

# Release Notes 2022 R2

# Contents

<b>Copyright.....</b>	<b>5</b>
<b>Introduction.....</b>	<b>6</b>
<b>Installation and Upgrade Notes.....</b>	<b>7</b>
<b>Commerce: Connection of a Store with a Custom Shopify App.....</b>	<b>12</b>
<b>Commerce: Export of Sales Orders to Shopify.....</b>	<b>13</b>
<b>Commerce: Enhanced Export of Product Availability Settings.....</b>	<b>18</b>
<b>Commerce: Multiple Guest Customer Accounts.....</b>	<b>19</b>
<b>Commerce: External Description in Synchronization Records.....</b>	<b>20</b>
<b>CRM: Enhanced Marketing Lists and Campaigns.....</b>	<b>22</b>
<b>CRM: Side Panels with Marketing Data for CRM Entities.....</b>	<b>31</b>
<b>CRM: The Currency of Business Accounts and Related Entities.....</b>	<b>35</b>
<b>CRM: The Ability to Change the Business Account in Opportunities and Sales Quotes.....</b>	<b>39</b>
<b>CRM: Relations Between Sales Orders and Associated Entities.....</b>	<b>42</b>
<b>CRM: Other Improvements.....</b>	<b>48</b>
<b>Documentation: Improvements in User Guides.....</b>	<b>51</b>
<b>Email Processing: Support of OAuth 2.0 for Google Suite.....</b>	<b>53</b>
<b>Email Processing: Email Template Enhancements.....</b>	<b>55</b>
<b>Field Services: Appointment Schedule Optimization with Consideration of the Staff Members' Skills.....</b>	<b>57</b>
<b>Field Services: Improved Titles Related to Total Amounts on the Service Orders and Appointments Forms...</b>	<b>59</b>
<b>Field Services: Profit Margin Calculation.....</b>	<b>65</b>
<b>Field Services: Improvements in the Mobile App.....</b>	<b>69</b>
<b>Field Services: Updating the Unit Cost of Non-Stock Items to Be Purchased.....</b>	<b>71</b>
<b>Finance: AP Debit Adjustments with Retainage.....</b>	<b>73</b>
<b>Finance: Approval of GL Transactions.....</b>	<b>79</b>
<b>Finance: Approval of GL Transactions in the Mobile App.....</b>	<b>87</b>
<b>Finance: Automatic Assignment of the Tax Zone to Sales Orders and Invoices.....</b>	<b>93</b>
<b>Finance: Changes in 1099 Boxes.....</b>	<b>96</b>
<b>Finance: Dunning Level by Customer Class.....</b>	<b>101</b>
<b>Finance: Enhancements in GL Error Detection.....</b>	<b>103</b>
<b>Finance: Exclusion of Payments and Voided Payments from Open Item Statements.....</b>	<b>106</b>
<b>Finance: Inclusion of All Documents with Open Balances in Dunning Letters.....</b>	<b>107</b>
<b>Finance: Improved Processing of Batch Payments.....</b>	<b>112</b>
<b>Finance: Improvements in the Straight-Line Depreciation Method.....</b>	<b>117</b>
<b>Finance: Integration with Bank Feeds.....</b>	<b>119</b>

<b>Finance: Expense Receipt Notifications and Generic Inquiry.....</b>	<b>139</b>
<b>Finance: Modification of Dunning Fees During the Dunning Process.....</b>	<b>142</b>
<b>Finance: Preventing Creation of Documents with Dates in the Distant Future.....</b>	<b>145</b>
<b>Finance: Support of Multiple Base Currencies for Contracts.....</b>	<b>148</b>
<b>Finance: Support of Multiple Base Currencies for the Dunning Process.....</b>	<b>150</b>
<b>Finance: Other Improvements.....</b>	<b>156</b>
<b>Integrations: Ability to Change the Dimensions of the Box on the Fly.....</b>	<b>158</b>
<b>Integrations: Creation of a Shipping Manifest for the ShipEngine Carrier Service.....</b>	<b>159</b>
<b>Integrations: Enhancements to Integration with SendGrid.....</b>	<b>160</b>
<b>Inventory and Order Management: Calculation of Inventory Turnover.....</b>	<b>163</b>
<b>Inventory and Order Management: Conversion of the Stock Status of the Item.....</b>	<b>169</b>
<b>Inventory and Order Management: Selection of a Cost Layer Type for Inventory Transactions.....</b>	<b>173</b>
<b>Inventory and Order Management: Other Improvements.....</b>	<b>174</b>
<b>Inventory and Order Management: Side Panel Support.....</b>	<b>176</b>
<b>Inventory and Order Management: Tracking Data and Processes by Using Predefined Dashboards.....</b>	<b>183</b>
<b>Licensing: Experimental Features.....</b>	<b>189</b>
<b>Localization: Canadian Localization at the Company Level.....</b>	<b>190</b>
<b>Localization: Support of BACS Standard 18 for Lloyds Bank.....</b>	<b>194</b>
<b>Manufacturing: Engineering Workbench.....</b>	<b>197</b>
<b>Manufacturing: Enhanced Support for Transfers in MRP.....</b>	<b>205</b>
<b>Manufacturing: Control of Excessive Item Quantity for Operations.....</b>	<b>211</b>
<b>Manufacturing: Restricted Visibility of Customers and Vendors.....</b>	<b>213</b>
<b>Manufacturing: Side Panel Support for Lists of Records.....</b>	<b>214</b>
<b>Manufacturing: Support of Blanket Sales Orders in MRP.....</b>	<b>218</b>
<b>Manufacturing: Other Enhancements.....</b>	<b>220</b>
<b>Mobile: Ability to Edit the Main Screen.....</b>	<b>222</b>
<b>Mobile: Adjustment of Colors to Fit the Company's Color Scheme.....</b>	<b>224</b>
<b>Payroll: Enhanced Conditions for Final Paycheck Release.....</b>	<b>225</b>
<b>Payroll: Improvements to the User Interface.....</b>	<b>226</b>
<b>Payroll: Pay Stubs in the Mobile App.....</b>	<b>229</b>
<b>Platform: Ability to Specify a Custom Title to Side Panels.....</b>	<b>232</b>
<b>Platform: Ability to Generate GS1 EAN/UCC-128 Barcodes in Report Designer.....</b>	<b>233</b>
<b>Platform: Depreciation of MSMQ for Internal Notification Queues.....</b>	<b>235</b>
<b>Platform: Improved Diagnostics for Business Events and Push Notifications.....</b>	<b>236</b>
<b>Projects and Construction: Enhancements in Change Management.....</b>	<b>241</b>
<b>Projects and Construction: Mobile App Enhancements.....</b>	<b>243</b>

