PTC ILM
Interoperable Release Management
User Guide

Last Updated: May 2023

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Learning about PTC ILM Release Management

Positive Train Control Interoperable Lifecycle Management (PTC ILM) is a platform that enables the railroad industry to manage the Interoperable Configuration Items (ICIs) and Interoperable Coordinated Deployment Items (ICDIs) that comprise the interoperable aspects of PTC throughout their lifecycle.

> **Important:** Refer to the *PTC ILM Getting Started Guide* for more introductory information about PTC ILM, including an overview, information about user roles, and login instructions.

PTC ILM Interoperable Release Management is an application module within the PTC ILM application that enables users to view and manage PTC Interoperable System Releases, ensuring that industry-wide standards for ICIs are followed.

Note: You must have one of the following roles to use PTC ILM Interoperable Release Management.

- **Standard User**

  Standard User access is read only.

- **Railroad Release Manager**

  Railroad Release Managers can create copies of an input draft and view PTC Interoperable System Releases.

- **Interoperable Release Manager**

  Interoperable Release Managers can initiate and update new PTC Interoperable System Releases and enter approvals for PTC Interoperable System Releases. Users with this role have access to all menus.

- **Railroad PTC ILM System Administrator**

  Railroad PTC ILM System Administrators have access to all menus.

Overview

Interoperable Release Management is the process by which an Interoperable Release Manager defines the permissible versions of ICIs that are included in a PTC Interoperable System Release and sets the deployment date range (compliance date and retirement date). The release begins in *Draft* status and is advanced to *Approved* status once the release is approved. When an approved release reaches its compliance date, the release can be updated to *Active* status. Once an active release reaches its retirement date, PTC ILM prompts the Interoperable Release Manager to set the release to *Retired* status or modify the retirement date.

An Interoperable Configuration Item (ICI) is a PTC artifact that has been defined to be managed at an industry level to support PTC interoperability. Refer to the *PTC ILM Interoperable Configuration Management User Guide* for information about working with ICIs.

An Interoperable Change Request (ICR) is the electronic entity used to facilitate the approval of a new permissible version or the mandatory decommissioning of a PTC artifact that will be used in

interoperable service. An Interoperable Deployment Request (IDR) is a request to deploy a permissible ICI version to your railroad. Refer to the *PTC ILM Interoperable Change Management User Guide* for information about working with ICRs and IDRs.

When you select the Interoperable Release Management icon from the ILM Application Suite page as described in the *PTC ILM Getting Started Guide*, the Interoperable Release Management application module opens and displays the Release Management Dashboard page.

This document describes how to use the PTC ILM Interoperable Release Management application module in the following sections:

- "Working with the Release Management Dashboard" on page 3

- "Creating a New Interoperable Release Plan" on page 6

- "Viewing Release Information" on page 7

- "Editing a Release" on page 12

- "Copying a Release" on page 20

- "Obtaining Release Input " on page 21

- "Comparing Release Versions" on page 25

- "Viewing Release Activity" on page 26

Accessing the Railinc Customer Success Center

The Railinc Customer Success Center (CSC) provides reliable, timely, and high-level support for Railinc customers. Representatives are available to answer calls and respond to emails from 7:00 a.m. to 7:00 p.m. Eastern time, Monday through Friday, and provide on-call support via pager for all other hours to ensure support 24 hours a day, 7 days a week. Contact us toll-free by phone at 877-RAILINC (1-877-724-5462) or send an email directly to csc@railinc.com.

Working with the Release Management Dashboard

The PTC ILM Release Management Dashboard page (see <u>Exhibit 1</u>) is displayed when you select the Interoperable Release Management icon from the ILM Application Suite page.

Exhibit 1. The Release Management Dashboard Page
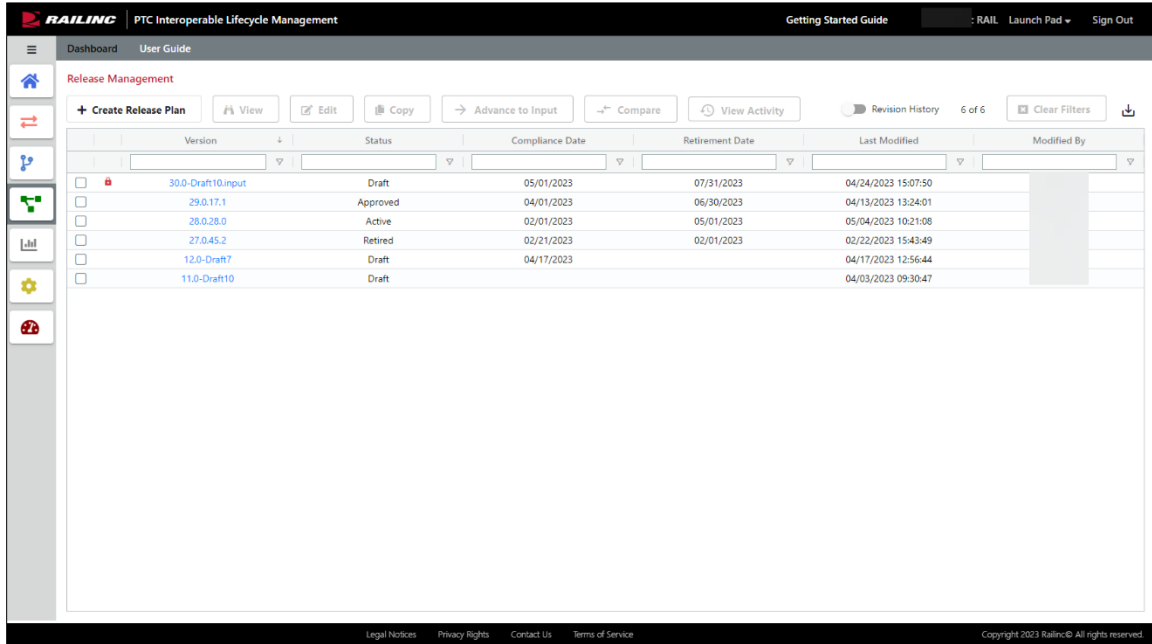
The Release Management Dashboard lists the latest version of each release and displays a grid containing the following columns of information for each release:

Version	The version of the release.
Status	The status of the release (Draft, Approved, Active, or Retired).
Compliance Date	The date by which the release must be implemented.
Retirement Date	The date on which the release is scheduled to be retired (this date must be after the compliance date).
Last Modified	The date and time when the release was last modified.
Modified By	The user who last modified the release.

Note: You can select the **Revision History** toggle at the top right of the grid to view all archived releases.

You can <u>sort, filter</u> and <u>export</u> the information displayed in the grid.

In addition to showing the above columns of information, the Release Management Dashboard contains the following buttons, which provide access to additional functionality (your access depends on your role):

- Create Release Plan – enables you to create a release (see "<u>Creating a New Interoperable Release Plan</u>" on page 6).

- View – enables you to view detailed information about a release and, if you have the required permissions, advance a release to the next status (see "Viewing Release Information" on page 7).

- Edit – enables you to make changes to a release (see "Editing a Release" on page 12).

- Copy – enables you make a copy of a release (see "Copying a Release" on page 20).

- Advance to Input – locks the release in draft status and adds ".input" to the version name. Railroads can then create a copy of the input to provide their feedback. This button is only available to Interoperable Release Managers (see "Obtaining Release Input " on page 21).

- Compare – enables you to compare up to three release versions (see "Comparing Release Versions" on page 25).

- View Activity – enables you to view the history of release-related activity (see "Viewing Release Activity" on page 26).

Sorting and Filtering Release Information

Release information is displayed in a grid, which contains rows and columns of information.
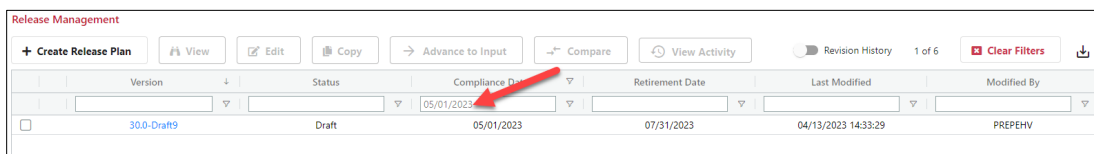
To see all the rows in the grid, use the vertical scroll bar. Use the horizontal scroll bar to view any columns of data that exceed the width of the viewable area.

You can sort the displayed information by column in ascending or descending order. Simply select the column heading for the column you want to sort. An arrow (↑ or ↓) is displayed next to the heading to indicate the sort order. Select the column heading again to switch the sort order.

You can filter the information displayed in the grid to only show rows containing information you need to see. Each column contains a filter field directly below the column heading.

To apply a filter to a column, type a word or phrase you want to see in a column's filter field. The displayed release information is narrowed to only show rows that contain the filtered word or phrase. A filter icon (▽) is displayed in the column heading to remind you about the filter (see Exhibit 2).

Exhibit 2. The Release Management Dashboard Grid (showing a Column Filter entered)

Tip! You can apply filters to multiple columns at once.

To remove filters, select the **Clear Filters** button or delete the characters from the filter field.

Note: Any changes that you make to the grid using sorting or filters are reflected if the data is exported.

Exporting Release Information

You can export the information displayed in the grid to a Comma Separated Value (CSV) file, which can then be opened in a spreadsheet application.

Once you have the information you want to export displayed in the grid, select the Export to CSV icon (⤓) to download the grid contents to a CSV file (see Exhibit 3).

Exhibit 3. The Grid (Showing Data to be Exported)

Note: Any changes that you make to the grid using sorting or filters are reflected in the export.

Once the results are exported to a CSV file, you can then view them in a spreadsheet application (see Exhibit 4).
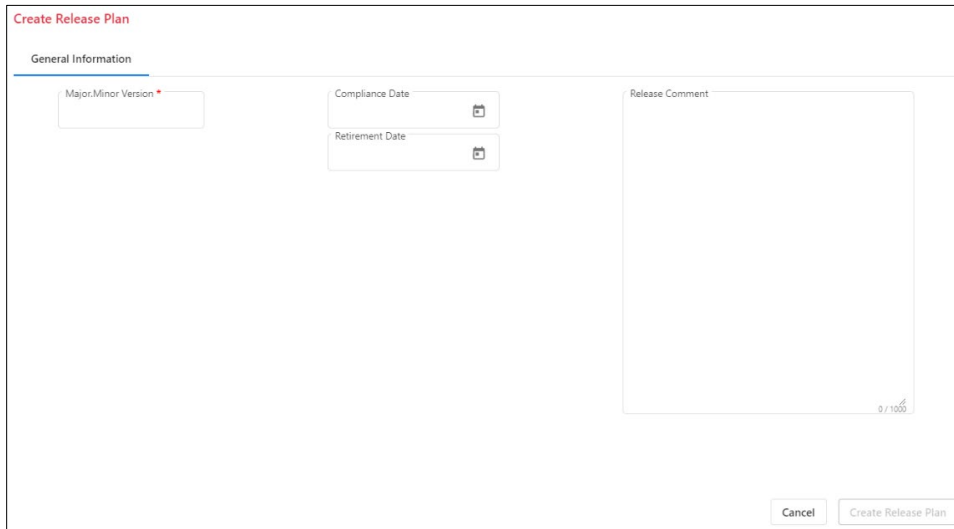
Exhibit 4. Spreadsheet Application (Showing Exported Data)

