ezTCP Utility

ezVSP User's Manual

Version 1.8

2014-05-30

Sollae Systems Co., Ltd.

Contents

1   Overview

1.1 What is ezVSP?

● ezVSP is a program that has the same role of ezTCP. You can use TCP/IP protocol conversion function with the program.

● The serial ports created by ezVSP are not physical but virtual devices. However, you can see those ports in the device manager.
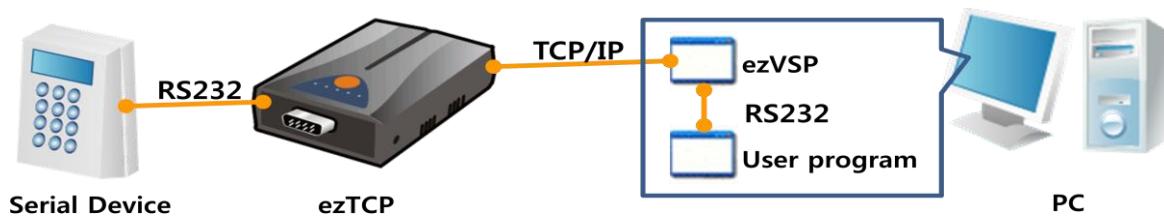

Fig 1-1 Overview of ezVSP

● ezVSP can be modified without prior notice in order to remove bugs or add new features. You can download the latest version from our website.

http://www.eztcp.com/en/download/ezvsp.php

1.2 Key features

1.2.1 Operating system requirement

Operating system
Microsoft Windows Server 2003
Microsoft Windows Server 2008
Microsoft Windows Server 2008 R2
Microsoft Windows Server 2012
Microsoft Windows XP
Microsoft Windows Vista
Microsoft Windows 7
Microsoft Windows 8

Table 1-1 Operating system requirement

1.2.2 Features

- ezVSP is registered for startup on Windows.

- ezVSP supports TCP server, TCP client and UDP communication.

- The TCP server provides only one TCP/IP connection.

- ezVSP supports SSL v3.0 and TLS v1.0 when it works as a TCP server or client.

- ezVSP supports RFC2217 (Telnet COM Port Control Option) when it works as a TCP server or client.

- SSL secure communication and RFC2217 (Telnet COM Port Control Option) can't be used concurrently.

2   Installation

- You can find the latest version on our website.

- http://www.eztcp.com/en/download/ezvsp.php

## 2.1 Installation procedure
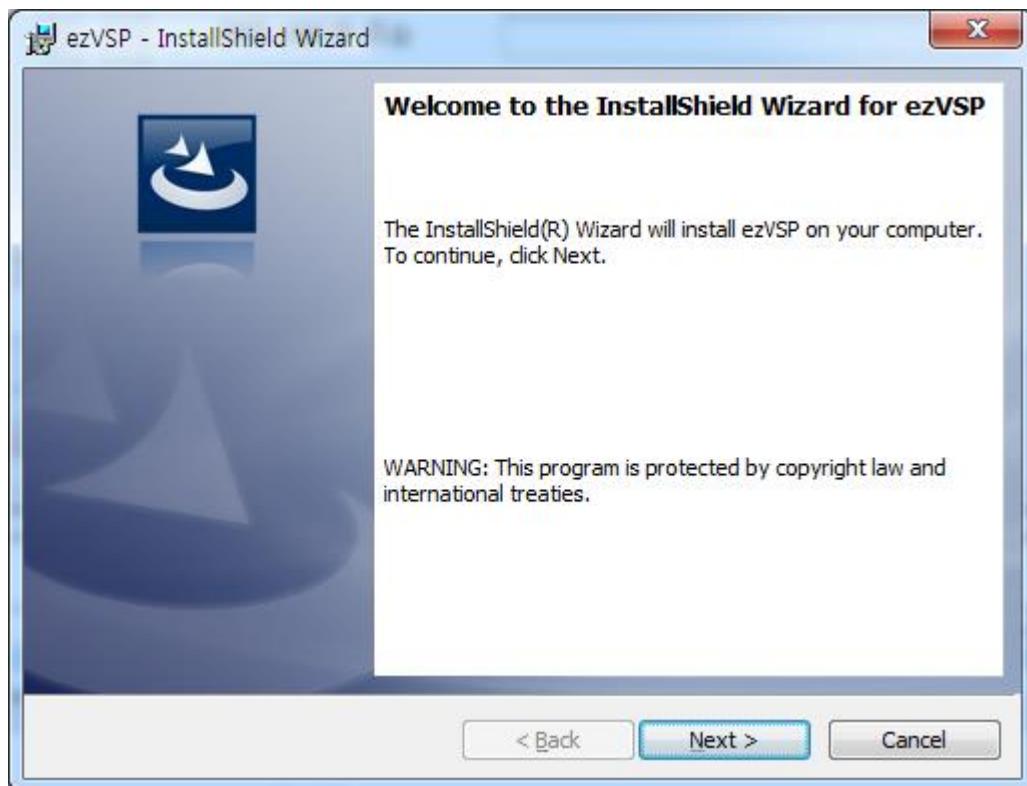
Fig. 2-1 Ready to setup
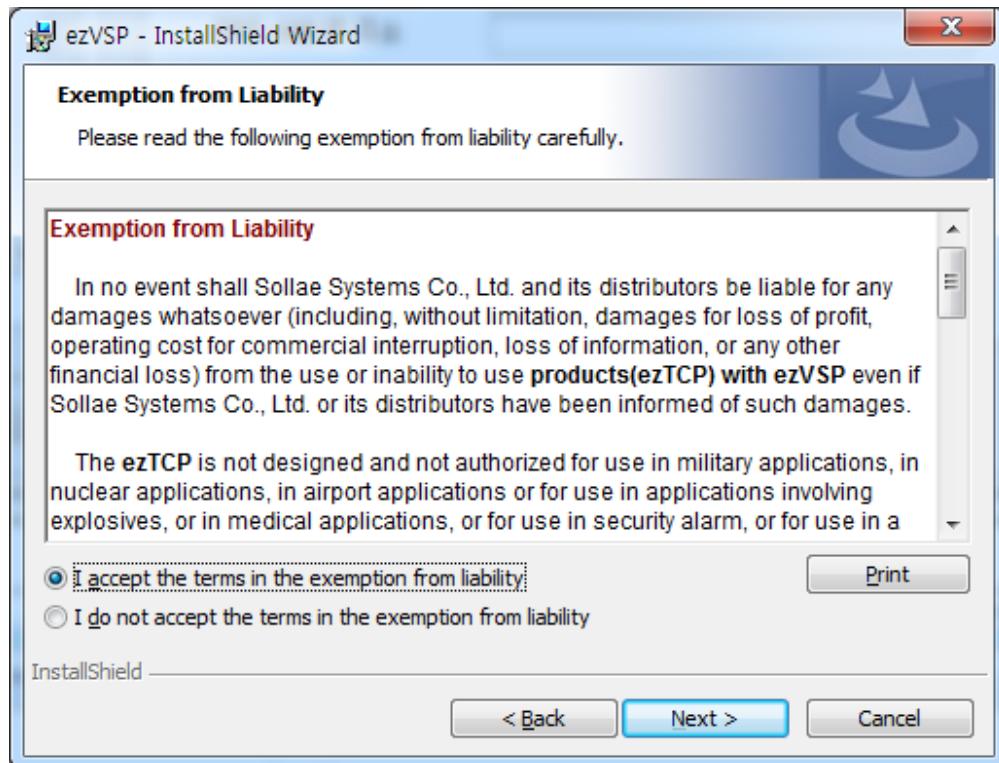
Fig. 2-2 Confirm the exemption from liability
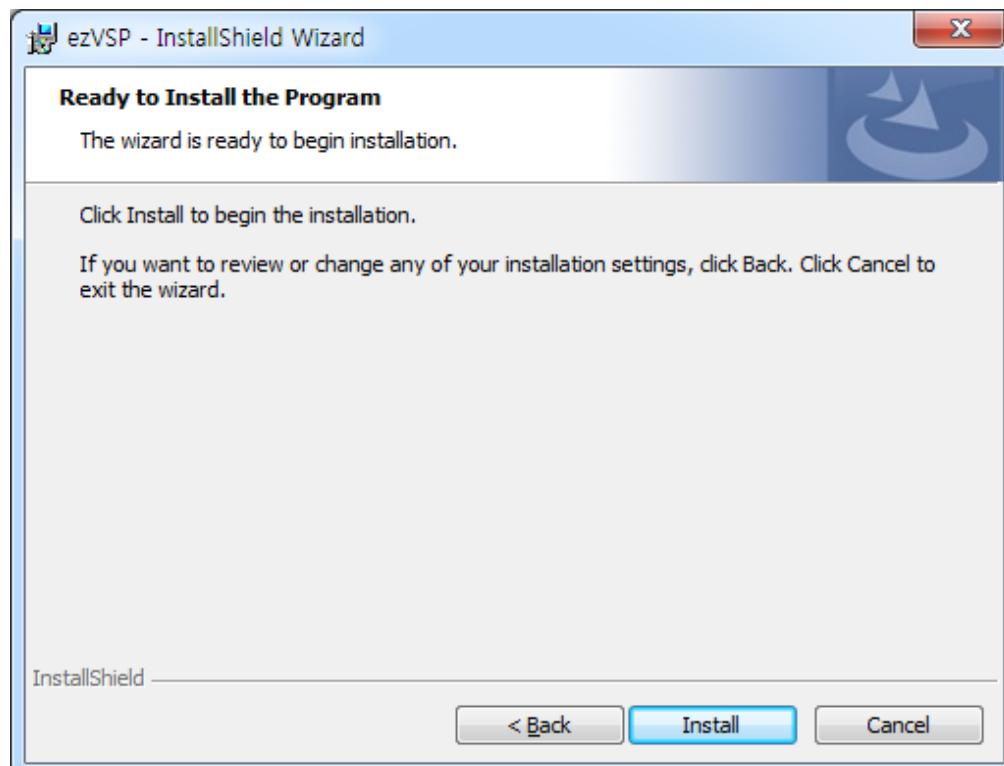
Fig. 2-3 Setup information

