



i-Vu® Pro v8.0

# 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 v8.0 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™ v84.0 or later <sup>1</sup> Microsoft® Edge v84 or later Mozilla® Firefox® v79.0 or later
Mac® OS X® (Apple® Mac only)	Safari® v11 or later <sup>2</sup> Google Chrome v84.0 or later Mozilla Firefox v79.0 or later

1 Best performance

2 Best performance unless browser is running on a Mac® Mini or a MacBook:



**WARNING** If machine is running Mountain Lion 10.8x with an integrated Intel HD 400 graphics card, it will experience display issues. Use one of these workarounds for better performance:

- If an additional NVIDIA graphics card is available, manually switch the graphic card setting in MAC® OS X® to use that card.
- If not, use Google™ Chrome™ v84.0 or later.

## Mobile devices

Device type	Platform support
Smart phone	Android™, iOS
Tablet	Android™, iOS, Surface™

**NOTE** 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
- 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 6).)

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	4 / 4GB	1 / 1GB	3000
<b>Medium</b>	250 - 1000	1000 - 5000	3000	1000	4 / 8GB	2 / 4GB	5000
<b>Large</b>	1000 - 10,000	5000 - 50,000	5000	1400	6 / 12GB	4 / 8GB	15000
<b>Huge</b>	more than 10,000	more than 50,000	6500	1600	16 / 16GB <sup>3</sup>	12 / 12GB	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 v8.0 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 v8.0 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® 10 Professional and Enterprise
- Windows® 8.1 Professional and Enterprise
- Windows® Server 2020
- Windows® Server 2019
- Windows® Server 2016
- Windows® Server 2012 R2

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® 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 and 13</b>	Windows®	Fast	Yes	Yes	Yes	This open source database is free under the BSD Public License.
<b>Apache Derby</b>	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:

<b>Sample interval</b>	<b>for 1 week</b>	<b>for 1 month</b>	<b>for 3 months</b>	<b>for 1 year</b>
<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 v8.0 will not run on a 32-bit server. To upgrade, first install i-Vu® Pro v8.0 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 files into the **I-Vu Prov8.0\webroot** folder on the 64-bit server.
- 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 files into the **I-Vu Prov8.0\webroot** folder on the 64-bit server.
- 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 must be located in the **\-Vu\_Pro\_x.x\webroot** folder. 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.

<b>Date</b>	<b>Topic</b>	<b>Change description</b>	<b>Code*</b>
2/3/21	Operating system and database requirements	Added Windows 10 Enterprise to list of operating systems	C-PM-TC-E

\* For internal use only