	A	B	C	D	E	F	G
1		Version	Status	Compliance Date	Retirement Date	Last Modified	Modified By
2	N	30.0-Draft9	Draft	5/1/2023	7/31/2023	4/13/2023 14:33	PREPEHV
3	N	12.0-Draft1	Draft			4/14/2023 10:09	BSCXK02
4	N	11.0-Draft5	Draft			4/3/2023 9:30	PREPEHV

Creating a New Interoperable Release Plan

PTC ILM Interoperable Release Management enables Interoperable Release Managers to create new release plans (a list of ICIs and permissible versions that informs railroads about the requirements for compliance). To begin creating a new release plan, select the **Create Release Plan** button from the Dashboard. The Create Release Plan popup is displayed (see Exhibit 5).

Exhibit 5. Create Release Plan Popup

In the Major.Minor Version field, type a unique major version number for the release followed by a period and the minor version number for the release (e.g., 10.1).

Note: This is the only field that is required to be completed to create a new release plan.

Optionally, select the calendar icon (📅) in the Compliance Date field and select the date by which railroads must implement the release plan.

Optionally, select the calendar icon (📅) in the Retirement Date field and select the date on which the release plan is scheduled to be retired.

Optionally, enter a comment to describe the release plan.

Select **Create Release Plan** to create the release plan (or select **Cancel** to cancel creating the release).

The release plan is created and is added to the list of release plans in the Dashboard with the status of "Draft". A draft number is automatically appended to the major version number (for example, "3-Draft1", where "3" is the major version number and "Draft1" is the draft number).

Note: "Draft" appended to the major release plan version number indicates that the release plan is editable. PTC ILM automatically increments the draft number each time the draft release plan is saved.

The next step is to edit the release plan and add ICI information (see "Editing a Release" on page 12 for more information).

Viewing Release Information

PTC ILM Interoperable Release Management enables all users to view detailed information about releases. While viewing the list of releases in the Dashboard, select the checkbox to the left of the release version for which you want to view detailed release information, and then select the **View** button. The View Release popup is displayed. This popup contains the following three tabs:

General Information

ICI Information

Release History

Note: If you have the required permission, a button (for example, **Approve**) may be displayed on the General Information tab, enabling you to advance the release to the next status.

Select **Close** when you have finished viewing this popup.

Viewing General Information

The General Information tab (see Exhibit 6) is the default tab for the View Release popup.

Exhibit 6. View Release Popup (Showing the General Information Tab)

The General Information tab displays the following fields, which are described in "Working with the Release Management Dashboard" on page 3:

Release Version
Status
Compliance Date
Retirement Date
Last Modified
Modified By

Note: If you have the required permission, you can select **Edit** at the bottom right to enter edit mode, which enables you to make changes to field values.

Viewing ICI Information

Select **ICI Information** on the View Release popup to view the ICI Information tab (see Exhibit 7).

Note: Only users with the Interoperable Release Manager role can change information on this tab.

Exhibit 7. View Release Popup (Showing the ICI Information Tab)

The ICI Information tab contains a grid that displays information about all adopted and proposed ICIs.

If you have the required permission, you can select the **Edit** button to enter edit mode, which enables you to make changes. Then, select the edit icon (✏) in the Permissible Versions column for each ICI associated with this release and indicate the permissible version(s).
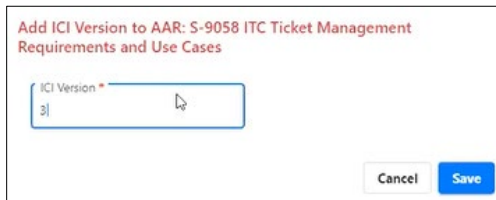
If the permissible version is not listed, select **Add ICI Version** to add a new ICI version to the list (see Exhibit 8).

Exhibit 8. Selecting Add ICI Version

After you select **Add ICI Version**, a popup is displayed (see Exhibit 9).

Exhibit 9. Entering a New Version Number
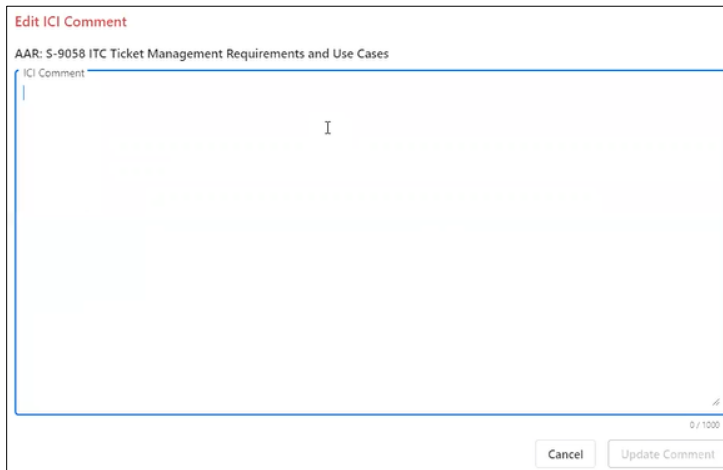
Enter the new ICI version number and select **Save**. The new ICI version number is automatically selected as a permissible version.

Note: PTC ILM also adds the new ICI version number to the list of ICI versions for this ICI in the Configuration Management Database (CMDB) with a status of "Pending Confirmation".

The Interoperable Change Manager can also select the edit icon (✏) in the Comment column and enter an ICI comment (see Exhibit 10).

