



DICOM Support in Metron

Version 7



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DICOM Support in Metron

Version 7

YOUR METRON ADVANCED IMAGING SOFTWARE IS CONTINUALLY BEING ENHANCED. WE LISTEN TO YOU, STRIVING TO ADD AND ENHANCE THE PRODUCT AND SERVICE TO ASSIST YOU WITH THE DIAGNOSIS AND TREATMENT OF YOUR PATIENTS.

Introduction

Metron supports the DICOM standard. A "DICOM Conformance Statement" is available at <http://www.metron-imaging.com>.

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DICOM File I/O

Metron can import and export a DICOM files in exactly the same way as it imports and exports files of types like jpeg, bitmap, or tiff. When you browse your disk looking for images from Metron, thumbnails appear for each folder that you select, and DICOM images will be displayed just like the other image types.

When importing image files into Metron, look for the button labeled "Auto-Import all DICOM Images" -- this will import all the DICOM images found in a selected folder, and will use the information in the DICOM tags to place them into the Metron database. At any time, click on the "Receive Images" button (in the Database Browser panel) to see a log showing where all imported DICOM images have been stored in Metron.

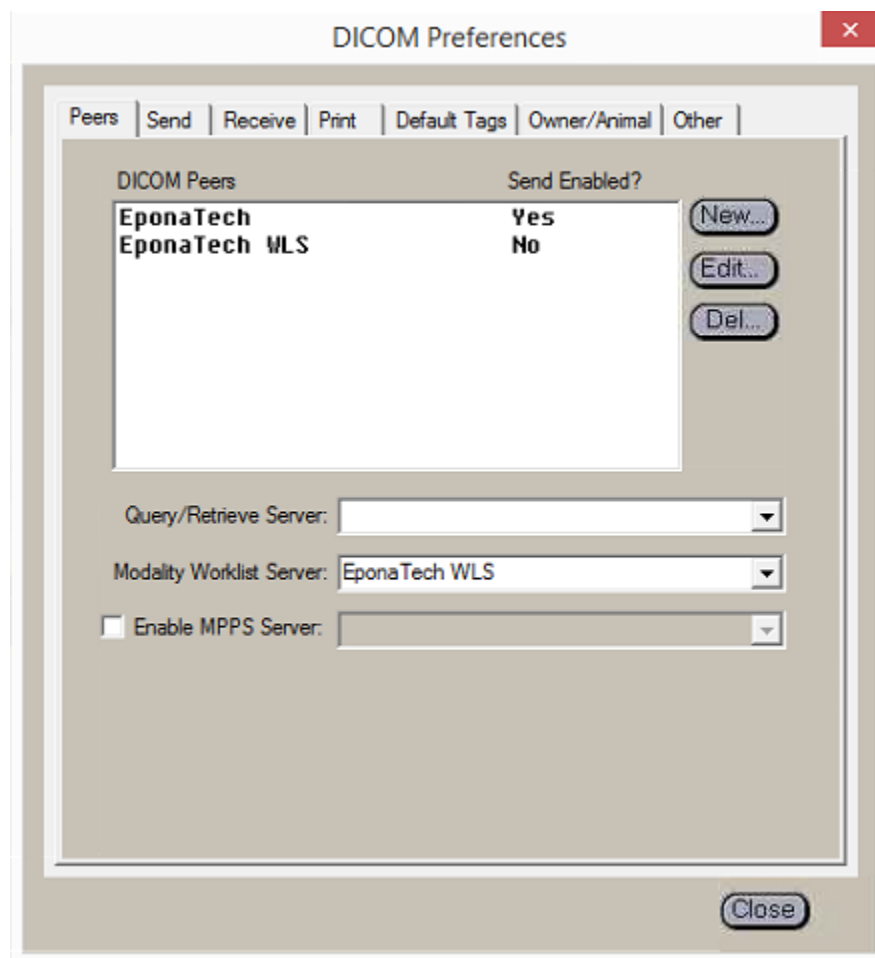
Likewise, anyplace in Metron where you are allowed to "Export" images or "Save As..." an image, you will find "DICOM" on the list of possible output formats.

The simple reading and writing of DICOM files is the most basic support for DICOM. But DICOM also specifies a communication protocol for sending and receiving images across a local network or the internet, and these topics are addressed in the next sections.

DICOM Send

Metron supports the "DICOM Send" functionality, allowing any image in Metron to be sent to any other DICOM-compliant product located anywhere on the internet.

To prepare to send via DICOM, you must first define a DICOM system that you will send to. This is done by going to "Preferences" in the top-bar, then choose "DICOM Preferences". On the "Servers" tab, you will see a list of all the DICOM systems that you have set up in Metron.



This panel lists all the servers you have configured Metron for. Additionally, you can indicate your favorite server to Query and Retrieve from, and your favorite server to fetch Worklists from.

A new DICOM system can be added to the list by clicking the “New...” button just to the right of the list, and a server can be removed by highlighting one and then clicking the “Del...” button. The settings for each server can be reviewed and possibly edited by highlighting one and clicking the “Edit...” button. Doing this brings up the DICOM Peer panel shown below.

Create/Edit DICOM Peer

Nickname: EponaTech

Peer Address: 99.99.99.193

Peer Port: 4002

Peer AE: METRON_AE

Test this Connection

Use

☒ Send Destination ☐ MWL Server

☐ Q/R Server ☐ MPPS Server

☐ Q/R Client

Format and Compression

Transfer Syntax: 2491 Compression: 200 ?

☒ Include the 'Original Image' in Private Data

Enable Send

☒ Send Images when 'DICOM Send' clicked

☐ Send Images automatically after acquire

Retry Strategy and Notification

Retry 2 times. Wait 60 secs between attempts

(If send fails after retrying, a pop-up alert will appear)

☐ Pop up Success Notification

OK Cancel

Use this panel to define a new DICOM system, or edit one that you previously set up.

The Peer Address, Peer Port, and Peer AE values must be given to you by whoever you wish to send a DICOM image to. These three values specify a particular DICOM enabled product somewhere on your local network or out on the internet somewhere in the world. The “Nickname” is chosen by you as a handy way to remember what each of these DICOMs

servers is. Once you have filled in the top portion of the panel, you can click the “Test This Connection” button to quickly check if the DICOM server can be found.

