

# Segment CT Installation Manual



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Software platform v2.0 R5316

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# 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.
<input type="button" value="Close"/>	Push/Toggle button in the graphical user interface.
<input type="radio"/> Endocardium	Radiobutton in the graphical user interface.
<input checked="" type="checkbox"/> Single frame	Checkbox in the graphical user interface.

## 1.2 Trademarks

Below are some of the trademarks used in this manual.

- Segment CT is a trademark of Medviso AB.
- Segment DICOM Server is a trademark of Medviso AB.
- Sectra PACS is a trademark of Sectra Imtec AB, (<http://www.sectra.se>).
- Matlab is a trademark of the Mathworks Inc, (<http://www.mathworks.com>).



# 2 System Requirements

In this chapter the hardware requirements for the software are outlined. Possible bottlenecks are (in order of likelihood) lack of RAM memory, CPU speed, and I/O network or disk transfer rates.

## 2.1 Operating system

Microsoft Windows 64 bit platform. It will run on any of the following Windows 2000, Windows XP, Windows Vista, Windows 7, Windows 8 and Windows 10.

## 2.2 Hardware requirements

The list below are the recommended hardware requirements. To run a clinical versin of Segment CT you need at least the specifications indicated below.

- A fairly recent computer with 8 GB of memory or preferably at least 8 GB.
- Harddisk with at least 500 MB of available space. The program Matlab Compiler Runtime takes about 450 MB, another 20MB is taken by the program.
- Graphics card supporting both DirectX and OpenGL (hardware accelerated) is recommended. Systems with two screens is recommended for clinical usage of Segment CT.

We strongly recommend using SSD disk for reading data.





# 3 Installation guide

For instructions on how to perform a first time installation of Segment CT see section 3.1. For upgrading Segment CT see section 3.2.

## 3.1 Installation

This section is written for first time installation of Segment CT. For upgrading, see the Section 3.2. The program is written in Matlab, in order to run it you therefore need to install Matlab Compiler Runtime first. **Note** that to be able to perform these steps below you **need** to have administrator privileges on the machine. If you are using Windows Vista, then please also refer to Section 3.1.4.

### 3.1.1 Installing Matlab Compiler Runtime

If you have Matlab **and** Matlab Compiler Runtime (MCR) installed on your computer this step may not be necessary, provided that you have exactly the same version as used for compiling Segment CT. Currently Matlab Compiler Runtime R2014a is required. Download the file `MCR_R2014a_win64_installer.exe`. Exact name of the file depends on operating system you are installing to. Download the file to a suitable location (i.e your desktop or a temporary folder) and double-click it. Follow the instructions in Figures 1-4.

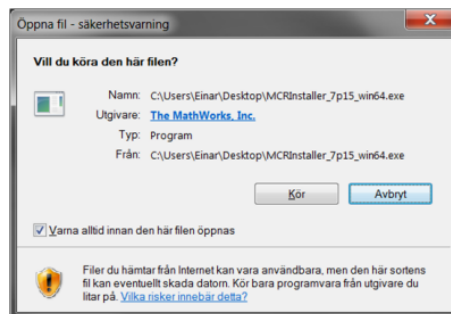


Figure 1: Click on Run or Kör.

## CHAPTER 3. INSTALLATION GUIDE

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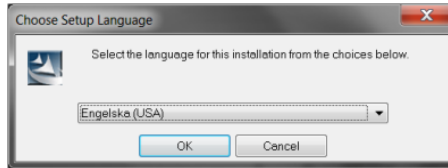


Figure 2: Click on OK.

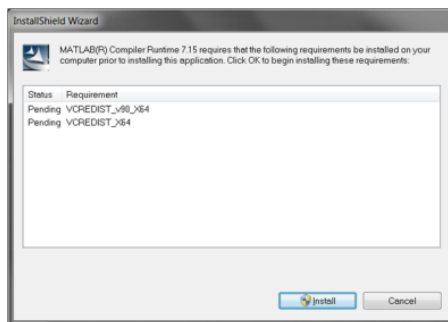


Figure 3: Click on Install.

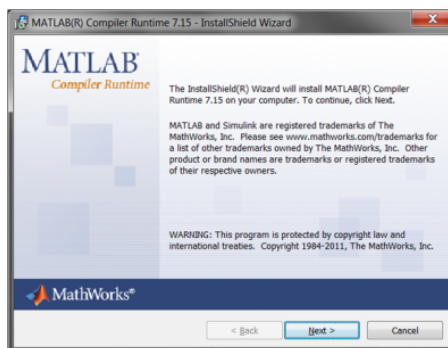


Figure 4: Click on Next.

This step to install MCR Installer does only need to be performed once and should generally not be necessary when upgrading to a later version of the software.

