

GV-Enterprise

User's Manual





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[Warranty]



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Preface

Welcome to the *GV-Enterprise User's Manual*.

This Manual is designed for the following GV-Software:

Product	Version
GV-Enterprise	V1.0.0

Note: To support the GV-SNVR, GV-RNVR, and UA-SNVR series, UA-HD DVRs, and the latest GV-IP Cameras, UA-IP Cameras, and GV-Video Servers, you must download and use the following software versions from the [GeoVision Website](#):

1. GV-Enterprise V1.1.0 or later
2. GV-Enterprise Plugin V1.1.0 or later

For the complete list of newly supported IP devices, see *Version 1.1.0* in the [GV-Enterprise Version History](#).

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Naming and Definition

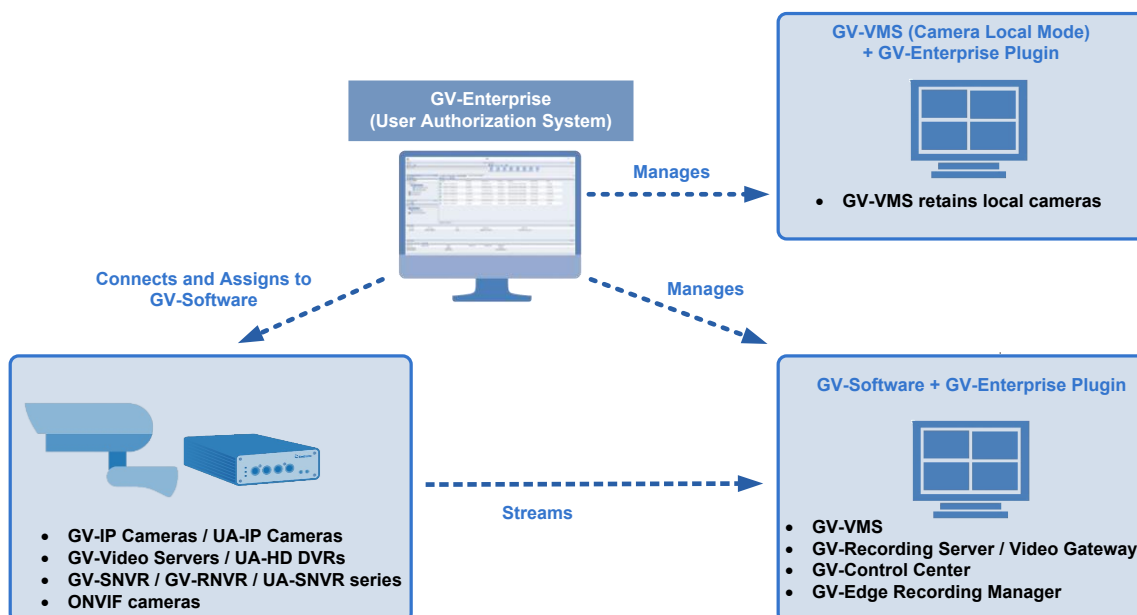
GV-Software	GV-Software refers to all GeoVision applications that can be connected to and managed by GV-Enterprise. These include GV-Control Center, GV-VMS, GV-Recording Server, GV-Video Gateway and GV-Edge Recording Manager for Windows. See <i>1.1.3 Compatible GeoVision Software and IP Devices</i> .
IP Devices	IP devices refer to GeoVision and ONVIF IP video devices, including GV-IP Camera and GV-Video Server, that can be connected to GV-Enterprise and assigned to GV-Software for video surveillance and recording. See <i>1.1.3 Compatible GeoVision Software and IP Devices</i> .

Chapter 1 Introduction

GV-Enterprise is a user authorization system designed to centrally manage access permissions and system configurations for GV-VMS, GV-Recording Server/Video Gateway, GV-Control Center, and GV-Edge Recording Manager.

GV-Enterprise seamlessly integrates with GV-Software, ensuring efficient and secure administration of surveillance systems. Upon connection to GV-Enterprise, administrator rights from GV-Software are automatically transferred, enhancing security by restricting local accounts on GV-Software from accessing critical settings. This innovative system empowers users to create accounts with customizable access levels, assign cameras, perform batch upgrades of software versions and camera firmware, modify camera settings, and much more.

The collaboration between GV-Enterprise and the GV-VMS system introduces two streamlined methods. Firstly, GV-Enterprise can be utilized to assign the GV-VMS system cameras, providing centralized control over camera allocation. Alternatively, Camera Local Mode allows users to retain control of GV-VMS cameras when connected to GV-Enterprise. In this mode, GV-Enterprise supervisors can centrally upgrade software across multiple GV-VMS systems and remotely access PCs for maintenance, enhancing operational efficiency and reducing downtime.



Note: Only GV-Control Center and GV-Edge Recording Manager are supported for receiving streams from the GV-SNVR, GV-RNVR, and UA-SNVR series, as well as UA-HD DVRs.

Features

- Centralized user account management
- Centralized host management to assign IP cameras to GV-Software
- Remote camera configuration
- Batch camera firmware upgrade
- Manual or scheduled remote software update
- Remote desktop to access the PC of GV-Software for maintenance
- Centralized log management to record user behaviors and security data across GV-Software and cameras
- Active Directory integration
- Web viewer for live view and playback

1.1 System Requirements

The following are the system requirements for GV-Enterprise.

1.1.1 Minimum System Requirements

The PC used to install GV-Enterprise must meet the following minimum system requirements.

OS		64-bit Windows 10 / 11, Server 2019 / 2022
CPU		6 th Generation i5-6400, 2.70 GHz
Memory		8 GB
Hard Disk	Installation	1 GB
	OS	32 GB
Graphics		Intel internal graphics
LAN		Gigabit Ethernet
Microsoft SQL Server		2014
Software		.Net Framework 3.5

Note:

1. GV-Enterprise can be installed either with Microsoft SQL Server on the same PC, or on a separate PC.
2. It is recommended that GV-Enterprise be installed on a separate PC from the GV-Software connected. If GV-Enterprise and GV-Control Center are installed on the same PC, the system requirements of the [GV-Control Center](#) must be met.
3. Users of **Windows Server 2019 and Server 2022** must install .Net Framework 3.5 and Microsoft SQL Server. For **Windows 10 and 11** users, the two applications are installed alongside GV-Enterprise.

1.1.2 License

License	GV-Control Center V4 USB dongle for GV-Enterprise to be executable
<p>Note: GV-Control Center V4 has two types of licensing, USB dongle licensing and software licensing. GV-Enterprise is only compatible with GV-Control Center V4 USB dongle.</p>	

1.1.3 Compatible GeoVision Software and IP Devices

GV-Enterprise can connect to and manage the following versions of GV-Software:

- **GV-Control Center:** V4.2.0 or later
- **GV-Edge Recording Manager:** V2.3.0.1 or later
- **GV-Recording Server / Video Gateway:** V2.1.1 or later
- **GV-VMS:** V18.3.2 with Patch, V17.4.7 with Patch or later

GV-Enterprise can connect to and manage the following IP devices:

- **GV-IP Cameras:** GV-ABL / ADR / AVD / BX / EBD / EFD / FER / GBL / GDR / GEB / GEBF / GPH / GVD / MFD / PBL / PDR / PFER / PTZ / QFER / QSD / RBL / REB / RFER / SD / TBL / TDR / TVD series
- **UA-IP Cameras:** UA-B580 / R500 / R580 / R800 series
- **GV-Video Servers**
- **SNVRs:** GV-SNVR / GV-RNVR / UA-SNVR series
- **HD DVRs:** UA-HD DVRs

Note: Only GV-Control Center and GV-Edge Recording Manager are supported for receiving streams from the GV-SNVR, GV-RNVR, and UA-SNVR series, as well as UA-HD DVRs.

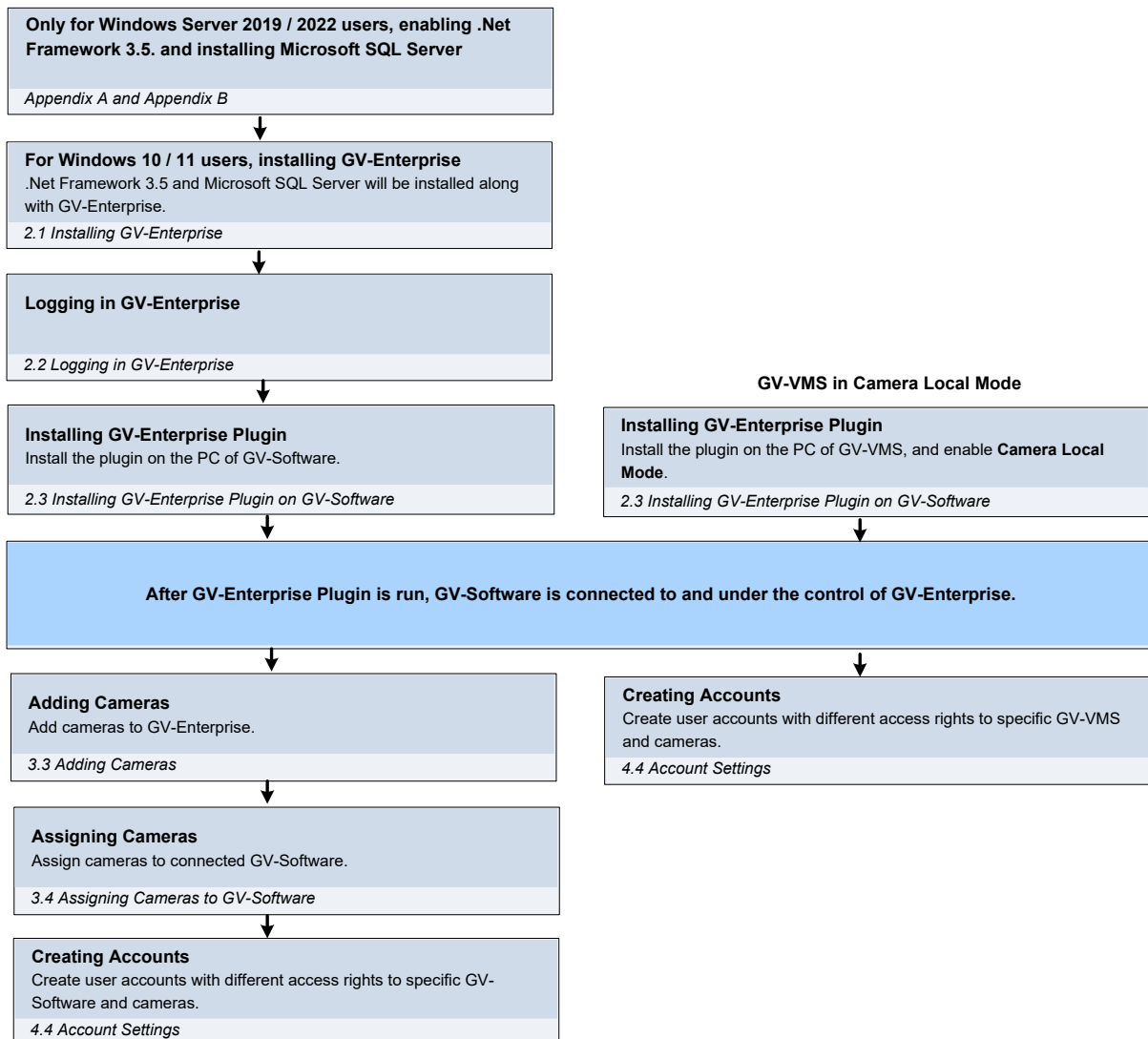
The supported versions are:

1. GV-Control Center V4.2.1.12 or V4.3.0 or later
 2. GV-Edge Recording Manager V2.3.0.1 or later
-

1.2 Setup Flowchart

The following flowchart provides an overview of how GV-Enterprise is built and operates, as well as a road map to help you navigate the manual.

The GV-VMS systems operate in two ways. One method is to utilize GV-Enterprise to assign cameras to GV-VMS. The other is **Camera Local Mode** to retain the cameras already connected to GV-VMS when connected to GV-Enterprise.



Chapter 2 Installation and Login

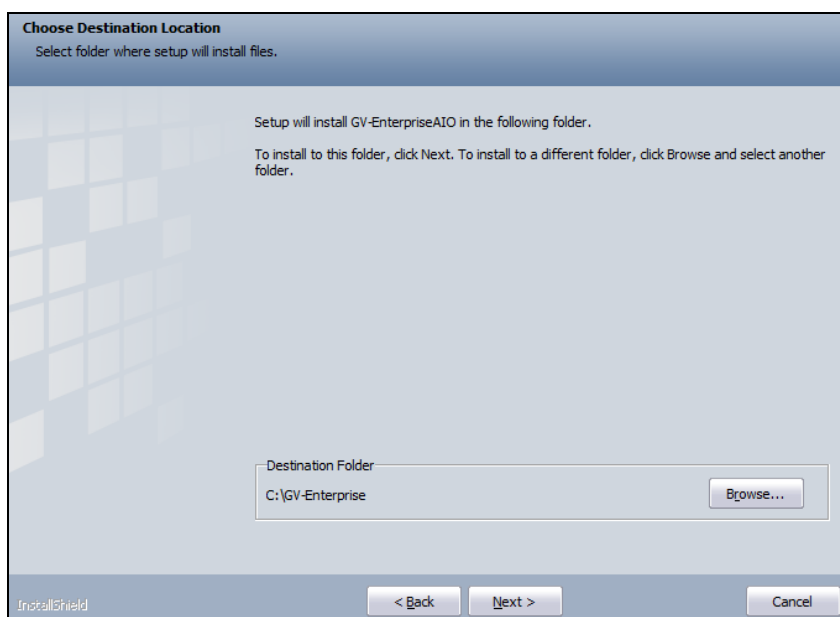
To begin, install the **GV-Enterprise** software on a dedicated computer and the **GV-Enterprise Plugin** on the GV-Software system to be managed.

2.1 Installing GV-Enterprise

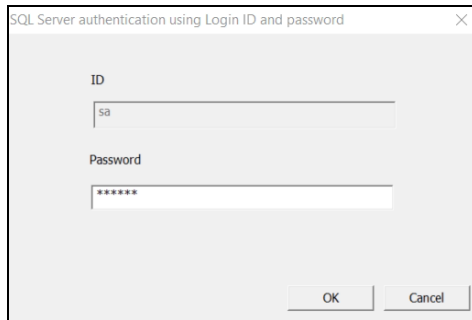
GV-Enterprise must be installed on a separate computer from the GV-Software system it is managing.

Note: Prior to GV-Enterprise installation, users of **Windows Server 2019 and 2022** must install .Net Framework 3.5 and Microsoft SQL Server. For **Windows 10 and 11** users, these two applications are installed alongside GV-Enterprise.


1. Before installing GV-Enterprise, ensure the following:
 - A. GV-Control Center USB dongle or software license has been installed.
 - B. .Net Framework 3.5 and Microsoft SQL Server have been installed for Windows Server 2019 and 2022. See *Appendix A* and *B* for installation details.
2. Download and install **GV-Enterprise** from [GeoVision's website](#).
3. During the installation process,
 - A. Install the application to the default path: C:\GV-Enterprise, or click **Browse** to select a location to install it.

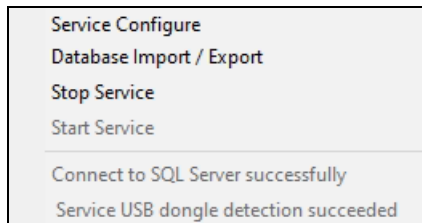


- B. When you are asked to create the password for the SQL Server administrator account (sa), type a password, and click **OK**.



