GeoVision inc
The Vision of Security

GV-Redundant Server / GV-Failover Server

User's Manual

RFSV12-B-EN

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September 2023

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[Technical Support Policy]

Preface

Welcome to the *GV-Redundant and Failover Server User's Manual*.

This Manual is designed for the following software version:

Product	Version
GV-Redundant Server	V1.2.0
GV-Failover Server	V1.2.0

Contents

Naming and Definition

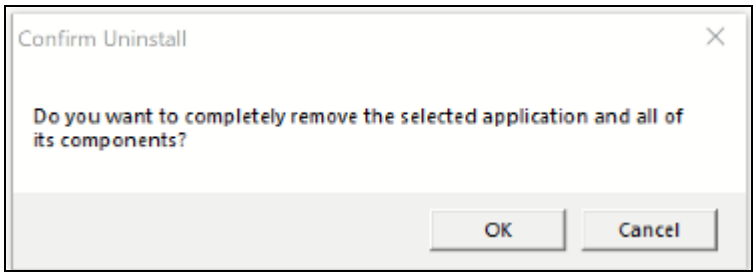
GV-NVR	GeoVision recording software that allows you to record video and audio data over TCP/IP networks.
Remote ViewLog	GeoVision viewing software that allows you to play back recorded files.
GV-VMS	GeoVision Video Management System for IP cameras

Note for Upgrading Software

To upgrade GV-Redundant / Failover Serve, it is required to remove the previously installed software in advance. There are two methods to remove the software:

1. Remove the previous software.

   Method 1: Click the Redundant Server Installer (setup. exe) and the following message is prompted. Select **OK** to remove the software.



   Method 2: Use **Windows Control Panel** to uninstall. Go to **Control Panel** > **Programs** > **Programs and Features**, right-click on the Redundant Server and select **Uninstall**.

2. To upgrade GV-Redundant / Failover Server, run the Installer (setup. exe) included in the latest software downloads from our website to start.

IMPORTANT: After uninstalling, do not delete the previous installation folder manually (by default located at C:\Program Files(x86)\Redundant Server).

Chapter 1 Introduction

GV-Redundant Server is a video backup server designed for large-scale video surveillance deployments. With 7/24 round-the-clock recording, GV-Redundant Server stores a backup copy of recordings for IP channels connected to GV-NVR, GV-VMS and GV-Recording Server.

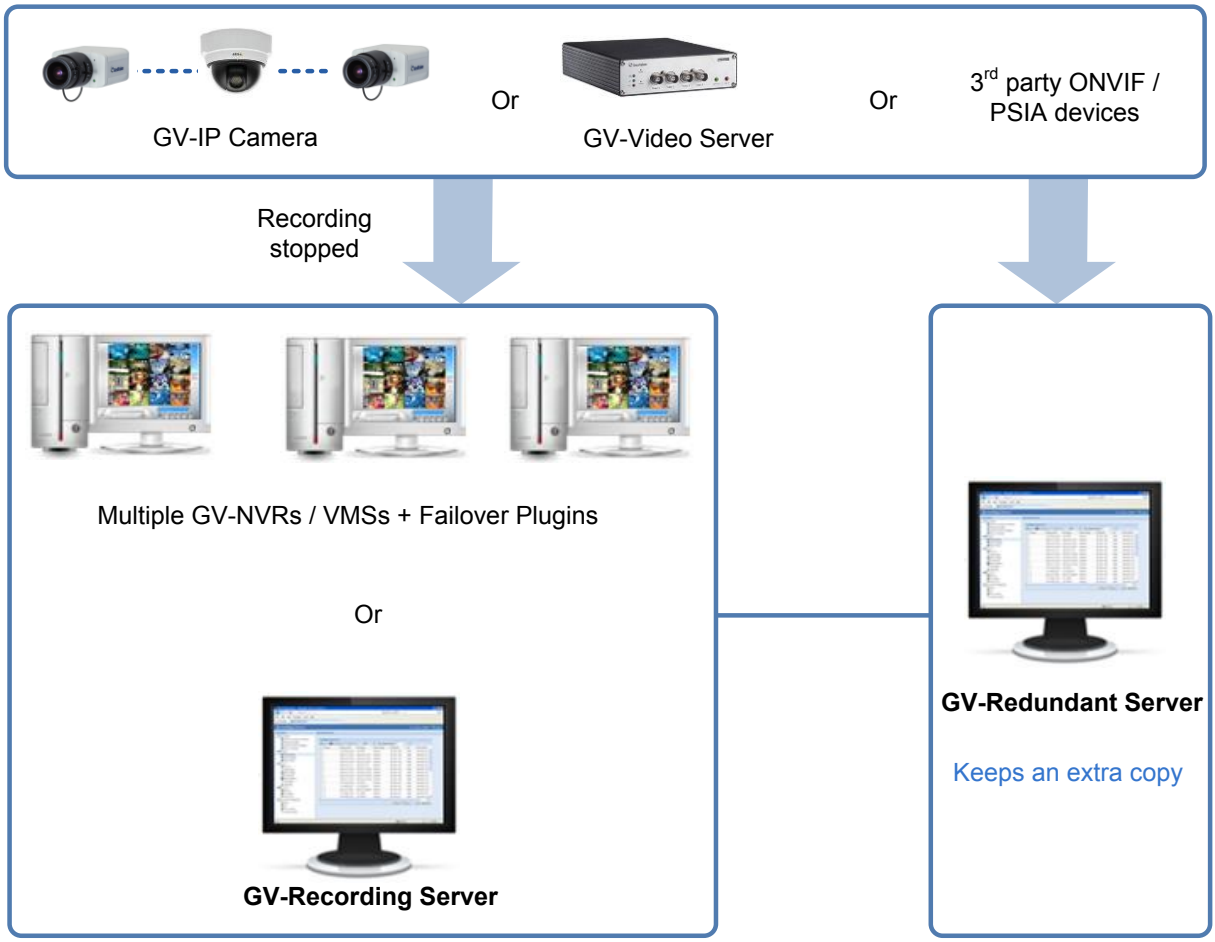


Figure 1-1

GV-Failover Server is a video backup server that records up to 128 channels from GV-NVR, GV-VMS or GV-Recording Server when any of the following conditions occurs: (1) the GV server starts up without recording; (2) the file recycling fails; (3) the hard drive fails; (4) the connection between GV server and IP cameras fails; (5) the GV server fails to function properly.

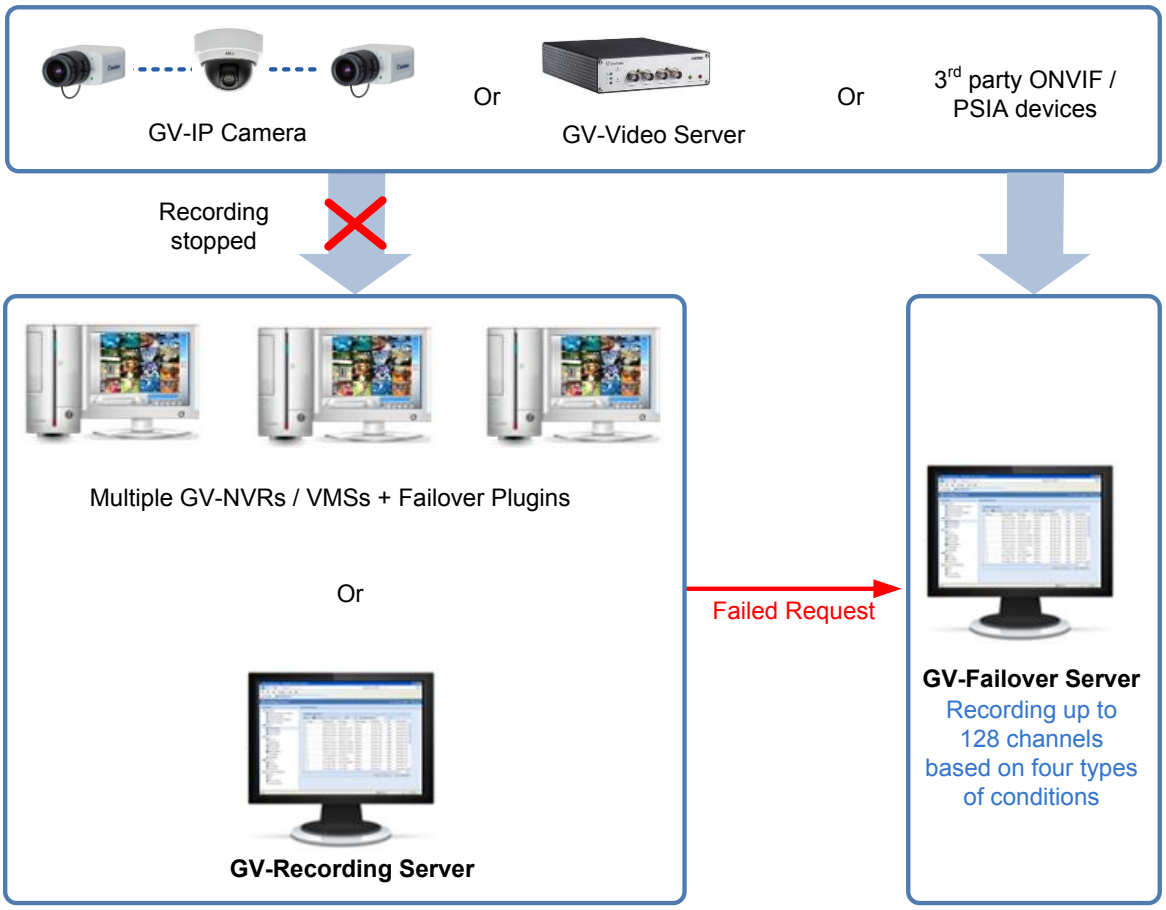


Figure 1-2

Features

- Up to 128 IP channels recording
- Round-the-clock recording
- Video playback using Remote ViewLog
- Remote configuration and monitoring of GV-Redundant Server / GV-Failover Server using Web browsers
- Support for third-party IP device brands (Arecont Vision, Axis, HikVision, Panasonic, Sony, VIVOTEK)
- Support for ONVIF, PSIA and RTSP protocols
- 31 languages supported on the Web interface

For the supported third-party IP video devices, visit our website at http://classic.geovision.com.tw/english/4_21.asp

IMPORTANT:

1. GV-Redundant / Failover Server do not support GV-VMS hosts in service mode. It is highly suggested not to enable "Service Mode" on GV-VMS. For details on service mode, see *System Configuration*, *Configuring the Main System* Chapter, *GV-VMS User's Manual*.
2. GV-Redundant Server / GV-Failover Server does not support backup of analog cameras.

Packing List

- GV-USB Dongle for GV-Redundant Server or GV-Failover Server
- Software DVD

1.1 System Requirements

The following are the system requirements to run the GV-Redundant Server / GV-Failover Server.

1.1.1 Minimum System Requirements

Servers meeting the following minimum system requirements have the capacity to receive up to 128 channels.

OS	64-bit Windows 10 / 11 / Server 2016
CPU	Core i5 750, 2.67 GHz
Memory	6 GB Dual Channels
Hard Disk	1 GB (for software installation)
Browser	• Internet Explorer 8.0.7600.16385 • Internet Explorer 9.00.7930.16406 • Firefox 3.6.13 • Google Chrome 9.0.597.94 • Safari 5.33.19.4
LAN	Gigabit Ethernet X 1
Hardware	Internal or external GV-USB Dongle
Software	.Net Framework 3.5

Note:

1. The memory required varies depending on the number of channels recorded.
2. The 1 GB hard disk requirement is for installation of GV-Redundant Server / GV-Failover Server only. For hard disk requirements for recording, see *1.1.2 Recommended Hard Disk Requirements* for more detail.
3. Recordings cannot be played back using Firefox, Google Chrome and Safari.
4. Optionally purchase an internal dongle for hardware watchdog function which re-starts the Windows when the system crashes. To see how to install the internal GV-USB Dongle, refer to *Appendix B. Installing the Internal USB Dongle*.

1.1.2 Recommended Hard Disk Requirements

The recommended hard disk requirements for 24 hours of recording are listed as below.

Resolution	Frame rate	Codec	Max. channel per HDD and required HDD capacity	HDD capacity required for recording 128 ch for 24 hr	Recommended HDD requirements
1.3 MP	30 fps	H.264 / MPEG4	32 ch / 2.5 TB	10 TB	3 TB 7200RPM HDD x 4 (SATA3)
		JPEG	8 ch / 2.7 TB	43.2 TB	3 TB 7200RPM HDD x 16 (SATA3)
2.0 MP	30 fps	H.264	21 ch / 2.2 TB	13.5 TB	3 TB 7200RPM HDD x 7 (SATA3)
		JPEG	5 ch / 2.5 TB	64 TB	3 TB 7200RPM HDD x 26 (SATA3)
3.0 MP	20 fps	H.264	32 ch / 3 TB	12 TB	3 TB 7200RPM HDD x 4 (SATA3)
		JPEG	4 ch / 2 TB	64 TB	3 TB 7200RPM HDD x 32 (SATA3)

Note: The number of hard drives required varies depending on the write speed of the hard drive and the hard disk size required varies depending on the recorded file size. The recommended hard disk requirement is just for your reference.

1.1.3 Optimal Network Requirements

For optimal performance and processing efficiency, it is advisable to use two Gigabit connections, each assigned with 64 channels and run through separate network. Taking GV-Redundant Sever as an example, the suggested deployment of Gigabit connections for recording is illustrated below.

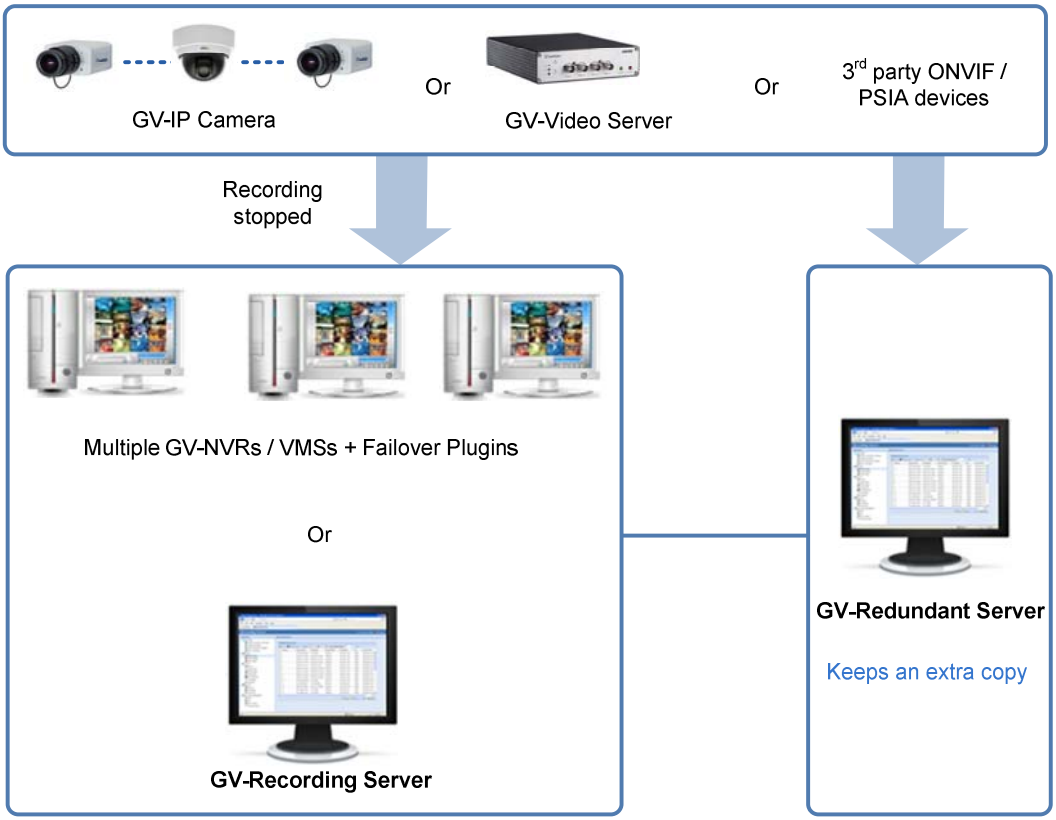


Figure 1-3

Note: To avoid network bottleneck, each network card must be assigned a different IP address and subnet mask. Refer to *Appendix C. How to Avoid Network Bottleneck* for more details.

1.1.4 GV-USB Dongle

A GV-USB Dongle is required to activate the GV-Redundant Server / GV-Failover Server. The GV-USB Dongles for GV-Redundant Server and GV-Failover Server both support up to 128 IP channel connections. You can select between the internal or the external type for your GV-Redundant Server / GV-Failover Server.

GV-Redundant Server: Internal or external USB dongle supporting a maximum of 128 GeoVision and third-party IP channels.

GV-Failover Server: Internal or external USB dongle supporting a maximum of 128 GeoVision and third-party IP channels.

Note:

1. GV-Redundant Server and GV-Failover Server cannot be run on the same PC.
2. One GV-NVR / GV-VMS can only connect to one GV-Redundant Server / GV-Failover Server.
3. Optionally purchase an internal USB dongle for the Hardware Watchdog function. With this feature, the computer restarts itself when Windows crashes. To see how to install the internal GV-USB Dongle, refer to *Appendix B. Installing the Internal USB Dongle*.

