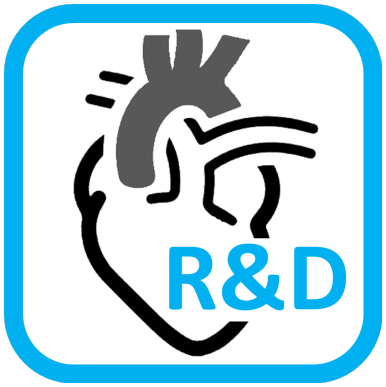
Segment - Installation Manual



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Contents

1 Conventions and Trademarks **ii**
1.1 Typographic conventions ii

2 Requirements **iii**
2.1 System requirements iii
2.1.1 Mac OS users iii
2.2 Safety Instructions iii

3 Installation guide **1**
3.1 Installation and upgrading 1
3.2 First time running Segment 7
3.2.1 Setting preferences 7
3.2.2 Setting window positions 7
3.2.3 PACS connection 7
3.3 Add software license code 7
3.4 Uninstallation 8
3.5 Software overview 9
3.6 Software upgrade 9
3.7 Trouble shooting 9
3.7.1 Segment fails to install 10
3.7.2 Segment fails to start after installation 10
3.7.3 No compatible GPU configuration detected 10
3.7.4 Sudden software crash 11
3.7.5 Update NVIDIA graphics driver to latest version 11

1 Conventions and Trademarks

1.1 Typographic conventions

`A`	Key `A` at the keyboard.
`Ctrl-A`	Control key. Hold down `Ctrl` key and `A` simultaneously.
	Icon in toolbar.
`*.mat`	Filename extension.
`C:/Program`	Folder.
File	Menu, e.g. File menu.
File→Save As	Sub menu, e.g. under the File menu the item Save As is found.
Close	Push/Toggle button in the graphical user interface.
◎ Endocardium	Radiobutton in the graphical user interface.
☒ Single frame	Checkbox in the graphical user interface.

2 Requirements

2.1 System requirements

- Operating System: 64-bit Windows 10
- Computer with 8 GB of memory or preferably 16 GB
- Harddisk with at least 5 GB of available space
- Graphics card supporting both DirectX and OpenGL

To access full version of machine learning algorithms in Segment:

- CUDA enabled NVIDIA graphics card with 4 GB memory or more
  - GPU architecture: Ampere, Turing, Volta, Pascal

For users with additional modules not included in the free research version:

- Internet connection for software license management and software download. We recommend a speed of at least 24 Mbit/s.

Recommendations

- Systems with two screens
- Using SSD disk for reading data

2.1.1 Mac OS users

Please refer to the section "I have a Mac" in our FAQ (www.medviso.com/faq).

2.2 Safety Instructions

Caution used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury or material damage. Caution consists of the following elements:

- Information about the nature of a hazardous situation,
- Consequences of not avoiding a hazardous situation, and
- Methods of avoiding a hazardous situation.

The following cautions are valid for Segment:

CAUTION: The user reads a revision of the user manual that differs from their software revision, so the user gets incorrect information on how to use the software.
Extra work for user, since the software cannot be used.

- Ensure the version number of your Instructions for Use corresponds to your software version number. The correct Instructions for Use for your software can always be found under the Help menu, while the latest can be found on the Medviso webpage.

CAUTION: Antivirus software has not been installed or updated.
Violation of patient integrity.

The computer where Segment is installed should have:

- Firewall,
- Anti-virus software installed and running,
- Back-up on patient data, and
- Personal login to access the software (in the preferences for Segment the user can activate user login to the device and user logging for the usage of the device.)

In the event that the use of Segment causes a serious incident, such that it results in physical OR psychological harm to the user and/or patient, this shall immediately be reported to Medviso AB (support@medviso.com), as well as the competent authority of your Member State (Ministries/Agencies of Health and/or Medicines).

3 Installation guide

3.1 Installation and upgrading

To install or upgrade Segment, log in on our website (https://medviso.com/download2/) and download the installation file. Run the installation file under administrator privileges on the machine and follow the instructions in the figures below. For assistance, please contact `support@medviso.com`.

