

# Volans Troubleshooting Guide

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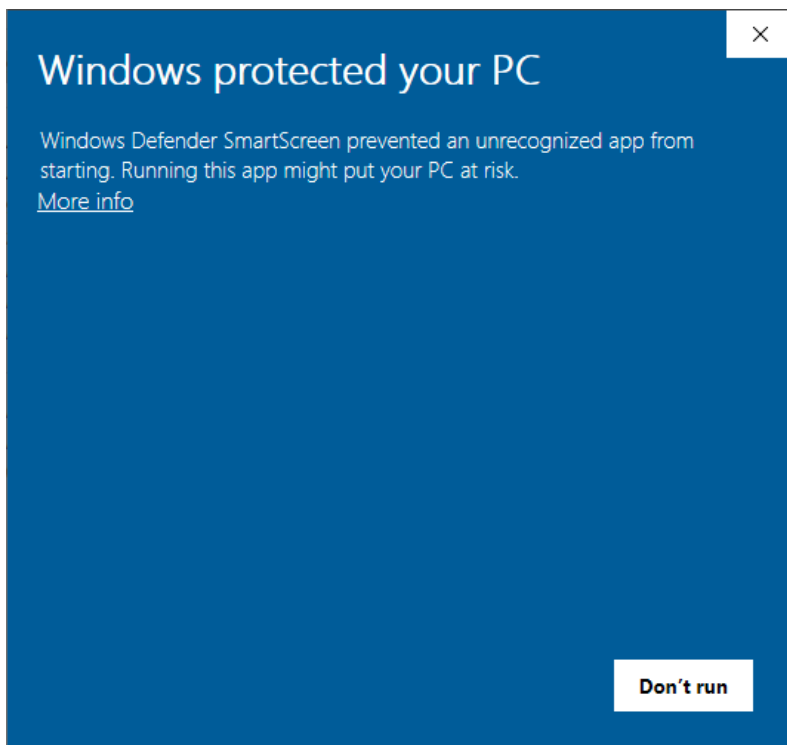
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## Intro and Installation

The Volans application is written using Java SE 12. Everything needed to run Volans including the necessary Java components are included in the installation package. The installation does not place a standalone version of Java on the client's computer. Instead Java is packaged in the Volans application and only referenced from inside the application. Therefore, the client does not need Java installed to run Volans. Furthermore, the existence of one or more versions of Java installations on the client machine does not pose a problem since Volans only uses the Java components that are part of the Volans installation.

Volans is installed by running a Windows installer package named "volans-installer-windows-x64.msi". This installer is designed to place the necessary files on the client's computer to support launching, updating and running Volans.

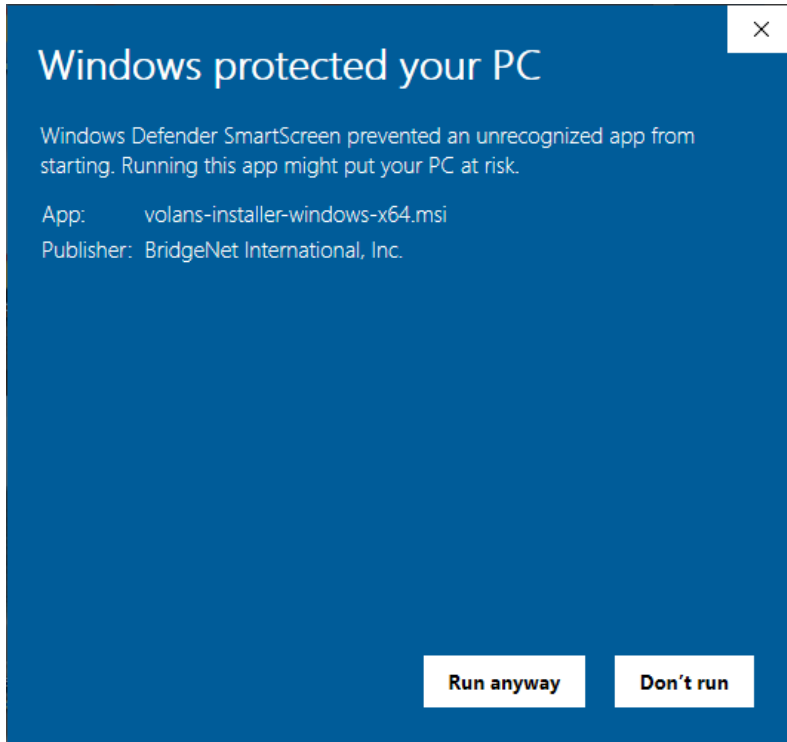
When running the Volans installer you may receive a warning from Windows that looks like this:



If you receive the warning shown above this is not indicative of a problem. Windows presents this warning for low volume installations that have not yet been installed enough times to be added to Microsoft's recognized list of applications.