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

- Click Install button for next step.
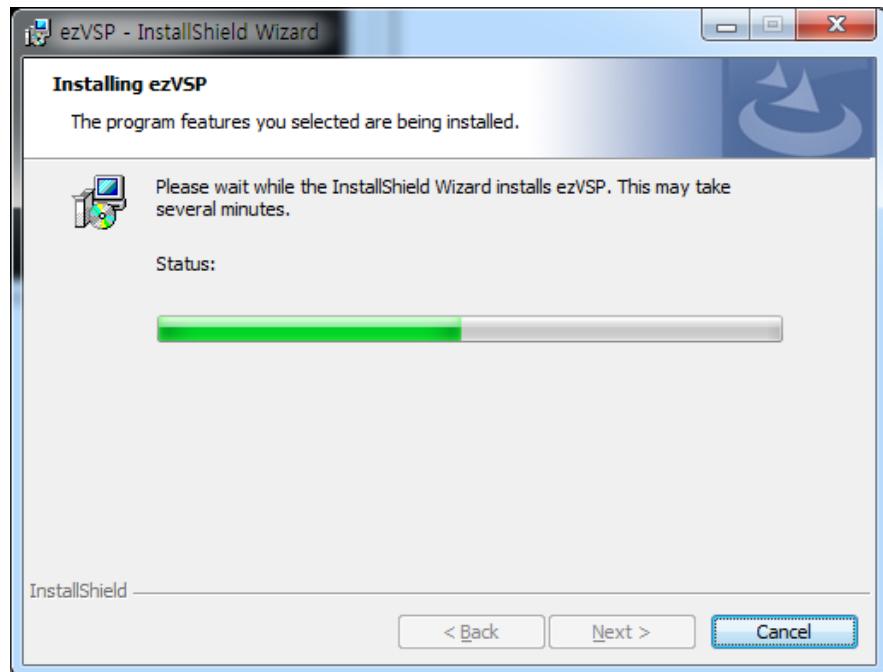

Fig. 2-4 Installing (1)
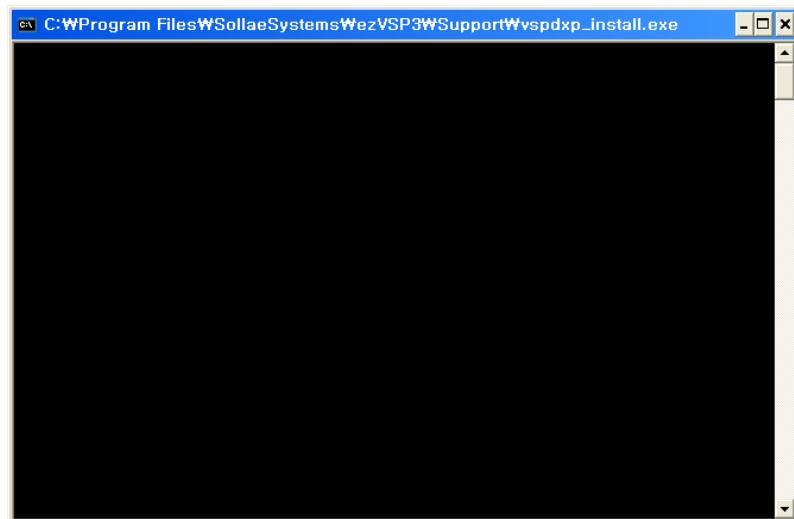
Fig. 2-5 Installing (2)

- The device driver for virtual ports is installed to user's computer during installation procedures. It may take several minutes depending on the system.

Fig. 2-6 Installing (3)

● After installing the device driver, the DLL for virtual ports is installed to user's computer.
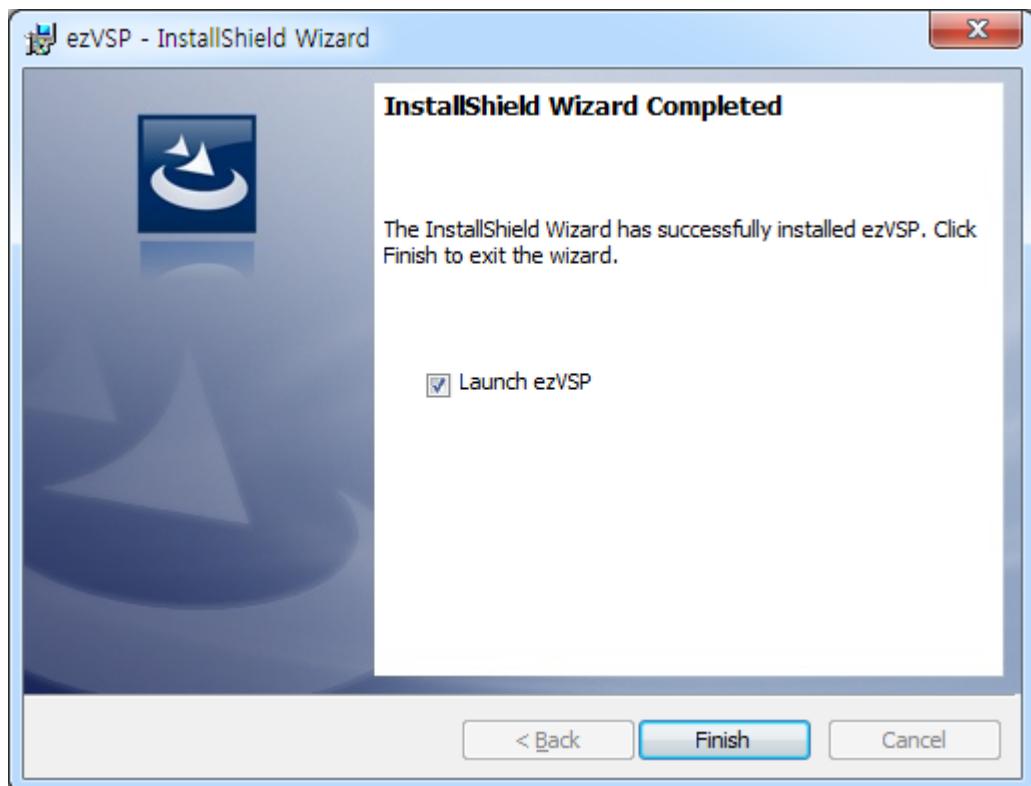
Fig. 2-7 Installation completed

3 How to use ezVSP

3.1 Registration

- ezVSP provides its functions to customers who uses ezTCP.

- The **MAC address** of ezTCP and the **KEY** are needed for this step.
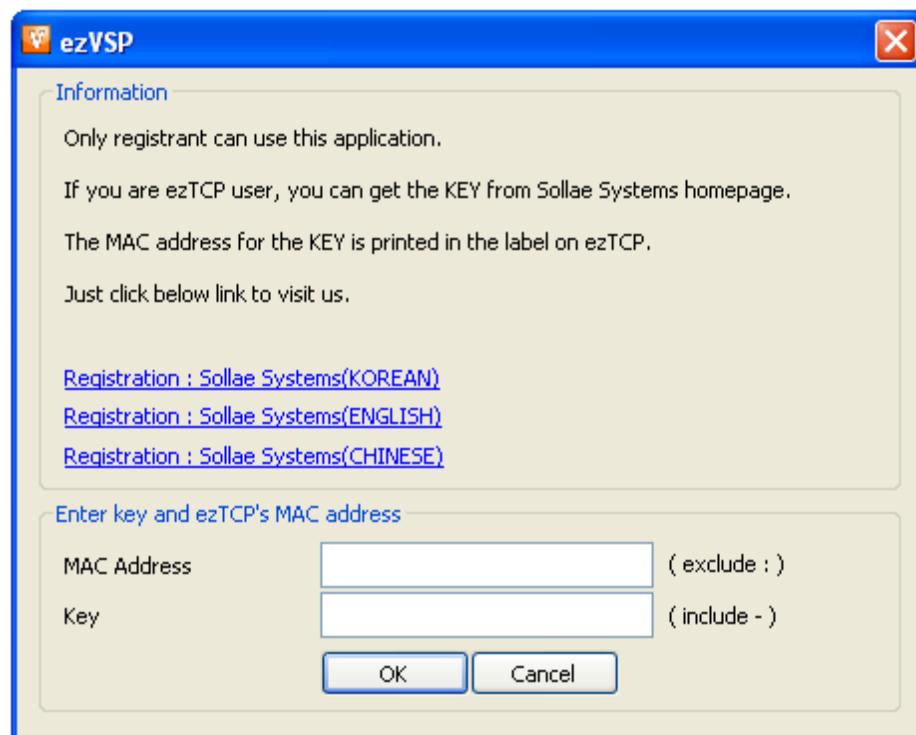
Fig. 3-1 Enter KEY

- If you don't have the KEY, please visit our website to register your ezTCP.

- Click one of the three links and then it leads you to the ezVSP registration page of selected language.

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Fig. 3-2 Registration (1)

● Please fill all the fields and then click **Request Registration**.

Sollae Systems Co., Ltd.   - 9 -   http://www.sollae.co.kr
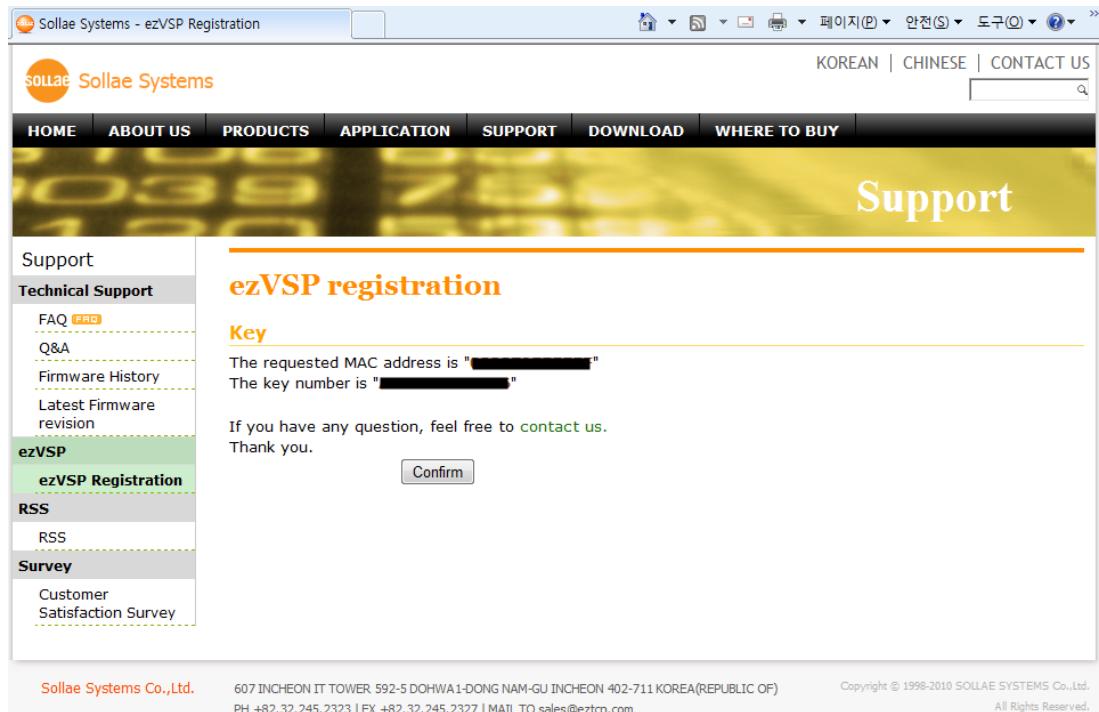
Fig. 3-3 Registration (2)

- We also send the email with the information. So, please make sure that email address is available.

- The KEY is generated by using the MAC address. So, please use the pair of the MAC address and the KEY.

3.2 Start and Exit the program

3.2.1 Start the program

- ezVSP is minimized to system tray after it started.

Fig. 3-4 Tray icon

3.2.2 Popup menus
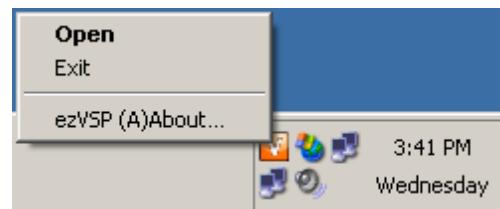
Fig. 3-5 Popup menus

● Right-click the icon and then you can choose **Open, Exit, or ezVSP (A)About...**.

Menu	Function
Open	Click Open and then ezVSP shows its main window.
Exit	Click Exit and then ezVSP will be terminated.
ezVSP (A)About...	Click ezVSP (A)About... and then ezVSP This menu shows the version information.