The next items are for specifying “Transfer Syntax” and “Compression”. If you are unsure of these settings, you can set both values to “2” in order to send full-sized uncompressed images which will be of the highest quality (but perhaps large and slow to send). Click on the button labeled “?” to see other possible settings. You probably should discuss this with the person in charge of the DICOM system you are sending to, as they may have a preference, or it may be the case that their DICOM system cannot accept all possible transfer syntaxes. Again, choosing “2” and “2” is a safe choice, and it is the default in Metron. Here is more information on the values that you can use for these two settings:

Use an integer code to select the desired transfer syntax:

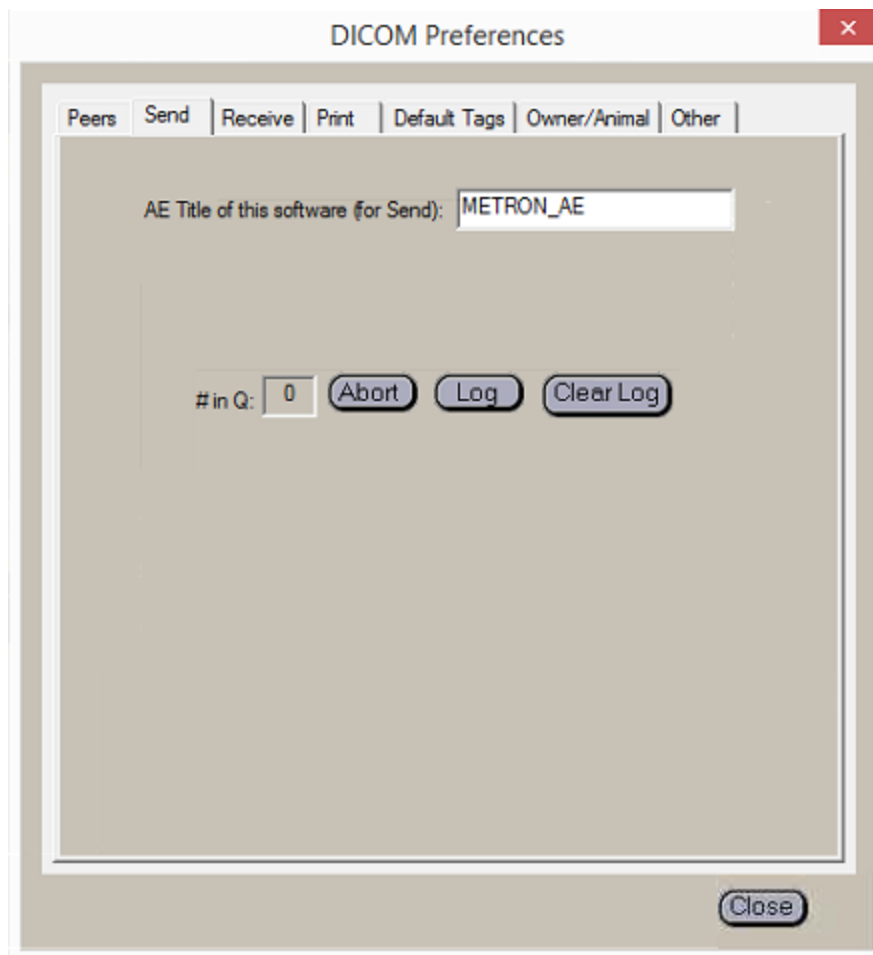
2 = IMPLICIT_VR_LITTLE_ENDIAN = "1.2.840.10008.1.2"
21 = EXPLICIT_VR_LITTLE_ENDIAN = "1.2.840.10008.1.2.1"
22 = EXPLICIT_VR_BIG_ENDIAN = "1.2.840.10008.1.2.2"
25 = RLE_LOSSLESS = "1.2.840.10008.1.2.5"
2199 = DEFLATED_EXPLICIT_VR_LITTLE_ENDIAN = "1.2.840.10008.1.2.1.99"
2450 = JPEG_BASELINE_1 = "1.2.840.10008.1.2.4.50"
2451 = JPEG_EXTENDED_2_4 = "1.2.840.10008.1.2.4.51"
2452 = JPEG_EXTENDED_3_5 = "1.2.840.10008.1.2.4.52"
2453 = JPEG_SPECTRAL_NONHIER_6_8 = "1.2.840.10008.1.2.4.53"
2454 = JPEG_SPECTRAL_NONHIER_7_9 = "1.2.840.10008.1.2.4.54"
2455 = JPEG_FULL_NONHIER_10_12 = "1.2.840.10008.1.2.4.55"
2456 = JPEG_FULL_NONHIER_11_13 = "1.2.840.10008.1.2.4.56"
2457 = JPEG_LOSSLESS_NONHIER_14 = "1.2.840.10008.1.2.4.57"
2458 = JPEG_LOSSLESS_NONHIER_15 = "1.2.840.10008.1.2.4.58"
2459 = JPEG_EXTENDED_HIER_16_18 = "1.2.840.10008.1.2.4.59"
2460 = JPEG_EXTENDED_HIER_17_19 = "1.2.840.10008.1.2.4.60"
2461 = JPEG_SPECTRAL_HIER_20_22 = "1.2.840.10008.1.2.4.61"
2462 = JPEG_SPECTRAL_HIER_21_23 = "1.2.840.10008.1.2.4.62"
2463 = JPEG_FULL_HIER_24_26 = "1.2.840.10008.1.2.4.63"
2464 = JPEG_FULL_HIER_25_27 = "1.2.840.10008.1.2.4.64"
2465 = JPEG_LOSSLESS_HIER_PROCESS_28 = "1.2.840.10008.1.2.4.65"
2466 = JPEG_LOSSLESS_HIER_PROCESS_29 = "1.2.840.10008.1.2.4.66"
2470 = JPEG_LOSSLESS_NONHIER_14B = "1.2.840.10008.1.2.4.70"
2490 = JPEG2000_LOSSLESS_ONLY = "1.2.840.10008.1.2.4.90"
2491 = JPEG2000 = "1.2.840.10008.1.2.4.91"

For transfer syntaxes that use compression, you may specify how much compression to use by giving an integer on the range [2..255] where 2 specifies the least compression (highest quality) and 255 specifies the most compression. For transfer syntaxes which don't use compression this value is ignored.

One restriction concerning simultaneous transmissions to multiple recipients: all recipients must have the same "transfer syntax" and "quality factor" specified. If these values need to vary by recipient, then you'll need to perform a separate send for each one.

Next, we can configure Metron to send to this particular recipient when the Metron user manually clicks a "DICOM Send" button, or, automatically when a CR or DR image is taken with Metron (This only available if you have a DR or CR system which is based on Metron). If you choose the "Auto-Send" option, you have the further option of having the image sent immediately when acquired, or only when the user clicks the "Accept" button. Use of the later allows the user to possibly rotate, crop, and filter the image before pressing "Accept" to save the image locally and send it out via DICOM communications.

