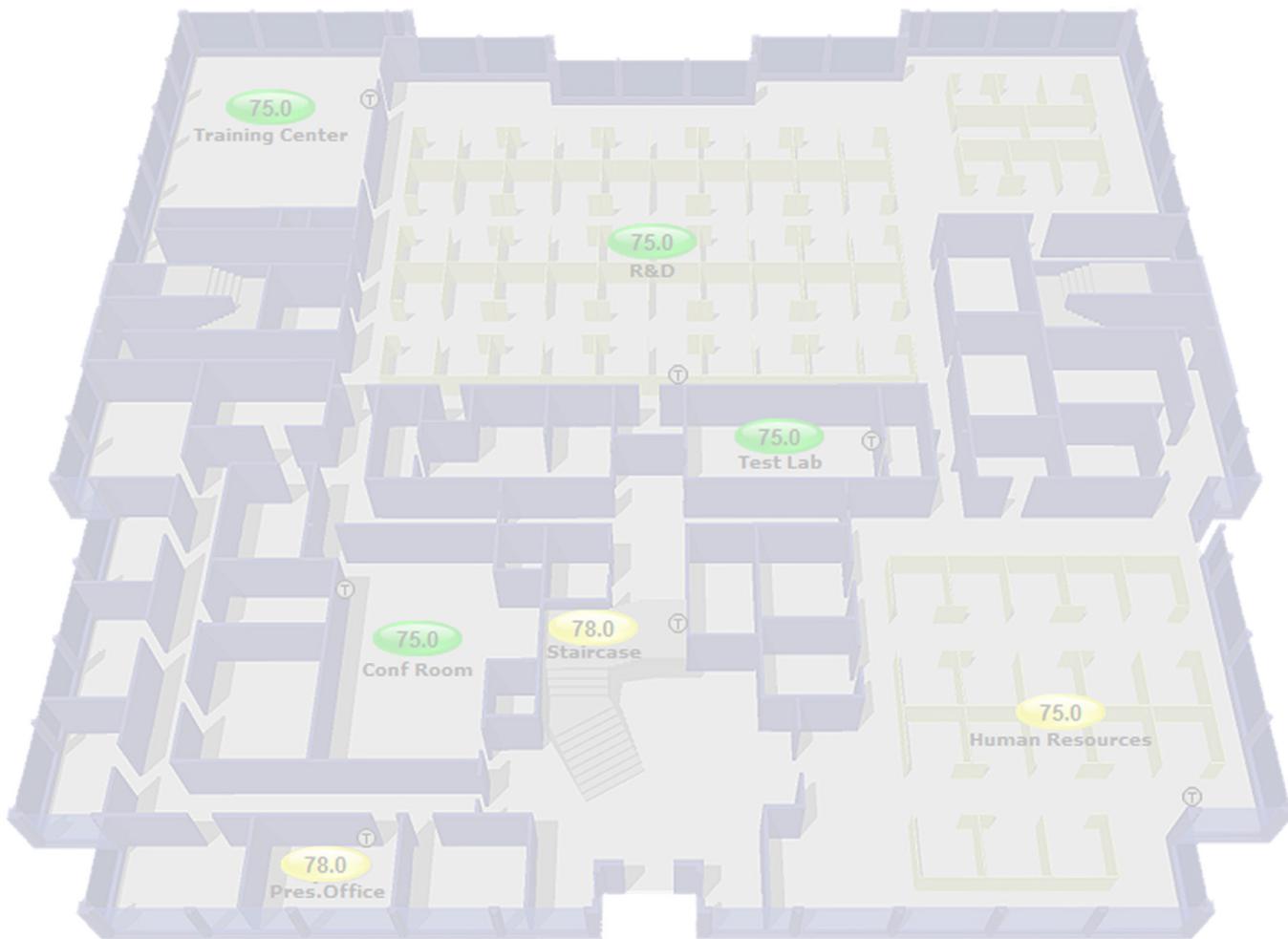# i-Vu® Application Upgrade Guide to v7.0

⚠ Verify that you have the most current version of this document from **www.hvacpartners.com** or **www.accounts.ivusystems.com** or your local Carrier office.

Important changes are listed in **Document revision history** at the end of this document.

Contents

Upgrading to the i-Vu v7.0 application

Prerequisite

Verify that you have the latest version of all the add-ons that are currently used. Some have been updated for the i-Vu v7.0 application. Be sure to have those updated add-ons ready to install during the upgrade process.

Follow these upgrade procedures:

Upgrading a single system to the i-Vu Standard/Plus v7.0 application

Use the following instructions to upgrade a single i-Vu CCN or i-Vu Open system.

NOTES

- If you are running a mixed CCN and Open system, see *To merge a mixed system to the i-Vu Plus v7.0 application.* (page 17)

- You cannot downgrade an i-Vu CCN Pro database to the i-Vu Standard/Plus v7.0 application.

- The i-Vu CCN v4.0 application must be upgraded to v4.2 before you can install v7.0.

i-Vu web server models

You **MUST** check your model to ascertain if you need to upgrade and purchase a new one. The model number is on the bottom of your web server.

i-Vu web server model number	System limits
MP945-xx or **MP965-xx**	You must purchase a new web server to accommodate v7.0.
MP45-xx or **MP65-xx** or **NUC5i3MYHE** or **NUC7iDNHE**	USB Router - • 140 CCN controllers or • 60 i-Vu Open controllers External routers - 750 controllers Total combined - 750 controllers

The table below is a quick outline of steps. Each step is explained in detail in the sections that follow.

Existing system	Procedure
i-Vu CCN Standard v4.0 application	You MUST upgrade to i-Vu CCN v4.2 application before you can install v7.0. Also, you must replace web server model MP945-xx or MP965-xx. See table above for details.
	Upgrade to v4.2:
	1 Backup system to your PC or USB from Management Tool.
	1 Connect upgraded web server to your network.
	2 Install i-Vu v4.2 application on the web server using the DVD or USB drive.
	3 Restore system to upgraded web server from the Management Tool.
	4 Follow instructions to upgrade v4.2 to v7.0.

Existing system	Procedure
Any of the following:	**1** Backup system to your PC or USB from Management Tool.
•i-Vu CCN Standard v4.2 application with USB CCN Adapter	**2** Install i-Vu v7.0 application on your web server from the Installation USB drive.
•i-Vu CCN Plus v4.2 application with i-Vu CCN Router or i-Vu Link	**3** Restore system to upgraded web server from the Management Tool.
•i-Vu Open Standard v5.0 or v5.1 application with USB Open Adapter	**NOTE** If you purchase a new web server, follow steps 1 and 3 above.
•i-Vu Open Standard or Plus v5.0 and later application with an i-Vu Open Router, i-Vu Open Link, or i-Vu XT or TruVu routers.	

Capture current i-Vu web server settings

Access the **Management Tool** using one of the following methods:

•Click ![icon], then select **System Options** > **General** tab > **Management Tool**.

•Launch your browser and type your system name followed by :8080. For ex.: http://ivu:8080/.

Print the **Management Tool** screen or record all of the information under **Addressing** and **I-Vu Port Configuration**.

• i-Vu Standard v4.2 addresses

•i-Vu Plus v4.2 addresses

•i-Vu Standard or Plus v5.1 addresses

•i-Vu Standard or Plus v6.0 and later addresses

Addressing

Name: comcastPlus

☐ Obtain an IP address automatically

i-Vu Address:	10 . 1 . 10 . 7
Subnet Mask:	255 . 255 . 255 . 0
Default Gateway:	10 . 1 . 10 . 1
DNS Address:	68 . 87 . 71 . 226
Domain:	wp.comcast.net

USB Network Type: CCN *(Connector Not Detected)*
USB Network Address: 10 . 1 . 10 . 37

i-Vu Port Configuration

HTTP : 80   HTTPS : 443

Note: Changing these values forces a webserver restart.

NTP Configuration

Status: Local NTP server is running. Seconds since the last NTP time sync: 292.
Estimated time drift in 1000's of a second: 0.000.

☑ Enable time synchronization from an NTP server

System Assigned NTP Server Address:	
System Assigned NTP Server Address:	
User Assigned NTP Server Address:	0.pool.ntp.org
User Assigned NTP Server Address:	1.pool.ntp.org

Backup data from Management Tool

Access the **Management Tool** using one of the following methods:

- Click ![icon], then select **System Options** > **General** tab > **Management Tool**.

- Launch your browser and type your system name followed by :8080. For ex.: https://ivu:8080/.

Use either of the following methods to backup your data:

Backup data to your computer

1   Click **PC Backup** under **Manage Server Data** to save the entire database zipped into one file to your computer.

2   Click **OK** when you see the message **The system will be stopped and restarted. Do you wish to proceed?** Watch **Operation Status** to see the progress.

3   Click the message **Save/Download Backup File to Your Local Hard drive** when it appears.

4   Click **Save** when asked **Do you want to open or save this file?**

    5   Save this system.backup.tgz file to a convenient location on your computer.

            CAUTION! Do not alter the name of this file!

    6   Exit from **Management Tool**.

Backup data to a USB drive

    1   Plug your own USB drive into any available USB port on your i-Vu web server.

            ⚠ **CAUTION** Do not use the i-Vu **Restore** USB drive!

    2   Click **USB Backup** under **Manage Server Data**.

    3   Click **OK** when you see the message **The system will be stopped and restarted. Do you wish to proceed?**

    4   When **Operation Status** says **No Background Operations Currently Active**, remove USB drive from the i-Vu web server.

    5   Exit from **Management Tool**.

Install new i-Vu v7.0 software

⚠ **CAUTION** If you are using a USB CCN or Open Adapter with an upgraded web server, you must connect the cable to your network and the web server <u>before</u> you start the i-Vu v7.0 application.

    1   Remove the i-Vu web server from the network by disconnecting the LAN cable.

    2   Insert the USB Installation drive into the USB port on the web server.

    3   Shut down the i-Vu web server by pushing the On/Off button **once**.

            NOTE For MP model number i-Vu web servers, wait for the blue light to turn off (could take as long as 2 minutes).

    4   Press the On/Off button again to restart the web server. The installation begins automatically.

    5   The USB Installation drive's light goes off when the installation is complete. This process takes several minutes.

            NOTE Do not power off during the installation.

    6   Remove the USB drive.

Access updated system

⚠️ **CAUTION** If you are using a USB CCN or Open Adapter with an upgraded web server, you must connect the cable to your network and the web server <u>before</u> you start the i-Vu v7.0 application.

1 Connect a LAN cable between the computer and the i-Vu web server.

2 Make sure that the computer is set up for DHCP.

3 Allow about a minute after connecting the LAN cable for the IP addressing to complete.

4 Launch Internet Explorer to access your system. Type **http://Ivu**.

  NOTES

  ○ Use only the i-Vu interface to navigate through the i-Vu interface; do not use the browser's navigation buttons.

  ○ Disable all popup blockers. **IE** > **Tools** > **Turn Off Popup Blocker**.

5 Enter login name and password.

6 **Accept** License Agreement.

On the Startup page:

1 You must carefully select the **USB Network Type.** If you change from using a router to a cable at a later time, you will lose all your settings and have to restore to factory defaults.

  NOTE Do **not** fill in any other blank fields on the Startup page. Restoring your system in will automatically fill in the other information.

