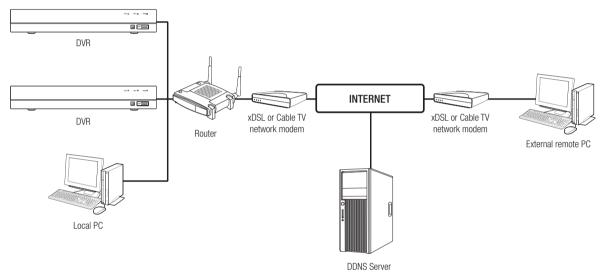
Quick Network Setup Guide

Use Router to Connect to Network

% Caution

- Guide for CMS (Wisenet Client) users on PC/Mac
- The Wisenet Life mobile viewer and web viewer can be used without making any separate router settings.
- For more information about the Wisenet Life viewer, visit wisenetlife.com.

By using a router, you can connect your computer and 1-3 DVRs to the Internet through sharing by using a XDSL or cable TV modem. This guide is intended for the average users other than professional network engineers.



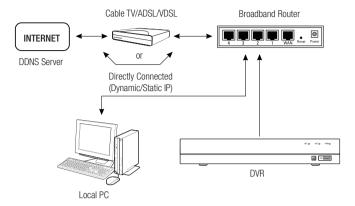
To use the router properly, please closely follow Steps 1-6.

Configure router, PC and DVR device in accordance with the following steps.

- Step 1. Connect the cable
- Step 2. Connect your local computer to the router
- Step 3. Connect the DVR to the router
- Step 4. Connect the router to Internet service line
- Step 5. Configure Port Forwarding for Router
- Step 6. Use the DDNS to access the DVR in dynamic IP environment

Step 1. Connect the cable

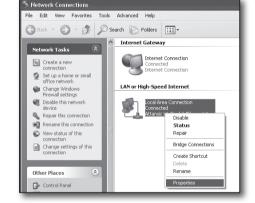
- 1. Connect the Internet service line (XDSL/cable TV Modem) to the Internet (WAN) port on the router.
- 2. Connect the computer and DVR to the LAN port (1-4) on the router by using an Ethernet cable.



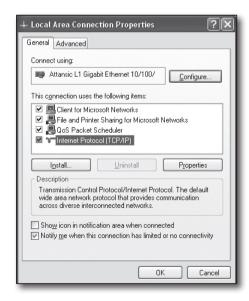
Step 2. Connect local computer to the router

Step 2.1 Connection Settings

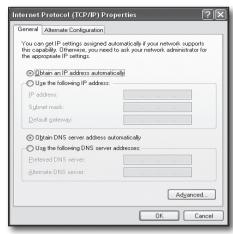
- 1. Click [Start] on your computer.
- 2. Access < Control Panel> < Network Connection>.
 The Network Connection Window is as shown in the figure.
- 3. Select < Local Connection>.
- 4. Right click on the mouse and select < Properties>.



- 5. The <Local Connection Properties> Window is as shown in the figure.
- 6. Select <Internet Protocol (TCP/IP)>, and then click on [Properties].

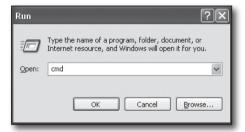


- 7. Select <Obtain an IP address automatically> and <Obtain DNS server address automatically>, and then click on <OK>.
- 8. Click on <OK> to finish setting.



Step 2.2 Verify connection

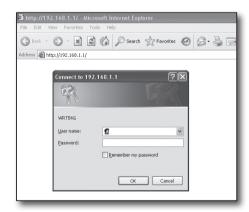
- 1. Click [Start] on your computer.
- 2. Click on [Run].
- 3. Enter "cmd" in <Open> text box found within the <Run> dialog box, and then click on [OK].



4. Enter "ipconfig" in DOS command line window [cmd.exe] and press [ENTER].



- 5. Run Internet Explorer and enter the IP address of <Default Gateway> in the address bar found in "cmd.exe" window, and then press [ENTER].
- If all connections have been set up properly, a router login page will be displayed.



If the connection fails, check all cables and return to Step 2.1, and then select </p

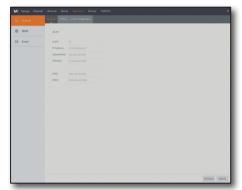
In "Local Connection Status" window, click on <Support> tab and select Default Gateway> (if it matches the gateway as found in [cmd.exe] window, and then check connection again.)



