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# Virtual CE Pro

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Quick Start Manual

[Version 5.0]

For WinPAC / XPAC / ViewPAC



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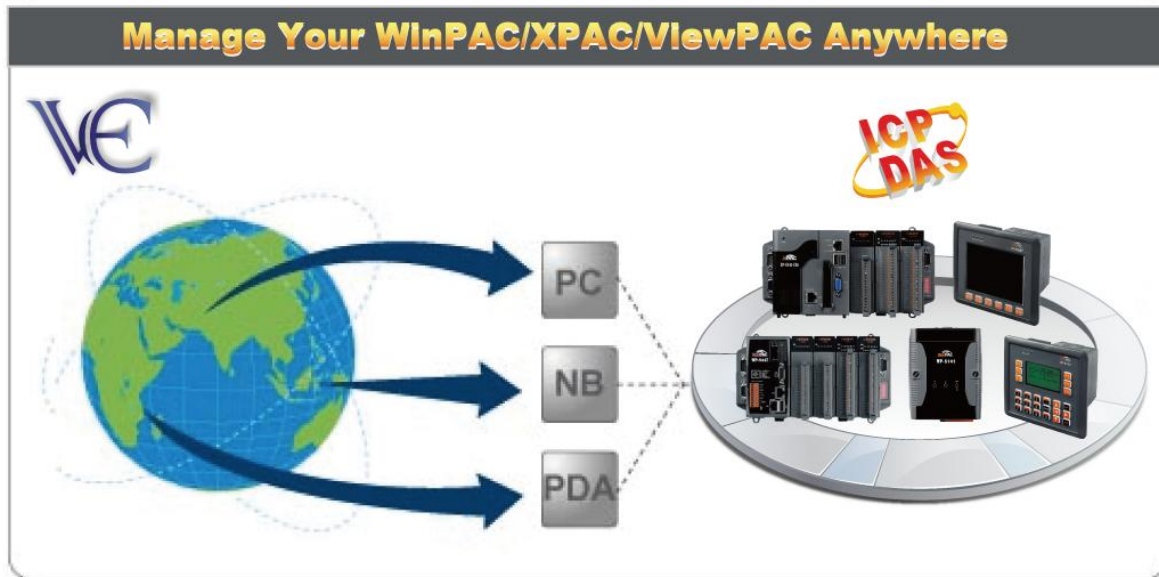
<b>ABOUT THIS MANUAL</b> .....	<b>4</b>
<b>1. INTRODUCTION</b> .....	<b>4</b>
<b>2. GETTING STARTED</b> .....	<b>6</b>
2-1 INSTALLATION .....	6
2-2 RUNNING .....	7
<b>3. FUNCTION OVERVIEW</b> .....	<b>10</b>
3-1 FUNCTIONS ON CLIENT (PC).....	10
3-1-1 <i>Default Settings</i> .....	10
3-1-2 <i>New Connection</i> .....	11
3-1-3 <i>Connection Edit</i> .....	12
3-1-4 <i>New Scenario</i> .....	12
3-1-5 <i>Scenario Edit</i> .....	13
3-1-6 <i>About</i> .....	13
3-2 FUNCTIONS ON SERVER (WINPAC/XPAC/VIEWPAC).....	14
3-2-1 <i>Configure</i> .....	14
3-2-2 <i>Disconnect</i> .....	15
3-2-3 <i>About</i> .....	15
3-3 FUNCTIONS WHEN CONNECTING.....	16
3-3-1 <i>Configure</i> .....	16
3-3-2 <i>File Explorer</i> .....	17
3-3-3 <i>Edit</i> .....	17
3-3-4 <i>Tools</i> .....	18
3-3-5 <i>View</i> .....	18
<b>4. APPLICATIONS</b> .....	<b>19</b>
4-1 GENERAL REMOTE CONTROL FROM CLIENT .....	19
4-2 ACTIVE CONNECTION FROM SERVER .....	22
4-2-1 <i>To Client With Public IP</i> .....	22
4-2-2 <i>To Client With Private IP in Other Domain</i> .....	24
4-3 DEBUGGING AND MAINTAINING .....	34

## About This Manual

The manual is divided into four parts.

1. ['Introduction'](#) describes basic function and infrastructure of VCEP.
2. ['Getting Started'](#) describes installation and running procedures step by step.
3. ['Function Overview'](#) describes all functions of VCEP.
4. ['Applications'](#) describes different VCEP scenario in different application.

## 1. Introduction



VCEP, the Virtual CE Pro, is designed for managing your WinPAC/XPAC/ViewPAC anywhere. No matter where you are, VCEP provides a convenient environment on the Desktop PC and lets you control your WinPAC/XPAC/ViewPAC remotely.

VCEP is composed of two main components: The **'Server'** which runs on WinPAC/XPAC/ViewPAC and the **'Client'** which runs on a Desktop PC. Once a connection is established between the client and server (initiated by the client), the client will periodically send requests for screen updates and send mouse/key click information to the server to simulate. Each video frame is inter-compressed against the previous frame and then intra-compressed with a modified LZW scheme to minimize the amount of data transmitted from server to client.

### HARDWARE REQUIREMENTS

Device	Minimum	Recommended
IBM compatible PC with Pentium processor	Pentium II 350 MHz	Pentium III 500 MHz
System RAM	64 MB	128 MB
Hard disk	100 MB free memory space	

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## SOFTWARE REQUIREMENTS

Microsoft Windows 2000 SP2, Windows XP or Windows 7

## FEATURES

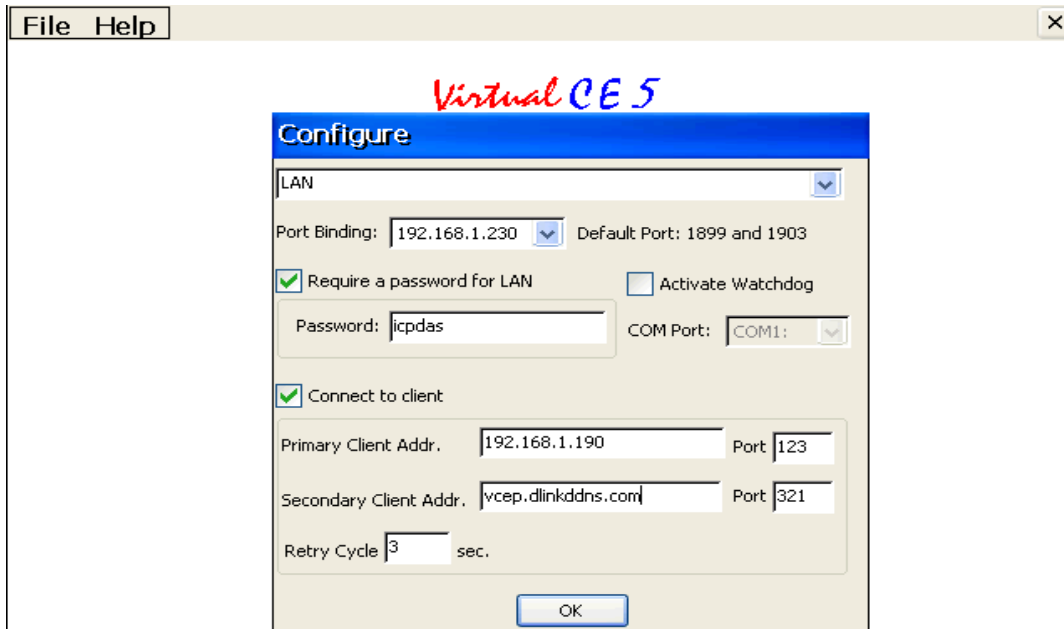
- Save compressed AVI files
- Rotate the display to any angle in 90 degree increments
- Screen captures saved to BMP, GIF or JPG
- Copy clipboard contents to CE and back to PC
- Rapid data entry from your more comfortable PC mouse and keyboard
- 1-18 frames per second capture speed (depending on device and communication conduit)
- Support serial, Ethernet communications
- Minimal impact on target device CPU while capturing
- Auto-discovery of the target device on a LAN
- Works across the internet
- Capture screen shots to a BMP file or the clipboard
- Supports 2 + 4-bit monochrome and 8 + 16-bit color displays
- Scale image 1-4X
- Multiple instances of VCEP can run on the same PC allowing multiple devices to be controlled simultaneously
- One-click capture of screen shots to BMP files with auto-naming
- Capture session to a standard AVI file for distribution
- Capture session keys/clicks for later playback
- Toggle toolbar display
- Toggle 'always-on-top' window feature
- Paste text from the PC clipboard to the CE device
- Actively connect from Server to Client
- Watchdog auditing
- Record/Play script events

## 2. Getting Started

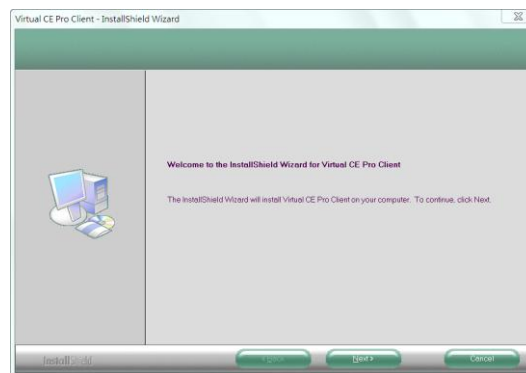
### 2-1 Installation

**Step 1:** Execute `v_remote.exe` in '`\system_disk\tools\vcep`' of WinPAC/XPAC/ViewPAC. If you cannot find it, please go to the 'Download Center' of the VCEP website.  
<http://www.icpdas.com.tw/product/solutions/software/utilities/vecp/vecp.html>

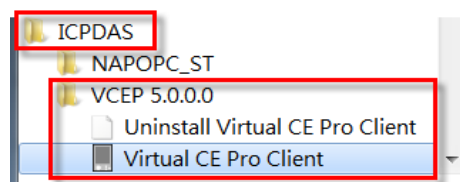
**Step 2:** Configure ([File] -> [Configure]) it as below then click OK. After setting password, don't forget to press 'Save and Reboot' button in WinPAC/XPAC/ViewPAC Utility.



**Step 3:** Execute `VCEP_5.0.x.x.exe` in `CD:\pc_tools\vcep_5.0.0.0` folder to install VCEP Client to Desktop PC. Or download from VCEP website listed in the Step 1.