Table 3-1 Popup menus
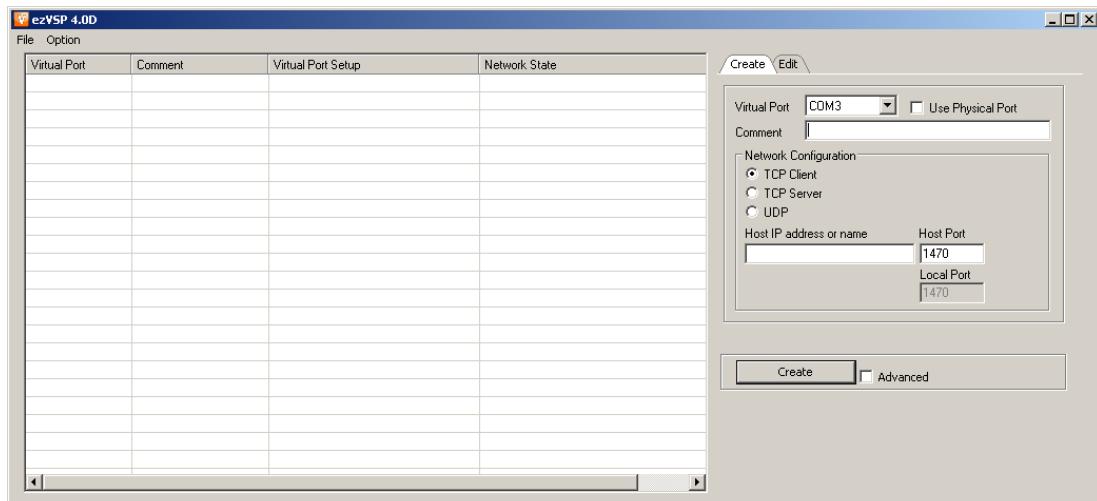
Fig. 3-6 Main window

3.3 Create virtual ports

3.3.1 Basic settings
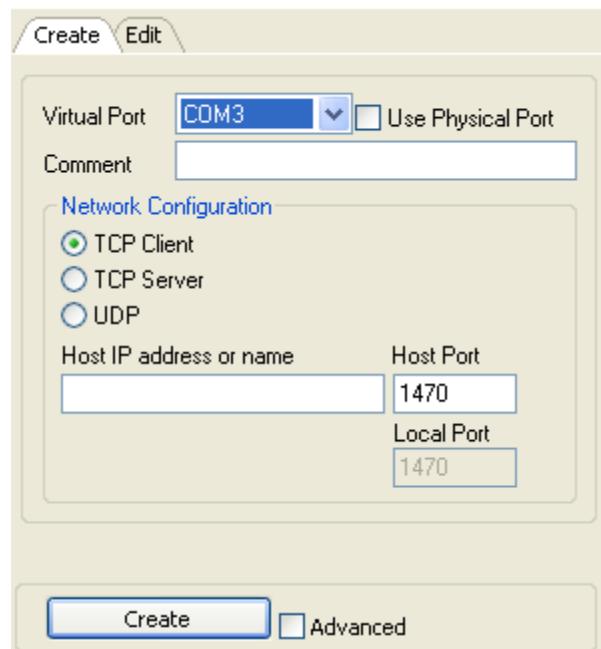
Fig. 3-7 Basic settings

● Click **Create** tab and then fill the basic settings.

| Field	Comment
Virtual Port	Select a port number.
Use Physical Port	Click **Use Physical Port** and then ezVSP displays the physical COM ports on your system in **Virtual Port.**
Comment	Short explanation of the virtual port.
Network Configuration	Choose one of TCP Client, TCP Server, or UDP.
Host IP address or name	In case of **Network Configuration** is TCP client or UDP: **Host IP address or name** is the IP address or DNS name of the remote host.
Host Port	In case of **Network Configuration** is TCP client or UDP: **Host Port** is the TCP or UDP port number of the remote host.
Local Port	In case of **Network Configuration** is TCP server or UDP: **Local Port** is the TCP or UDP port number of the virtual port.

Table 3-1 Basic settings

3.3.2 Advanced settings
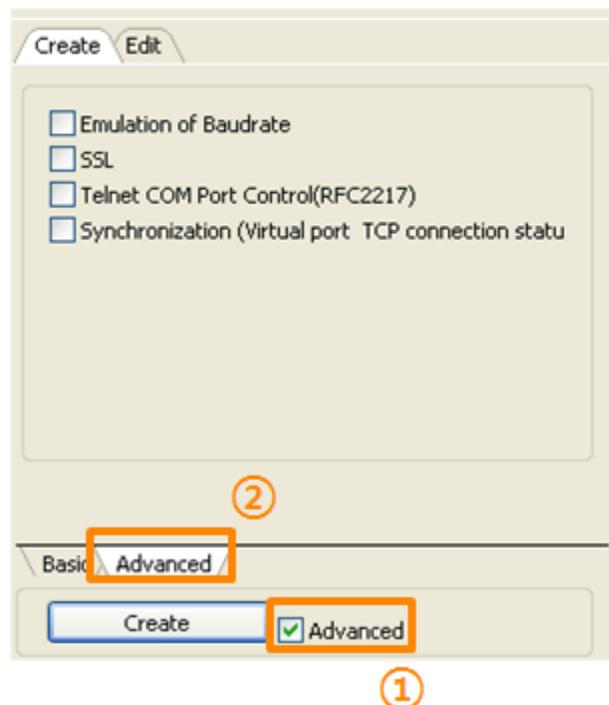
Fig 3-8 Advanced settings

● Click **Advanced** checkbox and then click **Advanced tab.**

Field	Comment
Emulation of Baudrate	It enables or disables emulation of data transfer speed according to current virtual port Baud rate value.
SSL	SSL is only valid when **Network Configuration** is TCP Client or TCP Server. SSL can't be used with **Telnet COM Port Control**.

Telnet COM Port Control(RFC2217)	It is only valid when **Network Configuration** is TCP Client or TCP Server. You can't use it 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 **Telnet COM Port Control**. http://www.eztcp.com/documents/application/an_telcom_en.pdf
Synchronization (Virtual port TCP connection status)	If the virtual port is opened by a serial communication program then ezVSP starts to make a TCP/IP connection. If the serial communication program close the virtual port then ezVSP starts to close the TCP/IP connection.

Table 3-2 Advanced settings

3.3.3 Create virtual port

● Click **Create** button to make a new virtual port.

● The example below is showing how to make a virtual port as a TCP Server.
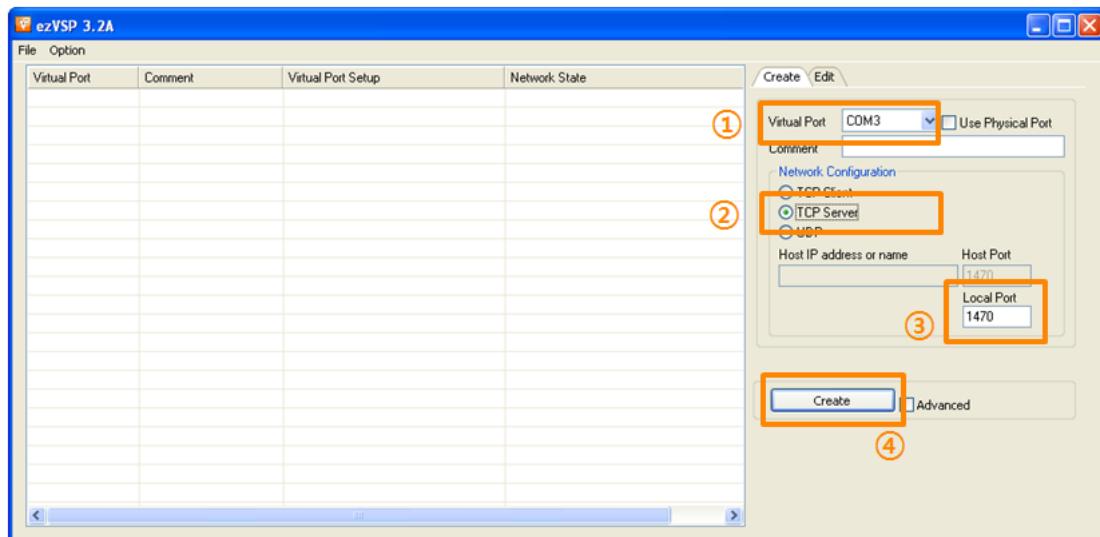
Fig. 3-9 Example of creating a virtual port (1)
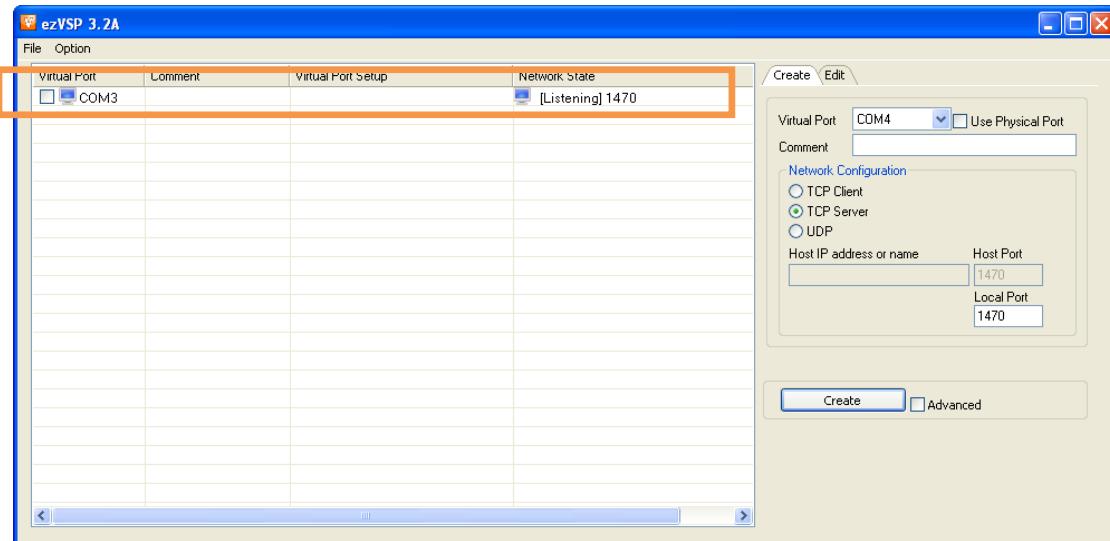
Fig. 3-10 Example of creating a virtual port (2)

3.4 Change virtual port settings

- Click one of the virtual ports in ezVSP's main window and then modify the settings in the **Edit** tab.
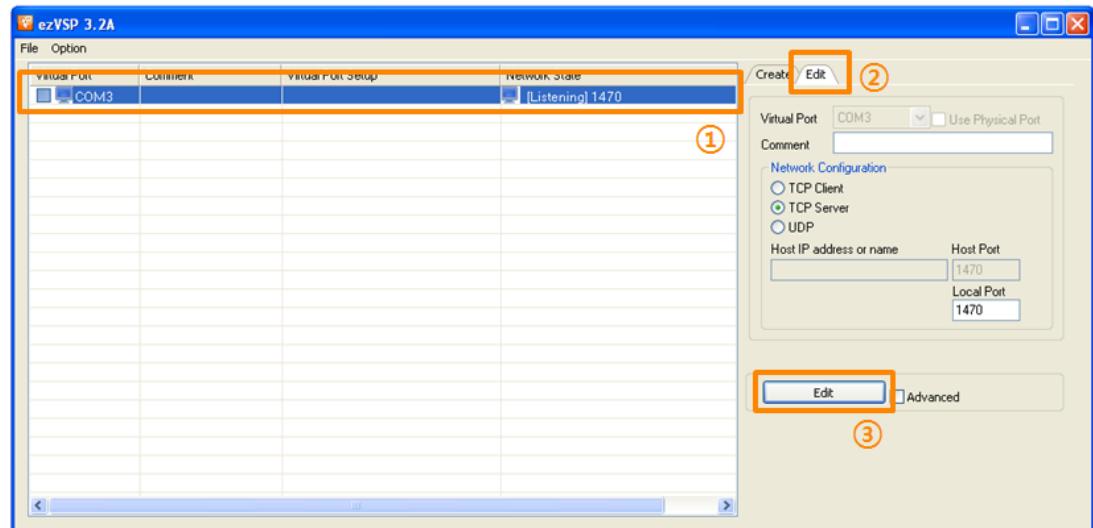
Fig. 3-11 Change virtual port setting

- You can change all the fields except **Virtual Port**.

