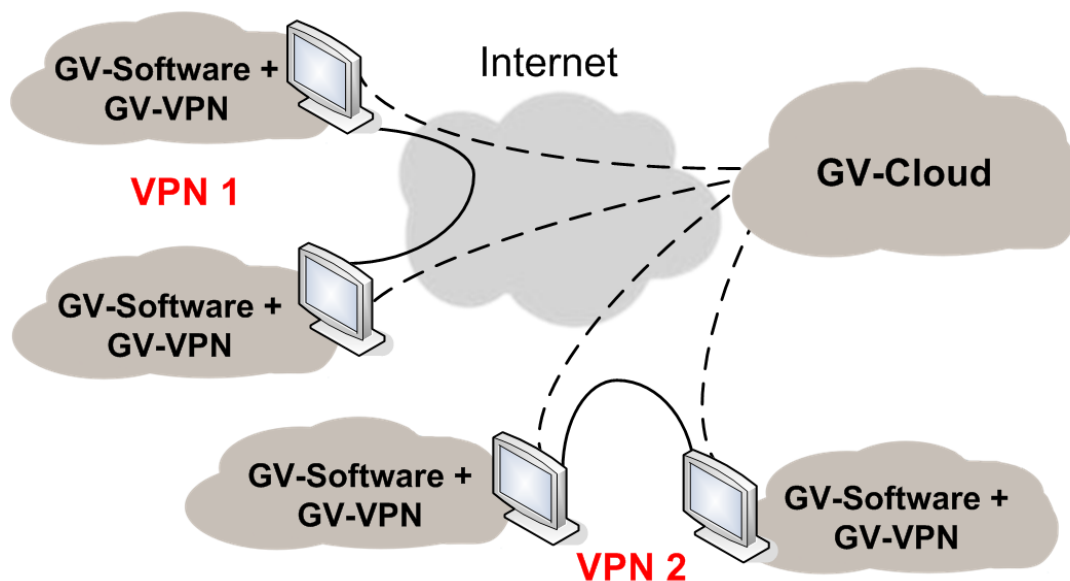


GV-VPN

With the application of GV-VPN empowered by P2P VPN technology and the cloud-based platform, GV-Cloud, users are allowed to create a virtual private network environment enclosed for GeoVision Software running on separate PCs. It saves the trouble of separate router configurations and links the GeoVision Software to the same virtual private network.



Note:

1. GV-VPN supports all GeoVision Software equipped with DDNS.
2. GV-VPN does not support the symmetric network environment or the network environment with the UDP Broadcast disabled.

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License

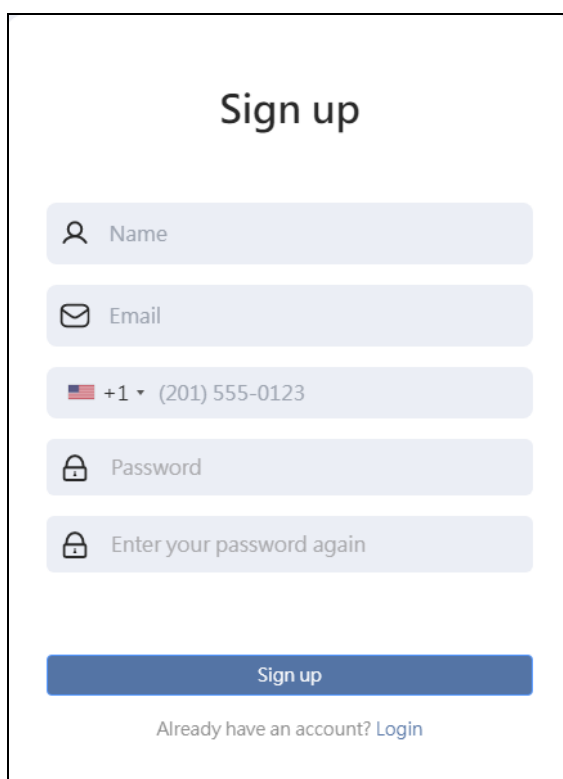
Free License	10 hosts
License Option	128 hosts, 256 hosts
Note: 1. For over 256 hosts, the increment for each license is 128 hosts. 2. Contact our sales representatives directly to purchase the license. 3. You will receive e-mail reminders 15 days before the license expires. If the license is not renewed, partial hosts will be disabled.	

