ModLink

User Help

DOC-ML25-UH-EN-REVB

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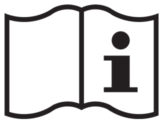
Documentation Notice

Regulatory and compliance



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General warnings and precautions

To ensure patient safety and adhere to HIPAA Privacy Rule involving patient health information, the Healthcare provider shall assign an unique Accession Number and Medical Record Number (MRN) to identify individual patient's health record affiliated with the patient to prevent erroneous medical data and duplicate identification with other patients.

Symbols glossary

ISO - 15223-1 - Medical devices - Symbols to be used with medical device labels, labeling, and information to be supplied.

3082 - Manufacturer: Indicates the medical device manufacturer.

ISO - 15223-1 - Medical devices - Symbols to be used with medical device labels, labeling, and information to be supplied.

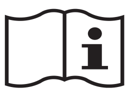
2497 - Date of Manufacture: Indicates the date when the medical device was manufactured.

ISO - 15223-1 - Medical devices - Symbols to be used with medical device labels, labeling, and information to be supplied.

2493 - Catalog number: Indicates the manufacturer's catalog number so the medical device can be identified.

ISO - 15223-1 - Medical devices - Symbols to be used with medical device labels, labeling, and information to be supplied.

2498 - Serial number: Indicates the manufacturer's serial number so that a specific medical device can be identified.

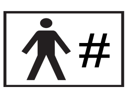


ISO - 15223-1 - Medical devices - Symbols to be used with medical device labels, labeling, and information to be supplied.

1641 - Consult instructions for use: Indicates the need for the user to consult the instructions for use.

ISO - 15223-1 - Medical devices - Symbols to be used with medical device labels, labeling, and information to be supplied.

0434A - Caution: Indicates the need for the user to consult the instructions for use for important information such as warnings and cautions.



ISO - 15223-1 - Medical devices - Symbols to be used with medical device labels, labeling, and information to be supplied.

2610 - Patient number: Indicates a unique number associated with an individual patient.

Quantity: Indicates the number of units.

Directive 2012/19/EU on waste electrical and electronic equipment (WEEE).

Table of Contents

Intended use

The ModLink application is a software solution that transfers structured report measurements directly into a voice recognition system using DICOM Structured Report (SR) and HL7 Messaging from modalities such as ultrasound, DEXA, or CT. ModLink sends this data to the voice recognition system, which in turn uses this data to populate the report with these values. ModLink supports multiple modalities, vendors, and reports, as well as advanced data types such as CT dosage.

Warnings, precautions, and contraindications

Report any malfunction or security risks such as unauthorized access, modification, interference, and adverse and security incidents that occur in relation to ModLink Technical Support @community.hyland.com.

What is ModLink?

ModLink is a program that automatically populates clinical worksheets and forms for dictation systems with values from modalities, saving manual dictation time. You use ModLink to configure each of the processes listed below. ModLink runs these processes in the background as a Windows service according to your configuration.

- Receive messages containing measurements from modalities on specific ports and place those messages into meaningful matching groups.
- Assign templates to matching groups.
- Map values in matching groups to template fields that correspond to custom fields in a third-party dictation system.
- Forward the mapped data to the dictation system.

Launch ModLink

To launch ModLink, complete the following steps.

1. In a web browser go to the following URL: *http(s)://<serverURL>/modlinkweb*.
2. In the **ModLink** login page, complete one of the following actions.
   - For a clean installation, enter the default administrative credentials, **admin** for the login and **Pacsgear1** for the password.
   - For an upgrade, enter the login and password you used for your previous installation.

Use ModLink

To use ModLink, complete the following steps.

1. Ensure that all connected modalities are sending data to ModLink on the correct port.
2. Confirm that the ModLink service is running.
3. Enable at least one port on the **Settings** tab and one template on the **Configuration** tab.
4. Ensure that the dictation system is receiving data from ModLink at the correct DICOM or HL7 address.
5. Optional. Exit ModLink.

ModLink begins translating inbound messages (DICOM SR/HL7) and forwarding the values to the configured dictation system.

About the ModLink dashboard

The ModLink dashboard is a graphical user interface that allows you to view high-level statistics and analysis of the ModLink application.

- **Failed DICOM Jobs**

  Failed DICOM Jobs displays a list of failed DICOM jobs and allows you to quickly access the Failed DICOM Jobs page.

- **Failed HL7 Jobs**

  Failed HL7 Jobs displays a list of failed HL7 jobs and allows you to quickly access the Failed HL7 Jobs page.

- **Inbound devices**

  Inbound devices displays a list of inbound devices and allows you to quickly access the Inbound Devices page.

- **Ports**

  Ports displays a list of configured ports and includes relevant information such as the port number, type and whether the port is currently enabled or disabled.

- **Service Status**

  Service Status displays the current status of the ModLink service.

Settings

Manage Ports

About using ports

In ModLink, you use ports to separate incoming messages from various modalities into groups which are matched to templates. You can create two different port types: Listening for incoming DICOM or listening for incoming HL7. For DICOM ports, the system automatically groups the messages, by the manufacture and model numbers. Then within those groups, messages can be grouped by matching criteria, such as Study Description or AE Title for HL7 messages. Message type is the default matching criteria.

Configure a port

To configure a port, complete the following steps.

