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i-Vu® Pro v6.0

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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Contents

i-Vu® Pro v6.0 client, server, operating system, and database requirements.....	1
i-Vu® Pro client requirements	1
i-Vu® Pro server requirements	2
Operating system and database requirements	3
Setting up databases	6
Document revision history	7



i-Vu® Pro v6.0 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.

A computer ¹ with this operating system...	Supports these web browsers...	
Windows®	Google™ Chrome™ v23.0 or later ² Internet Explorer® v8, v9, v10, or v11 Desktop Mozilla® Firefox® v21.0 or later	
Mac® OS X® (Apple® Mac only)	Safari® v6 or later ³ Google Chrome v23.0 or later Mozilla Firefox v21.0 or later	
A tablet with this operating system	Web browser	Tested tablets
iOS	Safari v6 or later	Apple® iPad® ^{4, 5}
Windows® RT	Internet Explorer® 10/11 or Metro-style Internet Explorer® 10/11	Microsoft® Surface ^{4, 5}
Windows® 8 or 8.1 Pro	Internet Explorer® 10/11 or Metro-style Internet Explorer® 10/11	Microsoft® Surface™ Pro ^{4, 5}
Android™	Google™ Chrome™ v23.0 or later	Google™ Nexus™ 7 and 10 ^{4, 5}

- 1 The client computer should have at least:
 - Dual core processor
 - 1.5 GB RAM
 - Communications link of 10 Mbps or higher
 The i-Vu® Pro application will work with slower computers and slower links, but the results may not be satisfactory.
- 2 Best performance
- 3 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™ v23.0 or later.
- 4 Most of the tablets listed do not support plug-ins (Java Runtime Environment, Flash, PDF reader, etc.) so some i-Vu® Pro add-on applications and other features may not work. The Surface Pro with IE 10 Desktop does support plug-ins.
- 5 Touch functionality on tablets not tested by Carrier may or may not work with the i-Vu® Pro application. Use at your own risk.

i-Vu® Pro server requirements

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

- Dual core processor
- 2 GB RAM
- 30 Gigabyte Hard drive
- Communications link of 10 Mbps or higher

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

The memory requirements for the i-Vu® Pro server will 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 ¹	Physical Points and Display Objects	Passmark Total Score ²	Passmark Single-threaded Score	RAM Minimum/Recommended	JVM Memory Minimum/Recommended	Operating system
Small	0 - 250	0 - 1000	2000	800	4 / 4GB	1 / 1GB	32 or 64-bit server ³
Medium	250 - 1000	1000 - 5000	3000	1000	4 / 8GB	2 / 4GB	64-bit server
Large	1000 - 10,000	5000 - 50,000	5000	1400	6 / 12GB	4 / 8GB	64-bit server
Huge	more than 10,000	more than 50,000	6500	1600	16 / 16GB ⁴	12 / 12GB	64-bit server

¹ Total number of pieces of equipment in the SiteBuilder Geographic tree plus the number of device instances in the SiteBuilder Network tree.

² For more information, see www.CPUbenchmark.com

³ Note to Administrator: If using 32-bit, you can't use more than 1.2GB for the JVM.

⁴ For a huge system with minimal user activity, the average piece of equipment or instance device requires approximately 300KB of server RAM. Contact Carrier Technical Support for server sizing recommendations.

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

Supported operating systems and database management systems

A i-Vu® Pro v6.0 or later system is supported on the following operating systems (32-bit and 64-bit). The table below shows which operating systems can be used with each DBMS.

- Windows® 8 and 8.1 Professional
- Windows® 8 Enterprise
- Windows® 7 Professional and Ultimate
- Windows® Server 2012 R2
- Windows® Server 2008 R2
- Windows® Vista Business or Ultimate SP2

Database	Operating systems supported	Speed	Supports multiple servers	Dynamic defrag-mentation	Database replication	Notes
SQL Server® 2012 Express R2 and 2008 Express R2	Windows® (32-bit only)	Fast	No	Yes	Yes	<ul style="list-style-type: none"> • Database cannot exceed 10 GB. • See UPGRADE NOTES below.
SQL Server® 2012 R2 and Server 2008 R2	Windows® (32 + 64-bit)	Fast	Yes	Yes	Yes	<p>SQL Server® 2012 Enterprise, Business Intelligence, and Standard editions can be used.</p> <p>SQL Server® 2008 Workgroup, Standard, or Enterprise editions can be used.</p>
MS Access®	Windows® (32 bit only)	Slow	No	No	Yes	<ul style="list-style-type: none"> • The i-Vu® Pro Install for Windows includes all the files needed to use an MS Access® database. • Database cannot exceed 2 GB. • Do not use Access® if total historical trend capacity will exceed 500 MB. • See UPGRADE NOTES below.
MySQL 5.6	Windows®	Fast	Yes	No	Yes	This open source database is free under the GNU Public License.
PostgreSQL 8.4 and 9.4	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® (32 + 64-bit)	Slow	No	No	Yes	<ul style="list-style-type: none"> The i-Vu® Pro Installs for Windows include all the files needed to use an Apache Derby database. Only one application can access the database at one time. Example: VewBuilder cannot access the database if SiteBuilder is already running. Do not use Derby if total historical trend capacity will exceed 2 GB. <p>Audit database cannot contain an entry of more than 32,700 characters; compact the database before migrating to Derby.</p>

NOTE To install any i-Vu® Pro application on a Windows® operating system, the installer must log in to Windows® as a user with Administrator-level access control settings.

UPGRADE NOTES

- If your system uses MSDE and you upgrade to v6.0 or later, we recommend that you permanently migrate to a different type of database as soon as possible because you will no longer be able to:
 - Replicate your database to an MSDE database
 - Migrate back to MSDE after migrating to a different type of database
- MS Access®, MSDE, and SQL Server® Express are not available on a i-Vu® Pro 64-bit installation. If your system uses one of these databases and you want to upgrade to the i-Vu® Pro v6.0 or later 64-bit version, you must migrate your database to a different type of database before upgrading.

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 80 bytes of data. Disk space requirements per trended point are:

Sample Interval	for 1 week	for 1 month	for 3 months	for 1 year
1 minute	800 kB	3.5 MB	10 MB	42 MB
5 minutes	160 kB	700 kB	2.1 MB	8.5 MB
15 minutes	54 kB	230 kB	700 kB	2.8 MB

1 hour	13 kB	58 kB	174 kB	700 kB
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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.
- If you use a separate trend database server, you can run the i-Vu® Pro application on a Microsoft® operating system with any or all of its databases on non-Microsoft operating systems. But, you cannot run the i-Vu® Pro application on a non-Microsoft operating system and connect to Microsoft database products. So, if you have Apache Derby, Access®, SQL Server®, or SQL Server® Express databases, the i-Vu® Pro application must be running on Windows8 or 8.1.

Setting up databases

The system folder must be located in the **\i-Vu Pro.x\webroot** folder. The actual databases may be located 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 2012 R2 and 2008 R2 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*
7/29/15	Operating system and database requirements v6.0	Changed MYSQL from 5.5 to MySQL 5.6. Changed PostgreSQL 8.4 or 9.0 to PostgreSQL 8.4 or 9.4	X-TS-CI-E-EA
	i-Vu® Pro server requirements	Added Passmark and JVM columns: Added Upgrade Note regarding Access Added Recommended RAM	X-TS-TA-O-BR
	i-Vu® Pro server requirements	Minimum requirements listed.	C-TS-CI-E

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