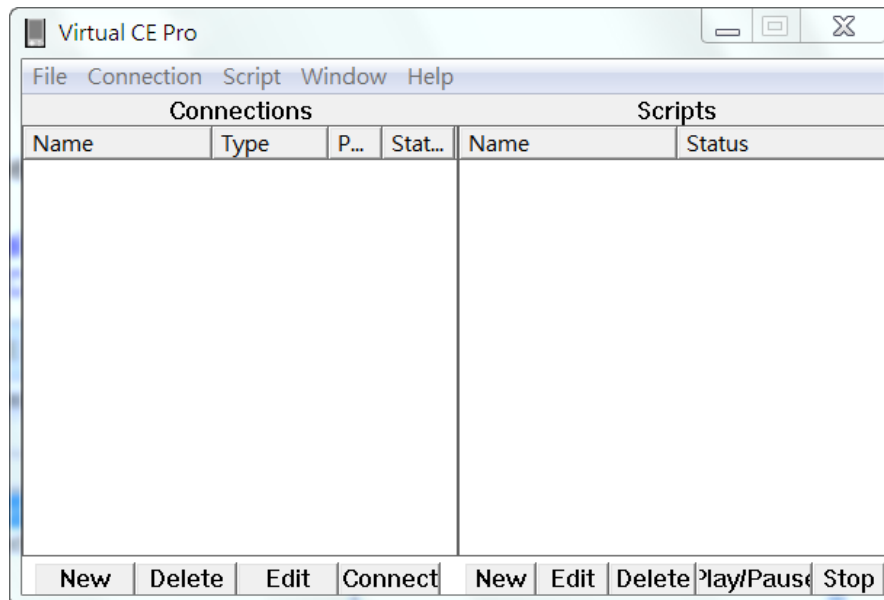
**Step 4:** After that, you will find out **Virtual CE Pro Client** at 'Program File' as below.



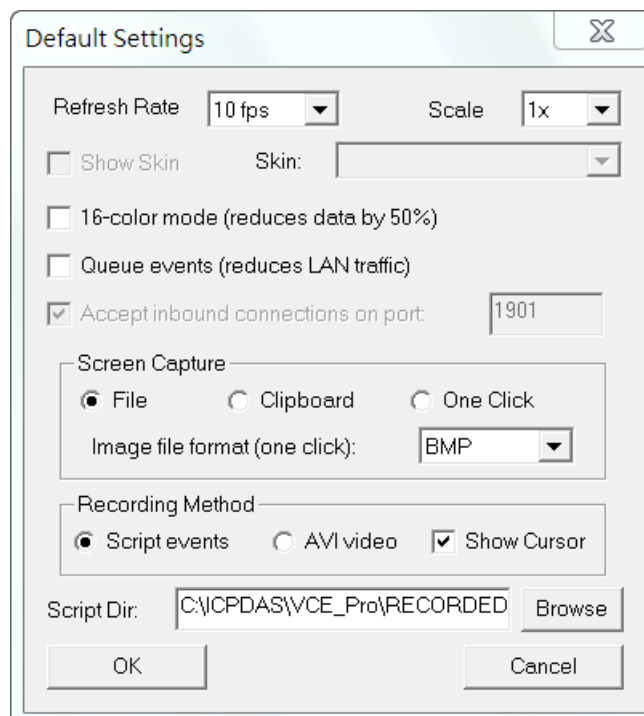
## 2-2 Running

**Step 1:** Make sure the `v_remote.exe` is executed in WinPAC/XPAC/ViewPAC

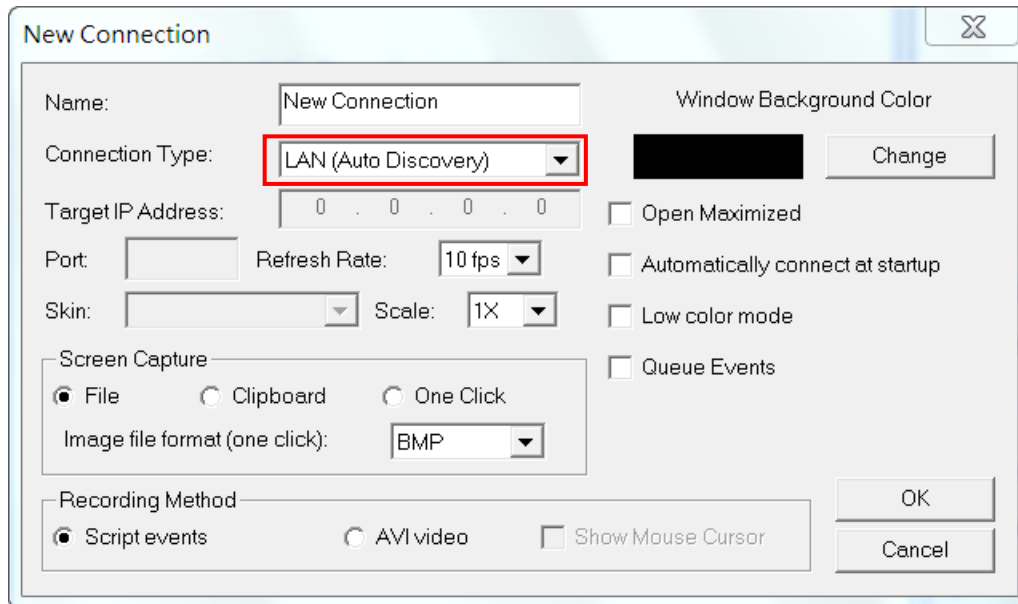
**Step 2:** Select “Virtual CE Pro Client” from [Start]->[ICPDAS]->[VCEP\_5.0.0.0] or execute "`C:\ICPDAS\VCE_Pro\v_ppc.exe`"



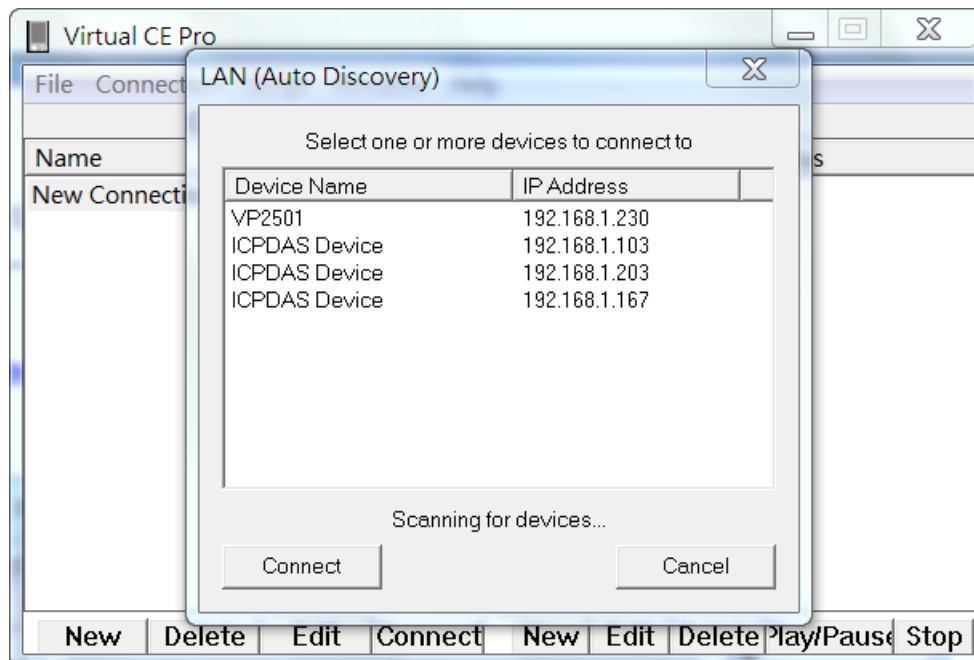
**Step 3:** Configure some basic settings at [File]->[Default Settings].



**Step 4:** Create a new connection at [Connection]->[New].

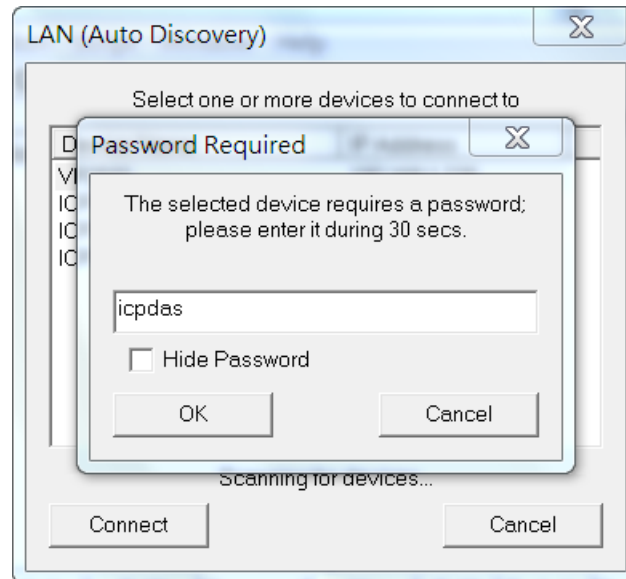


**Step 5:** Press 'Connect' button. VCEP will automatically scan the available device within LAN. Select the Device and press 'Connect' button.





**Step 6:** Enter your password and press 'OK' button.



**Step 7:** After that, you will see the screen of target device.



## 3. Function Overview

VCEP function is divided into three parts:

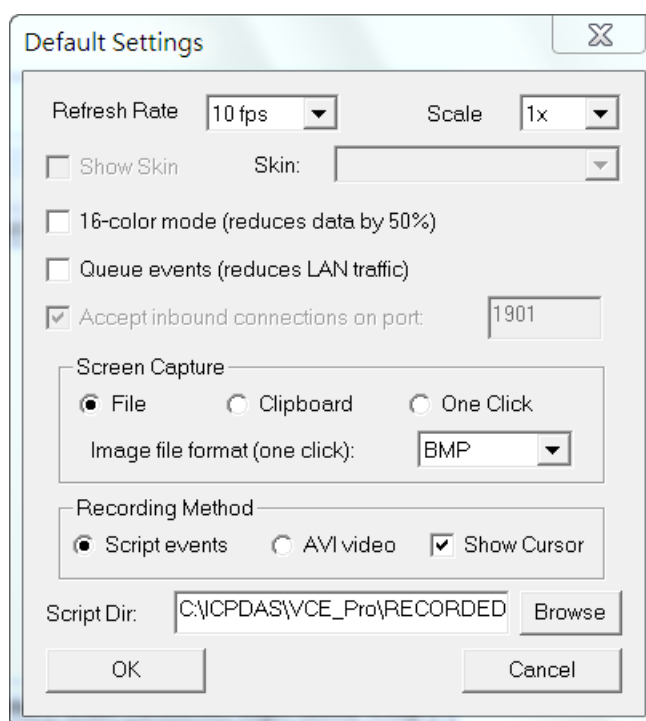
[Functions on Client site](#), [Functions on Server site](#), and [Functions when connecting](#).

### 3-1 Functions on Client (PC)

All functions and settings at this section are on Client (PC) site.