3.5 Additional functions

## 3.5.1 Data Bypass

Overview
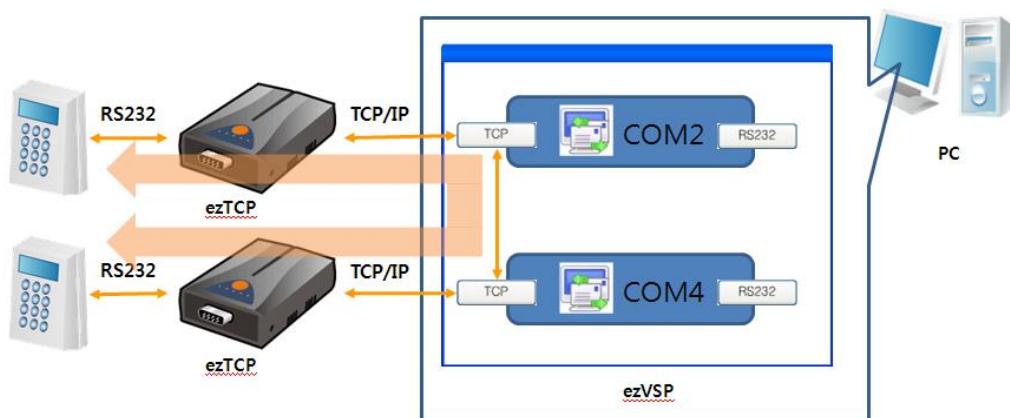
Fig. 3-12 Data Bypass overview

- Two remote serial devices can communicate each other through two virtual ports' TCP/IP port.

- The virtual ports which are using **Data Bypass** doesn't receive data from its serial port.

### Make Data Bypass
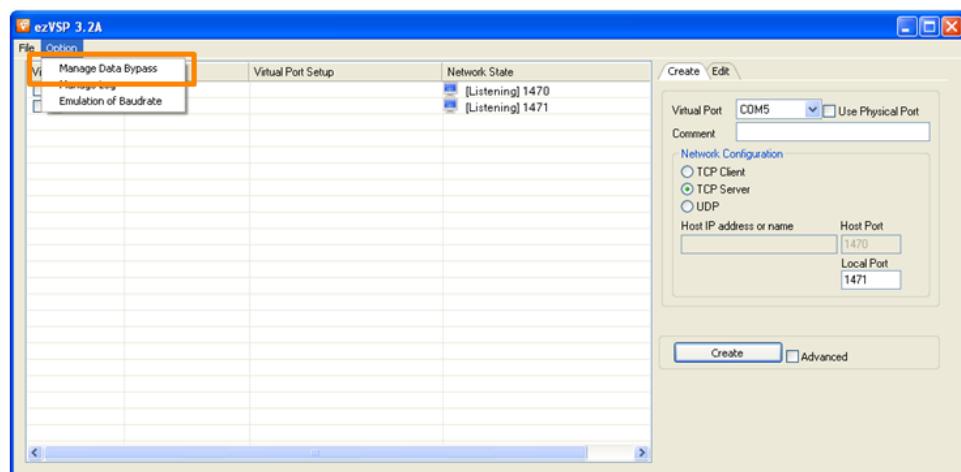
Fig. 3-13 Manage Data Bypass (1)
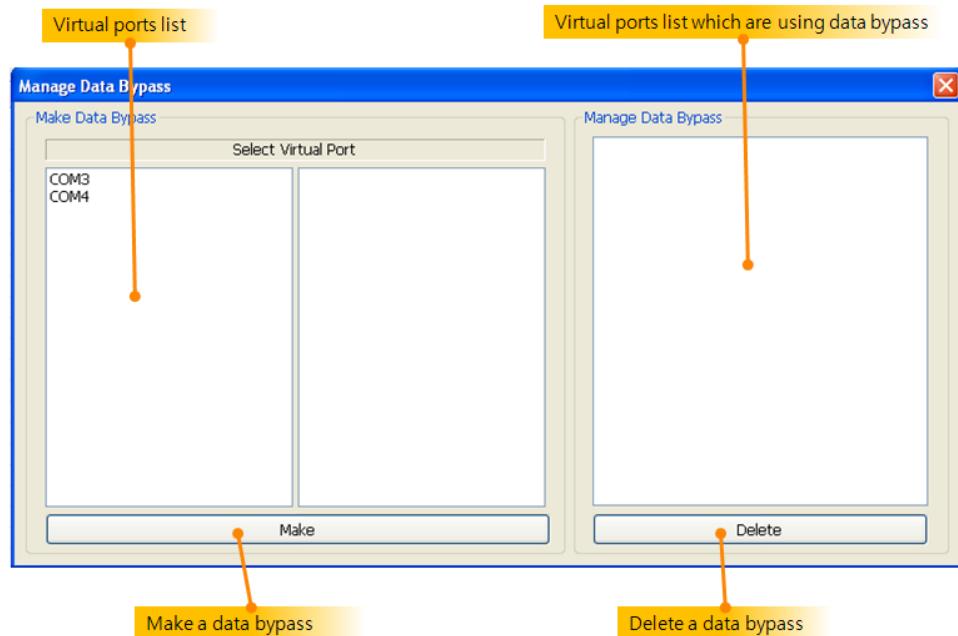
Fig. 3-14 Manage Data Bypass (2)
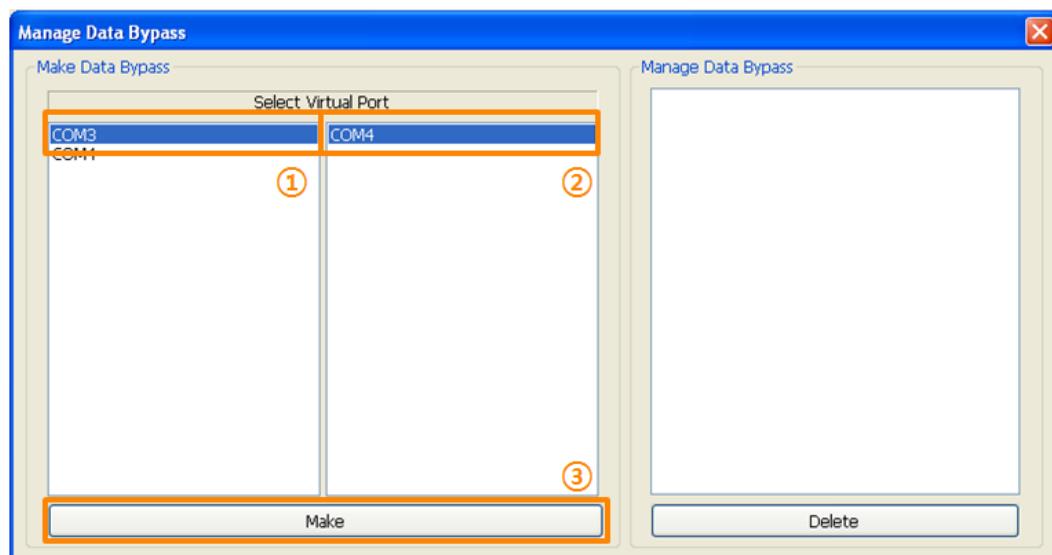
Fig. 3-15 Manage Data Bypass (3)

- Select two virtual ports on the left side for making **Data Bypass** and then click **Make** button.
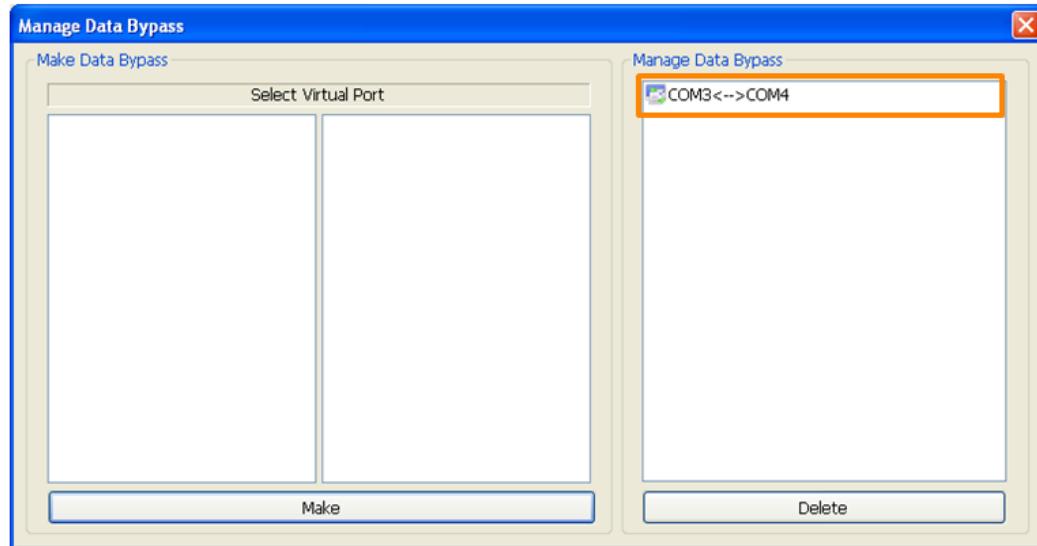
Fig. 3-16 Manage Data Bypass (4)
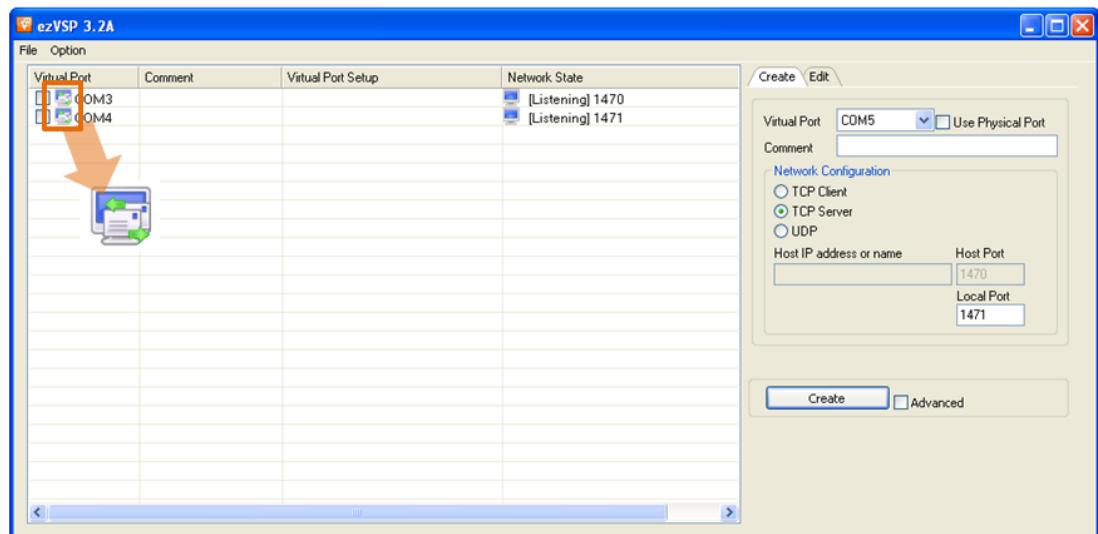
Fig. 3-17 Manage Data Bypass (5)

The icon ( ) represents that the virtual port is using **Data Bypass**.

