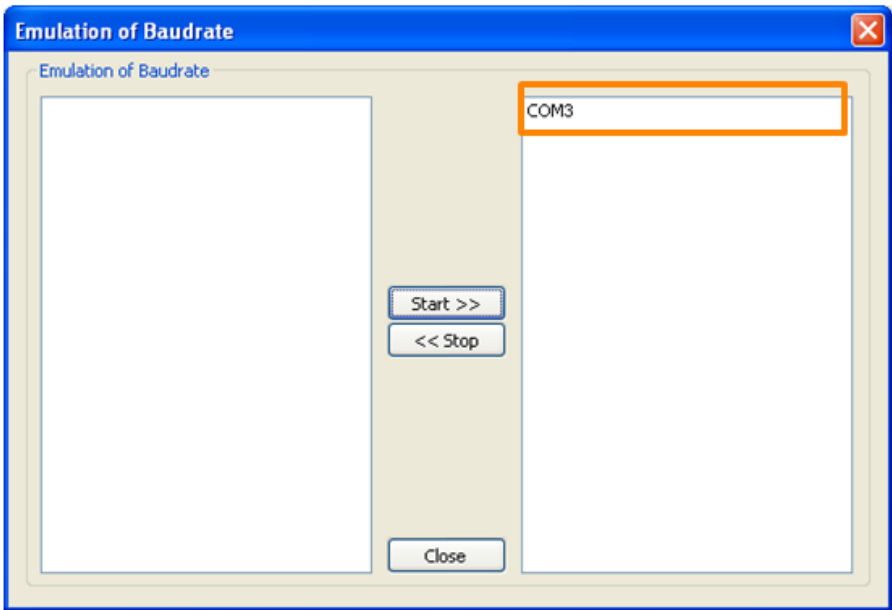


Fig. 3-30 Emulation of baud rate(4)

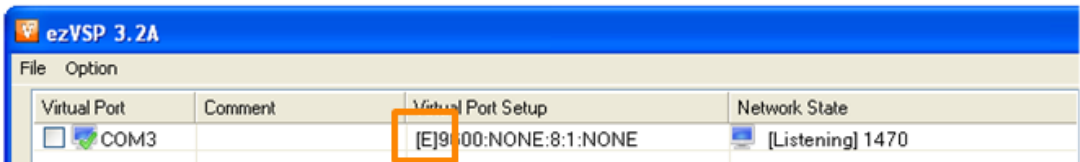


Fig. 3-31 Emulation of baud rate(5)

39. The "[E]" is shown on Virtual Port Setup field when a virtual port using emulation of baud rate.

Stop emulation of baud rate

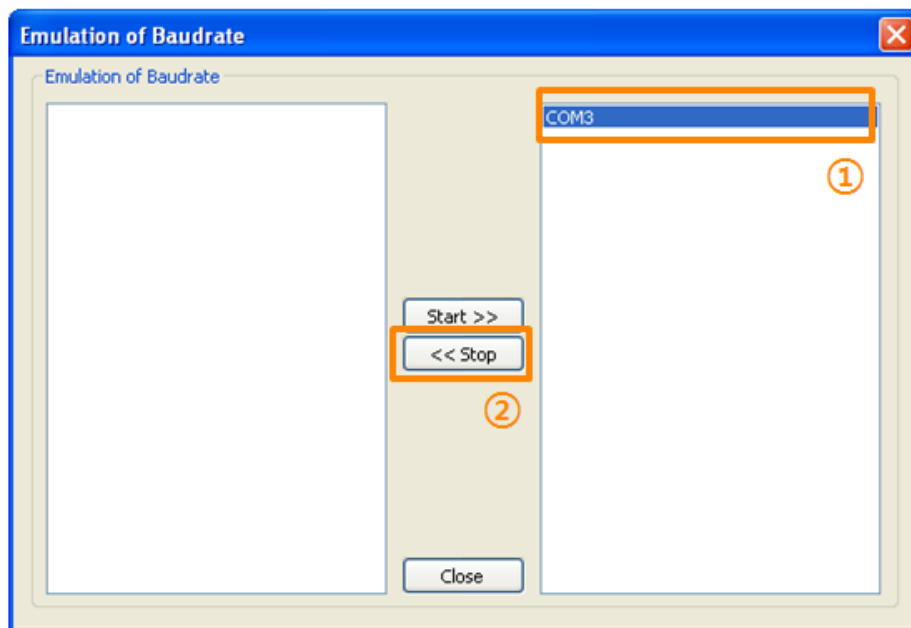


Fig. 3-32 Emulation of baud rate(6)