1. Click the **Settings** tab and then click **Manage Ports**.
2. Click **New Port**.
3. Under **Port**, complete the following substeps.
   1. In the **Number** field, type the appropriate port number to where the modalities will send data.

   2. In the **Description** field, type a port description.
   3. In the **Source** list, select the type of data that is sent by the modality (DICOM or HL7).
   4. If you selected DICOM: in the **Matching criteria** field, click a criterion to use to place messages into matching groups.
   5. If you selected HL7: confirm the HL7 mappings options for **MRN**, **Accession** number, **Study Description** and **Patient Name**.
   6. In the **Site name** field, type the name of the clinical site you want to associate with the port
4. Click **Add**.
5. Click **Service Restart Needed** to restart the service.

> **Note:**
> You must restart the service for the new settings to take effect.

Remove a port

To remove a port, complete the following steps.

1. Click the **Settings** tab and then click **Manage Ports**.
2. Locate the port you want to remove and then click the **Remove** icon.
3. In the **Remove Port** dialog box, click **Remove** to confirm.
4. Click **Service Restart Needed** to restart the service.

Enable or disable a port

A port must be enabled before it can receive data. To enable a port, complete the following steps.

1. Click the **Settings** tab and then click **Manage Ports**.
2. Locate the port you want to enable or disable.
3. In the **Enabled** column for that port, set the toggle button to **False** to disable or **True** to enable.

Edit a port

Important: Once a port is configured, the only settings you can edit are the Port, Description, and Site Name. If you need to make changes to any other port settings, you must delete that port and recreate it. To edit port settings, complete the following steps.

1. Click the **Settings** tab and then click **Manage Ports**.
2. Locate the port you want to edit and then click the **Edit port** icon.
3. Under **Port**, update the appropriate fields. For more information, see **Configure a port**.
4. Click **Update** to save your changes.
5. Click **Service Restart Needed** to restart the service.

Manage Templates

What is a template?

A template is a set of data mapping rules. You configure data from the incoming modality into ModLink fields (also referred to as template IDs).

When ModLink receives values, it maps them to the template fields and then forwards them to your dictation system, which uses the values to populate custom fields in reports and worksheets. To make this process as accurate as possible, you configure the template fields in ModLink to correspond precisely to the custom fields on your dictation system. ModLink uses two kinds of templates, DICOM and HL7. Each type of template contains data from different sources, and you configure them in different ways.

By assigning a template to each matching group, you configure how you want ModLink to map specific values from specific modalities to custom fields in a dictation system.

DICOM Templates

Download a DICOM template

To download a DICOM template, complete the following steps.

1. Click the **Settings** tab and then click **Manage Templates**.
2. Under **DICOM Templates**, select the template you want to download and then click the **Download SR Template** icon. The system downloads the template to your local drive.

Rename a DICOM template

To rename a DICOM template, complete the following steps.

1. Click the **Settings** tab and then click **Manage Templates**.
2. In the **DICOM Templates** list, click the **Edit name** icon next to the template you want to edit.
3. In the **Edit template name** dialog box, type the new name and then click **OK**.

Upload a DICOM template

To upload a DICOM template, complete the following steps.

1. Click the **Settings** tab and then click **Manage Templates**.
2. Beside **DICOM Templates**, click the **Upload DICOM Template** icon.
3. In the **Open** dialog box, browse to the template you want to upload and then click **Open**. The system uploads the template.

Delete a DICOM template

To delete a DICOM template, complete the following steps.

1. Click the **Settings** tab and then click **Manage Templates**.
2. Under **DICOM Templates**, select the template you want to delete. You can select more than one template. Any matching groups that are assigned to the template appear in the right pane.
3. Click the **Delete** icon.

4. In the **Remove templates?** dialog box, click **Remove** to confirm. **Caution!** This will remove the template and message groups it was assigned to.
5. Click **Service Restart Needed** to restart the service.

HL7 Templates

Download an HL7 template

To download an HL7 template, complete the following steps.

1. Click the **Settings** tab and then click **Manage Templates**.
2. Under **HL7 Templates**, select the template you want to download and then click the **Download HL7 Template** icon. The system downloads the template to your local drive.

Rename an HL7 template

To rename an HL7 template, complete the following steps.

1. Click the **Settings** tab and then click **Manage Templates**.
2. In the **HL7 Templates** list, right-click the name of the template you want to rename, and then click the **Edit name** icon.
3. In the **Edit template name** dialog box, type the new name and then click **OK**.

Upload an HL7 template

To upload an HL7 template, complete the following steps.

1. Click the **Settings** tab and then click **Manage Templates**.
2. Beside **HL7 Templates**, click the **Upload HL7 Template** icon.
3. In the **Open** dialog box, browse to the template you want to upload and then click **Open**. The system uploads the template.

Delete an HL7 template

To delete an HL7 template, complete the following steps.

1. Click the **Settings** tab and then click **Manage Templates**.
2. Under **HL7 Templates**, select the template you want to delete. You can select more than one template. Any matching groups that are assigned to the template appear in the right pane.
3. Click the **Delete** icon.
4. In the **Remove templates?** dialog box, click **Remove** to confirm. **Caution!** This will remove the template and message groups it was assigned to.
5. Click **Service Restart Needed** to restart the service.

Login Settings

About users

You can restrict login access to ModLink by configuring the three types of roles described below. When any user attempts to log in, ModLink verifies the user's role and assigns access accordingly.