1.1.5 Compatible GeoVision Software

The GV-Redundant Server / GV-Failover Server is only compatible with the following version:

- **GV-NVR, GV-Remote ViewLog:** version 8.5.3 or later.
- **GV-VMS:** version 14.1
- **GV-Recording Server:** version 1.2.5 ~ 1.4.2

Chapter 2 Installation

It is recommended to install the GV-Redundant Server / GV-Failover Server on a dedicated computer or server. Before installing the GV-Redundant Server / GV-Failover Server, you need to plug the corresponding **GV-USB Dongle** to the computer, and then install the **dongle driver**.

Follow the steps below to install the driver and GV-Redundant Server / GV-Failover Server from the Software DVD or GeoVision Website.

Installing from Software DVD

1. Plug in the GV-Redundant Server / GV-Failover Server dongle.
2. Insert the Software DVD to the computer. This window pops up automatically.

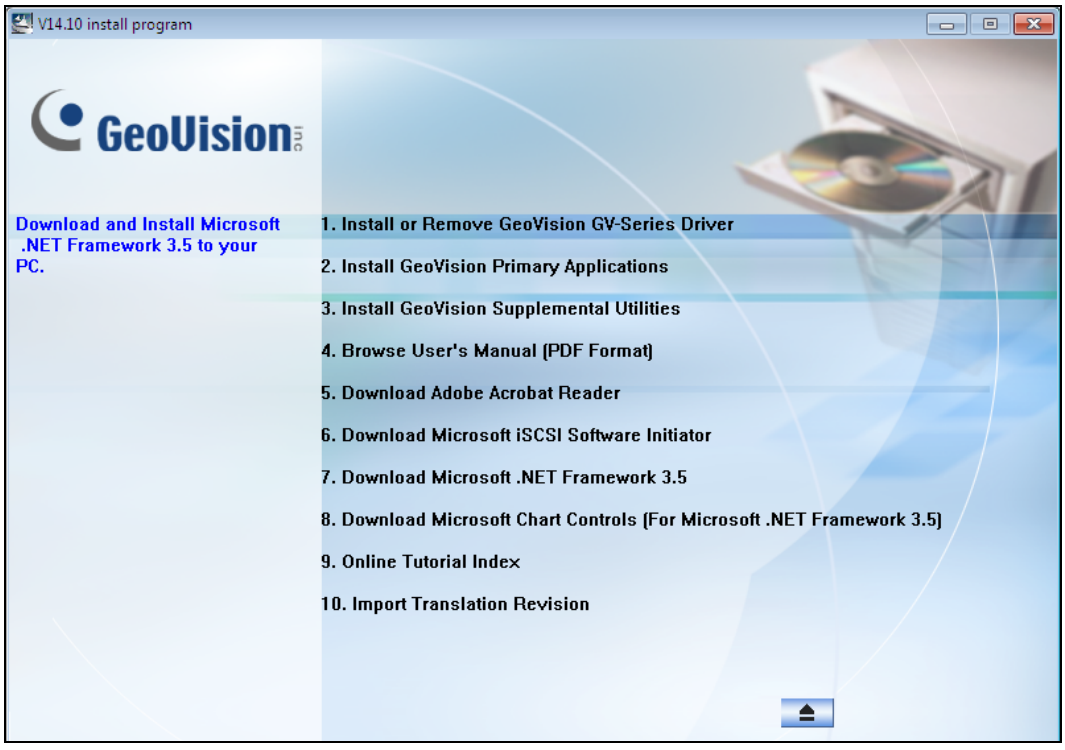


Figure 2-1

3. To install USB driver, select **Install or Remove GeoVision GV-Series Driver** and click **Install GeoVision USB Device Drivers**.
4. To install GV-Redundant Server / GV-Failover Server

   A. Select **Install GeoVision Primary Applications**, and click **Yes** to accept the license agreement.

B. Select **GV-Redundant and Failover Server** and then follow the on-screen instructions.

5. To install .Net Framework 3.5, select **Download Microsoft .NET Framework 3.5**.

Note: To install .Net Framework for Windows 10 / 11 or Windows Server 2016, see *Appendix D How to install .Net Framework 3.5 for Windows 10 / 11 / Server 2016*.

Downloading from GeoVision Website

1. Plug in the GV-Redundant Server / GV-Failover Server dongle.
2. Go to the GeoVision website of GV-Redundant Server / GV-Failover Server to download and install the software.
3. To install USB driver, click **GV-Series Card Driver / GV-USB Device Driver**.
4. To download and install **.Net Framework 3.5**, go to: http://www.microsoft.com/download/en/details.aspx?id=25150

Note: To install .Net Framework for Windows 10 / 11 or Windows Server 2016, see *Appendix D How to install .Net Framework 3.5 for Windows 10 / 11 / Server 2016*.

Chapter 3 Getting Started

After you have installed the GV-Redundant Server / GV-Failover Server, you are ready to start its services, connect GV-NVR / GV-VMS to the server and configure the storage settings on the server.

3.1 Starting the GV-Redundant Server / GV-Failover Server

After installing GV-Redundant Server / GV-Failover Server, follow the steps below to execute and log in the GV-Redundant Server / GV-Failover.

1. Log in the GV-Redundant Server / GV-Failover Server.

   A. Rig ht-click the **Server Service Manager** icon in the system tray and select **Login**. This dialog box appears.

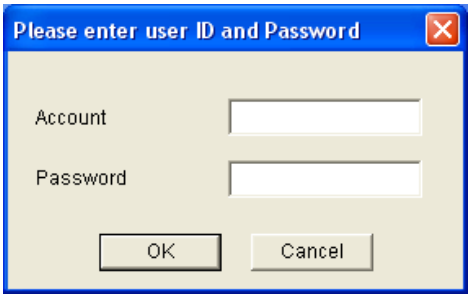


Figure 3-1

   B. Type the ID and password. The default ID and password are **admin**.

   C. Click **OK**. The message “Login succeeded.” appears.

2. Rig ht-click the **Server Service Manager** icon and select **Start Service**. The GV-Redundant Server / GV-Failover Server is started and the icon is indicated with a green tick .

3. Access the Web interface.

A. Rig ht-click the **Server Service Manager** icon in the system tray and select **Access Web Interface**. This window appears.

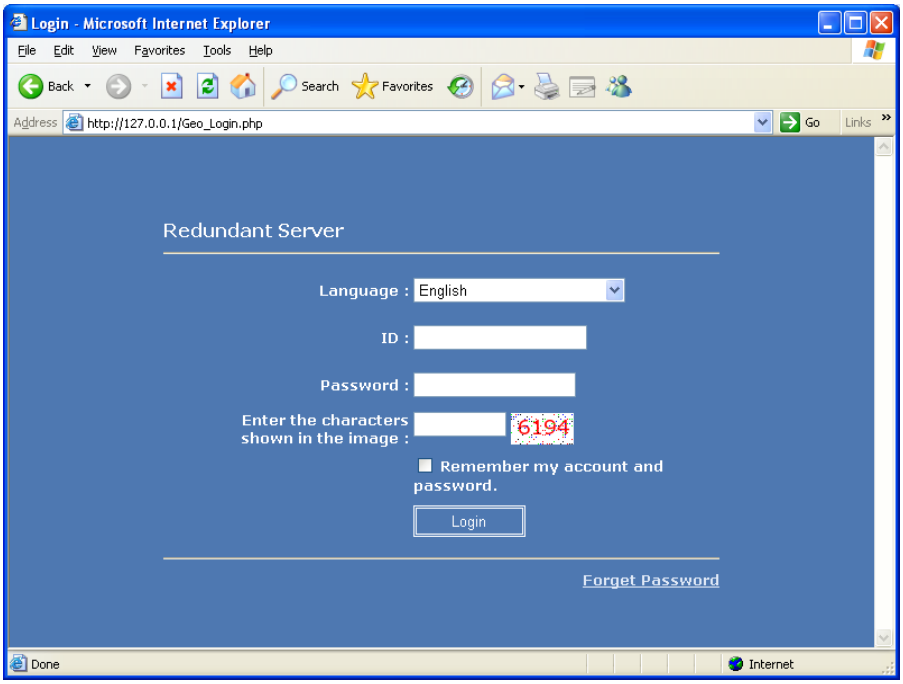


Figure 3-2

B. Select the language using the drop-down list, type the ID, password and the verification number. The default ID and password are **admin**.

C. Click **Login**. The Web interface appears.

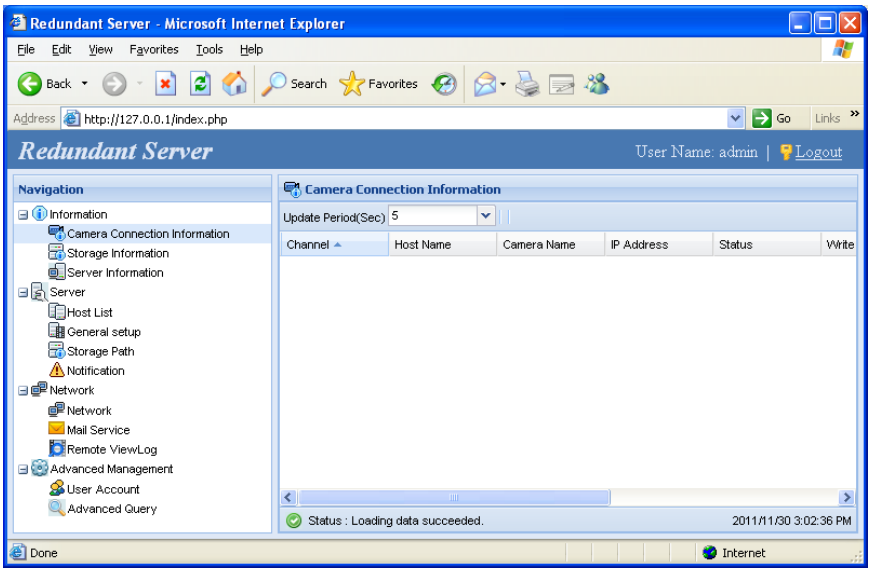


Figure 3-3

Remotely Accessing the Web Interface

To access the Web interface from a remote computer, start the Internet browser and type the IP address or the domain name of the GV-Redundant Server / GV-Failover Server in the Location/Address field. If the default HTTP port has been changed, type a colon and the port number after the IP address or domain name, for example, **//192.168.3.199:81/**. After the login page appears, follow step 3 to log in the Web interface.

Note:

1. To enable the updating of images in Microsoft Internet Explorer, you must set your browser to allow ActiveX Controls and perform a one-time installation of GeoVision's ActiveX component onto your computer.
2. If the GV-Redundant Server / GV-Failover Server is installed behind a firewall or router, you may need to open these default ports: HTTP port 80, remote playback (Remote ViewLog) port 5552 and Command Port 20000.
3. The Command port is used to run GV-Redundant Server / GV-Failover Server. By default, the 8 ports following the specified Command port and the Command port itself are reserved (20000 to 20009) for the program use. If the specified Command port is used up by other program, you may need to change the Command port value.

Changing the HTTP and Command Ports

1. Make sure you have stopped the GV-Redundant Server / GV-Failover Server service. To stop the service, right-click the **Server Service Manager** icon and select **Stop Service**.
2. Rig ht-click the **Server Service Manager** icon again and select **Configure**. This dialog box appears.

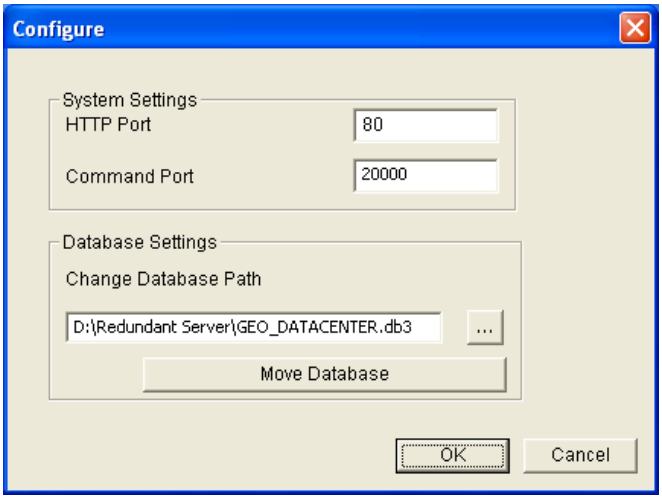


Figure 3-4

3. Modify the port value and click **OK**.

Assigning Database Path, Configuring Backup Settings and Restoring Settings

The GV-Redundant Server / GV-Failover icon in the system tray also allows you to change the database storage path, back up configuration settings and restore configuration settings.

1. Make sure you have stopped the GV-Redundant Server / GV-Failover Server service. To stop the service, right-click the **Server Service Manager** icon and select **Stop Service**.
2. To change the database path, right-click the **Server Service Manager** icon, select **Configure**, select a new location and click **Move Database**.

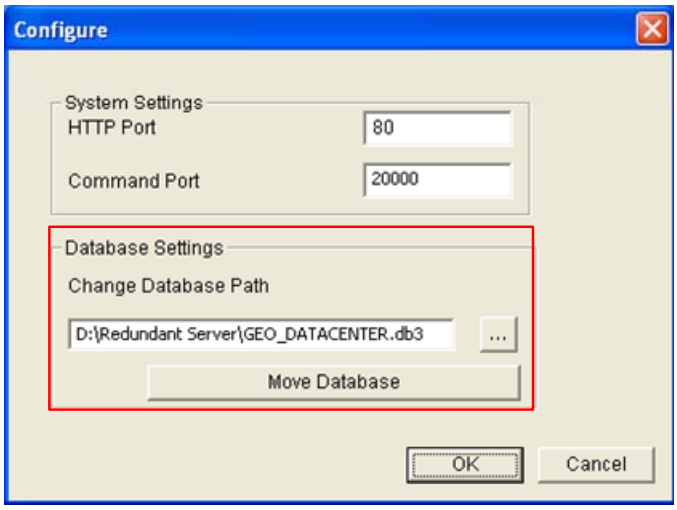


Figure 3-5

3. To back up configuration settings, right-click the GV-Redundant Server / GV-Failover Server icon in the system tray and select **Backup Settings**. Select to back up **Basic** and/or **Password** settings and click **OK**.
4. To restore configuration settings, right-click the GV-Redundant Server / GV-Failover Server icon and select **Restore Settings**. Select the backed up file and click **OK** to begin restoring.

3.2 Connecting to GV-NVR / GV-VMS

After you have installed and started the GV-Redundant Server / GV-Failover Server, connect GV-NVR / GV-VMS to the GV-Redundant Server / GV-Failover Server by executing the Failover Plugin program.

1. **For GV-NVR**, follow the steps below to access the Failover Plugin program.
   A. Execute the Failover Plugin program from GV-NVR folder. The **Failover Plugin** icon appears in the system tray.

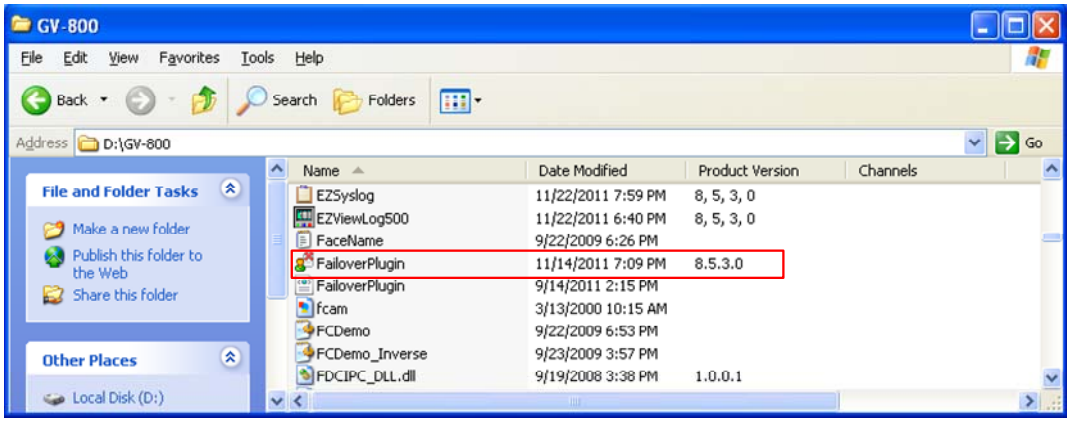


Figure 3-6

   B. Double- click the **Failover Plugin** icon . The Failover Plugin dialog box appears.

2. **For GV-VMS**, on the main screen, click **Home**, **Toolbar**, **Network** and then select **Failover Plugin**. The Failover Plugin dialog box appears.

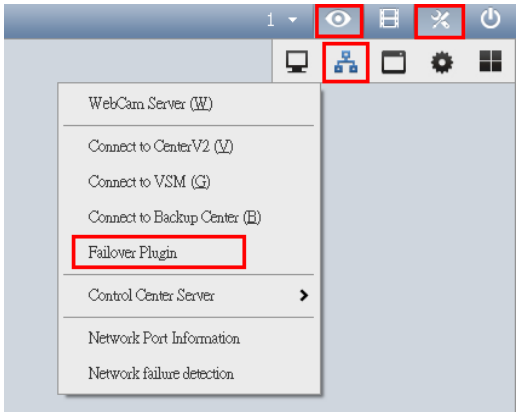


Figure 3-7

3. Type the IP address, ID and password of the GV-Redundant Server / GV-Failover Server. Keep the default Command port **20000** or change it to match the corresponding port on GV-Redundant Server / Failover Server.