#### 3-1-1 Default Settings

[File]->[Default Settings]



**Refresh Rate:** High refresh rate requires high LAN traffic. 1fps ~18fps for option

**Scale:** Display scale. 1x / 2x / 3x / 4x for option

**16-color mode:** Choosing this option can reduce data by 50%

**Queue events:** Choosing this option can reduce LAN traffic

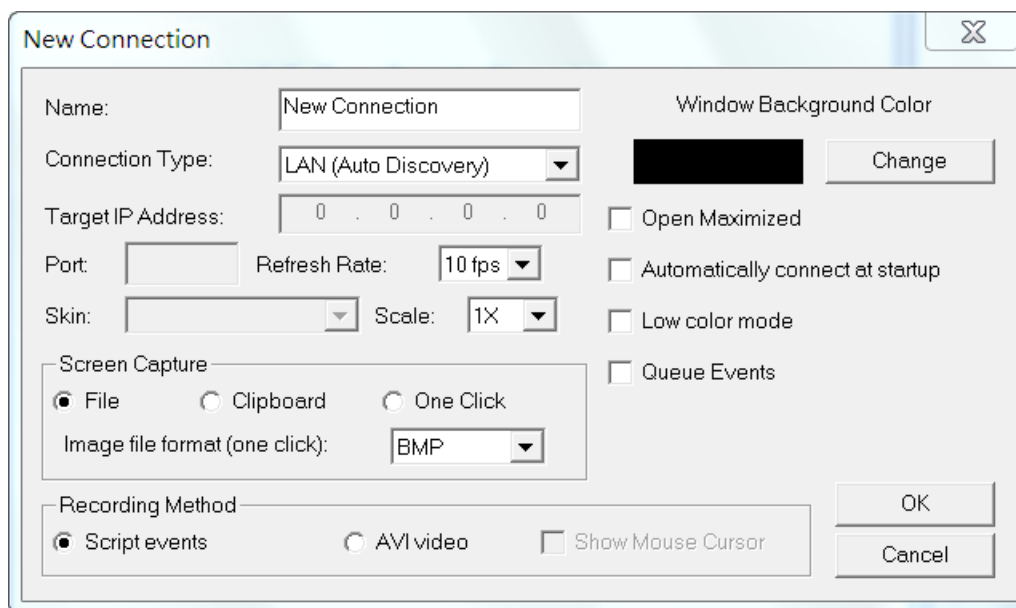
**Screen Capture:** Choosing the method to capture screen and the format (BMP/BMP24/GIF/JPEG) to store

**Recording Method:** Choosing the method (Script/AVI) to record and showing cursor or not

**Script Dir:** The location to save script

## 3-1-2 New Connection

[Connection]->[New]



**Name:** Any name

**Connection Type:** Choosing the type of connection (WAN / LAN / Connect From Server)

**Target IP Address:** The IP address of Server should be entered if choosing the type of 'WAN'

**Port:** Port means IP port which is the same with server if choosing the type of 'Connect From Server'

**Refresh Rate:** High refresh rate requires high LAN traffic. 1fps ~18fps for option.

**Scale:** Display scale. 1x / 2x / 3x / 4x for option

**Windows Background Color:** Windows' background color

**Open Maximized:** Maximize the display when connecting

**Automatically connect at startup:** Connect to server automatically when startup

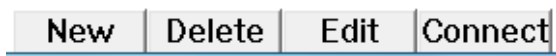
**Low color mode:** Choosing this option can reduce data by 50%

**Queue Events:** Choosing this option can reduce LAN traffic

**Screen Capture:** Choosing the method to capture screen and the format (BMP/ BMP24/ GIF/ JPEG) to store

**Recording Method:** Choosing the method (Script/AVI) to record and showing cursor or not

### 3-1-3 Connection Edit



**New:** See '[3-1-2 New Connection](#)'

**Delete:** Delete the connection in the list

**Edit:** Edit old connection. See '[3-1-2 New Connection](#)'

**Connect:** Start connecting to WinPAC/XPAC/ViewPAC

### 3-1-4 New Scenario

[Script]->[New]

**Scenario Name:** Any name

**Log Results:** Log the results of scenario operating

**Scenario Loop Count:** The times of playing scenario

**Loop Delay:** The delay time between scenario and scenario

**Add:** Add a script

**Remove:** remove a script

**Up:** push a script up

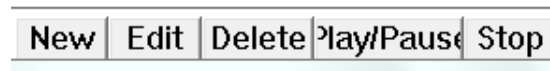
**Down:** pull a script down

**Script Loop Count:** The times of playing scripts in scenario:

**Script Loop Delay:** The delay time between script and script in scenario

**Disable video update:** No update on Client site for reducing traffic load

### 3-1-5 Scenario Edit



**New:** See '[3-1-4 New Scenario](#)'

**Edit:** See '[3-1-4 New Scenario](#)'

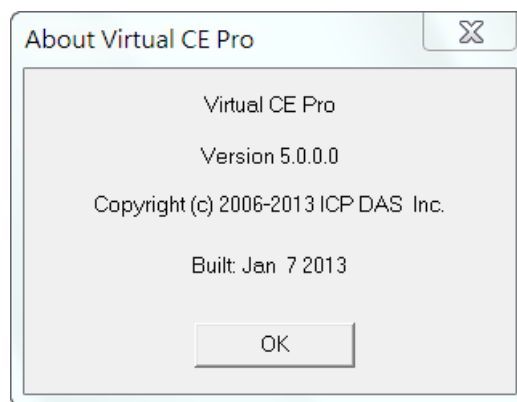
**Delete:** Delete the scenario in the list

**Play/Pause:** Play/Pause the scenario in the list

**Stop:** Stop playing the scenario in the list

### 3-1-6 About

[Help]->[About VCE...] Show version message.



## 3-2 Functions on Server (WinPAC/XPAC/ViewPAC)

All functions and settings at this section are on WinPAC/XPAC/ViewPAC.

### 3-2-1 Configure

[File]->[Configure...]

The screenshot shows the 'Configure' dialog box with the following settings:

- Connection Type: LAN
- Port Binding: 192.168.1.230 (Default Port: 1899 and 1903)
- Require a password for LAN:  (Password: icpdas)
- Activate Watchdog:
- COM Port: COM1
- Connect to client:
- Primary Client Addr.: 192.168.1.190 (Port: 123)
- Secondary Client Addr.: vcep.dlinkdns.com (Port: 321)
- Retry Cycle: 3 sec.

**Connection Type:** Choosing an appropriate 'Connection Type' (LAN / WAN) depends on WinPAC/XPAC/ViewPAC's real situation

**Port Binding:** IP address number of the WinPAC/XPAC/ViewPAC

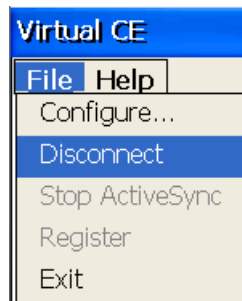
**Require a password for LAN:** Password for Ethernet connection from Client

**Active Watchdog:** This function can let VCEP restore automatically if VCEP crash for un-known reason

**Connect to client:** When WinPAC/XPAC/ViewPAC is in LAN and Client is in WAN with public IP, you can check this and assign two Client IP for active connection from WinPAC/XPAC/ViewPAC. If the first Client IP can not be connected to, VCEP will connect to second Client IP automatically. If the connection of the first Client IP restore, you have to disconnect the second connection manually to connect to the first one. The 'Retry Cycle' means the time between two connections

### 3-2-2 Disconnect

**[File]->[Disconnect]** Disconnect the connection from server site.



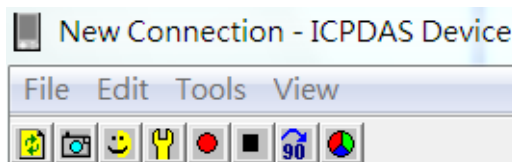
### 3-2-3 About

**[Help]->[About...]** Show version message.



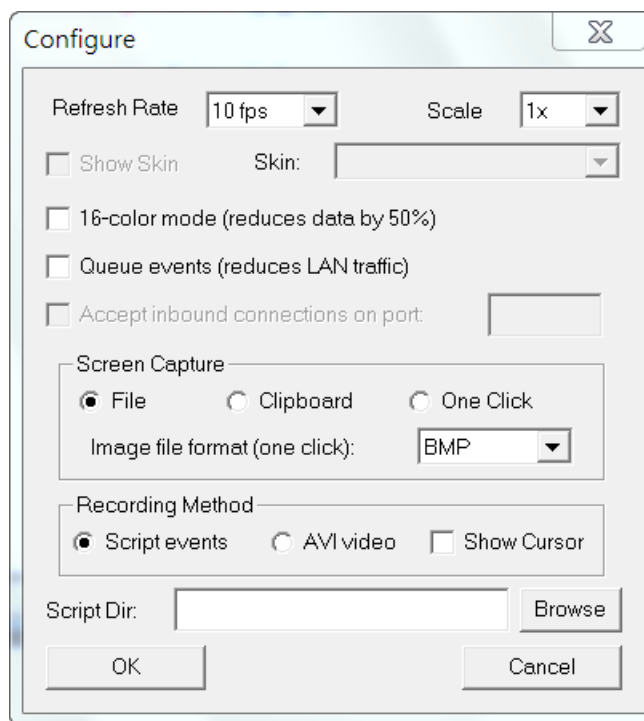
### 3-3 Functions when Connecting

When connecting, you can see some functions upper the window. These function descriptions are as below.



#### 3-3-1 Configure

[File]->[Configure...] See '[3-1-1 Default Settings](#)'



**Refresh Rate:** High refresh rate requires high LAN traffic. 1fps ~18fps for option

**Scale:** Display scale. 1x / 2x / 3x / 4x for option

**16-color mode:** Choosing this option can reduce data by 50%

**Queue events:** Choosing this option can reduce LAN traffic

**Screen Capture:** Choosing the method to capture screen and the format (BMP/BMP24/GIF/JPEG) to store

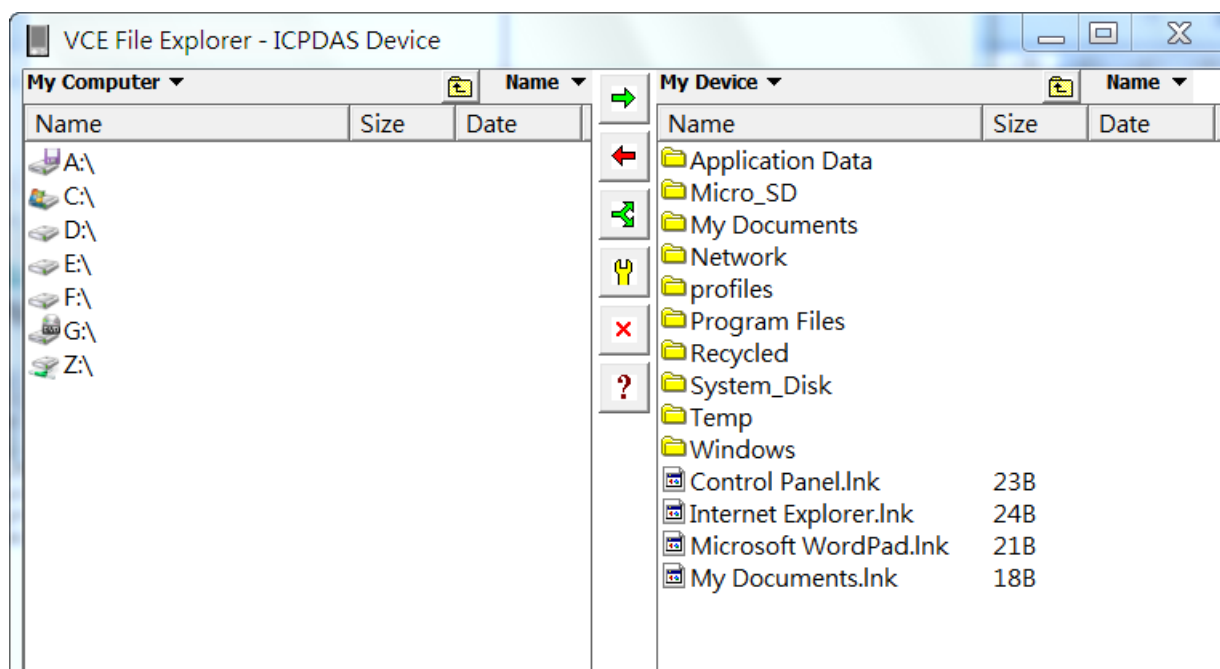
**Recording Method:** Choosing the method (Script/AVI) to record and showing cursor or not

**Script Dir:** The location to save script



### 3-3-2 File Explorer

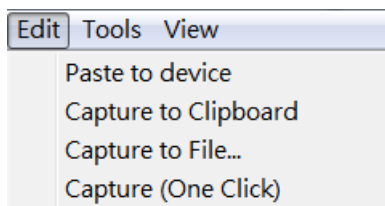
[File]->[File Explorer]



Left side of window shows the file tree on PC. Right side of window shows the file tree on WinPAC/XPAC/ViewPAC. You can transfer files by clicking the buttons between two windows.