2 Click **Link to Management Tool** at the bottom of the screen.

Restore data from backup

1 Click **PC Restore** or **USB Restore** under **Manage Server Data** in the **Management Tool**.

- ○ **PC Restore** - Browse to your backup file and click **Upload File**, then click **Perform Restore**.

- ○ **USB Restore** - Place your backup USB drive in any port on the i-Vu web server. Select the backup file and click **Perform Restore**.

2 Restore is complete when **Operation Status** displays **No Background Operations Currently Active**.

Restore Addressing and set NTP (Network Time Protocol)

1 Refer to the data recorded from your original i-Vu web server. See *Capture current i-Vu web server settings.* (page 5)

2 Enter your previous **Name**.

3 If your original setup did not have **Obtain an IP address automatically** checked, then enter **ALL** of the IP address information from the original configuration.

4 Enter your original settings in **i-Vu Port Configuraton**.

Configuring NTP

Network Time Protocol (NTP) is a networking protocol for clock synchronization. You can designate an NTP source that sends the correct time to the i-Vu web server, ensuring constant accurate time. You can enter 2 static addresses (DNS name or IP) of NTP servers or use the default addresses provided by the i-Vu application. If you do not enable NTP, the i-Vu system clock must be monitored and updated regularly in **System Options** > **General** tab.

You can configure DHCP servers to supply IP addresses of NTP servers to the i-Vu web server. If you have checked **Obtain an IP address automatically** and **Enable Time Synchronization**, the i-Vu web server tries to obtain an NTP server address from the DHCP server on site. If it cannot find one, the i-Vu web server uses the User Assigned NTP addresses, if any, in the User Assigned fields.

⚠ **CAUTION** Contact your Network Administrator for guidance in entering these settings.

You can access NTP from a local server, a remote server, or a website. To set up NTP:

1 Verify that **Enable time synchronization from an NTP server** is checked.

2 **System Assigned NTP Server Address** - To use this read-only field, make sure you have checked **Obtain an IP address automatically** to allow your system to search for an address for the NTP server and display a primary and alternate address.

3 **User Assigned NTP Server Address** - You can use the default website addresses if your system allows it. Firewalls may prevent successful access to the default websites. Your Network Administrator can provide alternate addresses for a local server, a remote server, or a website.

After entering address and/or NTP settings

1 Click **Apply Changes** to save your updated settings. The web server automatically reboots.

2 Close the **Management Tool**.

3 Disconnect the LAN cable between the computer and the i-Vu web server and reconnect the web server to the customer's LAN.

Start the i-Vu application

1   If necessary, reconfigure the computer to access the i-Vu web server over the customer's network.

2   Launch your browser, access the i-Vu interface, and login.

3   Since the database was restored, the you must adjust the following:

- ○ **Timezone, Date** - select appropriate options

- ○ **Time** - enter the correct time! The i-Vu web server will **not** automatically read the time from your computer.
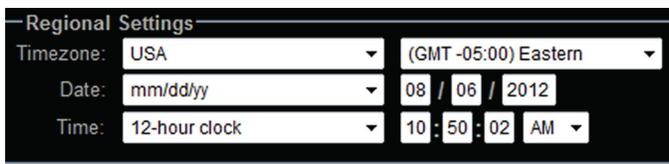
4   Click **Next**.

5   Review entries. Click **Submit**. Wait for your system to launch. It will take a minute. If you get an error, type http://<your system name> in your browser and refresh.

Update the SAL library

The i-Vu SAL files update youri-Vu controllers. The SAL libraries contain control programs, graphics, drivers, screen files, and other important controller data.

Carrier periodically provides updates, which include enhancements and bug fixes.

NOTES

• The library update only changes **default** graphics. If you have edited your graphic in ViewBuilder, it is not updated.

• The last digits in the SAL library name are the release date of the library.

• All of the SAL files will not necessarily have the same <date> revision.

• To ensure that your installation is running the latest software, we recommend that you check *Control Systems Support http://www.hvacpartners.com/*, *https://accounts.ivusystems.com/* for updates. Download the latest SAL files and apply them to all new installations.

• If you are changing to an older SAL file than the current one being used, a warning asks you if you are sure you want to apply an older version.

NOTE Keep copies of the latest libraries in a safe place. In the event of a system restore, the updated .sal file must be reapplied.

Check current SAL library version

1   Login to the i-Vu application using the **Installer** role.

2   Click , then select **System Options** > **Update** tab.

3   Click **Current Libraries (.sal)** to view the current SAL libraries and their revision date.

Update library

1   Save the updated library (.sal file) to your computer.

2   Click [icon], then select **System Options** > **Update** tab.

   NOTE Expand **Current Libraries (.sal)** to see the current SAL libraries and their revision. Compare them to what you downloaded from the Carrier Control Systems support website to determine if any of them have been updated.
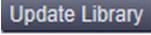
3   Click Update Library and browse to the updated .sal file that you have saved on your computer, select the file, and click **Open**.

4   Click **Continue**.

5   When process is complete, the message appears **File added successfully**.

6   Click **Close**.

NOTE These changes are not applied to the controllers until you have updated your routers and controllers.

Install self-signed certificates for network security in v7.0

For security purposes, you must install a self-signed certificate on every computer used to access the i-Vu application using "https". A user who has the **Installer Role** and will be accessing the **Management Tool** needs a second certificate.

You will get a browser certificate error when using "https" to access the i-Vu application and the Management Tool until you install the certificates on your computer.

IMPORTANT We highly recommend that you have the appropriate browser certificates in place **before** finding and uploading your devices and building your system in the i-Vu application.

⚠️ **CAUTION** If you ever change the Network Name, the IP address, or DNS IP address, you must download both certificates again.

The i-Vu application

1   After setting up the information on the **Startup** screen, log out.

2   Launch your browser and type https://<your system name> or Server IP address. For ex.: https://ivu/ or https://172.21.319.123.

   NOTE Use the TLS indicator `https` instead of `http`.

3   There will be a certificate error in your browser. Follow the steps listed below to install a certificate for the browser you are using to access the i-Vu application.
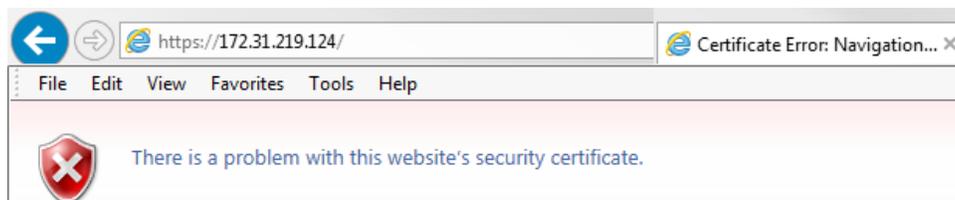
The Management Tool

After installing the certificate for browsing to the i-Vu application, you must install another one for accessing the Management Tool.

1   Log out of the i-Vu application.

2   Launch your browser and type your system name or Server IP address followed by **:8080.** For ex.: https://ivu:8080/ or https://172.21.319.123:8080

3   You will see a certificate error again. Follow the directions below for the browser you are using.

Instructions to install a self-signed certificate

Internet Explorer®

1   If the page displays **There is a problem with this website's security certificate**, click **Continue to this website**.

2   Enter your **Username** and **Login**.

3   In the address bar, click **Certificate Error**.

4   Click **View Certificates** to open the Certificate dialog.
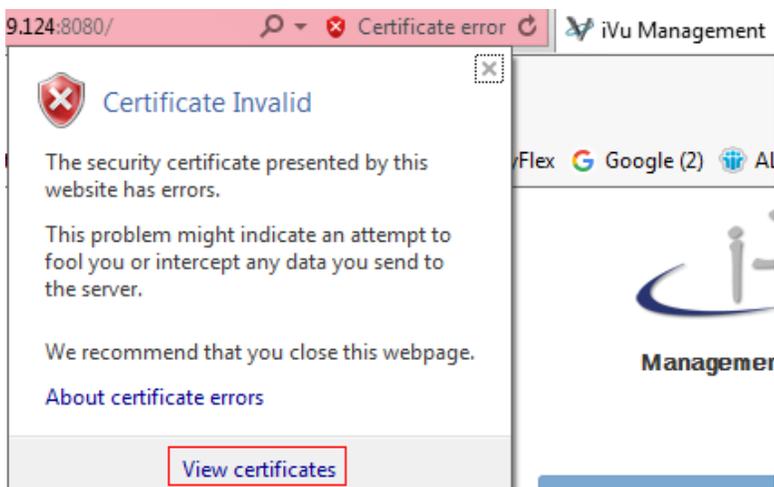
5   On the **Details** tab, select **Issuer**, then click **Copy to File**.

6   In the **Certificate Export Wizard**, click **Next** and **Next** again.

7   Browse to the folder on your computer that you want to save the certificate in, enter a name, then click **Next**.

8   Click **Finish**.

9   Click **OK** to close the message **The export was successful**.

10   Click **OK** to close **Certificate** window.

11   To import the certificate, Select **Tools** or ⚙ > **Internet Options**.

12   On the **Content** tab, click **Certificates**, and then select **Trusted Root Certification Authorities** tab.

13   Click **Import**.

14   Click **Next** in the **Certification Import Wizard**.

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Upgrade Guide to v7.0

15 Browse to the certificate you saved and click **Open**, then **Next**.

16 Select **Place all certificates in the following store**.

17 Click **Browse** and select **Trusted Root Certification Authorities**.

18 Click **Next**.

19 Click **Finish**.

20 Click **Yes** in the **Security Warning** dialog box to install the certificate.

21 Click **OK**.

22 Click **Close** again and then **OK**.

23 Close Internet Explorer, then open it again.

24 Log in to the i-Vu application.

NOTE Chrome and Windows browsers use the same Certificate store, so it is not necessary to install a certificate obtained through Internet Explorer in a Chrome Browser used on the same computer.

Google™ Chrome™

When connecting to the i-Vu application or Management Tool without a self-signed certificate installed, you will see the following.
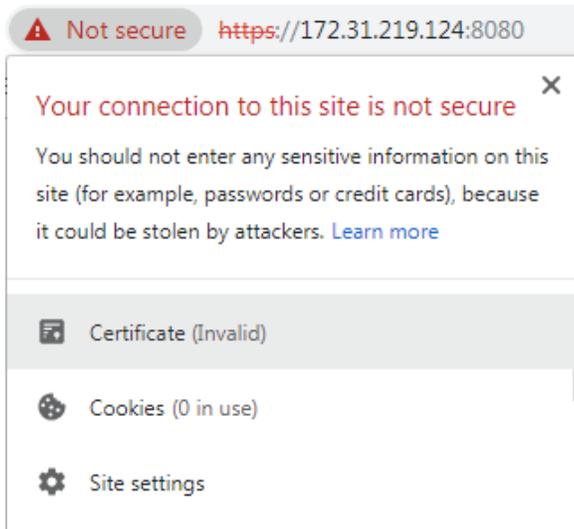
1 Export certificate to a known location:

    a) In the address bar, click **Not secure**.

    b) Click **Certificate (Invalid)** to open the Certificate dialog.

    c) On the **Details** tab, select **Issuer**, then click **Copy to File**.

    d) In the **Certificate Export Wizard**, click **Next** and **Next** again.

e) Browse to the folder on your computer that you want to save the certificate in, enter a name, click **Save**, then **Next**.

f) Click **Finish**.

g) Click **OK** to close the message **The export was successful**. and click OK again to close the **Certificate** dialog.