Getting Started

1. Signing up on GV-Cloud

It is required to create a VPN on GV-Cloud first for the configurations on GV-VPN later. To create a VPN on GV-Cloud, follow the instructions below to sign up on GV-Cloud first.

1. On the Web browser (Microsoft Edge / Chrome / FireFox), visit the GV-Cloud webpage at <https://www.gvaicloud.com/>.
2. Click **Sign Up**. This page appears.

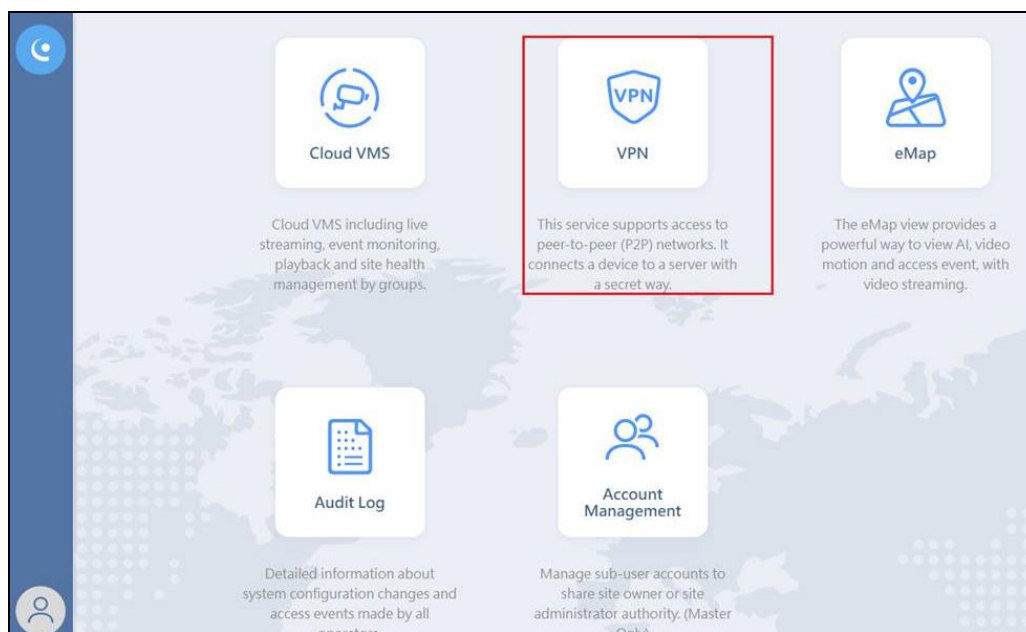
A screenshot of the GV-Cloud 'Sign up' page. The page has a white background with a black border. At the top, the text 'Sign up' is centered in a large, bold, black font. Below this, there are five input fields, each with a light blue background and a small icon on the left: a person icon for 'Name', an envelope icon for 'Email', a flag icon for a country code dropdown followed by a phone number '(201) 555-0123', a padlock icon for 'Password', and another padlock icon for 'Enter your password again'. At the bottom of the form is a blue button with the text 'Sign up' in white. Below the button, the text 'Already have an account? Login' is displayed in a smaller, blue font.

3. Type the user's Name, E-mail, Password, type the password again, and click **Sign up**. You will receive a confirmation e-mail.
4. To confirm the e-mail account, click the activation link in the confirmation e-mail. You will receive an additional e-mail confirming the success of GV-Cloud registration, along with an account ID number. Keep the information for logging in GV-Cloud later.

