

Release Notes 2024 R1 RC

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Introduction

This document provides important information about fixes, enhancements, and key features that are available in Acumatica ERP 2024 R1. The document is designed particularly for those who install Acumatica ERP. All users can benefit from reviewing this content to determine how they may benefit from the changes in this release.

Information about fixes, enhancements, and key features for those who customize Acumatica ERP or develop applications for it can be found in the separate [Release Notes for Developers](#) document.

To try new features and improvements, you can use the demo company, which you can easily deploy by selecting the *SalesDemo* item in the Acumatica ERP Configuration Wizard. For detailed information on deploying the demo company and working with the demo data, see [Demo Materials](#) on the Acumatica Portal.

Installation and Upgrade Notes

We strongly recommend that before administrators upgrade Acumatica ERP to a newer product version, they back up all configuration files and databases used by the application instances. For a detailed description of the general procedure of updating Acumatica ERP, see [Updating Acumatica ERP by Using the Configuration Wizard](#) in the Installation Guide.

Multiple changes have been made in Acumatica ERP 2024 R1, in comparison to Version 2023 R2, that may affect customizations and integrations. For details, see [Release Notes for Developers](#).

If the Acumatica ERP instance was integrated with software provided by an independent software vendor (ISV) partner, we recommend that the administrator consult with this partner about the compatibility of its products with Acumatica ERP 2024 R1.

Supported Web Browsers for Acumatica ERP Workstations

Supported web browsers that can be used to work with Acumatica ERP 2024 R1 workstations are listed in the following table.



Web browsers on mobile devices are not supported. We recommend that the Acumatica mobile app be used.

Table: Supported Web Browsers

Web Browser	Version
<i>Microsoft Edge</i>	108 or later
<i>Mozilla Firefox</i>	108 or later
<i>Apple Safari</i>	15 or later
<i>Google Chrome</i>	109 or later

Deprecated Support for Azure Cloud Services

On August 24, 2021, Microsoft announced plans to retire the Cloud Services (classic) deployment model on August 31, 2024. As of April 5, 2021, the new Azure Cloud Services deployment model is generally available.

Starting in 2022 R1, Acumatica switched to the new deployment model and stopped providing the following:

- Azure service package files (with the `.cspkg` extension) for each major version and minor updates
- The functionality to generate `.cscfg` files by using the Acumatica ERP Configuration Wizard

Therefore, in Acumatica ERP 2024 R1, an administrator cannot install Acumatica ERP by using the Azure Cloud Services (classic) deployment model.

To deploy the Acumatica ERP Service for 2024 R1 and later on the Windows Azure platform by using Azure Cloud Services (extended support), the administrator should create a Windows virtual machine in the Azure portal and install Acumatica ERP, as described in the [Installing Acumatica ERP Locally](#) topic.

Deprecated Support for Authorize.Net Payment Plug-In

Starting in Acumatica ERP 2025 R1, the Authorize.Net plug-in will no longer be supported or available in the system. We encourage customers to take advantage of the Acumatica Payments plug-in, which provides greater functionality, better support, and competitive rates.

The customer company should contact its partner to create a presales support case to learn more about making the switch. Customers that use Acumatica ERP 2023 R2 or higher can configure the Acumatica Payments plug-in without making any software changes.

For more information about Acumatica Payments, see [Configuring and Using Acumatica Payments](#) and [To Configure Acumatica Payments](#).

Upgrade Policy

On the [Apply Updates](#) (SM203510) form, only minor updates are available for the currently installed version of Acumatica ERP. The administrator should upgrade the Acumatica ERP instance from previous major versions of the system to Version 2024 R1 manually on the server. (An upgrade through the web interface is not supported because the customization of the Acumatica ERP instance may be incompatible with Version 2024 R1 due to changes in Version 2024 R1.)

Prerequisite Steps

Before administrators install Acumatica ERP 2024 R1 or upgrade to it locally, they need to do the following:

1. Switch the Internet Information Services application pool where the Acumatica ERP 2024 R1 instance will be installed to Integrated mode. (Classic mode is not supported.)
2. Install Microsoft .NET Framework 4.8 on the server where the Acumatica ERP 2024 R1 instance will be installed.

Upgrade Path

The upgrade to Acumatica ERP 2024 R1 must be performed as described in the following table. The upgrade process depends on the version before the upgrade.

Table: Upgrade Paths for Acumatica ERP

From Version	Upgrade Path
2023 R2	A direct upgrade to Acumatica ERP 2024 R1 is supported.
2023 R1	A direct upgrade to Acumatica ERP 2024 R1 is supported.
2022 R2	A direct upgrade to Acumatica ERP 2024 R1 is supported.
2022 R1	An incremental upgrade is required. The following steps must be performed in the listed order: <ol style="list-style-type: none"> 1. Upgrade to the latest Version 2022 R2 X build available. 2. Upgrade to Version 2024 R1.

From Version	Upgrade Path
2021 R2	An incremental upgrade is required. The following steps must be performed in the listed order: <ol style="list-style-type: none"><li data-bbox="456 310 1472 346">1. Upgrade to the latest Version 2022 R2 X build available.<li data-bbox="456 359 1472 394">2. Upgrade to Version 2024 R1.

Acumatica ERP 2024 R1 can be upgraded from the following particular versions:

- 2023 R2 Update 6 (23.206.0006) and earlier
- 2023 R1 Update 13 (23.113.0042) and earlier
- 2022 R2 Update 20 (22.220.0026) and earlier

For the list of upgradable versions for later 2024 R1 updates, see the Release Notes for the particular 2024 R1 update.

Post-Upgrade Changes and Actions

An administrator should be aware of the changes that have been made in the system after the upgrade to Acumatica ERP 2024 R1 has been performed. The following sections describe these changes, as well as any actions that the administrator needs to take after the upgrade.

Upgrade of Access Rights

During the system upgrade to Acumatica ERP 2024 R1, the system will apply the following migration rules to the access rights specified in the system:

- If the access rights for a system object were set to *Not Set* for all user roles, these access rights will be converted to *Granted* for all user roles.
- If at least one role is assigned the *Delete*, *Insert*, *Edit*, *View Only*, or *Revoked* restriction level explicitly, all *Not Set* access rights will be converted to *Revoked*. All other access rights will not be changed.

For more information about changes in managing access rights, see [Platform: Changes to the Management of Access Rights](#).

Access Rights in Customization Projects

If your organization uses customization packages, after an upgrade to Acumatica ERP 2024 R1, the administrator must verify the access rules that have been set for the forms added by customization projects.

In a customization project migrated from a previous Acumatica ERP version, on the [Access Rights](#) page of the Customization Project Editor, the system will insert *Apply and Keep* in the **Merge Rule** column for all listed forms. It inserts this option regardless of the previously specified option in the **Reset Permissions** column of this page. (The column has been removed from the page.) With this merge rule, during the publishing of the customization project, the access rights specified in the customization project will be applied to the instance, and all other roles will remain unchanged.



To revoke access rights for all roles except those that are explicitly specified in the customization project, before publishing the customization project, the system administrator must change the **Merge Rule** in the customization project to *Apply and Reset*.

For more information about changes in managing access rights in customization projects, see [Platform: Changes to the Management of Access Rights](#).

CRM

After an upgrade to Acumatica ERP 2024 R1, the *Case Commitments* feature will be enabled on the [Enable/Disable Features](#) (CS100000) form if any case class had contained at least one row on the **Reaction** tab of the [Case Classes](#) (CR206000) form.

On the [Work Calendar](#) (CS209000) form, the settings in the following UI elements will be calculated as follows for existing calendar records:

- The **Hours Worked** column (**Calendar** tab): The system recalculates the duration in this column by using the following formula.

```
Hours Worked = End Time - Start Time - Break Duration
```

- The **Workday Hours** box (Summary area): The system calculates the duration in this box as follows: The sum of the durations in the **Hours Worked** column for which the **Day of Week** check box is selected is divided by the number of selected days.

- The **Break Duration** column (**Calendar** tab): The durations in this column will remain unchanged and non-editable. Users can modify these durations by adding new rows on the **Break Times** tab.

On the [Case Classes](#) (CR206000) form for all case classes, the **Work Calendar** box (Summary area) will have the **24H7WD** option selected. On the **Commitments** tab of this form, the **Stop Counting Time** box will have the *If Case Becomes Inactive* option selected. In the table on this tab, the check box in the **Enable** column with the **Resolution Time Tracking** tooltip will be selected for a particular severity level if the value in the **Target Resolution Time** column (the **Reaction Time** column in previous versions) was a nonzero duration.

For existing cases on the [Cases](#) (CR306000) form, the system will populate the **Reported On** box with the value specified in the `CreatedDateTime` DAC field of the case. This field holds the date of case creation.

During the upgrade to Acumatica ERP 2024 R1, if any employee was previously specified for approval on the **Rule Actions** tab of the [Approval Maps](#) (EP205015) form, the system will add the employee to the **Approvers** table of the tab. That is, if *Employee* was specified in the **Approver** box and an employee was selected in the **Employee** box for the rule or step of the approval map, as part of this upgrade, a row for the designated employee will be added to the new table. This provides a smooth transition to the new version with no additional effort required by the administrator.

Finance

After an upgrade to Acumatica ERP 2024 R1, the following changes will be applied in the system:

- Administrators may have configured approval maps for finance-related entity types, such as *Bills and Adjustments, Cash Purchases, Cash Sales, Cash Transactions, Checks and Payments, Invoices and Memos, and Payments and Applications*. If these maps exist, they will have the following settings on the [Approval Maps](#) (EP205015) form:

- **Reason for Approval:** *Is Not Prompted*
- **Reason for Rejection:** *Is Not Prompted*

For more information about the setup of approval and rejection reasons, see [Finance: Approval and Rejection Reasons on Financial Forms](#).

- If the *Bank Feed Integration* feature is enabled for your organization, when the administrator enables the *Mapping of Multiple Accounts for Bank Feeds* feature on the [Enable/Disable Features](#) (CS100000) form, the **Map Multiple Bank Accounts to One Cash Account** check box will be cleared on the [Bank Feeds](#) (CA205500) form for all active bank feeds.

For more information about the mapping of bank accounts, see [Finance: Mapping of Multiple Accounts for Bank Feeds](#).

- On the [Companies](#) (CS101500) form, the **Cash Discount Base** box on the **Company Details** tab will contain *Document Amount*.

For more information about changes in calculation of cash discounts, see [Finance: Calculation of Cash Discounts on Taxable Amounts](#).

Canadian Localization

After an upgrade to Acumatica ERP 2024 R1, the following changes will be applied in the system if the *Canadian Localization* feature is enabled on the [Enable/Disable Features](#) (CS100000) form:

- For companies that have *Canada* selected in the **Localization** box on the [Companies](#) (CS101500) form, the **Cash Discount Base** box on the **Company Details** tab of this form will be set to *Document Amount Less Taxes*.

For more information about changes in calculation of cash discounts, see [Finance: Calculation of Cash Discounts on Taxable Amounts](#).

- On the [Non-Stock Items](#) (IN202000) form, the **T5018 Service** check box will be selected for non-stock items of the *Service* and *Non-Stock Item* types.

On the **Details** tab of the [Bills and Adjustments](#) (AP301000) form, the documents that match all of the following criteria will have the **T5018 Service** check box selected:

- The vendor specified in the document is a T5018 vendor.
- The document's date is in the current year or in the two years preceding the upgrade date.
- The document contains non-stock items in its lines. (Lines without items specified will also have the **T5018 Service** check box selected.)

For more information on reporting T5018 services, see [Localization \(Canada\): Differentiation Between Payments in T5018 Reporting](#).

Payroll

After an upgrade to Acumatica ERP 2024 R1, the following changes will be applied in the system if the *Payroll* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

On the [PTO Banks](#) form, the settings that were previously specified in the Summary area and on the **General** tab will be transferred to a row on the **Employee Classes** tab with *<NONE>* specified in the **Employee Class** column and 1/1/1900 in the **Effective Date** column.

On the **General** tab of the form, *Specific Date* will be automatically selected in the **Transfer Date Type** box. In the **Carryover Type** box, the *Paid After a Period of Time* option selected in the previous version will be replaced with the *Total* option. Also, the new option to be inserted in the **Accrual Method** box will be determined as shown in the following table.

New Accrual Method	Settings in Previous Version
<i>Percentage</i>	Accrual Method: <i>Percentage</i>
<i>Total Hours per Year</i>	Accrual Method: <i>Total Hours per Year</i>
<i>Front Loading</i>	All of the following settings: <ul style="list-style-type: none"> • Accrual Method: <i>Percentage</i> • Default Accrual %: 0 • Front Loading Amount: Greater than 0
	All of the following settings: <ul style="list-style-type: none"> • Accrual Method: <i>Total Hours per Year</i> • Hours per Year: 0 • Front Loading Amount: Greater than 0
<i>Front Loading and Percentage</i>	All of the following settings: <ul style="list-style-type: none"> • Accrual Method: <i>Percentage</i> • Default Accrual %: Greater than 0 • Front Loading Amount: Greater than 0
<i>Front Loading and Hours per Year</i>	All of the following settings: <ul style="list-style-type: none"> • Accrual Method: <i>Total Hours per Year</i> • Hours per Year: Greater than 0 • Front Loading Amount: Greater than 0

On the **Paid Time Off** tab of the [Employee Payroll Settings](#) form, the noted settings are determined based on the following rules:

- The state of the **Use Custom Settings** check box is the opposite of the state of the **Use PTO Banks from Employee Class** check box in the previous version.
- If the **Use Custom Settings** check box is selected, *Accrued and Available* is automatically specified in the **During Probation Period** column in all rows.
- The state of the **Allow Negative Balance** check boxes in the table is the same as the state of the **Allow Negative Balance** check box for the relevant PTO bank in the previous version.

Retail Commerce

After the upgrade, companies that used the Amazon connector with previous versions of Acumatica ERP may continue using the *Sales Invoice (Obsolete)* entity to process and resynchronize previously prepared marketplace-fulfilled orders. For orders imported after the upgrade, a new entity, *Marketplace-Fulfilled Order*, must be used instead.

CRM: Mailing Settings Enhancements

In Acumatica ERP, a preferences form holds the general settings of a particular functional area (such as projects or customer management). These settings include the list of mailings that users can use for printing and emailing documents related to entities of the functional area.

Previously, if a user tried to send a document (such as an invoice) to a customer, vendor, or business account by email, the system did not send the email and displayed an error if both of the following were true:

- In the entity class or the entity itself, a branch was specified in the settings for mailing documents of a particular type (such as an invoice).
- In the preference settings of the functional area of the entity, no branch was specified in the settings for mailing documents of the same type. (In some cases, no branch was specified because the tab for mailing settings did not have a **Branch** column.)

Starting in Acumatica ERP 2024 R1, users can specify a branch in the settings for a mailing on certain preferences forms, which prevents these issues from occurring. Additionally, the inheritance of mailing settings has been enhanced, as described in the following sections. Entities and entity classes now inherit mailing settings from the applicable preference settings.

Ability to Create Branch-Specific Mailings on Preferences Forms

On most Acumatica ERP preferences forms, an administrative user can specify the list of mailings that can be used in the functional area, along with the settings of the mailings. These settings will be used by default when a user adds a mailing setting to an entity class or to an entity of the class in the functional area.

The mailings can be branch-specific or not. In Acumatica ERP 2024 R1, to enable the creation of branch-specific mailings for some functional areas, the **Branch** column has been added to the **Mailing & Printing** tab of the following preferences forms:

- [Customer Management Preferences](#) (CR101000)
- [Projects Preferences](#) (PM101000)
- [Service Management Preferences](#) (FS100100)
- [Subcontracts Preferences](#) (SC101000)

A branch-specific mailing defined on the preferences form of a functional area can be added to an entity class (of the functional area) or an entity of the class. Once the mailing has been added to the class or entity, the **Mailing ID** and **Branch** columns on the **Mailing & Printing** tab of the appropriate data entry form are copied and become unavailable for editing. The following screenshot shows a project on the [Projects](#) (PM301000) form with a mailing whose identifier and branch cannot be changed.

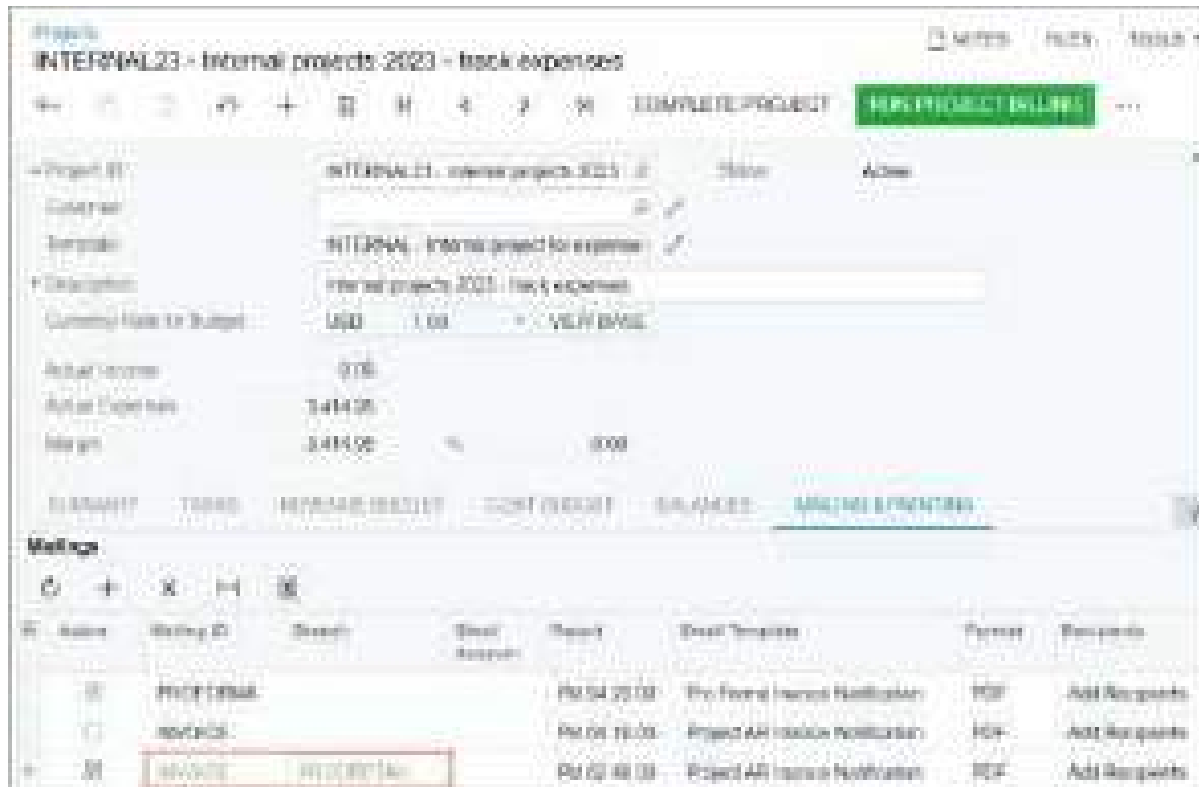


Figure: A branch-specific mailing

Improvements in the Inheritance of Mailing Settings

Improvements have been made in the inheritance of mailing settings in Acumatica ERP 2024 R1. On the data entry form of a particular entity class or entity, if a user selects a mailing ID in the **Mailings** table of the **Mailing & Printing** tab, the other columns in the row are filled in as follows:

- For an entity class (if applicable), the default values are copied from the row of the mailing on the corresponding preferences form.
- For an entity, the default values are copied from the row of the mailing on the entity class creation form (if applicable). If the entity class creation form does not contain a particular mailing, the values of the mailing are copied from the appropriate preferences form. In this case, the **Overridden** check box for this mailing is cleared.

If a user adds a mailing for the entity class and the same mailing has already been added for the entity of this class, the **Overridden** check box becomes selected for the specific mailing of the entity.

Mailing Setting Priorities for Emailing Documents

In Acumatica ERP 2024 R1, if a user attempts to send a document to a customer, vendor, or business account by email, the system verifies the presence of mailings for this type of document in the following order and applies the first one it finds:

1. A branch-specific mailing that is specified in the entity for which the document was created
2. A mailing without a branch selected that is specified in the entity for which the document was created
3. A branch-specific mailing that is specified in the entity class of the entity for which the document was created
4. A mailing without a branch selected that is specified in the entity class of the entity for which the document was created

If no mailing for this type of document is found, the system does not send the document by email and shows an error.

Deletion of Mailing Settings

On the **Mailing & Printing** tab of the *Business Accounts* (CR303000), *Customers* (AR303000), and *Vendors* (AP303000) forms, if a user tries to delete a mailing that has been inherited from the business account class, customer class, or vendor class, respectively, the following error message will be shown.

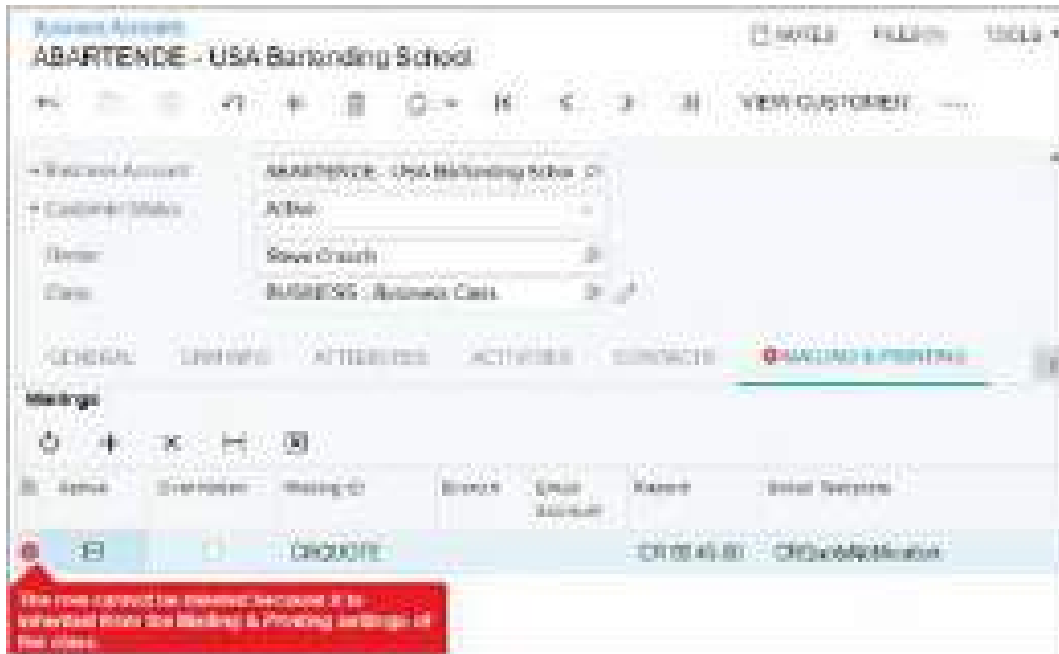


Figure: The error message

CRM: Association of Existing Tasks

In previous versions of Acumatica ERP, tasks could be associated with each other only if a child task was created based on a parent task.

Starting in Acumatica ERP 2024 R1, if a task is not completed or canceled, a user can associate it with another existing task on the [Task](#) (CR306020) form at any time. In addition, the [Activity](#) (CR306010) form has been redesigned to improve the functionality of associating an activity with a parent activity.

Changes to the Task and Activity Forms

On the [Task](#) (CR306020) form, if a task has the *Draft*, *Open*, or *Processing* status, the **Parent Activity** box is available for editing. In this box, a user can select an existing task, as illustrated in the following screenshot.

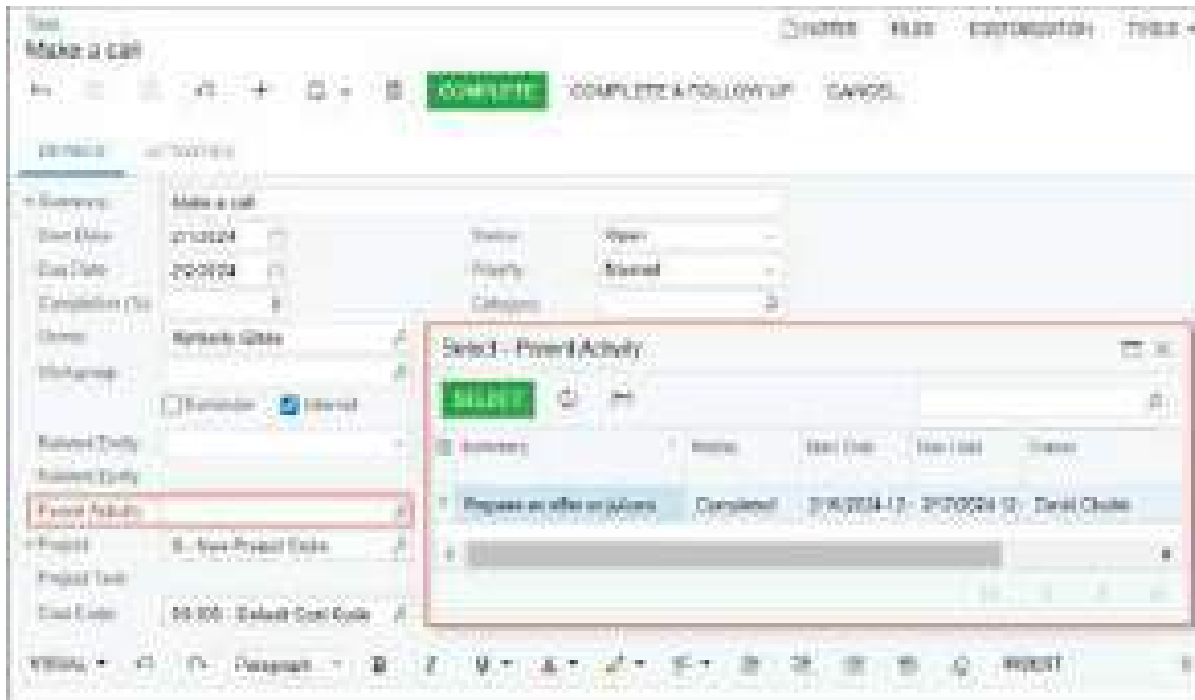


Figure: The selection of a parent task

On the [Activity](#) (CR306010) form, the **Task** box has been renamed to **Parent Activity**, as shown in the following screenshot. In this box, a user can select an existing task or event and associate it with the current activity (the activity selected on the form) as the parent activity.

The screenshot displays the 'Activity' form with the following details:

- Activity:** Make a call
- Type:** Work Item
- Date:** 1/1/2010
- Project:** New Project Task
- Project Task:** New Project Task
- Status:** Open
- Priority:** High
- Due Date:** 01/01/2010
- Time Spent:** 00:00

Figure: The redesigned Activity form

If the parent task or event has been associated with a project with or without a project task, the system copies the value of the project and project task (if any) to the **Project** and **Project Task** boxes, respectively, on the [Task](#) or [Activity](#) form for the child task or activity.

If a user clicks the Open button next to the **Parent Activity** box, the system opens a parent activity in a pop-up window.

CRM: Closure Notes in Cases

Acumatica ERP 2024 R1 now provides a tab on the [Cases](#) (CR306000) form where users can enter all necessary case-related information beyond the information in the existing settings of the form.

While this information is typically entered during the case's closure, the user can also enter information during any phase of the case's processing.

Changes Related to Closure Notes

To give users the ability to enter case-related information at any time, the **Closure Notes** tab with a rich text editor has been added to the [Cases](#) (CR306000) form, as shown in the following screenshot. The rich text editor includes a text area and a formatting toolbar.



Figure: The Closure Notes tab

The **Details** dialog box, which in previous versions opened when a user clicked **Close** on the form toolbar or **More** menu, has been renamed to **Close** (see Item 1 in the following screenshot). To give the user the ability to provide more details about the closing of the case, the **Closure Notes** box (Item 2), which also has a rich text editor, has been added to the dialog box.

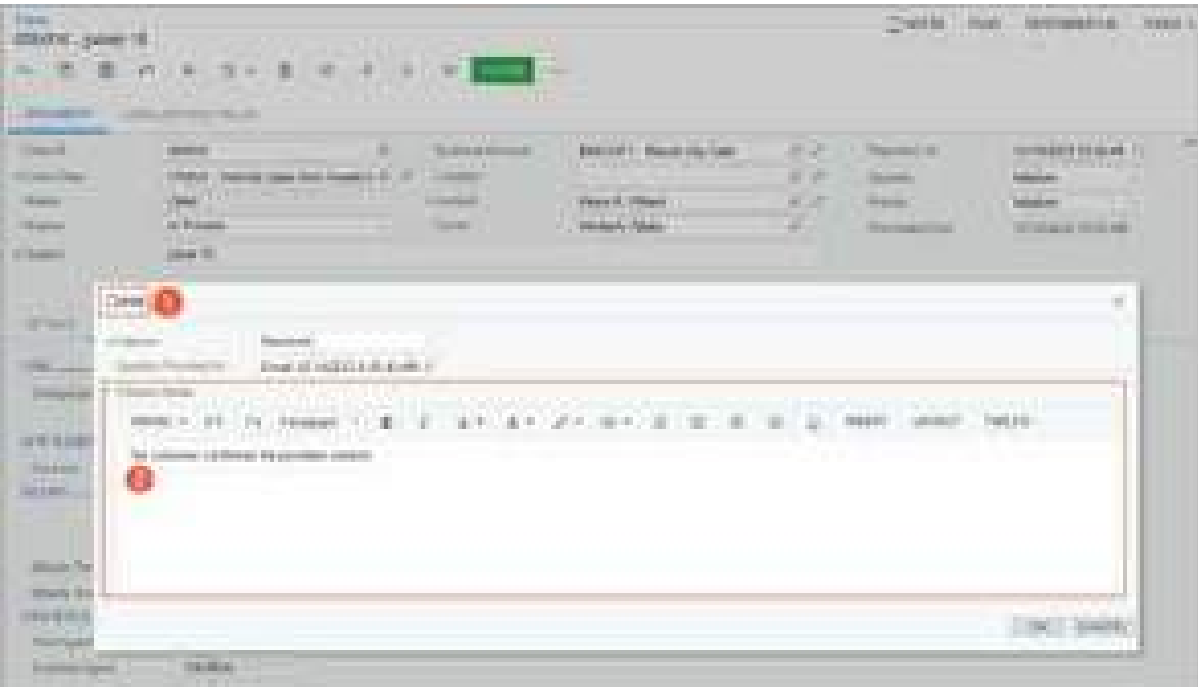


Figure: The Close dialog box

In this box, a user can enter case-related information during the case's closure, such as the solution for the case that has been confirmed by a customer. By default, the system copies the text specified on the **Closure Notes** tab and inserts it in the **Closure Notes** box, but the user can add, edit, and delete any of the copied text.

When the user clicks **OK** in the **Close** dialog box, the system copies the information from the **Closure Notes** box of this dialog box to the **Closure Notes** tab of the **Cases** form for the case.

If the **Require Case Closure Notes** check box is selected for a case class on the **Case Classes** (CR206000) form (see the following screenshot), a user must fill in the **Closure Notes** box during the closing of a case of this class.

The screenshot shows a CRM case record for 'ITHELP - Internal issues from Snowflake employees to IT'. The 'REQUIREMENTS' section is visible, containing several checkboxes: 'Require Closure', 'Require Case Closure Notes' (highlighted with a red box), 'Require Case Closure Summary', and 'Require Case Closure Comments'. The 'Require Case Closure Notes' checkbox is currently unchecked. Other sections like 'ACTIVITY METRICS' and 'REQUIREMENTS' are also visible.

Figure: The Require Case Closure Notes check box

By default, the check box is cleared, which means that the specification of closure notes is optional for a case of this class.

CRM: Case Commitment Management

Acumatica ERP 2024 R1 introduces the capability for companies to manage their case commitments and monitor their fulfillment within target time periods, thus optimizing service levels. Case commitments are commitments that customer service representatives will provide responses and case resolution within the needed time periods. These commitments are established within service-level agreements (SLAs) and must be fulfilled.

To support the implementation of case commitment management, improvements have been made across the following forms:

- [Case Classes](#) (CR206000)
- [Cases](#) (CR306000)
- [Work Calendar](#) (CS209000)
- [Activity](#) (CR306010)
- [Task](#) (CR306020)
- [Event](#) (CR306030)
- [Email Activity](#) (CR306015)
- [Enable/Disable Features](#) (CS100000)

The case commitments, along with the UI changes related to this functionality, are described in the following sections.

Changes to the Enable/Disable Features Form

In Acumatica ERP 2024 R1, the **Case Commitments** check box has been added to the **Experimental Features** group on the [Enable/Disable Features](#) (CS100000) form (see the following screenshot).

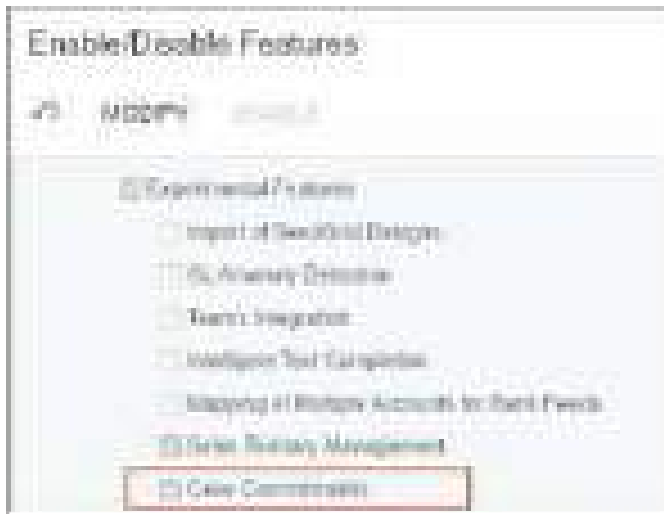


Figure: The Case Commitments check box

By default, the **Case Commitments** check box is cleared, and the corresponding feature is disabled. An administrative user can click **Modify** on the form toolbar, select the check box, and click **Enable** on the form toolbar. The check box is available if the *Case Management* feature is enabled on the [Enable/Disable Features](#) form.

With the *Case Commitments* feature enabled, the following UI elements appear in the system:

- The **Commitments** tab on the [Case Classes](#) (CR206000) form.
On this tab, an administrative user can activate the tracking of case commitment times and specify their durations. For details, see the [Changes to the Case Classes Form for Managing Commitments](#) section.

- The following boxes on the [Cases](#) (CR306000) form (which are shown both in the Summary area and on the **CRM Info** tab):
 - **Initial Response Due:** The date and time by which the company is expected to send an initial response to the customer's request
 - **Response Due:** the date and time by which the company must send a response to any customer request
 - **Resolution Due:** The date and time by which the case must be resolved

For details, see the *Tracking of the Initial Response Time*, *Tracking of the Response Time*, and *Tracking of the Resolution Time* sections.

Commitments in Case Management

With the general case management workflow, a customer service representative receives a new case (see Step 1 in the following diagram), sends the first response to the customer (Step 2), and receives and responds to follow-up questions about the case (Steps 3 and 4, which may be repeated if the customer has additional questions or skipped if the customer has no additional questions). The representative then provides the solution and closes the case (Step 5).



In Acumatica ERP 2024 R1, if the *Case Commitments* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, an administrative user can turn on tracking and specify targets for the following periods of time (also shown in the diagram):

- **Initial response time:** The time period the customer service representative takes to respond to the initial request from the customer. For details, see the *Tracking of the Initial Response Time* section.
- **Response time:** The time period the customer service representative takes to respond to a customer request regarding the case. For details, see the *Tracking of the Response Time* section.
- **Resolution time:** The time period the customer service representative takes to resolve a case by providing a solution to the customer's request. For details, see the *Tracking of the Resolution Time* section.

In Acumatica ERP 2024 R1, an administrative user can activate time tracking at the case class level and specify target commitment times for any of these time periods. For the case class, time tracking can be activated and target commitment times specified at each severity level, so that these commitments apply to all cases of the class with this severity. The system tracks the time only for the activated commitments.

If the administrative user activates time tracking for all commitments of a case class, the system begins tracking the initial response time, response time, and resolution time for each case of the class, starting at the time of the case's creation. The system tracks the time of the first response for both the initial response time commitment and the response time commitment. When the user sends the initial response to the customer, the system stops tracking

the initial response time and response time and continues tracking only the resolution time. If the customer sends an additional request or provides the requested information, the system starts tracking the response time again until the user responds to this inquiry. The tracking of time for the resolution time commitment stops when a solution for the case is provided or the case is closed, depending on the option selected in the **Stop Counting Time** box on the [Case Classes](#) (CR206000) form.

For each commitment to be tracked for the case class and severity, the administrative user can also specify an additional time extension to meet case commitments in scenarios where the expected time to fulfill the commitment is reduced (that is, the response or resolution must be delivered more quickly). These scenarios may include a user making the following changes to the case after its creation:

- Changing the case severity to another level (usually, to a higher level) in which the specified duration to fulfill the commitment is less than the duration in the previously selected severity level.
- Changing the case class to another class in which the specified duration to fulfill the commitment is less than the duration in the previously selected class with the same severity level.

In either of these scenarios, the remaining time to fulfill the commitment (starting at the moment of the change) may be less than it would have been if the user had selected the current severity level or class at the moment of case creation. To avoid the commitment not being met for this case, the system adds the time extension specified for this commitment to the current time period and sets the extended target time (for example, for resolving the case or responding to the customer), as shown in the following diagram.



New Layout of the Work Calendar Form

To support the case commitment capabilities and to improve the usability of the [Work Calendar](#) (CS209000) form, the layout of the form has been changed. Some new elements have been added to the form, while others have been renamed or moved.

The Summary area has been enhanced as follows:

- The new **Workday Hours** box (see Item 1 in the following screenshot) shows the duration of the work time (in hours and minutes) during the workday. The system calculates the time duration in the box as the sum of the durations in the **Hours Worked** column for each selected day divided by the number of selected days on the **Calendar** tab. If the duration in the **Hours Worked** column changes, the system recalculates the duration in the **Workday Hours** box.
- The **Override** check box (Item 2) has been added. If the check box is selected, the **Workday Hours** box is available for editing. By default, the check box is cleared.

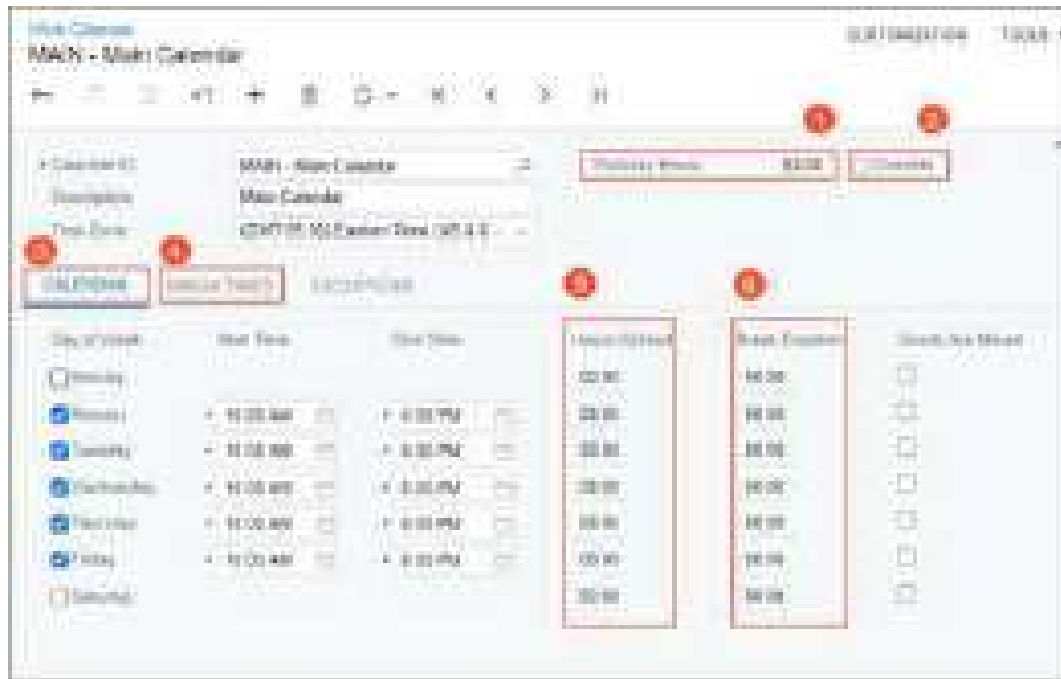


Figure: Updates to the Work Calendar form

The **Calendar Settings** tab has been renamed to **Calendar** (see Item 3 in the previous screenshot). The tab has been enhanced as follows:

- The read-only **Hours Worked** column (Item 5) has been added to the tab. The column displays the duration of the work time in hours and minutes for a particular day. The system calculates each duration in this column by using the following formula.

```
Hours Worked = End Time - Start Time - Break Duration
```

The formula uses the following parameters:

- End Time:** The time specified in the **End Time** column
- Start Time:** The time specified in the **Start Time** column
- Break Duration:** The duration shown in the **Break Duration** column.

The system recalculates the **Hours Worked** duration for a row if any of the following settings have been changed in the row: **Start Time**, **End Time**, and **Break Duration**.



If the administrative user specifies an end time of the workday that is earlier than the start time, the system considers the end of the workday to be on the following day. Suppose that the start time is set for 9:00 PM and the end time for 9:00 AM. Then the system calculates 12 hours in the **Hours Worked** column for that workday.

- The read-only **Unpaid Break Time** column has been renamed to **Break Duration** (Item 6) and moved in the table. This column now appears on the form regardless of whether the *Payroll* feature is enabled or disabled on the [Enable/Disable Features](#) (CS100000) form. The column shows the duration of a break (or multiple breaks) in hours and minutes within the working hours for a particular day. The system populates the column by using the data on the **Break Times** tab (Item 4), where the user can specify the duration of a break for all days at once or for a particular day. The system calculates the duration of each break by using the following formula.

```
Break Duration = Break End Time - Break Start Time
```


If multiple breaks occur on a particular day, the **Break Duration** for that day is the sum of the calculated break durations.

The formula uses the following parameters:

- Break End Time: A time specified in the **End Time** column on the **Break Times** tab
- Break Start Time: A time specified in the **Start Time** column on the **Break Times** tab

If the user changes the break times on the **Break Times** tab, the system updates the durations in the **Break Duration** column accordingly.

The **Break Times** tab has been moved on the form and is now available regardless of whether the *Manufacturing* feature is enabled or disabled on the *Enable/Disable Features* form.

On the **Exceptions** tab, the **Unpaid Break Time** column has been renamed to **Break Duration** and moved in the table.

Starting in Acumatica ERP 2024 R1, the out-of-the-box system provides the following work calendars for the *Eastern (US & Canada)* time zone on the *Work Calendar* form:

- **24H7WD**: In this calendar, the work week is set to 24 hours a day and 7 days a week.
- **EASTERN**: In this calendar, the work week is set to 8 hours a day (9:00 AM to 6:00 PM, with a break duration of 1 hour) and 5 days a week (Monday through Friday).

New Layout of the Case Classes Form

In Acumatica ERP 2024 R1, the layout of the *Case Classes* (CR206000) form has been improved to make the form consistent with other CRM forms. Now the form's subtitle (see Item 1 in the following screenshot) contains a combination of the case class ID and the description of the case (both of which are copied from the Summary area). Also, some UI elements on the **Details** tab have been added, moved, and renamed to improve usability.

The screenshot displays the Acumatica ERP interface for the 'Case Classes' form. The title bar shows 'DELIVERY - Sales and delivery of products, parts, services, and items'. The main content area is divided into several sections:

- Summary Area:** Contains fields for 'Case Class ID' (value: 200000) and 'Description' (value: Sales and delivery of products, parts, services, and items). A subtitle field is highlighted with a red box and labeled '1', containing the text '200000 - Sales and delivery of products, parts, services, and items'. Below this are buttons for 'Details', 'Workday Hours', and 'Work Calendar', with the latter two highlighted by red boxes and labeled '2' and '3' respectively.
- Workday Hours Section:** A section with a red box and label '3' containing a list of checkboxes: 'Workday Hours', 'Workday Hours', 'Workday Hours', 'Workday Hours', and 'Workday Hours'.
- Work Calendar Section:** A section with a red box and label '2' containing a list of checkboxes: 'Work Calendar', 'Work Calendar', 'Work Calendar', and 'Work Calendar'.
- Details Section:** A section with a red box and label '1' containing various fields and buttons, including 'Details', 'Workday Hours', and 'Work Calendar'.

Figure: Changes on the Case Classes form

The **Work Calendar** box (see Item 2 in the previous screenshot) and the **Workday Hours** box (Item 3) have been added to the Summary area; they are described in the *Changes to the Case Classes Form for Managing Commitments* section.

The **Reaction** tab has been renamed to **Commitments** (Item 4). The tab is available if the *Case Commitments* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

The **Details** tab of the [Case Classes](#) form has been changed as follows:

- The **Data Entry Settings** section (Item 5) has been added. The following UI elements have been moved to this section:
 - The **Require Customer** check box
 - The **Require Contact** check box
 - The **Allow Selecting Employee as Case Contact** check box
 - The **Require Contract** check box
 - The **Require Case Closure Notes** check box
- The **Billing Settings** section (Item 6) has been added. The following UI elements have been moved to this section:
 - The **Billable** check box
 - The **Enable Billable Option Override** check box
 - The **Billing Mode** box
 - The **Overtime Labor Item** box
 - The **Labor Item** box
 - The **Min Billable Time** box
 - The **Round Time by** box
- The new **Activity Settings** section (Item 7) has been added. The section includes the following new and existing UI elements:
 - The **Default Email Account** box.
 - The new **Track Solutions in Activities** check box.
The box is described in the *Changes to the Case Classes Form for Managing Commitments* section of this topic.
 - The **Days Allowed to Reopen Case** box.
The box has been renamed from **Allowed Period to Reopen Case (in Days)**.

Changes to the Case Classes Form for Managing Commitments

On the [Case Classes](#) (CR206000) form, the **Work Calendar** box (see Item 1 in the following screenshot) shows the work calendar used for cases of the class. This calendar defines the company's working hours for fulfilling customer commitments and monitoring fulfillment times. The default work calendar is *24H7WD* (which is predefined and provided with the out-of-the-box system, as described above).

The read-only **Workday Hours** box (Item 2) displays the duration of a working day (in hours and minutes) based on the selected work calendar. The system copies this duration from the [Work Calendar](#) (CS209000) form.



In Acumatica ERP, case management does not support calendars in which work time goes past midnight, although these calendars can be defined in the system. For example, if the start time of a particular work calendar on the [Work Calendar](#) form is set to *09:00 PM* and the end time is set to *03:00 AM*, an administrative user cannot save the case class with this work calendar selected.

Figure: New UI elements on the Case Classes form

If the new **Track Solutions in Activities** check box (see Item 3 in the previous screenshot) is selected, if a user creates an activity, task, event, or email (further referred to as *activity* for simplicity) for a case of the class, the **Case Solution Provided** check box appears on the respective form: [Activity](#) (CR306010), [Task](#) (CR306020), [Event](#) (CR306030), or [Email Activity](#) (CR306015). The user can select this check box, which is cleared by default, to indicate to the system that in this activity, a solution was provided for the case. For details, see the [Ability to Mark an Activity, Task, Event, or Email as Including a Case Solution](#) section.

The system shows a warning message next to the **Track Solutions in Activities** check box if this check box is cleared and all of the following conditions on the **Commitments** tab of the [Case Classes](#) form are met:

- In the **Stop Counting Time** box, *If Case Solution Is Provided in Activity* is selected.
- At least one check box is selected for time tracking (in any of the **Enable** columns).

To give administrative users the ability to specify target periods of time to fulfill commitments and time extensions for any commitment, new UI elements have been added to the **Commitments** tab of the [Case Classes](#) (CR206000) form (see the following screenshot). The tab is available only if the *Case Commitments* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

Figure: Commitment Settings on the Case Classes form

Three new groups of commitment settings have been added to the table on the tab. Each row in the table corresponds to a severity level of a case of the class. The table now has the following groups of columns:

- The first group (see Item 1 in the previous screenshot) relates to the time of the initial response to the customer's request (that is, the case) and includes the following columns:
 - **Enable** (which has the **Initial Response Time Tracking** tooltip): If the check box is selected, the **Target Initial Response Time** and **Initial Response Extension** columns are available for editing.
 - **Target Initial Response Time**: The target duration (in days, hours, and minutes) within which the company is expected to respond to the initial request from a customer.
 - **Initial Response Extension**: The additional time (in days, hours, and minutes) your company has to handle the customer request if the customer support representative does not fulfill the commitment according to the target initial response time after the severity or class of the case has been changed. If this column is empty, when a user enters a value in the **Target Initial Response Time** column, the system copies the value from the **Target Initial Response Time** column and inserts it into this column.
- The second group (Item 2) relates to the time of response to the customer's request within the case (it can be an email) and includes the following columns:
 - **Enable** (which has the **Response Time Tracking** tooltip): If the check box is selected, the **Target Response Time** and **Response Extension** columns are available for editing.
 - **Target Response Time**: The target duration (in days, hours, and minutes) within which the company is expected to respond to a customer's request regarding the case.
 - **Response Extension**: The additional duration (in days, hours, and minutes) your company has to handle the customer request if the customer support representative does not fulfill the commitment according to the target response time after the severity or class of the case has been changed. If this column is empty, when a user enters a value in the **Target Response Time** column, the system copies this value from the **Target Response Time** column and inserts it into this column.
- The third group (Item 3) relates to the time of resolving a case and includes the following columns:
 - **Enable** (which has the **Resolution Time Tracking** tooltip): If the check box is selected, the **Target Resolution Time** and **Resolution Extension** columns are available for editing.
 - **Target Resolution Time**: The target duration (in days, hours, and minutes) within which the company is expected to resolve a case by providing a solution to a customer's request.



Starting in Acumatica ERP 2024 R1, the **Reaction Time** column has been renamed to **Target Resolution Time**.

- **Resolution Extension:** The additional time (in days, hours, and minutes) your company has to resolve the case if the customer support representative does not fulfill the commitment according to the target resolution time after the severity or class of the case has been changed. If this column is empty, when a user enters a value in the **Target Resolution Time** column, the system copies this value from the **Target Resolution Time** column and inserts it into this column.

Additionally, for each case class with time commitments specified, the administrative user must indicate which event causes the system to stop counting the resolution time for a case. To do this, the **Resolution Time** section (Item 4) and **Stop Counting Time** box (Item 5) have been added. This box contains the following options:

- *If Case Becomes Inactive:* If the administrative user selects this option, the system stops tracking the resolution time for a case of the class when the status of the case has changed to *Resolved* or *Released* on the [Cases](#) (CR306000) form. When the case has either status, the system clears the **Active** check box on the form.
- *If Case Solution Is Provided in Activity:* If the administrative user selects this option, the system stops tracking the resolution time for a case of the class when a completed activity associated with the case is marked as including a case solution. That is, the system stops tracking the time when the **Case Solution Provided** check box is selected for the activity on the [Activity](#) (CR306010), [Task](#) (CR306020), [Event](#) (CR306030), or [Email Activity](#) (CR306015) form.

New Layout of the Cases Form

The layout of the [Cases](#) (CR306000) form has been improved to support case commitment management. Also, some UI elements have been added, renamed, and moved on the form.

In the Summary area, the following changes have been made:

- The **Class ID** box has been renamed to **Case Class** (see Item 1 in the following screenshot) and moved on the form.
- A new **Reported On** box (Item 2) displays the date and time of the case creation. Initially, the box is empty. The first time the user saves the case, the system automatically enters the current date and time; however, the user can override it.
- The following boxes have been moved on the form:
 - **Status** (Item 3)
 - **Reason** (Item 4)
 - **Subject** (Item 5)
 - **Location** (Item 6)
 - **Severity** (Item 7)
 - **Priority** (Item 8)
- The **Date Reported** and **SLA** boxes have been removed. The **Reported On** box is now used instead of **Date Reported**. The **SLA** box is replaced by new UI elements in the **Commitments** section of the **CRM Info** tab of the form, which are described below.

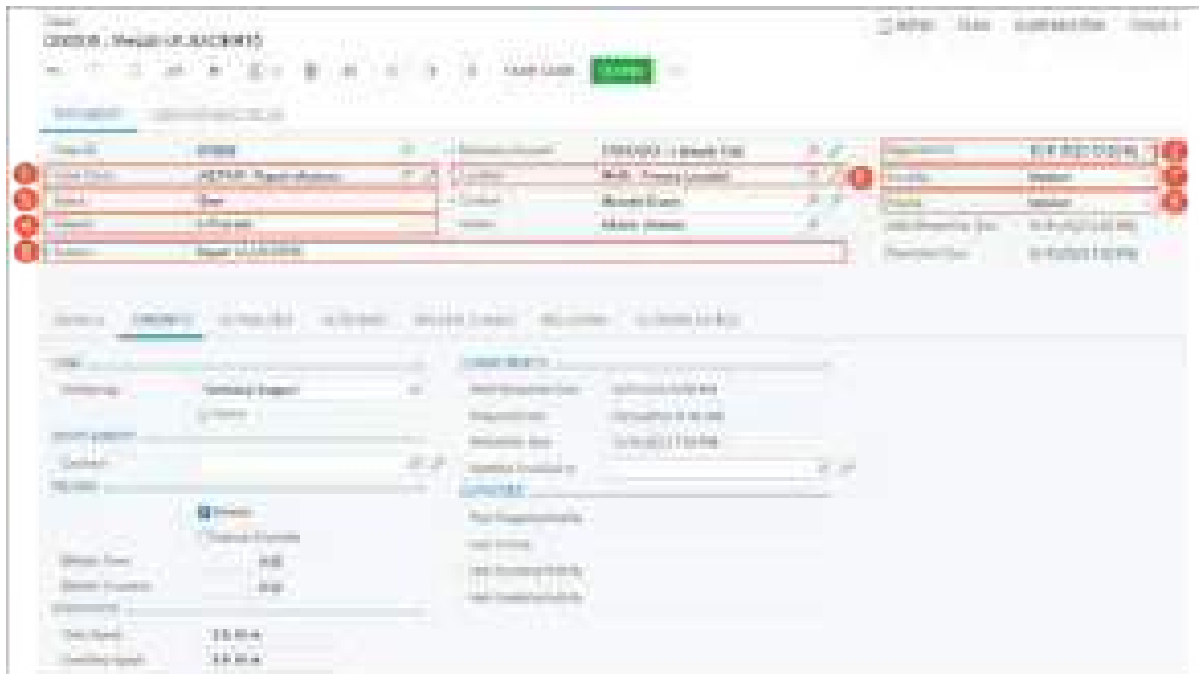


Figure: Changes in the Summary area of the Cases form

The **Additional Info** tab has been renamed to **CRM Info** (see Item 1 in the following screenshot).

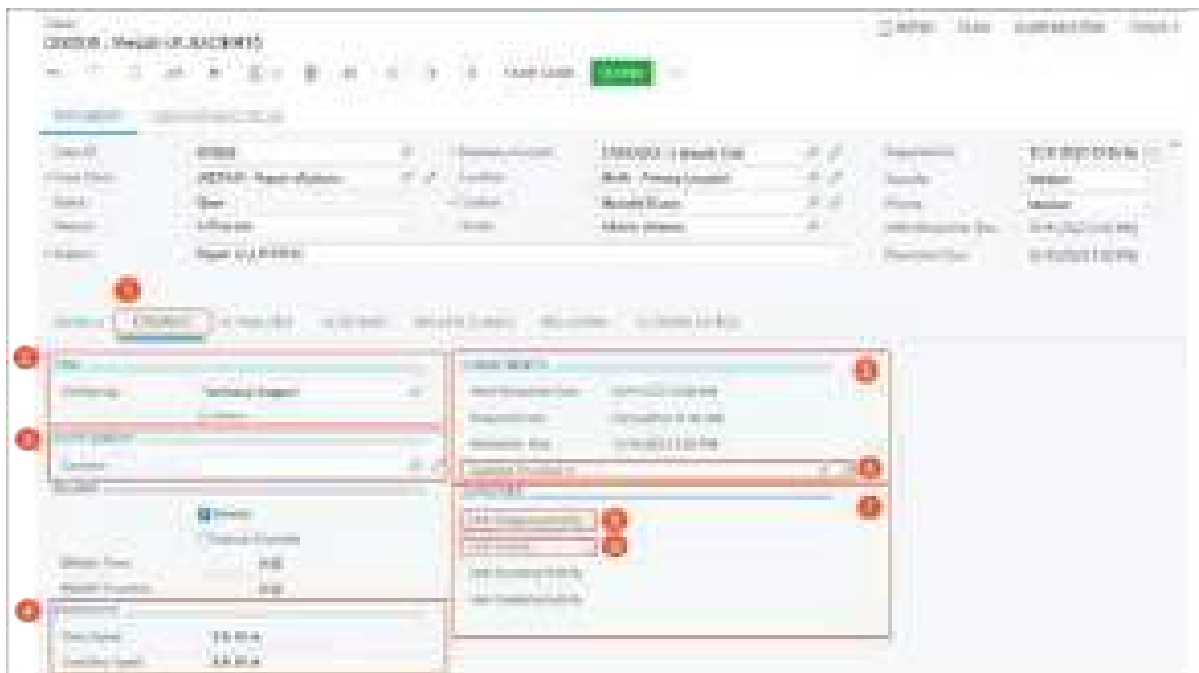


Figure: Changes on the CRM Info tab of the Cases form

The following changes have been made on the tab.

- The **CRM** section (see Item 2 in the previous screenshot) has been added and the following UI elements have been moved to the section:
 - The **Workgroup** box
 - The **Active** check box
- The **Entitlement** section (Item 3) has been added, and the **Contract** box has been moved to the section.

- The **Statistics** section (Item 4) has been added, and the following boxes have been moved to the section:
 - **Time Spent**
 - **Overtime Spent**

The **Resolution Time** and **Init. Response** boxes are now hidden.

- The **Commitments** section (Item 5), with the following new boxes, has been added:
 - **Initial Response Due**
 - **Response Due**
 - **Resolution Due**
 - **Solution Provided In**

The **Solution Provided In** box (Item 6) is available if the **Track Solution in Activities** check box is selected for the case class on the *Case Classes* (CR206000) form. If the **Solution Provided In** box of the *Cases* form is empty, the system fills it in with the description of the completed activity associated with the case for which the **Case Solution Provided** check box is selected on the *Activity* (CR306010), *Task* (CR306020), *Event* (CR306030), or *Email Activity* (CR306015) form. If the user reopens the activity, the system clears the **Solution Provided In** box on the *Cases* form.

The **Initial Response Due**, **Response Due**, and **Resolution Due** boxes are described in the following sections.

- The **Service Details** section has been renamed to **Activities** (Item 7) and now includes the following boxes:
 - **First Outgoing Activity** (Item 8).

This new box is read-only and initially empty. The system fills in the box with the date and time of the first completed outgoing activity associated with the case.
 - **Last Activity** (Item 9).

The box has been renamed from **Last Activity Date**.
 - **Last Incoming Activity**.
 - **Last Outgoing Activity**.
- The **Business Account** and **Resolution Time** boxes have been removed from the tab. The **Business Account** box now appears only in the Summary area. The **Resolution Time** box is replaced with the **Resolution Due** box.
- The **Closing Date** box has been renamed to **Closed On** and moved to the Summary area, as shown in the following screenshot. This box is shown only if the case is closed (that is, if the status of the case is *Closed* or *Released*).

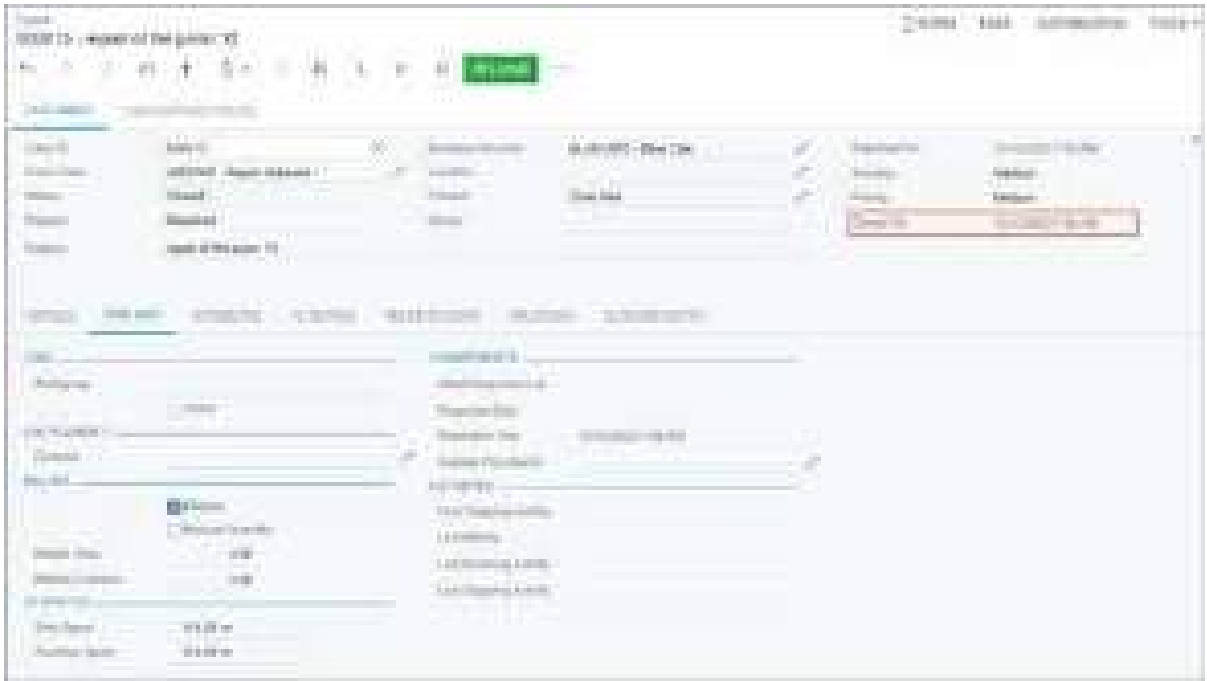


Figure: The new layout of the Cases form for a closed case

Tracking of the Initial Response Time

In Acumatica ERP 2024 R1, users can monitor a case's initial response time on the [Cases](#) (CR306000) form. The system calculates the initial response time and displays it in the **Initial Response Due** box. This box appears both in the Summary area (see Item 1 in the following screenshot) and on the **CRM Info** tab (Item 2) if the **Case Commitments** feature is enabled on the [Enable/Disable Features](#) (CS100000) form. In these boxes, users can see the date and time by which the company is expected to send an initial response to the case.

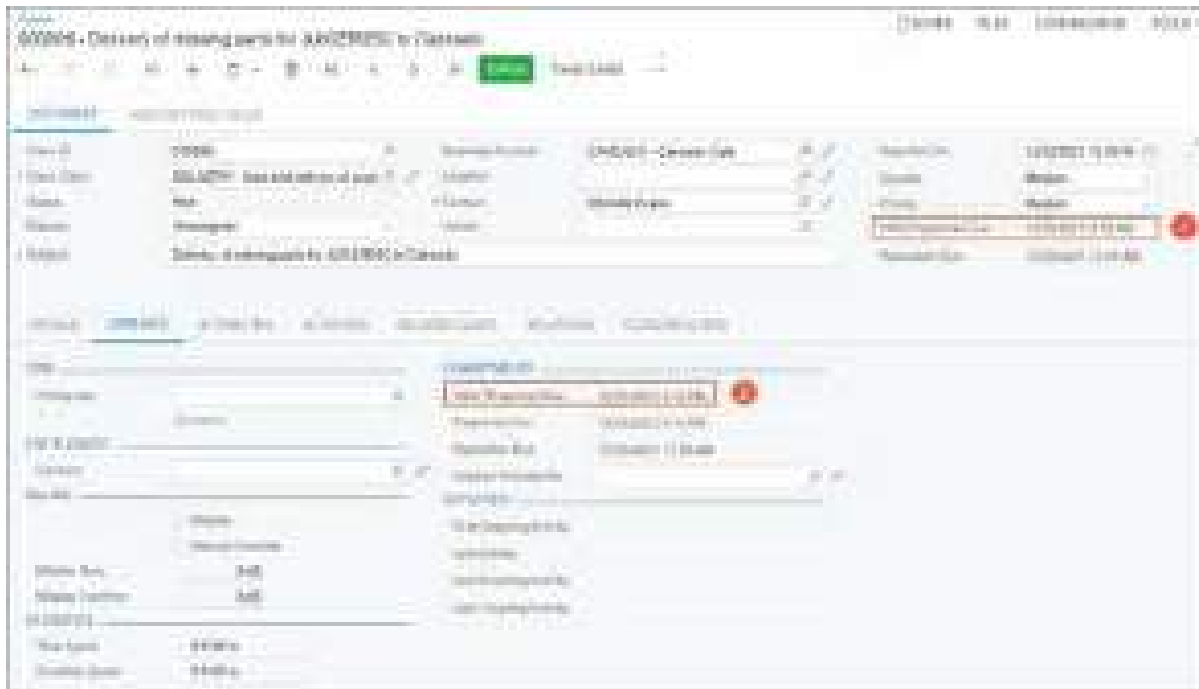


Figure: The Initial Response Due boxes

The read-only **Initial Response Due** box appears in the Summary area and on the **CRM Info** tab of the form if both the following conditions are met:

- The **Enable** check box (with the **Initial Response Time Tracking** tooltip) is selected on the **Commitments** tab of the [Case Classes](#) (CR206000) form for the severity level and class of the case.
If only this condition is met, the box appears only on the **CRM Info** tab of the form.
- The **Response Due** box on the **CRM Info** tab of the current form is empty or contains a date and time that are later than or the same as the date and time in the **Initial Response Due** box.

The system calculates the date and time in the **Initial Response Due** box as follows:

- If there is no outgoing activity for the case (that is, if the **First Outgoing Activity** box is empty), the system uses the following formula.

```
Reported On + Target Initial Response Time
```

The following parameters are used in this formula:

- `Reported On` is the date and time specified in the **Reported On** box in the Summary area of the current form.
- `Target Initial Response Time` is the duration of time specified in the **Target Initial Response Time** column on the **Commitments** tab of the [Case Classes](#) form for the class and severity level of the case.
- At the moment when the time extension becomes applicable, the system recalculates the initial response due time by using the following formula.

```
Current Time + Initial Response Extension
```

The following parameters are used in this formula:

- `Current Time` is the date and time when the severity or class of the case was changed.
- `Initial Response Extension` is the duration specified in the **Initial Response Extension** column on the **Commitments** tab of the [Case Classes](#) form for the class and severity level of the case.

The **Initial Response Due** box becomes hidden in the Summary area of the [Cases](#) form if the first outgoing activity has been created for a case (that is, the **First Outgoing Activity** box is filled in). Also, the **Initial Response Due** box on the **CRM Info** tab becomes empty.

The **Initial Response Due** box is not shown on the [Cases](#) form if any of the following conditions are met:

- The **Enable** check box (with the **Initial Response Time Tracking** tooltip) has become cleared on the **Commitments** tab of the [Case Classes](#) form for the class and severity level of the case.
- A user has removed the row with the severity level of the case from the **Commitments** tab of the [Case Classes](#) form for the case class.
- The case has become inactive (for example, if a user closes it).

Tracking of the Response Time

To monitor a case's response time commitment, users can use the **Response Due** box on the [Cases](#) (CR306000) form. The box appears both in the Summary area (see Item 1 in the following screenshot) and on the **CRM Info** tab (Item 2) if the *Case Commitments* feature is enabled on the [Enable/Disable Features](#) (CS100000) form. The box displays the date and time by which the company is expected to send a response to a request regarding the case.

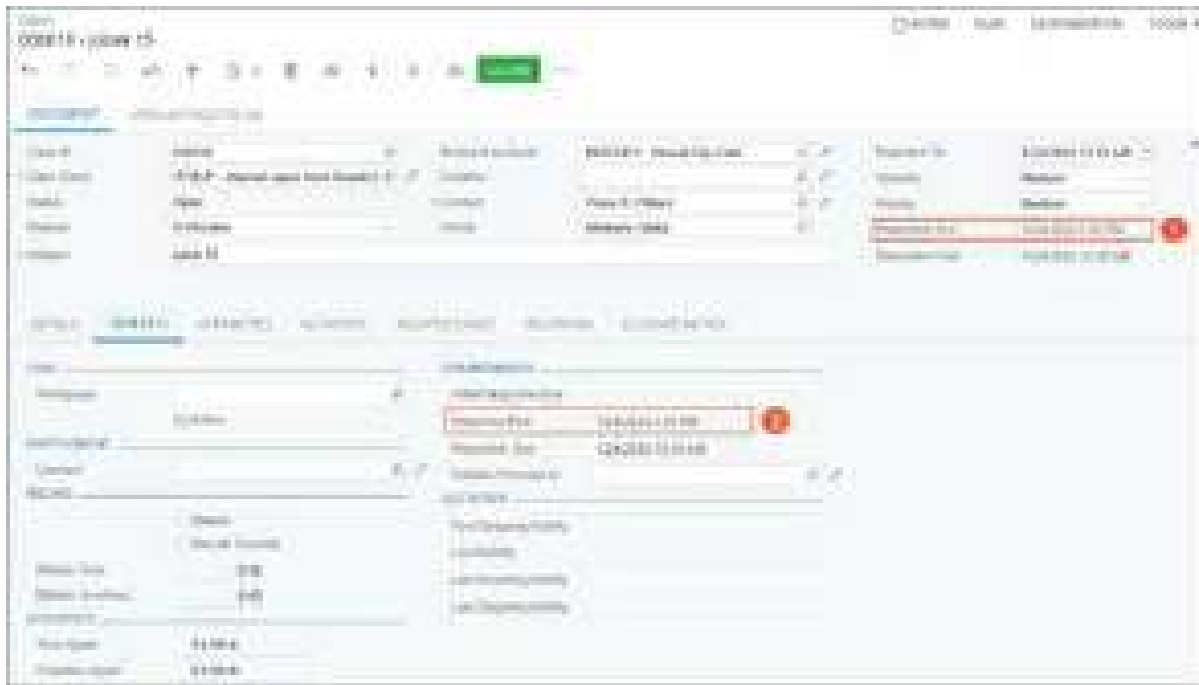


Figure: The Response Due boxes

The **Response Due** box is read-only and appears on the form instead of the **Initial Response Due** box if both of the following conditions are met:

- The **Enable** check box (with the **Response Time Tracking** tooltip) is selected on the **Commitments** tab of the **Case Classes** (CR206000) form for the severity level and class of the case.
- The **Initial Response Due** box on the **CRM Info** tab is empty or contains a date and time that later than the date and time in the **Response Due** box.

The system calculates the date and time in the **Response Due** box as follows:

- If the date and time in the **Last Incoming Activity** box is later than the date and time in the **Last Outgoing Activity** box, the system applies the following formula.

```
First Unanswered Incoming Activity + Target Response Time
```

- If there is no outgoing activity for the case (that is, if the **First Outgoing Activity** box is empty), the system uses the following formula.

```
Reported On + Target Response Time
```

The following parameters are used in this formula:

- **First Unanswered Incoming Activity** is the date and time of the first unanswered incoming activity.
Suppose that a customer service representative has received two incoming emails today, at 10:00 AM and 11:00 AM, and has not responded to either of them. The system considers 10:00 AM as the first unanswered incoming activity time and starts counting the response due time starting at this time.
- **Reported On** is the date and time specified in the **Reported On** box in the Summary area of the **Cases** form.
- **Target Response Time** is the time duration specified in the **Target Response Time** column on the **Commitments** tab of the **Case Classes** form for the class and severity level of the case.
- At the moment when the time extension becomes applicable, the system recalculates the response due time by using the following formula.

```
Current Time + Response Extension
```

The following parameters are used in this formula:

- `Current Time` is the date and time when the severity or class of the case was changed.
- `Response Extension` is the duration specified in the **Response Extension** column on the **Commitments** tab of the [Case Classes](#) form for the class and severity level of the case.

The **Response Due** box becomes hidden from the Summary area of the [Cases](#) form if the last outgoing activity has been created for the case (that is, the **Last Outgoing Activity** box is filled in, and its date and time is later than the date and time in the **Last Incoming Activity** box).

The **Response Due** box is not shown on the [Cases](#) form if any of the following conditions are met:

- The **Enable** check box (with the **Response Time Tracking** tooltip) has become cleared on the **Commitments** tab of the [Case Classes](#) form for the severity level and class of the case.
- A user has removed the row with the severity level of the case from the **Commitments** tab of the [Case Classes](#) form for the case class.
- The case has become inactive (for example, if a user closes it).

Tracking of the Resolution Time

For tracking the resolution time commitment, a user can view the **Resolution Due** box on the [Cases](#) (CR306000) form. The box contains the date and time by which the case must be resolved. It is shown both in the Summary area (see Item 1 in the following screenshot) and on the **CRM Info** tab (Item 2) if the *Case Commitments* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

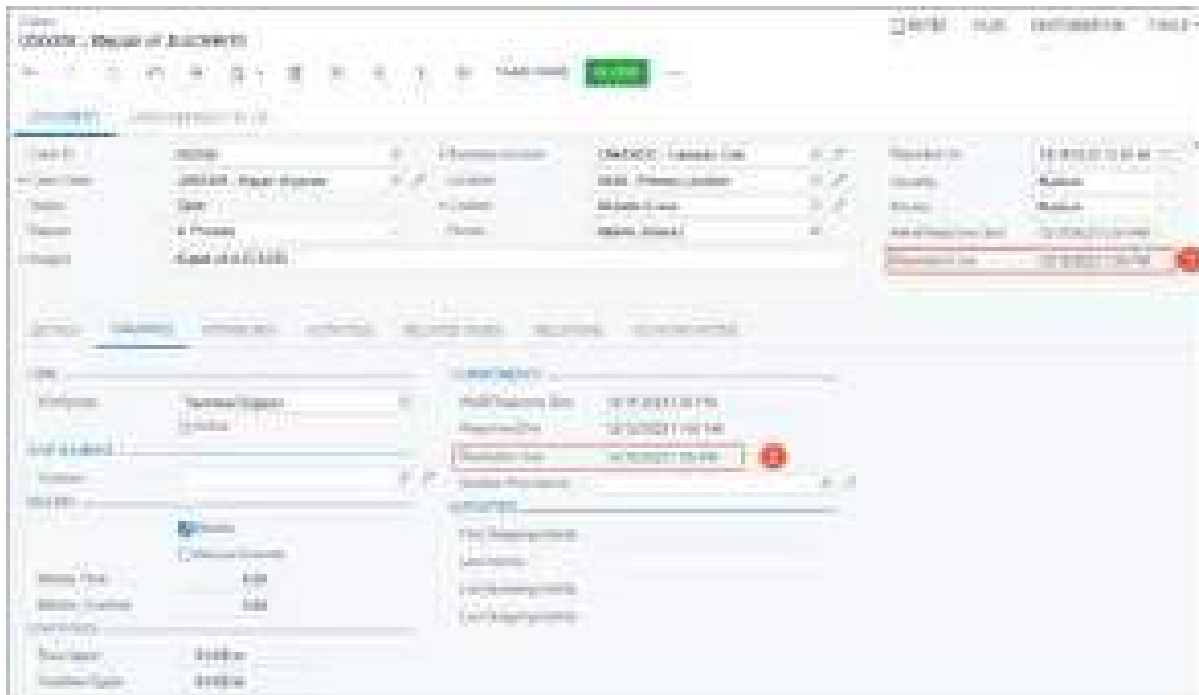


Figure: The Resolution Due boxes

The **Resolution Due** box is read-only and appears on the form if both of the following conditions are met:

- The **Enable** check box (with the **Resolution Time Tracking** tooltip) is selected on the **Commitments** tab of the [Case Classes](#) (CR206000) form for the severity level and class of the case.
- The case is active.

If the case is inactive, the box is shown only on the **CRM Info** tab of the form.

The system calculates the date and time in the **Resolution Due** box by using the following formula.

```
Reported On + Target Resolution Time
```

The system uses the formula above if either of the following conditions is met :

- The **Solution Provided In** box (**CRM Info** tab) is empty, and *If Case Solution is Provided in Activity* is selected in the **Stop Counting Time** box on the [Case Classes](#) form for the case class.
- The case is active (that is, the **Active** check box on the **CRM Info** tab is selected), and *If Case Becomes Inactive* is selected in the **Stop Counting Time** box on the [Case Classes](#) form for the case class.

The following parameters are used in this formula:

- `Reported On` is the date and time specified in the **Reported On** box in the Summary area of the [Cases](#) form.
- `Target Resolution Time` is the time duration specified in the **Target Resolution Time** column on the **Commitments** tab of the [Case Classes](#) form for the class and severity level of the case.

At the moment when the time extension becomes applicable, the system recalculates the resolution due time by using the following formula.

```
Current Time + Resolution Extension
```

The following parameters are used in this formula:

- `Current Time` is the date and time when the severity or class of the case was changed.
- `Resolution Extension` is the duration specified in the **Resolution Extension** column on the **Commitments** tab of the [Case Classes](#) form for the class and severity level of the case.

The **Resolution Due** box becomes hidden from the Summary area of the [Cases](#) form if either of the following conditions is met:

- The **Solution Provided In** box is filled in, and *If Case Solution is Provided in Activity* is selected in the **Stop Counting Time** box on the [Case Classes](#) form for the case class.
- The case has become inactive, and *If Case Becomes Inactive* is selected in the **Stop Counting Time** box on the [Case Classes](#) form for the case class.

The **Resolution Due** box is not shown on the [Cases](#) form if either of the following conditions is met:

- The **Enable** check box (with the **Resolution Time Tracking** tooltip) has become cleared on the **Commitments** tab of the [Case Classes](#) form for the severity level and class of the case.
- A user has removed the row with the severity level of the case from the **Commitments** tab of the [Case Classes](#) form for the case class.

Ability to Mark an Activity, Task, Event, or Email as Including a Case Solution

To provide users with the ability to mark an activity, task, event, or email as including a case solution, the **Case Solution Provided** check box has been added on the [Activity](#) (CR306010), [Task](#) (CR306020), [Event](#) (CR306030), and [Email Activity](#) (CR306015) forms.

The following screenshot shows the **Case Solution Provided** check box (Item 1) on the [Activity](#) form.

Figure: Changes to the Activity form

By default, this check box is cleared. It is available for selection on the form if all of the following conditions are met:

- In the **Related Entity Type** box, *Case* is selected.
- In the **Related Entity** box, an associated case is specified.
- The **Track Solutions in Activities** check box is selected on the *Case Classes* (CR206000) form for the case class.

Also, **Case Solution Provided** has been added to the list of hidden columns on the **Activities** tab of the *Cases* (CR306000) form.

The **Internal** check box (Item 2 in the previous screenshot) has been moved on the *Activity* form.

Changes to the Activity Statistics Calculation

Starting in Acumatica ERP 2024 R1, the system calculates activity statistics differently. Now the system inserts the date and time of activity completion (that is, when the activity is assigned the *Completed* status) into the following boxes of the *Cases* (CR306000), *Business Accounts* (CR303000), and *Leads* (CR301000) forms:

- **First Outgoing Activity**
- **Last Activity**
- **Last Incoming Activity**
- **Last Outgoing Activity**

UI Enhancements for Case Processing

Starting in Acumatica ERP 2024 R1, the following changes have been made on the *Cases* (CR306000) form to give users the ability to specify an activity as a case solution while closing a case.

- The **Details** dialog box, which opens when a user clicks **Pending Customer** on the form toolbar or More menu, has been renamed to **Pending Customer**.
- The **Details** dialog box, which opens when a user clicks **Close** on the form toolbar or More menu, has been renamed to **Close**.

- The **Solution Provided In** box has been added to the **Pending Customer** and **Close** dialog boxes. The box appears in the dialog box if the **Track Solutions in Activities** check box is selected on the **Case Classes** (CR206000) form for the case class.

The following screenshot shows the **Solution Provided In** box in the **Pending Customer** dialog box.

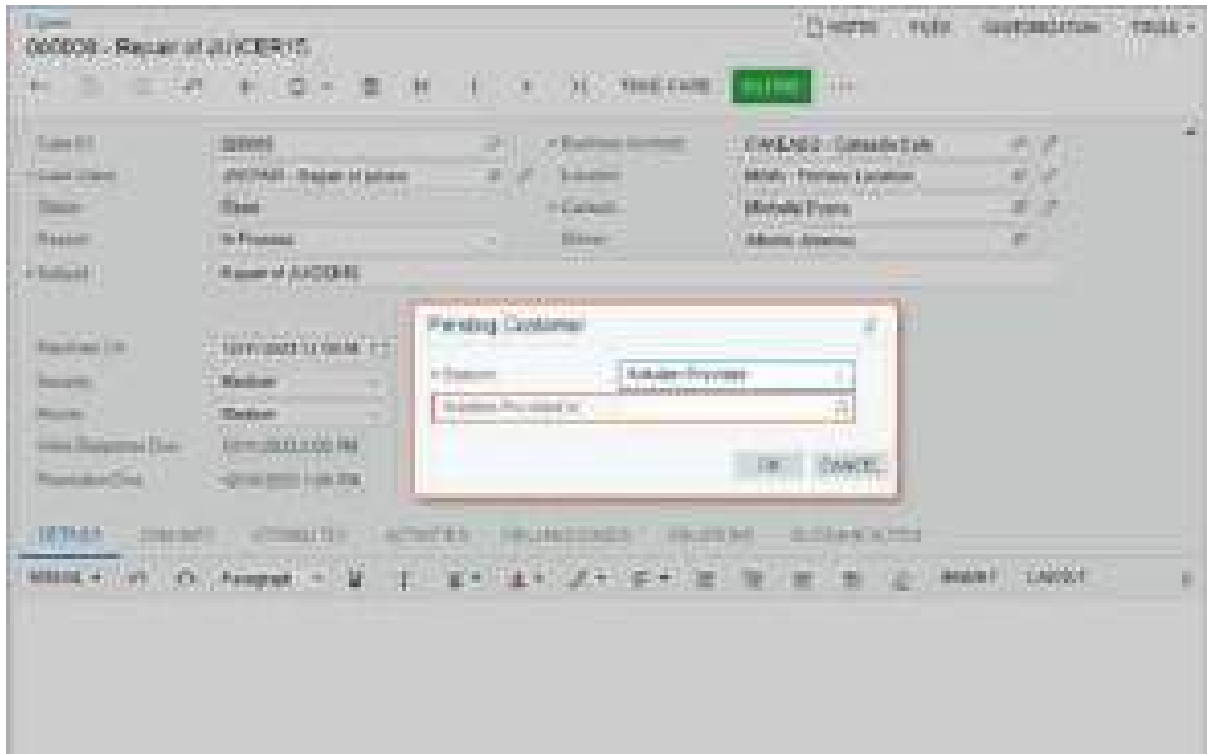


Figure: The Solution Provided In box

- The *Waiting Confirmation* reason in the **Pending Customer** dialog box has been renamed to *Solution Provided*.

When a user copies a case, the system does not copy the value of the **Solution Provided In** box to the new case.

The **Details** dialog box, which opens when a user clicks **Open** on the form toolbar or More menu of the **Cases** form, has been renamed to **Open** to make its title consistent with the titles of other dialog boxes on the form.

Changes to the Cases List of Records

In the *Cases (CR3060PL)* list of records, the following columns have been added to the list of available columns in the **Column Configuration** dialog box:

- Initial Response Due**
- Response Due**
- Resolution Due**

In the *Cases (CR3060PL)* list of records in the *System* tenant, the **Created On** column has been replaced with **Reported On**.

Changes to the Mobile App Screens

To give users the ability to mark an activity as a case solution by using the Acumatica mobile app, the **Case Solution Provided** box has been added to the *Event*, *Task*, *Email*, and *Activity* screens of the mobile app.

In Acumatica ERP 2024 R1, a user can select an activity as a case solution in the **Solution Provided In** box of the **Additional Info** section of the *Case* screen. Also, this box appears if a user clicks **Pending Customer** or **Close** in the screen menu.

Upgrade Notes

After an upgrade to Acumatica ERP 2024 R1, the *Case Commitments* feature will be enabled on the [Enable/Disable Features](#) (CS100000) form if any case class had contained at least one row on the **Reaction** tab of the [Case Classes](#) (CR206000) form.

On the [Work Calendar](#) (CS209000) form, the settings in the following UI elements will be calculated as follows for existing calendar records:

- The **Hours Worked** column (**Calendar** tab): The system recalculates the duration in this column by using the following formula.

```
Hours Worked = End Time - Start Time - Break Duration
```

- The **Workday Hours** box (Summary area): The system calculates the duration in this box as follows: The sum of the durations in the **Hours Worked** column for which the **Day of Week** check box is selected is divided by the number of selected days.
- The **Break Duration** column (**Calendar** tab): The durations in this column will remain unchanged and non-editable. Users can modify these durations by adding new rows on the **Break Times** tab.

On the [Case Classes](#) (CR206000) form for all case classes, the **Work Calendar** box (Summary area) will have the *24H7WD* option selected. On the **Commitments** tab of this form, the **Stop Counting Time** box will have the *If Case Becomes Inactive* option selected. In the table on this tab, the check box in the **Enable** column with the **Resolution Time Tracking** tooltip will be selected for a particular severity level if the value in the **Target Resolution Time** column (the **Reaction Time** column in previous versions) was a nonzero duration.

For existing cases on the [Cases](#) (CR306000) form, the system will populate the **Reported On** box with the value specified in the `CreatedDateTime` DAC field of the case. This field holds the date of case creation.

