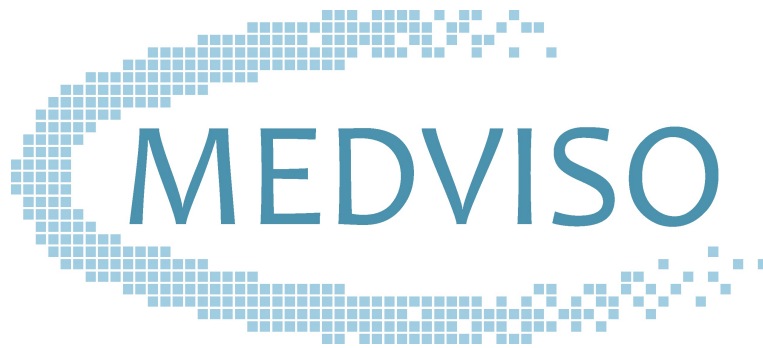


Sectra PACS Plugin



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1 Background

The Sectra PACS Plugin is as an addition to the software Segment, Segment CMR, Segment CT or Segment 3DPrint that allows for direct access to images in Sectra PACS. In this manual the software Segment, Segment CMR, Segment CT or Segment 3DPrint are used interchangeable since they work similarly with the Sectra PACS Plugin. At all places this manual specifies Segment this can also be read as Segment CMR, Segment CT or Segment 3DPrint.

Using the Sectra PACS Plugin it is possible to with a simple right click to send images and open them in Segment for analysis. From Segment it is possible with a single click to send the images back to the Sectra PACS including measurements and analysis etc.

The plugin is sold and distributed by Medviso AB. For more details about the software Segment, please see Segment User Manual. For more information about Sectra PACS, please see documentation supplied by SECTRA Imtec AB (<http://www.sectra.se>).


1.1 Conditions for use

- **Caution:** Federal law restricts this device to sale by or on the order of professionals trained in medical image analysis.
- The software is a tool to direct access images in Sectra PACS from Segment software packages.

2 Conventions and Abbreviations

The following typographic conventions are used in this manual.

2.1 Typographic conventions

A	Key A at the keyboard.
Ctrl-A	Control key. Hold down <code>Ctrl</code> key and <code>A</code> 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 type="checkbox"/> Single frame	Checkbox in the graphical user interface.

3 Send data from Sectra PACS to Segment

Before attempting the installation, please see system requirements below.

3.1 System Requirements

In order to run the SECTRA PACS plugin you need to have:

- Access to Sectra PACS IDS7, including log-in.
- A powerful enough computer to run Segment. For further details, please see Chapter 'System Requirements' in the Segment User Manual.
- Supported operating systems are Windows 10.

3.2 Overview

The installation consist of three major steps:

1. Install Segment on each client computer you want to run the Sectra PACS Plugin.
2. Enable communication between Segment and Sectra PACS.
3. Configure the Sectra PACS workstation to allow plugins.
4. Configure Sectra PACS and Segment to be able to send images between the systems.

Please note that the above process needs to be repeated on each client computer that will run Segment and the Sectra PACS Plugin.

3.3 Installing Segment

Please follow the instructions on how to install Segment from Segment Installation Manual. If you want to deploy Segment to many machines, it is technically possible to perform a network installation of Segment.

You will need a Sectra plugin license included in your Segment license to run the plugin. This license is supplied to you either at the time of purchase of

Sectra PACS Plugin, or by contact sales@medviso.com for evaluation purposes.

3.4 Installing Microsoft Visual C++ 2010 Redistributable Package

To successfully register the plugin, currently the runtime components for Visual C++ libraries have to be installed. These can be downloaded from

<http://www.microsoft.com/download/en/details.aspx?id=5555> (32 bit)

<http://www.microsoft.com/download/en/details.aspx?id=14632> (64 bit)

3.5 Enable communication from Sectra PACS to Segment

This step will enable the communication from Sectra PACS to Segment.

This step will register an .dll file. If you are using 32 bit Sectra PACS system, then double click on the file `sectraplugin32.bat` in Segment installation folder. If you are running a Sectra PACS 64 bit system, then click on `sectraplugin64.bat`. You will now see a message box that looks like in Figure 1. For some systems you might need to run the .bat-file from command line.