Delete Data Bypass
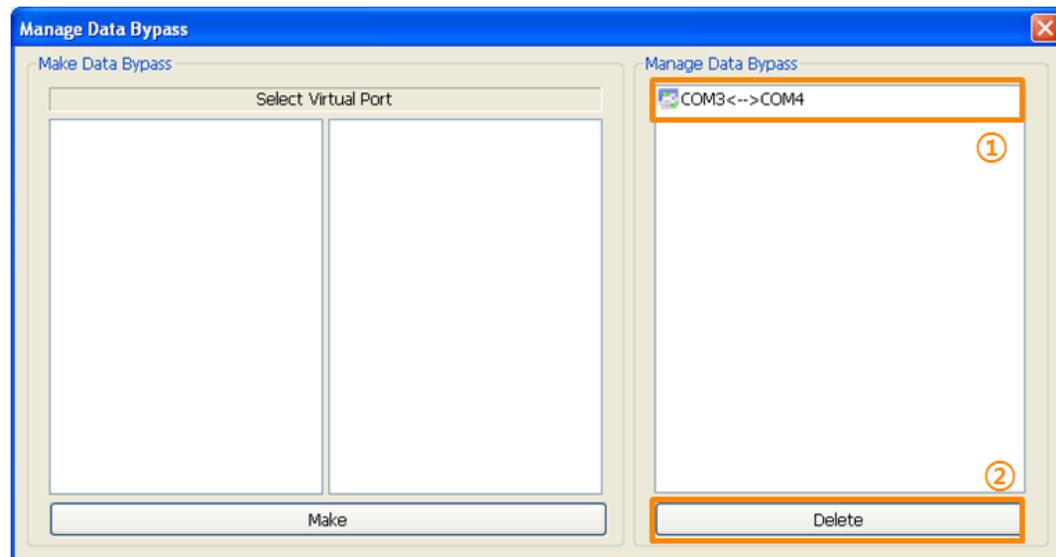
Fig. 3-18 Manage Data Bypass (6)

- Select **Data Bypass** on the right side to delete and then click **Delete** button.

3.5.2 Log

Overview

- The log files are saved in "C:/Users/User Account/Documents/ezVSP"

- ezVSP creates new log file if the size of log file exceeds 5 Mega-byte.

	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

Table 3-3 Naming rule

- Below figure shows data log files format.
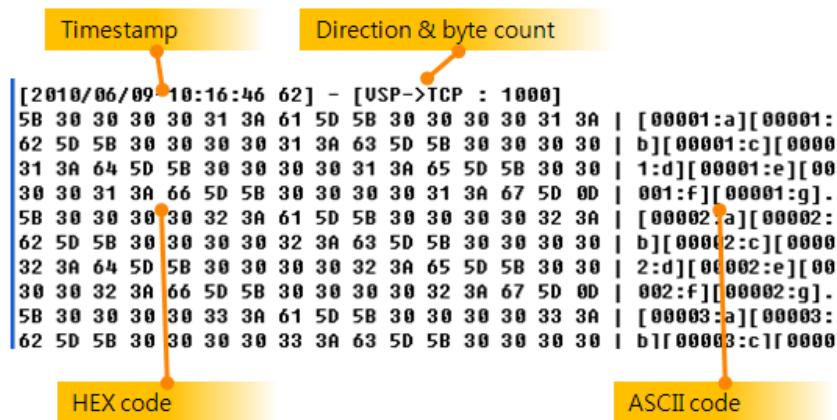
Fig. 3-20 Data log file format

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

Table 3-4 The contents of a data log file

Start Log
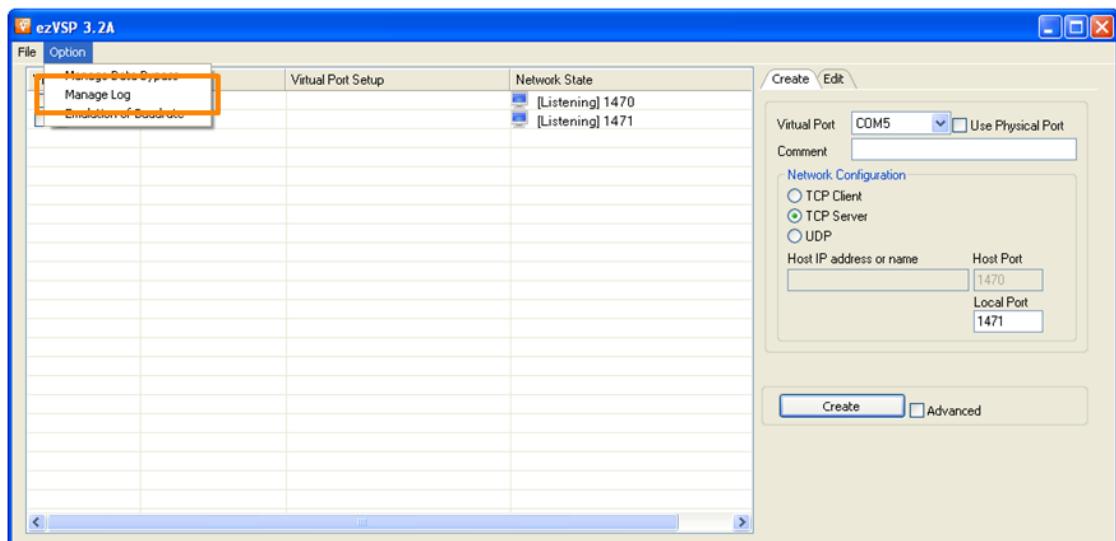
Fig. 3-21 Log (1)
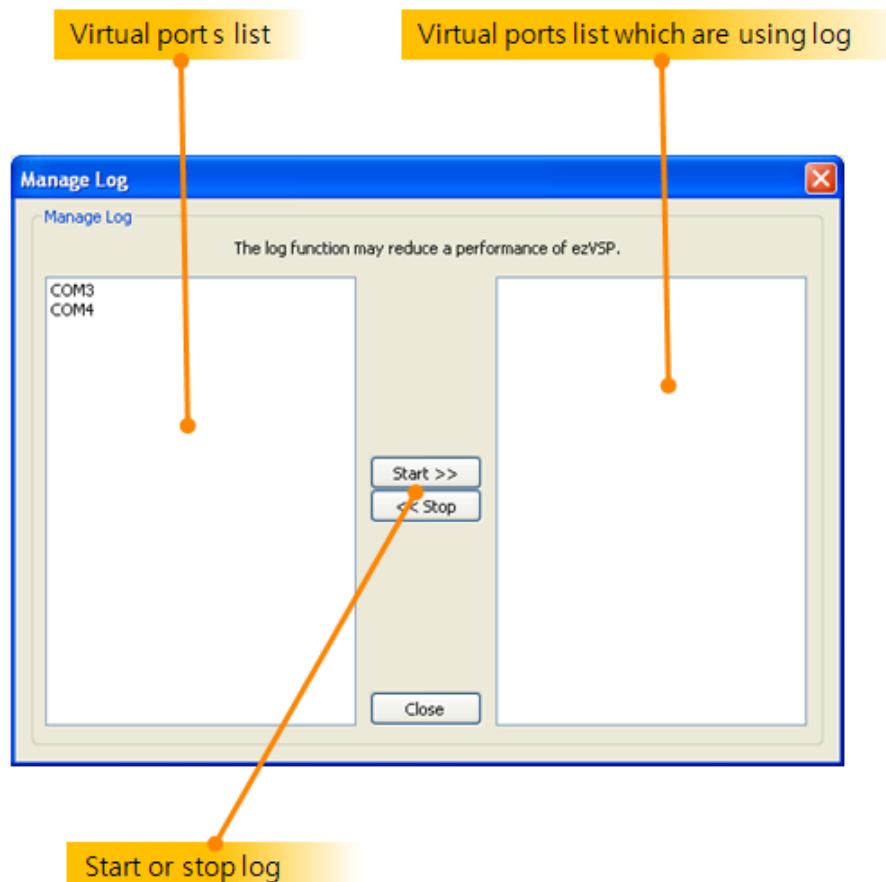
Fig. 3-22 Log (2)
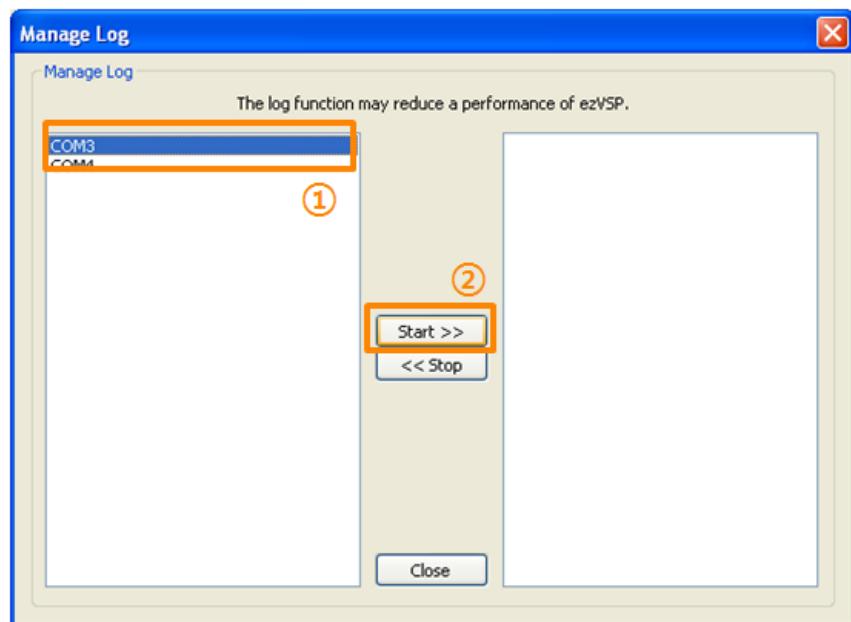
Fig. 3-23 Log (3)
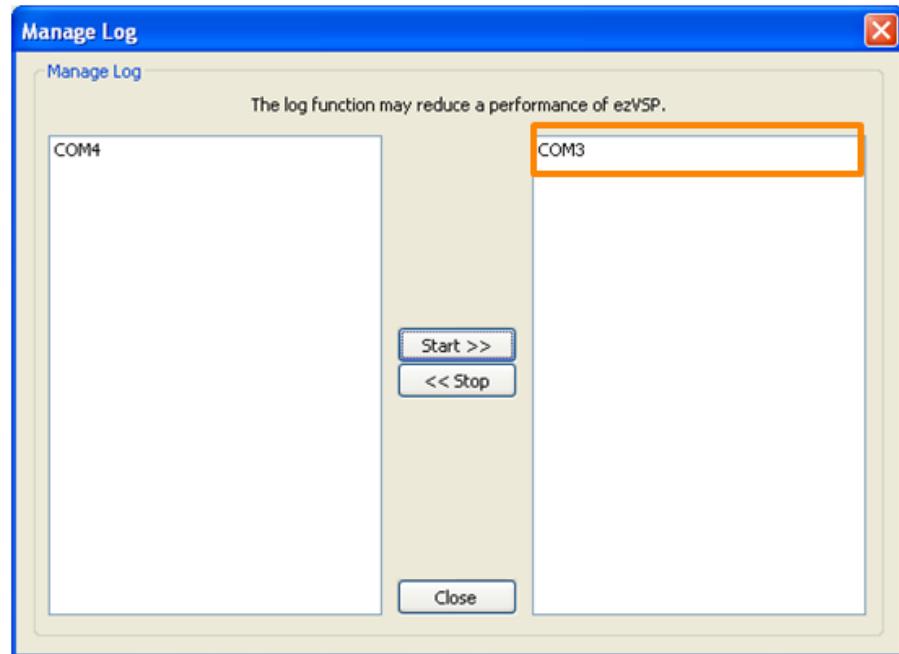
Fig. 3-24 Log (4)

