# i-Vu® Application
# Upgrade Guide to v6.0

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# To upgrade to the i-Vu® v6.0 application

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# To upgrade a single system to the i-Vu Standard/Plus v6.0 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 v6.0 application.* (page 12)

- You cannot downgrade an i-Vu CCN Pro database to the i-Vu Standard/Plus v6.0 application.

- The i-Vu CCN v4.2 application must be upgraded to v4.2 before you can install v6.0.

## 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 | Memory | System limits |
|---|---|---|
| **MP945-D** | 512 MB | You must purchase a new web server to accommodate v6.0 |
| **MP965-D** | 1 GB | USB CCN Router - 140 CCN controllers<br><br>External routers - 750 CCN controllers<br><br>⚠ **CAUTION** This web server was previously available only for CCN. If you want to add i-Vu Open controllers to your network, we highly recommend you upgrade the memory in the MP965-D to 2 GB. |
| **MP45-DU or MP65-D** | 2 GB | USB Router -<br><br>• 140 CCN controllers<br>or<br>• 60 i-Vu Open controllers<br><br>External routers - 750 controllers<br>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 v6.0. Also, you must replace web server model MP945-D. See table above for details. |
| | Upgrade to v4.2: |
| | **1** Backup system to PC or USB from Management Tool. |
| | **1** Connect upgraded web server to your network. |
| | **2** Install i-Vu v4.2 application from the DVD or USB drive on your web server. |
| | **3** Restore system to upgraded web server from the Management Tool. |
| | **4** Follow instructions to upgrade v4.2 to v6.0. |
| i-Vu CCN Standard v4.2 application with USB CCN Adapter | If using your current web server: |
| | **1** Backup system to PC or USB from Management Tool. |
| | **2** Install i-Vu v6.0 application from the DVD or USB drive on your web server. |
| | **3** Restore system to upgraded web server from the Management Tool. |
| | **NOTE** If you purchase a new MP65-D web server, follow steps 1 and 3 above. |
| i-Vu CCN Plus v4.2 application with i-Vu CCN Router or i-Vu Link | **1** Backup system to PC or USB from Management Tool. |
| | **2** Install i-Vu v6.0 application from the DVD or USB drive on your web server. |
| | **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 | **1** Backup system to PC or USB from Management Tool. |
| | **2** Install i-Vu v6.0 application from the DVD or USB drive on your web server. |
| | **3** Restore system to upgraded web server from the Management Tool. |
| | **NOTE** If you purchase a new MP65-D web server, follow steps 1 and 3 above. |
| i-Vu Open Plus v5.0 or v5.1 application with an i-Vu Open Router or i-Vu Open Link | **1** Backup system to PC or USB from Management Tool. |
| | **2** Install i-Vu v6.0 application from the DVD or USB drive on your web server. |
| | **3** Restore system to upgraded web server from the Management Tool. |

# Capture current i-Vu® web server settings

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

- Click **Main Menu** ▼ in the i-Vu® interface, 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

Addressing
Name: ivu
☑ Obtain an IP address automatically
i-Vu Address: 161 . 145 . 175 . 121
Subnet Mask: 255 . 255 . 254 . 0
IP Gateway Address: 161 . 145 . 174 . 1
DNS Address: 172 . 17 . 100 . 1
Domain: carrier.ivuccn.com

CCN Gateway Address: 161 . 145 . 175 . 122

i-Vu Port Configuration

HTTP : 80      HTTPS : 443

Note: Changing these values forces a webserver restart.

- i-Vu Standard v5.1 addresses

Addressing
Name: ivu
☑ Obtain an IP address automatically
i-Vu Address: 161 . 145 . 175 . 121
Subnet Mask: 255 . 255 . 254 . 0
IP Gateway Address: 161 . 145 . 174 . 1
DNS Address: 172 . 17 . 100 . 1
Domain: carrier.ivuopen.com

USB Network Address: 161 . 145 . 175 . 122

i-Vu Port Configuration

HTTP : 80      HTTPS : 443

Note: Changing these values forces a webserver restart.

- i-Vu Plus v4.2 or v5.1 addresses

**Addressing**

Name: iVu

☐ Obtain an IP address automatically

| | | | | |
|---|---|---|---|---|
| i-Vu Address: | 161 | 145 | 175 | 226 |
| Subnet Mask: | 255 | 255 | 254 | 0 |
| IP Gateway Address: | 161 | 145 | 174 | 1 |
| DNS Address: | 172 | 17 | 100 | 1 |
| Domain: | carrier.ivucon.com | | | |

**i-Vu Port Configuration**

HTTP : 80        HTTPS : 443

Note: Changing these values forces a webserver restart.