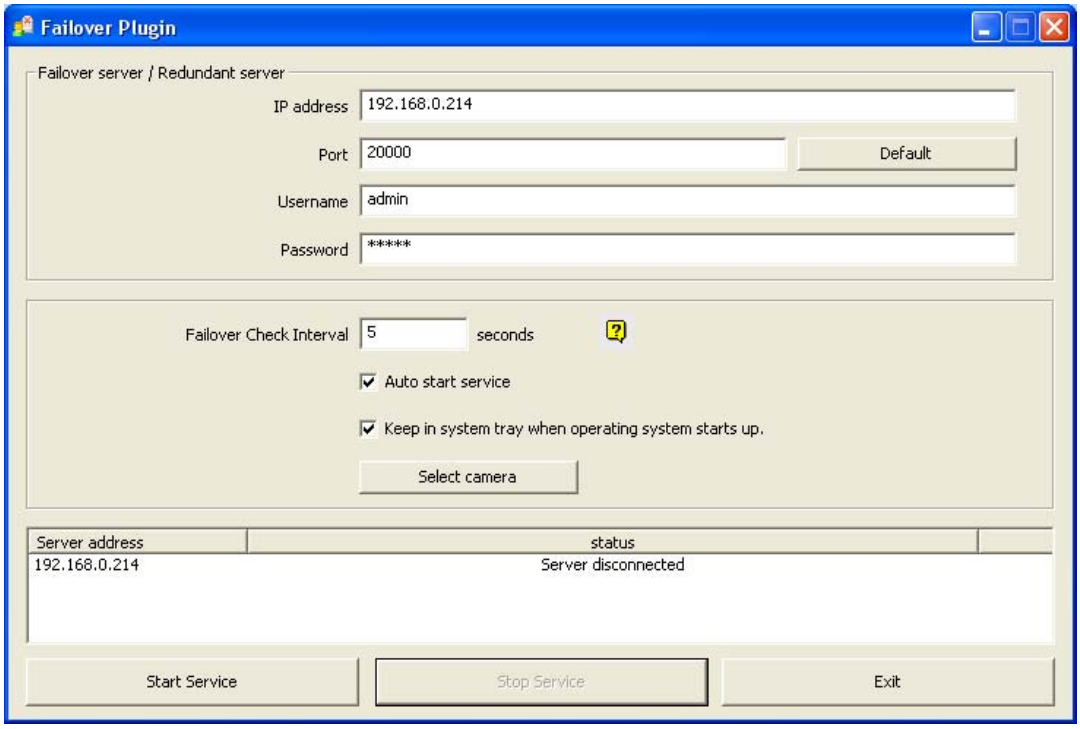


Figure 3-8

Note: The port on Figure 3-8 must match the Command port on Figure 3-4.

4. Click **Select IP Camera** to select the channels for connection. This dialog box appears.

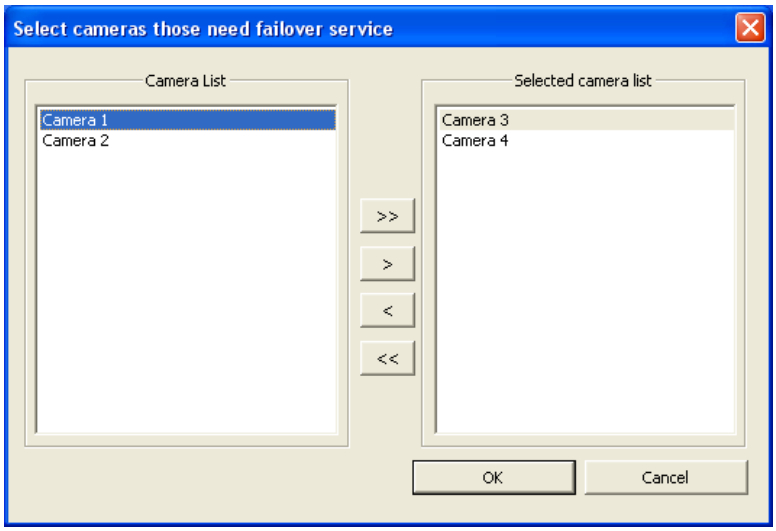


Figure 3-9

5. Optionally configure the following settings (Figure 3-8).

   - **Failover Check Interval:** The interval at which the GV-Failover Server updates with its host GV-NVR / GV-VMS.
   - **Auto start service:** The Failover Plugin service starts automatically when the operating system starts.
   - **Auto run when system starts up:** The Failover Plugin is minimized (but not started) in the system tray when the operating system starts.

6. Click **Start service**. The GV-Redundant Server will start recording the selected IP channels of the host. The GV-Failover Server will start recording the selected IP channels under faulty conditions. The recordings on GV-Redundant Server / GV-Failover Server will be stopped when you click **Stop Service**.

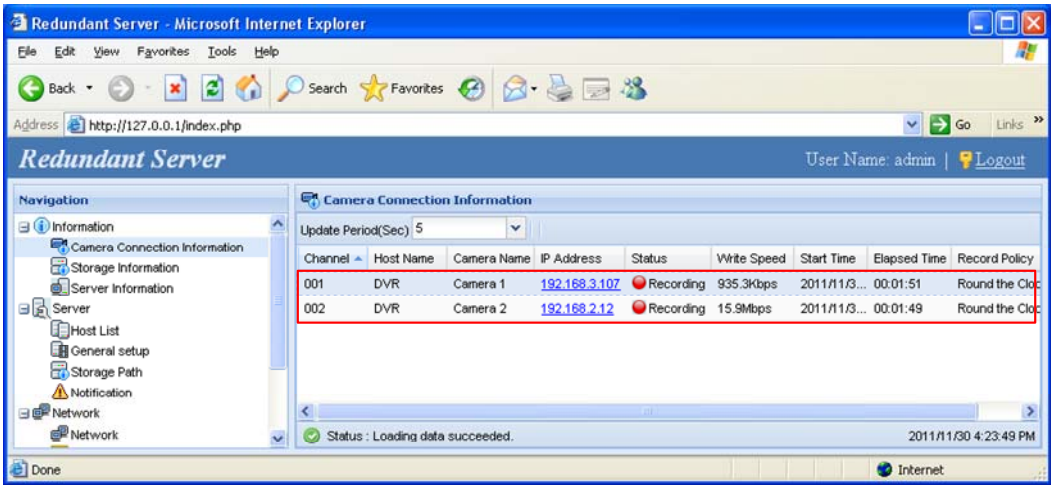


Figure 3-10

IMPORTANT:

1. Keep the Failover Plugin program running in the background to maintain the connection of the GV-NVR / GV-VMS to GV-Redundant Server / GV-Failover Server.
2. GV-Redundant / Failover Server do not support GV-VMS hosts when they are running in service mode. For details on service mode, see *System Configuration*, *Configuring the Main System* Chapter, *GV-VMS User's Manual*.

3.3 Configuring the Storage Settings

When logging in the GV-Redundant Server / GV-Failover Server for the first time, it is advisable that you configure the storage settings.

The default storage path is :**\ERS\bksv**. To add a new storage group or storage path, follow the steps below.

1. On the main menu, select **Server** and **Storage Path**. This page appears.

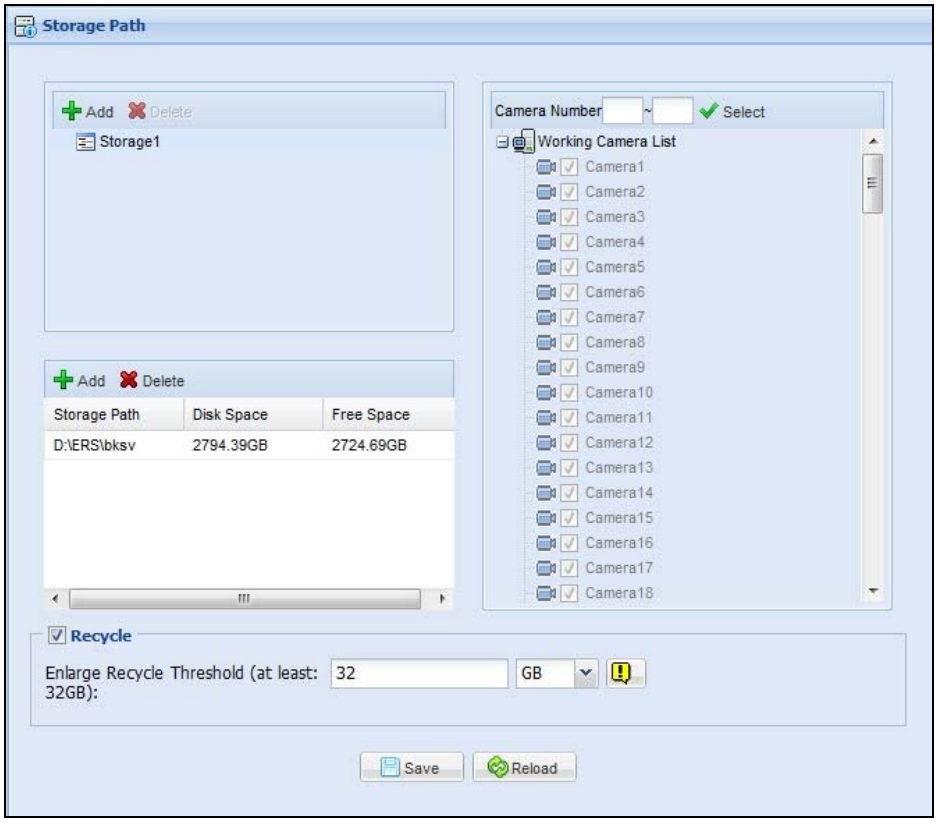


Figure 3-11

2. On the Storage Path page, click the **Add** button Add to add a new storage folder in a different disk drive, or simply select an existing storage folder.

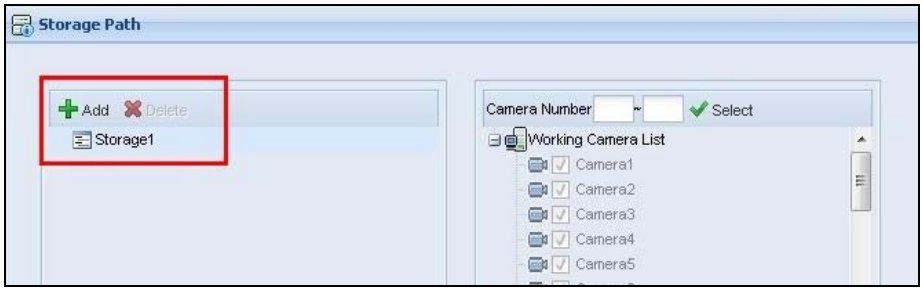


Figure 3-12

3. Use the default storage path, or click the **Add** button to add a new storage path.

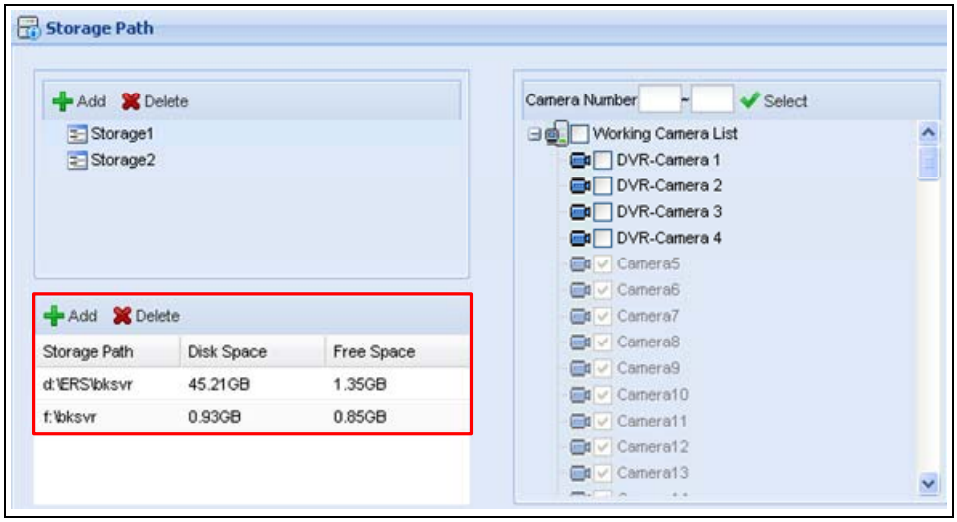


Figure 3-13

4. In the Working Camera List section, type a range of camera number and click the **Select** button. You can also select cameras individually from the **Working Camera List**. The selected cameras will be recorded to the storage path indicated.

5. To specify a recycle threshold, select **Recycle** and type a minimum free space. When the remaining free space falls below the threshold, the oldest files will be overwritten.

Figure 3-14

6. Click **Save**. These settings will be saved and applied instantly.

IMPORTANT:

1. When multiple storage paths are added to a Storage Group, recycling of the oldest file will begin when the free space of every storage path in that Storage Group falls below the recycle threshold.
2. By default, the recorded files will be stored for 30 days unless the recycle threshold is met. To change the recording storage duration, see *Recording Settings*, *4.2.2 General Setup*.
3. When assigning the storage path, ensure there is enough storage space on the disk drives to avoid storage overload. For details on the maximum channel supported for each hard disk, see *1.1.2 Recommended Hard Disk Requirements*.

Chapter 4 Administrator Mode

The Administrator has access to all configurations in GV-Redundant Server / GV-Failover Server. On the left side of the Web interface, four categories of configurations are listed in a tree menu: **Information**, **Server**, **Network** and **Advanced Management**.

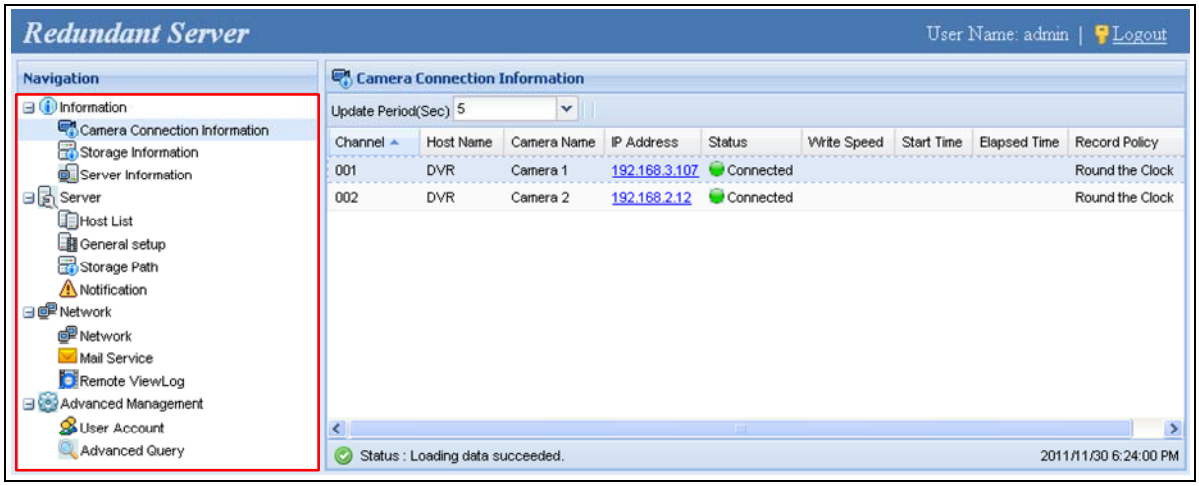


Figure 4-1

List of Menu Options

Find the topic of interest by referring to the sections below.

4.1 Information

This section introduces the settings on connection status, recording storage and basic server information.

4.1.1 Camera Connection Information

The Camera Connection Information page shows the connection status of all the IP cameras added to the Working Camera List.

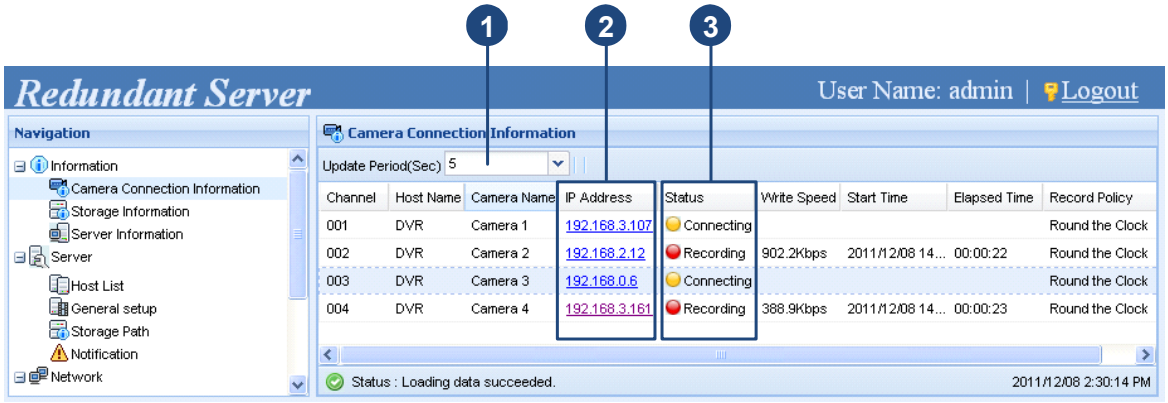


Figure 4-2

The controls in the window:

No.	Name	Description
1	Update Period	Shows the refresh frequency of the page. Use the drop-down list to customize.
2	IP Address	Click to access the Web interface of the camera.
3	Status	Recording : The camera is recording. Connected : The camera is connected. Connecting : Connecting to the camera. Connect Failed : Unable to connect to the camera. Disconnect : The camera is disconnected. VIDEO LOST : Unable to obtain video from the device. Login failed : Incorrect ID or password. Recording Failure : Unable to record video.