2. Creating a VPN on GV-Cloud

After successfully signing up on GV-Cloud, follow the instructions below to log into GV-Cloud and create a VPN.

1. On the Web browser (Microsoft Edge / Chrome / Firefox), visit the GV-Cloud webpage at <https://www.gvaicloud.com/>.
2. Fill in the ID, E-mail, and password created at *Step 3, 1. Signing up on GV-Cloud*.
3. This page appears. Select **VPN** to access the VPN setup page.



4. On the VPN setup page, click the **Add**  icon on the upper right corner to create a VPN.

- Type the ID, Password, Confirmation Password, optionally the Note for the VPN, and verify the VPN ID in case it's already in use. Keep the information for the configurations on GV-VPN later.

Add VPN

ID

The ID must be 5-30 characters long. It can contain the following three character classes: lowercase letters (a-z), numbers (0-9), and hyphens (-, not at the beginning and end.).

Verify

Password

Confirmation

Enter your password again

Note

Cancel

Send

- Click **Send**.

The VPNs created will be display on the home page as shown below.

VPN				
Console / VPN				
ID	Quantity	Created Date	Expired Date	Note
GV-Test1	10	05-04-2023 18:23	N/A	LAN1
GV-Test2	10	05-05-2023 16:54	N/A	LAN2

Name	Description
ID	The VPN ID created at <i>Step 5</i> .
Quantity	Available number of hosts for the connection.
Created Date	The date the specified VPN is created.
Expired Date	The expiration date for the license.
Note	The note added at <i>Step 5</i> .

Note:

- You can optionally click the VPN on the list to modify its note and password.
- For details on the license options, see the *License* section.

3. Configuring GV-VPN

After VPNs are created on GV-Cloud, run **GV-VPN .exe** on the same PC where GV-Software is installed. On the GV-VPN setup page, fill in the information created and acquired at the previous steps.

The screenshot shows the GV-VPN configuration window. It has a title bar with a minus, maximize, and close button. The window contains several input fields and buttons. Numbered callouts point to the following fields:

- 1: ID (text input)
- 2: Host Name (eg. VMS-1) (text input)
- 3: Password (password input)
- 4: LAN IP (IP address input, showing 198.18.x.x)
- 5: Network Interface Card (dropdown menu, showing Auto Detect)
- 6: Status (button, showing Disconnect)
- 7: Note (text input)
- 8: NAT Type (dropdown menu, showing Unknown)

At the bottom left, there is a [Register](#) link. At the bottom right, there are **Connect** and **Save** buttons.

No.	Name	Description
1	LAN ID	The VPN ID created on GV-Cloud at <i>Step 5, 2. Creating a VPN on GV-Cloud.</i>
2	Host Name	The desired host name for your GV-Software.
3	Password	The VPN password created on GV-Cloud at <i>Step 5, 2. Creating a VPN on GV-Cloud.</i>
4	LAN IP	The desired IP address (198.18.x.x) for your GV-Software. 198.18.0.1 ~ 198.18.255.254 is available.
5	Network Interface Card	Auto Detect is enabled by default, or optionally select the desired network card when multiple cards are inserted.

Note:

1. Make sure your GV-Software is running when setting up the connection on GV-VPN.
2. After a network card is inserted to the PC or when the PC is connected to the network during GV-VPN operation, restart GV-VPN for it to take effect.

After filling in the information above, click **Connect**. The following information will be displayed for No.6 ~ No.8.

No.	Name	Description
6	Status	One of the following word strings will be displayed for different connection statuses: ■ Disconnect: The connection is not yet set up. ■ Connecting: The connection is in process. ■ Connected: The connection is set up. ■ Login failed: You typed the incorrect LAN ID / Password. ■ IP address is already in use: The IP address is already occupied. Change the last two digits of LAN IP and try again. ■ Temporarily locked out: After three attempts of incorrect password key-in, the system will be automatically locked out for 5 minutes.
7	Note	The message of "No GV Software Running" appears when no GV-Software is detected running in the background.
8	NAT Type	One of the following word strings will be displayed for different connection NAT types: ■ Moderate: The network environment is applicable for running GV-VPN. ■ Restrict: The network environment is not applicable for running GV-VPN and may lead to unstable connection. ■ Exceed limit: The number of hosts exceeds the system threshold. ■ Unknown: The connection is undetectable. Make sure to click Connect or check if the network environment is detectable.