# Backup data from Management Tool

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

- Click **Main Menu** ▼ in the i-Vu® interface, 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 the Management Tool:

**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**.

**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 Open web server, as there was an issue accessing the USB drive.

**5** Exit from **Management Tool**.

# Install new i-Vu® 6.0 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 6.0 application.

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

**2** Insert the i-Vu® v6.0 Installation DVD into the i-Vu® web server DVD drive or USB Installation drive into the USB port on the front of the web server.

**3** Shut down the i-Vu® web server by pushing the On/Off button **once**. 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 DVD ejects or the USB drive's light goes off when the installation is complete. This process takes several minutes.

**NOTE**  Do not power off during the installation.

# 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 6.0 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** **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 Step 2 will automatically fill in the other information.
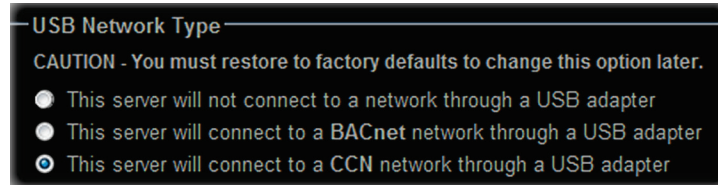
**2** Click **Link to Management Tool** at the bottom of the screen.
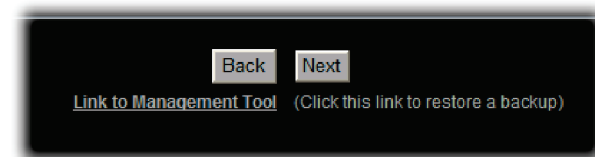
# Restore data from backup

**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 the **System Options** menu > **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 Internet Explorer, 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 hit return.

# Update the equipment library

The i-Vu® SAL files update your i-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/* 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.


There are currently 6 SAL files used by the i-Vu® v6.0 application:

- ivu-6.0-factory-<date>.sal (for PIC-based controllers)

- ivu-6.0-upc-open-<date>.sal (for Universal Protocol Converter-based equipment)

- ahub-6.0-<date>.sal (for 39m AHU applications)

- ivu-6.0-universal-controller-<date>.sal (for UC Open and AppController-based applications)

- ivu-6.0-applicationbuilder-<date>.sal (for CCN applications)

- ivu-6.0-discovery-<date>.sal (for CCN PIC applications)

**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 **Main Menu** ▼, then select **System Options** > **Update** tab.

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


## Step 1: Update library

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

**2**  Click **Main Menu** ▼, 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 support website http://www.hvacpartners.com* 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 routers and controllers.

# Update your routers and controllers

**IMPORTANT!**  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 2 or more routers, you must check **Change for all control programs 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 **Controller**. A message appears **Changes the control program, view, driver and screen files 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 the **Devices** tab 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 site level 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 Download page.Click the **Start** button.

**NOTES**

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

- Up to 5 routers can download simultaneously.

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

## To merge a mixed system to the i-Vu Plus v6.0 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 file** – Includes source files, database, and trends (does not include operators or alarms)

  **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® v6.0 application

**NOTE** Web server model numbers and memory - see *To upgrade to the i-Vu v6.0 application* (page 1).

### 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 | Memory | System limits |
|---|---|---|
| **MP945-D** | 512 MB | You must purchase a new web server to accommodate v6.0 |
| **MP965-D** | 1 GB | USB CCN Router - 140 CCN controllers<br><br>External routers - 750 CCN controllers<br><br>⚠️ **CAUTION** This web server was previously available only for CCN. If you want to add i-Vu Open controllers to your network, we highly recommend you upgrade the memory in the MP965-D to 2 GB. |
| **MP45-DU or MP65-D** | 2 GB | USB Router -<br><br>• 140 CCN controllers<br><br>or<br><br>• 60  i-Vu Open controllers<br><br>External routers - 750 controllers<br><br>Total combined - 750 controllers |

Before you start the upgrade process

- The limit for the i-Vu Standard or Plus v6.0 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 v6.0 application. See *To upgrade to the i-Vu Pro v6.0 application* (page 22). Even if you upgrade to a Pro system, you must first upgrade both of your web servers and systems to the i-Vu Plus v6.0 application. After installing the v6.0 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 v6.0 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 v6.0 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 or an i-Vu Open Router. 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 v6.0 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 v6.0

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

- 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**

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 or i-Vu Open Router

1    *Capture current web server settings* (page 15).