To sort:

Click any drop-down arrow on the control bar and select **Sort Ascending** or **Sort Descending**.

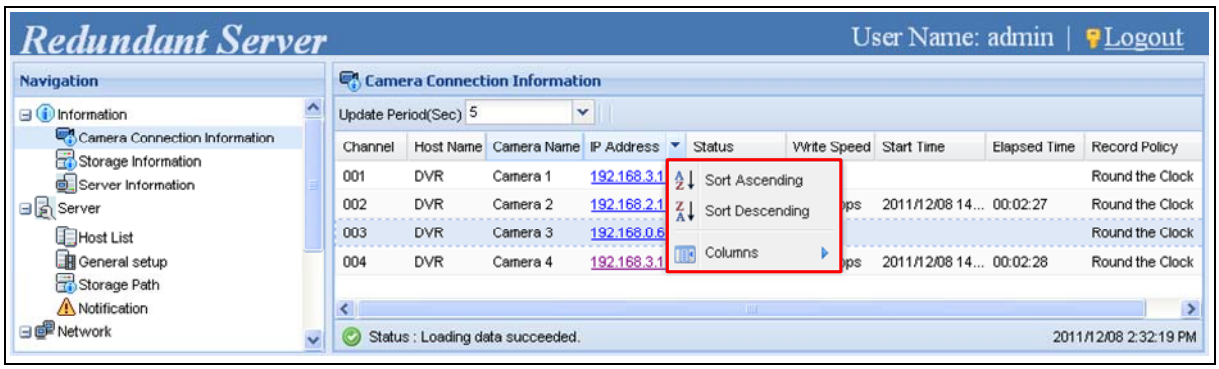


Figure 4-3

To add or delete a control category:

Click any drop-down arrow on the control bar, select **Columns** and select or unselect a control category.

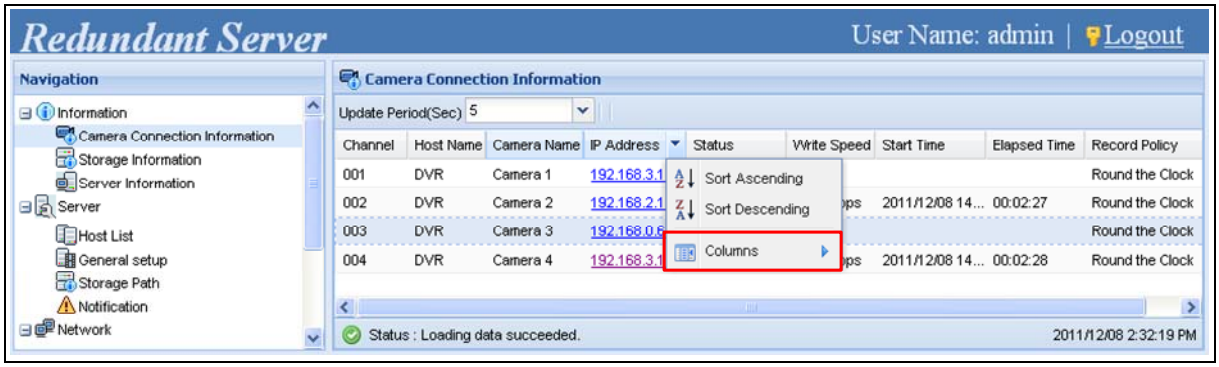


Figure 4-4

4.1.2 Storage Information

The Storage Information page shows the storage paths designated to store recorded videos. For each storage path, you can see the disk's used size, free space, write speed and the time when the disk became full.

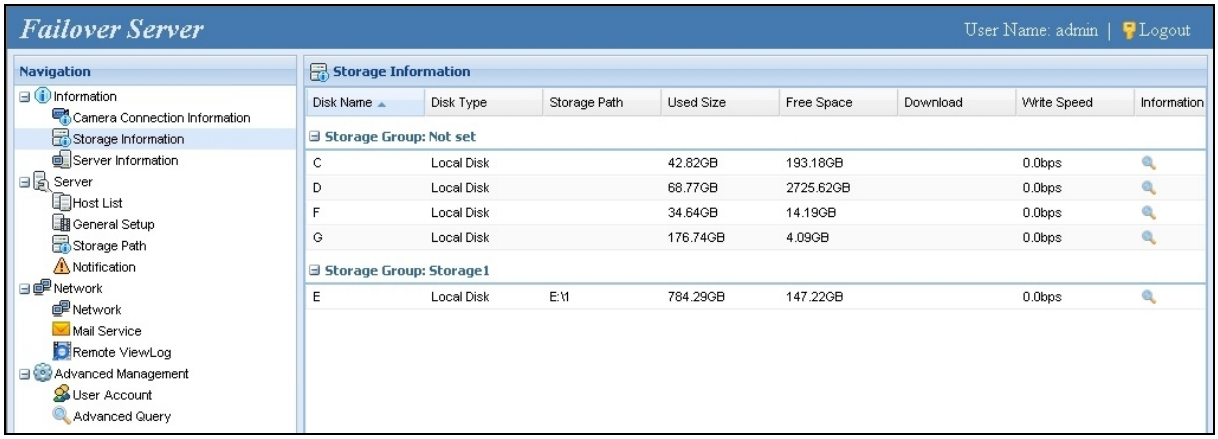


Figure 4-5

To sort, group, add or delete storage information, click the drop-down arrow on the control bar and select from the drop-down lists. For example,

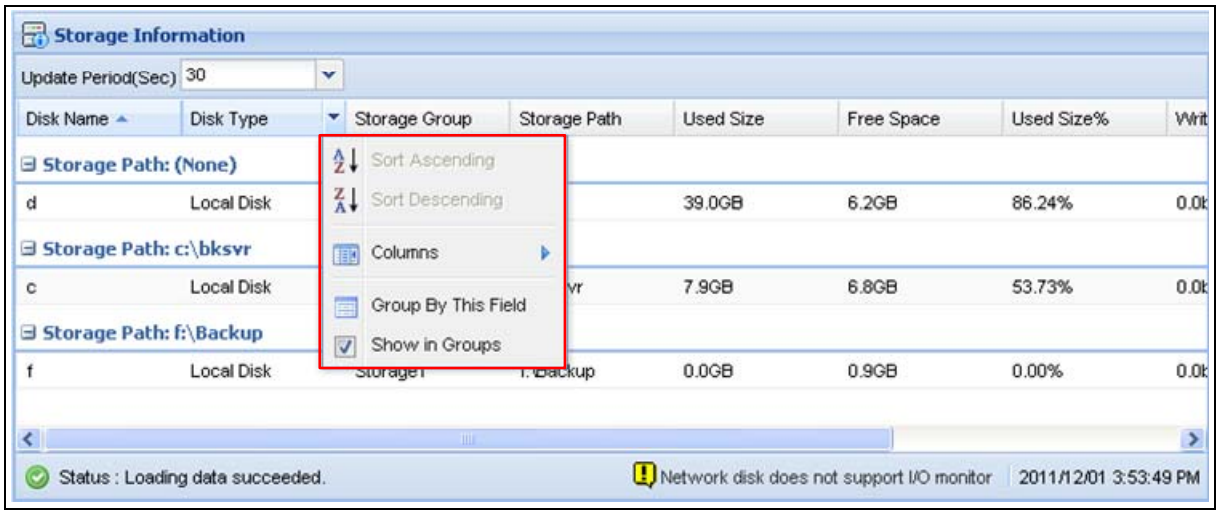


Figure 4-6

To detect possible faults, click under the **Information-E** column (Figure 4-5) to view the hard disks' analytic information (S.M.A.R.T).

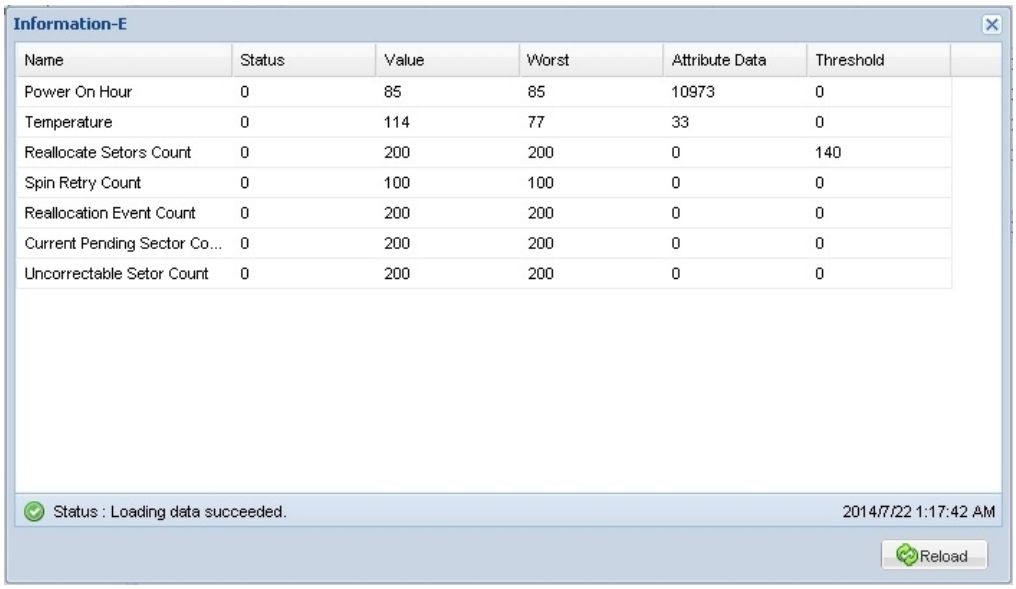


Figure 4-7

4.1.3 Server Information

The Server Information page shows server information such as version information, CPU loading, transfer speed of network interface card and Remote ViewLog status.

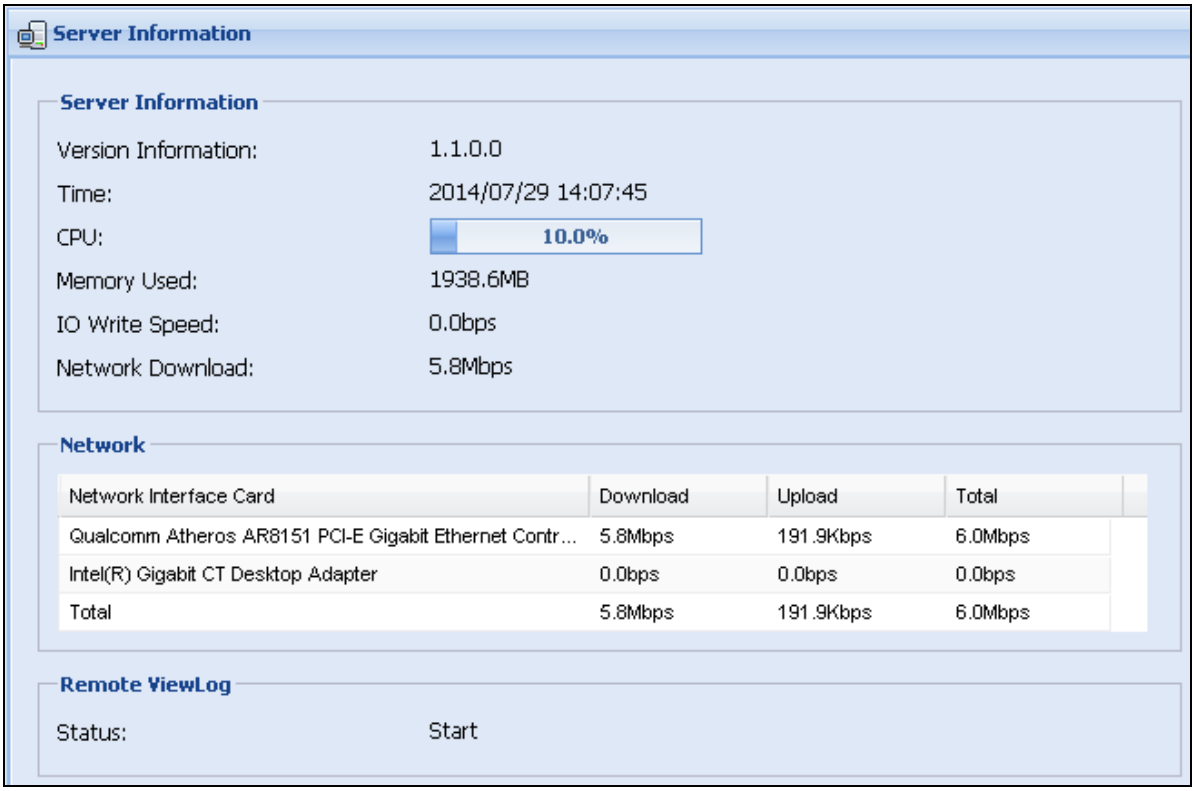


Figure 4-8

4.2 Server

In the Server section, you can start services, configure general setup, specify storage path, and set up e-mail notifications.

4.2.1 Host List

The Host List pages displays host information including host name, its IP address, the number of cameras connected, connection status and recording status.

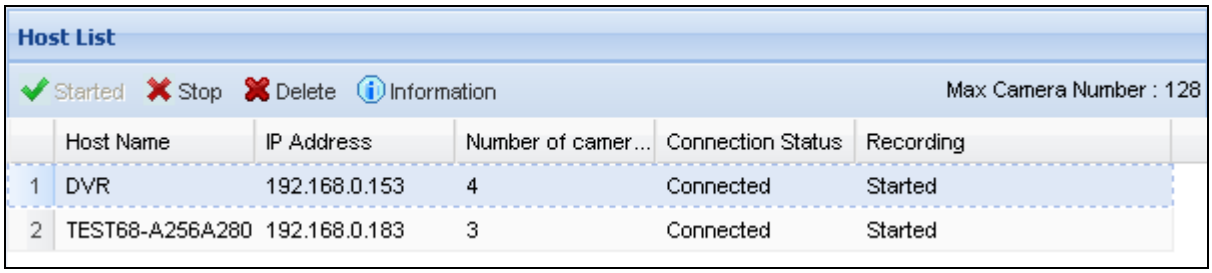


Figure 4-9

The controls on Host List:

No.	Button	Description
1	Started	Select a host and click to start recording.
2	Stop	Select a host and click to stop recording.
3	Delete	Select a host and click to delete.
4	Information	Select a host and click to view IP channel information (camera number, camera name, IP address, port and brand).

4.2.2 General Setup

In the General Setup page, you can set up the server name, command port and recording type of GV-Redundant Server / GV-Failover Server and configure system log settings.

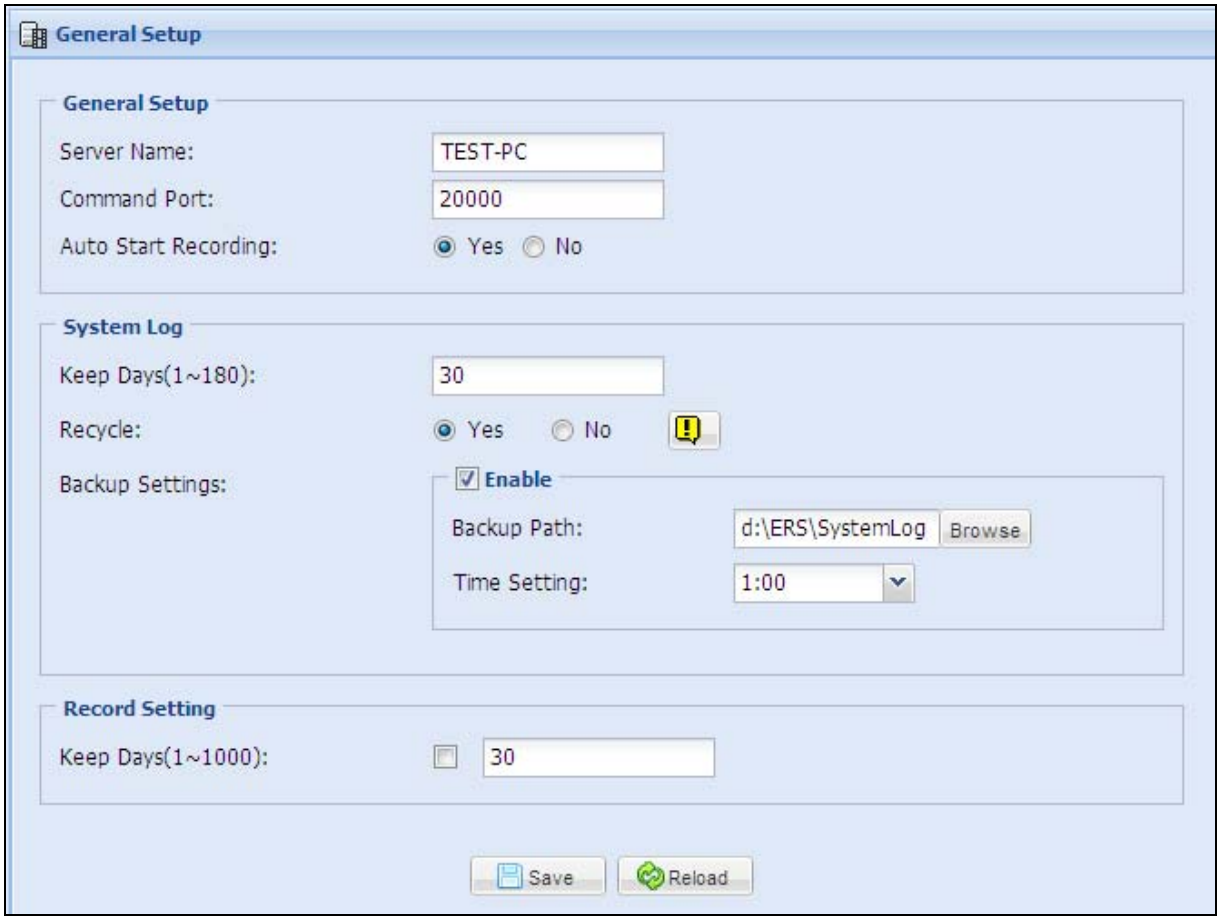


Figure 4-10

[General Setup]

- **Server Name:** Type a name to identify the GV-NVR / GV-VMS. The default is the computer's name.
- **Command Port:** The default command port is **20000**. The command port is used to connect the GV-NVR / GV-VMS and the GV-Redundant Server / GV-Failover Server. If this port is used up for other program, you may need to change the port value. The eight ports followed by the specified communication port and the command port itself will be reserved for running the program. Therefore, with the default command port 20000, port 20000 to 20009 will be reserved.
- **Auto Start Recording:** Automatically start recording the connected IP channels (from GV-NVR / GV-VMS) once the GV-Redundant Server / GV-Failover Server is activated.