● Select virtual ports on the left side to start **Log** and then click **Start>>** button.

Stop Log
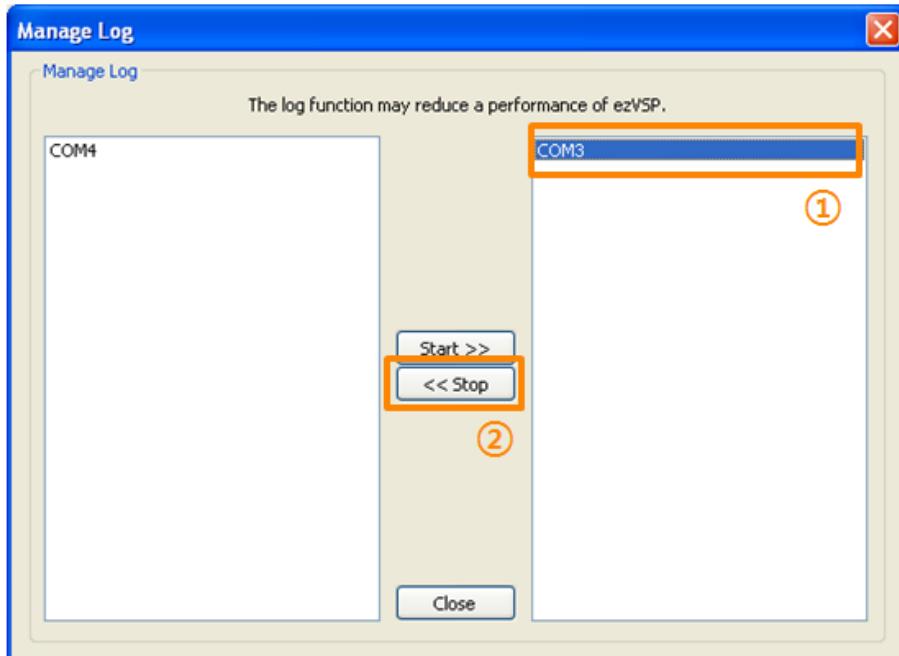
Fig. 3-25 Log (5)

● Select virtual ports on the right side to stop **Log** and then click **<<Stop** button.
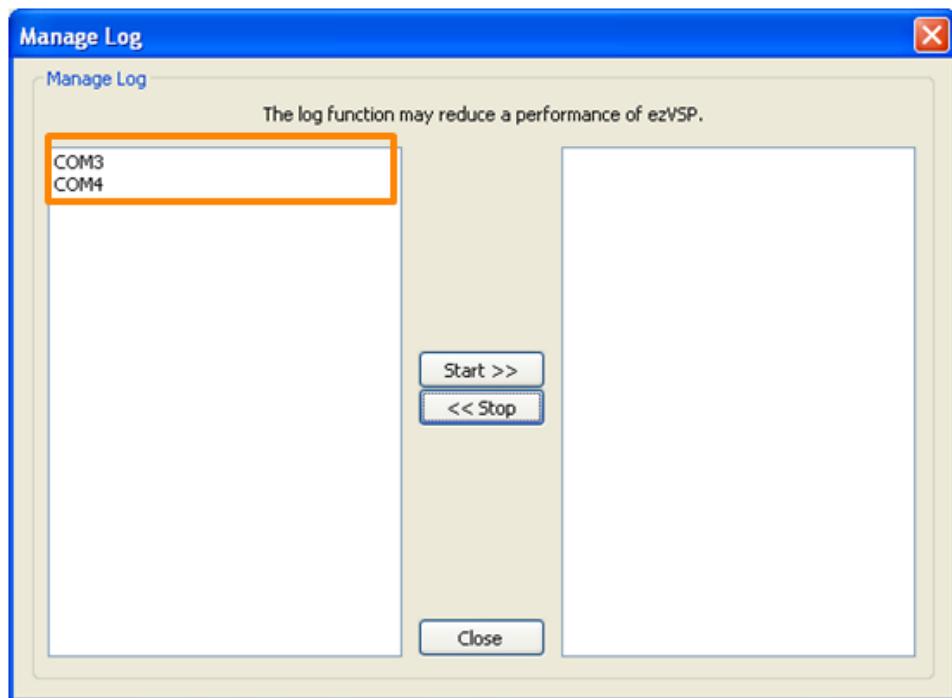
Fig. 3-26 Log (6)

3.5.3 Emulation of Baudrate

Overview

● The data transfer speed of virtual ports is faster than their Baudrate value. **Emulation of Baudrate** enables or disables emulation of data transfer speed according to current virtual port Baud rate value.

Start Emulation of Baudrate

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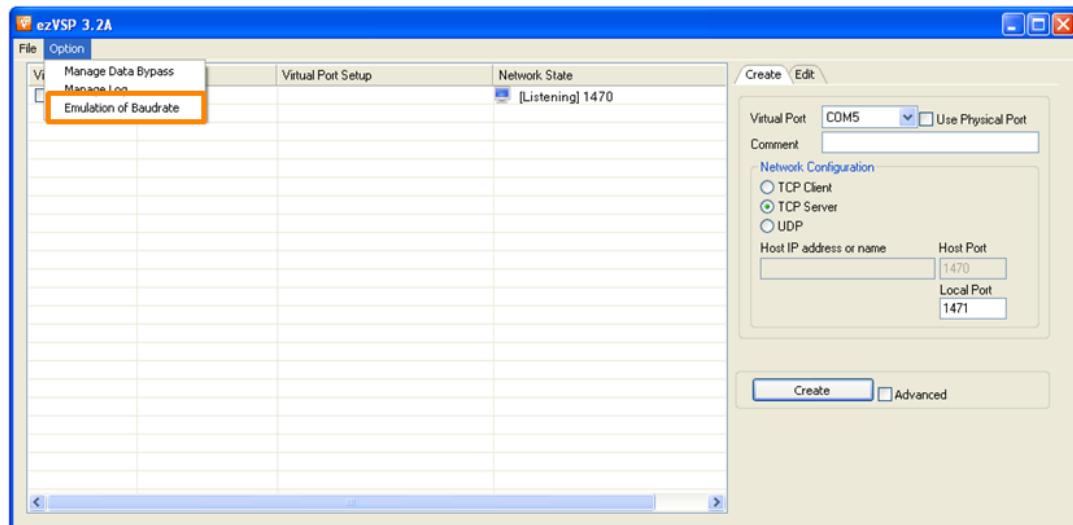
Fig. 3-27 Emulation of Baudrate (1)
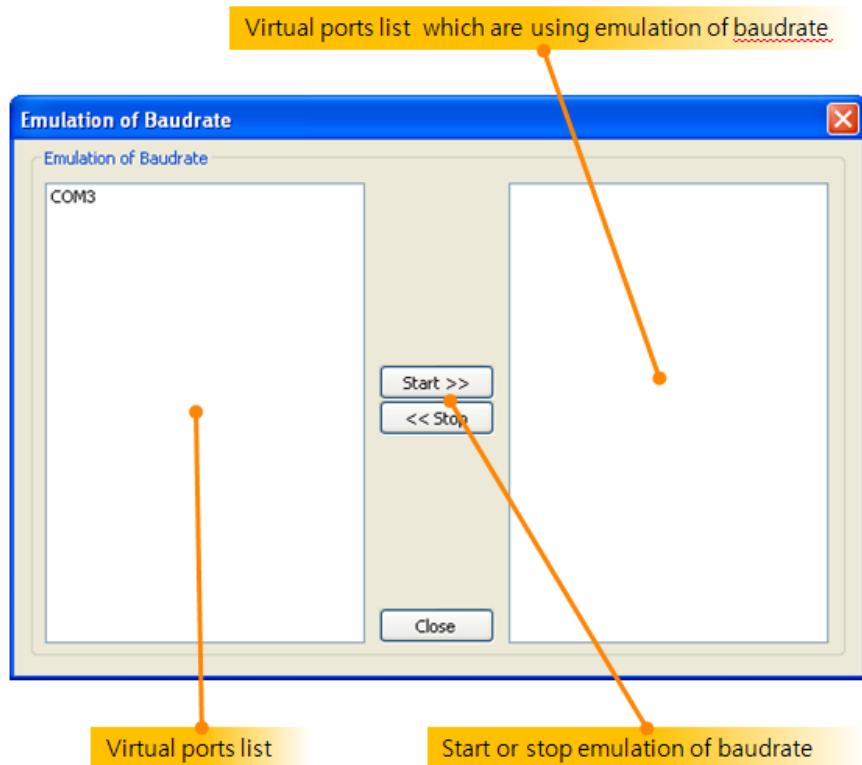
Fig. 3-28 Emulation of Baudrate (2)
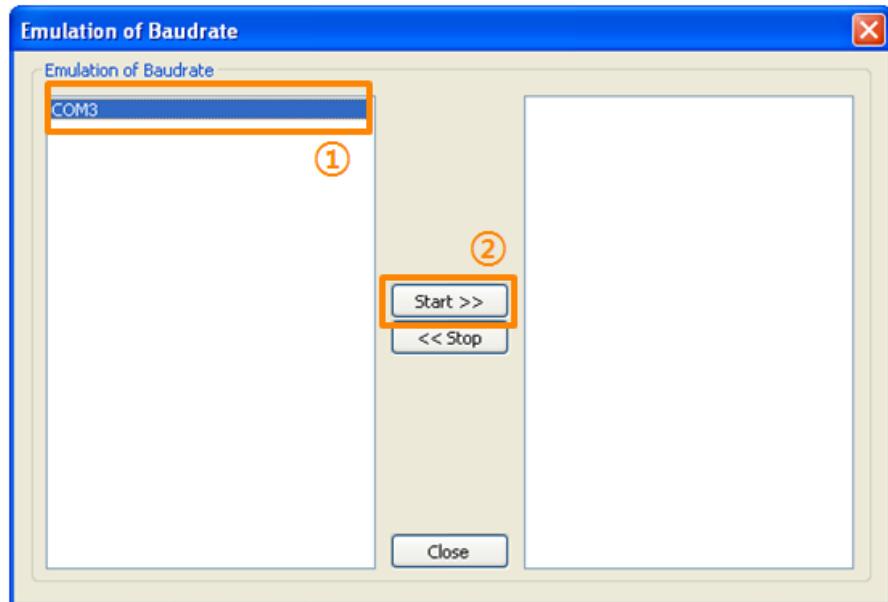
Fig. 3-29 Emulation of Baudrate (3)