<b>Projects and Construction: Tracking Project Progress by Unit.....</b>	<b>258</b>
<b>System Administration: Trace Improvements.....</b>	<b>263</b>
<b>System Administration: Cloud Service Diagnostics.....</b>	<b>266</b>
<b>Usability: Built-In Infotips.....</b>	<b>267</b>
<b>Commerce Connector: API Changes.....</b>	<b>270</b>
<b>Customization: Independent Publishing and Unpublishing of Customization Projects for the Self-Service Portal.....</b>	<b>272</b>
<b>Customization: Publishing of a Customization Project Using Web API.....</b>	<b>273</b>
<b>Developer Documentation: New Guides.....</b>	<b>277</b>
<b>Integration Development: Use of Acumatica ERP as an Identity Provider via OIDC.....</b>	<b>279</b>
<b>Platform API: Dropped Support of Obsolete Acumatica Framework Development Tools.....</b>	<b>280</b>
<b>Platform API: Optimization of the PXSetup&lt;Table&gt; Implementation.....</b>	<b>281</b>
<b>Platform API: Signature Capturing on Mobile.....</b>	<b>282</b>
<b>Web Services: Introduction of the Default/22.200.001 Endpoint.....</b>	<b>283</b>
Web Services: Creation of a Shipment with Allocations and Package Contents in One Call.....	284
Web Services: Creation and Update of an Inventory Issue.....	287
Web Services: Creation of a Return Order.....	289
Web Services: Creation of a Credit Memo.....	290
Web Services: Retrieval of the Available Quantity of an Inventory Item.....	291
Web Services: Specification of Tax Details in Purchase Orders.....	291
Web Services: Overriding of Values in the Item Warehouse Details.....	293
<b>Web Services: Innovations in the Implementation of the REST API.....</b>	<b>294</b>
<b>Web Services: Update of Tax Details During Bill Creation or Update.....</b>	<b>296</b>
<b>Workflow: Enhancements to the Workflow Engine.....</b>	<b>297</b>
Workflow: Enhancements to the Customization Project Editor.....	297
Workflow: Enhancements to Workflow API.....	299
<b>Fixes and Enhancements.....</b>	<b>302</b>

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# Introduction

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This document provides important information about fixes, enhancements, and key features that are available in Acumatica ERP 2022 R2. 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 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

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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 2022 R2, in comparison to Version 2022 R1, 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 2022 R2.

## Deprecated Support for Internet Explorer

Acumatica ERP 2022 R2 does not support Internet Explorer. Acumatica ERP continues to support Microsoft Edge, Firefox, Google Chrome, and Apple Safari.

## 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 R2, Acumatica is switching to the new deployment model and is no longer 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 2022 R2, an administrator cannot install Acumatica ERP by using the Azure Cloud Services (classic) deployment model.

To deploy the Acumatica ERP Service for 2022 R2 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.

## 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 2022 R2 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 2022 R2 due to changes in Version 2022 R2.)

## Prerequisite Steps

Before administrators install Acumatica ERP 2022 R2 or upgrade to it locally, they need to do the following:

1. Switch the Internet Information Services application pool where the Acumatica ERP 2022 R2 instance will be installed to Integrated mode. (Classic mode is not supported.)
2. Install Microsoft .NET Frameworks 4.8 on the server where the Acumatica ERP 2022 R2 instance will be installed.
3. Install Microsoft .NET Core 3.1 on the server where the Acumatica ERP 2022 R2 instance will be installed.

## Upgrade Path

The upgrade to Acumatica ERP 2022 R2 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
2022 R2 Beta	A direct upgrade to later builds of Acumatica ERP 2022 R2 is supported.
2022 R2 Preview 2	An upgrade to later builds of Acumatica ERP 2022 R2 is not supported. The administrator must completely remove all components of the system and install the later build from scratch.
2022 R2 Preview 1	An upgrade to later builds of Acumatica ERP 2022 R2 is not supported. The administrator must completely remove all components of the system and install the later build from scratch.
2022 R1	A direct upgrade to Acumatica ERP 2022 R2 is supported.
2021 R2	A direct upgrade to Acumatica ERP 2022 R2 is supported.
2021 R1	A direct upgrade to Acumatica ERP 2022 R2 is supported.
2020 R2	An incremental upgrade is required. The following steps must be performed in the listed order: <ol style="list-style-type: none"> <li>1. Upgrade to the latest Version 2022 R1 X build available.</li> <li>2. Upgrade to Version 2022 R2.</li> </ol>
2020 R1	An incremental upgrade is required. The following steps must be performed in the listed order: <ol style="list-style-type: none"> <li>1. Upgrade to the latest Version 2021 R2 X build available.</li> <li>2. Upgrade to Version 2022 R2.</li> </ol>

Acumatica ERP 2022 R2 can be upgraded from the following particular versions:

- 2022 R1 Update 10 (22.110.0018) and earlier
- 2021 R2 Update 15 (21.215.0016) and earlier
- 2021 R1 Update 24 (21.124.0017) and earlier

For the list of upgradable versions for later 2022 R2 updates, see the Release Notes for the particular 2022 R2 update.

## Actions Before the Upgrade

Before performing the upgrade to Acumatica ERP 2022 R2, the administrator should do the following:

- If the organization uses Acumatica ERP Manufacturing Edition and visibility restrictions by branch or company have been configured for customer or vendor accounts, make sure that users who work with production-related forms have appropriate access permissions to companies or branches. These permissions allow users to view and specify the customer or vendor accounts that are assigned to these



companies or branches. Also, make sure that all production-related documents and transactions that include customer or vendor accounts have been processed through completion.

- All legacy credit card transactions—that is, credit card transaction generated on the [Sales Orders](#) (SO301000) and [Invoices](#) (SO303000) form in Acumatica ERP 2020 R2 and earlier versions—must be captured, voided, or converted to payments before the application can be upgraded to Acumatica ERP 2022 R2. The *Generate Payments for Card Transactions* (SO511000) form has been removed from the system. For details on legacy credit card conversion, see the [After an upgrade to Acumatica ERP 2020 R2, sales orders and SO invoices that have links to external transactions locked for processing in the system](#) knowledge base article.



The upgrade to Acumatica ERP 2022 R2 will not be possible if legacy credit cards transactions exist in the system.

## Post-Upgrade Changes and Actions

The administrator should be aware of the following changes in the system after the upgrade to Acumatica ERP 2022 R2 has been performed:

- The system has copied the dunning levels from the **Dunning** tab of the [Accounts Receivable Preferences](#) (AR101000) form to the **Dunning** tab on the [Customer Classes](#) (AR201000) form for each customer class.
- The following changes have been applied on the **Dunning** tab of the [Accounts Receivable Preferences](#) form:
  - The **Add Coming-Due Invoices** check box has inherited its state from the **Include Other Unpaid Documents** check box of the previous version.
  - The new **Add Open Payments and Credit Memos** check box has been cleared.

Customized dunning letter reports will still work, but if on the [Accounts Receivable Preferences](#) form, the **Add Open Payments and Credit Memos** check box is selected, the system administrator should review how credit memos and payments are shown in these reports. If they are not shown in an acceptable way, we recommend that standard reports be used instead of customized ones, or that the company create a new customized report.

- On the [Accounts Receivable Preferences](#) form, the system has inserted the option in the **Prepare Dunning Letters** box based on the state of the **Consolidate Dunning Letters for all Branches** check box as follows:
  - If the **Consolidate Dunning Letters for all Branches** check box was selected, the *Consolidate for All Companies* option has been inserted in the **Prepare Dunning Letters** box.
  - If the **Consolidate Dunning Letters for all Branches** check box was cleared, the *For Each Branch* option has been inserted in the **Prepare Dunning Letters** box.

If your organization uses customized reports, the system administrator should perform the steps described in [Upgrade Changes](#) in Release Notes for Developers.