[System Log]

- **Keep days (0~180):** Specify the number of days to keep system log before deleting. The default is **30**.
- **Recycle:** Enables recycling of system log when the storage space falls below 500 MB.
- **Backup Settings:** Select to assign a storage path and time to back up system log. The default path is :\ERS\SystemLog.

[Record Setting]

- **Keep Days (1~1000):** Select this option and specify the number of days to keep the recordings. This function is disabled by default.

4.2.3 Storage Path

In the Storage Path page, you can set a storage path for each camera to store recorded videos and specify the file size threshold for recycling recorded video. For detail, refer to *3.3 Configuring the Storage Settings*.

4.2.4 Notifications

You can receive e-mail notifications for the following conditions:

- Cam era connection lost
- USB protection key removed
- Recycling of recorded video started
- Start keep days operation
- Disk full
- D isk error
- Disk Removed
- Recor ding Failure

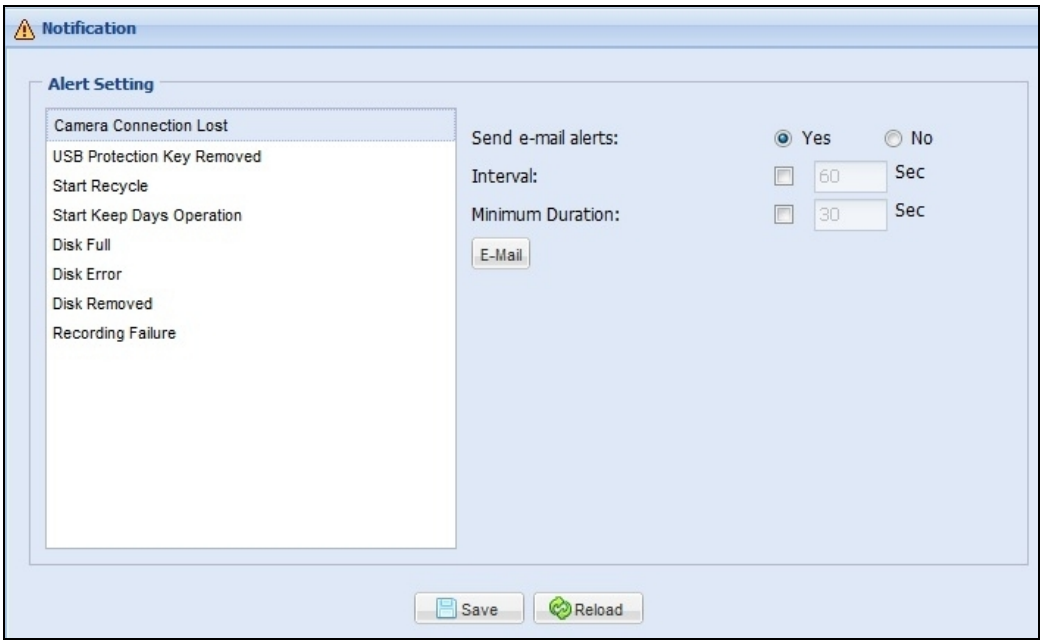


Figure 4-11

Be sure you have set up the mail server. If not, click the **E-Mail** button to go to the Mail Service page. For details on the Mail Service settings, see *4.3.2 Mail Service*. Configure the following settings to set up an e-mail alert.

- **Send e-mail alerts:** Select **Yes** to send e-mail alerts for the selected event type.
- **Interval:** Sets the frequency of e-mail alerts. The valid entry is from 1 to 86400 seconds. For example, if the interval is set to 60 seconds for Camera Connection Lost, you will receive the first e-mail alert as soon as an event is detected, and receive the next e-mail alert only after 60 seconds (if any event is detected then). Note this setting is not available for USB Protection Key Removed, Start Recycle and Start Keep Days Operation.

- **Minimum Duration:** This setting is only available for Camera Connection Lost. Set a duration for which the camera must be disconnected to GV-Redundant Server / GV-Failover Server for it to send an e-mail alert.

4.3 Network

The Network section includes settings of basic network connection, communication ports, e-mail server for notifications and connection settings for remote playback.

4.3.1 Network

In the Network page, you can configure basic network settings as well as set up SSL protocol and Dynamic DNS.

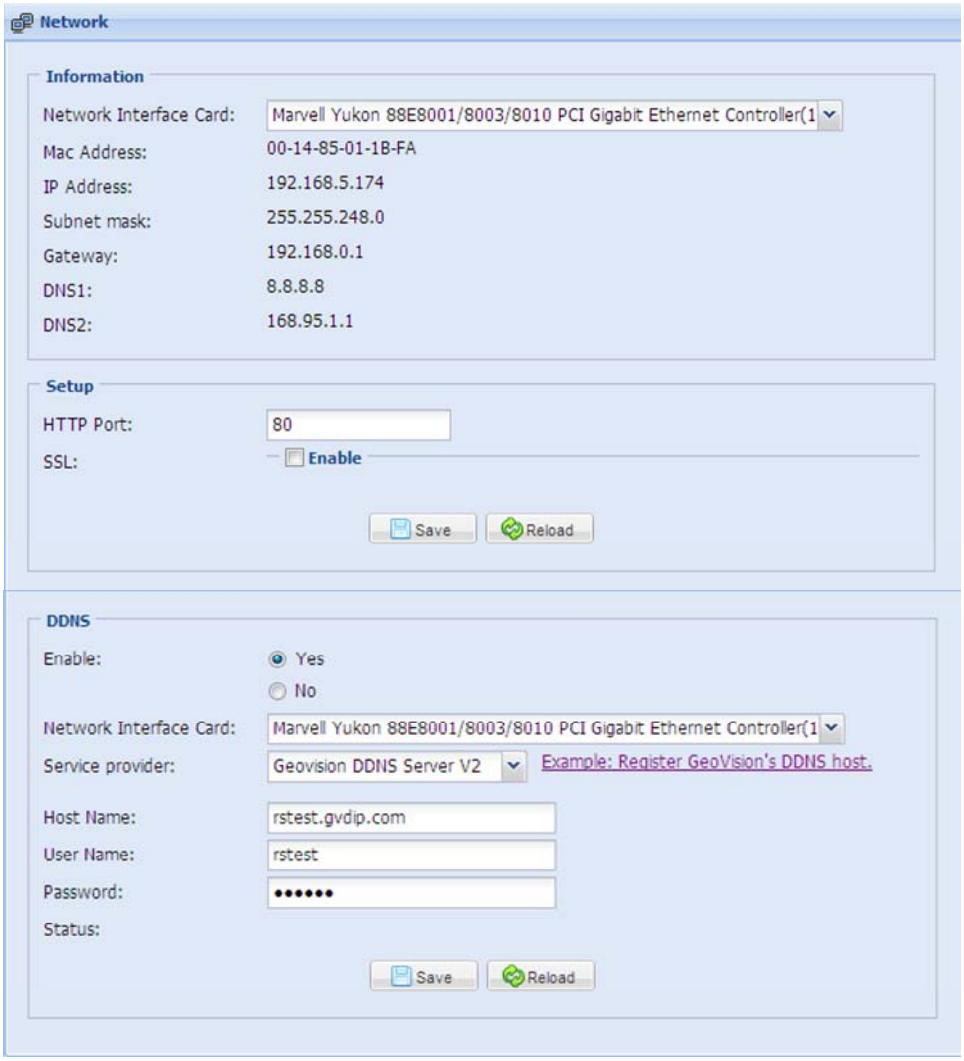


Figure 4-12

[Information]

- **Network Interface Card:** Select a Network Interface Card to connect to the Internet.

[Setup]

- **HTTP Port:** The default HTTP port is 80.
- **SSL:** Enable the Secure Sockets Layer (SSL) protocol for a more secure Internet connection. To use your own Certificate File, Certificate Key File and Certificate Chain File, click the **Browse** buttons and select the files stored at your computer. The encryption strength depends on your SSL certificate.

[DDNS] Dynamic DNS allows you to register a domain name to easily access your GV-Redundant Server / GV-Failover Server when using a dynamic IP address.

- **Enable:** Select to enable DDNS.
- **Network Interface Card:** Select a Network Interface Card to connect to the Internet.
- **Service Provider:** Select a DDNS service provider. If you select **GeoVision DDNS Server** or **GeoVision DDNS V2**, click the link on the right to enable the service and obtain a host name.
- **Host Name:** Type the host name you have obtained. For example, the host name you obtained for GeoVision DDNS Server will be your username followed by ".gvdip.com".
- **Username:** Type the username used to enable the DDNS service.
- **Password:** Type the password used to enable the DDNS service.
- **Status:** Shows the DDNS connection time.

4.3.2 Mail Service

When any of the following conditions occur, the administrator can receive alert by an e-mail:

- Cam era connection lost
- USB protection key removed
- Recycling of recorded video started
- Start keep days operation
- Disk full
- D isk error
- Disk Removed
- Recor ding Failure

To send e-mail alerts, you have to configure the following mail server settings and specify the e-mail address to receive alert messages.

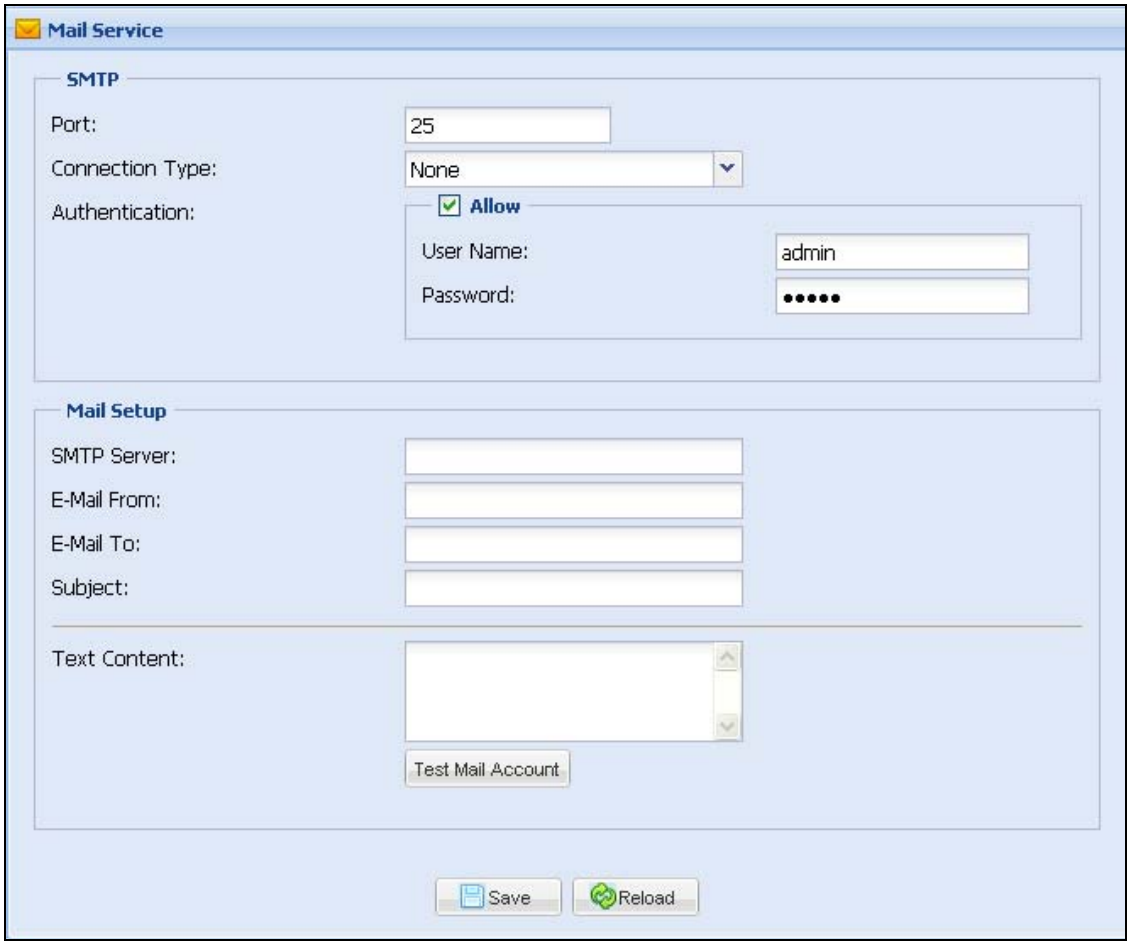


Figure 4-13

[SMTP Setting]

- **Port:** The default port for most SMTP servers is 25. However, the webmail Yahoo and Hotmail generally use different SMTP port. In this case, check your e-mail provider for the SMTP port number.
- **Connection Type:** For a more secure connection, use the drop-down list to select **SSL** or **TLS/STARTTLS**.
- **Authentication:** If your mail server needs login authentication, select **Allow** and type your login account name and password.

[Mail Setup]

- **SMTP Server:** Type your mail server's URL address or IP address.
- **E-Mail From:** Type the sender's e-mail address.
- **E-Mail To:** Type the recipient's e-mail address. For multiple recipients, add a semicolon between each e-mail address.
- **Subject:** Type a subject that comes with the alert message.
- **Text Content:** Type the content of the alert message.
- **Test Mail Account:** Click this button to send a test e-mail to the assigned account.

4.3.3 Remote ViewLog

Through the network, you can remotely play back the files recorded by GV-Redundant Server / GV-Failover Server and play back videos. Configure settings for remote access on this page. To play back files recorded by GV-Redundant Server / GV-Failover Server using Remote ViewLog, see *6. Remote Playback*.

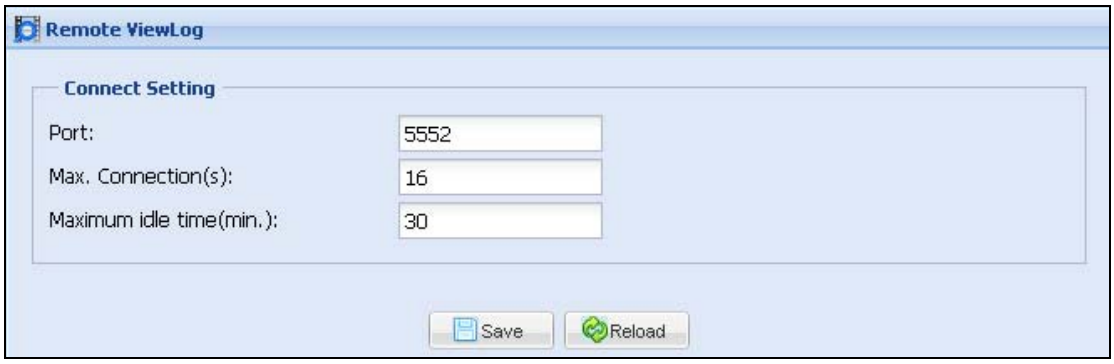


Figure 4-14

- **Port:** Keep the default port 5552 or modify to match the setting on Remote ViewLog.
- **Max. Connection (s):** Type a number to limit the maximum number of connections.
- **Maximum idle time (min.):** Users connecting from Remote ViewLog will be disconnected after being idle longer than the time period specified.

4.4 Advanced Management

The Advanced Management section allows you to set up user accounts, play back recorded files remotely, search for event logs, and analyze events and recording size.

4.4.1 User Account

You can create up to **1000** User and Supervisor accounts to access GV-Redundant Server / GV-Failover Server. The Supervisor accounts have full access to GV-Redundant Server / GV-Failover Server, and you can set up different level of access rights for the User accounts.