The last two items in the panel allow you to configure the behavior of the DICOM send function should the transmission fail, or should it succeed. Note that in any case you will **always** get a pop-up telling you of a transmission failure. The pop up telling you of success is optional (only downside: the click required to clear it off the screen after you see it). In addition to the failure pop-up and the optional success pop-up is a log file which is always kept in which you can review all the details of the DICOM sending activity.



The DICOM Send tab provides some controls and supports a log of all sends.

In the panel shown above, you can see where you can pop up the log file, or clear it out. Also, the panel shows how many images are in the queue waiting to be sent, and there is an “Abort” button in the (unlikely) event that you decide you want to cancel the transmission of images awaiting being sent.

At the bottom of the panel, you see that you have a choice regarding viewing the “DICOM header tags” when you perform a DICOM send. Choosing “No” means the system won’t show you these tags at the time of sending at all – this choice minimizes mouse clicks, as otherwise you will use one or more mouse clicks to take this panel off the screen when a send occurs. If you select “Once per Study” then a panel showing the DICOM tags will pop up when you have clicked “DICOM Send” once for each study being sent. This gives you a chance to review the tags – if you spot something wrong, there is a “Cancel Send” button so you could cancel the send, got fix the tags, and then send again. The panel shown below shows the DICOM header tags.

The DICOM Data panel.

The most important tags are displayed in this panel. An item near the lower left portion of this panel lets you view all the tags supported by Metron. When you are viewing these tags during a “DICOM Send” operation, they are in read-only mode. If you see something you need to change, you’ll have to click “Cancel Send”, go edit the tag(s) and then again click “DICOM Send” to send the image(s). Editing of the tags is permitted when you see the “DICOM Data” button in Metron’s “Single Image View” panel.

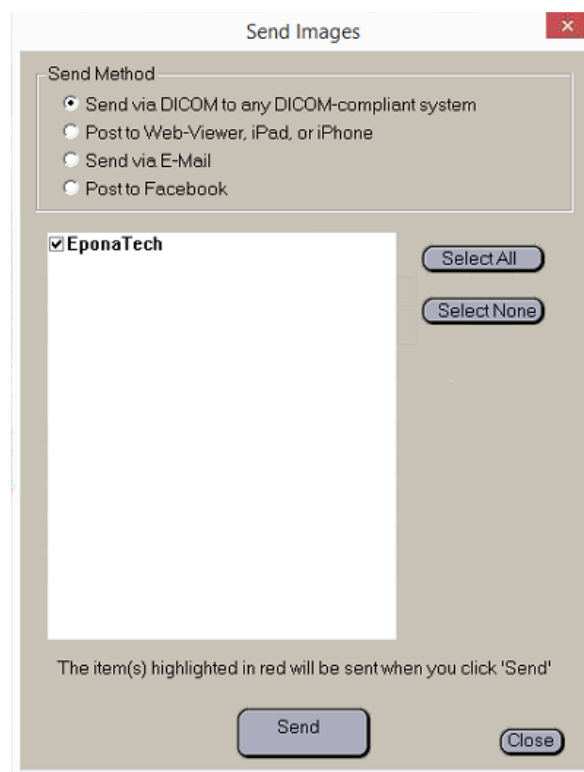
Since Metron, particularly when is used as acquisition software of a DR or CR system, is the source of DICOM images, we have the philosophy that the user is allowed to edit DICOM tags since the image is being created in Metron, and obviously the creator needs to be able to set the tags as needed. On the other hand, since Metron can import DICOM files that may have come from other DICOM sources, it is **not** recommended to edit the tags of those “foreign” DICOM files. While it is not strictly forbidden in Metron, the editing of tags of a foreign DICOM file in Metron causes a record to be kept in a special log file known as an Audit Trail. This would allow some responsible person to make a review and learn that Metron was used to alter DICOM tags in a foreign DICOM file.

Metron encapsulates all the “Metron specific” data such as calibration, free mark-up, and guided mark-up, etc inside a “Private Tag” in the DICOM file. If you send a DICOM file from Metron to another Metron user, the recipient will be able to receive the image, and all of its mark-up and data into their copy of Metron.

A DICOM Send is initiated from the main Database Browser panel of Metron by highlighting one or more thumbnail images, and clicking the "Send" button.



There are 4 ways to send images: DICOM, post to <http://www.metronwebviewer.com>, iPad or iPhone, by e-mail, or post to Facebook. You can select your default or favorite method in the general preferences panel, or simply choose the method each time you enter the Send Images panel.



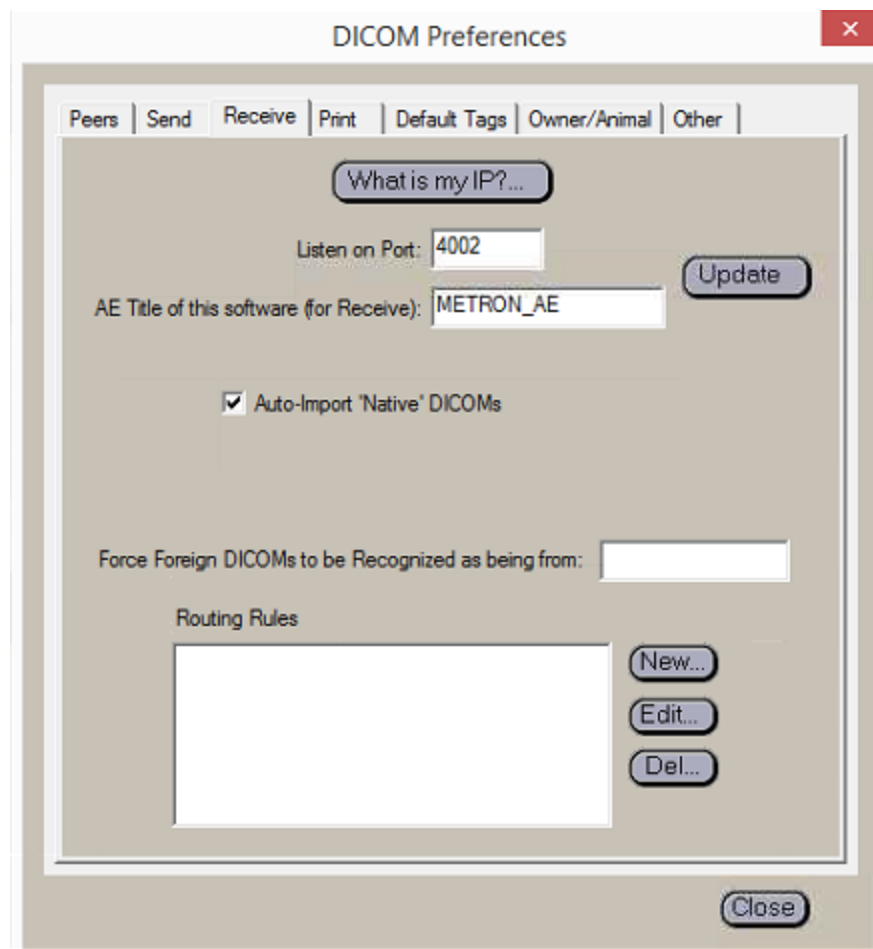
Mark the check box for one or more recipients and click 'Send'.