- On the [Dunning Letter](#) (AR306000) form, the **Dunning Fee** setting has been updated as follows:
  - If the status of a dunning letter is *Draft*, the **Dunning Fee** box has been populated with the dunning fee specified for the customer class on the **Dunning** tab of the [Customer Classes](#) form.
  - If the status of a dunning letter is *Released*, the **Dunning Fee** box has been populated with the **Detail Total** amount of the dunning fee invoice whose identifier is specified in the **Fee Reference Nbr.** box on the [Dunning Letter](#) form. If no dunning fee invoice was generated, the **Dunning Fee** box has been populated with *0.00*.
- On the [Payment Methods](#) (CA204000) form, the *ACH* and *ACHBA* payment methods have been added to the system only if payment methods with these names were not defined manually in the tenant in a previous version. The **Release Batch Payments Before Export** check box has been cleared for all ACH payment methods.
- On the [Tax Zones](#) (TX206000) form, for each tax zone, the settings on the deprecated **Zip Codes** tab have been converted to settings on the **Ship-To Addresses** tab as follows:

- The **Tax Zone Is Based On** box has been filled in with the *Postal Codes* option. The **Country** box has been left empty.
- Each row in the table on the deprecated **Zip Codes** tab has been converted into one row on the **Ship-To Addresses** tab. The rows have been converted according to the following rules:
  - If *1* was specified in the **Zip Code+4 (Min)** column and *9999* was specified in the **Zip Code+4 (Max)** column, the **From Postal Code** and **To Postal Code** columns are filled in with the one that had been specified in the **Zip Code** column for the row.  
If settings other than *1* and *9999* were specified in the **Zip Code+4 (Min)** and **Zip Code+4 (Max)** columns, respectively, the **From Postal Code** column is filled in with the postal code followed by a hyphen and then the value in the **Zip Code+4 (Min)** column. The **To Postal Code** column is filled in with the postal code followed by a hyphen and then the value in the **Zip Code+4 (Max)** column.
  - The values in the **Zip Code+4 (Min)** and **Zip Code+4 (Max)** columns, when concatenated with a postal code added after a zip postal code and a hyphen, have been formatted to four digits with leading zeroes.
- If the organization used a bank feed customization project from AcuSync, the administrator should perform the following steps:
  - a. Unlink and delete bank feeds in the customization project, so that the organization is not charged for the additional bank feeds.
  - b. Remove the customization project from Acumatica ERP.
  - c. On the *Bank Feeds* (CA205500) form, configure new bank feeds in the system, as described in *To Set Up Plaid Integration* and *To Set Up MX Integration*.

For detailed upgrade instructions, see the following [knowledge base article](#).

- If the organization uses a Shopify store that was connected to Acumatica ERP Retail-Commerce Edition with a Shopify private app, after the upgrade to 2022 R2, the administrator should reconnect the Shopify store by using a public or custom Shopify app. Store connections established through private Shopify apps will no longer work. For details, see *Commerce: Connection of a Store with a Custom Shopify App*.
- If the tenant had the *Canadian Localization* feature enabled before the upgrade, the system has inserted *Canada* in the **Localization** box of the *Companies* (CS101500) form for all companies in the tenant.  
If the tenant had the *Canadian Localization* feature disabled before the upgrade, during the upgrade, the system has inserted *None* in the **Localization** box of the *Companies* form for all companies in the tenant.  
To make it possible for users to launch Canadian versions of the reports from the site map, the administrator should manually add the reports to the site map. If predefined Canadian versions of reports are available, they have the same names as the base versions with *.CA* added before the file extension. For example, if the base version of a report is *SO641010.rpx*, the Canadian version is *SO641010.CA.rpx*.  
To add a Canadian version of a report to the site map, the administrator should do the following:
  - a. On the *Site Map* (SM200520) form, click **Add Row**.
  - b. In the **Screen ID** column for a new row, specify a form ID that has not been used yet.
  - c. Specify the following settings for the new row:
    - **Title:** The name of the form that will be displayed on UI, such as *Sales Order (Canada)*
    - **URL:** The URL of the report



Make sure that the report ID in the URL is the Canadian version—for example *SO641010.CA.rpx*.

- **Workspaces:** The workspace from which the form can be accessed
- **Category:** *Printed Forms*
- d. On the form toolbar, click **Save**.
- If the organization uses Customer Relationship Management, the system has done the following for each dynamic list that had been created on the *Marketing Lists* (CR204000) form:

- Has moved the values that had been entered in the **Generic Inquiry** and **Shared Filter to Apply** boxes on the **Configuration Options** tab to the **Generic Inquiry** and **Shared Filter** boxes in the Summary area
- Has added any filtering criteria that had been specified on the **Selection Criteria** tab of the previous version to a generic inquiry form which will be specified in the **Generic Inquiry** box, and the list ID will be added to the filter name specified in the **Shared Filter** box

Any text that had been entered in the editor area on the **Configuration Options** tab (such as a description of the marketing list) has not be migrated during the upgrade.

- The system has done the following with the currency settings specified on the *Customer Management Preferences* (CR101000) form (the **Currency ID** setting and the state of the **Enable Currency Override** check box):
  - For each business account class, has copied the currency and the check box from the *Customer Management Preferences* (CR101000) form to the *Business Account Classes* (CR208000) form.
  - To populate the currency settings of a business account on the *Business Accounts* (CR303000) form, has copied the currency settings that are specified for the selected business account class on the *Business Account Classes* form. If no business account class is specified for a business account, the **Currency ID** box will be left empty and the **Enable Currency Override** check box will be selected in the business account.

# Commerce: Connection of a Store with a Custom Shopify App

Previously, it was possible to connect a Shopify store to Acumatica ERP in the following ways:

- By using the Acumatica ERP public app, which is available in the Shopify App Store
- By using a private app developed and installed in a Shopify store specifically for connecting it to Acumatica ERP

In January 2022, Shopify deprecated support for the private apps and introduced custom apps, which can now be used to connect a Shopify store to Acumatica ERP.

## Connection of a Store by Using a Custom Shopify App

In Acumatica ERP 2022 R2, to establish a connection between a Shopify store and Acumatica ERP, a user should complete the following general steps:

1. In Shopify, create a custom Shopify app and install it in the Shopify store. For details, see [the Shopify documentation](#).
2. In the Shopify store, obtain the custom app's access token and shared secret. For information, see [the Shopify documentation](#).
3. On the [Shopify Stores](#) (BC201010) form, create a store, and specify the access token and shared secret in the **API Access Token** and **API Secret Key** boxes of the **Connection Settings** tab (shown in the following screenshot).

The screenshot shows the 'Shopify Stores' form for 'Shopify Sweet Store'. The 'CONNECTION SETTINGS' tab is active. The 'STORE SETTINGS' section includes fields for 'Store Admin URL', 'API Key', '\* API Access Token', and '\* API Secret Key'. The '\* API Access Token' and '\* API Secret Key' fields are highlighted with a red box. The 'STORE PROPERTIES' section includes fields for 'Store URL', 'Default Currency', 'Supported Currencies', 'Store Time Zone', and 'API Version'. The 'SYSTEM SETTINGS' section includes a 'Locale' field. The 'STORE ADMINISTRATOR DETAILS' section includes an 'Administrator' field. The 'LICENSE RESTRICTIONS' section includes a 'Max. Number of Stores' field.

**Figure:** API Access Token and API Secret Key boxes on the Shopify Stores form

For step-by-step instructions for connecting a Shopify store to Acumatica ERP, see [Initial Configuration: To Establish the Store Connection with a Custom App](#).

The API key and API password had to be specified for the connection through the private app. Because this connection is no longer supported, the **API Password** box has been removed from the **Connection Settings** tab of the [Shopify Stores](#) form. The **API Key** box is now filled in by the system automatically when the user specifies the access token and shared secret of the custom app.

# Commerce: Export of Sales Orders to Shopify

In previous versions of Acumatica ERP, it was impossible to export sales orders created or updated in Acumatica ERP to a Shopify store. Starting in Acumatica ERP 2022 R2, an administrative user can set up the order export so that if a sales order has been created in Acumatica ERP, it can be exported to a Shopify store, and if a user changes a sales order that has already been exported, these changes can be synchronized with Shopify.

