

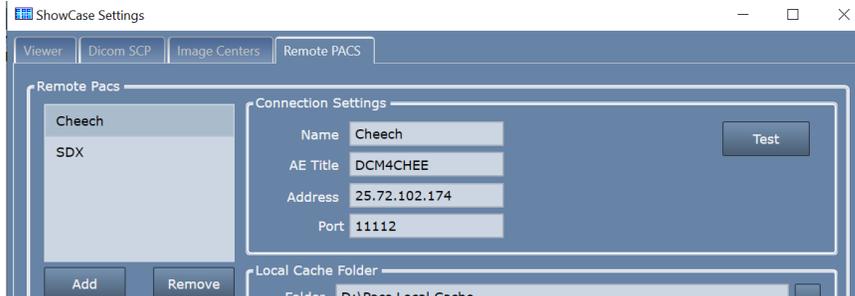


# SHOWCASE® Workstation Query/Retrieve Troubleshooting

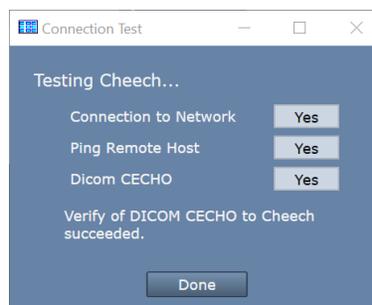
This guide assumes you have already set up your Workstation to do Query/Retrieve as outlined in the *Workstation Query-Retrieve Configuration Guide*.

## Verify the Connection to the PACS

1. From the **Edit Menu**, select **ShowCase Settings...**
2. Click on the **Remote PACS** tab and select your PACS



- a. Check that the **AE Title**, **Address**, and **Port** for the PACS are correct.
- b. Click the **Test** button. A test dialog will appear.



Look for clues in the messages in this dialog if any of these tests fail. Here is some further insight as to what may cause each test to fail. You may find that you need assistance from your IT group to resolve these issues.

**Connection to Network failed** – Means that the Workstation computer cannot find any networks connected to your computer.

- Can other applications connect to the network, e.g. Chrome?

**Ping Remote Host failed** – Means that the Workstation computer cannot ping the PACS computer with a conventional ethernet ping.

- Is the firewall on the PACS properly configured?
- Is the IP address of the PACS correct?
- Is the PACS computer configured to respond to Ping?

**DICOM CECHO failed** – Means that the Workstation computer was unable to send a DICOM CECHO to the PACS.

- Is the firewall on the PACS configured to allow DICOM traffic on the specified port?
- Is the port of the PACS correct?
- Is the AE Title of the PACS correct?
- In the PACS: Is the AE Title for the Workstation correct?

- Is the PACS configured to respond to DICOM CECHO from this workstation's AE Title?

## A Quick Overview of DICOM Query/Retrieve

### Query

In a DICOM Query, the Workstation functions as a Client (known in DICOM as an 'SCU') contacting the PACS, which is functioning as a Server (known in DICOM as an 'SCP'). The Workstation asks the PACS, 'what do you have that matches these search criteria?' and the PACS returns a list of studies. During a query, there is exactly **one** active network connection, from Workstation to PACS.

### Retrieve

A DICOM Retrieve is a very different beast. The Workstation sends a CMOVE command to the PACS, which tells the PACS, 'send the given study/series to the following AE Title'. The PACS now changes roles. It assumes the role of Client (SCU) and opens a completely new network connection to the Workstation, which is now functioning as a Server (SCP) and does a CSTORE, which sends the study to the Workstation. During a retrieve, there are **two** active network connections, one from Workstation to PACS, asking it to move the study, and another from PACS to Workstation, where it is sending the study (via CSTORE).

For this reason, it is crucial that your firewalls on both your Workstation computer and PACS are configured to allow this kind of network traffic.

## Troubleshooting Query Issues

If your connection to your PACS is working, you will probably want to get your PACS administrator involved in troubleshooting this. Here are some things to look for when you get errors:

### *There are CFIND errors at the top of my study list...*

- Is your PACS set up to respond to standard Dicom Study-Series hierarchical queries? If you don't know, consult with your PACS administrator. Please note that ShowCase does not do relational queries.

### *My searches just hang...*

- Click on the **More...** button at the bottom of the study list and select **Test Connection**.
  - If the connection test passes, try increasing the Receive timeout. See the section Connection Timeouts for details.
  - If the connection test fails, see the previous section on *Trouble Connecting to the PACS*

### *I can't find the patient I'm looking for...*

- Click the **Full Search** button and then in the search dialog, click **Clear** to clear out any other search criteria that may have escaped your notice. Now try doing the search again.

If you're not getting any traction with these suggestions, see the section *Digging Deep: The SCU and Dicom Logs* below.

## Troubleshooting Retrieve Issues

Retrieve is complex. Have your PACS administrator check the following:

- Is your PACS properly configured with the right settings for the Workstation to talk with it?
  - Check the Workstation AE Title configured with your PACS.
  - Check the Workstation IP Address (or machine name) in your PACS.
  - Check the configured Workstation Port in your PACS configuration screen.

- Is your PACS properly configured so that it knows the Workstation AE Title is allowed to do Query/Retrieve?
- Is the incoming firewall port open on your Workstation PC to allow connections from your PACS?

*It says my PACS is "Out of Resources". What does that mean?*

- This can mean anything from a bad configuration (bad IP address, AE title, etc.) to the PACS being overloaded or busy. You will want your PACS administrator's help on this one.