Exhibit 10. Entering an ICI Comment

Enter the comment and select **Update Comment**.

If the release has multiple permissible versions of an ICI, an arrow (›) is indicated at the left of the ICI list (see Exhibit 11).

Exhibit 11. ICI Information Tab (Showing Multiple Permissible Versions)

Select the arrow to expand the list. You can then select the edit icon for each version of the ICI and add a comment for each version of the ICI (see Exhibit 12).

Exhibit 12. Entering an ICI Version Comment

Enter the comment and select **Update Comment**.

Once you have finished making changes, select **Save** at the bottom right. The Save Release popup is displayed, which prompts you to enter a mandatory release comment (see Exhibit 13).

Exhibit 13. Save Release Popup

Once you have entered the release comment, select **Create Release Version**. The release is saved, and the draft version is incremented.

Viewing the Release History

Select **Release History** on the View Release popup to view the Release History tab (see Exhibit 14).

Exhibit 14. View Release Popup (Showing the Release History Tab)

The Release History tab contains a grid that displays all versions of the release and all of the release comments.

Editing a Release

If you have the required permissions, you can edit any release version and make modifications.

Note: Only users with the Interoperable Release Manager role can edit release information unless the release version is in input mode, which enables Railroad Release Managers to copy and edit a draft for their railroad (see "Obtaining Release Input " on page 21).

On the Release Management Dashboard, first select the checkbox at the left of the release version that you want to edit. Then, select **Edit**. The Edit Release popup is displayed (see Exhibit 15).

Notes:

1. The Edit Release popup is identical to the View Release popup except that you are immediately placed in edit mode, which enables you to make changes. (To enter edit mode from the View Release popup, you are required to select the **Edit** button at the bottom right).

2. To leave Edit mode and switch to View mode, select **Cancel**. See "Viewing Release Information" on page 7 for more information.

Exhibit 15. Edit Release Popup

This popup contains the following three tabs, which are described in detail in the sections below:

General Information

ICI Information

Release History

Editing General Information

The General Information tab (see Exhibit 16) is the default tab for the Edit Release popup.

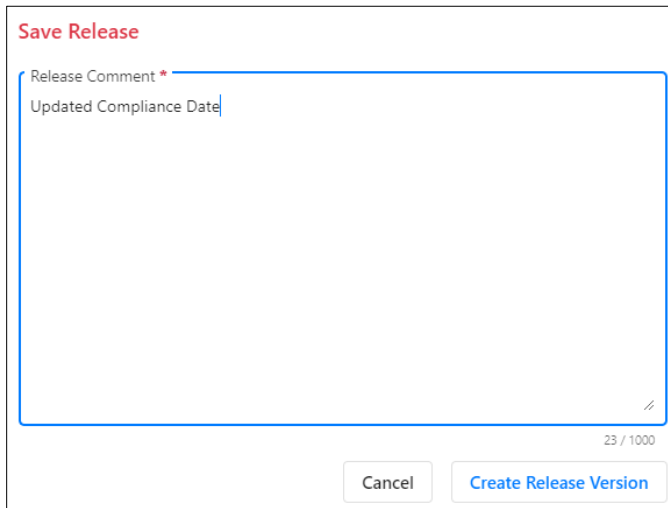*Exhibit 16. Edit Release Popup (Showing the General Information Tab)*

The General Information tab displays the following fields, which are described in "Working with the Release Management Dashboard" on page 3:

Release Version
Status
Compliance Date
Retirement Date
Last Modified
Modified By

Make any needed changes to field values.

Once you have finished making changes, select **Save** at the bottom right. The Save Release popup is displayed, which prompts you to enter a mandatory release comment (see Exhibit 17).

Exhibit 17. Save Release Popup
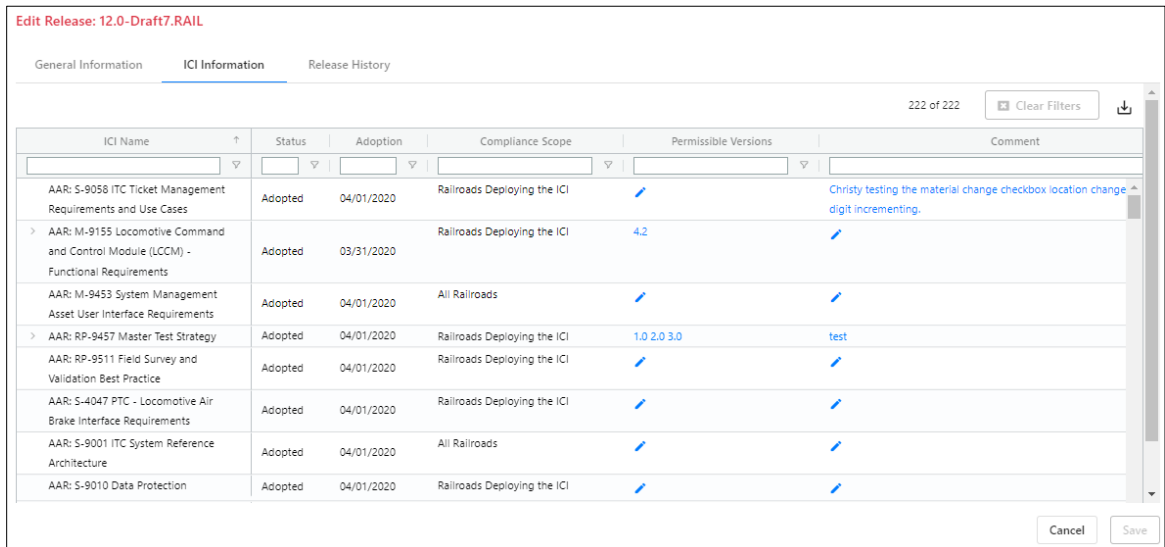
Once you have entered the release comment, select **Create Release Version**. The release is saved, and the draft version is incremented.