## Setting Up the Order Export

Before sales orders can be exported to a Shopify store, an administrative user needs to specify the order type of the orders that can be exported to the Shopify store. To do this, the administrative user selects the type in the new **Order Types for Export** box (see the following screenshot) on the **Order Settings** tab of the *Shopify Stores* (BC201010) form.

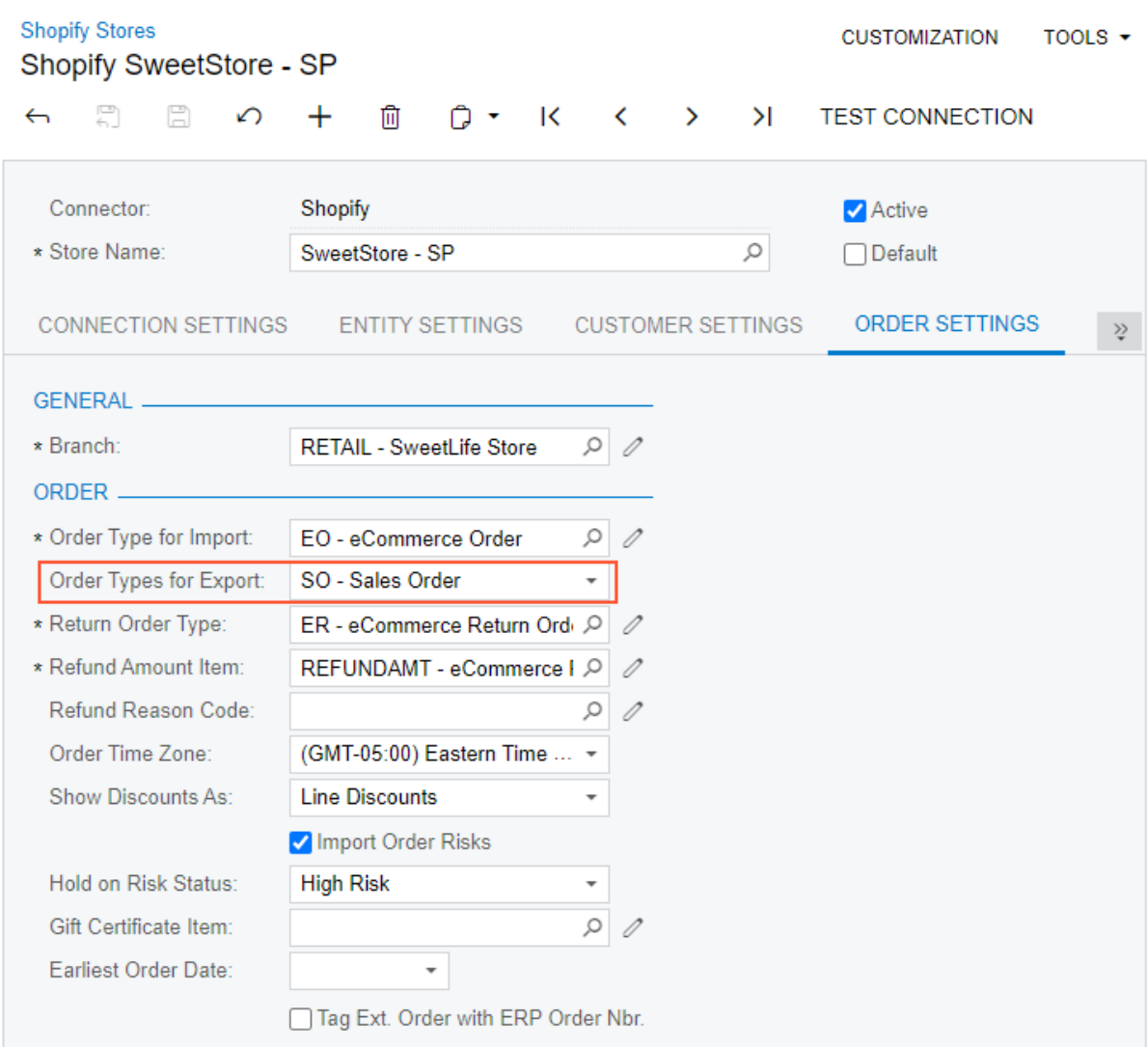


Figure: The new Order Types for Export check box

Order types are available for selection in this box only if they are based on the SO (Sales Order) or SA (Sales Order with Allocation) order template. The order template of an order type is specified on the *Order Types* (SO201000) form.

The export of sales orders follows the same process as the order import does. That is, the *Sales Order* entity is first prepared on the [Prepare Data](#) (BC501500) form and then processed on the [Process Data](#) (BC501500) form. During the synchronization, the **Sync Direction** of the *Sales Order* entity should be set to *Export* or *Bidirectional*.

A sales order is exported if it has the order type selected in the store settings on the [Shopify Stores](#) form and if it has one of the following statuses:

- *Open*
- *Pending Processing*
- *Shipping*
- *Back Order*
- *Completed*

When a sales order created in Acumatica ERP is exported, it is assigned the *Paid* status in Shopify, regardless of its open balance in Acumatica ERP. If the sales order has not yet been fully paid, a user can later collect the payment and create the corresponding payment document in Acumatica ERP.

## Exporting Customers, Items, and Taxes

A customer specified in a sales order in Acumatica ERP is exported along with the order. If the customer has not been previously exported to the Shopify store, the retail-commerce connector creates it in the Shopify store and adds it to the exported sales order during the order export.

Stock and non-stock items added to a sales order in Acumatica ERP must be synchronized with the Shopify store; otherwise, an error will occur during the export of the sales order.

The synchronization of the taxes applied to a sales order depends on the state of the **Tax Synchronization** check box on the **Order Settings** tab (**Taxes** section) of the [Shopify Stores](#) (BC201010) form for the store. If the **Tax Synchronization** check box is selected, taxes corresponding to the tax IDs from the order settings are created and applied to the exported sales order in the Shopify store. These tax IDs as listed on the **Taxes** tab of the [Sales Orders](#) (SO301000) form.

## Updating Synchronized Orders

After a sales order has been exported from Acumatica ERP to a Shopify store, a user can still make changes to the sales order in Acumatica ERP if these changes do not affect the order total. (For example, the user can update the shipping address or change the customer's email address or phone number.) The sales order can then be resynchronized so that the sales order in the Shopify store reflects the most recent changes.



A sales order that has been created in Acumatica ERP and exported to Shopify cannot be edited in the Shopify admin area. If a user needs to make any changes to this order (that is, the changes that the user would normally make after clicking the **Edit** button at the top of the Shopify order page), the user should cancel the order and recreate it with the correct settings and details.

An administrative user can allow adding items to sales orders that have been exported to Shopify. To do so, on the **Order Settings** tab of the [Shopify Stores](#) (BC201010) form, the administrative user selects the **Allow Adding Items to Processed Orders** check box (shown in the following screenshot).

