

Volans Troubleshooting Guide

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Volans Designer and Volans Login Applications

The Volans Designer application (hereinafter referred to as “Volans”) is written in Java. Therefore, Java must be installed on the client computer to run the Volans software.

Volans is typically launched using the Volans Login application. Volans Login is a separate application from the Volans software, and it is also written in Java. If you can launch the Volans Login application this indicates that Java is installed and working (at least to some degree) on the computer being used.

The Volans software utilizes features and relies on bug fixes and security updates introduced in relatively recent releases of Java.

Volans Minimum Requirements

Following is a list of the recommended minimum requirements for running the Volans application. Processing large data files or taking advantage of more advanced features in Volans will benefit from more RAM and disk space and a faster processor.

Item	Min Requirement
CPU Speed	1.6 GHz
Total RAM	2 GB
Free RAM	250 MB
Total Disk Space	Greater than 2 GB
Free Disk Space	2 GB
Supported GL Version	2.1
Video Resolution	1024 x 768
Java Version	1.8 Update 66

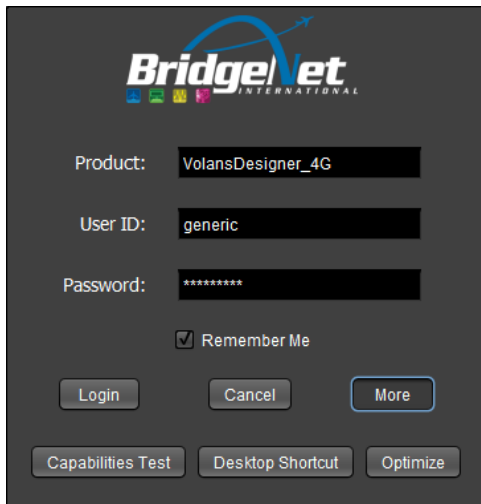
Volans Minimum Requirements Test Application

A Java application which tests for the minimum system requirements necessary to run Volans can be launched from the Volans Login application. To access the application first launch Volans Login...



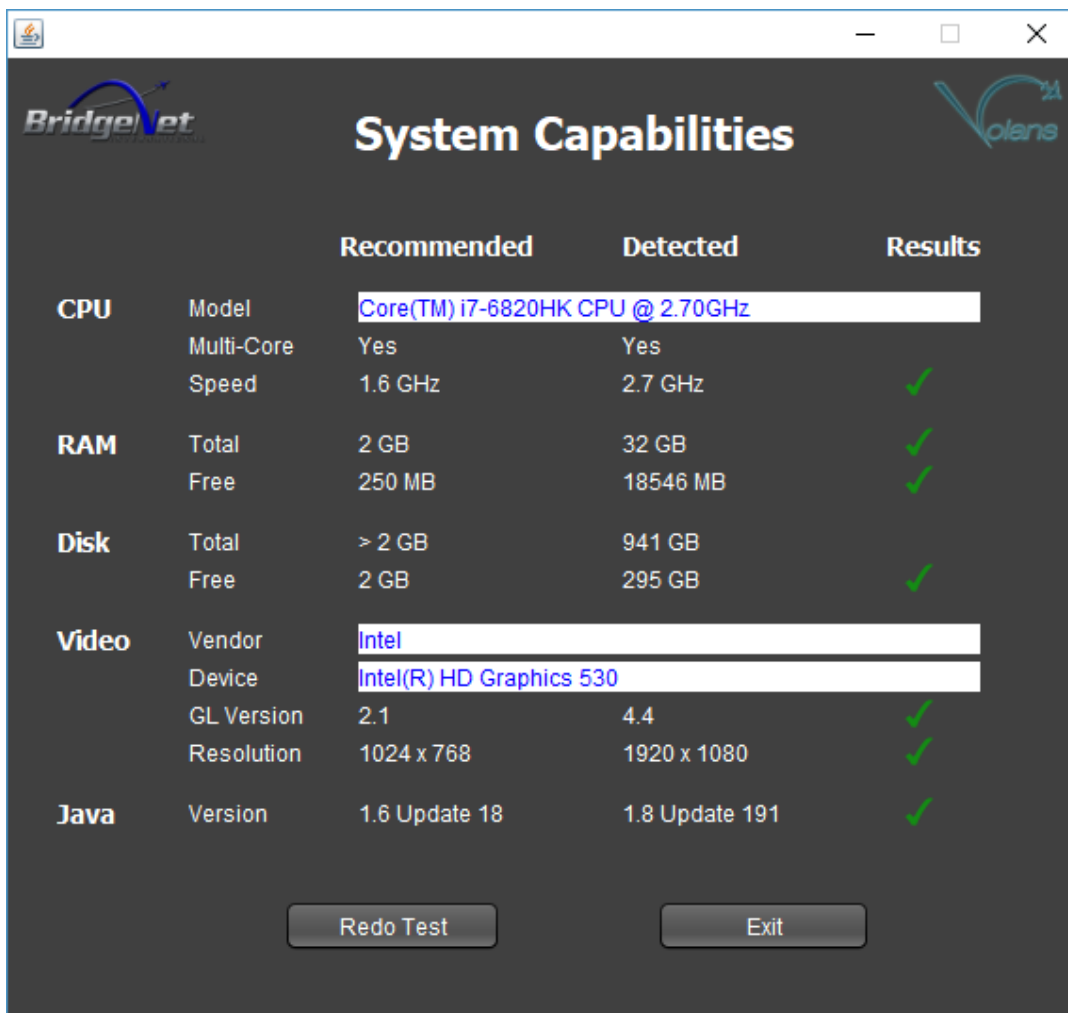
Then click the “More” button which will display additional options.