### 3-3-3 Edit

[Edit]



**Paste to device:** This function allows you paste text from PC to WinPAC/XPAC/ViewPAC

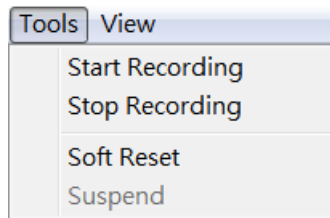
**Capture to Clipboard:** Capture the screen and save it into clipboard. After capturing to clipboard, you can paste the image to any application program.

**Capture to File...:** Capture the screen and save in file

**Capture (One Click):** Capture the screen to be file in 'Script Dir' folder

### 3-3-4 Tools

#### [Tools]



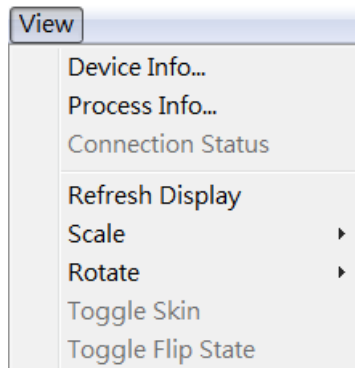
**Start Recording:** Start recording according to the settings in '[3-1-1 Default Settings](#)'

**Stop Recording:** Stop recording according to the settings in '[3-1-1 Default Settings](#)'

**Soft Reset:** Soft-reset WinPAC/XPAC/ViewPAC

### 3-3-5 View

#### [View]



**Device Info...:** Show WinPAC/XPAC/ViewPAC information

**Process Info...:** Show process information of WinPAC/XPAC/ViewPAC

**Refresh Display:** Refresh display once when using this function

**Scale:** Change the display scale (1x / 2x / 3x / 4x)

**Rotate:** Rotate display (0° / 90° / 180° / 270° )

## 4. Applications

This section describes how to set VCEP in different scenario step by step.

### 4-1 General Remote Control from Client

Generally speaking, VCEP will be applied when PC and WinPAC/XPAC/ViewPAC are all in LAN (See Figure 1) or in WAN (See Figure 2). This section highlights some important settings and reminds you of functions in common use.

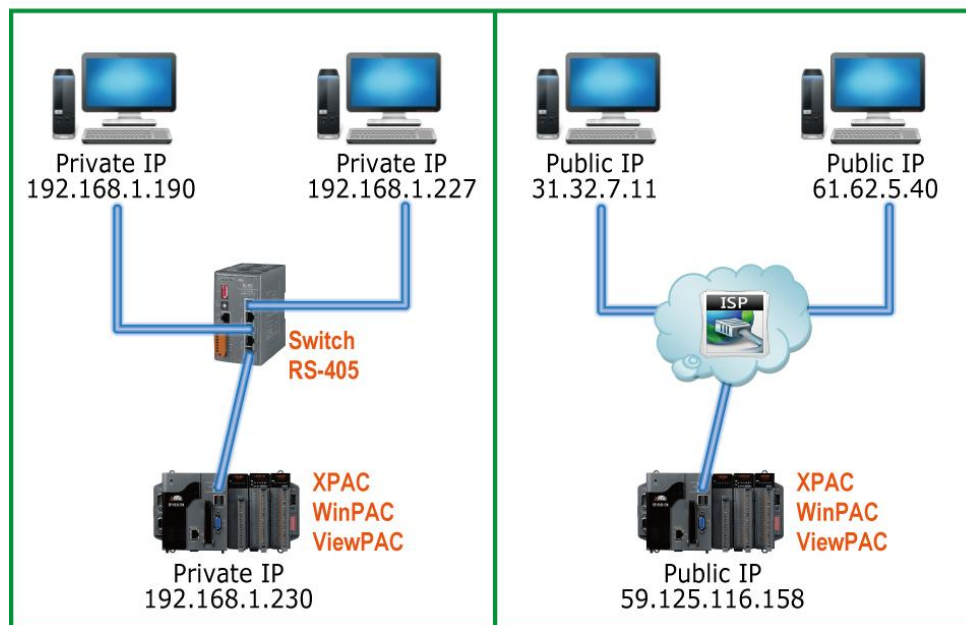
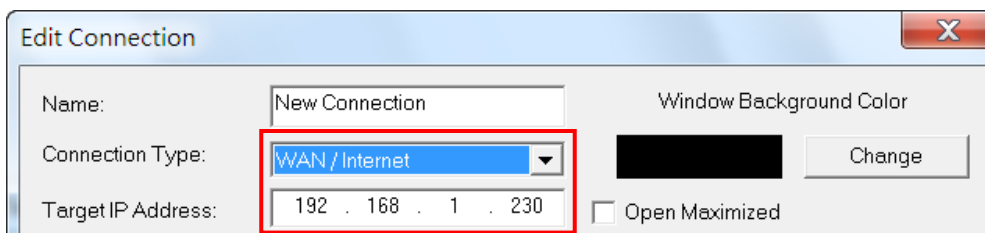
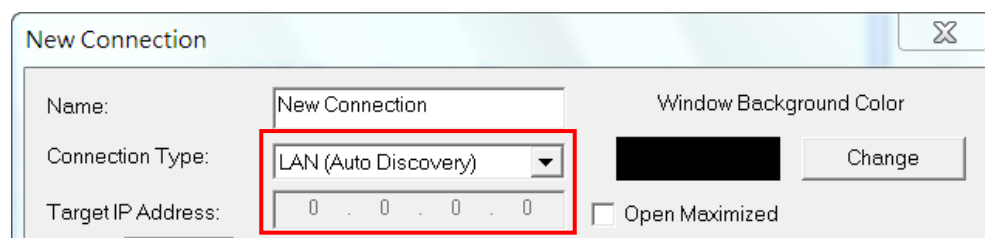


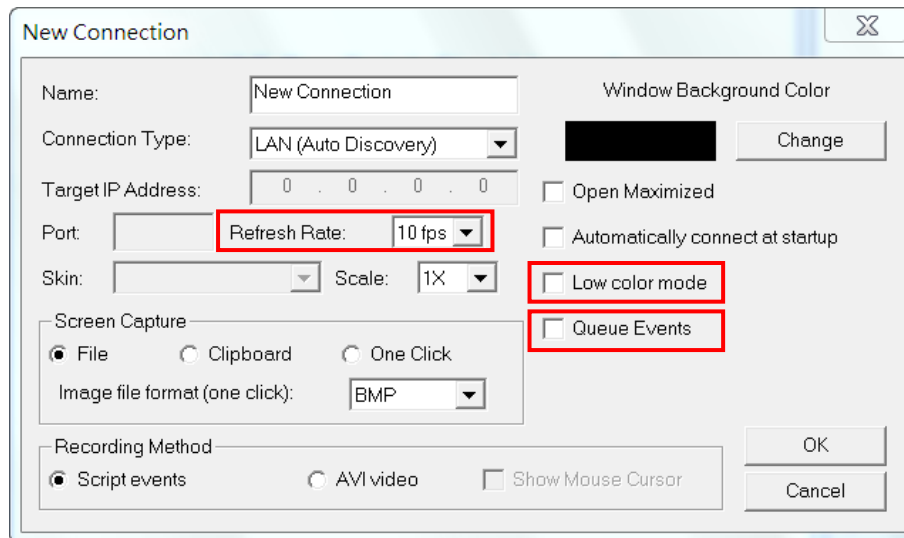
Figure 1

Figure 2

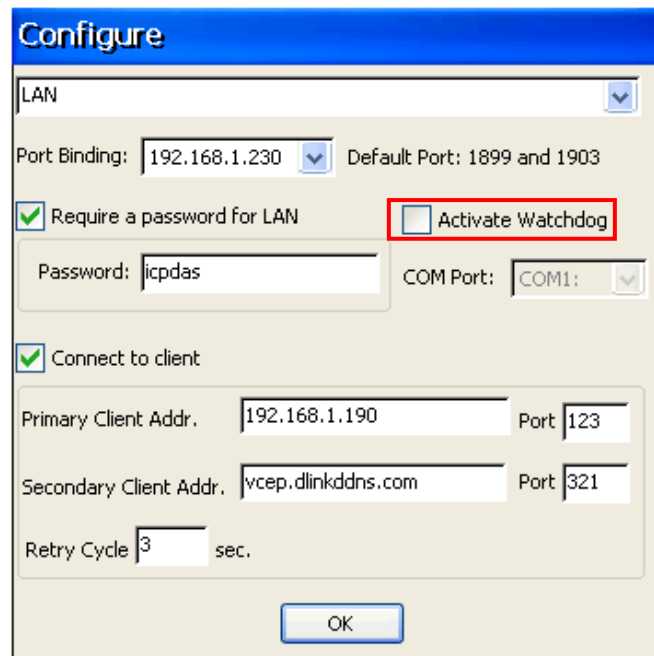
**Step 1: PC side:** Refer to '[2-2 Running](#)' and connect PC and WinPAC/XPAC/ViewPAC. The setting of '[Connection Type](#)' in '[2-2 Running](#)' depends on the real situation. If PC and WinPAC/XPAC/ViewPAC are all in WAN, you have to set IP address.