2 Import saved certificate:

a) Click ⋮ on the browser toolbar, then select **Settings**.

b) Click **Advanced**.

c) Scroll down to **Privacy and security**, then click **Manage certificates**.

d) On the **Trusted Root Certification Authorities** tab, click **Import**.

e) In the **Certificate Import Wizard**, click **Next**.

f) Click **Browse**, then select the file you exported in step 2.

g) Click **Open**.

h) Click **Next**, and **Next** again, then **Finish**.

i) Click **Yes** to the Security Warning popup, then **OK** to the **Import was successful** message.

j) Close the **Certificates** window.

k) Close Chrome, then open it again.

NOTE Chrome and Windows browsers use the same Certificate store so it won't be necessary to install this same certificate in a Window Browsers used on the same PC.

Mozilla® Firefox®

1 Open the i-Vu application or the Management Tool using Mozilla® Firefox®.

2 Click the **Advanced** button on the page stating **Warning: Potential Security Risk**.

3 Click **Accept the Risk and Continue**.

4 Firefox displays the following icon near the URL window indicating that an exception has been made for this site

Update your routers and controllers

⚠️ **CAUTION** Update your routers and controllers only **once**. Use either the i-Vu application **or** Field Assistant.

Router and controller configurations are maintained when you update them using the procedure below.

Step 1: Update the files for routers

1 Select the router that you wish to update in the navigation tree.

2 Right-click and select **Driver Properties**.

3 Select **Properties** page > **Update** tab.

4 If the database contains two or more routers, you must check **Change for all controllers of this type?** in the **Controller** section.

5 Click **Update**. A message appears **Changes the driver and screen file to use the current library version. Continue?**

   NOTE If more than one router exists, the additional routers are listed below the **Update** button.

6 Click **OK.**

7 Click **Accept.**

Step 2: Update the files for controllers

1 Double-click the controller in the navigation tree or right-click and select **Configure**.

2 If you have multiple controllers of the same type, enable **Change for all control programs of this type?**.

3 Click **Update** under **Control Program**. A message appears **Changes the control program, view, driver, and screen file to use the current library version. Continue?**

4 Click **OK.** When the message **Updated to the library version xx.** appears, click **Close.**

5 Repeat steps 1 - 4 for any additional types of controllers.

6 Click **Close** again.

Step 3: Update the files for CCN controllers

1 In the navigation tree, select the CCN device manager associated with the controllers that are to be updated.

2 Select **Devices** > **CCN Discovery** and re-scan any controllers that need to be updated by checking **Rescan Controllers Selected Below for Configuration Changes** and clicking **Start Scan**.

Step 4: Apply the update to routers and controllers

1   Select the **System** ⬚ in the navigation tree and then select the **Downloads** page.

2   If you wish to apply the new SAL file to your entire system, you can use this page to compare to your navigation tree and verify that you have selected all of your routers and controllers for download.

   NOTE Only the CCN Gateway and device managers require download, so the CCN controllers/equipment will not be listed.

3   A network's controllers download in the order shown. To change the order, select a controller(s), then drag and drop or click **Move to Top** or **Move to Bottom**.
   EXCEPTION If a controller's router requires a download, it will download first regardless of its position on the Downloads page. Click the **Start** button.

   NOTES

   ○   Use **Ctrl+click**, **Shift+click**, or the **Select All** checkbox to select multiple controllers.

   ○   See To download from the Downloads page in Help for more details.

Upgrade v4.2 Standard with USB Gateway connection to v7.0 with external i-Vu CCN Gateway

1   Verify that the i-Vu CCN Router or i-Vu Link you are planning to use for the CCN Gateway is turned on and the IP address is set to the same IP address as the internal USB Gateway in i-Vu v4.2 Standard and the same CCN address.

   NOTES

   ○   Do not connect it to the LAN or the CCN bus at this time!

   ○   Document all users, passwords, and security levels. The clipping file does not include the Operator data and it will be lost.

2   Disconnect the USB converter from the server and follow the instructions to upgrade the i-Vu 4.2 server to i-Vu v7.0. See *To upgrade a single system to the i-Vu Standard/Plus v7.0 application* (page 2).

3   After verifying that the database was properly restored, go to **System Options** > **General** tab, expand **Clippings** and click **Clipping file: Export**. It could take several minutes for the file to generate.

4   Click **Save**. Click **Save as**, select a location on your computer and type a file name. Click **Save**.

5   On the **System Options** > **General** tab, click **Management Tool**.

6   Click **Factory Default** to restore the server back to factory defaults.

7   On the i-Vu Startup screen, accept the agreement, enter an Installer name and password, enter the same site name that you are importing and check **This server will connect to a BACnet network through a USB adaptor**.

8   Select the correct time zone, adjust the time, and then click **Submit** and **Submit** again to start the system.

9   Go to **System Options** > **General** tab and click **Management Tool**.

10   In the Management Tool, change the **USB Network Address:** to 127.0.0.1 and click **Apply Changes**. Close the Management Tool.

11   Connect the external i-Vu CCN Router/Link, that you set up in step 1, to the LAN and the CCN bus.

12   On to **System Options** > **General** tab, expand **Clippings** and click **Clipping file: Import**.

13 Navigate to the clipping you saved, select the file, and click **Next**. After uploading, all of the areas to be imported are displayed. Select **Next** to continue. The clipping import progress is displayed, followed by any issues encountered during the import.

14 Click **Non-Critical Errors** to verify that the internal Gateway has been converted to an external Gateway. Select **Next** to continue.
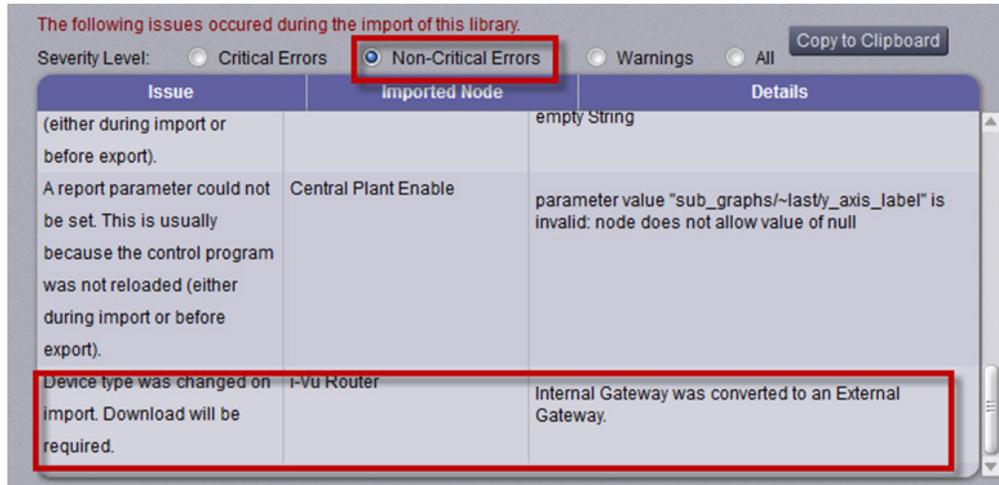
15 Select **Finish**. The message **Committing import changes to system** displays. The screen closes when complete.

16 On the **Installer** tree, select the controller at the top of the navigation tree and then select **Devices** > **Manage** tab to verify that the i-Vu CCN Router/Link is listed.

17 Select the i-Vu CCN Router/Link in the list on the page and click **Download All Content** to download all the programs, including the updated driver, if applicable.

18 Go to **System Options** > **Operators** and add the operators that you recorded in step 1.

Merging a mixed system to the i-Vu Plus v7.0 application

Terms to know:

- **Restore files** – restores all settings, including database, operators, alarms, and trends

- **Source files** – includes drivers, .equipment, .view, .bacview files, and .touch files

- **Clipping files** –

    ○ Navigation tree items including attached control programs, graphics, drivers, and screen files

    ○ Trend data

    ○ Reports

    ○ Alarm categories

    ○ Schedules and schedule group membership (including the entire schedule group and schedules, if it does not exist in the target system)

    ○ Alarm actions

    NOTES

    ○ Does not include operators or alarms

    ○ A clipping containing CCN controllers does not include the CCN tables. When importing a clipping containing CCN devices, you must re-scan the table.

    NOTE A system clipping file takes time to import. You can see the estimated time for each database in **System Options** > **General** tab > **System Statistics**.

- **Primary database** - This is the database that is restored and not added using a clipping. Primary includes database, operators, alarms, and trends. See *Before you start the upgrade process* below to determine if the CCN or Open system should be your primary database.

- **Target web server** - the web server you decide to use for the i-Vu v7.0 application

NOTE Web server model numbers and memory - see *To upgrade a single system to the i-Vu Standard/Plus v7.0 application* (page 2).

i-Vu web server models

You **MUST** check your model to ascertain if you need to upgrade and purchase a new one. The model number is on the bottom of your web server.

i-Vu web server model number	System limits
MP945-xx or **MP965-xx**	You must purchase a new web server to accommodate v7.0.
MP45-xx or **MP65-xx** or **NUC5I3MYHE** or **NUC7IDNHE**	USB Router - •140 CCN controllers or •60 i-Vu Open controllers External routers - 750 controllers Total combined - 750 controllers

Before you start the upgrade process

•The limit for the i-Vu Standard or Plus v7.0 application is 750 devices. The amount of memory in your web server determines your system's actual capacity. If your combined system devices are going to exceed 750, you must upgrade to the i-Vu Pro v7.0 application. See *To upgrade to the i-Vu Pro v7.0 application* (page 34). Even if you upgrade to an i-Vu Pro system, you must first upgrade both of your web servers and systems to the i-Vu Plus v7.0 application. After installing the v7.0 application and restoring your databases to both web servers, verify the number of devices in both of your systems. Select **System Options** > **General** tab > **Statistics** to see the actual number of your devices. Check both systems for a sum.

•If you use one of your current web servers and are not purchasing a new one, you must select the web server with the most memory for running the i-Vu v7.0 application. This is referred to as your target web server in these instructions. See table above.

•If you are currently using both a USB CCN and an Open Adapter, you must replace one of them with an external router. i-Vu v7.0 application does not support 2 USB cables on the single web server.

NOTE Replace a USB CCN Adapter with an i-Vu Link or an i-Vu CCN Router. Replace a USB Open Adapter with an i-Vu Open Link, i-Vu Open Router, i-Vu XT Router, or i-Vu XT BACnet Link. During the upgrade process, the i-Vu application will automatically find the new router and connect it to the network.

•Decide which database will be primary. A system that is connected with a USB Adapter (CCN or Open), must be primary. If you are not using a USB Adapter, select the larger database. The primary system is the first one you restore on the target web server with the v7.0 application. All settings are restored in your primary database, including, alarms, trends, and operators. The secondary system is installed using a clipping, which does not include operators or alarms.

Example of merging i-Vu databases to v7.0

The following example is an overview of the steps to upgrade and merge systems. Review this process to become familiar with the concepts. See proceeding topics for specific details on how to execute these steps.