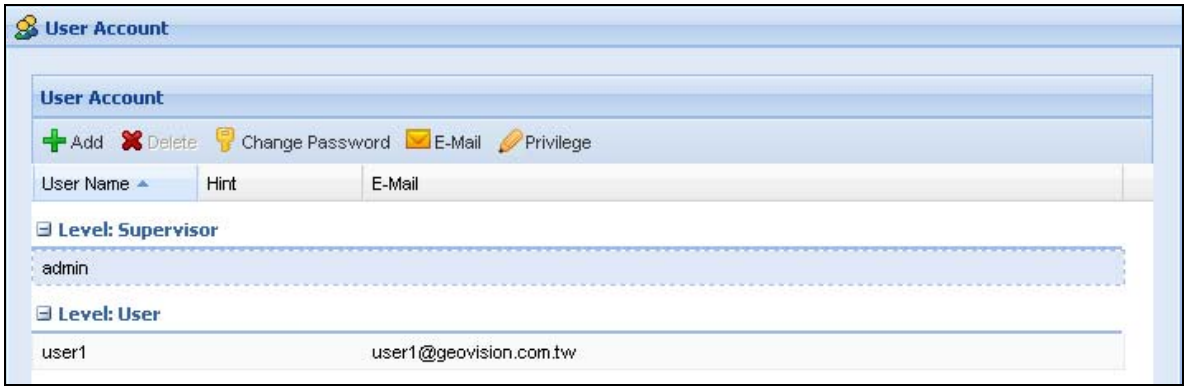


Figure 4-15

To create an account:

1. Click the **Add** button Add. This dialog box appears.

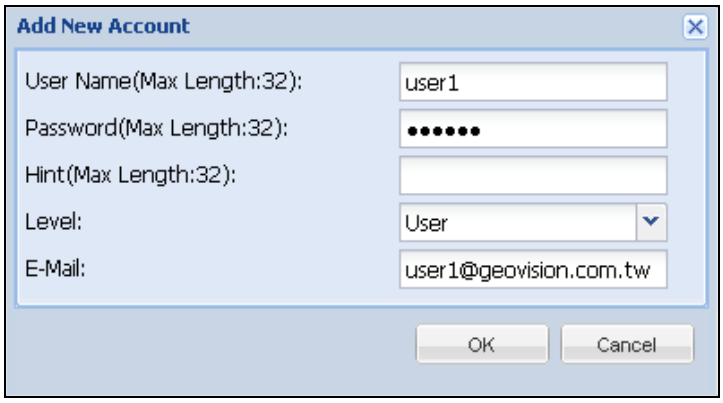


Figure 4-16

2. Type the **User Name**, **Password** and a password **Hint** for the account.
3. Use the **Level** drop-down list to select **Supervisor** or **User**.

4. Optionally type an e-mail address for the account. When you forget the password, the password can be sent to your e-mail account using the Forget Password link in the login page.

5. Click **OK** to return to the User Account List. You can edit the account settings using the **Change Password** and **E-Mail** button.

To set access rights:

1. Select a user account and click the **Privilege** button Privilege or simply double-click the account. This dialog box appears.

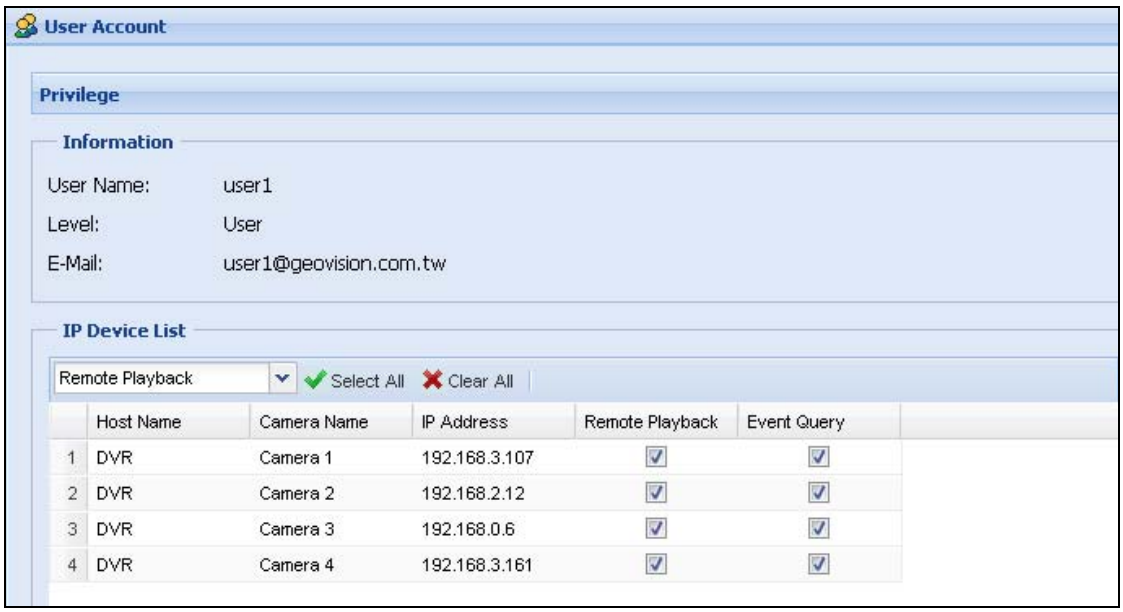


Figure 4-17

2. The cameras listed in the IP Device List are displayed. Select to allow the user to access the **Remote Playback** and **Event Query** functions.

Figure 4-18

3. Click **Save**.

4.4.2 Advanced Query

Using Advanced Query, you can search for events and play them back from a remote site. Also, you can query the system logs of GV-Redundant Server / GV-Failover Server and analyze events by means of graphical charts. For more details on Advanced Query, refer to *Chapter 5 User Mode.*

Chapter 5 User Mode

The GV-Redundant Server / GV-Failover Server administrator can create user accounts with different access rights to its Web interface. Refer to *4.4.1 User Account* to see how to create user accounts.

List of Menu Options

Find the topic of interest by referring to the sections below.

5.1 Remote Playback	Play back recorded videos remotely.
5.2 System Log Query	Query for system events according to type and time period.
5.3 Behavior Log Query	Query for events on supervisor configuration.
5.4 Login / Logout Query	Query for login and logout events of the supervisor and clients.
5.5 Chart Analysis	● System Analysis of Event Count ● Monitor Analysis of Event File Size ● Monitor Analysis of Event Count ● Monitor Analysis of Time File Size

After the user account is created, follow the steps below to access the Web interface in User Mode.

1. In the Location/Address field of Internet Explore, type the IP address or the domain name of the GV-Redundant Server / GV-Failover Server.

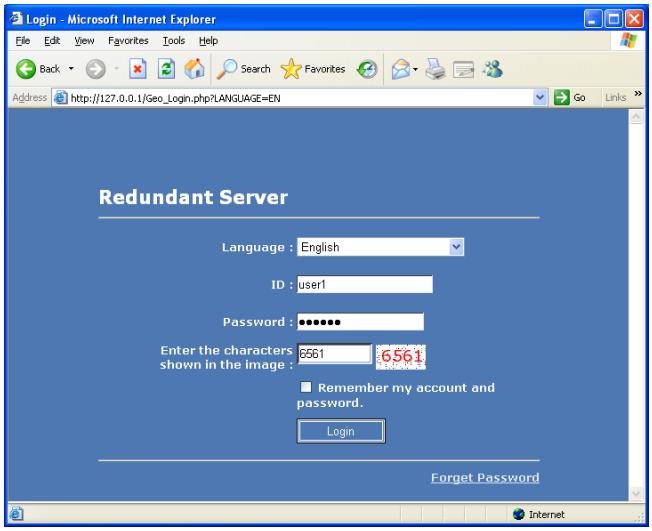


Figure 5-1

2. In the login page of the GV-Redundant Server / GV-Failover Server Web interface, type the **ID** and the **Password** of the user account.
3. Type the verification number shown in the image.
4. Click **Login**. The GV-Redundant Server / GV-Failover Server Web interface is now displayed.

Note: GV-Redundant Server / GV-Failover Server supports several browsers to access its Web interface. However, if you are using Firefox, Google Chrome and Safari, recorded files cannot be played back.

5.1 Remote Playback

In the left menu, expand **Remote Playback** and select **Event List Query** to search for camera events during a time period and play back the recorded events.

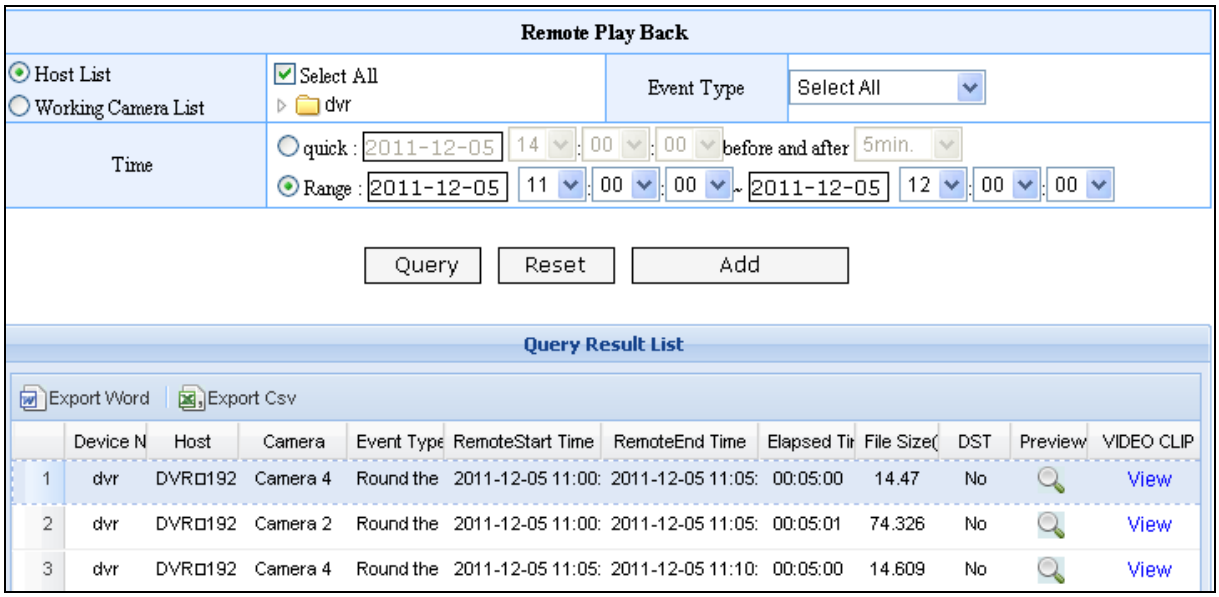


Figure 5-2

1. Select **Working Camera List** or **Host List** to list all connecting cameras or list cameras by IP video devices.
2. Double-click the server name and select the cameras, or select **Select All**.
3. Use the **Event Type** drop-down list to select the type of event to include in the search results.
4. In the **Time** section, select **Quick** to specify a time period before and after a time point or select **Range** to specify a time range directly.
5. Click **Query** to see the search results.
6. To preview a snapshot of the video, click the **Preview** button . To see the recorded video, click **View** under Video Clip.

You can click the **Add** button to save the search criteria to the **Favorite List** in the left menu for future use. You can also export the search results in **word** format and **excel** format by clicking **Export Word** or **Export Csv**.

Note: Only Internet Explorer browser is supported for Remote Playback function.

5.2 System Log Query

Using the System Log Query, you can search the system events of GV-Redundant Server / GV-Failover Server, such as camera connection, video recycling, storage status and USB Protection Key status etc. To access this query, expand **Event List Query** and select **System Log Query**.

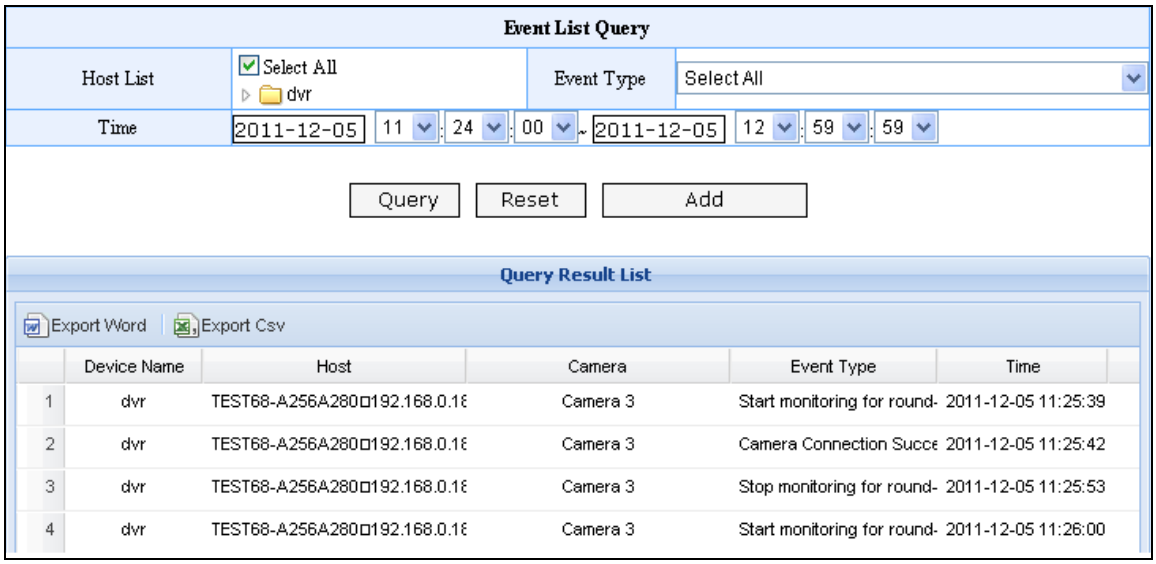


Figure 5-3

1. Double-click the server name and select the cameras individually, or select **Select All**.
2. Use the **Event Type** drop-down list to select the event types to include in the query.
3. In the **Time** section, specify the time period using the drop-down lists.
4. Click **Query** to start searching.

You can click the **Add** button to save the search criteria to the **Favorite List** in the left menu for future use. You can also export the search results in word format and excel format by clicking **Export Word** or **Export Csv**.

5.3 Behavior Log Query

Using the Behavior Log Event Query, you can search for events of Supervisor's configuration, such as adding a host, adding a user, modifying port, previewing video images and etc. To access this query, expand **Event List Query** and select **Behavior Log Query**.

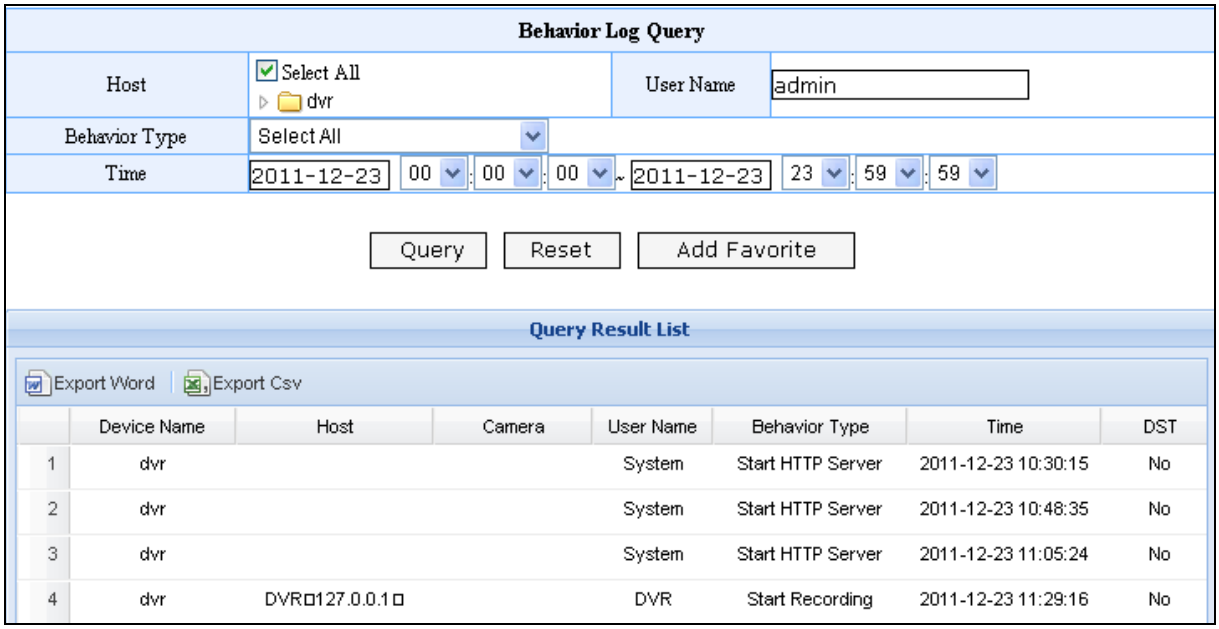


Figure 5-4

1. In the **Host** section, click the server name and select the cameras, or select **Select All**.
2. In the **User Name** section, type the Supervisor's account name. You can also leave the field blank to search for all the supervisor accounts that have logged into and out the GV-Redundant Server / GV-Failover Server.
3. Click the server name and select the cameras, or select **Select All**.
4. Use the **Behavior Type** drop-down list to select the type of event to include in the search results.
5. In the **Time** section, select a period of time.
6. In the **Active List** section, select **Active List** to search the connecting hosts, **Inactive List** to search the disconnected hosts, or click **Select All**.
7. Click **Query** to see the search results.