Additional Information

For more details about case commitment management, see [Case Classes: Case Commitments](#), [Case Management: Tracking of Case Commitment Times](#), and [Case Management: Time Extensions for Case Commitments](#).

CRM: Return Order Notifications

Acumatica ERP 2023 R2 introduced the ability to create a return order from the [Cases](#) (CR306000) form.

In Acumatica ERP 2024 R1, the system also provides the ability to notify support specialists regarding the closure of case-related return orders. Additionally, by using a newly introduced predefined generic inquiry, users can display the list of these return orders and their respective statuses.

Notifications About the Closure of Case-Related Return Orders

In Acumatica ERP 2024 R1, to give users the ability to monitor the closure of case-related return orders, new customer relationship management (CRM) *Return Order - Note* and *Return Order - Email* business events have been predefined on the [Business Events](#) (SM302050) form. By default, the business events are inactive; a system administrator can activate them.

These business events cause the system to generate notifications if the following conditions are met:

- The status of a case-related return order has been changed to *Completed*.
- The related case is active. That is, the status of the case is *New*, *Open*, or *Pending Customer*.



A case can be in an active or inactive state, and each state is determined by the case's status. The connection between the case's state and its status is established through the case workflow.

The return order is considered to be case-related if a row on the **Relations** tab of the [Sales Orders](#) (SO301000) form contains a link to the case for which the return order was created, and if the row has the following settings:

- **Role:** *Source*
- **Type:** *Case*

The following screenshot shows these options selected on the **Relations** tab for the selected return order. Thus, the return order is related to the listed case.

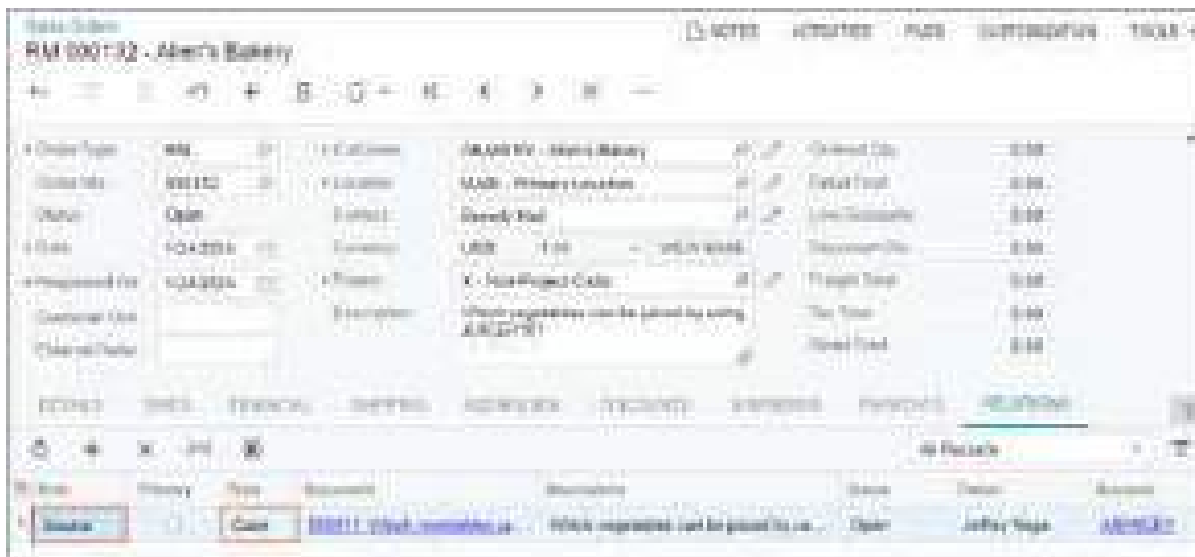


Figure: A case-related return order

The system can generate two types of notifications based on the newly created business events:

- A note: The *Return Order - Note* business event causes the generation of this type of notification.

- An email: The *Return Order - Email* business event causes the generation of this type of notification.

A system administrator can modify these business events to meet a company's specific needs. For example, a company can establish a notification policy to either send a single end-of-day notification or refrain from sending a notification if a customer has already received a notification for the same event for another reason than the closure of a case-related return order.

The type of notification that the system generates depends on whether an owner has been assigned to a related case.

If the case has no owner (that is, if the **Owner** box on the *Cases* form is empty), the system generates a note notification. That is, it creates an activity of the *Note* type on the *Activity* (CR306010) form and adds a row with a link to this activity on the **Activities** tab of the *Cases* form, as shown in the following screenshot. When the row with the note is selected, the user can view the entire text of the note at the bottom of the tab (also shown in the screenshot).

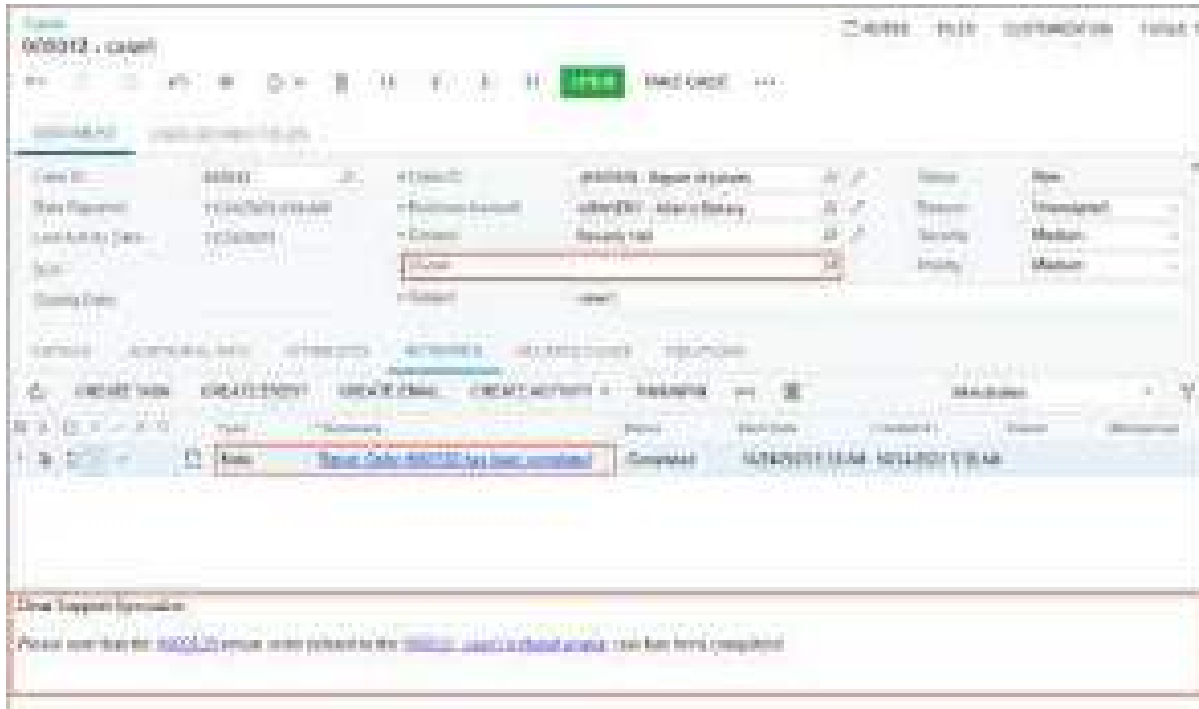


Figure: The note notification

If an owner has been assigned to the case, the system generates notifications of both types. The note notification is created as described above. The system generates the email notification by creating an activity of the *Email* type on the *Email Activity* (CR306015) form. The system sends the email to the owner of the case; it also adds a row with a link to this activity on the **Activities** tab of the *Cases* form, as shown in the following screenshot. When the row of the email activity is selected, the text of the email is shown at the bottom of the tab (also shown in the screenshot).

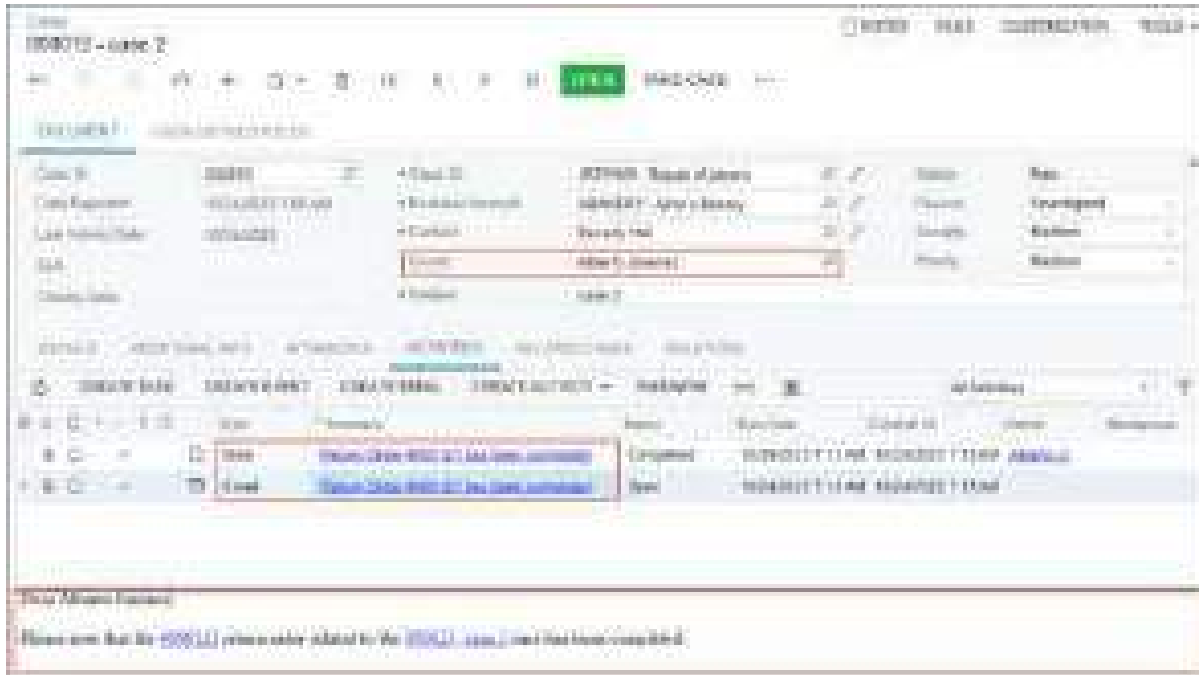


Figure: The note and email notifications

If multiple return orders are related to a particular case, the system generates the appropriate notifications for each return order.

The Return Orders Generic Inquiry

In Acumatica ERP 2024 R1, users can view a new predefined *CR-Return Orders* generic inquiry. The new generic inquiry has been created on the [Generic Inquiry](#) (SM208000) form.

On the resulting *Return Orders* (CR306017) inquiry form, the system displays the list of case-related return orders with their statuses, as shown in the following screenshot.

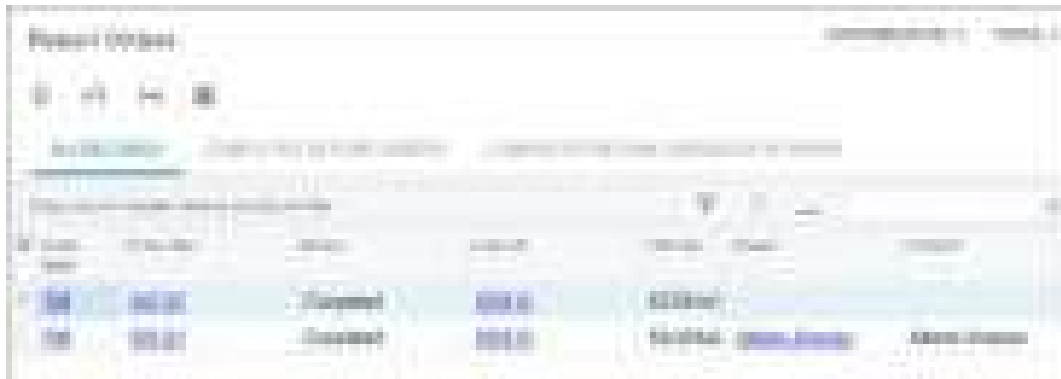


Figure: The Return Orders inquiry form

CRM: Simplified Adding of Multiple Approvers to an Approval Map

In many organizations, certain documents require approval from multiple employees across various departments.

In previous versions of Acumatica ERP, a user creating an approval map could select a specific employee for document approval on the **Rule Actions** tab of the [Approval Maps](#) (EP205015) form. This functionality had a limitation—only one employee could be selected at a time. When multiple employees from different departments needed to be assigned as approvers, users had to set complex conditions involving system fields, adding time to the process of creating an approval map.

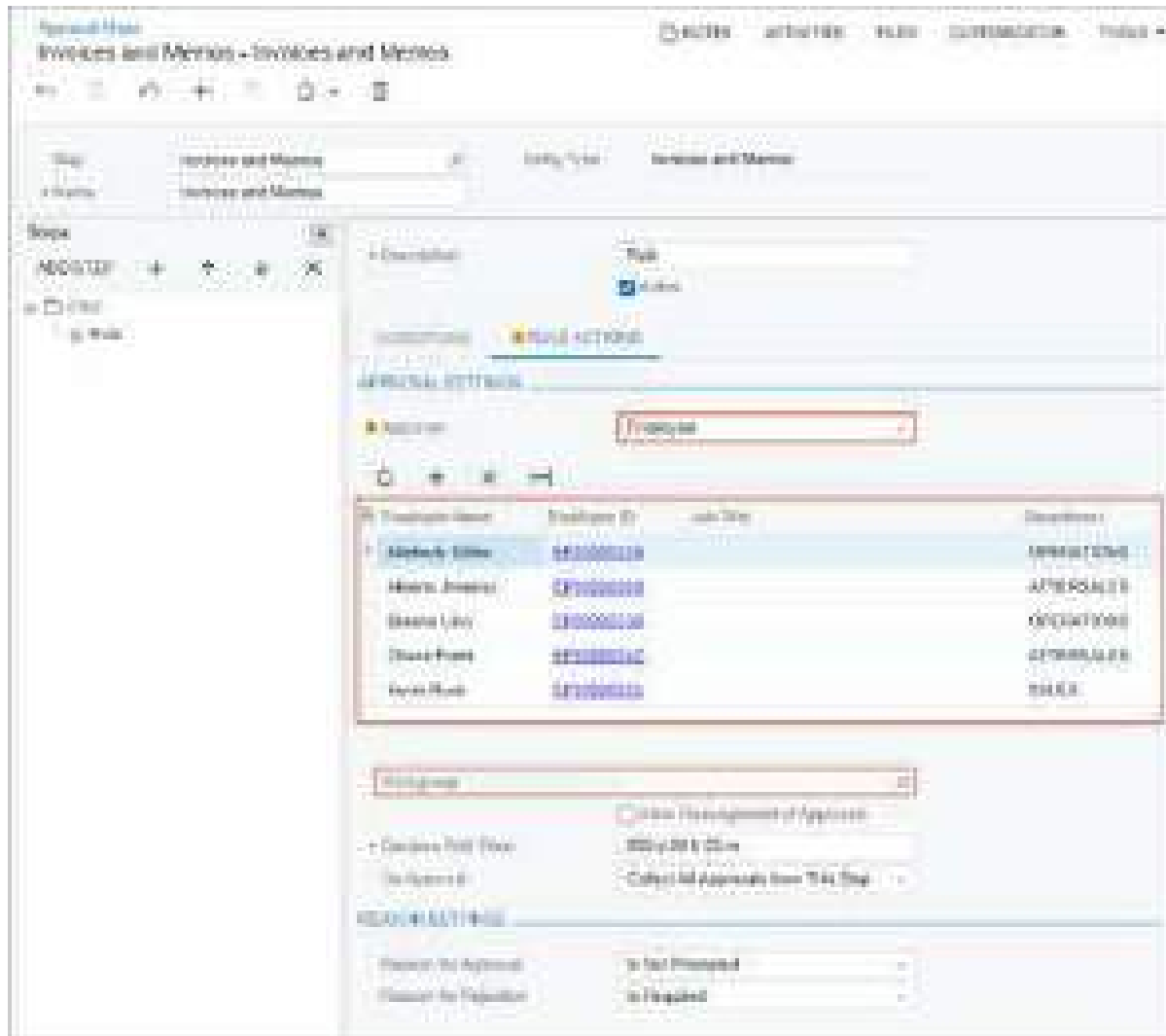
In Acumatica ERP 2024 R1, improvements have been made to the approval functionality to simplify the process of adding multiple approvers to approval maps.

Changes to the Approval Maps Form

The system now displays the *Approvers* table when the *Employee* option is selected in the **Approver** box on the **Rule Actions** tab of the [Approval Maps](#) (EP205015) form. In this table, you can list all employees who must approve a record of the specified entity type for the current step.

The following screenshot illustrates the selection of multiple employees in an approval map for the *Invoices and Memos* entity type.

Figure: Approvers table for the Invoices and Memos entity type



In the **Employee Name** column of each added row, the user can manually enter the employee name or select the employee.

The system fills in the following columns (whose values cannot be edited) when the user selects an employee in the **Employee Name** column:

- **Employee ID:** The identifier of the selected employee. This ID is also a link that a user can click to open the employee's record on the [Employees](#) (EP203000) form in a new browser tab.
- **Job Title:** The selected employee's job title.
- **Department:** The selected employee's department in the company.

If the user selects a workgroup on this tab, it may affect the Approvals table as follows:

- If the **Workgroup** box is filled in when a user adds a row to the table, the lookup table for the **Employee Name** column is refined to include only employees from the selected workgroup.
- If the **Workgroup** box is filled in or modified after rows have been added to the table, the system reviews the existing records in the table and removes the employees that do not belong to the newly selected workgroup.

Upgrade Notes

During the upgrade to Acumatica ERP 2024 R1, if any employee was previously specified for approval on the **Rule Actions** tab of the [Approval Maps](#) (EP205015) form, the system will add the employee to the Approvers table of the

tab. That is, if *Employee* was specified in the **Approver** box and an employee was selected in the **Employee** box for the rule or step of the approval map, as part of this upgrade, a row for the designated employee will be added to the new table. This provides a smooth transition to the new version with no additional effort required by the administrator.

CRM: Other Improvements

Acumatica ERP 2024 R1 introduces the improvement to the customer relationship management (CRM) functionality that is described below.

Enhancement on the Relations Tab of Multiple Forms

Multiple data entry forms have the **Relations** tab, which lists the entities related to the entity selected on the form. On several of these forms, in Acumatica ERP 2024 R1, the **Document Date** column has been added to indicate the date of creation of each listed entity. By default, the column is hidden, but a user can add the column to the table of the tab by using the **Column Configuration** dialog box.

The change on the **Relations** tab has been made on the following forms:

- [Leads](#) (CR301000)
- [Contacts](#) (CR302000)
- [Business Accounts](#) (CR303000)
- [Opportunities](#) (CR304000)
- [Sales Quotes](#) (CR304500)
- [Cases](#) (CR306000)
- [Sales Orders](#) (SO301000)

Enhancement on the Approvals Tab of Multiple Forms

If a company requires approvals for particular types of records, the system displays each record's approvals and rejections on the **Approvals** tab of the record's data entry form.

In previous versions of Acumatica ERP, the system showed all collected approvals on **Approvals** tab, including those that were obtained before a record was returned for revision.

Starting in Acumatica ERP 2024 R1, if a records is returned for editing (that is, its status is changed so that it can be edited), the system removes approvals from the **Approvals** tab. For example, a sales quote is returned for editing if a user clicks **Edit** on the form toolbar or the More menu of the [Sales Quotes](#) (CR304500) form, which causes the sales quote to have the *Draft* status. However, if an approver rejects the record and specifies a reason for the rejection, the system preserves this information on the **Approvals** tab of the data entry form, as shown in the following screenshot of the [Sales Quotes](#) form.



Figure: The preserved rejection on the Approvals tab

The enhancement to the **Approvals** tab has also been made to the following data entry forms of multiple areas:

- [Engineering Change Request](#) (AM210000)
- [Engineering Change Order](#) (AM215000)
- [Bills and Adjustments](#) (AP301000)
- [Checks and Payments](#) (AP302000)
- [Cash Purchases](#) (AP304000)
- [Invoices and Memos](#) (AR301000)
- [Payments and Applications](#) (AR302000)
- [Cash Sales](#) (AR304000)
- [Cash Transactions](#) (CA304000)
- [Sales Quotes](#) (CR304500)
- [Expense Claim](#) (EP301000)
- [Journal Transactions](#) (GL301000)
- [Daily Field Report](#) (PJ304000)
- [Projects](#) (PM301000)
- [Progress Worksheets](#) (PM303000)
- [Project Quotes](#) (PM304500)
- [Cost Projection](#) (PM305000)
- [Pro Forma Invoices](#) (PM307000)
- [Change Orders](#) (PM308000)
- [Change Requests](#) (PM308500)
- [Purchase Orders](#) (PO301000)
- [Requests](#) (RQ301000)
- [Requisitions](#) (RQ302000)
- [Subcontracts](#) (SC301000)
- [Sales Orders](#) (SO301000)

On the following forms, this enhancement has been made on the **Approval** tab:

- [Expense Receipt](#) (EP301020)
- [Employee Time Card](#) (EP305000)
- [Equipment Time Card](#) (EP308000)

Changes on the Activities Tab of Multiple Forms

In previous versions of Acumatica ERP, users seldom used two of the displayed columns on the **Activities** tab of multiple forms. Starting in Acumatica ERP 2024 R1, on the following forms, the **Created At** and **Workgroup** columns are hidden by default:

- [Leads](#) (CR301000)
- [Contacts](#) (CR302000)
- [Business Accounts](#) (CR303000)
- [Mass Emails](#) (CR308000)
- [Marketing Lists](#) (CR204000)
- [Marketing Campaigns](#) (CR202000)
- [Opportunities](#) (CR304000)
- [Sales Quotes](#) (CR304500)

- [Cases](#) (CR306000)
- [Employees](#) (EP203000)
- [Projects](#) (PM301000)
- [Project Tasks](#) (PM302000)
- [Project Quotes](#) (PM304500)

By using the **Column Configuration** dialog box, a user can still display either or both of these columns.

Documentation: Improvements in User Guides

In Acumatica ERP 2024 R1, significant improvements have been made to the content and structure of the guides that make up the documentation, as described in the following sections.

Implementation Guide

The following new chapters have been added to the [Acumatica ERP Implementation Guide](#):

- The [Implementing Approvals](#) chapter, which describes configuring and implementing the approval functionality. The new structure ensures that all information related to the configuration and implementation of the approval functionality is now consolidated under the same informational hierarchy. This chapter covers the following guidelines:
 - Enabling the approval functionality in the system
 - Creating approval maps for various entities
 - Applying an approval map and a notification template to each entity
- The [Corporate Cards](#) chapter has been added. The topics of this chapter explain how a user can configure a corporate card and allow employees to use this credit card for payments.
- The [Configuring Inventory Planning](#) chapter has been added. The topics of this chapter explain how an administrator can configure and implement inventory planning if the *Material Requirements Planning* or *Distribution Requirements Planning* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

Construction Form and Report Reference Information

The following changes has been made to the structure of the documentation related to Acumatica ERP Construction Edition:

- The [Construction Form Reference](#) and [Construction Reports](#) chapters have been removed from the [Construction Edition](#) Guide.
- In the Form Reference Guide, the [Construction Form Reference](#) chapter is now available.
- In the Report Reference Guide, the [Construction Reports](#) chapter is now available.

Inventory Planning Form Reference Information

The structure of the documentation related to Acumatica ERP Manufacturing Edition has been changed as follows: The [MRP Form Reference](#) chapter has been removed from the [Manufacturing Form Reference](#) Guide. It has been replaced by the [Inventory Planning Form Reference](#) chapter of the Form Reference Guide. This chapter consists of the following parts:

- [Inventory Planning Forms](#), which includes reference information for the forms that are available if the *Material Requirements Planning* or *Distribution Requirements Planning* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.
- [MPS Forms](#), which includes reference information for the forms that are available only if the *Material Requirements Planning* feature is enabled on the [Enable/Disable Features](#) form.

Improvements in Guides

In the [Project Accounting](#) Guide, the following changes has been made:

- The former [Billing Projects](#) chapter has been reworked into the following chapters:
 - [Preparing Projects to Billing](#): This chapter explains how a user can select the billing workflow for projects and how a user can check that the particular project is ready to be billed.

- [Billing Projects by Progress](#): This chapter is dedicated to billing projects based on their progress.
- [Billing Projects for Time and Material](#): This chapter explains how a user can bill projects based on the cost transactions that have been processed for the project.
- The [Correcting Project Invoices](#) chapter has been added. The topics of this chapter explain how a user can make corrections to project invoices depending on the billing workflow that is used for projects.
- The [Processing Expense Receipts with Corporate Cards](#) chapter has been moved to the [Time and Expenses](#) Guide.

In the [Time and Expenses](#) Guide, the following chapters are now available:

- [Processing Expense Receipts with Corporate Cards](#): This chapter explains how to process expense receipts with corporate cards.
- [Processing Expense Returns to Corporate Cards](#): This chapter explains how to refund expenses that previously were paid by corporate card.

The [Processing Expense Receipts with Corporate Cards](#) chapter has been moved to the [Time and Expenses](#) Guide from the [Construction Edition](#) Guide.

In the [Accounts Payable](#) Guide, the [Processing Expenses with a Corporate Credit Card](#) chapter has been renamed to [Processing Payments with a Corporate Card](#). This chapter describes how to manage payments to corporate cards when the corporate card functionality (provided with the [Expense Management](#) feature) is not activated in the system.

In the [Customer Relationship Management \(CRM\)](#) Guide, the following changes have been made:

- The [Case Classes: Case Commitments](#) topic has been added to the [Defining Case Classes](#) chapter. This topic explains which case commitments can be specified for the case class and how to set up tracking for their fulfillment.
- The [Case Management: Tracking of Case Commitment Times](#) and [Case Management: Time Extensions for Case Commitments](#) topics have been added to the [Managing Cases](#) chapter. These topics explain how to monitor the fulfillment of the case commitments and provide examples of time extensions being applied for cases.

Improved Navigation in the Infotip Pane

In Acumatica ERP, a user can quickly learn about a UI element (such as a box, check box, or option button) by hovering over its label and clicking the question mark that appears. The system opens an infotip, which is a pane with information and links related to the UI element.

In Acumatica ERP 2024 R1, the UI element's complete description now provides links to related documentation topics, as shown in the following screenshot.

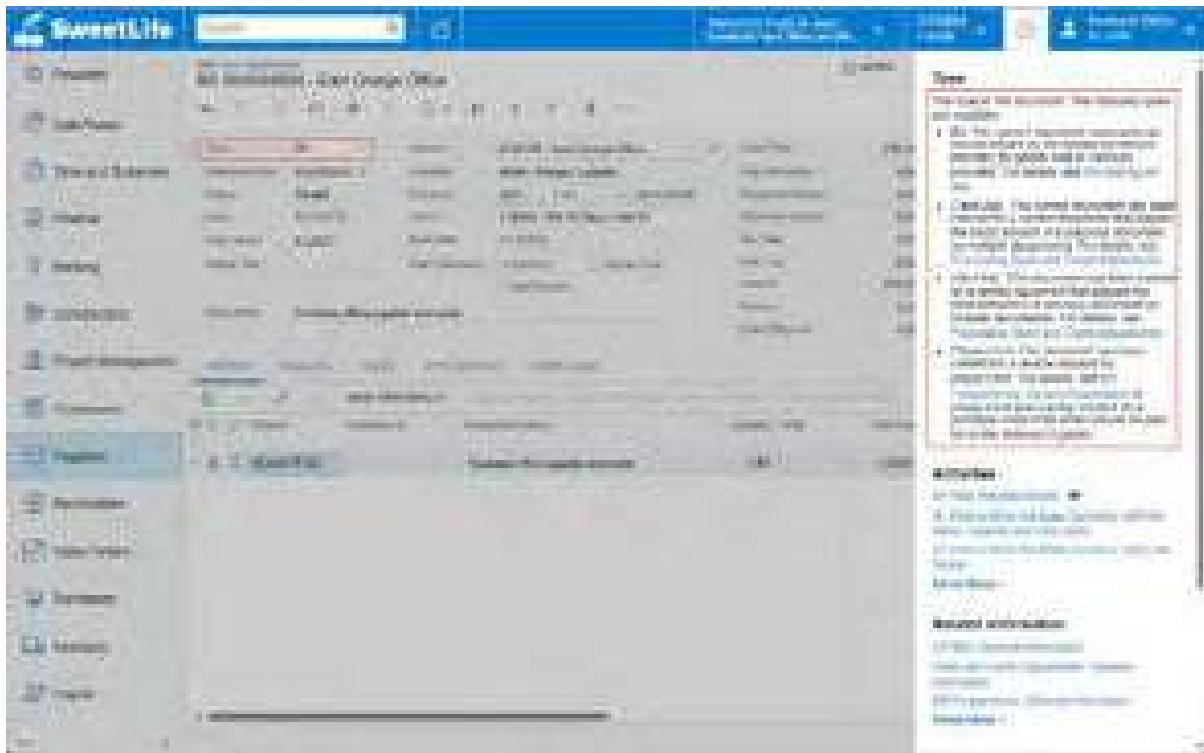


Figure: Description of the UI element in the infotip pane

Email Processing: Enhanced IMAP and POP3 Protocol Handling

In previous versions of Acumatica ERP, errors during the processing or delivery of an email through the IMAP or POP3 protocol disrupted the process, preventing the reception of new emails. Troubleshooting was challenging due to the absence of adequate diagnostic tools for email-related errors.

Starting in Acumatica ERP 2024 R1, an administrative user can enable an email processing log of all attempts to process or receive an email through IMAP or POP3, whether successful or not. If an error occurs during any stage of email processing, the system skips the affected email, ensuring uninterrupted reception of subsequent emails. A diagnostic message about the error is also recorded in the system event log.

The sections below provide details about the changes that support the enhanced handling of emails received through the IMAP and POP3 protocols.

Changes to the Email Preferences Form

The **Email Processing Logging** and **Keep Email Logs For** boxes have been added to the Summary area of the [Email Preferences](#) (SM204001) form, as shown in the following screenshot.

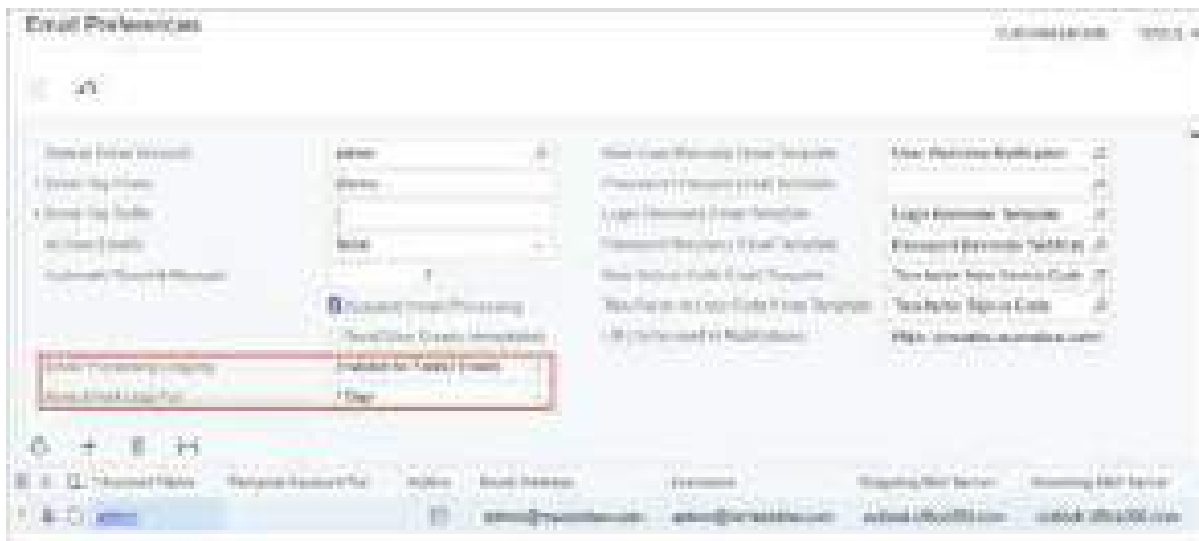


Figure: New elements on the Email Preferences form

By selecting an option in the **Email Processing Logging** box, an administrative user can specify whether the system should log information about email processing. The following options are available in the drop-down list:

- *Disabled*: No logging is performed.
- *Enabled for Failed Emails* (default): The system logs only information about errors that occur during the reception or processing of emails.
- *Enabled for All Emails*: The system logs information about all successful and failed attempts to receive or process emails.

In the **Keep Email Logs For** box, the administrative user selects the period of time (*1 Day, 1 Week, 1 Month, or 3 Months*) for which email processing logs should be stored in the system.

Email Processing Log Form

A new generic inquiry form, [Email Processing Log](#) (SM404100), has been added to the system. By using this form, an administrative user can view all log entries associated with email processing. These log entries are generated only

if the *Enabled for Failed Emails* or *Enabled for All Emails* option is selected in the **Email Processing Logging** box on the [Email Preferences](#) form.

In the out-of-the-box system, the administrative user can find the link to this form in the **System Management** workspace under the **System Health Monitoring** category.

Changes to the System Monitor Form

On the **System Events** tab of the [System Monitor](#) (SM201530) form, the *Email* option has been added to the drop-down list in the **Source** box. If this option is selected, events of the following levels (that is, with these values in the **Level** column) are listed in the table on this tab:

- *Information*: The system generates a record of this level if the *Enabled for Failed Emails* or *Enabled for All Emails* option is selected in the **Email Processing Logging** box on the [Email Preferences](#) form, and no errors occur during the reception of emails. The record includes the number of successfully received email messages for the specific email account.
- *Error*: The system generates a record of this level if the *Enabled for Failed Emails* option is selected in the **Email Processing Logging** box on the [Email Preferences](#) form, and the reception of emails results in errors. The record includes the number of errors that occurred during the reception of emails and the number of successfully received email messages for the specific email account.

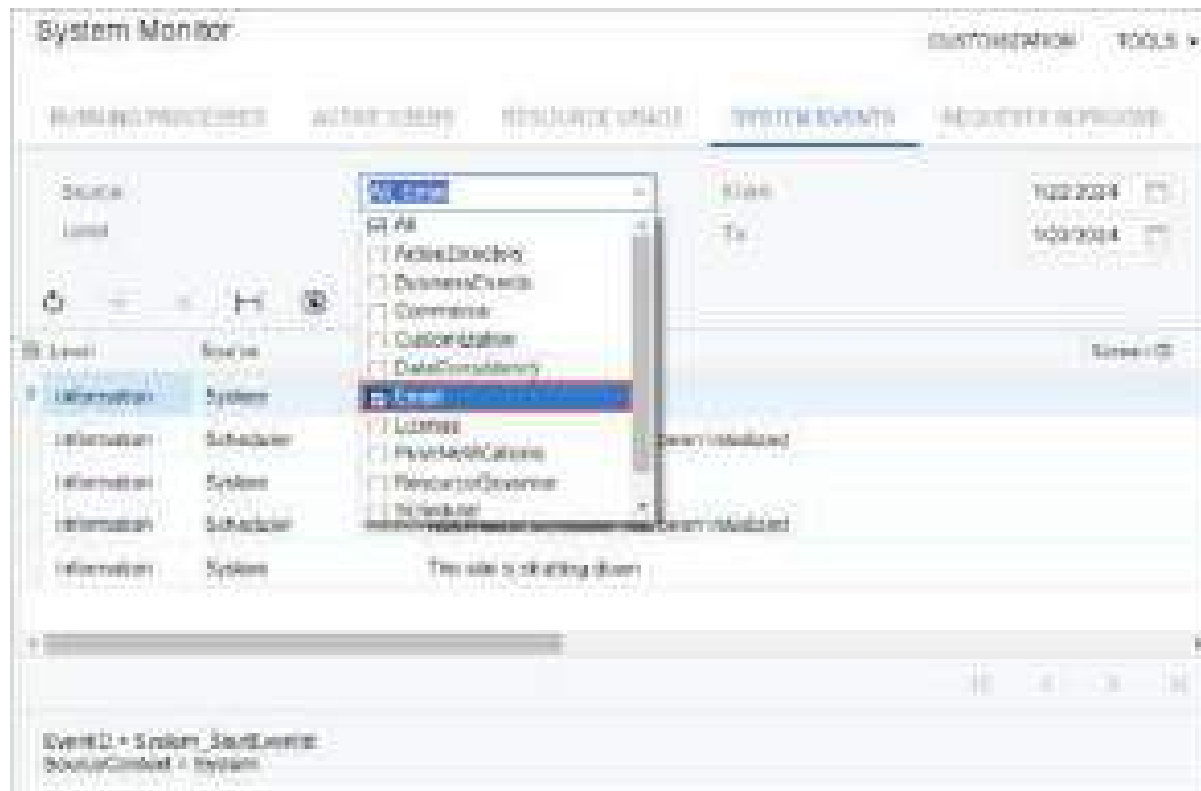


Figure: The new source of records shown in the system event log

Email Log Side Panel

On the [Email Accounts](#) (SM204002) form, a new tab, **Email Log**, has been added to the side panel, as shown in the following screenshot. By using this tab, an administrative user can access the *Email Processing Log (SM4041SP)* generic inquiry form with email log entries for the selected email account.

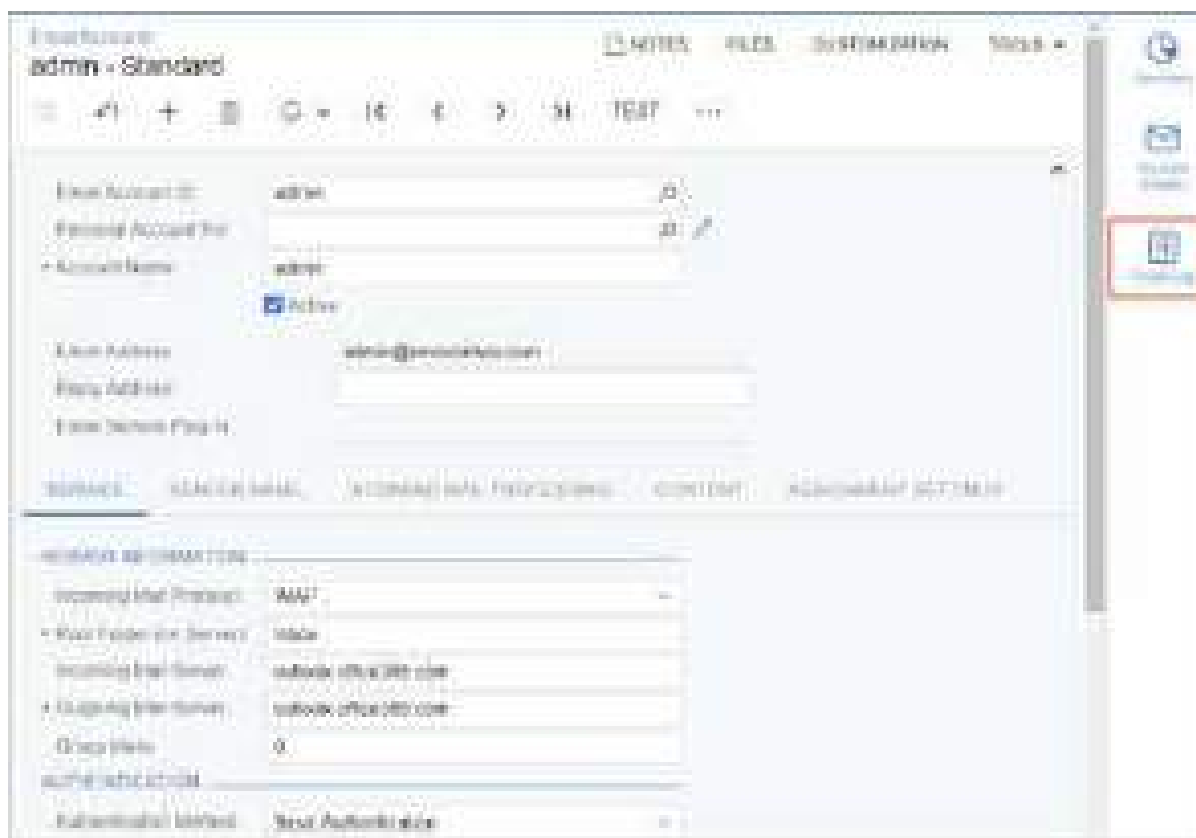


Figure: The Email Log icon on the side panel of the Email Accounts form

Field Services: Reversing SO Invoices Originating from Service Documents

In previous versions of Acumatica ERP, when a user needed to reverse a sales invoice generated from a service order or an appointment, they had to create a credit memo, which involved performing multiple manual steps. In the credit memo, in the Summary area of the *Invoices* (SO303000) form, the user had to specify the settings of the sales invoice to be reversed. On the **Details** tab of the form, the user had to manually add all the lines of the original sales invoice by clicking **Add Return Line** on the table toolbar. Finally, the user had to save and release the credit memo. Hence, reversing an invoice could be an error-prone process.

Acumatica ERP 2024 R1 offers an enhanced and simplified process of reversing sales invoices created from service documents. A user can now initiate the reversal of a sales invoice with just one click.



The ability to reverse a sales invoice (that is, a document of the *Invoice* type) created from a service document with a single click, as described in this topic, is available only if the *Service Management* and *Advanced SO Invoices* features are enabled on the *Enable/Disable Features* (CS100000) form.

Addition of Reverse Service Invoice Command

To simplify the process of reversing sales invoices created from service orders or appointments, the new **Reverse Service Invoice** command has been added to the More menu (under **Corrections**) of the *Invoices* (SO303000) form, as the following screenshot shows.



Figure: The Reverse Service Invoice command on the More menu

When a user clicks this command, the system creates a new document of the *Credit Memo* type and the *On Hold* status on the *Invoices* form. In the credit memo, in the Summary area, the **Date**, **Post Period**, and **Description** boxes are available for editing. The other boxes of the Summary area are filled in with the settings of the original invoice and are unavailable for editing. On the **Details** tab, all lines of the original sales invoice have been automatically added. On the table toolbar of this tab, the **Add** and **Delete** buttons are unavailable, so that no detail lines can be added or deleted.

When a user releases the credit memo, the original sales invoice is assigned the *Canceled* status. The associated service order or appointment can then be billed again.

Associated Changes

Because this new functionality has been introduced, a sales invoice originating from a service document cannot be corrected or canceled manually. That is, on the More menu of the *Invoices* (SO303000) form, the **Correct Invoice** and **Cancel Invoice** commands are unavailable.



The **Cancel Invoice** command is available for sales invoices generated from service documents only if the *Advanced SO Invoices* feature is disabled on the [Enable/Disable Features](#) (CS100000) form.

Additionally, when a user creates a document of the *Credit Memo* type manually, the user cannot add the detail lines of invoices originating from service documents. When the user clicks **Add Return Lines** on the table toolbar of the **Details** tab, these detail lines are no longer available in the **Add Return Lines** dialog box.

Upgrade Notes

After an upgrade to Acumatica ERP 2024 R1, the following notes apply to the existing sales invoices that have been created on the [Invoices](#) (SO303000) form:

- If a sales invoice has been created for a service order or an appointment before the upgrade but has not been released, the **Reverse Service Invoice** command will be unavailable for this invoice.
- If a sales invoice has been created and released for a service order or an appointment before the upgrade, the **Reverse Service Invoice** will be available for this invoice.
- If a sales invoice has been created for a service order or an appointment and a credit memo has been created for this invoice, the documents are affected as follows:
 - If the credit memo has not been released and it contains all lines of the original sales invoice, it will be available for release. However, the **Reverse Service Invoice** command will also be available for the sales invoice on the [Invoices](#) form. Hence, a user can either release the existing credit memo, or delete it and use the **Reverse Service Invoice** command to create a new credit memo.
 - If the credit memo has not been released and it does not contain all the lines of the original sales invoice, then it will not be available for release because detail lines cannot be added to an already-created credit memo. However, the **Reverse Service Invoice** command will be available for the original sales invoice. That is, the credit memo that was generated before the upgrade has to be deleted, and a user can create a new one by using **Reverse Service Invoice** for the original sales invoice.
 - If the credit memo has been released, the **Reverse Service Invoice** command will be unavailable in the original sales invoice.
- If a sales invoice has been created for a service order or an appointment and if a full or partial payment has been made for the invoice, clicking the **Reverse Service Invoice** command will return an error. The applied payment has to be deleted before a user can reverse the sales invoice.

Finance: Ability to Reverse a Cash Purchase Document

In previous versions of Acumatica ERP, a user could create a cash purchase document to record a purchase for which the payment was made at the time of the purchase (that is, when no liability was created because the payment was made upfront). If a full or partial refund had to be recorded, it was impossible to reverse a cash purchase document unless the user voided it.

In Acumatica ERP 2024 R1, the cash purchase processing functionality has been enhanced. Now a user can create a cash return document to register a full or partial refund for the items paid immediately. On the [Cash Purchases](#) (AP304000) form, a document of the *Cash Return* type can now be created. This document can be created in two ways.

Reversal of a Cash Purchase Document

A user can create a document of the *Cash Return* type by reversing a document of the *Cash Purchase* type that was previously recorded in Acumatica ERP.

On the More menu of the [Cash Purchases](#) (AP304000) form, the new **Return** command is now available (see the following screenshot).



Figure: The new Return menu command

When a user clicks this command for a cash purchase document of the *Closed* status, the system creates and opens the document of the *Cash Return* type and the *On Hold* status. The system copies details of the **Details**, **Financial**, **Taxes** and **Remittance** tabs of the [Cash Purchases](#) form from the original *Cash Purchase* document to the *Cash Return* document. On the **Financial** tab, the system inserts the reference number of the original cash purchase document in the **Orig. Ref. Nbr** box.

On the **Details**, a user can edit the details of the purchased items depending on whether they are recording a partial refund or a full refund.

The system does not copy the settings on the **Approvals** tab and the **Charges** tab. However, in the *Cash Return* document, on the **Charges** tab, a user can manually add a charge, either positive or negative.

Manual Creation of a Cash Return Document

A user can also manually create an independent cash return document on the [Cash Purchases](#) (AP304000) form. In the Summary area of the form, in the **Type** box, a user selects *Cash Return* (see the following screenshot). The user fills in all required details in the Summary area and on the **Details** tab of the form.



Figure: The new Cash Return document type

Cash Returns Intended for Depositing

A document of the *Cash Return* type can be added to a bank deposit on the *Bank Deposits* (CA305000) form. Because only payments recorded to clearing accounts associated with a bank account may be included in deposits, cash clearing accounts are available for selection in the **Cash Account** box in the Summary area on the *Cash Purchases* (AP304000) form for documents of the *Cash Return* type.

If a user wants to add a cash return to a deposit, they have to select a clearing cash account in the **Cash Account** box before releasing the cash return. Once a clearing account is selected, the system selects the **Batch Deposit** check box on the **Financial** tab (**Payment Info** section), which means that the cash return will be available for selection on the *Bank Deposits* form. When a cash return has been added to a deposit on the *Bank Deposits* form and the deposit has been released, the system does the following on the **Financial** tab of the *Cash Purchases* form:

- Selects the **Deposited** check box
- Specifies the date when the cash return was deposited in the **Batch Deposit Date** box
- Inserts the reference number of the batch deposit that includes this cash return in the **Batch Deposit Nbr.** box

If the bank deposit that includes a cash return was voided for any reason on the *Bank Deposits* form, the system clears the **Deposited**, **Batch Deposit Date**, and **Batch Deposit Nbr.** elements on the **Financial** tab of the *Cash Purchases* form, which returns them to their original state. The *Cash Return* document then becomes available for inclusion in another bank deposit on the *Bank Deposits* form.

Changes to the Cash Purchases Form

The new **Payment Info** section has been added to the **Financial** tab of the *Cash Purchases* (AP304000) form (see the following screenshot).

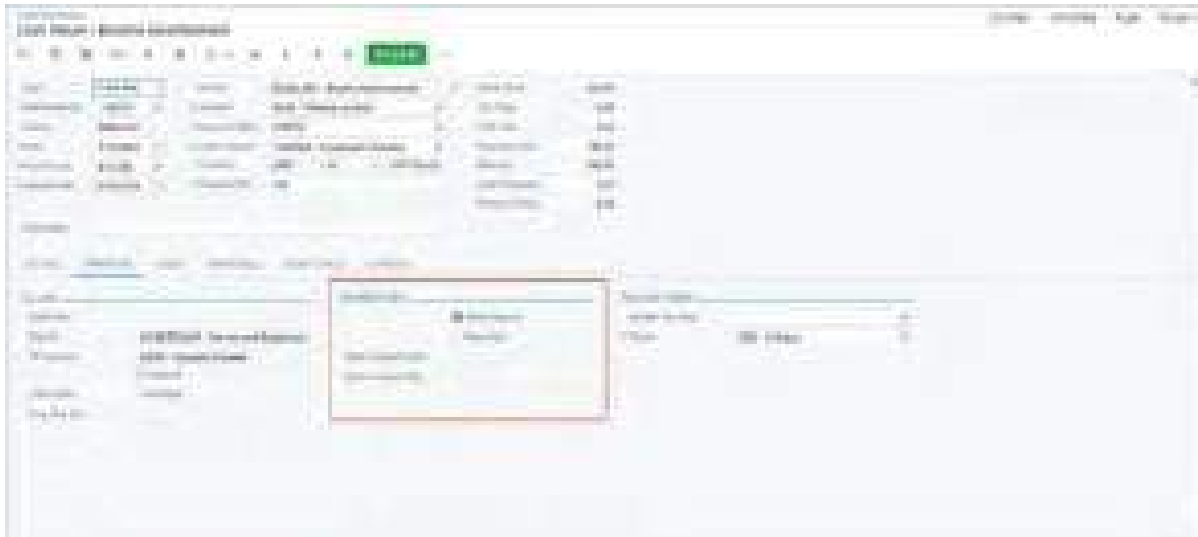


Figure: The new *Payment Info* section

The following UI elements, which are related to depositing a document of the *Cash Return* type, are available:

- **Batch Deposit:** A check box (selected by default) that indicates that the cash return should be deposited. A user can clear this check box if needed. Deposits can be performed only from a clearing account.
- **Deposited:** A check box that indicates (if selected) that the cash return has been deposited. The system selects this check box automatically once a bank deposit that includes the cash return is released.
- **Batch Deposit Date:** The date when the cash return was deposited. The system specifies the date automatically once a bank deposit that includes the cash return is released.
- **Batch Deposit Nbr.:** The reference number of the batch deposit that includes this cash return. The system specifies this number automatically once a bank deposit that includes the cash return is released.

Finance: Approval and Rejection Reasons on Financial Forms

Some companies need approvers to enter a reason for the approval or rejection of a financial document. In previous versions of Acumatica ERP, the functionality defining whether an approver must enter a reason was supported on some forms, such as the [Journal Transactions](#) (GL301000) form. Other finance-related data entry forms did not support this functionality.

Starting in Acumatica ERP 2024 R1, the following forms support the entry of reasons for the approval or rejection of documents:

- [Bills and Adjustments](#) (AP301000)
- [Invoices and Memos](#) (AR301000)
- [Checks and Payments](#) (AP302000)
- [Payments and Applications](#) (AR302000)
- [Cash Transactions](#) (CA304000)
- [Cash Sales](#) (AR304000)
- [Cash Purchases](#) (AP304000)



This functionality is available in the system if the *Approval Workflow* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

Changes to the Approval Maps Form

On the [Approval Maps](#) (EP205015) form, the **Reason Settings** section on the **Rule Actions** tab is now shown if one of the following entity types is selected:

- *Bills and Adjustments*
- *Cash Purchases*
- *Cash Sales*
- *Cash Transactions*
- *Checks and Payments*
- *Invoices and Memos*
- *Payments and Applications*

The following screenshot illustrates the reason settings for the *Invoices and Memos* entity type.

The screenshot shows the 'AR Invoice Approval Map - Invoices and Memos' configuration window. The 'Reason Settings' section is highlighted with a red box and contains the following fields:

Field	Value
Reason for Approval	Is Not Prompted
Reason for Rejection	Is Required

Figure: Reason settings for the Invoices and Memos entity type

In these boxes, an administrator can select one of the following options, which determine what happens during approval and rejection, respectively, of the AR, AP, and cash documents affected by the map:

- *Is Optional*: The approver is prompted to enter a reason when they approve or reject a document, but the reason is an optional setting.
- *Is Required*: The approver is prompted to enter a reason when they approve or reject a document, and the reason must be specified.
- *Is Not Prompted*: The approver is not prompted to enter a reason when they approve or reject a document.

Other UI Changes

The UI changes described in this section have been made on the following forms:

- [Bills and Adjustments](#) (AP301000)
- [Invoices and Memos](#) (AR301000)
- [Checks and Payments](#) (AP302000)
- [Payments and Applications](#) (AR302000)
- [Cash Transactions](#) (CA304000)
- [Cash Sales](#) (AR304000)
- [Cash Purchases](#) (AP304000)

For an entity type with optional or required approval configured, when a user approves or rejects a document of the type on the data entry form, the system displays the **Enter Reason** dialog box. The following screenshot shows the dialog box on the [Invoices and Memos](#) (AR301000) form.

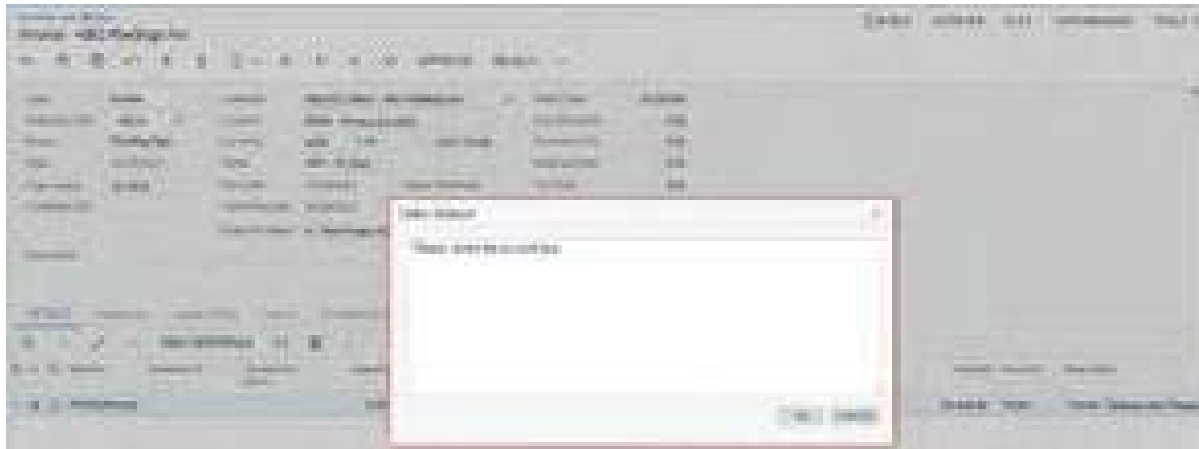


Figure: The Enter Reason dialog box on the Invoices and Memos form

The approver enters the reason for approval or rejection in this dialog box and clicks **OK**.

The reason is also displayed on the **Approvals** tab of the data entry forms listed above. The following screenshot shows the **Reason** column with the reason specified on the *Invoices and Memos* form.



Figure: The Approvals tab on the Invoices and Memos form

Upgrade Notes

After an upgrade to Acumatica ERP 2024 R1, the existing approval maps created for the affected entity types will have the following settings on the *Approval Maps* (EP205015) form:

- **Reason for Approval:** *Is Not Prompted*
- **Reason for Rejection:** *Is Not Prompted*

Finance: Calculation of Cash Discounts on Taxable Amounts

Some companies offer a cash discount (also called an *early payment discount*) if a customer pays a document before a certain date. (The payment terms specify the date and the percent of the discount.) In some countries, to calculate the cash discount, the company applies the cash discount percent to the document total; in other countries, this percent is applied to the taxable amount.

In previous versions of Acumatica ERP, a company could apply the percent in either way, depending on whether a specific feature was enabled:

- If the *Canadian Localization* feature was disabled on the [Enable/Disable Features](#) (CS100000) form, the cash discount percent was applied to the document's total amount.
- If the *Canadian Localization* feature was enabled, the cash discount percent was applied to the document's taxable amount.

Acumatica ERP 2024 R1 introduces the feature-independent ability to apply cash discounts to taxable amounts.

Changes to the Companies Form

On the **Company Details** tab of the [Companies](#) (CS101500) form, the **Cash Discount Base** box, shown in the following screenshot, has been added.

The screenshot shows a software interface for managing products. The main title is 'PRODUCTS - Revision Two Products'. Below the title, there are several sections for data entry:

- Company Information:** Includes fields for 'Company ID', 'Company Name' (Revision Two Products), and 'Company Type' (With Executive Payroll Allowance).
- Product Information:** Includes 'Product Name' (Revision Two Products), 'Product Code', 'Product Description', 'Product Category', 'Product Subcategory', 'Product Unit of Measure', 'Product Weight', 'Product Length', 'Product Width', 'Product Height', and 'Product Volume'.
- Address Information:** Includes 'Address Line 1', 'Address Line 2', 'City', 'Country', 'State', and 'Zip Code'.
- Cash Discount Base:** A dropdown menu is highlighted with a red box, showing 'Document Amount' as the selected option. Other options include 'Document Amount Less Taxes'.
- Localization Information:** Includes 'Localization ID', 'Localization Name', 'Localization Code', 'Localization Description', 'Localization Unit of Measure', 'Localization Weight', 'Localization Length', 'Localization Width', 'Localization Height', and 'Localization Volume'.

Figure: The Cash Discount Base box on the Companies form

One of the following options can be selected in this box:

- **Document Amount:** The cash discount percent will be applied to the total amount of a document, which is the purchase price or sales price plus the tax amount.
- **Document Amount Less Taxes:** The cash discount percent will be applied to the taxable amount of the document. The tax amount calculated for the document will be the same regardless of whether a cash discount is applied to the document.

If the *Canadian Localization* feature is enabled on the [Enable/Disable Features](#) (CS100000) form and *Canada* is selected in the **Localization** box on the [Companies](#) form for a company, **Document Amount Less Taxes** will be selected by default in the **Cash Discount Base** box. The user can override this value, but the system will display a warning message.

By default, when a user creates a new company, this setting is copied from the first active company that exists in the system. If no active companies have been created yet, the *Document Amount* option will be selected by default.

Changes in the Calculation of Cash Discounts

Cash discounts are calculated automatically on the [Invoices and Memos](#) (AR301000), [Bills and Adjustments](#) (AP301000), [Cash Sales](#) (AR304000), [Cash Purchases](#) (AP304000), [Invoices](#) (SO303000), and [Journal Vouchers](#) (GL304000) forms. The system now calculates cash discounts as follows:

- If the document's originating branch belongs to a company with *Document Amount* specified in the **Cash Discount Base** box on the [Companies](#) (CS101500) form, the cash discount is calculated as $\text{Cash Discount} = \text{Document Amount} * \text{cash discount \%}$.
- If the document's originating branch belongs to a company with *Document Amount Less Taxes* specified in the **Cash Discount Base** box, the cash discount is calculated as $\text{Cash Discount} = (\text{Document Amount} - \text{Tax Total}) * \text{cash discount \%}$.



These calculations are applied only to sales taxes, not use taxes.

Upgrade Notes

After an upgrade to Acumatica ERP 2024 R1, for companies that have *Canada* selected in the **Localization** box on the [Companies](#) (CS101500) form, the **Cash Discount Base** box on the same form will be set to *Document Amount Less Taxes*.

In all other cases, the **Cash Discount Base** box on the [Companies](#) form will be set to *Document Amount*.

Additional Information

For details on processing taxable AR documents with cash discounts, see [Invoices with Sales Taxes: To Process an AR Invoice with a Cash Discount](#) and [AR Documents with VAT: To Process an AR Invoice with a Cash Discount](#).

Finance: Cash Discounts and Terms in Credit Memos

In previous versions of Acumatica ERP, users had no way to specify the due date in credit memos that were created in the system. As a result, the credit memos that appeared in AR aging reports had due dates that were the same as the report aging date or the document date, depending on the preferences settings. Credit memos could not be used in cash flow forecasting on the [Cash Flow Forecast](#) (CA658000) form. Also, users could not specify a cash discount for a credit memo. As a result, if an original invoice with a cash discount was reversed, the created credit memo did not have the cash discount that the invoice had.

To address these issues, in Acumatica ERP 2024 R1, administrators can enable the use of credit terms for credit memos, and users can create credit memos with cash discounts.

The following sections describe the UI changes and changes in document processing that have been made to support this functionality.

Changes to the Accounts Receivable Preferences Form

The following UI changes have been made on the **General** tab of the [Accounts Receivable Preferences](#) (AR101000) form:

- In the **Data Entry Settings** section, the **Use Credit Terms in Credit Memos** check box (see Item 1 in the following screenshot) has been added. If this check box is selected, users can specify credit terms for credit memos created on the [Invoices and Memos](#) (AR301000) form. These credit memos may be subject to cash discounts.
- In the **VAT Recalculation Settings** section, the **Automatically Release Credit Memos** box has been renamed to **Automatically Release Tax Adjustments** (Item 2). The **Credit Memo Description** box has been renamed to **Tax Adjustment Description** (Item 3), because now credit memos and debit memos can be generated to adjust taxes if early payments are made.

Figure: Changes to the Accounts Payable Preferences form

Changes to the Invoices and Memos Form

If the **Use Credit Terms in Credit Memos** check box is selected on the [Accounts Receivable Preferences](#) (AR101000) form, a user will see the following changes for a document with the *Credit Memo* type selected in the Summary area of the [Invoices and Memos](#) (AR301000) form:

- The **Terms** box (see Item 1 in the screenshot below) becomes available. By default, the system inserts the credit terms assigned to the customer, if any, on the [Customers](#) (AR303000) form, but the user can override this setting (or clear the box; this setting is optional).

If the **Terms** box is empty (that is, no credit terms are specified for the credit memo), the system will clear the **Due Date** and **Cash Discount Date** boxes, set the **Cash Discount** box to *0.00*, and make these three boxes unavailable.

- The **Due Date** and **Cash Discount Date** boxes (Item 2) become available if credit terms are specified for a credit memo. As is the case with invoices, the system calculates the dates in these boxes based on the selected credit terms and the document date.
- The **Cash Discount** box (Item 3) becomes available. If credit terms with a cash discount are selected in the **Terms** box, this box displays the cash discount calculated by the system, which will be applied if the document is paid before the **Cash Discount Date**.



Figure: Changes in the Summary area of the Invoices and Memos form

When the user creates a credit memo whether or not the credit terms have a cash discount, they can select the **Pay by Line** check box for this credit memo. By default, the state of the **Pay by Line** check box is copied from the customer's settings. If the new credit memo has a cash discount and has the **Pay by Line** check box selected, the cash discount is distributed equally between the document lines. The distributed value of each line is saved in the database as the cash discount balance.

On the **Financial** tab of the *Invoices and Memos* form, the **Cash Discount Info** section appears for a credit memo (as shown in the following screenshot) if all of the following conditions are met:

- The credit memo has credit terms specified in the **Terms** box.
- The credit memo has a nonzero cash discount specified in the **Cash Discount** box.
- The credit memo has a tax applied for which *Reduces Taxable Amount on Early Payment* is selected in the **Cash Discount** box on the *Taxes* (TX205000) form.

The following screenshot illustrates a credit memo with the **Cash Discount Info** section filled in.

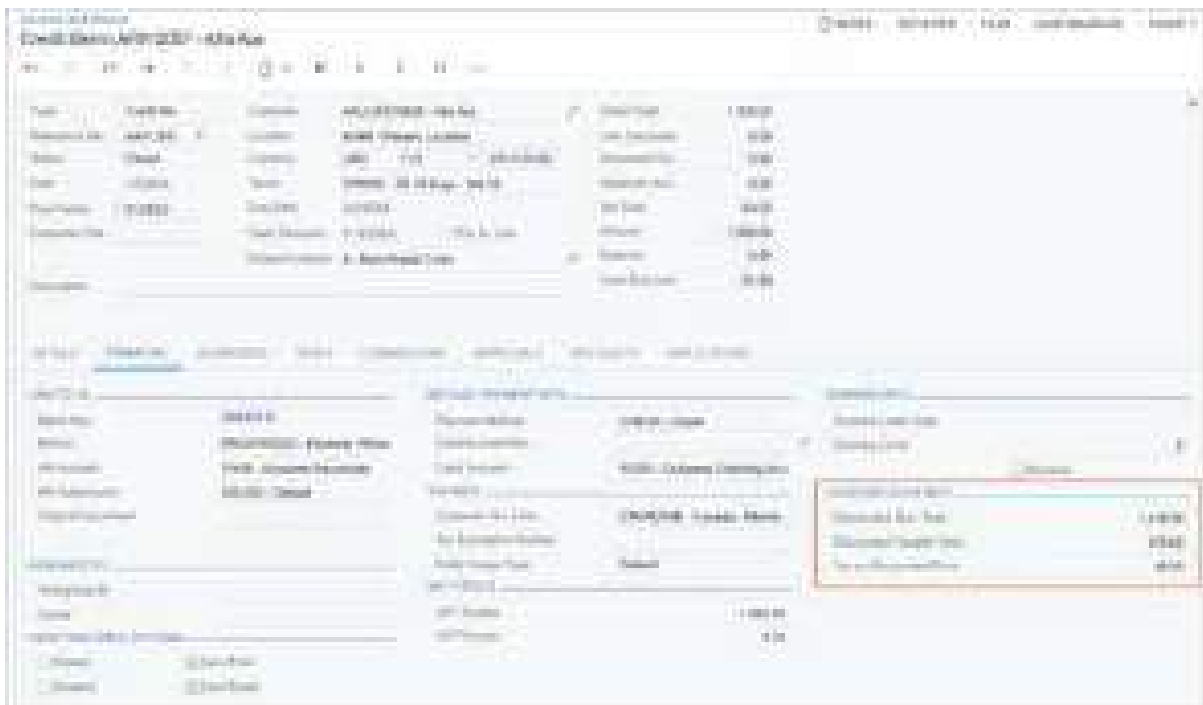


Figure: The Cash Discount Info section of the Financial tab

Changes to the Invoices Form

If the **Use Credit Terms in Credit Memos** check box is selected on the [Accounts Receivable Preferences](#) (AR101000) form, the following changes occur for a sales document with the *Credit Memo* type on the [Invoices](#) (SO303000) form:

- The **Terms** box (see Item 1 in the screenshot below) becomes available. By default, the system inserts the credit terms assigned to the customer (if any) on the [Customers](#) (AR303000) form, but the user can override this setting (or clear the box; this setting is optional).

If the **Terms** box is empty, the system will clear the **Due Date** and **Cash Discount Date** boxes, set the **Cash Discount** box to 0.00, and make these three boxes unavailable.

- The **Due Date** and **Cash Discount Date** boxes (Item 2) become available. As is the case with sales invoices, the system calculates the dates in these boxes based on the selected credit terms and the document date.
- The **Cash Discount** box (Item 3) becomes available. If credit terms with a cash discount are selected in the **Terms** box, this box displays the cash discount calculated by the system, which will be applied if the document is paid before the **Cash Discount Date**.



Figure: UI changes to the Invoices form

Changes to the Payments and Applications Form

On the [Payments and Applications](#) (AR302000) form, if a user creates a refund or a payment and selects a credit memo on the **Documents to Apply** tab, the system calculates the **Amount Paid** and **Cash Discount Taken** and shows these amounts in the line, as shown in the following screenshot.

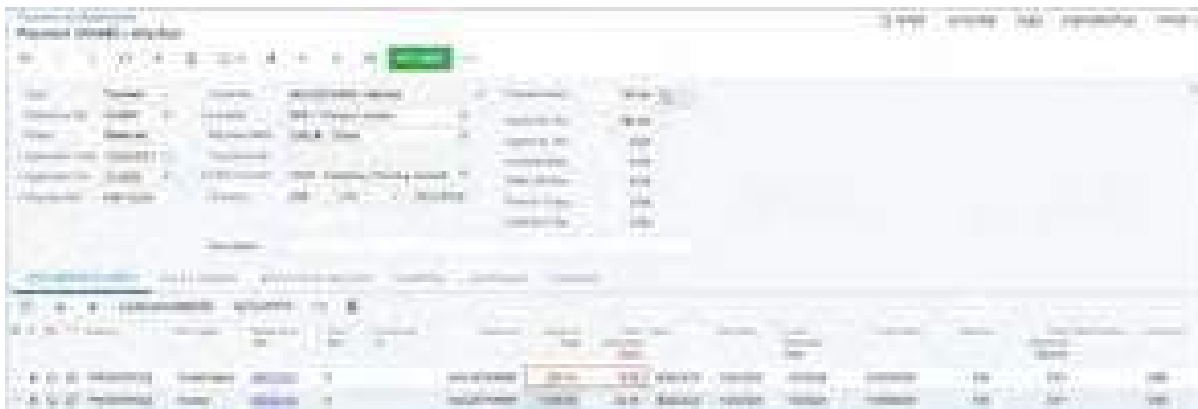


Figure: The calculated Amount Paid and Cash Discount Taken

If the user overrides these amounts, the system checks whether the cash discount entered by the user exceeds the cash discount balance. If it does, the system displays an error message.

If a credit memo applied to a payment has no terms specified or has credit terms without a cash discount, the **Cash Discount** and **Cash Discount Balance** columns always contain 0.

If a credit memo is selected on the *Payments and Applications* form and an invoice or debit memo is applied to it on the **Documents to Apply** tab, the system calculates the **Amount Paid** value. The **Cash Discount Taken** column contains 0 by default, even if the invoice or debit memo has a cash discount. The user can override the **Cash Discount Taken** amount, which causes the recalculation of the amount paid. The following screenshot shows the two column values for the row.

Document	Amount Paid	Cash Discount Taken
1000.00	1000.00	0.00
1000.00	1000.00	0.00
1000.00	1000.00	0.00
1000.00	1000.00	0.00

Figure: The Amount Paid and Cash Discount Taken columns on the Payments and Applications form

If the user clicks **Auto Apply** on the table toolbar of the **Documents to Apply** tab, and the list of documents contains a credit memo with a cash discount, this cash discount is considered if the cash discount balance is not null and the document's application date is within the cash discount period. The system fills in the **Cash Discount Taken** column, as shown in the following screenshot.

Document	Amount Paid	Cash Discount Taken
1000.00	1000.00	0.00
1000.00	1000.00	0.00
1000.00	1000.00	0.00
1000.00	1000.00	0.00

Figure: Specified cash discounts for credit memos

On the **Application History** tab of the *Payments and Applications* form, the following UI changes have been introduced:

- The **VAT Adjustment** column (see Item 1 in the following screenshot) has been renamed to **Subject to Tax Adjustment**.
- The **VAT Credit Memo** column (Item 2) has been renamed to **Tax Adjustment**.



Figure: Changes to the Application History form

Changes to the Auto-Apply Payments Form

On the [Auto-Apply Payments](#) (AR506000) form, when the user selects the **Apply Credit Memos** check box of the Selection area, the system includes credit memos in the list of payments that can be applied to invoices. If the automatically applied credit memo has a cash discount, this cash discount is taken into account if the cash discount balance is not null and the document's application date is within the cash discount period.

Changes to the Cash Flow Forecast Form

On the [Cash Flow Forecast](#) (CA401000) form and the [Cash Flow Forecast](#) (CA658000) report, the system includes credit memo amounts as follows:

- A credit memo with credit terms is shown in the column whose date is the same as the **Due Date** of the credit memo. If the **Due Date** is earlier than the **Start Date** specified in the Selection area, the credit memo is included in the column whose date is the same as the **Start Date**.
- A credit memo without credit terms has a **Due Date** that is the same as the document date. The calculated **Due Date** is shown in the same way as it is for credit memos with credit terms.

The following screenshot illustrates the total balance (\$214.55) of all credit memos of AACUSTOMER shown in the **2024-01-21** column.

The screenshot shows the 'Cash Flow Forecast' form. It displays a table with columns: 'Date', 'Amount', 'Status', 'Application Date', 'Application Time', 'Start Date', 'End Date', 'Start Time', and 'End Time'. The table lists various credit memos. At the bottom right, the total balance for the date '2024-01-21' is highlighted in a red box, showing a value of \$214.55.

Figure: The credit memos shown on the Cash Flow Forecast form

Changes to the Generate VAT Credit Memos Form

The *Generate VAT Credit Memos (AR504500)* form has been renamed to *Generate AR Tax Adjustments*. This form is now used for the generation of both debit memos and credit memos. The following UI changes (also shown in the screenshot below) have been made to the form:

- The **Consolidate Credit Memos by Customer** check box has been renamed to **Consolidate Tax Adjustments by Customer** (see Item 1 in the screenshot below). If this check box is selected, the system will create one debit memo for multiple credit memos or one credit memo for multiple invoices and debit memos, as it is described below. If the table contains multiple documents (any combination of invoices, debit memos, and credit memos) for the same customer, when the user clicks **Process All** on the form toolbar, the system will create the following documents:
 - One credit memo for the selected invoices and debit memos
 - One debit memo for the selected credit memos
- The **Credit Memo Date** box has been renamed to **Tax Adjustment Date** (Item 2).



Figure: Changes to the Generate AR Tax Adjustments form

The system also includes in the list of documents shown in the table credit memos that were refunded in full within the cash discount period and that have a value-added tax (VAT) reduced based on the cash discount. Credit memos without credit terms are not included in the list of documents because these credit memos have cash discounts of 0.

For each credit memo that the user includes in processing, the system creates a debit memo. If the **Consolidate Tax Adjustments by Customer** check box is selected, one debit memo will be created for all selected credit memos. In the debit memo, by default, the system inserts the credit terms copied from the customer's settings into the **Terms** box of the *Invoices and Memos (AR301000)* form. If the credit terms are configured with a cash discount, this setting will be ignored, and the debit memo will be created without the cash discount. That is, it will have the following settings:

- A **Cash Discount Date** that is the same as the **Due Date**
- A **Cash Discount** of 0



The created debit memos have the **Don't Print** and **Don't Email** check boxes selected on the **Financial** tab of the *Invoices and Memos (AR301000)* form.

For the created VAT credit memos and VAT debit memos, the system uses the description specified in the **Tax Adjustment Description** box on the *Accounts Receivable Preferences (AR101000)* form.

Changes to the Journal Vouchers Form

On the *Journal Vouchers (GL304000)* form, suppose that a user adds a new line to the table. In the **Tran Code** column, if the user selects a transaction code that has *AR* in the **Module** column and *Credit Memo* in the **Module Tran. Type** column of the lookup table, the system does the following:

- If the **Use Credit Terms in Credit Memos** check box is selected on the [Accounts Receivable Preferences](#) (AR101000) form, inserts the credit terms from the customer's settings in the **Terms** column and makes the **Terms, Due Date, Cash Discount Date,** and **Cash Discount** columns available. The user can override the credit terms or clear any of the columns.
- If the **Use Credit Terms in Credit Memos** check box is cleared on the [Accounts Receivable Preferences](#) form, leaves the **Terms** column empty and makes the **Terms, Due Date, Cash Discount Date,** and **Cash Discount** columns unavailable.

Changes to the Process Bank Transactions Form

On the [Process Bank Transactions](#) (CA306000) form, a user can now select a *Disbursement* bank transaction and link it to a credit memo with a cash discount on the **Create Payment** tab. When a user processes the records on this form, the system will create an AR refund and apply it to the credit memo. If the application date is within the cash discount period of the credit memo, the cash discount will be applied.

Credit memos with cash discounts are shown on the **Match to Invoices** tab of the form. Users can use this tab to match credit memos to *Receipt* bank transactions. This is required if the company receives payments for invoices and credit memos together and the total amount of the invoices exceeds the total amount of the credit memos.

Changes to the Generate Payments Form

On the [Generate Payments](#) (AR511000) form, if a credit memo appears in the table and is processed when the user clicks **Process** or **Process All**, the credit memo is applied to a payment with a cash discount if the credit memo has a cash discount balance and the payment date is within the cash discount period.

Changes to the Release AR Retainage Form

On the [Release AR Retainage](#) (AR510000) form, when the system creates a retainage credit memo, it fills in the credit terms as follows:

- If the **Use Credit Terms in Credit Memos** check box is selected on the [Accounts Receivable Preferences](#) (AR101000) form, the credit terms are copied from the customer's settings.
- If the **Use Credit Terms in Credit Memos** check box is cleared, no credit terms are specified.

Other UI Changes

The following UI changes have also been implemented to ensure consistency between AR and AP forms:

- On the [Checks and Payments](#) (AP302000) form, the following UI elements on the **Application History** tab have been updated:
 - The **VAT Adj.** hidden column has been renamed to **Tax Adjustment**.
 - The **VAT Adjustment** column has been renamed to **Subject to Tax Adjustment**.
- On the [Accounts Payable Preferences](#) (AP101000) form, the **VAT Adjustment Description** box on the **General** tab has been renamed to **Tax Adjustment Description**.
- The [Generate VAT Adjustments](#) (AP504500) form has been renamed to [Generate AP Tax Adjustments](#). In the Selection area of this form, the following UI elements have been updated:
 - The **Consolidate VAT Adjustments by Vendor** check box has been renamed to **Consolidate Tax Adjustments by Vendor**.
 - The **VAT Adjustment Date** box has been renamed to **Tax Adjustment Date**.

Changes to the Insertion of Credit Memo Settings

When a user creates a credit memo on the *Invoices and Memos* (AR301000) form by copying an existing credit memo, the system inserts the settings as follows:

- If the **Use Credit Terms in Credit Memos** check box is selected on the *Accounts Receivable Preferences* (AR101000) form, the **Terms** value on the *Invoices and Memos* form is copied from the original document, if terms have been specified; otherwise, the **Terms** value is copied from the customer's settings. The values in the **Cash Discount Date**, **Due Date**, and **Cash Discount** boxes are calculated based on these terms. All these boxes are available.
- If the **Use Credit Terms in Credit Memos** check box is cleared on the *Accounts Receivable Preferences* form, the **Terms**, **Cash Discount Date**, and **Due Date** boxes are empty on the *Invoices and Memos* form, and the **Cash Discount** box contains 0.00. All these boxes are unavailable.

When the user creates a credit memo by reversing an invoice or debit memo, the system inserts the settings as follows:

- If the **Use Credit Terms in Credit Memos** check box is selected on the *Accounts Receivable Preferences* form, the **Terms**, **Cash Discount Date**, **Due Date**, and **Cash Discount** settings of the *Invoices and Memos* form are copied from the original document, and these boxes are available.
- If the **Use Credit Terms in Credit Memos** check box is cleared on the *Accounts Receivable Preferences* form, the **Terms**, **Cash Discount Date**, and **Due Date** boxes of the *Invoices and Memos* form are empty, and the **Cash Discount** box contains 0.00. All these boxes are unavailable.



If an AR document has credit terms with the *Multiple* installment type, the **Cash Discount** box contains 0 and is unavailable. If the user changes the setting in the **Terms** box, the system recalculates the **Cash Discount** amount.

Changes to the Processing of Sales Orders

On the *Sales Orders* (SO301000) form, the following changes to the processing of sales orders have been introduced, depending on the settings of the order type:

- If on the *Order Types* (SO201000) form, the **AR Document Type** box contains *Credit Memo*, the system fills in the credit terms for a new sales order of this type on the **Financial** tab of the *Sales Orders* form as follows:
 - If the **Use Credit Terms in Credit Memos** check box is selected on the *Accounts Receivable Preferences* (AR101000) form, the system inserts the default credit terms (if any) copied from the customer's settings; these terms can be overridden by the user.
 - If the **Use Credit Terms in Credit Memos** check box is cleared, the **Terms** box on the **Financial** tab of the *Sales Orders* form is empty and unavailable for editing.

If a user prints a sales order of this type by using the *Sales Order* (SO641010) report, the credit terms of this sales order are shown in the printed report. The due date and cash discount date are not printed.

- If on the *Order Types* form, the **AR Document Type** box contains *Invoice/Credit Memo* for this order type, the system allows lines with a positive and negative quantity in the sales order. Also, a sales invoice or credit memo (depending on the sign of the order total) can be created for the sales order on the *Invoices* (SO303000) form. If a sales invoice is created for a sales order, the credit terms are copied from the sales order to the sales invoice. If a sales credit memo is created, the system fills in the credit terms as follows:
 - If the **Use Credit Terms in Credit Memos** check box is selected on the *Accounts Receivable Preferences* form, credit terms are copied from the sales order.
 - If the **Use Credit Terms in Credit Memos** check box is cleared, the **Terms** box of the Summary area of the *Invoices* form is empty in the credit memo. That is, the credit terms in the sales order are ignored by the system.

Changes to the Processing of Dunning Letters

Credit memos are listed in dunning letters with their full amount, even if they have cash discounts. In other words, a cash discount does not reduce the amount of a credit memo included in a dunning letter.

When a dunning letter is printed on the [Print/Release Dunning Letters](#) (AR522000) form, the system populates the due date of each listed credit memo as follows:

- If the credit memo has no credit terms, the **Due Date** column is always empty.
- If the credit memo has credit terms, the **Due Date** column shows *Current* if the document is not overdue or the due date if the document is overdue.

If the user clicks **View Dunning Letter** on the table toolbar of the [Print/Release Dunning Letters](#) form, the [Dunning Letter](#) (AR306000) form is opened. In the table of this form, the system populates the due date of each listed credit memo as follows:

- If the credit memo has no credit terms, the **Due Date** column is always empty.
- If the credit memo has credit terms, the **Due Date** column shows the document's due date.

Changes to the Processing of Customer Statements

Credit memos that have been created on the [Invoices and Memos](#) (AR301000) form are listed in customer statements with their full amount, even if they have cash discounts. In other words, a cash discount does not reduce the amount of a credit memo included in a customer statement.

When a customer statement is printed on the [Print Statements](#) (AR503500) form, the due date is printed for credit memos with credit terms. For credit memos without credit terms, the due date is not printed.

Depending on the state of the **Age Credits** check box on the [Accounts Receivable Preferences](#) (AR101000) form, credit memos are included in statement buckets as follows:

- If **Age Credits** is selected, credit memos with credit terms are included in the bucket related to the due date if **Age Based On** is set to *Due Date* on the [Statement Cycles](#) (AR202800) form or related to the document date if **Age Based On** is set to *Document Date*.

Credit memos without credit terms are included in the bucket related to the document date.

- If **Age Credits** is cleared, whether or not credit memos have credit terms, the system defines the bucket by deducting amounts from the aging bucket amounts starting from the rightmost column. The remaining amount is shown in the *Current* bucket if the customer's balance is negative.

Changes to the Calculation of Salesperson Commissions

On the [Calculate Commissions](#) (AR505500) form, the cash discount taken of a credit memo is excluded from commission calculation when the system calculates the commission amount if all of the following conditions are met:

- On the [Accounts Receivable Preferences](#) (AR101000) form, **Salesperson Commission By** is set to *Payment*.
- The credit memo has a cash discount and has been applied to a payment within the cash discount period.
- The credit memo contains lines with a salesperson specified for whom commission has been configured.

Suppose that the commission percent is 2%, a \$1,000 credit memo with a \$30 cash discount is fully paid, the **Paid Amount** is \$970, and the **Cash Discount Taken** is \$30. In this case, the amount deducted from the commission is calculated as $\$970 * 2\% = \19.40 .

Changes to the Billing Processes

If the **Use Credit Terms in Credit Memos** check box is selected on the [Accounts Receivable Preferences](#) (AR101000) form, credit memos will be generated with credit terms copied from the customer record. This rule is applied to the processes that the user runs on the following forms:

- [Customer Contracts](#) (CT301000)
- [Bill Expense Claims](#) (EP502000)
- [Run Service Order Billing](#) (FS500600)
- [Run Appointment Billing](#) (FS500100)

When the user runs the billing process on the [Run Project Billing](#) (PM503000) form, credit memos are generated with credit terms copied from the project record if specified; otherwise, they will be copied from the customer record.

Changes to the AR Aging Reports

Credit memos with credit terms specified are displayed in the following AR aging reports as described:

- [AR Aging](#) (AR631000), [AR Aging MC](#) (AR631100), [AR Aging by Project](#) (AR631200), [AR Aged Period-Sensitive](#) (AR630500), [AR Aged Period-Sensitive by Project](#) (AR630600): Regardless of the status of the **Age Credits** check box on the [Accounts Receivable Preferences](#) (AR101000) form, the system shows the due date in the **Due Date** column of the report. The system determines the aging bucket in either of the following ways:
 - If the **Age Credits** check box is selected, the date that the system will use to determine the aging bucket (the **Current** column or one of the **Past Due** columns) is determined based on the customer's statement cycle settings on the [Statement Cycles](#) (AR202800) form. If the **Age Based On** box contains *Due Date*, the system will use the due date. If the **Age Based On** box contains *Document Date*, the system will use the document date.
 - If the **Age Credits** check box is cleared, the system will use the **Age as of Date** report parameter on the applicable report form to determine the aging bucket.