4. After the installation is complete, the **Service Configure** dialog box appears.
- A. In **Plugin Authentication**, set an authentication password for connecting *GV-Enterprise Plugin*, installed with the GV-Software to be managed, to GV-Enterprise Service.
- B. Click **Test database connection**. The message “Connect to datasheet succeed” appears to indicate the SQL Server connection is created.
5. Click **OK** to apply the settings.

Once the SQL Server is connected, the icon  with a tick will be minimized to the system tray. You can click the icon and select **Service Configure** to adjust the connection settings, or select **Database Import / Export** to import or export GV-Enterprise database.

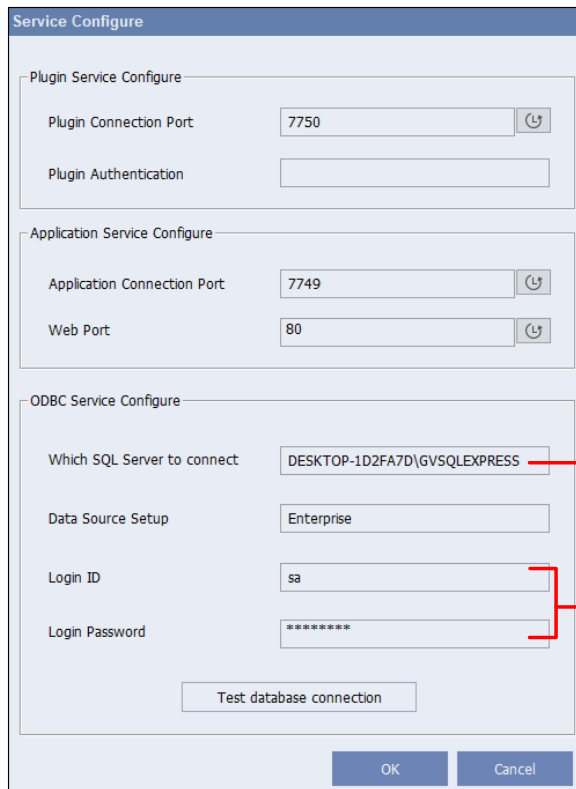


Note: GV-Authentication Server accounts can be imported into GV-Enterprise by using the **Database Import / Export** function. However, only the accounts and passwords will be imported. The account's privileges will not be imported.

You can find the following settings on the **Service Configure** dialog box:

- **Plugin Connection Port:** The default port for GV-Enterprise Plugin to communicate with GV-Enterprise Service is 7750.
- **Plugin Authentication:** Set an authentication password for connecting *GV-Enterprise Plugin*, installed with the GV-Software to be managed, to GV-Enterprise Service.
- **Application Connection Port:** The default port for GV-Enterprise to communicate with GV-Enterprise Service is 7749. The default port for remote connection to GV-Enterprise is 80.
- **Which SQL Server to connect:** The server name of the SQL Server.
- **Data Source Setup:** The name of the SQL Server database.
- **Login ID & Password:** The login credentials of the SQL Server. The default ID is sa.
- **Test Database Connection:** Test if the connection to the SQL Server database is successful.

[Service Configure on GV-Enterprise Server]

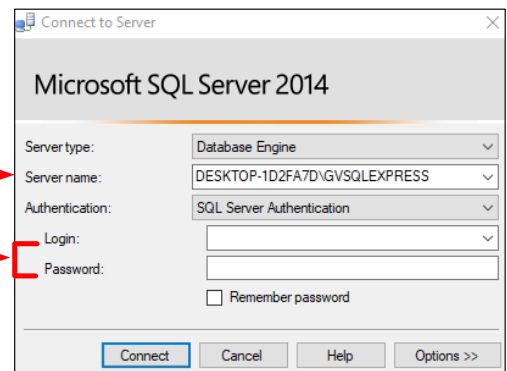


The **Service Configure** dialog box is divided into three sections:

- Plugin Service Configure:**
 - Plugin Connection Port: 7750
 - Plugin Authentication: (empty field)
- Application Service Configure:**
 - Application Connection Port: 7749
 - Web Port: 80
- ODBC Service Configure:**
 - Which SQL Server to connect: DESKTOP-1D2FA7D\GVSQLEXPRESS
 - Data Source Setup: Enterprise
 - Login ID: sa
 - Login Password: (masked with asterisks)
 - Test database connection button

At the bottom are **OK** and **Cancel** buttons.

[SQL Server]



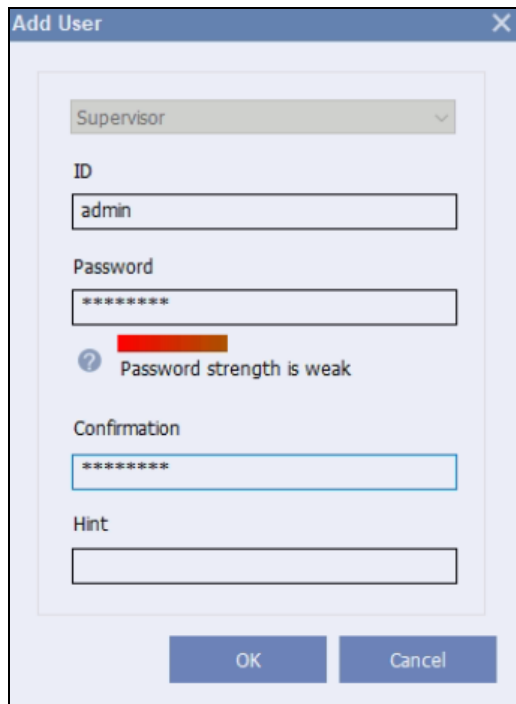
The **Connect to Server** dialog box for **Microsoft SQL Server 2014** contains the following fields:

- Server type: Database Engine
- Server name: DESKTOP-1D2FA7D\GVSQLEXPRESS
- Authentication: SQL Server Authentication
- Login: (empty field)
- Password: (empty field)
- ☐ Remember password

At the bottom are **Connect**, **Cancel**, **Help**, and **Options >>** buttons.

2.2 Logging into GV-Enterprise

Upon first-time startup of GV-Enterprise, you will be prompted to set a supervisor account for GV-Enterprise.



1. Type an **ID** and **Password** for the GV-Enterprise supervisor account.
2. In **Confirmation**, type the password again to confirm.
3. Optionally type a hint to remind you of the set password.
4. Click **OK**.
5. On the ID -admin dialog box, type an e-mail address which will be used to retrieve a forgotten password, and then click the **E-Mail** icon to configure an e-mail server. Alternatively, click **Cancel** to skip the settings.
6. On the Login window, type the **ID** and **Password** of the supervisor account again.
7. Click **OK** to log in.

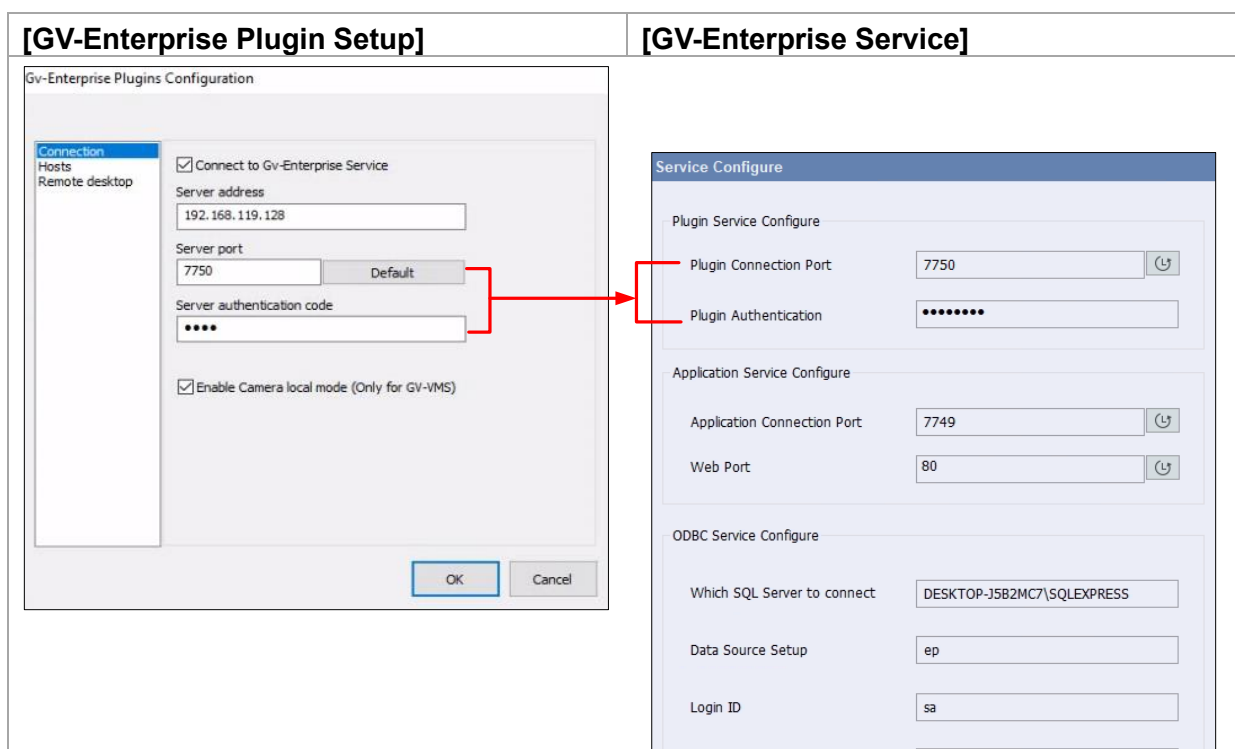
Note: For details on configuring an e-mail server, see [4.3.2 E-mail Setup](#).

2.3 Installing GV-Enterprise Plugin on GV-Software

Before GV-Software can be connected to and managed by GV-Enterprise, the required **GV-Enterprise Plugin** must be installed on it first. When GV-Software is connected to GV-Enterprise, its administrator rights, including the ability to upgrade GV-Software and add/remove cameras, are automatically turned over to GV-Enterprise for centralized management.

To install GV-Enterprise Plugin:

1. Stop and close all services of GV-Software.
2. Download and install **GV-Enterprise Plugin** from [GeoVision's website](#).
3. Once installed, you are prompted to set the required configurations for connecting GV-Enterprise Plugin, and thereby GV-Software to GV-Enterprise.

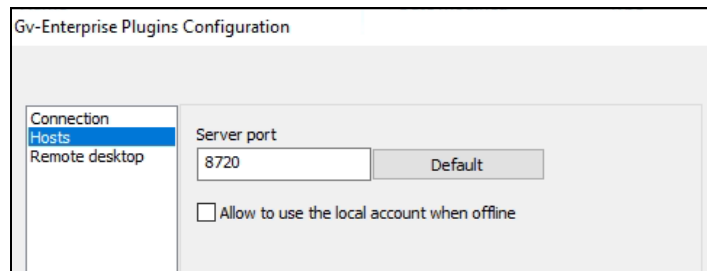


[GV-Enterprise Plugin Setup]	[GV-Enterprise Service]
Gv-Enterprise Plugins Configuration Connection <input checked="" type="checkbox"/> Connect to Gv-Enterprise Service Server address: 192.168.119.128 Server port: 7750 (Default) Server authentication code: **** <input checked="" type="checkbox"/> Enable Camera local mode (Only for GV-VMS) OK Cancel	Service Configure Plugin Service Configure Plugin Connection Port: 7750 Plugin Authentication: ***** Application Service Configure Application Connection Port: 7749 Web Port: 80 ODBC Service Configure Which SQL Server to connect: DESKTOP-J5B2MC7\SQLEXPRESS Data Source Setup: ep Login ID: sa

4. Select **Connect to GV-Enterprise Service** and type the **Server IP Address** of GV-Enterprise.
5. In **Server Port**, keep the default port 7750. You can also change the port to match the Plugin Connection Port.
6. In **Server Authentication Code**, type the same password as defined by Plugin Authentication (see Step 4-A, 2.1 *Installing GV-Enterprise*).

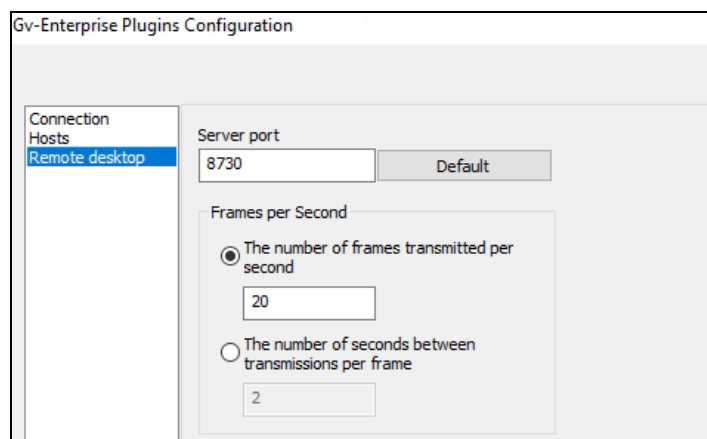
7. By default, **Enable Camera Local Mode (only for GV-VMS)** is enabled, which retains the cameras already connected to the GV-VMS when connected to GV-Enterprise.
8. Optionally select **Hosts** and **Remote Desktop** to configure the following settings.

[Hosts]




- **Server Port:** The port for communication between GV-Software and GV-Enterprise.
- **Allow to use the local account when offline:** Allow users to log into GV-Software with its local login credentials when it is disconnected from GV-Enterprise.

[Remote Desktop]



- **Server Port:** The port for accessing the remote desktop of GV-Software from GV-Enterprise.
- **Frames per Second:** Select to define the FPS of the remote desktop actively streamed to GV-Enterprise.

9. Click **OK** to apply the settings.

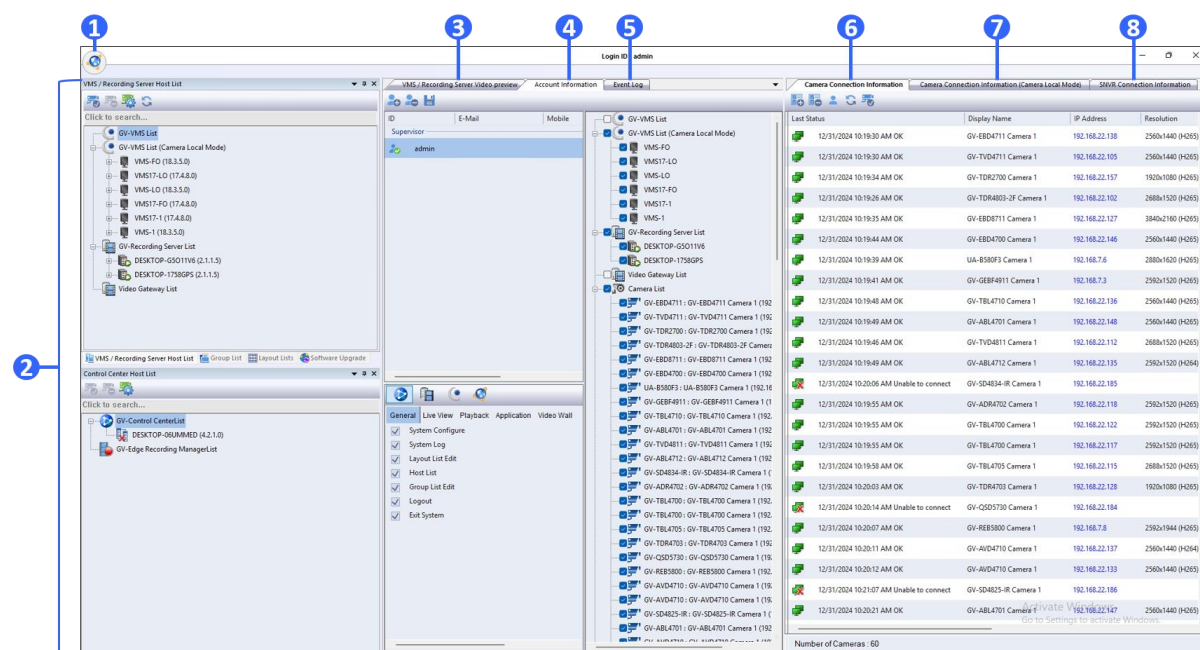
After GV-Enterprise Plugin has been properly configured, run GV-Software and it will be automatically connected to GV-Enterprise. A tick will be displayed on the GV-Enterprise Plugin icon in the system tray , indicating successful connection.