You can click the **Add** button to save the search criteria to the **Favorite List** in the left menu for future use. You can also export the search results in word format and excel format by clicking **Export Word** or **Export Csv**.

5.4 Login / Logout Query

Using the Login and Logout Query, you can search the login and logout information of Supervisor and clients. To access this query, expand **Event List Query** in the left menu and select **Login/Logout Query**.

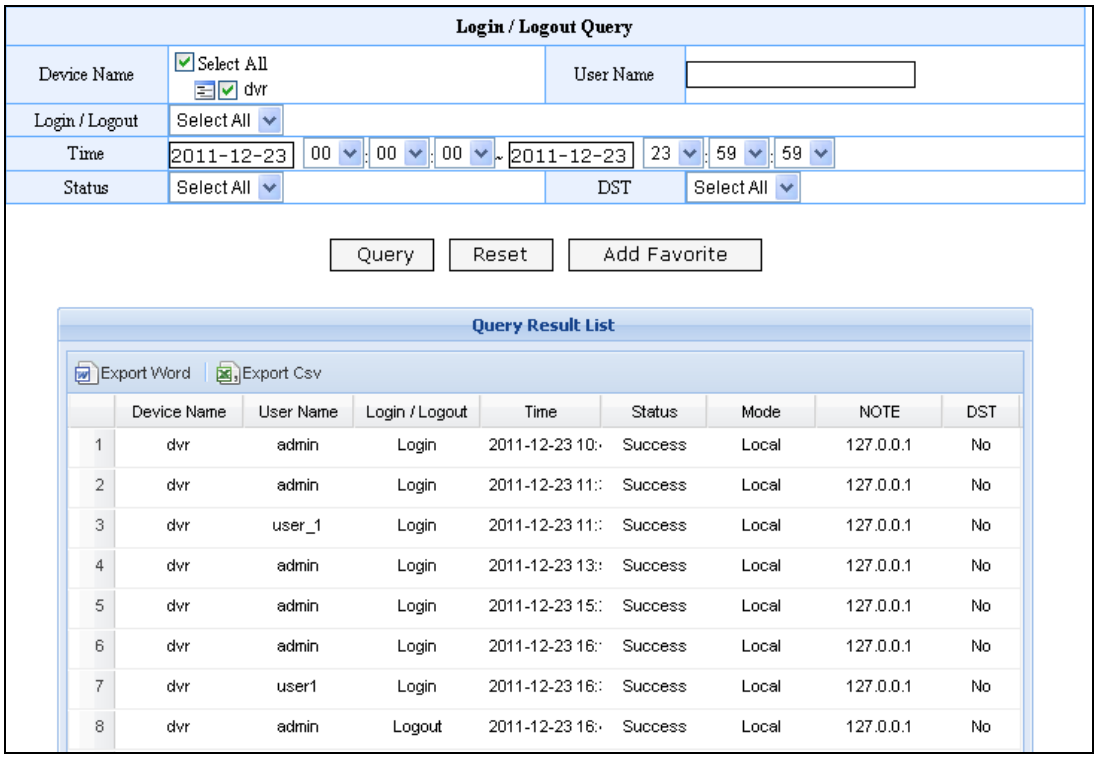


Figure 5-5

1. In the **Device Name** section, click the server name and select the cameras, or select **Select All**.
2. In the **User Name** section, type the Supervisor's or user's name or leave the field blank to search for login and logout events of all the users.
3. In the **Login/Logout** section, select one type of event or **Select All**.
4. In the **Time** section, specify the time period using the drop-down lists.
5. In the **Status** section, select login **Fail** or **Success**.
6. In the **DST** section, select **Select All** to search all events including DST (Daylight Saving Time) events, **Yes** to only search DST events or **No** to search events without DST.
7. Click **Query** to start searching.

You can click the **Add** button to save the search criteria to the Favorite List in the left menu for future use. You can also export the search results in word format and excel format by clicking **Export Word** or **Export Csv**.

5.5 Chart Analysis

Using the Chart Analysis, you can analyze event count, event file size, and time file size and presented in three types of graph: bar, pie and line graph.

- **System Analysis of Event Count:** Shows the counts of each event type.
- **Monitor Analysis of Event File Size:** Shows the total size of events recorded under each recording policy.
- **Monitor Analysis of Event Count:** Shows event counts under each recording policy.
- **Monitor Analysis of Time File Size:** Shows total size of all videos recorded in a month, a day and an hour.

To search for System Analysis of Event Count, Monitor Analysis of Event File Size and Monitor Analysis of Event Count, follow the steps below:

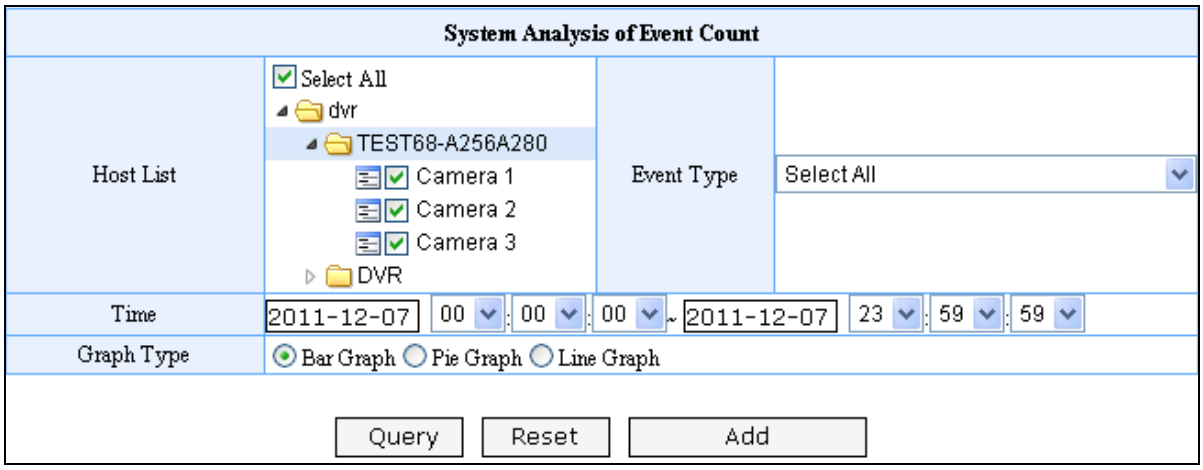


Figure 5-6

1. I n the **Host List** section, double-click the host and select each channel individually or select **Select All**.
2. I n the **Event Type** section, select one type of event or **Select All**.
3. I n the **Time** section, specify a time period.
4. Select a graph type.
5. Click **Query** to display search results.

To search for Monitor Analysis of Time File Size, follow the steps below:

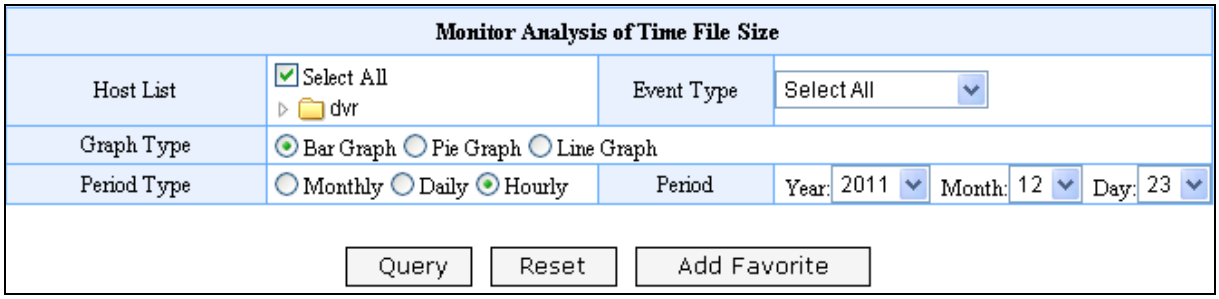


Figure 5-7

1. In the **Host List** section, double-click the host and select each channel individually or select **Select All**.
2. In the **Event Type** section, select one type of event or **Select All**.
3. In the **Graph Type** section, select a type of graph.
4. In the **Period Type** section, select **Monthly** and specify a year to see the total file size of each month in a year, select **Daily** and specify the period to see the total file size of each day in a month or select **Hourly** and specify the time period to see the file size of each hour in a day.
5. In the **Period** section, select the year, month or date depending on the Period Type selected.
6. Click **Query** to display search results.

Chapter 6 Remote Playback

The files recorded on the GV-Redundant Server / GV-Failover Server can be played back remotely using the Remote ViewLog program. You can install the program from the Software DVD or download it through the GeoVision website. In the left menu, click **Advanced Query** and in the window that pops up, select **Utility Download**. Click the **Download** button of **Remote ViewLog** to download the program.

Note: When the Remote ViewLog is started, it will pop up the selections of Remote ViewLog Server and Remote Storage System. Just click any place on the window to ignore and close the pop-up window.

To access recorded files from the GV-Redundant Server / GV-Failover Server through the Remote ViewLog, you can configure the Address Book for downloading the files of a specific IP device, or connect through the Remote ViewLog Service for downloading the files of all connected IP devices. For quick access to the recorded files of a specific IP device, it is recommended to configure the Address Book instead of connecting through the Remote ViewLog Service.

Configuring Address Book

1. On the main screen, click the **Tools** button and select **Address Book**. This dialog box appears.

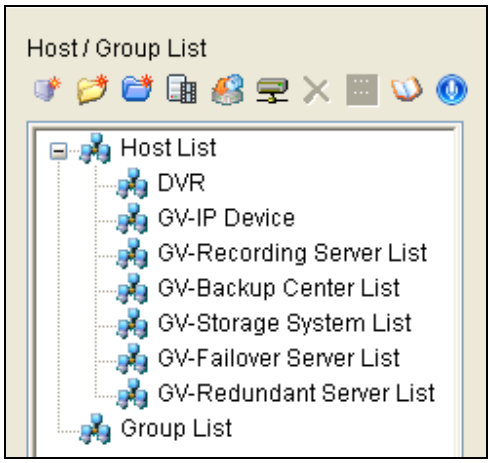


Figure 6-1

2. Click **Add GV Device Server** button . This dialog box appears.

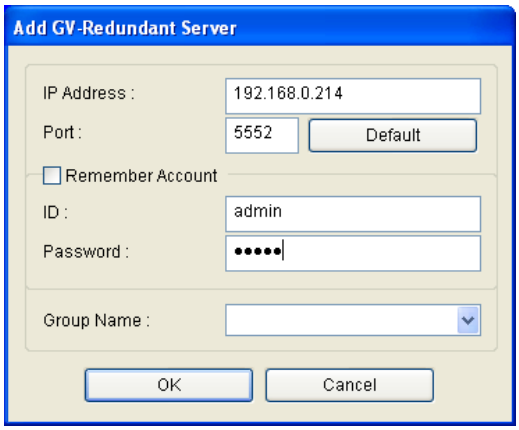


Figure 6-2

3. Type the IP address of the GV-Redundant Server / GV-Failover Server. Use the default connection port **5552** or modify to match the port value on GV-Redundant Server / GV-Failover Server. See *4.3.3 Remote ViewLog*.
4. Type the **ID** and **Password** of the GV-Redundant Server / GV-Failover Server user account. To access the recorded files without entering the ID and password again when connecting with the device, click **Remember Account**.
5. To add the GV-Redundant Server / GV-Failover Server to address book under a group, select a **Group Name** or type a new name.
6. Click **OK.** The GV-Redundant Server / GV-Failover Server is added to the address book.

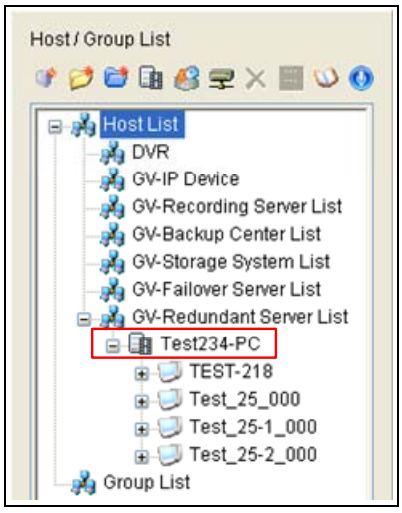


Figure 6-3

7. Expand the device list under the GV-Redundant Server / Failover Server List, right-click the desired IP device and select **Connect**. Login ID and password are required if you did not click **Remember Account** in Step 4.

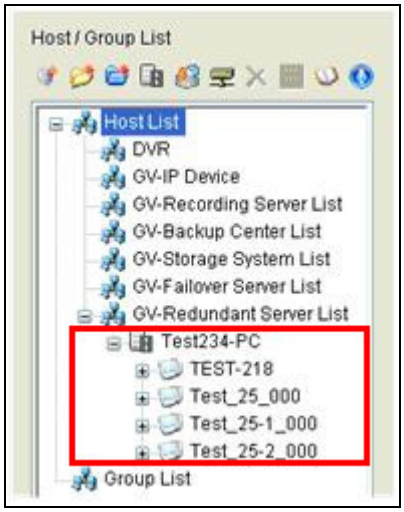


Figure 6-4

8. In the Remote ViewLog player, the recorded events will be listed for playback.

Figure 6-5

Connecting through Remote ViewLog Service

1. On the main screen, click the **Tools** button and select **Remote ViewLog Service**. This dialog box appears.

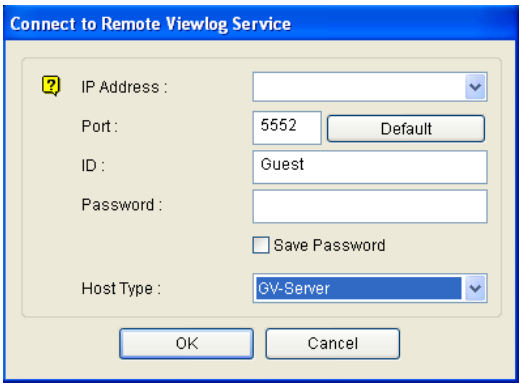


Figure 6-6

2. Type the **IP address**, login **ID** and **password** of the GV-Redundant Server / Failover Server. Keep the default port **5552** or modify it if necessary.
3. In the Host Type, select **GV-Server**.
4. Click **Connect**. The recorded files of the GV-Redundant Server / Failover Server are ready for playback.

For details on the playback functions, see *Chapter 4 Video Playback*, *GV-DVR / NVR User's Manual* on the Software DVD or from GeoVision website.

Specifications

		GV-Redundant Server	GV-Failover Server
Client		GV-NVR / GV-VMS / GV-Recording Server	
Dongle		Up to 128 IP channels	
Supported 3rd Party IP Cameras		Support 6 third-party brands. http://classic.geovision.com.tw/english/4_21.asp	
Recording Mode		Records as soon as the hosts are connected.	Records when: 1. Host starts up without monitoring. 2. File recycling fails. 3. There is an error in the hard drive. 4. The connection between host and IP camera fails. 5. Host fails.
Protocol		DynDNS, HTTP, HTTPS, SMTP, ONVIF, PSIA, RTSP, TCP, UDP	
Live Viewing		No	
Playback	**using Remote ViewLog**	Yes	
	via web page	Yes	
Recycle Threshold for Video Files		Yes	
Event Log		Yes	
Recycling Days & Threshold for Event Logs		Yes	
S/W & H/W Watchdog		Yes	
E-mail Notification		Yes (camera connection loss, removal of USB protection key, recycling of recorded video, start keep days operation, disk full, disk error, removal of hard disk, recording failure)	
Number of User Accounts		Up to 1000 accounts	
Support for Internet / LAN		Yes	
Mobile Phone Support		No	
Bandwidth Control		No	
IE Event Query		Yes	

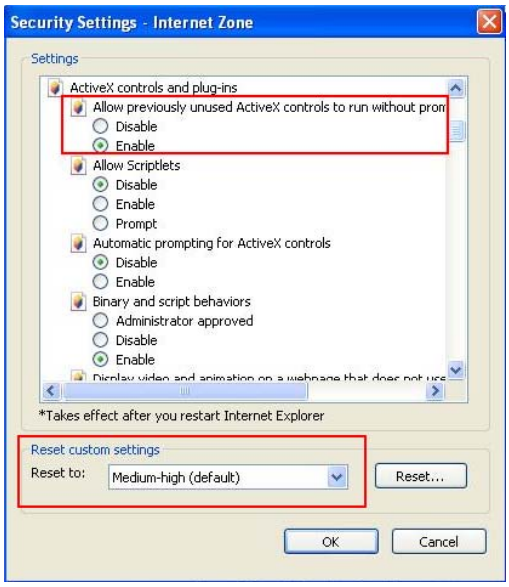
IE I/O Control	No
Language on Web Interface	Arabic, Bulgarian, Czech, Danish, Dutch, English, Finland, French, German, Greek, Hebrew, Hungarian, Indonesian, Italian, Japanese, Lithuanian, Norwegian, Persian, Polish, Portuguese, Romanian, Russian, Serbian, Simplified Chinese, Slovakian, Slovenian, Spanish, Sweden, Thai, Traditional Chinese, Turkish
IMPORTANT: GV-Redundant Server / Failover Server and GV-Recording Server cannot be run in one PC at the same time.	