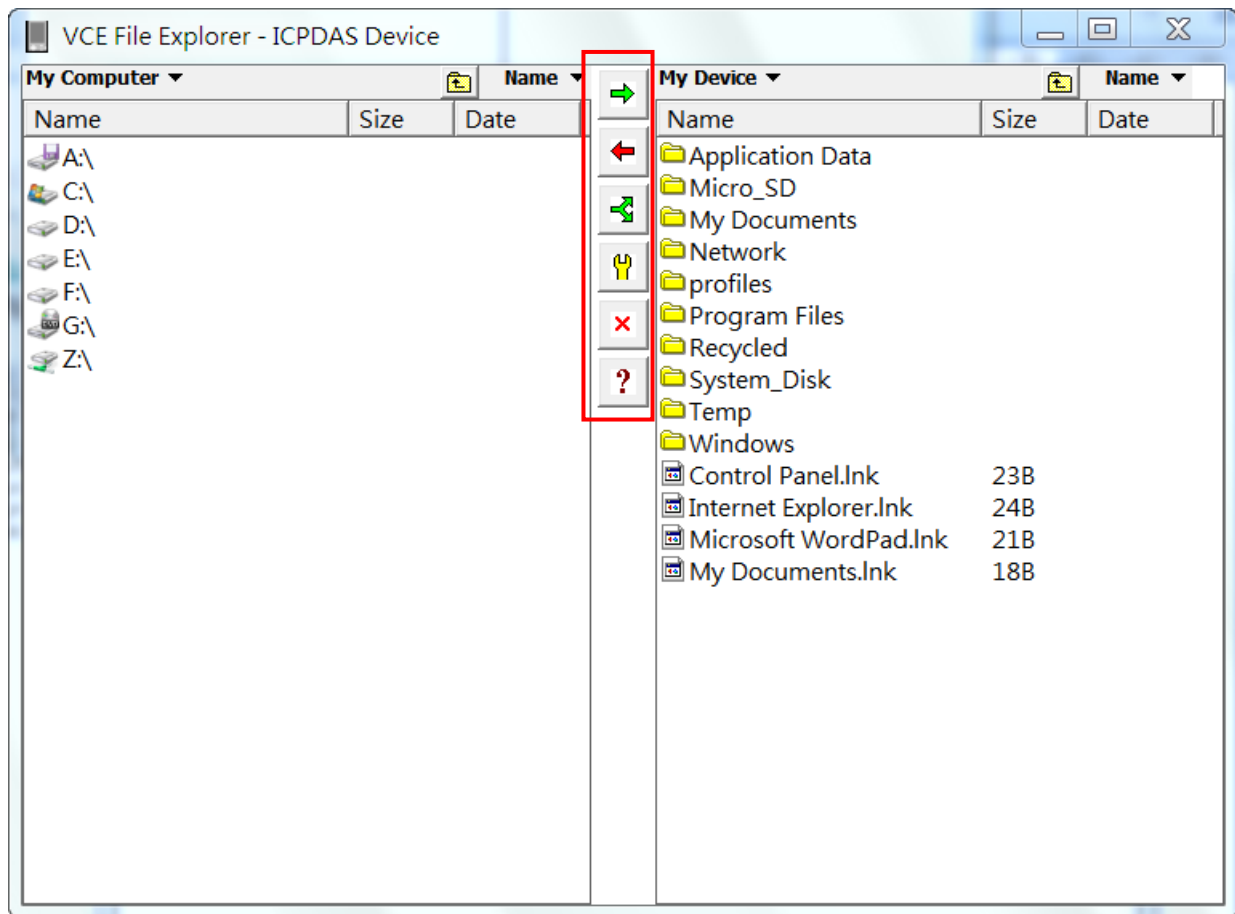
**Step 2:** You can adjust 'Color Mode', 'Queue Events' and 'Refresh Rate' to reduce traffic load.



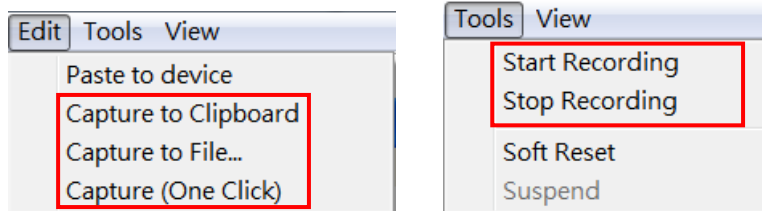
**Step3: PAC side:** You can check 'Active Watchdog' in '3-2-1 Configure'. This function can let VCEP restore automatically if VCEP crash for un-known reason.



**Step4:** Though WinPAC/XPAC/ViewPAC supports FTP itself, you can use '[3-3-2 File Explorer](#)' function of VCEP to transfer files between PC and WinPAC/XPAC/ViewPAC as well.



**Step5:** Finally, don't forget these convenient functions of '[Screen Capture](#)' of '[3-3-3 Edit](#)' and '[Recording Script/AVI](#)' of '[3-3-4 Tools](#)'.



**NOTE:** If your WinPAC/XPAC/ViewPAC is behind the firewall, please make sure to keep port 1899 and 1903 open.

## 4-2 Active Connection from Server

### 4-2-1 To Client With Public IP

In some situation, WinPAC/XPAC/ViewPAC only has private IP in LAN, but has to communicate with PC in WAN (See Figure 3).

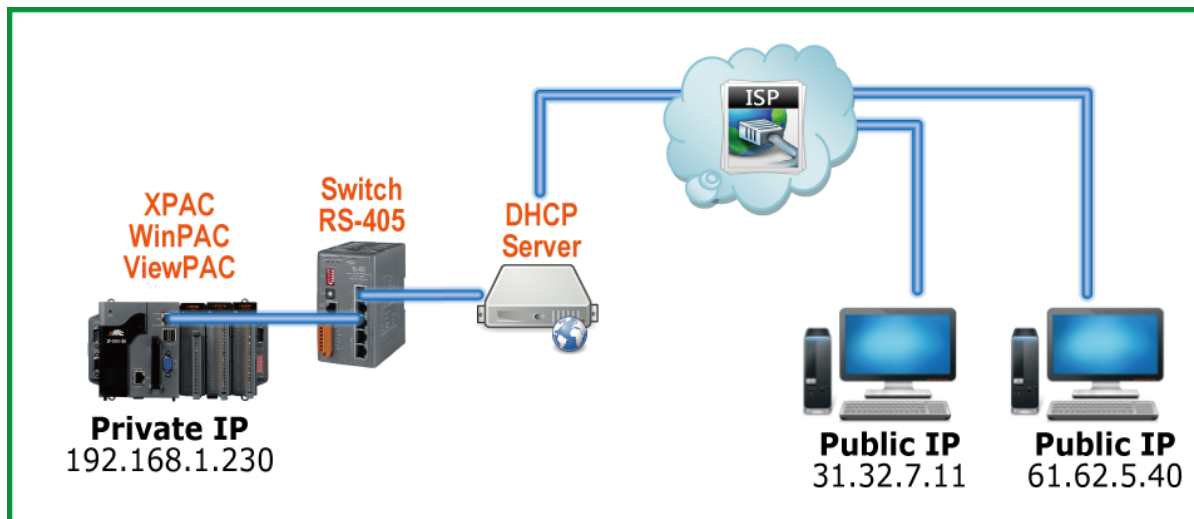


Figure 3

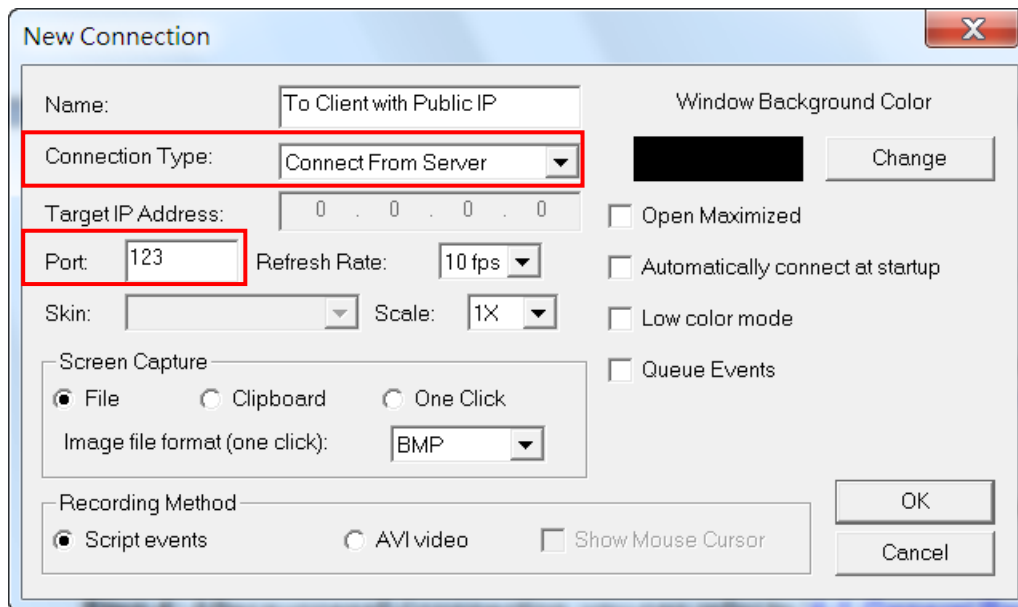
**Step 1:** Refer to '[3-2-1 Configure](#)'. Enter appropriate variables in '[Connect to client](#)'.

**PAC Side:** Check '[Connect to client](#)' and assign two '[Client Addr.](#)' for active connection from WinPAC/ XPAC/ViewPAC. If the first '[Primary Client Addr.](#)' cannot be connected to, VCEP will connect to the second '[Secondary Client Addr](#)' automatically. If the connection of the first '[Client Addr.](#)' restore, you have to disconnect the second connection manually to connect to the first one. The '[Retry Cycle](#)' means the time between two connections

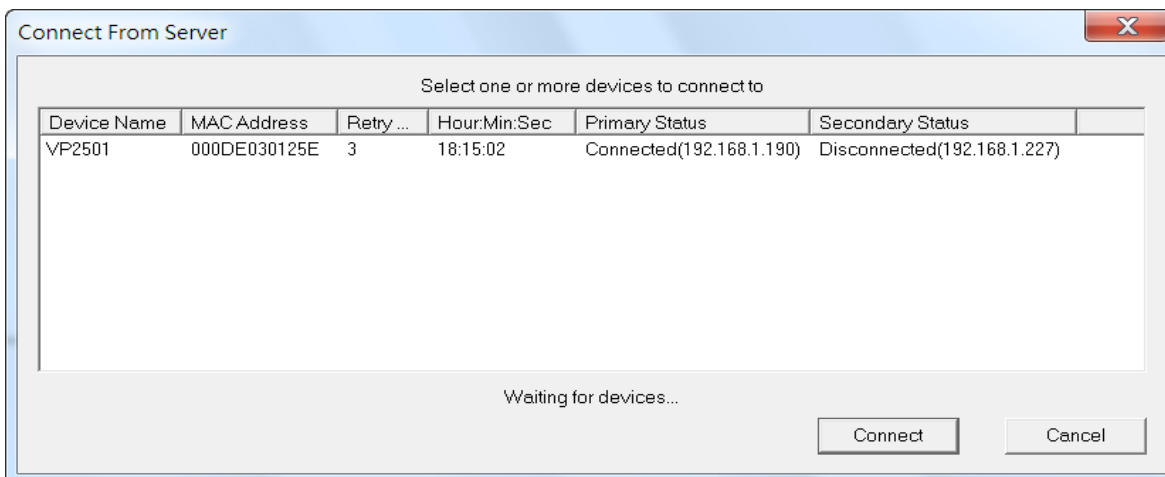
The screenshot shows the 'Configure' dialog box with the following settings:

- LAN (selected)
- Port Binding: 192.168.1.230 (selected) Default Port: 1899 and 1903
- Require a password for LAN
- Activate Watchdog
- Password: icpdas
- COM Port: COM1 (selected)
- Connect to client
- Primary Client Addr.: 192.168.1.190 Port: 123
- Secondary Client Addr.: 192.168.1.227 Port: 321
- Retry Cycle: 3 sec.
- OK button

**Step 2: PC Side:** Refer to '[3-1-2 New Connection](#)' and create a new connection on PC. Choose '[Connect From Server](#)' in '[Connection Type](#)'. The '[Port](#)' number should be the same with the '[Port](#)' number at **Step 1**.