Editing ICI Information

Select **ICI Information** on the Edit Release popup to edit the ICI Information tab (see Exhibit 18).

Exhibit 18. Edit Release Popup (Showing the ICI Information Tab)

The ICI Information tab displays information about all adopted and proposed ICIs.

Note: If a PTC ILM release draft is created including an ICI, and then that ICI is retired, viewing the same draft shows the correct status of the ICI as "Retired". It is also grayed out and does not allow you to edit any properties of that ICI. If you edit the draft version and create a new draft version or if the release is directly approved, the retired ICI is removed. This helps you to know

that the ICI was retired (for example, there could be useful comments associated with the ICI). The retired ICI is automatically removed from the next PTC release version.

As needed, select the edit icon (✎) in the Permissible Versions column for each ICI associated with this release and indicate the permissible version(s).
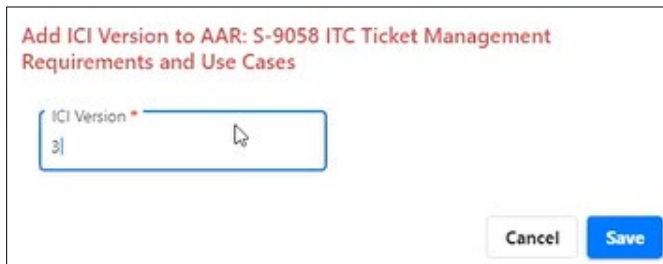
If the permissible version is not listed, select **Add ICI Version** to add a new ICI version to the list (see Exhibit 19).

Exhibit 19. Selecting Add ICI Version
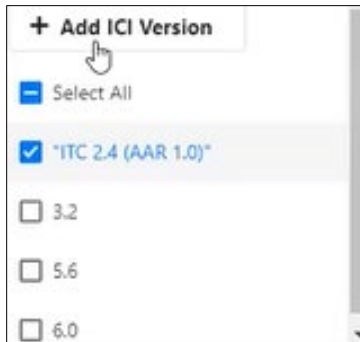
After you select **Add ICI Version**, a popup is displayed (see Exhibit 20).

Exhibit 20. Entering a New Version Number

Enter the new ICI version number and select **Save**. The new ICI version number is automatically selected as a permissible version.

Note: PTC ILM also adds the new ICI version number to the list of ICI versions for this ICI in the Configuration Management Database (CMDB) with a status of "Pending Confirmation".

You can also select the edit icon (✎) in the Comment column to the right and enter an ICI comment (see Exhibit 21).

Exhibit 21. Entering an ICI Comment

Enter the comment and select **Update Comment**.

If the release has multiple permissible versions of an ICI, an arrow (>) is indicated at the left of the ICI list (see Exhibit 22).

Exhibit 22. ICI Information Tab (Showing Multiple Permissible Versions)

Select the arrow to expand the list. You can then select the edit icon for each version of the ICI and add a comment for each version of the ICI (see Exhibit 23).
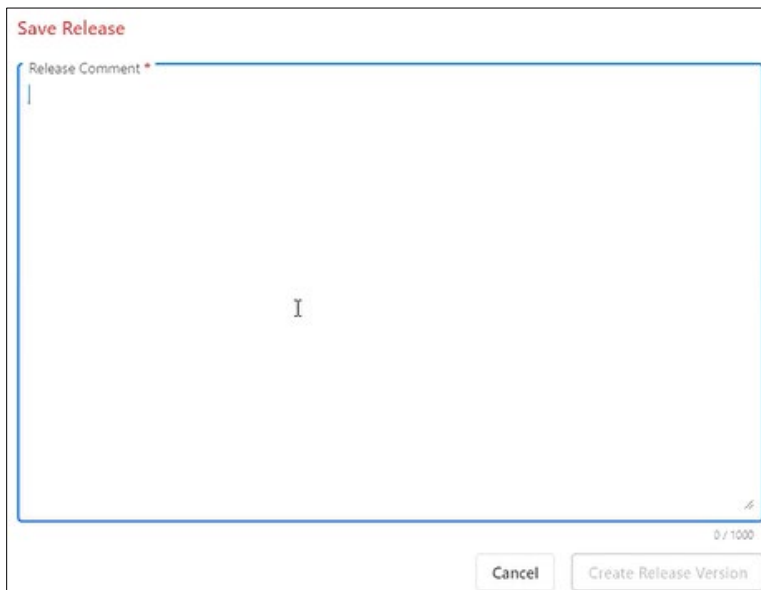
Exhibit 23. Entering an ICI Version Comment

Enter the comment and select **Update Comment**.

Once you have finished making changes, select **Save** at the bottom right. The Save Release popup is displayed, which prompts you to enter a mandatory release comment (see).