IMPORTANT: The GV-VMS system operate in two ways. One method is to utilize GV-Enterprise to assign cameras to GV-VMS. The other is **Camera Local Mode** to retain the cameras already connected to GV-VMS when connected to GV-Enterprise. If the **Enabled Camera Local Mode** is disabled, the previously assigned cameras will be removed from the GV-VMS once connected to GV-Enterprise.

Chapter 3 Getting Started

3.1 Main Screen

After logging into GV-Enterprise, the main screen appears, which has a customizable layout containing multiple windows for you to move and adjust freely.



No.	Name	Description
1	Main Menu	For details, see <i>4.1 Main Menu</i> .
2	Host List / Group List / Software Upgrade	Access the following lists and Software Upgrade: <ul style="list-style-type: none"> ■ VMS/Recording Server Host List: See <i>3.2 Viewing Connected GV-Software</i>. ■ Control Center/Edge Recording Host List: See <i>3.2 Viewing Connected GV-Software</i>. ■ Group List: See <i>4.7.1 Group List</i>. ■ Software Upgrade: See <i>4.7.4 Software Upgrade</i>.
3	VMS / Recording Server Video Preview	View the first image from the cameras assigned to the GV-VMS, GV-Recording Server, or GV-Video Gateway hosts. See <i>4.6 Video Preview</i> .
4	Account Information	Add/remove user accounts, and assign different access rights. See <i>4.4 Account Settings</i> .
5	Event Log	Display various event logs of GV-Enterprise. See <i>4.5 Event Log</i> .

6	Camera Connection Information	View the status of all connected cameras. See 3.3.3 <i>Accessing Camera Connection Information</i> .
7	Camera Connection Information (Camera Local Mode)	View the status of local cameras already connected to GV-VMS. See 3.5 <i>Accessing Local Camera Information (Camera Local Mode)</i> .
8	SNVR Connection Information	View the status of all connected SNVRs. See 3.3.4 <i>Accessing SNVR Connection Information</i> .

3.2 Viewing Connected GV-Software

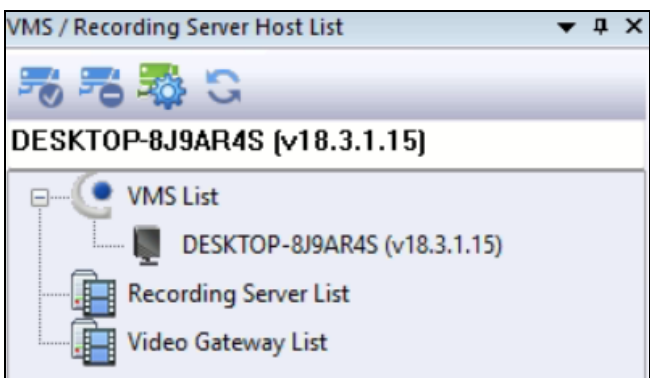
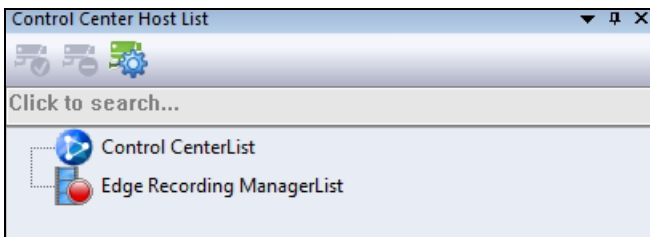
All GV-Software connected to GV-Enterprise are displayed and managed in their respective host lists.





- **VMS/Recording Server Host List:** Display and manage all GV-VMS, GV-Recording Server / Video Gateway connected.
- **Control Center Host List:** Display and manage all GV-Control Center and GV-Edge Recording Manager connected.

Note: For any GV-Software to connect to GV-Enterprise, the required GV-Enterprise Plugin must first be installed on that GV-Software. See 2.2 *Installing GV-Enterprise Plugin on GV-Software*.

3.2.1 Host List

The Host List displays and manages all the GV-Software connected to GV-Enterprise, with configurations including adding/removing cameras, configuring recording settings, upgrading software version, remote desktop operation and more.

VMS / Recording Server Host List	 <p>The screenshot shows a window titled "VMS / Recording Server Host List". It contains a toolbar with icons for Apply to All, Delete, Software Upgrade, and Camera Adjustment. Below the toolbar, the text "DESKTOP-8J9AR4S [v18.3.1.15]" is displayed. A tree view on the left shows a hierarchy: VMS List (selected), Recording Server List, and Video Gateway List. The main area on the right shows a single entry: "DESKTOP-8J9AR4S (v18.3.1.15)".</p>
Control Center Host List	 <p>The screenshot shows a window titled "Control Center Host List". It contains a toolbar with icons for Apply to All, Delete, Software Upgrade, and Camera Adjustment. Below the toolbar, the text "Click to search..." is displayed. A tree view on the left shows a hierarchy: Control CenterList (selected) and Edge Recording ManagerList. The main area on the right shows a single entry: "Control CenterList".</p>

Icon	Name	Description
	Apply to All	Click for the adding/removing of cameras on GV-Software to take effect.
	Delete	Remove the GV-Software selected.
	Software Upgrade	Batch update the software version of all related GV-Software. See <i>4.7.4 Software Upgrade</i> .
	Camera Adjustment	Only for GV-VMS and GV-Recording Server/Video Gateway. Update the status of all cameras on the selected GV-Software.

3.3 Adding Devices

There are two ways to add devices (cameras / SNVRs / HD DVRs) to GV-Enterprise:


- **Searching for IP Devices:** Detect and add devices within the same LAN as GV-Enterprise. See *section 3.3.1*.
- **Adding IP Device Manually:** Add devices manually in the Camera Connection Information window or the SNVR Connection Information window. See *section 3.3.2*.

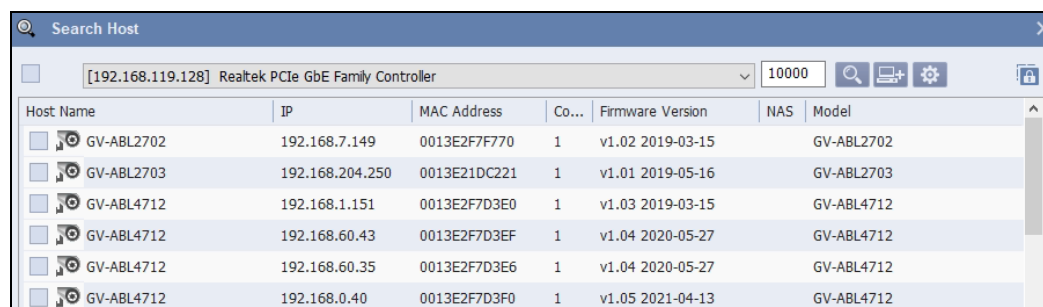
After adding cameras, use the **Camera Connection Information** window to perform advanced settings. See *section 3.3.3*. For SNVRs and HD DVRs, use the **SNVR Connection Information** window. See *section 3.3.4*.







Note: When GV-VMS is in **Camera Local Mode**, which retains previously connected cameras during the connection to GV-Enterprise, skip the sections 3.3 and 3.4 on adding and assigning cameras. Instead, see *3.5 Accessing Local Camera Information (Camera Local Mode)*.

3.3.1 Searching for Devices



Only GeoVision and USAVision IP devices are compatible with the searching feature for locating devices (cameras / SNVRs / HD DVRs) within the same LAN. To add ONVIF IP devices, see *3.3.2 Adding Devices Manually*.

1. To detect devices within the same LAN as GV-Enterprise, click **Main Menu** (No. 1, *3.1 Main Screen*) > **Search IP Devices**. The search starts.
2. If the system has more than one network interface card, select one and click **Search IP Device**  again.





Host Name	IP	MAC Address	Co...	Firmware Version	NAS	Model
 GV-ABL2702	192.168.7.149	0013E2F7F770	1	v1.02 2019-03-15		GV-ABL2702
 GV-ABL2703	192.168.204.250	0013E21DC221	1	v1.01 2019-05-16		GV-ABL2703
 GV-ABL4712	192.168.1.151	0013E2F7D3E0	1	v1.03 2019-03-15		GV-ABL4712
 GV-ABL4712	192.168.60.43	0013E2F7D3EF	1	v1.04 2020-05-27		GV-ABL4712
 GV-ABL4712	192.168.60.35	0013E2F7D3E6	1	v1.04 2020-05-27		GV-ABL4712
 GV-ABL4712	192.168.0.40	0013E2F7D3F0	1	v1.05 2021-04-13		GV-ABL4712

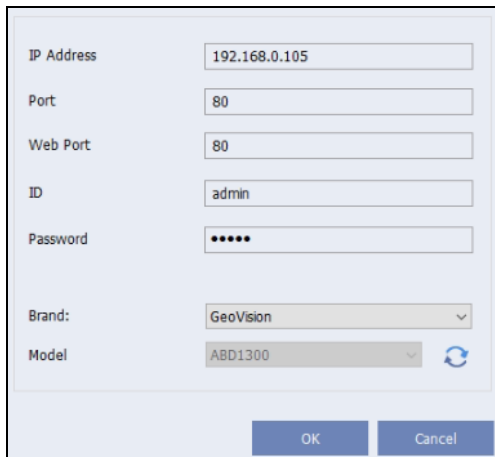
3. Select a device. You are prompted to type its login **ID** and **Password**.

4. You can also select the **Duplicate ID and Password** option  to use the same set of login credentials for devices selected later.
 - A. Select a device and set up the login credentials.
 - B. Select several devices.
 - C. Click the option to apply the same login credentials.
5. Once the desired devices have been selected, click **Add to Enterprise Camera Connection Information**  to add.

3.3.2 Adding Devices Manually

To manually add a device (camera / SNVR / HD DVR) to GV-Enterprise, follow the steps below.

1. Click **Add Device**  in the **Camera Connection Information** window (No. 6, 3.1 Main Screen) or the **SNVR Connection Information** window (No. 8, 3.1 Main Screen), depending on the device.
2. Type the **IP Address**, **Port**, and login **ID & Password** of the device, select **GeoVision** or **Protocol** from the Brand dropdown list, and click **Update Information**  to detect the IP device.



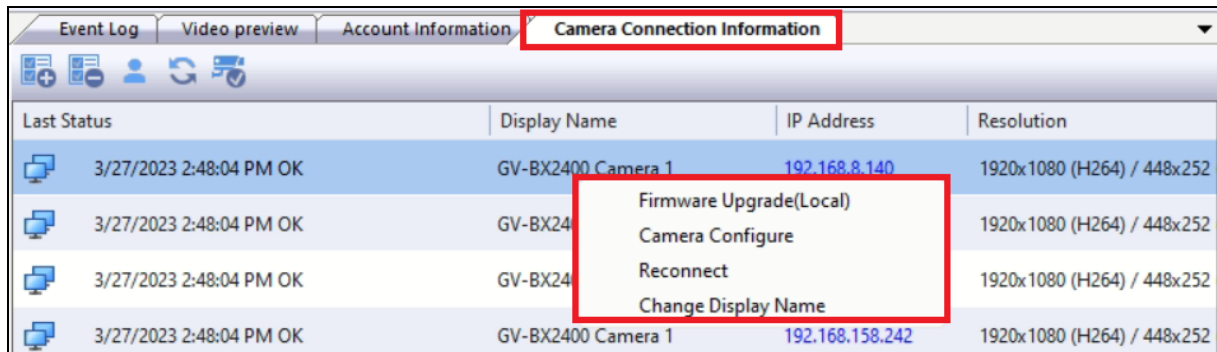
IP Address	192.168.0.105
Port	80
Web Port	80
ID	admin
Password
Brand:	GeoVision
Model	ABD1300

OK Cancel

3. Click **OK**. The device is added to GV-Enterprise.

3.3.3 Accessing Camera Information

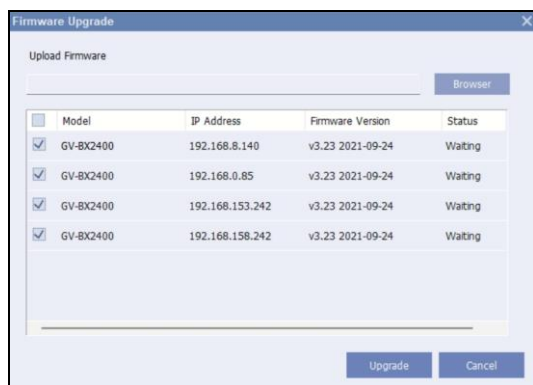
In the **Camera Connection Information** window, you can view all cameras currently connected, add / remove cameras manually, as well as adjust the camera settings.



Icon	Name	Description
	Add Device	Manually add a new IP device.
	Delete Device	Delete the IP device selected.
	User's Rights	View and modify the access rights that decide which power user or user has access to the camera.
	Reconnect All Cameras	Reconnect all cameras listed.
	Reapply All Cameras to Assigned Host	Reconnect the cameras assigned to hosts.

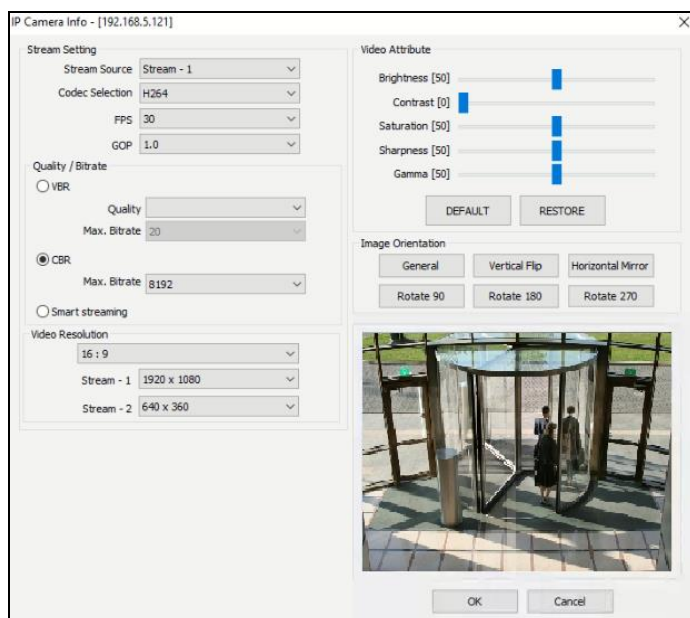
[Additional Device Settings] Right-click a connected camera to access the following settings.

- **Firmware Upgrade (Local):** Upgrade the camera firmware of the same model. Browse and locate the firmware file on the local PC, select the desired cameras, and click **Upgrade**.



Note: The firmware upgrade function can only update the firmware of one camera model at a time.