**Step 3:** Press the '[Connect](#)' button and have patient waiting the connection from WinPAC/XPAC/ViewPAC.



**Step 4:** After successful connection, you can refer to '[4-1 General Remote Control from Client](#)' for all activities on WinPAC/XPAC/ViewPAC.

**NOTE:** If your WinPAC/XPAC/ViewPAC is behind the firewall, please make sure to keep port 1899 and 1903 open.

## 4-2-2 To Client With Private IP in Other Domain

### System Architecture

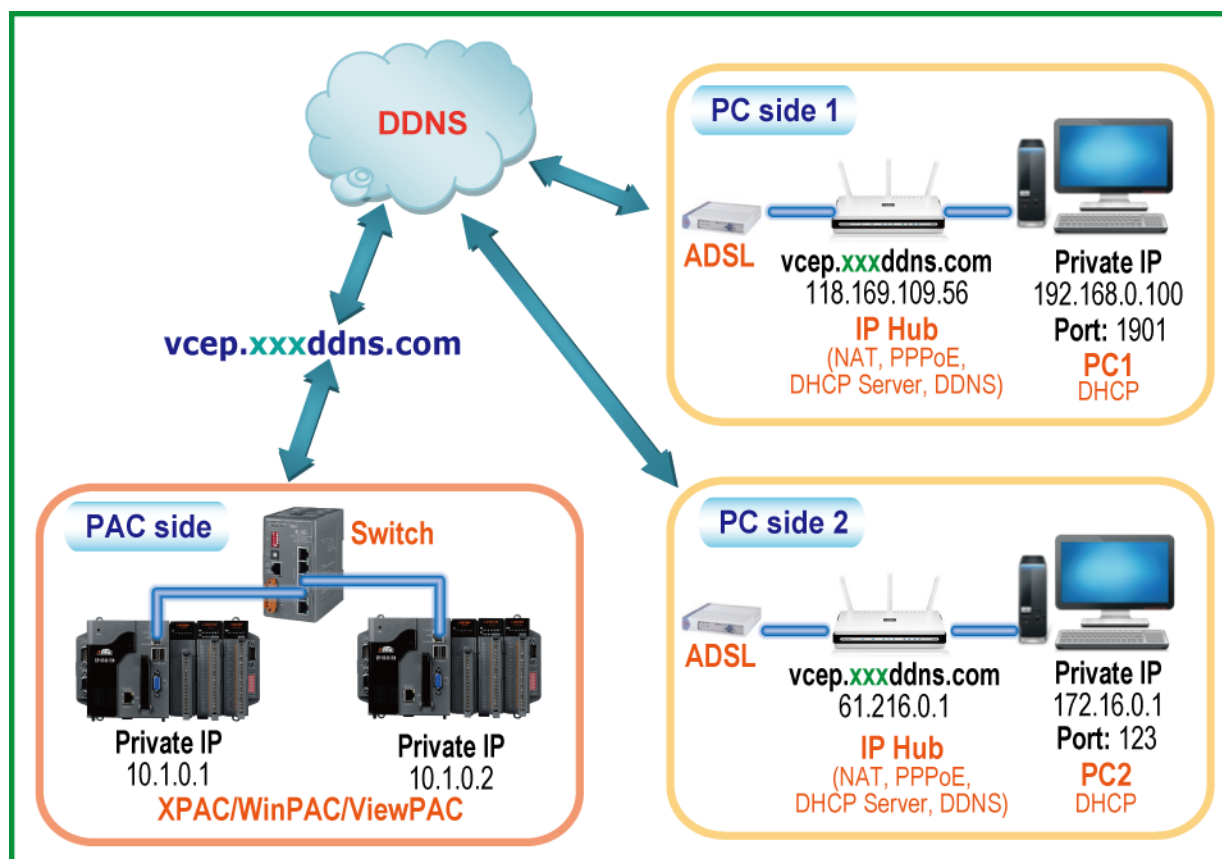


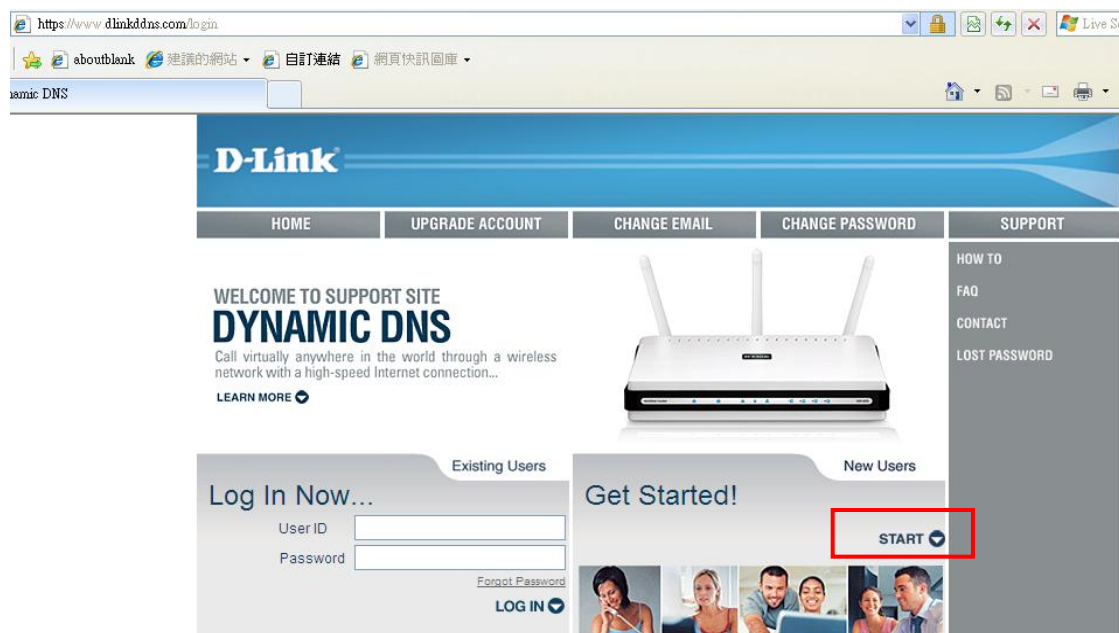
Figure 4

PC using a network device, for example D-Link device, automatic connects to the Internet, through a DDNS provided domain name, e.g. dlinkddns, to link with the local IP, and WinPAC/XPAC/ViewPAC through the dlinkddns provided domain name to connect with remote PC. If the DDNS network device and PC work well, even in different domains, PC and the remote WinPAC/XPAC/ViewPAC can make connection anytime.

**Note:** This example uses D-Link DIR-615 as the network device. The 'dlinkddns' is for use of the D-Link devices, please check if you use the D-Link network device, or you may use other DDNS provided by the third party.



**Step 1.** Link to the D-Link DDNS website (<https://www.dlinkddns.com>) . If you don't have any D-Link DDNS account, please click on "START" to create one. If you have one, please go to Step 4.



**Step 2.** Enter Username, Password, E-mail address, and check the box below. At last, click on "Create Account" button.

## New Account

<b>Username</b>	<input type="text" value="adddfs2000"/>
<b>Password</b>	<input type="password" value="••••••••"/>
<b>Confirm</b>	<input type="password" value="••••••••"/>
<b>Email</b>	<input type="text" value="adddfs@gmail.com"/>

Subscribe to our mailing list

### Acceptable Use Policy

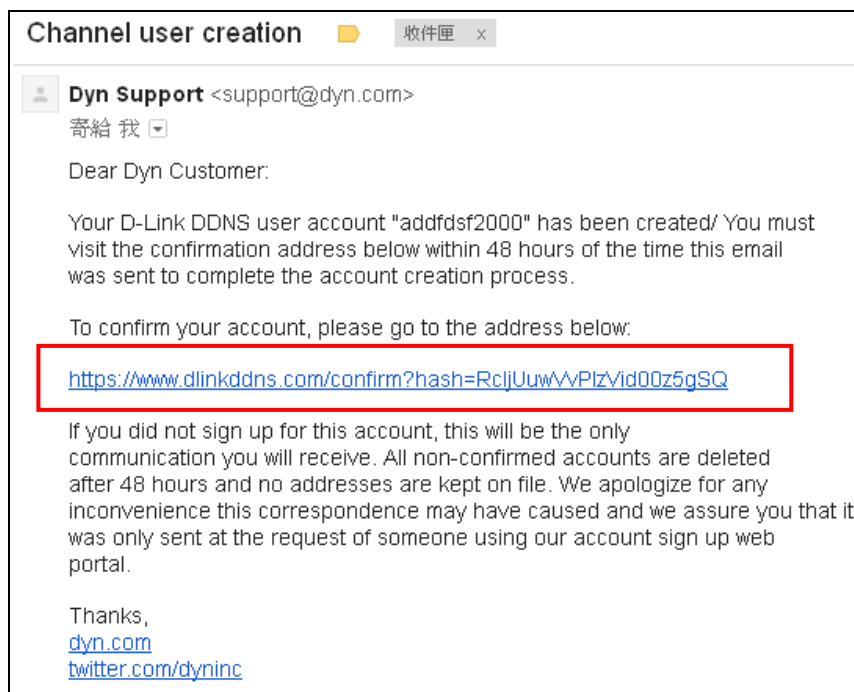
1. ACKNOWLEDGMENT AND ACCEPTANCE OF TERMS OF SERVICE

All services provided by Dynamic Network Services, Inc. ("DynDNS") are provided to you (the "Member") under the Terms and Conditions set forth in this Acceptable Use Policy ("AUP") and any other operating rules and policies set forth by DynDNS. The AUP comprises the entire agreement between the Member and DynDNS and supersedes all prior agreements between the parties regarding the subject matter contained herein. BY COMPLETING THE REGISTRATION PROCESS AND CLICKING THE "Accept" BUTTON, YOU ARE INDICATING YOUR AGREEMENT TO BE BOUND BY ALL OF THE TERMS AND CONDITIONS OF THE AUP.

