

PTC ILM Interoperable Asset Configuration Management User Guide



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Learning about PTC ILM Configuration 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 Asset Configuration Management is an application module within the PTC ILM application that enables users to identify the versions and attributes of deployed PTC artifacts to facilitate interoperability between rail industry systems.

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

- **Standard User**
Standard User access is read only.
- **Railroad Configuration Manager**
Railroad Configuration Managers have access to the ICI Deployment Record Management menu and the ICI Railroad Audit menu.
- **Interoperable Configuration Manager**
Interoperable Configuration Managers have access to all menus.
- **Railroad PTC ILM System Administrator**
Railroad PTC ILM System Administrators have access to all menus.

Overview

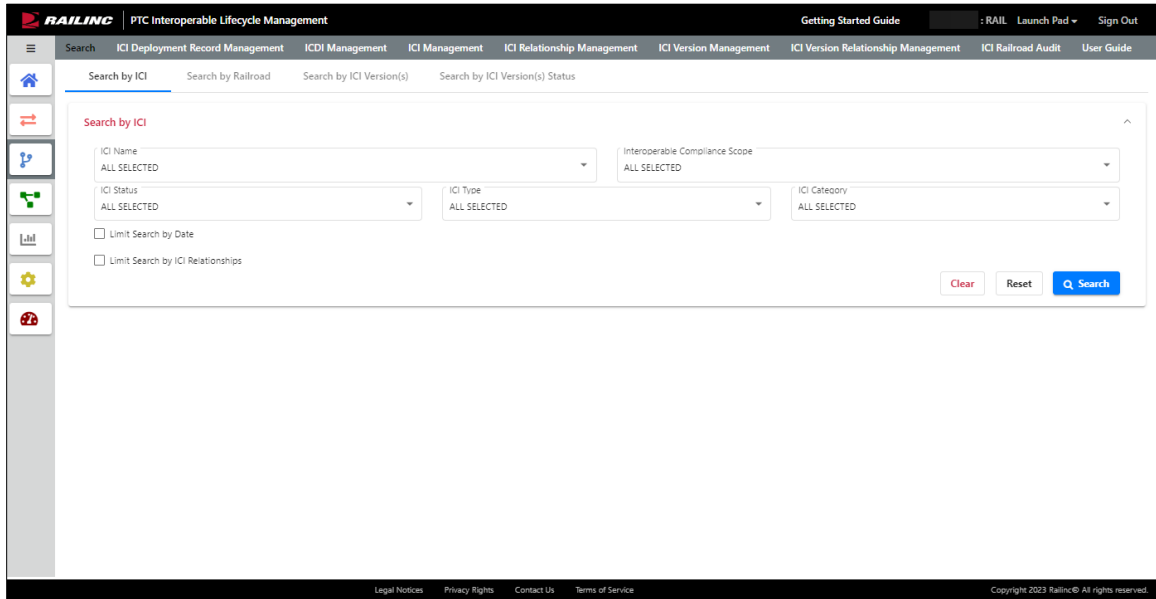
An Interoperable Configuration Item (ICI) is a PTC artifact that has been defined to be managed at an industry level to support PTC interoperability.

Interoperable Asset Configuration Management is the process by which all versions and attributes of ICIs and ICDI categories deployed for interoperable service by a railroad are documented, communicated, and recorded in the Interoperable Configuration Management Database (ICMDB).

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. A Standalone Interoperable Deployment Request (SIDR) is a unique type of IDR that is not tracked in the ICMDB but requires coordination and approval by the ICAB. Refer to the [PTC ILM Interoperable Change Management User Guide](#) for information about working with ICRs, IDRs, and SIDRs.

When you select the Interoperable Asset Configuration Management icon from the ILM Application Suite page as described in the [PTC ILM Getting Started Guide](#), the Interoperable Asset Configuration Management application module opens and displays the Search page (see [Exhibit 1](#)).

Exhibit 1. Configuration Management Search Page



The PTC ILM Interoperable Asset Configuration Management application contains the following main menu items (your access depends on your role):

- Search – enables you to search ICIs by name, railroad, or version (see [“Searching for ICIs”](#) on page 4).
- ICI Deployment Record Management – enables you to baseline ICIs (see [“Baselining ICIs”](#) on page 12).
- ICDI Management – enables Interoperable Configuration Managers to create, edit, and delete ICDI categories (see [“Creating and Editing ICDIs”](#) on page 17).
- ICI Management – enables you to view, create, and edit ICIs (see [“Creating and Editing ICIs”](#) on page 13).
- ICI Relationship Management – enables you to manage ICI relationships (see [“Managing ICI Relationships”](#) on page 19).
- ICI Version Management – enables you to manage ICI versions (see [“Managing ICI Versions”](#) on page 21).
- ICI Version Relationship Management – enables you to manage ICI version relationships (see [“Managing ICI Version Relationships”](#) on page 23).
- ICI Railroad Audit – enables you to perform a self-audit of your railroad’s ICI information (see [“Performing ICI Railroad Audits”](#) on page 25).

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.

Searching for ICIs

PTC ILM Interoperable Configuration Management has a powerful search function that enables you to locate ICIs by name, implementing railroad, or version number. The Search page (see [Exhibit 2](#)) is displayed when you first open the Configuration Management application module.

Exhibit 2. Configuration Management Search Page

The screenshot shows the 'Search by ICI' section of the Configuration Management application. At the top, there are four tabs: 'Search by ICI', 'Search by Railroad', 'Search by ICI Version(s)', and 'Search by ICI Version(s) Status'. The 'Search by ICI' tab is selected. Below the tabs, there are several search filters: 'ICI Name' (dropdown menu, 'ALL SELECTED'), 'Interoperable Compliance Scope' (dropdown menu, 'ALL SELECTED'), 'ICI Status' (dropdown menu, 'ALL SELECTED'), 'ICI Type' (dropdown menu, 'ALL SELECTED'), and 'ICI Category' (dropdown menu, 'ALL SELECTED'). There are also two checkboxes: 'Limit Search by Date' and 'Limit Search by ICI Relationships', both of which are unchecked. At the bottom right, there are three buttons: 'Clear', 'Reset', and 'Search' (with a magnifying glass icon).

The first step in performing a search is to choose one of the following:

- [Search by ICI](#) – enables you to locate ICIs by name.
- [Search by Railroad](#) – enables you to locate ICIs by implementing railroad.
- [Search by ICI Version\(s\)](#) – enables you to locate ICIs by version number.
- [Search by ICI Version\(s\) Status](#) – enables you to see all versions associated with all ICIs.

Searching by ICI Name

When you select **Search by ICI** (this is the default search method), the Search page displays the Search by ICI fields (see [Exhibit 3](#)).

Exhibit 3. Search Page (Showing the Search by ICI Fields)

This screenshot is identical to Exhibit 2, showing the 'Search by ICI' section of the Configuration Management application. The 'Search by ICI' tab is selected, and the search filters are set to 'ALL SELECTED'. The 'Clear', 'Reset', and 'Search' buttons are visible at the bottom right.