Exhibit 24. Save Release Popup

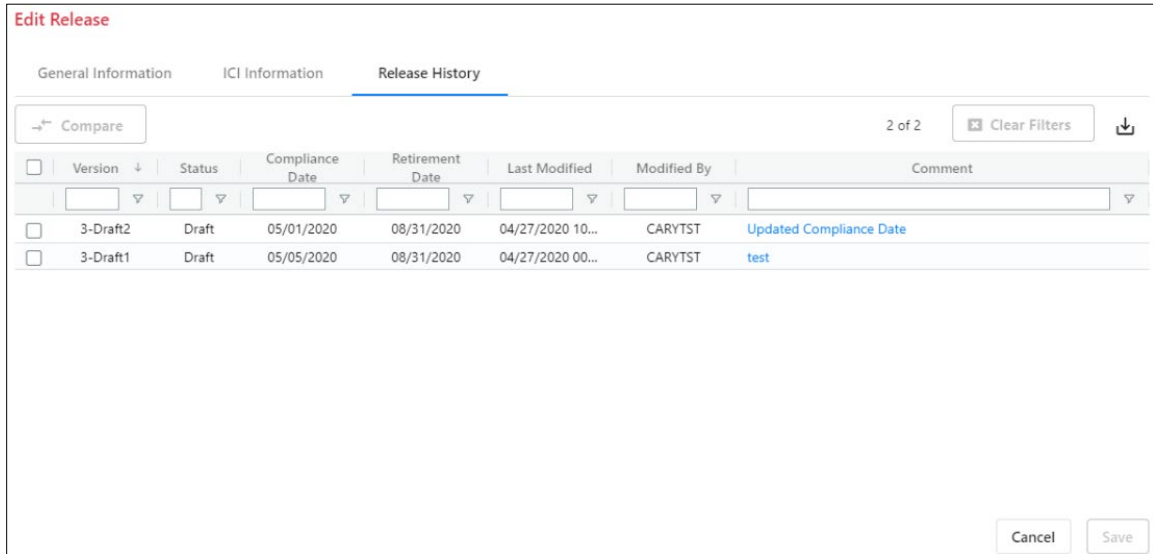Once you have entered the release comment, select **Create Release Version**. The release is saved, and the draft version is incremented.

Viewing the Release History

Select **Release History** on the Edit Release popup to view the Release History tab (see Exhibit 25).

Exhibit 25. Edit Release Popup (Showing the Release History Tab)
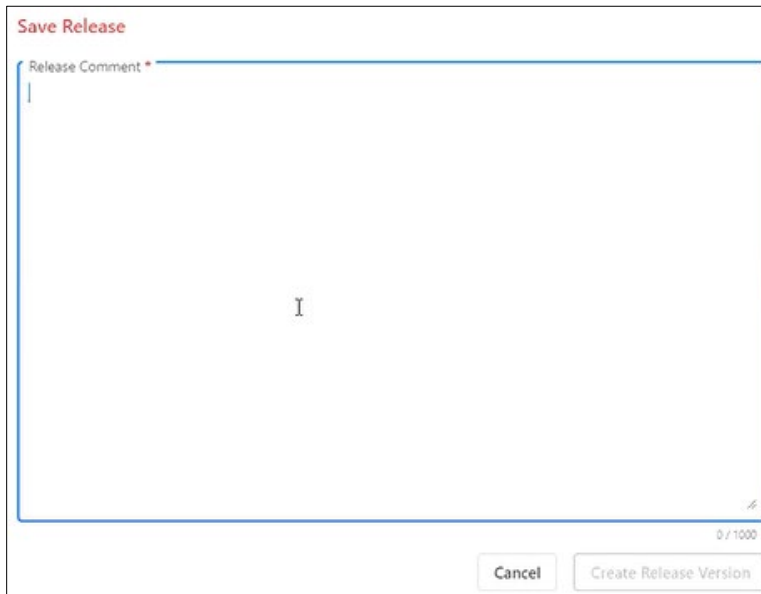

The Release History tab contains a grid that displays all versions of the release and all of the release comments.

You can select the checkboxes to the left of two or three releases and then select the **Compare** button to compare the releases. See "Comparing Release Versions" on page 25 for more information.

Although there is no information that you can change on the Release History tab, the Save and Cancel buttons apply to the entire Edit Release popup. If you made changes on one of the other tabs, select **Save** at the bottom right. The Save Release popup is displayed, which prompts you to enter a mandatory release comment (see Exhibit 26).

Note: If you don't want to save your changes, select **Cancel**.
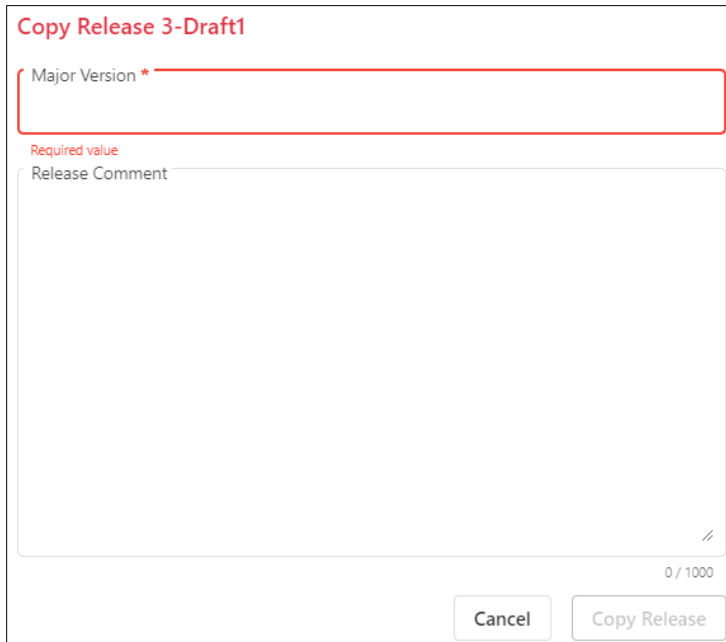
Exhibit 26. Save Release Popup

Once you have entered the release comment, select **Create Release Version**. The release is saved, and the draft version is incremented.

Copying a Release

You can copy any release version and make a new version.

On the Release Management Dashboard, first select the checkbox at the left of the release version that you want to copy. Then, select **Copy**. The Copy Release popup is displayed (see Exhibit 27).