Step 3. Connect DVR to the router

Step 3.1 Configure DVR router settings

- 1. Select [Setup → Network].
- 2. Select < General > window.
- 3. Deselect DHCP. The connection setting window will be displayed.
- 4. Move the cursor to the desired item.
- 5. Manually input <IP address> when static connection is selected. The IP address consists of 4 fields, and the first 3 fields should be same to those of <Default Gateway> address of your computer which can be found in Step 2, and the last field should be an unoccupied figure between 2 and 254. For example, IP: 192.168.1.200.
- Enter <Gateway> and < Subnet Mast> (the same parameters as found in your computer in Step 2).
- Set <Client Port> and <Web Port>.
 Refer to the next page for setting up the Client port and Web Port.



What's a Port?

Port 80 is generally used for <Web Port> in the HTTP protocol.

If no port is set, it will be automatically set to 80 in the HTTP protocol.

For example, http://www.yahoo.com and http://www.yahoo.com:80 will be deemed as equal.

Therefore, if < Web Port> has been set to any port other than 80, then you have to specify the address in the following form: http://<IP address>:<Web Port>,

For example, http://192.168.1.200:80 to connect to the DVR using internet browser. It is recommended to set <Web Port> to a port number between 1024 and 65535.

If the port is not set to 80, access may be limited (depending on the security strategy or firewall configuration of your ISP).

DVR uses <Web Port> and <Client Port> for Web connection.

<Web Port> is used for access to DVR through the Web Browser.

<Client Port> is used to receive video sent from DVR through the Web browser.

When several DVRs are configured, the <Web Port> and <Client Port> settings should be configured respectively for each DVR.

For example, DVR #1: 4520, Web Port: 80 DVR #2: 4529, Web Port: 2000

Step 4. Connect the router to Internet service line

Internet connection setup and procedure may vary depending on the specific router. Please check your router setup method.

Connection type depends on your Internet service

Set Internet connection based on the type of Internet service. Check your environment and choose the proper connection type before you proceed.

- DHCP: Dynamic IP environment (allocate IP address automatically).
- Static (fixed) IP: IP environment where public IP address is used.
- PPPoE: commonly used in DSL environment, requiring ADSL access ID and password.
 For your user ID and password, consult your ISP.
 Name of each type stated above may vary depending on router manufacturer.

Step 4.1 Connection guide (by router)

Step 4.1-Case 1. D-Link DIR-330

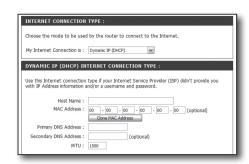
- 1. Run Internet Explorer and enter the IP address of <Default Gateway> found in Step 2 in the address bar, and then press [ENTER].
- When the router login screen is displayed, enter your User name and Password. For your User name and Password, refer to the user manual for the router.



- Select Internet connection method from connection setup wizard and manual setup. Selecting the Internet Connection Setup Wizard automatically moves to the next step.
- 4. Click on <Manual Setting>.

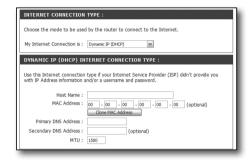


5. Select < Internet Connection Type>.



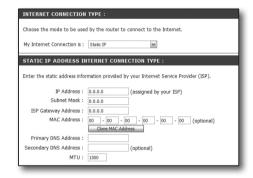
Dynamic IP Address Environment

- 6. Select < Dynamic IP (DHCP)>.
- 7. Click on [Save Settings].



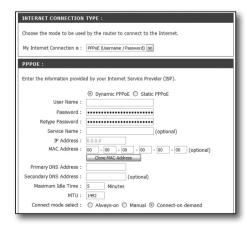
Static IP Address Environment

- 8. Select <Static IP>.
- Enter the <IP Address>, <Subnet Mask> and <ISP Gateway Address> allocated by your ISP.
- 10. Click on [Save Settings].



ADSL Environment

- 11. Select < PPPoE (Username/Password)>.
- Enter your User name and Password. For your User name and Password, consult your ISP.



Step 4.1-Case 2. NETGEAR WGR614SS

- Run Internet Explorer and enter the IP address of <Default Gateway> found in Step 2 into the address bar, and then press [ENTER].
- When the router login window is displayed, enter your User name and Password.