Use the following procedure to locate ICIs by name:

1. Complete one or more of the following fields to locate the needed ICI(s).

ICI Name	This field lists every ICI by name. By default, all ICIs are included in the search. If you know the name of the ICIs to search for, select their checkboxes in this field.
Interoperable Compliance Scope	This field lists each possible ICI scope value. By default, all scopes are included in the search. If you know the scope of the ICIs to search for, select the appropriate checkboxes in this field.
ICI Status	This field lists each possible ICI status (Proposed, Adopted, and Retired). By default, all statuses are included in the search. If you know the statuses of the ICIs to search for, select the appropriate checkboxes in this field.
ICI Type	This field lists each possible ICI type. By default, all types are included in the search. If you know the types of the ICIs to search for, select the appropriate checkboxes in this field.
ICI Category	This field lists each possible ICI category. By default, all categories are included in the search. If you know the categories of the ICIs to search for, select the appropriate checkboxes in this field.


2. Optionally check one or more of the following checkboxes to further refine your search:

Limit Search by Date	Select the date type (Adoption Date or Retirement Date) and select a date range to limit your search.
Limit Search by ICI Relationships	This field lists each possible ICI relationship type. By default, all relationship types are included in the search. If you know the relationship types of the ICIs to search for, select the appropriate checkboxes in this field.

3. Select **Search** to perform the search. The search criteria fields are hidden, and search results are displayed in a grid below the search criteria.

Note: Before performing the search, you can select **Clear** to empty all the search criteria fields or select **Reset** to return all the fields to their default setting if needed.

Once you have results displayed, you can:

- Select the  icon at the top right to redisplay the search criteria fields, make modifications, and perform another search.
- [Sort and filter the search results](#) to focus on the information you need.
- [Export search results to a CSV file.](#)

Searching for ICIs

[Exhibit 4](#) shows an example of Search by ICI results with sorting and filtering applied.

Exhibit 4. Search by ICI Results with Sorting and Filtering Applied

ICI Name	ICI Type	ICI Category	ICI Status	Compliance Scope	Deployment Status Tracking	Limited Scope ICI	Limited Scope ICI Railroads
AAR: S-YYYY Federated Network Requirements	Standard	AAR Published Standards	Retired	All Railroads	Yes	No	
AAR: S-YYYY ITC WRS Requirements	Standard	AAR Published Standards	Retired	All Railroads	Yes	No	
AAR: S-YYYY ITCNet Over the Air Specification	Standard	AAR Published Standards	Retired	All Railroads	Yes	No	
ITC: HTMS Risk Assessment [RA] - Vital Overlay	Safety Artifact	ITC Configuration Items	Retired	Railroads Deploying the ICI	Yes	No	
RR/ITC: OSCARs (RR specific version) [OSCAR]	Safety Artifact	ITC Configuration Items	Retired	All Railroads	Yes	No	
WRE: Railroad Specific Configuration Files - Alaska RR Corp	Configuration Release	Vendor Proprietary Configuration Items	Retired	Railroads Deploying the ICI	No	No	
WRE: Railroad Specific Configuration Files - Great Northwest Railroad	Configuration Release	Vendor Proprietary Configuration Items	Retired	Railroads Deploying the ICI	No	No	
WRE: Railroad Specific Configuration Files - Iowa Pacific Holdings, LLC	Configuration Release	Vendor Proprietary Configuration Items	Retired	Railroads Deploying the ICI	No	No	
WRE: Railroad Specific Configuration Files - Lycoming Valley Railroad Co	Configuration Release	Vendor Proprietary Configuration Items	Retired	Railroads Deploying the ICI	No	No	
WRE: Railroad Specific Configuration Files - New Jersey Transit Corp	Configuration Release	Vendor Proprietary Configuration Items	Retired	Railroads Deploying the ICI	No	No	
WRE: Railroad Specific Configuration Files - North Shore Railroad Company	Configuration Release	Vendor Proprietary Configuration Items	Retired	Railroads Deploying the ICI	No	No	

Select an ICI name to view (and edit if you have permissions) information about that ICI (see [“Creating and Editing ICIs”](#) on page 13 for more information).

Searching by Railroad

When you select **Search by Railroad**, the Search page automatically performs a search and displays the ICIs for your railroad with a version status of Current Deployed Version(s) (see [Exhibit 5](#)).

Exhibit 5. Search Page (Showing the Search by Railroad Fields)

ICI Name	UP
AAR: S-9058 ITC Ticket Management Requirements and Use Cases	1.0
AAR: M-9155 Locomotive Command and Control Module (LCCM) - Functional Requirements	2.2
	2.3
AAR: M-9453 System Management Asset User Interface Requirements	1.0
AAR: RP-9457 Master Test Strategy	1.0
AAR: RP-9511 Field Survey and Validation Best Practice	2.0
AAR: S-4047 PTC - Locomotive Air Brake Interface Requirements	1.0
AAR: S-9001 ITC System Reference Architecture	1.0
AAR: S-9010 Data Protection	1.0
AAR: S-9053 ITC System Requirements - Level 0	2.0
AAR: S-9054 ITC System Requirements - Level 1	2.0
AAR: S-9055 ITC Comms and Messaging Sys Req - Level 1	1.0
AAR: S-9056 Wayside Requirements - Level 1	1.0
AAR: S-9057 ITC Systems Management Reqs - Level 1	1.0

Searching for ICIs

You can select railroads and see the ICIs that they have deployed or decommissioned. Select a railroad or railroads from the Select Railroad drop-down. This field lists every railroad mark and child mark. By default, your railroad is included in the search. You can select or deselect checkboxes for any or all railroads.

Next, use the Select View drop-down list to choose the status of the ICI versions you want to view:

- Version(s) Proposed for Deployment
- Version(s) Being Deployed
- Currently Deployed Version(s)
- Version(s) Proposed for Decommissioning
- Version(s) Being Decommissioned
- Decommissioned Version(s)
- Version(s) Not Deployed

PTC ILM automatically performs a search and displays the ICIs for the railroads and version status you selected.

Once you have results displayed, you can:

- Modify the Select Railroad field to view ICIs that have been implemented (deployed) by different railroads.
- Modify the Select View field to view ICIs that have a different status.
- [Sort and filter the search results](#) to focus on the information you need.

[Exhibit 6](#) shows an example of Search by Railroad results with multiple railroads selected and sorting and filtering applied.