DICOM Receive

If DICOM images are sent to Metron, the “Receive Images” button in the Database Browser panel will begin to blink within 7 seconds of the image(s) arriving. By clicking the Receive Images button you can see a transcript showing where they will go in Metron when you click on the “Import” button there. We will also discuss “auto-import” below - in this scheme the button does not blink and arriving images are silently accepted into your Metron database.

To configure the system which will send DICOM images to Metron, you need to know three things: the IP address of the PC that Metron runs on; the Port that Metron listens on (default value is 4002); and the name, or “AE Title” of Metron (default value is METRON_AE). With those three bits of information the system which will send images to Metron can be configured. The Port and AE Title used by Metron can be changed on the DICOM Receive tab if need be.

If you do not know the IP address of your computer, you can find out by going to the site <http://www.ipchicken.com> which will display your IP address.

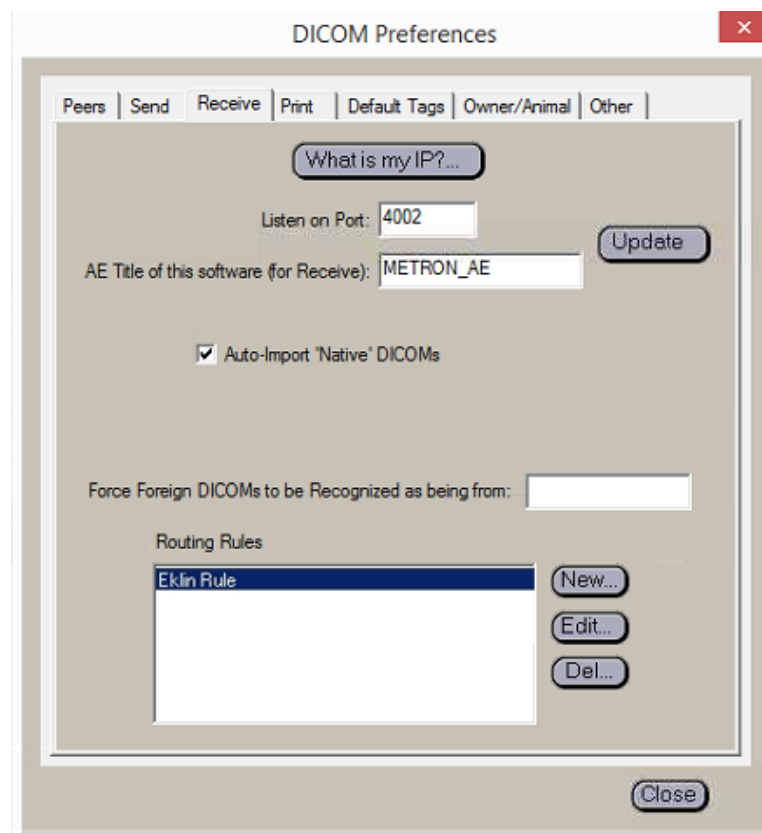


DICOM Receive tab: Configure auto-importing of native DICOMs and/or routing rules for recognized foreign DICOMs.

Receiving "Native DICOMs" and "Recognized Foreign DICOMs"

A "Native DICOM" is one which was created on a Metron system, and therefore it has the special 'private data tag' which holds all of the original Metron information (calibration, markup, measurements, etc). Generally it is a good idea to choose to auto-import them directly into the Metron database (this is the default setting). When Metron is configured to auto-import these DICOMs, their arrival will not cause the "Receive Images" button to blink red, rather, they will be silently and automatically inserted into the Metron database. A record of their auto-importation is kept in the Receive Images log, so you can always check the log and see that this has occurred.

A "Recognized Foreign DICOM" is one that did not originate from a Metron system, but it is from a system that Metron can recognize. For example, Metron knows how to tell that a DICOM file originated from an Eklin DR system. If Metron can recognize the source of the DICOM file, Metron can know where to look to find the species, the anatomical region, and other details. Some of these details are not always in standard locations (especially in veterinary use of DICOM.)



DICOM Receive tab with a Routing Rule specified.

In the panel shown above, a "routing rule" has been created called "Eklin Rule". You click on the "New..." button to create a new routing rule, or click on "Edit..." to view or modify an existing routing rule. The panel below shows the definition of the "Eklin Rule":

DICOM Routing Rule

Nickname: Eklin Rule

For DICOMs from: Eklin

☒ Auto-Import

☐ Auto Jump to Study when Image Received

☒ Convert to 'Native Metron' and apply Filter Set...

Filter Library: ☒ DR ☐ CR ☐ Dental

Equine: Canon

CA: Canon

Other: Canon

Default Filter: Detail 2

☐ Auto-Forward to EponaTech

☐ Auto-Forward to EponaTech

OK Cancel

Example of a Routing Rule.

The "Nickname" can be chosen as you wish. The important keyword "Eklin" has been inserted in the "For DICOMs from:" field. Please ask EponaTech if Metron knows how to recognize DICOMs from a particular system of interest, and what the corresponding keyword is for that system.