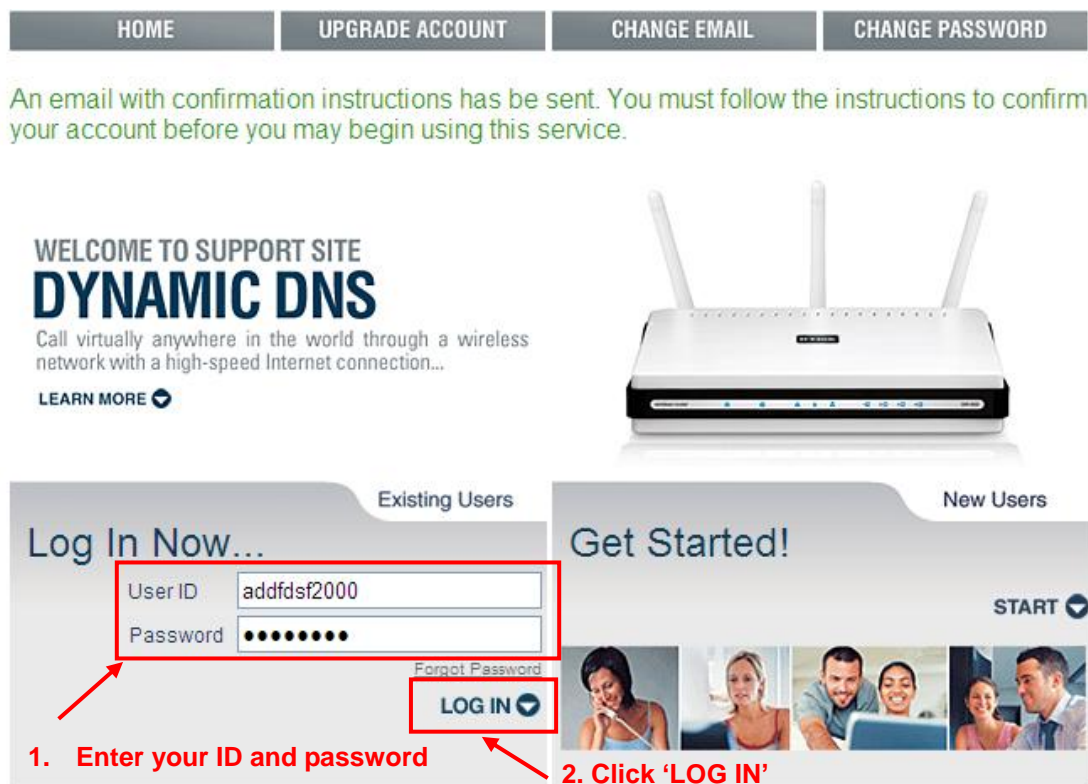
I agree to the Acceptable Use Policy above

← Check this option

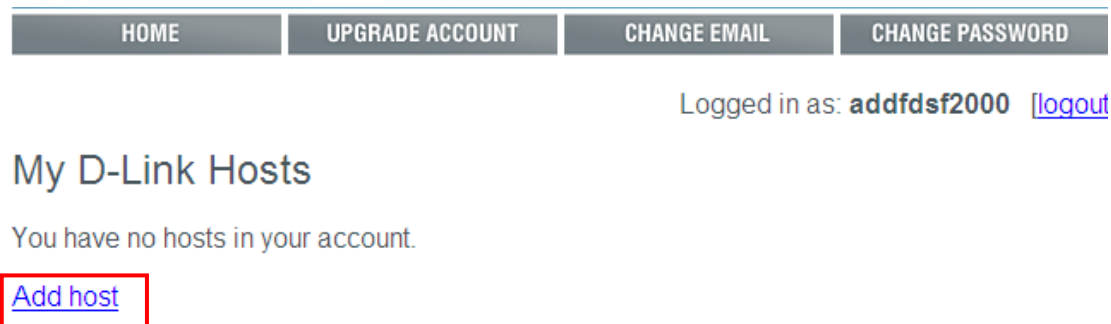
**Step 3.** Please check the 'dlinkddns' mail in your e-mail box, and click the link address in the e-mail to confirm your D-Link DDNS account.



**Step 4.** Go to D-Link DDNS website. Enter your User ID and Password to log in.



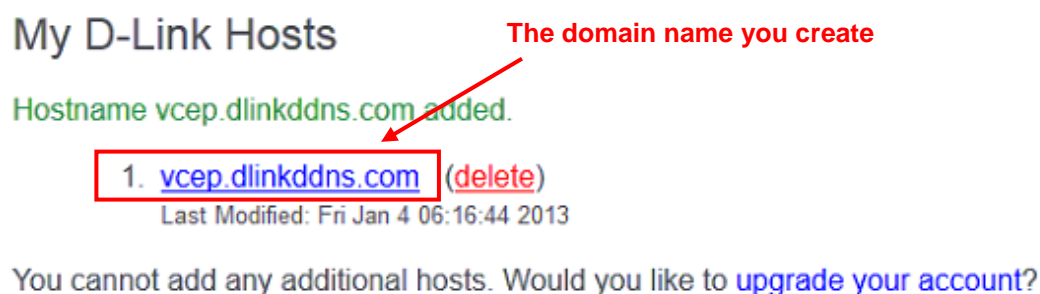
**Step 5.** After logged in, click "Add host" to create your domain name.



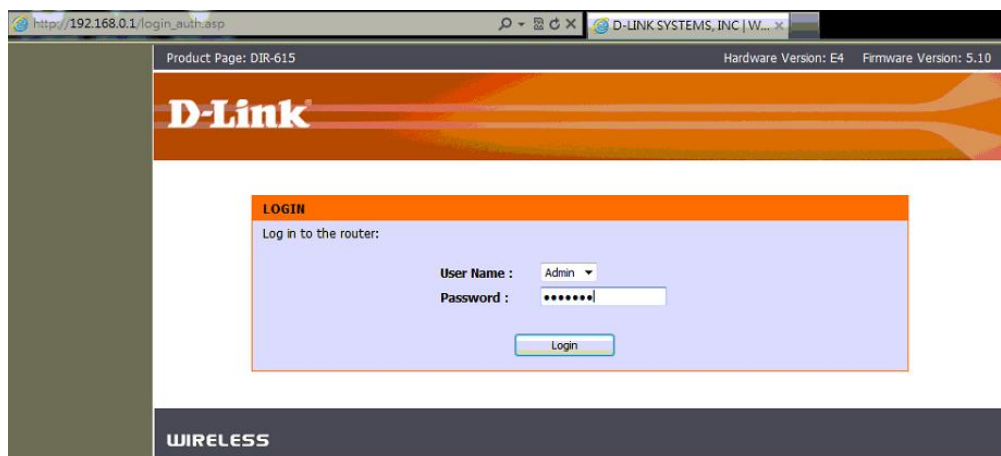
**Step 6.** In 'Hostname', enter the domain name you want. In 'New IP Address', enter the IP Address for external use (Refer to the Browser IP Address), and save it.



**Step 7.** Then you will see the domain name as below picture.



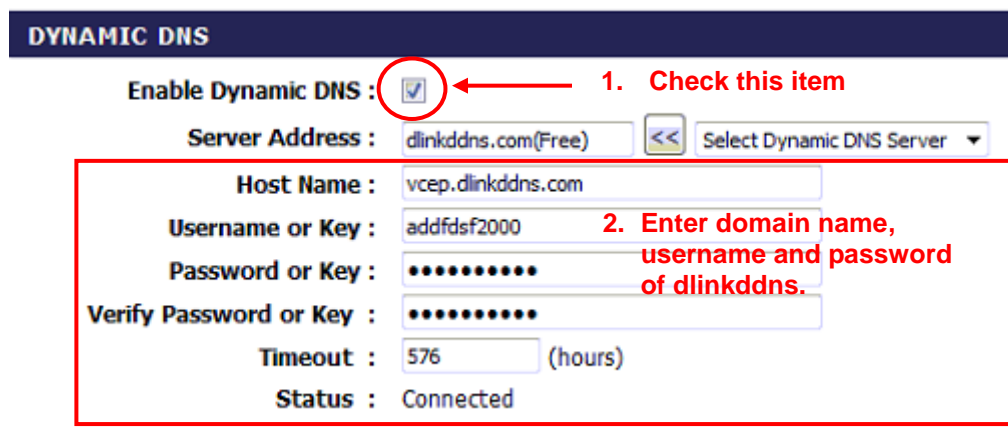
**Step 8.** Enter "192.168.0.1" in the address line of your Browser (e.g. IE) to go the DR-615 website. Enter the User Name and Password of your administrator.



**Step 9.** First, select "TOOLS", and then "DYNAMIC DNS".



**Step 10.** Check "Enable Dynamic DNS" first. Then enter the domain name created in the Step 8 into "Host name", and enter the 'dlinkddns' username and password into the "Username or key" and "password or key".



**Step 11.** Click "Save Settings".

### DYNAMIC DNS

The DDNS feature allows you to host a server (Web, FTP, Game Server, etc...) using a domain name that you have purchased (www.whateveryournameis.com) with your dynamically assigned IP address. Most broadband Internet Service Providers assign dynamic (changing) IP addresses. Using a DDNS service provider, your friends can enter your host name to connect to your game server no matter what your IP address is.

Sign up for D-Link's Free DDNS service at [www.dlinkddns.com](http://www.dlinkddns.com)

---

### DYNAMIC DNS

Enable Dynamic DNS :

Server Address :

Host Name :

Username or Key :

Password or Key :

Verify Password or Key :

Timeout :  (hours)

Status : Connected

---

**Step 12.** Waiting the IP Hub restart to enable the setting. The DDNS service is ready for use after the IP hub restart.

## D-Link

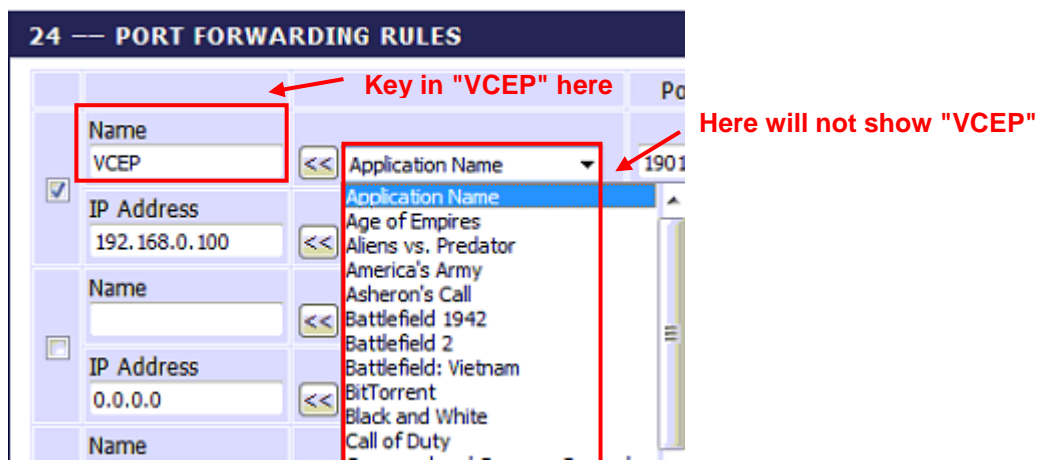
The new settings have been saved.  
Please wait 15 seconds.

To set the IP Hub can forward the specific port data to the VCEP in PC, please follow the steps below.

**Step 1.** First select "ADVANCED", and then "PORT FORWARDING"



**Step 2.** The VCEP name will not show in the pull down menu box, please key in "VCEP" in the column "NAME".



**Step 3.** Select your VCEP PC from the pull down menu box in the right hand side, then click "<<" button to add the IP address.