For the [AR Aged Period-Sensitive](#) and [AR Aged Period-Sensitive by Project](#) reports, the end date of the **Financial Period** parameter will be used to determine the appropriate aging bucket.
- [AR Coming Due](#) (AR631500) and [AR Coming Due MC](#) (AR631600): Regardless of the status of the **Age Credits** check box on the [Accounts Receivable Preferences](#) form, the system shows the due date in the **Due Date** column. The system determines the aging bucket in either of the following ways:
 - If the **Age Credits** check box is selected, the date that the system will use to determine the aging bucket (the **Past Due** column or one of the **Coming Due** columns) is defined based on the customer's statement cycle settings on the [Statement Cycles](#) (AR202800) form. If the **Age Based On** box contains *Due Date*, the system will use the due date. If the **Age Based On** box contains *Document Date*, the system will use the document date.
 - If the **Age Credits** check box is cleared, the system will use the **Age as of Date** report parameter on the applicable report form to determine the aging bucket.

Finance: Mapping of Multiple Accounts for Bank Feeds

In previous versions of Acumatica ERP, a user could map a bank account to one cash account and receive all of the cash account's transactions via a bank feed. If the *Subaccounts* feature was enabled on the [Enable/Disable Features](#) (CS100000) form, each received transaction had the **Account Owner** setting filled in on the [Bank Feeds](#) (CA205500) form, which indicated from which subaccount the transaction was made. The **Account Owner** column could contain the card holder's name or the digits of the credit card number, depending on the bank. The user could then set up rules on the **Corporate Cards** tab of the [Bank Feeds](#) form to create expense receipts for different cards or employees, depending on the value in the **Account Owner** column in a particular transaction.

However, only Plaid provides the **Account Owner** data on the transaction level, and it does so only for those financial institutions that send this data. MX does not provide this information, and some banks have connections with MX only. If the account owner of a transaction was unknown, the user could not define the card and employee and could not properly reconcile the cash account.

Also, the user could not create expense receipts for the needed card and employee. The only way to track transactions for each card holder was to map each bank subaccount separately to a cash account in Acumatica ERP. The previous versions of Acumatica ERP did not allow the mapping of multiple bank accounts to one cash account. The user had to create a separate cash account for each subaccount, which took a long time if the company had many employees.

Starting in Acumatica ERP 2024 R1, users can map multiple bank accounts to one cash account in Acumatica ERP. Users can also do the following:

- Load bank transactions for one cash account from different bank accounts and financial periods
- Manually change the start date for importing transactions to Acumatica ERP
- Load transactions from multiple bank feeds for one cash account

This functionality is available in the system if the *Mapping of Multiple Accounts for Bank Feeds* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

The following sections describe the changes to the UI and transaction processing that have been made to support this functionality.

Changes to the Enable/Disable Features Form

On the [Enable/Disable Features](#) (CS100000) form, the **Mapping of Multiple Accounts for Bank Feeds** check box has been added under **Experimental Features**, as shown in the following screenshot.



Figure: The Mapping of Multiple Accounts for Bank Feeds check box on the Enable/Disable Features form

This check box becomes available if the **Bank Feed Integration** check box is selected.

If the *Mapping of Multiple Accounts for Bank Feeds* feature is enabled, the **Map Multiple Bank Accounts to One Cash Account** check box appears and becomes available on the [Bank Feeds](#) (CA205500) form.

The *Mapping of Multiple Accounts for Bank Feeds* feature cannot be disabled for the tenant if the tenant has at least one bank feed with the **Map Multiple Bank Accounts to One Cash Account** check box selected on the [Bank Feeds](#) form.

If a user attempts to disable the *Bank Feed Integration* feature while the *Mapping of Multiple Accounts for Bank Feeds* feature is enabled, the system performs the following actions:

- Checks whether there is at least one bank feed with the **Map Multiple Bank Accounts to One Cash Account** check box selected. If the system finds such a bank feed, it displays an error message and does not allow the user to disable the *Bank Feed Integration* feature.
- If the system finds no bank feeds with the **Map Multiple Bank Accounts to One Cash Account** check box selected, disables both the *Bank Feed Integration* feature and the *Mapping of Multiple Accounts for Bank Feeds* feature on the [Enable/Disable Features](#) form. Also, the **Mapping of Multiple Accounts for Bank Feeds** check box becomes cleared and unavailable on this form.

When the *Mapping of Multiple Accounts for Bank Feeds* feature is enabled, the number of bank feed accounts for the license is calculated as it was in previous versions of the system. For example, if two bank accounts are mapped to the same cash account in Acumatica ERP, the license will include two bank feed accounts.

Changes to the Bank Feeds Form

On the [Bank Feeds](#) (CA205500) form, the **Map Multiple Bank Accounts to One Cash Account** check box has been added, as shown in the following screenshot.

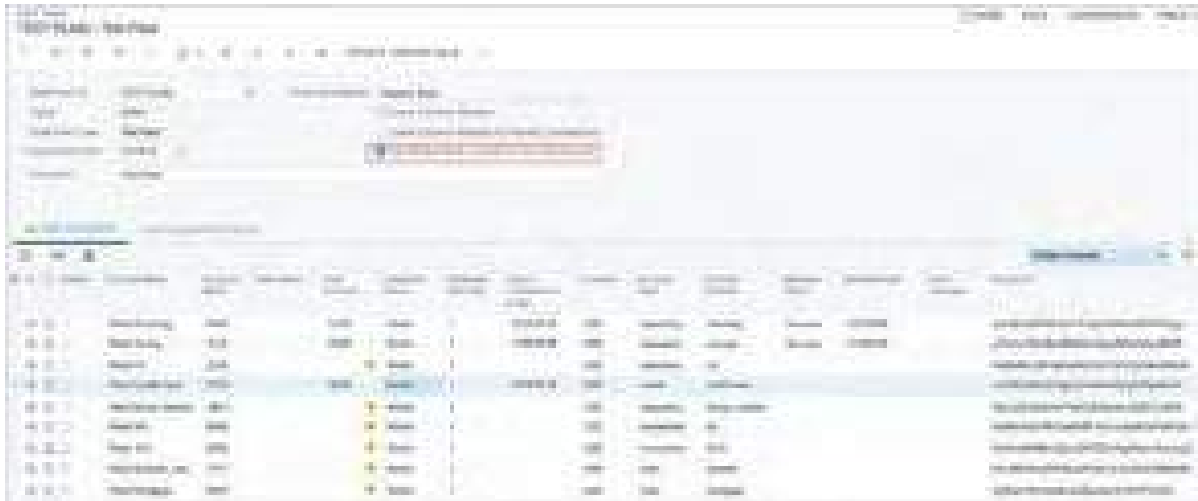


Figure: The Map Multiple Bank Accounts to One Cash Account check box on the Bank Feeds form

This check box appears on the form if the *Mapping of Multiple Accounts for Bank Feeds* feature is enabled on the [Enable/Disable Features](#) (CS100000) form and the status of the selected bank feed is *Active*, *Setup Required*, or *Suspended*. This check box is cleared by default.

If a user selects this check box for a bank feed, multiple bank accounts can be matched to a single cash account. With this check box selected, for each mapped bank account in the bank feed, the system does the following:

- Allows users to override the date specified in the **Import Transactions From** column on the **Cash Accounts** tab for a particular bank account line. The system calculates this date by using the rules described below, but a user can change this date to a later one. (The system will prevent users from changing the date to a date that is earlier than the calculated date.)



The **Import Transactions From** date remains unavailable and cannot be overridden if the **Map Multiple Bank Accounts to One Cash Account** check box is cleared for the bank feed.

- Checks whether any transactions were loaded for the cash account from the bank feed for a particular bank account for which the **Bank Feed Account** column contains the bank account name and mask. If transactions were loaded, updates the **Import Start Date** column with the latest of the following dates:
 - The date specified in the **Import Start Date** box in the Summary area
 - The date of the most recent bank transaction loaded for the cash account from the bank feed for a particular bank account if the **Bank Feed Account** column contains the bank account name and mask.

If no transactions were loaded for the cash account from a particular bank account, the system will update the **Import Start Date** column with the latest of the following dates:

- The date specified in the **Import Start Date** box in the Summary area
- The date of most recent bank transaction loaded for the cash account from the bank feed for which the **Bank Feed Account** column is empty
- The date that is one day after the most recent bank transaction that was entered manually by a user

The dates in the **Import Start Date** box in the Summary area and in the **Import Transactions From** column on the **Cash Accounts** tab can be overridden by the user.



If the user needs to revert to the date calculated by the system, they need to manually clear the entered value. The system will recalculate the dates and populate the date in the **Import Transactions From** column.

Changes to the Import Bank Transactions Form

On the [Import Bank Transactions](#) (CA306500) form, the following UI changes have been introduced:

- The unlabeled column marked with the icon has been renamed to **Matched** (see Item 1 in the following screenshot).
- The **Bank Feed Account** column has been added to the table (Item 2). The value in this column helps users to identify from which bank account a specific transaction was received. This value consists of the **Account Name** and **Account Mask** values specified for the bank feed in the respective columns of the table on the [Bank Feeds](#) (CA205500) form.

This column appears on the form if the *Mapping of Multiple Accounts for Bank Feeds* feature is enabled on the [Enable/Disable Features](#) (CS100000) form. This column is filled in for a transaction only if the **Map Multiple Bank Accounts to One Cash Account** check box is selected for the bank feed on the [Bank Feeds](#) form. This column is populated automatically by the system and its value cannot be overridden by the user.

The screenshot shows the 'Import Bank Transactions' form with a table of transactions. A red box highlights a column labeled 'Matched' with a checkmark icon. Another red box highlights a column labeled 'Bank Feed Account'.

Bank Feed Account	Account Name	Account Mask	Matched	Transaction Date	Transaction Amount	Transaction Description
Bank of America	Bank of America	1234567890		10/10/2019	100.00	DEPOSIT
Bank of America	Bank of America	1234567890		10/10/2019	100.00	DEPOSIT
Bank of America	Bank of America	1234567890		10/10/2019	100.00	DEPOSIT
Bank of America	Bank of America	1234567890		10/10/2019	100.00	DEPOSIT
Bank of America	Bank of America	1234567890		10/10/2019	100.00	DEPOSIT
Bank of America	Bank of America	1234567890		10/10/2019	100.00	DEPOSIT
Bank of America	Bank of America	1234567890		10/10/2019	100.00	DEPOSIT
Bank of America	Bank of America	1234567890		10/10/2019	100.00	DEPOSIT
Bank of America	Bank of America	1234567890		10/10/2019	100.00	DEPOSIT
Bank of America	Bank of America	1234567890		10/10/2019	100.00	DEPOSIT

Figure: The UI changes on the Import Bank Transactions form

Changes to the Process Bank Transactions Form

On the [Process Bank Transactions](#) (CA306000) form, the following UI changes have been introduced:

- The unlabeled column marked with the icon has been renamed to **Matched** (see Item 1 in the following screenshot).
- The **Bank Feed Account** column has been added to the table in the left pane (Item 2). The value in this column helps users to identify from which bank account a specific transaction was received. This value consists of the **Account Name** and **Account Mask** values specified for the bank feed in the respective columns of the table on the [Bank Feeds](#) (CA205500) form.

This column appears on the form if the *Mapping of Multiple Accounts for Bank Feeds* feature is enabled on the [Enable/Disable Features](#) (CS100000) form. This column is filled in for a transaction only if the **Map Multiple Bank Accounts to One Cash Account** check box is selected for the bank feed on the [Bank Feeds](#) form. This column is populated automatically by the system and its value cannot be overridden by the user.

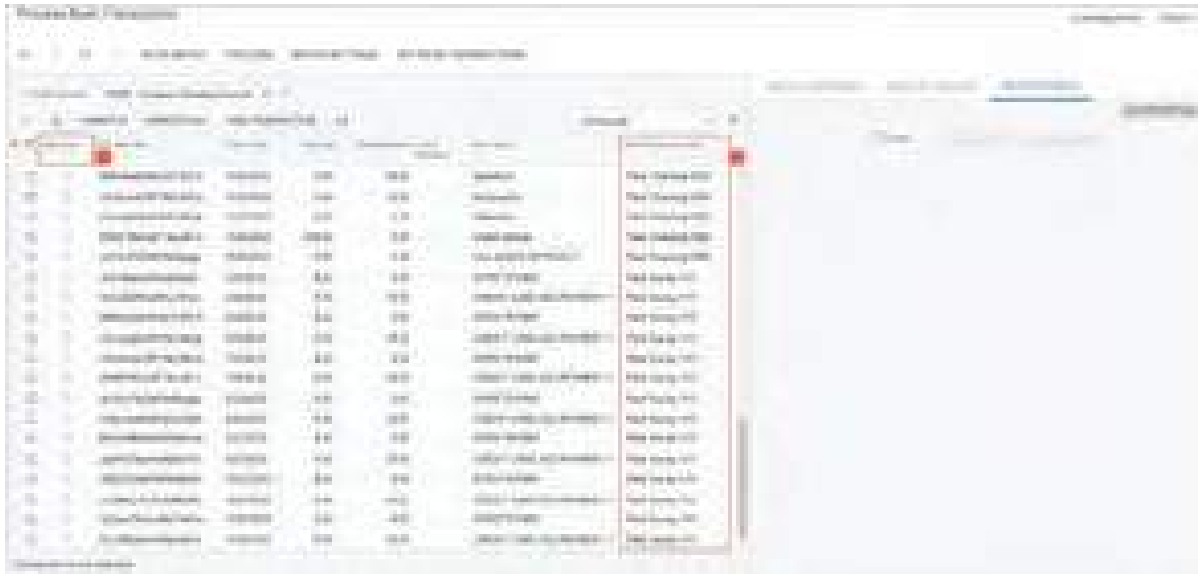


Figure: The UI changes on the Process Bank Transactions form

Changes in the Retrieval of Bank Transactions

When a user clicks **Retrieve Transactions** on the [Import Bank Transactions](#) (CA306500) or [Process Bank Transactions](#) (CA306000) form, the system checks whether a bank statement exists with a suitable statement date and financial period.

If the dates of the transactions fall within the range of the **Start Balance Date** and **End Balance Date** of the bank statement, the system adds these transactions to the statement. If no suitable statement is found, the system creates a new bank statement and adds the transactions to it.

Thus, if **Statement Start Date** or **Statement Period** on the [Bank Feeds](#) (CA205500) form for a bank account is different from this setting of other bank accounts mapped to the same cash account, the system will create a separate bank statement for this bank account.

Changes to the Transaction Retrieval of Plaid Bank Feeds

In the production environment for Plaid bank feeds, the Plaid data provider does not allow calling the same bank feed more than 30 times per minute.



We recommend creating a Plaid bank feed with fewer than 30 mapped accounts. If more than 30 accounts should be mapped, we recommend creating multiple bank feeds, with 30 mapped accounts in each feed.

Because of this limitation and depending on whether a user retrieves transactions for all bank feed accounts or for only one account, the rules that the system uses for retrieving transactions have been changed.

Transactions are retrieved for one bank feed account in either of the following cases:

- On the [Bank Feeds](#) (CA205500) form, the user clicked **Load Transactions in Test Mode** on the More menu and selected one bank account in the **Load Transactions in Test Mode** dialog box.
- On the [Import Bank Transactions](#) (CA306500) or [Process Bank Transactions](#) (CA306000) form, the user clicked **Retrieve Transactions** on the form toolbar and both of the following conditions are met in the system:
 - On the [Cash Management Preferences](#) (CA101000) form, the **Import Bank Statement to Single Cash Account** check box is selected in the **Import Settings** section of the **Bank Statements** tab.

- On the [Bank Feeds](#) form, the **Map Multiple Bank Accounts to One Cash Account** check box is cleared for the bank feed.

Transactions are retrieved for all mapped bank feed accounts in either of the following cases:

- On the [Retrieve Bank Feed Transactions](#) (CA507500) form, the user selected a bank feed and clicked **Process** on the form toolbar. Alternatively, this process has been set up to occur for this form on the [Automation Schedules](#) (SM205020) form.
- On the [Import Bank Transactions](#) or [Process Bank Transactions](#) form, the user clicked **Retrieve Transactions** on the form toolbar and both of the following conditions are met in the system:
 - On the [Cash Management Preferences](#) form, the **Import Bank Statement to Single Cash Account** check box is cleared in the **Import Settings** section of the **Bank Statements** tab.
 - On the [Bank Feeds](#) form, the **Map Multiple Bank Accounts to One Cash Account** check box is cleared for the bank feed.
- On the [Import Bank Transactions](#) or [Process Bank Transactions](#) form, the user clicked **Retrieve Transactions** on the form toolbar and the **Map Multiple Bank Accounts to One Cash Account** check box is selected for the bank feed on the [Bank Feeds](#) form.

If the **Map Multiple Bank Accounts to One Cash Account** check box is selected for a bank feed on the [Bank Feeds](#) form, the system uses the following rules of retrieving transactions:

- If the user selects a cash account to which multiple bank accounts are mapped and clicks **Retrieve Transactions** on the form toolbar of the [Import Bank Transactions](#) or [Process Bank Transactions](#) form, the system copies the value in the **Import Transactions From** column and uses this date to fetch data for each bank account within the affected feeds. Because the same cash account can be used in multiple bank feeds, all bank feeds with the *Active* or *Setup Required* status are processed.
- The system ignores the state of the **Import Bank Statement to Single Cash Account** check box in the **Import Settings** section of the **Bank Statements** tab on the [Cash Management Preferences](#) form. If the bank feed has the **Map Multiple Bank Accounts to One Cash Account** check box selected on the [Bank Feeds](#) form, the system always proceeds as if the **Import Bank Statement to Single Cash Account** check box is cleared.
- Once the download of transactions is complete, the system shows all bank feeds that were affected, all accounts, and the number of transactions that were fetched and created. This information can be reviewed in the **Bank Feed Account** column on the [Import Bank Transactions](#) and [Process Bank Transactions](#) form. Support specialists can view the recent loading results without having to open the Trace log.

Upgrade Notes

After an upgrade to Acumatica ERP 2024 R1, when an administrative user enables the *Mapping of Multiple Accounts for Bank Feeds* feature on the [Enable/Disable Features](#) (CS100000) form, the **Map Multiple Bank Accounts to One Cash Account** check box will be cleared on the [Bank Feeds](#) (CA205500) form for all active bank feeds.

Additional Information

For details, see [Mapping of Multiple Bank Accounts to One Cash Account](#).

Finance: Support of POS Payments

In previous versions of Acumatica ERP, merchants could not accept payments that were made via point-of-sale (POS) terminals via Acumatica ERP. Merchants had to rely on third-party POS software to accept these payments, and users had to manually create invoices and payments for them in the system. This resulted in extra work for the users.

Starting in 2024 R1, Acumatica ERP provides support for POS payments. Users can now do the following:

- Set up the POS functionality and import the terminals' settings into the system for each location from the payment processor
- Assign a user-friendly name to each POS terminal
- Activate and deactivate POS terminals
- Use the user's default POS terminal when creating POS payments and override the default terminal for a specific user
- Create a payment method with the *POS Terminal* means of payment
- Send a credit card payment request to a POS terminal from any of the following forms: [Payments and Applications](#) (AR302000), [Cash Sales](#) (AR304000), [Sales Orders](#) (SO301000), [Invoices](#) (SO303000), and [Invoices and Memos](#) (AR301000)
- Track the status of transactions and update POS payments in the system
- Resend a transaction to the POS terminal
- Authorize and void a POS transaction
- Issue a refund or a partial refund for a POS payment

The support of POS payments can be configured and used in the system if the *Acumatica Payments* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

Changes to the Processing Centers Form

On the [Processing Centers](#) (CA205000) form, the following UI changes have been made in Acumatica ERP 2024 R1:

- The **Accept Payments from POS Terminals** check box (see Item 1 in the following screenshot) has been added to the Summary area. The check box appears on the form if the payment processor supports POS payments. To verify this, the system checks whether the selected plug-in can accept payments from POS terminals.
- The **POS Terminals** tab (Item 2) has been added to the form. The tab appears if the **Accept Payments from POS Terminals** check box is selected for the processing center. On this tab, a user can import the available POS terminals from the processing center and review their settings. The active POS terminals that are listed on this tab (that is, those for which the **Active** check box is selected) will be available for selection on the [Payments and Applications](#) (AR302000), [Cash Sales](#) (AR304000), [Sales Orders](#) (SO301000), and [Invoices](#)(SO303000) forms.

Each location must have a separate set of terminals. A location can have more than one terminal.

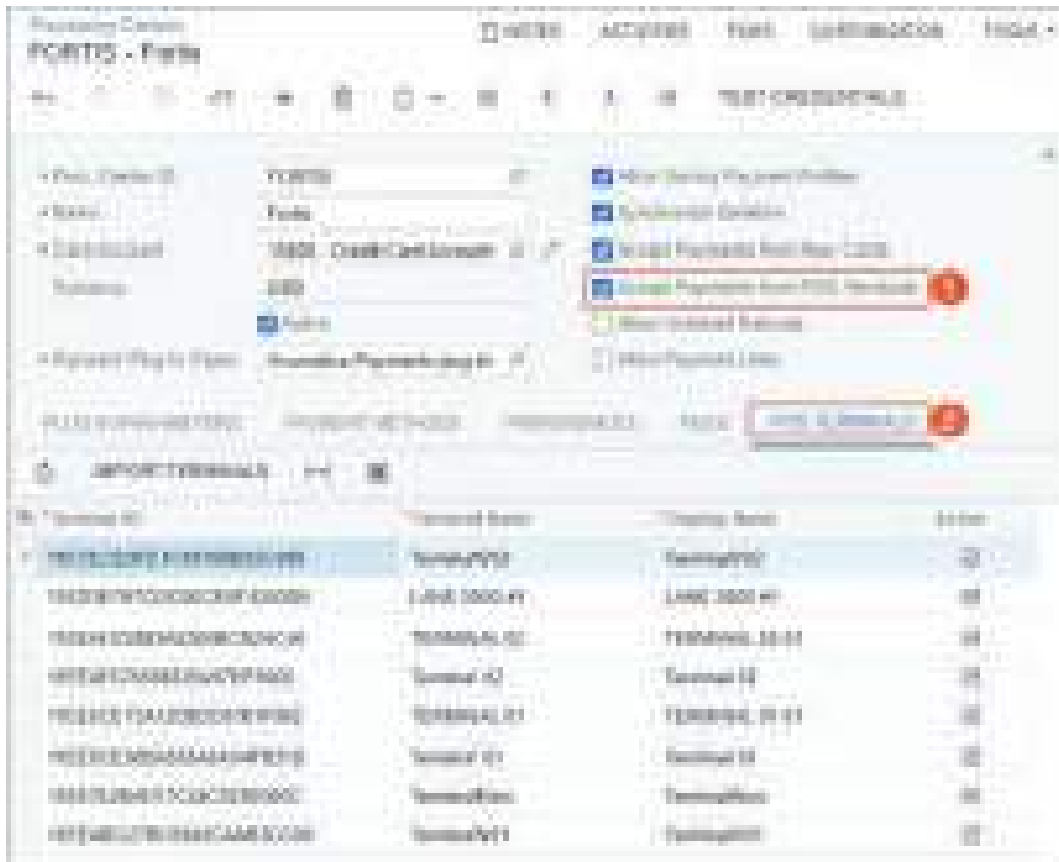


Figure: UI changes on the Processing Centers form

The **POS Terminals** tab contains the following UI elements.

Element	Description
Import Terminals	A button that a user can click to initiate the process of importing terminals. The system makes an API call to the payment processor, fetches all the IDs (Terminal ID) and names (Terminal Name) of the terminals, and displays them in the table.
Terminal ID	The ID of the terminal. This setting cannot be overridden by the user.
Terminal Name	The terminal name. This setting cannot be overridden by the user.
Display Name	<p>The terminal name to be displayed in the system, which must be unique. An administrator can give the terminal a user-friendly name for easy identification of the terminal in use.</p> <p>If the terminal settings are imported from the payment processor, the system inserts the terminal name in this column by default.</p>
Active	<p>A check box that indicates, if selected, that the terminal is activated in Acumatica ERP. If the check box is cleared, the system considers the terminal to be deactivated, and it will not appear in the Terminal lookup box on data entry forms.</p> <p>When the user imports terminals for the first time (that is, when a user clicks the Import Terminals button on the table toolbar), this check box is selected by default for each imported terminal.</p>

Changes to the Payment Methods Form

In Acumatica ERP 2024 R1, on the [Payment Methods](#) (CA204000) form, the *POS Terminal* option has been added to the drop-down list in the **Means of Payment** box in the Summary area, as shown in the following screenshot.

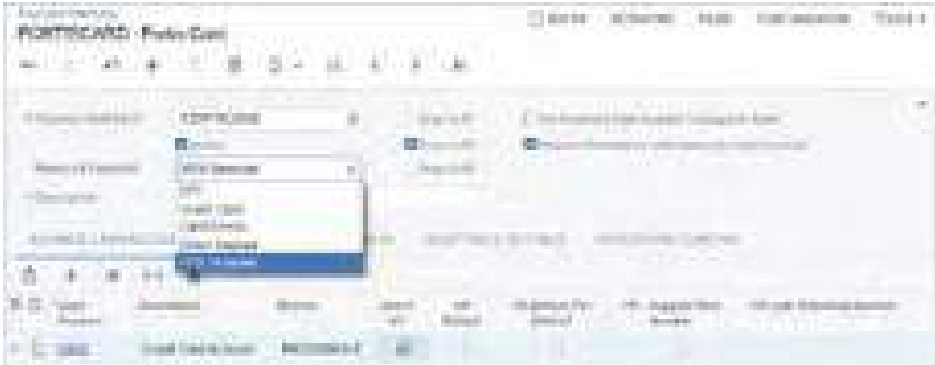


Figure: The POS Terminal means of payment on the Payment Methods form

On the **Settings for Use in AR** tab (shown in the following screenshot), the **Integrated Processing** check box is selected by default and is unavailable. The **Require Card/Account Number** and **Has Billing Information** check boxes have been removed.

In the **Payment Method Details** table on the **Settings for Use in AR** tab, all the settings in the columns are now optional.



Figure: The Settings for Use in AR tab on the Payment Methods form

Changes to the Payments and Applications Form

Changes have been made to the [Payments and Applications](#) (AR302000) form in Acumatica ERP 2024 R1. If the selected document has a payment method selected that has the *POS Terminal* means of payment specified on the [Payment Methods](#) (CA204000) form, the following changes appear in the Summary area:

- The **Proc. Center ID** box (see Item 1 in the following screenshot) is displayed.
- The **Terminal** box (Item 2) has been added to the Summary area. When the user clicks the magnifier button in this box, the lookup table with a list of available terminals (Item 3) is displayed. If the user is creating a POS transaction for the first time, and selects a terminal, such as *Terminal 01*, the system saves this value in the database for the current user and sets it as the default terminal for the user. In subsequent sign-ins for this user, when the user is creating a record on a data entry form with the **Terminal** box in the Summary area, this default terminal will be automatically inserted in the **Terminal** box.

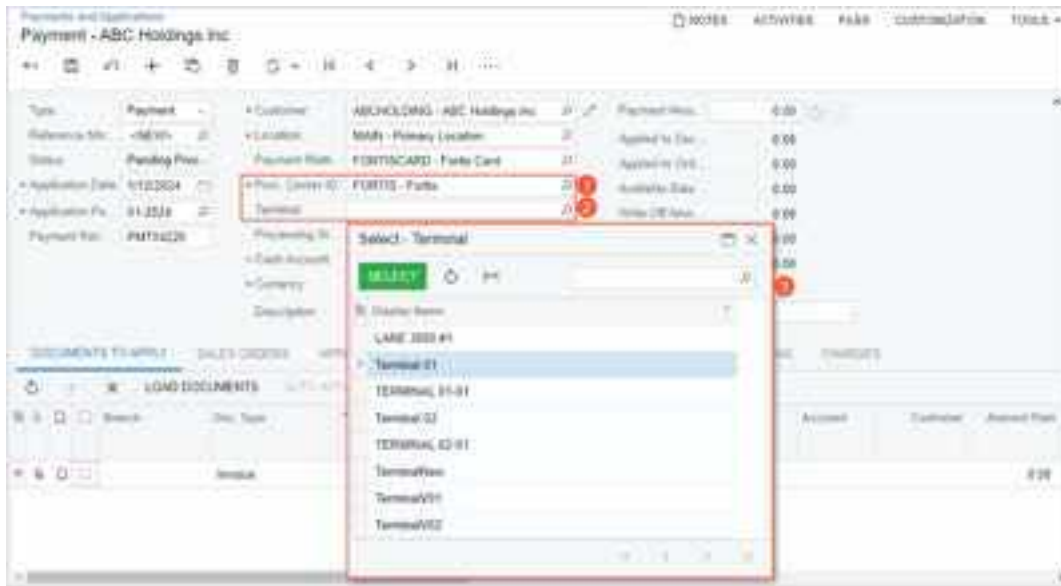


Figure: UI changes on the Payments and Applications form

When the selected document has a POS terminal selected in the **Terminal** box, the commands are available under **Card Processing** on the More menu, as shown in the following screenshot.

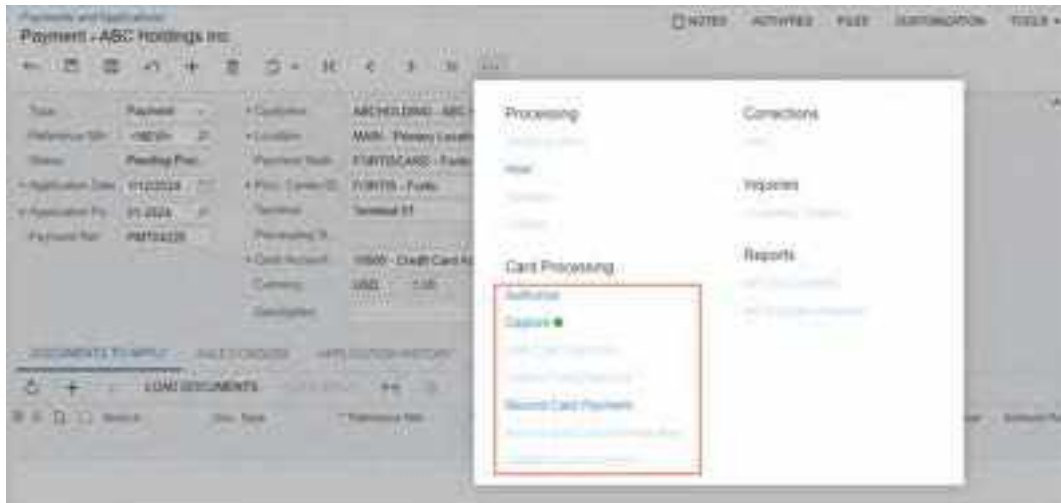


Figure: The Card Processing commands on the Payments and Applications form

To send and capture a payment via a POS terminal, the user performs the following general steps:

1. On the [Payments and Applications](#) form, creates a payment, selecting a payment method linked to POS payments.
2. In the **Terminal** box, selects a POS terminal from the lookup table.
3. On the **Documents to Apply** tab, selects a document or multiple documents that will be applied to the payment.
4. On the More menu, clicks **Capture**, which causes the following actions to occur:
 - a. The system sends an API request to the processing center to create a transaction on the POS terminal.
 - b. The payment processor launches a transaction on the terminal.

The customer receives the transaction on the terminal and taps, swipes, or inserts their credit card; they then complete the payment. The system automatically does the following:

- a. Updates the payment transaction in Acumatica ERP with the final status.
 - b. On the **Card Processing** tab of the [Payments and Applications](#) form, adds a new line and populates the **Proc. Center Tran. Nbr.** column with the credit card transaction ID.
5. Because the **Integrated Processing** check box is selected on the **Settings for Use in AR** tab of the [Payment Methods](#) (CA204000) form for the payment method, the payment is released automatically.

The following screenshot illustrates a payment paid via a POS terminal.



Figure: A closed payment paid via a POS terminal



The system does not save payment profiles and credit card details. No customer payment method is created through POS payments.

The processing center allows a full or partial refund after a transaction is captured. For POS payments, the transaction amount can be refunded at any time after it has been created because it is not limited by the *Settled* status. For linked refunds, a terminal or credit card is not needed; only the original transaction number is required.

Once the payment is captured, the **Void** and **Refund** commands on the More menu of the [Payments and Applications](#) form become available.

When a POS transaction is launched on the POS terminal, the payment is not editable in Acumatica ERP, as is the case with payments that have the *Authorize Only* status.

Changes to the Cash Sales Form

Acumatica ERP 2024 R1 introduces changes to the [Cash Sales](#) (AR304000) form. If the selected document has a payment method selected that has the *POS Terminal* means of payment specified on the [Payment Methods](#) (CA204000) form, the following changes appear in the Summary area:

- The **Proc. Center ID** box (see Item 1 in the following screenshot) is displayed.
- The **Terminal** box (Item 2) has been added to the Summary area. When the user clicks the magnifier button in this box, the lookup table (Item 3) is displayed.



For the signed-in user creating the document shown in the following screenshot, *Terminal 01* has been saved by the system as the default terminal. This is why the system has inserted it by default in the **Terminal** box (Item 2). The user can override this setting by selecting another terminal.

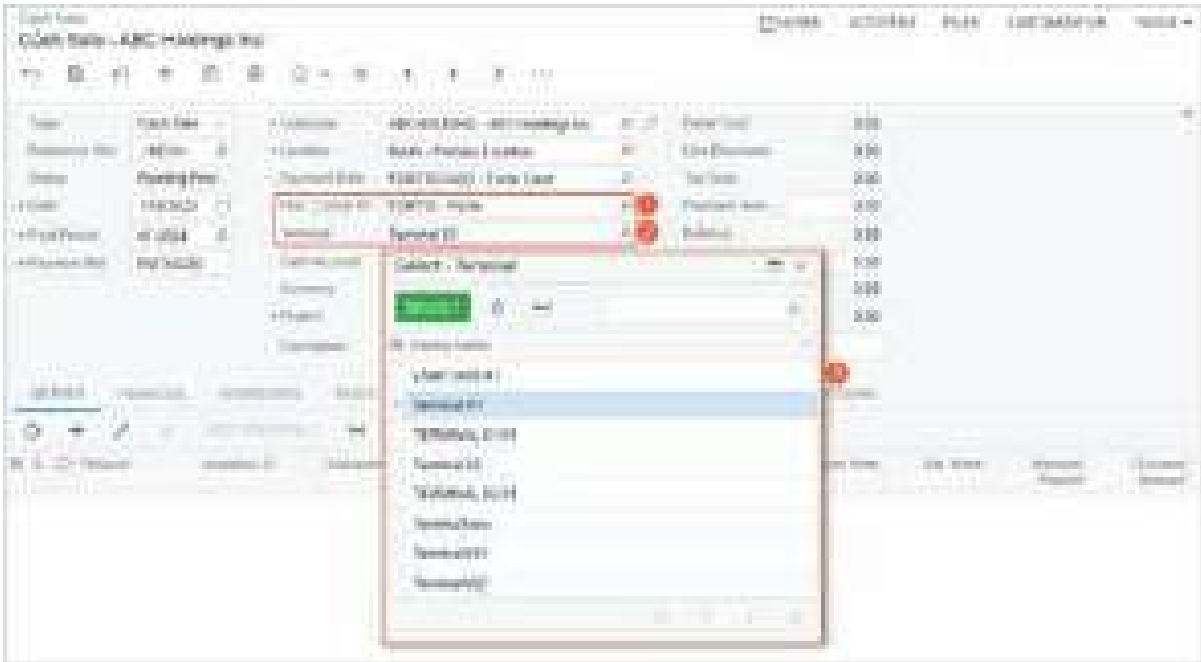


Figure: UI changes on the Cash Sales form

When the selected document has a POS terminal selected in the **Terminal** box, the commands under **Card Processing** on the More menu are available.

The following screenshot illustrates a cash sale paid via a POS terminal.



Figure: A cash sale paid via a POS terminal

Changes to the Sales Orders Form

In Acumatica ERP 2024 R1, on the [Sales Orders](#) (SO301000) form, when a user creates a payment or prepayment on the **Payments** tab, the **Create Payment** or **Create Prepayment** dialog box is opened. If the payment method selected for the order is associated with POS payments, the following UI changes have been made to these dialog boxes:

- The **Proc. Center ID** box (see Item 1 in the following screenshot) is displayed.
- In the **Terminal** box (Item 2), the **Terminal** lookup table is displayed, where the user can select an active POS terminal.
- The **Capture** and **Authorize** buttons (Items 3 and 4) related to card processing become available only when a POS terminal has been selected in the **Terminal** box.



Figure: UI changes on the Sales Orders form

To create a payment for a sales order and capture it via a POS terminal, the user performs the following general steps:

1. Creates a sales order on the [Sales Orders](#) form.
2. Goes to the **Payments** tab and clicks **Create Payment** on the table toolbar. The **Create Payment** dialog box opens.
3. Selects the following settings in the **Create Payment** dialog box:
 - **Payment Method:** A payment method associated with POS payments. The system automatically fills in the **Proc. Center ID** box with the processing center associated with the selected payment method.
 - **Terminal:** The POS terminal to be used. This box is automatically filled in with the default terminal, but the user can override this setting.
4. Clicks **Capture** in the **Create Payment** dialog box.

The system sends an API request to the processing center with all the mandatory settings to create a POS transaction on the terminal. The processing center launches a transaction on the terminal.

The customer receives the transaction on the terminal and then taps, swipes, or inserts their credit card; then they complete the payment. When the payment is sent to the processing center, the card payment is processed and a response is sent to Acumatica ERP with the final transaction status.

Once the system receives the response, it adds the reference number of the processing center and updates the transaction status.

5. Once the payment is successful, the system automatically releases the payment.



The payment is released automatically because the **Integrated Processing** check box is selected on the **Settings for Use in AR** tab of the [Payment Methods](#) (CA204000) form for the payment method.

The following screenshot illustrates a POS payment created and released for a sales order.



Figure: A POS payment for a sales order

When a user records a linked refund on the [Sales Orders](#) form by creating a sales order of the *RC* type and clicking **Create Refund** on the **Payments** tab, if there are multiple original invoices in the *RC* order, for the refund on the [Payments and Applications](#) (AR302000) form, the system leaves the **Orig. Transaction** box empty. The user must select the original transaction number of the invoice they want to refund.

To make it possible for users to record unlinked refunds (those for which the system does not require the original transaction number; these refunds are also called *blind refunds*), the administrative user must do the following:

- Get approval from the processing center and enable blind refunds on the processing center's side.
- In Acumatica ERP, make sure that the **Allow Unlinked Refunds** check box is selected on the [Processing Centers](#) (CA205000) form.

Changes to the Invoices Form

Changes have also been made to the [Invoices](#) (SO303000) form in Acumatica ERP 2024 R1. If a user clicks **Create Payment** on the table toolbar of the **Applications** tab, the **Create Payment** dialog box is opened. If the payment method selected for the sales invoice is associated with POS payments, the following UI changes are reflected in this dialog box:

- The **Proc. Center ID** box (see Item 1 in the following screenshot) is displayed.
- In the **Terminal** box (Item 2), the **Terminal** lookup dialog box is displayed, where the user can select an active POS terminal.
- The **Capture** and **Authorize** buttons (Items 3 and 4) related to card processing become available only after a POS terminal has been selected in the **Terminal** box.



Figure: UI changes on the Invoices form

To create a payment for a sales invoice and capture it via a POS terminal, the user performs the following general steps:

1. Creates a sales invoice on the [Invoices](#) form.
2. Goes to the **Applications** tab and clicks **Create Payment** on the table toolbar. The system displays the **Create Payment** dialog box.
3. Selects the following settings in the **Create Payment** dialog box:
 - **Payment Method:** A payment method associated with POS payments. The system automatically fills in the **Proc. Center ID** box with the processing center associated with the selected payment method.
 - **Terminal:** The POS terminal to be used. This box is automatically filled in with the default terminal, but the user can override this setting.
4. Clicks **Capture** in the **Create Payment** dialog box.

The system sends an API request to the payment processor with all the mandatory settings to create a POS transaction on the terminal. The processing center launches a transaction on the terminal.

The customer receives the transaction on the terminal and then taps, swipes, or inserts their credit card; then they complete the payment. When the payment is sent to the processing center, the card payment is processed and a response is sent to Acumatica ERP with the final transaction status.

Once the system receives the response, it adds the reference number of the processing center and updates the transaction status.

5. Once the payment is successful, the system automatically releases the payment.



The payment is released automatically because the **Integrated Processing** check box is selected on the **Settings for Use in AR** tab of the [Payment Methods](#) (CA204000) form for the payment method.

The following screenshot illustrates a sales invoice with a POS payment created for it.



Figure: A sales invoice paid with a POS payment

Refunds for POS transactions can be created after the transaction has been captured. The system allows refunds and does not wait for the transaction to be settled.

Additional Information

For details on the POS payments functionality, see [Support of POS Payments](#).

For details on how to configure the support of POS payments, see [To Configure the POS Payment Functionality](#).

Finance: Transmission of Level 2 Data During Credit Card Processing



This functionality is available in Acumatica ERP starting in 2023 R2 Update 2.

All businesses accepting credit card payments fall into a certain level of data processing. Each level is defined by the amount of information that is required or passed to complete the payment. Level 1 processing, the default one, is the basic level because the merchant adds only the basic payment data to a transaction. With level 2 processing, the merchant provides incremental data, combined with the basic payment data, and sends this data electronically to the bank to define the purchase in more detail. In return, the merchants get fraud prevention, and the card networks lower the interchange rates to process the credit card payments for B2B and B2G transactions.

In previous versions of Acumatica ERP, the system did not send additional data (level 2 data) in the transaction requests that were required to qualify for level 2 interchange rates. Interchange rates are the rates that banks charge the card networks. The card networks pass these charges to the merchants.

Starting in 2023 R2 Update 2 and in 2024 R1, the following additional data is incorporated in the transaction API request along with the payment data for *Card Not Present* transaction endpoint requests:

- The tax amount (the `tax` database field)
- The subtotal amount (the `subtotal_amount` database field)

During credit card processing, the system sends this additional data to the processing center if the selected payment method has *Credit Card* specified in the **Means of Payment** box on the [Payment Methods](#) (CA204000) form.



Although multiple tax calculation rules are used in Acumatica ERP, the system always calculates the tax amount and the subtotal amount as follows:

- The tax amount is always the amount from the **Tax Total** box in the Summary area of a data entry form. The tax amount cannot be less than 0 in the system.
- The subtotal amount is always the payment amount minus the tax amount.

Changes to the Payments and Applications Form

On the [Payments and Applications](#) (AR302000) form, when a user creates a payment that is not applied to an AR document or a sales order, there is no tax information. Therefore, the system passes 0 in the `tax` database field, and the subtotal amount is the same as the payment amount for the **Authorize** and **Capture** commands.

If the user clicks **Authorize** on the More menu for a payment that is applied to a sales order, invoice, or debit memo, the system fetches the total tax amount from the applied document according to the following rules:

1. The system searches the **Documents to Apply** tab if the full payment amount is applied to a document or multiple documents. The system calculates the tax amount and the subtotal amount from this document or multiple documents.

If a partial payment amount is applied, the system prorates the taxes from all the documents to which the payment amount is applied and adds these amounts to get the total tax amount. Then the system does the following:

- a. If an amount is specified in the **Applied to Order** column on the **Sales Orders** tab, the system calculates the taxes from this sales order and adds them to the taxes from the documents. When the total tax amount has been calculated, the system then calculates the subtotal amount from the documents to which the payment is applied and from the sales order.
- b. If the amount in the **Applied to Order** column is 0, the system ignores this sales order, because the amount must be transferred to the invoice from which the taxes were already extracted.

- If no documents are listed on the **Documents to Apply** tab, the system checks the **Sales Orders** tab. If the payment is applied to a sales order in full and an amount is specified in the **Applied to Order** column, the system calculates the tax amount and the subtotal amount from this sales order.

If a partial amount is applied to the sales order and an amount is specified in the **Applied to Order** column, the system calculates the taxes from the sales order and then calculates the subtotal amount from the sales order. If the amount in the **Applied to Order** column is 0, the system ignores this sales order, because the amount must be transferred to the invoice from which the taxes were already extracted.

- If the payment amount is less than the total amount of the invoice, debit memo, or sales order, the system prorates the tax amount based on the amount applied to the invoice, debit memo, or sales order.



If a user captures a payment directly on the [Payments and Applications](#) form, this payment will not qualify for level 2 data transmission, because the tax amount is 0 at this time. Once the transaction is captured, it cannot be updated, so it will be settled without the level 2 interchange rate.

Changes to the Capture Payments Form

When a user creates a payment for multiple invoices of the same customer on the [Generate Payments](#) (AR511000) form, the user then captures the created payment on the [Capture Payments](#) (AR511500) form. The tax amount and subtotal amounts are calculated based on the **Total Tax** amounts in the invoices on the [Invoices and Memos](#) (AR301000) form, the **Applied to Documents** amount of the payment on the [Payments and Applications](#) (AR302000) form, and the total amounts of the invoices. The system then sends the data to the payment gateway.

Changes to the Cash Sales Form

On the [Cash Sales](#) (AR304000) form, when a user creates a payment for a payment method with the *Credit Card* means of payment, the system fetches the total tax amount from the **Tax Total** box in the Summary area and calculates the subtotal amount for the document. These amounts are added to the transaction endpoint request.

Changes in Sales Order Processing

The changes described below have been introduced on the following data entry forms related to sales order processing:

- [Sales Orders](#) (SO301000): If a user creates a payment on the **Payments** tab by clicking **Create Payment** or **Create Prepayment** and the payment method has the *Credit Card* means of payment, the system fetches the total tax amount calculated for the document from the **Tax Total** box in the Summary area of the form. The system then calculates the subtotal amount and sends both the subtotal amount and the tax amount to the payment gateway.
- [Invoices](#) (SO303000): If a user creates a payment for a payment method that has the *Credit Card* means of payment, the system fetches the total tax amount calculated for the document from the **Tax Total** box in the Summary area. The system then calculates the subtotal amount and adds this data to the transaction request (authorize or capture).



If the user releases the invoice first, they can create the payment by clicking **Pay** on the form toolbar. The system opens the [Payments and Applications](#) (AR302000) form. On this form, when the payment is created, the system checks the **Documents to Apply** tab, fetches the total tax amount and the subtotal amount from the sales invoice, and sends these amounts to the payment gateway.

- [Credit Card Processing for Sales](#) (SO507000): If the user selects *Reauthorize* or *Capture* in the **Action** box to process a payment, the system calculates the tax amount and the subtotal amount based on the following amounts of the sales orders:
 - Tax Total** in the Summary area of the [Sales Orders](#) form

- **Applied to Order** on the **Payments** tab of the *Sales Orders* form (the sum of these column values)
- **Order Total** in the Summary area of the *Sales Orders* form

The system sends this data to the payment gateway and then further to the card network.

- *Process Orders* (SO501000): If the user selects *Create and Capture* in the **Action** box to create a payment, the system calculates the tax amount and the subtotal amount based on the following amounts of the sales orders:
 - **Tax Total** in the Summary area of the *Sales Orders* form
 - **Applied to Order** on the **Payments** tab of the *Sales Orders* form (the sum of these column values)
 - **Order Total** in the Summary area of the *Sales Orders* form

The system sends this data to the payment gateway and then further to the card network.

Limitations

This functionality is not applicable for the following types of documents:

- Documents paid by line: For documents that have the **Pay by Line** check box selected on the *Invoices and Memos* (AR301000) form, this functionality is not supported because it is applied only on the document level. If a payment is applied to a document paid by line, the system does not calculate the taxes for the individual lines. Instead, it treats the document as it treats documents with the **Pay by Line** check box cleared and calculates the tax amount at the document level.

Suppose that on the *Payments and Applications* (AR302000) form, a payment is applied to two documents, one paid by line and the other paid at the document level. The system will calculate the tax amount for the document paid by line at the document level but not on the line level.

- Refund transactions: The following documents produce transactions with the *Credit* type, so they do not qualify for level 2 processing:
 - Documents with the *Cash Return* type created on the *Cash Sales* (AR304000) form
 - Documents with the *Refund* type created on the *Payments and Applications* form

Transactions qualify for the level 2 interchange rate only if they have the *Sale* type.

- Sales orders imported from eCommerce sites: When an order from an eCommerce site is synchronized with a sales order in Acumatica ERP, the payment for the order is either imported automatically by the system along with the order or imported manually by the user.

If the payment for this order is *Authorized* or *Captured* in the eCommerce site, this transaction may not qualify for level 2 processing. In this case, Acumatica Payments was not used to capture the payment and thus cannot send the transaction with the level 2 data to the payment gateway.



If the payment has been authorized with the Fortis Gateway in the eCommerce site and imported to Acumatica ERP in a sales order, the tax information is synchronized as part of the order details. When this payment is captured, the system can fetch the **Total Tax** amount specified on the **Totals** tab of the *Sales Orders* (SO301000) form, calculate the subtotal amount from the sales order, and incorporate it in the transaction request to reclassify the transaction for level 2 processing.

Upgrade Notes

After an upgrade to Acumatica ERP 2023 R2 Update 2 and later, the new database fields (`tax` and `subtotal_amount`) will be assigned the default value of 0.

Finance: Other Improvements

In Acumatica ERP 2024 R1, multiple improvements to financial management processes and the UI have been introduced, as described below.

Revaluation of Customer and Vendor Prepayment Balances

Acumatica ERP 2024 R1 now provides the ability to revalue customer or vendor prepayment balances—that is, the balances of dedicated prepayment accounts to which customer or vendor documents of the *Prepayment* type have been posted. Now on the [Revalue AR Accounts](#) (CM505000) and [Revalue AP Accounts](#) (CM504000) forms, a user can select a prepayment account or multiple accounts. The user then initiates the process of revaluing their balances by clicking **Revalue** on the form toolbar.

To make customer prepayment accounts available on the [Revalue AR Accounts](#) form, an administrative user must specify the appropriate setting on the [Currency Management Preferences](#) (CM101000) form. The user must select the **Revalue AR Prepayment Balance** check box (which is cleared by default) in the new **Revaluation Settings** section (shown in the following screenshot). To make vendor prepayment accounts available on the [Revalue AP Accounts](#) form, the administrative user selects the **Revalue AP Prepayment Balance** check box in the same section of the form.

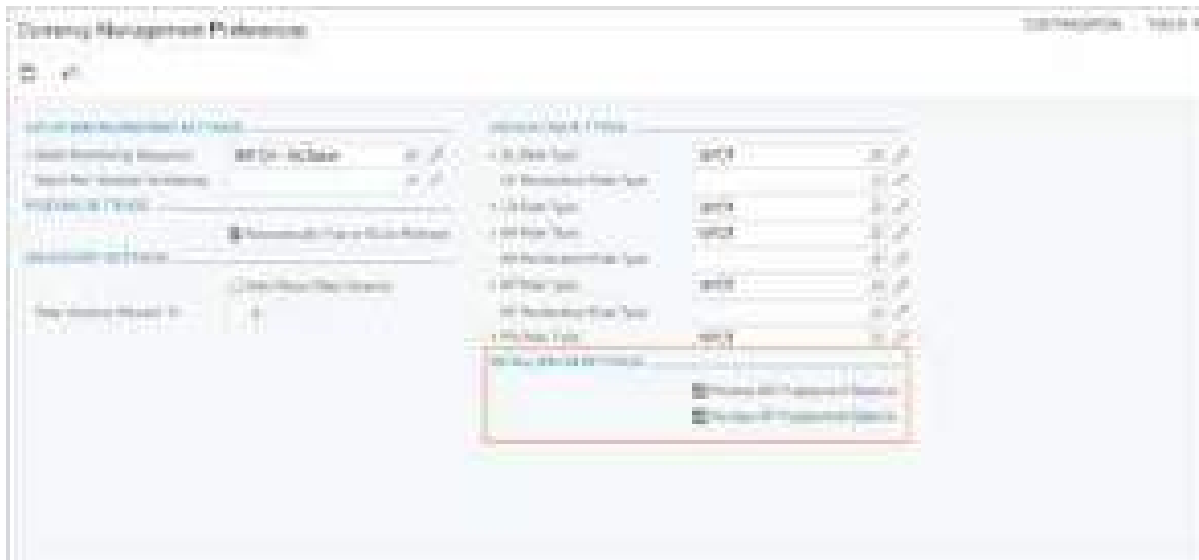


Figure: The new Revaluation Settings section

These forms are available if the *Multicurrency Accounting* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

Creation of a Reversing Batch Originating in AP After Reclassification

In Acumatica ERP 2024 R1, the reclassification of AP bills has been optimized. The process of AP bill reclassification involves a user correcting some value in the bill, such as an account, a subaccount, or a project. When a user corrects any of these values in the AP bill and initiates the reclassification, the system creates the GL transaction with the new details, as well as a reversing batch for the original GL transaction.

Now the reversing batch originates in AP. That is, AP is specified in the **Module** box in the Summary area of the [Journal Transactions](#) (GL301000) form for a GL transaction with the **Reversing Entry** check box selected in the Summary area.

Reimplementation of the New Zealand Straight-Line Depreciation Method

In Acumatica ERP 2024 R1, the *New Zealand Straight-Line* depreciation method has been reimplemented to use the new depreciation engine. The method of calculating depreciation is based on percentage calculation. An asset's depreciation base in the first depreciation period is defined as $\text{Acquisition Cost} * \text{Business Use (\%)}$.

For the *New Zealand Straight-Line* method, additions and deductions are not allowed. Depreciation is not calculated for the year in which the asset is disposed of. If the depreciation has been calculated, it will be reversed. The logic of calculating a depreciation amount for a short year is the same as it is for an ordinary year. No depreciation amounts are posted in suspended periods. After a user unsuspects an asset, the depreciation schedule is prolonged as by the number of suspended periods.

Reimplementation of the Dutch 2 Depreciation Method

Acumatica ERP 2024 R1 provides the *Dutch Method 2* depreciation method with the *Full Period* averaging convention, which has been reimplemented to use the new depreciation engine. The depreciation rate for this method is calculated by using a constant percentage and the number of periods in a year. The constant percentage defines the part of the asset's net book value that should be depreciated during this year.

With this method, the depreciation expenses per period are calculated as $\text{Net Book Value} * \text{Depreciation Rate}$. The depreciation rate is calculated as $1 - (1 - \text{Percentage} / 100) ^ (1 / \text{Number of periods in a year})$.

Confirmation for the Voiding of Deposited Payments

On the *Payments and Applications* (AR302000) and *Checks and Payments* (AP302000) forms, when a user clicks **Void** to void a payment that has been deposited, the system displays a confirmation dialog box, as shown in the following screenshot.



Figure: The confirmation dialog box on the Payments and Applications form

The screenshot illustrates a payment that has been added to a bank deposit on the [Bank Deposits](#) (CA305000) form. For such a payment, the **Batch Deposit** and **Deposited** check boxes are selected on the **Financial** tab of the [Payments and Applications](#) form. When a user clicks **Void** on the form toolbar, the confirmation message warns the user that this is a deposited payment. The user can click **OK** to proceed with voiding the payment or **Cancel** to cancel the operation.

Specification of the Time Limit of the Consolidation Process

Starting in Acumatica ERP 2024 R1, a user can specify the time limit allocated to the system to perform the consolidation process for the selected consolidation unit or units. Once the time limit is reached, the system stops the process.

On the [Consolidation](#) (GL103000) form, the new **Process Time Limit** column has been added (as shown in the following screenshot).



Figure: The new Process Time Limit column

In the **Process Time Limit** column, a dropdown list of predefined time intervals is available (see the following screenshot). The following options are available: *15 min, 30 min, 45 min, 1 h, 1 h 30 min, 2 h, 3 h, 4 h, 5 h, 6 h, 7 h, 8 h, 9 h, 10 h, 11 h, 12 h, 13 h, 14 h, 15 h, 16 h, 17 h, 18 h, 19 h, 20 h, 21 h, 22 h, 23 h, and 24 h*. By default, *5 h* is specified; a user can override this setting before starting the synchronization process.



Figure: The list of time limit options

Integrations: Enhancements to the FedEx REST Plug-In

In Acumatica ERP 2023 R1, support for the FedEx REST API was implemented to ensure that users can continue using the FedEx carrier service in Acumatica ERP when FedEx stops supporting the Web Services API V10. Also, the `PX.FedExRestCarrier.FedExRestCarrier` plug-in was added to the [Carriers](#) (CS207700) form for this purpose.

Acumatica ERP 2024 R1 introduces additional enhancements to simplify the testing and usage of this functionality.

Changes to Plug-In Settings

Previously, the production URL of the of the carrier service for the `PX.FedExRestCarrier.FedExRestCarrier` plug-in was specified directly in the `web.config` file of Acumatica ERP. If a system administrator needed to test the plug-in for the FedEx REST API in the sandbox environment, they had to edit this file. The administrator may have found this task impossible to complete due to restrictions of file editing in a cloud-hosted version of Acumatica ERP.

In Acumatica ERP 2024 R1, **LOGIN ENDPOINT** has been added to the settings of the `PX.FedExRestCarrier.FedExRestCarrier` plug-in on the **Plug-In Parameters** tab of the [Carriers](#) (CS207700) form (see Item 1 in the screenshot below). In this row, the system administrator can specify the production or sandbox URL of the FedEx carrier service.

Additionally, the system administrator does not need to use the [External Applications](#) (SM301000) form to generate OAuth tokens anymore. Now the system can generate an OAuth token when the administrator clicks **Test Connection** on the form toolbar of the [Carriers](#) form for the `PX.FedExRestCarrier.FedExRestCarrier` plug-in. The redundant *FedEx Carrier Service* option in the **Type** box on the [External Applications](#) form has been removed. For the `PX.FedExRestCarrier.FedExRestCarrier` plug-in, the system administrator now specifies the client ID and client secret in the new **CLIENT ID** and **CLIENT SECRET** settings on the **Plug-In Parameters** tab of the [Carriers](#) form (Item 2).

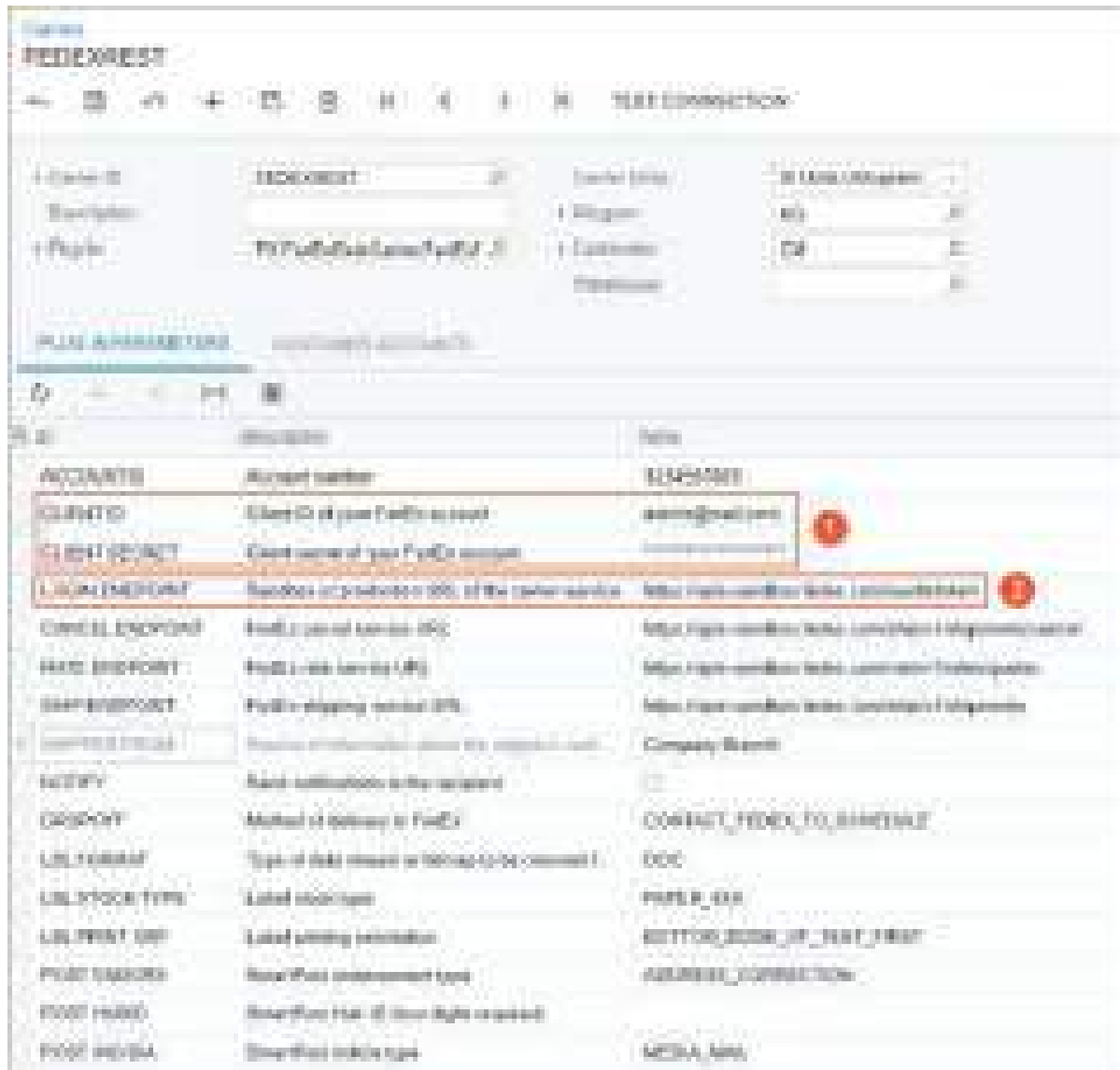


Figure: New plug-in parameters

Integrations: Exception Certificate Management

In 43 states across the United States, economic nexus laws require businesses to collect and remit sales taxes based on their activities within each state. These laws require businesses to manage tax-exempt transactions for various customer types, such as healthcare, government, universities, and non-profit organizations, which are exempt from tax payments. Consequently, companies must stay updated with their customers' tax exemption certificates to accurately apply valid certificates to transactions. If companies do not manage exemption certificates efficiently, they may encounter challenges, such as delays in order processing, billing errors, added complexity in the purchase process, and negative customer reviews that affect the company's reputation.

Acumatica ERP provides built-in support for online integration with Avalara, offering both online sales tax processing services and an exemption certificate management solution. Starting in Acumatica ERP 2024 R1, users can view and manage tax-exempt certificates associated with specific customers through the Avalara integration. The new functionality enables Acumatica ERP users to request and retrieve exemption certificates for eligible customers. Administrative users can seamlessly create customers in Avalara with just one click in Acumatica ERP, synchronizing the list of customers between the Avalara Exemption Certificate Management (ECM) account and Acumatica ERP. Consequently, Acumatica ERP users gain the ability to manage tax exemptions by associating transactions with tax-exempt customers.

By enabling the new *Exemption Certificate Management* feature in Acumatica ERP 2024 R1, companies can empower their users to efficiently manage lists of tax-exempt customers and their corresponding certificates, preventing the inadvertent application of taxes to transactions involving tax-exempt customers. This functionality not only streamlines the tax exemption process but also enhances the overall management of tax-related documents, ensuring compliance across transactions.

Configuring Exemption Certificate Management in Acumatica ERP

Before the Exemption Certificate Management functionality is configured, the ECM tax provider account must be created in Avalara and integration with Avalara must be configured in Acumatica ERP (for details, see [Online Integration with Avalara AvaTax](#)).

Before a company's users can start using the exemption certificate management functionality, an administrative user must perform the following tasks:

1. Enable the *Exemption Certificate Management* feature on the [Enable/Disable Features](#) (CS100000) form, as described in the next section.
2. Ensure that the Avalara tax provider has been configured on the [Tax Providers](#) (TX102000) form.
3. Specify the Avalara ECM provider on the [Tax Preferences](#) (TX103000) form.
4. Create the Acumatica ERP tax-exempt customers in the ECM provider account.
5. Request the exemption certificates in the Avalara ECM provider.

These steps are described in more detail in the following sections of this topic.

Enabling the ECM Feature

To enable the *Exemption Certificate Management* feature, a user must do the following:

1. On the [Enable/Disable Features](#) (CS100000) form, click **Modify** on the form toolbar.
2. In the list of features, select the **Exemption Certificate Management** check box, which is located under **External Tax Calculation** in the **Third Party Integrations** group of features (see the following screenshot).
3. On the form toolbar, click **Enable**.



Figure: The new Exemption Certificate Management check box

Once the *Exemption Certificate Management* feature is enabled, all UI elements related to the exemption certificate management become available for users with the appropriate access rights, such as *Admin*, *Acumatica Support*, *TX Admin*, *AR Admin*, *AR Clerk*.

Configuring a Tax Provider

On the [Tax Providers](#) (TX102000) form, ensure that the Avalara tax provider has been configured, as shown in the following screenshot. See [Online Integration with Avalara AvaTax](#) for information about how to perform this configuration.



Figure: The Avalara ECM tax provider's configuration settings

On the [Tax Providers](#) form, in the **Plug-In (Type)** box of the Summary area, the `PX.TaxProvider.AvalaraRest.AvalaraRestTaxProvider` plug-in type should be selected for the Avalara ECM tax providers.

Specifying the ECM Tax Provider in Acumatica ERP

On the [Tax Preferences](#) (TX103000) form, an administrative user must specify the Avalara ECM tax provider that has been configured as described in the previous section. To do this, the user must do the following:

1. In the **ECM Settings** section, select the Avalara ECM tax provider in the **ECM Provider** box (see the following screenshot).



The **ECM Provider** box contains the tax providers that have the `PX.TaxProvider.AvalaraRest.AvalaraRestTaxProvider` plug-in type.

2. Save the changes by clicking **Save** on the form toolbar.

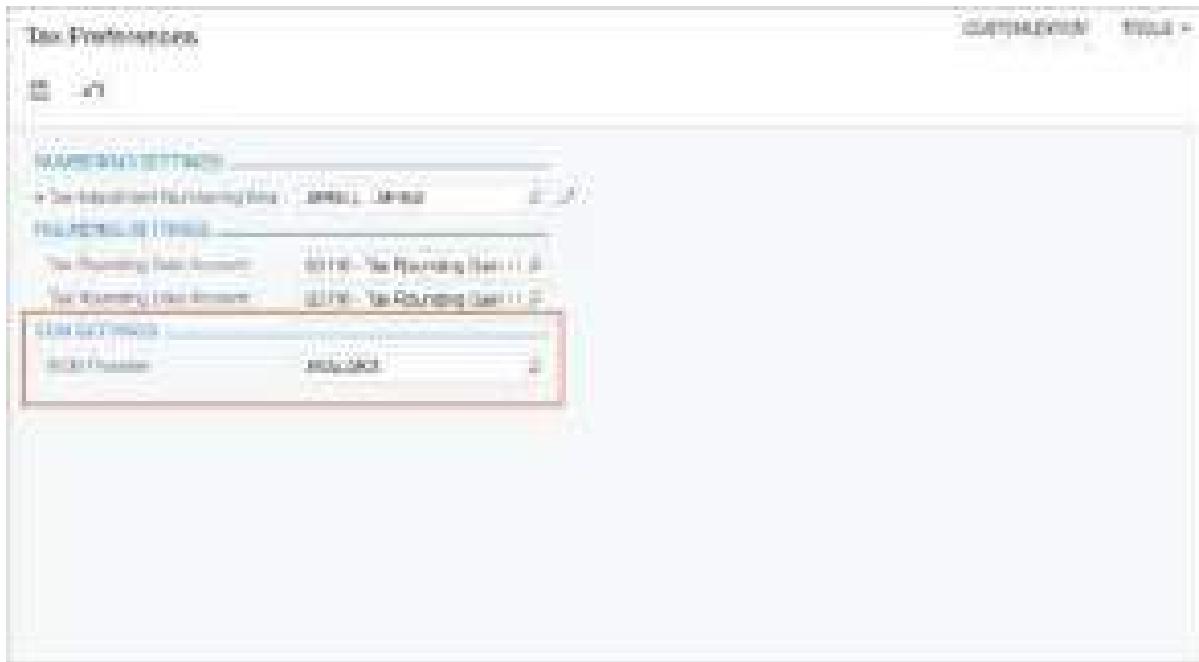


Figure: The ECM tax provider on the Tax Preferences form

Creating Customers in the ECM Provider Account

An administrative user must synchronize tax-exempt customer records between Acumatica ERP and the Avalara ECM provider account in order to establish a connection between Acumatica ERP and the ECM provider. In Acumatica ERP, an administrative user can click the **Create Customer in ECM Provider** command on the More menu of the [Customers](#) (AR303000) form for a selected customer (as shown in the following screenshot).

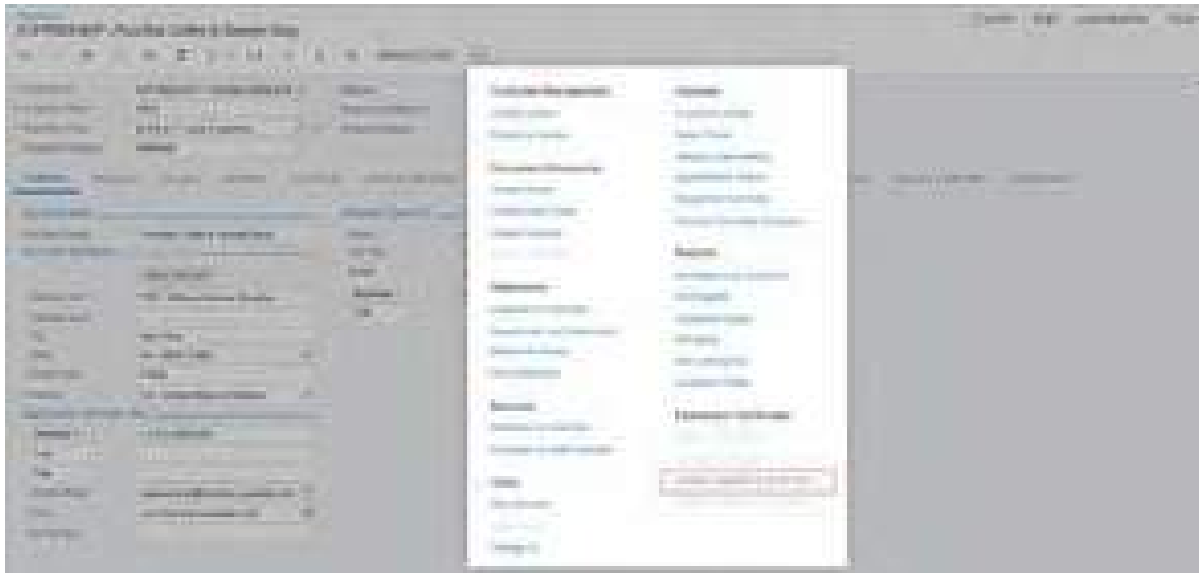


Figure: The Create Customer in ECM Provider command

When the administrative user clicks this command, the system opens the **Select Company Code** dialog box, which shows all company codes available for the customer. This user selects the company code for which the customer record must be created in the Avalara ECM provider account and clicks **OK**, which closes the dialog box. If one company code is available for the customer, the system inserts the code by default and does not display the dialog

box. Whether the user selects the company code in the dialog box or the system inserts the code, the corresponding customer record is created in the Avalara ECM provider account.

The lists of customers can also be mass-synchronized between Acumatica ERP and the Avalara ECM provider account. In the Selection area of the new *Manage Exempt Customers (TX505000)* form, the *Create Customer in ECM Provider* option is available in the **Action** box (as the following screenshot shows).

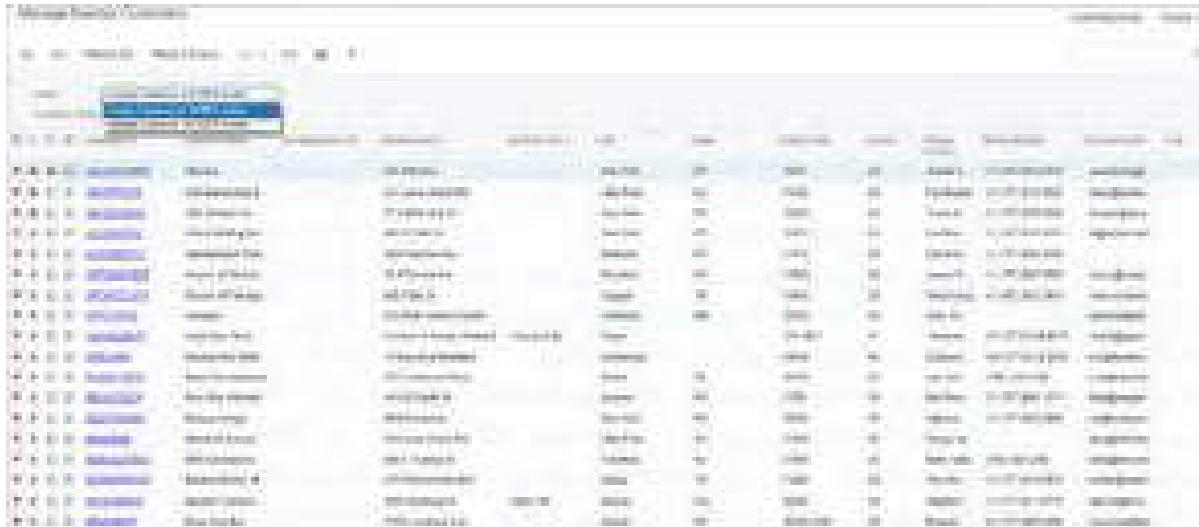


Figure: The *Create Customer in ECM Provider* action

To create a customer or multiple customers at once in the Avalara ECM provider account, an administrative user does the following on the *Manage Exempt Customers* form:

1. In the Selection area, selects the following options:

- **Action** box: *Create Customer in ECM Provider*.
When the user selects this option, the table shows all the active customers defined in Acumatica ERP.
- **Company Code**: The company code the administrative user created in the ECM account. This code corresponds to the branch in Acumatica ERP.



If only one company code is available, the system inserts it by default, and the box is unavailable for editing.

2. Does one of the following:

- To create only selected customer accounts in the Avalara ECM account: In the table, selects the unlabeled check box in the rows of the customers that must be created in the Avalara ECM account. Then on the form toolbar, the administrative user clicks **Process**.
- To create all listed customers in the Avalara ECM account: On the form toolbar, clicks **Process All**.

The same customer can be created for multiple company codes. If the administrative user has created customers for only one of the available company codes, all customers will again be listed when the user starts to create customers for another company code (that is, if another code is selected in the **Company Code** box of the Selection area).

Once the process is completed, the processed customers are created in the ECM provider, and the success message is displayed next to each customer on the **Processed** tab of the **Processing** dialog box. If any of the customers have already been created in the ECM provider previously, the system displays a warning message informing the user about it on the **Warnings** tab of the **Processing** dialog box. In that case, the system only synchronizes the company code specified for the customer in the ECM account with Acumatica ERP.

Updating Customers in the ECM Provider Account

Sometimes an update of a customer's information may be required in the Avalara ECM account if any changes have been made to the customer settings in Acumatica ERP. This may occur, for example, if some changes have been made to the business or to contact's personal details, such as name and address.

Once any changes have been made to a customer in Acumatica ERP, the **Update Customer in ECM Provider** menu command becomes available on the More menu of the *Customers* (AR303000) form (as shown in the following screenshot).



This command is available if the customer has already been created in the Avalara ECM provider account.

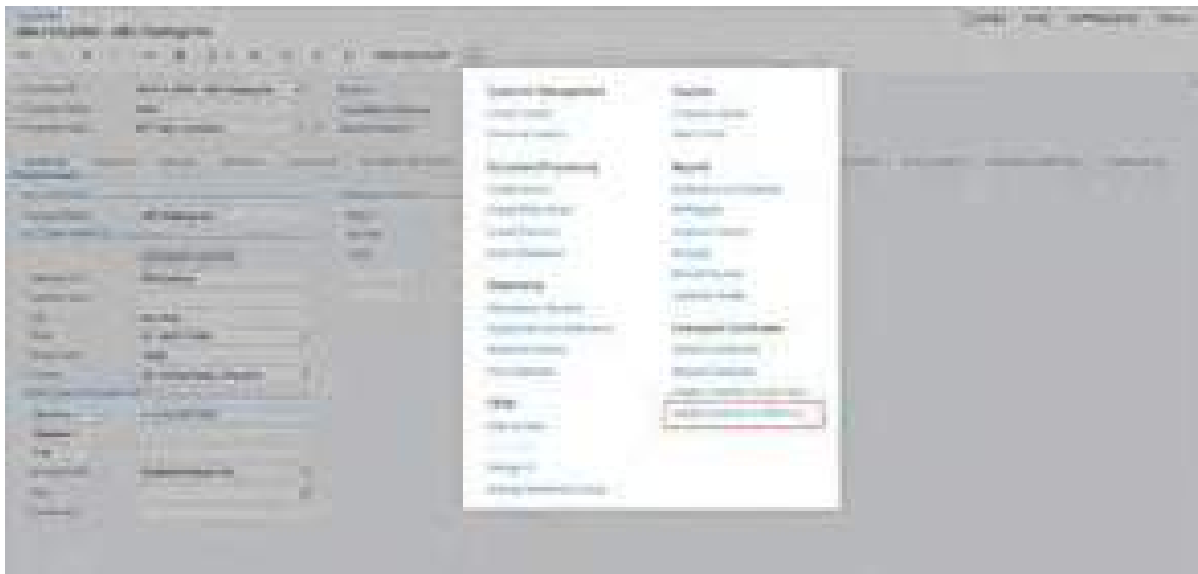


Figure: The Update Customer in ECM Provider command

If a user clicks the command, the corresponding customer record is updated in the Avalara ECM provider account, and the following message is shown in the top right corner of the form: *The customer has been updated successfully in the Avalara ECM provider.* The user can check the ECM account to be sure that the customer details have been successfully updated.

To mass-update customers, an administrative user uses the *Update Customer in ECM Provider* action and processes these customers on the new *Manage Exempt Customers (TX505000)* form (shown in the following screenshot).



Figure: The Update Customer in ECM Provider action

When the user selects the *Update Customer in ECM Provider* action, the table lists all the active customers whose information has been updated in Acumatica ERP and that have already been created in the Avalara ECM account for at least one company code.

To update any number of customers in the Avalara ECM provider account, the administrative user does the following on the *Manage Exempt Customers* form:

1. In the Selection area, selects the following options:
 - **Action** box: *Update Customer in ECM Provider*.
 - **Company Code**: A company code that has been created beforehand in the ECM account. This code corresponds to the branch in Acumatica ERP.



If only one company code is available, the system inserts it by default, and the box is unavailable for editing.

2. Does one of the following:
 - To update only selected customer accounts in the Avalara ECM account: In the table, selects the unlabeled check box in the rows of the customers that must be updated in the Avalara ECM account. Then on the form toolbar, the administrative user clicks **Process**.
 - To update all listed customers in the Avalara ECM account: On the form toolbar, clicks **Process All**.

Once the process has been successfully completed, the customer records disappear from the table.

Requesting a New Exemption Certificate for a Customer

An administrative user of Acumatica ERP requests a certificate from the customer selected on the *Customers* (AR303000) form. To do this, on the More menu, the user clicks the **Request Certificate** command under **Exemption Certificates** (see the following screenshot).



The **Request Certificate** command is unavailable if the customer has not been created in the ECM provider account.

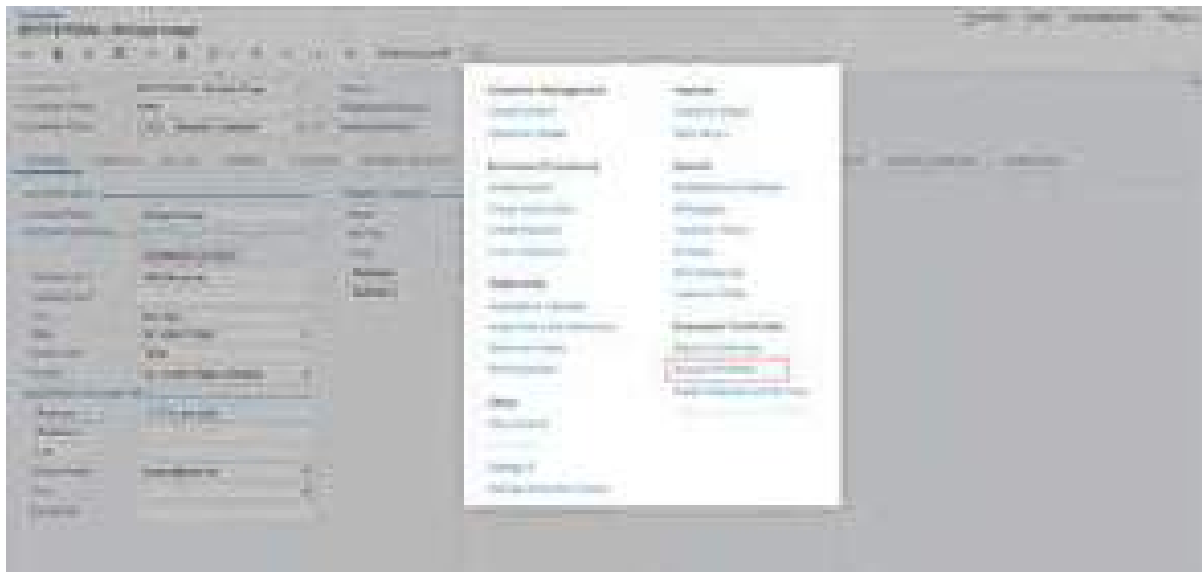


Figure: The Request Certificate command

Once the button is clicked, the **Request Certificate** dialog box opens (as the following screenshot shows).



Figure: The Request Certificate dialog box

In the dialog box, the user fills in the following boxes:

- **Company Code:** The needed company code from the company codes available for this customer. By default, the system inserts the company code that corresponds to the branch selected in the Company and Branch Selection menu at the top of Acumatica ERP screen.
- **Email:** The email address to be used for sending a request. By default, the customer's default email address is specified.
- **Certificate Request Template:** A template available in the Avalara ECM Provider; the following screenshot shows the templates in the lookup table for this box. An API request is used to retrieve the list of cover letters from Avalara ECM Provider.

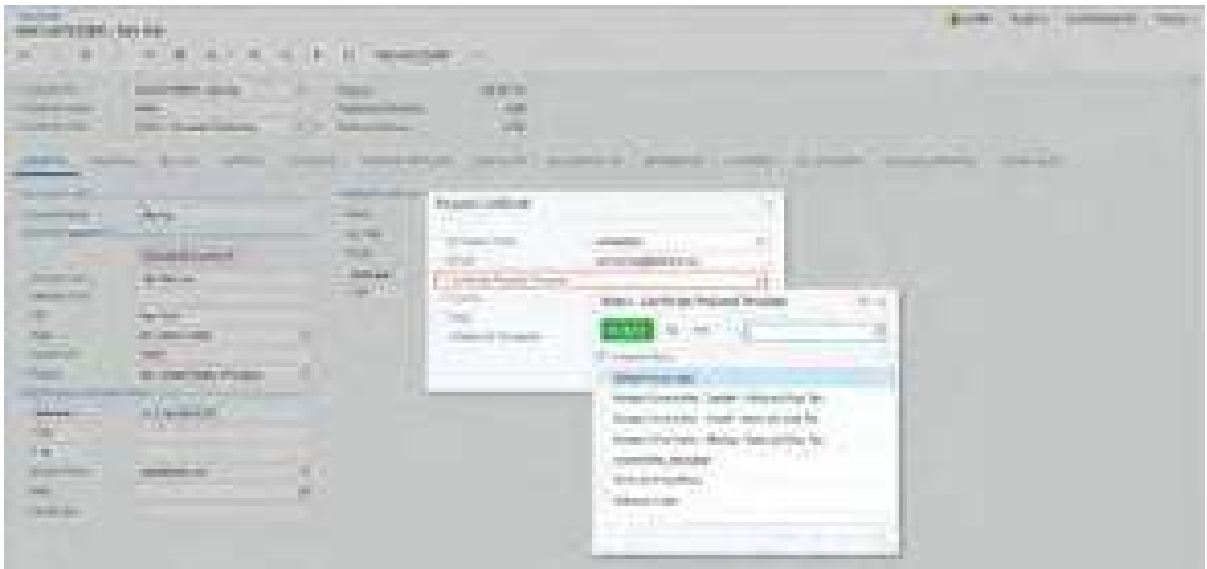


Figure: The list of certificate request template letters

- **Country:** The country of the customer. By default, *US* is selected.
- **State:** The state for which the exemption certificate will be issued. The user selects a state from the list of states available for the selected country.

- **Reason for Exemption:** The reason the customer is exempt. The lookup table contains the list of exemption reasons that are available in the Avalara ECM Provider (see the following screenshot). Acumatica ERP retrieves this list from the Avalara ECM provider by using an API request.