40. Select a virtual port on the right side to stop emulation of baud rate and then click <<Stop button.

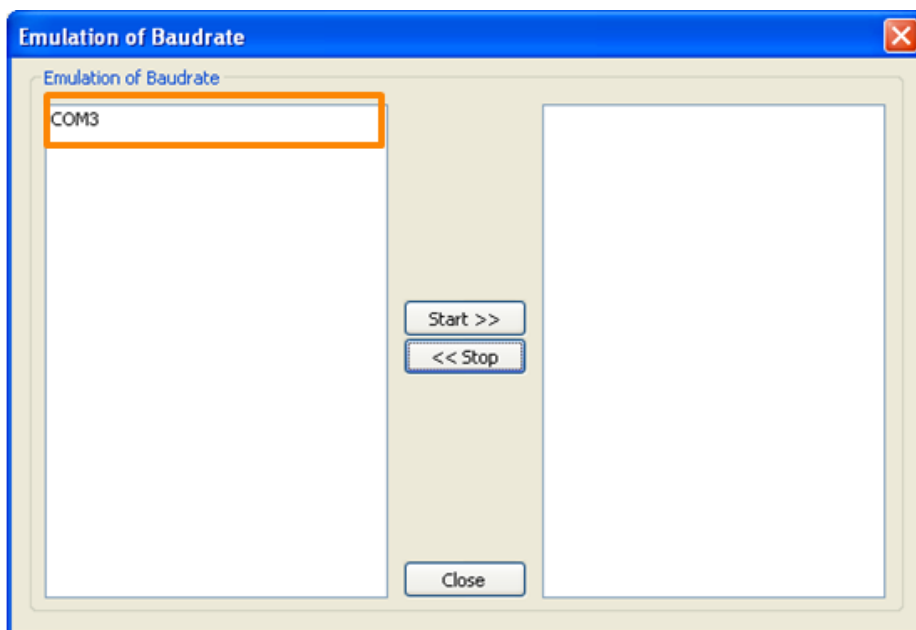


Fig. 3-33 Emulation of baud rate(7)