For your User name and Password, refer to the user manual for the router.



3. Click on <Setup> - <Basic Settings> from the menu on the left side. Click <Setup Wizard> for automatic setup.



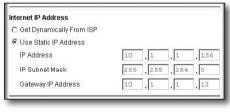
Dynamic IP Address Environment

- 4. Select <Get Dynamically From ISP>.
- 5. Click on [Apply].



Static IP Address Environment

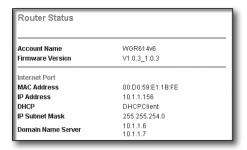
- 6. Select < Use Static IP Address>.
- 7. Enter <IP Address>, <IP Subnet Mask> and <Gateway IP Address>.
- 8. Click on [Apply].
- 9. All changes will now be saved.





Check Connection

Upon connection, the status indicator <DHCP Client> will be displayed at the top of the screen.

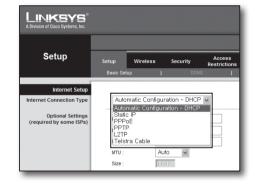


Step 4.1-Case 3. LINKSYS WRT54G

- 1. Run Internet Explorer and enter the <Default Gateway> found in Step 2 into the address bar, and then press [ENTER].
- 2. When the router login screen is displayed, enter your User name and Password
 - For your ID and password, refer to the user manual for the router.

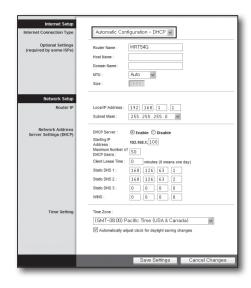


- 3. Click on <Internet Setup>.
- The setup screen to be displayed varies depending on your Internet Connection type.



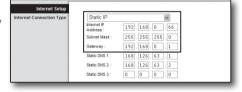
Dynamic IP Address Environment

- 5. Select < Automatic Configuration-DHCP>.
- 6. Click on [Save Settings] at the bottom.



Static IP Address Environment

- 7. Select <Static IP>.
- Enter the <Internet IP Address>, <Subnet Mask> and <Gateway> allocated by your ISP.
- 9. Click on [Save Settings] at the bottom.



ADSL Environment

- 10. Select <PPPoE>.
- **11.** Enter your User name and Password. For your User name and Password, consult your ISP.
- 12. Click on [Save Settings] at the bottom.



13. Upon completion, a completion page will be displayed.

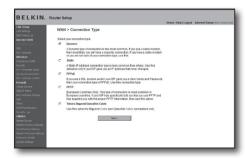


Step 4.1-Case 4. BELKIN F5D8236-4

1. Run Internet Explorer and enter the IP address of <Default Gateway> found in Step 2 into the address bar, and then press [ENTER].



2. Click on <WAN> - <Connection Type>. Select your Internet Service type.



Dynamic IP Address Environment

- 3. Select < Dynamic> as the connection type and click on [Next].
- 4. Enter <Host Name>and click on [Apply Changes]. If your ISP provided you with a specific DNS address, please click on <WAN> - <DNS> and enter the DNS address.



Static IP Address Environment

- 5. Select <Static> as the connection type and click on [Next].
- 6. Enter the <IP Address> allocated by your ISP.
- 7. Enter <Subnet Mask> and <ISP Gateway Address>.
- 8. Click on [Apply Changes].



ADSL Environment

- 9. Select <PPPoE> as the connection type and click on [Next] button.
- **10.** Enter your User name and Password. For your User name and Password, consult your ISP.
- 11. Click on [Apply Changes].



Check Connection

Once connected, the status indicator <Connection> will be displayed at the top of the interface.

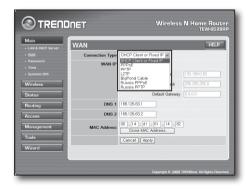


Step 4.1-Case 5. TRENDNET TEW-652BRP

- Run Internet Explorer and enter the IP address of <Default Gateway> found in Step 2 into the address bar, and then press [ENTER].
- When the router login window is displayed, enter your User name and Password.
 - For your ID and password, refer to the user manual for the router.

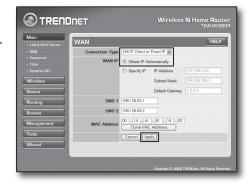


- 3. Click on <WAN> from the menu at the left side of the setup page.
- 4. Select < Connection Type>.