Exhibit 6. Search by Railroad Results for Multiple Railroads with Sorting and Filtering

ICI Name	BNSF	CPRS	CSXT	UP
AAR: S-9058 ITC Ticket Management Requirements and Use Cases	1.0	1.0	1.0	1.0
AAR: M-9155 Locomotive Command and Control Module (LCCM) - Functional Requirements	2.3	2.3	2.3	2.2
AAR: M-9453 System Management Asset User Interface Requirements	9		2.4.1	2.3
AAR: RP-9457 Master Test Strategy	1.0	1.0	1.0	1.0
AAR: RP-9511 Field Survey and Validation Best Practice	N/A	2.0	2.0	2.0
AAR: S-4047 PTC - Locomotive Air Brake Interface Requirements	1.0		1.0	1.0
AAR: S-9001 ITC System Reference Architecture	1.0	1.0	1.0	1.0
AAR: S-9010 Data Protection	1.0	1.0	1.0	1.0
AAR: S-9053 ITC System Requirements - Level 0	2.0	2.0	2.0	2.0
AAR: S-9054 ITC System Requirements - Level 1	2.0	2.0	2.0	2.0
AAR: S-9055 ITC Comms and Messaging Sys Req - Level 1	1.0	1.0	1.0	1.0
AAR: S-9056 Wayside Requirements - Level 1	1.0	1.0	1.0	1.0
AAR: S-9057 ITC Systems Management Req - Level 1				

- [Export search results to a CSV file.](#)
- Select an ICI name to view (and edit if you have permissions) information about that ICI (see “[Creating and Editing ICIs](#)” on page 13 for more information).
- Select an ICI version number to view ICR information associated with the ICI. While viewing, you can select an ICR ID to switch to the PTC ILM Change Management module and view (and edit if you have permissions) detailed ICR information.

Searching by ICI Versions

When you select **Search by ICI Version(s)**, the Search page displays the Search by ICI Version(s) fields (see [Exhibit 7](#)).

Exhibit 7. Search Page (Showing the Search by ICI Version(s) Fields)

Sponsor Railroad	Version(s) Proposed for Deployment	Version(s) Being Deployed	Current Deployed Version(s)	Version(s) Proposed for Decommissioning	Version(s) Being Decommissioned	Decommissioned Version(s)	Version(s) Not Deployed
No Rows To Show							

To search by ICI version, first choose an ICI from the Select ICI Name field and then select an ICI version (or multiple versions) from the Select ICI Version(s) field.

After you select the ICI version(s) to search for, the Search page automatically performs a search and displays the railroads that have implemented the selected ICI versions – both currently deployed and decommissioned.

Searching for ICIs

Once you have results displayed, you can:

- [Sort and filter the search results](#) to focus on the information you need.
- [Export search results to a CSV file](#).

[Exhibit 8](#) shows an example of Search by ICI Version(s) results with sorting applied.

Exhibit 8. Search by ICI Versions Results with Sorting Applied

Sponsor Railroad	Version(s) Proposed for Deployment	Version(s) Being Deployed	Current Deployed Version(s)	Version(s) Proposed for Decommissioning	Version(s) Being Decommissioned	Decommissioned Version(s)	Version(s) Not Deployed
SOUND TRANSIT			1.0				1.1
SOUTH FLORIDA RTA			1.0			2.0	
SOUTH KANSAS & OKLAHOMA RAILROAD			N/A				1.0 1.1
SPRINGFIELD TERMINAL			2.0			1.0	1.0 1.1
STILLWATER CENTRAL RAILROAD			N/A			N/A	1.0 1.1
TACOMA RAIL			N/A				1.0 1.1
TEXAS NORTHEASTERN			N/A				1.0

Select an ICI version number to view information about the ICR that contains that ICI version (see “[Creating and Editing ICIs](#)” on page 13 for more information). While viewing, you can select the ICR ID to switch to the PTC ILM Change Management module and view (and edit if you have permissions) ICR information.

Searching by ICI Version(s) Status

When you select **Search by ICI Version(s) Status**, the Search page displays all versions of each ICI in a table (see [Exhibit 3](#)).

Exhibit 9. Search Page (Showing the Search by ICI Version(s) Status Fields)

ICI Name	ICI Version	ICI Status
AAR: S-9058 ITC Ticket Management Requirements and Use Cases	1.0	Adopted
	1.2.3.4TEST	
	99	
	AAR: 1.0	
	ITC: 2.4	
	ITC: 2.4 Do Not Use	
AAR: M-9155 Locomotive Command and Control Module (LCCM) - Functional Requirements	N/A	
	1.0	Adopted
	2.2	
	2.3	
	2.4.1	
	2.4.2	
2.5		

The table displays the following information about ICIs:

ICI Name	This field lists every ICI by name. By default, all ICIs are included in the search.
ICI Version	This field lists each ICI version.
ICI Status	This field lists each possible ICI status (Proposed, Adopted, and Retired).

You can perform the following tasks:

- [Sort and filter the search results](#) to focus on the information you need.
- [Export search results to a CSV file.](#)
- Select an ICI name to view (and edit if you have permissions) information about that ICI (see “[Creating and Editing ICIs](#)” on page 13 for more information).

Sorting and Filtering Search Results

The results of searches are displayed in a grid (see [Exhibit 10](#)).

Exhibit 10. The Search Results Grid

The screenshot shows a search interface with a grid of results. At the top, there are search filters: 'Search by ICI', 'Search by Railroad', 'Search by ICI Version(s)', and 'Search by ICI Version(s) Status'. Below these is a search input field with the text 'Search by ICI'. There is a 'Show Hidden ICIs' toggle and a '252 of 252' indicator. A 'Clear Filters' button and a download icon are also present. The grid has the following columns: ICI Name, ICI Type, ICI Category, ICI Status, Compliance Scope, Deployment Status Tracking, and Limited Scope ICI. The grid contains 20 rows of data, each representing an ICI with its name, type, category, status, and compliance scope.