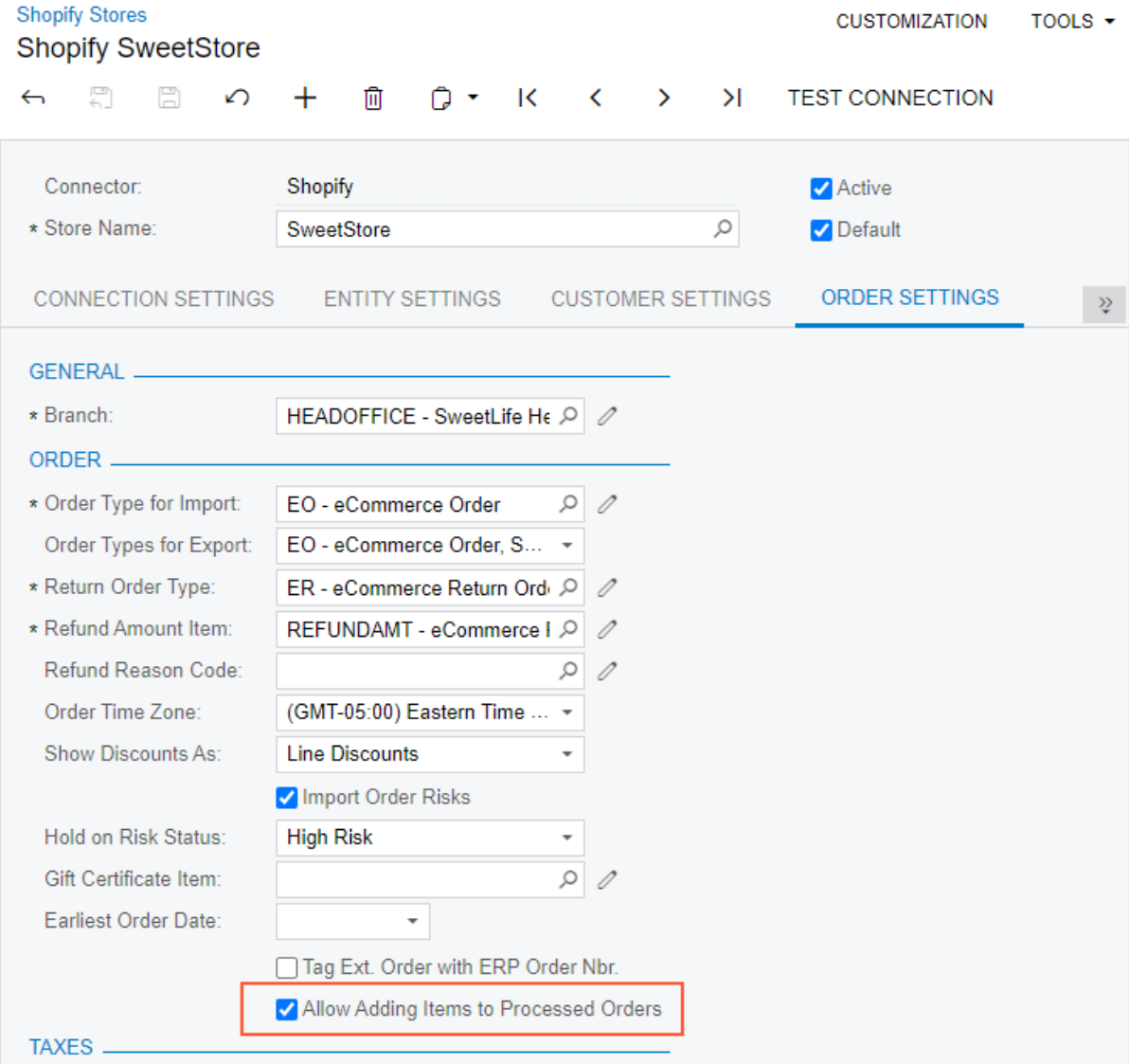


Figure: The Allow Adding Items to Processed Orders check box

When the **Allow Adding Items to Processed Orders** check box is selected for a store, a new column, **Excluded from Export**, is displayed for sales orders synchronized with the store on the **Details** tab of the [Sales Orders](#) (SO301000) form. If a user adds an item to such an order, the **Excluded from Export** check box automatically becomes selected, which indicates that this item will not be reflected in the order in the Shopify store after the sales order is resynchronized.

In the following screenshot, the *APJAM96* item has been added to the sales order after the order has been synchronized with the Shopify store.

Sales Orders

EO 000066 - Candy Cafe

NOTES ACTIVITIES FILES CUSTOMIZATION TOOLS

QUICK PROCESS CREATE SHIPMENT HOLD

\* Order Type: EO \* Customer: C000000001 - Candy Cafe Ordered Qty.: 30.00  
 Order Nbr.: 000066 \* Location: MAIN - Primary Location Discount Total: 0.00  
 Status: Open Contact: Candy Cafe Tax Total: 0.00  
 \* Date: 8/25/2022 \* Project: X - Non-Project Code. Order Total: 659.00  
 \* Requested On: 8/25/2022 Description: SweetStore | Order: #1016 | Status: Paid  
 Customer Ord... #1016  
 External Refer... 455417148220

DETAILS TAXES FINANCIAL SHIPPING ADDRESSES SHIPMENTS PAYMENTS RISKS RELATIONS TOTALS

ADD ITEMS ADD MATRIX ITEMS ADD INVOICE ADD BLANKET SO LINE LINE DETAILS PO LINK

Excluded from Export	Branch	Inventory ID	Free Item	Warehouse	Line Description	UOM	Quantity	Qty. On Shipments
<input type="checkbox"/>	RETAIL	APJAM32	<input type="checkbox"/>	WHOLESALE	Apple jam 32 oz	BOX	10.00	0.00
<input type="checkbox"/>	RETAIL	APJAM08	<input type="checkbox"/>	WHOLESALE	Apple jam 8 oz.	PIECE	10.00	0.00
<input checked="" type="checkbox"/>	RETAIL	APJAM96	<input type="checkbox"/>	WHOLESALE	Apple jam 96 oz	PIECE	10.00	0.00

Figure: The sales order line item excluded from synchronization

To prevent a user from changing the order settings that cannot be exported to a synchronized order in Shopify, the UI elements of the *Sales Orders* (SO301000) form that are listed in the following table are made unavailable for editing as soon as the sales order is synchronized with the Shopify store.

Table: UI Elements That Cannot Be Changed in Synchronized Orders

Location on the <i>Sales Orders</i> Form	UI Element
<b>Details</b> tab	<ul style="list-style-type: none"> <li>Quantity</li> <li>Unit Price</li> <li>Manual Price</li> <li>Discount Percent</li> <li>Discount Amount</li> <li>Tax Category</li> </ul>
<b>Taxes</b> tab	<ul style="list-style-type: none"> <li>Tax Rate</li> <li>Tax Amount</li> <li>Taxable Amount</li> </ul>
<b>Discounts</b> tab, which is shown if the <i>Customer Discounts</i> feature is enabled on the <i>Enable/Disable Features</i> (CS100000) form	<ul style="list-style-type: none"> <li>Manual Discount</li> <li>Discount Amt.</li> <li>Discount Percent</li> <li>Free Item</li> <li>Free Item Qty.</li> </ul>
<b>Totals</b> tab	<ul style="list-style-type: none"> <li>Override Freight Price</li> <li>Freight Price</li> <li>Premium Freight Price</li> </ul>



Also, after sales order synchronization, the **Recalculate Prices** command becomes unavailable on the More menu of the form.

# Commerce: Enhanced Export of Product Availability Settings

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In Acumatica ERP 2022 R2, a number of improvements have been introduced for the export of product availability settings to BigCommerce and Shopify stores. The sections of this topic provide a high-level overview of the changes.

## Synchronization of Availability Settings of Matrix Items

In Acumatica ERP, a user can specify the availability settings for a template item on the **eCommerce** tab of the [Template Items](#) (IN203000) form. Starting in Acumatica ERP 2022 R2, the user can also specify the availability settings for each of the template item's matrix items on the **eCommerce** tab of the [Stock Items](#) (IN203000) form. These improvements provide more granular control over the availability settings assigned to the product (template item) and its variants (matrix items) in the external system during the synchronization of the *Template Item* entity.

Now the availability settings of a product variant in the external system are determined by the settings specified both for the template item and for the matrix item, and the purchasability status assigned to each of the product variants is consistent with the purchasability of the status of the product itself.

