

PACS Scan Mobile

User Help

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What is PACS Scan Mobile?

PACS Scan Mobile is an app for mobile devices that physicians and authorized staff can use to capture images and videos easily. You can use the built-in camera of the mobile device to capture images or videos of your patient and then attach them to patient studies. When you are finished capturing images and videos you can edit them before sending them to the selected source for storage, and optionally send an HL7 message to an HL7 device. You cannot save images and videos on your mobile device.

PACS Scan Mobile offers the following features.

- Query and retrieve patient demographics from multiple sources, or create new patient data.
- Capture clinical images and video, attach to patient studies, and send to DICOM archives.
- Edit demographics and media.
- Manage mobile device configuration and user access from a web console.
- Create department-specific configurations.
- Make both DICOM and Worklist queries, and send HL7 messages.
- View DICOM Trace data, server logs, and audit logs.

The following components support the functionality of PACS Scan Mobile.

- PACS Scan Server, a desktop server.
- PACS Scan Mobile Administration Console, a browser-based interface to the server.

PACS Scan Server

PACS Scan Server is a program that controls the flow of data between DICOM or related systems such as PACS, archives, Worklist servers, modalities, EHR/EMR, and RIS, and any clients that connect to it such as the PACS Scan Mobile app.

PACS Scan Mobile Administration Console

PACS Scan Mobile Administration Console (PSM Console) is a browser-based interface to PACS Scan Server that administrators can use to configure server settings, and settings for all of the client mobile devices that connect to the server. These include settings for licensing, DICOM querying and sending, users, and logging.

Indications for use

Lexmark PACS Scan Mobile is intended to be used by authorized staff to perform various operations on imaging studies before they are made available to other locations in the network. These operations include capturing images, capturing video images, confirming or editing patient demographics, and reviewing the history of the study. Lexmark PACS Scan Mobile is not labeled for diagnostic use.

Work with PACS Scan Mobile

Find a patient

To find an existing patient study from a configured source, complete the following steps.

1. **Optional.** In PACS Scan Mobile, under **Query Source**, tap the arrow to open the source list and select a source, and then tap **Done**.
2. Under **Patient**, enter all or part of the **Last name** or **MRN** to use as search criteria. For example, in the **Last name** box, type **c** to query patients whose last names begin with the letter **c**.
3. Tap **Search**.
4. On the **Patient Lookup** screen, scroll through the list of query results to find your patient's record, and then complete the following substeps.
 1. Tap the patient record to display associated studies, and then tap a study.
 2. To add a description to the study, scroll to the bottom of the main screen. Under **Series** tap the arrow, select a description from the list, and then click **Done**.

Create a patient


To create a new patient record, complete the following steps.

1. **Optional.** Under **Query Source**, tap the arrow to open the source list and select a source, and then tap **Done**.
2. Under **Patient**, enter the MRN and patient last name (required), and any other information you want to include in the patient demographic fields.
3. To add a description to the study, scroll to the bottom of the main screen. Under **Series Description**, tap the arrow, select a description from the list, and then click **Done**.
4. Tap **Next**, and then perform one of the following actions.
 - To attach images to the new patient, refer to Capture an image.
 - To send the patient record to the selected DICOM device, click **Next** again, and then click **Send**.


Capture an image




To capture an image, complete the following steps.

1. Find a patient, and then tap **Next**.

The camera of the mobile device turns ON.
2. Capture one or more images by aiming the camera and then tapping the white circle .

When you are done capturing images, tap **Next**.

Thumbnails of the images you capture appear on the send screen.
3. To edit an image before sending, on the send screen, tap an image, and then perform one or more of the following actions.
 - To display crop borders, tap the crop  button. To resize the crop boundary, drag just inside of a corner handle (not directly on top of the handle). To move the crop boundary over the image, drag near the middle of the boundary. To crop the image at the crop boundary, tap **Crop**.

- To add a description to the image, tap the text **T** button, type a description, and then tap **OK**.
- To rotate the image 90 degrees clockwise, tap the rotate  button.
- To undo all unsaved edits, tap the revert  button.
- To delete the image, tap the delete  button.

4. Tap **Save**.


Note To save edits and delete images you must tap **Save**.

5. On the send screen, tap **Send**.

Capture a video

To capture a video, complete the following steps.

Prerequisite. Before you can capture videos, your administrator must turn ON video capture. Refer to Add a department.