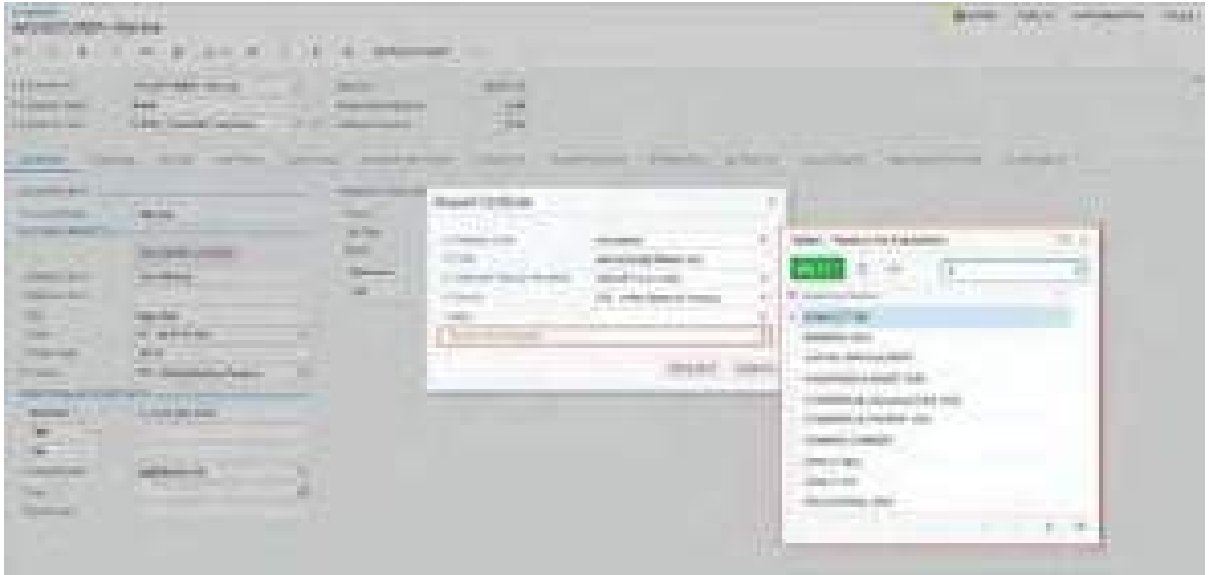


Figure: The list of exemption reasons

When the user clicks **Request** in the dialog box, the system sends a request to the provided email address and closes the **Request Certificate** dialog box. If the request has been sent successfully, the success message is displayed in the top-right corner of the *Customers* form. If the certificate was not successfully requested, then a warning message is shown instead.

Retrieving an Exemption Certificate for a Customer

A user with the appropriate access rights (*Admin, Acumatica Support, TX Admin, AR Admin, or AR Clerk*) can view all exemption certificates available for the selected customer. To do this, on the More menu of the *Customers* (AR303000) form, the user clicks the **Retrieve Certificates** command under **Exemption Certificates** (as the following screenshot shows).



The **Retrieve Certificates** command is unavailable if the customer has not been created (or was deleted) in the ECM provider account.

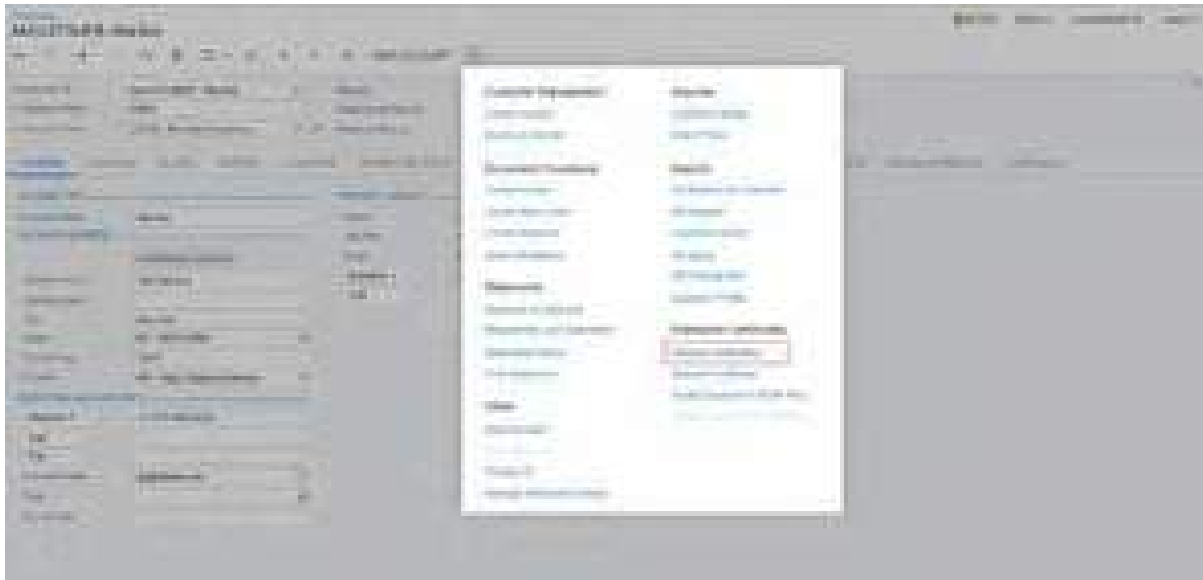


Figure: The Retrieve Certificates command

Once the user clicks the command, the **Exemption Certificates** dialog box opens (see the following screenshot). The dialog box shows the list of all customer's exemption certificates.



Figure: The list of the customer's exemption certificates

The user can check the statuses of the existing certificates (*Valid* or *Invalid*) in the **Certificate Status** column. The user can also request a new certificate, if needed, by clicking **Request Certificate** on the table toolbar.

By clicking the **Refresh** button, which is also available on the table toolbar, the user can refresh the list of certificates by sending a new API request to Avalara to obtain the latest available certificates.

Integrations: Support for Pacejet Carrier Service

In previous versions of Acumatica ERP, the Pacejet carrier service was available only as a customization. Acumatica ERP 2024 R1 introduces support of this integration in the core application.

Pacejet is a carrier aggregator featuring more than 65 carriers. Its shipping platform offers a range of services, including freight and parcel carriers, as well as third-party logistics carriers.

Configuration of the Pacejet Carrier Service

Before the company can start using the Pacejet carrier service in Acumatica ERP, a system administrator should complete the following tasks:

- Acquire a Pacejet account and password, along with the corresponding license key.
- Create a Pacejet location within the Pacejet account.
- Enable the *Pacejet* feature (**Shipping Carrier Integration** group of features) on the [Enable/Disable Features](#) (CS100000) form.
- Create and configure a Pacejet carrier by using the `PX.PacejetCarrier.PacejetCarrier` plug-in on the [Carriers](#) (CS207500) form.
- Create Ship Via codes with the Pacejet carrier on the [Ship via Codes](#) (CS207500) form, as described in [To Create Ship via Codes for the Integrated Carrier](#).

To create a new Pacejet carrier on the [Carriers](#) form, the administrator specifies the carrier ID in the **Carrier ID** box (see Item 1 in the screenshot below). After that, the administrator selects `PX.PacejetCarrier.PacejetCarrier` in the **Plug-In** box (Item 2). The system then displays the available plug-in settings on the **Plug-In Parameters** tab.

For the minimal configuration of the plug-in, the administrator must also complete the following tasks on this form:

- Specify the units of measure in the Summary area (Item 3)
- Provide valid values for **PACEJET URL**, **LOCATION**, and **PACEJET LICENSE** on the **Plug-In Parameters** tab (Item 4)

Once the specification of the required settings is complete, the administrator can validate the Pacejet account details in the plug-in settings by clicking **Test Connection** on the form toolbar. If the connection is successful, the Pacejet carrier becomes available for the creation of Ship Via codes and the processing of shipments.

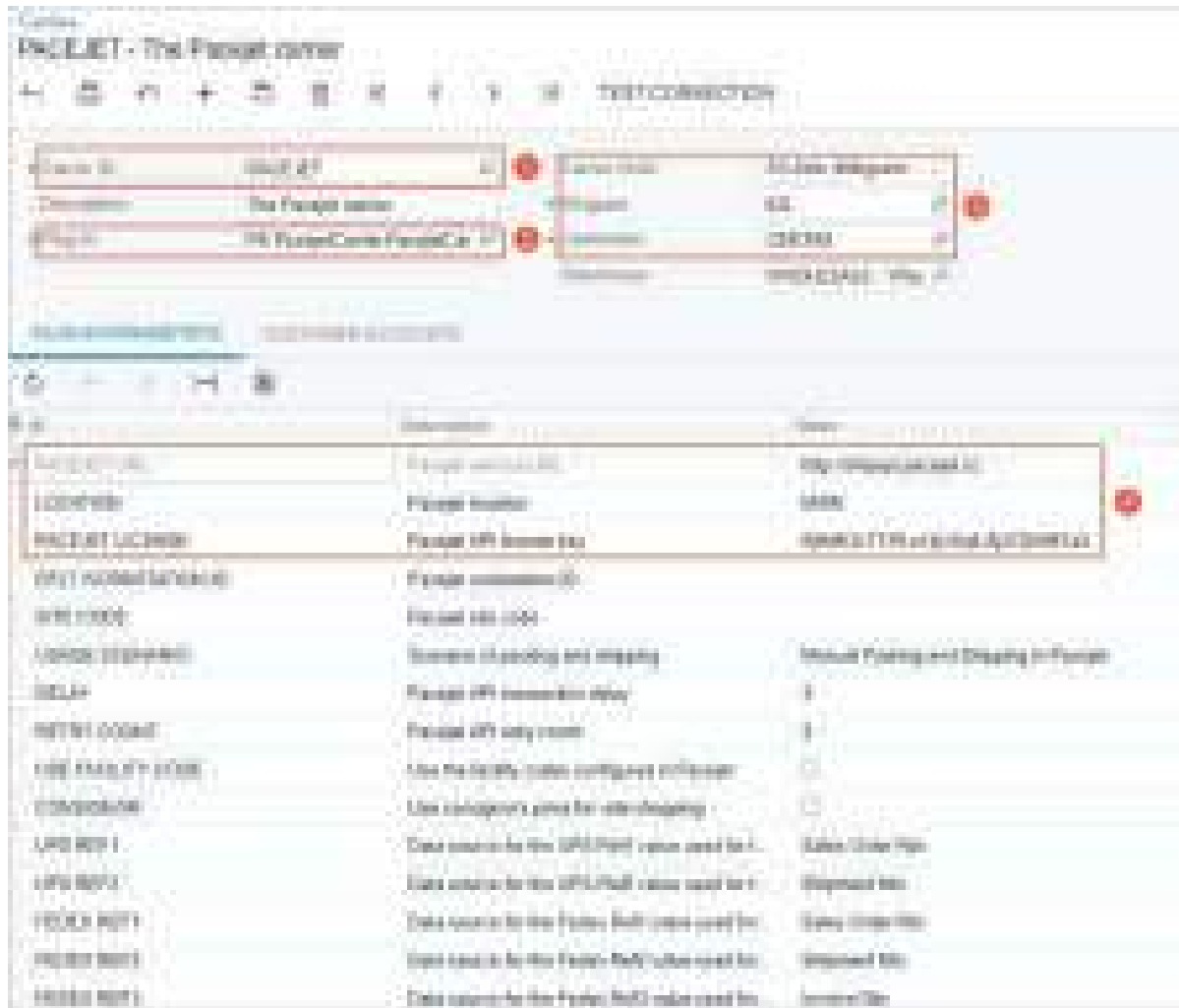


Figure: The Pacey carrier configuration

Changes to the User Interface

Acumatica ERP 2024 R1 introduces several new UI elements on various forms to support the Pacey carrier service.

If a Ship Via code with the Pacey carrier is selected on the **Shipping** tab of the [Sales Orders](#) (SO301000) form, these new check boxes (shown in the following screenshot) appear:

- **Additional Handling:** Indicates (if selected) that the carrier will receive a notification about additional handling of the shipment.
- **Lift Gate:** Indicates (if selected) that the carrier will receive a notification about the need for a lift gate.
- **Inside Delivery:** Indicates (if selected) that the carrier will receive a notification about delivery within the shipping destination.
- **Limited Access:** Indicates (if selected) that the carrier will receive a notification about the limited access to the shipping destination.

The screenshot shows the SAP Sales Order form (SO302000) for 'Pacejet Coffee & Snacks Shop'. The 'Addresses' tab is active, displaying a list of address types with checkboxes. The 'Ship-To' address is highlighted in red. The form includes fields for 'Address', 'Company', 'Address 1', 'Address 2', 'Address 3', 'Address 4', 'Address 5', 'Address 6', 'Address 7', 'Address 8', 'Address 9', 'Address 10', 'Address 11', 'Address 12', 'Address 13', 'Address 14', 'Address 15', 'Address 16', 'Address 17', 'Address 18', 'Address 19', 'Address 20', 'Address 21', 'Address 22', 'Address 23', 'Address 24', 'Address 25', 'Address 26', 'Address 27', 'Address 28', 'Address 29', 'Address 30', 'Address 31', 'Address 32', 'Address 33', 'Address 34', 'Address 35', 'Address 36', 'Address 37', 'Address 38', 'Address 39', 'Address 40', 'Address 41', 'Address 42', 'Address 43', 'Address 44', 'Address 45', 'Address 46', 'Address 47', 'Address 48', 'Address 49', 'Address 50', 'Address 51', 'Address 52', 'Address 53', 'Address 54', 'Address 55', 'Address 56', 'Address 57', 'Address 58', 'Address 59', 'Address 60', 'Address 61', 'Address 62', 'Address 63', 'Address 64', 'Address 65', 'Address 66', 'Address 67', 'Address 68', 'Address 69', 'Address 70', 'Address 71', 'Address 72', 'Address 73', 'Address 74', 'Address 75', 'Address 76', 'Address 77', 'Address 78', 'Address 79', 'Address 80', 'Address 81', 'Address 82', 'Address 83', 'Address 84', 'Address 85', 'Address 86', 'Address 87', 'Address 88', 'Address 89', 'Address 90', 'Address 91', 'Address 92', 'Address 93', 'Address 94', 'Address 95', 'Address 96', 'Address 97', 'Address 98', 'Address 99', 'Address 100'. The 'Ship-To' address is highlighted in red.

Figure: New check boxes on the Sales Orders form

On the [Shipments](#) (SO302000) form, the **Ship-To Contact** and **Ship-To Address** sections have been removed from the **Shipping** tab. These sections are now located on the new **Addresses** tab, as shown in the following screenshot. This change is not limited to shipments for which a Ship Via code with the Pacejet carrier service is selected; it applies to all new shipments on the [Shipments](#) form.

The screenshot shows the 'Shipments' form in Acumatica ERP. The 'Shipping' tab is active, and the 'Pacejet Processing' section is visible. The 'Pacejet Status' field is highlighted with a red box. Below it, the 'Delivery Settings' section is visible, containing checkboxes for 'Use Customer's Account', 'Insurance', 'Residential Delivery', and 'Saturday Delivery'. The 'Shipments' form also shows a 'Ship Via' dropdown menu set to 'Pacejet'.

Figure: New Addresses tab on the Shipments form

On the **Shipping** tab of the [Shipments](#) form, the new **Pacejet Processing** section (see Item 1 in the screenshot below) appears if a user selects a Ship Via code with the Pacey carrier on this tab. The section includes the following boxes:

- **Pacejet Status:** The status of the shipment in Pacey. This read-only box can have the following values:
 - *Not Submitted:* The shipment has the *Open* status in Acumatica ERP and has not been submitted to Pacey.
 - *Workbench Processing:* The shipment has been confirmed in Acumatica ERP and is now on the Pacey Shipping Workbench.
 - *Completed:* The shipment has been confirmed in Acumatica ERP, completed on the Pacey Shipping Workbench, and updated in Acumatica ERP.
- **Pacejet Workstation ID:** The ID of the Pacey workstation that is used for printing shipments.

On the same tab, the **Delivery Settings** section has been added. The following check boxes (Item 2) have been removed from the **Shipping Information** section of the **Shipping** tab and added to the **Delivery Settings** section:

- **Use Customer's Account**
- **Insurance**
- **Residential Delivery**
- **Saturday Delivery**

Also, several new UI elements (Item 3) appear in the **Delivery Settings** section if a Ship Via code with a Pacey carrier is selected on this tab:

- **Additional Handling:** A check box that indicates (if selected) that the carrier will receive a notification about additional handling of the shipment.
- **Email Notifications:** A check box that indicates (if selected) that email notifications about the shipment status are sent to the recipient of the shipment.
- **Hazardous Materials:** A check box that indicates (if selected) that the carrier will receive a notification about hazardous materials in the shipment's contents.
- **Preprint Return Labels:** A check box that indicates (if selected) that the carrier will receive a notification about the need for a return label in the returned shipment.
- **Pro Bill Nbr.:** The pro bill number of the shipment. A user can manually enter this number to send it to Paceyjet when confirming the shipment.
- **Delivery Instructions:** The instructions to the delivery. A user can manually specify the instructions to send to Paceyjet when confirming the shipment.

The **LTL Settings** section (Item 4) has been added to the **Shipping** tab. This section appears only if a Ship Via code with the Paceyjet carrier is selected on this tab. The section includes the following check boxes:

- **Lift Gate:** Indicates (if selected) that the carrier will receive a notification about the need for a lift gate.
- **Inside Delivery:** Indicates (if selected) that the carrier will receive a notification about the delivery within the shipping destination.
- **Limited Access:** Indicates (if selected) that the carrier will receive a notification about the limited access to the shipping destination.

The screenshot shows the 'Shipping' tab of a shipment form. At the top, there's a header with the shipment ID '000007' and the carrier 'Paceyjet'. Below this, there are several sections: 'SHIPMENT INFORMATION', 'SHIPMENT DETAILS', 'SHIPMENT SETTINGS', and 'LTL SETTINGS'. The 'SHIPMENT SETTINGS' section includes fields for 'Ship Via', 'Ship Date', 'Ship Time', 'Ship Weight', 'Ship Volume', 'Ship Length', and 'Ship Width'. The 'LTL SETTINGS' section includes checkboxes for 'Lift Gate', 'Inside Delivery', and 'Limited Access'. The 'Additional Handling' section includes checkboxes for 'Additional Handling', 'Email Notifications', 'Hazardous Materials', and 'Preprint Return Labels'. The 'Delivery Instructions' field is also visible. Red boxes highlight the 'Pro Bill Nbr.' field, the 'LTL SETTINGS' section, the 'Additional Handling' section, and the 'Delivery Instructions' field.

Figure: The Shipping tab on the Shipments form

The following commands have been added to the More menu on the [Shipments](#) form, as shown in the following screenshot:

- **Open Pacey Workbench:** Opens the Pacey Workbench in a new browser window, where the user can complete the processing of the shipment in Pacey.
- **Update Shipment with Pacey Data:** Retrieves the documents generated for the shipment in Pacey and attaches them to the shipment.

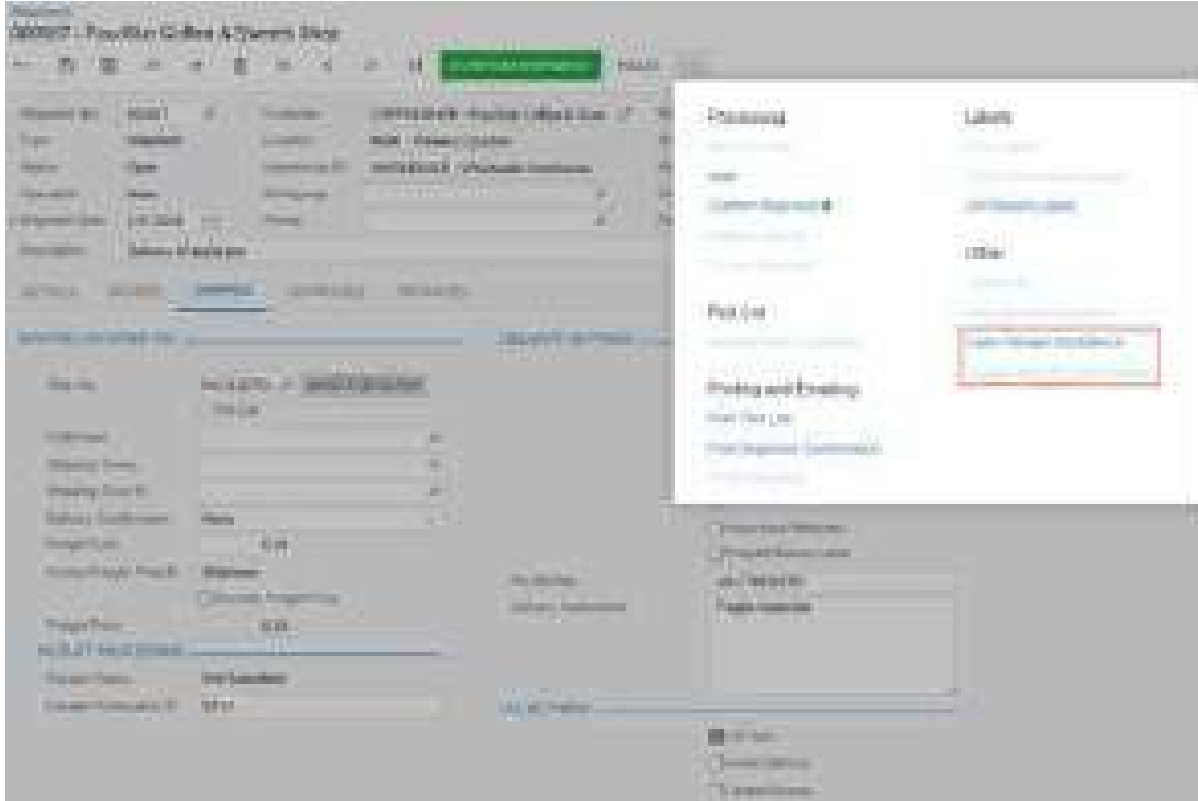


Figure: The More menu on the Shipments form

On the **Packages** tab of the [Shipments](#) form, the columns listed below (shown in the following screenshot) have been added to the table:

- **Non-Standard Container:** A check box that indicates (if selected) that the carrier will receive a notification about the nonstandard dimensions of the container for the package.
- **Additional Handling:** A check box that indicates (if selected) that the carrier will receive a notification about the need for additional handling for the package.
- **SSCC:** The serialized shipping container code (SSCC), which is used to identify, scan, and track the container in the retail chain.

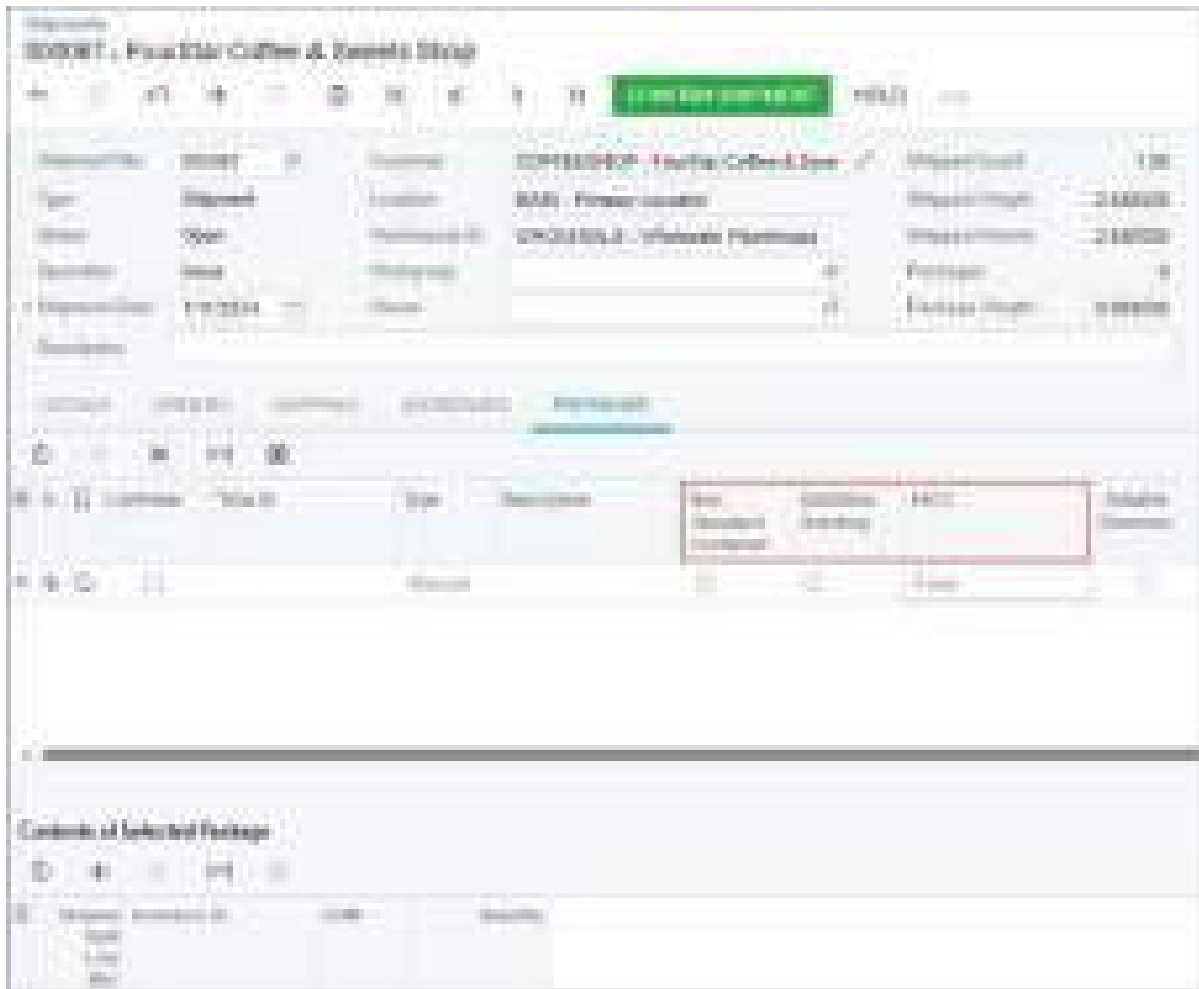


Figure: New columns on the Packages tab of the Shipments form

On the **Packaging** tab of the [Stock Items](#) (IN202500) form, the following boxes (see Item 1 in the screenshot below) appear in the **Dimensions** section if the *Pacey* feature is enabled on the [Enable/Disable Features](#) (CS100000) form:

- **Length:** The length of the item
- **Height:** The height of the item
- **Width:** The width of the item
- **Linear UOM:** The linear unit of measure of the item

Additionally, the new **Pacey Packaging** section appears on the same tab if the *Pacey* feature is enabled on the [Enable/Disable Features](#) form. The section includes the following UI elements (Item 2):

- **Tariff Code Group:** The code of the tariff group according to Pacey classification
- **Commodity Name:** The commodity code according to Pacey classification
- **Product Code:** The product code according to Pacey classification
- **Product Subcode:** The product subcode according to Pacey classification
- **Hazardous Material Code:** The hazardous material code according to Pacey classification
- **Manufacturer's Packaging:** A check box that indicates (if selected) that the item has a manufacturer's package and no additional box is required

The users can find the values for the boxes listed above in their Pacey account.

Figure: New UI elements on the Packages tab of the Stock Items form

The new **Pacejet Workstation ID** box, as shown in the following screenshot, has been added to the **Personal Settings** tab on the [Users](#) (SM201010) and [User Profile](#) (SM203010) forms. In this column, the system administrator specifies the ID of the printing workstation in Pacejet that will be inserted by default into shipments this user creates with a Pacejet-related Ship Via code. This box appears only if the *Pacejet* feature is enabled on the [Enable/Disable Features](#) form.

Figure: New box on the Users form

On the [Shipping Terms](#) (CS208000) form, the new **Pacejet Freight Terms** box has been added, as shown in the following screenshot. A system administrator can select one of the following options in this box in order to map Acumatica ERP shipping terms to the Pacejet freight terms:

- *Bill Recipient*
- *Collect*
- *Consignee Billed*
- *Prepaid*

- *Prepaid and Charged*
- *Third-Party Billing*

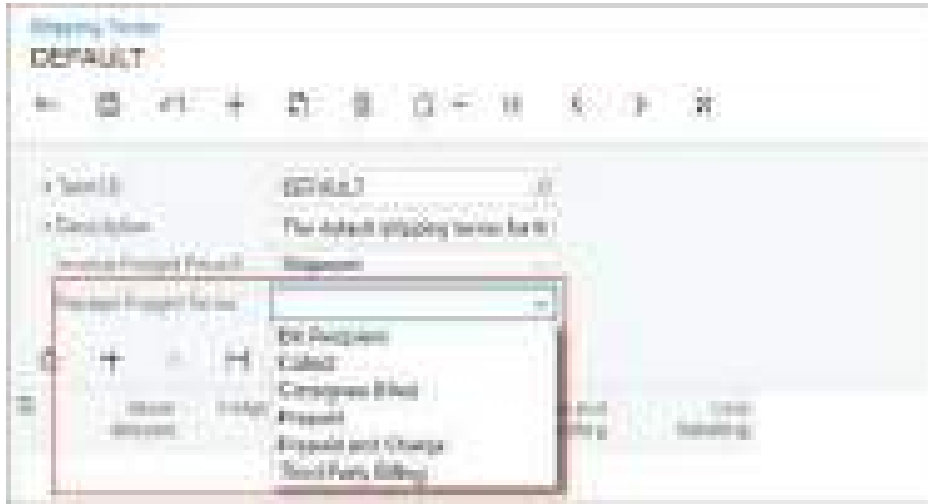


Figure: The Pacey Freight Terms box

On the [Process Shipments](#) (SO503000) form, the new *Update Shipment with Pacey Data* option has been added to the **Action** box, as shown in the following screenshot. A user can select this action to update the processed shipments with the Pacey data when a user clicks **Process** or **Process All**.

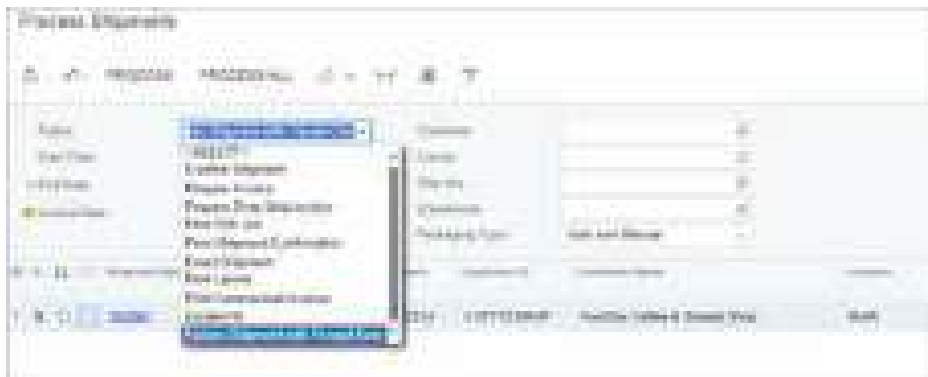


Figure: The Update Shipment with Pacey Data action

Configuration of Usage Scenarios

The Pacey carrier service supports multiple scenarios for packing and shipping. The system administrator can choose the way to handle the shipments by selecting one of the options as the **Usage Scenario** setting on the **Plug-In Parameters** tab of the [Carriers](#) (CS207700) form. The following table lists these options with their descriptions.

Table: Scenarios of Packing and Shipping

Option	Description
<i>Manual Packing and Shipping in Pacey</i>	Once the shipment is confirmed in Acumatica ERP, a user manually specifies packages and completes the shipping process in Pacey. After completing the shipping in Pacey, the user needs to update the shipment in Acumatica ERP by selecting Update Shipment with Pacey Data on the More menu of the Shipments (SO302000) form.

Option	Description
<i>Auto-Packing and Manual Shipping in Pacejet</i>	Once the shipment is confirmed in Acumatica ERP, the Pacejet carrier service automatically specifies packages using its algorithms for automatic packing. A user then manually completes the shipping process in Pacejet. After completing the shipping, a user needs to update the shipment in Acumatica ERP by selecting Update Shipment with Pacejet Data on the More menu of the <i>Shipments</i> form.
<i>EDI LTL - No Packing Changes</i>	<p>The packages defined in Acumatica ERP are sent to Pacejet when the shipment is confirmed. A user then completes the shipping process in Pacejet. After the shipping is complete in Pacejet, the user needs to update the shipment in Acumatica ERP by selecting Update Shipment with Pacejet Data on the More menu of the <i>Shipments</i> form.</p> <p>When the system updates the shipment with the Pacejet data, the packages in Acumatica ERP are not updated.</p>
<i>Packing in Acumatica ERP and Shipping in Pacejet</i>	The packages defined in Acumatica ERP are sent to Pacejet when the shipment is confirmed. After the shipment is confirmed in Acumatica ERP, a user can modify the packages in Pacejet if required. Then a user completes the shipping process in Pacejet. After the shipping process is complete, the user needs to update the shipment in Acumatica ERP by selecting Update Shipment with Pacejet Data on the More menu of the <i>Shipments</i> form.
<i>Packing and Shipping in Acumatica ERP</i>	The packages defined in Acumatica ERP are sent to Pacejet when the shipment is confirmed. Additionally, when the shipment is confirmed, it is automatically processed in Pacejet and updated in Acumatica ERP. The user does not need to update the shipment in Acumatica ERP by selecting Update Shipment with Pacejet Data on the More menu of the <i>Shipments</i> form.

Inventory and Order Management: Distribution Requirements Planning (DRP)

Acumatica ERP 2024 R1 introduces the distribution requirement planning (DRP) functionality so that companies can take advantage of time-phased inventory planning and sales forecasting for handling orders within a supply chain. With time-phased planning, companies can precisely plan their supply to arrive at the required time, thereby minimizing the inventory stored in warehouses for orders placed well ahead of the needed date. Distributors can match supply to demand based on date-specific recommendations for unmet demands. The system can group supply and demand by time periods and generate exceptions for supply issues, such as late delivery dates in documents.

Also, implementation consultants can now specify default inventory planning settings (such as the default source of supply or the days of supply for stock items) at the item class level, which streamlines item setup and improves usability. These settings are **Source**, **Source Warehouse**, **Safety Stock**, **Reorder Point**, **Min. Order Qty.**, **Max. Order Qty.**, **Lot Size**, and **Days of Supply** on the **Inventory Planning** tab of the *Item Classes* (IN201000) form.

The Distribution Requirements Planning Feature

Starting in Acumatica ERP 2024 R1, the new **Distribution Requirements Planning** check box appears in the **Inventory and Order Management** group on the *Enable/Disable Features* (CS100000) form (see the following screenshot). By selecting this check box, an implementation consultant enables this feature so that the inventory planning functionality can be used in the system.



Figure: The Distribution Requirements Planning check box

The Inventory Planning Workspace and Its Forms

In Acumatica ERP 2024 R1, when the *Distribution Requirements Planning* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, the **Inventory Planning** workspace is available (see the following screenshot).

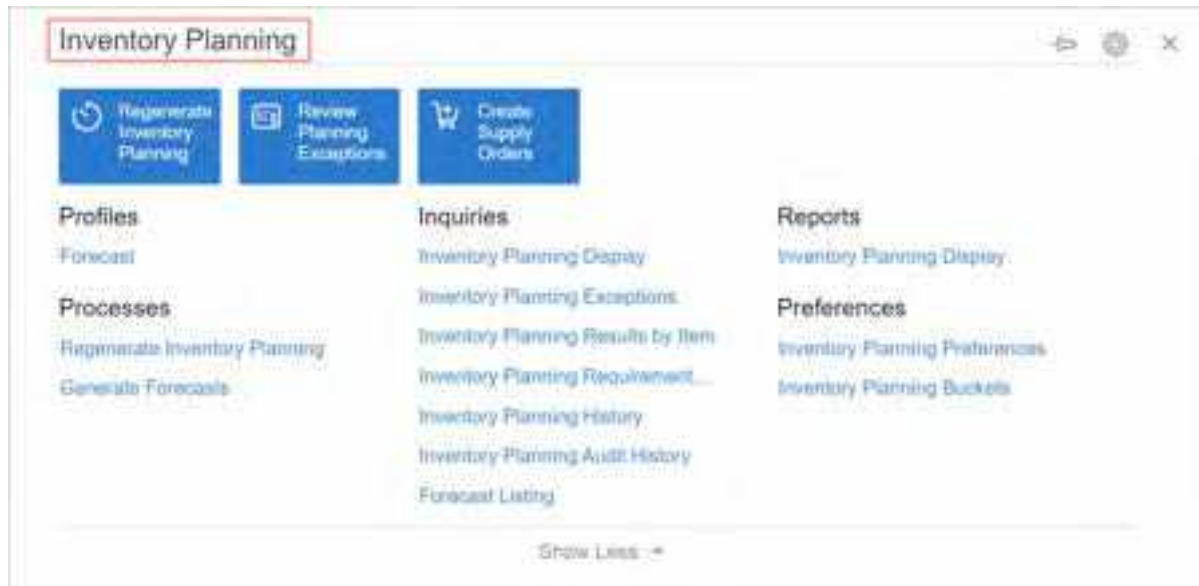


Figure: The Inventory Planning workspace

Specification of Settings on the Inventory Planning Preferences Form

Once the *Distribution Requirements Planning* feature has been enabled in Acumatica ERP 2024 R1, an implementation consultant specifies inventory planning settings on the [Inventory Planning Preferences](#) (AM100000) form (see the following screenshot). At minimum, they should save the default settings.

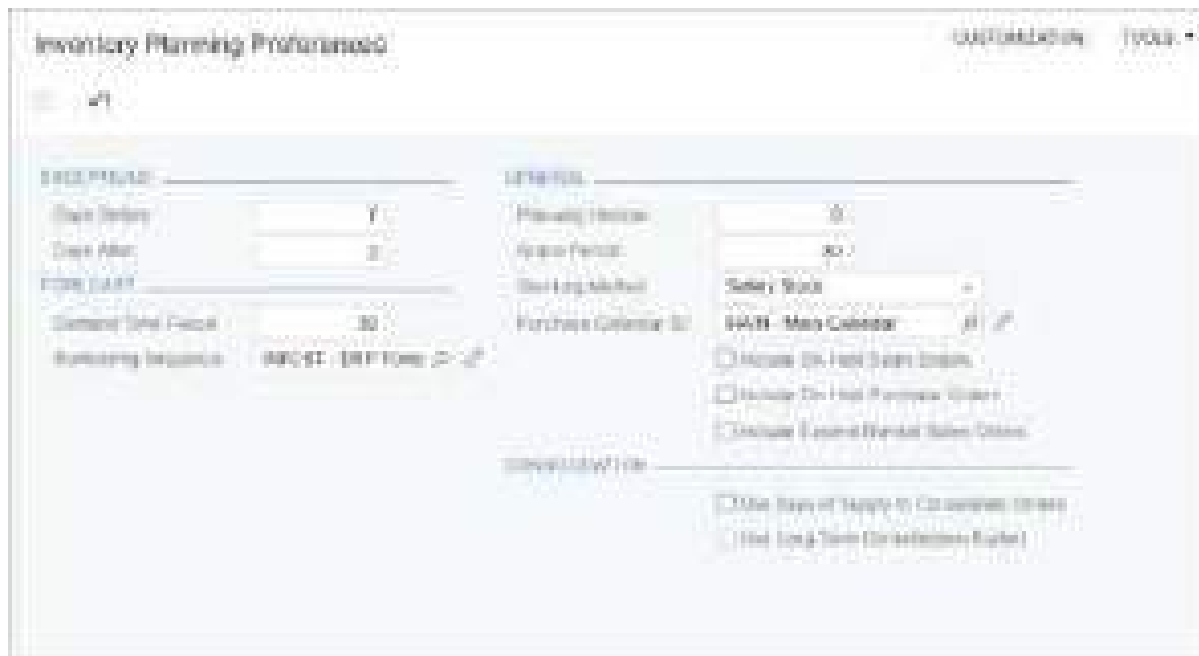


Figure: The Inventory Planning Preferences form

The implementation consultant can specify and change the settings on this form to fit the inventory planning workflow in the company.

The settings in the **Exceptions** section determine the conditions in which exceptions related to inventory planning can be generated. This section has the following boxes:

- **Days Before:** The acceptable number of days for items to be supplied before the date of a demand document (such as a sales order, transfer order, or kit assembly). By default, 10 is specified in this box. The larger this number, the greater the potential of holding inventory for longer, meaning that cash will remain invested in inventory for a more extended period.
- **Days After:** The acceptable number of days for items to be supplied after the date of a demand document (such as a sales order, transfer order, or kit assembly). The value in this box must be less than or equal to the value in the **Grace Period** box in the **General** section of this form. By default, 10 is specified in this box. This value is more critical than the **Days Before** value because a late delivery from a supplier affects the company's ability to ship goods to customers. We recommend that the implementation consultant reduce this value based on the customer business needs.



If the *Advanced SO Invoices* feature is enabled on the [Enable/Disable Features](#) form, a sales invoice created directly on the [Invoices](#) (SO303000) form can also be a demand document.

The **Forecast** section has the following settings:

- **Demand Time Fence:** The number of days within which the system excludes forecast records from demand data; the period starts on the day when inventory planning is regenerated on the [Regenerate Inventory Planning](#) (AM505000) form. If the period's end date is earlier than the date when inventory planning was regenerated plus the number of days specified in this box, inventory planning does not use forecast periods and one-time forecasts on the [Forecast](#) (AM202000) form. By default, 30 is specified in this box.
- **Numbering Sequence:** The numbering sequence to be used to assign reference numbers to the forecasts that are created on the [Forecast](#) form.

The **General** section has the following settings:

- **Planning Horizon:** The number of days during which the system processes item plans, excluding plans with a supply or demand date beyond a specified number of days from the regeneration date. The default value is 0, which will not restrict any incoming item plans, and all records will be processed during the regeneration of inventory planning on the [Regenerate Inventory Planning](#) form. If a different value is specified, during the regeneration of inventory planning, the system will process only item plans with a supply or demand date that is earlier than or the same as the regeneration date plus the number of days specified in this box.

A company may have many item plans extending into the distant future, as with sales orders placed far in advance of the date when the items are needed (for example, blanket sales orders). In this case, the company may choose to exclude this future demand from planning by specifying a planning horizon. This approach reduces the number of item plans to be processed on the [Regenerate Inventory Planning](#) form, thus shortening the run time of the processing.

- **Grace Period:** The number of days after the requested date of an item in a demand order within which the supplied item (purchase order, transfer order, or assembly order) can be received into inventory and still be considered as satisfying the requested date. By default, 30 is specified in this box.
- **Stocking Method:** The approach that the system uses to trigger the replenishment of a stock item in a demand order during inventory planning. The implementation consultant can select one of the following options:
 - *Safety Stock* (default): The additional stock of the item that is maintained to avoid stockouts. A safety stock value should be specified if there are fluctuations in demand and supply.
 - *Reorder Point:* The stock level that, when reached, should prompt the system to replenish the stock of the item at this warehouse. Minimum quantities should be set equal to anticipated demand during the lead time plus a safety stock.

Depending on the selected stocking method, the system uses the following amounts in inventory planning:

- For an item–warehouse pair, **Safety Stock** or **Reorder Point** in the **Inventory Planning Settings** section on the **Inventory Planning** tab of the [Item Warehouse Details](#) (IN204500) form
- For a stock item that has no warehouse-specific settings, **Safety Stock** or **Reorder Point** on the **Inventory Planning** tab on the [Stock Items](#) (IN202500) form

- **Purchase Calendar ID:** The work calendar that the system uses to determine a valid action date for planned purchase orders.



Purchase lead times are calculated by days and not by the working days in the purchase calendar. For details, see [Inventory Planning Configuration: Lead Times](#).

- **Include On-Hold Sales Orders:** A check box that indicates (if selected) that the system includes on-hold sales orders during inventory planning. If the check box is cleared (the default state), the system generates an exception of the *Order on Hold* type for these orders on the [Inventory Planning Exceptions](#) (AM403000) form.
- **Include On-Hold Purchase Orders:** A check box that indicates (if selected) that the system includes on-hold purchase orders during inventory planning. If the check box is cleared (the default state), the system generates an exception of the *Order on Hold* type for these orders on the [Inventory Planning Exceptions](#) form.
- **Include Expired Blanket Orders:** A check box that indicates (if selected) that blanket sales orders that have expired are included in inventory planning. If the check box is cleared (the default state), the system excludes these blanket sales orders during inventory planning.

The **Consolidation** section has the following settings:

- **Use Days of Supply to Consolidate Orders:** A check box that indicates (if selected) that during inventory planning, the system consolidates items with the same ID from multiple demand documents into the same planning recommendation for a given period of time. By default, the check box is cleared.
If the check box is selected, the system uses one of the following settings for short-term planning:
 - The **Days of Supply** value specified on the **Inventory Planning** tab of the [Stock Items](#) form for a stock item
 - The **Days of Supply** value specified on the **Inventory Planning** tab of the [Item Warehouse Details](#) form for an item-warehouse pair if the item is stored in multiple warehouses
- **Use Long-Term Consolidation Bucket:** A check box that indicates (if selected) that for long-term planning, the system uses a consolidation bucket when it creates planning orders during inventory planning. In this context, *long-term planning* refers to the time period after the number of days specified in the **Consolidate After (Days)** box. With the check box selected, the system consolidates items with the same ID from multiple demand documents with deferred requested dates if the documents' due dates fall within the number of days specified in the **Bucket (Days)** box. If the check box is cleared (the default state), the system uses the number of days specified in the **Days of Supply** box.
This check box is available for selection only if the **Use Days of Supply to Consolidate Orders** check box is selected.
- **Consolidate After (Days):** The number of days from the current business date after which the system starts consolidating items in demand documents with due dates that fall within the number of days specified in the **Bucket (Days)** box. This box is shown only if the **Use Long-Term Consolidation Bucket** check box is selected.
- **Bucket (Days):** The number of days within which the due dates in the demand documents must fall to be consolidated into a single planning recommendation. This box is shown only if the **Use Long-Term Consolidation Bucket** check box is selected.

General Workflow of Inventory Planning Configuration

In Acumatica ERP 2024 R1, to configure inventory planning, an implementation consultant performs the following general steps (which are described further in this topic):

1. On the [Warehouses](#) (IN204000) form, specifies inventory planning settings for the needed warehouses and warehouse locations. On the **Inventory Planning** tab (**Inventory Planning Settings** section), they select or clear the check boxes that determine the data to be included in planning for each warehouse.
2. On the [Inventory Planning Preferences](#) (AM100000) form, selects the purchase calendar ID.

3. Optional: For users to view one planning suggestion for items with the same ID from multiple demand documents within a specific time range on the [Inventory Planning Display](#) (AM400000) form, specifies consolidation settings on the [Inventory Planning Preferences](#) form.
4. Optional: On the [Item Classes](#) (IN201000) form, specifies the *DRP* planning method and the inventory planning settings for the needed item classes.
5. On the [Stock Items](#) (IN202500) form, specifies the *DRP* planning method and inventory planning settings for stock items that are going to be planned.
6. Optional: On the **Vendors** tab of the [Stock Items](#) form, specifies the reorder preferences, such as vendor, lot size, lead time, and minimum and maximum order quantities.
7. Optional: On the [Item Warehouse Details](#) (IN204500) form, specifies inventory planning settings for the needed item-warehouse pairs.
8. Optional: On the [Inventory Planning Preferences](#) form, does either or both of the following:
 - Reviews the number of days that are used for generating exceptions.
 - Specifies forecast preferences.
9. Optional: On the [Forecast](#) (AM202000) and [Generate Forecasts](#) (AM502000) form, creates the needed forecasts.
10. Optional: On the [Inventory Planning Buckets](#) (AM201200) form, specifies time periods. With these periods defined, users can monitor calculated item quantities by period on the [Inventory Planning Requirements by Item](#) (AM401200) form.
11. Optional: On the [Automation Schedules](#) (SM205020) form, creates an automation schedule for inventory planning regeneration.

After all the configuration steps have been performed, a user can perform inventory planning on the [Regenerate Inventory Planning](#) (AM505000) form, view the results on the [Inventory Planning Display](#) form, and take the needed actions.

Changes to the Warehouses Form

In Acumatica ERP 2024 R1, on the **Locations** tab of the [Warehouses](#) (IN204000) form, each row with location settings has the **Inventory Planning** column if the *Distribution Requirements Planning* feature is enabled on the [Enable/Disable Features](#) (CS100000) form. If the check box is selected in a row with location settings, the on-hand quantity of items in this location is included in inventory planning.

Also, the new **Inventory Planning** tab is shown on the form (see Item 1 in the following screenshot) if the feature is enabled.

Figure: The Inventory Planning tab on the Warehouses form

In the **Inventory Planning Settings** section (see Item 2 in the previous screenshot), an implementation consultant can select the check boxes that determine which supply and demand data the system uses for this warehouse during inventory planning. The implementation consultant selects the following check boxes if the noted quantities should be included in inventory planning:

- **Forecasts:** The quantities from the forecast records
- **Inventory On Hand:** The on-hand quantities of stock items stored in this warehouse
- **Sales Orders:** The quantities of items in sales orders
- **Shipments:** The quantities of items in shipments for which invoices have not yet been created
- **Purchase Orders:** The quantities of items in purchase orders



We recommend that an implementation consultant select all the check boxes for a complete planning picture.

The **Transfer Lead Time** table (Item 3) is shown if the *Multiple Warehouses* feature is enabled on the [Enable/Disable Features](#) form. In this table, a user can view and add warehouses from which stock items can be transferred and specify the default transfer lead time. The system will use this lead time for items transferred between the current warehouse and a demand warehouse. Users can override this lead time for an item–warehouse pair if different shipment methods may be used to transfer the stock item. For example, small items might be eligible for air shipment within 3 days, while large, bulky items might need to travel by ocean for 40 days.

Planning Methods

In Acumatica ERP 2024 R1, the new **Planning Method** box is shown on the [Item Classes](#) (IN201000), [Stock Items](#) (IN202500), and [Item Warehouse Details](#) (IN204500) forms if one of the following features is enabled (or both are enabled) on the [Enable/Disable Features](#) (CS100000) form:

- *Inventory Replenishment*
- *Distribution Requirements Planning*

If an implementation consultant specifies a planning method on the *Item Classes* form for an item class, this method will be selected for each newly created stock item of the class.

The following screenshot shows the **Planning Method** box on the **General** tab of the *Stock Items* form.

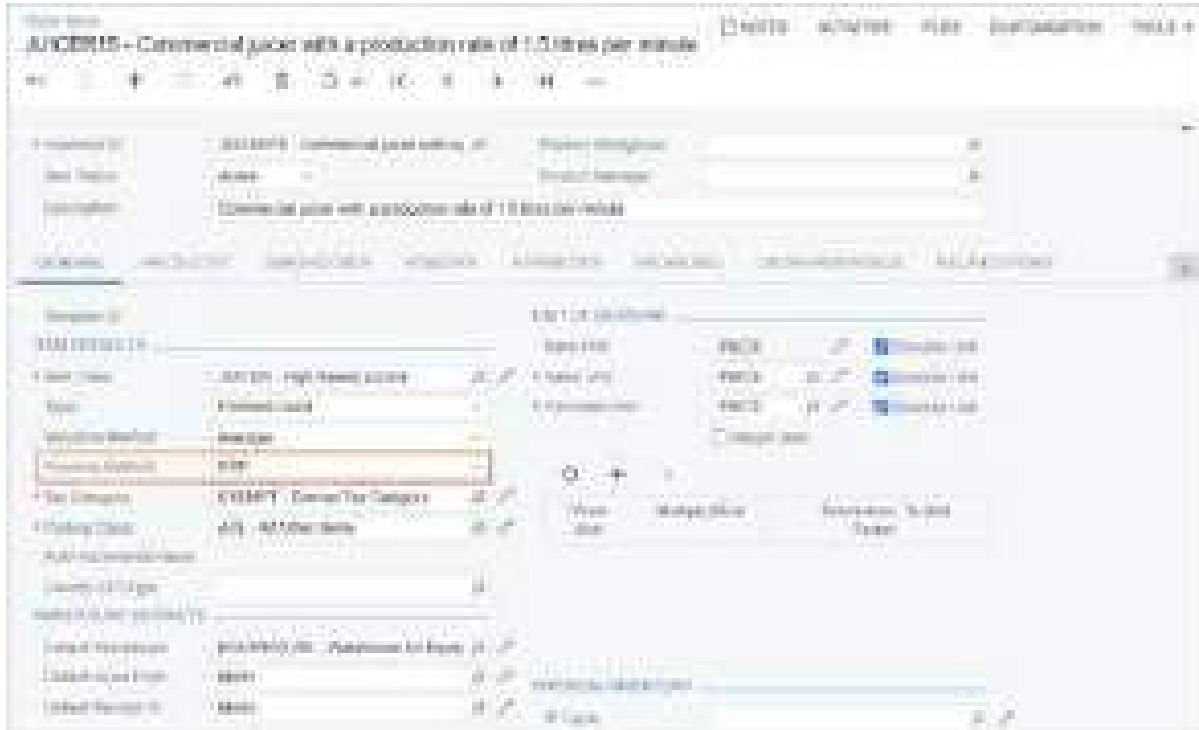


Figure: The **Planning Method** box on the *Stock Items* form

In the **Planning Method** box, an implementation consultant can select one of the following options:

- *None* (default): This option, which is always available for selection, indicates that neither inventory replenishment nor inventory planning can be used to plan the stock item.
- *DRP*: This option indicates that inventory planning forms can be used to plan the stock item. The option is available for selection if the *Distribution Requirements Planning* feature is enabled on the *Enable/Disable Features* form.
- *Inventory Replenishment*: This option indicates that the inventory replenishment functionality can be used to plan the stock item. The option is available for selection if the *Inventory Replenishment* feature is enabled on the *Enable/Disable Features* form. Only items that have the *Inventory Replenishment* planning method will appear on the following forms:
 - *Prepare Replenishment* (IN508000)
 - *Calculate Replenishment Parameters* (IN508500)
 - *Apply Replenishment Parameters* (IN509500)

Changes to the Stock Items and Item Classes Forms

In Acumatica ERP 2024 R1, on the *Item Classes* (IN201000) and *Stock Items* (IN202500) forms, users can specify DRP-specific planning settings on the **Inventory Planning** tab (formerly called **Inventory Replenishment**).

Depending on the option selected in the **Planning Method** box on the **General** tab, different UI elements are displayed on the tab. The following screenshot shows the **Inventory Planning** tab of the *Stock Items* form (see Item 1) for a stock item whose planning method is *DRP*.

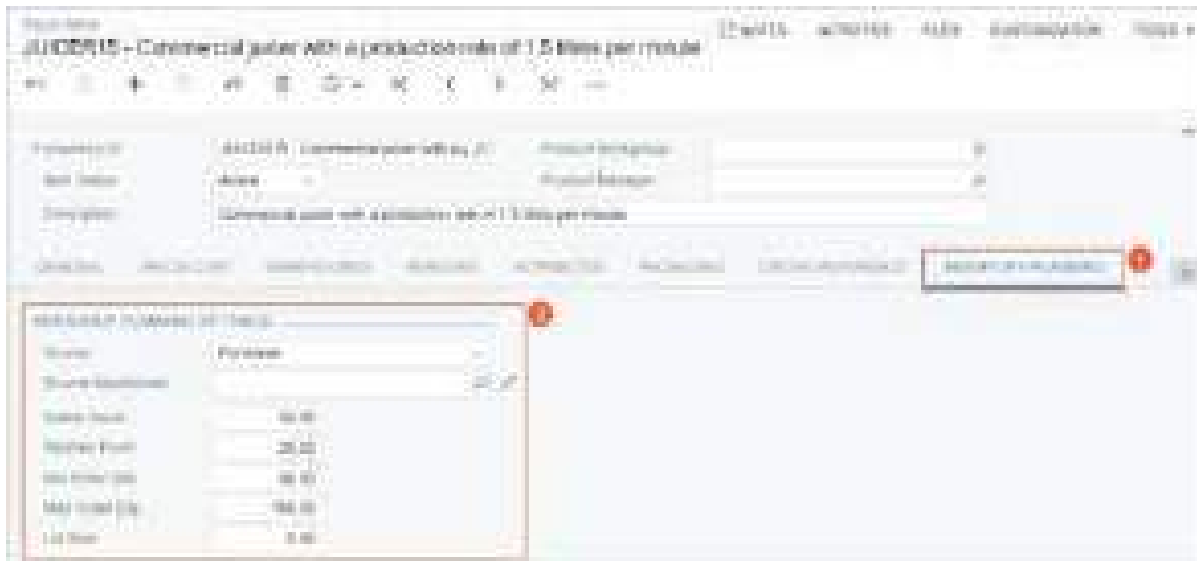


Figure: The Inventory Planning tab on the Stock Items form

In the **Inventory Planning Settings** section (see Item 2 in the previous screenshot) of the tab, a user can specify the following settings, which the system uses for calculating the suggested supply plans:

- **Source:** The replenishment source to be used for the stock item in inventory planning.
- **Source Warehouse:** The warehouse from which the stock item is replenished, which is specified based on the source:
 - If *Purchase* is selected in the **Source** box, the user selects the warehouse to handle centralized purchasing for replenishment in the demand warehouse. The system uses this warehouse only for a stock item in a sales order line for which the *Mark for PO* check box is selected.
 - If *Transfer* is selected in the **Source** column, the user selects the warehouse to be used as the source of replenishment by transfers.

The box is shown only if the *Multiple Warehouses* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

- **Safety Stock:** The quantity of the stock item that is maintained in the warehouse to prevent possible stockouts during the time period between the creation of the supply order (which can be a purchase order, transfer order, or kit assembly) and the receipt of the requested supply.
- **Reorder Point:** The stock level that, when it is reached, should prompt the system to replenish the stock of the item at this warehouse. The user should set minimum quantities that are equal to the anticipated demand during the lead time plus the safety stock value.
- **Min. Order Qty.:** The minimum quantity of the item, which is used by the system for inventory planning.
- **Max. Order Qty.:** The maximum quantity of the item, which is used by the system for inventory planning.
- **Lot Size:** The order multiple that the system uses in inventory planning. For example, if the maximum quantity of the item is 140 and the vendor's lot size is 15, the system increases the maximum quantity to be a multiple of 15 and makes it 150.

If the *Multiple Warehouses* feature is enabled on the [Enable/Disable Features](#) form and a user makes changes in the **Safety Stock**, **Reorder Point**, **Min. Order Qty.**, **Max. Order Qty.**, or **Lot Size** box, the system will update the corresponding values on the **Inventory Planning** tab of the [Item Warehouse Details](#) (IN204500) form for the item-warehouse pair. These values can be overridden on this form if a user has selected the corresponding **Override** check box next to the needed box. For details, see the following section.

If a default vendor is specified on the **Vendors** tab of the [Stock Items](#) form and the source is *Purchase*, the **Min. Order Qty.**, **Max. Order Qty.**, and **Lot Size** will be used from the **Vendors** tab. This is also applicable for the item-warehouse pair on the [Item Warehouse Details](#) form.

Changes to the Item Warehouse Details Form

In Acumatica ERP 2024 R1, on the [Item Warehouse Details](#) (IN204500) form, users can specify DRP-specific planning settings on the **Inventory Planning** tab (formerly called **Inventory Replenishment**).

Depending on the option selected in the **Planning Method** box (Item 2), different UI elements are displayed on the form. The screenshot shows the **Inventory Planning** tab for the combination of the selected warehouse and the stock item whose planning method is *DRP*. The **Planning Method** box on this tab is read-only; its value is copied from the settings of the stock item currently selected in the **Inventory ID** box of the Summary area.

Name	Value	Units
Min Stock	0000	0 Items
Max Stock	0000	0 Items
Reorder Point	0000	0 Items
Reorder Qty	0000	0 Items
Lot Size	000	0 Items
Reorder Interval	0	0 Items

Figure: The Inventory Planning tab on the Item Warehouse Details form

A user can override the settings in the **Inventory Planning Settings** section by selecting the **Override** check box next to the needed box, changing the value in the box, and saving their changes.

Exceptions in Inventory Planning

During the inventory planning, Acumatica ERP 2024 R1 checks whether the created supply plans are fulfilling the demand at the appropriate time based on the settings on the [Inventory Planning Preferences](#) (AM100000) form. On the [Inventory Planning Exceptions](#) (AM403000) form (see the following screenshot), the system shows the exceptions that were generated during the most recent execution of inventory planning regeneration on the [Regenerate Inventory Planning](#) (AM505000) form. This helps users to decide if they need to change the order dates.

Item ID	Item Name	Location	Order Date	Quantity
00000000000000000000	Item Name	Location	Order Date	Quantity
00000000000000000000	Item Name	Location	Order Date	Quantity

Figure: The Inventory Planning Exceptions form

The table on the [Inventory Planning Exceptions](#) form has the following columns:

- **Inventory ID:** The identifier of the item related to the exception.
- **Description:** The description of the item related to the exception.
- **Type:** The reason for the exception or the suggested action that a user can take to resolve the exception.
- **Ref. Type:** The document type of the supply or demand document.
- **Related Document:** The type and the identifier of the supply or demand document related to the exception. The type and ID is also a link that a user can click to view document details on the appropriate data entry form.

The type and identifier of a demand document will be shown in this column if the demand document has a status of *On Hold* and is not included in inventory planning because the setting is cleared to include documents of that type. Suppose that the **Include On-Hold Sales Orders** check box is cleared on the [Inventory Planning Preferences](#) form and a sales order on hold exists in the system. After the inventory planning has been regenerated, a user can see the *Order On Hold* exception and the link to the sales order in this column. The *Sales Order* document type is shown in the **Ref. Type** column.

- **Quantity:** The open item quantity on the supply or demand order whose number is displayed in the **Related Document** box. If the demand document has the *Order On Hold* type, this column shows 0.
- **Required Date:** The date of the supply or demand order, which the system has calculated to satisfy the requested date on the related demand document. For a demand document with the *On Hold* status, this column shows the demand date (such as the **Line Ship On** date for a sales order).
- **Promise Date:** The current date when the item is required, which is copied from the supply order.
- **Warehouse:** The warehouse in which the item must be received.
- **Supply Qty.:** The quantity of applicable stock items, which is determined based on the exception type:
 - If the exception has the *Transfer Available* type, this is the quantity of items available for transfer in the warehouse specified in the **Supply Warehouse** column.
 - If the exception type is not *Transfer Available* and the exception is related to a supply order, this is the quantity that is reserved or allocated for demand. A value of 0 indicates that the supply is not needed because no demand orders are associated with it.
 - If the exception type is *Order On Hold* and the exception is related to a demand order, this is the quantity is 0.
- **Supply Warehouse:** The warehouse from which the items can be transferred. This column contains a value only if the exception has the *Transfer Available* type.
- **Item Class:** The item class to which the item belongs.

To manage the generation of exceptions, an implementation consultant specifies the values in the **Days Before** and **Days After** boxes of the **Exceptions** section on the [Inventory Planning Preferences](#) form. The **Days After** value must be less than or equal to the value in the **Grace Period** box in the **General** section. With greater values, fewer exception messages are generated. If both values are 0, then messages are generated whenever a supply date does not cover the demand.

To view the details about the supply of stock items and demand for items, a user can select a row in the table on the [Inventory Planning Exceptions](#) form and click one of the following commands on the More menu:

- **Results by Item:** Opens the [Inventory Planning Results by Item](#) (AM404000) form for the selected row
- **Inventory Summary:** Opens the [Inventory Summary](#) (IN401000) form for the selected row
- **Inventory Allocation Details:** Opens the [Inventory Allocation Details](#) (IN402000) form for the selected row

Types of Exceptions

In Acumatica ERP 2024 R1, the **Type** column on the [Inventory Planning Exceptions](#) (AM403000) form shows the type of the exception, which is the reason it occurred. The column can contain one of the following options:

- *Defer:* The supply order is outside of the period specified in the **Days Before** box on the [Inventory Planning Preferences](#) (AM100000) form. The supply order can be deferred to a later date.

- *Delete*: The supply order is outside the period specified in the **Grace Period** box on the [Inventory Planning Preferences](#) form. The supply order can be deleted. This exception is displayed along with *Late Order*.
- *Expedite*: The supply order is within the period specified in the **Grace Period** box on the [Inventory Planning Preferences](#) form but outside of the period specified in the **Days After** box on this form. The supply order must be expedited to meet the requirement date of a demand document.
- *Order on Hold*: The purchase order or production order is on hold. This exception is generated only if the **Include On-Hold Purchase Orders** or **Include On-Hold Production Orders** check box is cleared on the [Inventory Planning Preferences](#) form.
- *Late Order*: The supply order has the current date (if the inventory planning has been regenerated today) or an earlier date.
- *Transfer Available*: The demand document is past due, the required quantity of items in the document is not available in the specified warehouse, and the required quantity is available in another warehouse. In the **Supply Warehouse** column, a user can view the warehouse from which the items can be transferred, and in the **Supply Qty** column, the user can view the item quantity available in the warehouse.
- *Order Without Sched. Shipment Date*: One or both of the following conditions is met for the blanket sales order:
 - The **Sched. Shipment Date** column of a blanket sales order line is empty on the **Details** tab of the [Sales Orders](#) (SO301000) form.
 - The **Sched. Shipment Date** column is empty for a line detail of any line in the **Line Details** dialog box on the same form.
- *Transfer without Repl. Warehouse*: A source of *Transfer* has been specified for an item–warehouse combination on the **Inventory Planning** tab of the [Item Warehouse Details](#) (IN204500) form, but no **Source Warehouse** is specified on the same tab.
- *Circular Transfer*: A circular transfer has been set up in the system—that is, the source warehouse and the destination warehouse are the same.

Performing of Inventory Planning

Starting in Acumatica ERP 2024 R1, a user can perform inventory planning regeneration on the [Regenerate Inventory Planning](#) (AM505000) form. Although the user can run the process at any time, the process may affect the performance of the Acumatica ERP instance.



We recommend that an implementation consultant schedule inventory planning regeneration to be run when most users are signed out of the system.

Before a user clicks **Process** on the form toolbar for the first time, the table on the form is empty. When they click **Process**, the system starts the regeneration of inventory planning. After the process has been completed, the table on the [Regenerate Inventory Planning](#) form shows records (see the following screenshot) the system has generated during the processing.

The screenshot shows the 'Regenerate Inventory Planning' form with a 'PROCESS' button and a 'HISTORY' tab. Below the form, a table displays the history of regeneration steps.

Created At	Message
5/17/2024 5:18 AM	Inventory Planning Display Starting
5/17/2024 5:20 AM	Processing First Pass
5/17/2024 5:20 AM	First Pass Complete
5/17/2024 5:23 AM	Processing Items at level 0
5/17/2024 5:23 AM	Level 0 Adjustments Complete
5/17/2024 5:23 AM	Level 0 Breakdown complete. 4 records have been processed
5/17/2024 5:23 AM	Checking for Exceptions
5/17/2024 5:23 AM	Checking for exceptions - complete
5/17/2024 5:23 AM	Creating the inventory Plan
5/17/2024 5:25 AM	Display
5/17/2024 5:29 AM	Completed (00:00:12)

Figure: The Regenerate Inventory Planning form

The form has the following boxes:

- **Last Completed At:** The date and time of the last inventory planning regeneration that has been completed.
- **Last Completed By:** The username of the user who performed the last inventory planning regeneration that has been completed.

The table has the following columns:

- **Created At:** The date and time (in the time zone of the user who initiated the process) of the step in the process of inventory planning regeneration.
- **Message:** A message that indicates which step in the inventory planning regeneration has been executed.

On the [Inventory Planning Display](#) (AM400000) form (see the following screenshot), a user can view the list of recommended supply orders to create based on the last execution of inventory planning. The user can create the supply orders directly from this form.

The screenshot shows the 'Inventory Planning Display' form with a table of recommended supply orders. The table has columns for Item ID, Item Name, Item Description, Item Category, Item Status, Item Quantity, Item Unit, Item Date, Item Location, and Item Description.

Item ID	Item Name	Item Description	Item Category	Item Status	Item Quantity	Item Unit	Item Date	Item Location	Item Description
1000000	General purpose...	...	...	...	...	...	...	...	...
1000000	Item name 1.0	...	...	...	...	...	...	...	...
1000000	Item name 1.0	...	...	...	...	...	...	...	...
1000000	Item name 1.0	...	...	...	...	...	...	...	...

Figure: The Inventory Planning Display form

The Selection area of this form has the following UI elements, which can be used to narrow the scope of the records listed in the table:

- **Related Document:** The reference number of the demand document. A user can select a reference number to narrow the results to only this document's items.
- **Related Parent Document:** The reference number of the demand document that contains the demand generated by the related document (specified in the **Related Document** box). A user can select a reference number to view only items of demand documents for which this is a parent.
- **Related Product Document:** The reference number of the demand document that contains the top-level demand. If a user selects a reference number, the table shows all items of the demand documents of this document.

If a row in a table is related to only a sales order, then the **Related Document**, **Related Parent Document**, and **Related Product Document** columns will have the link to the same sales order. And if the table row is related to a planning recommendation for a transfer order related to a sales order, then the number of the planned transfer order will be shown in the **Related Document** column, and the link to the sales order will be shown in the **Related Parent Document**, and **Related Product Document** columns.

The table has the following columns:

- **Included:** An unlabeled check box that the user selects to include the item in the created order if the user then clicks an applicable command on the form toolbar or the More menu and creates a supply document.
- **Inventory ID:** The stock item for which a planning suggestion has been created.
- **Description:** The description of the stock item.
- **Source:** The replenishment source to be used for the item in the specified warehouse. The system copies this value from either of the following places:
 - The **Source** box on the **Inventory Planning** tab of the [Item Warehouse Details](#) (IN204500) form for the item-warehouse pair if warehouse-specific settings exist for this pair
 - The **Source** box on the **Inventory Planning** tab of the [Stock Items](#) (IN202500) form if no warehouse-specific settings exist for this item-warehouse pair
- **Warehouse:** The warehouse in which the items will be received.
- **Base Qty:** The quantity of the item in the base unit of measure.
- **Promise Date:** The date when this item is needed, which is calculated based on the specified dates in the demand documents. A date earlier than today indicates that the needed quantity of the item may not be available in time to satisfy the demand.
- **Action Date:** The date by which the supply order must be created. The system calculates this date based on the promised date and lead time (such as the vendor lead time for a suggested purchase order). A date earlier than the current date indicates that the items may not be available in time to satisfy the demand.
- **Type:** The demand type that the system associates with the reason it is suggesting a planning order. The system can show one of the following options:
 - *Sales Order, Blanket Order, Shipment, Stock Adjustment, Transfer Demand, Planned Transfer Demand, Assembly Demand (Kits), or Inventory Demand (Issues)*, any of which represents the demand type
 - *Purchase Order*, which represents the supply type
- **Preferred Vendor ID:** The identifier of the vendor, which can be either of the following:
 - The vendor ID specified for the item-warehouse pair in the **Preferred Parameters** section of the [Item Warehouse Details](#) form
 - If no item-warehouse pair exists for the stock item, the default vendor ID specified on the **Vendors** tab of the [Stock Items](#) form
- **Vendor Name:** The name of the preferred vendor.
- **Related Document:** The reference number of the demand document that contains the item.

After the user has selected the table rows for which they want to create supply documents, they can do either of the following:

- On the form toolbar, click **Purchase** to begin the process of creating the needed purchase orders. In the **Create Purchase Order** dialog box, which opens, specify the needed settings and click **Create**. This creates the purchase order.
- On the form toolbar, click **Transfer** to begin the process of creating the needed transfer orders. In the **Create Transfer Order** dialog box, which opens, specify the needed settings and click **Create**. This creates the transfer order.
- On the form toolbar, click **Assemble Kit** to begin the process of creating the needed assembly orders, and in the **Create Kit Assemblies** dialog box, which opens, specify the needed settings and click **Create**. This creates the assembly order.



This button is displayed only if the *Kit Assembly* feature is enabled on the [Enable/Disable Features](#) (CS100000) form. For details, see [Manufacturing: Kit Components Included in Inventory Planning](#).

In the **Create Purchase Order**, **Create Transfer Order**, or **Create Kit Assemblies** dialog box, a user can make the system merge lines with same inventory ID into one line in the created purchase order, transfer order, or assembly order, respectively. To do this, the user should specify the same number for each needed line in the **Group Nbr.** column. By default, 0 is specified in the column, and all lines with both the same **Inventory ID** and 0 in this column will not be merged into one line.

To view why the system recommended the creation of a supply order, a user can click a row in the table on the [Inventory Planning Display](#) form (see Item 1 in the following screenshot) and click **Results by Item** on the side panel (Item 2). For the selected item, the system will show the supply and demand orders processed by inventory planning (Item 3), as well as the planning preferences for the item-warehouse pair used by inventory planning (Item 4).



Figure: The Inventory Planning Results by Item form as a side panel

Inventory Planning and Sales Allocations

In Acumatica ERP 2024 R1, on inventory planning forms, the system does not show allocation links between a sales order and the corresponding purchase order when it is matching supply and demand. (The **PO Source** column on the [Sales Orders](#) (SO301000) form for the sales order may contain *Purchase to Order* or any other option.) The system matches supply and demand based on dates instead.

Suppose that for a stock item, the *DRP* planning method is selected on the **Inventory Planning** tab of the [Stock Items](#) (IN202500) form. A user created a sales order for this stock item and selected the **Mark for PO** check box in the line on the **Details** tab of the [Sales Orders](#) form. Further suppose that they created a purchase order for the sales order by using the [Create Purchase Orders](#) (PO505000) form. Then the user created another sales order for

this stock item. The sales order has a **Date** and a **Ship On** date that are earlier than the ones in the first sales order. However, the user did not create the purchase order corresponding to the second sales order.

Finally, the user performs inventory planning regeneration on the [Regenerate Inventory Planning](#) (AM505000) form. When they view the results on the [Inventory Planning Results by Item](#) (AM404000) form, the lines with the linked sales order and purchase order are not shown next to each other. Instead, the line with the link to the purchase order in the **Related Document** column will be followed by the line with the link to the sales order created for an earlier date.

Forecasts for Inventory Planning

Starting in Acumatica ERP 2024 R1, users can create sales forecasts to plan the demand for stock items.

To give users the ability to generate and manually create sales forecasts, an implementation consultant should do the following:

- Create a numbering sequence for forecasts on the [Numbering Sequences](#) (CS201010) form
- Specify the numbering sequence in the **Numbering Sequence** box on the [Inventory Planning Preferences](#) (AM100000) form

On the [Forecast](#) (AM202000) form (see the following screenshot), a user can manually create a sales forecast.



Figure: The Forecast form

A user can also use sales history in the system to predict the demand by generating sales forecasts on the [Generate Forecasts](#) (AM502000) form. Suppose that the user would like to create a forecast for a stock item by using one year of sales history for a particular customer; the user expects a 25% sales growth during the current year. They specify the following settings in the Selection area:

- **Forecast Date:** 1/1/2024
- **Growth Rate:** .25
- **Years of History:** 1

To narrow the recommended results, the user also specifies the following settings:

- **Customer:** The applicable customer
- **Inventory ID:** The stock item for which the forecast is being created

The user then clicks **Calculate** of the form toolbar. The system adds a table row with the calculated data (see Item 1 in the following screenshot).



The **Type** and **Seasonality** boxes (Item 2) are shown on the form only if the *Inventory Replenishment* feature is enabled on the [Enable/Disable Features](#) (CS100000) form. The **Type** box contains the type of the forecast, which can be *Regular* if no seasonality is used and *Seasonality* if one is specified. The **Seasonality** box contains a set of seasonality settings that has been defined on the [Replenishment Seasonality](#) (IN206600) form.

Figure: The Generate Forecasts form

When the user selects the row in the table and clicks **Process** on the form toolbar, this row is no longer shown on the *Generate Forecasts* form, and the row with the forecast data is added on the *Forecast* form (see the following screenshot).

Inventory ID	Warehouse	Begin Date	End Date	Quantity	Change in Units	Percent Change	Customer	Dependent
ARTILES	WHOLESALE	11/01/24	12/31/24	997.50	111	0.25	HIMBAKERY	

Figure: The calculated forecast on the Forecast form

Demand Time Fence in Inventory Planning

In Acumatica ERP 2024 R1, an implementation consultant can set up the system to exclude forecast records from demand data. On the *Inventory Planning Preferences* (AM100000) form, they should specify the number of days in the **Demand Time Fence** box.

Suppose that a monthly forecast record on the *Forecast* (AM202000) form has a start date of March 12 and an end date of June 30, and that it has generated the following forecast intervals:

- March 12–April 11
- April 12–May 11
- May 12–June 11
- June 11–June 30

If the **Demand Time Fence** box had 15 and the process on the *Regenerate Inventory Planning* (AM505000) form was run on April 7, then the interval from March 12 to April 11 would be ignored, and the remaining three intervals would be factored into the calculations. A user can see the results by viewing the *Inventory Planning Results by Item* (AM404000) form, where forecast records would be shown for April 12, May 12, and June 12.

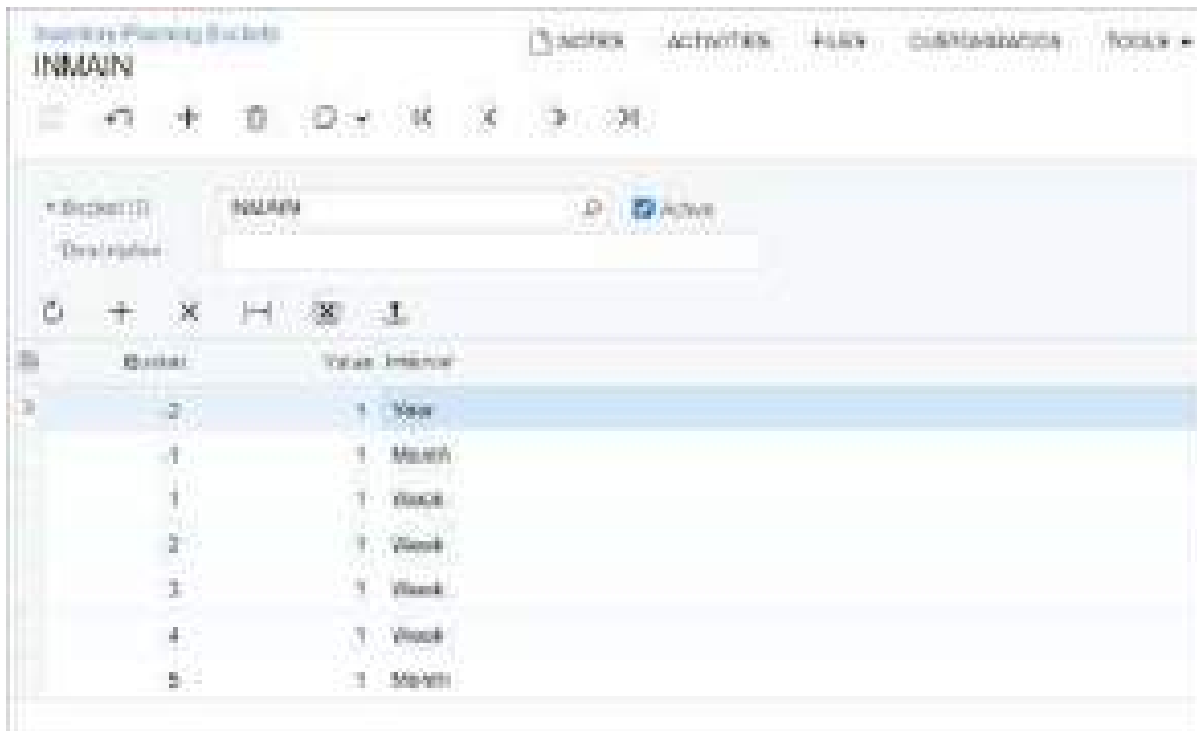
On the *Forecast* form, the **Active** check box is automatically cleared for a forecast record if its **End Date** is earlier than the **Last Completed At** date on the *Regenerate Inventory Planning* form plus the number of days specified in the **Demand Time Fence** box on the *Inventory Planning Preferences* form. This is the case because no remaining intervals have been considered by the process that was run on the *Regenerate Inventory Planning* form.

Monitoring of Calculated Item Quantities by Period

Starting in Acumatica ERP 2024 R1, on the [Inventory Planning Requirements by Item](#) (AM401200) form, users can monitor the supply of stock items and the demand for items in the past and in the present.

To view item plans by time periods on the [Inventory Planning Requirements by Item](#) form, a user should create inventory planning *buckets* that correspond to periods of time—such as days, weeks, months, or years—on the [Inventory Planning Buckets](#) (AM201200) form.

Suppose that a user wants to see the planned demand for the previous year, the previous month, the next four weeks, and the next month. The list of the buckets will look as shown in the following screenshot. Negative values show periods in the past, and positive values show periods in the future. In the **Interval** column, a user can select one of the following options: *Day*, *Week*, *Month*, or *Year*.



The screenshot shows the 'Inventory Planning Buckets' form in Acumatica ERP. The form title is 'INMAIN'. Below the title bar, there are several icons for navigation and actions. The main area contains a form with a 'Bucket ID' field set to 'INMAIN' and an 'Active' checkbox. Below this is a table with the following data:

Bucket ID	Value	Interval
2	1	Year
-1	1	Month
1	1	Week
2	1	Week
3	1	Week
4	1	Week
5	1	Month

Figure: The buckets on the *Inventory Planning Buckets* form

When the needed buckets have been created, a user can open the [Inventory Planning Requirements by Item](#) form and select the bucket ID, inventory ID, and warehouse. The table will show the data about the actual supply and demand and the planned supply and demand (see the following screenshot).

Item	Quantity	Planning Period	Item	Quantity	Planning Period
1000000	1000	1/1/19	1000000	1000	1/1/19
1000000	1000	1/1/19	1000000	1000	1/1/19
1000000	1000	1/1/19	1000000	1000	1/1/19
1000000	1000	1/1/19	1000000	1000	1/1/19
1000000	1000	1/1/19	1000000	1000	1/1/19
1000000	1000	1/1/19	1000000	1000	1/1/19
1000000	1000	1/1/19	1000000	1000	1/1/19

Figure: The Inventory Planning Requirements by Item form

The user can click **Results by Item** on the More menu, which opens the [Inventory Planning Results by Item](#) (AM404000) form. The form shows the item quantities that the system has calculated based on the results of inventory planning for the specific item in the specific warehouse (see the following screenshot).

Item	Quantity	Planning Period	Item	Quantity	Planning Period
1000000	1000	1/1/19	1000000	1000	1/1/19
1000000	1000	1/1/19	1000000	1000	1/1/19
1000000	1000	1/1/19	1000000	1000	1/1/19
1000000	1000	1/1/19	1000000	1000	1/1/19
1000000	1000	1/1/19	1000000	1000	1/1/19
1000000	1000	1/1/19	1000000	1000	1/1/19
1000000	1000	1/1/19	1000000	1000	1/1/19

Figure: The Inventory Planning Results by Item form



The **Days of Supply** box is shown in the Selection area if the **Use Days of Supply to Consolidate Orders** check box is selected on the [Inventory Planning Preferences](#) (AM100000) form.

Also, the user can click any of the following commands on the More menu:

- **Inventory Allocation Details**, which opens the [Inventory Allocation Details](#) (IN402000) form. The form shows how the selected stock item is distributed among warehouses and warehouse locations.
- **Inventory Transaction Details**, which opens the [Inventory Transaction Details](#) (IN404000) form. The form shows summary information about inventory transactions posted within the selected financial period.

- **Item Warehouse Details**, which opens the [Item Warehouse Details](#) (IN204500) form for the item–warehouse pair.

Troubleshooting of Inventory Planning

In Acumatica ERP 2024 R1 an administrator can view the history of the inventory planning regeneration on the [Inventory Planning History](#) (AM000016) form in order to troubleshoot process-related issues (see the following screenshot).

ID	Start Date	End Date	Start Time	End Time	Duration	File Error	Created By	Detail Count	Post Pass Detail Count	Detail Plan Count	Exception Count	Inventory Count	Plan Count
3	1/16/2024	1/16/2024	11:07 AM	11:07 AM	0:0:01.85	<input type="checkbox"/>	gibbs	4	10	4	2	4	6
	1/17/2024	1/17/2024	1:30 PM	1:31 PM	0:0:01.85	<input type="checkbox"/>	gibbs	4	10	4	2	4	6
	1/17/2024	1/17/2024	3:19 AM	3:20 AM	0:0:01.85	<input type="checkbox"/>	gibbs	4	10	4	2	4	6
	1/15/2024	1/15/2024	4:24 PM	4:24 PM	0:0:01.85	<input type="checkbox"/>	gibbs	3	8	4	2	4	7
	1/15/2024	1/15/2024	3:58 PM	3:58 PM	0:0:01.85	<input type="checkbox"/>	gibbs	1	5	0	0	4	1
	1/15/2024	1/15/2024	3:56 PM	3:56 PM	0:0:01.85	<input type="checkbox"/>	gibbs	1	5	0	0	4	1

Figure: The Inventory Planning History form

For the selected process that was run on the [Regenerate Inventory Planning](#) (AM505000) form, the [Inventory Planning History](#) form shows the following:

- The start date and time and the end date and time
- The process duration
- An indicator of whether any errors occurred during the process
- The username of the user that ran the process
- The information about the processed records

Upgrade Notes

After an upgrade to Acumatica ERP 2024 R1, if the [Inventory Replenishment](#) feature was enabled on the [Enable/Disable Features](#) (CS100000) form, the [Inventory Replenishment](#) option will be inserted in the **Planning Method** box of the following forms:

- The [Item Classes](#) (IN201000) form for each item class
- The [Stock Items](#) (IN202500) form for each stock item

All the replenishment settings will remain unchanged after the upgrade.

Additional Information

For more information about inventory planning configuration, see [Inventory Planning Configuration: General Information](#). For form reference topics related to inventory planning, see [Inventory Planning Form Reference](#).

Inventory and Order Management: Document Approval on the Invoices Form

In previous versions of Acumatica ERP, the approval of invoices could be performed only on the *Invoices and Memos* (AR301000) form.

In the inventory and order management workflow, a user generates an invoice from a sales order or shipment, and the system creates it on the *Invoices* (SO303000) form. (Alternatively, a user can directly create an invoice on this form.) This document appears on the *Invoices and Memos* form only after it has been released. Thus, the sales invoices could not be approved.

Acumatica ERP 2024 R1 introduces the ability to configure the approval of documents that have been created on the *Invoices* (SO303000) form such as invoices, credit memos, debit memos, cash sales, and cash returns.