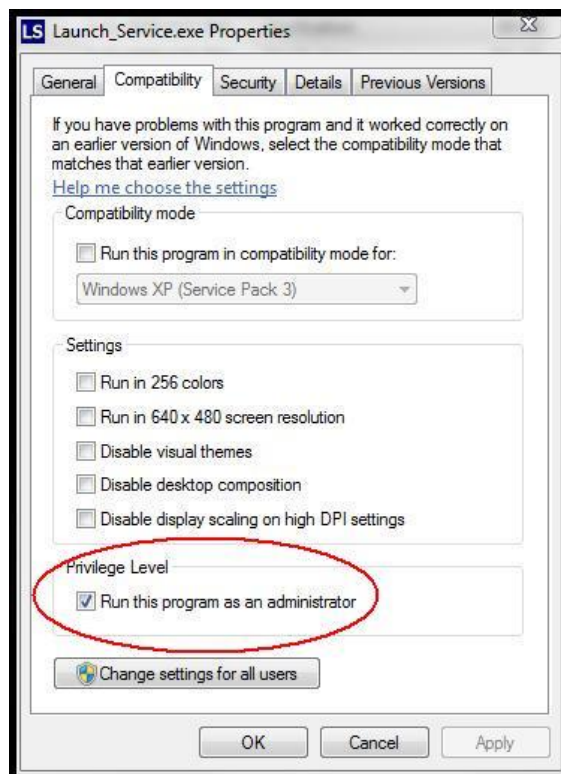
This routing rule says that if a DICOM arrives that is recognized as being from an Eklin system, it will be auto-imported into the current Metron database, and will be converted to a native Metron image. Further, it will be automatically filtered with "Detail 2" from the filter-set called "Canon".

Note: The only way that a foreign DICOM can be auto-imported into Metron's database is by use of a routing rule. If not matching routing rule is found, they will arrive in "pending" mode, and the Receive Images button will blink red to alert you.

Special Requirement when Installing on Windows 7

After installing Metron on a Windows 7 computer, there are a few more steps that need to be done to enable it for DICOM receive. These things occur automatically on Windows XP, but for Windows 7, which has a stricter security environment, these things must be done manually. This is a one-time operation, performed just once after installing Metron.

1) Look in folder C:/Epona/Diclis and you will see three files with “exe” extensions. They are called: launch_service.exe, metron_service.exe, and remove_service.exe. **For each of these**, right-click on the file, and choose “Properties”. In the properties panel that pops up, choose the “Compatibility” tab. As shown in figure 1 below, check the box labeled “Run this program as an administrator”.

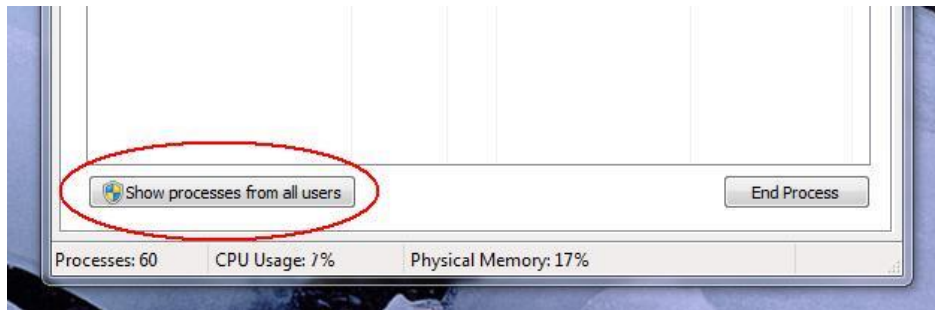


Set a program to “Run as Administrator”. Repeat this for 3 programs in the C:/Epona/Diclis folder.

Make sure to enable this setting for all 3 of the programs, and click the “OK” button at the bottom of the panel each time.

2) Now double-click the program called “Launch_Metron.exe”. This should start a process on the computer called “Metron_Service”.

3) Now check with the Task Manager to see that there is a process called “Metron_Service” running. To get the Task Manager, do a CTRL-ALT-Delete and then choose the Task Manager. Choose the tab labeled “Processes”. To check if “Metron_Service” is running, you may have to click on the choice to “show processes from all users”. See screen capture below.



Click this button for a full listing of all running processes.

If you see “Metron-Service” is running, you are done, and Metron is ready to receive DICOM transmissions. If it is not running, something is wrong, so please check these instructions again.

If you shut down the computer and re-boot, the “Metron_Service” process should be automatically started for you, so you should not have to perform any of these actions again.

The “Metron-Service” is the thing that “listens” for DICOM files that might be sent to Metron, so it needs to be running in order for DICOM Receive to function in Metron.

DICOM Modality Worklist

Modality Worklist allows Metron to query a remote DICOM server to fetch “worklists”. That is, Metron can query a practice management system to ask “are there scheduled appointments requiring radiography?” This way, the patient information entered in the PM system can be transferred to Metron. In the “DICOM Preferences” Servers panel there is a setting where you indicate which server will be used to fetch worklists from. Then, on the Database Browser panel of Metron, a small button in the lower left labeled “W L” can be clicked to query that server.

Using the Worklist panel, the technician at Metron can see the schedule of upcoming exams. Any given exam can be used to create a new patient in Metron - thus avoiding re-entering of patient information in Metron.

DICOM Compliant CDs

DICOM compliant CDs and DVDs can be written by Metron. This function is found in the Database Browser panel and is labeled “Burn CD/DVD”. To send a partial study, highlight the thumbnails of the images you wish to include before going into the Burn CD/DVD function. Adding of full studies can be done from within that panel.

These CDs contain the images in DICOM format as well as a viewer program (which resembles Metron itself) so that the CD you create may be sent to a recipient and they can view the images directly off the CD without the need for any particular software on their PC.

Alternate DICOM viewers can also view the images on the CD because the CD, in addition to the images, contains the required DICOMDIR file which some systems require/

Query/Retrieve from a Remote Server

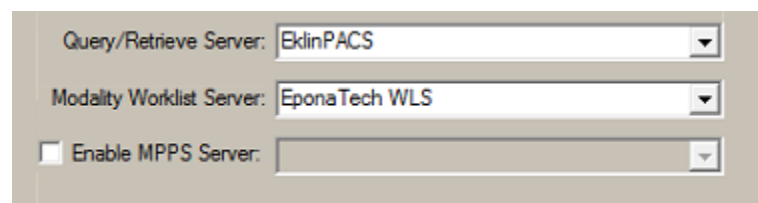
Introduction

Metron supports the client side (or “SCU”) of the DICOM Query/Retrieve capability. By this means, Metron can pull images from a DICOM PACs system back to Metron.

Configuring Systems for Q/R

The following steps must be taken to prepare for using Query/Retrieve:

1. Under “DICOM Preferences” create a server with the information given to you by the administrator of the PACs that you intend to retrieve images from.
2. Under “DICOM Preferences” you can choose which (of possibly several) servers you intend to use as your principle Q/R server. This simply will make it the default setting later when you enter the Q/R panel.

A screenshot of a software interface for configuring DICOM preferences. It features three rows of controls. The first row is labeled 'Query/Retrieve Server:' and has a dropdown menu with 'EkinPACS' selected. The second row is labeled 'Modality Worklist Server:' and has a dropdown menu with 'EponaTech WLS' selected. The third row is labeled 'Enable MPPS Server:' and includes an unchecked checkbox followed by a dropdown menu.