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The image shows a login dialog box for BridgeNet International. It has a dark grey background with the BridgeNet logo at the top. Below the logo, there are three input fields: 'Product' with the value 'VolansDesigner_4G', 'User ID' with the value 'generic', and 'Password' with a masked value '*****'. There is a checked checkbox labeled 'Remember Me'. At the bottom, there are three buttons: 'Login', 'Cancel', and 'More'. Below these buttons are three smaller buttons: 'Capabilities Test', 'Desktop Shortcut', and 'Optimize'.

Click on the button labeled “Capabilities Test” which will launch the test application which looks like this:



The image shows a 'System Capabilities' dialog box. It has a dark grey background with the BridgeNet logo on the left and the Volans logo on the right. The title 'System Capabilities' is centered at the top. Below the title is a table with four columns: 'Recommended', 'Detected', and 'Results'. The table is organized into sections for CPU, RAM, Disk, Video, and Java. Each section has a category name in the first column, followed by a sub-category name in the second column, and then the recommended and detected values in the third and fourth columns respectively. The 'Results' column contains green checkmarks for all items. At the bottom of the dialog, there are two buttons: 'Redo Test' and 'Exit'.

		Recommended	Detected	Results
CPU	Model		Core(TM) i7-6820HK CPU @ 2.70GHz	
	Multi-Core	Yes	Yes	
	Speed	1.6 GHz	2.7 GHz	✓
RAM	Total	2 GB	32 GB	✓
	Free	250 MB	18546 MB	✓
Disk	Total	> 2 GB	941 GB	
	Free	2 GB	295 GB	✓
Video	Vendor		Intel	
	Device		Intel(R) HD Graphics 530	
	GL Version	2.1	4.4	✓
	Resolution	1024 x 768	1920 x 1080	✓
Java	Version	1.6 Update 18	1.8 Update 191	✓

When the application has finished detecting the specifications of the computer in use it will present a dialog with the results.

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Java Version

The minimum version of Java required to run Volans is Java SE 8 update 66. However, it is recommended that the latest update of Java SE 8 be used when running the Volans application (*see “Java SE 9+” section below). Unless specifically needed for other applications it is recommended that all older versions of Java be removed from the client computer.

The latest update of Java SE 8 can be found here: <https://www.java.com/en/download/>. This URL provides the latest update of Java SE 8 based on the architecture (32 bit or 64 bit) of the browser used to access the URL.

The use of 64 bit Java is required by Volans as of May 2019. The latest 64 bit release of Java SE 8 can be found here: <https://www.java.com/en/download/manual.jsp>. Using the 64 bit version of Java makes it possible to make a much larger amount of memory available to the Volans software which is beneficial when working with very large data sets.

Java SE 9+

The Volans software is designed to run on Java SE 8. Oracle has released newer versions of Java including major versions 9, 10, 11 and 12. There have been some significant changes in the Java programming language starting with Java SE 9. Due to these changes Volans does not yet support any major version of Java beyond SE 8.

Oracle has also introduced new licensing as of Java SE 8 update 211. The new licensing prevents commercial use of Java without a paid license. Therefore, Volans users are recommended to do one of the following:

- Continue to use Java SE 8 with any update between 66 and 201.
- Or, purchase an annual license from Oracle to use updates to Java SE 8 beyond update 201.

Java Web Start

A product called Java Web Start is used to download, update, and launch the Volans application. Java Web Start technology is included in the Java Runtime Environment (JRE) which is part of the Java installation.