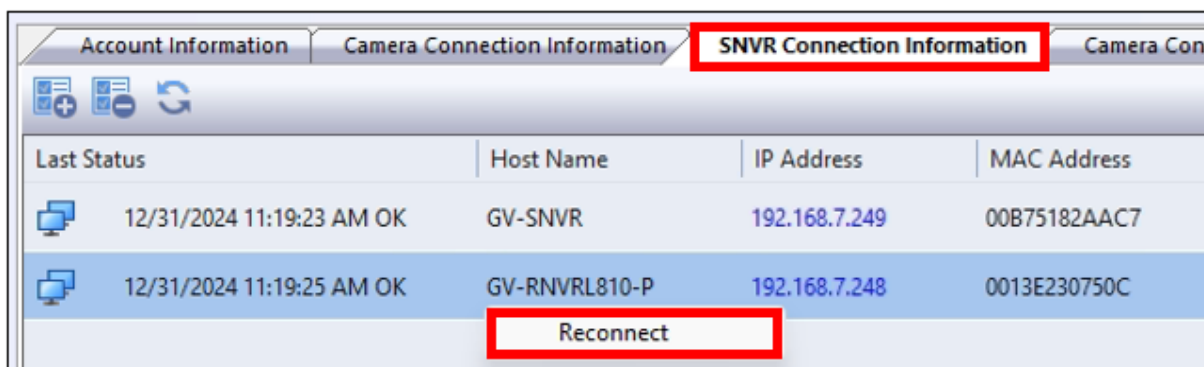
- **Camera Configure:** Configure the camera settings, including stream settings, quality/Bitrate, video resolution, video attributes, and image orientation. The available settings vary among camera models.



- **Change Display Name:** Change the display name of the camera.
- **Reconnect:** Reconnect to the camera.

3.3.4 Accessing SNVR Information

In the **SNVR Connection Information** window, you can view all connected SNVRs and HD DVRs, manually add or remove them, and adjust their settings as needed.



Icon	Name	Description
	Add Device	Manually add a new IP device.
	Delete Device	Delete the IP device selected.
	Reconnect All Devices	Reconnect all devices listed.
	Camera List	Displays the cameras under the selected SNVR or HD DVR. See the following subsection <i>Camera List</i> .


[Additional Device Settings] Right-click a connected SNVR to access the following settings.

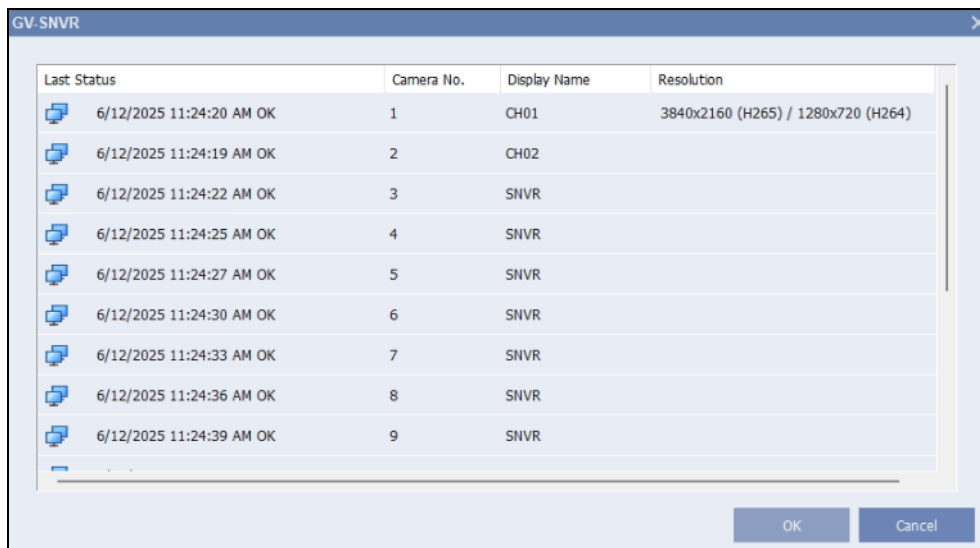
- **Reconnect:** Reconnect to the SNVR.








Note:

- Support for firmware upgrades of SNVRs will be added in a future update.
- Support for assigning analog channels of HD DVRs to GV-VMS and GV-Recording Server will be added in a future update.

Camera List

To display the cameras under a selected SNVR or HD DVR, click the **Camera List** icon  to the left of your desired device. This dialog box appears.



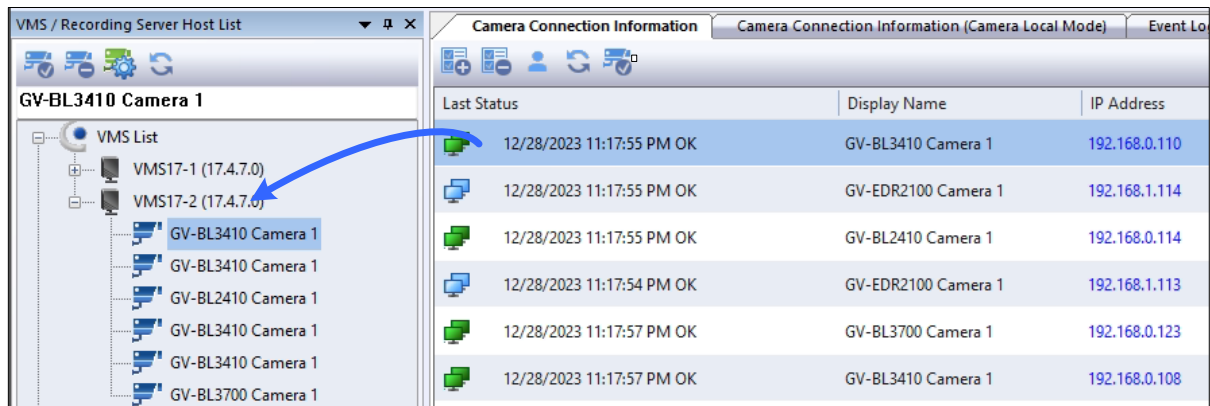
Last Status	Camera No.	Display Name	Resolution
 6/12/2025 11:24:20 AM OK	1	CH01	3840x2160 (H265) / 1280x720 (H264)
 6/12/2025 11:24:19 AM OK	2	CH02	
 6/12/2025 11:24:22 AM OK	3	SNVR	
 6/12/2025 11:24:25 AM OK	4	SNVR	
 6/12/2025 11:24:27 AM OK	5	SNVR	
 6/12/2025 11:24:30 AM OK	6	SNVR	
 6/12/2025 11:24:33 AM OK	7	SNVR	
 6/12/2025 11:24:36 AM OK	8	SNVR	
 6/12/2025 11:24:39 AM OK	9	SNVR	

Note: You can verify if a camera is connected by checking whether its resolution is displayed.


3.4 Assigning Devices to GV-Software

To assign cameras to GV-VMS, GV-Recording Server, GV-Video Gateway, or a Group, follow the steps below.

1. Simply drag cameras from the **Camera Connection Information** window to the desired GV-Software in the Host List or a Group.



2. Click **Apply to All**  in the Host List for the changes to take effect.

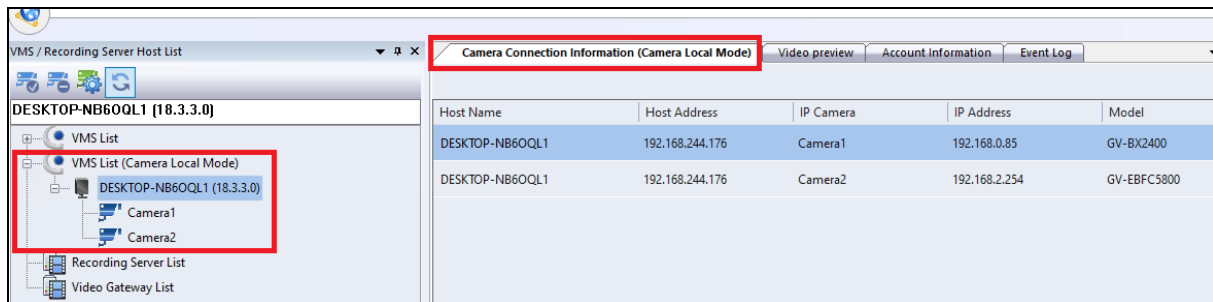
When a camera is assigned to a GV-Software, the camera icon will be shown in green .

IMPORTANT: It is not required for you to assign cameras to GV-Control Center and GV-Edge Recording Manager. All cameras and software added to GV-Enterprise will be automatically reflected in the two GV-Software. The Hosts (cameras) displayed on the two GV-Software are then decided by the access rights of the user account logging in.

Note: Support for assigning analog channels of HD DVRs to GV-VMS and GV-Recording Server will be added in a future update.

3.5 Accessing Local Camera Information (Camera Local Mode)

When GV-VMS is connected in Camera Local Mode to retain the cameras already assigned to it during the connection to GV-Enterprise, the local cameras can be viewed under the **Camera Connection Information (Camera Local Mode)** window.



To upgrade a camera, you can right-click the camera and select Firmware Upgrade:

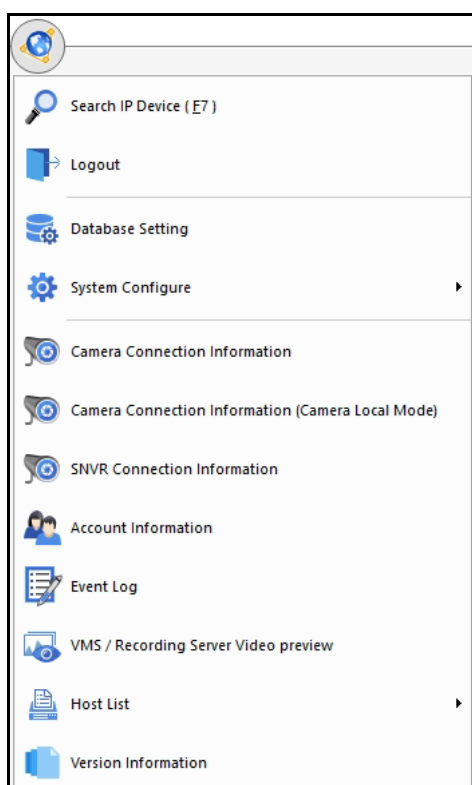
- **Firmware Upgrade (File):** Upgrade the camera firmware of the same model. Browse and locate the firmware file on the local PC, select the desired cameras, and click **Upgrade**.

Tip: Right-click a GV-VMS system under the **VMS List (Camera Local Mode)**, you can access the Remote Configure and Software Upgrade functions. For the details on the two functions, see [4.7.1 Host List](#).

Chapter 4 Supervisor Mode

This section introduces the configurations available in the **Main Menu** of GV-Enterprise. The Supervisor has access to all the configurations of GV-Enterprise.

4.1 Main Menu



Name	Description
Search IP Device	Detect and search for IP devices within the LAN. See 3.3.1 <i>Searching for Devices</i> .
Logout	Log out of GV-Enterprise.
Database Settings	Configure the database settings of GV-Enterprise. See 4.2 <i>Database Settings</i> .
System Configure	<ul style="list-style-type: none"> ■ System Idle Protection Setting: See 4.3.1 <i>Idle Protection and Camera Update Settings</i>. ■ Send E-mail Alert: See 4.3.2 <i>E-mail Setup</i>.
Camera Connection Information	Display and manage all cameras connected. See 3.3.3 <i>Accessing Camera Connection Information</i> .
Camera Connection Information (Camera Local Mode)	Display and manage local cameras already connected to GV-VMS. See 3.5 <i>Accessing Local Camera Information (Camera Local Mode)</i> .

SNVR Connection Information	Display and manage all SNVRs connected. See 3.3.4 <i>Accessing SNVR Connection Information</i> .
Account Information	Add/remove user accounts, and adjust account access and configuration rights. See 4.4 <i>Account Settings</i> .
Event Log	Display various event logs of GV-Enterprise. See 4.5 <i>Event Log</i> .
VMS / Recording Server Video Preview	View the first image from the cameras assigned to the GV-VMS, GV-Recording Server, or GV-Video Gateway hosts. See 4.6 <i>Video Preview</i> .
Host List	<ul style="list-style-type: none"> ■ VMS/Recording Server Host List: See 4.7.1 <i>Host List</i>. ■ Control Center/Edge Recording Host List: 4.7.1 <i>Host List</i>. ■ Group List: See 4.7.2 <i>Group List</i>. ■ Layout List: See 4.7.3 <i>Layout List</i>. ■ Software Upgrade: See 4.7.4 <i>Software Upgrade</i>.
Version Information	Display the version information of GV-Enterprise.

4.2 Database Settings

By default, GV-Enterprise uses Microsoft SQL Server as a database. You can also import groups and users from Microsoft Active Directory to create user accounts efficiently.

Note: It is required to group user accounts in Active Directory, as only groups can be imported into GV-Enterprise.

Click **Database Settings** in the Main Menu (see *4.1 Main Menu*). This dialog box appears.

- **Keep Days of Log:** Select to specify the number of days to keep the system log.
- **Synchronize Active Directory:** Select to automatically synchronize the database with Microsoft Active Directory at a specified interval. The default interval is 60 minutes, with a range of 30–1440 minutes (24 hours).

Note: When GV-Recording Server is connected to GV-Enterprise and Active Directory is selected as the source database, you must ensure that GV-Recording Server has direct network access to the Active Directory Server (e.g., it must be able to ping the server's IP address).

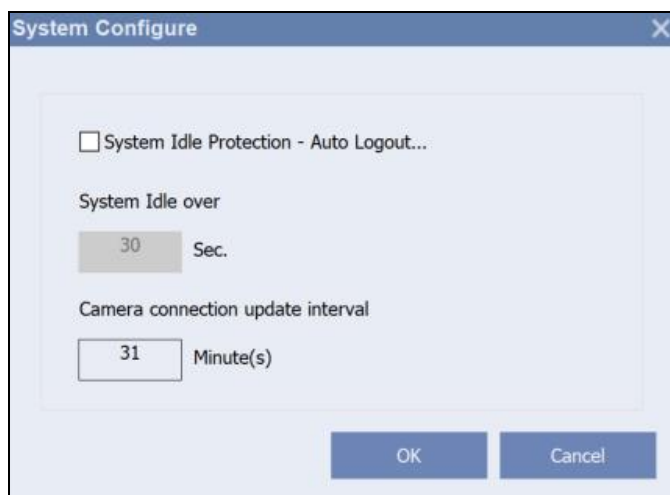
4.3 System Configuration

The System Configure feature contains the idle protection, camera status update, and E-mail settings of GV-Enterprise.

4.3.1 Idle Protection and Camera Update Settings

The Idle Protection mechanism of GV-Enterprise ensures user security by automatically logging out of the system after it has been idled for a set amount of time.

Click **Main Menu** (No. 1, 3.1 Main Screen) > **System Configure** > **System Idle Protection Setting**. This dialog box appears.



- **System Idle Protection – Auto Logout:** Set a time interval for GV-Enterprise to automatically log out after being idled for.
- **Camera Connection Update Interval:** Set a time interval for GV-Enterprise to check the camera connection status.

4.3.2 E-mail Setup

The GV-Enterprise supervisor can send e-mails to GV-Enterprise account holders who have forgotten their IDs and passwords. For this to work, you need to set up an e-mail server by following the steps below.

To set up the e-mail server:

1. Click **Main Menu** (No. 1, 3.1 Main Screen) > **System Configure** > **Send E-mail Alert**.

This dialog box appears.