● Select virtual ports on the left side to start **Emulation of Baudrate** and then click **Start>>** button.
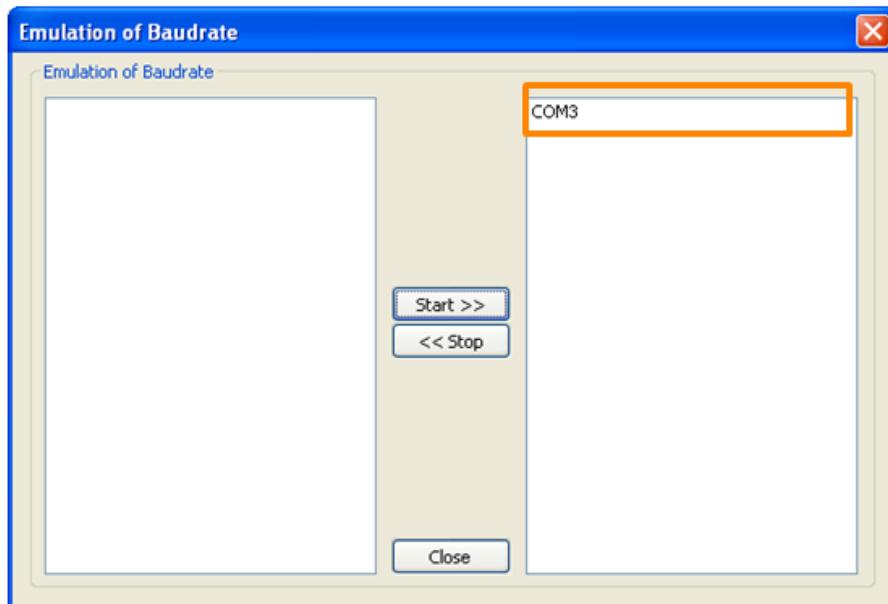
Fig. 3-30 Emulation of Baudrate(4)
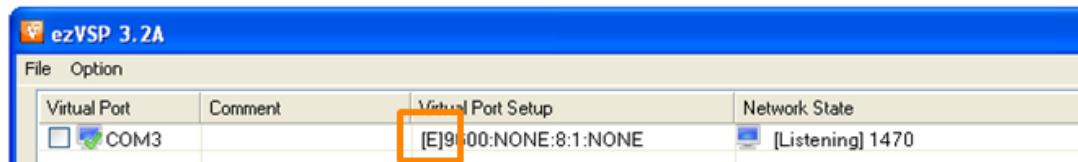
Fig. 3-31 Emulation of Baudrate (5)

● The "[E]" is showing on **Virtual Port Setup** field when the virtual port is using **Emulation of Baudrate**.

Stop Emulation of Baudrate
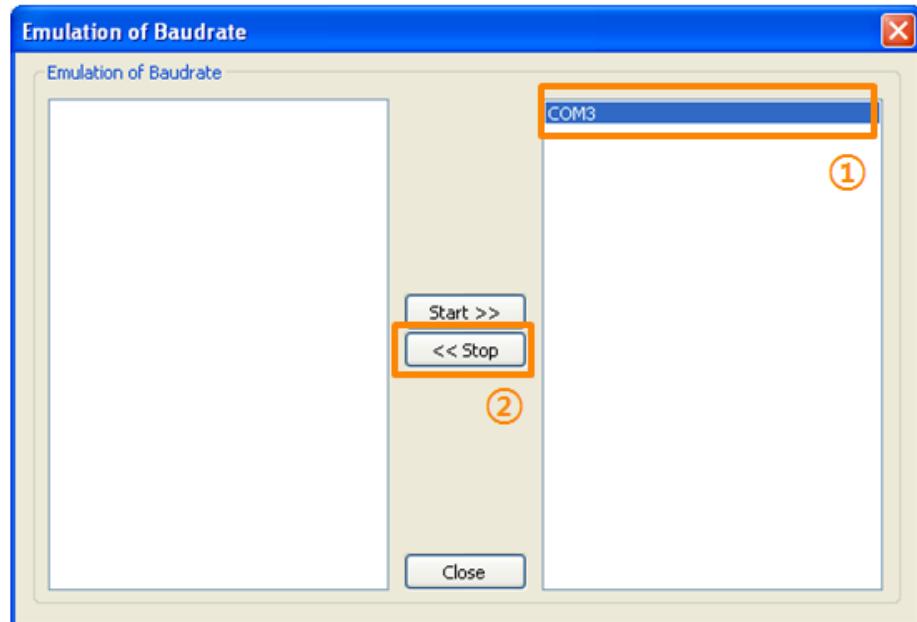
Fig. 3-32 Emulation of Baudrate (6)

● Select virtual ports on the right side to stop **Emulation of Baudrate** and then click **<<Stop** button.
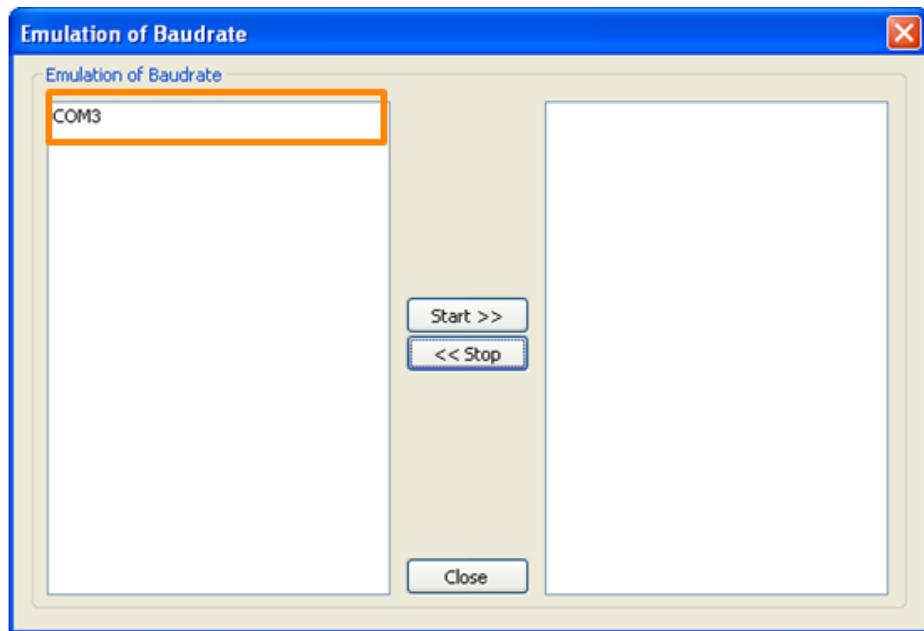
Fig. 3-33 Emulation of Baudrate (7)

3.5.4 Backup and Restore Virtual Port Setting

Backup Virtual Port Setting
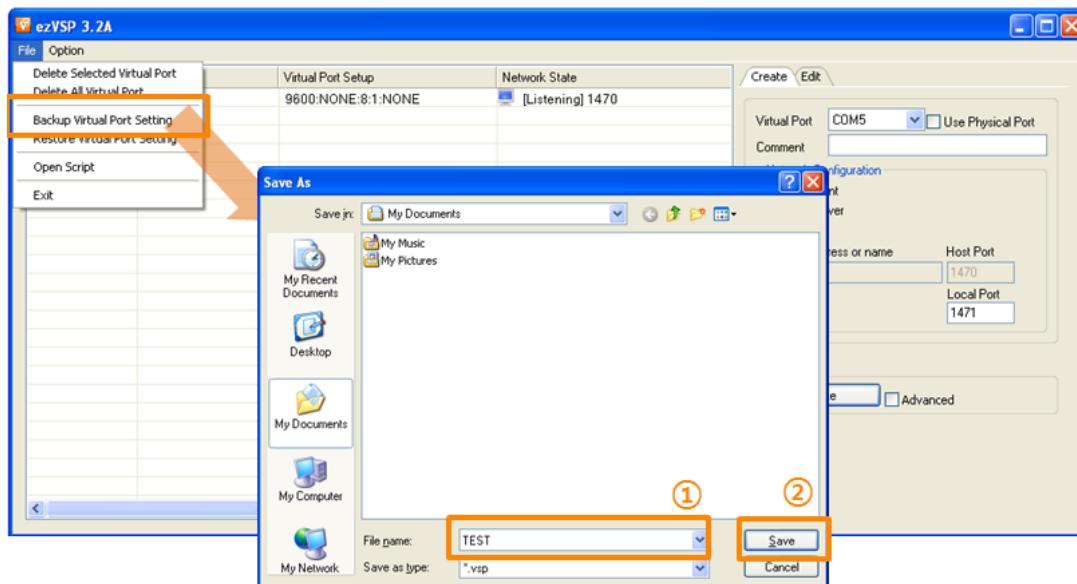
Fig. 3-34 Backup Virtual Port Setting (1)

- Click **Backup Virtual Port Setting** and then fill **File Name** text box.

- Click **Save** button.

Restore Virtual Port setting
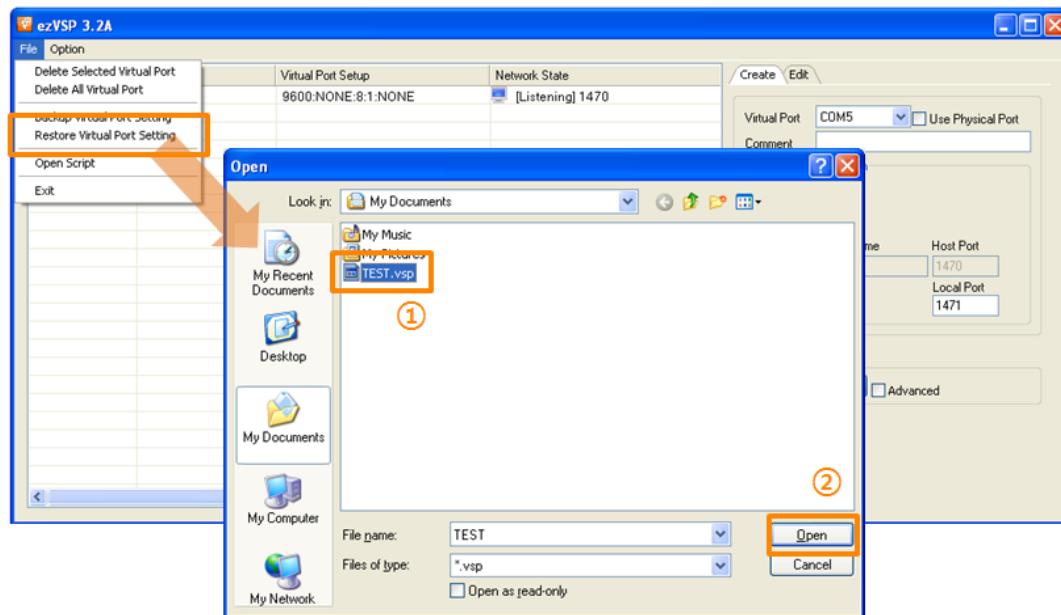
Fig. 3-25 Restore Virtual Port Setting (1)

- Click **Restore Virtual Port Setting** and then Select the backup file**.**

- Click **Open** button.