Assumptions in this example

• An i-Vu CCN Plus v4.2 web server system is connected to the network using a USB CCN Adapter

• An i-Vu Open v5.0 or 5.1 system is connected to an i-Vu Open Link or an i-Vu Open Router

• You are using one of the web servers you already own and not purchasing a new one

• The i-Vu Open v5.1 web server is more powerful

• See the illustration below for explanations of the terms used in the steps.

Current configuration

I-Vu CCN Standard v4.2

Web server 1 (**WS1**)

Database 1 (**DB1**)

Location **1**

Connected to the CCN network using a CCN Adapter cable

I-Vu Open Standard or Plus v5.1

Web server 2 (**WS2**)

Database 2 (**DB2**)

Location **2**

Connected to the MS/TP network using an i-Vu Open Link or i-Vu Open Router

End configuration

("Target" web server)

I-Vu Open Standard or Plus v6.0 (or later)

Web server 2 (**WS2**)

Primary database 1 (**DB1**)

Location **1**

Connected to the CCN network using a CCN Adapter cable

Connected to the MS/TP network using an i-Vu Open Link, i-Vu Open Router, i-Vu XT Router, or i-Vu XT BACnet Link

1 Capture current web server settings.

2 *Backup DB1 and DB2 from Management Tool to PC or USB* (page 23).

3 Install v6.0 on both boxes from the USB drive or CD.

4 *Connect and power up your target web server* (page 25).

5 *Restore DB1 to WS2 from Management Tool* (page 25).

6 *Restore DB2 to WS1 from Management Tool.* (page 25)

7 Check number of devices on both systems in **System Options** > **General** tab > **Statistics** to ensure your merged system will not have more than 750 devices.

8 *Fix potential conflicts between both databases.* (page 25)

    1. Export DB2 Source files from WS1.

    2. Import DB2 Source file into WS2.

    3. Resolve conflicts.

9 Export DB2 Clippings from WS1.

10 Import DB2 Clippings into DB1 in the target web server WS2.

11 Verify that the imported devices are communicating.

12 Back up the merged database

To merge a mixed system onto a new i-Vu v7.0 web server

1 Capture current web server settings.

2 *Backup DB1 and DB2 from Management Tool to PC or USB* (page 23).

3 *Connect and power up your target web server* (page 25).

4 Restore primary database to the new web server from the Management Tool.

5 Check number of devices on both systems in **System Options** > **General** tab > **Statistics** to ensure your merged system will not have more than 750 devices.

6 *Fix potential conflicts between both databases.* (page 25)

    1. Export DB2 Source files from WS1.

    2. Import DB2 Source file into WS2.

    3. Resolve conflicts.

7 Export DB2 clipping from secondary database.

8 Import DB2 clipping into new web server.

9 Verify that the imported devices are communicating by obtaining a Module Status (Modstat).

10 Back up the merged database.

Capture current i-Vu web server settings (merge)

You need to record the **Addressing** information from the i-Vu web server Management Tool that is physically residing where you are going to place your i-Vu v7.0 web server (whether it is the same web server, a new one, or the one currently located elsewhere).

- If you will be using a USB Adapter (CCN or Open), your v7.0 web server needs to be where the cable is located.

- If you have external routers, you probably want to use the location of the web server that connects to the system you choose for your primary database.

- If you enable **Obtain an IP address automatically**, the only setting you need to record is the **i-Vu Port Configuration**.

Access the **Management Tool** using one of the following methods:

- Click ▼☰, then select **System Options** > **General** tab > **Management Tool**.

- Launch your browser and type your system name followed by :8080. For ex.: http://ivu:8080/.

Print the **Management Tool** screen or record all of the information under **Addressing** and **i-Vu Port Configuration**.

- i-Vu Standard v4.2 addresses

- i-Vu Plus v4.2 addresses

• i-Vu Standard or Plus v5.1 addresses

• i-Vu Standard or Plus v6.0 and later addresses

Backup data from Management Tool

Access the **Management Tool** using one of the following methods:

•Click ![icon], then select **System Options** > **General** tab > **Management Tool**.

•Launch your browser and type your system name followed by :8080. For ex.: http://ivu:8080/.

Use either of the following methods to backup your data from both databases.

Backup data to your PC

1   Click **PC Backup** under **Manage Server Data** to save the entire i-Vu database zipped into one file to your PC.

2   Click **OK** when you see the message **The system will be stopped and restarted. Do you wish to proceed?** Watch **Operation Status** to see the progress.

3   Click the message **Save/Download Backup File to Your Local Hard drive** when it appears.

4   Click **Save** when asked **Do you want to open or save this file?**

5   Save the file (system.backup.tgz) to a convenient location on your computer.

   CAUTION! Do not alter the name of this file!

6   Exit from **Management Tool**.

7   You must reboot the web server before proceeding.

Backup data to a USB drive

1   Plug your USB drive into any available USB port on your i-Vu web server.

2   Click **USB Backup** under **Manage Server Data** to save the entire i-Vu database zipped into one file to your USB drive.

3   Click **OK** when you see the message **The system will be stopped and restarted. Do you wish to proceed?** The **Operation Status** message updates as the i-Vu application prepares and creates the backup. Wait for **Operation Status** to state **No Background Operations Currently Active.**,

4   Remove USB drive from the web server.

   NOTES

   ○   A check of the USB drive will show a backup file named **system.backup**

   ○   An error may be displayed under the **Management Tool** title stating **The USB device failed to mount and initialize. Connect the USB drive to the first USB port**. In this case, try a different USB drive or try rebooting the i-Vu web server, as there was an issue accessing the USB drive.

5   Exit from **Management Tool**.

6   You must reboot the web server before proceeding.

Install i-Vu v7.0 software

Use the following steps to install the i-Vu v7.0 application on **both** of your web servers, even the one you will no longer use.

1   Remove the i-Vu web server from the network by disconnecting the LAN cable.

2   Insert the USB Installation drive into the USB port on the web server.

3   Shut down the i-Vu web server by pushing the On/Off button **once**.

   NOTE   For MP model number i-Vu web servers, wait for the blue light to turn off (could take as long as 2 minutes).

4   Press the On/Off button again to restart the web server. The installation begins automatically.

5   The Installation USB drive's light goes off when the installation is complete. This process takes several minutes.

   NOTE   Do not power off during the installation.

6   Remove the USB drive.

Connect and power up target i-Vu web server

If you are currently using both a USB CCN and an Open Adapter, you must replace one of them with an external router. i-Vu v7.0 application does not support 2 USB cables on the single web server.

1   If necessary, re-locate the i-Vu web server that you have chosen as the web server for i-Vu v7.0. For instance, if you are using a USB Adapter cable, you most likely need to move the target web server with the largest memory to the physical location of the cable.

2   Plug the power cable into the back of the i-Vu web server and into an electrical outlet.

   NOTE We highly recommend using a UL Certified power surge/RFI suppression device.

3   Connect an Ethernet cable from the laptop computer's network port, or the customer's LAN, to the Ethernet jack on the back of the i-Vu web server.

4   Connect your the selected i-Vu web server to your CCN and Open networks using routers and/or a USB Adapter cable (CCN or Open). If you are using a USB Adapter cable, plug the adapter into the USB port and connect to your network.

Restore data from backups

When merging an existing CCN and Open system, the database that you restore on the target web server becomes the primary database. Restoring includes all settings, including database, operators, alarms, and trends. You merge the second database using a clipping, which does not include operators or trends.

On your target web server:

1   Click **PC Restore** or **USB Restore** under **Manage Server Data** in the **Management Tool**.

   ○   **PC Restore** - Browse to your backup file and click **Perform Restore**.

   ○   **USB Restore** - Place your backup USB drive in any port on the i-Vu web server. Select the backup file and click **Perform Restore**.

2   Restore is complete when **Operation Status** displays **No Background Operations Currently Active**.

Troubleshoot, import secondary database, and resolve conflicts

Export source files (drivers, .equipment, .view, and .bacview files) from the secondary database and import them into the primary database to identify and fix any equipment file names that may be duplicated in both databases. After you fix the conflicts, you export a clipping file (Source Files, database, and trends) from the secondary database and import it into the primary database on the target web server.

If you skip using source files for removing conflicts and proceed directly to exporting and importing the clipping file, when duplicate file names are encountered during the clipping process, your must delete one of the files completely or stop the entire import process, fix the conflict, and start importing all over again.

NOTE A system clipping file takes time to import. You can see the estimated time for each database in **System Options** > **General** tab > **System Statistics**.

Fixing potential conflicts

1   Export source files from your secondary database, which is residing in the web server that you are not using for your target system. Select **System Options** > **General** tab > **Source Files** > **Export** button.

2   Close **System Options**.

3   Access the target web server.

4   Import the source files into the primary database. Select **System Options** > **General** tab > **Source Files** > **Import** button.

5   Browse to the source files you just exported and click **Open**.

6   Click **Continue**. You can copy the list of conflicts to use for a troubleshooting reference.

7   Resolve conflicts before proceeding. To change the name of a custom equipment file:

  ○   If the control program was made in Snap, open it in Snap and save with a different name.

  ○   If the control program was produced in ApplicationBuilder, open the equipment file in EquipmentBuilder and save the file with another name.

Import the secondary database into the target web server

Clippings include source files, database, and trends. They do not include operators or alarms.

1   Export a clipping file from the secondary database, which is residing in the web server that you are not using for your target system. Select **System Options** > **General** tab > **Clippings** > **Export** button.

2   Click **Save**.

3   Import the clipping file into the primary database on the target web server. Select **System Options** > **General** tab > **Clippings** > **Import** button.

4   Browse to the exported clipping.

5   Click **Next**.

   NOTE You must resolve conflicts or problems that are displayed during the clipping import. In the case of duplicate file names, your only options are to delete one of the files completely or stop the entire import process, fix the conflict, and start the entire clipping import again.

6   Verify that the imported devices are communicating. In the i-Vu v7.0 interface, select one router at a time in the navigation tree and click the **Devices** tab.

7   *Back up the merged target system from the Management Tool* (page 23).

Update your routers and controllers

⚠️ **CAUTION** Update your routers and controllers only **once**. Use either the i-Vu application **or** Field Assistant.

Router and controller configurations are maintained when you update them using the procedure below.

Step 1: Update the files for routers

1   Select the router that you wish to update in the navigation tree.

2   Right-click and select **Driver Properties**.

3   Select **Properties** page > **Update** tab.

4   If the database contains two or more routers, you must check **Change for all controllers of this type?** in the **Controller** section.

5   Click **Update**. A message appears **Changes the driver and screen file to use the current library version. Continue?**

   NOTE If more than one router exists, the additional routers are listed below the **Update** button.

6   Click **OK.**

7   Click **Accept.**

Step 2: Update the files for controllers

1   Double-click the controller in the navigation tree or right-click and select **Configure**.

2   If you have multiple controllers of the same type, enable **Change for all control programs of this type?**.

3   Click **Update** under **Control Program**. A message appears **Changes the control program, view, driver, and screen file to use the current library version. Continue?**

4   Click **OK.** When the message **Updated to the library version xx.** appears, click **Close.**

5   Repeat steps 1 - 4 for any additional types of controllers.

6   Click **Close** again.

Step 3: Update the files for CCN controllers

1   In the navigation tree, select the CCN device manager associated with the controllers that are to be updated.

2   Select **Devices** > **CCN Discovery** and re-scan any controllers that need to be updated by checking **Rescan Controllers Selected Below for Configuration Changes** and clicking **Start Scan**.