- **Admins** have the highest privileges and have access to all the functionality of the system.
- **Super Users** have access to configure templates, access tools, logs, and system licensing.
- **Users** have access to the system dashboard, tools, and logs.

Add a local user

To add a local user, complete the following steps.

1. Click the **Settings** tab and then click **Login Settings**.
2. Click the **Local users** tab.
3. Click **New Local User**.
4. In the **Username** and **Password** fields, type the user name and password of the user.
5. In the **User role** list, select the role type you want to assign to this user.
6. Click **Add**.

Edit a local user

To edit a local user, complete the following steps.

1. Click the **Settings** tab and then click **Login Settings**.
2. Click the **Local users** tab.
3. Locate the user you want to edit and then click the **Edit user** icon.
4. Optional. Update the **Username** and **Password** fields.
5. Optional. In the **User role** list, select a new role type.
6. Click **Update**.

Remove a local user

To remove a local user, complete the following steps.

1. Click the **Settings** tab and then click **Login Settings**.
2. Click the **Local users** tab.
3. Locate the user you want to remove and then click the **Remove user** icon.
4. In the **Remove User** dialog box, click **Remove** to confirm.

Add a domain server

To add a domain server, complete the following steps.

1. Click the **Settings** tab and then click **Login Settings**.
2. Click the **Domain Servers** tab.
3. Click **New Server**.
4. In the **Name** field, type the name of the server.
5. In the **Domain** field, type the domain name of the server.
6. In the **Domain URL** field, type the URL for the domain.

7. Click **Add**.
8. Click **Service Restart Needed** to restart the service.

Edit a server

To edit a server, complete the following steps.

1. Click the **Settings** tab and then click **Login Settings**.
2. Click the **Domain Servers** tab.
3. Locate the server you want to edit and then click the **Edit server** icon.
4. Optional. Update the **Name** field.
5. Optional. Update the **Domain** field.
6. Optional. Update the **Domain URL** field.
7. Click **Update**.
8. Click **Service Restart Needed** to restart the service.

Remove a server

To remove a server, complete the following steps.

1. Click the **Settings** tab and then click **Login Settings**.
2. Click the **Domain Servers** tab.
3. Select the domain server you want to remove and then click the **Remove Server** icon.
4. In the **Remove Domain server** dialog box, click **Remove** to confirm.
5. Click **Service Restart Needed** to restart the service.

Edit a domain role assignment

Domain role assignments in ModLink include Super, Admin, and User. Supers have to the highest level of access to ModLink. They can do everything Admins and Users can do and have access to super-role tools and functionality. To edit a domain role assignment, complete the following steps.

1. Click the **Settings** tab and then click **Login Settings**.
2. Click the **Domain Role Assignment** tab.
3. Under **Domain Group Roles**, beside the role, **Admin**, **Super**, or **User**, you want to edit, click the **Edit** icon.
4.
5. In the **Domain Group** field, type the names of the domain groups, separated by a semicolon, you want to assign to this role.
6. Click **Save**.

Server Settings

Configure server settings

To configure the server settings, complete the following steps.

1. Click the **Settings** tab and then click **Server Settings**.
2. In the **AE title** field, type a name for the AE. The default is **Modlink**.

3. In the **Max custom field length** field, type the maximum length of data you want to set for custom fields. For most dictation systems, the default value should be sufficient, however, some dictation systems limit the length of data that can be sent.
4. In the **Number retries before fail** field, type the number of attempts you want to contact the server before failing.
5. In the **Retry time (seconds)** field, type the amount of time, in seconds, that you want the server to wait before trying to delay jobs submitted to the forwarding system. You must select **Delay before first send** to enable this functionality.
6. In the **Auto Logout time (minutes)** field, type the amount of time, in minutes, that you want the system to wait before automatically logging out a user. You must select **Enable Auto Logout** to enable this functionality.
7. Select **Listen for Forward API jobs** and **Listen for HL7 API jobs** if you are integrating PACSgear Enterprise forms with your ModLink system. You must select **Enable ModLink Data** to enable this functionality.

   There are specific settings you must configure on your PACSgear Enterprise system to complete the integration.
8. Select **Save DICOM** if you want ModLink to save the received DICOM image. This option should only be enabled for troubleshooting. Use caution when enabled as it can take up a large amount of disk space over time.
9. Select **Allow blank matching** if you want to allow blank matching on inbound files for translations.

   Important This option should only be enabled for troubleshooting inbound messages. Do not leave this setting enabled.
10. Select **Append GUID** if you want to append a globally unique identifier to messages that are saved to disk.
11. Select **Delay before first send** if you want jobs submitted to the forwarding service to be delayed before the first attempt.
12. Select **Enable UI Logging** if you want to enable UI logging.
13. Select **Enable Auto Logout** if you want to log a user out automatically after a specified number of minutes.
14. Select **Enable ModLink Data** if you want to save data processed by the system to a local storage path. This option should only be enabled in specific use cases. Contact your administrator if you want to use this option.
15. Click **Save** and then restart the service for the changes to take effect.

SR Forwarding

About SR forwarding

Forwarding is the process of sending received SRs to a separate DICOM destination. SR forwarding is only available for Nuance API customers.