ICI Name	ICI Type	ICI Category	ICI Status	Compliance Scope	Deployment Status Tracking	Limited Scope ICI
AAR: S-9058 ITC Ticket Management Requirements and Use Cases	Standard	AAR Published Standards	Adopted	Railroads Deploying the ICI	Yes	No
AAR: M-9155 Locomotive Command and Control Module (LCCM) -	Standard	AAR Published Standards	Adopted	Railroads Deploying the ICI	Yes	No
AAR: M-9453 System Management Asset User Interface Requirements	Standard	AAR Published Standards	Adopted	All Railroads	Yes	No
AAR: RP-9457 Master Test Strategy	Recommended Practice	AAR Published Standards	Adopted	Railroads Deploying the ICI	Yes	No
AAR: RP-9511 Field Survey and Validation Best Practice	Recommended Practice	AAR Published Standards	Adopted	Railroads Deploying the ICI	Yes	No
AAR: S-4047 PTC - Locomotive Air Brake Interface Requirements	Standard	AAR Published Standards	Adopted	Railroads Deploying the ICI	Yes	No
AAR: S-9001 ITC System Reference Architecture	Standard	AAR Published Standards	Adopted	All Railroads	Yes	No
AAR: S-9010 Data Protection	Standard	AAR Published Standards	Adopted	Railroads Deploying the ICI	Yes	No
AAR: S-9053 ITC System Requirements - Level 0	Standard	AAR Published Standards	Adopted	All Railroads	Yes	No
AAR: S-9054 ITC System Requirements - Level 1	Standard	AAR Published Standards	Adopted	All Railroads	Yes	No
AAR: S-9055 ITC Comms and Messaging Sys Req - Level 1	Standard	AAR Published Standards	Adopted	All Railroads	Yes	No
AAR: S-9056 Wayside Requirements - Level 1	Standard	AAR Published Standards	Adopted	Railroads with WIUS	Yes	No
AAR: S-9057 ITC Systems Management Reqs - Level 1	Standard	AAR Published Standards	Adopted	All Railroads	Yes	No
AAR: S-9070 HMI Specifications	Standard	AAR Published Standards	Adopted	Railroads with Locomotives	Yes	No
AAR: S-9074 Federated Network Requirements	Standard	AAR Published Standards	Adopted	All Railroads	Yes	No
AAR: S-9075 ISMP Design Considerations	Standard	AAR Published Standards	Adopted	Railroads with PTC Back Office	Yes	No
AAR: S-9076 Interoperable Systems Management Gateway Requirements	Standard	AAR Published Standards	Adopted	Railroads with PTC Back Office	Yes	No

The grid displays 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 in a column's filter field that you want to see in the results. The displayed results are 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 10](#)).

Exhibit 11. The Search Results Grid (showing a Column Filter entered)

ICI Name	ICI Type	ICI Category	ICI Status
<input type="text"/>	<input type="text" value="configuration"/>	<input type="text"/>	<input type="text"/>
AMTRAK - National Railroad Passenger Corporation	Configuration Release	Vendor Proprietary Configuration Items	Adopted
Abhay Testing	Configuration Release	AAR Published Standards	Adopted
Alabama & Gulf Coast Railway (AGR)	Configuration Release	Vendor Proprietary Configuration Items	Adopted
Alaska Railroad Corporation	Configuration Release	Vendor Proprietary Configuration Items	Adopted

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 Search Results

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** button to download the grid contents to a CSV file (see [Exhibit 12](#)).

Exhibit 12. The Grid (Showing Data to be Exported)

ICI Name	ICI Type	ICI Category	ICI Status	Compliance Scope
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
AAR: S-9058 ITC Ticket Management Requirements and Use Cases	Standard	AAR Published Standards	Adopted	Railroads Deploying the ICI
AAR: M-9453 System Management Asset User Interface Requirements	Standard	AAR Published Standards	Adopted	All Railroads
AAR: RP-9457 Master Test Strategy	Recommended Practice	AAR Published Standards	Adopted	Railroads Deploying the ICI
AAR: RP-9511 Field Survey and Validation Best Practice	Recommended Practice	AAR Published Standards	Adopted	Railroads Deploying the ICI

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 13](#)).

Exhibit 13. Spreadsheet Application (Showing Exported Data)

	A	B	C	D	
1	ICI Name	ICI Type	ICI Category	ICI Status	Compliance Scope
2	AAR: S-9058 ITC Ticket Management Requirements and Use Cases	Standard	AAR Published Standards	Adopted	Railroads Deploying the ICI
3	AAR: M-9453 System Management Asset User Interface Requirements	Standard	AAR Published Standards	Adopted	All Railroads
4	AAR: RP-9457 Master Test Strategy	Recommended Practice	AAR Published Standards	Adopted	Railroads Deploying the ICI
5	AAR: RP-9511 Field Survey and Validation Best Practice	Recommended Practice	AAR Published Standards	Adopted	Railroads Deploying the ICI

Baselining ICIs

Baselining ICIs involves identifying the initial versions of ICIs deployed at your railroad.

Note: Railroad Configuration Managers can only baseline their own railroad, while Interoperable Configuration Managers can select a railroad to baseline and perform baselining on their behalf.

Select **ICI Deployment Record Management** from the menu to begin baselining the ICIs at your railroad. PTC ILM displays the ICI Deployment Record Management page, which contains two tabbed lists: the Baseline Adopted ICI Version(s) tab contains a list of ICIs for which you need to enter the version deployed at your railroad and the Current Deployed Version(s) tab contains a list of your railroad’s deployed ICIs and the currently deployed versions (see [Exhibit 14](#)).

Exhibit 14. ICI Deployment Record Management Page

ICI Name	ICI Status	Adoption	Compliance Scope	Versions
AAR: S-9075 ISMP Design Considerations	Adopted	04/01/2022	Railroads with PTC Back Office Systems	This item is recommended to interoperable service, has pending AAR edits, and will r produced.
AAR: S-9076 Interoperable Systems Management Gateway Requirements	Adopted	08/17/2021	Railroads with PTC Back Office Systems	v1.0 AAR published 08/17/21
AAR: S-9370 Interoperable Event and Status Service	Adopted	04/01/2022	Railroads with PTC Back Office Systems	The following ICI is recomme interoperable service, has pending AAR edits, and will r produced.
AAR: S-9382 Interoperable Asset Access Service	Adopted	04/01/2022		This item is recommended to interoperable service, has pending AAR edits, and will r produced.

While viewing the list of ICIs in the Baseline Adopted ICI Version(s) tab, select an edit icon () in the Versions column for an ICI that needs to be baselined. A popup is displayed, listing all the available versions of the ICI (see [Exhibit 15](#)).

Exhibit 15. Select ICI Baseline Version Popup

Select All
 86.3807

Select the checkbox for the version(s) of the ICIs deployed at your railroad. If your railroad has deployed all the versions of the ICI, choose the Select All checkbox.

Once you have specified all the ICI versions deployed at your railroad, select the **Complete Baseline** button to indicate that you have completed the baselining process for that ICI.

The newly baselined ICIs that were listed in the Baseline Adopted ICI Version(s) list are now displayed in the Current Deployed Version(s) list.

If a new ICI is added in the future, it will be displayed in the Baseline Adopted ICI Version(s) list for you to baseline.

Creating and Editing ICIs

PTC ILM enables you to create new ICIs as well as edit existing ICIs.

Note: This feature is only available to Interoperable Configuration Managers.

Select **ICI Management** from the menu to begin managing ICIs. PTC ILM displays the ICI Management page, which contains a list of all the existing ICIs (see [Exhibit 16](#)).