Note:

1. Different NAT types across separate PCs may affect the connection. See the table below:

NAT Type Client \ Server	Restrict (Symmetric)	Moderate (Asymmetric)
Restrict (Symmetric)	Not Support	Possible
Moderate (Asymmetric)	Possible	Pass

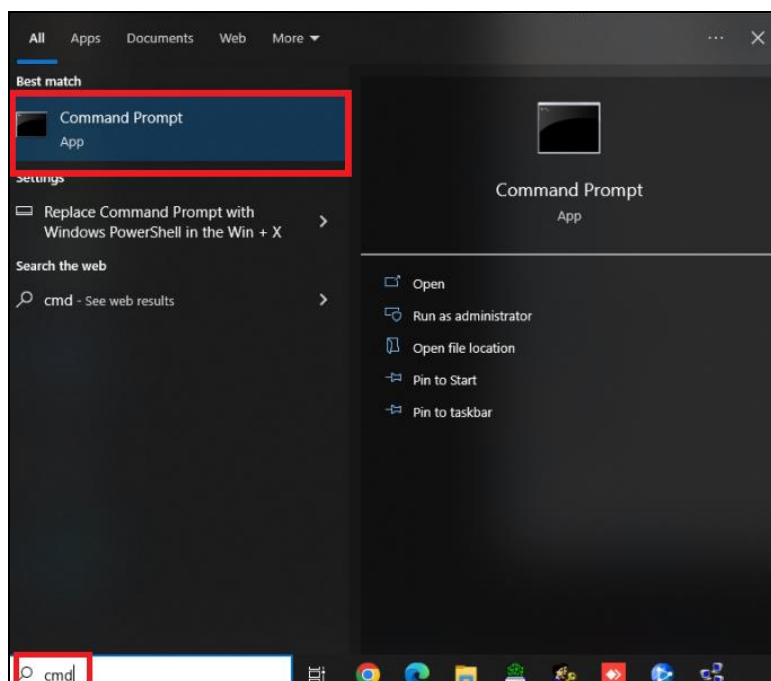
2. When encountering connection issues, check the router settings first.
-

4. Testing the Connection

When GV-VPN is configured and running on different PCs for different GV-Software, verify if GV-Software can connect to each other via the created VPN on GV-Cloud. You can use Command Prompt or Web browsers to ping and search for the presence of another GV-Software in the created VPN.