SR forwarding

ModLink supports automatically forwarding received SR messages to a DICOM destination, such as a PACS.

To enable SR forwarding, complete the following steps.

1. Click the **Settings** tab and then click **SR Forwarding**.

2. Select **Forwarding enabled** to turn on automatic forwarding.
3. Click **Save**.

Configure SR forwarding

To configure SR forwarding, complete the following steps.

Prerequisite SR forwarding must be enabled to configure the following settings.

1. Click the **Settings** tab and then click **SR Forwarding**.
2. Toggle whether SR forwarding is enabled or disabled.
3. In the **Destination AE Title** field, type the AE title of the destination.
4. In the **Destination IP Address** field, type the IP address of the destination.
5. In the **Destination Port** field, type the port for the destination
6. In the **File storage directory** field, type the temporary file storage folder location.
7. Optional. Select **Raw capture** to save information about the transfer activities.

   RawCapture is a function that writes unstructured DICOM data to files in the RawCap subdirectory of the ModLink installation directory. You should only enable RawCapture when working with a support representative for troubleshooting purposes.
8. Click **Save** to save the changes. The system prompts you to restart the service.

Custom Fields

What are custom fields?

Template custom fields in ModLink correspond to custom merge fields, or tokens, in dictation systems (the terms are largely interchangeable). Dictation systems use custom fields to create clinical worksheets and forms. When using ModLink, you can add, edit, import, or remove custom fields as needed, but you must configure the dictation system to use the same custom fields as ModLink, otherwise ModLink may not map the values correctly.

Add a custom field

To add a custom field, complete the following steps.

1. Click the **Settings** tab and then click **Custom Fields**.
2. Click the **Add custom field** icon.
3. In the **Custom Field** field, type a name for the new custom field, and then click **Add**.

   Note: If you add a custom field in ModLink, you must also add it in the dictation system if it does not exist already.

Edit a custom field

To edit a custom field, complete the following steps.

1. Click the **Settings** tab and then click **Custom Fields**.
2. Under **Custom Fields**, select the custom field you want to edit and then click the **Edit** icon.

3. In the **Custom Field** field, type a new name for the custom field, and then click **Update**.

Note: If you edit a custom field in ModLink, you must also edit it in the dictation system to match.

Import custom fields

To import custom fields into ModLink from a CSV file, complete the following steps.

1. Click the **Settings** tab and then click **Custom Fields**.
2. Click **Import from CSV**.
3. In the **Import custom fields** dialog box, complete the following substeps.
    1. Click **Chose file**.
    2. In the **Open** dialog box, navigate to the CSV file you want to import, select it, and then click **Open**.
4. Select the appropriate custom fields and then click **Upload**.

Export custom fields

Exporting the custom fields to a comma separated values file provides a useful reference to ensure that the custom fields in ModLink match those of the dictation system. To export the custom fields that you configured in ModLink to a CSV file, complete the following steps.

1. On the **Settings** menu, click **Custom Fields**.
2. Click **Export to CSV** to export the custom fields to a CSV file. Select **Include usage** if you want to include usage details for each custom field.
3. Click **Export for 360** to export the custom files to a CSV file for the PowerScribe system.
4. Click **Export used** if you want to only export custom fields that are in use.

Delete a custom field

To delete a custom field, complete the following steps.

1. Click the **Settings** tab and then click **Custom Fields**.
2. Under **Custom Fields**, select the custom fields you want to delete and then click the **Delete selected** icon.

    Note:

    Click the **More options** icon and then select **Check All** to select all the custom fields in the list.

3. In the **Delete custom field** dialog box, click **Continue** to confirm.

    Note: If you delete a custom field in ModLink, you must also delete it in the dictation system to match.

Dictation Settings

Configure dictation settings

To configure the dictation settings, complete the following steps.

1. Click the **Settings** tab and then click **Dictation Settings**.

2. Toggle whether dictation is enabled or disabled. It must be set to enabled to configure the following settings.
3. In the **Username**, **Password**, and **Retype password** fields, type credentials for the dictation system.
4. In the **IP address**, type the IP address (or URL) of the dictation system.
5. In the **Site Name** field, type the name of the clinical site you want to associate with the dictation system.
6. Click **Test Connection** to test whether ModLink can communicate with the dictation system.
7. Click **Service Restart Needed** to restart the service.

HL7 Forwarding

About HL7 forwarding

HL7 forwarding is the process of sending ORU messages to another system based on the parsed data within the SR.

Configure HL7 forwarding

To configure HL7 forwarding, complete the following steps.

1. Click the **Settings** tab and then click **HL7 Forwarding Settings**.
2. Toggle whether HL7 forwarding is enabled or disabled. It must be set to enabled to configure the following settings.
3. Under **HL7 Forward Destinations** locate the destination you want to edit and then click the Edit icon.
4. In the **IP Address** field, type the IP address of the destination.
5. In the **Port** field, type the port for the destination.
6. In the **Description** field, type a description for the destination.
7. Click **Update** to save the changes. The system prompts you to restart the service.

Configuration

What is a matching group?

A matching group contains data from modalities that match a criterion that you specify when you configure a port. Matching groups appear in the right pane of the Configuration tab, one group on each line. ModLink displays the following information about each group.

Matching value

The name of the value that matched the criterion.

Messages

The number of messages in the group.

Template

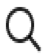
The template that you assigned to the matching group.