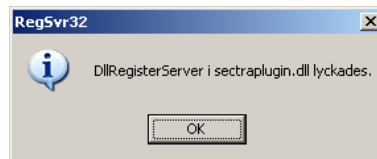


Figure 1 – Successful notification .dll installation.

If the installation was not successful please contact support@medviso.com for help with trouble shooting.

3.6 Configure the Sectra PACS workstation

Before you can use the Sectra PACS Plugin you need to configure the PACS installation on each computer where you want to run the application. Depending on the PACS master settings this step may not be required. In order to perform this step you need to have PACS administration system privileges.

1. Start Sectra PACS
2. Login in as local PACS administrator
3. In the menu **Tools** or **Verktøy** select **Options** or **Alternativ**. The keyboard short cut for this is **Shift-Ctrl-O**. Select the name of the workstation as the role. Click continue.
4. Click on the tab for **Advanced Settings**
5. Select **CAI Settings**
6. Adjust settings according to Figure 2
7. You are now set to go. However, we strongly recommend that you first test it, and then also logoff and test it for users with standard privileges.

CHAPTER 3. SEND DATA FROM SECTRA PACS TO SEGMENT

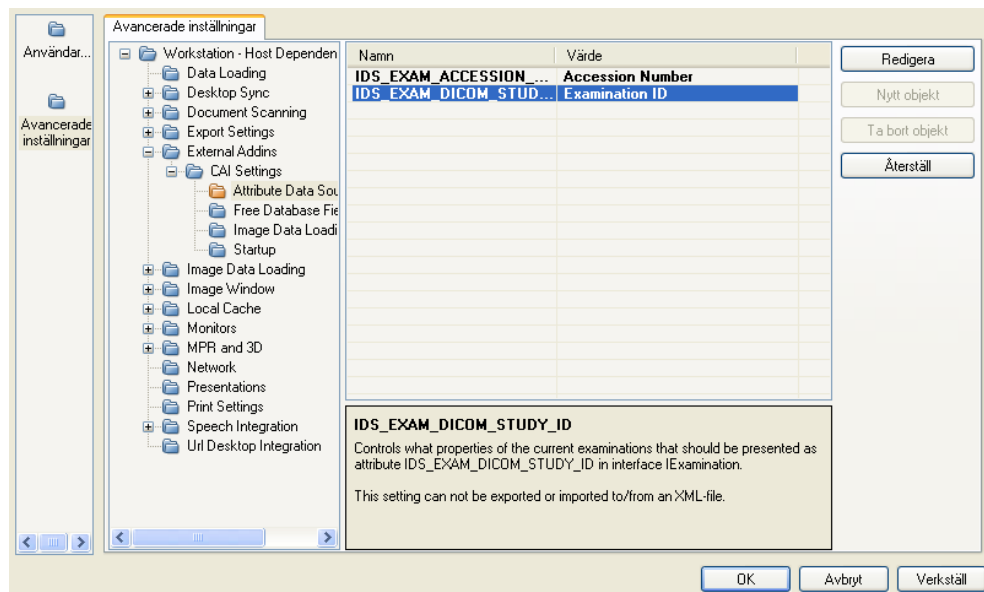


Figure 2 – Local PACS settings for each client computer.

3.7 Using the Sectra PACS Plugin

In this section it is assumed that you are well acquainted with using Sectra PACS. If you need assistance using the Sectra PACS, please consult you local hospital PACS support, or contact Sectra Imtec AB.

3.8 Send images from Sectra PACS to Segment

To send images to Segment, first open them in Sectra PACS. In the image window, simply right click on the desired image series. The menu showed in Figure 3. In the menu, click on **Clinical Applications**, or **Kliniska Applicationer** and select **Segment**.

Segment will automatically start and load the desired image stack. If Segment is already open, then it will load it into the current image stack collection. If you are loading images into another patient a warning message will appear.