3.5.4 Backup or restore virtual port setting

Overview

41. You can backup all virtual port settings into a file. Before saving, all information is encrypted.

Backup virtual port setting

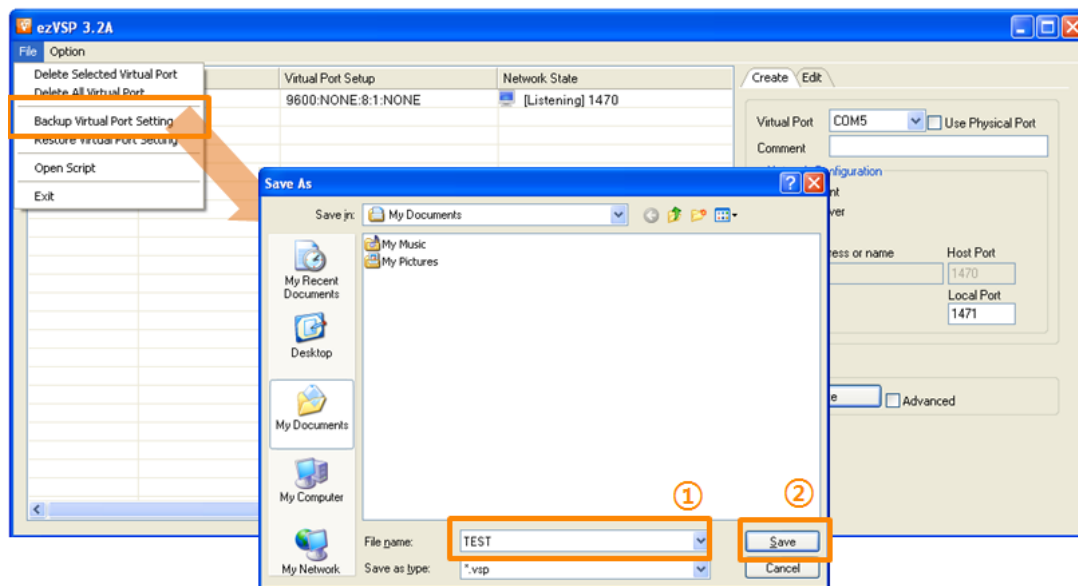


Fig. 3-34 Backup virtual port setting(1)

42. First, select the Backup Virtual Port Setting menu then the Save As dialog box is showing.
43. Second, fill the File name text box as you want to use and then click Save button.

Restore virtual port setting

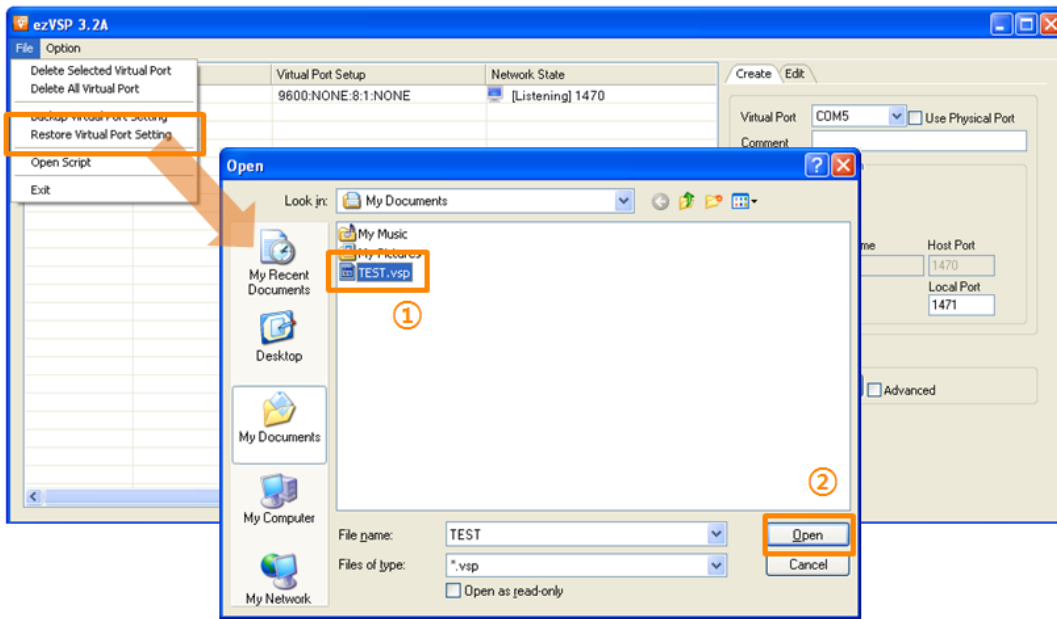


Fig. 3-25 Restore virtual port setting(1)

44. First, select the Restore Virtual Port Setting menu then the Open dialog box is showing.
45. Second, select a backup file as you want to restore and then click Open button.
46. If you have created a virtual port before restoring then below message box will be shown.

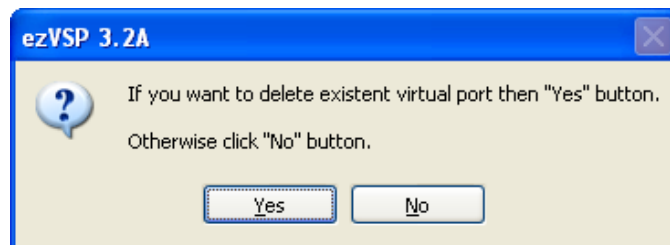


Fig. 3-36 Restore virtual port setting(2)

47. If you click Yes button then all existent virtual ports will be deleted before restoring.
48. If you click No button then the ezVSP will add new virtual port after existent virtual port.