1. In PACS Scan Mobile, find a patient, and then tap **Next**.
The camera of the mobile device turns on.
2. Tap **Video**, and then rotate your device for capturing video in landscape orientation. Portrait orientation is not supported.
3. To start video capture, tap the white circle . To stop video capture, tap it again.
4. Repeat as needed to take additional videos, and then tap **Next**. Thumbnails of the videos you capture appear on the send screen.

Change the current department

To change the current department, complete the following steps.

PACS Scan Mobile uses the application entity (AE) destinations, query sources, and devices configured for the current department.

Note When you change the department, all current images and data are lost.

1. In PACS Scan Mobile, tap menu .
2. On the **Menu** screen, under **Departments**, tap the name of the current department.
3. In the **Select Department** list, tap the name of the department you want to select.

The department you tapped becomes the current department, and PACS Scan Mobile returns to the main screen.

Manage jobs in PACS Scan Mobile

What is a job?

A “job” is a collection of metadata about a send operation that is created when a user sends data to a DICOM device. This information includes such things as who sent the data, when, and from

where. It also includes the job status, which is the result of the send operation. You can view job history, or cancel or restart a failed job in either the PACS Scan Mobile app or PSM Console.


View a job

To view a job, complete the following step.

- In PACS Scan Mobile, tap menu  on the main screen, and then tap **Status**.


Cancel a job

To cancel a failed job, complete the following steps.

1. In PACS Scan Mobile, tap menu  on the main screen, and then tap **Status**.
2. In the list of jobs, tap the failed job you want to cancel.
3. Tap **Cancel**.

Restart a job

To restart a job, complete the following steps.

1. In PACS Scan Mobile, tap menu  on the main screen, and then tap **Status**.
2. In the list of jobs, tap the failed job that you want to restart.
3. Tap **Restart**.

The job is highlighted in yellow, and PACS Scan Mobile attempts to resend the job.

Administer PACS Scan Mobile

Configure provisioning of devices


Administrators must configure provisioning so that users of PACS Scan Mobile can provision their devices. To configure provisioning, complete the following steps.

1. On the PACS Scan Server computer, open the following file in an XML editor.
{PACS Scan Server installation directory}\admin\web.config
2. Under the **<devices>** element, complete the following substeps.
 1. In the tag **<add key="provisionAddress" value="mobile.pacsgear.com"/>**, in the **value** parameter, type the IP address of the server.
 2. In the tag **<add key="provisionSSL" value="t"/>**, in the **value** parameter, type `true` if you enabled SSL on the server, or type `false` if you did not.
 3. Save the file and close the XML editor.

Confirm the server address

To confirm the server address, complete the following steps.

Your PACS Scan Mobile app provisions your server's address. If you have questions about the server address, contact your Lexmark representative.

1. To launch the app, on a mobile device, tap the **PACS Scan** icon.
2. On the login screen, tap the gear  icon.
3. On the **Settings** screen, in the **Address** box, confirm that the IP address is correct.
4. Tap **Save** to return to the login screen.
5. To begin using PACS Scan Mobile, enter your credentials and tap **Log In**.

Edit the AE title

To change the application entity (AE) title, complete the following steps.

An AE title is assigned to DICOM devices to identify them to other DICOM devices on the same network. PACS Scan Mobile uses PACSSCANMOBILE as the default AE title. The AE title must be between 1 and 16 characters in length, and must not include spaces or special characters.

1. In PSM Console, in the left pane, click **DICOM Settings**.
2. On the **DICOM Settings** page, in the **AE title** box, type an AE title.
3. Click **Save**.

Edit a default setting

To edit a default setting, complete the following steps.

"Defaults" refers to optional site information and settings that are automatically included with studies as DICOM metadata.

1. In PSM Console, in the left pane, click **Defaults**.
2. On the **Defaults** page, click **Edit**.
3. Perform one or more of the following actions, and then click **Save**.
 - In the **Manufacture** box, type the manufacturer of the sending device. The default value is `APPLE`.
 - In the **Institution** box, type the name of your institution.
 - In the **Model** box, type the model of the sending device. The initial value is `PSMOBILE`.
 - In the **Serial number** box, type the serial number of the sending device.
 - In the **Secondary version** box, type the version of the DICOM secondary capture device.
 - In the **Secondary model** box, type the model name of the DICOM secondary capture device.
 - In the **Secondary manufacturer** box, type the manufacturer name of the DICOM secondary capture device.
 - In the **Software version** box, type the version number of the model you typed in the Model box.
 - In the **Modality** list, select a default modality according to how you want the image to be processed by systems that open the image.