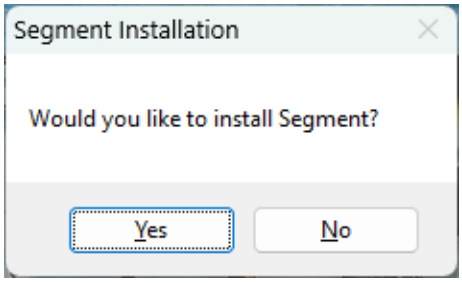

Figure 1: Click on `Yes`.

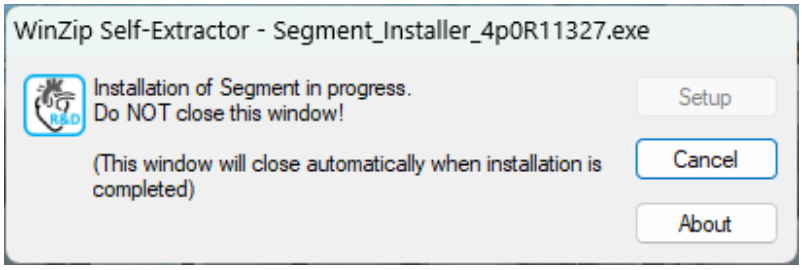

Figure 2: The installation starts automatically. Do not close this window, it will close automatically when the installation is completed.

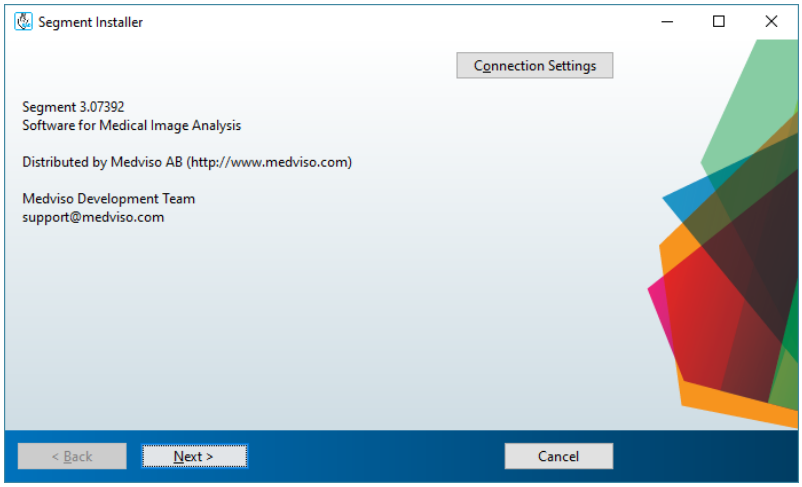

Figure 3: Click on `Next`.

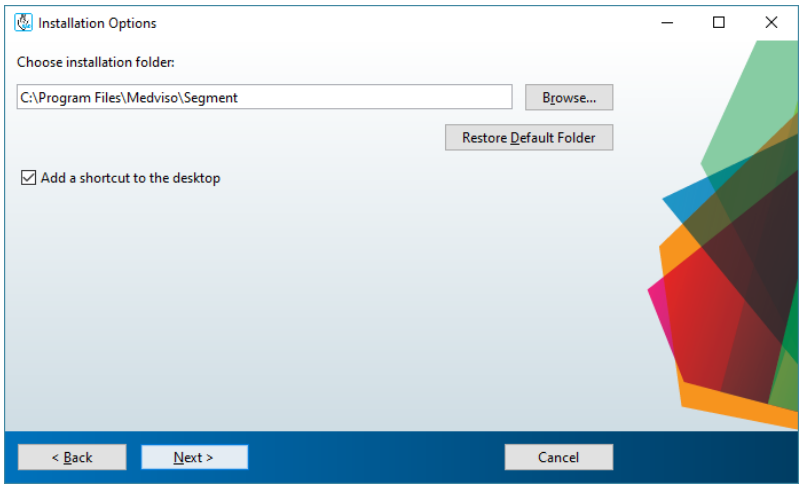

Figure 4: Select `Add a shortcut to the desktop`. Click on `Next`.