3.5.5 Script

Overview

49. You can create a virtual port by using a text file. The text file is using specific syntax.

Syntax of script file

Table 3-5 Items of script

Item	Syntax	
Virtual port name	[COMxx]	The "xx" represents virtual port number ex) [COM4]
Virtual port comment	Comment=	
Network	Network=	0:TCP client 1:TCP server 2:UDP
Host address	HostAddr=	- When TCP client or UDP. - Enter IP address or DNS name of remote host.
Host port number	HostPort=	- When TCP client or UDP. - Enter port number of remote host.
Local port number	LocalPort=	- When TCP server or UDP. - Enter local port number.
SSL	SSL=	SSL secure communication. - 0 : Disable - 1 : Enable
RFC2217	RFC2217=	Telnet COM Port Control(RFC2217) - 0 : Disable - 1 : Enable
Synchronization (Virtual port & TCP connection status)	Sync=	Synchronization (Virtual port & TCP connection status) - 0 : Disable - 1 : Enable
Data bypass	BypassPortName=	Enter a virtual port name which you want to make a data bypass.
Log	Log=	- 0 : Disable - 1 : Enable

50. A value of each item has to be placed after "=".

51. Each item have to end with <CR><LF>

Table 3-6 Example of script

```
[COM2]
Comment=sensor #1
Network=0
HostAddr=172.16.0.1
HostPort=1471
LocalPort=
SSL=1
RFC2217=0
Sync=1
BypassPortName=COM1
Log=1
```

3.6 Delete virtual ports

3.6.1 Delete a virtual port

52. When you want to delete one of virtual ports, check the checkbox in virtual port column and select the Delete Selected Virtual Port menu.

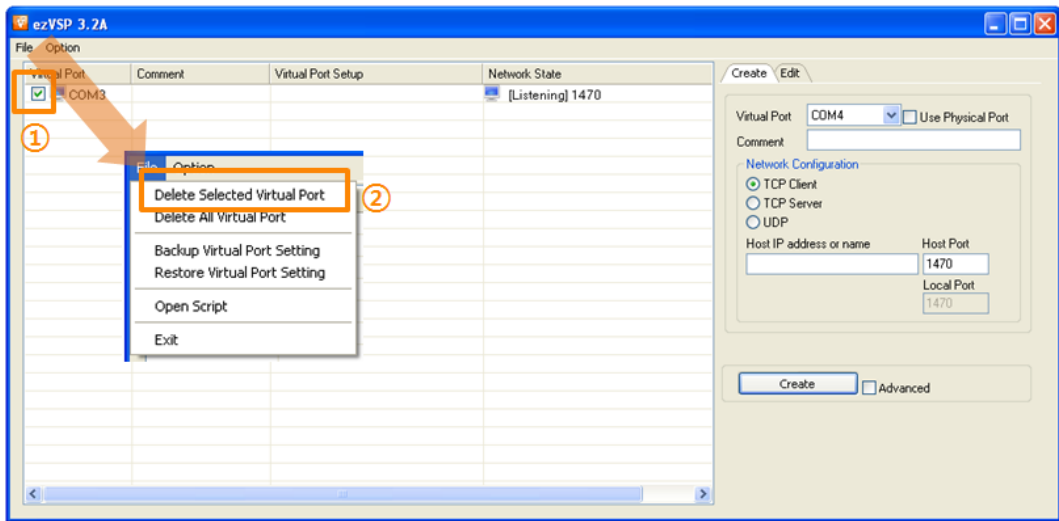


Fig. 3-37 Delete virtual port(1)