Step 4: Apply the update to routers and controllers

1   Select the **System** in the navigation tree and then select the **Downloads** page.

2   If you wish to apply the new SAL file to your entire system, you can use this page to compare to your navigation tree and verify that you have selected all of your routers and controllers for download.

   NOTE Only the CCN Gateway and device managers require download, so the CCN controllers/equipment will not be listed.

3   A network's controllers download in the order shown. To change the order, select a controller(s), then drag and drop or click **Move to Top** or **Move to Bottom**.
   EXCEPTION If a controller's router requires a download, it will download first regardless of its position on the Downloads page. Click the **Start** button.

   NOTES

   ○   Use **Ctrl+click**, **Shift+click**, or the **Select All** checkbox to select multiple controllers.

   ○   See To download from the Downloads page in Help for more details.

Registering and downloading your i-Vu license

To register your software, you must obtain a license from Carrier and then apply it in the i-Vu® Pro interface.

1 Login to *i-Vu Systems website* (*http://accounts.ivusystems.com*).

NOTES

○ Only Carrier authorized personnel may access accounts.ivusystems.com. To set up your account, please contact Control Systems Support with the following information: name, phone number, e-mail address, office address, and your password of choice.

○ If you are an end-user or contractor, please contact your local Carrier office to obtain your license.

2 Click the **License Manager** tab.

3 Click **i-Vu Pro License Manager link.**

4 Expand the applicable section under **Available Licenses** and select the site/project to register it.

NOTE All your Sites Names/Project Names are listed.

5 In **License Details**, fill in the Owner and Site information and click **Register License**.

6 Check **I agree to the terms of use**.

7 Click **Download License** and then save the .properties file to a convenient location to use when installing the i-Vu® Pro application.

To apply the license to the i-Vu application

During the i-Vu installation, in the **Setup Wizard**, on the **Product License** screen, check **Browse to a different license**, and select the site license you obtained.

NOTES

○ Selecting the default license results in a prompt appearing every few minutes in the i-Vu interface to remind you to apply your site license.

○ Do not edit any part of this registered license file. Editing a license file invalidates the license.

○ Store the license in a safe location.

To apply the site license after the installation:

1 In the i-Vuinterface, select **System Options** > **License Administration**.

2 Browse to the license file.

3 Click **Apply**.

4 Restart i-Vu Server using the rebootserver manual command.

Before you upgrade an i-Vu Pro database

- **Server requirements**—Verify that the i-Vu server computer meets the v7.0 *i-Vu server requirements* (page 30).

- **Trends**— i-Vu Pro v6.5 and later systems have a different Trends database structure than earlier systems. If you are upgrading a v6.0 or earlier system, use one of the following methods to convert your current trends:
  - Before upgrading, use the Trend Conversion Utility (highly recommended for large trend databases)
  - As part of the upgrade process in SiteBuilder's upgrade wizard

  See *Converting your trend database* (page 31).

- **BACnet Bindings**—i-Vu v6.0 and later uses only dynamic binding for communication between devices. Before you upgrade from v4.2 or earlier, uncheck **Use Static BACnet Bindings** on the **System Settings** > **Communications** tab, restart the BACnet connection, and then immediately run the **Reports** > **Network** > **Controller Status** report to verify that you have no communication problems. If you do, contact Carrier Control Systems Support.

- **Access® and MSDE databases**—As of v6.5, SiteBuilder no longer supports Access and MSDE database types. If your system uses one of these, you need to migrate to a Derby database in your current i-Vu version before upgrading to v7.0
  NOTE Derby became a supported database type in v6.0. If your current system is v5.1 or earlier, you will need to upgrade to v6.0 or v6.5 (32-bit only), migrate to Derby, and then upgrade to v7.0 (64-bit).

- **SQL Server® Express database**—If your system is currently using an SQL Server Express database running on a 32-bit i-Vu server, you must do the following before upgrading to v7.0:
  1. Shut down i-Vu Server application.
  2. On the server's **Start** menu, select **All Programs** > **Microsoft SQL Server** > **Configuration Tools** > **SQL Server Configuration Manager**.
  3. In the left pane, select **Protocols for SQLEXPRESS**.
  4. In the right pane, right-click **Named Pipes**, and then select **Enable**.
  5. In the left pane, select **SQL Server Services**.
  6. In the right pane, right-click **SQL Server (SQLEXPRESS)**, and then select **Restart**.

- **Backup**—Always back up your database before upgrading. A failed upgrade could corrupt your data.

  Back up a Derby or SQL Server Express database by copying the system folder in **i-Vu_Pro_x.x\webroot**.

- Back up a MySQL, MS SQL Server, Oracle, or PostGreSQL using the database management system's backup method. Also, copy the system folder in **i-Vu_Pro_x.x\webroot.**

  ⚠ **CAUTION** Do <u>not</u> use SiteBuilder's **Replicate** feature to back up your database.

i-Vu server requirements

The recommended minimum for an i-Vu server:

• Dual core processor

• 4 GB RAM

• 30 Gigabyte hard drive

• Communications link of 10 Mbps or higher

• 64-bit server (See *Upgrading from a 32-bit server to a 64-bit server* (page 36).)

The i-Vu application will work with slower computers and slower links, but the results may not be satisfactory.

A i-Vu server must be 64-bit. Memory requirements vary, based on the:
• number of pieces of equipment and device instances
• size of the control programs
• number of simultaneous users logged in to the i-Vu application

For this size system...	With this number of...		The computer should have at least a dual core processor and...				
	Instances of equipment and devices [1]	Physical Points and Display Objects	Passmark Total Score [2]	Passmark Single-threaded Score	RAM Minimum/ Recom-mended	JVM Memory Minimum/ Recom-mended	Disk Mark[4]
Small	0 - 250	0 - 1000	2000	800	4 / 4GB	1 / 1GB	3000
Medium	250 - 1000	1000 - 5000	3000	1000	4 / 8GB	2 / 4GB	5000
Large	1000 - 10,000	5000 - 50,000	5000	1400	6 / 12GB	4 / 8GB	15000
Huge	more than 10,000	more than 50,000	6500	1600	16 / 16GB [3]	12 / 12GB	30000

[1] Total number of control programs and controllers.

[2] For more information, see www.CPUbenchmark.net.

[3] For a huge system with minimal user activity, the average piece of equipment or instance device requires approximately 300KB of server RAM. Contact Technical Support for server sizing recommendations.

[4] SATA SSDs are recommended as baseline performance for WebCTRL on all systems. Large systems benefit from the faster PCIe interface SSDs on both the WebCTRL and database servers. Passmark's Disk Rating "Disk Mark" can be useful in gauging disk performance when designing new servers.
Rotational Drives: 900-1500
SATA SSDs: 3000-5000
PCIe SSDs: 10000-30000

Converting your trend database

If you are upgrading from v6.0 or earlier, you must convert your current trend database to the trend database structure for v6.5 and later systems.

- For a Derby database, the trends are converted as part of the upgrade process in SiteBuilder's upgrade wizard.

- For an SQL Server, MySQL, or PostgreSQL database, use one of the following methods to convert your current trends:

  - As part of the upgrade process in SiteBuilder's upgrade wizard. The i-Vu system is not running during the upgrade.
  - Before upgrading using the Trend Conversion Utility (highly recommended for large trend databases. See "To determine the size of your trend database" below.) This method is faster and the utility can run while the i-Vu system is running.

  Before using either of these methods, verify that the trend database management system user has 'drop' authority.

NOTES

- If your trend database is on a different server than the i-Vu system, you have the option of installing and running the Trend Conversion Utility on either server. However, the conversion will run faster if you run it on the trend database server.

- If you created any custom software to access the i-Vu trend data, it may not work with the new trend database structure. Contact Carrier Control Systems Support for assistance.

- Upgrading to and/or running a i-Vu v6.5 or later system uses more database resources than previous versions.

⚠️ **CAUTIONS**

- If you use the Trend Conversion Utility, back up your system before you run the utility and again before you upgrade the system in SiteBuilder. Make the backup using the database management system's backup method, and also copy the system **webroot** folder.

- Disable trend expiration in your source trend database. In i-Vu, go to **System Settings** > **Scheduled Tasks**, and uncheck **Remove expired historical trends daily at ____**.

To determine the size of your trend database

In the i-Vu interface, select **System Options** > **System Settings** > **General** tab > **System Statistics** button.

Size	Small	Medium	Large	X-Large
Trend Samples	< 100M	100M - 500M	500M - 650	> 650M
Conversion time using Trend Conversion Utility	1 hour	1 - 4 hours	4 - 6 hours	> 6 hours

Options for migrating and upgrading the database

NOTE The "system folder" refers to the folder with the name of your site in the webroot folder, as in the following example, **i-Vu_Pro_x.x** > **webroot** > **acme_corp**.

From	To	Steps to migrate to the 64-bit i-Vu Pro v7.0 application on a new computer
Access	Access or MSDE	SiteBuilder v6.5 and later no longer supports Access and MSDE database types. If a system uses one of these, we recommend that you migrate to a Derby database in the 32-bit v6.0 i-Vu application before upgrading to the v7.0 version.
Access	Derby	**1** Install the i-Vu Pro v6.0 32-bit application from the DVD on your existing computer. **2** Upgrade database in SiteBuilder. Select **File** > **Upgrade i-Vu System**. **3** In SiteBuilder, select **File** > **Manage Database** > **Migrate/Replica** > **Migrate**. Select **Derby**. **4** Copy upgraded i-Vu system folder to your own USB drive. **5** On your new computer, install the 64-bit i-Vu Pro v7.0 application from the Installation USB drive. **6** Upgrade database in SiteBuilder. Select **File** > **Upgrade i-Vu System**. **7** Copy the system folder from your USB drive into the webroot folder. **8** Upgrade database in SiteBuilder. Select **File** > **Upgrade i-Vu System**.
Access	MS SQL	SiteBuilder v6.5 and later no longer supports Access and MSDE database types. If a system uses one of these, we recommend that you migrate to a Derby database in the 32-bit v6.0 i-Vu application before upgrading to the v7.0 version. **1** On your existing computer, install the 32-bit i-Vu Pro v6.0 application from the DVD. **2** Upgrade database in SiteBuilder. Select **File** > **Upgrade i-Vu System**. **3** In SiteBuilder, select **File** > **Manage Database** > **Migrate/Replica** > **Migrate**. Select **Derby**. **4** Copy upgraded i-Vu system folder to your own USB drive. **5** On your new computer, install the 64-bit i-Vu Pro v7.0 application from the Installation USB drive. **6** Install 2005/8/12 MS SQL. See Upgrade to MS SQL Server 2005-8-12 on a new computer. **7** Copy the system folder from your USB drive into the webroot folder. **8** In SiteBuilder, select **File** > **Manage Database** > **Migrate/Replica** > **Migrate**. Select **MS SQL**.