Edit a server setting

To edit a server-related setting, complete the following steps.

1. In PSM Console, in the left pane, click **Server Settings**.
2. On the **Server Settings** page, click **Edit**.
3. Complete one or more of the following steps.
 - To turn off recording of server logs, clear the **Enable debug** check box.
 - To turn off recording of audit logs, clear the **Enable audit** check box.
 - In the **Session timeout** box, type the number of minutes that a mobile device must remain inactive for its connection to the server to time out.
 - In the **Max. retries** box, type the maximum number of times the server should attempt to reconnect after a lost connection.
 - In the **Retry intervals** box, type the number of seconds between attempts to reconnect.
4. Click **Save**.

View an audit log

To view an audit log, complete the following steps.

When auditing is enabled, you can view audit logs showing user and device access to the server.

1. In PSM Console, in the left pane, click **Audit Logs**.
2. If the log entry you want is not on the first page of the list, click the navigation buttons at the bottom of the list or type all or a portion of the log entry in the **Search** box, and then press ENTER.
3. To display study details, click the log entry you want to view.

View a server log

To view a server log, complete the following steps.

If you selected the Enable debug check box in the server settings, you can view server logs containing server-specific events such as errors and changes in connection statuses. For information on the Enable debug check box, refer to Edit a server setting.

1. In PSM Console, in the left pane, click **Server Logs**.
2. If the log entry you want is not on the first page of the list, click the navigation buttons at the bottom of the list or type all or a portion of the log entry in the **Search** box, and then press ENTER.

Manage jobs in PSM Console

View a job

To view a job in PSM Console, complete the following steps.

1. In PSM Console, in the left pane, click **Jobs**.
2. If the job you want does not appear on the first page of the list, click the navigation buttons at the bottom of the list or type all or a portion of the job information in the **Search** box, and then press ENTER.

Cancel a job

To cancel a job, complete the following steps.

1. In PSM Console, in the left pane, click **Jobs**.
2. If the job you want does not appear on the first page of the list, click the navigation buttons at the bottom of the list or type all or a portion of the job information in the **Search** box, and then press ENTER.
3. Select the job and click **Cancel**.

Restart a job

To restart a job, complete the following steps.

1. In PSM Console, in the left pane, click **Jobs**.
2. If the job you want does not appear on the first page of the list, click the navigation buttons at the bottom of the list or type all or a portion of the job information in the **Search** box, and then press ENTER.
3. Select the job and click **Restart**.

Manage DICOM settings

About managing DICOM settings

Because PACS Scan Mobile works in conjunction with other DICOM devices over a network, it is necessary to configure DICOM settings for those devices. You can manage the following four categories of DICOM settings.

Destinations

A “destination” is a user-specified group of DICOM device configurations. By creating a destination, you can send studies or HL7 messages to multiple devices at once. Destinations are optional.

Query sources

A “query source” is a DICOM worklist server, archive, or other source that can respond to patient queries. To query patient studies in PACS Scan Mobile, you must configure at least one query source. For information on the query sources available at your institution, contact your PACS administrator.

Devices

A “device” is an HL7 server, archive, or other device to which you can send HL7 messages for processing, or patient studies for storage. To use PACS Scan Mobile to send captured images or HL7 messages, you must configure at least one DICOM device. For information on the devices available at your institution, contact your PACS administrator.

DICOM Trace

“DICOM Trace” is a function that captures raw event data flowing between DICOM devices and the PACS Scan Mobile server. This data is useful for server diagnostics. For DICOM trace data to be available for viewing, you must enable the function prior to any server activity.

Add a DICOM destination

To add a destination, complete the following steps.

1. In PSM Console, in the left pane, click **DICOM Settings**.
2. On the **DICOM Settings** page, click the **Destinations** tab, and then click **Add**.
3. In the **Add Destination** dialog box, complete the following substeps.
 1. In the **Name** box, type a name for the Destination.
 2. **Optional.** In the **Description** box, type a description of up to 65 characters to appear at the bottom of the image.

A description can help you remember the purpose of each destination, especially if there are a large number of destinations.
 3. In the list of devices, select one or more check boxes corresponding to the devices you want to include in the destination, and then click **Save**.