For information about the export of availability settings and data to the external systems, see [Selling Matrix Items: Export of Product Availability Data](#) (for BigCommerce) and [Sale of Matrix Items: Export of Product Availability Data](#) (for Shopify).

## Determination of the Item's Purchasability

Previously, when a user synchronized the *Stock Item* and *Template Item* entities with an external system, only some of the availability settings of the stock and template items were updated in the external system. For existing items, the product's purchasability was determined based on the availability settings alone, regardless of the available quantity of the item and the **When Qty Unavailable** setting specified for the item on the **eCommerce** tab of the [Stock Items](#) (IN203000) or [Template Items](#) (IN203000) form. To make the availability settings of items and the available quantity of items in the external system reflect the settings specified for them in Acumatica ERP, the user had to synchronize the *Product Availability* entity.

Starting in Acumatica ERP 2022 R2, for products that have already been synchronized with the external system, when the *Stock Item* and *Template Item* entities are synchronized, the system checks the available quantity of the item in the external system before determining its purchasability status.

For information about the export of the availability settings of stock and non-stock items, see [Product Availability: General Information](#) (for BigCommerce) and [Product Availability: General Information](#) (for Shopify).

## Export of Available Quantities in Sales UOMs

Starting in Acumatica ERP 2022 R2, the available quantity of an item whose quantity is configured to be tracked is exported to external systems in the item's sales unit of measure, which is defined on the **General** tab of the [Stock Items](#) (IN202500) form. If an item's base UOM is different from its sales UOM, during the synchronization of the *Product Availability* entity, the item's available quantity is converted from the base UOM to the sales UOM before the quantity is exported to an external system.



To avoid discrepancies in sales orders imported into Acumatica ERP, we recommend that before changing an item's sales UOM, a user makes sure that there are no unsynchronized sales orders that contain the item. Also, the user should synchronize the item's available quantity immediately after changing its sales UOM so that new orders for the item are created in the external system with the updated UOM.

# Commerce: Multiple Guest Customer Accounts

In previous versions of Acumatica ERP, orders that were placed in an external system by guest customers (for example, customers that make purchases at a point of sale or create orders on a BigCommerce website without signing in) and then imported into Acumatica ERP were created in Acumatica ERP for a single customer account assigned to all such orders. If an excessive number (that is, hundreds of thousands) of orders has been assigned to the guest customer, this could lead to performance issues. In Acumatica ERP 2022 R2, this issue has been addressed, as described in the following section.

## Use of Multiple Guest Customer Accounts

Starting in Acumatica ERP 2022 R2, an administrator can set up the system to use multiple guest customer accounts to record guest sales orders imported from BigCommerce or Shopify. To do so, the administrator selects the new **Use Multiple Guest Accounts** check box (see item 1 in the following screenshot) on the **Customer Settings** tab of the [BigCommerce Stores](#) (BC201000) or [Shopify Stores](#) (BC201010) form. (See the following screenshot).

The screenshot shows the 'Customer Settings' tab for a Shopify Store named 'SweetStore'. The 'CUSTOMER SETTINGS' tab is selected. The 'Use Multiple Guest Accounts' checkbox is checked and highlighted with a red box and a red circle containing the number 1. Other settings include 'Customer Auto-Numbering' (ECCUSTOMER - Customer N) highlighted with a red box and a red circle containing the number 3, and 'Generic Guest Customer' (ECOMGUEST - eCommerce) highlighted with a red box and a red circle containing the number 2.

**Figure:** The new **Use Multiple Guest Accounts** check box

When this check box is selected, this system limits the number of sales orders that can be created in Acumatica ERP for the customer account selected in the **Generic Guest Customer** box of the same tab (see Item 2 in the previous screenshot). The customer account selected in this box that appears on imported sales orders placed by anonymous customers. By default, the allowed number of sales orders per guest customer account is limited to 10,000. An administrator can override this number by changing the value of the `MaxOrdersPerGuestAccount` parameter in the `web.config` file.

When the maximum allowed number of sales orders is exceeded, the system creates a new customer account and inserts its identifier in the **Generic Guest Customer** box. The settings of the new customer account are copied from the previous generic guest customer account, and its identifier is generated based on the numbering sequence specified in the **Customer Auto-Numbering** box of the tab (Item 3).

# Commerce: External Description in Synchronization Records

In previous versions of Acumatica ERP, when an entity was synchronized with an external e-commerce system, the synchronization records of the entity displayed on the [Process Data](#) (BC501500) and [Sync History](#) (BC301000) forms included information about only the identifier of the entity in the external system.

Starting in Acumatica ERP 2022 R2, on the [Process Data](#) and [Sync History](#) forms, a new column, **External Description** (shown in the following screenshot), has been added to simplify the identification of particular synchronization records.

Sync History

Store: Sweet Store

Entity:

ALL RECORDS READY TO PROCESS FAILED PROCESSED SKIPPED ABORTED DELETED FILTERED INVALID

Entity	Store	ERP ID	External ID	External Description
Stock Item	Sweet Store	Orange jam 96 oz	7681560019162	Orange jam 96 oz
Payment	Sweet Store	Prepayment_000073	4818398675162-5634562425050	1001
Sales Order	Sweet Store	EO_000063	4818398675162	1001
Customer	Sweet Store	WESTBBQ_West BBQ Rest...	6227794395354	contact.westbbq@example.com
Customer Location	Sweet Store	MAIN_Primary Location	6227794395354-7744129564890	contact.westbbq@example.com

**Figure:** The External Description column on the Sync History form

The following table summarizes the information this column displays for each entity for a BigCommerce store and a Shopify store.

**Table:** The External Description for BigCommerce and Shopify stores

Entity	External Description for Shopify	External Description for BigCommerce
Customer Price Class	N/A	Email address
Customer	Email address	Email address
Customer Location	Email address	Email address
Sales Category	N/A	Sales category name
Stock Item	Product name	Product name
Non-Stock Item	Product name	Product name
Template Item	Product name	Product name
Base Sales Price	N/A	Product name If the base price is defined for a matrix item, the product name of the matrix item

Entity	External Description for Shopify	External Description for BigCommerce
<i>Price List</i>	N/A	Price list name
<i>Product Image</i>	Product name	Product name
<i>Product Availability</i>	Product name	Product name
<i>Sales Order</i>	Shopify order number	BigCommerce order number
<i>Payment</i>	Shopify order number	BigCommerce order number
<i>Shipment</i>	Shopify order number	BigCommerce order number; tracking number (if it exists)
<i>Refund</i>	Shopify order number	BigCommerce order number

# CRM: Enhanced Marketing Lists and Campaigns

In Acumatica ERP 2022 R2, users can add multiple members to marketing lists and campaigns, and manage the members and subscriptions quickly and easily.

## New Layout of the Marketing Lists Form

In previous versions of Acumatica ERP, adding or updating multiple members of a marketing list could be time-consuming, and a user could manage subscriptions of only one list member at a time. Starting in Acumatica ERP 2022 R2, the layout of the [Marketing Lists](#) (CR204000) form has been significantly changed (see the screenshot below).

The form now has a More menu with the following commands:

- **Convert to Static List** (for details, see the *Enhancements to Static and Dynamic Marketing Lists* section)
- **Convert to Dynamic List:** If a user confirms the intention to convert the list, the **Generic Inquiry** and **Shared Filter** boxes appear in the Summary area (see Items 1 and 2 in the following screenshot). The user can open the generic inquiry in a new browser tab by clicking the icon to the right of the **Generic Inquiry** box.

In the new **Status** box, the user can select *Active* or *Inactive* for the marketing list (Item 3).