From	To	Steps to migrate to the 64-bit i-Vu Pro v7.0 application on a new computer
MSDE	MS SQL	SiteBuilder v6.5 and later no longer supports Access and MSDE database types. If a system uses one of these, we recommend that you migrate to a Derby database in the 32-bit v6.0 i-Vu application before upgrading to the v7.0 version.
		1 On your existing computer, install the 32-bit i-Vu Pro 6.0 application from the DVD.
		2 Upgrade database in SiteBuilder. Select **File** > **Upgrade i-Vu System**.
		3 In SiteBuilder, select **File** > **Manage Database** > **Migrate/Replica** > **Migrate**. Select **Derby**.
		4 Copy upgraded i-Vu system folder to your own USB drive.
		5 On your new computer, install the 64-bit i-Vu Pro v7.0 application from the Installation USB drive.
		6 Install 2005/8/12 MS SQL. See Upgrade to MS SQL Server 2005-8-12 on a new computer.
		7 Copy the system folder from your USB drive into the webroot folder.
		8 In SiteBuilder, select **File** > **Manage Database** > **Migrate/Replica** > **Migrate**. Select **MS SQL**.
MS SQL	MS SQL	**1** Copy existing i-Vu system folder on your own USB drive.
		2 Backup 4 databases in MS SQL on your USB drive.
		3 On your new computer, install the 64-bit i-Vu Pro v7.0 application from the Installation USB drive.
		4 Install 2012, 2014, or 2016 MS SQL. See Upgrade to MS SQL Server 2005-8-12 on a new computer.
		5 *Restore above databases to upgraded MS SQL* (page 43).
		6 On your new computer, install the 64-bit i-Vu Pro v7.0 application from the Installation USB drive.
		7 Upgrade database in SiteBuilder v7.0. Select **File** > **Upgrade i-Vu System**.

Upgrading to the i-Vu Pro v7.0 application

To begin, see *To register and download your i-Vu Pro license* (page 28).

If you are upgrading from an i-Vu Standard or Plus system that uses a USB Adapter cable (CCN or Open), you must replace the cable with a router. Use an i-Vu CCN Router or i-Vu Link for a CCN network or an i-Vu Open Router, i-Vu Open Link, i-Vu XT Router, or i-Vu XT BACnet Link.

If your web server is model MP945-D or MP965-D, you must purchase a new web server in order to convert your system to an i-Vu v7.0 application. Your model number is on the bottom of your web server.

If your database is Access®, MSDE, or SQL Server Express, be sure you have followed the instructions in *Before you upgrade* (page 29).

The table below is a quick outline of steps. Each step is explained in detail in the sections that follow.

Existing system	Notes	Procedure	
i-Vu CCN Standard v4.2 or i-Vu Open Standard v5.1	You must first upgrade to i-Vu Standard v7.0 application and then convert that to the i-Vu Pro v7.0 application.	**1**	Backup system to your PC or USB from Management Tool.
		2	Install i-Vu Standard v7.0 application on your web server.
		3	Restore system to upgraded web server from the Management Tool.
		4	Export clipping file. Go to **System Options** > **General** tab > **Clippings** > and click the **Export** button.
		5	On your new computer, install the 64-bit i-Vu Pro v7.0 application from the Installation USB drive.
		6	Open SiteBuilder v7.0 and import clipping. **File** > **Clipping** > **Import**.
i-Vu CCN Plus v4.2 or i-Vu Open Plus v5.1	You must first upgrade to i-Vu Plus v7.0 application and then convert that to i-Vu Pro v7.0 application	**1**	Backup system to your PC or USB from Management Tool.
		2	Install i-Vu Plus v7.0 application on your web server.
		3	Restore system to upgraded web server from the Management Tool.
		4	Export clipping file. Go to **System Options** > **General** tab > **Clippings** > and click the **Export** button.
		5	On your new computer, install the 64-bit i-Vu Pro v7.0 application from the Installation USB drive.
		6	Open SiteBuilder v7.0 and import clipping. **File** > **Clipping** > **Import**.

Existing system	Notes	Procedure
Mixed i-Vu CCN Plus v.4.2 and i-Vu Open Plus v5.1		Follow instructions in *To merge a mixed system to the i-Vu Plus v7.0 application* (page 17). Once you have both databases merged in a single web server that is running the i-Vu v7.0 application, do the following: **1** Backup system to your PC or USB from Management Tool. **2** Export clipping file. Go to **System Options** > **General** tab > **Clippings** > and click the **Export** button. **3** On your new computer, install the 64-bit i-Vu Pro v7.0 application from the Installation USB drive. **4** Open SiteBuilder v7.0 and import clipping. **File** > **Clipping** > **Import**.
i-Vu Standard or Plus v6.0 and later	You must first upgrade to the v7.0 application and then convert that to i-Vu Pro v7.0 application.	**1** Backup system to your PC or USB from Management Tool. **2** Install i-Vu Standard or Plus v7.0 application on your web server. **3** Restore system to upgraded web server from the Management Tool. **4** Export clipping file. Go to **System Options** > **General** tab > **Clippings** > and click the **Export** button. **5** On your new computer, install the 64-bit i-Vu Pro v7.0 application from the Installation USB drive. **6** Open SiteBuilder v7.0 and import clipping. **File** > **Clipping** > **Import**.
i-Vu CCN Pro v3.1	You must install the latest driver in all i-Vu Integrators. They download automatically with the installation. See Upgrade v3.1 or v4.2 database in SiteBuilder.	SiteBuilder v6.5 and later no longer supports Access and MSDE database types. If a system uses one of these, we recommend that you migrate to a Derby database in the 32-bit v6.0 i-Vu application before upgrading to the v7.0 version. **1** On your new computer, install the 64-bit i-Vu Pro v7.0 application from the Installation USB drive. **2** Upgrade database in SiteBuilder. Select **File** > **Upgrade i-Vu System**. **3** Upgrade graphics in ViewBuilder, using the plug-in.

Existing system	Notes	Procedure
i-Vu CCN Pro v4.2	See Upgrade v3.1 or v4.2 database in SiteBuilder.	SiteBuilder v6.5 and later do not support Access and MSDE database types. If a system uses one of these, we recommend that you migrate to a Derby database in the 32-bit v6.0 i-Vu application before upgrading to v7.0.
		1 On your new computer, install the 64-bit i-Vu Pro v7.0 application from the Installation USB drive.
		2 Upgrade database in SiteBuilder. Select **File** > **Upgrade i-Vu System**.
i-Vu Pro v6.5		**1** If you have a 32-bit system, you can only run v7.0 on a 64-bit server. See *Upgrading from a 32-bit server to a 64-bit server* (page 36).
		2 Follow the steps in *Install the i-Vu Pro application and use SiteBuilder to upgrade database.* (page 37)

For more details on upgrading to the i-Vu Pro v7.0 application and migrating to different databases, see Options for migrating and upgrading the database.

Upgrading from a 32-bit server to a 64-bit server

i-Vu v7.0 will not run on a 32-bit server. To upgrade, first install i-Vu v7.0 on a 64-bit server. The method for upgrading your system depends on the database type or size.

Derby database

1   Copy your existing system's **i-Vux.x\webroot\<system name>** folder.

2   Paste the copied files into the **i-Vu7.0\webroot** folder on the 64-bit server.

3   Open the system in SiteBuilder.

4   Select **File** > **Upgrade** > **i-Vu system** and follow the prompts to upgrade the system.

All Non-Derby databases

1   Open your existing system in SiteBuilder.

2   Select **File** > **Manage Database** > **Migrate/Replicate**, and then select **Replicate database** to create a copy of the system in a Derby database.

3   Copy the replicate system's **i-Vux.x\webroot\<system name>** folder.

4   Paste the copied files into the **i-Vu7.0\webroot** folder on the 64-bit server.

5   Open the system in SiteBuilder.

6   Select **File** > **Upgrade** > **i-Vu system** and follow the prompts to upgrade the system.

7   Select **File** > **Manage Database** > **Migrate/Replicate**, and then select **Migrate to a different database type** to change the system back to the original database type.

Very large databases

If you are moving a very large system to a 64-bit server, contact Technical Support for assistance.

Install the i-Vu Pro v7.0 application and use SiteBuilder to upgrade database

SiteBuilder v6.5 and later do not support Access and MSDE database types. If a system uses one of these, we recommend that you migrate to a Derby database in the 32-bit v6.0 i-Vu application before upgrading to v7.0. See Options for migrating and upgrading the database.

Typically, the file path for an i-Vu Pro system is the default path: C:\i-Vu_Pro_$x.x$.

1   Back up your system before upgrading. Once a system is upgraded, you cannot retrieve or access the database with your previous i-Vu installation.

2   Install the i-Vu Pro v7.0 application from the Installation USB drive.

3   Open SiteBuilder v7.0 and select **File** > **Upgrade i-Vu System**.

4   Click **Browse** and select the system folder for your previous i-Vu Pro system: C:\i-Vu_Pro_x.x\webroot.

5   Check **Make this the default system for iVu** and click **Next**.

6   Confirm that you have backed up and click **Next** when the **Upgrade complete** message appears.

7   The upgrade process copies the necessary system files to your i-Vu Pro v7.0 installation folder and performs the required database upgrade steps.

Upgrading drivers

- When upgrading a v3.1 database, the drivers for the i-Vu Integrators are automatically updated to the latest drivers. v3.1 drivers do not function in v7.0.

- When upgrading a v4.2 or later database, a dialog lists all the current drivers and you can uncheck them if you do not want them to be upgraded. v4.2, v6.0, and v6.5 drivers will function in v7.0.

8   Log in to your new i-Vu Pro v7.0 application using an Administrator account.

Upgrade from Access and i-Vu Pro v3.1 or v4.2 application to Derby, new computer, and 64-bit v7.0

i-Vu Pro v3.1 and v4.2 only ran on a 32-bit platform and v7.0 is only 64-bit. since In the 32-bit v6.0, Access or MSDE is supported and they are not supported in the 64-bit version.

Access®, MSDE, and SQL Server Express databases—As of v6.5, SiteBuilder no longer supports Access and MSDE database types. As of v7.0, SiteBuilder no longer supports SQL Server Express. If your system uses one of these, you need to migrate to a Derby database in your current i-Vu version before upgrading to v7.0
NOTE Derby became a supported database type in v6.0. If your current version is earlier, you will need to upgrade to v6.0 32-bit, migrate to Derby, and then upgrade to v7.0 64-bit.

1 Install the 32-bit version of the i-Vu Pro v6.0 application on your current computer.

   NOTE You will still have your i-Vu Pro v3.1 or v4.2 system there, also.

2 Make a backup of your current i-Vu system by copying the system folder under the webroot folder.

3 Upgrade database in SiteBuilder. Select **File** > **Upgrade i-Vu System**.

4 In SiteBuilder, select **File** > **Manage Database** > **Migrate/Replica** > **Migrate**. Select **Derby**.

5 Copy the migrated system folder from the i-Vu v7.0 webroot folder to your own USB drive.

6 Install the i-Vu v7.0 application from the Installation USB drive.

7 Copy the saved Derby database from your USB drive to the webroot folder of the new i-Vu Pro v7.0 application.

Upgrade from the i-Vu v3.1, v4.2, or v6.0 application that uses SQL Server 2000, 2005, 2008 to SQL Server 2012, 2014, or 2016 on a new computer

Follow these procedures to successfully upgrade and migrate your system and computer:

1 *Copy system folder from your previous the i-Vu Pro application and back up the i-Vu databases in MS SQL* (page 38).