**Note:** For some operating systems it is required to reboot the computer after installing the MCRInstaller. We therefore, **strongly** advise all users to reboot the computer after installing the MCRInstaller.

### 3.1.2 Installing Segment CT

Download the file (called something like `install_Segment CT_2px_Ryyyy.exe`, where `2px` is the version number and `Ryyyy` is the revision number). Place the file where you easily can find it (i.e your desktop). When downloaded, double click on the file, and follow the instructions. You will be prompted if you want to install the program to the default location ( `C:/Program Files` or `C:/Program` depending on operating system language). One advantage of installing to another location, where you have write access, is that you can thereafter install upgrades without being logged in as local administrator.

### 3.1.3 Create shortcut

Place a shortcut to the file `C:/Program Files/Segment CT/Segment CT.exe` at your desktop. Note that depending on your system locale, or if you have installed Segment CT to a non-default location this path may be different. Creating this short-cut is done by using the standard Windows file explorer to find the file, then right click on the file and select the option `Create a short-cut`. Move the created shortcut to your desktop.

### 3.1.4 Notes for Windows Vista users

You will need to run the application in administrator mode the first time you run Segment CT since the first time Segment CT is started some files are extracted. This operation is blocked in user mode. The second time you run Segment CT you should be able to run in a user mode.

## 3.2 Upgrading Segment CT

If your previous version used another MCR then you need to **first** replace your old Matlab Compiler Runtime. To see which version of Matlab Compiler Runtime is required, please see the table below.

Segment CT version	MCRInstaller
1.9	Matlab Compiler Runtime 7.15
2.0	Matlab Compiler Runtime 2014a

If you need to upgrade MCR, follow the installation instructions in Section 3.1. It is **important** to uninstall the old MCR before installing a new one. When having problems installing or uninstalling the MCRInstaller, please consult Mathworks support pages, and search for **MCRInstaller**.

If you, as in most cases, do not need to upgrade MCR, simply download the Segment CT installation file and double click on it to install it, as described in Section 3.1.2. If you are running services for the Segment Server solution, then you need to stop and delete them prior to upgrading, please see Patient Database and PACS Communication Manual for details.

### 3.3 First time running Segment CT

Doubleclick the file `C:/Program Files/Segment CT/Segment CT.exe`, or your shortcut to it, to start the program. The first time it is started, it runs a setup process which can take a while, so be patient. To complete setup, set preferences and window positions as described in Sections 3.3.1 and 3.3.2.

#### 3.3.1 Setting preferences

The preferences are saved as a file `.segment_preferences.mat` in a folder that can be accessed by selecting **Open Folder with Log Files** from the **Help** menu. This preferences are specific for all users, however it is possible to set default preferences for all users starting to use the software by in the **Advanced System and DICOM preferences** click on **Save to all**. This preferences file will then be copied to the preferences path of every user that does not already have preferences saved. It will also override any PACS or Segment Server settings for all users on the machine. Please note that these operations may require that you run the software as Administrator (not only being logged in as Administrator). This is done by right clicking on the icon of the software and then select "Run as administrator".

### 3.3.2 Setting window positions

The position of the main window for Segment CT 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 CT is launched the same position will be used.

In case where one have switched to another monitor Segment CT may move outside the screen. In this case you could press **Shift-Ctrl-R** to reset GUI positions. This is also available under the **File** menu.

### 3.3.3 Patient database

We recommend that you start by using our example patient database. Download the file `Patientdatabase.zip` from Medviso AB homepage (<http://medviso.com/download2/>). The file is quite large (1.4 GB). Unpack the file and place the contents in a folder. In Segment CT you need to set the location of the patient database. Click on **Preferences** and click on **Advanced System and DICOM Settings**. A new user interface appears and click on **Database Folder**, select the folder where the file `patientdatabase.mat` resides.

### 3.3.4 PACS connectivity

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

## 3.4 Uninstallation

There is currently no uninstallation software available. Remove all files in the folder `C:/Program/Segment CT` or `C:/Program Files/Segment CT`. User preferences are stored in the **Application Data** and the subfolder **Segment CT** under each user account (Windows). To uninstall the Matlab Compiler Runtime, use the Windows functionality **Install or Remove Programs** in the control panel menu. Please note that if you are running services

for the Segment Server solution, then you need to first stop and delete these services before uninstalling the software, as they otherwise will lock files that needs to be deleted. See Patient Database and PACS Communication Manual for details.

### 3.5 Trouble shooting

The absolutely most common problem is the failure to not login as a local administrator of the computer. The second most common mistake is not to read the installation instruction provided in this user manual or on the homepage.

To trouble shoot the installation you can see if the Segment CT installation program actually was successfully started by checking for the existence of .log files. Segment CT 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 CT. Note that this folder by default is hidden. If you have problems installing Segment CT, please send this log-file to together with a description on what problems where encountered.