The **Used in Campaigns** tab has been added (Item 4). On this tab, users can see all the marketing campaigns that the current marketing list has been added to.

Also, the **Configuration Options** and **Selection Criteria** tabs have been removed from the form. The **Activities** tab has been hidden and can be shown through a customization.

Subs	Type	Member Name	Job Title	Business Account	Account Name	Email
<input checked="" type="checkbox"/>	Lead	<a href="#">Abdul Waheed</a>	Network & System Administra...	KUFPEC		awaheed@kufpec.com
<input checked="" type="checkbox"/>	Lead	<a href="#">Agustin Muller</a>		Kling and Sons		agustin.muller@klingsons.example.com
<input checked="" type="checkbox"/>	Lead	<a href="#">Alejandrin Orm</a>		Hane - Kemmer		alejandrin.orm@hanekemmer.example.com
<input checked="" type="checkbox"/>	Lead	<a href="#">Aniyah Jenkins</a>		Nader, Padberg and Hegmann		aniyah.jenkins@nph.example.com
<input checked="" type="checkbox"/>	Lead	<a href="#">Araceli Harvey</a>	UX Designer	Torp Inc		araceli.harvey@torp.example.com
<input checked="" type="checkbox"/>	Lead	<a href="#">Ariane Ebert</a>		Fritsch and Sons		ariane.ebert@fritsch-sons.example.com
<input checked="" type="checkbox"/>	Lead	<a href="#">Aron Mills</a>		Bahringer LLC		aron.mills@bahringer.example.com
<input checked="" type="checkbox"/>	Lead	<a href="#">Arturo Smitham</a>		Lakin, Buckridge and McClure		arturo.smitham@lbm.example.com
<input checked="" type="checkbox"/>	Lead	<a href="#">Brain Konopalski</a>	Product Manager	Brakus, Oberbrunner and Baier		brain.konopalski@bob.example.com

**Figure:** New layout of the Marketing Lists form

The table toolbar of the **List Members** tab of this form has the following new buttons (see Item 5 in the previous screenshot):

- **Add Members:** Opens a menu that lists the **Add from Generic Inquiry**, **Add from Marketing Lists**, and **Add from Campaigns** commands. These commands are available only if the marketing list is static. For details, see the *Addition of New Members to a Static Marketing List* section below.

- **Manage Subscription:** Opens a menu that lists the **Subscribe All** and **Unsubscribe All** commands. For details, see the *Enhanced Subscription Management* section below.
- **Copy All:** Opens the Copy Members wizard. For details, see the *Copying of Members Between Marketing Lists* section below.
- **Clear All:** Deletes all the members currently shown on all pages of the table from the marketing list.



Clicking the **Clear All** button deletes only members that are shown in the table when the user clicks the button (not all members of the list).

The user can do any of the following:

- Delete all the records from the table. In this case, the user would click the menu command without first filtering records.
- Search for the records that meet the needed criteria (for example, employees) and then delete all the records that meet these criteria.
- Select a filter among any available filters, and then click the button to delete all the filtered records.

## Enhancements to Static and Dynamic Marketing Lists

On the *Marketing Lists* (CR204000) form, the default **List Type** option for a newly created marketing list is *Static* (see Item 1 in the following screenshot). A user can convert the static marketing list to a dynamic one by clicking **Convert to Dynamic List** on the form toolbar (Item 2) or the More menu.

Subs	Type	Member Name	Job Title	Business Account	Account Name	Email
<input checked="" type="checkbox"/>	Lead	<a href="#">Wilma Green</a>			Monahan - O'Conner	<a href="mailto:wilma.green@monahanoconner.example.com">wilma.green@monahanoconner.example.com</a>
<input checked="" type="checkbox"/>	Contact	<a href="#">Wilma Wilson</a>	District Tactics Coordinator		Williams Carpet Shop	<a href="mailto:consectetur.ipsum@PhasellusnullaInteger.com">consectetur.ipsum@PhasellusnullaInteger.com</a>
<input checked="" type="checkbox"/>	Contact	<a href="#">Yamazaki Shinji</a>	Consultant	<a href="#">ASAHSUNTR</a>	Asahi Sun Tours	<a href="mailto:Asahi@japan-mail.com">Asahi@japan-mail.com</a>
<input checked="" type="checkbox"/>	Contact	<a href="#">Yi Xiang Yuan</a>	Chief Financial Officer	<a href="#">CASHCONNEX</a>	Cash Connection	<a href="mailto:cash@cc.example.com">cash@cc.example.com</a>
<input checked="" type="checkbox"/>	Lead	<a href="#">Yiannis Chourdakis</a>	Sales and Operations Admin...		Logicom Public LTD	<a href="mailto:ychourdakis@logicom.example.com">ychourdakis@logicom.example.com</a>
<input checked="" type="checkbox"/>	Employee	<a href="#">Yona Jones</a>	Operations Employee	<a href="#">PRODWHOLE</a>	Revision Two Products	<a href="mailto:yjones@revisiontwo.com">yjones@revisiontwo.com</a>
<input checked="" type="checkbox"/>	Employee	<a href="#">Zaitana Young</a>	Support Engineer	<a href="#">PRODWHOLE</a>	Revision Two Products	<a href="mailto:zyoung@revisiontwo.com">zyoung@revisiontwo.com</a>
<input checked="" type="checkbox"/>	Lead	<a href="#">Zelda Leuschke</a>			Stark Inc	<a href="mailto:zelda.leuschke@stark.example.com">zelda.leuschke@stark.example.com</a>

**Figure:** The conversion of a static marketing list to dynamic one

Similarly, a dynamic marketing list can be converted to static through the **Convert to Static List** button, which is shown on the form toolbar and available on the More menu for a dynamic marketing list.

In previous versions of Acumatica ERP, if a user converted a dynamic list to a static list, the system deleted all the members from the **List Members** tab. In Acumatica ERP 2022 R2, if a user clicks **Convert to Static List** on the *Marketing Lists* form, and at least one member is in the table on the **List Members** tab, the system displays the following warning message: *Do you want to keep the members in this list after conversion to a static list?* The user can choose what to do with the members after conversion: keep the members or delete them from the list.

## Addition of New Members to a Static Marketing List

On the **List Members** tab of the *Marketing Lists* (CR204000) form, a user can add new members to a static marketing list by clicking **Add Members** on the table toolbar and selecting the needed menu command.

If the user clicks **Add Members > Add from Generic Inquiry**, the **Add Members** dialog box opens, in which the user can select a generic inquiry, select any shared filter for the generic inquiry (including *All Records*), and add the members from the generic inquiry to the marketing list (see the following screenshot).