1. Select your VCEP PC here

2. Click "<<" button to add IP Address

**Step 4.** Enter the Port number that VCEP wants to use for "TCP" and "UDP".

1. Enter the Port that VCEP uses

2. "Schedule": select "Always"

3. "inbound": select "Allow All"

**Step 5.** Click "Save Settings".

Product Page: DIR-615 Hardware Version: E4

**D-Link**

DIR-615 // SETUP ADVANCED TOOLS STATUS

VIRTUAL SERVER

PORT FORWARDING

APPLICATION RULES

QOS ENGINE

NETWORK FILTER

ACCESS CONTROL

**PORT FORWARDING RULES:**

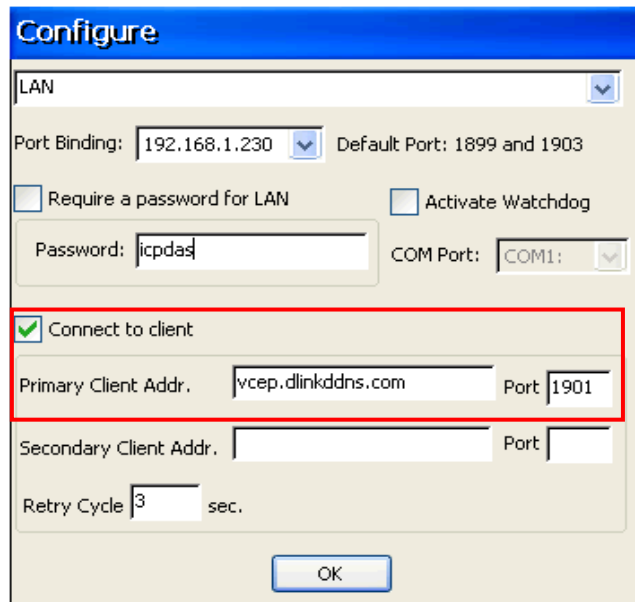
This option is used to open multiple ports or a range of ports in your router and redirect data through those ports to a single PC on your network. This feature allows you to enter ports in various formats including, Port Ranges (100-150), Individual Ports (80, 68, 888), or Mixed (1020-5000, 689).

Save Settings Don't Save Settings

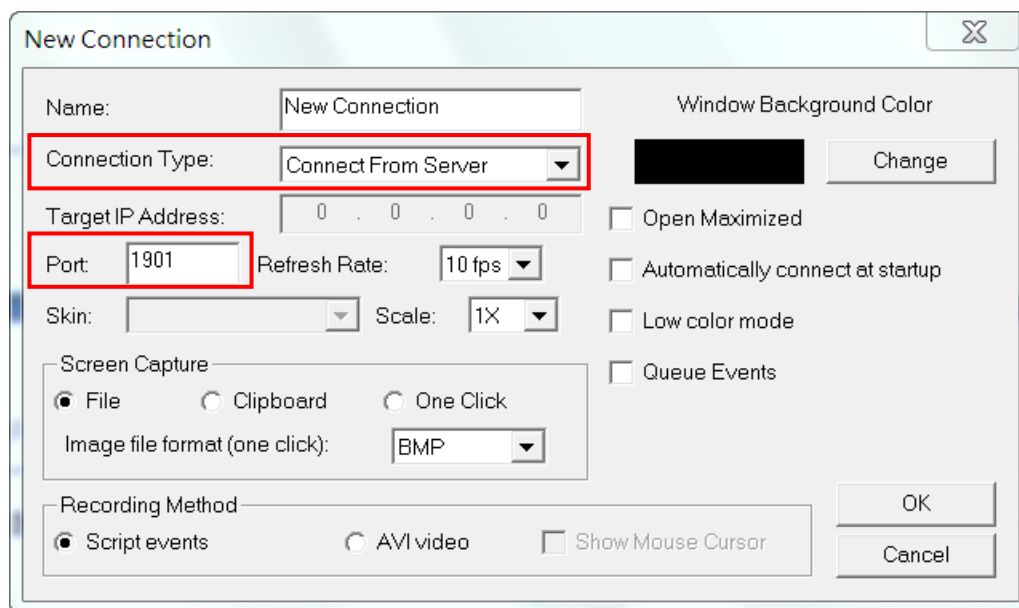
**Step 6.** Waiting the IP Hub restart to enable the setting.

Connection with the WinPAC/XPAC/ViewPAC, please follow the steps below.

**Step 1: PAC Side:** Configure appropriate variables in 'Connect to client' (Refer to '[3-2-1 Configure](#)'). Check 'Connect to client'. Assign the domain name and port number to 'Client Addr'.



**Step 2: PC Side:** Create a new connection on PC (Refer to '[3-1-2 New Connection](#)'). Choose 'Connect From Server' in 'Connection Type'. The 'Port' number should be the same with the 'Port' number at **Step 1**.





**Step 3:** Press the '[Connect](#)' button and have patient waiting the connection from WinPAC/XPAC/ViewPAC.

**Step 4:** After successful connection, you can refer to '[4-1 General Remote Control from Client](#)' for all activities on WinPAC/XPAC/ViewPAC.

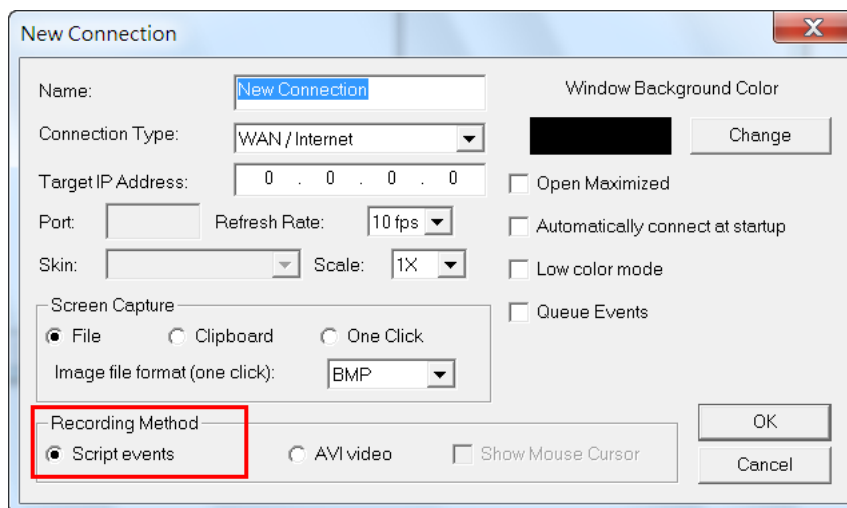
**NOTE:** If your WinPAC/XPAC/ViewPAC is behind the firewall, please make sure to keep port 1899 and 1903 open.

## 4-3 Debugging and Maintaining

VCEP allows user recording and playing script. This function is very convenient to debug and maintain WinPAC/XPAC/ViewPAC. For example, user can re-play a script to re-generate the problem for debugging. Also, user can record a script for registration which can simplify the procedure of deploying application to different WinPAC/XPAC/ViewPAC.

### [Recording]

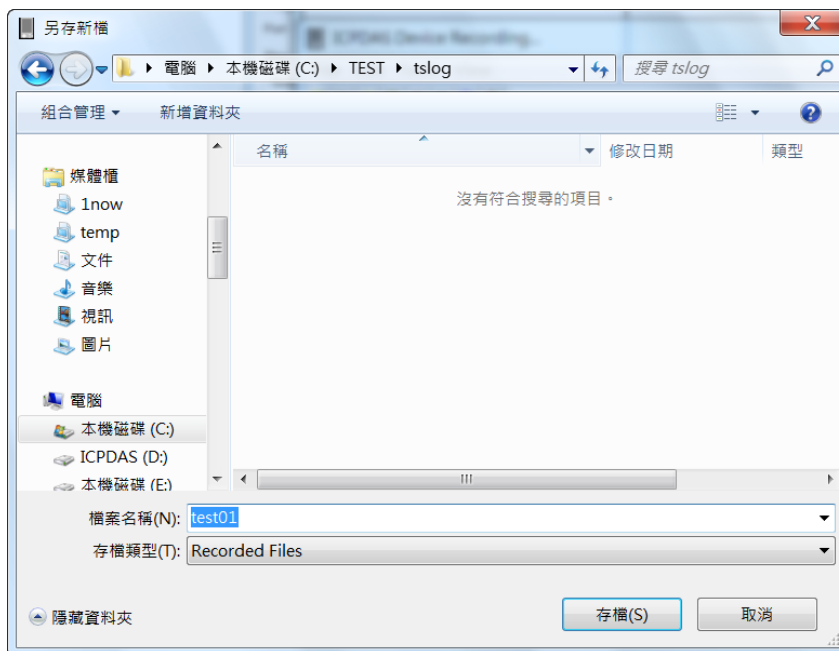
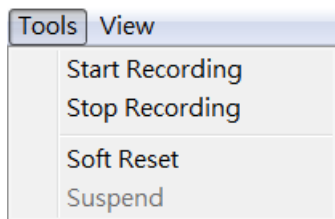
**Step 1:** Choose 'Script Events' of 'Recording Method' in 'New Connection' dialog



**Step 2:** Connect to WinPAC/XPAC/ViewPAC. (Refer to '[4-1 General Remote Control from Client](#)')

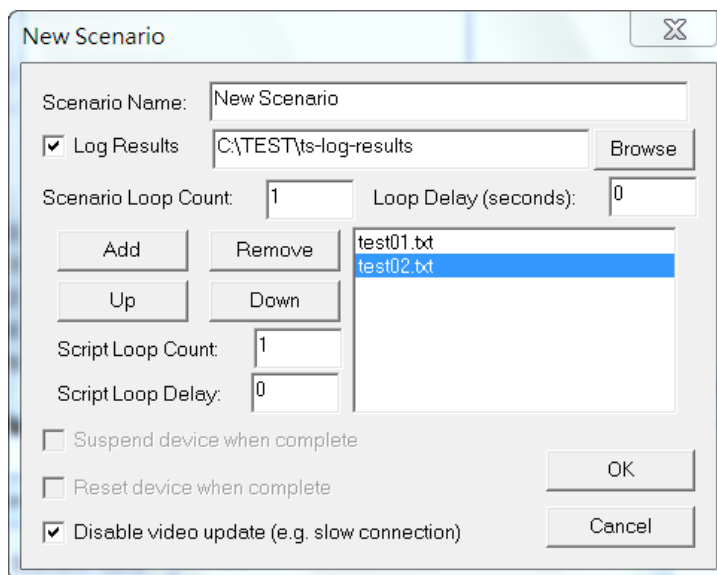
**Step 3:** Choose [Tools]-> [Start Recording] to record all activities when connecting

**Step 4:** Choose [Tools]-> [Stop Recording] to stop recording and save in file



**[Playing]**

**Step 1:** Create a scenario (Refer to '[3-1-4 New Scenario](#)'). If you check '[Log Results](#)', the log file will record all results when playing scenario. If you have several scripts should be played in one scenario, you can add all of them in the list by '[Add](#)' function and set loop for each one. If the activities in scenario do not need to see on PC, remember to check '[Disable Video Update](#)'.



**Step 2:** Choose one WinPAC/XPAC/ViewPAC to connect

**Step 3:** After press '[Play](#)' button, you will see a '[Run Script](#)' dialog. Choose the WinPAC/XPAC/ViewPAC and '[Run](#)'. Now, you can find out WinPAC/XPAC/ViewPAC act as you record before