For first time installation, `Matlab Compiler Runtime (MCR)` needs to be installed according to Figure 5 - 8. For upgrading, continue according to Figure 9.

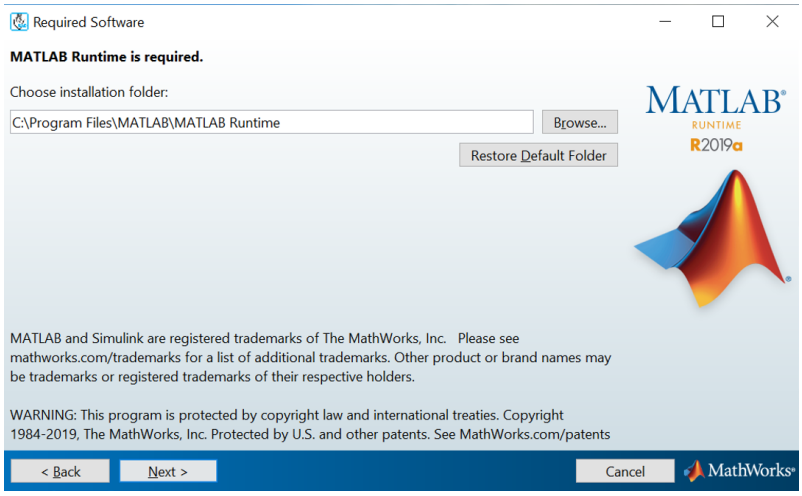

Figure 5: Click on `Next`.

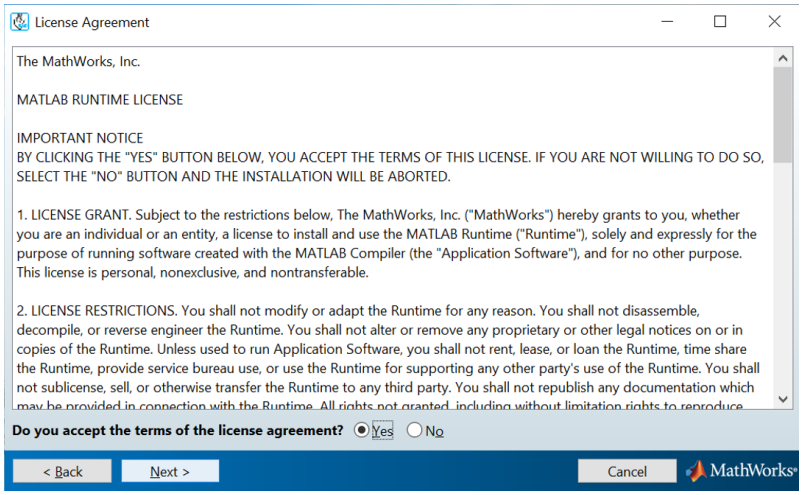

Figure 6: Select `Yes`. Click on `Next`.

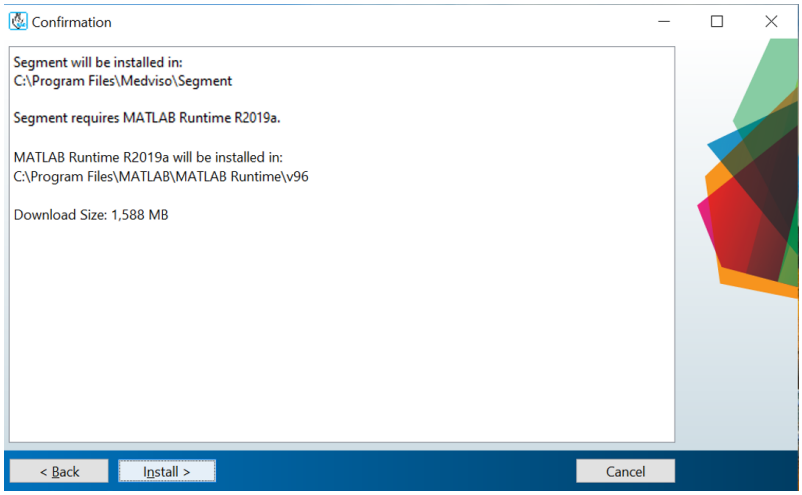

Figure 7: Click on `Install`.