2    *Backup DB1 and DB2 from Management Tool to PC or USB* (page 17).

3    *Install v6.0 on both boxes from the USB drive or CD.* (page 18)

4    *Connect and power up your target web server* (page 18).

5    *Restore DB1 to WS2 from Management Tool* (page 19).

6    *Restore DB2 to WS1 from Management Tool.* (page 19)

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 19)

　　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® v6.0 web server**

**1**   *Capture current web server settings* (page 15).

**2**   *Backup DB1 and DB2 from Management Tool to PC or USB* (page 17).

**3**   *Connect and power up your target web server* (page 18).

**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 19)

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

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 v6.0 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 v6.0 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 **Main Menu** ▼ in the i-Vu® interface, 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 Standard v5.1 addresses

- i-Vu Plus v4.2 or v5.1 addresses



# Backup data from Management Tool

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

- Click **Main Menu** ▼ in the i-Vu® interface, 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® v6.0 software

Use the following steps to install the i-Vu® v6.0 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 i-Vu® v6.0 Installation DVD into the i-Vu® web server DVD drive or USB Installation drive into the USB port on the front of the web server.

**3**   Shut down the i-Vu® web server by pushing the On/Off button **once**. 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 DVD ejects or the USB drive's light goes off when the installation is complete. This process takes several minutes.

**NOTE**   Do not power off during the installation.

# 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 v6.0 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 v6.0. 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 recommended 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 any conflicts that appear 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 problem 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 in the i-Vu® v6.0 interface the imported devices are communicating by selecting one router at a time in the navigation tree and clicking the **Devices** tab.

**7** *Back up the merged target system from the Management Tool* (page 17).

# Update your routers and controllers

**IMPORTANT!** 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 2 or more routers, you must check **Change for all control programs 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 **Controller**. A message appears **Changes the control program, view, driver and screen files 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 the **Devices** tab 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 site level 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 Download page.Click the **Start** button.

   **NOTES**

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

   ○   Up to 5 routers can download simultaneously.

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

## To upgrade to the i-Vu Pro v6.0 application

To begin, see Order software and obtain license.

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 and an i-Vu Open Router or i-Vu Open Link for an MS/TP network.

If your web server is model MP 945-D, you have to replace it in order to convert your system to an i-Vu v6.0 application. Your model number is on the bottom of your web server.

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 v6.0 application and then convert that to the i-Vu Pro v6 application. | **1** | Backup system to PC or USB from Management Tool. |
| | | **2** | Install i-Vu Standard v6.0 application from the DVD or USB drive 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 32 or 64-bit i-Vu Pro v6.0 application from the DVD. |
| | | **6** | Open SiteBuilder v6.0 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 v6.0 application and then convert that to i-Vu Pro v6.0 application | **1** | Backup system to PC or USB from Management Tool. |
| | | **2** | Install i-Vu Plus v6.0 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 32 or 64-bit i-Vu Pro v6.0 application from the DVD. |
| | | **6** | Open SiteBuilder v6.0 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 v6.0 application* (page 12). Once you have both databases merged in a single web server that is running the i-Vu v6.0 application, do the following: |
| | | **1** Backup system to 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 32 or 64-bit i-Vu Pro v6.0 application from the DVD. |
| | | **4** Open SiteBuilder v6.0 and import clipping. File > Clipping > Import. |
| i-Vu CCN Pro 3.1 | You must install the latest driver in all i-Vu Integrators. They download automatically with the installation. <br><br> If you install the 64-bit version, see *Upgrade v3.1 or v4.2 database in SiteBuilder* (page 27). | **1** On your new computer, install the 32 or 64-bit i-Vu Pro v6.0 application from the DVD. <br><br> **2** Upgrade database in SiteBuilder v6.0. Select **File** > **Upgrade i-Vu System**. <br><br> **3** *Upgrade graphics in ViewBuilder, using the plug-in* (page 32). |
| i-Vu CCN Pro 4.2 | If you install the 64-bit version, see *Upgrade v3.1 or v4.2 database in SiteBuilder* (page 27). | **1** On your new computer, install the 32 or 64-bit i-Vu Pro v6.0 application from the DVD. <br><br> **2** Upgrade database in SiteBuilder v6.0. Select **File** > **Upgrade i-Vu System**. |

For more details on upgrading to the i-Vu Pro v6.0 application and migrating to different databases, see *Options for migrating and upgrading the database* (page 24).