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Simply click the link that says “More info”, and you will be presented with the following dialog:



Finally, click the “Run anyway” button and the installation should proceed.

There are many settings and data files that are created or downloaded and cached on the client’s machine during application use, and these settings and data files are specific to the user running Volans. Therefore, the installation needs to occur in a per-user location. The default location is [WindowsDrive]:\Users\[user name]\AppData\Local\Volans\. However, this location can be overridden during installation via the GUI or via the command line by using the property “APPDIR”. To specify the install location via the command line simply add APPDIR="[desired path]". The value must be enclosed in quotation marks (no square brackets).

In addition to the settings and data files Volans also checks for updates to the application itself every time it is launched. If any updates exist they are downloaded before launching the application. So the location of the application must allow for files to be created and deleted during normal use by a non-admin user.

Volans also creates a shared cache of map tiles that are used in the application. This cache is located at [WindowsDrive]:\ProgramData\Application Data\Volans\. When Volans is uninstalled the default behavior is to leave the cache in place. If you want to delete the cache during uninstallation this can be indicated via the GUI or via the command line using the property “DELETE\_MAP\_CACHE”. Simply add DELETE\_MAP\_CACHE=1 to the command line (no quotation marks necessary).

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## Microsoft SCCM (System Center Configuration Manager)

The Volans installer is an MSI package which can be used with SCCM for managed installation and uninstallation. The default installation location and the optional deletion of the map cache during uninstallation can be specified in the SCCM configuration as described in the “Intro and Installation” section of this document.

## Minimum Requirements

Following are the recommended **minimum requirements** for running the Volans application:

| Item                 | Min Requirement    |
|----------------------|--------------------|
| Operating System     | Windows 8*         |
| Architecture         | 64 bit             |
| CPU Speed            | 1.6 GHz**          |
| Total RAM            | 4 GB**             |
| Free RAM             | 512 MB**           |
| Total Disk Space     | Greater than 50 GB |
| Free Disk Space      | 5 GB**             |
| Supported GL Version | 2.1                |
| Video Resolution     | 1024 x 768         |

\* Certain display features related to High DPI displays and scaling may not work correctly on operating systems older than Windows 10.

\*\* Processing large data files or taking advantage of more advanced features in Volans will benefit from more available RAM and disk space and a faster processor.

## 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 go through 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 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.

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## Ports, Protocols and File Types

Volans communicates with several servers owned by BridgeNet which contain data utilized by the application (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 only IP address Volans needs to access is 107.162.139.23.

Volans checks for updates at every launch. The file types that may be updated and must be allowed through the firewall include:

- jar, dll, jnilib, manifest, so, dat, dgn, dxf, extra, png, lst, csv, svg, txt, wkt

## Self-Signed Certificates and SSL Handshake Error

Some companies utilize self-signed certificates on their network which will cause an error in the Volans application since these certificates are not trusted by default by Java. If a dialog asking for proxy information keeps popping up when you try to run Volans even though you’re not behind a proxy this may be the reason. [Click here](#) to review the troubleshooting page for this issue for more information.

## OpenGL

Volans is designed to provide 3D views of aircraft and other objects positioned over a 3D globe. To provide these 3D capabilities recent versions of OpenGL (the 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.

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## Application Becomes Unresponsive

**Drivers:** As mentioned above in the “OpenGL” section, Volans utilizes 3D technology that is found in the drivers utilized in today’s video cards. These drivers are regularly being updated to provide better performance and to address bugs and other technical issues. If you are experiencing problems with the appearance or performance of Volans you should verify that you are using the latest driver available for your video card.

**Pagefile size:** There have been a few cases of computers that experience a reoccurring situation where Volans response time becomes very slow (almost non-responsive). When this occurs other symptoms that have accompanied the slow response time have been extremely high general RAM and CPU usage (although the RAM and CPU reported for Volans was not particularly high). Some of these cases have been successfully addressed by manually setting/limiting the pagefile size on the computer to a value equal to the amount of RAM installed on the computer.

**WARNING:** For most users it is recommended to leave pagefile size management to the operating system which is the default setting. Adjusting the pagefile size requires admin privileges, and determining an appropriate pagefile size involves a number of factors. Only adjust this setting if you are comfortable determining the appropriate value and taking on the risks to system stability that might occur as a result of changing this value.

## Console and 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 console and Volans log file which can be useful. Volans writes the same information to both the console and the log file.

The console can be displayed by selecting Help -> Show Console from the main menu in Volans. The Volans log file is created/updated every time the Volans application is launched. The file is called “Volans.log” and is placed in the Volans cache directory. The default location for the Volans cache directory is [WindowsDrive]:\Users\[user name]\AppData\Local\Volans\Cache\.