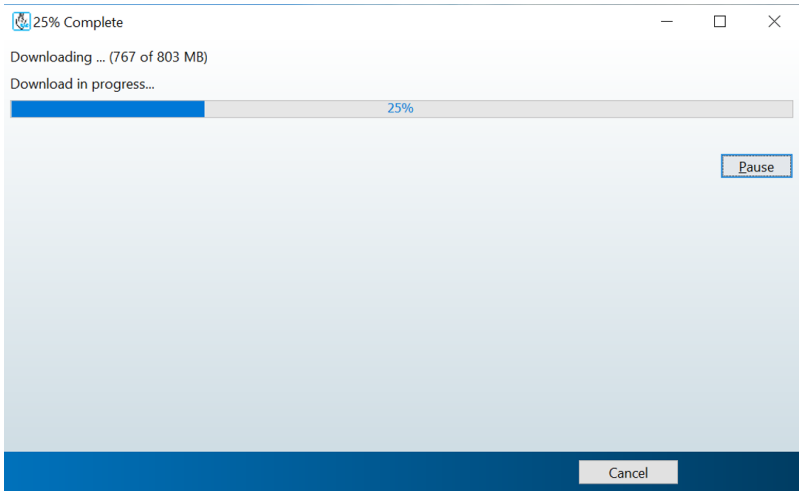

Figure 8: Wait for completed process.

For upgrading, only install Segment according to Figure 9 - 10.

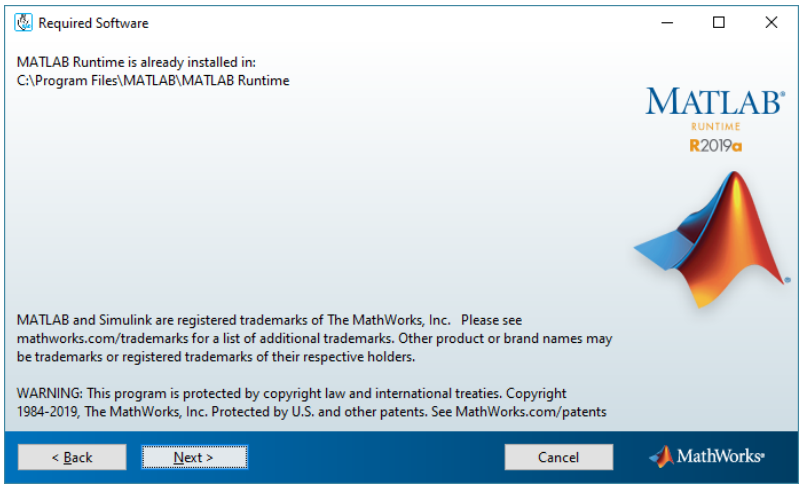

Figure 9: Click on `Next`.

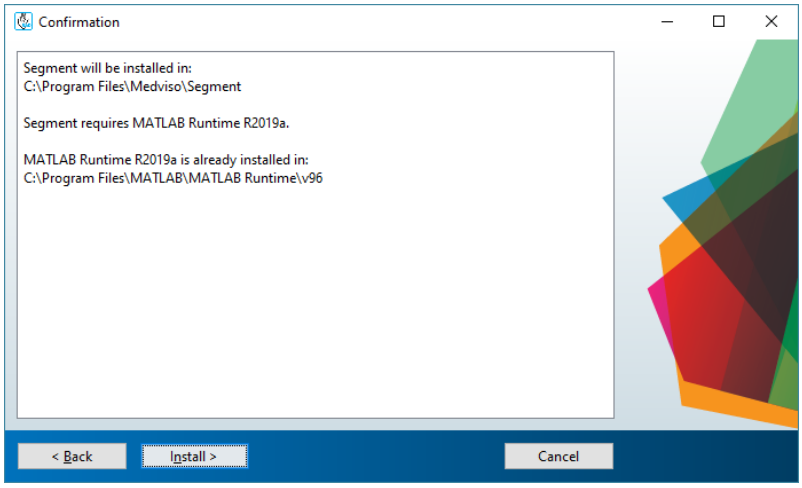

Figure 10: Click on `Install`.

