Configuring CDR Dicom for Windows with PACS servers.

Introduction

CDR DICOM for Windows is designed as a fully functional DICOM based client-server application. The client application can, in theory, communicate with any standard DICOM server to store and retrieve image data. This implies that the PACS server could simply replace the CDRServer. DICOM Conformance statements are available for both the CDRServer and CDRClient applications.

PACS

Upon initial installation and configuration, the PACS system may not support DICOM Query and Retrieve services. Therefore, CDR cannot be used to retrieve images from the DICOM server. In order to provide a stop gap until PACS supports query and retrieve, a site may elect to store image data on both the PACS server and the CDRServer. Then, images may be retrieved for display using the CDRServer. The basic workflow between the three applications is described Figure 1. The CDR Dicom software version 3.0.0.1031 has been modified to accomplish this task.

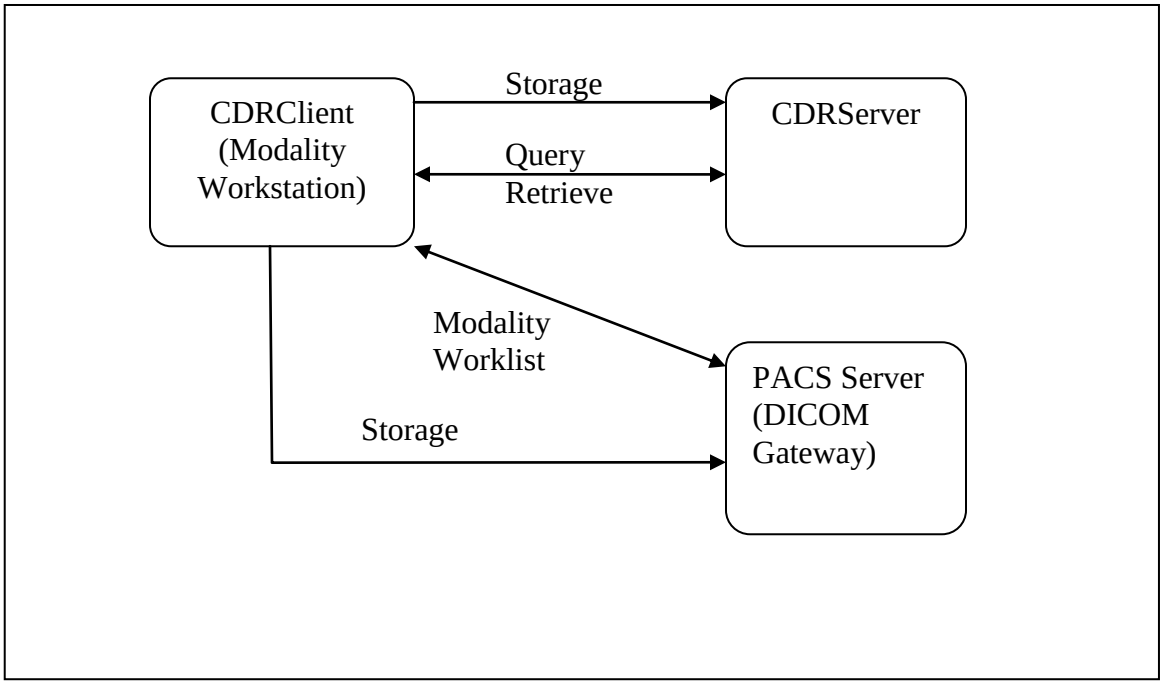


Figure 1: Workflow for CDRDicom and PACS

Configuration Process

To begin the configuration, we assume that CDR Dicom for Windows has been installed and is working properly in a client/server environment.

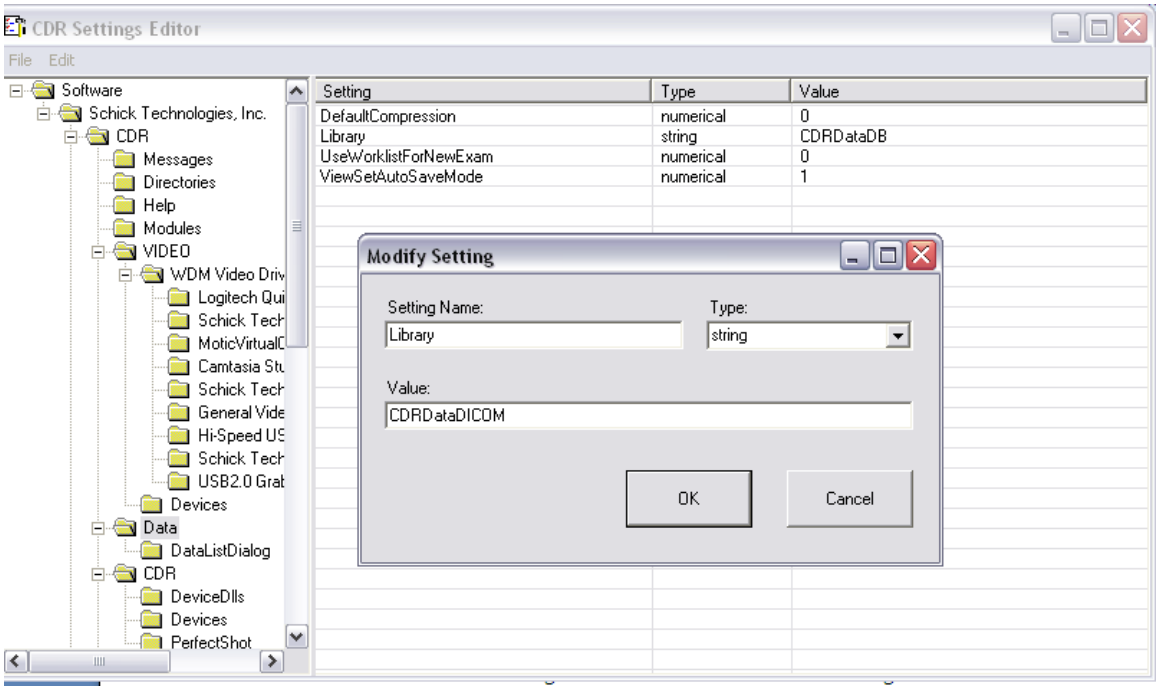
Requirements:

- The AE Title, IP Address and Port Number for the PACS Storage service
- The AE Title, IP Address and Port Number for the PACS Modality Worklist service
- The local AETitle for the CDRClient machine has been registered as a valid AE Title on the PACS system.
- Installation disk or upgrade to CDRDicom version 3.0.0.1031 or higher.

Procedure:

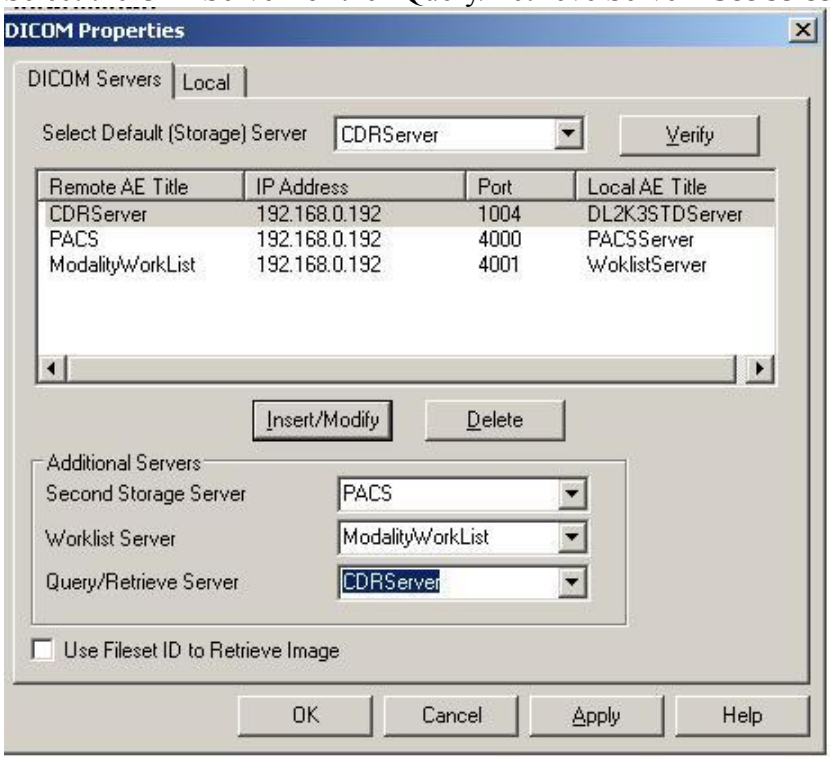
1. Install or upgrade CDRServer to a minimum of version 3.0.0.1031
2. Install or upgrade the CDR client machine where images will be acquired to a minimum version of 3.0.0.1031.

3. For the CDR DICOM 4.5 software click on “Start” > “All Programs” > CDR DICOM for Windows” > “CDR Settings editor and navigate to the CDR> Data folder and double click on the “Library” key on the right. Change the value from CDRDataDB to CDRDataDICOM and click ok. See screen shot below:

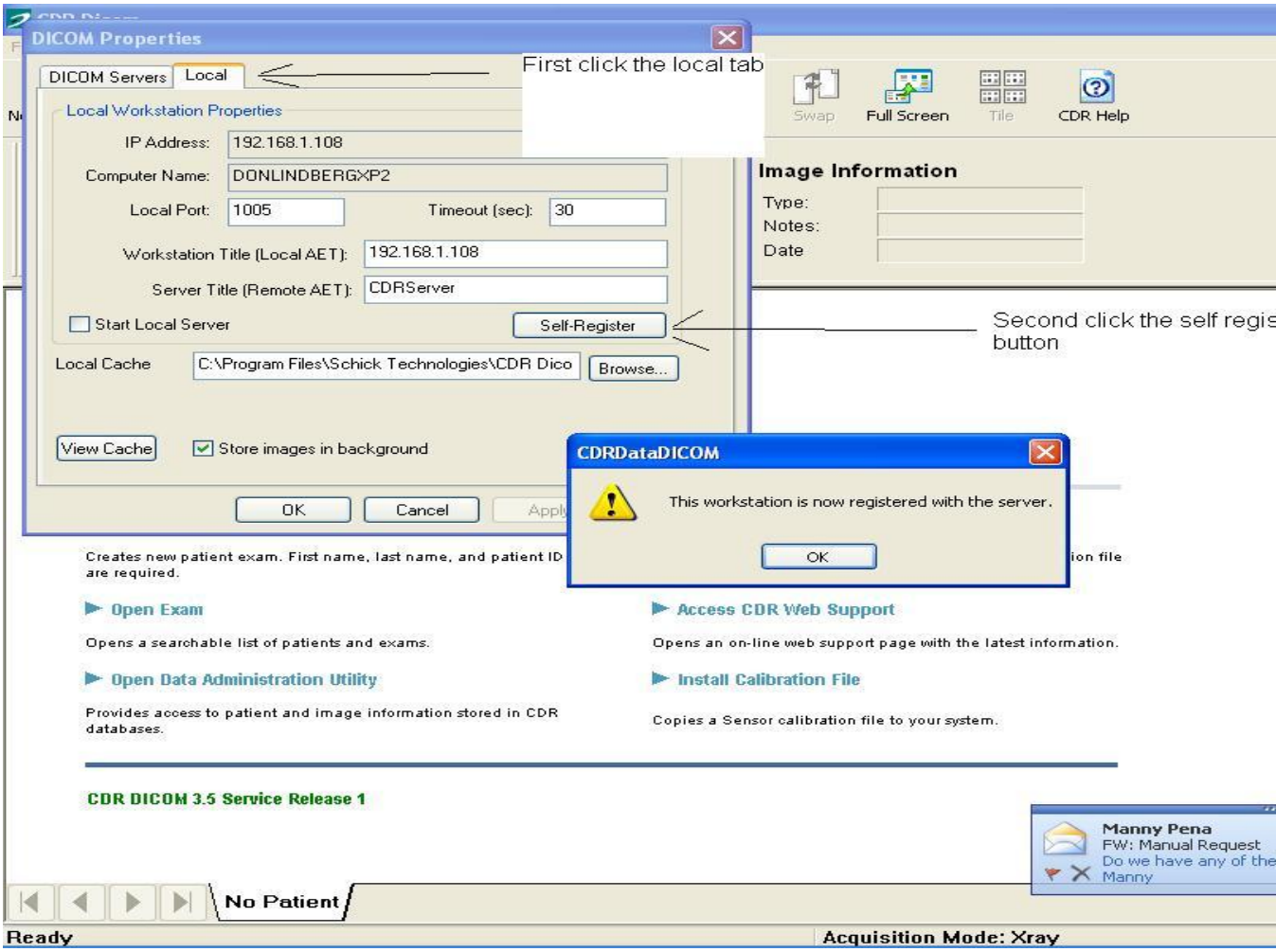


4. Launch CDRDicom (client application).
5. Select **System->Options** to display CDR Options

6. Check the box on the General tab that indicates "Use Modality Worklist for New Exam". You will be prompted with a warning, just accept it.
7. Click on the **Advanced** button under the "CDRDataDICOM" label.
8. Click on the Insert/Modify button and add the server information for the CDRServer. Be sure to check the box that indicates support for CDR Viewsets for the CDRServer and uncheck it for your PACS and Modality Worklist Servers.
9. CDRServer must use port 1004.
10. Click on the Insert/Modify button and add the server information for the PACS service.
11. Click on the Insert/Modify button and add the server information for the Modality Worklist Server
12. The dropdown box at the top of **Error! Reference source not found.** should indicate the normal CDRServer.
13. Select the PACS storage service title for the "Second Storage Server"
14. Select the Modality Worklist for the "Worklist Server"
15. Select the CDRServer for the "Query/Retrieve Server" See screen shot below:



16. You may need to register the workstation with the CDR DICOM or PACS Server. To do this click on the Local tab and verify all the workstation information and click "Self Register". See screen shot below:



Testing:

1. Create a new consultation for a test patient in PACS.
2. Lauch CDR Dicom and click on the **New Exam** button.
3. The Modality Worklist query will display.
4. Enter the Quick PID (first initial of Patient's last name + last 4 numbers of SSN) in the Patient ID field
5. Click on Search. The patient exam should be displayed.
6. Select the patient and click **Open**.
7. At the next screen, select an exam type and viewset series to display.
8. A new exam will be displayed.
9. Click on an empty viewbox and acquire an image.
10. Exit CDR Dicom.
11. Open the PACS client and verify that the image has been received.
12. Open CDR Dicom and verify that the patient can be retrieved by the **Open** button.