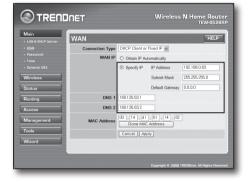
Dynamic IP Address Environment

- 5. Select < DHCP Client or Fixed IP>.
- 6. Click on <Obtain IP Automatically>. If your ISP provided you with a specific DNS address, please click on <WAN> - <DNS> and enter the DNS address.
- 7. Click on [Apply] button at the bottom.



Static IP Address Environment

- 8. Select < DHCP Client or Fixed IP>.
- 9. Select <Specify IP>.
- 10. Enter <IP Address>, <Subnet Mask> and <Default Gateway>.
- 11. Enter <DNS1> and <DNS2>. If your ISP provided you with a specific DNS address, please click on <WAN> - <DNS> and enter the DNS address.
- 12. Upon completion, click on [Apply] button at the bottom.



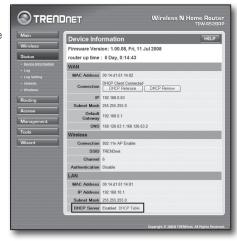
ADSL Environment

- 13. Select < PPPoE>.
- 14. Select appropriate method of obtaining <WAN IP> address.
- **15.** Enter <Service Name>, <User Name> and <Password>. For your User name and Password, consult your ISP.



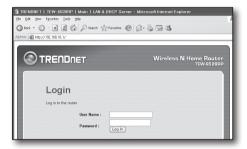
Check Connection

16. Click on <Status> - <Device Information> from the menu on the left side, and check the current status of server at <DHCP Server> under LAN type. When the connection is set up successfully, the <Enabled DHCP Table> will be displayed.

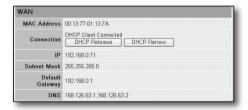


Step 4.2 Check connection to Internet

- 1. Run Internet Explorer on your computer.
- Enter the IP address of <Default Gateway> found in Step 2 into the address bar, and then press [ENTER].
- 3. Click on Status tab on router menu.



- 4. Check the WAN (Internet) connection status and WAN (Internet) IP address.
- When the connection is set up successfully, a message <DHCP Client Connected> will be displayed, and an address will be displayed for the WAN (Internet) IP.



- 6. Use Internet Explorer to access Yahoo, Google and other Web servers.
- If the connection has been set up correctly, Internet Explorer will properly display the page on the Web server accessed.
- 8. If connection fails, please return to Step 4 and check it again.



Step 5. Port Forwarding

Port forwarding should be configured for accessing from the outside of the router network to a computer or DVR which is connected to the router

Configure router port forwarding in accordance with the following instructions.

What's port forwarding?

It is a port mapping from <WAN (Internet) IP: port of Router> to <IP: port of DVR>. It helps start the communication channel between the interior and exterior of private LAN.

As a DVR uses two ports for communication, port forwarding should be set up for two ports.



If port forwarding is configured only for the <Web Port>: the Web Viewer can be accessed through the Web browser, but the video cannot be received, because port forwarding is not configured for <Client Port> which is used for video data communication.
If port forwarding is configured only for <Client Port>: the Web Viewer cannot be accessed through the Web browser, because port forwarding is not configured for <Web Port>, which is used for communication.

The Port forwarding method for each type of router is described below. For other routers not guided herein, refer to the user manual for the router.

Step 5.1 Port Forwarding Guide (by router)

Run Internet Explorer and enter the IP address of <Default Gateway> found in Step 2 into the address bar, and then press [ENTER].