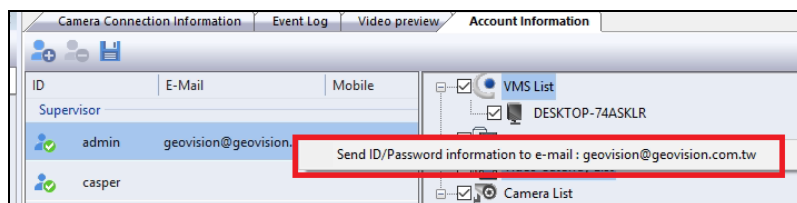
The 'System Configure' dialog box contains the following fields and buttons:

- Sender:** A text input field.
- Addressee:** A text input field.
- Subject:** A text input field with the value 'Notice from Enterprise'.
- Content:** A text area with the value 'Notice from Enterprise'.
- Buttons:** 'SMTP Server Setting', 'Test E-Mail Account', 'OK', and 'Cancel'.

2. Type the **Sender's** name and e-mail address.
3. Type the **Subject** and contents for the e-mail notifications.
4. If you are using an SMTP Server, click **SMTP Server Setting** to type the required server information, including the **Name**, **Account** and **Password** of the SMTP Server, as well as the value and type of **Port** used.
5. Click **Test E-mail Account** to test if the e-mail server has been properly set.
6. Click **OK**.

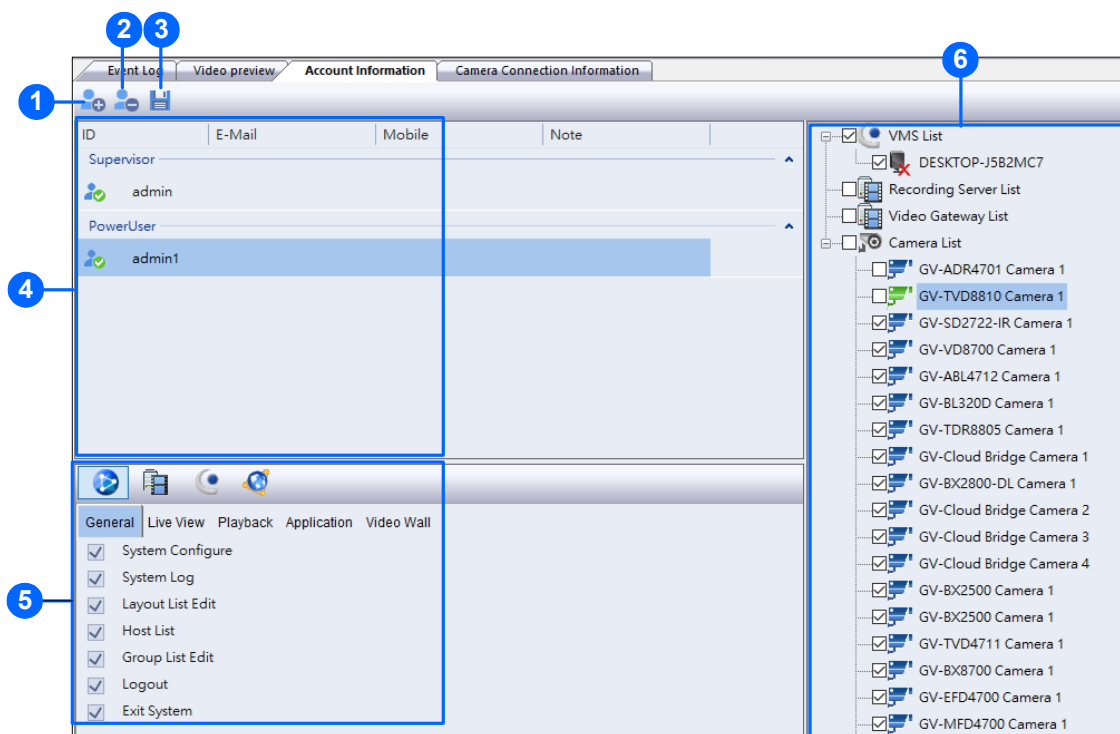
To send e-mails:

7. Click **Account Information**, and right-click a user account to send out an e-mail.



4.4 Account Settings


The **Account Information** window allows the supervisor to create user accounts with different access rights to specific GV-Software and cameras and to perform various software functions.

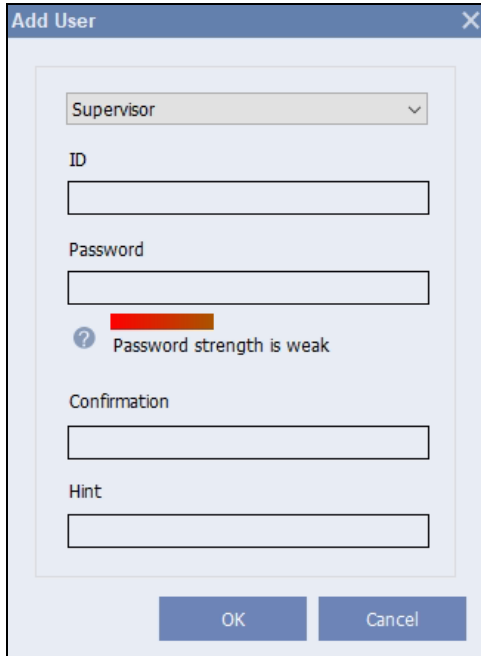


No.	Name	Description
1	Add User	Add user accounts. <ul style="list-style-type: none"> ■ Supervisor: has permissions over all the settings and functions of the GV-Software and cameras. ■ Power User: has the same permissions as Supervisor, but cannot log in GV-Enterprise. ■ User: has limited access rights assigned by Supervisor.
2	Delete User	Delete a selected user account.
3	Save Data	Save or apply to any changes made.
4	User Account	Display all user accounts created on GV-Enterprise.
5	Access to Functions	Manage the user account's access to different GV-Software functions.
6	Access to Hosts	Manage the user account's access to specific GV-Software, cameras, SNVRs, and HD DVRs.

IMPORTANT: Only Supervisor accounts can log in to GV-Enterprise.

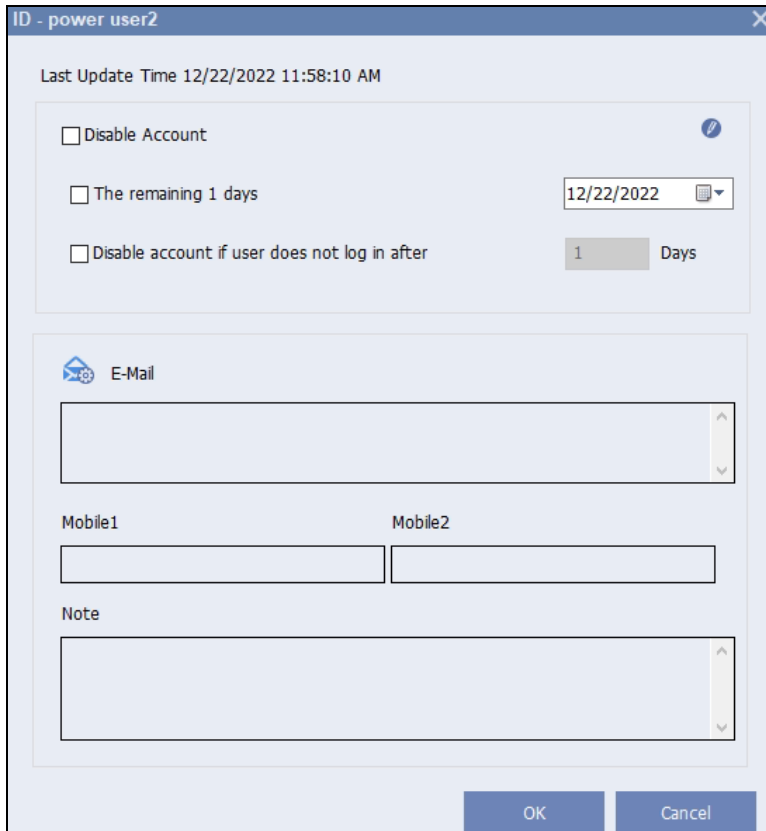
To create an account:

1. Click **Add User** . This dialog box appears.



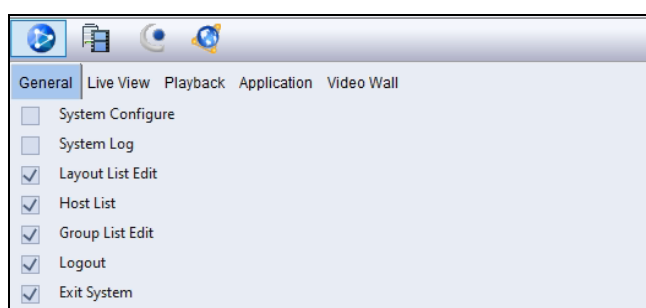
The 'Add User' dialog box is a light blue window with a title bar containing the text 'Add User' and a close button (X). Inside the dialog, there is a dropdown menu labeled 'Supervisor' with a downward arrow. Below this are four text input fields: 'ID', 'Password', 'Confirmation', and 'Hint'. The 'Password' field has a red strength indicator bar and a message that says '? Password strength is weak'. At the bottom of the dialog are two buttons: 'OK' and 'Cancel'.





2. Select the account type, specify ID and Password, confirm the password, and optionally type a hint for the password.
3. Click **OK**. This dialog box appears.



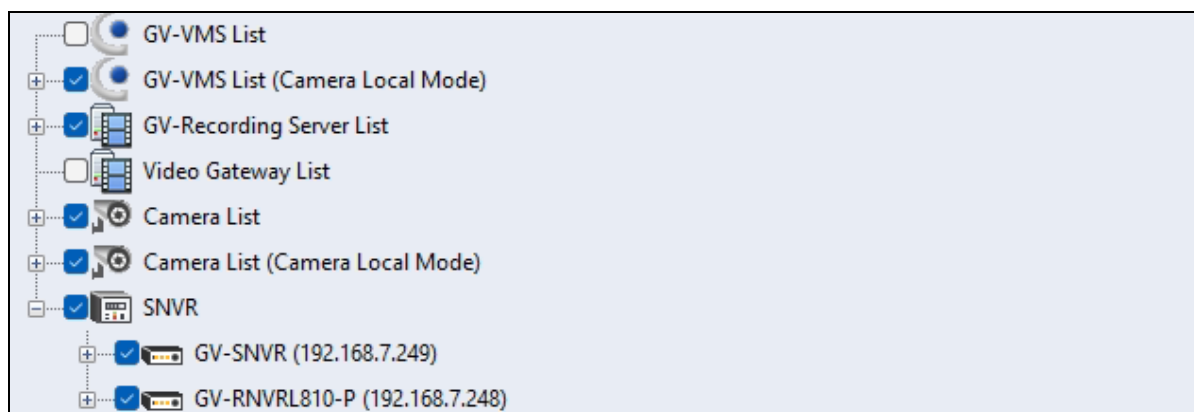
The 'ID - power user2' dialog box is a light blue window with a title bar containing the text 'ID - power user2' and a close button (X). At the top, it shows 'Last Update Time 12/22/2022 11:58:10 AM'. Below this are three checkboxes: 'Disable Account', 'The remaining 1 days', and 'Disable account if user does not log in after'. The 'Disable account if user does not log in after' checkbox has a date picker set to '12/22/2022' and a text input field set to '1' with the label 'Days'. Below these is an 'E-Mail' section with a large text area. Underneath are two text input fields labeled 'Mobile1' and 'Mobile2'. At the bottom is a 'Note' section with a large text area. At the bottom of the dialog are two buttons: 'OK' and 'Cancel'.

- **Disable Account:** Select to disable the account.
 - **The remaining x days:** Select a date when the account will expire.
 - **Disable account if user does not log in after:** If the account is not logged in for the specified number of days, it will be disabled automatically.
 - **E-Mail:** Type the account user's email address, which will be used to retrieve a forgotten password. Click the **E-Mail** icon to configure an e-mail server. For details on configuring the server, see 4.3.2 *Email Setup*.
4. Click **OK**. The account is created.
 5. Specify the account's access to different GV-Software functions.



	Specify access to GV-Control Center functions.
	Specify access to GV-Recording Server functions.
	Specify access to GV-VMS functions.
	The privilege to log in GV-Enterprise. Only Supervisors have the option.

6. Specify the account's access to specific GV-Software, cameras, SNVRs, and HD DVRs. Supervisor accounts have default access to all, and their access settings cannot be modified.











7. Click **Save Data**  to apply the settings.

Note: For the GV-Edge Recording Manager account, you can only define its access to certain GV-Software, cameras, SNVRs, and HD DVRs. You cannot define its access to functions.

4.5 Event Log

The Event Log window records and displays all the event logs of GV-Enterprise, which are categorized into the following: **System**, **Camera**, **Host**, **Application** and **Service**.

Event Log	Video preview	Account Information	Camera Connection Information
   			
System (7)	Camera (215)	Host (17)	Application (20) Service (6)
Event	User	Event Description	Message Time
Login	admin	System Login	2022/03/21 15:45:52
User Account	admin	Edit User admin Authority	2022/03/21 16:49:23
Exit	admin	Exit System	2022/03/21 18:00:41
Login	admin	System Login	2022/03/21 18:10:51
Exit	admin	Exit System	2022/03/21 18:12:21
Login	admin	System Login	2022/03/21 18:13:53
Login	admin	System Login	2022/03/22 14:51:16

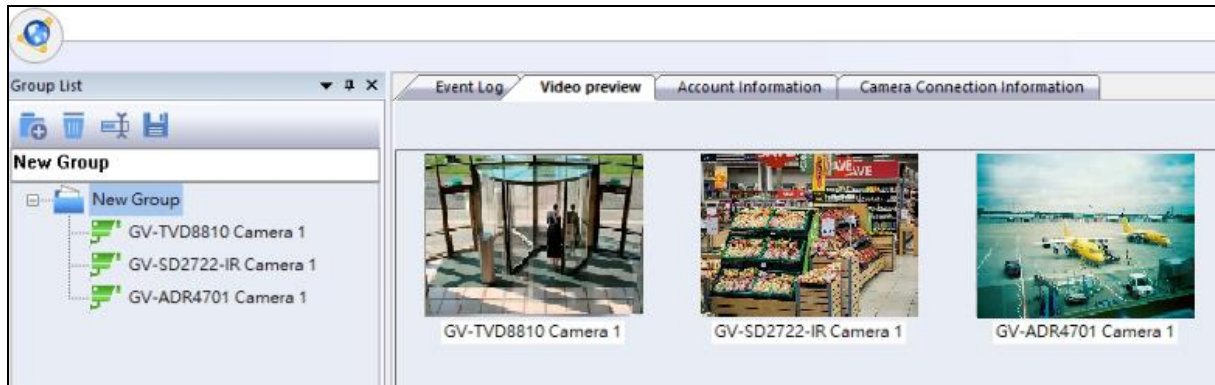
Icon	Name	Description
	Live Log	Display real-time event logs of GV-Enterprise.
	Search Log	Display event logs based on the search parameters set.
	Search Filters	Define the search parameter for event log search.
	Export Event Log	Export event logs into a specified directory.

[Types of Event Logs]

- **System:** Display the system-related event logs of GV-Enterprise.
- **Camera:** Display the event logs related to the connected devices.
- **Host:** Display the event logs related to the connected GV-Software.
- **Application:** Display the access and configuration events to the connected GV-Software.
- **Service:** Display the event logs related to GV-Enterprise Service.

4.6 Video Preview

The Video Preview window displays the snapshot previews for the cameras assigned to a GV-VMS host, GV-Recording Server host, GV-Video Gateway host, or Group.