53. You can also delete one of virtual ports by using popup menu.

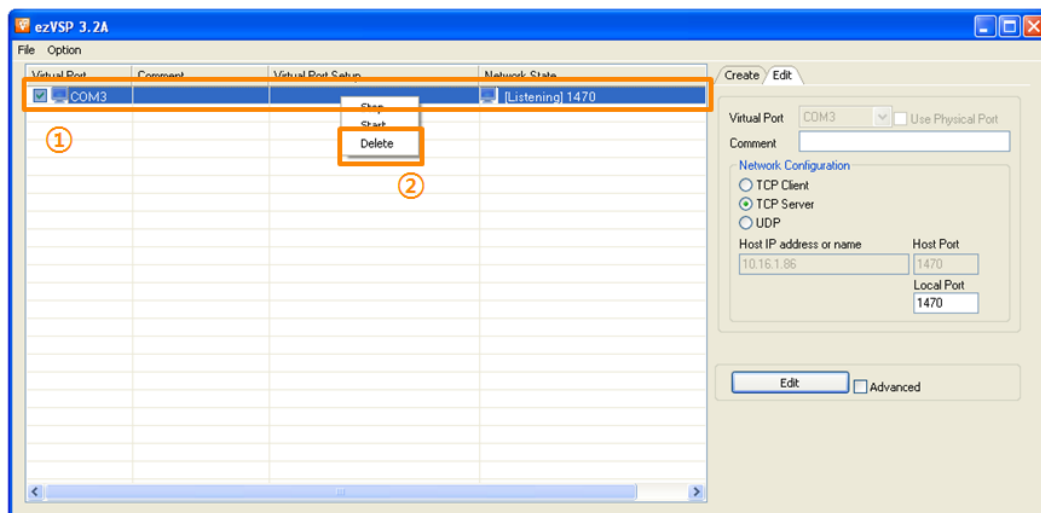


Fig. 3-38 Delete virtual port(2)

3.6.2 Delete entire virtual ports

54. When you want to delete all virtual ports, then select Delete All Virtual Port menu. In this case, you don't have to check the checkboxes in virtual port column.

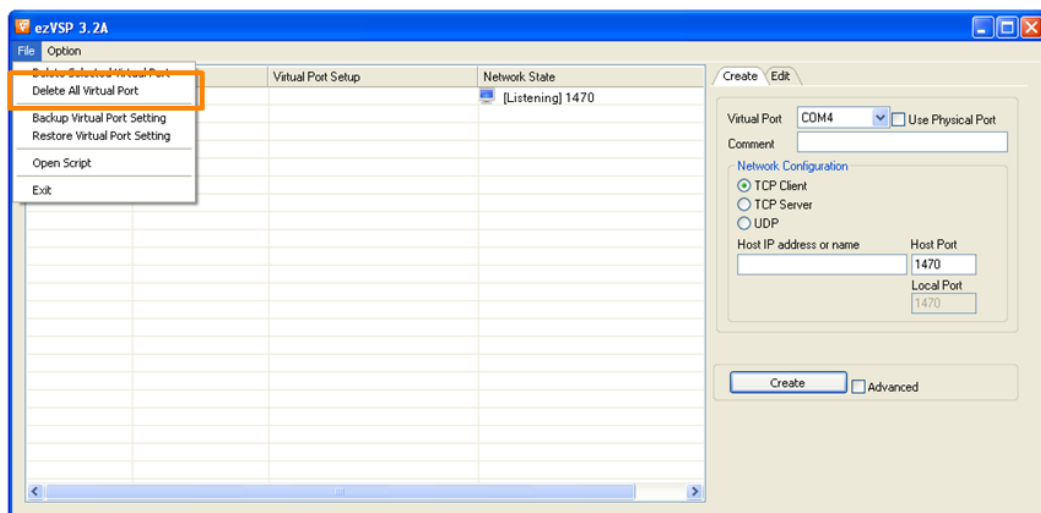


Fig. 3-39 Delete virtual port(3)

3.6.3 Cautions

55. It may take many seconds when it is in abnormal condition.
If the virtual port's Network State which you want to delete is in "Connecting" then this port will be deleted after the Network State is changed to other state.
56. You can't delete a virtual port when it is used by serial communication program.