Process Studies

Specifies whether to process them template.

Find a matching group

To find a matching group, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. Optional. To find a matching group that contains specific patient information, complete the following substeps.
    1. At the top of the right pane, in the **MRN** or **Accession** fields, type the MRN of the patient you want to find or the complete accession number.
    2. Click the **Search Studies**  icon. The matching groups are displayed in the right pane. The results are only for the selected model of the manufacture or model.

Assign a template to a matching group

To assign a template to a matching group, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, select the template that you want to assign from the **Template** list.
4. In the **Change Template?** dialog box, click **Confirm**.
5. Select the **Process Studies** option to toggle whether sending messages to forward/dictation destinations is enabled or disabled.

Remove a template from a matching group

To remove a template from a matching group, complete the following step.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, select **None Assigned** from the **Template** list.
4. In the **Change Template** dialog box, click **Confirm**.

DICOM templates

Add a new DICOM template

To add a new DICOM template and assign it to a matching group, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.

3. In the appropriate row, click the **Edit** icon.
4. In the right pane, click **New**.
5. In the **Create new template** dialog box, type a name for the template and then click **Confirm**.
6. Optional. Add any fields you want to the template and then click Save. For more information, see **Add a field to a DICOM template**.
7. Click **Close**.

Copy a DICOM template

If you need a new template that is similar to an existing one, you can copy the existing template and edit it. To copy a DICOM template and assign it to a matching group, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. In the right pane, click **Copy**.
5. In the **Copy template** dialog box, type a name for the template and then click **Confirm**.
6. Optional. To add fields to the template, see **Add a field to a DICOM template**.
7. Click **Save**.

About creating unique value definitions

When you add a field to a template based on a value that you select, the Select Modifier dialog box, in the Output Value field, indicates whether the definition of that value is unique. If it is not unique, ModLink maps more than one value to the field. For example, if you add Kidney Height as a field to your template, ModLink populates the field with all Kidney Height values that it finds in an incoming message. If you only want one specific value to appear in a field, you can change the value definition to make it unique to that specific value.

To change a value definition in the Select Modifier dialog box, click additional data from the message, click a modifier, click an additional modifier, or click some combination of all three of these. Each time you click one of these items, the definition of the value becomes more specific, resulting in fewer and fewer values being mapped to the field. When your definition applies only to a single value, the Select Modifier dialog box indicates that the definition is unique.

Add a tag to a DICOM template

To add a tag to a DICOM template, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.

3. In the row containing the matching group that is assigned to the template to which you want to add a tag, click the **Edit** icon.
4. Click **Add DICOM tag**. The **Add DICOM value** dialog box is displayed.
5. In the **Group** field, type the group code for the DICOM tag.
6. In the **Element** field, type the element code for the DICOM tag.
7. In the **Custom field** list, select the appropriate custom field.
8. Select **HL7 Replace value** if you want to create an HL7 replacement value.
9. Click **OK**.

Add a field to a DICOM template

You add a field for every type of value you want to forward to your dictation system. To add a field to a DICOM template, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.

   Data received from the modalities display on the left pane and you can scroll through the message in the left pane. On the right pane, the system displays all the values that are already mapped for the assigned template.
4. In the left pane, select a value on which to base the new field and then click **Add to template**. The **Select Modifier** dialog box is displayed.
5. Under **Select entry**, click an item to add to the definition. You can select multiple modifiers from the modality by clicking the appropriate modifier in the list. Click the modifier again to deselect it.
6. Under **Select Modifier**, click a modifier.
7. Under **Select additional modifier**, click an additional modifier.
8. In the **Custom field** list, select the appropriate custom field.
9. Optional. To add a custom field that is not listed, select **Add New Value** at the top of the list.
10. In the **Add custom field**, in the **Name field**, add the name you want to use for the replacement value and then click **Add**. For example, create DOB as a custom field to use for the date of birth.

    Note:
    If custom fields are created in ModLink they must match a corresponding data field in the receiving Dictation system.
11. Click **Apply**.

Remove a field from a DICOM template

To remove a field from a DICOM template, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. In the right pane, click the template field that you want to remove.
5. Click the **Remove Measurement** icon.
6. In the **Remove Measurement** dialog box, click **Continue** to confirm.
7. Click **Save**.

Format a DICOM template field

The field format determines the format of the values that ModLink sends to the dictation system. To configure the format of a DICOM field, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. In the right pane, click the template field that you want to format and then click the **Format Value** icon.

   > **Note:**
   > You cannot format the MRN field, Accession field, and fields whose Output columns are empty.

5. In the dialog box, modify settings for **Mathematical**, **Date|Time**, **Display**, and **Weights|Measurements**. The original value and formatted value are displayed below.
6. Click **Apply**.

Move a template field

To move a field within a template, complete the following steps.

You cannot move the MRN field or Accession field, and you cannot move any fields to a position above the Accession field.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
4. In the appropriate row, click the **Edit** icon.
5. In the right pane, drag the field to a new location in the list.
6. Click **Save**.

Add a range to a template field

A range specifies upper and lower limits for a value populating the field. If the value falls outside of the range, ModLink prepends an asterisk to the value before sending. To add a range to a field, complete the following steps.