The approval of documents is available only if the *Approval Workflow* feature is enabled on the *Enable/Disable Features* (CS100000) form.

Configuration of Approval

To provide the ability to configure the approval of documents on the *Invoices* (SO303000) form, the *Invoices* option has been added to the **Entity Type** box on the *Approval Maps* (EP205015) form, as shown in the screenshot below.

For this option, the system provides the same entities and fields for the configuration of conditions on the **Conditions** tab of the *Approval Maps* form as it does when the *Invoices and Memos* option is selected in the **Entity Type** box. On this tab, the user specifies the conditions that must be met for a document to be subject to approval.

The approval maps for documents created on the *Invoices* form cannot be applied to the AR documents created on the *Invoices and Memos* (AR301000) form; similarly, the opposite is true.



Some of the fields in the drop-down list of the **Field Name** column (for example, *Default Retainage Percent*) on the **Conditions** tab of the *Approval Maps* form for the *Invoices* entity type have corresponding UI elements displayed only on the *Invoices and Memos* form. If the approval conditions for the *Invoices* entity type are based on these fields, the person who approves the document will not be able to view the values in the UI elements corresponding to these fields on the *Invoices* form.

The following screenshot shows an example of an approval map for documents that are created on the *Invoices* form. The condition for triggering the approval process is the amount of a document line that is greater than 50.

Active	Bracket	Field	Field Name	Condition	Value 2	Bracket	Operator
<input checked="" type="checkbox"/>	-	AR Transactions	Amount	Is Greater	50.00	-	And

Figure: An approval map for documents on the Invoices form

On the **Approval** tab of the [Sales Orders Preferences](#) (SO101000) form, the new **Invoices** table has been added. To enable the approval of documents created on the [Invoices](#) form, the user needs to add a new row to this table, and select the **Active** check box (see Item 1 in the following screenshot) in the row. The user then selects the type of the document in the **Type** column (Item 2) and the approval map in the **Approval Map** column (Item 3). The **Type** column contains the types of documents that can be created on the [Invoices](#) form; the map will be used for documents of only the specified type.

Additionally, the **Require Approval** check box has been removed from the **Approval** tab. Instead, the **Active** check box has been added to the tables; the approval map is used when this check box is selected.

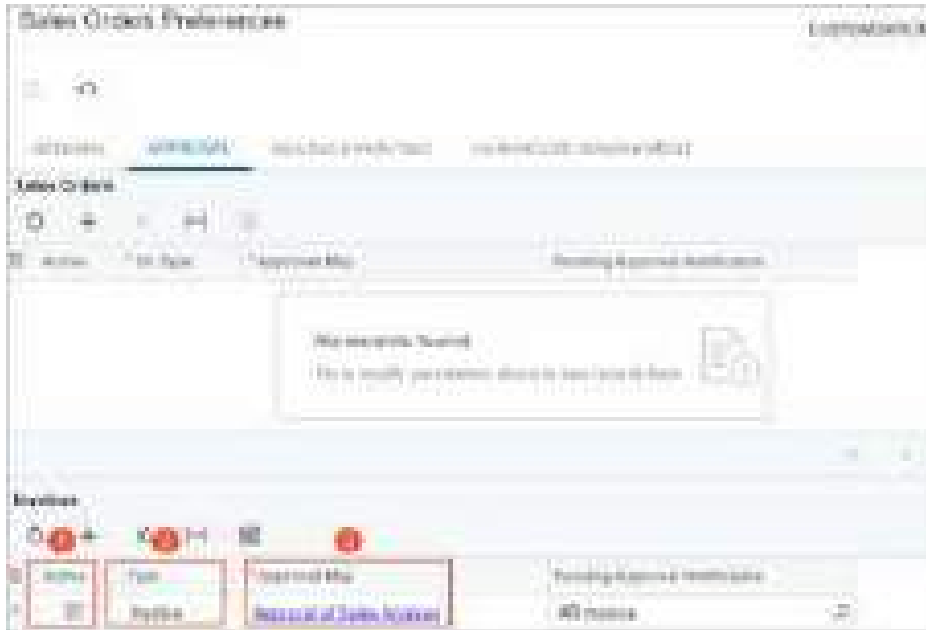


Figure: The approval settings on the Sales Orders Preferences form

Approval Workflow

If the approval has been activated for a type of document on the [Sales Orders Preferences](#) (SO101000) form, the system assigns the *On Hold* status to all new documents of this type on the [Invoices](#) (SO303000) form. The status is assigned to these documents regardless of the state of the **Hold Invoices on Entry** check box on the [Order Types](#) (SO201000) form for the order type of the sales order for which the system generates the invoice or the state of the **Hold Documents on Entry** check box on the [Accounts Receivable Preferences](#) (AR101000) form.

If the document does not require approval based on the conditions specified in the approval map, after the user removes it from hold, the system automatically approves it and assigns the next status according to the document's workflow. If the document requires approval, the system assigns the *Pending Approval* status (see Item 1 in the following screenshot) to it. Also, on the form toolbar, the **Approve** and **Reject** buttons appear (Item 2). If the approver clicks **Approve**, the system assigns the document the next status according to the document's workflow. If the person clicks **Reject**, the system assigns the document the *Rejected* status.

A user can view information about the approval status and all assigned approvers on the new **Approvals** tab of the [Invoices](#) (SO303000) form (Item 3).

Figure: Approval of an invoice

An assigned approver can also approve or reject the sales invoices with the *Pending Approval* status on the [Approvals](#) (EP503010) form. After an invoice has been approved, only the following settings of the invoice can be edited on the [Invoices](#) form: the value in the **Currency** box in the Summary area, the values in the **Payment Method** and **Cash Account** boxes on the **Financial** tab, and the values in the **Amount Paid** and **Write-Off Amount** columns on the **Applications** tab.

If an invoice has been created on the [Invoices](#) (SO303000) form and the system assigns the *Rejected* status to it, the corresponding AR document does not appear on the [Invoices and Memos](#) (AR301000) form or [Cash Sales](#) (AR304000) form. Documents that have been created on the [Invoices](#) form and rejected by the approver, do not prevent the closing of the financial period in which they are dated. If a sales invoice created from a sales order is rejected, the link to the rejected invoice remains in the related sales order on the **Shipments** tab of the [Sales Orders](#) (SO301000) form, and the user can see a warning message about the invoice's rejected status.



If the approval has been activated in the **Invoices** table on the **Approvals** tab of the [Sales Orders Preferences](#) (SO101000) form for documents of the *Credit Memo* type, the system will do the following when a user corrects or cancels an invoice on the [Invoices](#) form:

- If a user clicks **Correct Invoice** and then releases the created correction invoice, the system will automatically approve the cancellation credit memo that is created and released on the release of a correction invoice.
- If the user clicks **Cancel Invoice** on the [Invoices](#) form, the system creates a cancellation credit memo that proceeds through approval in the same way as it would if the user created a new credit memo on the [Invoices](#) form and removed the document from hold.

System Behavior After the Upgrade

After the upgrade to Acumatica ERP 2024 R1, if any documents with the *On Hold* status exist on the [Invoices](#) (SO303000) form and the approval workflow is configured for these documents, they will go through the approval process once they are removed from hold. The documents with other statuses will not go through the approval process.

Inventory and Order Management: Improved Searching of Invoices for RMA Orders and Tracking of Returns for Sales Orders

In Acumatica ERP 2024 R1, if a sales manager needs to return sold goods, they can find an original sales document more quickly and easily. By using the **Add Invoice Details** dialog box on the **Details** tab of the [Sales Orders](#) (SO301000) form for a return order (an order with the *RMA Order*, *Credit Memo*, or *Mixed Order* automation behavior), a user can search for lines from the original invoice in the following ways:

- By the sales order type and number
- By the inventory ID of an item
- By an included item's lot or serial number
- Within a specified period of time

Also, the sales manager can track the documents of all the returns related to an original sale on the new *Return Documents Related to Sales Order (SO4010SP)* form. A user can open this form by clicking **Related Return Documents** on the side panel of the [Sales Orders](#) form for an original order or on the *Sales Orders (SO3010PL)* list of records.

Improved Ability to Select Invoice Lines

When a user creates a return order by using the [Sales Orders](#) (SO301000) form, they use the **Add Invoice Details** dialog box to add lines from an invoice to the order. In previous versions of Acumatica ERP, the user could select the type of the AR document whose lines would be added to the return order and a particular reference number of the AR document. As a result, if the user did not know the reference number, they sometimes needed to scroll through many lines to find the ones to be added to the order.

Starting in Acumatica ERP 2024 R1, the Selection area of the **Add Invoice Details** dialog box has been enhanced (see the following screenshot).

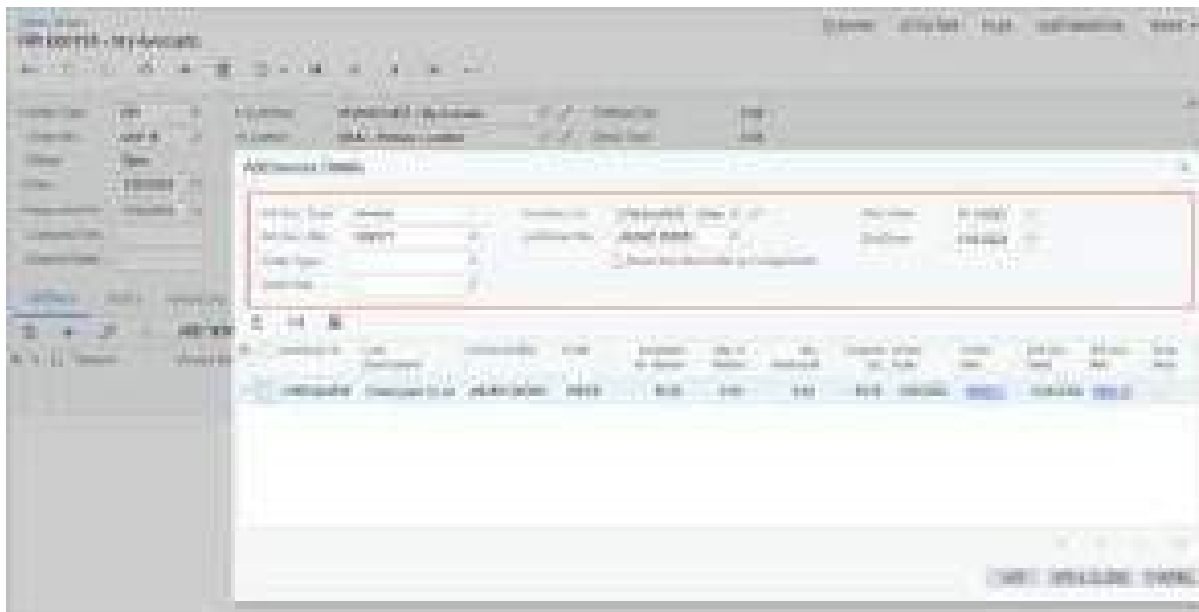


Figure: The Selection area in the Add Invoice Details dialog box

A user can make selections in the elements to narrow the range of the document lines to be displayed in the table. The following elements have been added to the Selection area:

- **AR Doc. Type (Type** in previous versions): In this box, the *Invoice*, *Cash Sale*, *Debit Memo*, and *Credit Memo* options are now available for selection. With the new *Credit Memo* option, a user can add lines from an AR document of the *Credit Memo* type to the return order.
- **AR Doc. Nbr. (Reference Nbr.** in previous versions): The number of an AR invoice.
- **Order Type:** The type of the particular order whose goods are being returned.
- **Order Nbr.:** The number of the particular sales order whose goods are being returned.
- **Inventory ID:** The inventory ID of an item included in the return.
- **Lot/Serial Nbr.:** The lot or serial number, which the user can select if a lot- or serial-tracked item is selected in the **Inventory ID** box. This box is shown if the *Lot and Serial Tracking* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.
- **Start Date:** The date that starts the date range of the invoices whose lines will be listed. By default, the system inserts the date that is 90 days before the end date. The user can select another date.
- **End Date:** The end date of the date range of the invoices whose lines will be listed. By default, the current business date is displayed. The user can select another date.

The following columns have been added to the table in the dialog box (see the screenshot below) to give users additional information about the listed lines:

- **Available for Return**
- **Qty. to Return**
- **Qty. Returned** (hidden by default)
- **Original Qty. (Qty.** in previous versions)
- **Order Date**
- **Order Nbr.**
- **AR Doc. Date**
- **AR Doc. Nbr.**



Figure: The new columns in the Add Invoice Details dialog box

If in the Selection area, the non-stock item selected in the **Inventory ID** box is a kit (see Item 1 in the following screenshot), and the **Show Non-Stock Kits by Components** check box is selected (Item 2), the new **Component ID** and **Component Description** columns are shown in the table (Item 3).

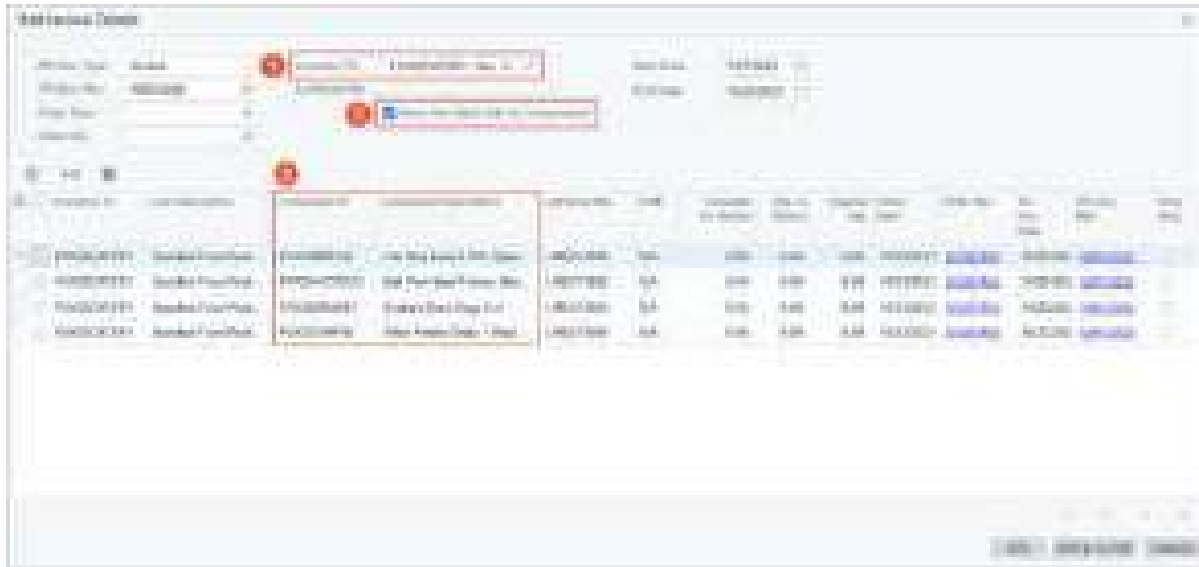



Figure: The new columns for a kit in the Add Invoice Details dialog box

 The **Show Non-Stock Kits by Components** check box is shown only if the *Kit Assembly* feature is enabled on the [Enable/Disable Features](#) form.

Finding Lines in the Add Invoice Details Dialog Box

To start finding for document lines in the **Add Invoice Details** dialog box, a user needs to select a value in at least one of the following boxes of the Selection area: **AR Doc. Nbr.**, **Order Nbr.**, or **Inventory ID**.

Lines in the table will be shown in the following cases:

- If the date of the AR document in which the item was sold belongs to the period between the **Start Date** and **End Date**
- If the dates of the AR documents related to a sales order in which the item was sold belong to the period between the **Start Date** and **End Date**

The date of the sales order selected in the **Date** box on the [Sales Orders](#) (SO301000) form for an order specified in the **Order Nbr.** box is not considered by the system for the period between the **Start Date** and **End Date**.

If a user has filled in the **AR Doc. Nbr.** box or **Order Nbr.** box, the system displays the lines of the selected document. It does this regardless of whether the AR document lines fall within the specified date range. If the dates of the applicable AR documents or dates of AR documents related to the selected sales order are outside the range between the **Start Date** and **End Date**, the system will automatically clear these boxes.

If a user searches for a document by **Inventory ID** or **Lot/Serial Number**, we recommend that they specify the appropriate **Start Date** and **End Date** to make the search faster.

If a user needs to find a kit component that is a stock item by its lot or serial number, they should use the Sorting and Filtering Settings dialog box for the **Lot/Serial Nbr.** table column. In the dialog box, they can specify the needed filter condition (see the following screenshot).

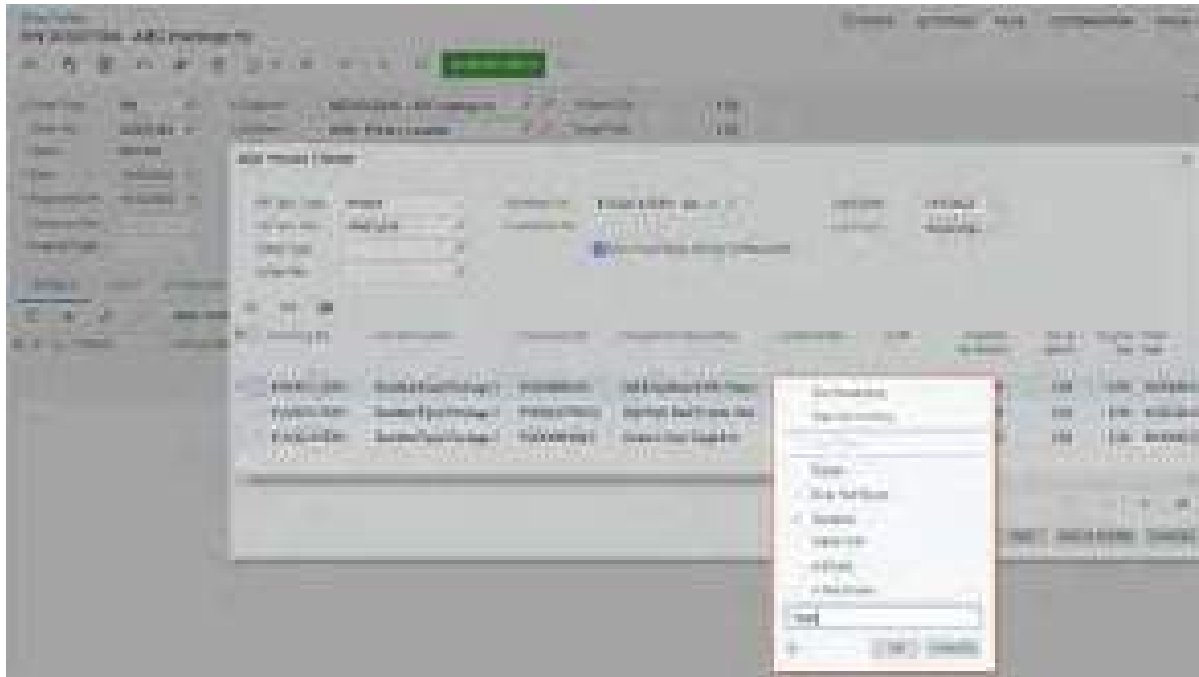


Figure: The specification of a filter condition for the Lot/Serial Number column

Addition of Lines to the Return Order

Once a user has found the appropriate line or lines from the AR invoice in the **Add Invoice Details** dialog box, they need to specify the quantity to be returned. The user first checks the **Available for Return** column (see Item 2 in the following screenshot), which shows the quantity of the item that could possibly be returned, considering any already-returned quantities of the item from the AR document.

If a user first selects the unlabeled check box for a line, the system automatically sets the **Qty. to Return** to be the same as the **Available for Return** value. The user can specify another quantity.

If the user first manually specifies the **Qty. to Return** value (Item 3), the system automatically selects the unlabeled check box (Item 1).



Figure: The specification of the item quantity to be returned

If the table has a few pages of lines, and the user has selected any lines on different pages and then sorted or filtered the lines by using column filters in the Sorting and Filtering dialog box, the selected lines will remain selected and will be added to the order after the user has clicked the **Add** or **Add & Close** button.

If the user has selected any lines in the table and then selected or changed settings in the Selection area, the unlabeled check box for the lines that do not fit the newly defined settings will become cleared automatically.

When the user clicks the **Add** or **Add & Close** button in the **Add Invoice Details** dialog box, the system adds the selected lines to the order on the *Sales Orders* (SO301000) form with the quantity specified in the **Qty. to Return** column.

New Form for Tracking Return Documents Related to Sales Orders

In Acumatica ERP 2024 R1, a new form, *Return Documents Related to Sales Order (SO4010SP)*, has been implemented. A user can open the form by clicking **Related Return Documents** on the side panel of either of the following:

- The *Sales Orders* (SO301000) form
- The *Sales Orders (SO3010PL)* list of records (see the following screenshot)

For the selected sales order, the *Return Documents Related to Sales Order* form displays the related return orders, their related shipments, and return invoices. The form also shows AP documents for drop-ship returns.



A return invoice is an invoice in which an item's return can be processed on the *Invoices* (SO303000) form. Users can create return invoices only if the *Advanced SO Invoices* feature is enabled on the *Enable/Disable Features* (CS100000) form.



Figure: The opening of the *Return Documents Related to Sales Order* form



A user cannot open the form by searching for its form name or form ID in the Search box in the top pane of the Acumatica ERP screen because the form is hidden.

The *Return Documents Related to Sales Order* form displays all the documents related to the return of items that have been sold in the selected sales order. The **Qty. on Shipments** box (see Item 1 in the following screenshot) shows the total quantity of shipped items and items added to the shipments that have not been processed yet. The **Qty. on Returns** box (Item 2) shows the quantities of items on return orders of all types and return invoices. These quantities are calculated in items' base UOMs.

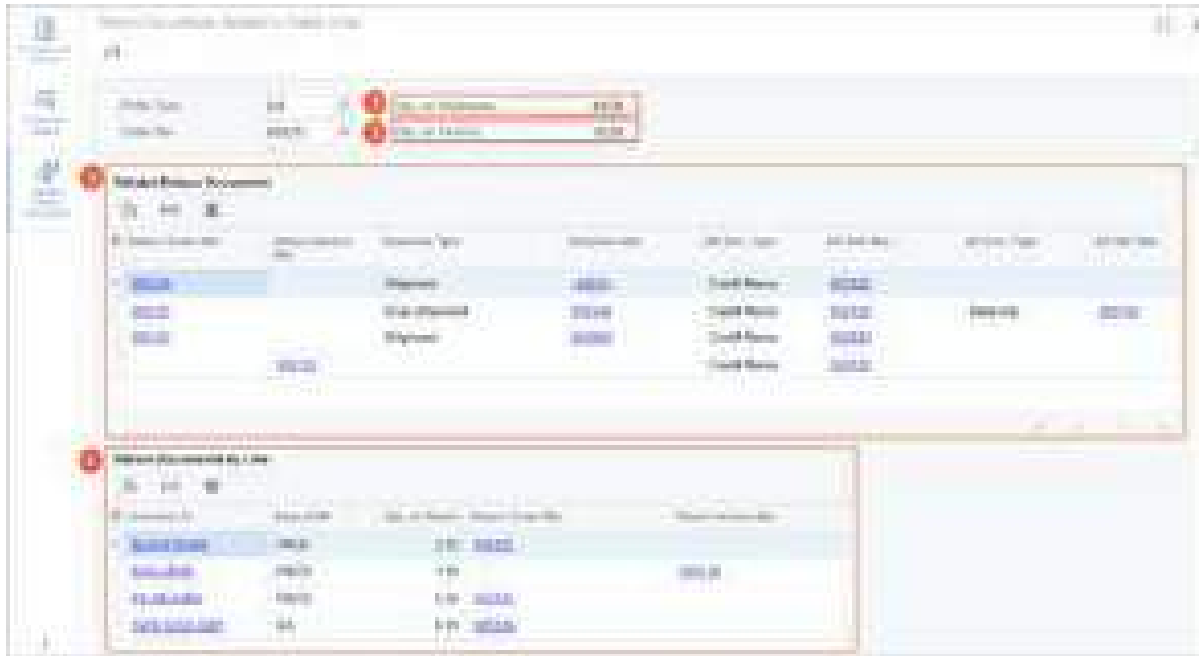


Figure: The settings of the Return Documents Related to Sales Order form

The **Related Return Documents** table (see Item 3 in the previous screenshot) shows links to return orders, as well as the related shipments and AR documents. For drop-ship vendor returns (orders that are used to process the return of the drop-shipped items directly from a customer to a vendor), the links to these returns and their AP documents are shown.

The **Return Documents by Line** table (Item 4) lists the inventory IDs of the items in the sales order lines and links to the respective return orders and return invoices.

The **Related Return Documents** tab is hidden in the side panel if the selected sales order has the following automation behaviors:

- *Quote*
- *Blanket Order*
- *Transfer Order*
- *Credit Memo*
- *RMA Order*, if the *Issue* operation is inactive for the order type

For sales orders whose type has the *Issue* and *Receipt* active operations, *Return Documents Related to Sales Order* form shows only the information about lines with the *Issue* operation.

Original Order Settings on the Sales Orders Form

Starting in Acumatica ERP 2024 R1, users can see the type and number of the original order on the **Details** tab of the *Sales Orders* (SO301000) form. The new **Orig. Order Type** and **Orig. Order Nbr.** columns (see Item 1 in the screenshot below) are shown for a return order if the following conditions are met on the **Template** tab of the *Order Types* (SO201000) form for the order type:

- *RMA Order*, *Credit Memo*, or *Mixed Order* is selected as the automation behavior.
- In the **Operations** table, the *Receipt* operation is listed and defined as active.

On the *Sales Orders* form, the system inserts the type and number of the original order in the **Orig. Order Type** and **Orig. Order Nbr.** columns, respectively, if the number of the original invoice is specified in the **Invoice Nbr.** column (Item 2).

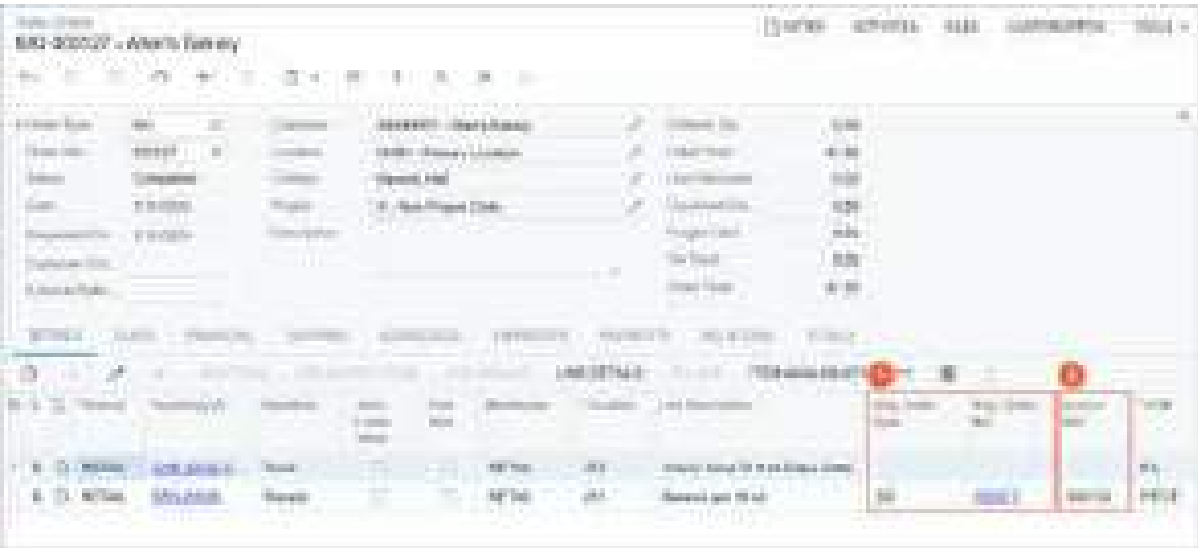



Figure: The new columns on the Sales Orders form

 In sales orders whose type has only the *Receipt* active operation on the **Template** tab of the *Order Types* form, the **Operation** column is not shown on the **Details** tab of the *Sales Orders* form.

Inventory and Order Management: Other Improvements

In Acumatica ERP 2024 R1, improvements to inventory and order management processes and the UI have been introduced, as described below.

Additional Configuration of Picking Direction by Path

The location of items in the warehouse can significantly affect the picking priority for shipping. For example, if heavier items are placed closer to the shipping area, picking is more efficient if pickers always start picking from the closest point, so they can load heavier items onto the cart first, followed by lighter ones.

To expand companies' picking options, in Acumatica ERP 2024 R1, the new **Allow Bidirectional Pick Lists** check box has been added to the **Warehouse Management** tab of the *Sales Orders Preferences* (SO101000) form, as shown in the following screenshot.



Figure: The Allow Bidirectional Pick Lists check box

The new check box affects only the mechanism of finding the nearest pick list for the picker when they click the **Next List** button on the form toolbar of the *Pick, Pack, and Ship* (SO302020) form. The **Next List** button is applicable when the *Paperless Picking* feature is enabled on the *Enable/Disable Features* (CS100000) form.

If the check box is selected, the system can suggest picking goods for a pick list with warehouse locations that have either a lower value or a higher value in the **Path** column on the **Locations** tab of the [Warehouses](#) (IN204000) form than the current location has. If the check box is cleared, the system will suggest the next pick list in only one direction of locations: from the lowest value to the highest one.

Manual Input of GS1 Barcodes on the Automated Warehouse Management Forms

In previous versions of Acumatica ERP, users could not enter GS1 barcodes manually on forms related to automated warehouse management. This could be a problem if a user needed to scan a GS1 barcode that was damaged and could not be scanned.

Acumatica ERP 2024 R1 introduces the ability to manually enter the Human Readable Interpretation (HRI) characters for GS1 barcodes, such as the one shown in the following screenshot. Users can enter the HRI characters in the **Scan** box on any form related to automated warehouse management. The characters must be entered with all brackets as they are shown in the barcode—for example, (01)23645148496321(17)210927.



Figure: HRI characters of a GS1 barcode

Specifying the Aggregated Quantity for Picked Lines

Acumatica ERP 2024 R1 introduces the ability to set the aggregated quantity for lines with the same item and location on the [Pick, Pack, and Ship](#) (SO302020) form. The new ability can be used to speed up the picking of shipments that incorporate lines of multiple sales orders with identical items.

Suppose that a picker starts picking up a shipment that has three lines with the *APPLES* item from different sales orders. All three lines should be picked from the *MAIN* location. These lines have the quantities of 5, 10, and 7, respectively. Instead of processing each line with the *APPLES* item one by one, the picker can scan the barcodes of the *MAIN* location and the *APPLES* item, click **Set Qty** on the form toolbar of the form, and enter 22, which is the aggregated quantity of these three lines. The system will automatically distribute the entered quantity among the lines with the *APPLES* item.

Enhancements to the Efficiency of Picking and Packing Form

Acumatica ERP 2024 R1 provides enhanced tracking of picking and packing efficiency on the [Efficiency of Picking and Packing](#) (SO402020) form. New elements have been added to the Selection area, and new columns have been added to the table.

If a user selects the **Expand by Pick List** check box in the Selection area, the user can click the **Shipment Nbr.** or **Worksheet Nbr.** option button. The user then proceeds as follows:

- When the **Shipment Nbr.** option button is selected, the user can select a shipment in the adjacent box (see Item 1 in the screenshot below).
- When the **Worksheet Nbr.** option button is selected, the user can select a picking worksheet in the adjacent box.

If the **Shipment Nbr.** option button is selected, the lookup table for the box shows only shipments for single-shipment pick lists. The following shipments are not shown:

- For a wave pick list, shipments included in the wave
- For a batch pick list, shipments included in the batch

The **Number of Actual Operations** and **Number of Errors** columns have been added to the table (Item 2).

The screenshot shows a table with the following columns: Item, Quantity, Date, Start Time, End Time, Number of Actual Operations, and Number of Errors. The 'Number of Actual Operations' and 'Number of Errors' columns are highlighted with red boxes. The table contains two rows of data.

Item	Quantity	Date	Start Time	End Time	Number of Actual Operations	Number of Errors
10000	100	2020-01-01	08:00:00	09:00:00	100	0
10000	100	2020-01-01	08:00:00	09:00:00	100	0

Figure: New elements on the Efficiency of Picking and Packing form

When a user performs operations on the *Pick, Pack, and Ship* (SO302020) form, the system counts all the scanning operations that a user performs for a pick list and shows this number in the **Number of Actual Operations** column. The system also counts the scanning operations that have resulted in an error. For example, if a user has erroneously scanned an item's barcode, lot number, or serial number and an error message is shown with a request to scan the correct data, this error is counted. The system shows the resulting count per shipment or per pick list in the **Number of Errors** column.

Also, some enhancements have been made to the data shown in the columns. The **Start Date** and **End Date** columns now show not only the date of each operation, but also the start time and end time (see Item 1 in the following screenshot).

The **Pick List Nbr.** column (Item 2) now shows links. By clicking this link, a user can open one of the following documents related to the pick list:

- The shipment for a single-shipment pick list
- The picking worksheet for a wave pick list
- The picking worksheet for a batch pick list

The screenshot shows a table with the following columns: Pick List Nbr., Start Date, End Date, and others. The 'Pick List Nbr.', 'Start Date', and 'End Date' columns are highlighted with red boxes. The table contains two rows of data.

Pick List Nbr.	Start Date	End Date	Other Columns
10000	2020-01-01 08:00:00	2020-01-01 09:00:00	...
10000	2020-01-01 08:00:00	2020-01-01 09:00:00	...

Figure: Changes to the column data on the Efficiency of Picking and Packing form

Improved Control of Removing Sales Orders from Credit Hold

In previous versions, if a payment was applied to the full order amount, a sales order on the *Sales Orders* (SO301000) form was automatically removed from credit hold. (That is, the system changed the order's status from *Credit Hold* to the next status, which depends on the company's workflow for these documents.) This happened for all sales orders if both of the following conditions were met:

- The customer specified in the sales order had exceeded the credit limit.

- On the **General** tab of the [Order Types](#) (SO201000) form, the sales order type had the following check box selected: **Hold Documents on Failed Credit Check**.

In Acumatica ERP 2024 R1, the **Remove Credit Hold on Payment Application** check box has been added to the **General** tab of the [Order Types](#) form (see the following screenshot).

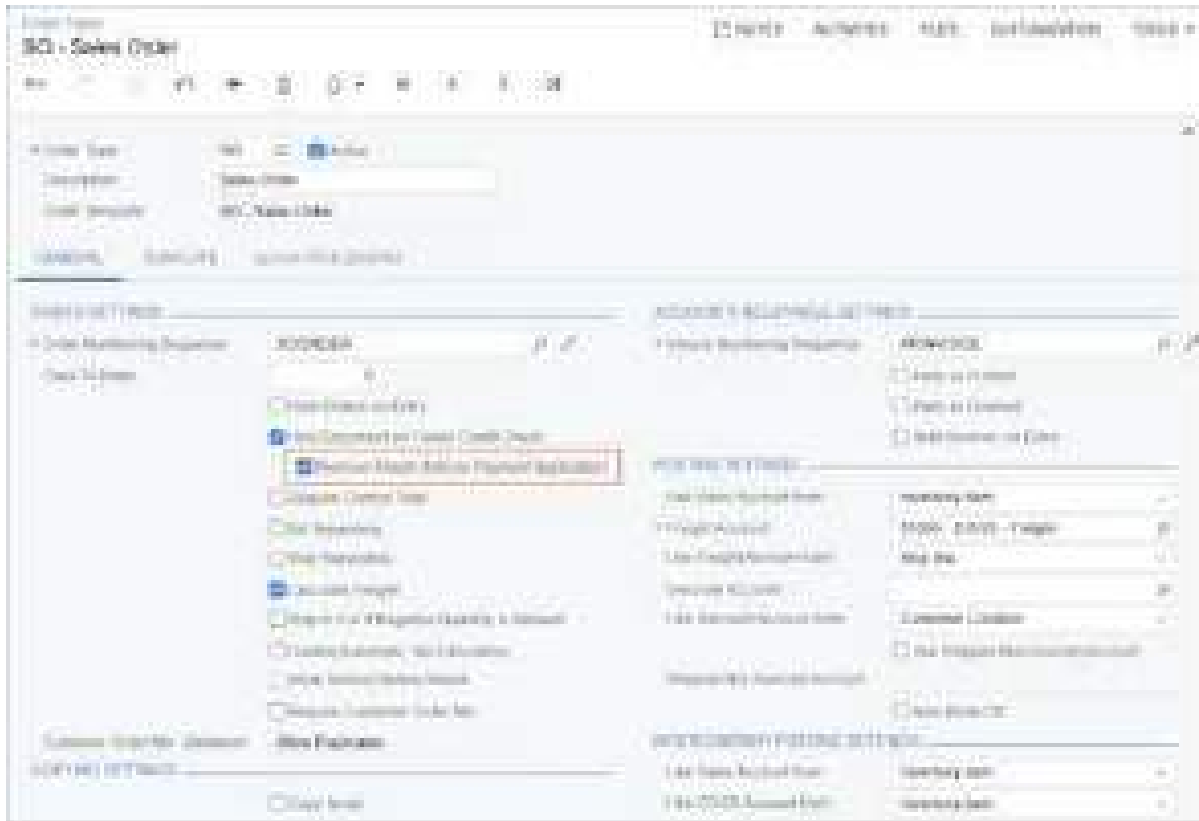


Figure: The new check box on the [Order Types](#) form

With **Hold Documents on Failed Credit Check** selected for an order type, the **Remove Credit Hold on Payment Application** check box is automatically selected. This means that the system will automatically remove a sales order of the type from credit hold when a payment has been applied to the full sales order amount. If a user clears the **Remove Credit Hold on Payment Application** check box for the order type, the *Credit Hold* status will remain unchanged in the sales order when the payment was applied to the full sales order amount. In this case, the user can change the *Credit Hold* status in either of the following ways:

- For an individual order by opening the order on the [Sales Orders](#) form and clicking **Remove Credit Hold**
- For any number of sales orders by selecting the *Remove Credit Hold* action on the [Process Orders](#) (SO501000) form and processing the needed sales orders

Also, starting in Acumatica ERP 2024 R1, if a customer has the *Credit Hold* status on the [Customers](#) (AR303000) form, a user can select the customer in the **Customer** box on the [Sales Orders](#) form and save the changes. When the user removes the sales order from hold, the order's status changes to *Credit Hold* because of the customer's status, regardless of the customer's credit limit and the state of the **Hold Documents on Failed Credit Check** check box on the [Order Types](#) form.



The sales order cannot be moved from the *Credit Hold* status even if the **Remove Credit Hold on Payment Application** check box is selected for the order type on the [Order Types](#) form and a payment is applied to the full sales order amount. The status of the sales order can be changed only when the customer's status is no longer *Credit Hold*.

Improvements to Payments and Prepayments in Blanket Sales Orders

Starting in Acumatica ERP 2024 R1, a user can apply a payment or prepayment from a blanket sales order to a child order that has been linked to the blanket order through the **Add Blanket Sales Order Line** dialog box. The user opens the dialog box by clicking **Add Blanket SO Line** on the table toolbar of the **Details** tab on the [Sales Orders](#) (SO301000) form.

Suppose that on the [Sales Orders](#) form, a user created an order with the *Blanket Order* automation behavior, followed by a payment for this blanket order. After that, they created a sales order with the *Sales Order* automation behavior and linked the sales order to the blanket order by selecting lines in the **Add Blanket Sales Order Line** dialog box. Finally, on the **Payments** tab, the user added a payment from the blanket order to the created child sales order. In previous versions of Acumatica ERP, the user could use only the available balance of the payment. When the user saved the changes after performing the described actions, the system did not consider the balance taken from the blanket order, and the amount in the **Transferred to Child Orders** column of the blanket order remained unchanged.

In Acumatica ERP 2024 R1, the user can change the payment or prepayment application amount in the **Applied to Order** column of the **Payments** tab of the [Sales Orders](#) form for a child order. This amount will be transferred from the blanket order to the child order (see Item 1 in the following screenshot, which shows the child order). The **Blanket SO Ref. Nbr.** column has been added on the **Payments** tab of the [Sales Orders](#) form (Item 2). By default, the column is hidden.

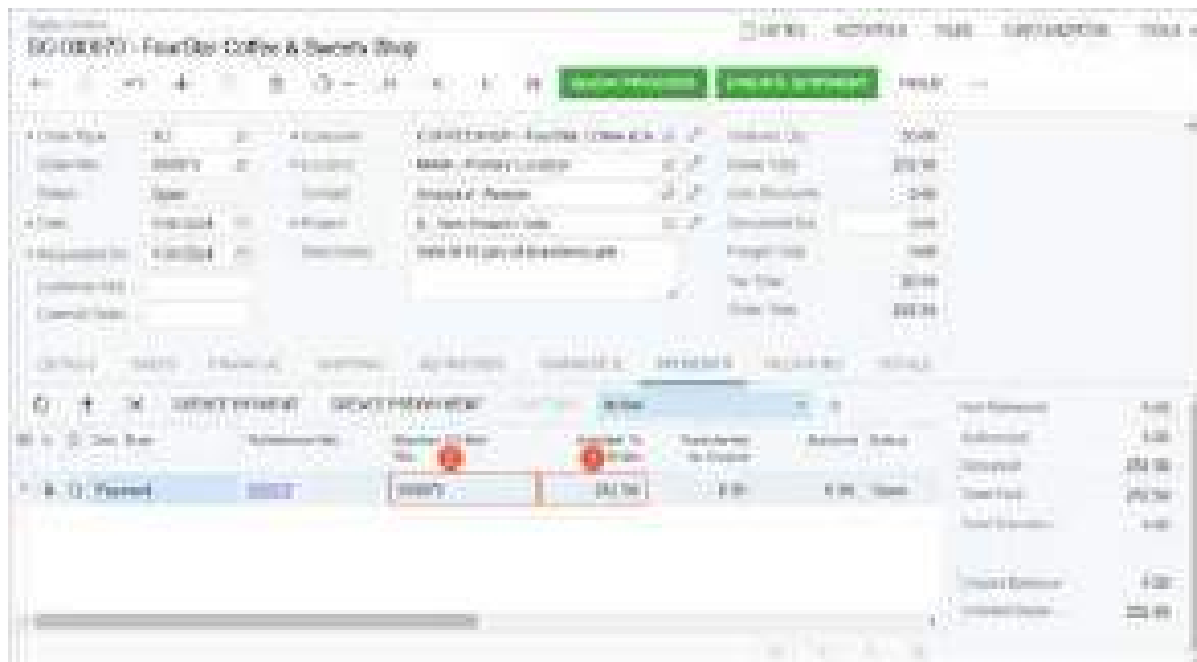


Figure: A child order with the payment from a blanket order applied

On the **Payments** tab of the [Sales Orders](#) form for the blanket order, the system updates the amount in the **Applied to Order** column for the payment. Also, the payment amount that is applied to the child order is updated in the **Transferred to Child Orders** column on the **Payments** tab for the blanket order.

Suppose that a payment is applied to multiple blanket orders, and a child order has lines from these multiple blanket orders. The system will use the payment application from only the blanket order whose link is the first one in the **Blanket SO Ref. Nbr.** column on the **Details** tab for the child order at the time a user adds the payment on the **Payments** tab for the child order. A user can apply to the child order the payment application amount that is equal to the payment application amount in the blanket order plus the available payment balance, which is the **Available Balance** amount on the [Payments and Applications](#) (AR302000) form for the payment.

If a nonzero payment application has been transferred from a blanket order to a child order, and a user deletes the blanket order line from the **Details** tab of the [Sales Orders](#) form for the child order, the system does the following:

- Leaves only the **Available Balance** of a payment in the **Applied to Order** column on the **Payments** tab for the child order.
- Deletes the blanket order number from the **Blanket SO Ref. Nbr.** column on the **Payments** tab for the child order.
- Transfers the payment application amount back to the blanket sales order. This amount is shown in the **Applied To Order** column of the blanket order.

External Tax Calculation for Invoices Prepared for Multiple Sales Orders or Shipments

Starting in Acumatica ERP 2024 R1, if a sales invoice has the *On Hold* status and a tax zone for which the **External Tax Provider** check box is selected on the [Tax Zones](#) (TX206000) form, taxes for the sales invoice are not calculated. This invoice can be prepared for a sales order or shipment, or it can be created directly on the [Invoices](#) (SO303000) form. To cause the system to calculate taxes, a user should take the invoice off hold.

Also, the new *Incomplete* status has been implemented for a sales invoice. The invoice is assigned the *Incomplete* status if any errors occur in the external tax calculation during the invoice creation and if any of the following conditions is met:

- The invoice has been prepared for multiple sales orders.
- The invoice has been prepared for multiple shipments.
- The invoice has been prepared for a shipment that has multiple sales orders.

If an invoice is assigned the *Incomplete* status, taxes are not calculated, and payments applied to related sales orders are not transferred from the orders to the invoice. For the invoice, only the **Complete Processing** command is available on the More menu of the [Invoices](#) form. When a user clicks **Complete Processing**, the system receives external taxes and transfers payments from the related sales orders to the invoice if no errors occur during the processing by the external tax provider. After the processing, the invoice is assigned the next status in the invoice workflow.

On the [Process Invoices and Memos](#) (SO505000) form, the new *Complete Processing* action is now available for selection in the **Action** box. If a user selects this action, the table displays all the invoices with the *Incomplete* status.

Enhancements to the Purchase Orders Form

In Acumatica ERP 2024 R1, on the [Purchase Orders](#) (PO301000) form, the **PO History** tab (shown in the screenshot below) has been reworked for purchase orders of the *Blanket* type. The redesigned tab increases the visibility of child orders—that is, purchase orders of the *Normal* or *Drop-Ship* type—that have been created for the blanket purchase order. Now users can review information about the child orders and their related purchase receipts and returns, AP bills, and debit adjustments for purchase returns in a single place.

The following columns (see Item 1 in the screenshot below) have been added to the left table on the **PO History** tab: **Order Nbr.**, **Order Date**, **Order Status**, and **Ordered Qty**. These new columns show the settings of the existing child orders.

The following columns (Item 2) have been renamed in the left table on the **PO History** tab:

- **Type** to **Receipt Type**
- **Date** to **Receipt Date**
- **Status** to **Receipt Status**

Also, the **Total Ordered Qty.** has been added to the table footer (Item 3).

The screenshot displays the 'PO History' tab. At the top, there are navigation and filter options. Below this, a table lists purchase orders. The table has columns for 'Order ID', 'Order Date', 'Order Type', 'Order Status', 'Order Amount', and 'Order Date'. A red circle highlights the 'Order Status' column. To the right, another table lists sales orders. This table has columns for 'Order ID', 'Order Date', 'Order Type', 'Order Status', 'Order Amount', and 'Order Date'. A red circle highlights the 'Order Status' column. The bottom of the screen shows a status bar with the text 'Microsoft Dynamics NAV 2013 R2'.

Figure: The PO History tab

In the columns that existed previously in the left table on the **PO History** tab, for blanket purchase orders, the system now shows the settings of purchase receipts and returns created for child orders. Also, in the right table of the **PO History** tab, for blanket sales orders, the settings of AP bills and debit adjustments created for child orders and related purchase receipts or returns are now shown.

Localization (Canada): Canadian EFT Plug-In

In previous versions of Acumatica ERP, users could export batch payments to a CPA-005 file by using an export scenario. (CPA-005 is an electronic funds transfer (EFT) file format accepted by the major Canadian banks.) Export scenarios can be complex and hard to configure, and they provide a limited ability to find and display errors. In Acumatica ERP 2024 R1, a new plug-in for exporting an EFT file in CPA-005 format has been added.

The Canadian EFT plug-in provides the following capabilities for users and administrators:

- Users can generate a production document that is CPA-005 compatible and a test EFT file for batch payments.
- Users can edit the automatically generated sundry information for a payment.
- An administrator can specify what information is exported in the **Originator's Cross Reference No** and **Originator's Sundry Information** fields of the file.
- An administrator can change the mapping for EFT fields. For example, it is possible to export different account numbers in the **Payee Account No.** and **Account No. for Returns** fields. (By default, these fields are mapped to one value.)

The EFT file generated for the Royal Bank of Canada includes the *RBC Header* record. All transaction amounts in the EFT file are greater than zero. If an EFT file cannot be exported, the system shows a clear error message to the user.

This functionality is available if the *Canadian Localization* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

The following sections describe the changes to the UI and the batch file processing that have been made to support this functionality.

Changes to the Payment Methods Form

On the [Payment Methods](#) (CS204000) form, the following UI changes have been made:

- On the **Settings for Use in AP** tab, the *Canadian EFT Plug-In* option has been added to the list in the **Export Method** box, as shown in the following screenshot.
- If *Canadian EFT Plug-In* is selected in the **Export Method** box, the **Plug-In Settings** tab appears on the form.

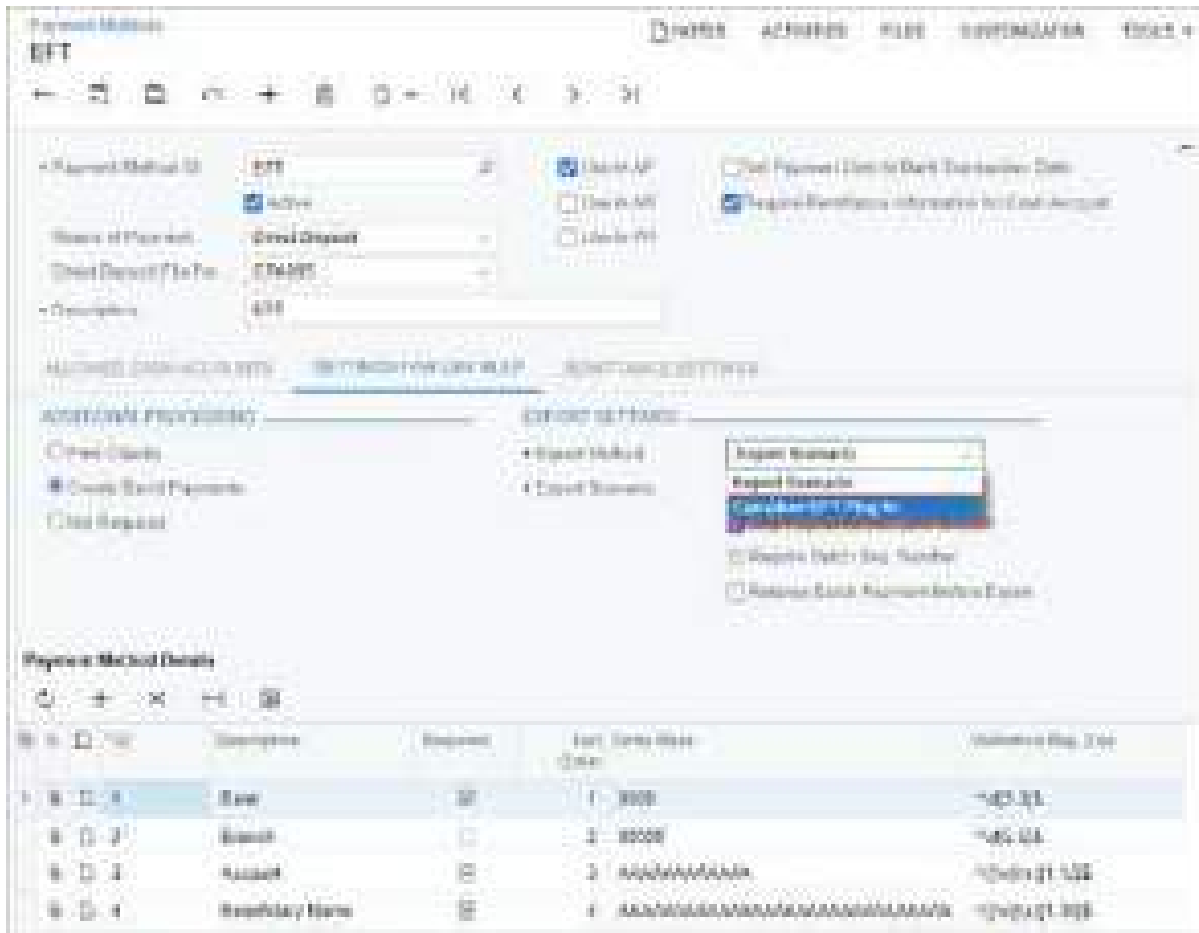


Figure: Change on the Settings for Use in AP tab

The table on the **Plug-in Settings** tab, which is shown in the following screenshot, displays the settings of the selected plug-in depending on the state of the **Show All Settings** check box.

The records in the table can be displayed in the following modes:

- Compact (default): If the **Show All Settings** check box is cleared, the table displays only the settings that most frequently require adjustment according to the known variations in customers' and banks' requirements.
- Full: If the **Show All Settings** check box is selected (as is the case in the screenshot), the table shows all the plug-in settings that can be specified.

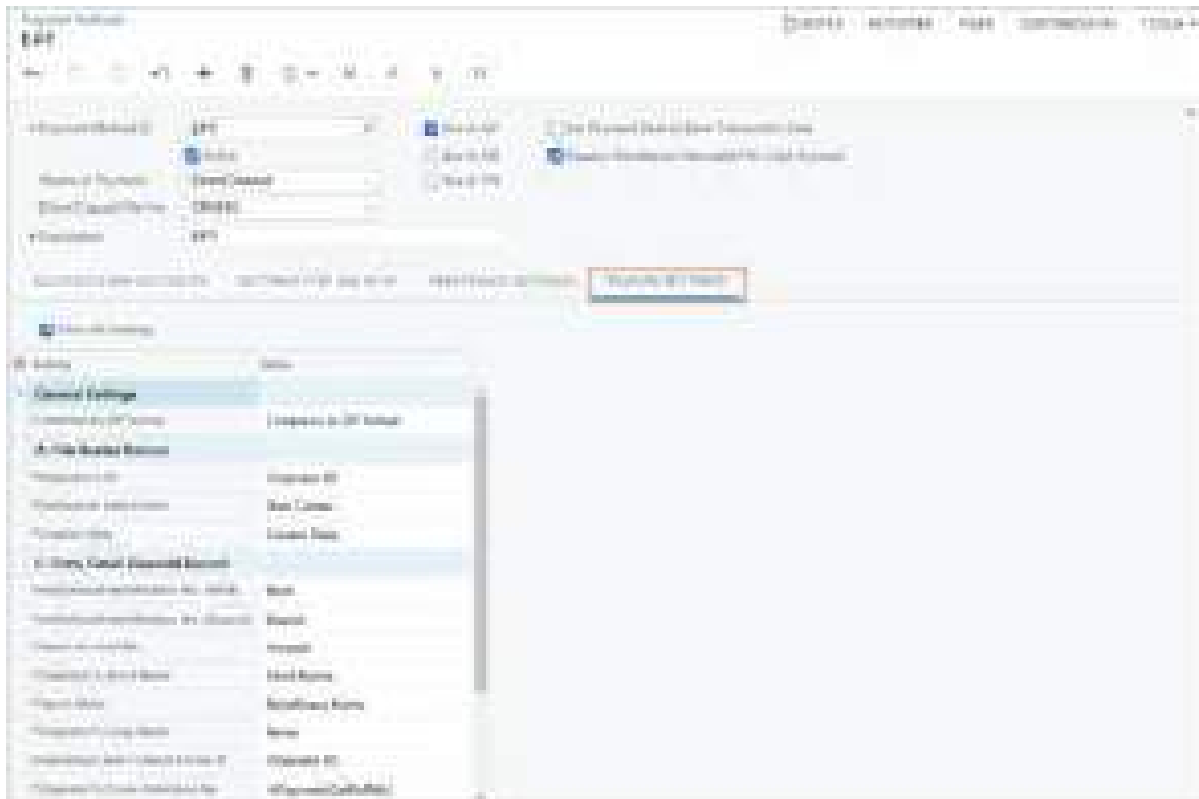


Figure: The new Plug-In Settings tab

Changes to the Batch Payments Form

On the [Batch Payments](#) (AP305000) form, the **Payment Related (Sundry) Info** column has been added to the table, as shown in the following screenshot.



Figure: The new column on the Batch Payments form

The setting in the **Payment Related (Sundry) Info** column is generated automatically by the system when an AP payment document is added to a batch or a batch is created. It is generated based on the formula specified in the **Originator's Sundry Information** box on the **Plug-in Settings** tab of the [Payment Methods](#) (CA204000) form. If the calculated value is longer than 15 characters, it is truncated.

Export of Batches via the Canadian EFT Plug-In

When a user exports a batch of payments on the [Batch Payments](#) (AP305000) form, the system uses the Canadian EFT plug-in if on the **Settings For Use in AP** tab of the [Payment Methods](#) (CA204000) form, the *Canadian EFT Plug-in* option is selected in the **Export Method** box.

The EFT file exported from the [Batch Payments](#) form by using the Canadian EFT plug-in has the following structure.

EFT Record		Comment
Header Record		This record is generated only for RBC (Royal Bank of Canada). Only one header record can be included in the EFT file.
	A: File Header Record	This header is required if only one record of type A can be included in the file.
	C: Detail Deposit Record 1	For each payment included in a batch of payments, a separate <i>Detail Deposit Record</i> is included in the EFT file.
	C: Detail Deposit Record 2	
	C: Detail Deposit Record N	
	Z: Control Totals (End Record)	This record is required if only one record of type Z can be included in the EFT file.

The name of the EFT file that the system generates has the following format:

- **EFT production file:** {PaymentMethodID}-{CashAccountCD}-{Date:yyyyMMdd}-{BatchSeqNbr:0000}.txt (for example, EFT-10600-20240206-0898.txt)
- **EFT test file:** {PaymentMethodID}-{CashAccountCD}-{Date:yyyyMMdd}-{BatchSeqNbr:0000}-Test.txt (for example, EFT-10600-20240206-0898-Test.txt)



The system inserts a date in the file name depending on the following settings:

- If *Current Date* is selected in the **Creation Date** box on the **Plug-In Settings** tab of the [Payment Methods](#) form for the payment method, the current business date is inserted.
- If *Batch Date* is selected in the **Creation Date** box for the payment method, the date specified in the **Batch Date** box on the [Batch Payments](#) form is inserted.

If the remittance setting mapped to the **Institutional ID Number for Returns (Bank)** box on the **Remittance Settings** tab of the [Cash Accounts](#) (CA204000) form is 003 or 0003, which corresponds to the RBC bank code, the generated EFT file will include the following predefined header record:

- EFT production file: \$\$AA01CPA1464[PROD[NL\$\$
- EFT test file: \$\$AA01CPA1464[TEST[NL\$\$

The system applies the following general rules to each EFT field for which no other mapping is specified:

- An alphanumeric field is left-justified and padded with trailing spaces.
- A numeric field is right-justified and padded with leading zeros.
- If a numeric field is not needed, it is filled entirely with zeros. If an alphanumeric field is not needed, it is filled entirely with spaces.

Limitations

The following limitations are applied to the Canadian EFT plug-in:

- The plug-in does not support offset records for HSBC bank. The support for these records will be added in a later version of Acumatica ERP. (Export scenarios do not support offset records either.)
- The plug-in does not support the processing of payroll batches.

Additional Information

For details on the setup of Canadian EFT payments, see [Setup of Canadian EFT](#).

For a detailed description of the plug-in settings, see [Settings of the Canadian EFT Plug-In](#).

For details on how to prepare and export Canadian EFT payments, see [Processing Canadian EFT Payments](#).

Localization (Canada): Differentiation Between Payments in T5018 Reporting

In previous versions of Acumatica ERP, the files created on the [Create T5018 E-File](#) (AP507600) form contained aggregate payments made to a T5018 vendor by a company. Aggregate payments contained *Goods*, *Services*, and *Mixed* payments, without any differentiation between them, which created incorrect T5018 reporting amounts.

Starting in Acumatica ERP 2024 R1, payments made to subcontractors for construction services or mixed payments (for both goods and services) are reported when the total service payments are \$500 or more during the reporting period. All applicable amounts of goods and services tax (GST) and harmonized sales tax (HST) are included in the reported T5018 amounts. The \$500 threshold is based on values after taxes and depends on the provincial and federal GST or HST rates.

The following sections describe the changes to the UI and transaction processing that have been made to support this functionality.

Changes to the Accounts Payable Preferences Form

On the [Accounts Payable Preferences](#) (AP101000) form, the **Canadian Tax Reporting** tab, shown in the following screenshot, has been added.

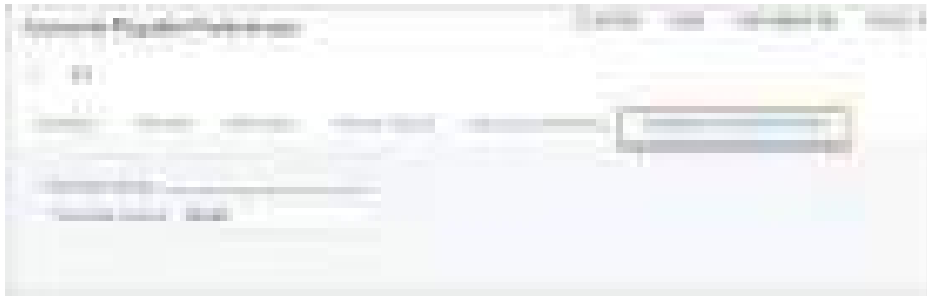


Figure: The Canadian Tax Reporting tab on the Accounts Payable Preferences form

This tab appears on the form if the *Canadian Localization* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

Changes to the Vendors Form

On the [Vendors](#) (AP303000) form, the following UI changes have been made in Acumatica ERP 2024 R1:

- On the More menu, the **Enable T5018 Reporting** command has been added under **Vendor Management**. When a user clicks this command, the T5018 reporting functionality becomes activated for the selected vendor. That is, the system selects the **T5018 Vendor** check box in the **Vendor Properties** section on the **General** tab.

This command is available if all of the following conditions are met in the system:

- The tenant to which the user is signed in has the *Canadian Localization* feature enabled on the [Enable/Disable Features](#) (CS100000) form.
- The **T5018 Vendor** check box is cleared for the vendor.
- The **1099 Vendor** check box is cleared for the vendor.
- On the More menu, the **Disable T5018 Reporting** command has been added under **Vendor Management**. This command is visible if T5018 reporting has been activated for the selected vendor. When a user clicks this command, the T5018 reporting functionality becomes deactivated for the selected vendor. That is, the system clears the **T5018 Vendor** check box in the **Vendor Properties** section on the **General** tab.

This command is available if all of the following conditions are met in the system:

- The tenant to which the user is signed in has the *Canadian Localization* feature enabled on the [Enable/Disable Features](#) form.
- The **T5018 Vendor** check box is selected for the vendor. (The user clicked **Enable T5018 Reporting** on the More menu.)
- The **1099 Vendor** check box is cleared for the vendor.

Neither command is visible on the More menu if the **1099 Vendor** check box is selected for the vendor.

Changes to the Item Classes Form

On the [Item Classes](#) (IN201000) form, the **T5018 Service** check box has been added to the **General** tab, as shown in the following screenshot.

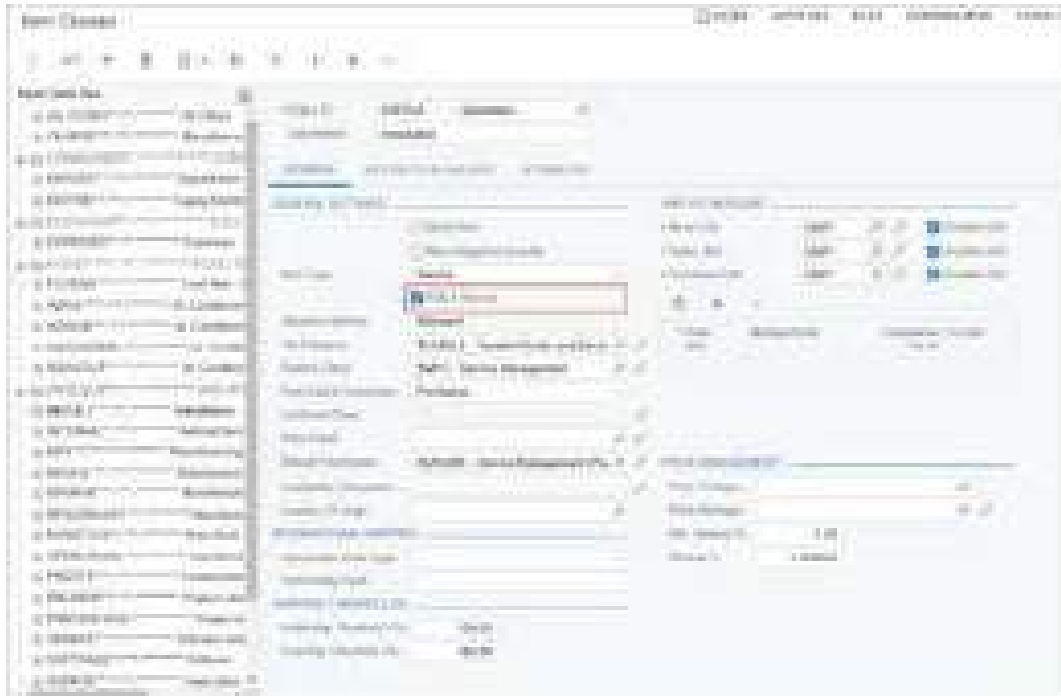


Figure: The T5018 Service check box on the Item Classes form

If this check box is selected, all the non-stock items of this class are subject to T5018 reporting as services. By default, the check box is cleared. This check box appears on the form if the *Canadian Localization* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

Changes to the Non-Stock Items Form

On the [Non-Stock Items](#) (IN202000) form, the **T5018 Service** check box has been added to the **General** tab, as shown in the following screenshot.

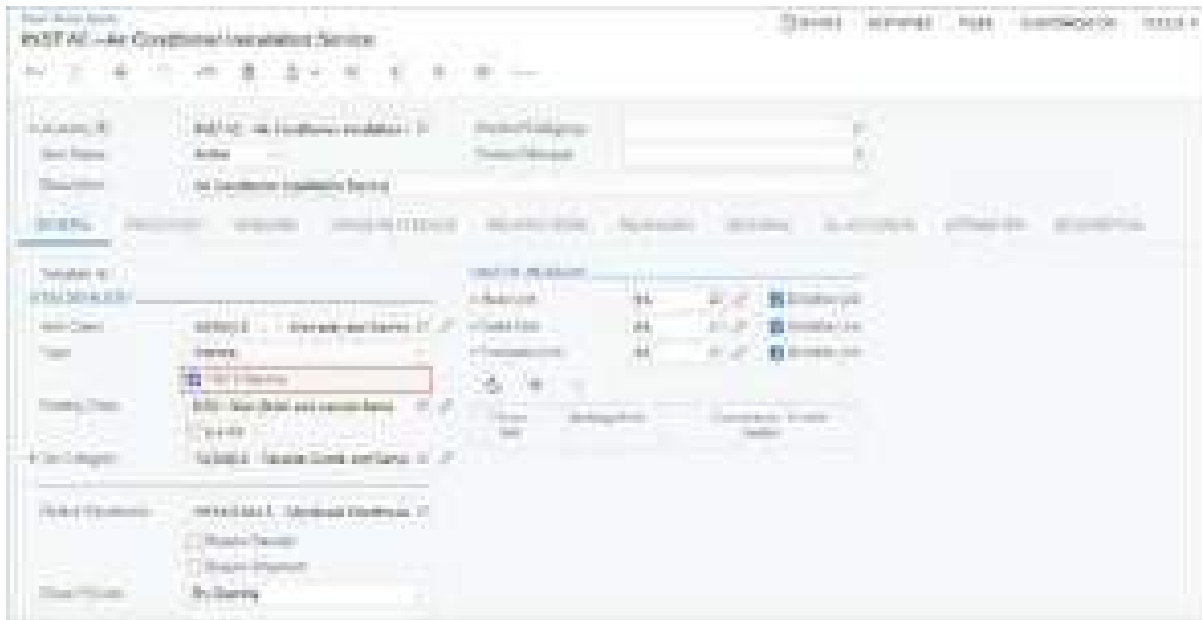


Figure: The T5018 Service check box on the Non-Stock Items form

If this check box is selected, the selected non-stock item is subject to T5018 reporting as a service. The default state of this check box is copied from the settings of the item class to which the item belongs. This check box appears on the form if the *Canadian Localization* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

Changes to the Bills and Adjustments Form

On the [Bills and Adjustments](#) (AP301000) form, the **T5018 Service** column has been added to the table on the **Details** tab, as shown in the following screenshot.




Figure: The T5018 Service column on the Bills and Adjustments form

If the check box in the **T5018 Service** column is selected for a document line, the item in this line will be reported as a service in the T5018 report. The state of the check box is copied by default from the settings of the selected item. The user can change the state of this check box to correct possible mistakes in T5018 reporting— whether the document is unpaid, partially paid, or fully paid and released. For a document of a T5018 vendor without any items specified, this check box is selected automatically for all the document lines, but the user can change the state of the check box.

The **T5018 Service** column is available if all of the following conditions are met in the system:

- The *Canadian Localization* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.
- For the current company, one of the following is true:

- Canadian localization is set up at the company level. That is, *Canada* is selected in the **Localization** box on the **Company Details** tab of the *Companies* (CS101500) form.
- The originating branch of the document belongs to a company with Canadian localization set up at the company level.
- The vendor has the **T5018 Vendor** check box selected on the **General** tab of the *Vendors* (AP303000) form.
- The document type selected in the **Type** box is not *Prepayment*. For prepayment requests, the **T5018 Service** check box is not visible.

 A document with multiple-installment credit terms selected in the **Terms** box cannot be created for a T5018 vendor.

For documents with retainage, the user can create a document with lines for which the **T5018 Service** check box is selected regardless of whether the **Pay by Line** check box is selected or cleared. The following screenshot illustrates an example of a document with retainage and the **Pay by Line** check box cleared.



Figure: A bill with retainage with T5018 Service lines

Changes to the Cash Purchases Form

On the *Cash Purchases* (AP304000) form, the **T5018 Service** column has been added to the table on the **Details** tab, as shown in the following screenshot.



Figure: The T5018 Service column on the Cash Purchases form

If a T5018 vendor is selected in the **Vendor** box, the check box in the **T5018 Service** column is selected automatically. The user can override its state if the cash purchase is fully paid and released to correct possible mistakes in T5018 reporting.

This check box is available if all of the following conditions are met:

- The *Canadian Localization* feature is enabled on the *Enable/Disable Features* (CS100000) form.

- For the current company, one of the following is true:
 - Canadian localization is set up at the company level. That is, *Canada* is selected in the **Localization** box on the **Company Details** tab of the *Companies* (CS101500) form.
 - The originating branch of the document belongs to a company with Canadian localization set up at the company level.
- The vendor has the **T5018 Vendor** check box selected on the **General** tab of the *Vendors* (AP303000) form.

Changes to the Checks and Payments Form

On the **Financial** tab of the *Checks and Payments* (AP302000) form, the **T5018 Report** section has been added, as shown in the following screenshot.

The screenshot displays the 'Checks and Payments' form for a 'Prepayment - Computer Environment Solution'. The 'FINANCIAL' tab is active. The 'T5018 REPORT' section is highlighted with a red box and contains an unchecked checkbox labeled 'Include in T5018 Report'. The form also shows various fields for Vendor (COMPENVR - Computer Environment), Location (SABY - Primary Location), Payment Method (CHECK), Cash Account (1020 - Company Checking Account), Currency (USD), and Payment Amount (0.00). The 'Batch' field is set to 'PRECROWHOLE - Precrow Wholesale'.

Figure: The T5018 Report section on the Financial tab

This section, which contains the **Include in T5018 Report** check box, appears on the form if the selected document has the *Prepayment* type and the document has not been fully applied. A user can select this check box to include the prepayment that can potentially be for mixed goods and services in the T5018 report. By default, the check box is cleared.

This check box is available if all of the following conditions are met:

- The *Canadian Localization* feature is enabled on the *Enable/Disable Features* (CS100000) form.
- For the current company, one of the following is true:
 - Canadian localization is set up at the company level. That is, *Canada* is selected in the **Localization** box on the **Company Details** tab of the *Companies* (CS101500) form.
 - The originating branch of the document belongs to a company with Canadian localization set up at the company level.
- The vendor has the **T5018 Vendor** check box selected on the **General** tab of the *Vendors* (AP303000) form.

Changes to the Create T5018 E-File Form

On the [Create T5018 E-File](#) (AP507600) form, the following UI changes have been made in Acumatica ERP 2024 R1:

- The default value in the **Threshold Amount** box has been changed from 0 to 500.00 (see Item 1 in the screenshot below). This setting means that payments for mixed goods and services and for services only are included in the T5018 report when the total annual service component is \$500 or more. This setting is copied from **Threshold Amount** box on the **Canadian Tax Reporting** tab of the [Accounts Payable Preferences](#) (AP101000) form.

Once a T5018 report is prepared, the user cannot override the value in the **Threshold Amount** box if the already-prepared report has the *Original*, *Amended*, or *Canceled* type. The **Threshold Amount** box on the [Accounts Payable Preferences](#) form is still editable.

- On the **Details** tab, the **Total Service Amount** column (Item 2) has been added. This column shows the sum of all amounts paid for services.
- On the **Details** tab, the **Amount** column has been renamed to **Amount to Report** (Item 3). This column shows the sum of payments that include only services or mixed goods and services. Payments for only goods are excluded from this amount.
- On the **Details** tab, the **Report Type** column (Item 4) has been added. The system inserts one of the following options:
 - Original*: The vendor information was included in the original T5018 report when it was prepared for the first time.
 - Amended*: The vendor information was included in an amended T5018 report that was prepared after amendments had been made to the vendor payments. This type is assigned when the vendor's new **Total Service Amount** is still greater than the **Threshold Amount**.
 - Canceled*: The vendor information was included in a canceled T5018 report that was prepared after amendments had been to the vendor payments. This type is assigned when the vendor's new **Total Service Amount** is less than the **Threshold Amount**.



Figure: UI changes on the Create T5018 E-File Form

The **Create E-File** button on the form toolbar is used for creating two other types of T5018 reports—*Amended* and *Canceled*. When the user clicks this button, reports of these types are generated one at a time or both at the same time, depending on the **Total Service Amount** for vendors after they have amended or voided their payments.

If the **Total Service Amount** has been changed for a particular vendor, the system compares the new amount to the **Threshold Amount** and does the following:

- If the **Total Service Amount** is less than the **Threshold Amount**, the system will include the vendor in a cancellation report and an amended summary. This inclusion applies to only T5018 e-files that have already been submitted.

- If the new **Total Service Amount** is greater than the **Threshold Amount**, the system will include the vendor in an amended report and an amended summary.

The names of the e-files generated on the [Create T5018 E-File](#) form now have the following formats:

- *Original*: T5018-<Transmitter_Name>-<Tax_Year>-<Revision>-Original.xml
- *Amended*: T5018-<Transmitter_Name>-<Tax_Year>-<Revision>-Amended.xml
- *Canceled*: T5018-<Transmitter_Name>-<Tax_Year>-<Revision>-Canceled.xml

In these file names, <Tax_Year> is a date in the *MMDDYY* format, and <Revision> is the revision number of the report, such as *R1*. For example, an original file can have the following name: T5018-PRODUCTS-021224-R1-Original.xml.

Changes to the T5018 Preview Report

In the printed version of the report generated on the [T5018 Preview Report](#) (AP607600) form, the following UI changes have been made in Acumatica ERP 2024 R1:

- The **Filing Type** box has been added to the report header.
- The **Total Service Amount** column has been added.
- The **Payments** column has been renamed to **Amount to Report**.
- The **Report Type** column has been added. The possible options in this column are *Original*, *Amended*, and *Canceled*.

The values in the **Total Service Amount**, **Filing Type**, and **Amount to Report** elements are copied from the corresponding settings on the [Create T5018 E-File](#) (AP507600) form

The T5018 Report Details Form

The [T5018 Report Details](#) (AP407600) form has been added in Acumatica ERP 2024 R1, as shown in the following screenshot.

The screenshot shows the 'T5018 Report Details' form. At the top, there are fields for 'Transmitter' (PRODUCTS), 'Revision' (1), 'T5018 Tax Year' (2024), and 'Number'. Below these is a 'Customize Header Here to configure Web' section. The main part of the form is a table with the following data:

Type	Reference No.	Payment Date	Vendor	Description	Amount
Payment	850215	2/12/2024	Computer Environment Solution		935.40
Payment	850211	2/12/2024	Computer Environment Solution		1,318.75
Cash Purchase	850209	2/12/2024	Computer Environment Solution		2,184.00

Figure: The T5018 Report Details form

This form appears in the system if the *Canadian Localization* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

A user can open this form by clicking a link in the **Amount to Report** column on the **Details** tab of the [Create T5018 E-File](#) (AP507600) form.

This inquiry form shows a list of the documents whose amounts are included in the selected revision of the T5018 report. The Selection area of the form contains the following UI elements.

UI Element	Description
Transmitter	Required. The current company (that is, the company to which the user is signed in) that is filing the T5018 returns.
T5018 Tax Year	Required. The T5018 reporting year. By default, this box is empty. The list that is opened in the lookup table contains only the years for which a T5018 report has been generated.
Revision	Required. The revision of the T5018 report. By default, 1 is inserted.
Vendor	Optional. The vendor that filed the T5018 report. The lookup box that is opened shows a list of vendors for which a T5018 report has been generated. By default, this box is empty. If the user makes no selection, the table will show the documents for all T5018 vendors.

The table on the form shows a list of documents that meet the specified criteria. The user can click a link in the **Reference Nbr.** column to review each document on the data entry form where the document was created.

Cancellation of Submitted T5018 Reports

A user can cancel a T5018 report that was already submitted to the Canada Revenue Agency (CRA) by generating a T5018 cancellation report in XML format and electronically submitting it. A T5018 report can be canceled on the [Create T5018 E-File](#) (AP507600) form.

To amend or cancel a T5018 report, a user performs the following general steps:

1. Creates a new document (or multiple documents) for the needed vendor on the [Checks and Payments](#) (AP302000) form, and selects or clears the **T5018 Service** check box for the needed lines.
2. On the [Create T5018 E-File](#) form, selects the submitted report that needs to be amended. (This report revision must have the **E-File Submitted to CRA** check box selected.)
3. On the form toolbar, clicks **Amend Report**.

The system prepares a new report revision with the *Amendment* filing type if the new **Total Service Amount** is greater than the **Threshold Amount**. The system prepares a new revision with the *Canceled* filing type if the new **Total Service Amount** is less than the **Threshold Amount**.

4. Creates a T5018 e-file by clicking **Create E-File** on the form toolbar.

Upgrade Notes

After an upgrade to Acumatica ERP 2024 R1, the following changes will be made in the system:

- On the [Non-Stock Items](#) (IN202000) form, the **T5018 Service** check box will be selected for each non-stock items of the *Service* or *Non-Stock Item* type.
- On the [Bills and Adjustments](#) (AP301000) form, the documents that match all of the following criteria will have the check box in the **T5018 Service** column selected:
 - The vendor specified in the document is a T5018 vendor.
 - The document's date is in the current year or in the two years preceding the upgrade date.
 - The document contains non-stock items in its lines. (Lines without items specified will also be marked as T5018 service lines.)

The applied prepayments will be included in the T5018 amount based on the payment date (not the application date).

Additional Information

For details on the setup of T5018 reporting, see [Configuring T5018 Reporting](#).

For details on generation of an electronic T5018 file, see [Filing the T5018 Form Electronically](#).

For details on how to generate T5018 forms, see [To Generate the Original T5018 Form](#) and [To Generate an Amendment to the T5018 Form](#).

Manufacturing: Automatic Backward Reporting

In previous versions of Acumatica ERP Manufacturing Edition, it was not possible to report quantity completion on production operations out of sequence. If a later operation reported a greater completed quantity than an earlier operation, this quantity was reported back to the earlier operation. That is, backward reporting was always turned on.

A manufacturer whose processes could be performed in a nonsequential order had to rely on shop floor workers to document production transactions (for example, the complete or scrapped quantity) outside Acumatica ERP. These transactions then had to be entered into the system in sequence for each production order, which could lead to data inaccuracies.

Starting in Acumatica ERP 2024 R1, automatic backward reporting can be turned on or off.

Turning Off Automatic Backward Reporting

In Acumatica ERP 2024 R1, organizations can turn off automatic backward reporting for production orders so that they can accurately report on production operations out of sequence. To provide this capability, a new check box, **Automatic Backward Reporting**, has been added on the following forms:

- [Production Order Types](#) (AM201100), in the **Order Defaults** section of the **General** tab (see the following screenshot). This check box is displayed only if the production order type has the *Regular* function. By default, the check box is selected.
- [Production Order Maintenance](#) (AM201500), the **General** tab. The system copies the state of this check box from the [Production Order Types](#) form when a new production order of the type is created, but this state can be changed until the production order is released.

The screenshot shows the 'Production Order Types' form in Acumatica ERP. The 'General' tab is active, and the 'Order Defaults' section is expanded. A red box highlights the 'Automatic Backward Reporting' checkbox, which is currently checked. Other visible elements include the 'Production Order Type' dropdown set to 'REG - Regular Order', the 'Production Order Function' dropdown set to 'REGULAR', and various other settings for production order types.

Figure: The Automatic Backward Reporting check box on the Production Order Types form

If the check box is cleared for a production order on the [Production Order Maintenance](#) form, when a user enters the quantity of completed items on the [Labor](#) (AM301000) or [Move](#) (AM302000) form for an operation, the system records it for the selected operation and not for the preceding operation. Similarly, when a user reports scrap, the system records it only for the selected operation.

For the last operation of a production order, users can report only a quantity that is less than or equal to the minimum quantity reported on preceding control point operations (if control point operations exist before the last operation).

If automatic backward quantity reporting has been turned on for a production order, all operations of that order except control point operations have the new **Auto-Report Qty.** check box selected on the **Operations** tab of the [Production Order Details](#) (AM209000) form (see the following screenshot). This read-only check box indicates (if selected) that nonsequential reporting is not supported for the operation. By default, the **Auto-Report Qty.** column is hidden.



Figure: The Auto-Report Qty. check box

Other UI Enhancements

The following UI elements have been renamed for greater clarity:

- The **Backflush** check box has been renamed to **Backflush Materials** on the **Materials** tab of the following forms:
 - [Production Order Details](#) (AM209000)
 - [Estimate Operation](#) (AM304000)
 - [Bill of Material](#) (AM208000)
 - [Engineering Change Request](#) (AM210000)
 - [Engineering Change Order](#) (AM215000)
- The **Backflush** check box has been renamed to **Backflush Labor** on the **Operations** tab of the [Production Order Details](#) form

Upgrade Note

After the upgrade to Acumatica ERP 2024 R1, the **Automatic Backward Reporting** check box is selected on the [Production Order Types](#) (AM201100) and [Production Order Maintenance](#) (AM201500) forms to preserve the previous system behavior of reporting production order operations in sequential order.

Manufacturing: Kit Components Included in Inventory Planning

In previous versions of Acumatica ERP, companies that used stock or non-stock kits were not able to properly plan the stock components needed to assemble the kit by using the inventory planning functionality. That is, the inventory planning regeneration process did not generate demand requirements for the stock components of a kit when a supply recommendation was made for the kit. When a stock kit was included in a sales order and that kit did not have enough quantity on hand, the user was not alerted to the additional demand for the stock components needed to assemble the kit.

To work around this limitation, users would create a kit assembly document immediately when a sales order for a kit was created. However, in previous versions of Acumatica ERP, the kit assembly document did not have an allocation date. This resulted in incomplete data being passed to the inventory planning regeneration process, which could not correctly assess when supply and demand were expected.

Additionally, users were unable to use the sales forecast functionality to plan for sales demand for non-stock kits because non-stock kits could not be added to the sales forecast forms.

In Acumatica ERP 2024 R1, the inventory planning regeneration process and the sales forecast functionality have been enhanced to address these issues.



This functionality is supported if the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form:

- *Kit Assembly*
- *Material Requirements Planning (MRP) or Distribution Requirements Planning (DRP)*

Inventory Planning for Stock Kits

Starting in Acumatica ERP 2024 R1, the inventory planning functionality now supports the generation of demand requirements for the components of a stock kit that is included in a sales order. The components needed to assemble the kit are now considered planned demand.

For the components of a stock kit to be included in inventory planning, the following criteria must be met:

- On the [Stock Items](#) (IN202500) form (**Inventory Planning** tab), the new *Kit Assembly* option (which is shown in the following screenshot) is selected in the **Source** box.
- On the [Stock Items](#) form (**General** tab), *MRP* or *DRP* is selected in the **Planning Method** box.
- On the [Kit Specifications](#) (IN209500) form, the kit specification has at least one active revision. If multiple active revisions exist, the most recent one is used for inventory planning.