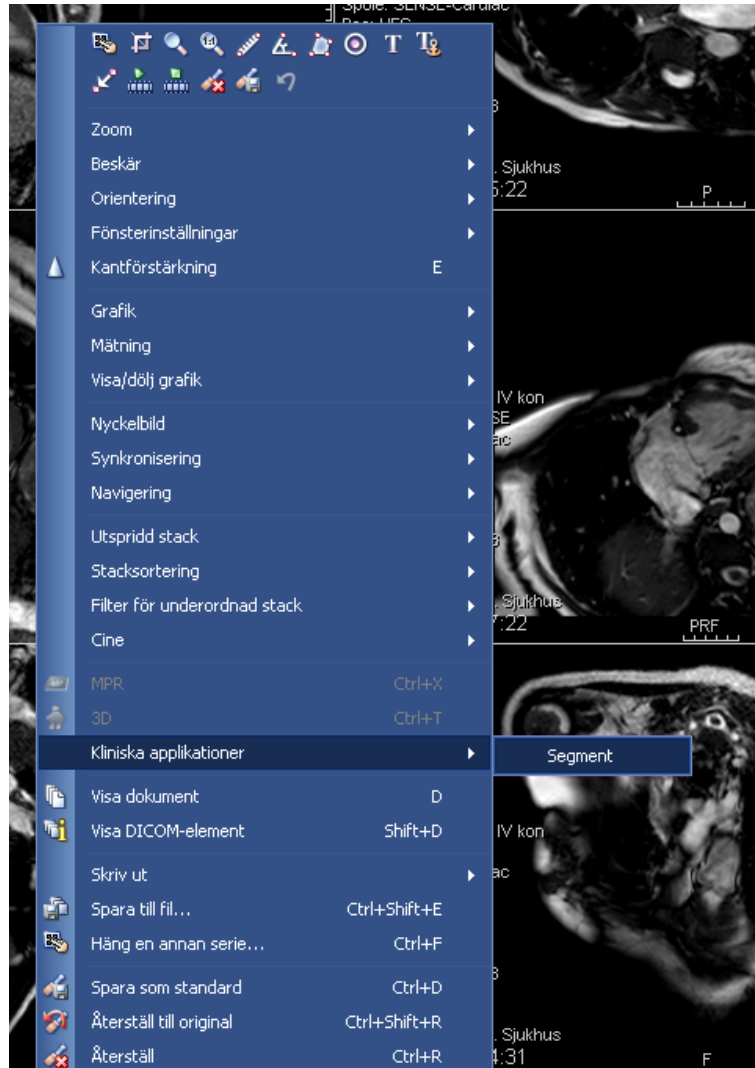


Figure 3 – Right click menu in Sectra PACS.

4 Send data from Segment to Sectra PACS

This step is optional and only required if you want to be able to send images and reports back to Sectra PACS from Segment.

4.1 Set up DICOM node in Sectra PACS

Ask your local Sectra PACS Administrator to set up a DICOM node (port) for the Segment Application. As PACS administrator you need to decide on the following:

- Called AE. This should be the AE Title for the DICOM node (or for the entire Sectra PACS).
- Peer IP. This is the IP address of the DICOM node (or the entire Sectra PACS).
- Peer Port. This is the port on which the DICOM node (or the entire Sectra PACS) is listening for incoming association requests.
- Port. This is the port suggested by Segment to be used in the communication.

You need to collect the following information about each client that you need to set up.

- Hostname
- IP number

4.2 Set up connection from Segment

You should create a new PACS connection in Segment and enter the information from above. This is done in the Preferences menu, and by clicking on **PACS Settings**. Thereafter, select **Add** under the Define PACS connection tab. The new settings should look something as shown in Figure 4.

For further details on how to configure PACS connections, please see Segment User Manual.

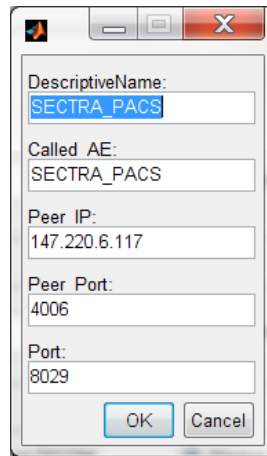



Figure 4 – Example of communication settings for Sectra PACS.

4.3 Send images from Segment to Sectra PACS

After image analysis and quantification in Segment, it is possible to send images back to Sectra PACS. This is done in Segment with the icon . It is also possible to send images from the Segment PACS Connection Module, or the Segment Patient Database.

The transmitted images are in Segment internal `.mat` format, but with a DICOM wrapper. This will enable that the images are visible as a thumbnail in Sectra PACS. When they are opened in Sectra PACS all you will see is an image preview. When opened in Segment through the Sectra PACS Plugin the full image and all measurements will be available. The internal representation used in Segment is stored in the private tag (37FB,1947).