Exhibit 16. ICI Management Page

ICI Name	ICI Type	ICI Category	ICI Status	Deployment Status Tracking	Limited Scope ICI
AAR: 5-9058 ITC Ticket Management Requirements and Use Cases	Standard	AAR Published Standards	Adopted	Yes	No
[Redacted]	Configuration Release	ITC Configuration Items	Adopted	Yes	No
WRE/TMDS: Back Office Server Software	Software Release	Vendor Proprietary Configuration Items	Adopted	Yes	No
[Redacted]	Configuration Release	ITC Configuration Items	Adopted	Yes	Yes
PTC 220: MTA 13, Tampa-St. Petersburg-Orlando Slot Plan	Configuration Release	PTC 220 Configuration Items	Adopted	Yes	Yes
[Redacted]	Software Release	ITC Configuration Items	Adopted	No	Yes
[Redacted]	Safety Artifact	Vendor Proprietary Configuration Items	Adopted	Yes	No
[Redacted]	Safety Artifact	Vendor Proprietary Configuration Items	Proposed	Yes	No
[Redacted]	[Redacted]	ITC Configuration Items	Proposed	Yes	No
[Redacted]	Configuration Release	ITC Configuration Items	Adopted	Yes	Yes
[Redacted]	Safety Artifact	PTC 220 Configuration Items	Retired	Yes	No
[Redacted]	[Redacted]	ITC Configuration Items	Proposed	Yes	No
PTC 220: MTA 22, Denver Slot Plan	Configuration Release	PTC 220 Configuration Items	Adopted	Yes	Yes

You can create a new ICI or edit an existing ICI as described in the following sections:

- [“Creating a New ICI”](#) on page 14
- [“Editing ICIs”](#) on page 16

Creating a New ICI

To create a new ICI, select **Create** from the ICI Management page. The Add ICI Information popup is displayed (see [Exhibit 17](#)).

Exhibit 17. Add ICI Information Popup (showing the ICI Attributes tab)

The screenshot shows a form titled "Add ICI Information" with two tabs: "ICI Attributes" (selected) and "Compliance Scopes". The "ICI Attributes" tab contains the following fields:

- ICI Name *
- ICI Description
- ICI Category
- ICI Type
- ICI Adoption Date
- ICI Retirement Date
- ICI Status: Proposed
- Limited Scope ICI: No
- ICI Comments
- ICI Retirement Comments
- Deployment Status Tracking: Yes
- Limited Scope ICI Railroads *
- Support Group for ICI

Buttons for "Cancel" and "Add" are located at the bottom right of the form.

On the ICI Attributes tab, complete the following fields:

- ICI Name
- ICI Description
- ICI Category (AAR Published Standards, ITC Configuration Items, PTC 220 Configuration Items, or Vendor Proprietary Configuration Items)
- ICI Type (Configuration Release, Recommended Practice, Safety Artifact, Software Release, Specification, or Standard)
- ICI Adoption Date
- ICI Comments
- ICI Retirement Date
- ICI Retirement Comments
- ICI Status (Proposed, Adopted, or Retired) – (when newly created, an ICI is in Proposed status)
- Deployment Status Tracking (Yes or No) – (if Yes, PTC ILM tracks which railroad is on which version of this ICI)

Creating and Editing ICIs

- Limited Scope ICI (Yes or No)
- Limited Scope ICI Railroads (if the Limited Scope ICI field is Yes, then select the railroads that are in the scope of this ICI)
- Support Group for ICI (the group contact name for the ICI)

On the Compliance Scope tab, select any or all of the following checkboxes from the Select Compliance Scopes list: Select All, All Railroads, Railroads Deploying the ICI, Railroads with 220 MHz Base Stations, Railroads with Locomotives, Railroads with PTC Back Office Systems, and Railroads with WIUs). For each compliance category that you select, an entry is added to the grid below.

Select the edit icon (✎) in the Start Date column to indicate the date when the category becomes effective for the ICI. Select the edit icon (✎) in the End Date column to indicate the date when the category becomes no longer effective for the ICI (see [Exhibit 18](#)).

Exhibit 18. Add ICI Information Popup (showing the Compliance Scopes tab)

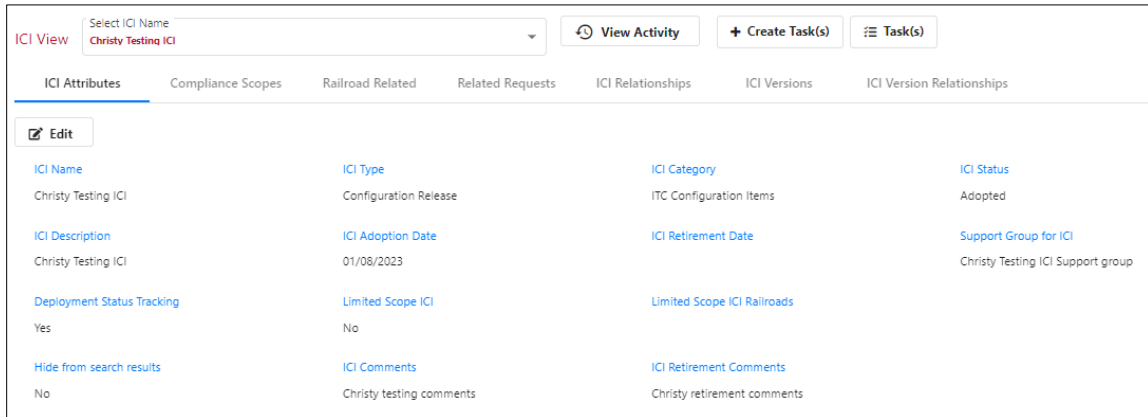
Compliance Scope	Start Date	End Date
Railroads with Locomotives	04/18/2020	05/31/2020

When you have finished entering information on the ICI Attributes and Compliance Scopes tabs, select **Add** to create the ICI. The ICI is created and added to the list on the ICI Management page.

Editing ICIs

To edit (modify) an existing ICI, select a link for an existing ICI on the ICI Management page. The ICI View page is displayed (see [Exhibit 19](#)).

Exhibit 19. ICI View Page



The ICI View page contains the following tabs:

- ICI Attributes – displays the attributes of the selected ICI.
- Compliance Scopes – displays the compliance scopes of the selected ICI (identifies the categories to which the ICI is applicable).
- Railroad Related – displays which railroads are on which versions of the selected ICI (which versions are being deployed, currently deployed, being decommissioned, and already decommissioned). You can select a version number to learn information about the ICR that was executed to deploy or decommission the version.
- Related Requests – displays the requests that have been opened on the selected ICI.
- ICI Relationships – displays ICI relationships for the selected ICI (e.g., dependencies, interfaces with, etc.).
- ICI Versions – displays the versions that are related to the selected ICI.
- ICI Version Relationships – displays the version relationships that pertain to the selected ICI.

Depending on your permissions, create, edit, and delete options may be available on each of these tabs.

Creating and Editing ICDIs

PTC ILM enables you to create new ICDI categories as well as edit and delete existing ICDIs.

Note: This feature is only available to Interoperable Configuration Managers.

Select **ICDI Management** from the menu to begin managing ICDI categories. PTC ILM displays the ICDI Management page, which contains a list of all the existing ICDI categories (see [Exhibit 20](#)).