*I start retrieving my study, but the retrieve often fails...*

This is often caused by an overloaded PACS or a sluggish network. Try increasing the Receive timeout at the Workstation. See the section *Connection Timeouts* for details.

*When I do a retrieve, the study does not actually retrieve...*

Do you have a **Philips Intellispace PACS**? If so, please see step 12 in the Configure Communication with the PACS section of this document.

Also talk to your PACS administrator about increasing the Send timeouts at the PACS. Lastly, you might want to check your with network administrators to see if your network is having issues or if there is a means to increase the speed or reliability of your network.

## Connection Timeouts

If your PACS is being accessed over a VPN or a sluggish network, or if your PACS is overloaded, you may need to consider increasing your Dicom Connection Timeouts. Open the **Edit** menu and select **ShowCase Settings....** Now click on the Remote PACS tab and select your PACS. There are three timeouts at the bottom of the screen.

**Connect** – This timeout controls the amount of time the network socket will wait when trying to connect to the PACS itself.

**Send** – This controls how long the workstation will wait for the PACS to respond when it is sending DICOM networking packets.

**Receive** - This controls how long the workstation will wait for the PACS to respond when it is waiting for the PACS to send DICOM networking packets.

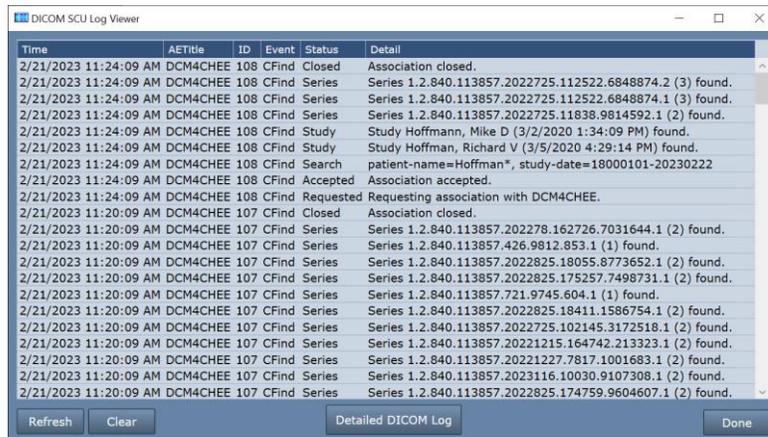
All timeouts are specified in milliseconds.

## Digging Deep: The SCU and Dicom Logs

If these suggestions don't help, you can have your PACS administrator look at the SCU and DICOM logs.

Click the **More...** button at the bottom of the study list and select **Status**.

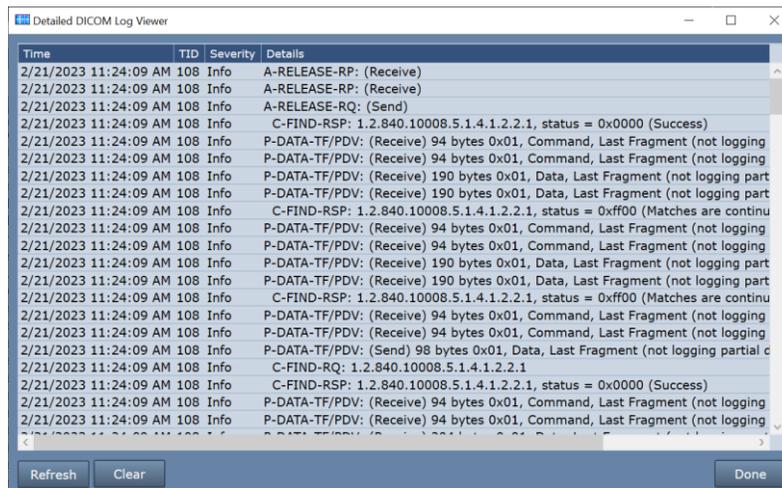
In the lower left of the dialog that appears there is a button called **DICOM SCU Log**. Click it.



This is a summary log of all of the SCU Dicom activity between the Workstation (the SCU) and your PACS (the SCP). A few things worth noting:

- The log is time-sorted with the most recent events *at the top* of the list, and shows events going backward in time.
- The log only shows activity with the AE Title of the PACS this tab is configured to talk to.
- The ID listed is the association ID.

Look for errors in this log. See if it tells you anything about what might be going wrong. This is a 'high-level' summary log of SCU Dicom Activity. If you want to go deeper, click the **Detailed DICOM Log** button:



This is a detailed log of all DICOM activity coming into and out of the Workstation in its role as SCP *and* SCU. Interpreting this log requires detailed knowledge of the DICOM standard.

Alternately, if you'd like to look at the raw log files themselves, you can find them in C:\ProgramData\TrilTech>ShowCase. There are three files of interest: scu\_log.txt, scp\_log.txt, and dicom\_log.txt.

## Contacting Trillium for Help

Click on the **Help** menu in ShowCase and select **Submit A Support Request...** A form will appear. Fill it in and send it to us. Please describe the problem you're having as best you can. This support request will package up all of your log files (encrypted) and send them to us for review. A couple of things:

- Recreate the problem immediately before sending these logs off. Logs are size-capped and will throw out old log messages when they get too big. If you had the error several days ago, it may no longer appear in the logs, so take a moment and re-create the problem before sending the support request.
- When it comes to PACS connectivity errors, we'll do our best to help, but it is very likely you will need to engage the assistance of your PACS administrator.
- You will need an active support plan for us to assist you.

**SHOWCASE® is a registered trademark of Trillium Technology, Inc.**