

# i-Vu® Pro v9.0

## Operating System Requirements





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

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## i-Vu® Pro v9.0 client, server, operating system, and database requirements

### i-Vu® Pro client requirements

The i-Vu® Pro system can be viewed on the following client devices and web browsers.

#### Computers

The client computer should have at least:

- Quad core processor
- 4 GB RAM
- Communications link of 100 Mbps or higher

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

A computer with this operating system...	Supports these web browsers...
Windows®	Google™ Chrome™ <sup>1</sup> Microsoft® Edge Mozilla® Firefox®
Mac® OS X® (Apple® Mac only)	Safari® Google Chrome Mozilla Firefox

<sup>1</sup> Best performance

#### Mobile devices

Device type	Platform support
Smart phone	Android™, iOS
Tablet	Android™, iOS, Surface™
<b>NOTE</b> Some functionality may be limited by the capability of the mobile device and operating system.	

## i-Vu® Pro server requirements

The recommended minimum for an i-Vu® Pro server:

- Dual core processor
- 8 GB RAM
- 30 Gigabyte hard drive space
- Communications link of 100 Mbps or higher
- 64-bit server (See *Upgrading from a 32-bit server to a 64-bit server* (page 5).)

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

A i-Vu® Pro 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® Pro 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 <sup>1</sup>	Physical Points and Display Objects	Passmark Total Score <sup>2</sup>	Passmark Single-threaded Score	RAM Minimum/Recommended	JVM Memory Minimum/Recommended	Disk Mark <sup>4</sup>
<b>Small</b>	0 - 250	0 - 1000	2000	800	8 / 8GB	4 / 4GB	3000
<b>Medium</b>	250 - 1000	1000 - 5000	3000	1000	8 / 12GB	4 / 8GB	5000
<b>Large</b>	1000 - 10,000	5000 - 50,000	5000	1400	12 / 16GB	8 / 12GB	15000
<b>Huge</b>	more than 10,000	more than 50,000	6500	1600	16 / 24GB <sup>3</sup>	16 / 24GB	30000

<sup>1</sup> Total number of control programs and controllers.

<sup>2</sup> For more information, see [www.CPUbenchmark.net](http://www.CPUbenchmark.net).

<sup>3</sup> 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.

<sup>4</sup> SATA SSDs are recommended as baseline performance for i-Vu® Pro on all systems. Large systems benefit from the faster PCIe interface SSDs on both the i-Vu® Pro 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

## Operating system and database requirements

To determine which operating system and database management system (DBMS) to use, consider:

- Operating systems and DBMS's already in use in your customer's organization
- Project size and trending requirements. See "Trend archival requirements" below.
- Project budget
- Your skill with the operating system and DBMS

The i-Vu® Pro v9.0 system use of database resources may require a moderate increase in the number of allowed connections if your database management system is set to the default value for the maximum allowed connections.

### Supported operating systems and database management systems

A i-Vu® Pro v9.0 or later system is supported on the following 64-bit operating systems. The table below shows which operating systems can be used with each DBMS.

- Windows® 11 Professional and Enterprise
- Windows® 10 Professional and Enterprise
- Windows® Server 2022
- Windows® Server 2019
- Windows® Server 2016

Database	Operating systems supported	Speed	Supports multiple servers	Dynamic defragmentation	Database replication	Notes
<b>SQL Server® Express 2019, 2017, 2016</b>	Windows®	Fast	No	Yes	Yes	Database cannot exceed 10 GB.
<b>SQL Server® 2022, 2019, 2017, 2016</b>	Windows®	Fast	Yes	Yes	Yes	SQL Server® 2016 Enterprise, Business Intelligence, and Standard editions can be used - only SP2 supported.
<b>MySQL 8.0</b>	Windows®	Fast	Yes	No	Yes	This open source database is free under the GNU Public License.
<b>PostgreSQL 12 through 14</b>	Windows®	Fast	Yes	Yes	Yes	This open source database is free under the BSD Public License.

Database	Operating systems supported	Speed	Supports multiple servers	Dynamic defragmentation	Database replication	Notes
Apache Derby	Windows®	Slow	No	No	Yes	<ul style="list-style-type: none"> <li>The i-Vu® Pro Installs for Windows include all the files needed to use an Apache Derby database.</li> <li>Only one application can access the database at one time. Example: ViewBuilder cannot access the database if SiteBuilder is already running.</li> <li>Do not use Derby if total historical trend capacity will exceed 2 GB.</li> <li>Audit database cannot contain an entry of more than 32,700 characters; compact the database before migrating to Derby.</li> </ul>

## Trend archival requirements

Trend archival (historical trending) requirements are the most significant factors in database selection. Alarms are not usually an issue unless large quantities (10,000+) will be kept for online access.

For each archived trend sample, the i-Vu® Pro application stores approximately 30 bytes of data. Disk space requirements per trended point are:

Sample interval	for 1 week	for 1 month	for 3 months	for 1 year
<b>1 minute</b>	300 kB	1.5 MB	5 MB	18 MB
<b>5 minutes</b>	60 kB	250 kB	1 MB	4 MB
<b>15 minutes</b>	21 kB	85 kB	250 kB	1 MB
<b>1 hour</b>	5 kB	20 kB	60 kB	240 kB

For example, a system with 2000 points archiving at 15 minute intervals for one year will require as much as 5.6 GB (2000 x 2.8 MB) disk space.

## NOTES

- To limit disk space required for trend storage, archive trend data only for important system points.
- If your archival requirements are 5 GB or greater, you should consider using a separate server for the trend database.

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

i-Vu® Pro v9.0 will not run on a 32-bit server. To upgrade, first install i-Vu® Pro v9.0 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-Vu Pro.x\webroot\<system name>** folder.
- 2 Paste the copied folder under a folder of your choice on the 64-bit server. For example, **I-Vu Pro.x\programdata\systems**.
- 3 Open the system in SiteBuilder.
- 4 Select **File > Upgrade > I-Vu Pro 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-Vu Pro.x\webroot\<system name>** folder.
- 4 Paste the copied folder under a folder of your choice on the 64-bit server. For example, **I-Vu Pro.x\programdata\systems**.
- 5 Open the system in SiteBuilder.
- 6 Select **File > Upgrade > I-Vu Pro 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 Carrier Control Systems Support for assistance.



## Setting up databases

The system folder can be saved in any location. The default location is `\i-Vu_Pro_x.x\programdata\systems\`. The actual databases may be in another location if you are using MySQL, MS SQL Server, or PostgreSQL. See any of the following topics in the *i-Vu® Pro Installation Guide* for more information on setting up the databases:

PostgreSQL on Windows

MySQL on Windows

SQL Server and SQL Server Express on Windows

## 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*
9/17/24	Operating system and database requirements	Added SQL Server® 2022	X-PM-TC-J-TC

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