- If ezVSP already have virtual ports before restoring then below message box is shown.

Fig. 3-36 Restore Virtual Port Setting (2)

- Click **Yes** then ezVSP deletes all existent virtual ports and restores virtual port

settings.

● Click **No** then ezVSP appends new virtual ports from backup file.

3.5.5 Script

Overview

● The script have to comply with INI file format.

● The INI file have properties and the properties are grouped into named sections.

● Properties has a name and value, delimited by an equal sign (=). The name appears to the left of the equal sign.

● [COMx] should be used for sections. The x represents a virtual port number.

ex) [COM4]

● Properties or sections have to end with <CR><LF>.

Syntax of script file

| Item	Syntax	Value
Virtual port name	[COMxx]	The "xx" represents virtual port number ex) [COM4]
Virtual port comment	Comment=	Enter short explanation of the virtual port.
Network	Network=	0: TCP client 1: TCP server 2: UDP
Host address	HostAddr=	In case of **Network** is TCP client or UDP: **HostAddr** is the IP address or DNS name of the remote host.
Host port number	HostPort=	In case of **Network** is TCP client or UDP: **HostPort** is the TCP or UDP port number of the remote host.
Local port number	LocalPort=	In case of **Network** is TCP server or UDP: **LocalPort** is the TCP or UDP port number of the virtual port.
TCP server type	TcpServerType=	In case of **Network** is TCP server:

		0: TCP/IP version 4 1: TCP/IP version 6 If **TcpServerType** is not provided, TCP/IP version 4 will be used.
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 the virtual port name which you want to make **Data Bypass**.
Log	Log=	0: Disable 1: Enable

Table 3-5 Items 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
```

Table 3-6 An example of script

## 3.6 Delete virtual ports

### 3.6.1 Delete virtual ports
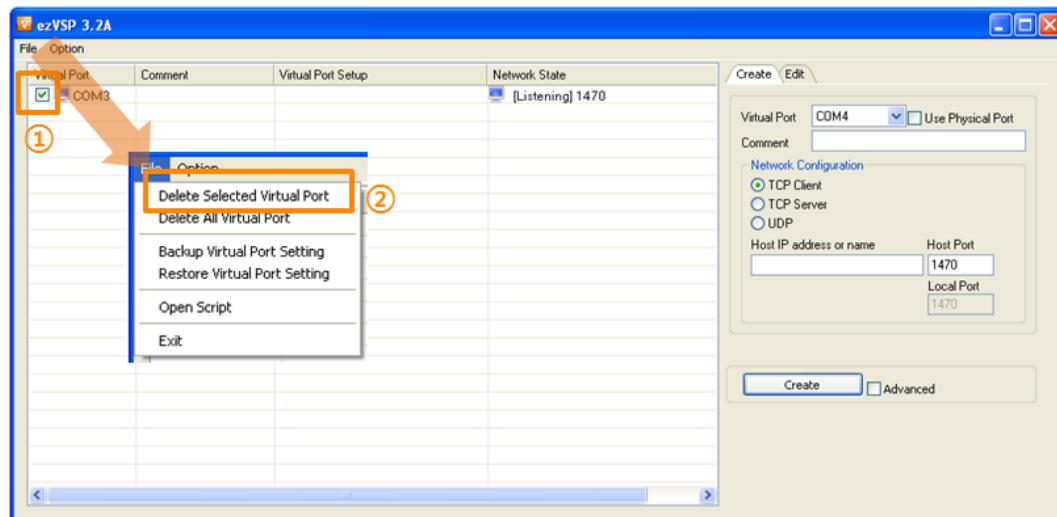
Fig. 3-37 Delete virtual ports (1)
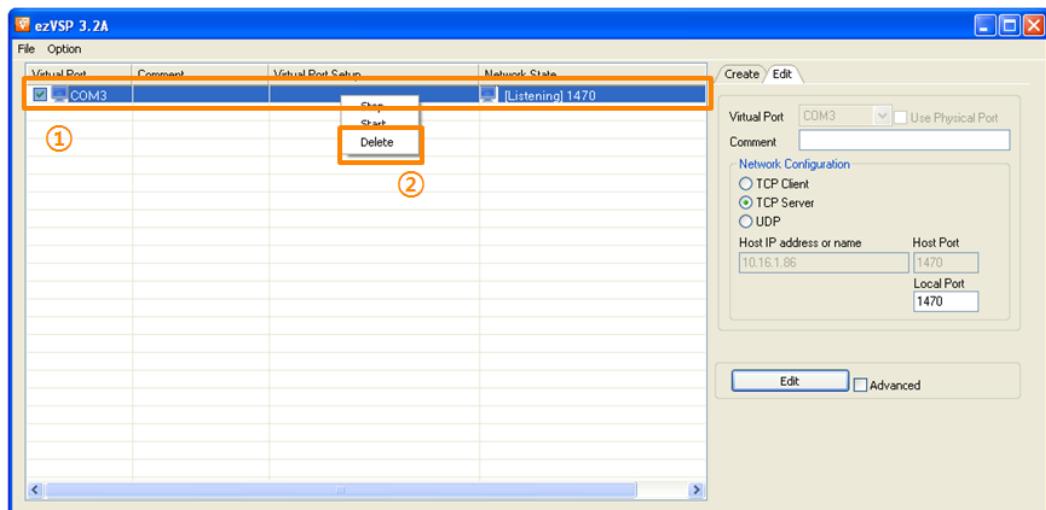
Fig. 3-38 Delete virtual ports (2)

● Click the checkboxes in **Virtual Port** column that you want to delete and then click **Delete Selected Virtual Port**.

● Right-click one of the virtual port that you want to delete and then click **Delete**.

3.6.2 Delete entire virtual ports
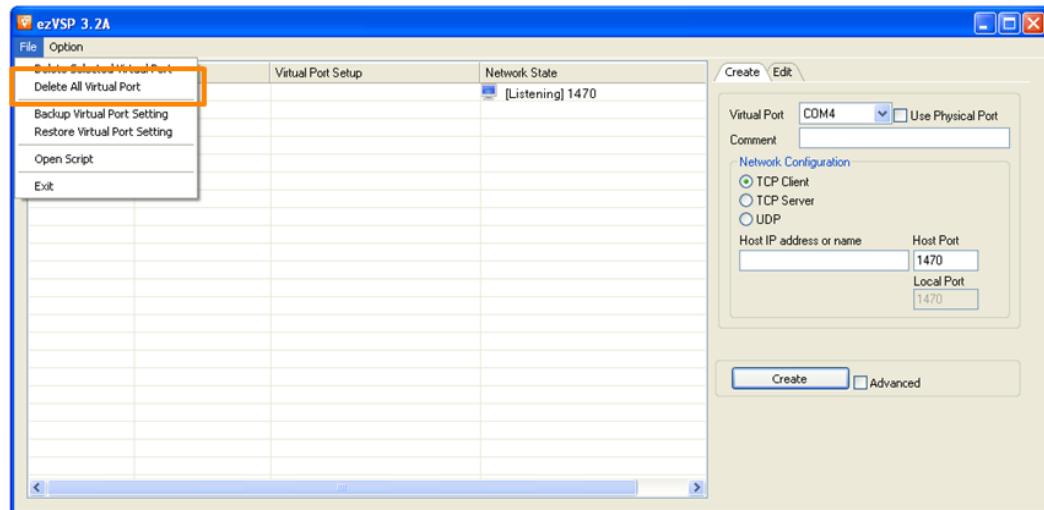
Fig. 3-39 Delete virtual ports (3)

● Click Delete All Virtual Port then ezVSP deletes all virtual ports.

☞ **If the virtual port's Network State is Connecting then it will be deleted after Network State is changed to another state.**

☞ **You can't delete the virtual port when it is used by a serial communication program.**

3.7 Status of virtual ports

3.7.1 Status of virtual ports

● Some icons represent the status of virtual ports.

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

Table 3-7 Status of virtual ports

3.7.2 Status of the network

● Some icons represent the status of virtual ports.

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

Table 3-8 Status of the network

3.8 Check virtual ports information
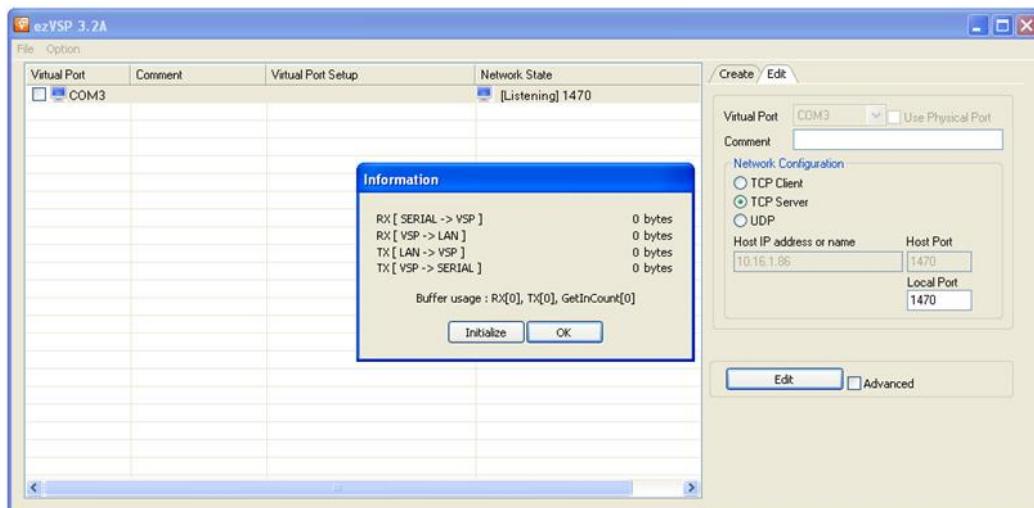
Fig. 3-12 Check virtual port information

● You can check how many bytes have passed through the virtual port.

● Double-click one of virtual ports then you can see the information.

● Click **Initialize** and then the number of counters are changed to 0.

Field	Comment
RX[SERIAL->VSP]	Total number of bytes that received from a serial communication program.
RX[VSP->LAN]	Total number of bytes that sent to LAN from RX[SERIAL->VSP].
TX[LAN->VSP]	Total number of bytes that received from LAN.
TX[VSP->SERIAL]	Total number of bytes that sent to a serial communication program from TX[LAN->VSP].
Buffer usage	RX, TX: Total number of bytes that saved in the buffer of ezVSP for transferring a data. The size of the buffer is nearly 4,096 bytes. GetInCount: Total number of bytes that in the virtual serial port device driver.

Table 3-9 Virtual port information

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
2013.09.09	1.6	○ Modify operating system compatibility.	Jack Kim
2013.12.27	1.7	○ Add new item of script syntax.	Jack Kim
2014.05.30	1.8	○ Modify operating system compatibility.	Jack Kim