Edit a DICOM destination

To edit an existing DICOM destination setting, complete the following steps.

1. In PSM Console, in the left pane, click **DICOM Settings**.
2. On the **DICOM Settings** page, click the **Destinations** tab.
3. If the destination you want to edit does not appear on the first page of the list, click the navigation buttons at the bottom of the list or type all or a portion of the destination information in the **Search** box, and then press ENTER.
4. Click the name of the destination.
5. In the **Edit Destination** dialog box, edit the information as needed and then click **Save**.

Add a DICOM query source

To add a query source, complete the following steps.

1. In PSM Console, in the left pane, click **DICOM Settings**.
2. On the **DICOM Settings** page, click the **Query Sources** tab, and then click **Add**.
3. In the **Add Query Source** dialog box, complete the following substeps.
 1. In the **Protocol** list, select the protocol of the query source.
 2. In the **Name** box, type a name for the query source.
 3. In the **AE title** box, type the AE title configured on the query source.
 4. In the **IP address** box, type the IP address of the query source.
 5. In the **Port** box, type the port that the query source uses for the protocol selected earlier.
 6. To enable querying of post-dated studies, select the **Include future dates** check box.
 7. To limit the number of query results returned by the source, select an option in the **Date range** list.
 8. In the **Study UID** list, select how you want PACS Scan Mobile to handle the study UID.
 9. To test whether the console can connect to your query source, click **Test**.

Note If the test fails, confirm that you entered the correct settings, or contact your PACS administrator.
4. Click **Save**.

Edit a DICOM query source

To edit an existing DICOM query source, complete the following steps.

1. In PSM Console, in the left pane, click **DICOM Settings**.
2. On the **DICOM Settings** page, click the **Query Sources** tab.
3. If the query source you want to edit does not appear on the first page of the list, click the navigation buttons at the bottom of the list or type all or a portion of the query source information in the **Search** box, and then press ENTER.
4. Click the name of the query source.
5. In the **Edit Query Source** dialog box, edit the information as needed and then click **Save**.

Add a DICOM device

To add a DICOM device, complete the following steps.

1. In PSM Console, in the left pane, click **DICOM Settings**.
2. On the **DICOM Settings** page, click the **Devices** tab, and then click **Add**.
3. In the **Add Device** dialog box, complete the following substeps.
 1. In the **Protocol** list, select the protocol of the device.
 2. In the **Name** box, type a name for the device.
 3. In the **AE title** box, type the AE title configured on the device.
 4. In the **IP address** box, type the IP address of the device.
 5. In the **Port** box, type the port that the device uses for the protocol selected earlier.
 6. To test whether the console can connect to your device, click **Test**. If the test fails, confirm that you entered the correct settings, or contact your PACS administrator.
4. Click **Save**.

Edit a DICOM device

To edit an existing DICOM device, complete the following steps.

1. In PSM Console, in the left pane, click **DICOM Settings**.
2. On the **DICOM Settings** page, click the **Devices** tab.
3. If the device you want to edit does not appear on the first page of the list, click the navigation buttons at the bottom of the list or type all or a portion of the device information in the **Search** box, and then press ENTER.
4. Click the name of the device.
5. In the **Edit Device** dialog box, edit the information as needed and then click **Save**.

Enable DICOM Trace

To enable DICOM Trace, complete the following steps.

1. In PSM Console, in the left pane, click **DICOM Settings**.
2. In the **AE title** area, select the **Enable trace** check box.

View DICOM trace data

To view DICOM trace data, complete the following step.

- In PSM Console, in the left pane, click **DICOM Trace**.

Manage user access

About managing user access

You can add users to manage access to PACS Scan Mobile and PSM Console, and to assign administrator rights to authorized users. You can configure PACS Scan Mobile to restrict access to users who are verified through local settings, or to users who are verified by an LDAP/Active Directory server. The PACS Scan Mobile server verifies local users based on the settings you specify in this section. Your LDAP/Active directory server verifies LDAP users.

Configure an LDAP/Active Directory server

To configure an LDAP/Active Directory server, complete the following steps.

1. In PSM Console, in the left pane, click **Users**.
2. Under **Restrict access permissions to**, click **LDAP Users**.
3. In the **Server** box, type the address of the LDAP/Active Directory server.
4. In the **Domain** box, type the domain of the LDAP/Active Directory server.
5. Click **Test**. If the test fails, confirm that your settings are correct, or contact your network administrator.