> **Note:**
> You cannot add a range if the unit of a value is pounds/ounces.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. Click the **More Options** icon to the right of the **Format Value** icon and then select **Add range**.
5. In the **Add Range** dialog box, complete the following substeps.
    1. In the **Lower Range** field, enter the minimum quantity for the value.
    2. In the **Upper Range** field, enter the maximum quantity for the value.
    3. Optional. To send the range values along with the actual values, select the **Include range in value** check box, and then click **OK**.
6. Click **Save**.

Edit a range to a template field

To edit a range to a field, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. Click the **More Options** icon to the right of the **Format Value** icon and then select **Edit range**.
5. In the **Edit Range** dialog box, update the settings as needed, and then click **OK**. For more information, see **Add a range to a template field**.
6. Click **Save**.

Remove a range to a template field

To remove a range to a field, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. Click the **More Options** icon to the right of the **Format Value** icon and then select **Remove range**.
5. Click **Save**.

Test a DICOM template

You can test whether ModLink forwards the correct values, in the correct format, to the dictation system. This is helpful after changing to a new template or editing an existing template. To test a DICOM template, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. Click the **More Options** icon located to the right of the **Close** button and then select **Resend file**.
5. To verify your results, open the target document in your dictation system.

View raw DICOM data

To view raw DICOM SR data, complete the following procedures.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Manufacturers/Models** list, select the manufacturer or model you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. Click the **More Options** icon located to the right of the **Close** button and then select **View raw file**. The system displays the Dicom Dump window.

HL7 templates

Add a new HL7 template

To add a new HL7 template and assign it to a matching group, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Sending Apps** list, select the source you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. In the right pane, click **New**.
5. In the **Create new template** dialog box, type a name for the template and then click **Confirm**.
6. Optional. To add new contents to the field, expand a segment in the list, select a field, and then click **Add**. In the **Select Subfields** dialog box, click **All** if you want the entire field or select the subfield if you want part of the message, and then click **OK**.complete the any of the following actions. Repeat this step as many times as necessary
7. Click **Save**.

Copy an HL7 template

If you want to create a new template that is similar to an existing one, you can copy the existing template and edit it rather than creating a completely new one. To copy an HL7 template and assign it to a matching group, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Sending Apps** list, select the source you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. In the right pane, click **Copy**.
5. In the **Copy template** dialog box, type a name for the template and then click **Confirm**.
6. Click **Save**.

Remove a field from an HL7 template

To remove a field from an HL7 template, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Sending Apps** list, select the source you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. In the right pane, click the template field that you want to remove.
5. Click the **Remove Measurement** icon.
6. In the **Remove Measurement** dialog box, click **Continue** to confirm.
7. Click **Save**.

Format an HL7 template field

The field format determines the format of the values that ModLink sends to the dictation system. To configure the format of an HL7 field, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Sending Apps** list, select the source you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. In the right pane, click the template field that you want to format and then click the **Format Value** icon.

   Note:
   You cannot format the MRN field, Accession field, and fields whose Output columns are empty.

5. In the **Format Output** dialog box, modify settings for case, isolating substrings, finding and replacing contents, and rounding values (to 3 decimal places only), and then click **Save**.

   Note: The settings that are available differ depending on the field.

6. Click **Save**.

Edit an HL7 template field

To edit an existing HL7 field, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Sending Apps** list, select the source you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. In the right pane, click the **Edit** icon. The system displays the **Edit field** dialog box.
5. To add new contents to the field, expand a segment in the list, select a field, and then click **Add**. In the **Select Subfields** dialog box, click **All** if you want the entire field or select the subfield if you want part of the message, and then click **OK**.complete the any of the following actions. Repeat this step as many times as necessary.
6. Click **Save**.

Remove an HL7 template field

To remove an HL7 field from a template, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Sending Apps** list, select the source you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. In the right pane, click the template field that you want to remove.
5. Click the **Remove Measurement** icon.
6. In the **Remove Measurement** dialog box, click **Continue** to confirm.
7. Click **Save**.

Move an HL7 template field

To move an HL7 field within a template, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Sending Apps** list, select the source you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. In the right pane, drag the field to a new location in the list.
5. Click **Save**.

Test an HL7 template

You can test whether ModLink forwards the correct values, in the correct format, to the dictation system. This is helpful after changing to a new template or editing an existing template. To test an HL7 template, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.

2. In the **Sending Apps** list, select the source you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. Click the **More Options** icon located to the right of the **Close** button and then select **Resend file**.
5. To verify your results, open the target document in your dictation system.

View raw HL7 data

To view raw HL7 data, complete the following procedures.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Sending Apps** list, select the source you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. Click the **More Options** icon located to the right of the **Close** button and then select **View raw file**. The system displays the **HL7 Dump** window.

HL7 fields

What are single-segment and multi-segment fields?

A single-segment field is a field in a segment that only appears once in an HL7 message. A multi-segment field appears more than once. There is a standard procedure to add a single-segment field to an HL7 template, but when you add a multi-segment field, you must configure how you want ModLink to translate the values in the fields.

About adding a multi-segment field

When you attempt to add a multi-segment field to a template, the Multiple Segments dialog box appears, prompting you to choose one of the following four methods to translate the values.