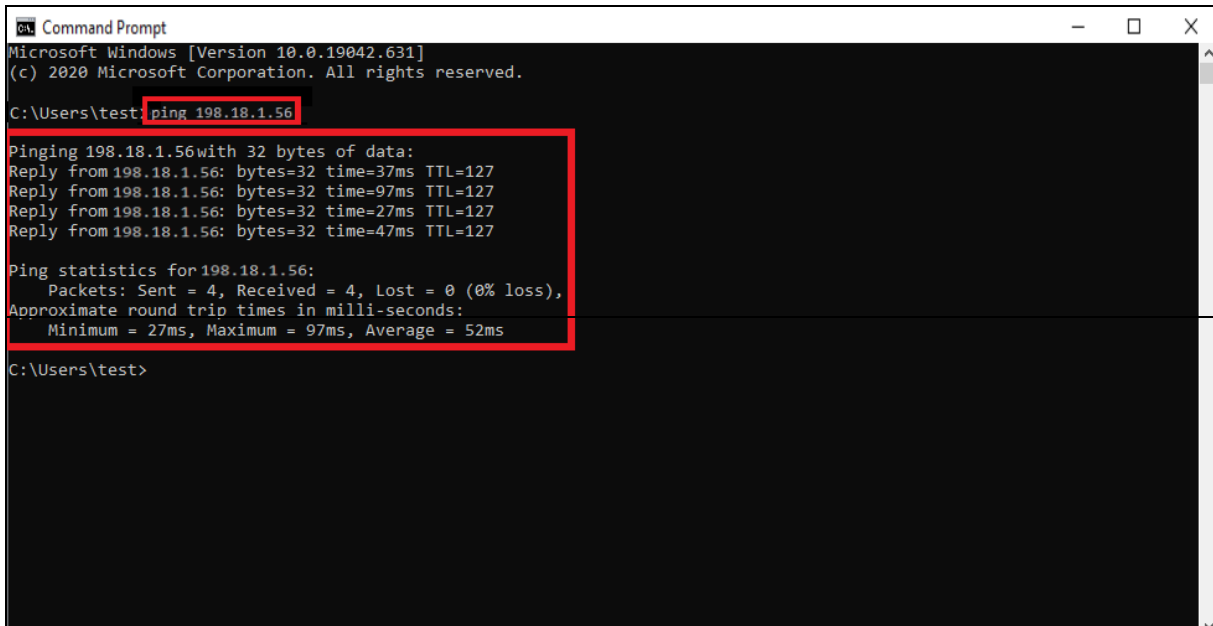
[Command Port]

1. On the search bar of your PC, type **cmd**. Run the **Command Prompt** application.



2. Use one of the following 2 methods for the testing:
 - **LAN IP:** On Command Prompt, type “ping <LAN IP>” using the IP address set for GV-Software on the GV-VPN running on another PC and click **Enter**.
 - **Host Name:** On Command Prompt, type “ping <Host Name>” using the Host Name set for GV-Software on the GV-VPN running on another PC, and click **Enter**.

Ping results appear below the command if the connection is successful.



```
Command Prompt
Microsoft Windows [Version 10.0.19042.631]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\test>ping 198.18.1.56

Pinging 198.18.1.56 with 32 bytes of data:
Reply from 198.18.1.56: bytes=32 time=37ms TTL=127
Reply from 198.18.1.56: bytes=32 time=97ms TTL=127
Reply from 198.18.1.56: bytes=32 time=27ms TTL=127
Reply from 198.18.1.56: bytes=32 time=47ms TTL=127

Ping statistics for 198.18.1.56:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 27ms, Maximum = 97ms, Average = 52ms

C:\Users\test>
```

[Web Browsers]

On the Web browser (Internet Explorer / Microsoft Edge / Chrome / FireFox), type the LAN IP (No. 1, 3. *Configuring GV-VPN*) in the URL bar.

The GV-Software login page appears if the connection is successful.

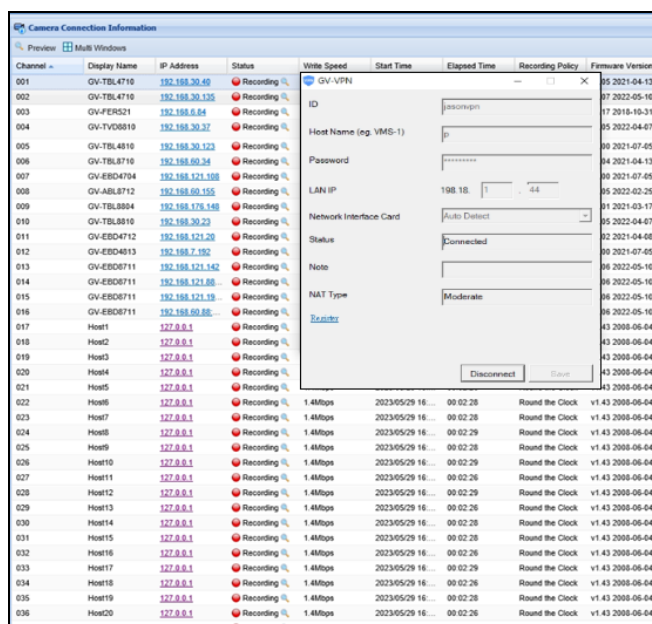
Demonstration: Connecting GV-Recording Server on GV-Edge Recording Manager Using GV-VPN