Choose your favorite Q/R server as the default.

3. The administrator of the remote server that you intend to query and retrieve from must be told the IP address, Port, and AE Title of your copy of Metron. The default values for the latter two are 4002 and METRON_AE. These can be altered, if need be, under “DICOM

Preferences” under the “DICOM Receive” tab. If the remote server has not be configured to ‘know’ of your Metron, you may find that you can query, but not retrieve.

Using Query/Retrieve

Since the use of Q/R results in adding images to your system, it is located in the center section of the main Database Browser panel of Metron.



Click on the button labeled “Q/R...” (or in some layouts “DICOM Q/R...”)

The top portion of the panel lets you select the server you wish to pull images from, and to describe the query you will use to hunt for images on that server.

Check one or more of the query criteria and enter values (usually with “” for wildcard)*

It is recommended to use the “*” character as a wild-card unless you know the exact value used on the remote system for patient name, or other criteria. You can query on one or more of:

- 1) Patient Name
- 2) Patient ID
- 3) Study ID
- 4) Date of the Study

After setting up your criteria, click on “Query Server”. After a short delay a list of all studies on the remote system matching your criteria will be displayed. If you don’t see what you are seeking, just alter your query keys, and click “Query Server” again.

To retrieve one of the displayed studies back to your local Metron, click on that study to highlight its line in the list. At the bottom of the panel, you will see how Metron will extract the owner and animal name from the DICOM tags. You can alter the source of these tags with the three associated pull-down menus to try to extract the owner and animal as you would like to see it in Metron.

Click the “Retrieve” button to commence the retrieval of the study images.

The screenshot shows the 'DICOM Query/Retrieve' window. At the top, 'Server to Query' is set to 'EkinPACS'. Under 'What to Query for', 'Patient Name' is checked and set to 'Craig', with a subtext '(by last name with wildcard * e.g. Sm* finds "John Smith")'. 'Study ID' is unchecked. 'Patient ID' is unchecked. 'Date' is set to 'Monday, April 28, 2014', with a subtext '(with wildcard * e.g. Pat33* finds "Pat33014")'. A 'Query Server' button is below these options.

Patient Name	Patient ID	Study Date	Study Time	Study ID
CRAIG,FIFI	2484761	17-Oct-2010	9:30	22045
CRAIG,BLACKJACK	6862820	14-Jun-2007	19:18	303
CRAIG,ISABELLA	7261751	9-Aug-2005	13:02	1262

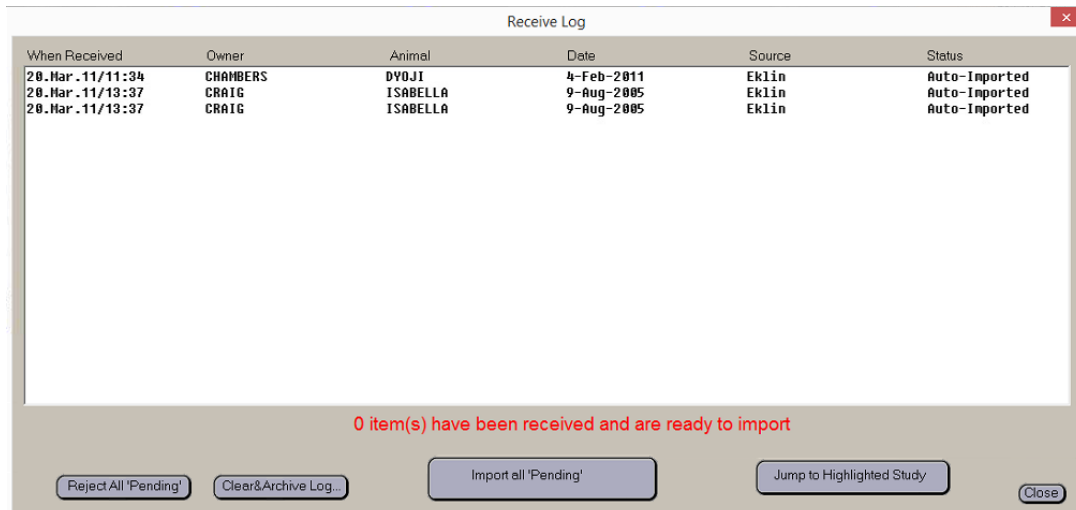
Below the table, 'For Highlighted Study: Select How to Extract Owner & Animal from DICOM Tags'. 'Owner' is 'Craig' from '1st part of "Patient Name"'. 'Animal' is 'Isabella' from '2nd part of "Patient Name"'. 'Method used to Parse Patient Name' is 'At first Comma (,)'. A 'More Info' button is on the left, and a 'Retrieve' button is on the right. A 'Close' button is at the bottom right.

A study is selected, criteria for determining Owner and Animal selected, and retrieval is underway.

As soon as the retrieval has commenced, you are free to leave this panel and do other activities in Metron while the images are fetched. You can even exit Metron and they will still be fetched (of course, the computer must stay on and connected to the internet).

Metron's Q/R feature is "study based" – you query for a list of studies, and you may decide to retrieve a study. There is not a way to only retrieve a subset of the images in the study – it is always the full study that is retrieved.

At any time, you may click on the "Receive Images" button in Metron's main Database Browser panel to see the status of your retrieval operation.



When Received	Owner	Animal	Date	Source	Status
20.Mar.11/11:34	CHAMBERS	DY0JI	4-Feb-2011	Eklin	Auto-Imported
20.Mar.11/13:37	CRAIG	ISABELLA	9-Aug-2005	Eklin	Auto-Imported
20.Mar.11/13:37	CRAIG	ISABELLA	9-Aug-2005	Eklin	Auto-Imported

0 item(s) have been received and are ready to import

Reject All 'Pending' Clear&Archive Log... Import all 'Pending' Jump to Highlighted Study Close

The "Receive Images" panel shows a log of images that have come into Metron via DICOM, including those retrieved as part of a Q/R action.

If the retrieval animation is running, it means Metron is running the retrieval process in the background. New lines will appear in the log as images arrive at Metron. You can go look at them, and return to this panel later to again check progress.

Depending on the kind of remote server you are retrieving from, and how you have your copy of Metron configured, the retrieved images might show up as "Pending" (causing the "Receive Images" button to blink), or they might be "Auto-Imported" directly into your local Metron database (which does not cause the "Receive Images" button to blink, but does leave a line in the log seen in the Receive Images panel).