Concatenate fields

You can configure ModLink to concatenate, or join, fields and map them to a single field. You choose which fields you want to concatenate from the first applicable segment, but ModLink sends values belonging to the same fields in all applicable segments. For example, if there are three OBX segments and you select fields 2 and 3, ModLink sends the values in fields 2 and 3 of segments OBX 1, OBX 2, and OBX 3. You can select as many fields as you want, in any order that you want. When ModLink sends values based on your selections, it separates each value with a segment separator, and, if you choose to use multiple fields, with a field separator. You can select which character to use for each type of separator.

Create ID/value pairs

You can configure ModLink to dynamically create a custom field (an ID) from one field, and combine it with one or more fields to define corresponding values. You select the fields you want to use to define the ID and values from the first applicable segment, and ModLink creates ID/value pairs based on the same fields in all applicable segments. You can only select one field to define the ID, but you can select multiple fields for the values.

Select single segment

Even if a field occurs in multiple segments, you can choose to map only the field from the first applicable segment and ignore all subsequent segments. You can choose the field you want to use from any of the applicable segments, but the actual value that ModLink maps is the one from the first applicable segment. When you choose the field, you also choose to map either a specific subfield, or all subfields.

Create an If/Then statement

You can configure ModLink to look for text in one field or subfield, and if found, forward a different field or subfield from that segment.

Add a single-segment field and subfield to an HL7 template

To add a single-segment field and subfield to an HL7 template, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Sending Apps** list, select the source you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. In the left pane, click the field you want to add.
5. In the **Custom field** field, click the custom field to which you want to map the items.

   Note:
   You can also add default text before, between, or after mapped fields. The system includes this text as part of the value in the mapped custom field. You can preview the output in the output field.

6. Click **Add**.
7. In the **Select Subfield** dialog box, select the subfield you want to add from the list, and then click **OK**.

   The corresponding value definition appears in the **HL7 Location** field.
8. Repeat the previous steps until all values that you want to add appear in the **HL7 Location** field, and then click **Add to template**.

Multi-segment fields and subfields

Concatenate fields

To concatenate fields, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Sending Apps** list, select the source you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. In the left pane, click the appropriate field and then click **Add**. The **Multiple Segments** dialog box is displayed.

   Note: If the Multiple Segments dialog box does not appear after clicking Add, it means that the field that you clicked in a previous step is not a multi-segment field. See Add a single-segment field and subfield to an HL7 template, or return to the previous step and click a different field.

5. Click **Concatenate fields**.
6. Click the fields to concatenate in the order you want them to appear and then complete the following substeps.
   1. In the **Segment separator** list, select a character string to use as a segment separator.
   2. In the **Custom field** list, select the appropriate custom field.
   3. In the **Fields separator** list, select a character string to use as a field separator if desired.
7. Click **Add to Template** and then click **Save**.

Create ID/value pairs

To create ID/value pairs, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Sending Apps** list, select the source you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. In the left pane, click the field you want to be the template ID in the HL7 template and then click **Add**. The **Multiple Segments** dialog box is displayed.

   > **Note:** If the Multiple Segments dialog box does not appear after clicking Add, it means that the field that you clicked in a previous step is not a multi-segment field. See Add a single-segment field and subfield to an HL7 template, or return to the previous step and click a different field.

5. Click **Create ID\value pair**.
6. Under **Selected ID segment**, complete the following substeps.
   1. Select the field you want to use to define a value for the ID.
   2. Click the **More options** icon and select **Add Subfield**.
   3. In the **Add Subfields** dialog box, select the subfield you want to use and then click **OK**.
7. Under **Selected Value segments**, complete the following substeps.
   1. Select the fields you want to use as the value fields.
   2. Optional. Click the **More options** icon and select **Add Subfield**.
   3. In the **Add Subfields** dialog box, click the subfield you want to use.

   The resultant ID/value pairs appear in the right pane.
8. Click **Add to Template** and then click **Save**.

Use a single segment

To use a single segment, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Sending Apps** list, select the source you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. In the left pane, click the appropriate field and then click **Add**. The **Multiple Segments** dialog box is displayed.

> **Note:** If the Multiple Segments dialog box does not appear after clicking Add, it means that the field that you clicked in a previous step is not a multi-segment field. See Add a single-segment field and subfield to an HL7 template, or return to the previous step and click a different field.

5. Click **Select single segment**.
6. In the **Add Subfields** dialog box, select a subfield.

   The results appear in the HL7 Location field.
7. In the **Custom field** list, select the appropriate custom field.
8. Click **Add to template** and then click **Save**.

Create an If/Then statement

To create an If/Then statement, complete the following steps.

1. Click the **Configuration** tab and then in the left pane, click a port.
2. In the **Sending Apps** list, select the source you want to view. The messages and assigned templates display within their groups based on the matching criteria assigned.
3. In the appropriate row, click the **Edit** icon.
4. In the left pane, click the appropriate field and then click **Add**. The **Multiple Segments** dialog box is displayed.

   > **Note:** If the Multiple Segments dialog box does not appear after clicking Add, it means that the field that you clicked in a previous step is not a multi-segment field. See Add a single-segment field and subfield to an HL7 template, or return to the previous step and click a different field.