Exhibit 20. ICDI Management Page

ICDI Management					
+ Create		Edit		Delete	
					7 of 7
Clear Filters					
<input type="checkbox"/>	ICDI Category	2 ↑	Created By	3 ↑	Modified By
			4 ↑	Created Date/Time	5 ↑
				6 ↑	Modified Date/Time
<input type="checkbox"/>	[Redacted]		[Redacted]	01/09/2023 12:23:25	01/09/2023 12:23:25
<input type="checkbox"/>	[Redacted]		[Redacted]	02/27/2023 10:06:30	02/27/2023 10:06:30
<input type="checkbox"/>	[Redacted]		[Redacted]	02/01/2023 10:49:04	02/01/2023 10:49:04
<input type="checkbox"/>	[Redacted]		[Redacted]	02/20/2023 09:11:35	02/20/2023 09:11:35
<input type="checkbox"/>	SMG Certificates		[Redacted]	01/25/2023 16:08:52	05/24/2023 10:26:55
<input type="checkbox"/>	test icdi category		[Redacted]	02/14/2023 14:38:35	02/14/2023 14:38:35
<input type="checkbox"/>	Track Data		[Redacted]	01/25/2023 15:48:02	01/25/2023 15:48:02

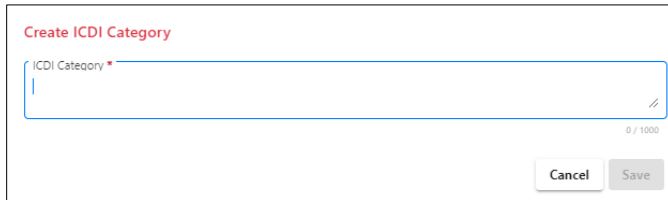
You can create, edit, or delete ICDI categories as described in the following sections:

- [“Creating a New ICDI Category”](#) on page 18
- [“Editing ICDI Categories”](#) on page 18
- [“Deleting ICDI Categories”](#) on page 18

Creating a New ICDI Category

To create a new ICDI category, select **Create** from the ICDI Management page. The Create ICDI Category popup is displayed (see [Exhibit 21](#)).

Exhibit 21. Create ICDI Category Popup



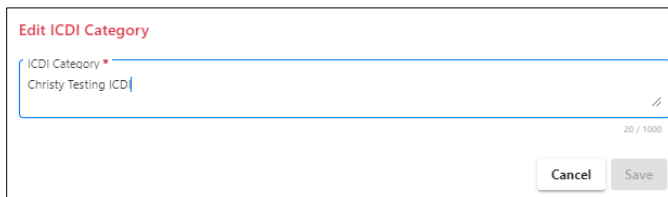
The screenshot shows a modal window titled "Create ICDI Category". Inside, there is a text input field with the label "ICDI Category *". The field is currently empty and has a character count of "0 / 1000" at the bottom right. Below the input field, there are two buttons: "Cancel" and "Save".

Create the ICDI category by entering a new name in the ICDI Category field and selecting **Save**.

Editing ICDI Categories

To modify an existing ICDI category, select the checkbox for an ICDI category on the ICDI Management page and then select **Edit**. The Edit ICDI Category popup is displayed (see [Exhibit 22](#)).

Exhibit 22. Edit ICDI Category Popup



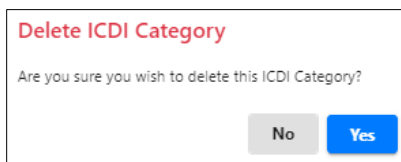
The screenshot shows a modal window titled "Edit ICDI Category". Inside, there is a text input field with the label "ICDI Category *". The field contains the text "Christy Testing ICDI" and has a character count of "20 / 1000" at the bottom right. Below the input field, there are two buttons: "Cancel" and "Save".

Edit the name of the ICDI category and select **Save**. The ICDI is updated and a confirmation popup is displayed.

Deleting ICDI Categories

To delete an ICDI category, select the checkbox for an ICDI category on the ICDI Management page and then select **Delete**. The Delete ICDI Category popup is displayed (see [Exhibit 23](#)).

Exhibit 23. Delete ICDI Category Popup



The screenshot shows a modal window titled "Delete ICDI Category". Inside, there is a question: "Are you sure you wish to delete this ICDI Category?". Below the question, there are two buttons: "No" and "Yes".

Once you select **Yes**, a confirmation popup is displayed indicating the successful deletion.

Note: If you select an ICDI category for deletion and confirm that you want to delete it, an error message is displayed if there are existing SIDRs associated with that ICDI category. In this case, the ICDI category cannot be deleted.

Managing ICI Relationships

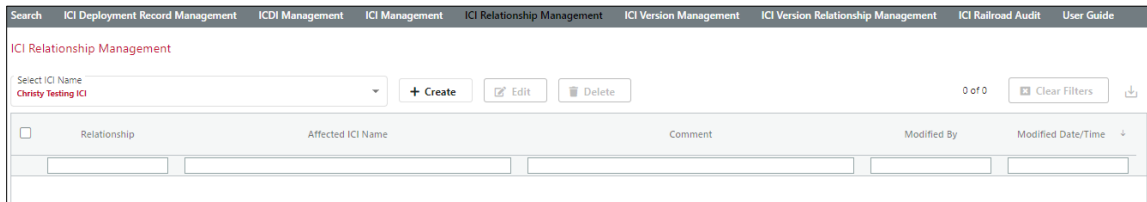
PTC ILM supports the following types of ICI relationships:

- Dependent (indicates the selected ICI is dependent on another ICI)
- Interchangeability (indicates the selected ICI is interchangeable with another ICI)
- Interface
- Specification

These relationships may be uni-directional or bi-directional. Each relationship has an inward description and an outward description (these descriptions are from the two different viewpoints of the two ICIs in the relationship).

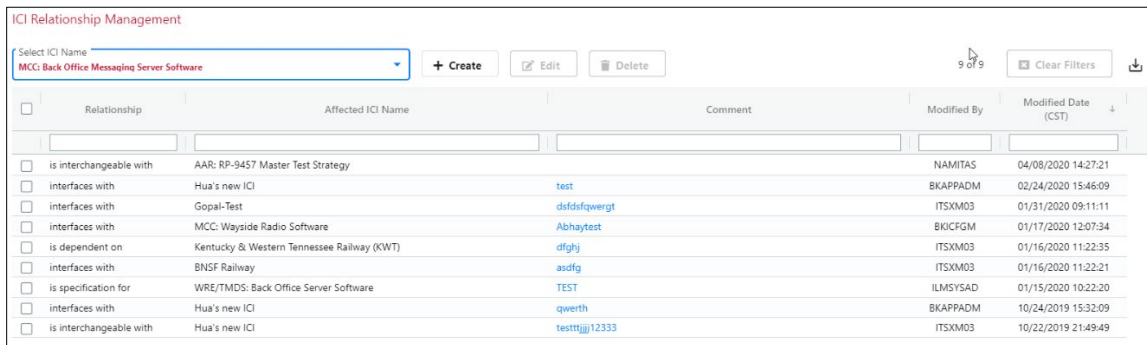
Select **ICI Relationship Management** from the menu to begin managing ICI relationships. PTC ILM displays the ICI Relationship Management page (see [Exhibit 24](#)).