In the "DICOM Preferences" panel under the "DICOM Receive" tab, it may be possible for you to set up an auto-import rule for DICOM images arriving from a Q/R transfer.

Troubleshooting Query/Retrieve

1. I can Query but Retrieve does not return any images

Most likely the remote server has not been set up to “know” about your Metron and so it is not allowing the unknown system to pull images from it. The administrator of the remote system has to set it up to “know” about your Metron. What they need is:

- 1) Your IP address (use www.ipchicken.com to get your IP address if you don't know it)
- 2) Your Port (Metron listens on port 4002 by default)
- 3) Your AE title (Metron is known as METRON_AE by default)

Note: if you don't have a “static IP address”, your IP address may change from time to time without your knowledge. You can always check with www.ipchicken.com --- but of course it will be inconvenient to be continually having to ask the remote system's administrator to update your IP address in their server.

2. Retrieve gets stuck and never completes

You can stop an active retrieve operation in Metron by going back to the Q/R panel and clicking on the “Retrieve” button. It will tell you that a retrieve is underway, and will offer to let you stop it.

The screenshot shows the 'DICOM Query/Retrieve' window. At the top, 'Server to Query' is set to 'EkinPACS'. Under 'What to Query for', 'Patient Name' is checked and set to 'Craig', with a 'Query Server' button below. A table lists three patients: CRAIG, FIFI (ID 24), CRAIG, BLACKJACK (ID 68), and CRAIG, ISABELLA (ID 72). A modal dialog box is open in the center, asking 'A previous Retrieve operation is still underway. Do you want to Abort it?' with 'Yes' and 'No' buttons. At the bottom, there are fields for 'Owner' (Craig), 'Animal' (Isabella), and 'Method used to Parse Patient Name' (At first comma (.)). A 'Retrieve' button is highlighted with a mouse cursor.

Patient Name	Patient ID	Study Date	Study Time	Study ID
CRAIG, FIFI	24			22045
CRAIG, BLACKJACK	68			303
CRAIG, ISABELLA	72			1262

Click “Retrieve” while Metron is retrieving, and you can kill the retrieve.

Submit to the Keeneland Repository from Metron

Metron can be used to create CDs or DVDs containing DICOM images in the format required by the Keeneland Repository as described in their document "**Keeneland Repository Digital Requirements for 2008 September Yearling Sale**".

[This document](#) describes how to configure Metron for this purpose.

Here are the step-by-step instructions:

- 1) Make sure you are using Metron **version 5.36** or later
- 2) **Animal name** in Metron should be all upper case, (e.g. "WINTERS EDGE 07")
- 3) Set up proper **Animal ID** as specified in the Keeneland guidelines document (e.g. "K0809-001"). This animal ID is given under the "More Information" tab in Metron when you specify a new animal, or when you click on the "edit" button to the right of the animal's name. (See Figure 1)
- 4) Put "**Consignor's Name**" into "**Responsible Person**" or "**Responsible Org**" (Consignor's name should be in all upper case.) (See Figure 1)
 - a. Note: The "Consignor's Name" for the DICOM tag will be drawn from either the "Responsible Org" field or the "Responsible Person" field, whichever is not blank. If both filled in, the "Responsible Organization" will be used.
 - b. Note: Owner name in Metron not particularly important, you can use the owner's name, the farm name, or the consignor's name, as you please.

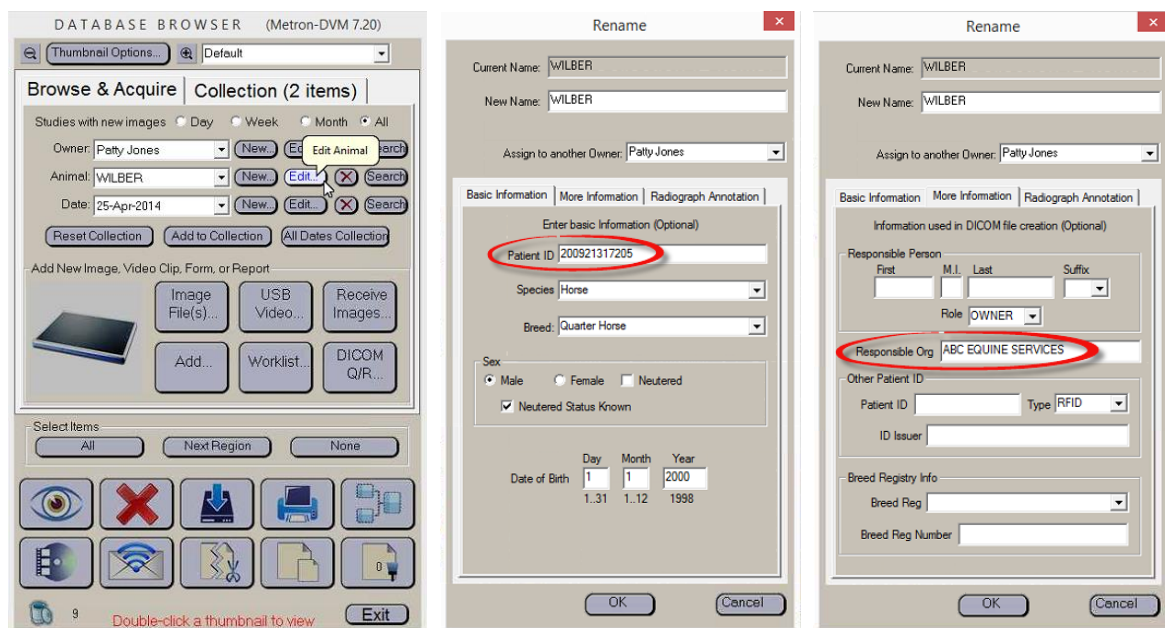


Figure 1: Edit Animal to add proper "Patient ID" and put "Consignor's Name" into the "Responsible Org" field, or alternately, if an individual's name, you can place it in the "Responsible Person" field.