Note:

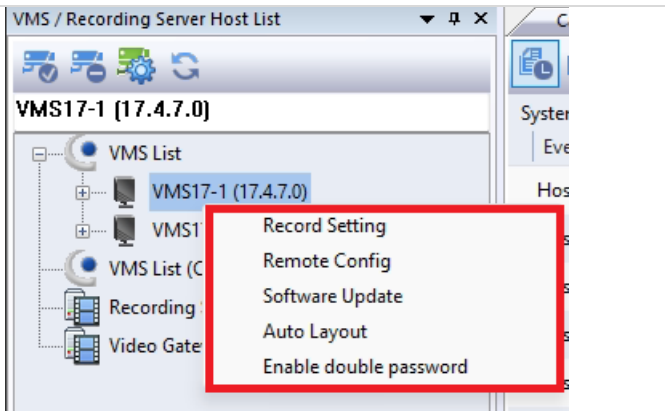
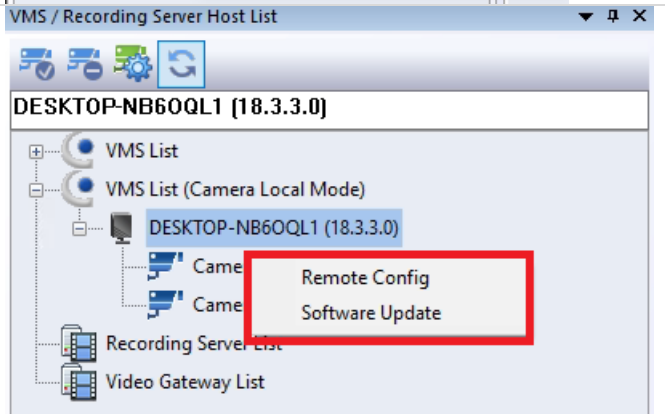
1. The snapshot images will only be updated when the cameras are deleted and added again.
 2. The GV-VMS in Camera Local Mode does not support the video preview.
-

4.7 Host List

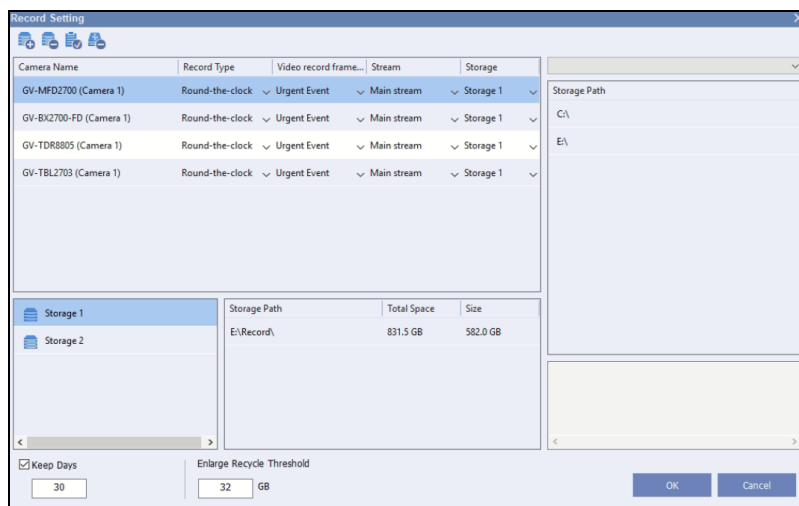
This section covers the **VMS/Recording Server Host List**, **Control Center/Edge Recording Host List**, **Group List**, **Layout List**, and **Software Upgrade** settings of GV-Enterprise.

4.7.1 Host List

To access additional settings of **VMS / Recording Server / Control Center / Edge Recording**, right-click one of the connected GV-Software hosts.

VMS List	
VMS List (Camera Local Mode)	

- **Record Setting:** Only for GV-VMS and GV-Recording Server. Configure the recording settings of GV-Software, including the Record Type (Round-the-clock, Event Detection), Video Record Frame Rate (Urgent Event, General Event), Storage Path and Stream (Main, Sub or Main and Sub Stream), Keep Days and Recycle Threshold.





- **Remote Config:** Access the PC of GV-Software from afar for remote control and maintenance.
- **Software Upgrade:** Upgrade the software version of GV-Software.
- **Auto Layout:** Only for GV-VMS. Automatically adjust for the most suitable live view and playback layout depending on the number of cameras assigned to it.
- **Enable Double Password:** Only for GV-VMS. Use the double-password authentication when accessing playback. For this function to work, at the least, one Supervisor plus one Power User, two Supervisors, or two Power Users must be set up in advance.

Note: The **VMS List (Camera Local Mode)** only supports the Remote Configure and Software Upgrade functions.

4.7.2 Group List

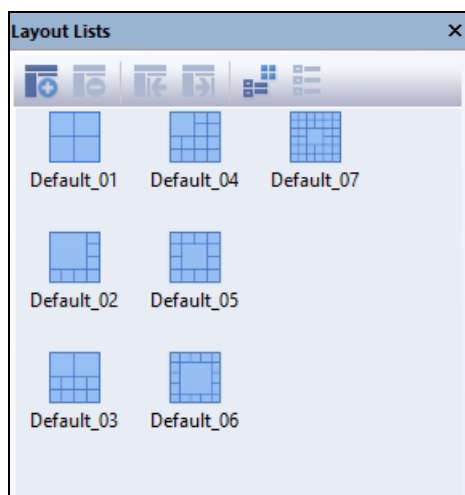
The Group List window allows you to create groups containing the cameras to be displayed and managed collectively. To create a group, follow the steps below.


1. Click **Main Menu** (No. 1, 3.1 *Main Screen*) > **Host List** > **Group List**.
2. Click **Add Group**  and name the group.
3. Simply click and drag the desired cameras from the **Camera Connection Information** window and drop them onto the group.
4. Click **Save Data** .

Tip: You can also drag and drop a created Group to any of VMS / Recording Server / Video Gateway / Control Center / Edge Recording Manager host to add the contained cameras to the host.

4.7.3 Layout List

The Layout List window allows you to create customized layouts for GV-Control Center and GV-Edge Recording Manager. By default, 7 layouts are already created. To create a new layout, follow the steps below.



1. Click **Main Menu** (No. 1, 3.1 Main Screen) > **Host List** > **Layout List**.
2. Click **Add Layout**  to customize a layout.

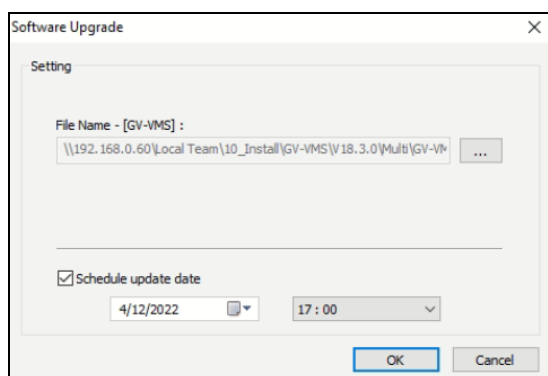
Once done, the new layout will be reflected in the Layout List of connected GV-Control Center and GV-Edge Recording Manager immediately.

Note: The function can only reflect newly created layouts. The layout removed from GV-Enterprise will not be removed in GV-Software.

4.7.4 Software Upgrade

You can update the version of any connected GV-Software through GV-Enterprise.

1. Right-click a host on the Host List > **Software Upgrade**.
2. Specify the location of the software file. Optionally set a schedule for update.



3. Click **OK** to start upgrading.
4. Under the **Software Upgrade** window, you can find the upgrade status and result.

Software Upgrade			
Host Type	Host Name	Status	Update Time
GV-VMS	DESKTOP-600LR8R	Succeeded(100%)	8/1/2023 10:40:54 PM
GV-VMS	DESKTOP-NB6OQL1	Succeeded(100%)	8/10/2023 10:21:24 AM

Note:

1. Currently, only GV-VMS supports the software upgrade with the zip file downloaded from the [GeoVision website](#). The software upgrade of GV-Recording Server, GV-Control Center and Edge Recording Manager only supports the patch file.
2. To batch upgrade the software version, click the **Software Upgrade** icon on the toolbar of VMS / Recording Server Host List (see 3.2.1 Host List).

GV-Software upgrade through GV-Enterprise

Currently, only GV-VMS supports the software upgrade with the zip file downloaded from the [GeoVision website](#). The software upgrade of GV-Recording Server, GV-Control Center and Edge Recording Manager only supports the patch file.

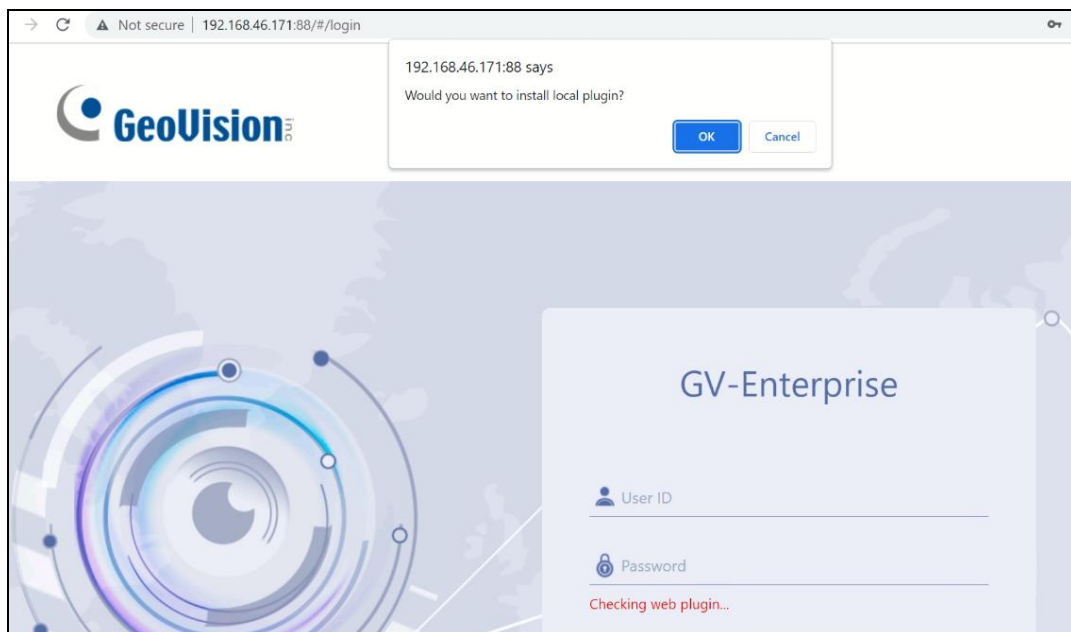
	VMS	Recording Server	Control Center	Edge Recording Manager
Full Version Upgrade	Supported	Not supported	Not supported	Not supported
Upgrade Format for full version upgrade	.zip	-	-	-
Patch Upgrade	Supported	Supported	Supported	Supported
Upgrade Format for patch upgrade	.exe	.exe	.exe	.exe

Chapter 5 Remote Viewer

You can remotely access the live view and play back videos of GV-VMS connected to GV-Enterprise.


To access the Remote Viewer:

1. For the function to work, it is required to allow remote access on GV-VMS. On GV-VMS, enable **Mobile Service** for live view and **Control Center Server > Remote ViewLog Service** for remote playback.
2. Enter the IP address of GV-Enterprise in a Web browser.
3. Type the login credentials of GV-Enterprise. You are prompted to install the local plugin.

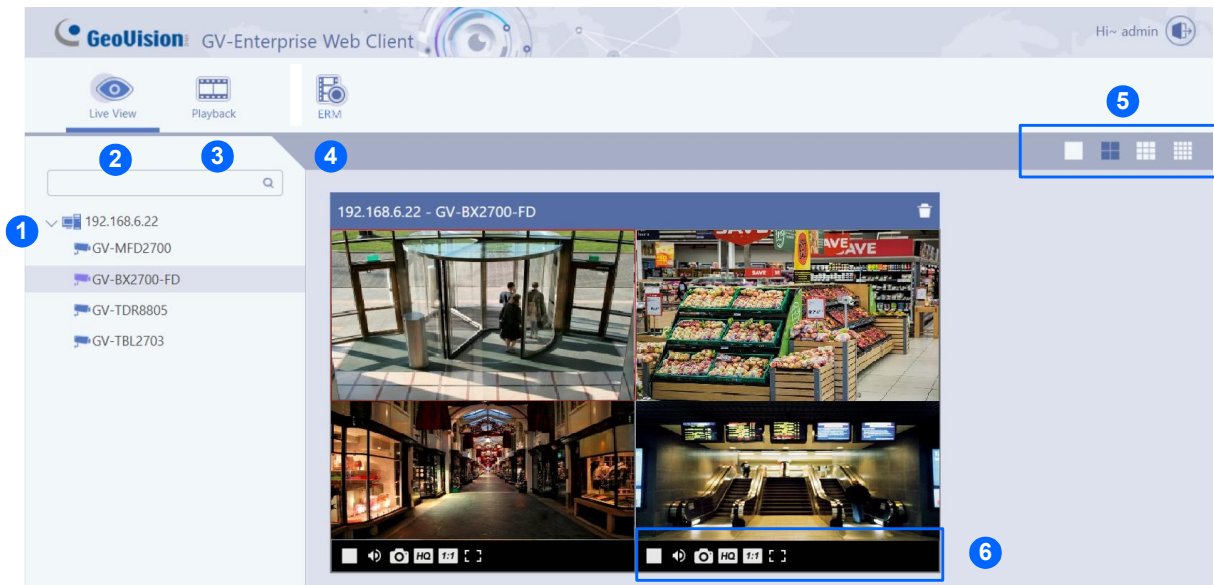


4. Click **OK** to download the plugin.
5. Run the plugin **GV-EnterpriseWeb.exe** from Windows' Downloads.
6. After the installation, type login credentials of GV-Enterprise, and click **Login**.

Note:

1. The remote viewer is only supported by GV-VMS.
 2. To change the default Web port 80, click the service icon  from the system tray > **Service Configure**, and find **Web Port** under **Application Connection Port**.
-

5.1 Web Client Viewer



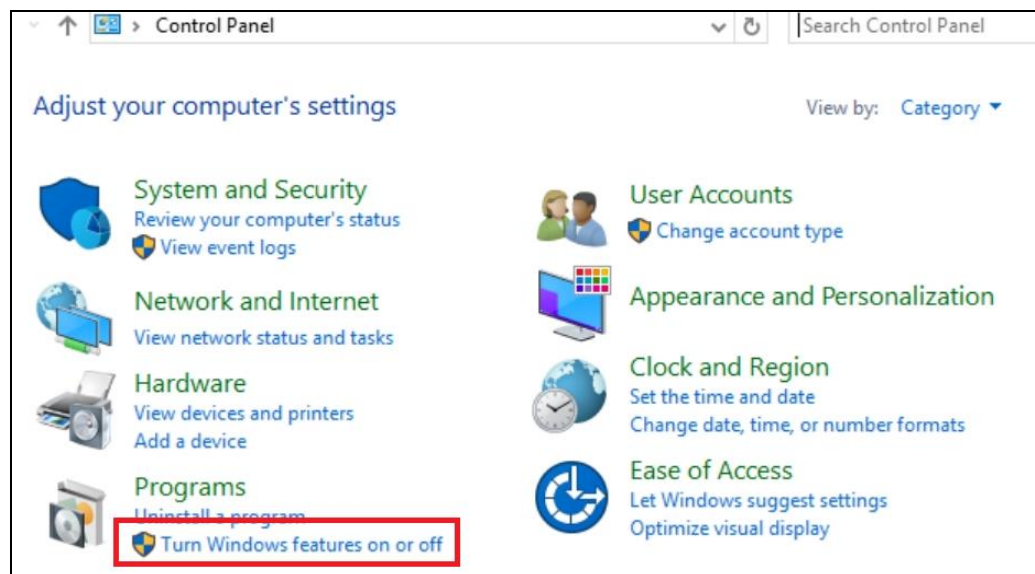
No.	Name	Description
1	Host List	Display the connected hosts and cameras. Drag cameras to the live view screen for display.
2	Live View	Access the live view from GV-VMS.
3	Playback	Access camera recordings from GV-VMS. Define the search criteria, such as camera name, time range and DST time, for event search.
4	ERM	Use GV-Edge Recording Manager software, instead of the Web Viewer, for live view and playback. You can use the software to connect GV-Recording Server for live view.
5	Screen Divisions	Switch between different screen divisions of live view.
6	Control Bar	Use the control bar to start/stop live view, enable/disable audio, take snapshots, change image quality and aspect ratio, and display the image into full screen.