Exhibit 27. Copy Release Popup

Enter a new major version and a release comment. Next, select **Copy Release**.

PTC ILM copies all the versions of all of the ICIs, ICI comments, and ICI version comments and creates a new draft release version based on the release version you selected.

Obtaining Release Input from Railroads

Once a draft release is ready for feedback from railroads, the Interoperable Release Manager can advance the release to input mode, which locks the release for changes and adds ".input" to the version name. Railroads can then create a copy of the input to provide their feedback.

On the Release Management Dashboard, first select the checkbox(es) at the left of the draft release version(s) that you want to advance to input. Then, select **Advance to Input** (see Exhibit 28).

*Exhibit 28. Release Management Dashboard (showing the Advance to Input button)*
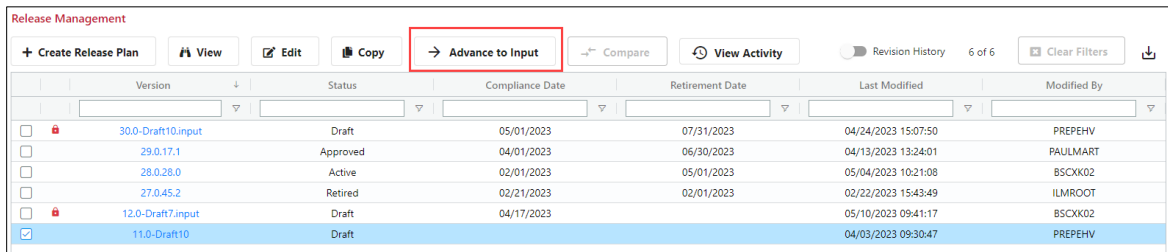
The Release Management Dashboard is updated to show that the selected release is locked and ".input" is added to the release version name (see Exhibit 29).

Exhibit 29. Release Management Dashboard (showing a locked release)
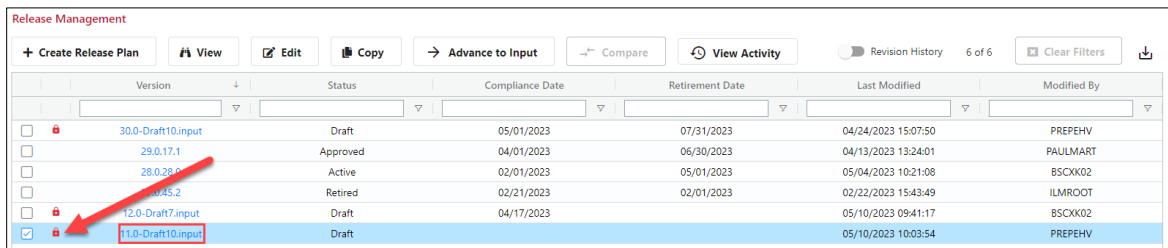
(Railroad Release Manager task) Once the Interoperable Release Manager locks the release in input mode, railroads can select the input draft checkbox and then select the **Copy** button to create a copy of the input that will enable them to provide their feedback (see Exhibit 30).

Exhibit 30. Release Management Dashboard (showing the checked version and the Copy button)
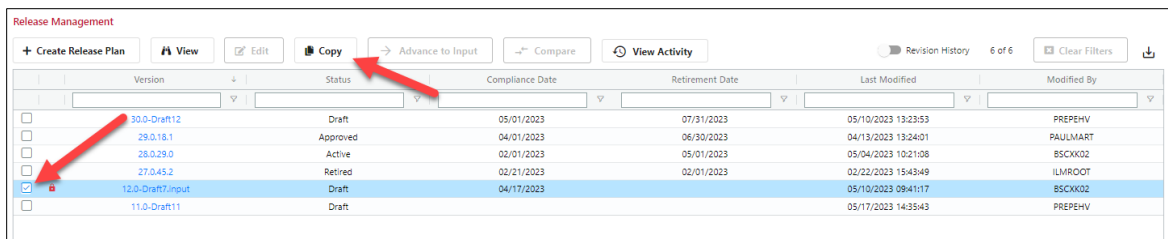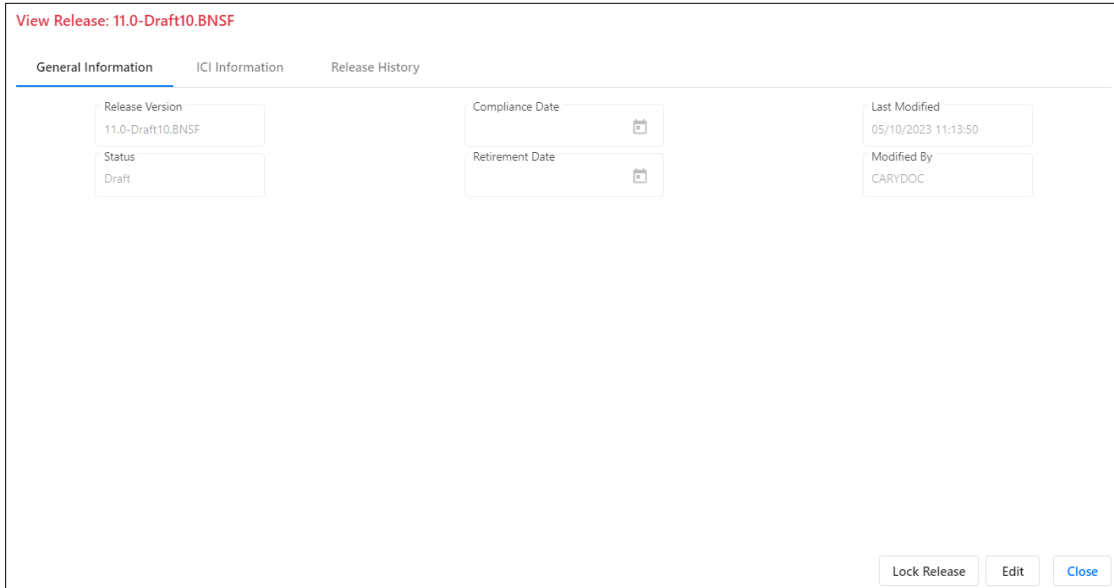

Once the Railroad Release Manager selects Copy, a confirmation popup is displayed (see Exhibit 31).