For first time installation or upgrading, continue according to Figures 11 - 12.

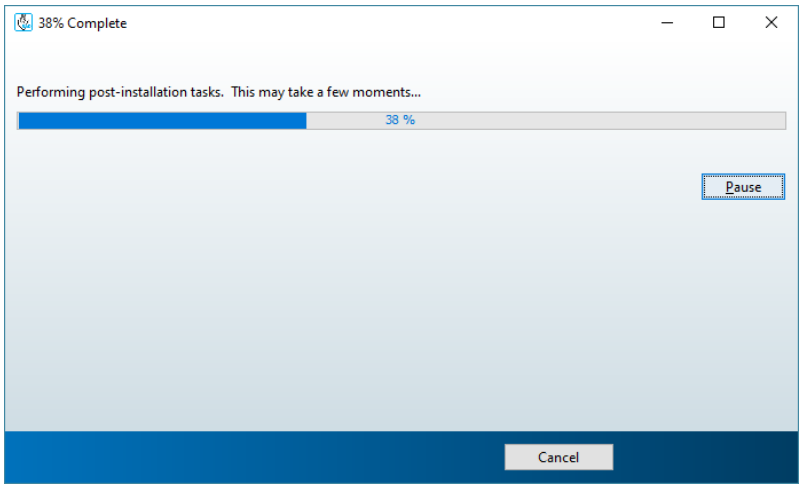

Figure 11: Wait for completed process.

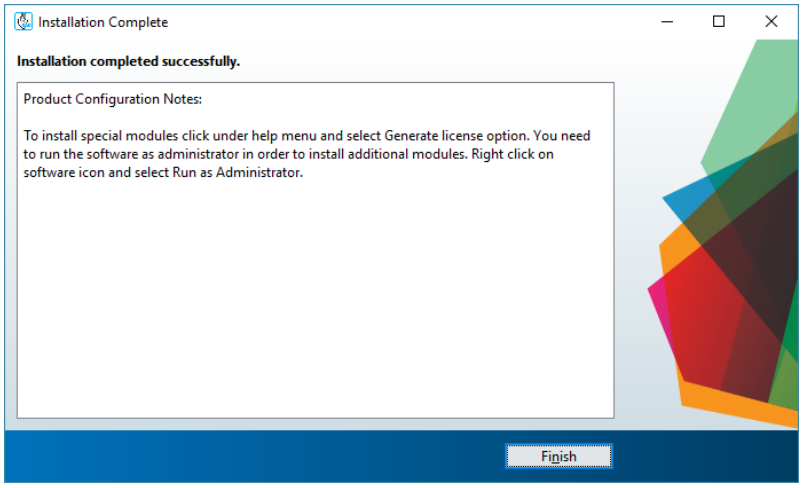

Figure 12: Click on `Finish`.

3.2 First time running Segment

The first time you run the software to configure it you need to run the software as Administrator. Right click on the shortcut to the software and select Run as administrator. Note that it is not sufficient to be logged in as administrator on the computer.

The first time Segment is started, it runs a setup process which can take a while, so be patient. When starting the software, the image in Figure 13 should be displayed. If it is not displayed, then the software is not correctly installed.

To complete the setup, set preferences and window positions as described in Sections 3.2.1 and 3.2.2.

3.2.1 Setting preferences

It is recommended to set the preferences of which folders to use to avoid browsing each time you want to load or save a file. It is invoked by using the icon (p). Set `Data`, `Export` and `CD` folders.

3.2.2 Setting window positions

The position of the main window for Segment can be set by dragging the window to an optional position and size. The size and position will be saved so that next time Segment is launched the same position will be used. In case where one have switched to another monitor, Segment may move outside the screen. In this case you could press `Ctrl-0` to reset GUI positions. This is also available under the File menu (a).