# To register and download your i-Vu® license

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

**1** Login to *ivusystems.com http://www.ivusystems.com*, using your email and password.

 **NOTE** If you need a password, email mary.fleiger@carrier.utc.com to request one.

**2** Select **Request/Download i-Vu Software Licenses**. All your Sites Names/Project Names are listed.

**3** Select the site/project to register it.

**4** In the **License Registration Area**., fill in the **Owner Information** and the **Site Information**.

**5**   Click **Register License**.

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

**7**   Click **Download License**, then save the license.properties file to a convenient location.

**To apply the license to the i-Vu® Pro application**

**1**   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-Vu® Pro v6.0 interface, select the **System Options** tree > **License Administration**.

**2**   Browse to the license file.

**3**   Click **Apply**.

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

# 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 32-bit i-Vu Pro v6.0 application on your same computer. | |
|------|----|-----|---|
| Access | Access | **1** | Copy existing i-Vu system folder for safekeeping. |
|  |  | **2** | Install the 32-bit i-Vu Pro v6.0 application from the DVD. |
|  |  | **3** | Upgrade database in SiteBuilder v6.0. Select **File** > **Upgrade i-Vu System**. |
| Access | Derby | **1** | Copy existing i-Vu system folder for safekeeping. |
|  |  | **2** | Install the 32-bit i-Vu Pro v6.0 application from the DVD. |
|  |  | **3** | Upgrade database in SiteBuilder v6.0. Select **File** > **Upgrade i-Vu System**. |
|  |  | **4** | In SiteBuilder, select **File** > **Manage Database** > **Migrate/Replica** > **Migrate**. Select **Derby**. |

| From | To | Steps to migrate to the 32-bit i-Vu Pro v6.0 application on your same computer. | |
|------|-----|---|---|
| Access | MS SQL | **1** | Copy existing i-Vu system folder. You cannot retrieve the files once they are upgraded. |
| | | **2** | Install 2005/8/12 MS SQL. See *Upgrade to MS SQL Server 2005-8-12 on a new computer* (page 28). |
| | | **3** | Install the 32-bit i-Vu Pro v6.0 application from the DVD. |
| | | **4** | Upgrade database in SiteBuilder v6.0. Select **File** > **Upgrade i-Vu System**. |
| | | **5** | In SiteBuilder, select **Fil**e > **Manage Database** > **Migrate/Replica** > **Migrate**. Select **MS SQL**. |
| MSDE | Access | **1** | Copy existing i-Vu system folder for safekeeping. |
| | | **2** | Install the 32-bit i-Vu Pro v6.0 application from the DVD. |
| | | **3** | Upgrade database in SiteBuilder v6.0. Select **File** > **Upgrade i-Vu System**. |
| | | **4** | In SiteBuilder, select **Fil**e > **Manage Database** > **Migrate/Replica** > **Migrate**. Select **Access**. |
| MSDE | MS SQL | **1** | Copy existing i-Vu system folder. You cannot retrieve the files once they are upgraded. |
| | | **2** | Install 2005/8/12 MS SQL. See *Upgrade to MS SQL Server 2005-8-12 on a new computer* (page 28). |
| | | **3** | Install the 32-bit i-Vu Pro v6.0 application from the DVD. |
| | | **4** | Upgrade database in SiteBuilder v6.0. Select **File** > **Upgrade i-Vu System**. |
| | | **5** | In SiteBuilder, select **Fil**e > **Manage Database** > **Migrate/Replica** > **Migrate**. Select **MS SQL**. |
| MS SQL | MS SQL | **1** | Copy existing i-Vu system folder. You cannot retrieve the files once they are upgraded. |
| | | **2** | Backup 4 databases in MS SQL. |
| | | **3** | Upgrade database in SiteBuilder v6.0. Select **File** > **Upgrade i-Vu System**. |
| | | | See *Upgrade from the i-Vu v3.1 or v4.2 application that uses MS SQL Server 2000-5-8 to MS SQL Server 2005-8-12 on a new computer* (page 28). |