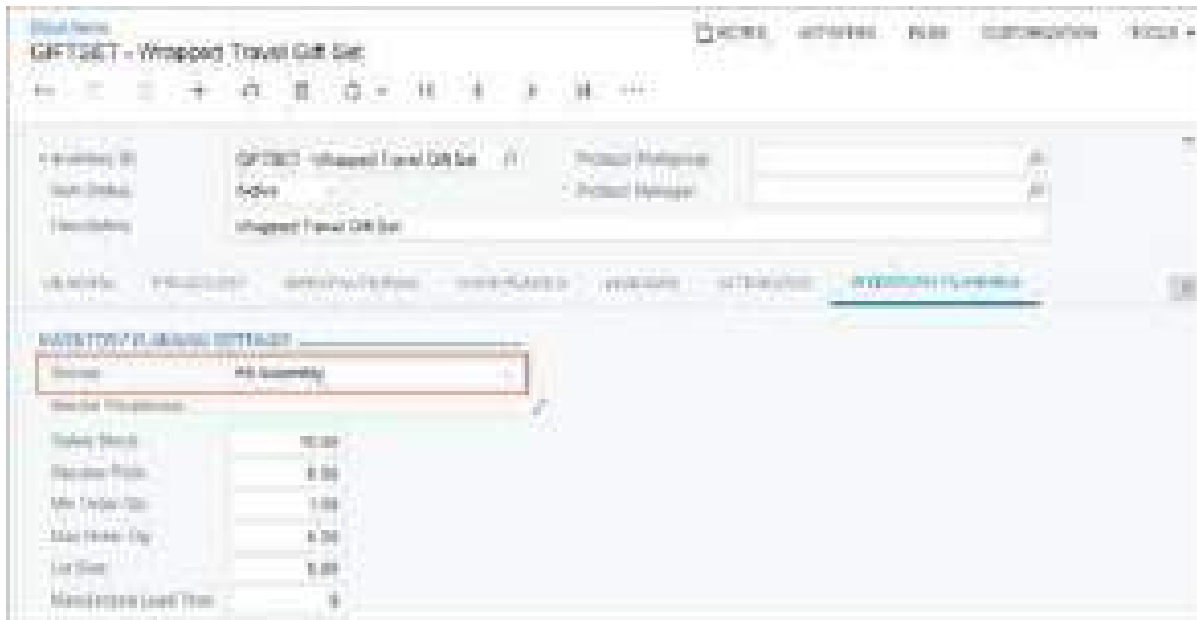


Figure: The new replenishment source

After the inventory planning regeneration process has been run, on the [Inventory Planning Display](#) (AM400000) form, the results are displayed for a stock kit with the following settings:

- In the **Type** column: *Planned Kit Assembly Demand*. This new type indicates that the demand for the item originates from a system-generated requirement to fulfill a planned kit. (See Item 1 in the following screenshot.)
- In the **Related Document** column, the identifier of a stock kit planning suggestion. This identifier is generated based on the new numbering sequence, *PLSK* (Item 2).
- In the new **Kit Revision** column, the kit specification revision that was used to generate the requirements (Item 3).

Figure: Inventory planning results for stock kits

Sales Forecasts and Inventory Planning for Non-Stock Kits

Starting in Acumatica ERP 2024 R1, users can generate a forecast for a non-stock kit on the [Generate Forecasts](#) (AM502000) form and manually add a forecast record for a non-stock kit on the [Forecast](#) (AM202000) form.

The inventory planning process now supports generating requirements for stock components of a non-stock kit that is included in a sales order or a forecast record. The stock components needed to assemble the kit are now considered planned demand.

For the stock components of a non-stock kit to be included in inventory planning, it must meet the following criteria:

- On the [Non-Stock Items](#) (IN202500) form (**General** tab), the **Is a Kit** check box is selected.

- On the *Kit Specifications* (IN209500) form, the kit specification has at least one active revision. If multiple active revisions exist, the most recent one is used for inventory planning.
- The non-stock kit is included in a sales order on the *Sales Orders* (SO301000) form or in a forecast record on the *Forecast* form.

After the inventory planning regeneration process has been run for a non-stock kit, the *Inventory Planning Display* (AM400000) form shows the planned suggestions for stock components of the kit. One of the following types is displayed in the **Type** column (see the following screenshot):

- *Sales Order Non-Stock Kit*: The demand for the item originates from a sales order line containing a non-stock kit.
- *Forecast Non-Stock Kit*: The demand for the item originates from a forecast line containing a non-stock kit.

Inventory ID	Description	Source	Warehouse	Plan Qty	Planned From	Planned To	Type	Planned From	Planned To	Planned Qty
00000	Gift Set	Kit Assembly	WHOLESALE	15.00	04/2024	04/2024	Sales Order Non-Stock Kit	04/2024	04/2024	15.00
00001	Straw	Kit Assembly	WHOLESALE	10.00	04/2024	04/2024	Sales Order Non-Stock Kit	04/2024	04/2024	10.00
00002	Gift Bag	Kit Assembly	WHOLESALE	15.00	04/2024	04/2024	Sales Order Non-Stock Kit	04/2024	04/2024	15.00
00003	String	Kit Assembly	WHOLESALE	15.00	04/2024	04/2024	Sales Order Non-Stock Kit	04/2024	04/2024	15.00

Figure: Inventory planning results for a non-stock kit included in a sales order line

Assembling Kits for Planned Demand

A user can now initiate kit assembly on the *Inventory Planning Display* (AM400000) form. To do this, they select a row or multiple rows with the *Kit Assembly* source and click **Assemble Kit** on the form toolbar. In the **Create Kit Assemblies** dialog box (which is shown in the following screenshot), the user can group the selected kits and modify their quantities. When the user clicks **Create**, a kit assembly record is generated on the *Kit Assembly* (IN307000) form for each processed item.

Inventory ID	Source	Warehouse	Quantity	UOM	Plan Date	Group Nbr.
GIFTSET	Kit Assembly	WHOLESALE	15.00	EA	3/4/2024	1
GIFTSET	Kit Assembly	WHOLESALE	10.00	EA	3/4/2024	1
GIFTSET	Kit Assembly	WHOLESALE	15.00	EA	3/4/2024	1

Figure: The Create Kit Assemblies dialog box

On the *Kit Assembly* (IN307000) form, kit assembly records are assigned with the *Assembly* type (previously called *Production*) and the *On Hold* status. The system initially populates the kit assembly settings as follows:

- The **Inventory ID**, **Description**, **Source**, **Warehouse**, and **UOM** settings are copied from the kit's settings on the *Stock Items* (IN202500) or *Non-Stock Items* (IN202000) form.
- The new **Requested On** box, which is shown in the following screenshot, is filled in with the kit assembly date. A user can modify this date to meet their allocation needs.
- The **Location** setting of each stock component is copied from the **Default Receipt To** box on the *Item Warehouse Details* (IN204500) form.

Item	Description	Source	Warehouse	UOM	Requested On	Location	Quantity	UOM
000620	Whipped Topped Gift Set	000620	STORAGE	EA	14/03/14	STORAGE	1000	EA
000621	Chocolate	000621	STORAGE	EA	14/03/14	STORAGE	1000	EA
000622	Truffles	000622	STORAGE	EA	14/03/14	STORAGE	1000	EA

Figure: The Requested On date for an assembled kit

Including On-Hold Kit Assemblies in Inventory Planning

A user can indicate whether to include on-hold kit assemblies in inventory planning. To include kit assemblies with the *On Hold* status in the regenerate inventory planning process, they select the new **Include On-Hold Kit Assemblies** check box, which has been added to the **General** section of the *Inventory Planning Preferences* (AM100000) form. (See the following screenshot.) When this check box is cleared, kit assemblies with the *On Hold* status are excluded from the process and are listed as exceptions on the *Inventory Planning Exceptions* (AM403000) form.

Manufacturing: MRP Enhancements

In Acumatica ERP 2024 R1, other improvements to the inventory planning processes have been introduced, as described below.

Excluding Inactive Warehouses from Inventory Planning

In previous versions of Acumatica ERP, planning suggestions for material requirements planning (MRP) were generated for inactive warehouses if the following criteria were met:

- The **Active** check box was cleared on the [Warehouses](#) (IN204000) form.
- All of the check boxes in the **Inventory Planning Settings** section on the **Inventory Planning** tab were selected.

This resulted in incorrect inventory planning results being displayed on the [Inventory Planning Display](#) (AM400000) form.

In Version 2024 R1, when the **Active** check box is cleared on the [Warehouses](#) form, all of the check boxes in the **Inventory Planning Settings** section on the **Inventory Planning** tab are cleared and read-only.

Including or Excluding Orders in Inventory Planning by Order Type

Acumatica ERP 2024 R1 introduces the ability for users to exclude or include supply plans by order type on the [Order Types](#) (SO201000) form.

The new settings are visible for an order type if the following conditions are met:

- The *Material Requirements Planning* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.
- In the **Operations** column on the **Template** tab of the [Order Types](#) form, a row contains *Receipt*, indicating that this operation is generated for an order of the type.

The **Include Returns in Inventory Planning Supply** check box is displayed in the new **Inventory Planning Settings** section on the **General** tab of the [Order Types](#) form (see the following screenshot).

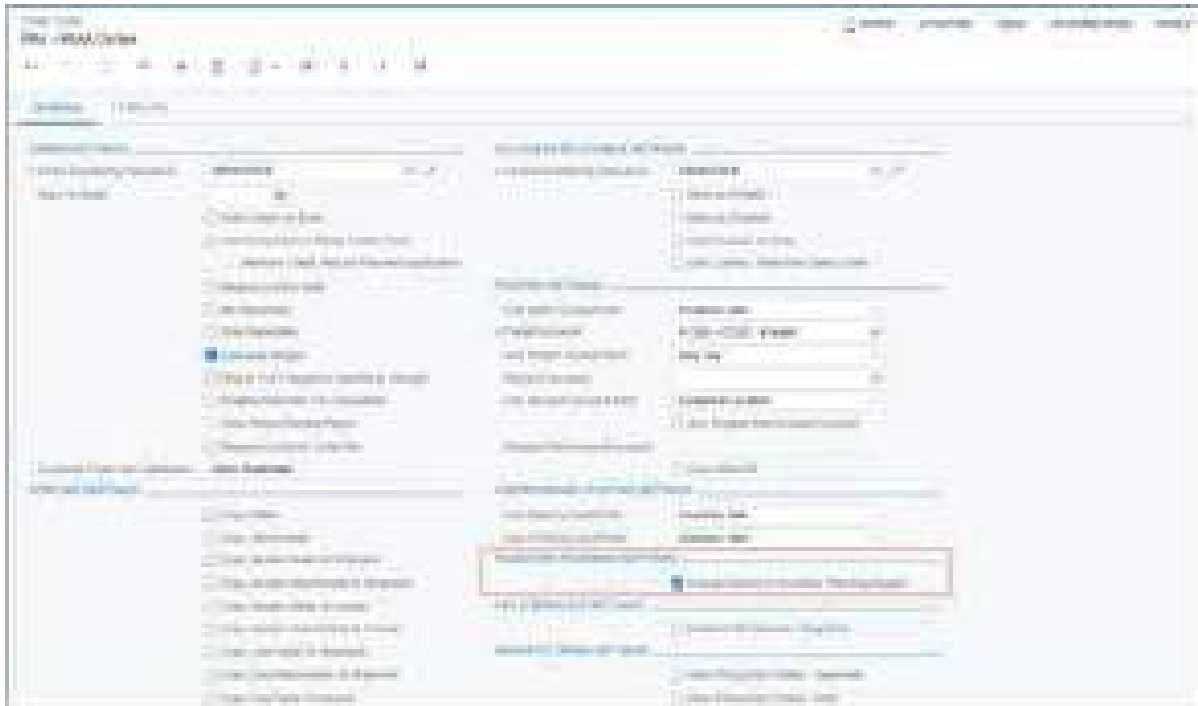


Figure: The new section on the Order Types form

When the **Include Returns in Inventory Planning Supply** check box is selected, supply plans by order type are displayed in the list of planned orders on the *Inventory Planning Display* (AM400000) form. After an upgrade to 2024 R1, the **Include Returns in Inventory Planning Supply** check box on the *Order Types* form is selected for all order types containing a *Receipt* operation. We recommend that an administrator review the settings of all order types with a *Receipt* operation after the upgrade.

Specifying the Planning Horizon for Inventory Planning

In Acumatica ERP 2024 R1, users now can specify the planning horizon value on the *Inventory Planning Preferences* (AM100000) form. With the planning horizon specified, during the regeneration of inventory planning on the *Regenerate Inventory Planning* (AM505000) form, the system will process only item plans with a supply or demand date that is earlier than or the same as the regeneration date plus the number of days specified in the **Planning Horizon** box (see Item 1 in the following screenshot).

Companies with a large number of item plans extending into the distant future, such as those with sales orders placed far in advance of the needed date, may choose to exclude this demand from planning by specifying the planning horizon. Reducing the number of item plans processed will shorten the run time of the process of regenerating inventory planning on the *Regenerate Inventory Planning* form. A **Planning Horizon** value of 0 will not restrict any incoming item plans, and all records will be processed during the process of regenerating inventory planning on the *Regenerate Inventory Planning* form.

The **Time Fence** box has been renamed to **MPS Time Fence** in the **MPS** section on the *Inventory Planning Preferences* form (Item 2). The label name was changed to indicate that the specified value applies only to master production schedule (MPS) records and is not generic across all planning records to be processed.



Figure: Changes to the Inventory Planning Preferences form

After an upgrade to 2024 R1, 0 is specified in the **Planning Horizon** box on the *Inventory Planning Preferences* form. We recommend that users carefully consider what planning horizon best fits their planning needs before changing the predefined setting in their production environment.

Payroll: Enhanced Usability of PTO Banks

Acumatica ERP 2024 R1 introduces significant improvements to the usability of paid time off (PTO) banks and other settings associated with paid time off. Along with the previously available functionality, a payroll administrator can now do any of the following:

- Configure a PTO bank to reset either on a manually specified date or on a hire anniversary date
- Define banding rules for a PTO bank, enabling the increase of bank balances after certain years of employee service
- Define the behavior of a PTO bank during an employee's probation period
- Plan future changes for a PTO bank in advance
- Adjust the PTO balances of employees and view PTO balances for any employee over any desired period

The changes that support these enhancements are described in the following sections.

Changes to the PTO Banks Form

The *PTO Banks* (PR204000) form has been significantly reworked.

In the Summary area of this form, the maximum length of the PTO bank ID has been increased and now may consist of up to 15 characters. All of the following elements have been removed: the **Default Accrual %**, **Hours per Year**, **Balance Limit**, and **Start Date** boxes, and the **Allow Negative Balance** and **Disburse Only from Carryover** check boxes. The **Accrual Method** box has been moved to the **General** tab, and the following options have been added to its drop-down list:

- *Front Loading*: Front-loading hours are added to the PTO balance of an employee on the transfer date, which is defined in the UI elements below this box.
- *Front Loading and Percentage* and *Front Loading and Hours per Year*: Paid time off is accrued with a combination of the *Front Loading and Percentage* or *Front Loading and Hours Per Year* accrual methods, respectively.

The new options are shown in the following screenshot.

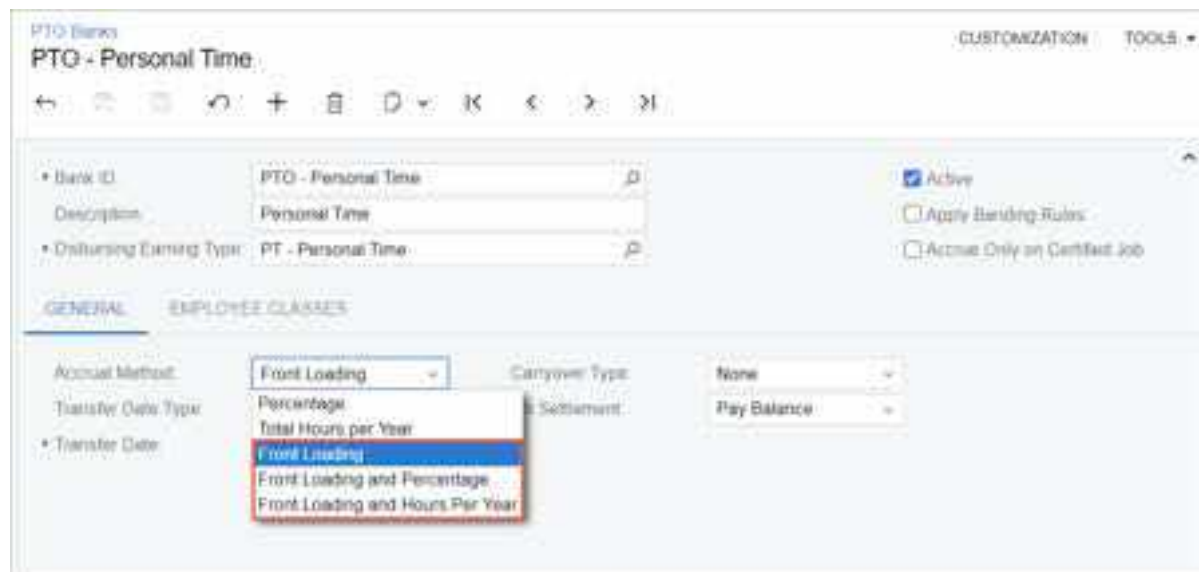


Figure: New options in the Accrual Method drop-down list

The **Transfer Date Type** box has been added to the **General** tab, as shown in the screenshot below. In this box, a payroll administrator can select the *Anniversary Date* option to use the individual employee's hire date as the

transfer date; alternatively, they can select *Specific Date* and use the **Transfer Date** group of elements, which appears, to specify the month and day of a custom-defined transfer date.



On the transfer date, the PTO bank resets. Depending on the configuration, the system may use this date to carry over accruals from one year to the next and to add front-loading hours to the PTO balance. In most common scenarios, custom-defined transfer dates align with the start of the calendar or fiscal year.

The screenshot shows the 'PERSONAL - Personal time off' configuration form. The 'GENERAL' tab is active. The 'Transfer Date Type' dropdown menu is open, showing three options: 'Anniversary Date', 'Anniversary Date', and 'Specific Date'. The first 'Anniversary Date' option is selected. Other visible fields include 'Bank ID' (PERSONAL), 'Description' (Personal time off), 'Disbursing Earning Type' (HS - Public Holidays), 'Active' (checked), 'Apply Banking Rules' (unchecked), and 'Accrue Only on Certified Job' (unchecked). The 'EMPLOYEE CLASSES' tab is also visible below the general settings.

Figure: The Transfer Date Type box on the General tab

On the **General** tab, the *Paid After a Period of Time* option in the **Carryover Type** box and the associated **Pay Carryover After (Months)** box have been removed.

A new tab, **Employee Classes**, has been added to the form, as shown in the screenshot below. A payroll administrator can use this tab to specify common PTO bank settings for employee classes. The following columns are available on this tab:

- **Active:** A check box that indicates (if selected) that paid time off is accrued for the selected combination of employee class and effective date. Only the rows with an effective date that precedes or matches the current business date may be marked as active.
- **Employee Class:** The employee class to which the PTO bank settings specified in the same row are applicable. If no class is specified, the settings are applicable to all employee classes.
- **Effective Date:** The date on which the specified PTO bank settings become effective.
- **Accrual %:** The accrual rate to be used to accumulate hours.
- **Hours per Year:** The number of hours that an employee may accrue throughout the year.
- **Balance Limit:** The maximum number of hours that can be accrued for the bank.
- **Allow Negative Balance:** A check box that indicates (if selected) that the system does not put restrictions on the disbursing amount.
- **Disburse Only from Carryover:** A check box that indicates (if selected) that only the carryover hours from the previous year can be used for paid time off.
- **Carryover Hours:** The number of hours the system carries over to the following year on the transfer date.
- **Front Loading Hours:** The number of hours the system adds to the bank each year on the transfer date.
- **During Probation Period:** A new setting that determines the ability of the PTO bank to accrue and disburse paid time off during an employee's probation period. The following options are available:
 - *Accrued and Available:* Time off is accrued and can be used during the probation period.
 - *Accrued but Not Available:* Time off is accrued but cannot be used during the probation period.

- *Not Accrued*: No time off can be accrued or used during the probation period.



Figure: The Employee Classes tab

A new check box, **Apply Banding Rules**, has been added to the Summary area. If this check box is selected, the **Banding Rules** tab appears on the form, as shown in the following screenshot. By using this tab, a payroll administrator can define tiered PTO rules so that employees may accrue or be eligible for different amounts of paid time off based on years of service.

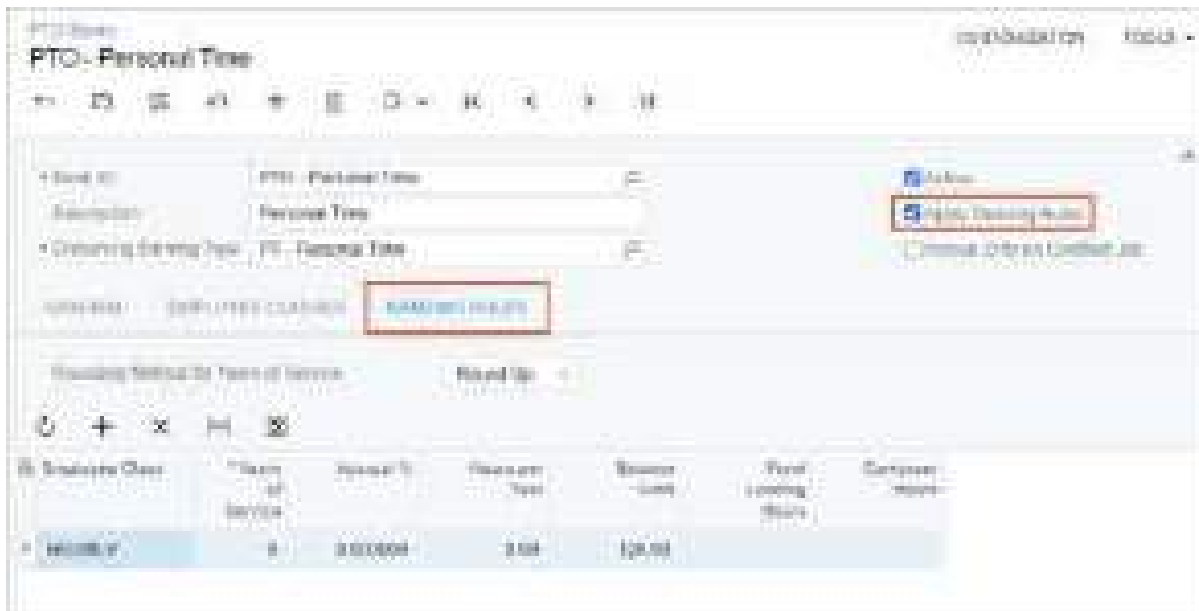


Figure: New banding rule settings

A payroll administrator can add any number of banding rules to the table, associating them with specific employee classes in the **Employee Class** column or with all employees if no class is selected. In each table row, the payroll administrator specifies the years of service, determining when the PTO settings in that row take precedence over the settings for the same employee class on the **Employee Classes** tab. If no settings exist for that class on the **Employee Classes** tab, the banding rule is not applied. Similarly, if no employee classes are specified on the **Employee Classes** tab (meaning that the PTO bank can be used for all employee classes), no banding rules can be applied to the PTO bank. In the **Rounding Method for Years of Service** box, the payroll administrator can select *Round Up* or *Round Down* to specify how employees' employment time is rounded during the transfer date or paycheck calculation, affecting the application of banding rules.

Once defined for a PTO bank, banding rules extend to employees, with further adjustments allowed at the employee level on the [Employee Payroll Settings](#) (PR203000) form. Banding rules apply only to the calculation of new paychecks; calculated paychecks are not affected by new banding rules.

Changes to the Employee Payroll Settings Form

On the **Employment History** tab of the [Employee Payroll Settings](#) (PR203000) form, the **Probation Period End Date** column has been added to the table, as shown in the following screenshot. The system calculates this date by adding the duration of the probation period specified for the employee class to the date shown in the **Start Date** column. A payroll administrator can modify or clear the date as necessary.

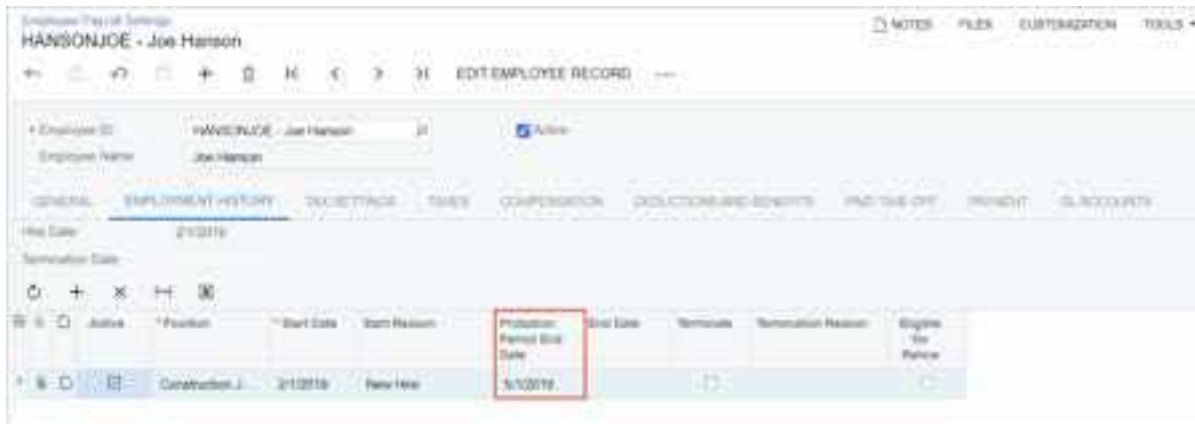


Figure: New column on the Employment History tab

On the **Paid Time Off** tab, which is shown in the screenshot below, the **Use PTO Banks from Employee Class** check box and the **View Payable Hours** button have been removed, and the following elements have been added:

- **Probation Period End Date, Hire Date, and Termination Date:** The dates copied from the **Employment History** tab, which are shown here for informational purposes.
- **Use Custom Settings:** A check box that indicates, if selected, that a payroll administrator can modify settings in the table below it. If the check box is cleared, the system uses the values specified for the employee's class on the **Employee Classes** tab of the [PTO Banks](#) form, and these settings are non-editable at the employee level.

The default set of columns in the table on this tab has been updated as follows:

- The **Use Class Default Values, Total Accrued Hours, Total Used Hours, and Total Available Hours** columns have been removed.
- The **Front Loading Amount** and **Carryover Amount** columns have been renamed to **Front Loading Hours** and **Carryover Hours**, respectively.
- The **Banding Rule, Allow Negative Balance, Transfer Date, During Probation Period, and On Settlement** columns have been added.



Figure: The Paid Time Off tab

Two new menu commands, **Adjust PTO Balance** and **Employee PTO Balances**, have been added to the More menu, as shown in the following screenshot. By using these commands, a user can navigate to the [PTO Adjustments](#) (PR306000) and [Employee PTO Balances](#) (PR406000) forms, which are new forms described in the following sections.

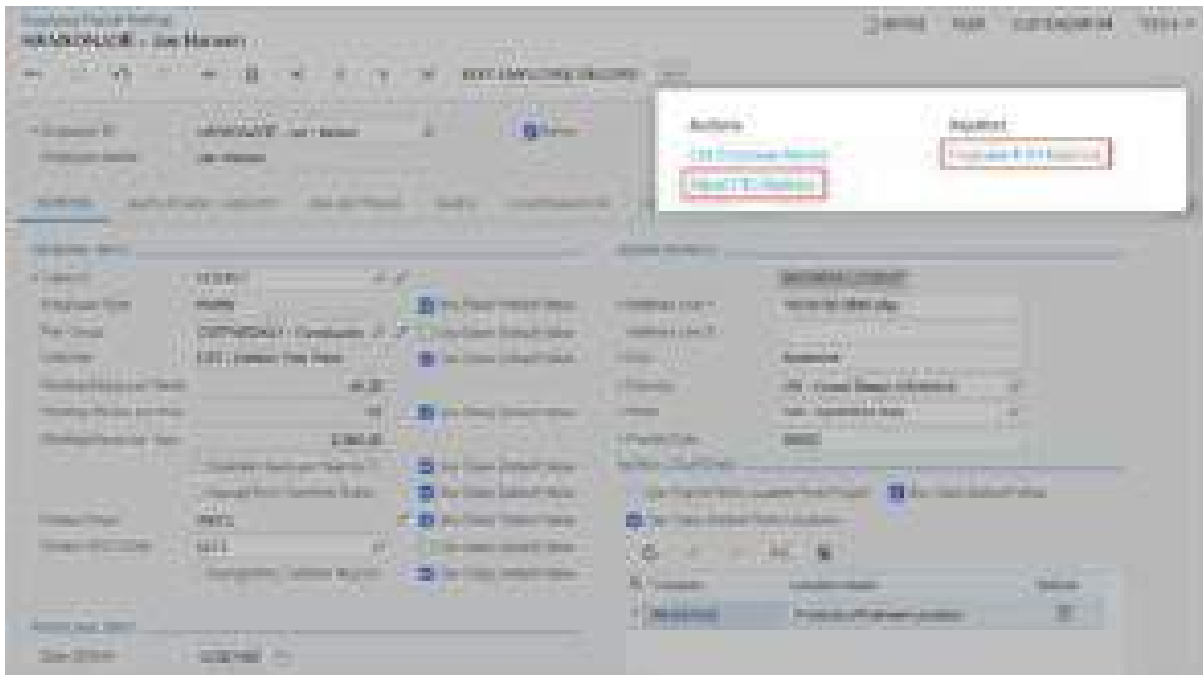


Figure: New menu commands

Employee PTO Balances Form

A new inquiry form, [Employee PTO Balances](#) (PR406000), has been added to the system. By using this form, a user can view PTO balances over a selected period for all employees or for only a selected employee.

The dates in the **Start Date** and **End Date** boxes are selected from the transaction dates specified for paychecks on the [Paychecks and Adjustments](#) (PR302000) form and PTO adjustment dates specified on the [PTO Adjustments](#) (PR306000) form, which is a new form described in the following section. The values displayed in the **Total Hours Accumulated**, **Total Hours Used**, and **Total Hours Available** columns are clickable links; clicking on them opens the [Paid Time Off Details by Employee](#) (PR641050) report for the selected date range, employee, and PTO bank.

The new inquiry form is shown in the following screenshot.

Employee	Description	PTO Bank	PTO Bank Description	Balance	Year To Date	Year To Date	Year To Date
171000001	Vacation	PTO	Vacation	171001	11.00	0.00	11.00
171000001	Sick Leave	SLL	Sick Leave	171001	11.00	0.00	11.00
171000001	Family Medical Leave	FML	Family Medical Leave	171001	11.00	0.00	11.00
171000001	Personal Leave	PL	Personal Leave	171001	11.00	0.00	11.00
171000001	Personal Leave	PL	Personal Leave	171001	11.00	0.00	11.00
171000001	Personal Leave	PL	Personal Leave	171001	11.00	0.00	11.00
171000001	Personal Leave	PL	Personal Leave	171001	11.00	0.00	11.00
171000001	Personal Leave	PL	Personal Leave	171001	11.00	0.00	11.00
171000001	Personal Leave	PL	Personal Leave	171001	11.00	0.00	11.00

Figure: The Employee PTO Balances generic inquiry form

In the out-of-the-box system, a user can find the link to this form in the **Payroll** workspace under the **Inquiries** category.

PTO Adjustments

Starting in Acumatica ERP 2024 R1, users can use a dedicated document, a PTO adjustment, to modify PTO balances for specific employees. Adjustment paychecks are no longer applicable for this purpose.

On the **General** tab of the [Payroll Preferences](#) (PR101000) form, the **PTO Adjustment Numbering Sequence** box has been added to the **Numbering Settings** section, as shown in the following screenshot. In this box, an administrator must specify the numbering sequence to be used for PTO adjustments. This is a required setting.

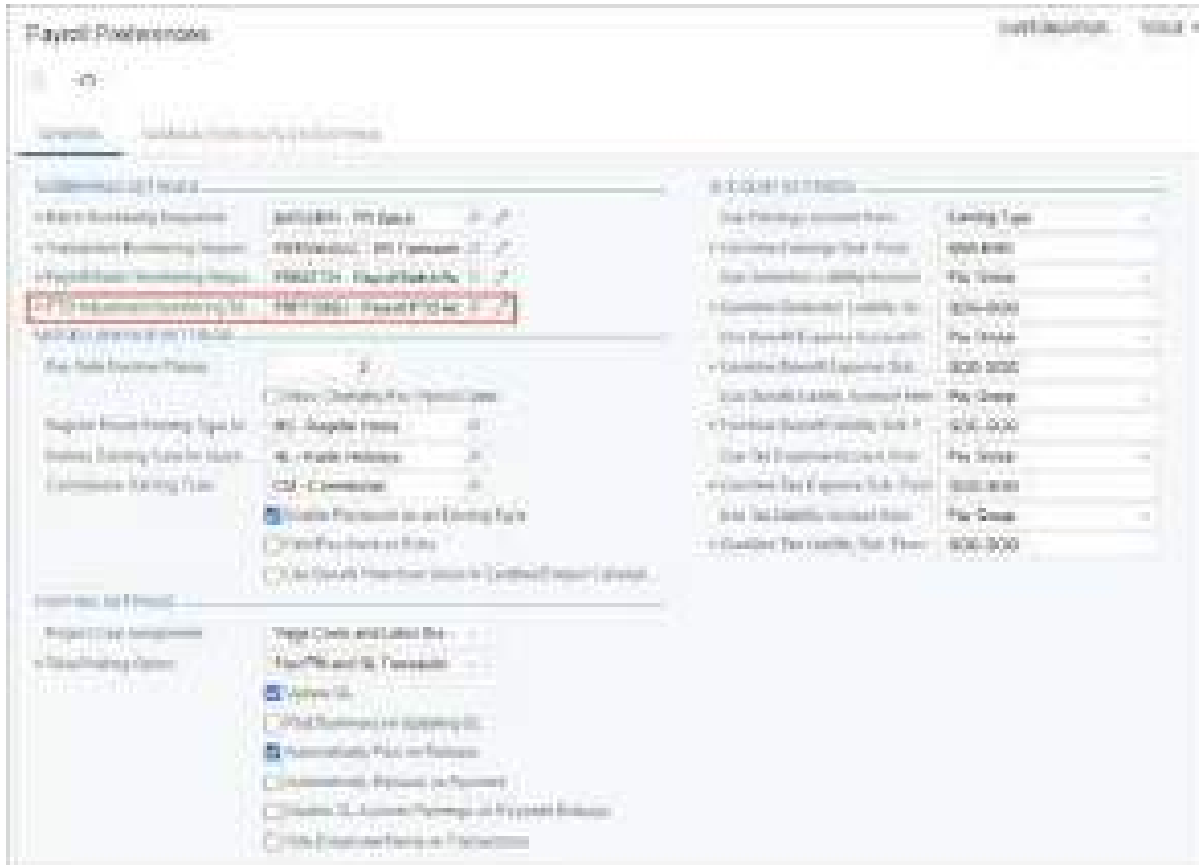


Figure: The PTO Adjustment Numbering Sequence box

Users can create and process PTO adjustments by using the new *PTO Adjustments* (PR306000) form, which is shown in the following screenshot.



Figure: The PTO Adjustments form

When creating a PTO adjustment, the user must fill in the table on the form, specifying in each row an employee, a PTO bank for balance adjustment, and the adjustment hours (positive or negative). In the **Adjustment Reason** column, the user must select a reason for the PTO adjustment, which can be one of the following: *Initial Balance Correction, Bonus or Incentive Allocation, Accrual Modification, Time Card Usage Correction, Accrual Earned Correction, Data Entry Correction, Carryover Correction, Maximum Accrual Correction, or Other*. If the user selects the *Other* adjustment reason, the **Reason Details** column becomes editable for custom input. In the **Initial Balance**,

New Balance, and **Balance Limit** read-only columns, the system displays the PTO balance before the adjustment, the adjusted balance, and the established balance limit for the PTO bank, respectively.

A user can import PTO adjustments from an Excel file by using the **Load Records from File** button on the table toolbar.

The system does not allow the entry of multiple rows for the same combination of employee and PTO bank.

When a user saves a new PTO adjustment, the system assigns it the *New* status and inserts the current system date in the **Date** box. This date is non-editable to prevent adjustments to PTO balances in the past or future.

PTO adjustments with the *New* status can be deleted from the system.

For a PTO adjustment with the *New* status, the **Release** command is available on the More menu of the form. By clicking this command, the user can release the PTO adjustment, causing the year-to-date available hours of the selected PTO bank to be corrected by the number of adjustment hours for the selected employee. The status of the PTO adjustments changes to *Released* as a result.

The user can void a released PTO adjustment by clicking the **Void** command on the More menu of the form. This action generates a PTO adjustment with the *Voiding Adjustment* type, mirroring the original PTO adjustment but with reversed values in the **Adjustment Hours** column. Releasing this voiding adjustment restores the initial balances of the selected PTO banks for the selected employees. The original PTO adjustment is assigned the *Voided* status as a result.

On the *PTO Adjustments (PR3060PL)* list of records, which can be used to view PTO adjustments created on the [PTO Adjustments \(PR306000\)](#) form, users can view the history of all PTO adjustments on the **All Records** filter tab. The **Not Released** filter tab lists all PTO adjustments that have not yet been released.

In the out-of-the-box system, a user can find the link to the *PTO Adjustments* list of records in the **Payroll** workspace under the **Transactions** category.

Other Changes

The following changes have also been implemented across the system to support the improved paid time off functionality:

- On the [Employee Payroll Class \(PR202000\)](#) form, the **Payroll** tab has been renamed to **Default Settings**, and the **Paid Time Off** tab has been removed.
- On the **General** tab of the [Employee Classes \(EP202000\)](#) form, the **Probation Period (Months)** box has been added. The value specified in this box is used in the calculation of the probation period end date for newly hired employees of the employee class.
- On the **History** tab of the [Employees \(EP203000\)](#) form, the **Probation Period End Date** column has been added. This column is synchronized with the similar column on the **Employment History** tab of the [Employee Payroll Settings](#) form.
- On the *PTO Banks (PR2040PL)* list of records, the **Default Accrual %**, **Balance Limit**, and **Front Loading Amount** columns have been removed, and the **Accrual Method**, **Transfer Date Type**, **Transfer Date**, **Banding Rules**, and **Created On** columns have been added.
- On the *PTO Banks (PR204000)* form, a user cannot delete a PTO bank if it is used in a paycheck or an employee's payroll settings.
- On the [Paychecks and Adjustments \(PR302000\)](#) form, all settings on the **Paid Time Off** tab are non-editable for a paycheck of the *Adjustment* type.

Upgrade Notes

To avoid potential issues, we recommend that the following steps be taken before an upgrade to Acumatica ERP 2024 R1:

- All existing paychecks and adjustments should be released.

- Adjustments with future dates affecting paid time off should be voided.

During an upgrade to Acumatica ERP 2024 R1, paid time off settings will be transferred as follows.

On the *PTO Banks* form, the settings that were previously specified in the Summary area and on the **General** tab will be transferred to a row on the **Employee Classes** tab with *<NONE>* specified in the **Employee Class** column and 1/1/1900 in the **Effective Date** column, as illustrated in the following screenshot.

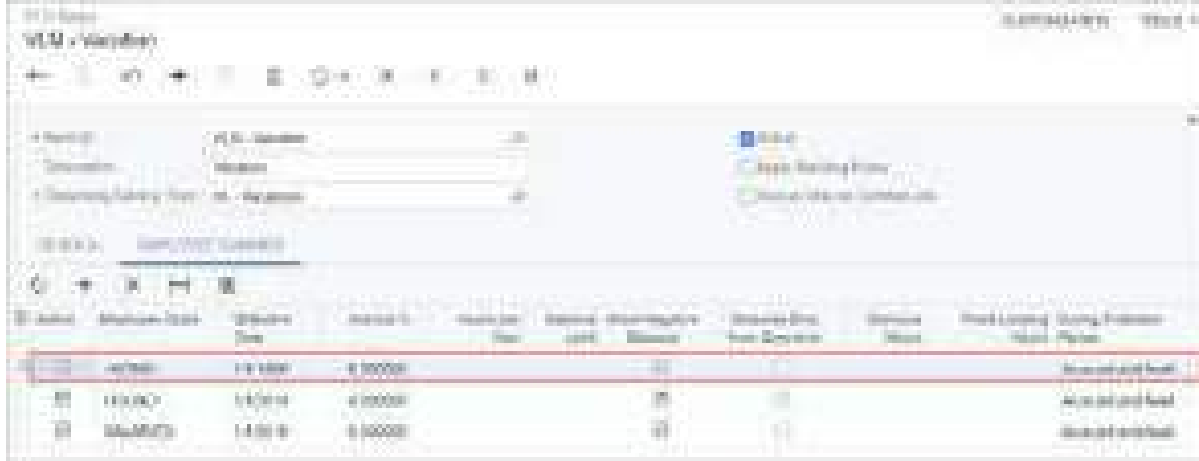


Figure: Settings transferred from the previous version

On the **General** tab of the form, *Specific Date* will be automatically selected in the **Transfer Date Type** box. In the **Carryover Type** box, the *Paid After a Period of Time* option selected in the previous version will be replaced with the *Total* option. Also, the new option to be inserted in the **Accrual Method** box will be determined as shown in the following table.

New Accrual Method	Settings in Previous Version
<i>Percentage</i>	Accrual Method: <i>Percentage</i>
<i>Total Hours per Year</i>	Accrual Method: <i>Total Hours per Year</i>
<i>Front Loading</i>	All of the following settings: <ul style="list-style-type: none"> • Accrual Method: <i>Percentage</i> • Default Accrual %: 0 • Front Loading Amount: Greater than 0
	All of the following settings: <ul style="list-style-type: none"> • Accrual Method: <i>Total Hours per Year</i> • Hours per Year: 0 • Front Loading Amount: Greater than 0
<i>Front Loading and Percentage</i>	All of the following settings: <ul style="list-style-type: none"> • Accrual Method: <i>Percentage</i> • Default Accrual %: Greater than 0 • Front Loading Amount: Greater than 0

New Accrual Method	Settings in Previous Version
<i>Front Loading and Hours per Year</i>	All of the following settings: <ul style="list-style-type: none"> • Accrual Method: <i>Total Hours per Year</i> • Hours per Year: Greater than 0 • Front Loading Amount: Greater than 0

On the **Paid Time Off** tab of the [Employee Payroll Settings](#) form, the noted settings are determined based on the following rules:

- The state of the **Use Custom Settings** check box is the opposite of the state of the **Use PTO Banks from Employee Class** check box in the previous version.
- If the **Use Custom Settings** check box is selected, *Accrued and Available* is automatically specified in the **During Probation Period** column in all rows.
- The state of the **Allow Negative Balance** check boxes in the table is the same as the state of the **Allow Negative Balance** check box for the relevant PTO bank in the previous version.

Platform: Availability of the Modern UI

Acumatica ERP 2024 R1 introduces the Modern UI, which is now available for testing purposes for users.



A user should not enable or use the Modern UI in a production environment at this time.

Modern UI Features

The Modern UI offers the following new features for users:

- An overhauled user interface with updated styles, typography, and colors
- A new **Settings** menu that unifies the **Tools** and **Customization** menus, which were found on the form title bar of every Acumatica ERP form (see Item 1 in the following screenshot)
- The ability to collapse and expand the containers that display the boxes that are displayed on a form (Items 2 and 7)
- The ability to configure the boxes that are displayed on a form and their properties, as well as the order in which they are displayed (Items 3 and 8)
- The ability to hide and reorder any tab on the tab bar of a form (Item 4)
- A unified form and table toolbar (Item 5)
- A toggle button to expand and collapse the enhanced filtering area on the table (Item 6)
- In elements with magnifier buttons, a link (which replaces the Edit button) that the user can click to open the corresponding form and view the selected record (Item 9)
- An adaptive screen layout that makes it possible for a form to be adapted to a device with a smaller screen, such as a tablet or a phone

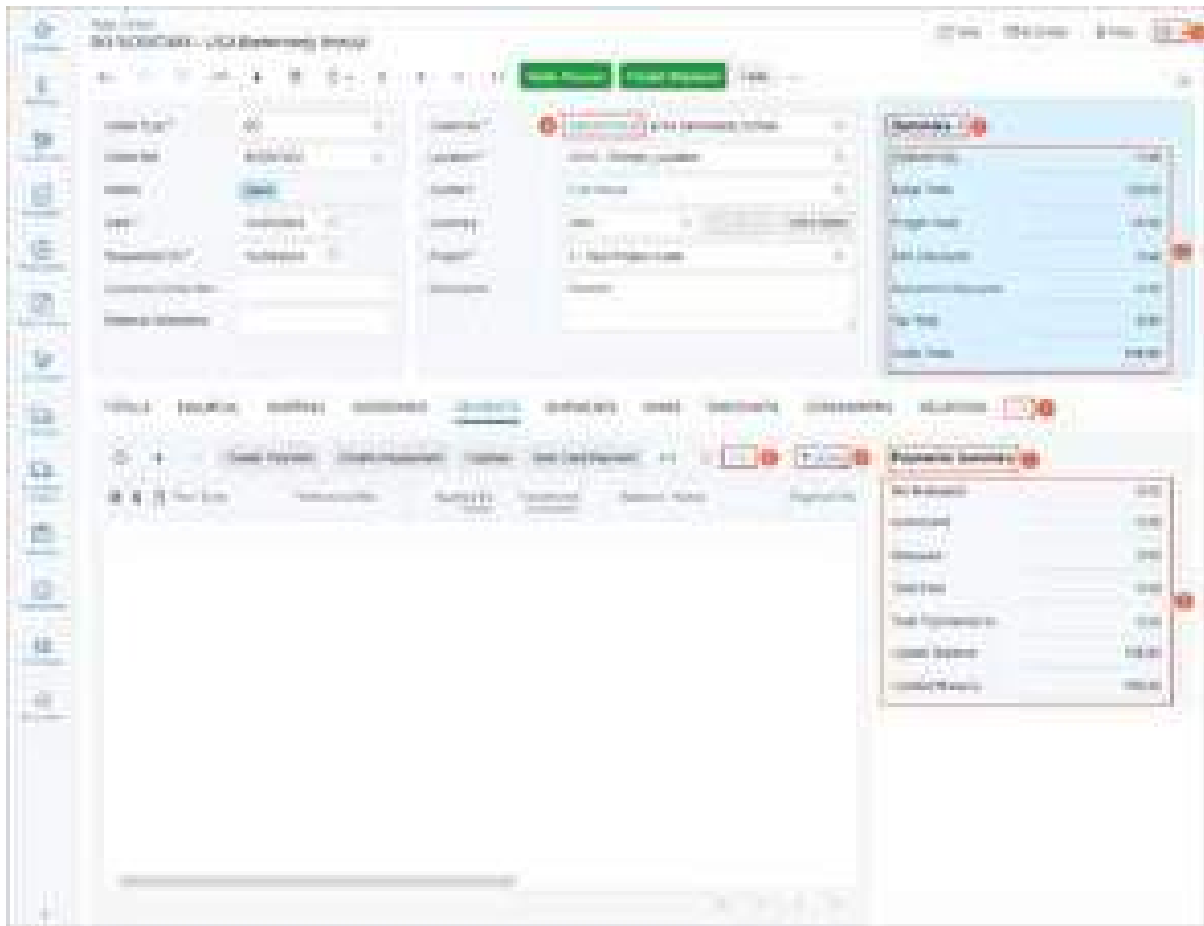


Figure: The features of the Modern UI

A user clicks the filtering toggle button (see Item 1 in the following screenshot) to expand and collapse the enhanced filtering area (Item 2), which provides quick and more intuitive access to quick and advanced filters. A user can open the **Advanced filter** window (Item 4) by clicking the More button (Item 3) and selecting **Open Advanced Filter**.

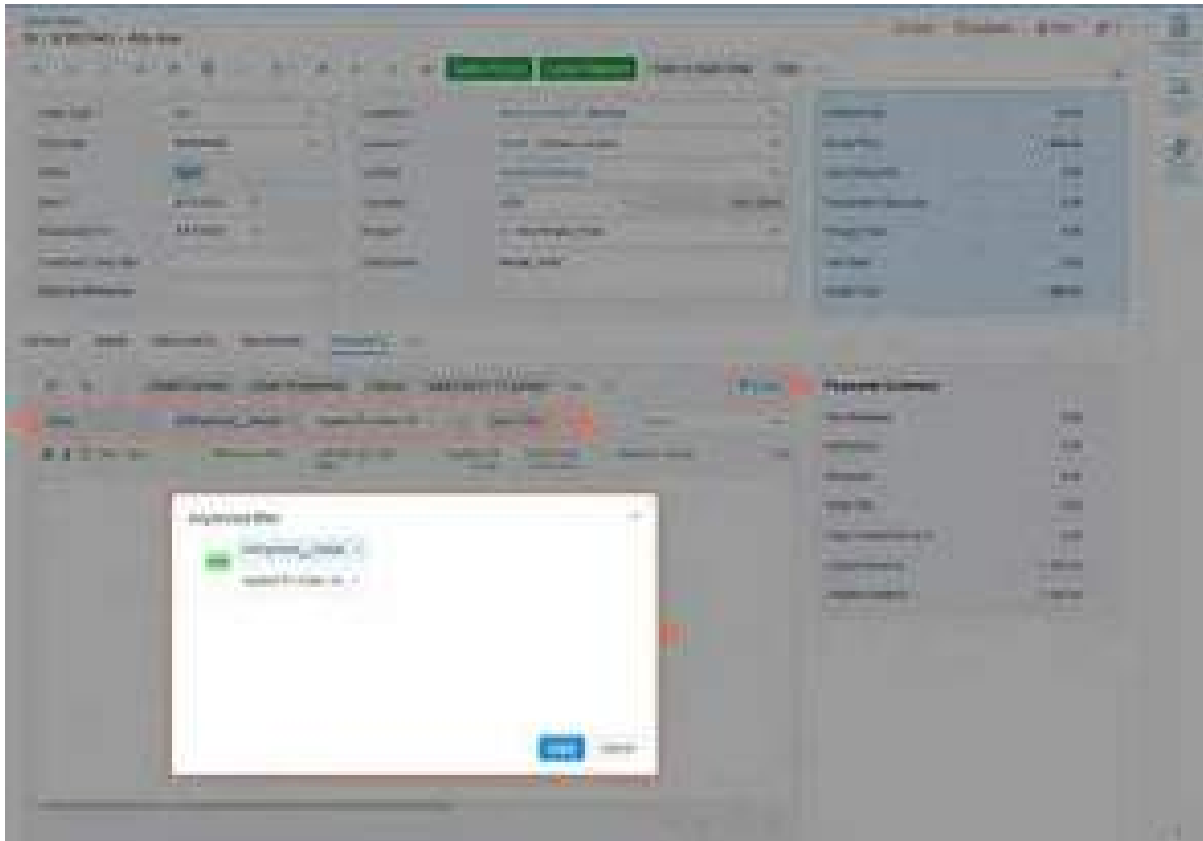


Figure: The Advanced filter window

The Modern UI also features an enhanced window for attaching files to a form, as shown in the following screenshot. This window opens when the user clicks **Files** on the form title bar.

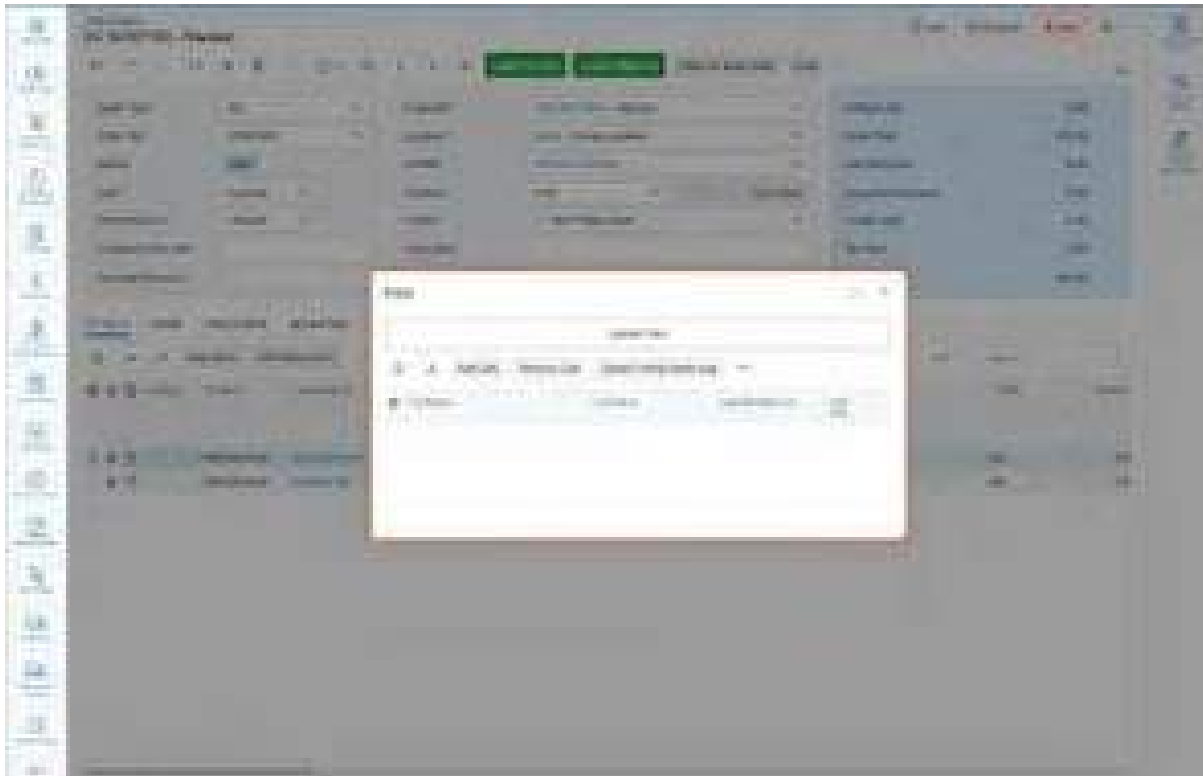


Figure: The enhanced window for attaching files

An administrative user needs to enable the Modern UI for their Acumatica ERP instance before any forms can be switched to the Modern UI. Once this setup has been performed, forms can be switched between the Modern UI and the Classic UI for all users.

The following sections describe how an administrative user can enable the Modern UI while configuring an instance, and how a form can be switched to the Modern UI. For more details, see [Modern UI: General Information](#) and [Modern UI: How to Switch a Form Between the Modern UI and the Classic UI](#).



Most of the forms in Acumatica ERP2024 R1 can be switched to the Modern UI. However, a small number of forms are not available in the Modern UI at this time.

Enabling of the Modern UI

Before anyone can use the Modern UI in the system, it must be enabled in the system.

While deploying an instance by using the Acumatica ERP Configuration Wizard, an administrative user can enable the switching to the Modern UI. To do this, the user selects the **Enable Modern UI** check box on the Website Configuration page of the wizard, as shown in the following screenshot.

The screenshot shows the 'Website Configuration' window of the Acumatica ERP Configuration Wizard. It is divided into two main sections: 'Website Settings' and 'Application Pool Settings'. In the 'Website Settings' section, there is a list of 'Available Websites' with 'Default Web Site' selected. Below this, there are several checked checkboxes: 'Create Virtual Directory' (with 'AcumaticaERP' in the text box), 'Compile the Site', 'Install RabbitMQ', and 'Enable Modern UI (not for production use)'. The 'Enable Modern UI' checkbox is highlighted with a red rectangular box. In the 'Application Pool Settings' section, the 'Use Existing Application Pool' radio button is selected, and 'DefaultAppPool' is chosen from the 'Available Application Pools' list. At the bottom right, there are 'Back' and 'Next' buttons. The URL 'https://www.acumatica.com' is visible at the bottom left.

Figure: The Enable Modern UI check box

When the user selects the **Enable Modern UI** check box, the system adds the `<add key="EnableSiteMapSwitchUI" value="True" />` key to the `Web.config` file of the instance. The user can also manually add this key to the `Web.config` file at a later time if they did not select the **Enable Modern UI** check box while deploying their instance.

If the administrative user wants to disable the switching to the Modern UI for their instance, they can manually remove this key or change its value to `False`. However, if some forms were already switched to the Modern UI before removing this key or changing its value, they will still stay on the Modern UI.

Use of the Menu on the Form Title Bar to Switch the UI

Once the Modern UI has been enabled in the system, while any user is on the Classic UI of a form, they can switch that form to the Modern UI. To do this, they click **Tools > Switch to Modern UI** on the form title bar, as shown in the following screenshot.

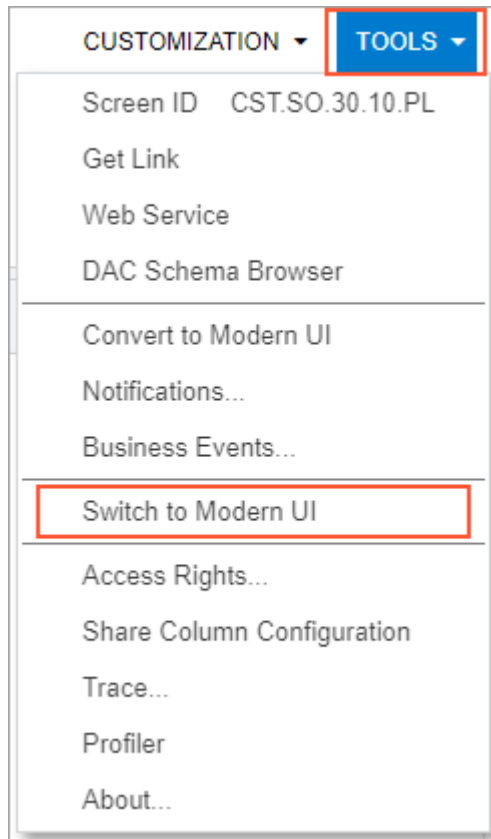


Figure: The Switch to Modern UI command

While the user is on the Modern UI of the form, they can switch the form back to the Classic UI. To do this, the user clicks **Settings > Switch to Classic UI** on the form title bar, as shown in the following screenshot.



Figure: The Switch to Classic UI command

Use of the Site Map (SM200520) Form to Switch the UI

An administrative user can also switch the UI (the Modern UI or the Classic UI) of a form by using the [Site Map \(SM200520\)](#) form. To do this, the administrative user can select *Modern* or *Classic* in the **UI** column of the [Site Map](#) form in the row that corresponds to the form, as shown in the following screenshot.

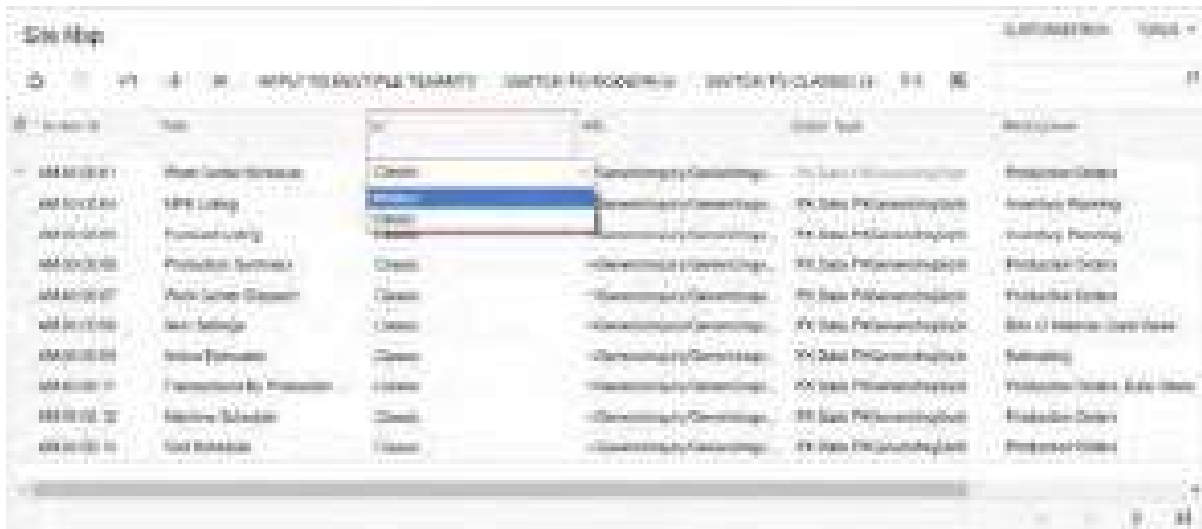


Figure: The UI column on the Site Map form

An administrative user can also switch the UI of all forms by using the **Switch to Modern UI** and the **Switch to Classic UI** buttons on the form toolbar of the form. By using either button, the administrative user can specify the UI to be used for all the forms with a single click. By clicking the **Switch to Modern UI** button, the user can switch the UI to the Modern UI for all the forms that are available in the Modern UI except for the [Site Map](#) form, as shown in the following screenshot.



Figure: The Switch to Modern UI command

By using the **Switch to Classic UI** command, the administrative user can switch the default view of all the forms to the Classic UI, as shown in the following screenshot.



Figure: The Switch to Classic UI command

Platform: Changes to the Management of Access Rights

In previous versions of Acumatica ERP, when a user created a new system object (for example, a form) and did not explicitly specify its access rights, the system automatically assigned the *Not Set* restriction level to this object for all user roles. The *Not Set* restriction level indicates that users with all roles have access to this system object until at least one role is assigned any other restriction level to it. As a result, this new system object became available to all users in the system, which could cause security issues.

In Acumatica ERP 2024 R1, the logic of setting restriction levels for system objects has been reworked. Also, the procedure of publishing the forms to the UI has been improved for generic inquiries, pivot tables, dashboards, report definitions, export scenarios, import scenarios, and application resources. The procedure now provides a straightforward configuration of the initial access rights during publication. Also, in Customization Project Editor, the process of managing access rights has been reworked and simplified.

The following sections describe these changes in detail.

Changes to Restriction Levels

In Acumatica ERP 2024 R1, the *Not Set* restriction level has been removed from the system.

On system upgrade to 2024 R1, for each existing system object, the system will update the access rights as follows:

- If the access rights for a system object were set to *Not Set* for all user roles, these access rights will be converted to *Granted* for all user roles.
- If at least one role is assigned the *Delete*, *Insert*, *Edit*, *View Only* or *Revoked* restriction level explicitly, all *Not Set* access rights will be converted to *Revoked*. All other access rights will not be changed.

As an example, the first screenshot shown below shows the access rights that were configured for the [Bank Deposits](#) (CA305000) form in an Acumatica ERP 2023 R2 instance. The second screenshot shows the access rights for the same form after the instance has been upgraded to 2024 R1. At least one user role has *Granted* or *Revoked* access to this form, so during the upgrade, the system changed the *Not Set* access rights to *Revoked*.

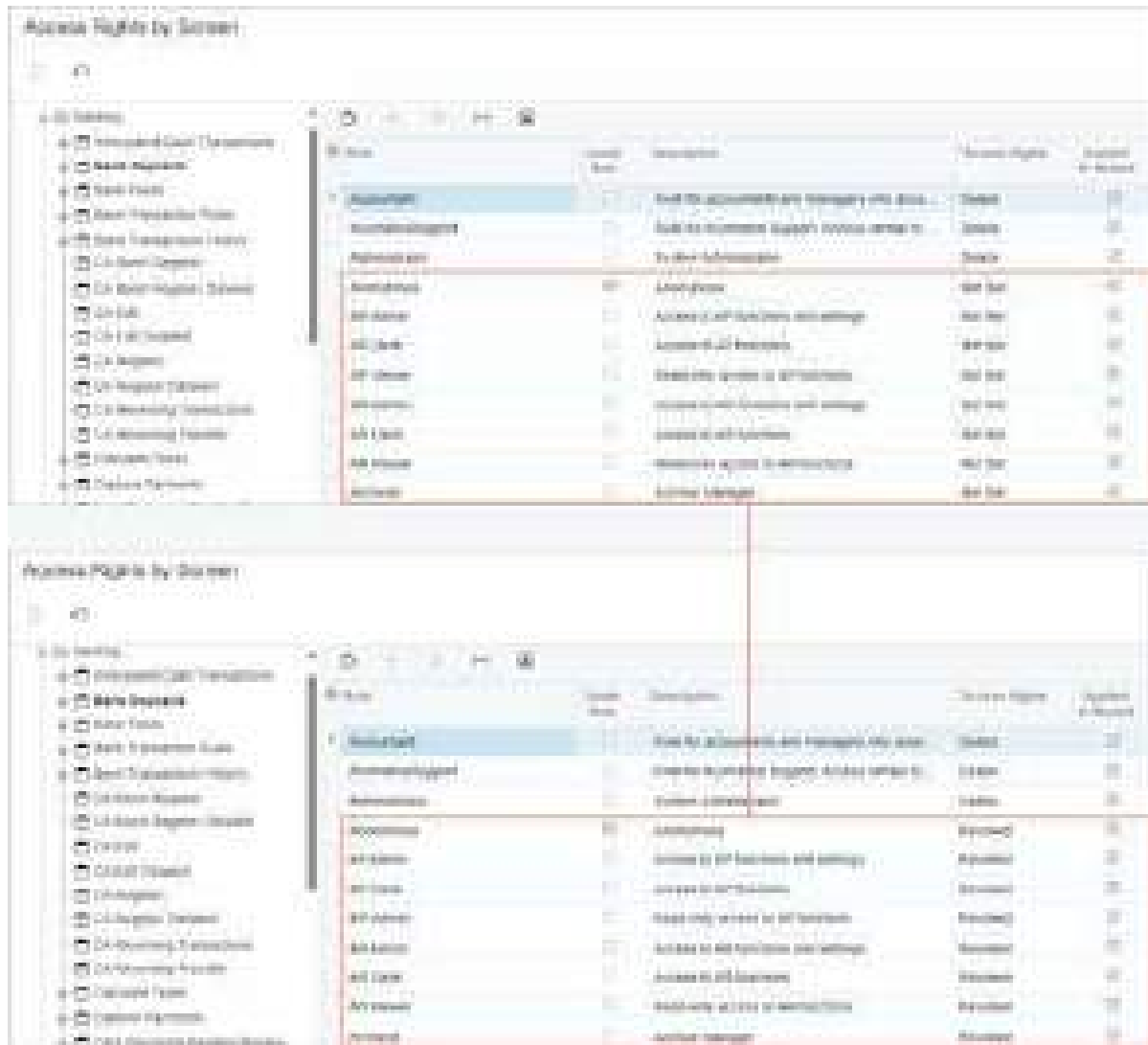


Figure: Updated access rights for the Bank Deposits form

Configuration of Access for New Forms

In previous versions of Acumatica ERP, an administrative user did not specify access rights during the publication procedure for generic inquiries, pivot tables, dashboards, report definitions, export scenarios, import scenarios, and application resources. The user had to select the **Make Visible on the UI** check box to publish a form (that is, to assign it a screen identifier and make it available in the specified workspace) on the following forms:

- [Generic Inquiry](#) (SM208000) form
- [Pivot Tables](#) (SM208010) form
- [Dashboards](#) (SM208600) form
- [Report Definitions](#) (CS206000) form
- [Export Scenarios](#) (SM207025) form
- [Import Scenarios](#) (SM206025) form
- [Application Resources](#) (SM301010) form

In Acumatica ERP 2024 R1, the publication procedure has been reworked. The **Make Visible on the UI** check box has been removed from the forms listed above.

The **Publish to the UI** button has been added on the form toolbar of these forms, as shown in the following screenshot (which shows the button on the *Generic Inquiry* form). By clicking this command, the user can add a new site map node to the site map and grant the required permissions for the added screen.

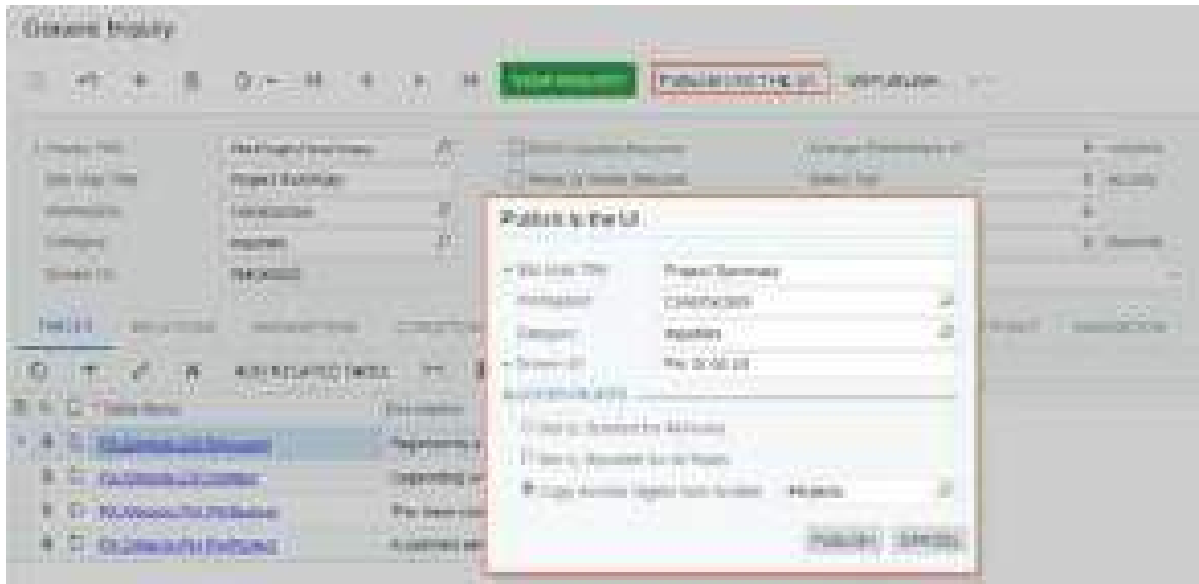


Figure: Adding of a new form to UI

When the user clicks **Publish to the UI** on the form toolbar, the **Publish to the UI** dialog box (shown in the screenshot above) opens. In this dialog box, the user specifies the following information:

- **Site Map Title:** The name of the form that will be shown on the *Site Map* form
- **Workspace:** The workspace in the user interface from which the form can be accessed
- **Category:** The name of the category under which the form will be displayed in the selected workspace
- **Screen ID:** The identifier to be assigned to the form

Also, in the **Access Rights** section of the dialog box, the user selects one of the following option buttons to indicate which access rights should be specified for the newly added form:

- **Set to Granted for All Roles:** The system will set the access rights for this form to *Granted* for all user roles in the system.
- **Set to Revoked for All Roles:** The system will set the access rights for this form to *Revoked* for all user roles in the system.
- **Copy Access Rights from Screen** (default): The system will copy the set of the access rights from the specified form.

After the user specifies the needed settings and clicks **Publish** in the dialog box, the form is published. That is, it is assigned a screen identifier and becomes available in the specified workspace. Also, the system adds the new site map node for this form to the site map and applies the appropriate access rights to this site map node.

A user with administrative rights can adjust the granted access rights for the form on the *Access Rights by Screen* (SM201020) form.



If the user publishes a generic inquiry that is used as a substitute form for some data entry form, the system applies the access rights specified for the generic inquiry to the data entry form as well.

Removal of Published Forms from UI

In previous version of Acumatica ERP, a user had to clear the **Make Visible on the UI** check box on one of the following forms to remove a published generic inquiry, pivot table, dashboard, report definition, export scenario, import scenario, or application resource from the UI:

- [Generic Inquiry](#) (SM208000) form
- [Pivot Tables](#) (SM208010) form
- [Dashboards](#) (SM208600) form
- [Report Definitions](#) (CS206000) form
- [Export Scenarios](#) (SM207025) form
- [Import Scenarios](#) (SM206025) form
- [Application Resources](#) (SM301010) form

In Acumatica ERP 2024 R1 this check box has been removed from these forms. The **Unpublish** command has been added on the form toolbar and more Menu of the forms listed above so that a user can remove a site map node from the site map.

When the user opens a record on any of the listed forms and clicks **Unpublish** on the form toolbar or More menu, the system removes the site map node related to the selected record from the site map and deletes all configured access rights from the database.

Access Rights for a New User Role

If an administrative user creates a new user role, the system now automatically sets the access rights for this role to *Revoked* for all system objects, as shown in the following screenshot. Then the user must explicitly set up access rights for this role on the [Access Rights by Role](#) (SM201025) form.

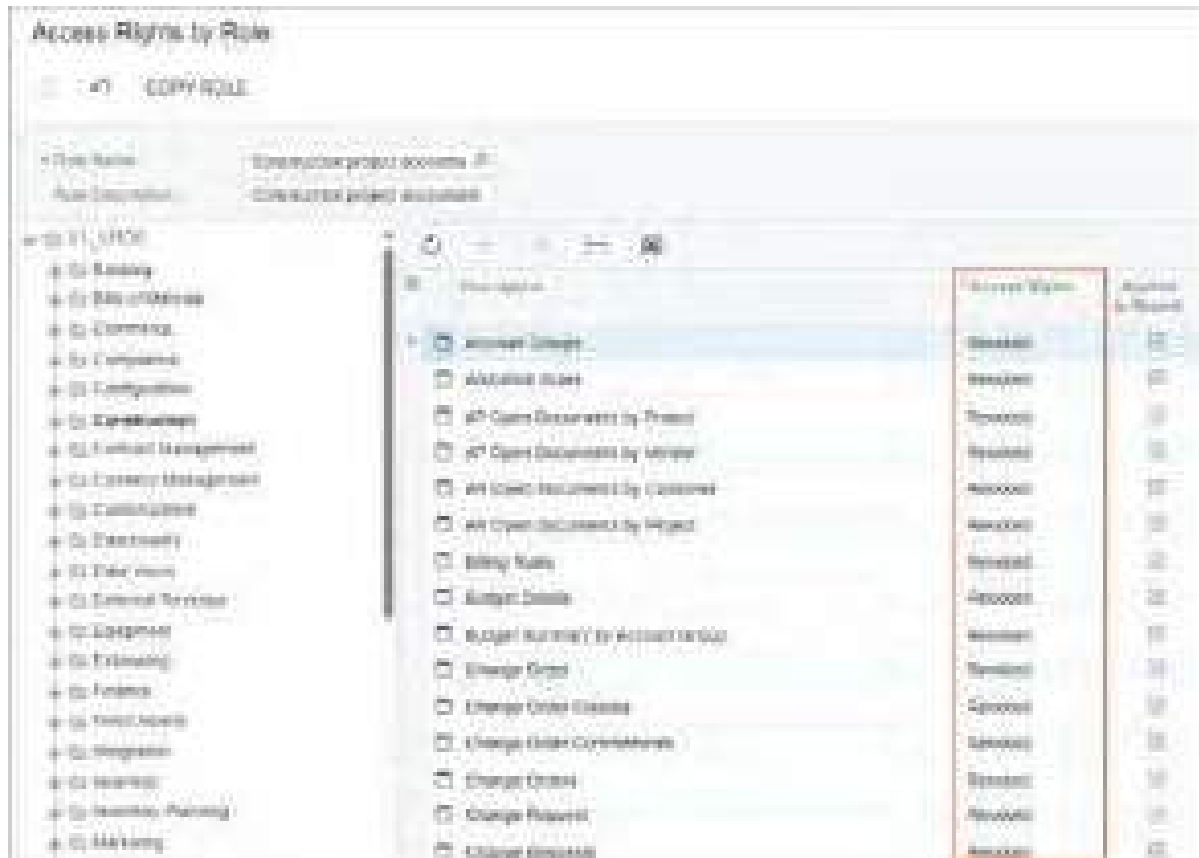


Figure: Default access rights set for a new user role

Access Rights for a New Form Added to Site Map

If an administrative user adds a new site map node directly on the [Site Map](#) (SM200520) form, the system will automatically set the form's access rights to *Revoked* for all user roles. Then the user should grant access to this form to particular user roles on the [Access Rights by Screen](#) (SM201020) form.

Configuration of Access Rights in the Customization Project Editor

The process of configuring access rights in customization projects has also been reworked and simplified. Now when a user opens the [Access Rights](#) page of the Customization Project Editor and clicks the **Add New Record** button on the form toolbar, the **Add Access Rights for Screen** dialog box opens, as shown in the screenshot below.

In this dialog box, the user selects the form for which the access rights should be configured. The user also specifies the merge rule, which is the way the system should apply the access rights, by selecting one of the following option buttons:

- **Grant All:** Set access rights to *Granted* for all roles
- **Revoke All:** Set access rights to *Revoked* for all roles
- **Apply and Reset:** Apply access rights from the customization project and set them to *Revoked* for the roles that are not included (in the customization project)
- **Apply and Keep** (default): Apply access rights from the customization project and keep them unchanged for the roles that are not included (in the customization project)

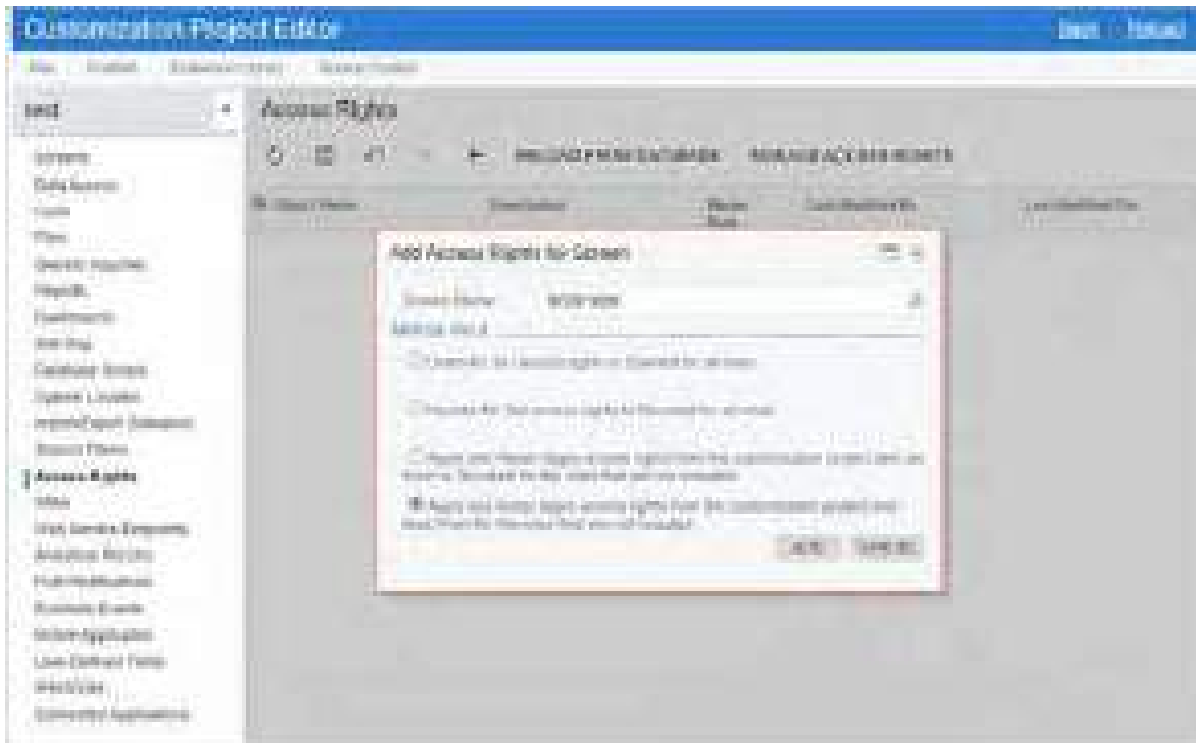


Figure: Configuration of access rights in a customization project



The merge rule that the user specifies in this dialog box is shown in the **Merge Rule** column of the table on the [Access Rights](#) page.

If a customization project does not include explicitly specified access rights on the [Access Rights](#) page, the following rules are applied when the customization project is being published:

- If a site map node does not exist in the target instance, the site map node will not be available for any roles; the access rights will be set to *Revoked*. That is, after the customization has been published, the system administrator should grant the access rights explicitly.
- If a site map node already is on the target instance, the existing access rights remain unchanged.

In a customization project migrated from a previous Acumatica ERP version, on the [Access Rights](#) page, the system will insert *Apply and Keep* in the **Merge Rule** for all listed forms. The system does this regardless of the option in the **Reset Permissions** column in the table on the [Access Rights](#) page. (This column has been removed from the page.) With this merge rule, during the publishing of the customization project, the access rights specified in the customization project will be applied to the instance, and all other roles will remain unchanged.

Other UI Changes

On the [Generic Inquiry](#) (SM208000) form, the **Change Screen ID** command has been removed from the form toolbar. A user now can change the identifier assigned to the inquiry in the **Publish to the UI** dialog box.

Projects and Construction: Cost Transactions Linked to AP Documents

In Acumatica ERP 2024 R1, a new side panel has been introduced on the *Pro Forma Invoices* (PM307000) form. On this side panel, users with appropriate access rights can link cost transactions produced on the release of project-related AP documents to the progress billing lines of pro forma invoices. Regardless of their access rights, users can also view the cost transactions that are linked to time and material billing lines of pro forma invoices.

The following sections describe the capabilities of the new side panel in detail.

New Side Panel on the Pro Forma Invoices Form

While viewing a pro forma invoice on the *Pro Forma Invoices* (PM307000) form, a user can click **Linked Cost Transactions** icon on the side panel. This opens the *Linked Cost Transactions* (PM307100) inquiry form in the side panel, as shown in the following screenshot. On the inquiry form, the system automatically populates the values in the **Project** and **Pro Forma Invoice Ref. Nbr.** boxes with the values from the current pro forma invoice. (The user can select any other project or pro forma invoice, if needed.)

The table on the side panel lists the cost transactions that are linked to the lines of the selected pro forma invoice.



Figure: The *Linked Cost Transactions* inquiry form on the side panel

The *Linked Cost Transactions* (PM307100) inquiry form in the side panel does not work synchronously with the *Pro Forma Invoices* (PM307000) form that you have opened. If the user performs any action on the *Pro Forma Invoices* form, the user must refresh the page to see the changes on the side panel.



The *Linked Cost Transactions* (PM307100) inquiry form is available only as a side panel and has not been added to the site map.

Cost Transactions Linked to Time and Material Lines

The table on the side panel of the *Pro Forma Invoices* (PM307000) form includes the project transactions linked to time and material lines of the selected pro forma invoice, as shown in the following screenshot. These are the cost transactions that have been used as the basis for billing. Users can only review these project transactions and cannot edit them. (That is, they cannot unlink these project transactions from the corresponding lines, or link a cost transaction to a time and material line.) The **Add Transaction** and **Remove Transaction** buttons are unavailable for these lines on the table toolbar of the side panel, as shown in the following screenshot.



Figure: Cost transactions linked to time and material lines

Cost Transactions Linked to Progress Billing Lines

When a pro forma invoice is created during the billing procedure, the progress billing lines of this pro forma invoice on the **Progress Billing** tab of the *Pro Forma Invoices* (PM307000) form are initially not linked to any cost transactions.

If the *Administrator*, *AcumaticaSupport*, or *Project Accountant* role is assigned to a user on the *User Roles* (SM201005) form, the user can link and unlink project transactions to progress billing lines of the pro forma invoice by using the side panel of the *Pro Forma Invoices* form. Other users have *View Only* access to the side panel tab; these users can open the side panel tab and review the project transactions linked to the current pro forma invoice but cannot make any changes to existing links.

A user with appropriate access rights can link project transactions to a pro forma invoice that has the *On Hold* status. To link a project transaction to a particular pro forma invoice line, the user does the following:

1. In the **Pro Forma Invoice Line Nbr.** box of the Selection area of the side panel, selects the number of the line to which the cost transaction should be linked. If the line number is not selected, the cost transaction will be linked to the pro forma invoice.
2. Clicks + on the table toolbar. The system opens the **Add Transactions** dialog box, as shown in the following screenshot.

The table in the **Add Transactions** dialog box lists all released project transactions that are not already linked to any pro forma invoice line. The system lists only the project transactions that have *AP* specified in the **Module** box on the *Project Transactions* (PM304000) form. The listed project transactions originate from the following types of accounts payable documents: bill, debit adjustment, credit adjustment, cash purchases, cash returns, or voided cash purchases. In the Selection area of the dialog box, the user can specify any of the following settings to narrow the list of the shown project transactions: **Project Task**, **Cost Code**, **From Date**, **To Date**, **Vendor**, **AP Doc. Type**, and **AP Doc. Nbr.**



Figure: Linking of a cost transaction to a pro forma invoice line



For an AP bill that has been reclassified, the system will show only the latest project transaction—that is, the one that has been generated by the reclassification process. The project transactions that have been created before reclassification are unavailable for linking to pro forma invoices.

3. Locates the project transaction to be linked to the pro forma invoice line, and selects the unlabeled check box in the row with this transaction.
4. Clicks **Add & Close** to link the project transaction, and then clicks **Save** on the form toolbar of the side panel to save the changes.

Each pro forma invoice or pro forma invoice line can be linked to one or multiple project transactions. Each project transaction can be linked to only one pro forma invoice line (or to one pro forma invoice). Once a project transaction has been linked to any pro forma invoice line, it is no longer shown in the **Add Transactions** dialog box.

Changes to Existing Links Between Cost Transactions and Pro Forma Invoices

A user can link project transactions to a pro forma invoice that has the *On Hold* status. To unlink a cost transaction, the user first clicks the cost transaction line in the table on the *Linked Cost Transactions (PM307100)* form in the side panel of the *Pro Forma Invoices* form. The user then clicks the **Remove Transaction** button on the table toolbar and saves the changes. The system removes the link so that the cost transaction can later be linked to another pro forma invoice.

The system automatically updates or removes the link between a cost transaction and a pro forma invoice (or pro forma invoice line) as follows:

- If a pro forma invoice line is deleted, the system removes the link to the cost transaction from the pro forma invoice.
- If a pro forma invoice is deleted, the system removes the corresponding links to the cost transactions.
- If an AP bill that corresponds to a project transaction has been reclassified, and the project has been changed as a result of this reclassification, the system removes the link to the cost transaction from the pro forma invoice (or invoice line).
- If an AP bill that corresponds to a project transaction has been reclassified, and the project has not been changed, the system transfers the link from the original project transaction to the reclassified one.
- If a new revision of the pro forma invoice is created, the system transfers the link from the previous revision of the pro forma invoice to the new revision. If a user makes any changes to the links in the new revision of the pro forma invoice and then deletes this revision, the system will use the updated links in the original pro forma invoice.