5. Click **Create if\then statement**.
6. Beside **If <field_name>**, in the **Field** list, click the field to use as a variable in the “If” part of the statement.
7. Optional. To define a more specific variable, in the **Subfield** list, click a subfield.
8. In the equals field, type text that the variable must match for the If/Then statement to be true.
9. Beside **Then <field_name>**, in the **Field** list, click a field to send if the statement is true (the “Then” part of the statement).
10. Optional. To define a more specific variable, in the **Subfield** list, click a subfield.
11. Click **Add**.
12. In the **Custom field** list, select the appropriate custom field.
13. Optional. To configure additional segments for output, repeat the above steps until all fields are listed in the output field.
14. Click **Add to Template** and then click **Save**.

Tools

Failed Jobs

Manage failed jobs

To view and take action on failed jobs, complete the following steps.

1. Click the **Tools** tab and then click **Failed Jobs**.

2. In the **FORWARD** or **HL7** columns, select a job and then perform one of the following actions.
   - To retry the job, click **Retry**.
   - To delete the job, click **Delete**.
   - To retry or delete all jobs, right-click and select **Check all**, and then click **Retry** or **Delete**.

SR Viewer

View raw DICOM data

Although you primarily use ModLink to convert raw DICOM SR data to a user-friendly format to populate clinical documentation, you can also view the raw data from modalities prior to conversion. To view raw DICOM SR data, complete the following procedures.

1. Click the **Tools** tab and then click **SR Viewer**.
2. In the **MRN** or **Accession** fields, type the complete MRN or accession number and then click **Search**.
3. In the results list, expand the appropriate row and click **View file**. The raw data in its original format is displayed.

HL7 Viewer

View raw HL7 data

To view raw HL7 data, complete the following procedures.

1. Click the **Tools** tab and then click **HL7 Viewer**.
2. In the **MRN** or **Accession** fields, type the complete MRN or accession number and then click **Search**.
3. In the results list, expand the appropriate row and click **View file**. The raw data in its original format is displayed.

CECHO Tool

Configure C-ECHO

To configure C-ECHO to send a DICOM verification, complete the following steps.

1. Click the **Tools** tab and then click **Send C-ECHO**.
2. In the **IP Address** field, type the IP address for the destination device.
3. In the **Port** field, type the port for the destination device.
4. In the **Calling AE Title** field, type the calling AE title of the destination device.
5. In the **Called AE Title** field, type the called AE title of your desired AE title.
6. Click **Send C-ECHO**.

Inbound devices

View inbound devices

To view a list of inbound devices, complete the following steps.

1. Click the **Tools** tab and then click **Inbound devices**.
2. Select **Include localhost** if you want to include inbound devices for the local host.

Logs

About ModLink file maintenance

When you install ModLink, the installer schedules an automatic maintenance task in Windows that deletes aging files. Administrators may want to monitor this task to ensure that it starts as scheduled by running Task Scheduler in Control Panel.

You can configure ModLink maintenance by updating the following three variables in the appsettings.json file, where each number represents the amount of days to save files. Older files will be purged from the system.

```
"ModlinkDataDays": "0",

"SRXMLDays": "30",

"HL7XMLDays": "30",
```

View server logs

Server logs contain server-specific events such as errors and changes in connection statuses. To view server logs, complete the following step.

1. Click the **Logs** tab and then click **Server Logs**.

   Note: Each message in the log receives a thread ID (starting with 0) for purposes of identifying which entries are associated with each other.

2. Optional. To sort the server log entries, select the appropriate sort criteria from the **Display Log** and **Display message type** lists.

Download server logs

To download server logs to a text file, complete the following step.

1. Click the **Logs** tab and then click **Server Logs**.
2. Click the **Download** icon. The system downloads the file to your local drive.

View audit logs

Server logs contain server-specific events such as errors and changes in connection statuses. To view server logs, complete the following step.

- Click the Logs tab and then click Audit Logs. The system displays the list of audit logs.

Alternate data hierarchy

About alternate data hierarchy

You can configure ModLink to change the way that parsed Siemen's XML data is processed. The new method adds the measurement name to the component name to add uniqueness for each component related to the associated measurement. Right or left is added if it is present in the XML data.

By default, SR data is structured in the following format:

Group

- Measurement
- Component

When you use the new method, SR data is structured in the following format.

Group

- Measurement
- Component Measurement

Configure alternate data hierarchy

The alternate data hierarchy feature is managed by the **UseOriginalSimensXML** setting in the Configuration database table. It is enabled by default. To change the default setting, contact Hyland technical support for assistance.

> **Note:**
> Enabling this feature may break current mappings in existing template files that have mapped components from Siemen’s XML. You must check existing templates after making the above change to assume components are mapped correctly.

Expected lifetime

ModLink’s service support life is by its version per Hyland’s Terms and Conditions agreement for “Retired Software.” Which means: (i) any version of the Software licensed by Customer from Hyland under the License Agreement, identified as being retired on Hyland’s applicable secure end user web site; and (ii) any version of the Software other than the then-current version and the immediately preceding version.

Preventative maintenance and cleaning

There are no cleaning requirements for ModLink software. License and maintenance may include upgrades from previous versions, security patches and updates, which are handle through technical support and solutions provided via service agreements, licenses, Terms and Conditions, etc. For support visit Hyland Community @community.hyland.com. Follow the manufacturer’s instructions provided on proper preventive maintenance and cleaning activities.

Safe disposal

Follow your local IT Department guidance on safe disposal of software products to comply with FDA HIPAA, EU GDPR privacy and security requirements in connection with personal and health-related data and other applicable local governmental standards and regulations.