| From | To | Steps to migrate to the 64-bit i-Vu Pro v6.0 application on a new computer |
|------|------|---|
| Access | Access | N/A 64-bit does not support Access. |
| Access | Derby | **1** Install the 32-bit i-Vu Pro v6.0 application from the DVD on your existing computer. |
| | | **2** Upgrade database in SiteBuilder v6.0. 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 USB drive. |
| | | **5** On your new computer, install the 32 or 64-bit i-Vu Pro v6.0 application from the DVD. |
| | | **6** Copy the system folder from your USB drive into the webroot folder. |
| Access | MS SQL | **1** On your existing computer, install the 32-bit i-Vu Pro v6.0 application from the DVD. |
| | | **2** Upgrade database in SiteBuilder v6.0. 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 USB drive. |
| | | **5** On your new computer, install the 64-bit i-Vu Pro v6.0 application from the DVD. |
| | | **6** Install 2005/8/12 MS SQL. See *Upgrade to MS SQL Server 2005-8-12 on a new computer* (page 28). |
| | | **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**. |
| MSDE | Access | N/A 64-bit does not support Access. |
| MSDE | MS SQL | **1** On your existing computer, install the 32-bit i-Vu Pro v6.0 application from the DVD. |
| | | **2** Upgrade database in SiteBuilder v6.0. Select **File** > **Upgrade i-Vu System**. |
| | | **3** In SiteBuilder, select **File** > **Manage Database** > **Migrate/Replica** > **Migrate**. |
| | | **4** Copy upgraded i-Vu system folder to USB drive. |
| | | **5** On your new computer, install the 32 or 64-bit i-Vu Pro v6.0 application from the DVD. |
| | | **6** Install 2005/8/12 MS SQL. See *Upgrade to MS SQL Server 2005-8-12 on a new computer* (page 28). |
| | | **7** Copy the system folder from your USB drive into the webroot folder. |
| | | **8** In SiteBuilder, select **File** > **Manage Database** > **Migrate/Replica** > **Migrate**. |

| From | To | Steps to migrate to the 64-bit i-Vu Pro v6.0 application on a new computer | |
|------|-----|------|------|
| MS SQL | MS SQL | **1** | Copy existing i-Vu system folder on USB drive. |
| | | **2** | Backup 4 databases in MS SQL on USB drive. |
| | | **3** | On your new computer, install the 32 or 64-bit i-Vu Pro v6.0 application from the DVD. |
| | | **4** | Install 2005/8/12 MS SQL. See *Upgrade to MS SQL Server 2005-8-12 on a new computer* (page 28). |
| | | **5** | *Restore above databases to upgraded MS SQL* (page 30). |
| | | **6** | Upgrade database in SiteBuilder v6.0. Select **File** > **Upgrade i-Vu System**. |

# Install v6.0 and use SiteBuilder to upgrade database

The i-Vu CCN Pro v3.1 or v4.2 database must be upgraded using **SiteBuilder v6.0**.

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

Typically, the file path for your i-Vu Pro v3.1 or v4.2 system are the default paths: C:\i-Vu3.1 or C:i-Vu4.2.

**1** Insert the Installation DVD into your computer.

**2** Click **Install i-Vu Pro.**and the Setup Wizard starts, unless you have a 64-bit computer.

If you are using a 64-bit computer. a prompt asks if you want to install the 64-bit version of i-Vu® Pro. Click **OK** to begin the 64-bit installation. Click **Cancel** to install the 32-bit version.

**NOTE**  MS Access is not available on a 64-bit installation. If your system uses an Access database and you want to upgrade to the 64-bit version of the i-Vu Pro v6.0 application, you must migrate your Access database to a different type of database before upgrading. Use the following steps:

1. Open database in your v3.1 or v4.2 SiteBuilder.

2. Select **File** > **Manage Database** > **Migrate/Replicate** > **Migrate to a different database type** and click **Next**.

3. Select database type from drop-down list and click **Next**.

4. Click **Finish**. Continue to upgrade your system in SiteBuilder v6.0. You can migrate again in v6.0 if you want to change your database to Derby, which was not previously available.

**3** Open **SiteBuilder 6.0**. and select **File** > **Upgrade i-Vu System** from the drop-down menu.

**4** Click **Browse** and select the system folder for your i-Vu Pro v3.1 or v4.2 system: C:\i-Vu3.1\webroot or C:\i-Vu4.2\webroot.

**5** Select **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 v6.0 installation directory 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 v6.0.

- ○ 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 v6.0.

**8** Log in using an administrator account.

# Upgrade from the i-Vu v3.1 or v4.2 application that uses MS SQL Server 2000-5-8 to MS SQL Server 2005-8-12 on a new computer

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

**1** Install the i-Vu Pro v6.0 application from the DVD on your existing i-Vu Pro v3.1 or v4.2 computer and set up a database in SiteBuilder.