2 *Install the i-Vu Pro v7.0 application and SQL Server on your new computer.* (page 39)

3 *Restore previous i-Vu databases to upgraded SQL.* (page 43)

4 *Upgrade system in SiteBuilder* (page 44).

Copy i-Vu v3.1, v4.2, or 6.0 system folder and backup in SQL to USB drive

⚠ **CAUTION** You must have installed the i-Vu Pro v7.0 application on your existing computer and set up a database in SiteBuilder before following these steps.

Use this procedure if you have been using SQL Server 2000, 2005, or 2008 and are upgrading to SQL Server 2012, 2014, or 2016 on a new computer.

Copy data from computer used for i-Vu Pro v3.1 or v4.2

1   Stop the i-Vu Pro Server and close any i-Vu applications. If the i-Vu Pro Server is installed as a service, stop it.

2   Browse to your i-Vu Pro v3.1 or later webroot folder and copy the system folder to a USB drive.

In SQL, back up the i-Vu databases to a USB drive

NOTE The i-Vu databases are named main, alarms, audit, and trends.

1   Log in to **SQL Studio Manager** using your Windows Authentication login.

2   Expand **Databases** on the left.

3   Right-click any of the 4 databases and select **New task** > **Backup**.

4   In the **Backup** > **General** tab, verify that the **Backup Type** is **Full**.

5   Under **Destination**, click **ADD**.

6   In the popup window, browse to the USB drive and enter a filename (i.e. main, alarms etc..)

7   Click **OK** and then **OK** again to return to the original backup window.

8   Under **Options**, check **Overwrite all existing backup sets**.

9   Click **OK** to start the backup.

10   Repeat the above steps for the 3 remaining i-Vu databases.

Install the i-Vu Pro v7.0 application and SQL Server on new computer

After installing the i-Vu Pro v7.0 application from the Installation USB drive on your new computer, use the following steps:.

1   If you do not already have MS SQL installed, install the 2014, 2016, or 2017 version and any applicable SQL service packs. For instructions on how to install any version of SQL Server, go to http://msdn.microsoft.com/en-us/library/default.aspx and, in the Search window, type **Install <your SQL Version >**. Select Authentication Mode - Mixed Mode during setup and enable TCP/IP on port 1433.

   NOTE As you install MS SQL Server, you must select certain options to use with i-Vu. For all other options, you may keep the defaults or select your own values. Select the following:

   ○   SQL Server Database Services

   ○   Workstation components, Books Online, and development tools

   ○   Authentication Mode - Mixed Mode (Windows Authentication and SQL Server Authentication)

      NOTE The password you specify grants extensive privileges.

   ○   Service Account for database engine – NT Authority\System

   ○   Enable TCP/IP on port 1433

2   If already installed, you must have selected **Authentication Mode - Mixed Mode** during setup and have TCP/IP enabled on port 1433.

If you are the database administrator and TCP/IP is not enabled on port 1433, or you are unsure of the port, follow the procedure below, 'To enable TCP/IP on port 1433' and then proceed to Step 1.

Install the program and follow the instructions below. Record your SQL Administrator information here:

| User name | _____ |
| Password | _____ |

To enable TCP/IP on port 1433

a   Click **Start** > **All Programs** > **Microsoft SQL Server <your SQL version>** > **Configuration Tools** > **SQL Server Configuration Manager**.

b   Expand the **SQL Server Network Configuration**.

c   Select **Protocols** for <server instance> where <server instance> is the SQL Server running the i-Vu application.

d   In the next window, under **Protocol Name**, double-click **TCP/IP**.

e   On the **Protocol** tab, under **General**, next to **Enabled**, select **Yes**.

f On the **IP Address** tab, scroll down to the **IPAll** section.

g   Clear any values from the **TCP Dynamics Port** field.

h   In the **TCP Port** field, enter `1433`, then click **OK**.

i Close the **SQL Server Configuration Manager**.

j Restart the SQL Server Service.

Step 1: Connect to the database engine for i-Vu SQL Server

a   Determine if Microsoft SQL is running on the i-Vu server:

- ○   If Microsoft SQL is running on the i-Vu server, select **Start** > **Programs** > **Microsoft SQL Server** > **SQL Server <your SQL version>** > **Management Studio**.

- ○   If Microsoft SQL is running on a different computer, download the SQL Management Studio and install it on the i-Vu server.

b   In the **Connect to Server** dialog box, select or enter the information using the table below.

c   Click **Connect**.

To set up the databases for a new i-Vu system, complete steps 2, 3, and 4 below.

Field	Notes
Server type	Database engine.
Server Name	The address or name of the computer running the SQL Server service. Get from your database administrator.
Authentication	Get from your database administrator.
User name	Get from your database administrator.
Password	Get from your database administrator.

Step 2: Create a database instance

a   In the **Object Explorer** pane, right-click **Databases**, then select **New Database**.

b   In the **Database name** field, type a name such as `xxx_main`; this will be your **Main Database Connect String Instance** in SiteBuilder. Record the name below.

c   Under **Select a Page**, select the **Options** page.

d   From the **Recovery model** drop-down list, select **Simple**.

e   Click **OK**.

f Repeat steps a-e to create the **Alarms**, **Trends**, and **Audit Log** databases.

> **NOTE** Database names are case-sensitive and must be 18 characters or less in length.

> **TIP** Record the database names here for future reference:

    Main   _____

    Alarms   _____

    Trends   _____

    Audit Log   _____

Step 3: Create a database user

a   In the **Object Explorer** pane, click the plus sign to the left of **Security**.

b   Right-click **Logins**, then select **New Login**.

c   In the **Login name** field, type in a login name for i-Vu, such as XXX_`User`; this will be your **Database User Login** in SiteBuilder.

> **TIP** Record the **role name** here for future reference _____.

d   Select **SQL Server authentication**.

e   In the **Password** and **Confirm password** fields, type a password; this will be your **Database User Password** in SiteBuilder.

> **TIP** Record the password here for future reference _____.

f Clear the following checkboxes:

- **Enforce password policy**
- **Enforce password expiration**
- **User must change password at next login**

g   In the **Default database** drop-down list, select **master**.

h   In the **Select a page** pane, select the **User Mapping**.

i Under **Users mapped to this login**, select the **Map** checkbox next to a database name you created in Step 2.

j Under **Database role membership for:** section, select the following checkboxes:

- **db_owner**
- **public**

k   Click **OK**.

l Repeat steps i-k for each remaining database.

m   Close SQL Server Management Studio.

Step 4: Set up the SQL Server databases in SiteBuilder

a   In SiteBuilder, select **File** > **New**.

b   Type a name for the system.

c   Select SQL Server from the **Database Type** drop-down list.

d   Select **Make this the default system for i-Vu** if you want the i-Vu application to automatically run this system each time it starts.

e   Complete the remaining fields, then click **Next**.

f Enter the **Connect String** information for each i-Vu database. See below.

g   Click **Finish**.

NOTE To change **Database Connect Strings** for an existing system, select **Modify database connection parameters** in the **File** > **Open** dialog box and then click **Next**.

Database Connect Strings:

Server	Type one of the following:
	• `localhost` if the i-Vu application and the database are on the same machine
	• The name or IP address of the machine that the database is on if different than the i-Vu application
Port	Do one of the following:
	• Type the default port of 1433.
	• Type the port number that the database uses for communication if different than the database default.
Instance	The name that you gave the i-Vu database in step 2b.
	NOTE If the 4 i-Vu databases do not reside under the default instance of SQL, then the instance name must be specified under the **Instance** column. The syntax for specifying the instance name of the SQL server is `<Database>;instance=<instance name>`. For example, if the SQL instance name is hvac, the syntax for the Instance field for the main database called i-Vu_Main would be `i-Vu_Main;instance=hvac`.

Database User:

Login	The user name that you entered in step 3c.
Password	The password that you entered in step 3e.

Restore i-Vu Pro v3.1 or later databases to upgraded SQL

1. Insert ihe USB drive that contains the database backups from your i-Vu Pro v3.1 or later system into your computer.

2. Open **SQL Studio Manager** and expand Databases.

3. Right-click the **Main database** and select **Tasks** > **Restore** > **Database**.

4. Under **Source** for restore, select **From device**.

5. Click on the browse icon on the right.

6. Click the **Add** button in the **Specify Backup** window.

7. Browse to the USB drive that contains the backed-up databases and select main.back (or whatever name you assigned to the main database).

8. Click **OK** twice to return to the **Restore database** window.

9. Check the box under the Restore column.

10. Select Options at the top left of the **Restore database** window.

11. Check **Overwrite existing database** and click **OK**.

12. A popup message will appear showing the restore was successful.

13. Repeat the above for the remain three databases.

14. Close **SLQ Studio Manage**r.

Upgrade in SiteBuilder v7.0

1 Open **SiteBuilder 7.0** and select **File** > **Upgrade i-Vu System**.

2 Browse to your i-Vu Pro v3.1 or later system folder on the USB drive.

3 Enter a new system name, if desired.

4 Enter the name of the computer where the SQL server is installed.

NOTE This is usually the PC name itself. (See below)

5 Leave the port field blank unless the IT department insists that a port number be entered.

NOTE Default port number for SQL Server is 1433.

6 Enter the name of the four databases that were created in SQL Studio Manager on the new computer.

7 Enter the username and password that was created in SQL Studio manager for the new i-Vu Pro v7.0 installation.

8 Click **Next**.

9 Confirm that you have backed up and click **Next** when the **Upgrade complete** message appears.

10 The upgrade process copies the necessary system files to your i-Vu Pro v7.0 installation folder and performs the required database upgrade steps.

Upgrading drivers

- ○ When upgrading a v3.1 database, the drivers for the i-Vu Integrators are automatically updated to the latest drivers. v3.1 drivers do not function in v7.0.

- ○ When upgrading a v4.2 database, a dialog lists all the current drivers and you can uncheck them if you do not want them to be upgraded. v4.2 drivers will function in v7.0.

11 Enter a password and click **Next** to complete the database upgrade.

NOTE If the 4 i-Vu databases do not reside under the default instance of SQL, then the instance name must be specified under the **Instance** column. The syntax for specifying the instance name of the SQL server is `<Database>;instance=<instance name>`. For example, if the SQL instance name is hvac , the syntax for the Instance field for the main database called iVu_Main would be `iVu_Main;instance=hvac`.

Update your routers and controllers for the i-Vu Pro v7.0 application

IMPORTANT! Update your routers and controllers only **once**. Use either the i-Vu **or** Field Assistant application.

Router and controller configurations are maintained when they are updated using the procedure below.

Step 1: Update the files for routers

1 Select the router that you wish to update in the navigation tree.

2 Right-click and select **Driver Properties**.

3 Select **Properties** page > **Update** tab.

4 If the database contains two or more routers, you must check **Change for all controllers of this type?** in the **Controller** section.

5 Click **Update**. A message appears **Changes the driver and screen file to use the current library version. Continue?**

   NOTE If more than one router exists, the additional routers are listed below the **Update** button.