To better demonstrate how to connect one GV-Software to another using GV-VPN, the following steps illustrate detailed information involved in the setup process. Before proceeding, make sure you have signed up on GV-Cloud and created a VPN on it. For details, see 1. *Signing up on GV-Cloud* and 2. *Creating a VPN on GV-Cloud*.

1. On the GV-VPN installed on the PC that runs GV-Recording Server, fill in the following information:

LAN ID	gv-test (The VPN ID created on GV-Cloud)
Host Name	RS1
Password	The VPN password created on GV-Cloud
LAN IP	198.18.1.1

2. Click **Save**, and the **Status** field will display **Connected**.

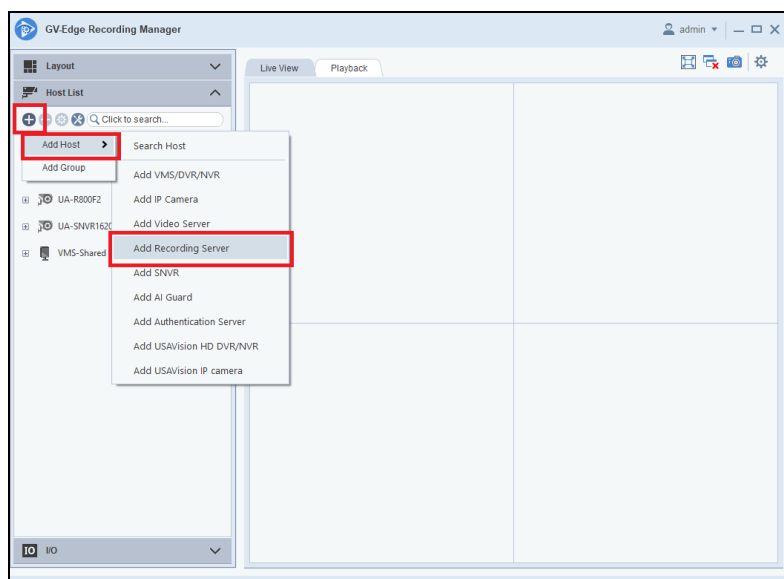


- On the GV-VPN installed on the PC that runs GV-Edge Recording Manager, fill in the following information:

LAN ID	gv-test (The VPN ID created on GV-Cloud)
Host Name	ERM
Password	The VPN password created on GV-Cloud
LAN IP	198.18.1.2

- Click **Save**, and the **Status** field will display **Connected**.

- On GV-Edge Recording Manager, click **Add**  > **Add Host** > **Add Recording Server** to add GV-Recording Server on the host list.



6. On the **Host Settings** dialog box, fill in the LAN IP / Host Name set for GV-Recording Server (198.18.1.1 / RS1) at *Step 1* in the **Address** field.

The image displays two side-by-side screenshots of the 'Host Settings' dialog box. In both, the 'Host Name' is 'Host 1', 'ID' is 'admin', 'Password' is masked with '*****', 'HTTP Port' is '80', 'Command Port' is '11000', 'Log Port' is '5552', and 'Stream' is set to 'Auto'. The 'Device Information' section shows 'Number of Cameras' as '95', 'Number of Modules' as '0', and 'Module 1' selected. The left screenshot has the 'Address' field containing '198.18.1.1', while the right screenshot has it containing 'RS1'. Both 'Address' fields are highlighted with a red rectangle. At the bottom of each dialog are 'OK' and 'Cancel' buttons.

7. Click **OK**. The live view images of GV-Recording Server will appear on GV-Edge Recording Manager.