Configure Settings in the “DICOM Preferences” panel found under “Preferences” in the Metron top-bar. Several of the settings in this panel must be altered from their default settings. Use the settings as described in the following six steps. (See Figure 2)

- 1) Select ‘write-Owner’ to “Patient Name”
- 2) Turn off ‘write-Owner’ to “Responsible Person”
- 3) Select ‘write-Animal’ to “Patient Name”
- 4) Switch definition of Study to “Date, Keeneland Series”
- 5) Set “Study Descriptions” to “Responsible Person or Organization”
- 6) Verify that you are set to send “DR & CR Originals in DICOM on Export Viewer CDs”

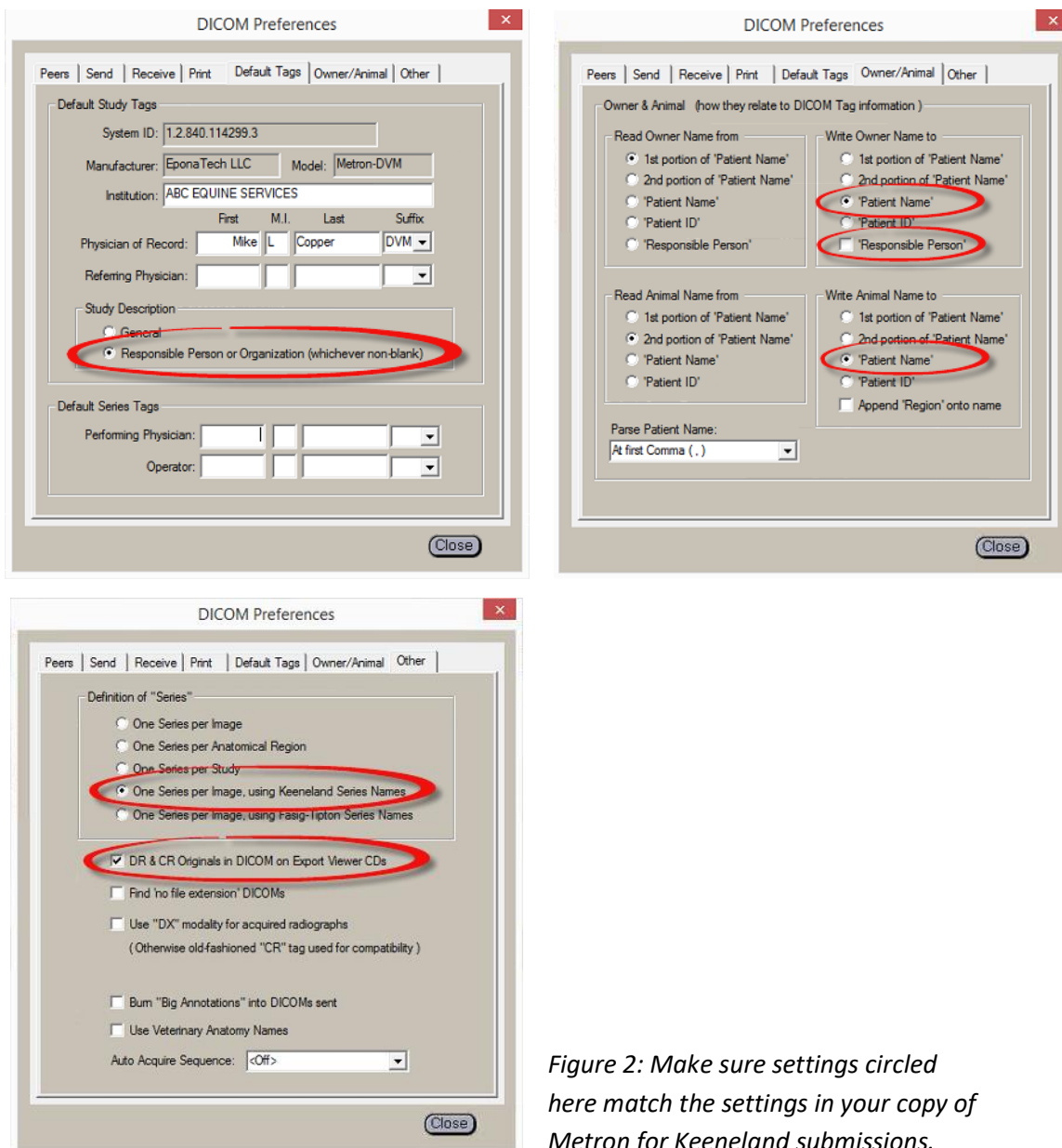


Figure 2: Make sure settings circled here match the settings in your copy of Metron for Keeneland submissions.

Finally, make sure that the anatomical regions and views as selected in the Metron user interface match the settings shown below. (See Table 1) The specified Metron anatomical regions will lead to the proper and desired Keeneland tags being assigned to the images. In most cases, this assignment is logical and straightforward. However, note descriptions such as for a front leg Fetlock, the Metron view “Flex Lateral” should be used, whereas for a hind fetlock the Metron view “Lateral” should be used.

Metron Anatomical Description			Keeneland Image Label	
Region	View		Left	Right
Carpus	Lat Med Oblique		L Carpus_DLPMO	R Carpus_DLPMO
Carpus	Med Lat Oblique		L Carpus_DMPLO	R Carpus_DMPLO
Carpus	Flexed Lateral		L Carpus_FLM	R Carpus_FLM
Carpus	Skyline ¹		L Carpus_Sky_DRow	R Carpus_Sky_DRow
Fetlock ²	F	DP	L FFetlock_DP	R FFetlock_DP
Fetlock	F	Med Lat Oblique	L FFetlock_DMPLO	R FFetlock_DMPLO
Fetlock	F	Lat Med Oblique	L FFetlock_DLPMO	R FFetlock_DLPMO
Fetlock	F	Flex Lateral	L FFetlock_FLM	R FFetlock_FLM
Fetlock	H	DP	L HFetlock_DP	R HFetlock_DP
Fetlock	H	Med Lat Oblique	L HFetlock_DMPLO	R HFetlock_DMPLO
Fetlock	H	Lat Med Oblique	L HFetlock_DLPMO	R HFetlock_DLPMO
Fetlock	H	Lateral	L HFetlock_LM	R HFetlock_LM
Hock	Med Lat Oblique		L Hock_DMPLO	R Hock_DMPLO
Hock	DP		L Hock_CrCa	R Hock_CrCa
Hock	Lateral		L Hock_LM	R Hock_LM
Stifle	Lateral		L Stifle_LM	R Stifle_LM
Stifle	Lat Med Oblique		L Stifle_CaLCrMO	R Stifle_CaLCrMO

Table 1: Correspondence between Metron anatomical names and Keeneland tags.

Additional Notes:

1. Either of the Metron view names which start with “Skyline” may be used
2. For all of the Fetlock shots, you can alternatively use the region names in Metron of “Foot”, “Pastern”, or “Cannon” (unless such a region is lacking the view name required, e.g. “Flex Lateral”).



Contact us if you have additional questions.
We can be reached at metron@metronsupportservices.com or 1-877-638-3868.