Java Web Start utilizes a JNLP file (which stands for Java Network Launching Protocol and has a file extension of “jnlp”) to launch Java applications over the internet. The JNLP file which specifies all the information required to launch a Java application is placed on the server which hosts the Java application (in this case Volans). A browser is used to access the JNLP file which triggers Java Web Start to verify all requirements, download any available updates, and launch the application. More information regarding Java Web Start can be found here: https://www.java.com/en/download/faq/java_webstart.xml

Basic Java Troubleshooting

Even if you have a supported version of Java installed it is possible that your system is not using the supported version of Java to run Volans if you have multiple versions of Java installed. To verify or enable the correct version of Java follow the instructions at this URL:

https://java.com/en/download/help/update_runtime_settings.xml.

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The tips provided at the following URL can be used to troubleshoot basic Java issues:

https://www.java.com/en/download/help/troubleshoot_java.xml.

Temporary Internet Files

Although Volans is accessed through Web Start it is a desktop application and requires various files be downloaded to the user's computer. There is a setting in the Java Control Panel called "Keep temporary files on my computer" that must be enabled (the default setting).

To verify this setting open the Java Control Panel. On the "General" tab click the "Settings" button in the "Temporary Internet Files" section. In the "Temporary Files Settings" dialog that appears make sure the box is checked for "Keep temporary files on my computer".

Corporate Users, Firewalls and Anti-Virus Software

The most common issues experienced by corporate users when trying to launch Volans have been related to corporate firewall and anti-virus settings. The best way to determine if the issue you are experiencing is related to these settings is...

Firewalls: Disconnect from the corporate network and attempt to run Volans from a network (internet connection) that does not have a corporate firewall. Try to use your home network, a public wi-fi, or a hotspot (such as your phone or a dedicated internet hotspot device).

If you can launch Volans from another network, then it is very likely that settings in the corporate network are preventing Volans from launching. Let your IT department know that you can launch Volans when you are not connected to the corporate network so that they can begin to troubleshoot network settings.

Anti-Virus: If possible turn off anti-virus software temporarily and attempt to run Volans. If Volans can be run when anti-virus is turned off, then it is very likely that the anti-virus software is the issue. Settings in the anti-virus software will need to be modified to allow Volans to run.

Ports and Protocols

Volans communicates with several servers owned by BridgeNet which contain data utilized by the software (including flight and noise data, saved "Projects" and "Cases", custom software settings, published and custom flight procedures, etc.). To avoid as many issues as possible with corporate firewall policies and anti-virus programs Volans only utilizes ports 80 (http) and 443 (https) for communicating and transferring data between the client and the Volans servers.

The IP addresses of the BridgeNet servers utilized by Volans are:

70.182.141.202
70.182.141.204
70.182.141.208
70.182.141.211

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OpenGL

Volans is designed to provide 3D views of aircraft and other objects positioned over the globe. To provide these 3D capabilities recent versions of OpenGL (Open Graphics Library) are utilized. OpenGL is continuing to add features and capabilities on a regular basis which are often pushed to existing computer video graphics cards through driver updates. The latest driver updates for your video card should be applied. See the website for the manufacturer of your video graphics card for updates.

High DPI Displays

There are known issues with Java 8 and high DPI displays. If the windows and dialogs in Volans appear with extremely small font you may be able to resolve the issue by performing the following steps:

1. Close Volans
2. Locate the “javaws.exe” file (located in the Java installation folder most likely located at C:\Program Files\Java\jre<your version>\bin\javaws.exe)
3. Right click on the “javaws.exe” file and select “Properties”
4. Choose the “Compatibility” tab
5. Click “Change high DPI settings”
6. Check “Override high DPI scaling behavior” and set “Scaling performed by” to “System”
7. Click “Ok” to close each dialog

After performing the steps above launch Volans again. If this did not resolve the issue performing the same steps on the following files located in the same folder may help: java.exe, javaw.exe, jp2launcher.exe

Corrupted Java Cache

There are occasions when the Java cache becomes corrupted which results in Java applications either not launching or exhibiting strange behavior. This does not happen often, but if no other troubleshooting method has resolved the issue being experienced clearing the Java cache might do the trick.

Close the Volans application. Then follow the instructions found at the link below to clear the Java cache. Once the cache has been cleared attempt to launch Volans again.

How to clear Java’s cache: https://www.java.com/en/download/help/plugin_cache.xml

Note: On Windows 10 the Java Control Panel can be launched by clicking on the Windows menu icon and then beginning to type “Configure Java”. As you type Windows will produce search results. When you see “Configure Java” highlighted in the results press the enter key.

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Volans Log File

There are times when the error messages provided by Java don't contain enough information to troubleshoot a problem. Often there will be additional information written to the Volans log file that can be useful.

The Volans log file is created/updated every time the Volans application is launched. The file is called "console.log" and is placed in the Volans cache directory. The Volans cache directory is located on the same drive as the operating system (usually "C" drive) at the following path: C:\Users\