Projects and Construction: Improved Process of Pro Forma Invoice Correction

If the *Construction* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, the pro forma invoice correction workflow is available in Acumatica ERP. With this workflow, a user can make corrections to a pro forma invoice with the *Closed* status for which the corresponding accounts receivable document has already been released.

In previous versions of Acumatica ERP, to finalize the correction process, the user had to manually apply the reversing document to the AR document related to the previous revision of the pro forma invoice. In Acumatica ERP 2024 R1, the correction workflow has been streamlined to ensure accurate corrections and efficient handling of pro forma adjustments.

The sections below describe the changes to the correction workflow in more detail.

Changes to Pro Forma Invoice Correction Process

Suppose that a user needs to correct a pro forma invoice that has already been released; the AR invoice that corresponds to this invoice has also been released and has the *Open* status.

To create a new revision of the pro forma invoice, the user clicks **Correct** on the More menu of the [Pro Forma Invoices](#) (PM307000) form. The system changes the status of the pro forma invoice to *On Hold* and adds a line with the previous revision of the pro forma invoice to the **Previous Revisions** table on the **Financial** tab of the [Pro Forma Invoices](#) form.

On release of the new revision of the pro forma invoice, the system creates a reversing document (credit memo), which is listed in the **Previous Revisions** table, as shown in the following screenshot.

The screenshot displays the 'Previous Revisions' table within the 'Financial' tab of the Pro Forma Invoices form. The table contains one entry representing a reversing credit memo.

Line	Revision	Date	Reversing Doc Type	Reversing Doc Num
1	1	11/15/2023	Invoice	20000 - Credit Memo

Figure: The reversing credit memo generated on release of the corrected pro forma invoice



If the pro forma invoice has a negative total amount, on release of this pro forma invoice, the system generates the AR credit memo. When the user corrects this pro forma invoice, the system generates a reversing document of the *Debit Memo* type.

Starting in Acumatica ERP 2024 R1, on release of the correction pro forma invoice, the system automatically releases and applies the reversing AR document to the original AR document to completely reverse the previous revision and update project actual values.



In some cases, on an attempt to release the new pro forma invoice revision, the system shows the following error: *The document is out of balance*. To resolve the issue, the user needs to check whether the reversing AR document and the original AR document have the same cash discount amounts. If these amounts differ, the user should correct the credit terms in the reversing documents to make the document balances equal.

The way the system applies the prepared reversing document to the original AR document depends on whether the original document can be paid by lines as follows:

- If the **Pay by Line** check box is cleared for the AR invoice in the Summary area of the *Invoices and Memos* (AR301000) form, on release of the correction pro forma invoice, the system automatically releases and applies the credit memo to the original AR invoice, as shown in the following screenshot. The reversing credit memo and original AR invoice become closed.



Figure: Credit memo applied to original AR invoice

- If the **Pay by Line** check box is selected for the AR document in the Summary area of the *Invoices and Memos* form, on release of the correction pro forma invoice, the system performs the following operations:
 - a. Generates and releases the credit memo.
 - b. Generates and releases a payment that includes the credit memo lines and original invoice lines and has a total payment amount of 0. (See the first screenshot below.)
 - c. Releases the payment and a payment application. The payment document, the reversing credit memo, and the original AR invoice become closed. (See the original AR invoice in the second screenshot below.)

The screenshot displays a 'Payment (AR3010)' form. The top section contains header information such as 'Payment (AR3010) - Your Payment Application', 'Company: Acumatica', 'Location: AR30 - Agency Location', and 'Payment: AR3010 - Credit Payment'. A table below lists various items with columns for 'Item', 'Quantity', 'Unit Price', 'Amount', 'Tax', and 'Total'. The bottom section shows a list of lines with columns for 'Line', 'Description', 'Quantity', 'Unit Price', 'Amount', 'Tax', and 'Total'. The lines are color-coded: blue for original invoice items and red for reversing lines.

Figure: Payment document with the lines of the original invoice and the reversing lines

The screenshot shows an 'Invoice (AR3010)' form. The top section contains header information such as 'Invoice (AR3010) - Invoice Release', 'Company: Acumatica', 'Location: AR30 - Agency Location', and 'Invoice: AR3010 - Credit Payment'. A table below lists various items with columns for 'Item', 'Quantity', 'Unit Price', 'Amount', 'Tax', and 'Total'. The bottom section shows a list of lines with columns for 'Line', 'Description', 'Quantity', 'Unit Price', 'Amount', 'Tax', and 'Total'. The lines are color-coded: blue for original invoice items and red for reversing lines.

Figure: Original invoice that is closed after release of the payment application



All correction operations must be performed for the latest AR document that originates from the pro forma invoice. Users must not make any corrections to the automatically generated documents (that is, they may not void the payment document or reverse the payment application).

For more information about pro forma invoice correction, see [Correcting Pro Forma Invoices](#).

Upgrade Notes

Because in previous versions of Acumatica ERP, the reversing documents were applied manually, in a production system, there may be existing reversing documents that still require application to the original AR documents. Before the upgrade, we recommend finalizing the correction process for all existing reversing AR documents. That is, each reversing AR document that originates from a pro forma invoice should be applied to the corresponding AR document.

A user can find the reference number of the document to which the reversing AR document should be applied in the **Original Document** box on the **Financial** tab of the [Invoices and Memos](#) (AR301000) form.

Projects and Construction: Expense Refunds to Corporate Credit Cards

Employees can pay for expenses either with their own money or by using a corporate credit card. By using corporate credit cards, employees can categorize and track the expenses in Acumatica ERP, including the expenses related to a project. For example, while in the field, the workers of a construction company or professional service provider can buy something that they want to charge to a project and pay for it with a corporate card.

In previous versions of Acumatica ERP, users could not process a refund of expenses that had been paid with the corporate card. Acumatica ERP 2024 R1 provides support for negative expense receipts paid with corporate cards. With this support, an employee enters and processes a negative expense receipt to make a full or partial refund to the corporate card. A company accountant will later match the expense documents to card statement records to reconcile the balance of the card with the balance of the corresponding GL account.

Entry of a Negative Expense Receipt

To process a refund to a corporate card, a user creates an expense receipt on the [Expense Receipts](#) (EP301010) form and specifies the following information on the **Details** tab:

- **Amount:** A negative amount, which is the amount to be returned to the corporate card, expressed as a negative value. (See Item 1 in the screenshot below.)

The user can do one of the following:

- Enter a negative amount in the **Amount** box.
- Enter a negative quantity in the **Quantity** box and a positive unit cost. The system will calculate a negative amount in this case.



If the expense receipt is subject to taxes, the system calculates a negative tax amount for a negative expense receipt.

- **Tip Amount:** The amount of nontaxable tips that has been previously included in the amount paid with the corporate card, expressed as a negative value (Item 2).
- **Currency:** The currency of the refund, which can be the card currency or a foreign currency (Item 3).
- **Project/Contract, Project Task, and Cost Code:** The project, project task, and cost code that have been specified in the expense receipt for which the refund is being created (Item 4).
- **Paid With:** *Corporate Card, Company Expense*, which indicates that the refund will be performed to the company's card (Item 5).
- **Corporate Card:** The number of the corporate card to which the refund should be performed (Item 5).

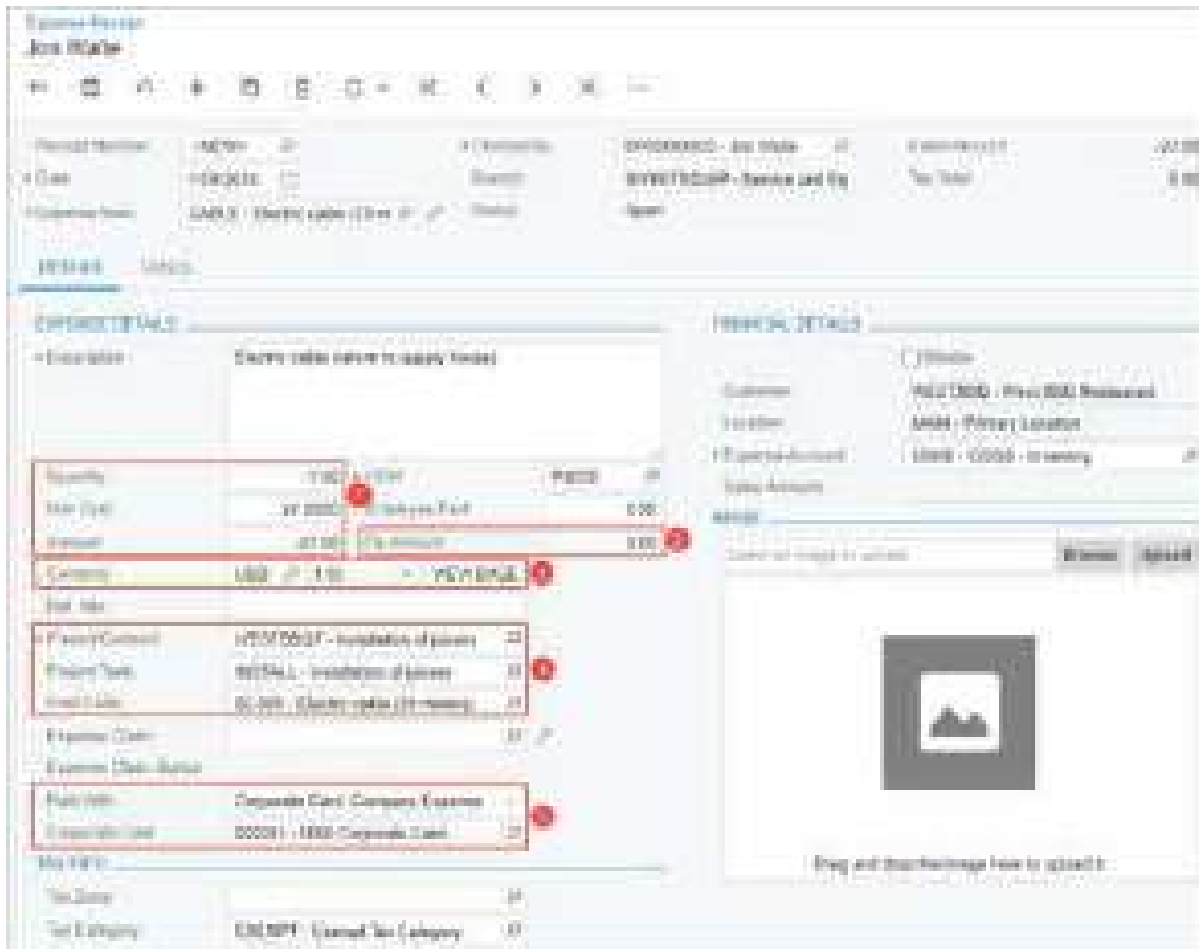


Figure: Expense receipt with a negative amount

After the expense receipt has been created and saved, the user creates an expense claim for this expense receipt by doing either of the following:

- Clicking **Claim** on the form toolbar of the *Expense Receipts* form. The system creates an expense claim on the *Expense Claims* (EP301030) form and adds the expense receipt line to it, as shown in the following screenshot.

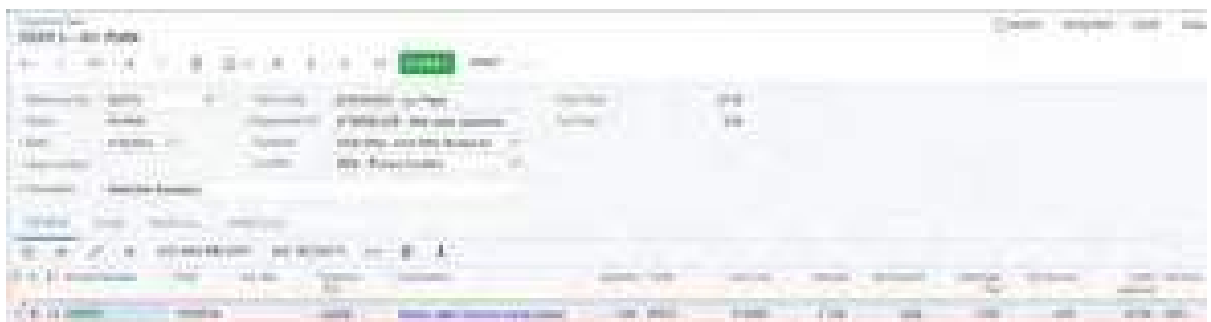


Figure: Expense claim with the negative expense receipt line

- Adding a line with this expense receipt to an existing expense claim on the *Expense Claims* form. (The expense claim can include both positive and negative expense lines.)

When the user submits and releases the expense claim, the system generates one AP document or multiple AP documents, depending on the state of the **Post Summarized Company Expenses by Corporate Cards** check box on the *Time and Expenses Preferences* (EP101000) form:

- If the check box is selected, the system will group into one document all lines with *Corporate Card, Company Expenses* in the **Paid With** column and with the same receipt date, receipt reference number, corporate card, and tax calculation mode.
- If the check box is cleared, the system will create a separate AP document for each line that is paid with a corporate card.

The type of the generated AP document depends on the sign of the total amount for the lines with *Corporate Card, Company Expenses* in the **Paid With** column:

- If the total claim amount for the lines is negative, the system generates a cash return on the *Cash Purchases* (AP304000) form, as shown in the following screenshot.

Figure: A cash return created on release of an expense claim

- If the total claim amount for the lines is positive or 0, the system generates a cash purchase on the *Cash Purchases* form.

On release of the cash return, the system generates and releases a batch of GL transactions that debits the corporate card account and credits the expense account. If the cash return has project information specified, on the release of the GL transaction, the system also generates a project transaction to update the actual values in the cost budget line of the project that has the same project budget key. (The project budget key consists of the project, project task, account group, and inventory item, as well as the cost code, if applicable).



Employees can also submit and claim negative expense receipts in the mobile app.

For more information about processing expense returns to corporate credit cards, see [Processing Expense Returns to Corporate Cards](#).

Reconciliation of Bank Statements

When an accountant performs the reconciliation of bank statements, the following rules apply to the documents related to corporate card refunds:

- On the *Process Bank Transactions* (CA501000) form, a negative expense receipt with the *Open* or *Pending Approval* status is available for matching on the **Match to Expense Receipts** tab of the form.

- After a negative expense receipt is released, the system generates the respective cash return document, which is available for matching on the **Match to Payments** or **Match to Invoices** tab on the *Process Bank Transactions* form.
- If a cash transaction that originates from a cash return is matched on the *Process Bank Transactions* form, it is displayed as cleared on the *Reconciliation Statements* (CA302000) form.

Billing of Expense Claims with Negative Lines

If a user runs customer billing on the *Bill Expense Claims* (EP502000) form, for an expense claim with mixed (positive and negative) billable lines, the system creates the AR document based on the total claim amount:

- If the total claim amount for the billable lines is positive or 0, the system generates an AR invoice on the *Invoices and Memos* (AR301000) form.
- If the total claim amount for the billable lines is negative, the system generates an AR credit memo on the *Invoices and Memos* form.



The lines of the expense claims that are linked to a project are not billed on the *Bill Expense Claims* form. To bill these lines, the user should run the billing procedure for the project.

Support for Refunds in Service Documents

If the *Service Management* feature is enabled on the *Enable/Disable Features* (CS100000) form, a user can create a negative expense receipt and link it to a service document. The system will show the linked negative expense receipt in the linked service document on the **Details** tab of the *Appointments* (FS300200) or *Service Orders* (FS300100) form.



The negative expense receipt cannot be billed from the corresponding service document. That is, the **Billable in Svc. Doc.** check box is cleared and cannot be selected for these expense receipts on the **Details** tab of the *Expense Receipts* (EP301010) form.

Projects and Construction: Simplified Logic of Updating the Project Budget

In previous versions of Acumatica ERP, on release of project transactions, the system updated the project budget of the corresponding projects based on the source of the project transaction, the type of the account group, and the type of the GL accounts that were specified in the project transaction line. In some cases, this could cause inconsistencies when identical project transactions that originated from different modules (or had different GL accounts) were updating the same project budget line with the amounts of different signs.

Acumatica ERP 2024 R1 introduces improved logic of project budget updating by project transactions. Also, the rules of the budget update no longer depend on the transaction source and GL account type in project transactions. The generation of allocation transactions also uses improved logic. The following sections describe these changes in more detail.

Rules of Updating the Project Budget with Project Transactions

Now for each line of a project transaction on the [Project Transactions](#) (PM304000) form, the system uses the following rules to update the budget of the corresponding project:

1. The system determines the number of lines to be updated as follows:
 - If an account group is specified in the project transaction line, and no credit account group is specified, the system will update one project budget line.
 - If the project transaction line has both an account group and a credit account specified, the system will update two project budget lines: one line with the project budget key that includes the account group, and another line with the project budget key that includes the credit account group.
2. Depending on the type of the account group specified in the **Account Group** or **Credit Account Group** column, the system updates the budget as follows:
 - If the account group or credit account group has the *Expense* type, the system updates the cost budget line of the project on the **Cost Budget** tab of the [Projects](#) (PM301000) form.
 - If the account group or credit account group has the *Income* type, the system updates the revenue budget line of the project on the **Revenue Budget** tab of the [Projects](#) form.
 - If the account group or credit account group has the *Asset*, *Liability*, or *Off-Balance* type, the system updates only the project balance on the **Balances** tab of the [Projects](#) form. The system also creates a line on the [Project Budget](#) (PM309000) form. The system does not update any revenue budget lines and cost budget lines in the project.
3. The system updates the actual amount in the project budget lines as follows:
 - If an account group of the *Expense* or *Asset* type was specified in the **Account Group** column, the system updates the actual amount by adding the amount in the project transaction line.
 - For an account group of the *Income* or *Liability* type that was specified in the **Account Group** column, the system updates the actual amount by subtracting the amount in the project transaction line.
 - If an account group of the *Expense* or *Asset* type was specified in the **Credit Account Group** column, the system updates the actual amount by subtracting the amount in the project transaction line with the opposite sign.
 - For an account group of the *Income* or *Liability* type that was specified in the **Credit Account Group** column, the system updates the actual amount by adding the amount in the project transaction line.
4. The system updates the actual quantities in the project budget lines as follows:
 - For the account group that was specified in the **Account Group** column, the system updates the actual quantity with the quantity in the project transaction line.

- For the account group that was specified in the **Credit Account Group** column, the system updates the actual quantity with the quantity in the project transaction line with the opposite sign.

Update of the Completion Percentage in the Budget

In Acumatica ERP 2024 R1, the system uses improved logic of updating the completion percentage in the revenue budget lines. The **Completed (%)** in the budget lines on the **Revenue Budget** tab of the *Projects* (PM301000) form is now recalculated automatically when a user performs any of the following operations:

- Release of a manual project transaction that has *PM* in the **Module** box in the Summary area of the *Project Transactions* (PM304000) form
- Release of a manual project transaction that has *AR* in the **Module** box in migration mode—that is, if the **Activate Migration Mode** check box was selected on the *Projects Preferences* (PM101000) form
- Release of the new revision of the pro forma invoice on the *Pro Forma Invoices* (PM307000) form during the pro forma invoice correction procedure
- Manual update of a draft pro forma invoice or a draft AR document linked to a project
- Deletion a draft pro forma invoice or a draft AR document linked to a project
- Release of a standalone AR document linked to a project (that is, an AR document that was not created as a result of the project billing procedure)

Changes to the Logic of Creating Allocation Transactions

In previous versions of Acumatica ERP, the logic of creating allocation transactions depended on the state of the **Post Transaction to GL** check box in the settings of an allocation rule step on the **Allocation Settings** tab of the *Allocation Rules* (PM207500) form. If the check box was cleared, the system created two project transaction lines per step; if the check box was selected, the generated allocation transaction included one project transaction line.

In Acumatica ERP 2024 R1, consistent logic is used for generating allocation transactions. Now regardless of the check box state, the system creates the allocation transaction with one transaction line per step. In this transaction line, the credit account group is specified depending on the settings in the **Credit Transaction** section of the **Allocation Settings** tab on the *Allocation Rules* form, which is shown in the following screenshot.

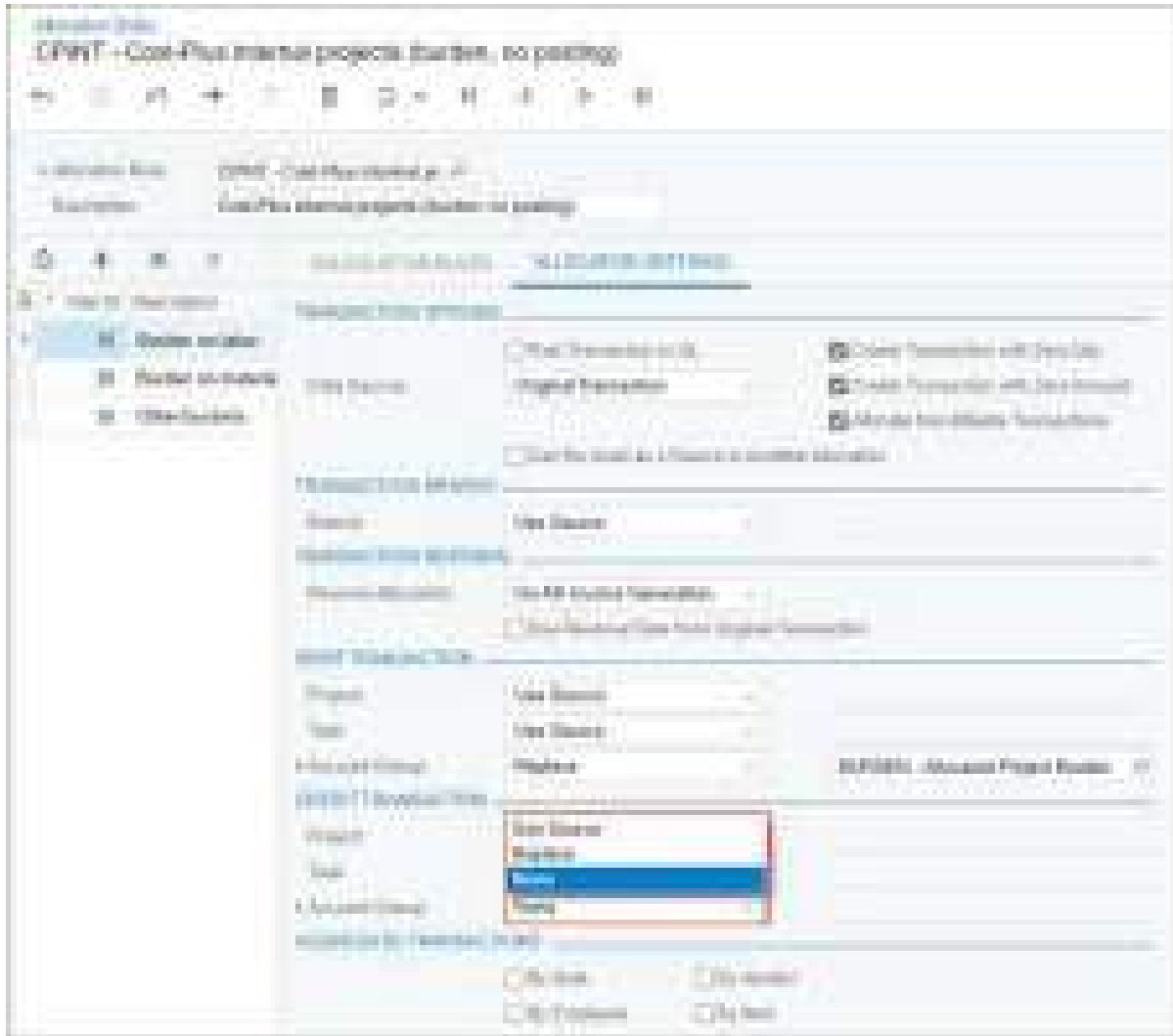


Figure: Credit account group settings in an allocation rule step

Depending on the option that is selected in the **Account Group** box of the **Credit Transaction** section, the system populates the **Credit Account Group** column of the generated allocation transaction line as follows:

- If *Use Source* is selected in the allocation step, the system will insert the account group of the source transaction.
- If *Replace* is selected in the allocation step, the system will insert the account group that is selected for replacement.
- If *None* is selected in the allocation step, the system will leave the **Credit Account Group** column empty.

An allocation transaction can be reversed manually (by a user) or automatically (by the billing process), On reversal of such allocation transaction, the system creates the reversal transaction as a copy of the original allocation transaction with the opposite amounts in the transaction lines.

Changes to the Configuration of Allocation Rules

Due to the introduced changes in the logic of generating allocation transaction generation, after an upgrade to Acumatica ERP 2024 R1, an administrative user may need to update the settings of allocation rules for the specific case that is described in this section.

Suppose that an allocation rule has the settings indicated in the following table.

Step ID	Step Settings	Value
10	Post Transaction to GL (Allocation Settings tab)	Cleared
	Can Be Used as a Source in Another Allocation (Allocation Settings tab)	Selected
	Account Group (Allocation Settings tab, Credit Transaction section)	<i>Replace or Use Source</i>
20	Account Group From and Account Group To (Calculation Rules tab, Calculation Settings section)	The account group specified in the Credit Transaction section in step 10 is included in the range of account groups

Then the allocation rule with the settings listed above must be reconfigured to have the settings indicated in the following table.

Step ID	Step Settings	Value
10	No changes (leave the settings that are already specified)	
20	Account Group (Allocation Settings tab, Debit Transaction section)	No changes (leave the settings that are already specified)
	Account Group (Allocation Settings tab, Credit Transaction section)	<i>None</i>
	All elements in the Calculation Settings section of the Calculation Rules tab	No changes (leave the settings that are already specified)
30 (new step)	Account Group (Allocation Settings tab, Debit Transaction section)	<i>Replace or Use Source</i> (the option from the Credit Transaction section in step 10)
	Account Group (Allocation Settings tab, Credit Transaction section)	<i>None</i>
	Account Group From and Account Group To (Calculation Rules tab, Calculation Settings section)	The same range of account groups as in step 20
	Calculation Settings section (Calculation Rules tab)	The formulas from step 20, but updated to calculate amounts with the opposite sign

Retail Commerce: Integration with Amazon

Acumatica ERP 2024 R1 now supports the synchronization of data between Acumatica ERP and Amazon. This functionality is available if the *Amazon Connector* feature is enabled on the [Enable/Disable Features](#) (CS100000) form. (See the following screenshot, which shows the **Amazon Connector** check box under **Retail Commerce**.)

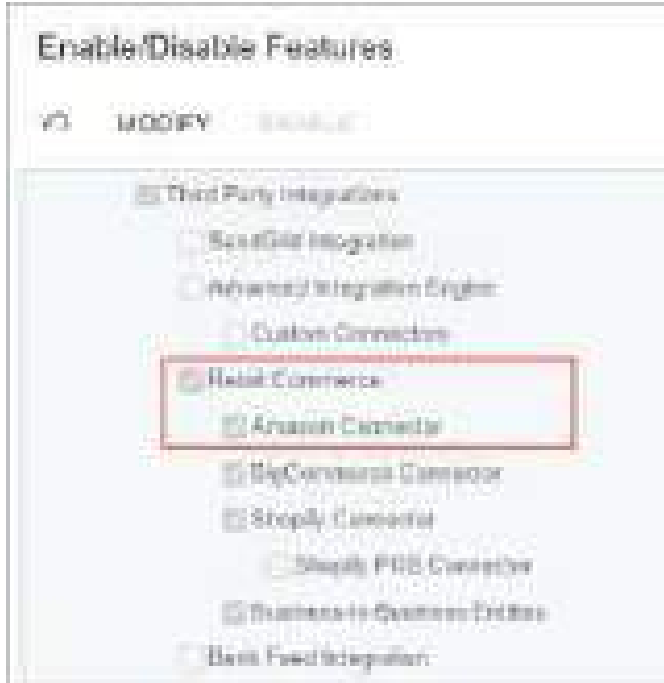


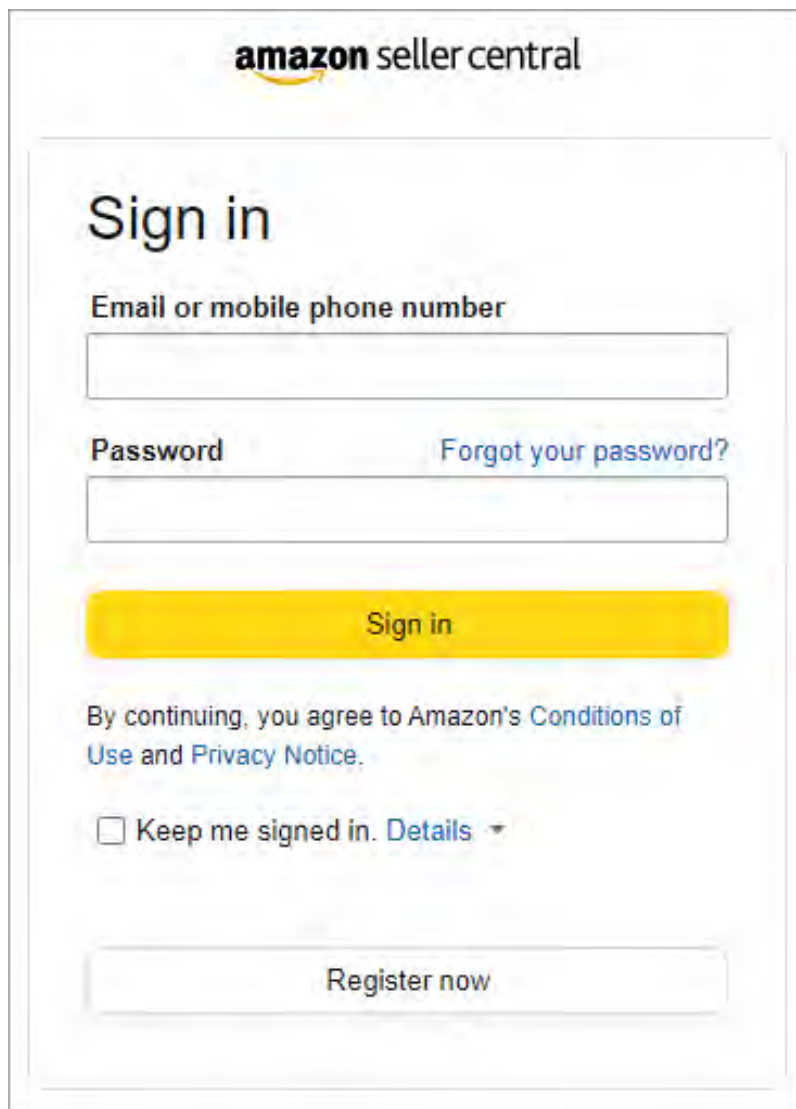
Figure: The Commerce Connector check box

When the *Amazon Connector* feature is enabled, the new [Amazon Stores](#) (BC201020) form becomes available. On this form, an administrative user can establish a connection between Acumatica ERP and the Amazon seller account, activate the entities that need to be synchronized with the Amazon seller account, and set up the activated entities.

Creating a Store and Connecting It to the Amazon Seller Account

To connect to an existing Amazon seller account, an administrative user performs the following general steps:

1. Creates an Amazon store on the [Amazon Stores](#) (BC201020) form.
2. Establishes a connection by specifying the region and marketplace of the seller account on the **Connection Settings** tab and click **Authorize** on the form toolbar. (Acumatica ERP supports synchronization of the following marketplaces in the North America region: *United States of America*, *Canada*, and *Mexico*.) The system opens the Amazon Seller Central sign-in page (shown in the following screenshot), on which the administrative user needs to sign in by using the credentials of the company's Amazon seller account.



The image shows the Amazon Seller Central sign-in page. At the top, the Amazon logo is followed by the text "amazon seller central". Below this, the heading "Sign in" is displayed. There are two input fields: "Email or mobile phone number" and "Password". To the right of the password field is a link that says "Forgot your password?". Below the input fields is a prominent yellow "Sign in" button. Underneath the button, there is a line of text: "By continuing, you agree to Amazon's [Conditions of Use](#) and [Privacy Notice](#)." Below this text is a checkbox labeled "Keep me signed in." followed by a link "Details" with a small downward arrow. At the bottom of the form is a "Register now" button.

Figure: The Amazon Seller Central sign-in page

Once the sign-in is completed, Amazon Seller Central prompts the administrative user to review and confirm the access rights that will be granted to Acumatica ERP. The Amazon connector will access this data during the data synchronization between Acumatica ERP and the Amazon seller account. (See the following screenshot.)

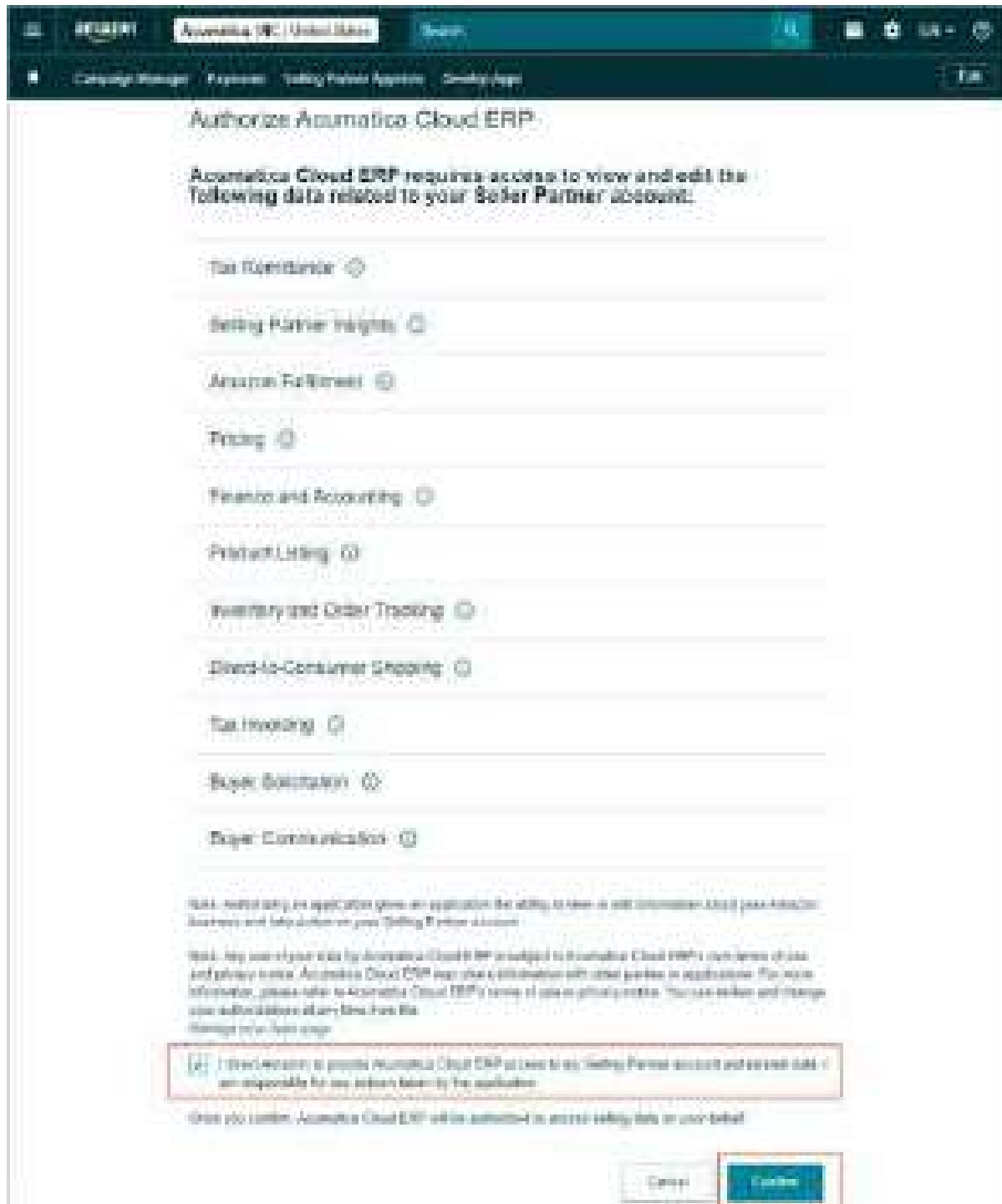


Figure: The access authorization page

Now the administrative user can set up the entities that need to be synchronized.

Activating and Setting Up the Supported Entities

On the **Entity Settings** tab of the [Amazon Stores](#) (BC201020) form, the administrative user selects the **Active** check box for the entities that need to be synchronized between the Acumatica ERP instance and the Amazon seller account.

The following table lists the entities that can be activated on the **Entity Settings** tab, along with the supported synchronization direction. The synchronization direction is predefined for each entity and cannot be changed.

Table: The Entities Supported by the Amazon Connector

Entity	Sync Direction	Description
<i>Product (Linking Only)</i>	<i>Import</i>	Establishes a link with seller-fulfilled products added to the Amazon seller account.
<i>Product Availability</i>	<i>Export</i>	Exports information about items' available quantities to the Amazon seller account.
<i>Sales Order</i>	<i>Import</i>	Imports seller-fulfilled orders from Amazon to Acumatica ERP.
<i>Marketplace-Fulfilled Order</i>	<i>Import</i>	Imports marketplace-fulfilled orders from Amazon to Acumatica ERP.
<i>Sales Invoice (Obsolete)</i>	<i>Import</i>	Resynchronizes marketplace-fulfilled orders that were imported as invoices in previous versions of Acumatica ERP.
<i>Payment</i>	<i>Import</i>	Imports payments for seller-fulfilled and marketplace-fulfilled orders from Amazon to Acumatica ERP.
<i>Non-Order Fees</i>	<i>Import</i>	Imports fees that are not associated with seller-fulfilled or marketplace-fulfilled orders from Amazon to Acumatica ERP.
<i>Shipment</i>	<i>Export</i>	Exports information about shipments for seller-fulfilled orders from Acumatica ERP to Amazon.

In the **Max. Number of Failed Attempts** column, the administrative user can change the default value (which is 5) to increase or decrease the number of times the system will attempt to synchronize data before a particular synchronization record is excluded from synchronization.

The other tabs of the form (**Inventory Settings, Order Settings, Payment Settings, and Shipping Settings**) contain the synchronization settings of the supported entities.

After the initial configuration has been completed, the user can configure active entities on the [Entities](#) (BC202000) form and then start synchronizing them. For example, the user can create filters to narrow the data to be synchronized or define additional mappings of data fields between Acumatica ERP and the Amazon seller account.



On the [Entities](#) form, filtering and mapping are not available for the *Product (Linking Only)* and *Product Availability* entities.

Synchronizing Data

The synchronization of data between Acumatica ERP and the Amazon seller account is similar to the synchronization of data with other external systems, such as Shopify and BigCommerce. The administrative user can use the following forms for manual data synchronization:

- [Prepare Data](#) (BC501000): To manually start data preparation
- [Process Data](#) (BC501500): To manually start data processing

- [Sync History](#) (BC301000): To review the status of synchronization and force-synchronize any synchronization records

Importing Orders of Different Types

The Amazon connector supports the synchronization of the following types of orders:

- Orders that are fulfilled by Amazon (which may also be referred to as *orders fulfilled by Amazon, FBA orders, or marketplace-fulfilled orders*)
- Orders that are fulfilled by the seller (also *orders fulfilled by the merchant, FBM orders, or seller-fulfilled orders*)

For details about each of these types, see the following sections.

Preparing to Import Marketplace-Fulfilled Orders

For marketplace-fulfilled orders, sales orders are imported to Acumatica ERP but are not fulfilled by the seller. Shipments are neither created for these orders in Acumatica ERP nor exported to the Amazon seller account.

To set up the synchronization of data for marketplace-fulfilled orders, the administrative user performs the following general steps:

1. Makes sure that the Acumatica ERP database is encrypted with an algorithm with a minimum of 2048-bit encryption.

For an overview of encrypting data in Acumatica ERP, see [Digital Certificates: General Information](#).

2. Activates the *Marketplace-Fulfilled Order* entity on the **Entity Settings** tab of the [Amazon Stores](#) (BC201020) form.
3. Specifies the order type to be used for imported orders.

On the **Order Settings** tab (**Order** section), the administrative user must specify the order type that will be used for imported marketplace-fulfilled orders in the **Marketplace-Fulfilled Order Type**. On the [Order Types](#) (SO201000) form, the specified order type must have the *IN - Invoice* template specified and the **Protect Personal Data** check box selected.

4. Specifies the shipping price item.

On the **Order Settings** tab (**Order** section) of the [Amazon Stores](#) form, the administrative user must fill in the **Shipping Price Item** box with the non-stock item that represents shipping fees in the imported marketplace-fulfilled orders.

5. Specifies the common order synchronization settings.

On the **Order Settings** tab (**General** and **Order** sections), the administrative user specifies the general settings related to the synchronization of orders. These settings include the branch that will appear on the imported documents, the earliest order date (which eliminates earlier orders that should not be imported), and the generic customer ID that will be inserted in the imported documents.

We recommend that the generic customer ID be created without address details other than the country.

6. Specifies the synchronization settings that are specific to marketplace-fulfilled orders.

On the **Order Settings** tab (**Marketplace-Fulfilled Order** section), the administrative user specifies the warehouse and warehouse location created for the marketplace on the [Warehouses](#) (IN204000) form. The warehouse and location specified in this section are inserted in imported marketplace-fulfilled orders. The specified warehouse and location must contain at least the same quantity of items that were sent to Amazon warehouses.

This user can also specify a dedicated shipping account (and subaccount, if applicable) to be used for marketplace-fulfilled orders. If no shipping account (and subaccount) has been specified in this section, the amounts will be recorded to the freight account (and subaccount) specified for the default warehouse of the generic customer.

7. Makes sure that the product identifiers match.

For each product in the Amazon seller account, the seller SKU or the ASIN number should match the inventory ID or an alternate ID of the stock or template item on the [Stock Items](#) (IN202500) or [Template Items](#) (IN203000) form.

Companies that used the Amazon connector as a customization project can use the *Sales Invoice (Obsolete)* entity to resynchronize marketplace-fulfilled orders that were imported in previous versions of Acumatica ERP as invoices on the [Invoices](#) (SO303000) form. For new synchronizations, the *Marketplace-Fulfilled Order* entity should be used.

Preparing to Import Seller-Fulfilled Orders

For seller-fulfilled orders, sales orders are imported into Acumatica ERP and processed and shipped by the seller. The information about the shipments is then exported to the Amazon seller account.

To set up the synchronization of data for seller-fulfilled orders, the administrative user performs the following general steps:

1. Makes sure that the Acumatica ERP database is encrypted with an algorithm with a minimum of 2048-bit encryption.

For an overview of encrypting data in Acumatica ERP, see [Digital Certificates: General Information](#).

2. Activates the *Sales Order* and *Shipment* entities on the **Entity Settings** tab of the [Amazon Stores](#) (BC201020) form.
3. Specifies the order type to be used for imported orders.

On the **Order Settings** tab (**Order** section), the administrative user must specify the order type that will be used for imported sales orders in the **Seller-Fulfilled Order Type** box. On the [Order Types](#) (SO201000) form, the specified order type must have the *SO - Sales Order* template specified and the **Protect Personal Data** check box selected.

4. Specifies the common order synchronization settings.

On the **Order Settings** tab (**General** and **Order** section) of the [Amazon Stores](#) form, the administrative user specifies the general settings related to the synchronization of orders, such as the branch that will appear on the imported documents, the earliest order date (which eliminates earlier orders that should not be imported), and the generic customer ID that will be inserted in the imported documents.

We recommend that the generic customer ID be created without address details other than the country.

5. Makes sure that the product identifiers match.

For each product in the Amazon seller account, the seller SKU or the ASIN number should match the inventory ID or an alternate ID of the stock or template item on the [Stock Items](#) (IN202500) or [Template Items](#) (IN203000) form.

6. Maps the Amazon shipping methods with the Ship Via codes on the **Shipping Settings** tab of the [Amazon Stores](#) form.

If order synchronization is started without the shipping methods being mapped, it fails, and the Amazon connector populates the **Store Shipping Method** column. The administrative user can then map each store shipping method with a Ship Via code defined in Acumatica ERP.

7. Maps Ship Via codes in Acumatica ERP with carriers and carrier services in Amazon.

The administrative user must map each Ship Via code with a carrier from Amazon in a substitution list on the [Substitution Lists](#) (SM206026) form, and then specify this substitution list in the **Ship Via Codes to Carriers** box on the **Order Settings** tab of the [Amazon Stores](#) form. Similarly, this user must map each Ship Via code with a carrier service from Amazon in a substitution list, and then specify the substitution list in the **Ship Via Codes to Carrier Services** box on the **Order Settings** tab.

If the carrier and carrier service method that have been defined for a Ship Via code do not match those defined in Amazon, during the export of a shipment, the carrier or carrier service method in Amazon will be updated based on the substitution values specified in these substitution lists.

Exporting Shipments for Seller-Fulfilled Orders

For orders that are imported from Amazon to Acumatica ERP for processing, the administrative user can export information about the created and confirmed shipments to the Amazon seller account. Shipments are exported during the synchronization of the *Shipment* entity.

For the successful synchronization of shipments, the following conditions must be met on the [Shipments](#) (SO302000) form:

- The shipment must not be empty.
- All items in the shipment must be assigned to a single box, and the box should have a tracking number.
- The shipment must be confirmed.

During the synchronization of shipments, the following information is exported to the Amazon seller account: the shipment date, the items added to the box and their quantities, the carrier name, the carrier service method, and the tracking number.

Preparing to Import Payments

Payments can be imported from the Amazon seller account if the *Payment* entity is activated on the **Entity Settings** tab of the [Amazon Stores](#) (BC201020) form. For a successful import of payments, the administrative user performs the following steps on the **Payment Settings** tab:

1. Maps the Amazon payment methods with the Acumatica ERP payment methods.

Initially, the upper table of the tab is empty. After an order and a payment have been created in the Amazon seller account, an administrative user needs to start the payment synchronization with no payment method mapped. The synchronization fails, and the Amazon connector populates the **Store Payment Method** column of the upper table. The user then completes the payment mapping by specifying values in the **ERP Payment Method** and **Cash Account** columns. The ERP payment method should have the *Cash/Check* means of payment selected on the [Payment Methods](#) (CA204000) form.

2. Maps the Amazon fees.

The **Amazon Fees** table is initially empty. Once the payment methods are mapped, the administrative user needs to start the payment synchronization again. The synchronization fails, and the Amazon connector populates the **Fee Type** column of the table. The user must map each Amazon fee type with an Acumatica ERP entry type.

Entry types are defined on the [Entry Types](#) (CA203000) form. An entry type can be used in the fee mapping if it meets the following criteria:

- The entry type has the *Disbursement* type.
- A default offset account has been specified for the entry type.
- The **Deduct from Payment** check box is selected for the entry type.
- For the cash account specified in the mapping for the Amazon payment method in the upper table, the entry type has been added on the [Cash Accounts](#) (CA202000) form.

Amazon fees imported with the payment are grouped by entry type and are displayed on the **Charges** tab of the [Payments and Applications](#) (AR302000) form.

Exporting Product Availability Information

To export information about product availability to the Amazon seller account, the administrative user performs the following general steps:

1. Activates the *Product (Linking Only)* and *Product Availability* entities on the **Entity Settings** tab of the [Amazon Stores](#) (BC201020) form.

During the synchronization of the *Product (Linking Only)* entity, as its name suggests, a link is created between the products in the Amazon seller account and the items in Acumatica ERP. During the synchronization of the *Product Availability* entity, the information about the stock levels for the items for which the link has been created is exported to Amazon.



The link is created only with merchant-fulfilled products in the Amazon seller account—that is, with items for which **I will ship this item myself** is selected in the **Fulfillment Channel** section of the **Offer** tab of the product management page.

2. Configures marketplace-level inventory settings.

During the configuration of the Amazon marketplace, the administrative user can specify which item quantity in Acumatica ERP needs to be synchronized with Amazon. To do so, the user selects one of the following options in the **Availability Mode** box:

- *On Hand*: The system exports the on-hand quantity.
- *Available for Shipping*: The system synchronizes the quantity available for shipping.
- *Available*: The system synchronizes the available quantity. The administrative user can configure the way the available quantity is calculated by using an availability calculation rule.

The administrative user also indicates whether quantity calculations should include available quantities from all warehouses or from only the specified warehouses or warehouse locations. To do so, in the **Warehouse Mode** box on the **Inventory Settings** tab of the [Amazon Stores](#) form, the user selects one of the following options:

- *All Warehouses*: To calculate the available quantity of the item in the Amazon seller account based on the quantity of the item in all warehouses.
- *Specific Warehouses*: To calculate the available quantity of the item based on the quantity in the selected warehouses and warehouse locations. When this option is selected, the **Warehouse Mapping for Inventory Export** table appears below the **Warehouse Mode** box. In this table, the user can list the warehouses and warehouse locations to be used in the calculation of item availability.

Importing Tax Amounts

Amazon handles tax calculation and reporting on behalf of merchants. However, for accurate record-keeping, the administrative user can turn on the synchronization of taxes to import the total tax amount to Acumatica ERP along with each sales order.



Only the tax amount is imported; tax names and rates are not imported.

On the **Order Settings** tab of the [Amazon Stores](#) (BC201020) form, the administrative user selects the **Tax Synchronization** check box and specifies the following:

- **Primary Tax Zone**: This tax zone will be inserted in imported documents. In this box, the administrative user should specify the tax zone for which the default tax has been specified.
- **Default Tax**: This tax ID will be inserted in imported documents for the tax amounts charged in the Amazon seller account.



The tax zone and tax specified in these boxes are not used for calculating taxes in imported orders. To avoid discrepancies in tax calculation, tax recalculation should be disabled for the order types that are used for importing marketplace-fulfilled and seller fulfilled orders. The administrative user can do this by selecting the **Disable Automatic Tax Calculation** check box on the **General** tab of the [Order Types](#) (SO201000) form.

Importing Non-Order Fees

Amazon charges merchants fees that are not related to particular orders, for example, storage or advertising fees. The details of these fees are available in the settlement reports provided by Amazon. To support the import of these fees into Acumatica ERP, a new entity, *Non-Order Fees*, has been introduced. By importing information about non-order fees into Acumatica ERP, a company can gain greater visibility into per-unit profitability—that is, how much the company makes on each unit of the products it sells on Amazon and how much it is charged for each unit of the products.

To set up the import of non-order fees to Acumatica ERP, the administrative user performs the following general steps:

1. Activates the *Non-Order Fees* entity on the **Entity Settings** tab of the [Amazon Stores](#) (BC201020) form.
2. Maps the Amazon non-order fees.

Initially, no non-order fees are mapped. When the *Non-Order Fees* entity is processed, the synchronization fails. The Amazon connector adds a row for each supported non-order fee to the **Amazon Fees** table and populates the **Fee Type** column. The administrative user must map each Amazon fee type with an Acumatica ERP entry type.

Entry types are defined on the [Entry Types](#) (CA203000) form. An entry type can be used in the fee mapping if it meets the following criteria:

- A default offset account has been specified for the entry type.
- For the cash account specified in the mapping for the Amazon payment method in the upper table, the entry type has been added on the [Cash Accounts](#) (CA202000) form.

Imported non-order fees are displayed as a cash transaction on the [Cash Transactions](#) (CA304000) form.

The **Sync Record Details** dialog box of the [Sync History](#) (BC301000) form displays the following information about imported non-order fees:

- The **ERP ID** column: The identifier of the cash transactions created for the settlement report
- The **External ID** column: The identifier of the settlement report generated by Amazon

Protecting Personal Data

Amazon requires that companies not store the customer's personal data related to sales orders imported from Amazon for more than 30 days after the order's creation. This data includes the ship-to address, bill-to address, ship-to contact, and bill-to contact in an imported order as well as its related shipment and invoice. To ensure compliance with this requirement, Acumatica ERP 2024 R1 has introduced the [Protect Personal Data](#) (BC601000) form, on which a user can erase or pseudonymize personal data in sales orders imported from Amazon Seller Central as well as in related invoices and shipments (if applicable).

To define the action to be performed on each selected document when the **Process** or **Process All** command is invoked, a user selects one of the following values in the **Action** box of the Selection area (see Item 1 in the following screenshot):

- *Pseudonymize*: Replaces personally identifiable information with placeholders in the selected documents (Item 2).
- *Erase*: Permanently deletes personally identifiable information in the selected documents.
- *Restore*: Restores previously pseudonymized data.



Figure: The Protect Personal Data form

The table on the form displays the following documents:

- Completed and canceled sales orders that belong to the order type for which the **Protect Personal Data** check box is selected on the *Order Types* (SO201000) form
- Sales invoices that have been created for such sales orders



Shipments are not displayed in the table, but they will be processed along with the related sales orders.

The user can narrow down the list of documents to be displayed in the table by specifying the following settings of the Selection area:

- **Entity:** The type of documents, which can be *Sales Order* or *Invoice*.
- **Document Date Within x Days:** The maximum age (in days) of documents to be displayed in the table. By default, 30 is specified in this box.



We recommend setting up an automation schedule to erase or pseudonymize personal data in imported sales orders and related documents regularly.

Retail Commerce: Support for Product Import

In previous versions of Acumatica ERP, it was possible to only export stock, non-stock, and template items from Acumatica ERP to external e-commerce systems. The import of products from external systems could be done only through import scenarios.

Starting in Acumatica ERP 2024 R1, support has been added for the import of products from Shopify and BigCommerce stores to Acumatica ERP through the commerce connector.

New Sync Directions for Items

To support the import of products from Shopify and BigCommerce stores, the *Import* and *Bidirectional* sync directions have been added for the *Stock Item*, *Non-Stock Item*, and *Template Item* entities. An administrative user can select the sync direction for an entity on the **Entity Settings** tab of the [BigCommerce Stores](#) (BC201000) and [Shopify Stores](#) (BC201010) forms and on the [Entities](#) (BC202000) form.

On the [Entities](#) form, the **Import Mapping** and **Import Filtering** tabs have been added. Now users can specify additional mapping, override the default mapping of product fields for import, and define filtering conditions to include product data in synchronization.



Real-time synchronization is not supported for the import of stock, non-stock, and template items.

Import of Stock and Non-Stock Items

To set up the import of products from a BigCommerce or Shopify store, an administrative user should specify the following settings on the **Inventory Settings** tab (**Import Settings** section) of the [BigCommerce Stores](#) (BC201000) and [Shopify Stores](#) (BC201010) forms:

- **Inventory Numbering Sequence** box: The numbering sequence that is used to generate identifiers for imported stock, non-stock, and template items.
- **Inventory Numbering Template** box: This box is available only if the *INVENTORY* segmented key consists of multiple segments. This character string, such as ____ - ____ -#####, initially shows the number and length of segments in the *INVENTORY* segmented key, which is configured on the [Segmented Keys](#) (CS202000) form and defines the structure of the identifiers used for inventory items in Acumatica ERP. The groups of underscores represent the constant segments, and the number signs represent the auto-numbered segment. The administrative user replaces the underscores with the values of the constant segments to be used in the identifiers of the stock, non-stock, and template items imported from the external e-commerce system.

Each item that is imported to Acumatica ERP is assigned an inventory ID based on its SKU in the external system. If there is no SKU in the external system, the identifier is generated based on the inventory numbering sequence specified in the **Inventory Numbering Sequence** box.

Some item settings are not imported from an external system but are required for creating a stock item on the [Stock Items](#) (IN202500) and a non-stock item on the [Non-Stock Items](#) (IN202000) form. The system copies these settings from the item class assigned to the item. The way the system assigns an item class to an item depends on the external system as follows:

- BigCommerce: The administrative user specifies the item class to be assigned to the imported stock and non-stock items in the **Item Class for Stock Items** and **Item Class for Non-Stock Items** boxes on the **Inventory Settings** tab (**Import Settings** section) of the [BigCommerce Stores](#) form.
When an item is imported, the system assigns the item class to it based on these settings.
- Shopify: The administrative user fills in the **Item Class for Stock Items** and **Item Class for Non-Stock Items** boxes on the **Inventory Settings** tab (**Import Settings** section) of the [Shopify Stores](#) form. Additionally, they can specify a substitution list in the **Substitution List for Item Classes** box. On the [Substitution Lists](#)

(SM206026) form, the specified substitution list should contain mapping between the product types used in the Shopify store and the item classes defined on the [Item Classes](#) (IN201000) form.

When an item is imported, the system searches the item class to assign as follows:

- Checks whether the item's product type is mapped to any item class in the substitution list specified in the **Substitution List for Item Classes** box of the **Inventory Settings** tab on the [Shopify Stores](#) form.
- Checks whether the item's product type matches any item class on the [Item Classes](#) form.
- Assigns the item class specified in the **Item Class for Stock Items** or **Item Class for Non-Stock Items** box.

The following screenshot shows the product import settings for a Shopify store.

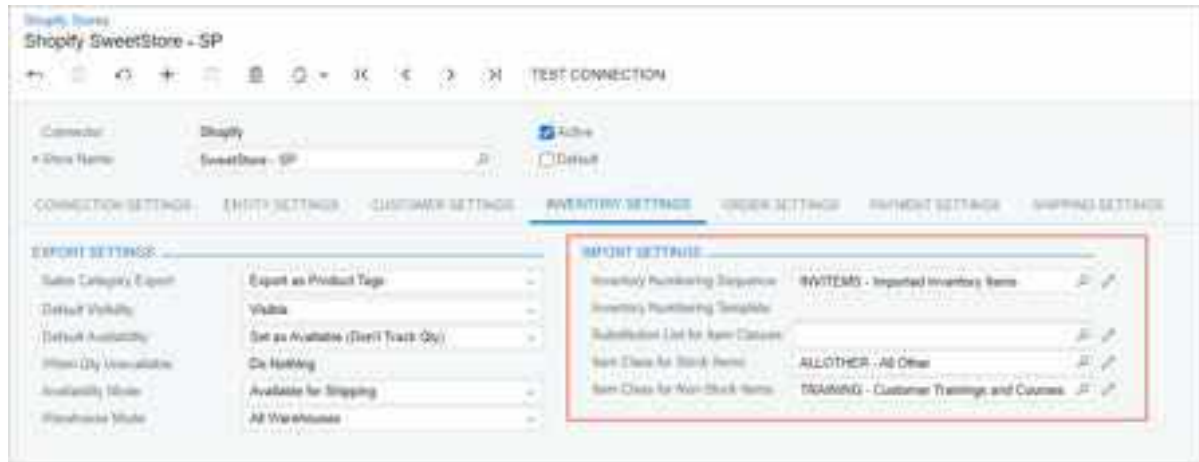


Figure: The Import Settings section on the Shopify Stores form

Stock and non-stock items are imported during the synchronization of the *Stock Item* and *Non-Stock Item* entities, respectively. The administrative user first prepares data on the [Prepare Data](#) (BC501000) form and then processes it on the [Process Data](#) (BC501500) form.

Import of Matrix Items

When the *Template Item* entity is activated for a BigCommerce or Shopify store and the *Import* or *Bidirectional* synchronization direction is selected for this entity, the administrative user must specify the numbering sequence to generate inventory IDs for imported items. They select the sequence in the **Inventory Numbering Sequence** box of the **Inventory Settings** tab on the [BigCommerce Stores](#) (BC201000) or [Shopify Stores](#) (BC201010) form.

Template items are imported to Acumatica ERP along with their matrix items during the synchronization of the *Template Item* entity. The administrative user first prepares data on the [Prepare Data](#) (BC501000) form and then processes it on the [Process Data](#) (BC501500) form.

During the first import of a template item, the synchronization fails because the item's options and option values from an external e-commerce system are not yet mapped with attributes and attribute values in Acumatica ERP. On the new [Attribute Mapping for Template Item Import](#) (BC203000) form, the system populates the list of product variants and their unmapped options and option values (see the following screenshot).

External ID	Item Class	External Option	External Option Value
10000000000000000000	General	Color	Red
10000000000000000000	General	Color	Blue
10000000000000000000	General	Color	Green
10000000000000000000	General	Color	Yellow

Figure: The new Attribute Mapping for Template Item Import form

For each group of items with the same external ID, the administrative user must specify the item class. The system attempts to automatically map the attributes and attribute values of that class with the external options and option values of the item. To do this, it compares the description of attributes and attribute values in Acumatica ERP with the titles of options and option values in the external e-commerce system. The search for matches is case-insensitive. If the system cannot find a match for any of the options and option values, the administrative user needs to manually specify the appropriate attributes and attribute values in the table.

The administrative user can select the item class in the **Item Class to Assign** box and click **Update Item Class** on the form toolbar to propagate the selected value to the table rows. They can also click **View Attributes** to open the [Attributes](#) (CS205000) form in a pop-up window and review the attributes and attribute values that have already been created in Acumatica ERP.

After the options and option values have been mapped to the attributes and attribute values for an item, the administrative user can process its sync record on the [Process Data](#) form or the [Sync History](#) (BC301000) form.

Retail Commerce: Import of Shopify POS Exchanges

In Shopify, it is possible to exchange a product from a point-of-sale (POS) order for the same product at the same price or a different price, or for a different product at the same price or a different price.

Starting in Acumatica ERP 2024 R1, POS exchanges can be imported from a Shopify store into Acumatica ERP.



- Before the company can import Shopify POS exchanges into Acumatica ERP, Shopify must enable API access for POS exchange data in the store itself. A representative of the company should contact Shopify to request this access.
- The synchronization of Shopify POS orders is available if the *Shopify POS Connector* feature is enabled on the [Enable/Disable Features](#) (CS100000) form and if the **Import POS Orders** check box is selected on the **Order Settings** tab of the [Shopify Stores](#) (BC201010) form.

Specifying the Order Types for Direct and Shipped POS Exchanges

In previous versions of Acumatica ERP, to set up the import of Shopify POS orders, an administrative user had to specify the order type to be assigned to imported orders on the **Order Settings** tab of the [Shopify Stores](#) (BC201010) form. In Version 2024 R1, to set up the import of Shopify POS exchanges, the user also needs to specify the order type to be assigned to exchanges in the **Order Type for Exchange** box. This box has been added to the following new sections (as shown in the following screenshot):

- **Direct POS Orders:** In this section, the administrative user specifies the order types for direct Shopify POS orders and Shopify POS exchanges—that is, for orders and exchanges that happen over the counter and do not require shipping. The order type specified in the **Order Type for Exchange** box of this section must have the *MO - Mixed Order* template selected and have both the *Receipt* operation and the *Issue* operation activated on the [Order Types](#) (SO201000) form.
- **Shipped POS Orders:** In this section, the administrative user specifies the order types for Shopify POS orders and Shopify POS exchanges that require shipping. The order type specified in the **Order Type for Exchange** box of this section must have the *RC - Return for Credit* template selected and have both the *Receipt* operation and the *Issue* operation activated on the [Order Types](#) form.

Figure: The new UI elements for the import of POS orders and exchanges

Exchanges for direct and shipped Shopify POS orders are imported during the synchronization of the *Refund* entity, which an administrative user should activate on the **Entity Settings** tab of the *Shopify Stores* (BC201010) form.



We recommend creating dedicated order types for Shopify POS exchanges instead of modifying predefined order types. For details, see [Custom Sales Order Types](#).

Importing Direct POS Exchanges

When a direct Shopify POS exchange is imported, the way the system processes the documents depends on the status of the Shopify POS order on the *Sales Orders* (SO301000) form.

If the sales order has the *Open* or *On Hold* status, the system does the following:

- In the sales order, on the **Details** tab of the *Sales Orders* form, inserts a line for the new item
- Also on the *Sales Orders* form, creates a return order with the order type specified in the **Order Type for Exchange** box of the **Direct POS Orders** section on the **Order Settings** tab of the *Shopify Stores* (BC201010) form
- In the new return order, inserts a line with the *Receipt* operation for the exchanged item
- On the *Payments and Applications* (AR302000) form, creates either of the following:
 - A payment in the additional amount if the extended price of the new item is higher than the extended price of the exchanged item
 - A refund in the excessive amount if the extended price of the new item is lower than the extended price of the exchanged item

Because of API limitations, the order total now includes the amounts of both the exchanged item and the new item. The user needs to manually create an additional payment and refund for the exchange on the *Payments and*

[Applications](#) (AR302000) form. The amounts of the payment and refund depend on whether the item was exchanged at the same price, a higher price, or a lower price, as described in the following table.

Price Change	Payment Amount	Refund Amount
The new item's price is the same.	Extended price of the exchanged item	Extended price of the exchanged item
The new item's price is the higher.	Extended price of the exchanged item	Extended price of the exchanged item
The new item's price is the lower.	Extended price of the new item	Extended price of the new item



We recommend processing each direct POS order as soon as it is imported into Acumatica ERP so that it has the *Completed* status before an exchange is initiated. Thus, users will not have to create additional payments and refunds manually.

If the sales order has the *Completed* status, the system does the following:

- Creates a new sales order with the order type specified in the **Order Type for Exchange** box of the **Direct POS Orders** section on the **Order Settings** tab of the [Shopify Stores](#) form
- In the new order, on the **Details** tab of the [Sales Orders](#) form, inserts a line with the *Receipt* operation for the exchanged item, and a line with the *Issue* operation for the new item
- If the price of the new item is different from the price of the original item, creates a payment for the additional amount or a refund for the amount that needs to be returned to the customer on the [Payments and Applications](#) form

Importing Shipped POS Exchanges

Items in a shipped POS order can be exchanged only if the order has been fully shipped. When a Shopify POS exchange is imported, the system does the following:

- Creates a new sales order on the [Sales Orders](#) (SO301000) form with the order type specified in the **Order Type for Exchange** box of the **Shipped POS Orders** section on the **Order Settings** tab of the [Shopify Stores](#) (BC201010) form
- In the new order, on the **Details** tab of the [Sales Orders](#) form, inserts a line with the *Receipt* operation for the exchanged item, and a line with the *Issue* operation for the new item
- Applies the invoice of the original sales order to the new order
- If the price of the new item is different from the price of the original item, creates a payment for an additional amount or a refund for the amount that needs to be returned to the customer on the [Payments and Applications](#) form

Reporting: Use of Generic Inquiries as Data Sources for a Generic Inquiry

In previous versions of Acumatica ERP, only data access classes (DACs) could be specified as data sources for a generic inquiry. The technical specialist (that is, the user developing the generic inquiry) then joined the added DACs one by one through key fields to construct a query. Some inquiries could have multiple tables joined into very complex queries.

Acumatica ERP 2024 R1 simplifies the process of constructing a query. Now a technical specialist can specify generic inquiries as data sources for a generic inquiry. That is, they can create multiple simple generic inquiries and reuse them as data sources for a generic inquiry. The specialist build a complex request by combining the simple inquiries into one.

Adding a Generic Inquiry as a Data Source

In Acumatica ERP 2024 R1, the following elements have been renamed or added on the *Generic Inquiry* (SM208000) form:

- The **Tables** tab has been renamed to **Data Sources** (see Item 1 in the following screenshot).
- The **Table Name** column in the table of this tab has been renamed to **Source Name** (Item 2).
- The **Generic Inquiries** tab has been added to the lookup table for the **Source Name** column (Item 3).

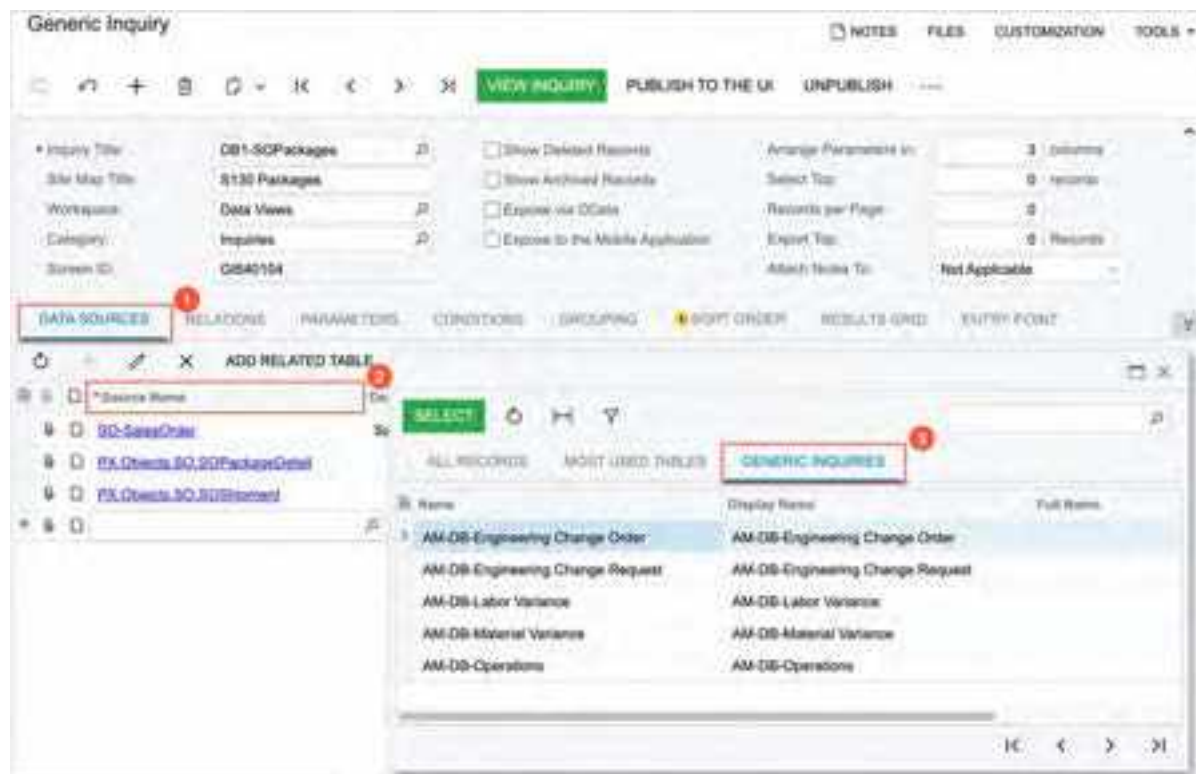


Figure: User interface changes on the Generic Inquiry form



On the **Generic Inquiries** tab of the lookup table, the system displays (that is, makes available for selection) only inquiries that are not using the current inquiry as a source.

When a specialist uses generic inquiries as data sources for other inquiries, the system does not limit the number of levels of nesting. It ensures only that an inquiry is not a parent to another inquiry that uses it as data source.



The term *parent* refers to a generic inquiry that uses another generic inquiry as its data source.

To add a generic inquiry as a data source, a technical specialist clicks **Add Row** on the table toolbar of the **Data Sources** tab. In the new row, the specialist opens the lookup table for **Source Name**. On the **Generic Inquiries** tab of the lookup table, the specialist selects the needed inquiry. The system adds the inquiry to the table and switches focus to the **Alias** column. The specialist can type an alias for the inquiry or skip this step. The system inserts the value from **Source Name** if no alias has been specified.

If the added generic inquiry is a parent to an inquiry that in turn is a parent to an inquiry (and so on in a chain of relations), each contained inquiry is considered a data source for the selected inquiry. However, the system does not add all the nested inquiries to the table of the **Data Sources** tab, only the selected one.

For each added data source, the technical specialist needs to specify the relations between pairs of data sources (tables or inquiries) on the **Relations** tab. For each pair of related data sources added to the **Table Relations** table, the specialist specifies the links between these two data sources in the **Data Field Links for Active Relations** table. If a field from the source inquiry is not stored in the database, it cannot be used to define a relation.



The **Related Tables** dialog box, which can be used to add relations between tables, is not available for adding relations between inquiries. When a technical specialist selects a row with an inquiry in the table on the **Data Sources** tab or in the **Table Relations** table on the **Relations** tab, the **Add Related Table** button becomes unavailable.

Adding Fields from a Source Inquiry to the Results Grid

When a technical specialist adds a generic inquiry as a data source on the *Generic Inquiry* (SM208000) form, the system does not add its fields to the **Results Grid** tab of the form. The specialist should manually add the needed fields.

When the specialist adds a field from the source inquiry on the **Results Grid** tab, the system copies the following settings from the source:

- **Use in Quick Search**
- **Quick Filter**
- **Caption**
- **Width**
- **Schema Field**
- **Style Formula**

For the rest of the settings the system inserts default values. The system modifies the copied settings to include the source inquiry name in the field names used in these settings. For example, if a field from source inquiry *A* is used in a style formula, the system will modify the field name to *A.field_name*.

The system does not copy the navigation settings for the fields from the source inquiry. However, if such a field has customized navigation settings (that is, different from the default behavior), the system will use these settings. These settings will apply for all parent inquiries where this field is added to the **Results Grid** tab. The specialist can modify the navigation settings for the current inquiry to achieve the needed behavior.

Using Parameters from a Source Inquiry

The system does not add parameters from source inquiries automatically to the **Parameters** tab of the *Generic Inquiry* (SM208000) form. A technical specialist can add any needed parameters manually. As with the field names, the system will display parameter names with the alias of the source inquiry preceding the parameter name.

When the specialist adds a row on the **Parameters** tab and selects a parameter from a source inquiry in the drop-down list in the **Name** column, the system adds the parameter and copies its settings. If the specialist first types some name in the **Name** column and then opens the drop-down list in this cell and selects a parameter from a source inquiry, the system adds the parameter with the typed name and the settings from the selected parameter.

When parameters in the parent and source inquiry share the same names, the system creates a link between these parameters. The specialist can adjust the parameter settings. However, these modifications must align with the settings in the source inquiry. For instance, if a parameter is defined as an integer type in the source inquiry, it should not be redefined as a string.

Modifications made in the parent inquiry do not affect the linked source. However, if a specialist modifies a parameter in the source inquiry, the system will show a warning indicating that the changes will affect the parent inquiry.

If a specialist changes the name of the parameter with the linked source, the system removes the link between these parameters. If the specialist reverses the name change, the system restores the link.

Application of Access Rights

A user with access rights to view a generic inquiry will see all the data that this inquiry returns, regardless of the user's access rights to the source inquiries that are included in the query.

If data from the source inquiry is restricted through the use of restriction group settings, the system may limit the display of data based on these settings.

Modifying an Inquiry Used as a Data Source

After a generic inquiry has been added to the table on the **Data Sources** tab of *Generic Inquiry* (SM208000) form, its name is displayed as a link. If a technical specialist clicks the link, the *Generic Inquiry* form opens in a new browser tab with the inquiry selected. The system will display a warning indicating that the inquiry is used as a data source for another inquiry. If a specialist modifies the inquiry used as a data source, the system opens the **Copy Generic Inquiry** dialog box (see the following screenshot). The dialog box asks the specialist if they want to create a copy to save modifications (which leaves the original inquiry intact) rather than overwriting it.



Figure: The Copy Generic Inquiry dialog box

If the specialist clicks **Copy**, the system saves a copy of the original inquiry with the modifications; it adds after the original value in **Inquiry Title** a hyphen and a number. The system increments the number each time a copy of that inquiry is saved.

Deleting an Inquiry Used as a Data Source

A technical specialist may want to delete an inquiry that is used as a data source by opening this inquiry on the [Generic Inquiry](#) form and clicking **Delete** on the form toolbar. The system displays a warning that lists the inquiries that use this inquiry as a data source.

If the specialist chooses to delete this inquiry, the system will mark its fields with a warning when the specialist opens a parent inquiry on the [Generic Inquiry](#) form. Suppose, a field from the deleted source inquiry was earlier added on the **Results Grid** tab of the parent inquiry. When the specialist opens the parent inquiry (after deleting the source inquiry), the system will display a warning in the row with the field from the delete source inquiry on the **Results Grid** tab (see the following screenshot).

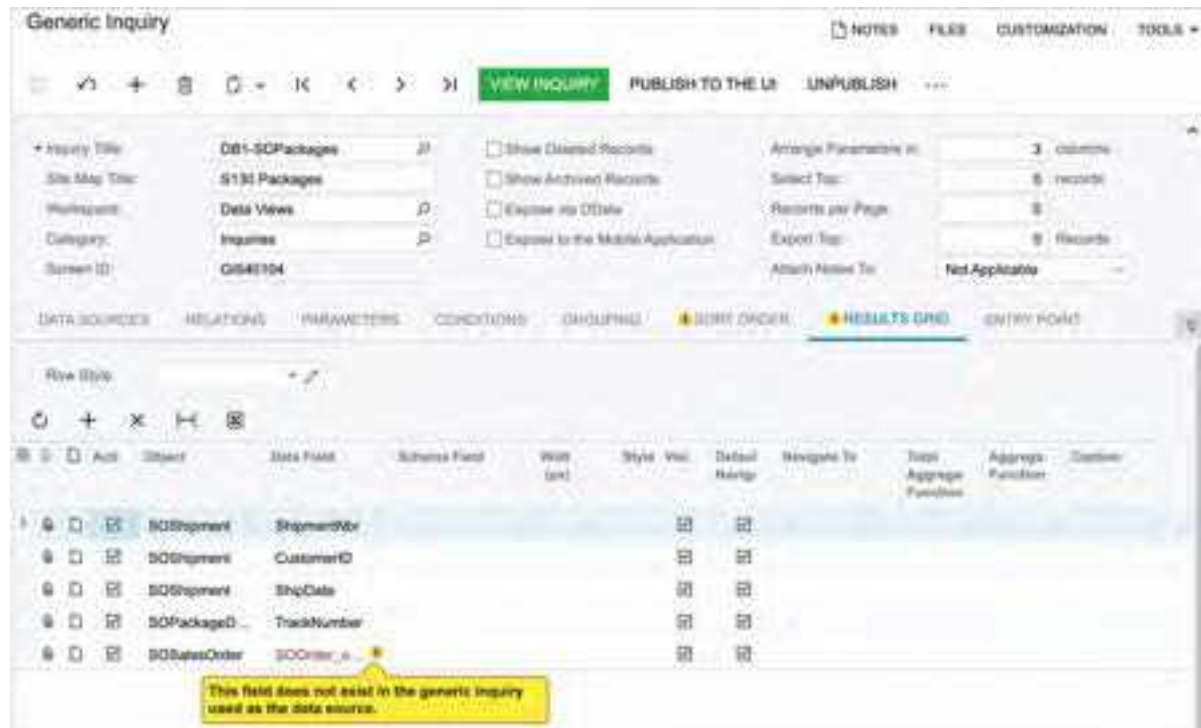


Figure: The warning about the deleted field

Similarly, if a specialist deletes a field on the **Results Grid** tab of a source inquiry that is somehow used in its parent inquiry, the system will display a warning for the deleted fields when the specialist opens a parent inquiry on the [Generic Inquiry](#) form.

Exporting and Importing Inquiries

In Acumatica ERP 2024 R1, when a technical specialist exports a generic inquiry that has other inquiries as data sources, the system includes all the inquiries from the chain of sources in the export file.

Also, when a specialist imports a file with generic inquiries and inquiries in the system have the same identifiers, the system displays a warning with the list of the inquiries. The specialist can cancel the import, or they can confirm the import of the inquiries, causing the system to overwrite the inquiries.

System Administration: Population of Values in Custom Columns

In Acumatica ERP 2024 R1, for snapshots that have been restored by using the Acumatica ERP Configuration Wizard, the system populates the custom columns in a destination tenant with values from the source tenant.

Restoration of a Snapshot with Custom Column Values

A system administrator might need to modify an Acumatica ERP instance by adding custom columns to a database table and filling in these columns with certain values. (For example, these changes might be made to support the addition of a new tab to a form and the addition of new boxes to this tab.) The administrator might also need to create a snapshot in a tenant that has such modifications. The administrator can then restore this snapshot in one of the following ways:

- By using the [Tenants](#) (SM203520) form.

The administrator opens the **Upload Snapshot Package** dialog box and selects the **Include Data From Custom Columns** check box.

This approach is suitable for snapshots whose size does not exceed 1 gigabyte.

- By using the Acumatica ERP Configuration Wizard.

The administrator copies the file with the snapshot to the `Acumatica ERP\Database\Data` folder, creates a tenant in the same instance or another instance, and selects the copied file as a dataset.

This approach is suitable for snapshots of any size.

In previous versions of Acumatica ERP, if the administrator restored a snapshot with custom columns by using the Acumatica ERP Configuration Wizard, these columns were empty in the destination tenant.

In Acumatica ERP 2024 R1, the administrator can use this approach for large snapshots that contain custom database columns with values.



The feature is supported for snapshots in XML format only.

System Administration: Support for Formulas in Triggering Conditions

Acumatica ERP 2024 R1 introduces support for formulas in the trigger conditions for business events. Now when a system administrator is defining a business event of any type on the [Business Events](#) (SM302050) form, the administrator can specify a formula in a trigger condition.

Use of Formulas in Conditions

Formulas give the administrator the ability to use advanced calculations and data transformation functions if some values are calculated or depend on data from other sources.

In certain scenarios, the administrator might want the system to compare the values of different boxes in order to decide whether it should trigger a business event. These usage scenarios include the following:

- The owner of a record is not the same as the creator of the record.
- The last activity related to a case whose priority is *High* took place more than eight hours ago.

In previous versions of Acumatica ERP, the administrator had to create a generic inquiry to retrieve this data, which could be time consuming.

In Acumatica ERP 2024 R1, the administrator can use the Formula Editor and enter formulas in the **Value 1**, **Value 2**, and **Field Name** columns on the **Trigger Conditions** tab of the [Business Events](#) (SM302050) form. The following screenshot show the Formula Editor (Item 1) for the **Value 1** column (Item 2).

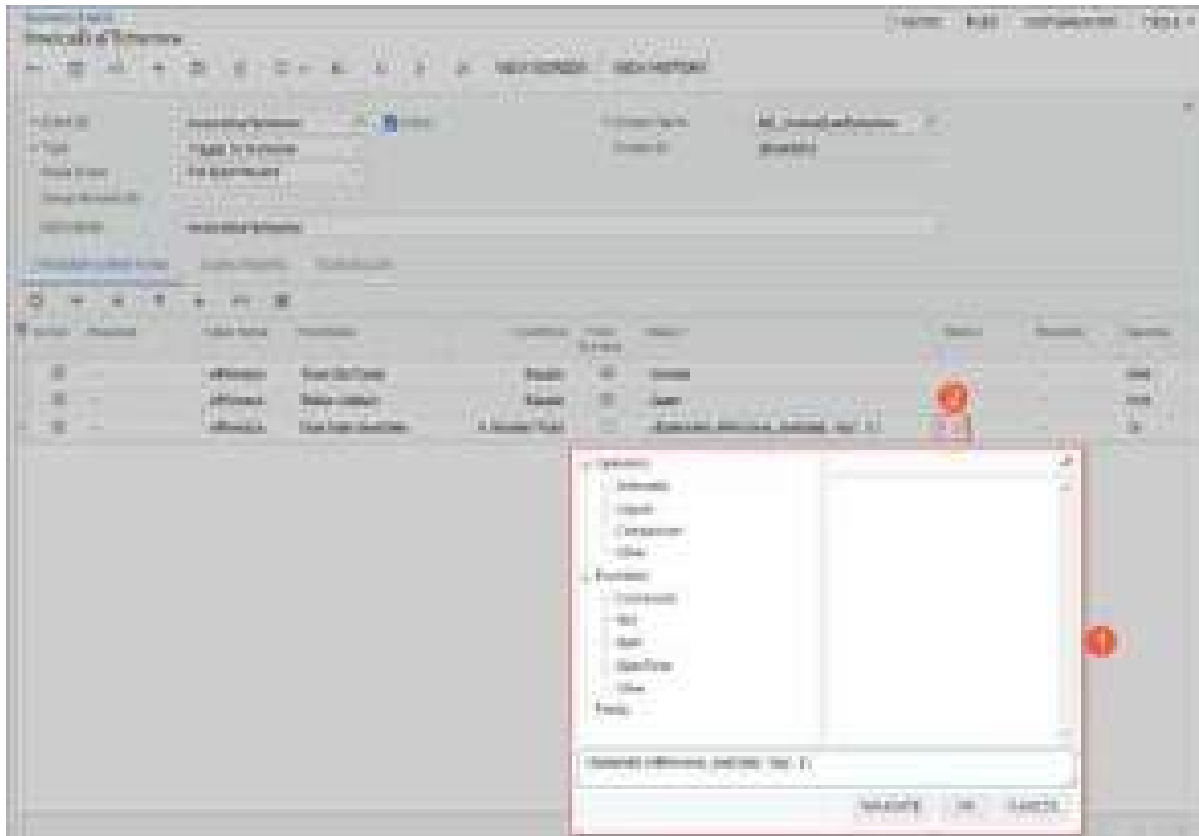


Figure: Formula Editor for a triggering condition



The Formula Editor is available in the **Value 1** and **Value 2** columns if the **From Schema** check box is cleared for the row.

The process of specifying formulas in triggering conditions is the same as the process of using formulas on other forms that contain the Formula Editor. For details on the Formula Editor, see [Formulas in Inquiry Results: General Information](#) and [FormulasThe Use of Formulas](#).



For business events of the *Triggered by Record Change* type, the system does not add to the **Fields to Track** tab the fields that the administrator has used in the formulas. If these fields should be tracked, the administrator must add them to this tab manually.

System Administration: Support of Dialog Box Values for Business Events

In previous versions of Acumatica ERP, a customizer could configure dialog boxes in a workflow so that users can later specify certain values in the elements of these dialog boxes. If a system administrator then created a business event, it was not possible to use these values in the subscribers to this business event.

Acumatica ERP 2024 R1 introduces the support of these dialog box values in business events.