Step 5.1-Case 1. D-LINK DIR-330

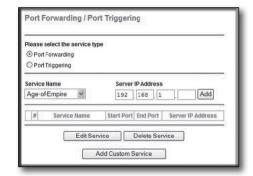
- 1. Select <Advanced>.
- 2. Set port forwarding for <Web Port>.
 - 2-1. Find the <Check box> and check it.
 - 2-2. Enter a name for the DVR port in the <Name>field. For example, "DVR 1"
 - 23. In <Public Port>, enter the <Web Port> defined in Step 3. For example, 80-80
 - 2^{-4} . In <Private Port>, enter the <Web Port> defined in Step 3. For example, 80-80
 - 2^{5} . In <IP Address>, enter the IP address defined for DVR in Step 3. For example, 192.168.1.200
 - 2-6. Select < Any > for < Traffic Type >.
- 3. Set port forwarding for <Client Port>.
 - 3-1. Find the <Check box> and check it.
 - 3-2. Enter a name for the DVR port in the <Name> field. For example, "DVR 2"
 - $\ensuremath{\mathbf{3}}\xspace^{-3}.$ In <Public Port>, enter the <Client Port> defined in Step 3. For example, $4520{\sim}4524$
 - 3.4. In <Private Port>, enter the <Client Port> defined in Step 3. For example, 4520~4524
 - 3^{-5} . In <IP Address>, enter the IP address defined for DVR in Step 3. For example, 192.168.1.200
- 4. Upon completion, click on [Save Settings].





Step 5.1-Case 2. NETGEAR 614SS

- 1. Click on [Port Forwarding / Port Triggering] from the menu on the left side.
- 2. Select < Port Forwarding>.
- 3. Set port forwarding for <Web Port>.
 - 3-1. Set port forwarding for <Add Custom Service>.



DVR1

80

TCP/UDP V

(1~65534)

(1~65534)

Ports - Custom Services

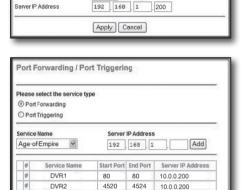
Service Name

Service Type

Starting Port

Ending Port

- 3⁻². In <Service Name> field enter a name for DVR. For example. "DVR 1"
- 3-3. Enter <Starting Port> and <Ending Port> matching the <Web Port> defined in Step 3.
 For example, 80
- 3-4. In <Server IP Address>, enter the IP address defined for DVR in Step 3. For example, 192.168.1.200
- 3-5. Click [Apply] to finish setting.
- 4. Set port forwarding for <Client Port>.
 - 4-1. Click on <Add Custom Service> button.
 - 4-2. In <Service Name> field, enter a name for <Client Port> of DVR. For example, "DVR 2"
 - 4-3. Enter <Start Port> and <End Port> matching the <Client Port> defined in Step 3. For example, 4520, 4524.
 - $4^{\text{-4}}.~$ In <Server IP Address>, enter the IP address defined for DVR in Step 3. For example, 192.168.1.200
 - 4-5. Click [Apply] to finish setting.

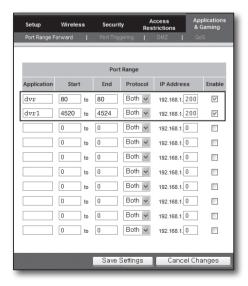


Edit Service Delete Service

Add Custom Service

Step 5.1-Case 3. LINKSYS WRT54G

- 1. Click on < Application & Gaming>.
- 2. Set port forwarding for <Web Port>.
 - 2-1. In <Application> field, enter a name for DVR port. For example, "DVR 1"
 - 2°. In <Start> and <End> fields, enter <Web Port> defined in Step 3. For example, 80
 - 2-3. Select [Both] for < Protocol>.
 - $2^{\text{-4}}.~$ In <IP Address>, enter the IP address defined for DVR in Step 3. For example, 192.168.1.200
 - 2-5. Select the check box in the <Enable> column for the specified port.



- 3. Set port forwarding for <Client Port>.
 - 3-1. In <Application> field, enter a name for DVR port. For example, "DVR 2"
 - 3-2. In <Start> and <End>> fields, enter <Olient Port> defined in Step 3. For example, 192.168.1.200
 - 3-3. Select [Both] for < Protocol>
 - 3^{-4} . In <IP Address>, enter the IP address defined for DVR in Step 3. For example, 192.168.1.200
 - 3.5. Select the check box in <Enable> column for the specified port.
- 4. Click on [Save Settings] at the bottom.
- 5. Upon completion, the completion screen will be displayed.