**2** *Copy data from the i-Vu Pro v3.1 or 4.2 application and back up the i-Vu databases in SQL* (page 28).

**3** *Install the i-Vu Pro v6.0 application and SQL Server on your new computer.* (page 29)

**4** *Restore i-Vu v3.1 or v4.2 databases to upgraded SQL.* (page 30)

**5** *Upgrade system in SiteBuilder* (page 30).

## Copy i-Vu v3.1 or v4.2 data and back up in MS SQL to USB drive

You must have installed the i-Vu Pro v6.0 application on your existing computer and set up a database in SiteBuilder before following these steps. Use this procedure if you have been using MS SQL Server 2000/2005/2008 and are upgrading to MS SQL Server 2005/2008/2012 on a new computer.

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

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

**2** Browse to your i-Vu Pro v3.1 or v4.2 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 6.0 application and MS SQL Server on new computer

**1**    Install i-Vu Pro v6.0 from the Installation DVD on your new computer. If you are changing to a 64-bit install, select **i-Vu Pro server for 64-bit O/S Server**.

       **NOTE**  The 32-bit version of i-Vu can be installed on either a 32 or 64-bit operating system. However, the 64-bit can only be installed on a 64-bit operating system.

**2**    Install SQL 2005/2008/2012 and any applicable SQL service packs. For instructions on how to install any version of MS SQL Server go to http://msdn.microsoft.com/en-us/library/default.aspx and, in the Search window, type **Install <your SQL Version >**.

**3**    As you install MS SQL Server 2005, 2008 or 2012, you must select certain options to use with i-Vu Pro. For all other options, you may keep the defaults or select your own values. Select the following:

      ○    MS 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

**4**    Select **Start** > **Programs** > **Microsoft SQL Server 2005** (**2008** or **2012**) > **SQL Server Management Studio**. In the opening dialog box, select the following options:

      ○    Server type: **Database engine**

      ○    Server name: [Address of machine where the database is located]

      ○    Authentication: **Windows Authentication**

      ○    User name: [A valid Windows user name]

      ○    Password: [Password associated with the above user name]

**5**    Click **Connect**.

**6**    In the **Object Explorer** pane, click the plus sign to the left of **Security** and then right-click **Logins** and select **New Login**.

**7**    Check **SQL Server authentication**.

**8**    Clear the following checkboxes:

      ○    **Enforce password policy**

      ○    **Enforce password expiration**

      ○    **User must change password at next login**

**9**    Enter and confirm a username and password in **Login**. Record them.

**10**    Select **Master** from the **Default database** drop-down list and click **OK**.

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

**12**    Enter **main** for the name.

**13**    In the **Owner** field, type the user name created in step 9.

**14**    Do not change the default values for the other fields.

**15**    Select **Options** at the top of **Database Properties**.

**16**    Select Simple from the **Recovery model** drop-down list.

**17**    Click **OK**.

**18**    Repeat steps 11 through 17 for the **alarms**, **audit**, and **trends** databases.

## Restore i-Vu v3.1 or v4.2 databases to upgraded MS SQL

**1**    Insert ihe USB drive that contains the database backups from your i-Vu v3.1 or v4.2 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.bak (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 v6.0

**1**    Open **SiteBuilder 6.0**. and select **File** > **Upgrade i-Vu System**.

**2**    Browse to your i-Vu v3.1 or v4.2 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 v6.0 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 v6.0 installation directory 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 v6.0.

   ○  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 v6.0.

**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`.

# Upgrade from Access and i-Vu Pro v3.1 or v4.2 application to Derby, new computer, and 64-bit v6.0

If you are continuing to use your current computer for the i-Vu Pro v6.0 application, the operating system is 32-bit, since v3.1 and v4.2 only ran on a 32-bit platform. The 32-bit v6.0 does support Access, however the 64-bit does not.

**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 the current i-Vu system by copying your system folder under the webroot folder.

**3**   Upgrade database in SiteBuilder v6.0. Select **File** > **Upgrade i-Vu System**.

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

**5**   Copy the migrated system folder from the i-Vu v6.0 webroot folder to a USB drive.

**6**   Install the 64-bit version of the i-Vu v6.0 application on the new computer.

**7**   Copy the saved Derby database from the USB drive to the webroot folder of the new i-Vu Pro v6.0 64-bit application.
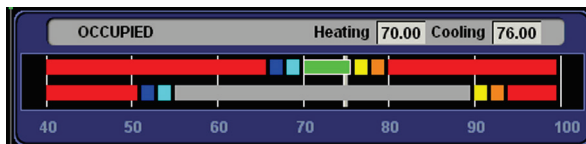
# Upgrade v3.1 graphics

i-Vu 3.1 graphics files (.view files) must be upgraded to be used in i-Vu® v6.0.