6 Click **OK.**

7 Click **Accept.**

Step 2: Update the files for controllers

1 Double-click the controller in the navigation tree or right-click and select **Configure**.

2 If you have multiple controllers of the same type, enable **Change for all control programs of this type?**.

3 Click **Update** under **Control Program**. A message appears **Changes the control program, view, driver, and screen file to use the current library version. Continue?**

4 Click **OK.** When the message **Updated to the library version xx.** appears, click **Close.**

5 Repeat steps 1 - 4 for any additional types of controllers.

6 Click **Close** again.

Step 3: Update the files for CCN controllers

1 In the navigation tree, select the CCN device manager associated with the controllers that are to be updated.

2 Select **Devices** > **CCN Discovery** and re-scan any controllers that need to be updated by checking **Rescan Controllers Selected Below for Configuration Changes** and clicking **Start Scan**.

Step 4: Apply the update to routers and controllers

1 Select the **System** ![icon] in the navigation tree and then select the **Downloads** page.

2 If you wish to apply the new SAL file to your entire system, you can use this page to compare to your navigation tree and verify that you have selected all of your routers and controllers for download.

   NOTE Only the CCN Gateway and device managers require download, so the CCN controllers/equipment will not be listed.

3 A network's controllers download in the order shown. To change the order, select a controller(s), then drag and drop or click **Move to Top** or **Move to Bottom**.
   EXCEPTION If a controller's router requires a download, it will download first regardless of its position on the Downloads page. Click the **Start** button.

   NOTES

   ○ Use **Ctrl+click**, **Shift+click**, or the **Select All** checkbox to select multiple controllers.

4 See To download from the Downloads page in Help for more details.

Upgrade i-Vu Pro v3.1 graphics and custom control programs

Upgrade v3.1 graphics

i-Vu 3.1 graphics files (.view files) must be upgraded to be used in the i-Vu Pro v7.0 application.

The graphics were copied to your v7.0 system when you upgraded the database in SiteBuilder v7.0. However, you must upgrade your graphics in ViewBuilder v7.0.

Area graphics in the i-Vu CCN Pro v3.1 application may have been designed to use variable color expressions, which change zone color based on fixed temperature ranges. Colors in a zone on a floorplan graphic do not change dynamically in i-Vu Pro v7.0. The Equipment Color control oval ![oval icon] takes over this function and changes color based on the specific setpoints for the zone.

The equipment's color in the oval is based on the current zone temperature and the position of the colored bands in the setpoint control.


Floorplan images used in the i-Vu v3.1 application often had random background colors assigned to each dynamically changing zone. These background colors will **not** be shown once the graphics have been upgraded.

When you open an i-Vu v3.1 .view file in ViewBuilder, you are prompted to upgrade the graphic and select a fill color for the zone. We recommend selecting a neutral color that is distinguishable from the wall color.
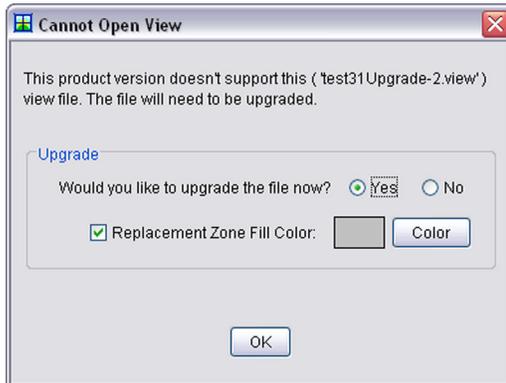
You can convert one graphic at a time, or you can convert an entire folder at once by installing the plug-in before upgrading your graphics.

1   Select **Tools** > **Configure Tools** > **Upgrade 3.1 graphics** and click **Add.**
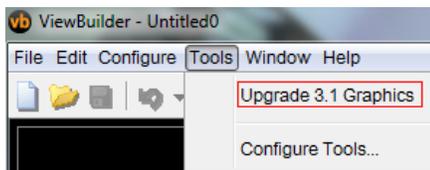
2   Select **upgrade-3_1-graphics.viewbuilder-plugin** and click **Open.**

3   Once the plug-in is installed, all the graphics in a folder (views and symbols) may be upgraded at once by selecting **Tools** > **Upgrade 3.1 Graphics.**

Upgrade v3.1 custom control programs

Library

The number of types of devices supported in the built-in equipment library has been greatly expanded since the i-Vu Pro v3.1 application.

- If the control program in the Integrator is only being used to access values in the CCN device, it is strongly recommended to use the control programs that are automatically generated when the devices are discovered.

- If equipment is using control programs that were automatically generated during discovery in v3.1, you can select those equipment on the **Devices** page and re-scan them to update their control programs and graphics to the current versions.

- If you wish to replace a control program that was made in the Snap application with a program that is automatically generated, you will have to delete the equipment from the **Devices** page and rediscover it. Deleting an equipment results in losing schedules, alarm actions, setpoints, or other parameters that are defined in that equipment. Schedules or alarm actions defined further up the hierarchy will not be affected.

Custom Control Programs

- If you have custom logic created in the Snap application that is being used as a part of the control sequence, you cannot replace the custom control program with the automatically-generated one.

- Your Snap-created control program will still run in an i-Vu Integrator that has been upgraded to run with the i-Vu Pro v7.0 application.

- In order for a custom control program to support any of the new features available in the i-Vu Pro v7.0 application, it is necessary to apply an update to the Snap application under the i-Vu Pro v3.1 application.

To apply the Snap update:

1 Download the update file called **lv42_eikon.update** from the Service Intranet.

2 Open SiteBuilder v3.1.

3 Select **Actions** > **Apply Update.**

4 Browse to the location of the .update file and select it.

5 The screen should appear as seen below. Click **Apply** to apply the Snap patch.
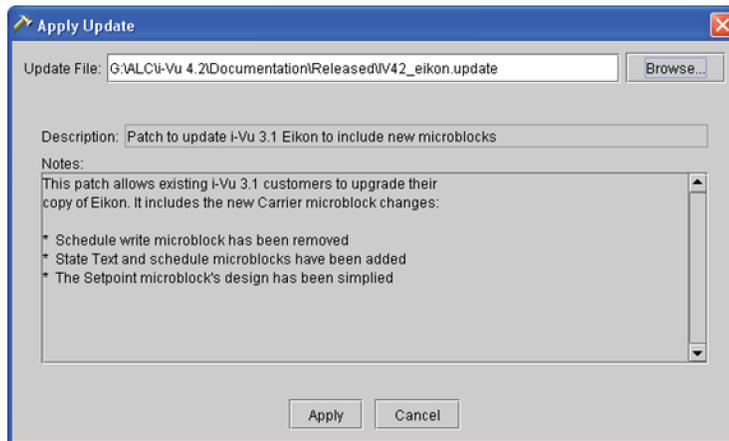
- You will need to use the Snap application that was a part of your i-Vu Pro v3.1 system to edit any custom control programs.

    NOTE Custom programs created with Snap will only run in an i-Vu Integrator. They are not supported in i-Vu CCN Routers.

Local override

- Local overrides were not allowed in the i-Vu Pro v3.1 application.

- Control programs that are automatically generated during the discovery process in the i-Vu CCN Pro v4.2 application will support local overrides.

- To support new features in an Snap-generated control program, you need to make some small changes.

  - v3.1 control programs typically had a section like the one shown in Figure 1. This took the current schedule state and used a Carrier Schedule Write microblock to write it to a CCN device. This should be replaced with logic similar to that shown in Figure 2.

Figure 1

  - The logic shown in Figure 2 uses a new Carrier Schedule microblock and DOES NOT use either of the microblocks shown in Figure 1. The bottom output from the new Carrier Schedule microblock indicates if the device is in override. If you wish to use the Tenant Override Billing add-on, you must add a binary trend with a reference name of **override** (case sensitive) to this output, as shown in Figure 2.

Figure 2

After the upgrade

- **Add-ons**
  - Some add-ons have been updated for compatibility with the i-Vu v7.0 application . Be sure that you have the latest version of the add-ons that were used in the previous i-Vu version.

  - In the i-Vu Plus application, if the add-on is signed and supported, go to the **System Menu** > **System Options** > **Add-ons** tab, select the add-on, then click **Remove Add-on and Keep Data**. Install the latest version of the add-on.

    - In the i-Vu Pro application, **System Menu** > **System Options** > **System Settings** > **Add-ons** tab, select the add-on, then click **Remove Add-on and Keep Data**. Install the latest version of the add-on.

  - To increase security of a i-Vu system, by default, v7.0 allows only add-ons that are supported and signed by Carrier.
    - In the i-Vu Plus application, you cannot change this default.
    - In the i-Vu Pro application, you can run an unsigned add-on. You must open SiteBuilder and go to **Configure** > **Preferences** > **Web Server**, and check **Allow unsigned add-ons**.

- **Schedules**—Descriptions are limited to 50 characters in a v6.0 or later system using v6-00a or later drivers. You must shorten any schedule descriptions over 50 characters or the schedules will not download.

- **Display settings**—If i-Vu images appear fuzzy after upgrading and you have a Windows 7 computer, set the computer's **Control Panel** > **Display** setting to **Smaller - 100%**.

- **Alarm sounds**—If an operator's **My Settings** page had an alarm sound file defined, copy the file from the old system to the new system.

- **Interface images and Graphics pages**—On each client computer, clear the web browser's cache to avoid error messages, strange graphics, or images.
  - In Internet Explorer®, search on "delete temporary Internet files".
    NOTE If you had the i-Vu application saved as a Favorite, uncheck **Preserve Favorites website data**.
  - In Safari®, search on "empty cache".
  - In Mozilla® Firefox®, search on "clear cache".
  - In Google™ Chrome™, search on "delete cache".

i-Vu Pro application only:

•**SSL**—If your old system used SSL, you will need to set up TLS again after upgrading. See "To set up i-Vu server communication" in SiteBuilder Help. If you use Internet Explorer®, you must check **Use TLS 1.2** Internet Explorer's security options.

•**Windows® service**—If you run i-Vu Pro Server as a Windows service, you must uninstall the service for your previous i-Vu Pro version, and then install the service for your new i-Vu Pro version. See "Running i-Vu Pro Server as a Windows® service" in i-Vu Pro Help for instructions on uninstalling and installing i-Vu Pro Server service.

•**MySQL**
  If you use MySQL and your system is v4.2 or earlier, copy the MySQL driver from **i-Vux.x\lib** to the **i-Vux.x\database-drivers** folder.
  If you use MySQL and your system is v3.1, copy the MySQL driver from **i-Vux.x\bin\lib** to the **i-Vux.x\database-drivers** folder.
  If the driver is not named **mysql-driver.jar**, change its name to this.

Document revision history

Important changes to this document are listed below. Minor changes such as typographical or formatting errors are not listed.

Date	Topic	Change description	Code*
5/18/20	Cover	Updated logo	C-D
	Requirements	Added Disk Mark column to table	X-TS-RB-E
10/8/19	Merging a mixed system to the i-Vu® Plus v7.0 application	More detailed information added to description of clipping files	C-TS-RD-E
6/18/19	Upgrading to the i-Vu Pro v7.0 application from: i-Vu Standard or Plus v6.0 and later	Moved the step for "Exporting the clipping" to after restoring your system, instead of before.	C-TS-CI-F
6/6/19	Install self-signed certificates for network security	New topic.	C-R-HRDC-O-BR
	Backup data from Management Tool	http changed to https	C-R-HRDC-O-BR
1/31/19	Upgrading to the i-Vu Pro v7.0 application	Clarified upgrading i-Vu Standard or Plus v6.0 and later to i-Vu Pro v7.0	C-TS-CP-O

* For internal use only