3.2.3 PACS connection

Setting up PACS connection and Segment Server usually requires help from your local PACS support, and we recommend that you contact us to setup a telephone / web-based video conference to make this process as smooth as possible. The Database and PACS connection manual and the Sectra PACS plugin manual is found at Medviso AB homepage (https://medviso.com/user-manuals). The Sectra PACS plugin may require additional Microsoft Visual C++ components that can be downloaded from Medviso AB homepage (https://medviso.com/download2/).

3.3 Add software license code

For new installations you need to add your license code for Segment. Add your license code after installation by starting Segment and select `Generate License` under the Help menu in Segment. Note that you have to run the software as Administrator to be able to add the license code in Segment. If you have lost the license code, please contact `sales@medviso.com`.

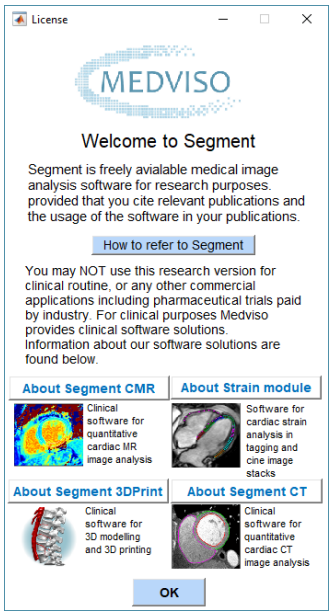

Figure 13: Startup window for Segment.

3.4 Uninstallation

To uninstall Segment, go to Control Panel and select Uninstall a program (Figure 14). Search for Segment in the programs list, right-click on it and select Uninstall/Change. Do the same steps for uninstalling MATLAB Runtime, but select MATLAB Runtime in the programs list.
User preferences are stored in `AppData`, in the subfolder `Segment` under each user account.

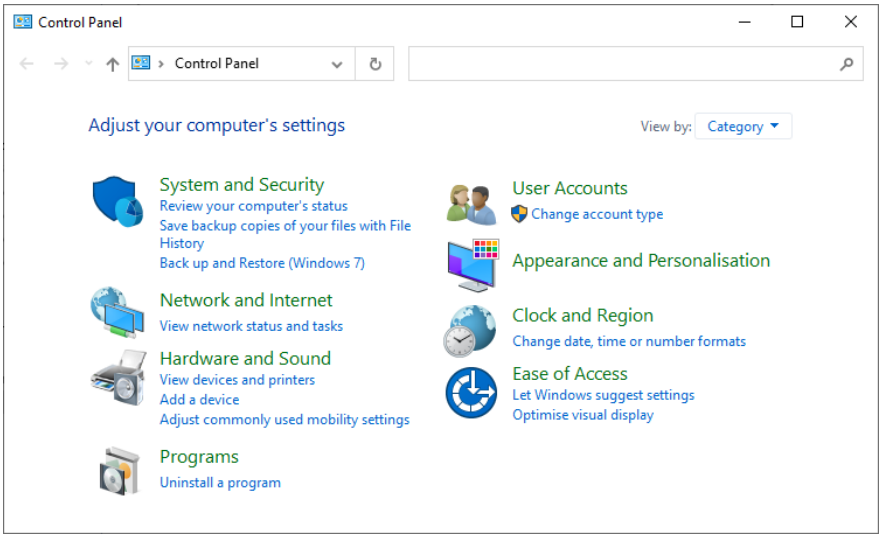

Figure 14: Control Panel

3.5 Software overview

An overview of Segment is given in Figure 15.