The graphics were copied to your v6.0 system when you upgraded the database in SiteBuilder 6.0. However, you must upgrade your graphics in ViewBuilder v6.0

Area graphics in i-Vu CCN Pro v3.1 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® v6.0. The Equipment Color control oval 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 i-Vu v3.1 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.
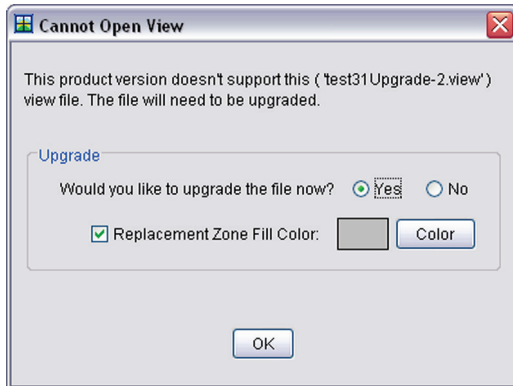


You can convert one graphic at a time, or you can convert an entire directory at once by installing the plug-in before upgrading your graphics.

1   Select **Tools** > **Configure Tools** > **Upgrade 3.1 graphics** and click **Add.**
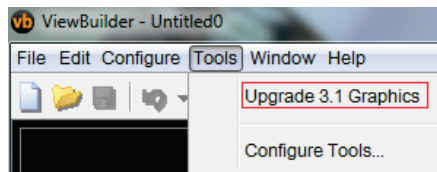


2   Select **upgrade-3_1-graphics.viewbuilder-plugin** and click **Open.**

3   Once the plug-in is installed, all the graphics in a directory (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 3.1, 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 with EIKON® with one 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.
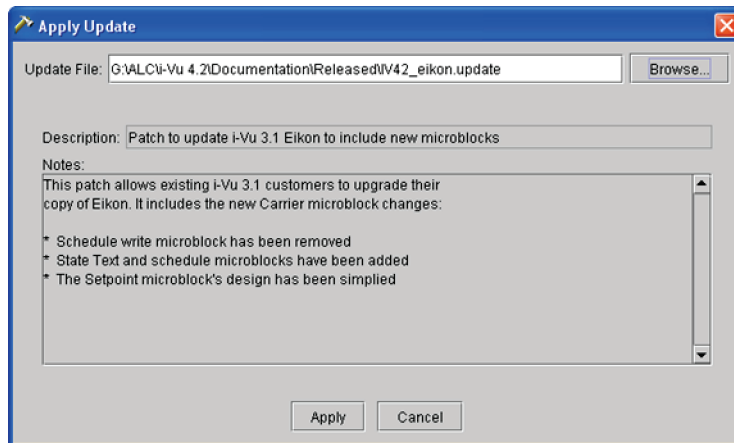
## Custom Control Programs

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

- Your EIKON-created control program will still run in an i-Vu Integrator that has been upgraded to run with the i-Vu Pro v6.0 application.

- In order for a custom control program to support any of the new features available in the i-Vu Pro v6.0 application, it is necessary to apply an update to EIKON under the i-Vu Pro v3.1 application.

To apply the EIKON update:

**1** Download the update file called **iv42_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 EIKON patch.



- You will need to use the EIKON program that was a part of your i-Vu Pro v3.1 system to edit any custom control programs.

  **NOTE**  Custom programs created with EIKON 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 EIKON-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.
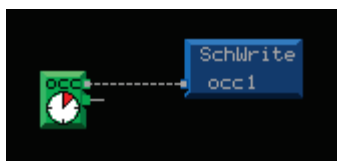
Figure 1

- ○ 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 new Tenant Billing plug-in, you must add a binary trend with a reference name of **override** (case sensitive) to this output, as shown in Figure 2.
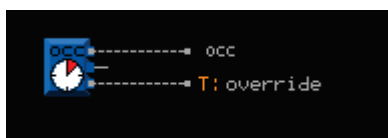

Figure 2

# Update your routers and controllers for the i-Vu Pro v6.0 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** in the drop-down list. A dialog window appears.

3    If the database contains 2 or more routers, you must check **Change for all control programs of this type** in the **Control Program** section.