Specifying Dialog Box Values in Subscribers

For business events of the *Triggered by Action* type that are configured for data entry forms, a system administrator can use dialog box values in subscribers to business events. A subscriber can be a task, action execution, or notification template (email, push, or SMS notification). In Acumatica ERP 2024 R1, the administrator can also use dialog box values in trigger conditions. With business events defined in this way on the [Business Events](#) (SM302050) form, the system can trigger business events when certain values are specified in the dialog boxes that are displayed when the user performs those actions.

The dialog box values can be selected in the following boxes of the forms where the subscribers are created:

- On the [Email Templates](#) (SM204003) form:
 - **To**
 - **CC**
 - **BCC**
 - **Subject**
 - **Insert > Data Field**
- On the [Mobile Notifications](#) (SM204004) form:
 - **To**
 - **Title**
 - **Insert > Data Field**
- On the [Task Templates](#) (SM204005) form:
 - **Owner**
 - **Value** on the **Task Settings** tab (**Fields > Internal** in the Formula Editor)
- On the [Action Executions](#) (SM204007) form:
 - **Value** on the **Keys** tab
 - **Value** on the **Field Values** tab

On the **Screen Fields** tab of the lookup table in any of these boxes of the forms listed above, the administrator searches for a dialog box by the name of the action for which this dialog box is configured. The administrator then selects the check box for the needed box of this dialog box, and clicks **Select**. The system inserts the placeholder for the dialog box value, as it does with other elements in the templates.

Configuring the Support of Dialog Box Values in Business Events

In most cases, the use of dialog box values in business events requires the modification of the form's workflow. In the customized workflow, the administrator needs to create an action that displays a dialog box, and then use the values of this dialog box in the trigger conditions or in the subscribers of a business event.

For example, the administrator could customize the workflow for the [Cases](#) (CR306000) form by performing the following general steps:

1. On the [Dialog Boxes](#) page, creating a dialog box (**Share**) that has a single box (**Share With**).

2. On the [Actions](#) page, adding a new action (Share), and specifying the new dialog box for this action.

When a user clicks the button corresponding to the action on the form, the dialog box opens, and the user specifies the username of the person with whom they want to share current record.

3. Publishing the customization project.

On the [Business Events](#) (SM302050) form, the administrator then creates a business event triggered by the *Share* action, and creates an email notification on the **Subscribers** tab of the form. In the **To** box of the [Email Templates](#) (SM204003) form (see Item 1 in the following screenshot), the administrator then selects the **Share With** box of the **Share** dialog box, which the system displays when a user shares a case (Item 2).

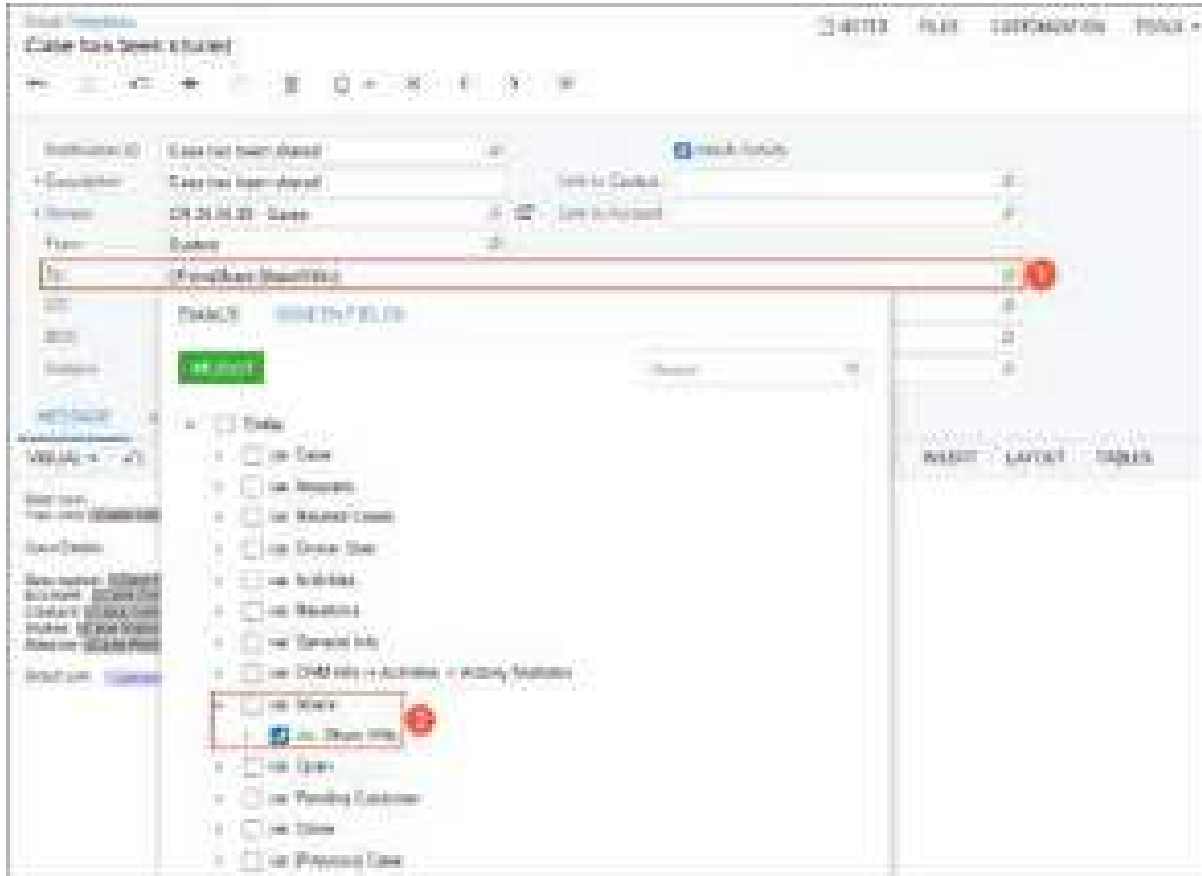


Figure: The selection of a dialog box value on the Email Templates form

Integration Development: Migration to .Net Core

In Acumatica ERP 2024 R1, the changes described in this topic have been made to support .Net Core in OData Version 4.0 and the contract-based web services APIs.

OData Version 4.0 Changes

A developer can find the following changes in OData Version 4.0 responses:

- A request for *\$metadata* returns an additional attribute, `Scale="Variable"`, for `Edm.Decimal` types, as shown in the following example.

```
<Property Name="ControlAmount" Type="Edm.Decimal" Nullable="false" Scale="Variable"/>
```

- In a request for *\$metadata*, if the *\$format=json* parameter has been specified, an error is returned. In previous versions, the parameter was ignored, and XML was returned.
- An empty response body is returned if the response code is *404 Not Found*.
- A request with an unsupported HTTP method (such as `POST`, `PUT`, or `DELETE`) now returns *405 Method Not Allowed* instead of *404 Not Found*.
- A request with an invalid `OData-Version` header, such as *6.0*, now returns *400 Bad Request* instead of *404 Not Found*.
- If full metadata is requested, such as in the following request, the value of `@odata.id` is different from what was returned in the previous versions.

```
https://localhost/instanceName/ODataV4/tenantName/ARSetup
?$format=application/json;odata.metadata=full
```

The new value includes the full path to the service, such as `"@odata.id": "https://localhost/instanceName/odatav4/tenantName/ARSetup"`

- In previous versions, if the client did not specify the `Accept-Charset` header in a request for *\$value* (such as the one shown below), the UTF-8 BOM (byte order mark) was added to a response. Now the UTF-8 BOM is not added.

```
https://localhost/instanceName/ODataV4/tenantName/BAccount('C000000001')/AcctName/
$value
```

OpenAPI 2.0 Changes

The following changes have been introduced in the OpenAPI 2.0 files of the REST API endpoints:

- Every operation now includes `"produces": ["application/json", "text/json"]` because every operation can return `HttpError` as JSON.
- The default values (such as `"consumes": []`, `"required": false`, and `"properties": {}`) are no longer emitted.
- When `schema` is a reference (such as `"schema": {"$ref": "..."}`), it no longer contains `"type": "object"`.
- The order of parameters has been changed: `"in": "body"` is now placed after `"in": "query"`.

Full Removal of the Contract-Based SOAP API Support

Contract Versions 2 and 3, which supported the SOAP API, have been removed in Acumatica ERP 2023 R2. In Acumatica ERP 2024 R1, system endpoints with Contract Versions 2 and 3, which are *Default/17.200.001* and *Default/18.200.001*, respectively, have also been removed.

Integration Development: Support for JWT Bearer Tokens for Client Authentication

In previous versions of Acumatica ERP, for a client application that implements the OAuth 2.0 or OpenID Connect (OIDC) authorization mechanism, only shared secrets were available. That is, a developer registered the client application on the [Connected Applications](#) (SM303010) form to create a shared secret, which is a secret key that is stored both in the Acumatica ERP instance and in the client application.

Acumatica ERP 2024 R1 implements support for JSON Web Token (JWT) Bearer Tokens for client authentication. With this support, the private secret key is stored only in the client application, while the Acumatica ERP instance holds the public key.

For a client application to use the new functionality, the developer needs to do the following:

1. Add a JSON Web Key (JWK) or a URL for JSON Web Key Set (JWKS URL) for the application on the [Connected Applications](#) (SM303010) form, as described in the following section.
2. In the client application, implement support of JWT, as described below.
3. Include the information about the connected application in the customization project.

For a detailed description of OAuth 2.0 or OIDC mechanism of authorization, see [OAuth 2.0 and OIDC: General Information](#)

Registration of the Application on the Connected Applications Form

When a developer registers the application on the [Connected Applications](#) (SM303010) form, the developer adds either a JWK or an JWKS URL on the **Secrets** tab.

To add a JWK, the developer clicks the new **Add JSON Web Key** button on the table toolbar. The developer specifies the needed data in the dialog box that opens, as shown in the following screenshot. For JWK, Acumatica ERP supports the format that is defined in RFC7517 (<https://datatracker.ietf.org/doc/html/rfc7517#section-4>).

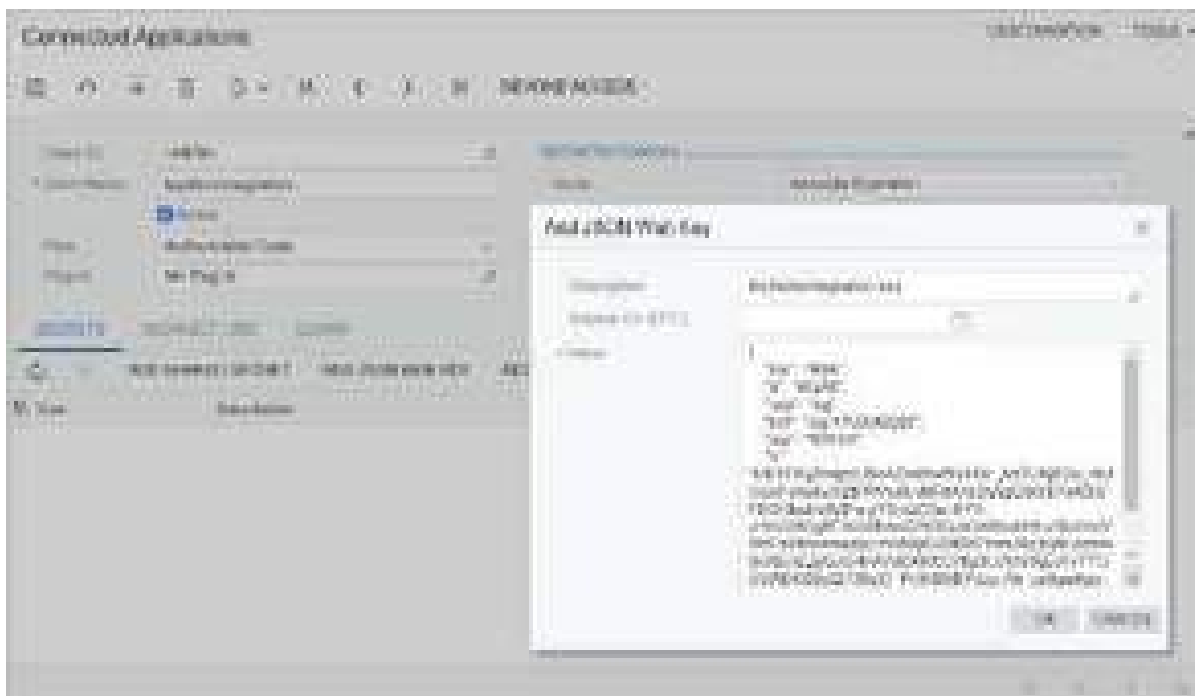


Figure: The Add JSON Web Key dialog box

To add a JWKS URL, the developer clicks the new **Add JSON Web Key Set URL** button on the table toolbar and specifies the needed data in the dialog box that opens. The JWKS URL should point to a location that satisfies the following requirements:

- It is accessible from each Acumatica ERP instance that is used with the client application. If the location is inaccessible, the token request is declined with the `invalid_client` error.
- It complies with RFC7515 (<https://datatracker.ietf.org/doc/html/rfc7517#section-5>).
- It should support a reasonable load because each Acumatica ERP instance that is used with the client application will access this location on every token request.

For details about registration of client applications in Acumatica ERP, see [Registration of an OAuth 2.0 or OIDC Application: General Information](#).

JWT Support in the Client Application

In the client application, a developer implements support of JWT, as described in <https://www.rfc-editor.org/rfc/rfc7523.html#section-2.2>. JWT can be implemented for any flow that is supported by Acumatica ERP for client authentication.

The following diagram shows the authorization code flow that uses JWT.

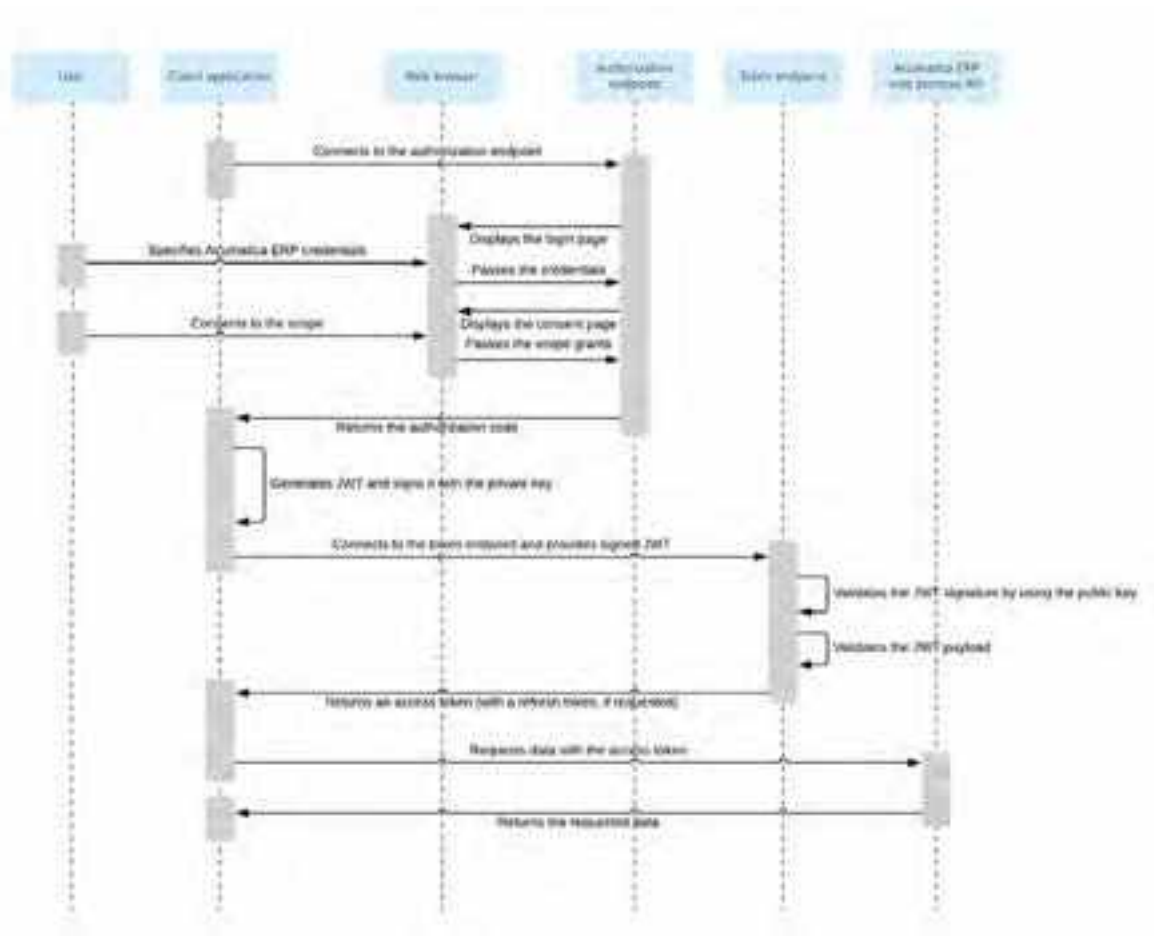


Figure: Authorization code flow with JWT

For implementation details, see [Authorization Code Flow: General Information](#), [Resource Owner Password Credentials Flow: General Information](#), and [Hybrid Flow: General Information](#).

Mobile API: The Ability to Display Thumbnails in Lists

For the Acumatica mobile app connected to an instance of Acumatica ERP 2024 R1, a developer can configure the display of thumbnails—that is, small images—to be displayed for the records in the list view of a mobile app screen. For each listed record, a thumbnail can be displayed next to the record description if the record includes a field containing an image. An example is shown in the following screenshot, where thumbnails are displayed for each record in the Photo Log list view.



Figure: Thumbnails in the list view

When the app displays the list view with the images, it asynchronously downloads the images for each record and displays them in the list. If an image is not available, the icon of an image file is displayed instead (see the second record in the screenshot above).

Configuring Thumbnails

For thumbnails to be displayed in the list view of the mobile screen, a developer needs to configure the mapping of the list in MSDL. For that purpose, a new `elementType` value is introduced: `FilePreview`. In the list mapping, the developer needs to specify `elementType = FilePreview` in the field object that contains the image file to indicate that the thumbnail should be displayed.



A field marked with `FilePreview` should have a `FileID` value that corresponds to the `FileID` value in the `UploadFile` table in the instance database.

The following code shows an example implementing the screenshot above.

```
add container "Photos"
{
  fieldsToShow = 5
  containerActionsToExpand = 1
  add field "Name" {
    listDisplayFormat = CaptionValue
  }
  add field "PhotoID" {
    listDisplayFormat = CaptionValue
  }
  add field "UploadedOn" {
    listDisplayFormat = CaptionValue
  }
  add field "UploadedBy"
  {
    displayName = "Created By"
    listDisplayFormat = CaptionValue
  }
  add field "Description" {
    listDisplayFormat = CaptionValue
  }
  add field "FileId" {
    elementType = FilePreview
  }
  add selectionAction "Delete" {
    icon = "system://Trash"
    behavior = Delete
    after = Close
  }
  add containerAction "ViewPhoto" {
    behavior = Open
    redirect = True
  }
}
```

Platform API: Introduction of the PXBqlTable Class

Developers frequently use DAC extensions, which give them the ability to extend the standard data access classes (DACs) defined in the application code. The Acumatica Customization Platform associates one or more instances of a DAC extension with the corresponding instance of a standard DAC class.

In previous versions of Acumatica ERP, the platform implemented this functionality by storing all the DAC extensions in one place in the memory. Although this approach worked well, it also led to the following issues:

- The memory usage increased over time because of the DAC extensions, causing cleanup problems and memory leaks. This resulted in an increased load on the garbage collector.
- The DAC extensions were shared during long-running user sessions and thus caused concurrency and data consistency issues.
- The same DAC instance had multiple instances of its corresponding database table, each containing different data.

In Acumatica ERP 2024 R1, DAC extensions are now stored within the instance of the corresponding DAC class. This approach alleviates the issues listed above. The platform implements this approach by placing the new `PXBqlTable` class at the top of the hierarchy in each DAC class. This maintains the system information, including cache extensions.

Previously, a developer had to declare a DAC as the following code shows.

```
public class MyDAC : IBqlTable
{
}

```

Now a developer must declare a DAC as the following code shows.

```
public class MyDAC : PXBqlTable, IBqlTable
{
}

```



Developers must update all of their existing DAC declarations by extending the `PXBqlTable` class, as shown in the preceding code examples.

Platform API: Support for Multiple Implementations of the PXImport Functionality

In previous versions of Acumatica ERP, a developer would rely on the `IPXPrepareItems` interface of the `PXImportAttribute` class to handle the import mechanism on a form. During customization, a developer had to implement all the members of this interface even if they were not actually needed. Also, there could only be one effective implementation of this interface per graph. This meant that this single implementation had to handle all the data views in a graph.

In Acumatica ERP2024 R1, this interface is now obsolete, and we recommend that developers use one of the following new interfaces, which offer more granular control for the handling of the import mechanism:

- `PXImportAttribute.IPrepare`
- `PXImportAttribute.IImport`
- `PXImportAttribute.IConfirm`

A developer can now have multiple implementations of the interfaces listed above within a graph (or in one of its extensions), and each implementation can handle its own data view. These interfaces should be implemented in a graph (or in one of its extensions) that introduces an importable data view.

The following code example shows how to implement the new `PXImportAttribute.IPrepare` interface in a graph.

```
public class MyGraph : PXGraph<MyGraph>, PXImportAttribute.IPrepare
{
    ...
    [PXImport]
    public
        SelectFrom<...>.
        View MyImportableView

    bool PXImportAttribute.IPrepare.PrepareImportRow(string viewName,
        IDictionary keys, IDictionary values)
    {
        /* Custom handlers must filter invocations that belong to their views */

        if (viewName == nameof(MyImportableView))
        {
            // prepare import
        }
        return true;
    }
}
```

The following code example shows how to implement the new `PXImportAttribute.IPrepare` interface in a graph extension.

```
public class MyGraphExtension : PXGraphExtension<MyGraph>, PXImportAttribute.IPrepare
{
    ...
    [PXImport]
    public
        SelectFrom<...>.
        View MyAnotherImportableView
```

```
bool PXImportAttribute.IPrepare.PrepareImportRow(string viewName,  
        IDictionary keys, IDictionary values)  
{  
    /* Custom handlers must filter invocations that belong to their views */  
  
    if (viewName == nameof(MyAnotherImportableView))  
    {  
        // prepare import  
    }  
    return true;  
}  
}
```

Note that when the `PrepareImportRow` handler is invoked in a graph or a graph extension for a particular data view, all of the other definitions of the `PrepareImportRow` handler in the graph or its extensions would be invoked as well. So a developer should check the first parameter of the `PrepareImportRow` handler to make sure they filter the invocation for their specific data view, as shown in the preceding code examples.

Platform API: Support for a Strongly Typed Facade for the PXCache Object

In previous versions of Acumatica ERP, a developer would rely on the weakly typed `PXCache` object to access the cache of modified data records relating to a particular table.

In Acumatica ERP2024 R1, a number of strongly typed overloads have been introduced for the `PXCache<TNode>` object. These overloads have return values and input parameters of the `TNode` type. The type parameter `TNode` is set to a data access class (DAC) that represents the table whose modified data records are stored in the cache object. We recommend that developers use the `PXCache<TNode>` object instead of the simple `PXCache` object wherever possible.

Use of the PXCache<TNode> Object

The `PXCache<TNode>` object can be declared and initialized as shown in the following code example.

```
PXCache<SOOrder> orderCache = graph.Caches<SOOrder>();
```

A developer can also directly cast a `PXCache` object to `PXCache<TNode>` when they are certain that they are working with the correct type. Direct casting of an existing `PXCache` object can be implemented as shown in the following code example.

```
public SelectFrom<SOOrder>.Where<...>.View Document;

public virtual void Foo()
{
    var orderCache = (PXCache<SOOrder>) Document.Cache;
    ...
}

protected virtual void _(Events.RowUpdated<SOOrder> e)
{
    var orderCache = (PXCache<SOOrder>) e.Cache;
    ...
}
```

Pitfalls of the PXCache<TNode> Object

A developer should not use the strongly typed `PXCache<TNode>` object in the following scenarios:

- When the DAC that is specified as the `TNode` parameter of the `PXCache<TNode>` object is a mapped DAC—that is, a DAC with `PXMappedCacheExtension` descendants. These DACs are processed not by the `PXCache<TNode>` object, but by the `PXModelExtension<TNode>` object.
- When the DAC that is specified as the `TNode` parameter of the `PXCache<TNode>` object is a candidate for cache substitution. This usually happens in cases of DAC inheritance where the `PXTableAttribute` attribute is declared on this DAC. In these cases, the developer may get an `InvalidCastException` exception. The following code example shows such a case.

```
public class MyGraph : PXGraph<MyGraph>
{
    public SelectFrom<ARRegister>.View ARDocuments;

    public void Foo()
    {
```

```

        PXCACHE<ARInvoice> cache = this.Caches<ARInvoice>();
    }
}

public class GraphHelper
{
    /* Method to enumerate strongly typed cache objects.
       This method is provided by the Acumatica Framework.
    */
    public static PXCACHE<T> Caches<T>(this PXGraph graph)
        where T : class, IBqlTable, new()
    {
        return (PXCACHE<T>)graph.Caches[typeof(T)];
    }
}

```

The `PXCACHE<ARInvoice> cache = this.Caches<ARInvoice>();` line in the code above results in an `InvalidCastException` exception because `ARInvoice` is a descendant of `ARRegister` and is marked with the `PXTableAttribute` attribute. Hence, it is a candidate for cache substitution. Since a cache of `ARRegister` type is already created by the `ARDocuments` view in the code above, the `graph.Caches[typeof(ARInvoice)]` indexer will return an instance of the `PXCACHE<ARRegister>` type. Then the system will try to downcast it to the `PXCACHE<ARInvoice>` type to match the return type of the `graph.Caches<ARInvoice>()` method. The `PXCACHE<TNode>` object is not an interface or delegate; thus, it cannot be a covariant or contravariant to its type parameter. Hence, the cast in the code above is not allowed and throws an exception.

Strongly Typed Overloads for CRUD Operations of the PXCACHE<TNode> Object

All of the basic methods of the `PXCACHE` object—such as `Insert()`, `Update()`, and `Delete()`—now accept a strongly typed parameter of the `TNode` type, and return a strongly typed object, if applicable. The following table lists these methods for both the strongly and weakly typed versions of the `PXCACHE` object.

<code>PXCACHE<TNode></code>	<code>PXCACHE</code>
<code>void Remove(TNode row)</code>	<code>void Remove(object row)</code>
<code>TNode Update(TNode row)</code>	<code>object Update(object row)</code>
<code>TNode Locate(TNode row)</code>	<code>object Locate(object row)</code>
<code>TNode Insert(TNode row)</code>	<code>object Insert(object row)</code>
<code>TNode GetOriginal(TNode row)</code>	<code>object GetOriginal(object row)</code>
<code>TNode Delete(TNode row)</code>	<code>object Delete(object row)</code>

Note that the weakly typed methods are still available in the `PXCACHE<TNode>` object. A developer can access them by passing a reference of `object` type. The following code shown an example.

```

PXCACHE<SOOrder> orderCache = graph.Caches<SOOrder>();
SOOrder order = new();
// The weakly typed Insert method is called in the following line
object orderObj = orderCache.Insert((object)order);

```




Developers should avoid the usage of the weakly typed method (and other similar weakly typed methods) that is illustrated in the code above. They should watch out for cases where a strongly typed cache's method with a strongly typed row leads to a call to a weakly typed method. In such cases, a call to a weakly typed method indicates that there is a semantic issue in the code because the compiler was unable to implicitly cast the row to the target type of the cache, which is strongly typed.

Strongly Typed Overloads for the Entity Inspection Methods

The strongly typed overloads of the various entity inspection methods are available for the `PXCache<TNode>` object. Currently, these overloads do not provide any specific advantages over their weakly typed versions. The following table lists these methods for both the strongly and weakly typed versions of the `PXCache` object.

<code>PXCache<TNode></code>	<code>PXCache</code>
<code>PXEntryStatus GetStatus(TNode row)</code>	<code>PXEntryStatus GetStatus(object row)</code>
<code>bool IsArchived(TNode row)</code>	<code>bool IsArchived(object row)</code>
<code>bool IsKeyFilled(TNode row)</code>	<code>bool IsKeyFilled(object row)</code>
<code>bool ObjectEqual(TNode a, TNode b)</code>	<code>bool ObjectEqual(object a, object b)</code>



There is only one strongly typed overload of the `ObjectEqual` method because this is the only overload that compares two instances by using all of their fields. When comparing two strongly typed instances by a set of their fields, a developer should use direct equality comparisons by using the `==` / `!=` operators instead of calling the `ObjectEqual<Field1, Field2, ..., FieldN>(object a, object b)` method.

Rows Property of the `PXCache<TNode>` Object

It is not possible to implement strongly typed overloads for properties and methods of the cache that are used for enumeration or for accessing rows. This is because they do not have any parameters, while overloading can be implemented only based on input parameters. To give developers the ability to use these properties and methods in a strongly typed manner, Acumatica ERP2024 R1 has introduced the new read-only `Rows` property for the `PXCache<TNode>` object. This property returns an instance of the `PXCache<TNode>.IStronglyTypedRows` interface, which is implemented by the `PXCache<TNode>` object itself and hence prevents any additional memory allocation. The following table lists these properties and methods for both the strongly typed version and the weakly typed version of the `PXCache` object.

<code>PXCache<TNode>.Rows</code>	<code>PXCache</code>
<code>TNode Current { get; set; }</code>	<code>object Current { get; set; }</code>
<code>TNode ActiveRow { get; set; }</code>	<code>object ActiveRow { get; set; }</code>
<code>TNode Insert()</code>	<code>object Insert()</code>
<code>TNode CreateInstance()</code>	<code>object CreateInstance()</code>
<code>IEnumerable<TNode> Inserted { get; }</code>	<code>IEnumerable Inserted { get; }</code>
<code>IEnumerable<TNode> Updated { get; }</code>	<code>IEnumerable Updated { get; }</code>

PXCache<TNode>.Rows	PXCache
IEnumerable<TNode> Deleted { get; }	IEnumerable Deleted { get; }
IEnumerable<TNode> Cached { get; }	IEnumerable Cached { get; }
IEnumerable<TNode> Dirty { get; }	IEnumerable Dirty { get; }
IEnumerable<TNode> Held { get; }	

Suppose that a developer declares and initializes a `PXCache<TNode>` object by using `PXCache<MyEntity>` `cache = graph.Caches<MyEntity>()`; . The developer declares a `PXCache` object by using `PXCache` `cache = graph.Caches[typeof(MyEntity)]`;

The following table provides some usage examples for some common scenarios that use the properties and methods described in the previous table, with its columns providing the following information:

- The first column describes the scenario—what the developer wants to do.
- The second column shows a code example for how to implement the scenario by using the `Rows` property of the strongly typed `PXCache<TNode>` object.
- The third column shows a code example for how to implement the scenario by using the weakly typed `PXCache` object.

Usage Scenario	PXCache<TNode>.Rows	PXCache
Accessing a field of the current instance	<pre>if (cache.Rows.Current .SomeFlag == true) { ... }</pre>	<pre>if ((MyEntity) cache.Current) .SomeFlag == true) { ... }</pre>
Iterating through updated entities	<pre>foreach (var ent in cache.Rows.Updated) { ent.SomeField = 42; }</pre>	<pre>foreach (var ent in cache.Updated.Cast<MyEntity>()) { ent.SomeField = 42; }</pre>
Creating a new instance of a PX-Cache item	<pre>MyEntity ent = cache.Rows.CreateIn- stance();</pre>	<pre>MyEntity ent = (MyEnti- ty) cache.CreateInstance();</pre>

The `PXCache<TNode>` object already has static strongly typed versions of a number of methods, such as `TNode CreateCopy(TNode item)`. The methods were also declared in the `PXCache<TNode>.IStronglyTypedRows` interface as instance methods so that signature collisions for the methods could be avoided. The following table lists these instance methods of the `PXCache<TNode>.IStronglyTypedRows` interface.

PXCache<TNode>.Rows Instance Methods	PXCache Instance Methods	PXCache<TNode> Static Methods
<code>TNode CreateCopy(TNode item)</code>	<code>object CreateCopy(object item)</code>	<code>TNode CreateCopy(TNode item)</code>

PXCache<TNode>.Rows Instance Methods	PXCache Instance Methods	PXCache<TNode> Static Methods
TNode RestoreCopy(TNode item, TNode copy)	void RestoreCopy(object item, object copy)	TNode RestoreCopy(TNode item, TNode copy)
TExtension GetExtension<TExtension>(TNode row)	TExtension GetExtension<TExtension>(object row)	TExtension GetExtension<TExtension>(TNode row)
TNode GetMain<TExtension>(TExtension extension)	object GetMain<TExtension>(TExtension extension)	TNode GetMain<TExtension>(TExtension extension)
TNode Extend<TParent>(TParent item)	object Extend<TParent>(TParent item)	TNode Extend<TParent>(TParent item)

Strongly Typed Overloads for the Data Manipulation Methods

For the data manipulation methods of the strongly typed `PXCache<TNode>` object, a developer can use `TNode` to build a lambda expression that provides the system with a field of this exact entity, such as `row => row.Field`. This allows the system to infer both the name of the field and its type and hence makes it possible for a developer to set or get strongly typed values with such methods. The following table lists these methods for the strongly and weakly typed versions of the `PXCache` object.

PXCache<TNode>	PXCache
void SetValueExt<TValue>(LambdaExpression fieldSelector, TNode data, TValue value)	void SetValueExt(object data, string fieldName, object value)
	void SetValueExt<TField>(object data, object value)
void SetDefaultExt<TValue>(LambdaExpression fieldSelector, TNode data, TValue value = null)	void SetDefaultExt(object data, string fieldName, object value = null)
	void SetDefaultExt<TField>(object data, object value = null)
void SetValuePending<TValue>(LambdaExpression fieldSelector, TNode data, TValue value)	void SetValuePending(object data, string fieldName, object value)
	void SetValuePending<TField>(object data, object value)
TValue GetValuePending<TValue>(LambdaExpression fieldSelector, TNode data)	object GetValuePending(object data, string fieldName)
	object GetValuePending<TField>(object data)
TValue GetValueOriginal<TValue>(LambdaExpression fieldSelector, TNode data)	object GetValueOriginal(object data, string fieldName)

PXCache<TNode>	PXCache
	object GetValueOriginal<TField>(object data)



The strongly typed API does not have regular `GetValue/SetValue` methods because there is no difference between these methods and directly accessing a strongly typed instance's properties. Developers should directly access a strongly typed instance's properties.

Suppose that a developer declares and initializes a `PXCache<TNode>` object by using the following code.

```
PXCache<MyEntity> cache = graph.Caches<MyEntity>();
MyEntity row = new();
```

Suppose that a developer declares and initializes a `PXCache` object by using the following code.

```
PXCache cache = graph.Caches[typeof(MyEntity)];
MyEntity row = new();
```

The following table provides some usage examples for some common scenarios in which the developer uses the data manipulation methods described in the previous table, with the following information provided in the table's columns:

- The first column describes the scenario (that is, the task the developer is performing).
- The second column shows a code example for how to implement the scenario by using the strongly typed overload of a data manipulation method.
- The third column shows a code example for how to implement the scenario by using the weakly typed version of a data manipulation method.

Usage Scenario	PXCache<TNode>	PXCache
Getting the original value of a particular field	<code>int? value = cache.GetValueOriginal(r => r.MyIntField, row);</code>	<code>int? value = (int?)cache.GetValueOriginal<MyEntity.myIntField>(row);</code>
Requesting defaulting of a field	<code>cache.SetDefaultExt(r =>r.MyIntField, row);</code>	<code>cache.SetDefaultExt<MyEntity.myIntField>(row);</code>
Setting an extension field to a value with event raising	<code>cache.SetValueExt((MyExt e) => e.MyIntField, row, 42);</code>	<code>cache.SetValueExt<MyExt.myIntField>(row, 42);</code>

In the last scenario in the table above for the `PXCache<TNode>` object, note that if instead of the integer value of 42, the developer passes a value of a different type, the developer will get a compilation error. However, for the same scenario but the `PXCache` object, the developer will not get a compilation error if they passed in a value of a different type; instead, a run-time exception will occur.



To access the fields of a cache extension, a developer must explicitly specify the input type of the lambda argument with the type of that cache extension. The default input type is `TNode`. The method's signature guarantees that only `TNode` and the extensions compatible with it can be used as the input type of the lambda argument.

Strongly Typed Overloads for the Event-Raising Methods

The following table lists the row-level event-raising methods for the strongly and weakly typed versions of the `PXCACHE` object.

PXCACHE<TNode>	PXCACHE
<code>void RaiseRowSelected(TNode item)</code>	<code>void RaiseRowSelected(object item)</code>
<code>bool RaiseRowInserting(TNode item)</code>	<code>bool RaiseRowInserting(object item)</code>
<code>void RaiseRowInserted(TNode item)</code>	<code>void RaiseRowInserted(object item)</code>
<code>bool RaiseRowUpdating(TNode item, TNode newItem)</code>	<code>bool RaiseRowUpdating(object item, object newItem)</code>
<code>void RaiseRowUpdated(TNode newItem, TNode oldItem)</code>	<code>void RaiseRowUpdated(object newItem, object oldItem)</code>
<code>bool RaiseRowDeleting(TNode item)</code>	<code>bool RaiseRowDeleting(object item)</code>
<code>void RaiseRowDeleted(TNode item)</code>	<code>void RaiseRowDeleted(object item)</code>
<code>bool RaiseRowPersisting(TNode item, PXDBOperation operation)</code>	<code>bool RaiseRowPersisting(object item, PXDBOperation operation)</code>
<code>void RaiseRowPersisted(TNode item, PXDBOperation operation, ...)</code>	<code>void RaiseRowPersisted(object item, PXDBOperation operation, ...)</code>

The following table lists the field-level event-raising methods for the strongly and weakly typed versions of the `PXCACHE` object. These methods also use a strongly typed lambda expression to select a field, as the data manipulation methods do. The type of the selected field is propagated to the other parameters of these methods.

PXCACHE<TNode>	PXCACHE
<code>bool RaiseCommandPreparing<TValue>(LambdaExpression fieldSelector, TNode row, TValue? value, ...)</code>	<code>bool RaiseCommandPreparing(string name, object row, object value, ...)</code>
	<code>bool RaiseCommandPreparing<TField>(object row, object value, ...)</code>
<code>bool RaiseFieldDefaulting<TValue>(LambdaExpression fieldSelector, TNode row, out TValue newValue)</code>	<code>bool RaiseFieldDefaulting(string name, object row, out object newValue)</code>
	<code>bool RaiseFieldDefaulting<TField>(object row, out object newValue)</code>

PXCache<TNode>	PXCache
bool RaiseFieldUpdating<TValue>(LambdaExpression fieldSelector, TNode row, ref TValue newValue)	bool RaiseFieldUpdating(string name, object row, ref object newValue)
	bool RaiseFieldUpdating<TField>(object row, ref object newValue)
bool RaiseFieldVerifying<TValue>(LambdaExpression fieldSelector, TNode row, ref TValue newValue)	bool RaiseFieldVerifying(string name, object row, ref object newValue)
	bool RaiseFieldVerifying<TField>(object row, ref object newValue)
void RaiseFieldUpdated<TValue>(LambdaExpression fieldSelector, TNode row, TValue oldValue)	void RaiseFieldUpdated(string name, object row, object oldValue)
	void RaiseFieldUpdated<TField>(string name, object row, object oldValue)
bool RaiseExceptionHandlering<TValue>(LambdaExpression fieldSelector, TNode row, TValue newValue, Exception exception)	bool RaiseExceptionHandlering(string name, object row, object newValue, Exception exception)
	bool RaiseExceptionHandlering<TField>(object row, object newValue, Exception exception)

Suppose that a developer declares and initializes a `PXCache<TNode>` object by using the following code.

```
PXCache<MyEntity> cache = graph.Caches<MyEntity>();
MyEntity row = new();
```

Suppose that a developer declares and initializes a `PXCache` object by using the following code.

```
PXCache cache = graph.Caches[typeof(MyEntity)];
MyEntity row = new();
```

The following table provides some usage examples for some common scenarios that use the event-raising methods described in the previous tables. The columns show the following information:

- The first column describes the scenario—what the developer wants to do.
- The second column shows a code example for how the developer can implement the scenario by using the strongly typed overload of an event-raising method.
- The third column shows a code example for how the developer can implement the scenario by using the weakly typed version of an event-raising method.

Usage Scenario	PXCache<TNode>	PXCache
Requesting defaulting of own field	cache.RaiseFieldDefaulting(r => r.MyDecimalField, row, out decimal? newValue);	cache.RaiseFieldDefaulting<MyEntity.myDecimalField>(row, out object newValue);

Usage Scenario	PXCache<TNode>	PXCache
Requesting exception handling of an extension field	<pre>cache.RaiseExceptionHandling((MyExt e) => e.MyStringField, row, "foo", new Exception());</pre>	<pre>cache.RaiseExceptionHandlerHandling<MyExt t.myStringField>(row, "foo", new Exception());</pre>

In the last scenario in the table above, for the `PXCache<TNode>` object, note that if a developer passes a value of a different type instead of the `foo` string value, the developer will get a compilation error. However, for the same scenario but for the `PXCache` object, a developer would not get a compilation error if they passed in a value of a different type; instead, a run-time exception would occur.



To access the fields of a cache extension, a developer must explicitly specify the input type of the lambda argument with the type of that cache extension. The default input type is `TNode`. The method's signature guarantees that only `TNode` and the extensions compatible with it can be used as the input type of the lambda argument.

Attribute-Accessing Method of the PXCache<TNode> Object

Only one strongly typed method can be used to access the attributes attached to a field for the `PXCache<TNode>` object: the `GetAttributesOf(LambdaExpression fieldSelector, TNode data = null, bool readOnly = false)` method.

As with the types of methods discussed in the previous sections, this method requires a lambda expression as its first parameter, that will provide it with a field whose attributes are to be accessed. The other two parameters of the method are optional. By default, the method does not require a data row and returns the cache-level attributes. However, if a developer passes a data row to this method, it will return the item-level attributes. If a developer only wants the read-only versions of these item-level attributes, then they should set the `readOnly` flag of the method to `true`.

The following table lists the combinations of the default parameter values (listed in the first column) that can be used with the strongly typed attribute accessing method. The second column of the table lists the corresponding weakly typed method of each parameter combination.

Default Optional Parameter Values	Corresponding PXCache Method
<code>data = null, readOnly = false</code>	<code>List<PXEventSubscriberAttribute> GetAttributes(string name)</code>
<code>data = null, readOnly = false</code>	<code>List<PXEventSubscriberAttribute> GetAttributes<Field>()</code>
<code>data = set, readOnly = false</code>	<code>IEnumerable<PXEventSubscriberAttribute> GetAttributes(object data, string name)</code>
<code>data = set, readOnly = false</code>	<code>IEnumerable<PXEventSubscriberAttribute> GetAttributes<Field>(object data)</code>

Default Optional Parameter Values	Corresponding PXCACHE Method
data = null, readOnly = true	List<PXEventSubscriberAttribute> GetAttributesReadOnly(string name)
data = null, readOnly = true	List<PXEventSubscriberAttribute> GetAttributesReadOnly<Field>()
data = set, readOnly = true	IEnumerable<PXEventSubscriberAttribute> GetAttributesReadOnly(object data, string name)
data = set, readOnly = true	IEnumerable<PXEventSubscriberAttribute> GetAttributesReadOnly<Field>(object data)

Platform API: Support for Targeted Overrides of the `PXGraph.Persist` Method

In previous versions of Acumatica ERP, a developer would generally override the `PXGraph.Persist` method when they needed to implement one of the following scenarios:

- Verifying the changes made to one or more records of an entity before persisting them to the database, and preventing the changes from being persisted if the verification fails.
- Verifying the changes made to one or more records of an entity that are to be persisted to the database, while adding some changes that should also be persisted in the same transaction in which the persist operation is executed.
- Performing a validation or other operation right before a transaction is closed.
- Performing an operation right after a change is successfully persisted to the database. These operations usually involve tasks that are not part of the transaction in which the persist operation is executed—such as resetting a custom cache, querying the database, or displaying a message to the user.

Acumatica ERP2024 R1 introduces the following targeted overrides of the `PXGraph.Persist` method, which offer more granular control to developers when they are dealing with the scenarios discussed above:

- `bool PXGraph.PrePersist()`: Makes it possible for developers to define the logic that should be executed before the definition of the persisting logic. This method is triggered before a transaction is opened. The base implementation of this method raises the `PXGraph.BeforePersist` event.
- `void PXGraph.PerformPersist(IPersistPerformer persister)`: Makes it possible for developers to change the order and composition of the caches that should be persisted within the definition of the persisting logic. This method is triggered within an open transaction.
- `void PXGraph.PreCommit()`: Makes it possible for developers to inject some logic just before a transaction is closed. This method is triggered within an open transaction. The base implementation of this method raises the `PXGraph.OnBeforeCommit` event.
- `void PXGraph.PostPersist()`: Makes it possible for developers to define the logic that should be executed after the definition of the persisting logic. This method is triggered after a transaction has been closed. The base implementation of this method raises the `PXGraph.AfterPersist` event.



When a developer overrides any of the above methods, they must call the base version of the method. The only exception to this rule is when they need to suppress the base logic for some reason.

Although developers can still override the `PXGraph.Persist` method, we recommend that they use the methods described in the preceding list instead. By using these methods, developers can inject their logic into the existing logic of the persist process without affecting the existing logic. This approach makes their code less error prone.

The following code shows an example of a case where a developer is using the old approach of overriding the `PXGraph.Persist` method. The developer needs to inject some custom logic via a graph extension in the persist process, but is unable to do so due to the current limitations of this approach.

```
public override void Persist()
{
    if (Document.Current != null && Document.Current.Hold == false)
    {
        foreach (POReceiptLine poReceiptLine in transactions.Select())
            if (poReceiptLine.ReceiptQty == 0m && Document.Current.ReceiptType
                == POReceiptType.TransferReceipt)
                transactions.Delete(poReceiptLine);

        ValidateDuplicateSerialsOnDropship();
    }
}
```

```

}

/* A developer wants to use a graph extension to insert some custom logic here
but there is no way to do this when overriding the PXGraph.Persist method */

base.Persist();

this.poLinesSelection.Cache.Clear();
this.openOrders.Cache.Clear();
}

```

The following code shows an example of the developer being able to inject their custom logic via a graph extension, as described in the preceding scenario, by using the new targeted overrides of the `PXGraph.Persist` method. The logic is the same as in the previous code example, but the new approach is shown.

```

protected override bool PrePersist()
{
    if (Document.Current != null && Document.Current.Hold == false)
    {
        foreach (POReceiptLine poReceiptLine in transactions.Select())
            if (poReceiptLine.ReceiptQty == 0m && Document.Current.ReceiptType
                == POReceiptType.TransferReceipt)
                transactions.Delete(poReceiptLine);

        ValidateDuplicateSerialsOnDropship();
    }

    return base.PrePersist();
}

protected override void PostPersist()
{
    base.PostPersist();
    this.poLinesSelection.Cache.Clear();
    this.openOrders.Cache.Clear();
}

```

The developer can easily inject their custom logic via a graph extension by overriding the `bool PXGraph.PrePersist()` method, as shown in the following code example.

```

[PXOverride]
public bool PrePersist(Func<bool> base_PrePersist)
{
    if (!base_PrePersist())
        return false;

    var linesCache = Base.transactions.Cache;
    var modifiedLines = linesCache.Updated.Concat_(linesCache.Inserted);

    foreach (POReceiptLine line in modifiedLines)
        SyncUnassigned(line);

    return true;
}

```

The following sections provide some usage examples for the methods described in the preceding list.

Usage of the bool PXGraph.PrePersist() Method

The following code example shows how a developer may use the bool `PXGraph.PrePersist()` method when they need to perform a check and an assignment operation before the persist operation.

```
protected override bool PrePersist()
{
    if (setup.Current != null && string.IsNullOrEmpty(setup.Current.DfltLotSerClassID)
        && !IsFeatureInstalled<FeaturesSet.lotSerialTracking>())
    {
        setup.Current.DfltLotSerClassID = INLotSerClass.GetDefaultLotSerClass(this);
    }
    return base.PrePersist();
}
```

Previously, a developer would implement the preceding scenario by overriding the `PXGraph.Persist` method in the following manner.

```
public override void Persist()
{
    if (setup.Current != null && string.IsNullOrEmpty(setup.Current.DfltLotSerClassID)
        && !IsFeatureInstalled<FeaturesSet.lotSerialTracking>())
    {
        setup.Current.DfltLotSerClassID = INLotSerClass.GetDefaultLotSerClass(this);
    }
    base.Persist();
}
```

The following code example shows how a developer may use the bool `PXGraph.PrePersist()` method when they need to perform a validation before the persist operation.

```
protected override bool PrePersist()
{
    if (CMSSetup.Select().Count == 0)
        throw new PXException(CS.Messages
            .RequiredConfigurationDataIsNotEnteredOnCurrencyManagementPreferencesForm);

    return base.PrePersist();
}
```

Previously, a developer would implement the preceding scenario by overriding the `PXGraph.Persist` method in the following manner.

```
public override void Persist()
{
    if (CMSSetup.Select().Count == 0)
        throw new PXException(CS.Messages
            .RequiredConfigurationDataIsNotEnteredOnCurrencyManagementPreferencesForm);

    base.Persist();
}
```

Usage of the void PXGraph.PostPersist() Method

The following code example shows how a developer may use the `void PXGraph.PostPersist()` method when they need to perform some operations after the persist operation.

```
protected override void PostPersist()
{
    base.PostPersist();
    this.Quotes.Cache.Clear();
    this.Quotes.View.Clear();
    this.Quotes.Cache.ClearQueryCache();
    this.Quotes.View.RequestRefresh();
}
```

Previously, a developer would implement the preceding scenario by overriding the `PXGraph.Persist` method in the following manner.

```
public override void Persist()
{
    base.Persist();
    this.Quotes.Cache.Clear();
    this.Quotes.View.Clear();
    this.Quotes.Cache.ClearQueryCache();
    this.Quotes.View.RequestRefresh();
}
```

Usage of the void PXGraph.PerformPersist(IPersistPerformer persister) Method

Suppose that a developer needs to use a graph extension to find some records of some specific entities and persist them to the database in the scope of another graph. This graph extension should first search for those records and store them into a field by overriding the `bool PXGraph.PrePersist()` method. Then at the end of the `void PXGraph.PerformPersist(IPersistPerformer persister)` method, the graph extension should pass those stored records to a special method that creates a new graph in which those records should be saved, and saves them. Since the developer is calling this special method in the scope of the `void PXGraph.PerformPersist(IPersistPerformer persister)` method, it is automatically available in the scope of the same transaction that is used in the initial graph (the one that overrides the persist methods). Hence, the developer does not need to open another transaction.

The following code example shows how a developer may use the `void PXGraph.PerformPersist(IPersistPerformer persister)` method to implement the scenario described above.

```
[PXOverride]
public bool PrePersist(Func<bool> base_PrePersist)
{
    _affectedOrders = GetAffectedEntities().ToArray();

    return base_PrePersist();
}

[PXOverride]
public void PerformPersist(PXGraph.IPersistPerformer persister,
    Action<PXGraph.IPersistPerformer> base_PerformPersist)
{
    base_PerformPersist(persister);
}
```

```

    if (_affectedOrders != null)
    {
        ProcessAffectedEntities(_affectedOrders);
        _affectedOrders = null;
    }
}

[PXOverride]
public void PostPersist(Action base_PostPersist)
{
    _affectedOrders = null;
}

```

The following example shows how the logic of the `void PXGraph.PerformPersist(IPersistPerformer persister)` method is overridden. Note that the `void PXGraph.PerformPersist(IPersistPerformer persister)` base method is not called anywhere in this code because the developer's goal is to take full control of the persisting process.

```

protected override void PerformPersist(IPersistPerformer persister)
{
    persister.Insert(APPayment_DocType_RefNbr.Cache);
    persister.Update(APPayment_DocType_RefNbr.Cache);

    persister.Update(APDocument.Cache);

    persister.Update(APTran_TrانType_RefNbr.Cache);

    persister.Update(APPaymentChargeTran_DocType_RefNbr.Cache);

    persister.Insert(APTaxTran_TrانType_RefNbr.Cache);
    persister.Update(APTaxTran_TrانType_RefNbr.Cache);

    persister.Insert(SVATConversionHistory.Cache);
    persister.Update(SVATConversionHistory.Cache);

    persister.Insert(APAdjust_AdjgDocType_RefNbr_VendorID.Cache);
    persister.Update(APAdjust_AdjgDocType_RefNbr_VendorID.Cache);
    persister.Delete(APAdjust_AdjgDocType_RefNbr_VendorID.Cache);

    persister.Insert<APHist>();

    persister.Insert<CuryAPHist>();

    persister.Insert<APTranPost>();
}

```

```

    persister.Insert(AP1099Year_Select.Cache);

    persister.Insert(AP1099History_Select.Cache);

    persister.Update(CurrencyInfo_CuryInfoID.Cache);

    persister.Insert<CADailySummary>();

    persister.Insert<PMCommitment>();

    persister.Update<PMCommitment>();

    persister.Delete<PMCommitment>();

    persister.Insert<PMHistoryAccum>();

    persister.Insert<PMBudgetAccum>();

    persister.Insert<PMForecastHistoryAccum>();

    persister.Update<APTax>();

}

```

Methods of the IPersistPerformer Interface

An `IPersistPerformer` interface is supplied as the parameter for the `void PXGraph.PerformPersist(IPersistPerformer persister)` method, as described in the preceding section. The following table lists the methods that this interface implements. Note that a developer does not need to implement this interface at all.

Method	Description
<code>ISet<Type> PersistedTypes { get; }</code>	Represents a set of caches whose data rows have already been persisted.
<code>void Insert(PXCache cache);</code>	Inserts new data rows in the database.
<code>void Insert(Type cacheType);</code>	Inserts new data rows in the database.
<code>void Insert<TTable>() where TTable : class, IBqlTable, new();</code>	Inserts new data rows in the database.
<code>void Update(PXCache cache);</code>	Saves changed data rows in the database.
<code>void Update(Type cacheType);</code>	Saves changed data rows in the database.
<code>void Update<TTable>() where TTable : class, IBqlTable, new();</code>	Saves changed data rows in the database.

Method	Description
<code>void Delete(PXCache cache);</code>	Removes deleted data rows from the database.
<code>void Delete(Type cacheType);</code>	Removes deleted data rows from the database.
<code>void Delete<TTable>() where TTable : class, IBqlTable, new();</code>	Removes deleted data rows from the database.

UI Development: Conversion of Acumatica ERP Forms to the Modern UI

Acumatica ERP 2024 R1 introduces the Modern UI, which is now available for testing purposes for users. For details about what benefits the Modern UI introduces and how to switch an Acumatica ERP instance to the Modern UI, see [Platform: Availability of the Modern UI](#).



In Version 2024 R1, the Modern UI is not for production use.

A developer can now convert to the Modern UI forms that the developer created for previous versions of Acumatica ERP or add new Acumatica ERP forms in the Modern UI.

Modern UI Technology

The Modern UI is a .NET-compatible product that provides updated UI capabilities without ASPX pages. On the server side, the Modern UI is represented by web services. On the client side, it is represented by a template-based single-page application framework, which is based on Aurelia. (For more details on Aurelia, see [Aurelia](#).) The application code is written in TypeScript. The framework transcribes the TypeScript code into JavaScript code, which is then executed in the web browser. HTML and CSS are used to design the layout of an Acumatica ERP form.

The structure of the Acumatica ERP form in the Modern UI is represented by the following layers:

- The presentation logic in a TypeScript (TS) file, which provides a definition of views with particular settings for them
- The layout of UI elements that are displayed on the form in HTML

The developer can find the source code of the Modern UI of Acumatica ERP forms in the `FrontendSources/screen/src/screens` folder of the Acumatica ERP instance folder.

UI Definition in TypeScript

To define the views of an Acumatica ERP form in TypeScript, in the TS file of the form, the developer defines a *screen class*—a class for the form. The class extends the `PXScreen` class. In the screen class, the developer defines a property for each data view, as shown in the following example.

```
import { graphInfo, PXScreen, createSingle } from "client-controls";

@graphInfo({graphType: 'PX.Objects.GL.AccountHistoryEnq', primaryView: 'Filter'})
export class GL401000 extends PXScreen {
  @viewInfo({containerName: 'Filter'})
  Filter = createSingle(GLHistoryEnqFilter);
}
```

In the TS file of the form, for each view of the graph, the developer defines a *view class*—that is, a class for each view of the graph—as shown in the following code. The class extends the `PXView` class.

```
import { PXView } from "client-controls";

export class GLHistoryEnqFilter extends PXView {
}
```

In each view class, the developer specifies the properties for all data fields of the data view that the developer wants to be able to show or use in the UI, as shown below. The developer uses the name of the data field as the property name.


```

Description: PXFieldState;
ShowCuryDetail: PXFieldState<PXFieldOptions.Hidden |
    PXFieldOptions.CommitChanges>;
OrderDate: PXFieldState<PXFieldOptions.CommitChanges>;

```

For more information about the UI definition in TypeScript, see [UI Definition in HTML and TypeScript: General Information](#).

Layout in HTML

In the HTML file, you define the layout of the Acumatica ERP form and the appearance of particular UI elements.

The Modern UI provides the following approaches to quickly organize the layout in a unified way:

- A Summary, Selection, or tab area of an Acumatica ERP form can have one of the predefined layouts. The developer uses templates to define a predefined layout for a part of a form. For details about templates, see [Form Layout: Predefined Templates](#).
- For tables (which are also called *grids*), a predefined set of properties can be specified by using presets. For more information about presets, see [Form Layout: Grid Presets](#).
- The developer can also use CSS classes to adjust the layout, such as to adjust color settings and organize the layout inside templates. They can also be used for tables and for the organization of multiple UI controls inside a field area. For the list of available CSS classes, see [Form Layout: CSS Classes](#).

Built-In Converter from the Classic UI to the Modern UI

Instead of manually writing the TypeScript and HTML code for an Acumatica ERP form that was developed for a previous version of Acumatica ERP, the developer can use the built-in converter, which transforms an Acumatica ERP form from the Classic UI to the Modern UI. The converter parses an ASPX page of the form and generates the source files of the form in the Modern UI.

To run the converter, the developer opens the needed Acumatica ERP form in the Classic UI and clicks **Customization > Convert to Modern UI** on the form title bar, as shown in the following screenshot.



The **Convert to Modern UI** command is only available if both of the following are true:

- The `<add key="EnableSiteMapSwitchUI" value="True" />` setting has been added in the `appSettings` section of the `web.config` file of the Acumatica ERP instance. For details on this setting, see [Modern UI: General Information](#).
- The *Customizer* role is assigned to the user.

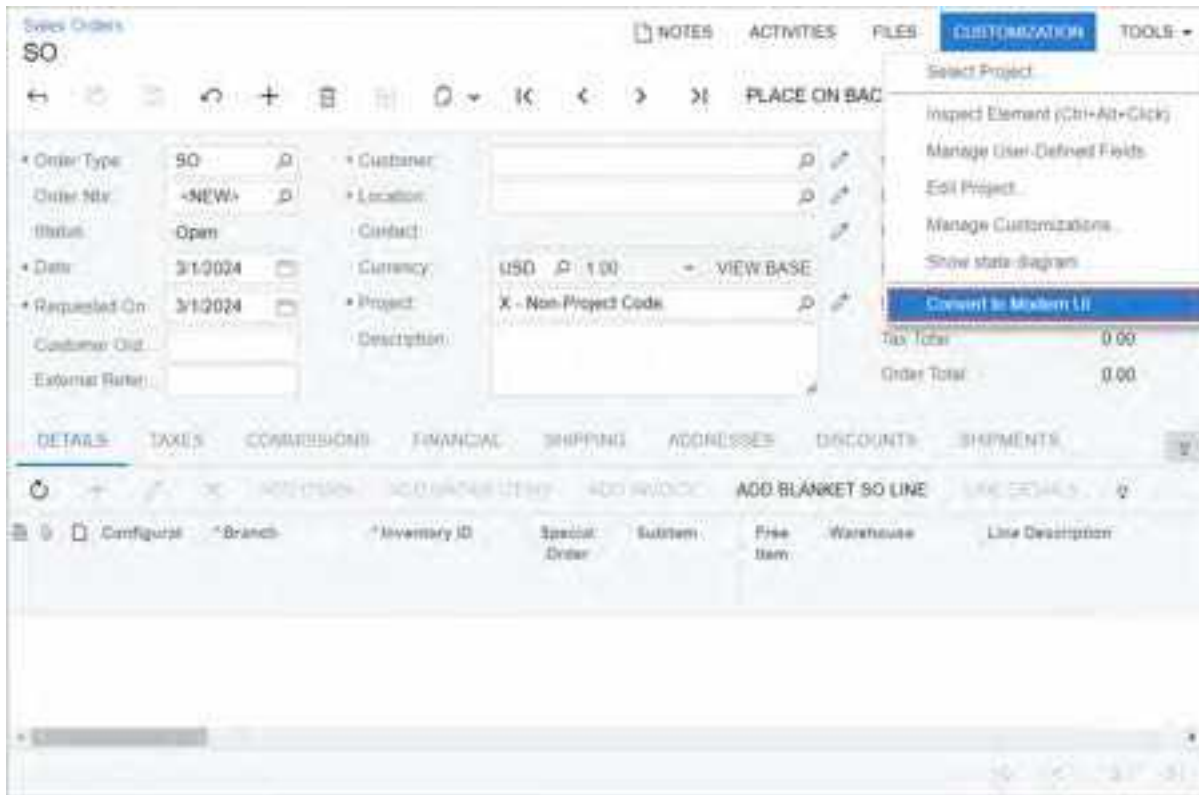


Figure: Running the converter

By default, the files that the converter generates are saved in a ZIP archive. For details about how the converter works and how to configure the converter, see [UI Definition in HTML and TypeScript: Built-In Converter](#).

Web Services: Retrieval of Localized Reports Through the REST API

Acumatica ERP 2023 R2 introduced the ability to retrieve a report through the REST API. A developer could create a custom endpoint or extend an existing endpoint with an entity of the *Report* type and use this entity to obtain the report from Acumatica ERP. The developer sent the `POST` HTTP method to the entity URL with the format of the report in the `Accept` header and the parameters of the report in the request body.

In Acumatica ERP 2024 R1, this functionality has been extended. Now a developer can also specify the language in which the report should be returned from Acumatica ERP.

Requesting the Report in the Specified Language

To obtain the report from Acumatica ERP in the specified language, the developer adds the `Accept-Language` header to the `POST` request. The header value can be one of the following:

- A locale name that is defined on the [System Locales](#) (SM200550) form, such as *fr-FR*: If this locale is defined on the form and is active, the report in this language will be returned. If this locale is not defined on the form or is inactive, the active locale with the lowest sequence number that is defined on the form is used for the returned report.
- Empty or `*`: The returned report uses the active locale with the lowest sequence number that is defined on the form.
- Multiple locale names that are weighted with the quality value syntax, such as *fr-FR, en;q=0.8, de;q=0.7, *;q=0.5*: To generate the returned report, the system uses one of the requested locales that is defined on the form, is active, and has the highest priority specified. For more information about quality values, see https://developer.mozilla.org/en-US/docs/Glossary/Quality_values.

For details about requesting reports, see [Request a Report](#).

Workflow: Support of Action Sequences

In previous versions of Acumatica ERP, a customizer could implement the sequential execution of actions in a workflow only by defining these actions as running automatically when certain conditions were met. In this case, the system checked the conditions for the actions every time the status of a record on the form changed, which affected system performance.

In Acumatica ERP 2024 R1, sequences of actions are supported for workflows. The new functionality has the following advantages:

- The customizer can make the system execute multiple actions one after another without specifying any conditions.
With this functionality, customizers can optimize system performance and speed up the processing of records.
- When the sequence of action is performed, the system shows a dialog box with the progress and results of performing the sequence.
- The customizer can add any actions to the sequence including actions which code is defined in the graph.

Sequential Action Execution

Each action can have multiple actions—referred to as *subscriber actions* or *subscribers*—that the system invokes after it executes this action. Each subscriber can also have its own subscribers. If a condition is specified for an action, the system executes a subscriber action only if the condition is met and the action is available in the current workflow state. The system executes the action even if it is hidden.

If a subscriber action is unavailable in the current state of the workflow, the system displays an error. The system then either continues the execution of other subscriber actions or stops the execution, depending on the settings specified for this action.



Only actions of the same form (screen) can be configured to run in a sequence.

If a user clicks a button (or invokes a command) that has an underlying action with subscribers, the system proceeds as follows:

1. If a dialog box is specified for this action, the system displays it and updates the fields.
For Workflow UI, the system updates the fields as specified on the **Field Update** tab of the **Action Properties** dialog box of the [Actions](#) page for the action.
For Workflow API, the system updates the fields as specified in the action configuration.
2. The system performs all other steps in the workflow.
For Workflow UI, the system does the following by using the settings on the [Actions](#) page for the workflow state:
 - a. Updates the specified fields (on the **Fields**, **Fields to Update on Entry**, and **Fields to Update on Exit** tabs).
 - b. Performs the transitions.
 - c. Updates the specified post-transition fields (in the **Fields to Update After Transition** table).
For Workflow API, the system uses the configuration of the transition and the action.
3. If the action has been executed successfully, the system then executes its subscribers.
If a dialog box is specified for a subscriber action, the system does not display this dialog box to the user; instead, the system uses the specified dialog box values.

4. For each of the subscribers, the system performs all other steps in the workflow.
5. If a subscriber action has its own subscribers, the system executes them one by one if their respective conditions are met and they exist in the current workflow state.

During the execution of each action in a sequence, the system displays a dialog box with the status of the action execution, as shown in the following screenshot. (It is the same dialog box that the system displays when the user clicks the **Quick Process** button on a form.) For report and navigation actions in Workflow API (or the actions of the *Run Report* or *Navigation: Create Record* type in Workflow UI), the system opens the corresponding report or data entry form in a new browser tab, and continues the processing of other actions in the current tab.

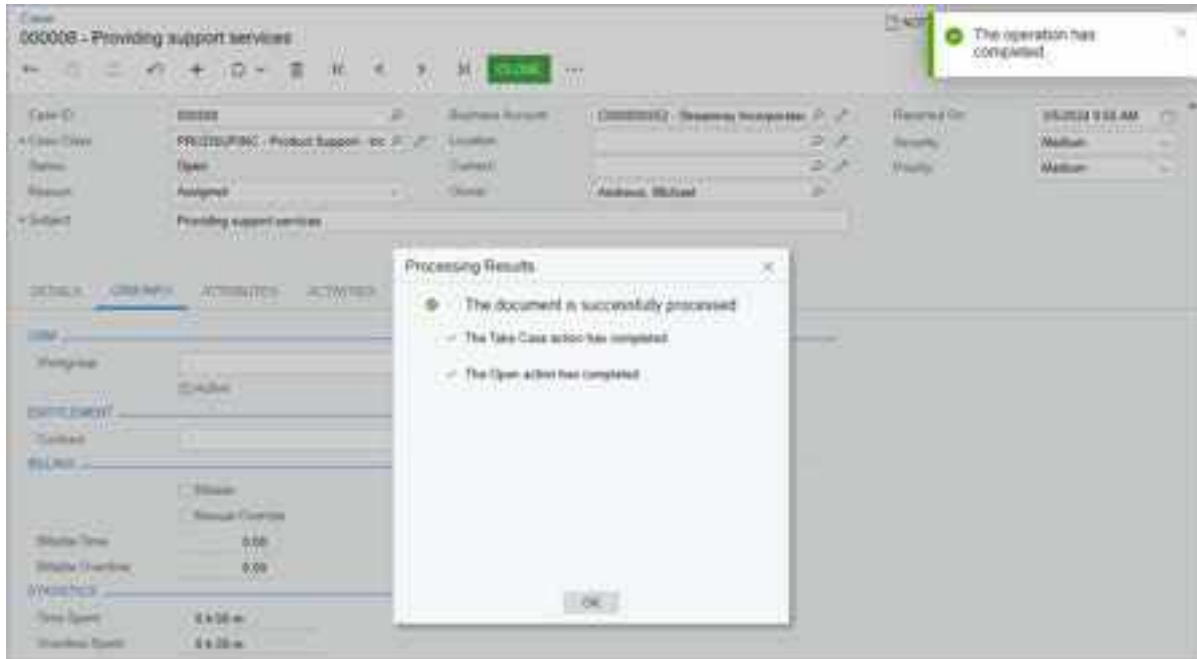


Figure: The dialog box during action execution

Workflow UI: Support of Action Sequences

This topic describes support of action sequences by Workflow UI.

Adding Subscribers

The customizer adds the subscribers to an action by using the new **Actions Executed on Success** tab of the **Action Properties** dialog box on the *Actions* page in the Customization Project Editor. The following screenshot shows this dialog box for the *Close* action on the *Cases* (CR306000) form. Notice that this action has one subscriber: The *Release* action (see Item 1 in the following screenshot), which the system executes if the case is billable (Item 2).



Instead of specifying a condition explicitly, the customizer can select *True* in the **Condition** column to make the system always execute the subscriber action.

By default, the system executes all actions in a sequence even if any of these actions fails. If needed, the customizer can make the system stop the execution of subscribers if a triggering action fails by selecting the **Stop on Error** check box (Item 3).

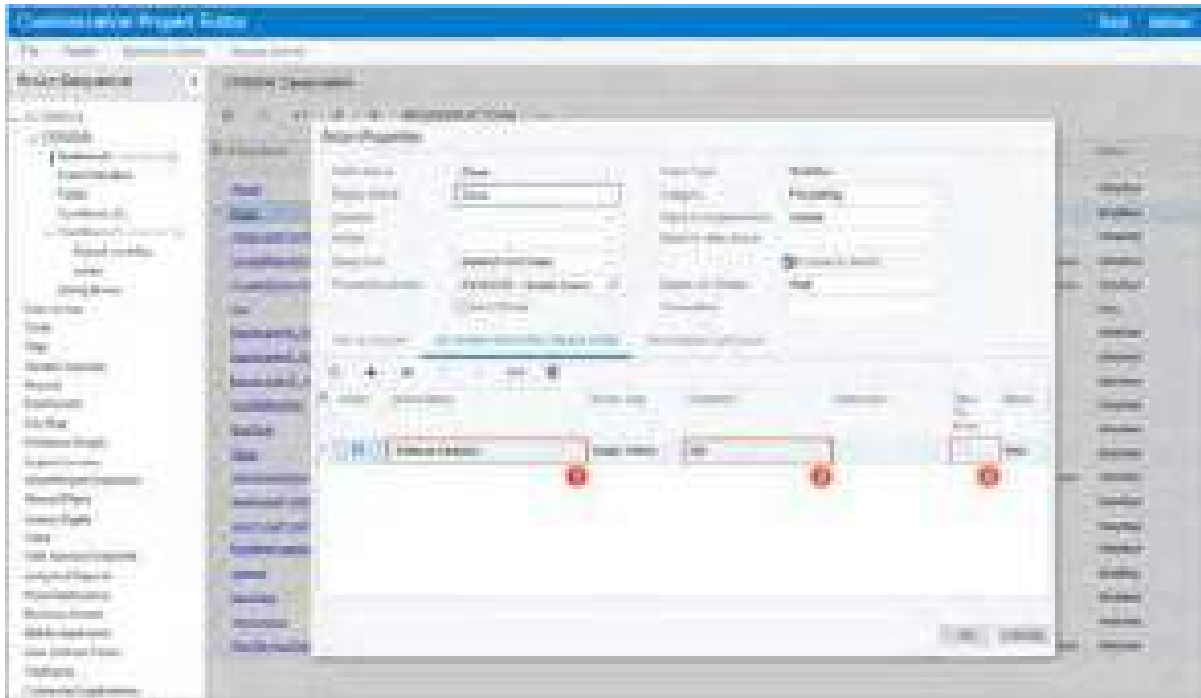


Figure: The subscribers of the Close action

Viewing the Triggering Actions

The customizer can see what actions trigger the execution of the current action on the new **Triggering Actions** tab of the same dialog box (see the following screenshot).

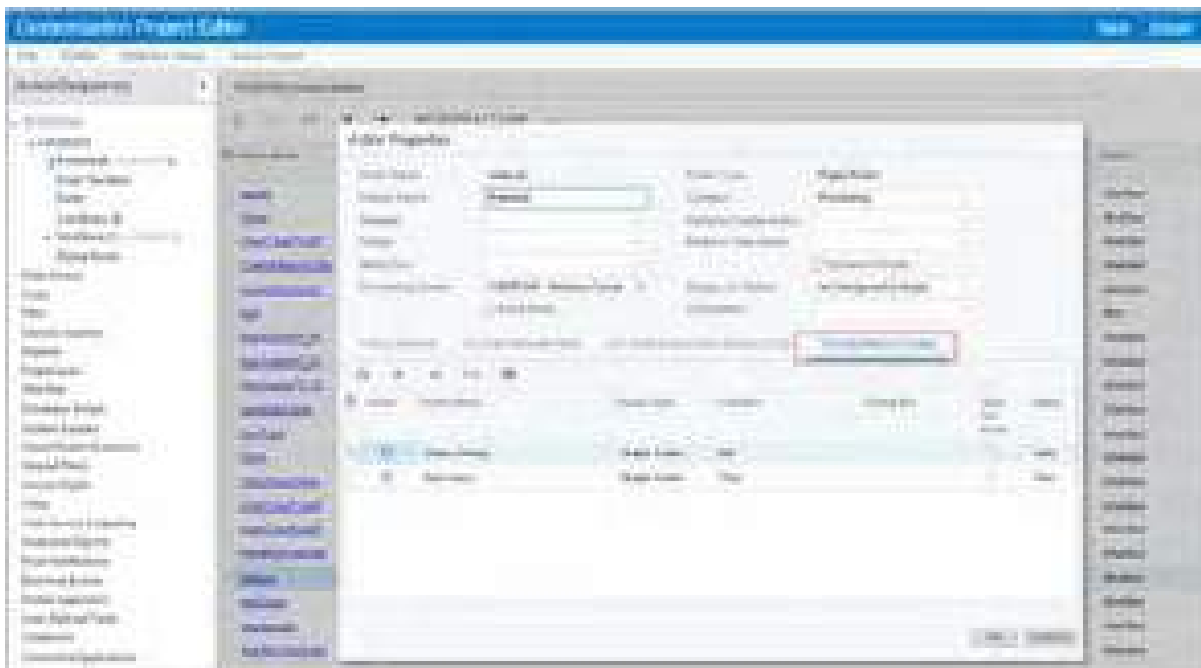


Figure: The Triggering Actions tab of the Action Properties dialog box

Note that after the customizer has added the `Release` action as a subscriber on the **Actions Executed on Success** tab for the `Close` action, the `Close` action automatically appears on the **Triggering Actions** tab in the **Action Properties** dialog box for the `Release` action.

Editing Dialog Boxes of Subscriber or Triggering Actions

If a subscriber action or a triggering action has a dialog box configured for it, the system displays the name of this dialog box as a link in the **Dialog Box** column (see Item 1 in the following screenshot). If the customizer clicks this link, the **Dialog Box Values** dialog box opens, in which the customizer can specify values other than the default ones. The screenshot shows the selection of the *More Info Requested* value (Item 2) instead of the default *In Process* value for the **Reason** box of the **Details** dialog box for the `Open` action.

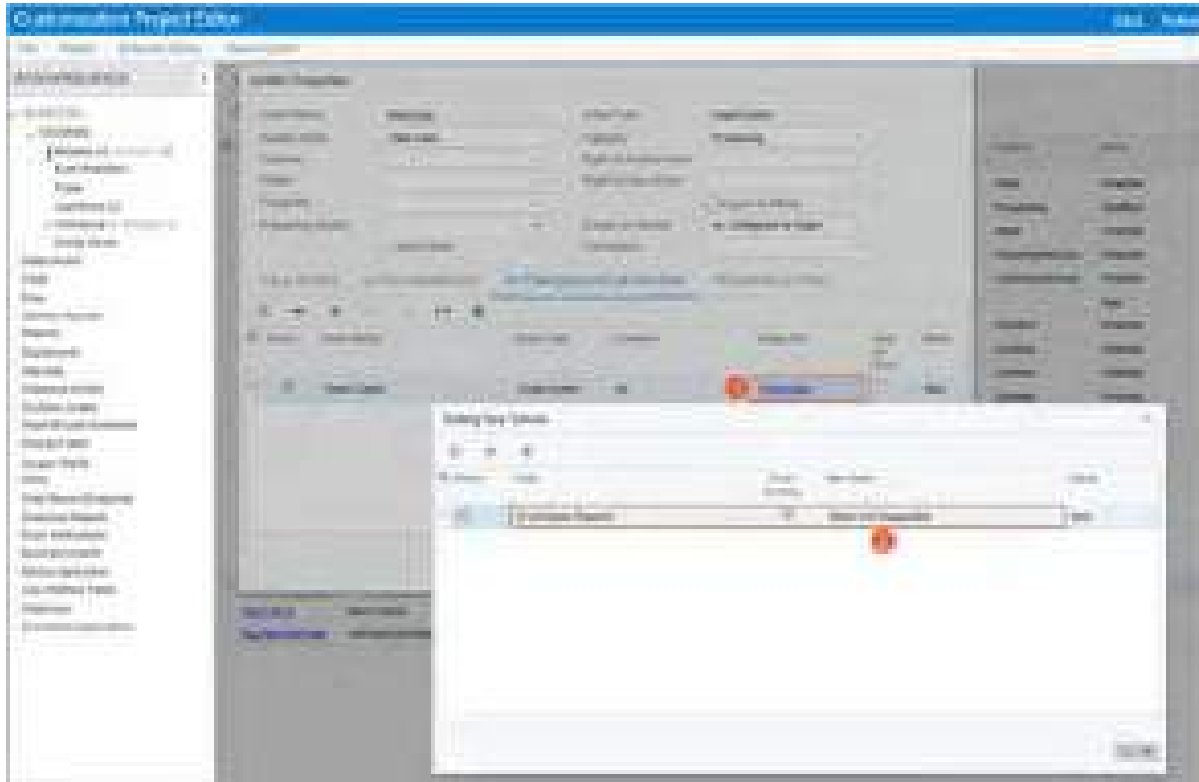


Figure: The specification of dialog box values for a subscriber action

If no values are specified explicitly in the **Dialog Box Values** dialog box, the system uses the default values specified on the [Dialog Boxes](#) page.

Workflow API: Support of Action Sequences

This topic describes support of action sequences by Workflow API.

Defining an Action Sequence

To define an action sequence, a developer should do the following:

1. At the screen configuration level, call the `WithActionSequences` method.
2. In the lambda expression for the `WithActionSequences` method, call the `Add` method to add a new sequence.



A developer can also call the `Replace` method to replace an existing sequence or the `Remove` method to remove an existing sequence. To avoid errors, there is no option to update an existing sequence.

3. In the lambda expression for the `Add` method, configure the sequence by using the following methods:

- `AfterAction`: Required. Specifies the triggering action (the action after which the sequence should be executed). A developer can specify either an action from the graph or an action defined by using Workflow API.
- `RunAction`: Required. Specifies the action that should be executed in the sequence.
Only one action can be added to a sequence. To add a sequence of multiple actions, a developer needs to add multiple sequences. For example, to add the `A > B > C` sequence of actions, a developer needs to add the `A > B` sequence and the `B > C` sequence.
- `StopOnError`: Optional. Specifies whether the system should stop the execution of subscribers if the triggering action fails. By default, the sequence is stopped if an error occurs.
- `AppliesWhen`: Optional. Specifies the condition depending on which the sequence should be executed.

A developer can also call the `AppliesAlways` method to always execute the sequence.

- `WithFieldAssignments`: Optional. Assigns the fields of a dialog box that is configured for the second action of the sequence (specified in the `RunAction` method). The assignment is performed after the first action (specified in the `AfterAction` method) is executed.



If a dialog box is configured for an action specified in the `RunAction` method (the second action in the sequence), this dialog box is not displayed during the execution of the sequence. So the only way to provide values that are different from default ones in the dialog box is to specify them in the `WithFieldAssignments` method.

The following code shows an example of defining a sequence of actions `ActionA > ActionB`.

```
var context = configuration.GetScreenConfigurationContext<SOOrderEntry,
                            SOOrder>();

context.UpdateScreenConfigurationFor(config => config
    .WithActions(actions => ...)
    .WithFlows(flows => ...)
    .WithActionSequences(sequences =>
    {
        sequences.Add(s => s
            .AfterAction<SOOrderExtension>(g => g.ActionA)
            .RunAction<SOOrderExtension>(g => g.ActionB)
            .StopOnError(true)
            .AppliesWhen(condition)
            .WithFieldAssignments(fields =>
            {
                fields.Add("FormFieldA", f => f.SetFromValue("Value"));
                fields.Add("FormFieldB", f => f.SetFromExpression("=EXPRESSION"));
            }));
    }));
```

Order of Execution

The system executes action sequences in the order they are defined in the code. For example, if the code contains the action sequences `A > B`, `B > C`, and `A > D` with no conditions, the system will first execute the sequence `A > B`,

then the sequence B > C, and then the sequence A > D, so the order of actions will be A > B > C > D. If the sequence A > B has a condition and it is not met, the system will proceed to the sequence A > D.

Developer Documentation: New Topics

In Acumatica ERP 2024 R1, a developer can find new and reworked guides, as described in the following sections.

Modern UI Guides

Two new developer guides, which are shown in the following screenshot, are now available for the Modern UI:

- [UI Developer Guide](#): In this guide, a developer can find information about how to create the Modern UI for an Acumatica Framework-based application. The developer will learn how to configure the development environment and how to design the layout of a form.
- [UI Component Reference Guide](#): In this guide, the developer can find details about configuration of UI components. For each UI component, the developer can find the design guidelines, naming conventions, and API reference information.

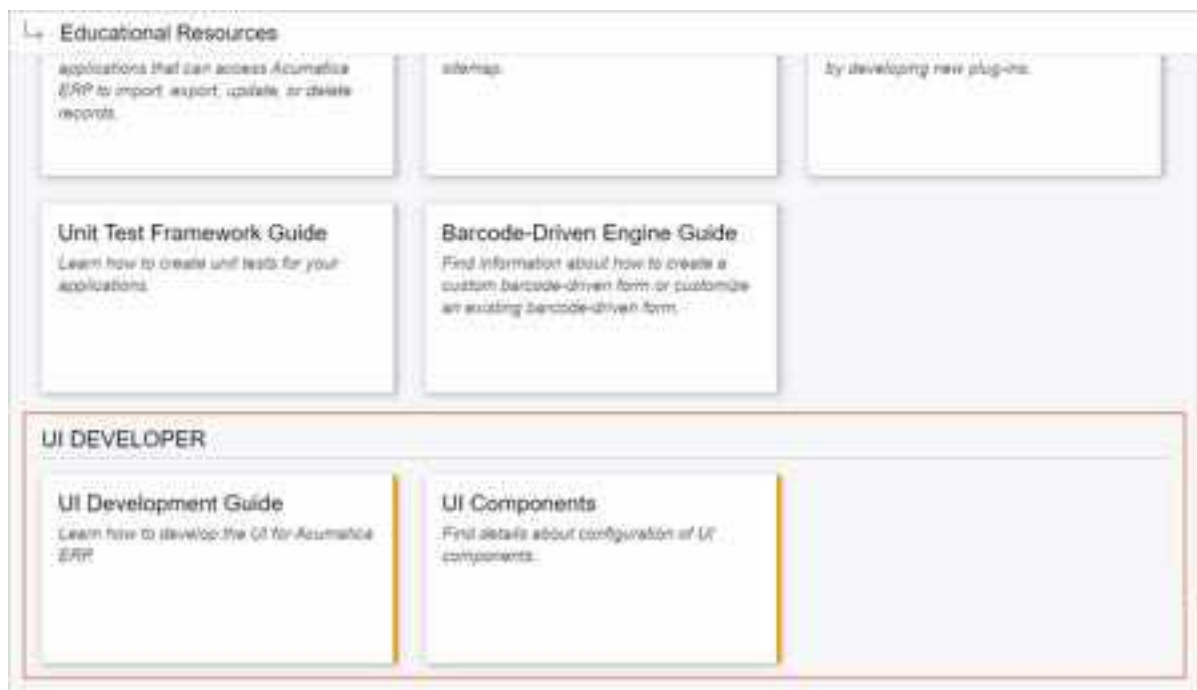


Figure: New guides on the Help dashboard

New Information in the Acumatica Framework Guide and Customization Guide

Based on the feedback that we have received from developers, we have created or updated the following topics in the [Acumatica Framework Guide](#) and [Customization Guide](#):

- [Managing Customization Projects by Using the PX.CommandLine Tool](#)
- [Naming Conventions for Tables \(DACs\) and Columns \(Fields\)](#)
- [Preservation of Deleted Records \(DeletedDatabaseRecord\)](#)
- [Putting a Sales Order on Credit Hold Status Programmatically](#)
- [Implementing the XML Import and Export Functionality in a Custom Form](#)

Fixes and Enhancements

You can find fixes and minor enhancements introduced in Acumatica ERP 2024 R1 in the following document:

[*Acumatica ERP 2024 R1 Release Notes: Fixes and Enhancements.*](#)