Exhibit 24. ICI Relationship Management Page



Select an ICI using the Select ICI Name drop-down to see the relationships that have been configured for that ICI (see [Exhibit 25](#)).

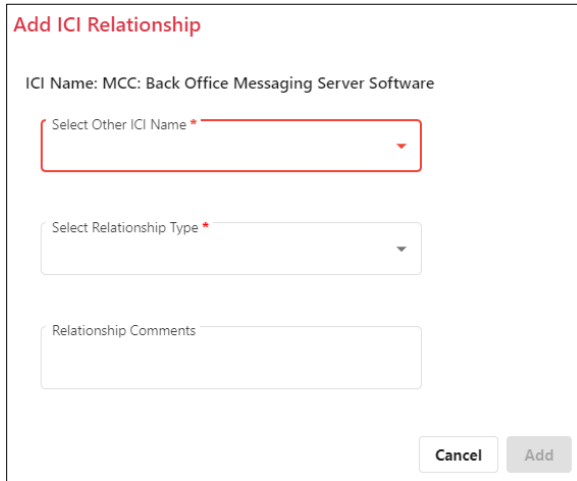
Exhibit 25. ICI Relationship Management Page (showing ICI relationships)



Depending on your permissions, create, edit, and delete options may be available.

If you do have permissions to create ICI relationships, select the **Create** button. The Add ICI Relationship popup is displayed (see [Exhibit 26](#)).

Exhibit 26. Add ICI Relationship Popup



The screenshot shows a modal window titled "Add ICI Relationship". At the top, it displays "ICI Name: MCC: Back Office Messaging Server Software". Below this, there are three input fields: a dropdown menu labeled "Select Other ICI Name" with a red border, a dropdown menu labeled "Select Relationship Type", and a text area labeled "Relationship Comments". At the bottom right, there are two buttons: "Cancel" and "Add".

Select the name of another ICI with which the currently selected ICI needs to have a relationship configured.

Next, select the relationship type (Dependent, Interchangeability, Interface, or Specification).

Optionally, enter a comment describing the relationship, and select **Add**.

The ICI relationship is created.

Managing ICI Versions

Select **ICI Version Management** from the menu to begin managing ICI versions. PTC ILM displays the ICI Version Management page to see the versions that have been created for the selected ICI (see [Exhibit 27](#)).

Exhibit 27. ICI Version Management Page

ICI Version	ICI Version Status	ICI Version Release Date	Estimated ICI Version Release Date	Earliest Permissible Deployment Date	Mandatory Decommission Date	Version Comment	Modified By	Modified Date/Time
3.5.1.0	Confirmed							05/05/2023 13:34:15
3.7	Pending Confirmation			01/18/2023	05/01/2023			03/17/2023 11:29:23
2.3.4	Confirmed			01/18/2023	05/01/2023	ICR 508		03/17/2023 11:29:23
3.6	Confirmed			10/01/2022	01/18/2023	ICR 1777		01/17/2023 11:34:29
3.5	Confirmed			04/01/2022	01/18/2023			01/17/2023 11:34:29
3.4.0.1	Confirmed			04/01/2022	01/18/2023	ICR 493		01/17/2023 11:34:29
3.3	Confirmed			04/01/2022	01/18/2023			01/17/2023 11:34:29
3.2	Confirmed			04/01/2022	01/18/2023			01/17/2023 11:34:29
2.3.2	Confirmed			04/01/2022	01/18/2023			01/17/2023 11:34:29
3.1	Confirmed			04/01/2022	01/18/2023			01/17/2023 11:34:29
2.3.3	Confirmed			04/01/2022	01/18/2023	ICR 412		01/17/2023 11:34:29
1.4.8	Confirmed			04/01/2022	01/18/2023			01/17/2023 11:34:29
2.0	Confirmed			10/01/2022	01/18/2023			01/17/2023 11:34:29
3.5.0	Pending Confirmation			11/01/2021		ICR 685		08/24/2022 16:22:10
3.4	Confirmed			11/01/2021	04/01/2022	ICR 413		04/01/2022 08:44:28
2.3.1	Confirmed			11/01/2021	04/01/2022			04/01/2022 08:44:28
2.3	Confirmed			11/01/2021	04/01/2022			04/01/2022 08:44:28
3.2.1	Confirmed			11/01/2021	04/01/2022			04/01/2022 08:44:28
N/A	Confirmed				04/01/2022			02/04/2022 09:10:14
1.4.6	Confirmed							08/21/2020 11:30:56
1.4.8.1	Confirmed							08/21/2020 11:30:55
1.4.8.2	Confirmed							08/21/2020 11:30:55

You can select a different ICI by using the Select ICI Name drop-down box.

Depending on your permissions, create, edit, and delete options may be available.

If you do have permissions to create ICI versions, select the **Create** button. The Add Version Attributes popup is displayed (see [Exhibit 28](#)).

Exhibit 28. Add Version Attributes Popup

Add Version Attributes

ICI Version *

ICI Version Release Date

ICI Version Status *
Confirmed

Estimated ICI Version Release Date

Earliest Permissible Deployment Date

Mandatory Decommission Date

ICI Version Comments

Cancel Save

Complete the following fields:

- ICI Version
- ICI Version Release Date
- ICI Version Status (Pending Confirmation, Confirmed, or Blocklisted)
 - Pending Confirmation - An identified version that has yet to be confirmed by the Interoperable Configuration Manager.
 - Confirmed - An identified version that has been confirmed by the Interoperable Configuration Manager.
 - Blocklisted - An identified version that is no longer allowed for interoperable use. The Interoperable Configuration Manager will change the status to “Blocklisted” when an ICI version is deemed invalid. This prevents the version from being listed in a permissible version in future PISR’s or PISR Plans.
- Estimated ICI Version Release Date
- Earliest Permissible Deployment Date
- Mandatory Decommission Date
- ICI Version Comments

Select **Save**.

The ICI version is created.

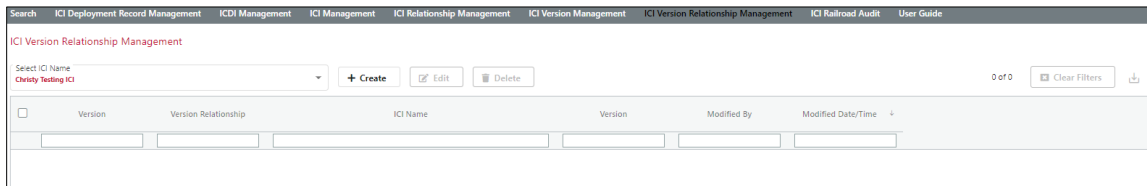
Managing ICI Version Relationships

PTC ILM supports relationships between a specified version of a selected ICI and a specified version of another ICI. The following types of ICI version relationships are supported:

- Compatibility Relationship – a version of an ICI that is designed to be compatible with a specific related version of another ICI.
- Direct Dependent Relationship – a version of an ICI that is directly dependent on a specific related version of another ICI, typically a specification, standard, or recommended practice.