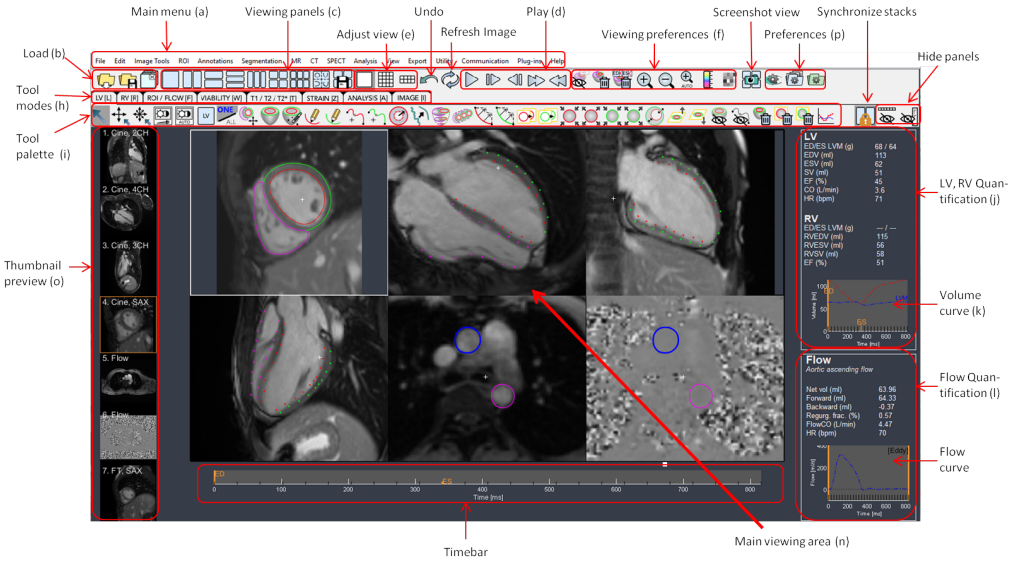

Figure 15: Main graphical user interface.

To learn more about each tool, hold the mouse over the icon in the software and a help text will be displayed.

3.6 Software upgrade

When upgrading to new software version you can just install a new version over the old version. The versions are always backwards compatible and settings are kept. If you have activated services for Segment to work as a DICOM node, then these services need to be stopped during the upgrade process. How to do this is illustrated in Figure 16. The services may also be stopped directly with Windows service manager by typing `services.msc` in the Windows search box.

The services can be restarted after upgrade is complete. The services will also be automatically restarted when the computer is restarted.

3.7 Trouble shooting

To trouble shoot the installation you can see if the Segment installation program actually was successfully started by checking for the existence of `.log` files. Segment creates a log file during installation, this file is stored in the user folder (i.e `Documents and Settings/Username` and `Application Data` and the subfolder `Segment`. Note that this folder by default is hidden. If you have problems installing Segment, please send this log-file

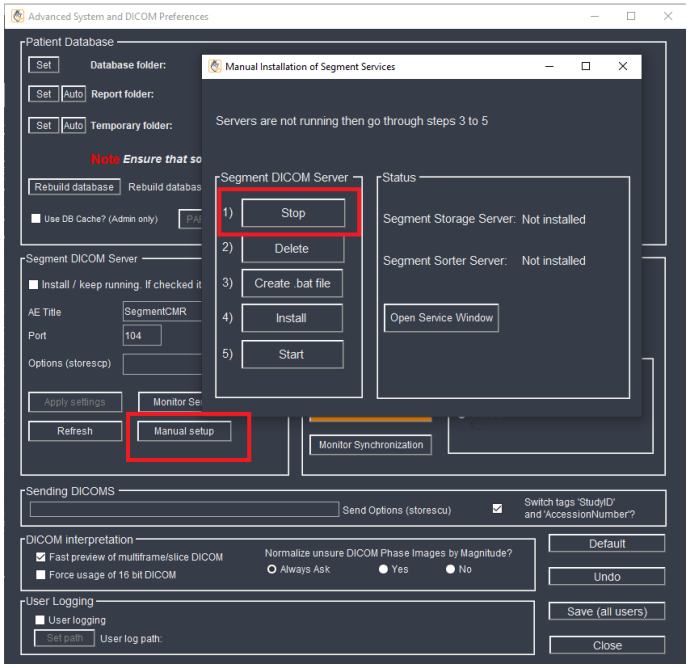

Figure 16: Stop services button in the Manual Installation of Segment Services window.

to `support@medviso.com` together with a description on what problems where encountered.

In case the software runs then you can access the log-files under the `Help` menu and `Open Folder with Log Files` .

3.7.1 Segment fails to install

The most probable cause is not to run the installation software as administrator. Another problem may be that have no Internet connection during installation.

3.7.2 Segment fails to start after installation

If the software fails to start after installation without or with error messages, that means that the installation process was not completed successfully Please refer to the section "Program won't start" in our FAQ (www.medviso.com/faq) for further support.