Appendix

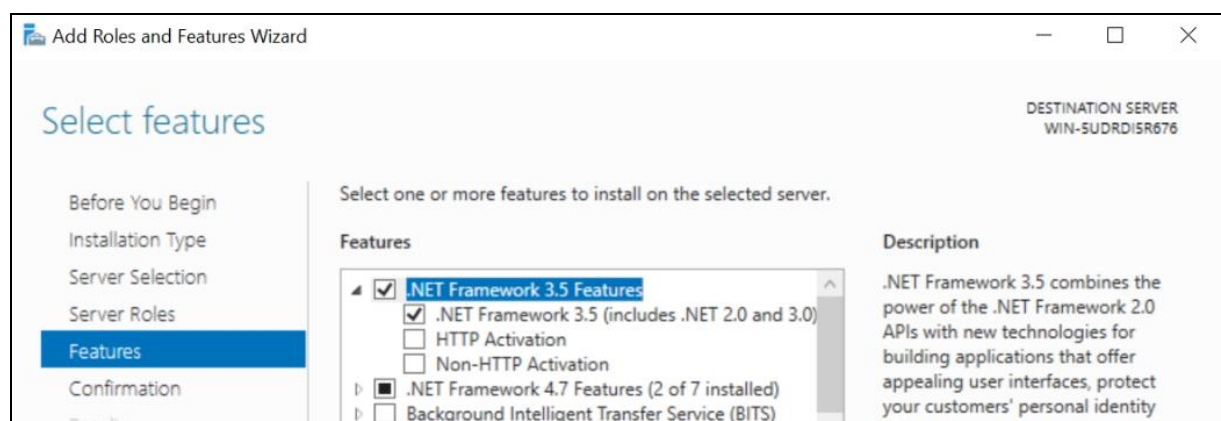
A. Enabling .Net Framework 3.5 in Windows Server 2019

Follow the steps below to enable .Net Framework 3.5 in Windows Server 2019:

1. Click the **Start** button > **Control Panel** > **Programs**, and click **Turn Windows features on or off**.



2. Select **Server Selection** > **Features** from the left panel.
3. Select **.Net Framework 3.5 Features**, and select **Next**.



4. Click **Install**.

B. Setting up Microsoft SQL Server in Windows Server

2019



Users of Windows Server 2019 must follow the steps **(B-1 ~ B-4)** below to install and configure the Microsoft SQL Server database.

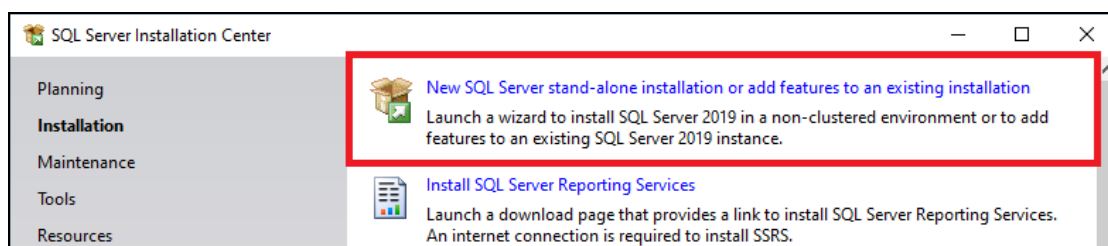
B-1. Installing Microsoft SQL Server

You can install Microsoft SQL Server on the same PC as GV-Enterprise. To download and install the SQL Server, click [here](#) or search for **Microsoft SQL Server 2014 Express** at <https://www.microsoft.com>.

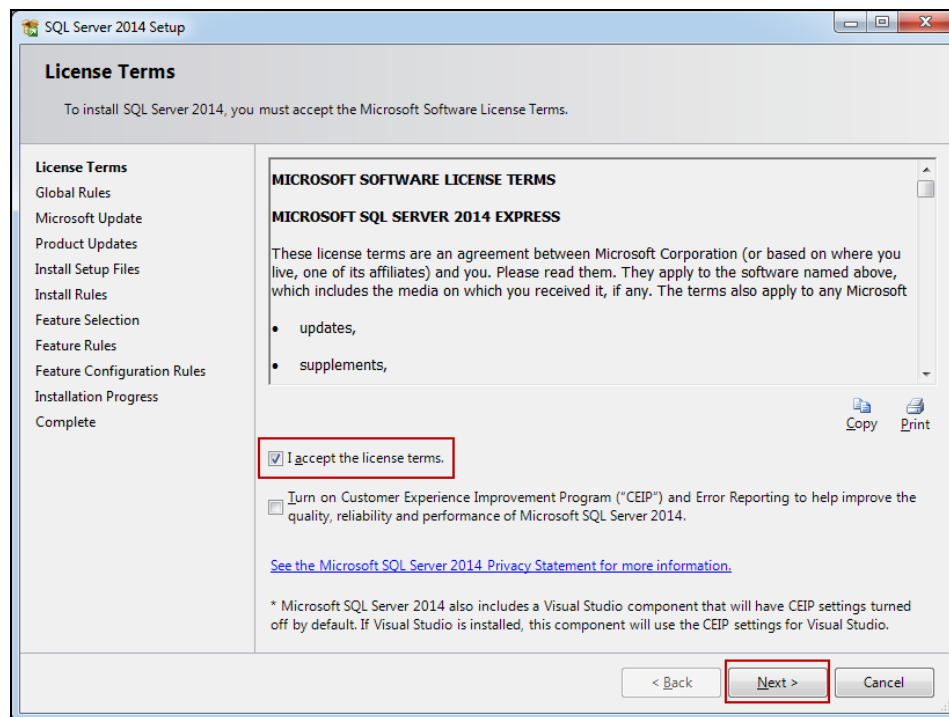
1. When downloading, select the option of **Express And Tools** corresponding to your operating system, 32- or 64-bit, as exemplified below.



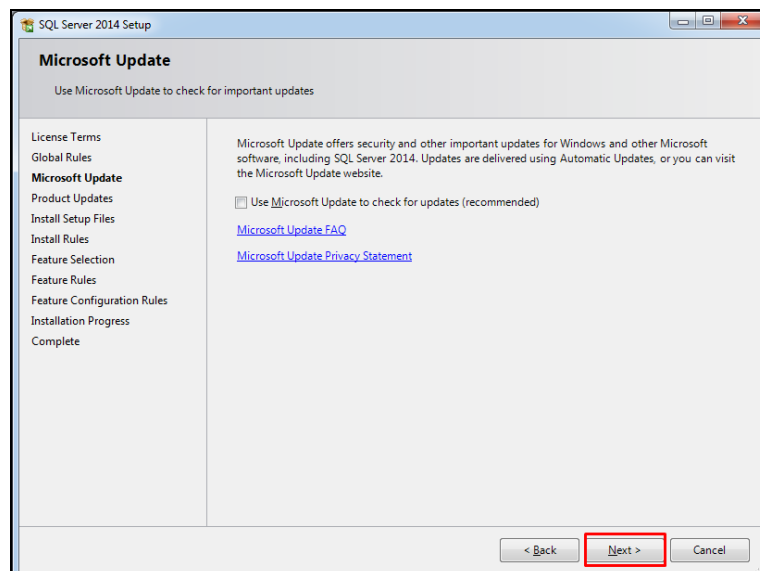
2. To start installing, execute  **SQLSERVER_PRW_x64_ENU** to extract the files to a desired folder, run  **SETUP** and select **New SQL Server stand-alone installation**.



3. Read the license terms and check **I accept the license terms**. Click **Next**.

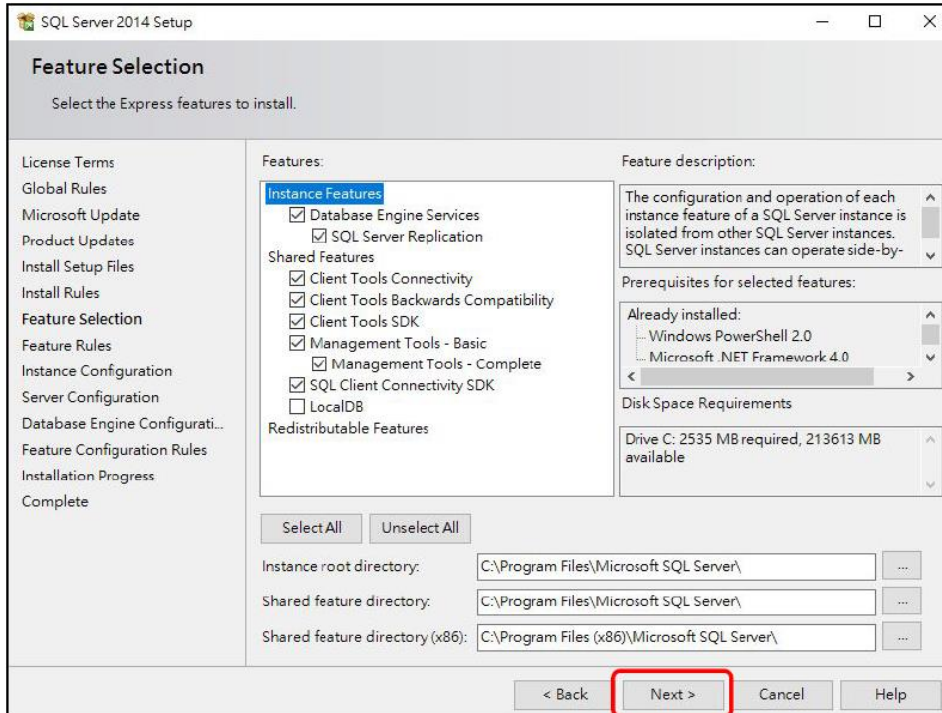


4. The **Global Rules** step scans for the rules that must be met to avoid potential problems during the installation. If all rules are passed, the step is processed and skipped automatically. If any of the rules don't pass, you must correct them before you can continue.
5. For the **Microsoft Update** step, click **Next**.



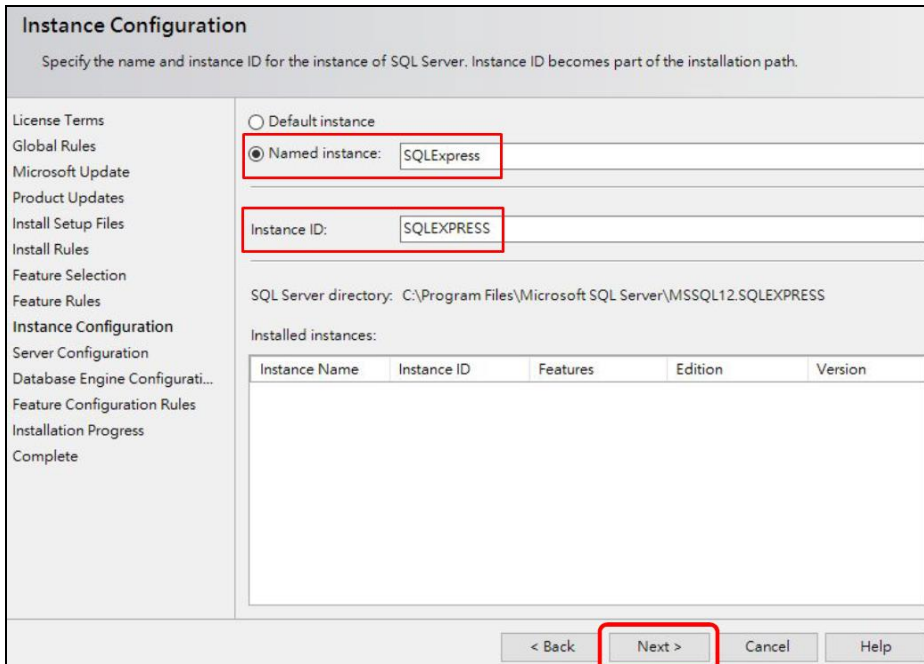
6. The steps of **Install Setup Files** and **Install Rules** are again processed automatically and skipped unless certain software requirements are not met, as identified by **Install Rules**. If a **Windows Firewall** warning appears, you can resolve it by referring to *B-4 Permitting Port Communication by Windows Firewall*.

7. For **Feature Selection**, install all features that are already selected by default and click **Next**.



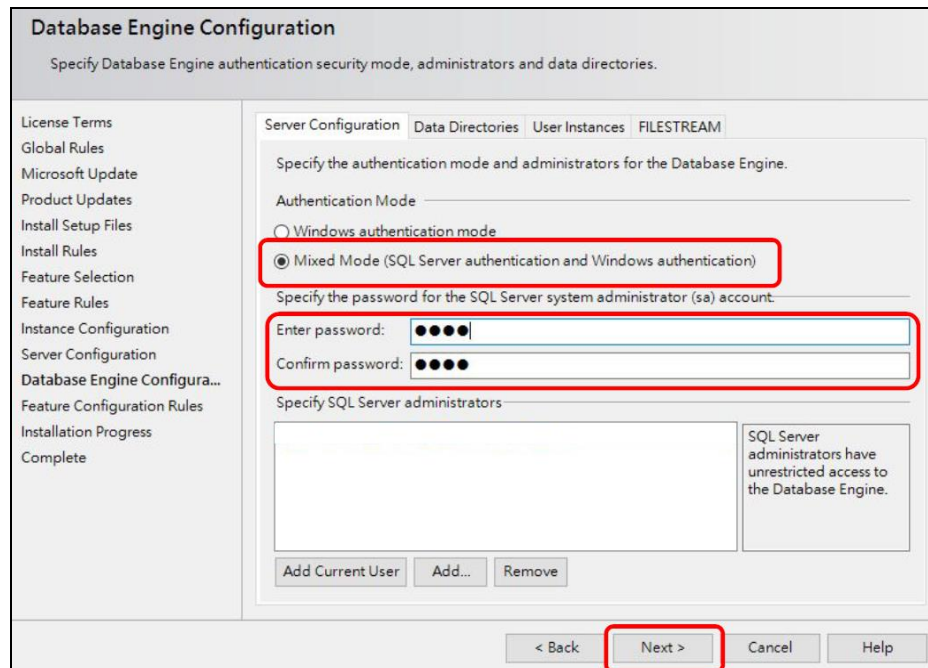
The screenshot shows the 'Feature Selection' window of the SQL Server 2014 Setup. The left sidebar lists various setup steps, with 'Feature Selection' currently selected. The main area is divided into three sections: 'Features', 'Feature description', and 'Prerequisites for selected features'. Under 'Features', the 'Instance Features' section is expanded, showing a list of features with checkboxes. The 'Feature description' section provides details about the selected features. The 'Prerequisites for selected features' section lists already installed components like Windows PowerShell 2.0 and Microsoft .NET Framework 4.0. At the bottom, there are buttons for '< Back', 'Next >', 'Cancel', and 'Help'. The 'Next >' button is highlighted with a red rectangle.

8. The **Features Rules** step is again processed automatically and skipped unless certain rules are not met.
9. During **Instance Configuration**, define a desired **Name** and **ID** for the Instance and click **Next**.