Select **ICI Version Relationship Management** from the menu to begin managing ICI version relationships. PTC ILM displays the ICI Version Relationship Management page, which shows the version relationships that have been configured for the selected ICI (see [Exhibit 29](#)).

Exhibit 29. ICI Version Relationship Management Page

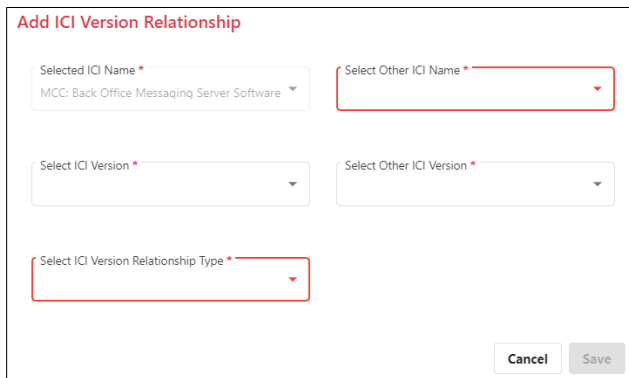


You can select a different ICI by using the Select ICI Name drop-down.

Depending on your permissions, create, edit, and delete options may be available.

If you do have permissions to create ICI version relationships, select the **Create** button. The Add ICI Version Relationship popup is displayed (see [Exhibit 30](#)).

Exhibit 30. Add ICI Version Relationship Popup



The currently selected ICI is prepopulated in the Selected ICI Name field. Select the version of the selected ICI for which you want to configure a version relationship.

Managing ICI Version Relationships

Select the name of another ICI with which the currently selected ICI should have a version relationship configured.

Note: If the ICI relationship does not already exist, PTC ILM prompts you to set up the ICI relationship (see [Exhibit 31](#)).

Exhibit 31. Add ICI Version Relationship Popup (showing prompt to create ICI relationship)

Add ICI Version Relationship

Select ICI Name *
MCC: Back Office Messaging Server Software

Select Other ICI Name *
AAR: S-9001 ITC System Reference Architect...

Select ICI Version *
26202001

Select Other ICI Version *
938315

Select ICI Version Relationship Type *
DIRECT DEPENDENT

System did not find an existing relationship between ICI : MCC: Back Office Messaging Server Software and ICI : AAR: S-9001 ITC System Reference Architecture. Please acknowledge and select relationship type for system to Record the ICI relationships.

Select ICI Relationship Type *
INTERFACE

Enter ICI Relationship Comments

Cancel Save

Select the version of the other ICI with which the currently selected ICI and version should have a version relationship configured.

Next, select the ICI version relationship type (Compatibility or Direct Dependent).

Select **Save**.

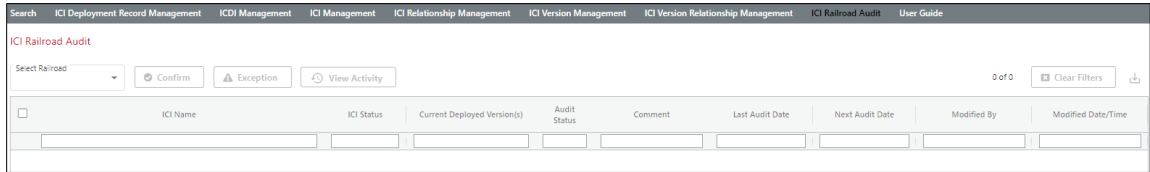
The ICI version relationship is created.

Performing ICI Railroad Audits

PTC ILM enables railroads to self-audit their ICI configurations.

Select **ICI Railroad Audit** from the menu to begin your ICI self-audit. PTC ILM displays the ICI Railroad Audit page (see [Exhibit 32](#)).

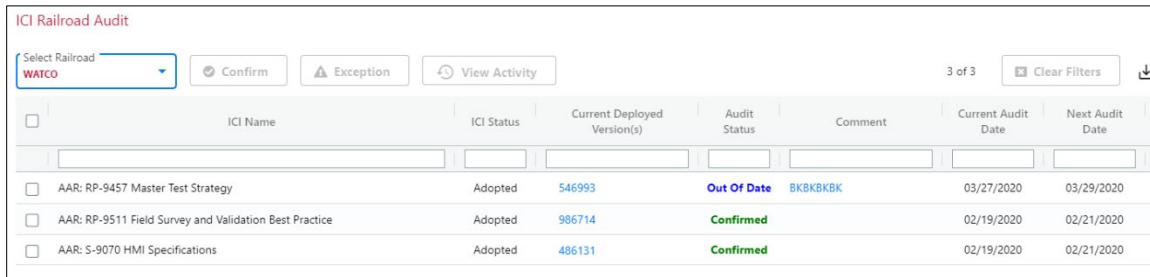
Exhibit 32. ICI Railroad Audit Page



Select the railroad for which you want to perform an audit. PTC ILM displays the ICIs implemented by that railroad and displays the audit status (see [Exhibit 33](#)).

Note: Railroad Configuration Managers can only self-audit their own railroad – they cannot choose a railroad. Interoperable Configuration Managers can select a railroad and perform an audit on their behalf.

Exhibit 33. ICI Railroad Audit Page (showing a selected railroad and audit status)



Self-audits are configured to occur every three months. If an ICI record indicates that the audit status is out of date, select the checkbox at the left of the record and then select either **Confirm** to indicate that you have verified that the ICI information is correct or **Exception** to indicate that the ICI information is incorrect. (You can then correct the incorrect information by creating an ICR to cover the needed change.)

You can also select the **View Activity** button to view the railroad audit activity logs. The ICI Audit Activity Logs Information popup is displayed (see [Exhibit 34](#)).

Exhibit 34. ICI Audit Activity Logs Information Popup

Action	Status	Action Description	Action Mark	User	Modified Date/Time (CST)
ICI Audit Modified	Exception	'Comment' value changed from EMPTY to 'BKBKBBK' 'Audit Status' value changed from Confirmed to Exception 'Next Audit Date' value changed from EMPTY to '21 Feb 2020'	WATC	BKICFGM	03/27/2020 15:57:57
ICI Audit Created	Confirmed	[WATC] completed audit for [AAR: RP-9457 Master Test Strategy] with Audit status as [Confirmed] on [02/19/2020]	RAIL	BKAPPA...	02/19/2020 14:14:59

Review the activity logs information and select **Close** to exit.