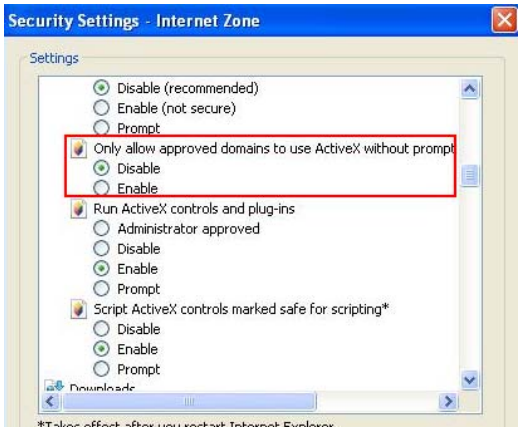
Appendix

A. Settings for Internet Explore 8

If you use Internet Explorer 8, it is required to complete the following setting.

1. Set the Security to **Medium-high (default)**.
2. Enable **Allow previously unused ActiveX controls to run without prompt**.
3. Disable **Only allow approved domains to use ActiveX without prompt**.

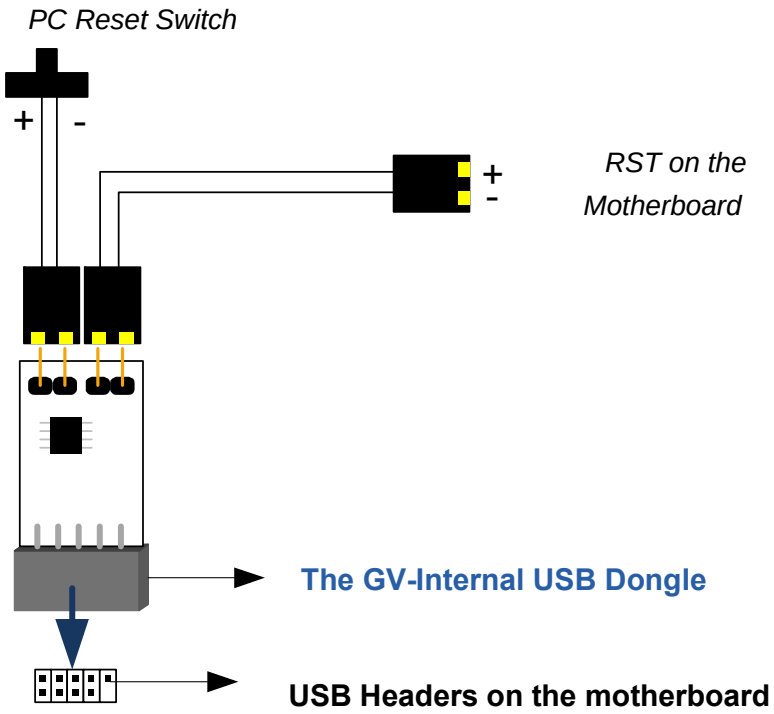




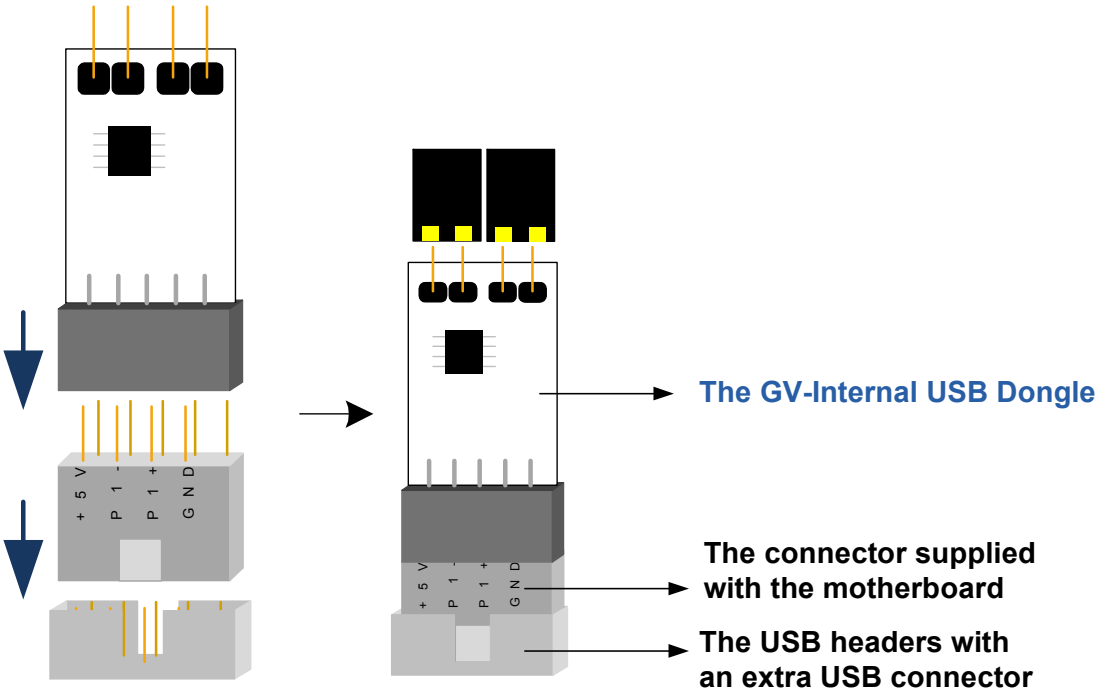
B. Installing the Internal USB Dongle

Follow the instructions below to install the internal USB dongle for the GV-Redundant Server / GV-Failover Server.

1. Turn off the computer, and open the case.
2. Connect the **GV-Internal USB Dongle** to the USB headers on the motherboard.
3. Remove the wire of the computer's reset switch from the motherboard, and connect it to the **GV-Internal USB Dongle**. Use the supplied Jumper Wire to connect the pins on the **GV-Internal USB Dongle** and the reset pins on the motherboard.



4. For some motherboards, the internal USB headers are integrated with an extra connector, making it unfit for the **GV-Internal USB Dongle** to plug in. In this case, it is required to use a connector supplied with the motherboard to connect the **GV-Internal USB Dongle** to the motherboard.

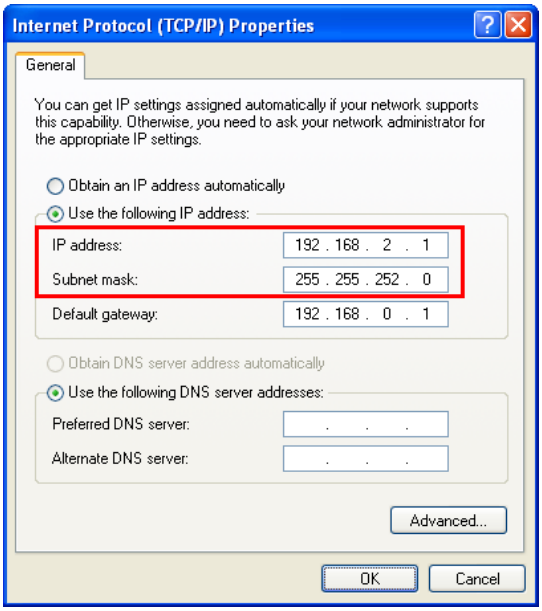


Note: Ensure not to remove the GV-Internal USB Dongle when the computer is powered on; otherwise it would cause the computer to restart or the GV-Internal USB Dongle to be damaged.

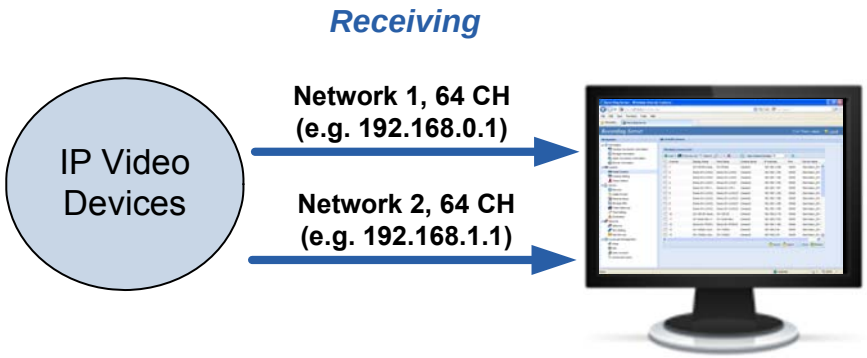
C. How to Avoid Network Bottleneck

To increase network bandwidth and avoid network bottleneck, you need to set up multiple networks and divide networks into multiple subnets or segments. Next, assign each IP channel in a different network.

1. To set up multiple networks on GV-Redundant Server / GV-Failover Server, you need to install multiple network cards. Each network card is assigned with a different IP address and subnet mask.



2. Assign each IP channel to a different network card using the IP addresses you have set up.



GV-Redundant Server / GV-Failover Server

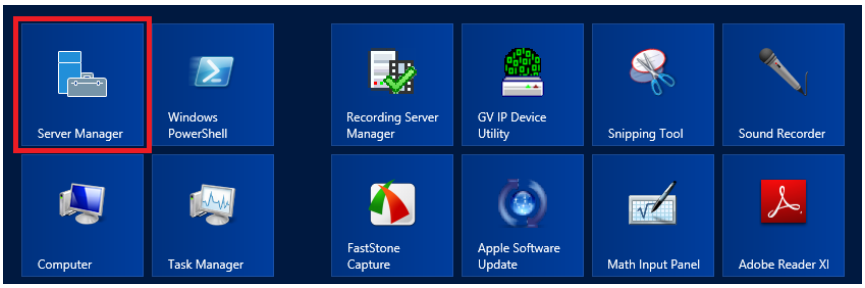
The GV-Redundant Server / GV-Failover Server can receive from up to 128 IP channels. In the example above, the incoming 128 channels are divided among two network cards.

D. Installing .Net Framework 3.5 for Windows 10 / 11 / Server 2016

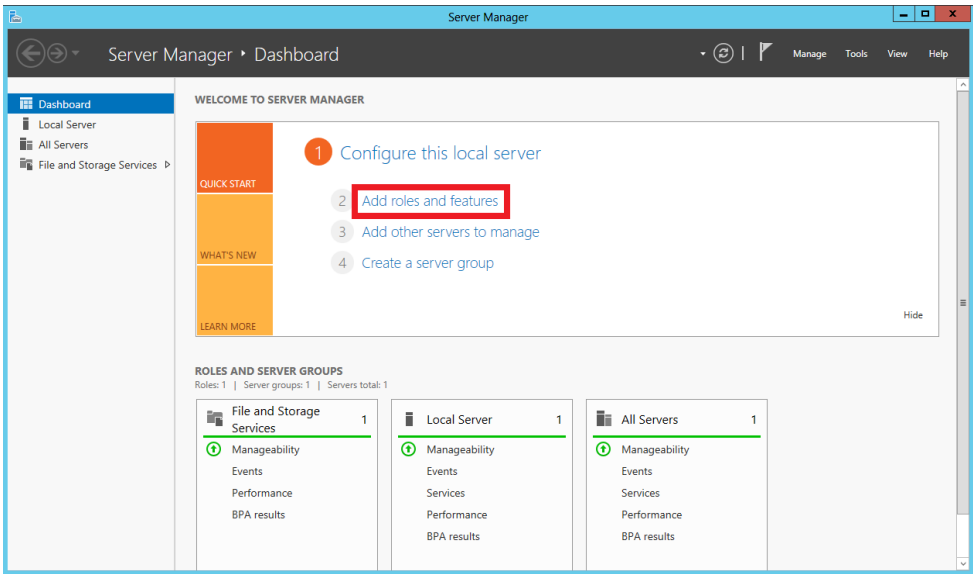
Follow the steps below to manually install **.Net Framework 3.5** for Windows 10 / 11 and Windows Server 2016.

Windows Server 2016:

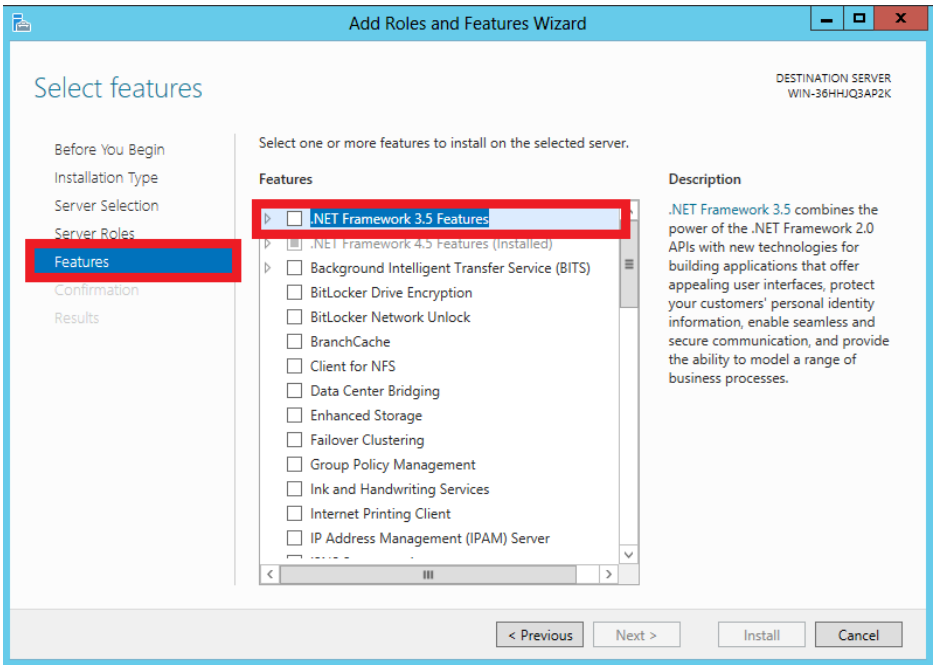
1. Open **Server Manager** from the Start menu.



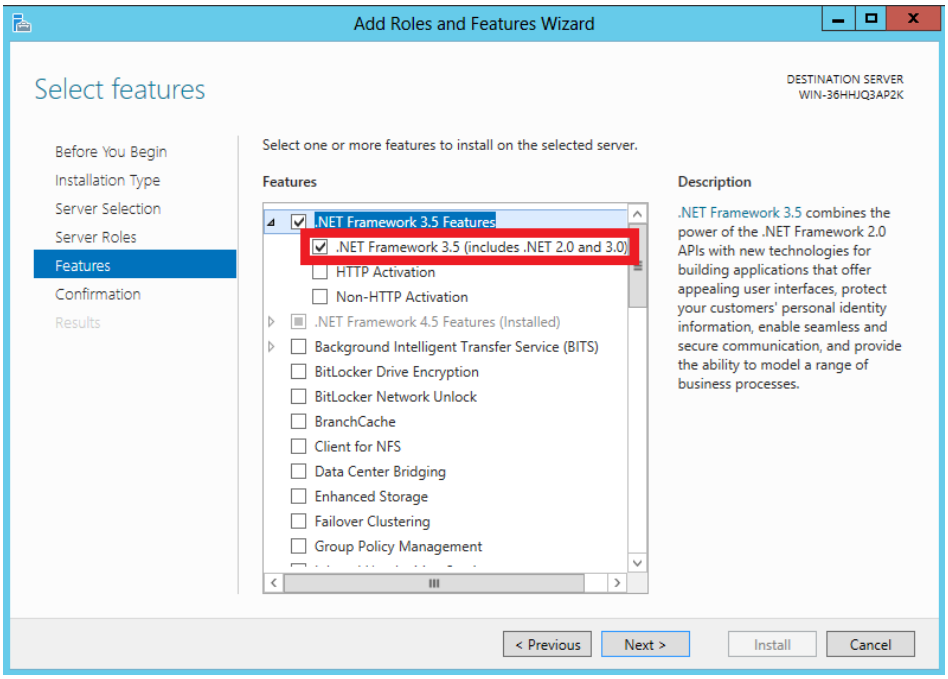
2. Click **Dashboard** from the tree list on the left and click **Add roles and features**.



3. Click **Features** from the tree list on the left and select **.Net Framework 3.5 Features**.

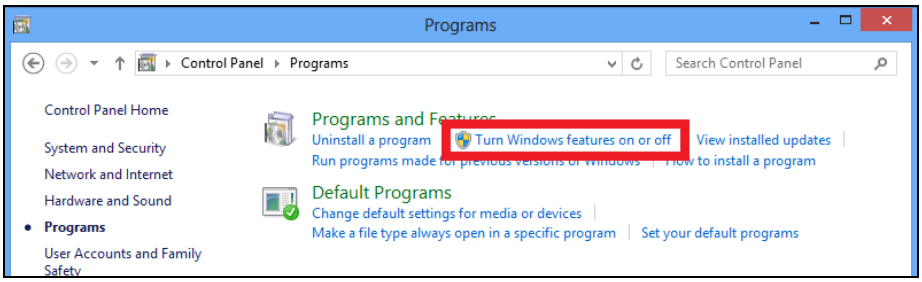


4. Select **.Net Framework 3.5 (include 2.0 and 3.0)** and click the **Install** button.



Window 10 / 11:

1. Click **Control Panel** from the Start menu.
2. Click the **Programs** icon.
3. Select **Turn Windows features on or off** under the Programs and Features title.



4. Select **.Net Framework 3.5 (includes .Net 2.0 and 3.0)** and click the **OK** button.