4    Click **Update**. A message appears **Changes the driver and bacview to use the current library version. Continue?**

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

5    Click **OK.**

6    Click **Close.**

**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 **Controller**. A message appears **Changes the control program, view, driver and screen files 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 4: 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 the **Devices** tab and re-scan any controllers that need to be updated by checking **Rescan Controllers Selected Below for Configuration Changes** and clicking **Start Scan**.

**Step 3: Apply the update to routers and controllers**

**1**   Select the site level 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 Download page.Click the **Start** button.

   **NOTES**

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

   ○   Up to 5 routers can download simultaneously.

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

# To upgrade Field Assistant

Follow these steps to upgrade your Field Assistant systems:

**1**  *Install new software.* (page 37)

**2**  *Transfer existing databases.* (page 37)

**3**  *Update your equipment SAL libraries.* (page 38)

## Install Field Assistant v6.0 software

**1**  Insert your Tech Tools v6.0 DVD in your computer and click **Install Field Assistant Tool**, which opens the i-Vu Tools menu.

**2**  Click on **Install Field Assistant Tool**.

**3**  Accept the license agreement.

**4**  Select directory where you wish to install Field Assistant (default is **C:\Field Assistant Tool6.0**).

**NOTE**  Field Assistant v6.0 must be installed in a new directory; it cannot be installed in an existing Field Assistant installation folder.

**5**  Select the **Start Menu** folder and locate Field Assistant (default is **Field Assistant Tool**).

**NOTE**  We recommend that you add **6.0** to the default folder name in order to identify this version of Field Assistant, in case you decide to retain the previous version.

**6**  Review and accept the **Installation Summary**.

**7**  When installation is complete, select **Exit Installer** to close i-Vu Tools menu.

## Transfer existing databases

Field Assistant 6.0 is compatible with systems created with previous versions of Field Assistant. You must copy them so they reside in the Field Assistant 6.0 installation folder.

**1**  Navigate to your **Field Assistant 5.0** or **5.1** folder (default is **C:\Field Assistant Tool5.0 / 5.1**) and open the **webroot** folder.

**NOTE**  Each system created in Field Assistant has a separate folder. By default, the following 2 folders are under webroot:

○  _common

○  WEB-INF

**2**  Select and copy the other folders, which are system databases. Use **Shift+click** or **Ctrl+click** to select multiple folders.

**3**  Paste these folders into the new **Field Assistant 6.0 > webroot** folder **C:\Field Assistant Tool6.0\webroot**).

**NOTE**  Do **not** copy any folders other than your systems.

**4**    Start Field Assistant 6.0 to access the **Field Assistant Launcher** screen.

**5**    Select the appropriate **Communications** option, based on your connection to the system:

- If you are connecting over the IP network, click **BACnet/IP** and select your IP. (This requires that the i-Vu Control System has one or more routers.).

- If you are connecting to the system using the USB Link cable, click **Local Access**, and select the Comm port that the USB Link (USB-L) cable is attached to.

**1**    Select an existing system from the drop-down menu, or, to set up a new one, click ⊞ and type your **System Name**.

**NOTES**

- ○    Do not begin your **System Name** with a number or use capital letters or special characters, other than a dash or an underscore.

- ○    If you elect to use an existing system, the database is updated automatically for 6.0 compatibility when you launch Field Assistant.

**2**    Click the **Star**t ▶ button. Your browser automatically launches the interface.

**NOTE**  This could take a few moments. However, if  Field Assistant does not start automatically, type **http://localhost/** in your browser.

# Update equipment SAL libraries

The i-Vu® SAL files update your i-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/* 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.


There are currently 6 SAL files used by the i-Vu® v6.0 application:

- ivu-6.0-factory-<date>.sal (for PIC-based controllers)

- ivu-6.0-upc-open-<date>.sal (for Universal Protocol Converter-based equipment)

- ahub-6.0-<date>.sal (for 39m AHU applications)

- ivu-6.0-universal-controller-<date>.sal (for UC Open and AppController-based applications)

- ivu-6.0-applicationbuilder-<date>.sal (for CCN applications)

- ivu-6.0-discovery-<date>.sal (for CCN PIC applications)

**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.

**Field Assistant**

1   Stop the **Field Assistant Server**, if it is running.

2   Copy the updated SAL file(s) to your Field Assistant Tool Installation path (Default: **C:\Field Assistant Tool6.0**) > **equipmentbuilder** folder.

   **NOTE**  Do not delete the older SAL file(s) to retain compatibility with older installations.

3   Start your system in Field Assistant.

Refer to *Update your routers and controllers* (page 10) to complete upgrading your system.