Note You cannot save the LDAP settings until the test succeeds, and at least one LDAP user is added to the list.

6. Click **Save**.

Assign access permissions

To assign access permissions by verification type, complete the following steps.

1. In PSM Console, in the left pane, click **Users**.
2. Under **Restrict access permissions to**, click **Local Users** or **LDAP Users**.
3. Click **Save**.

Add a local user

To add a local user, complete the following steps.

1. In PSM Console, in the left pane, click **Users**.
2. Under **Restrict access permissions to**, click **Local Users**.
3. At the bottom of the Users page, click **Add**.
4. In the **Add User** dialog box, complete the following substeps.

1. In the **User name** box, type a user name.
2. In the **Password** and **Confirm password** boxes, type a password.
3. To assign administrative rights to the user, select the **Administrator** check box.
Administrators can edit many PSM Console settings that normal users cannot. When

you log in to PSM Console as a non-administrator, only a limited number of options are available in the left pane.

5. Click **Save**.

Add an LDAP user

To add an LDAP user, complete the following steps.

1. In PSM Console, in the left pane, click **Users**.
2. Under **Restrict access permissions to**, click **LDAP Users**.
3. At the bottom of the Users page, click **Add**.
4. In the **New User** dialog box, in the **User name** box, type a user name that has already been configured on your LDAP/Active Directory server.
5. Click **Save**.

Edit a user

To edit an existing user, complete the following steps.

1. In PSM Console, in the left pane, click **Users**.
2. Under **Restrict access permissions to**, click the button corresponding to the type of user you want to edit (**Local Users** or **LDAP Users**), and then click a user name.
3. If the user you want to edit does not appear on the first page of the list, click the navigation buttons at the bottom of the list or type all or a portion of the user information in the **Search** box, and then press ENTER.
4. In the **Edit User** dialog box, edit the user settings as needed and then click **Save**.

Manage a department

What is a department?

Departments are saved groups of settings that make it easy to configure mobile devices for use in specific departments at a healthcare institution. You must configure any destinations and query sources you want to use in DICOM Settings before configuring departments.

PSM Console includes a default department called "General." All mobile devices use the default department unless users specify otherwise. You must add at least one department in PSM Console before you can change the default department in the PACS Scan Mobile app.

Add a department

To add a new department, complete the following steps.

1. In PSM Console, in the left pane, click **Departments**.
2. On the **Departments** page, click **Add**.
3. To make this department the default department, select the **Default** check box.
4. In the **Name** box, type a name for the department.
5. In the **AE title** box, type an AE title to use when the department is selected on PACS Scan Mobile.

Note If this box is empty, PACS Scan Mobile uses the AE title set in DICOM Settings.

6. In the **Modality** list, select the modality to use when the department is selected on PACS Scan Mobile.
Note If you select **None**, PACS Scan Mobile uses the modality set in DICOM Settings.
7. Click the **Destinations** tab, and then select the check boxes corresponding to the destinations you want your department to use.
8. Click the **Query Sources** tab, and then select the check boxes corresponding to the query sources you want your department to use.
9. Click the **Client** tab, and then select the check boxes corresponding to the mobile devices you want your department to use.
10. For each selected client, perform one or more of the following actions.
 - In the **Persistent Login** list, select YES if you want the mobile device to remain logged in indefinitely.
 - In the **Video** list, select YES if you want to enable video capture on the mobile device.
 - In the **Photo Quality** list, select HIGH, MEDIUM, or LOW resolution.
 - In the **Video Quality** list, select HIGH, MEDIUM, or LOW resolution.
 - In the **Max. Video Length** list, select the maximum length of video to allow users to capture at one time.
11. Click the **Series** tab, click **Add**, type a description, and then click **Save**. Repeat this step to add additional descriptions.
The descriptions you enter here are available to add to studies on PACS Scan Mobile.
12. Click **Save** to close the **Add Department** dialog box.

Edit a department

To edit an existing department, complete the following steps.

1. In PSM Console, in the left pane, click **Departments**.
2. On the **Departments** page, click the name of the department.
3. In the **Edit Department** dialog box, change the settings as needed.
4. Click **Save**.

Change the default department

To change the default department, complete the following steps.

1. In PSM Console, in the left pane, click **Departments**.
2. On the **Departments** page, in the list of departments, select the check box in the **Default** column corresponding to the department you want to be the default.