Exhibit 31. Railroad Input Draft Confirmation Popup

The View Release popup is displayed for the Railroad Release Manager to input their feedback for the release (see Exhibit 32).

Exhibit 32. View Release Popup (Railroad Release Manager view showing the Edit button)

(Railroad Release Manager task) Select **Edit** when you are ready to provide feedback for your railroad (see "Editing ICI Information" on page 14 for more information).

After all of the Railroad Release Managers have provided their changes in their railroad input drafts, the Interoperable Release Manager can select the input draft from the Release Management Dashboard and use the View Release Popup to initiate the process of merging the Railroad Release Managers' changes into one screen (see Exhibit 33).

Exhibit 33. View Release Popup (showing the Initiate Merge button)

Select the **Initiate Merge** button to initiate the merge. The Approve/Reject Differences popup is displayed (see Exhibit 34).

Exhibit 34. Approve/Reject Differences Popup

Use the Approve/Reject Differences popup to review the input and take actions (accept or reject).

In the Action column, "Accept" is entered for each input item by default. You can select **Accept** to display a drop-down list that allows you to see options for "Accept" and "Reject".

If you reject an input item, that input is not carried forward in the draft release. You can also select the Edit icon (✏) in the Comment column to add a comment.

Note: As you are reviewing and making changes, you can select **Save** to ensure your changes are saved if you need to close the screen for some reason.

When you have finished accepting and rejecting inputs, select **Review** to see a list of the accepted changes (see Exhibit 35).

Exhibit 35. Final Review Popup (showing an input removed)

Once you review the accepted changes, select **Finalize Merge**. A Save Release popup is displayed to enable you (as the Interoperable Release Manager) to enter a required comment indicating your approval (see Exhibit 36).

Exhibit 36. Save Release Popup

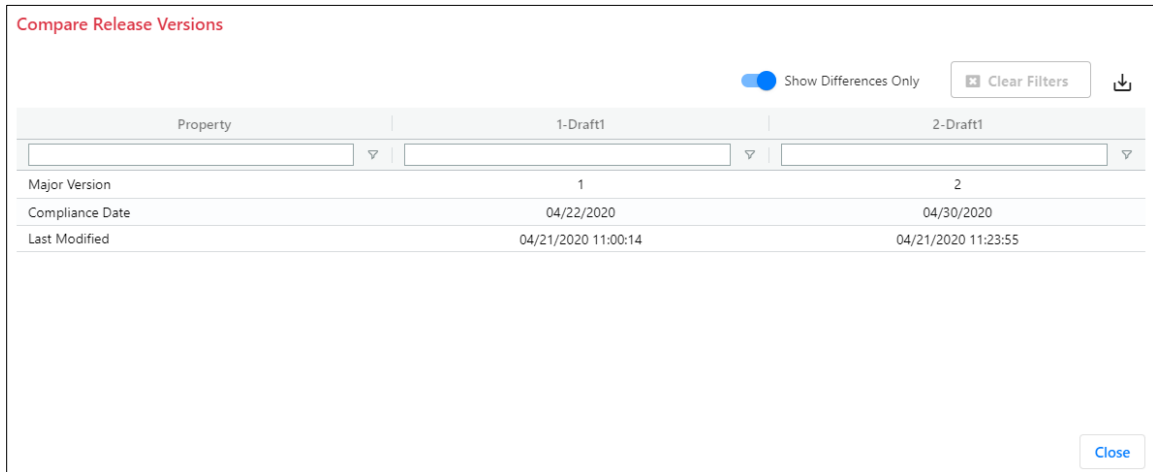Enter a comment to indicate your approval of the merge.

Select **Create Release Version** to create a new draft release version that includes the accepted railroad input. The draft number is incremented by one and the draft release is no longer locked.

Comparing Release Versions

You can compare up to three release versions to determine the differences between each version.

On the Release Management Dashboard, first select the checkboxes at the left of the two or three release versions that you want to compare. Then, select **Compare**. The Compare Release Versions popup is displayed (see [Exhibit 37](#)).

Exhibit 37. Compare Release Versions Popup

Property	1-Draft1	2-Draft1
Major Version	1	2
Compliance Date	04/22/2020	04/30/2020
Last Modified	04/21/2020 11:00:14	04/21/2020 11:23:55

The Compare Release Versions popup shows each property that has differences as well as a column for each release version showing the differences.

You can select the **Show Differences Only** toggle to see all values for each release.

Select **Close** when you have finished reviewing the comparison.

Viewing Release Activity

You can view the release activity logs for any release version.

On the Release Management Dashboard, first select the checkbox at the left of the release version for which you want to view the release activity logs. Then, select **View Activity**. The Release Activity Logs Information popup is displayed (see Exhibit 38).

Exhibit 38. Release Activity Logs Information Popup

The Release Activity Logs Information popup displays information about any and all activity associated with a release, including the action, the status, the Mark, the user account, and the date and time of the modification.

Select **Close** when you have finished viewing the release activity logs information.