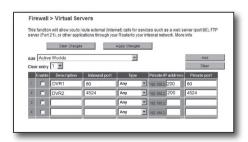
Step 5.1-Case 4. BELKIN F5D8236-4

1. Click on <Firewall> - <Virtual Servers> from the menu at the left side.



- 2. Set port forwarding for <Web Port>.
 - 2-1. Select < Enable > check box to mark the selected port.
 - 2°. In <Description> field, enter a name for DVR port. For example, "DVR 1"
 - 2^{-3} . In <Inbound Port>, enter the <Web Port> defined in Step 3. For example, 80
 - 2-4. Select <Any> for <Type>.
 - 2^5 . In <Private IP Address>, enter the IP address defined for DVR in Step 3. For example, 192.168.1.200
 - $\mathbf{2}^{\text{-6}}.~$ In <Private Port>, enter the <Web Port> defined in Step 3. For example, 80
- 3. Set port forwarding for <Client Port>.
 - 3^{-1} . Select <Enable> check box to mark the selected port.
 - 3-2. In <Description> field, enter a name for DVR port. For example, "DVR 2"
 - **3**-3. In <Inbound Port>, enter the <Client Port> defined in Step 3. For example, 4520, 4521, 4522, 4523, 4524.
 - 3-4. Select <Any> for <Type>.
 - $\mbox{3-5}.$ In <Private IP Address>, enter the IP address defined for DVR in Step 3. For example, 192.168.1.200
 - **3**-6. In <Private Port>, enter the <Client Port> defined in Step 3. For example, 4520, 4521, 4522, 4523, 4524.
- 4. Upon completion, click on [Apply Changes].







Step 5.1-Case 5. TRENDNET TEW-652BRP

- 1. Click on <Access> and then <Virtual Servers> from the menu on the left side.
- 2. Set port forwarding for <Web Port>.
 - 2-1. Select [Enable] for item < Enable>.
 - 2⁻². In <Name> field, enter a name for DVR port. For example, "DVR 1"
 - 2-3. Select [TCP] for item < Protocol>.
 - 24. In <Private Port> and <Public Port> fields, enter <Web Port> defined in Step 3.

For example, 80

- 2^{-5} . In <IP Address>, enter the IP address defined for DVR in Step 3. For example, 192.168.1.200
- 2-6. Click on [ADD].
- 3. Set port forwarding for <Client Port>.
 - 3-1. Select [Enable] for item < Enable>.
 - 3⁻². In <Name> field, enter a name for DVR port. For example, "DVR 2"
 - 3-3. Select [TCP] for item < Protocol>.
 - 3-4. In <Private Port> and <Public Port> fields, enter the <Client Port> defined in Step 3.

For example, 4520, 4521, 4522, 4523, 4524.

- $\bf 3^{\text{-5}}.~$ In <LAN Server>, enter the IP address defined for DVR in Step 3. For example, 192.168.1.200
- 3-6. Click on [ADD] button.
- 4. Finish setting.





Step 6. Access DVR by Using DDNS Service in Dynamic IP Environment

As WAN IP address of router may be different in XDSL/cable TV network connection where dynamic IP allocation is applied, DDNS (Dynamic Domain Name Service) is provided for access to DVR with fixed DDNS address in dynamic IP network environment.

Step 6.1 DVR DDNS Configuration

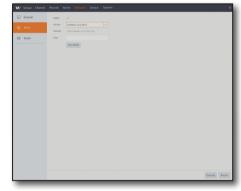
- Access <Network> window, select <DDNS>, and the DDSN setting page will appear.
- 2. DDNS: select Enable.

Server: HANWHA-SECURITY, DDNS_3322, DYNDNS, NO_IP, CHANGE IP or DNSEX IT may be chosen.

Enter domain name, user name and password provided by DDNS service provider.

For example, Domain name: DVR2016.no-ip.org User name: DVR2016. Password: 123456

3. Upon completion of DDNS setting, press <OK>.



Step 6.2 Access DVR by using DDNS information

1. Run Wisenet Client and enter the DDNS information found in Step 6.1.

• When using HANWHA DDNS

- 1) Select Product ID as the Login Type.
- 2) In the Product ID field, enter the Product ID that was registered on the HANWHA DDNS website.



· If you use another DDNS

- 1) Select IP/DOMAIN as the Login Type.
- 2) Enter the IP/DOMAIN provided by the DDNS service provider.
- 3) Enter the Client Port set in the DVR.
- Enter the User Name and Password set in the DVR and click the Login button. Once the network setup has been completed normally, you can view the live video on the screen.



- If failed with accessing, return to Step 6.1 and check the setting again.
- It may take 10 minutes to update IP address of the router recorded in DDNS server. When failed with accessing, retry after 10 minutes. DVR will report its IP address to DDNS server once every 10 minutes.
- 3. Configuration is finished.