3.7.3 No compatible GPU configuration detected

Segment fails to find a compatible NVIDIA graphics card. Firstly check that the card is correctly installed and meet the performance. We recommend to download the tool GPU-Z from Techpowerup for this purpose (www.techpowerup.com/download/techpowerup-gpu-z). If you have one card installed that should match the requirements on possible cause may be that your operating system is blocking GPU usage either for compability reasons or power saving reasons.

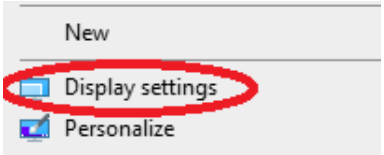

Figure 17: Select display settings by right click on desktop.

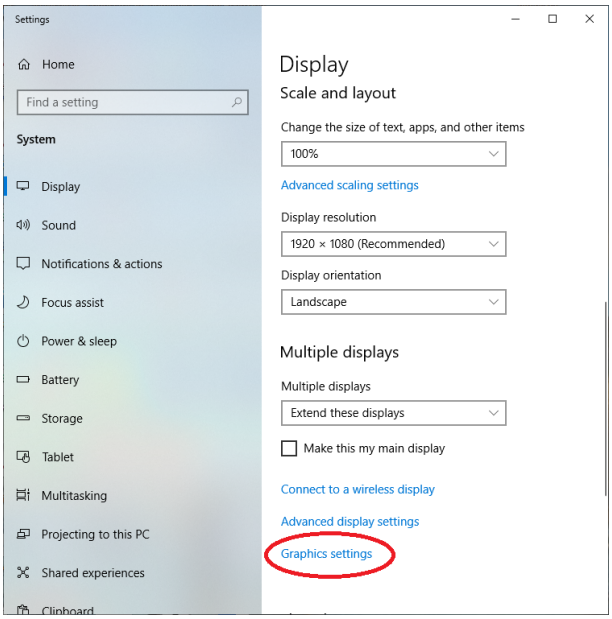

Figure 18: Select Graphics settings.

3.7.4 Sudden software crash

This is most likely caused by old NVIDIA graphics driver, please see Section 3.7.5. For getting help general crashes please send log-files to `support@medviso.com`. See details on where to

3.7.5 Update NVIDIA graphics driver to latest version

Please note that although you use Windows update and this process claims all drivers to be updated this is likely not the case for the NVIDIA graphics card driver. To install a new version, go to http://nvidia.co.uk/Download/index.aspx. Select you graphics card details and press Search. Follow instructions on how to download and install. See also under Section 3.7.3 on how to see GPU details and driver version details.

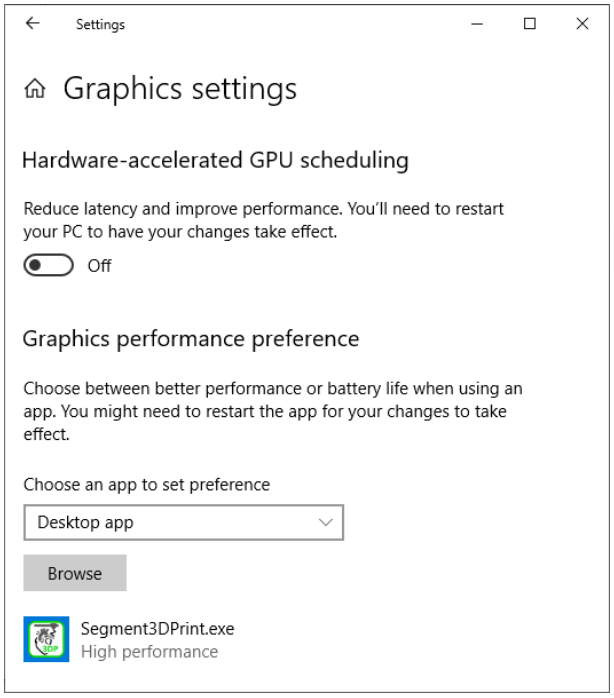

Figure 19: Select Browse, and select folder where Segment is installed. Select application. Select High Performance.