The screenshot shows the 'Instance Configuration' window of the SQL Server 2014 Setup. The left sidebar lists various setup steps, with 'Instance Configuration' currently selected. The main area is divided into two sections: 'Default instance' and 'Named instance'. The 'Named instance' section is selected, and the 'Instance ID' field is populated with 'SQLEXPRESS'. Below this, the 'SQL Server directory' is shown as 'C:\Program Files\Microsoft SQL Server\MSSQL12.SQLEXPRESS'. At the bottom, there are buttons for '< Back', 'Next >', 'Cancel', and 'Help'. The 'Next >' button is highlighted with a red rectangle.

10. Skip **Server Configuration**, and click **Next**.
11. Select **Mixed Mode** as the Authentication mode, define a desired **Password** for the SQL Server system administrator account **sa** and click **Next**.



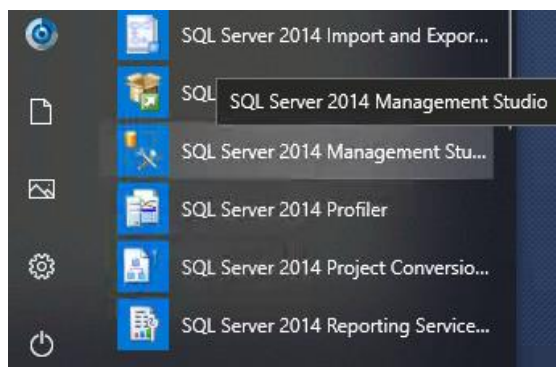
12. After the installation processes are finished, restart the PC to complete.

IMPORTANT: Note down the password of the SQL Server admin (sa) account because you will use it in the latter settings.

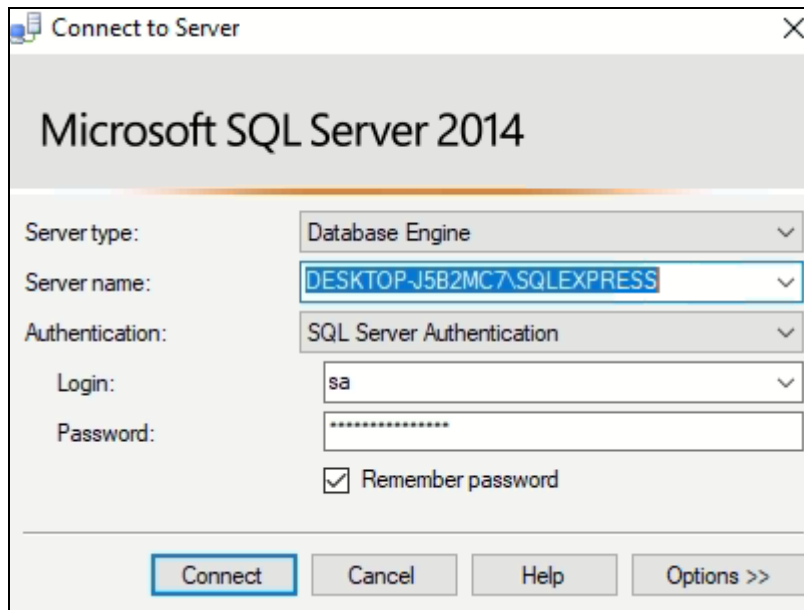
B-2 Building SQL Server DB for GV-Enterprise

Prior to running GV-Enterprise, make sure its SQL Server database is built properly by following the steps below.

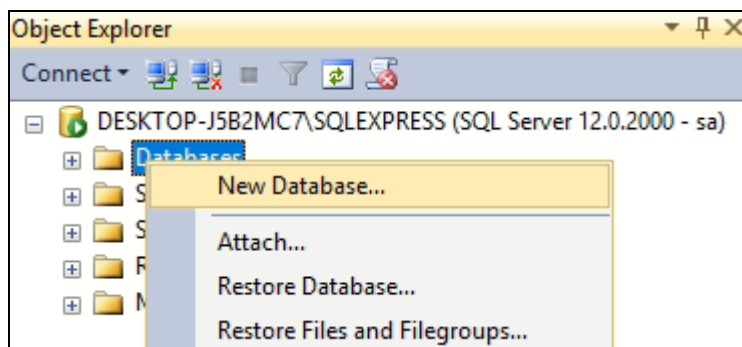
1. Launch **SQL Server Management Studio** from the **Start Menu**.



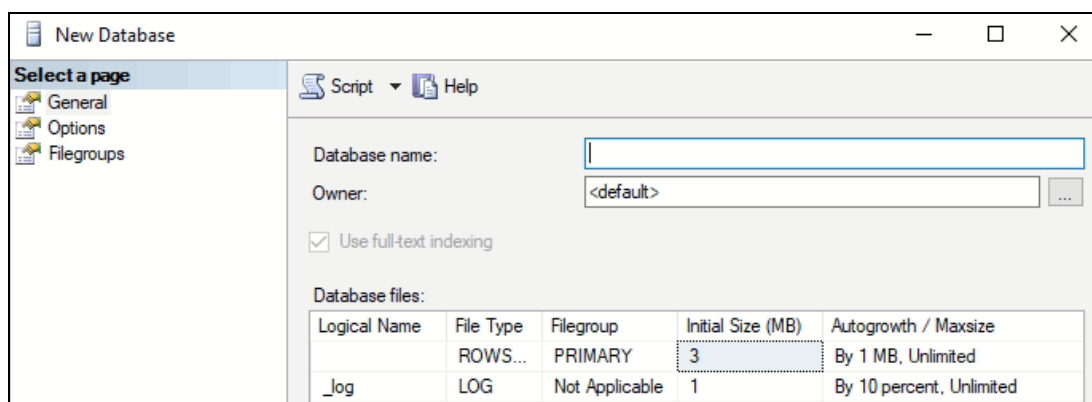
2. Select **SQL Server Authentication** from the **Authentication** dropdown list, type the Login ID (sa) and Password of the server, as set by Step 10, *B-1 Installing Microsoft SQL Server*, and click **Connect**.



3. Right-click **Databases** > **New Database**.



4. Type a desired name for the database and click **OK**.

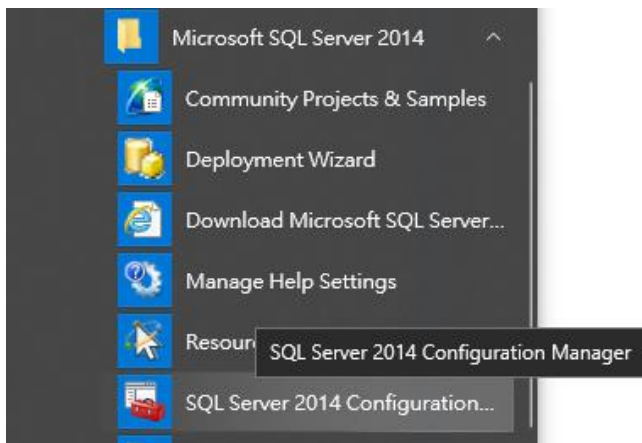


IMPORTANT: Note down the name of the database created because you will use it in the latter settings.

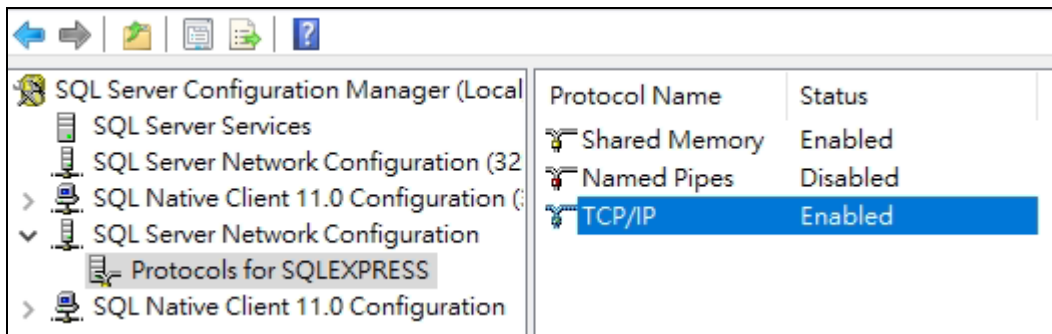
B-3 Enabling SQL Server TCP/IP Protocol

For Microsoft SQL Server to communicate with other applications, its TCP/IP protocol must be enabled.

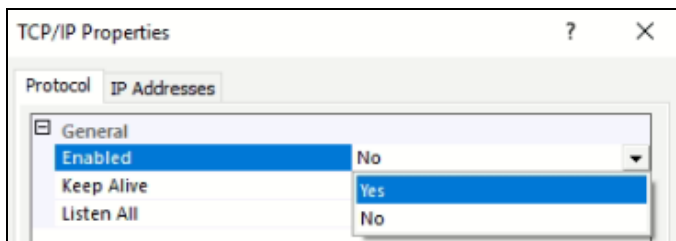
1. Launch **SQL Server Configuration Manager** from the **Start Menu**.



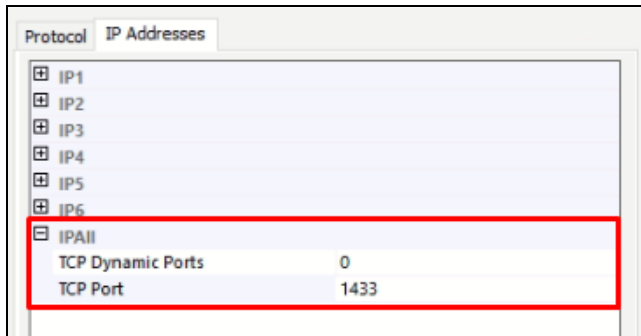
2. Click **SQL Server Network Configuration > Protocols for SQLEXPRESS** (the name of the instance is the same as the one defined by Step 9, *B-1 Installing Microsoft SQL Server*). Double-click **TCP/IP**.



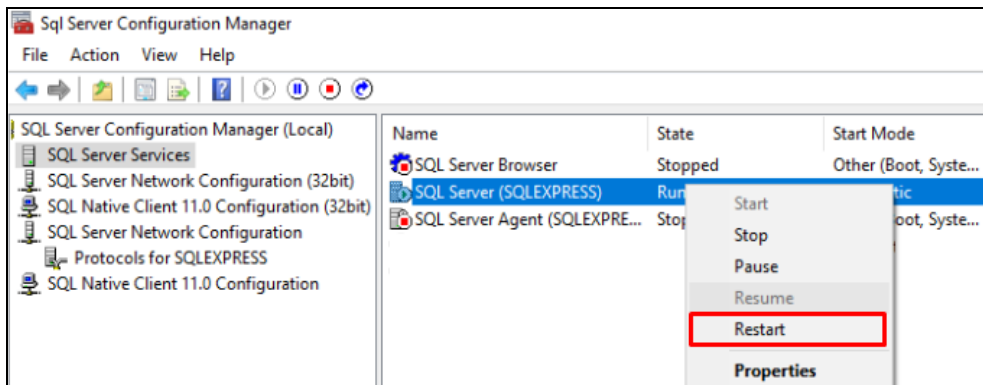
3. Select **Yes** from the **Enabled** dropdown list and click **OK**.



- In the **IP Addresses** tab, expand **IPAll** and set its **TCP Port** as **1433** and click **OK**.



- After enabling TCP/IP protocol and port, restart the **SQL Server** to complete.



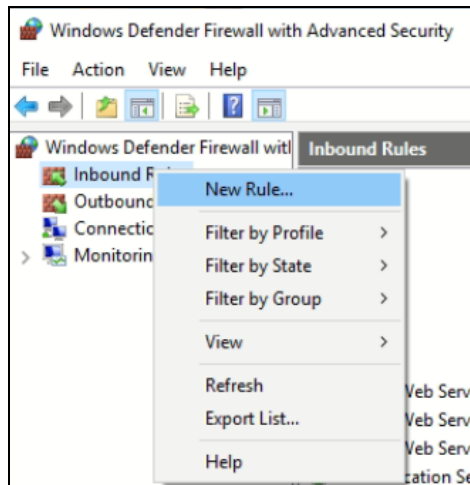
B-4 Permitting Port Communication by Windows Firewall

For the Microsoft SQL Server to retrieve and save data, its TCP/IP port must be permitted by the Windows Firewall.

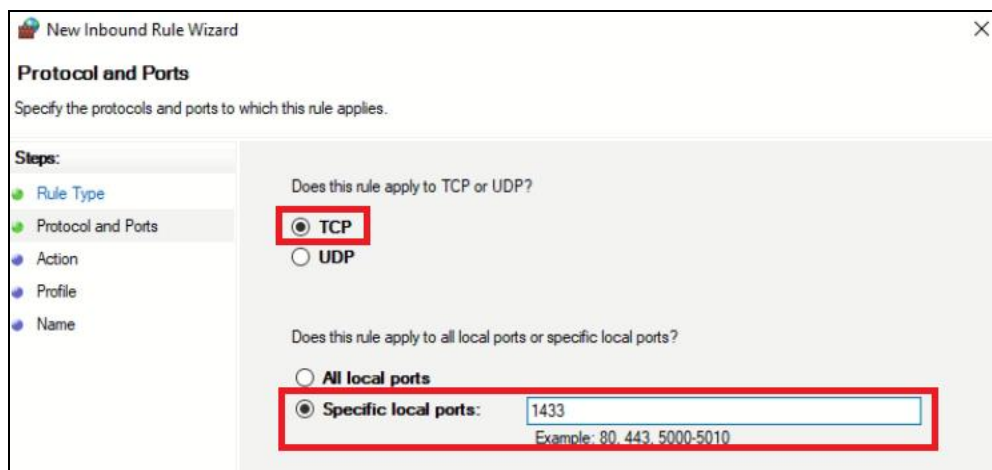
- Open Windows Firewall on your PC and click **Advanced settings**.



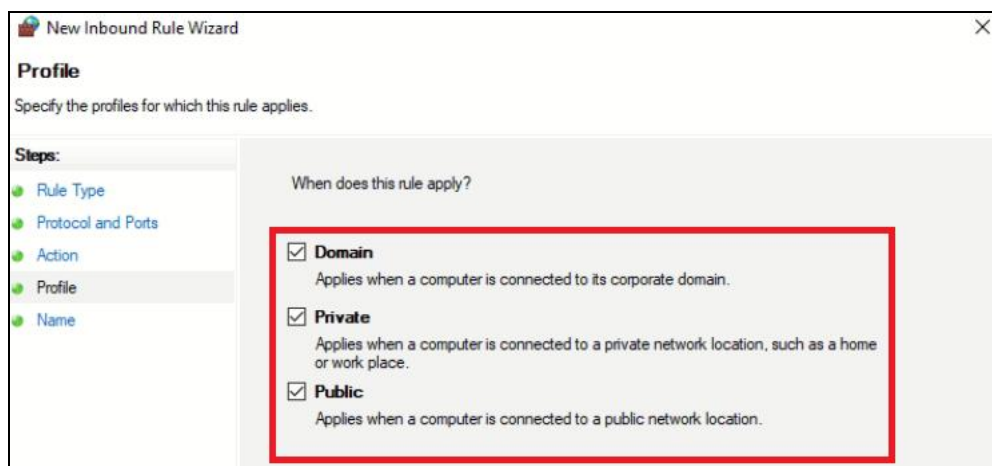
2. Right-click **Inbound Rules** > **New Rule**.



3. Select **Port** > **Next** > **TCP**, and type the same port value of *1433* as set by Step 4, *B-3 Enabling SQL Server TCP/IP Protocol*, and click **Next**.



4. Select **Allow the connection** > **Next**, select **Domain**, **Private** & **Public** and click **Next**.



5. Define a desired name for the rule established and click **Finish**.