3.7 Status of virtual ports

3.7.1 Status of virtual ports

57. You can identify virtual ports status by icons.

Table 3-7 Status of virtual ports

Icon	Comments
	A virtual port has created successfully.
	A serial communication program is using the virtual port.
	A virtual port is using 3.5.1 Data bypass function.
	Creating a virtual port is failed. Please delete it and make again with another Virtual Port.

3.7.2 Status of the network

58. You can also identify the network status by icons.

Table 3-8 Status of the network

Icon	Comments
	<i>When Network Configuration is TCP Client :</i> Trying to make a TCP/IP connection. <i>When Network Configuration is TCP Server :</i> Waiting a TCP/IP connection request.
	<i>When Network Configuration is TCP Client or TCP Server :</i> A TCP/IP connection is established. <i>When Network Configuration is UDP :</i> Virtual port successfully binds specific UDP port.
	Error occurred : You can see detail error message next to icon.

3.8 Check virtual ports information

59. You can check how many bytes have passed through the virtual port.
60. When you want to see this information, then double-click one of virtual ports.

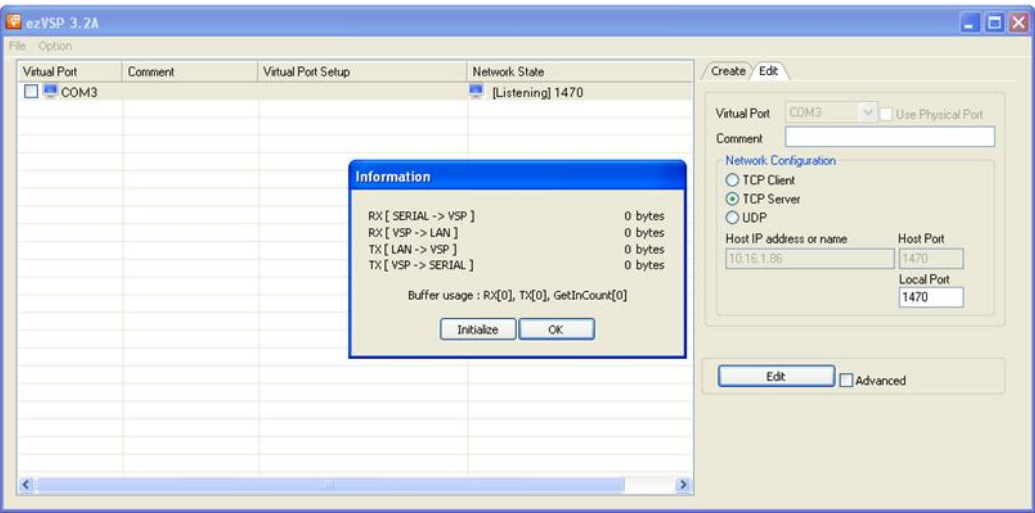


Fig. 3-12 Check virtual port information

Table 3-9 Virtual port information

Field	Comment
RX[SERIAL->VSP]	Total number of bytes received from user's serial communication program.
RX[VSP->LAN]	Total number of bytes sent to LAN from RX[SERIAL->VSP].
TX[LAN->VSP]	Total number of bytes received from LAN.
TX[VSP->SERIAL]	Total number of bytes sent to user's serial communication from TX[LAN->VSP].
Buffer usage	RX, TX : Total number of bytes in the buffer of ezVSP for transferring a data. Each buffer size is nearly 4,096 bytes. GetInCount : Total number of bytes in the Virtual Serial Port Driver.

61. If you want to initialize these counters then click Initialize button.

4 History

Date	Version	Comments	Author
2010.02.25	1.0	○ Created	Jack Kim
2010.03.23	1.1	○ Change the figures and add new features.	Jack Kim
2010.06.16	1.3	○ Change the figures and add new features.	Jack Kim
2010.12.14	1.4	○ Modify contents of operating system compatibility	Jack Kim
2011.11.09	1.5	○ Change the figures and modify operating system compatibility	Lisa Shin