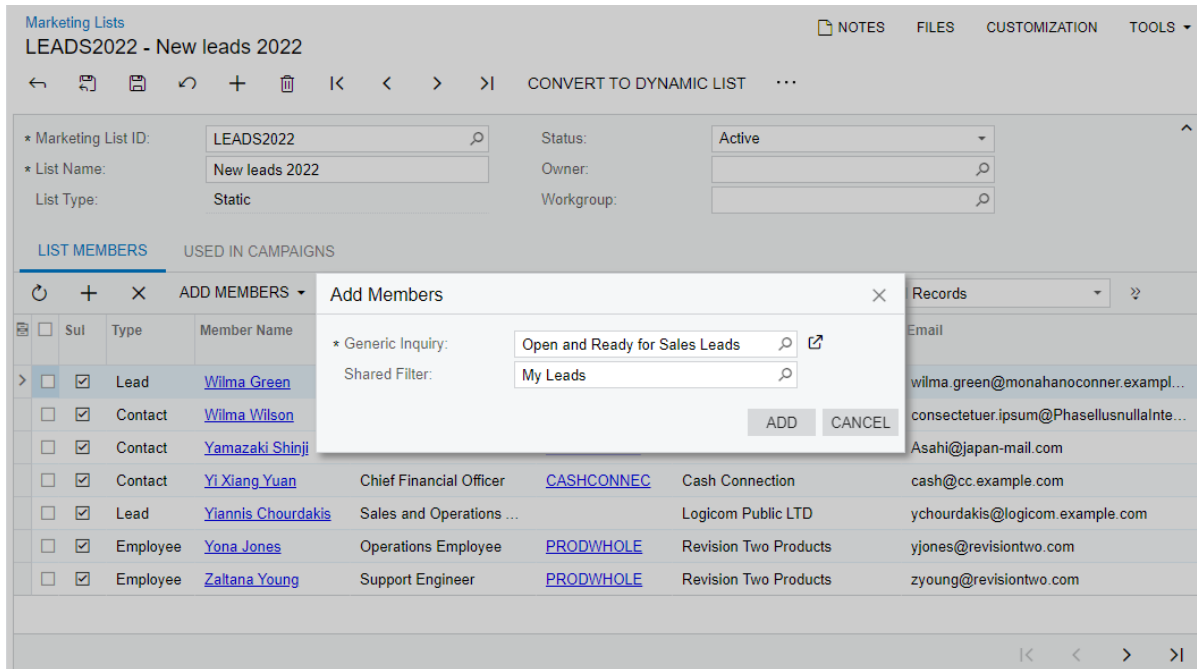


Figure: The addition of new members from a generic inquiry

If the user clicks **Add Members > Add from Marketing Lists**, the **Add Members from Marketing Lists** dialog box opens. In the dialog box, the user can select any number of marketing lists (see Item 1 in the following screenshot) and add the members from these lists to the marketing list (Item 2).

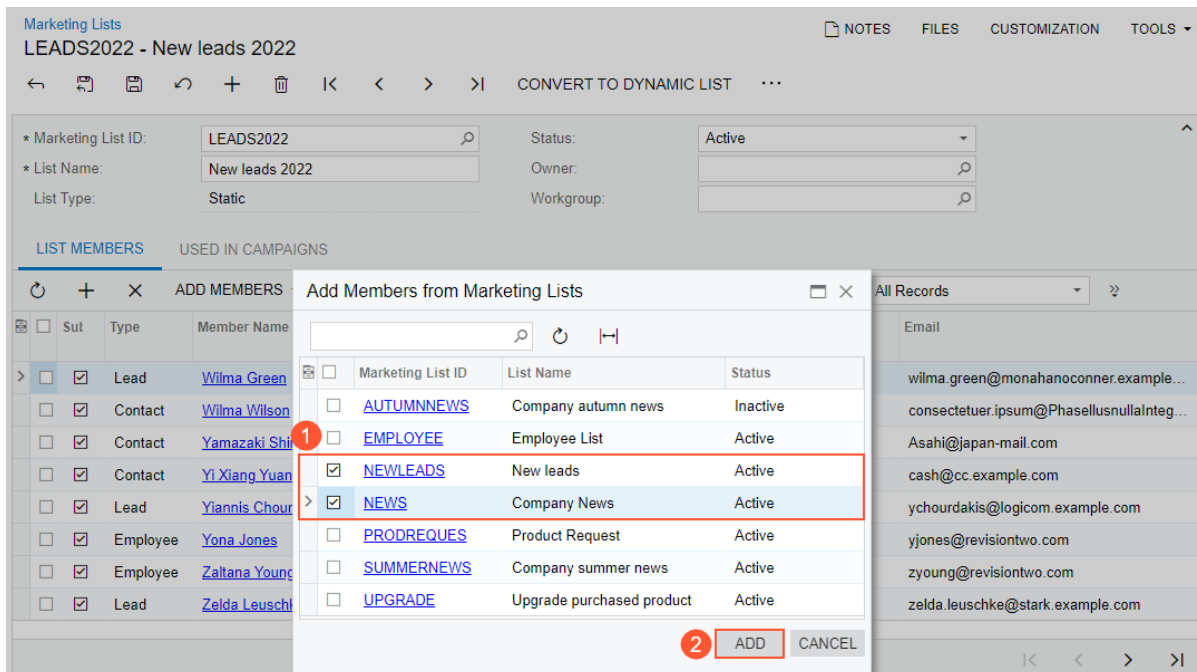


Figure: The addition of new members from marketing lists



If the user clicks **Add Members > Add from Campaigns**, the **Add Members from Campaigns** dialog box opens. In the dialog box, the user can select any number of marketing campaigns (see Item 1 in the following screenshot) and add the members from the campaigns to the marketing list (Item 2).

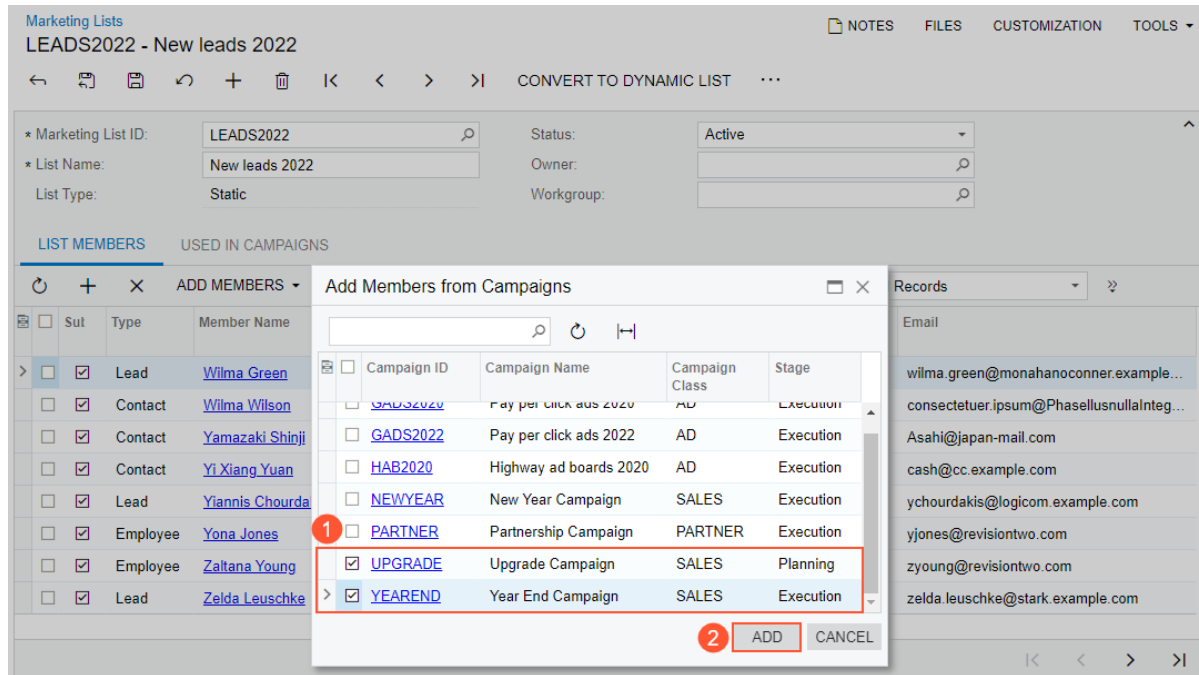


Figure: The addition of new members from marketing campaigns

## Enhanced Subscription Management

On the table toolbar of the **List Members** tab of the *Marketing Lists* (CR204000) form, a user can click **Manage Subscription > Subscribe All** or **Manage Subscription > Unsubscribe All**.



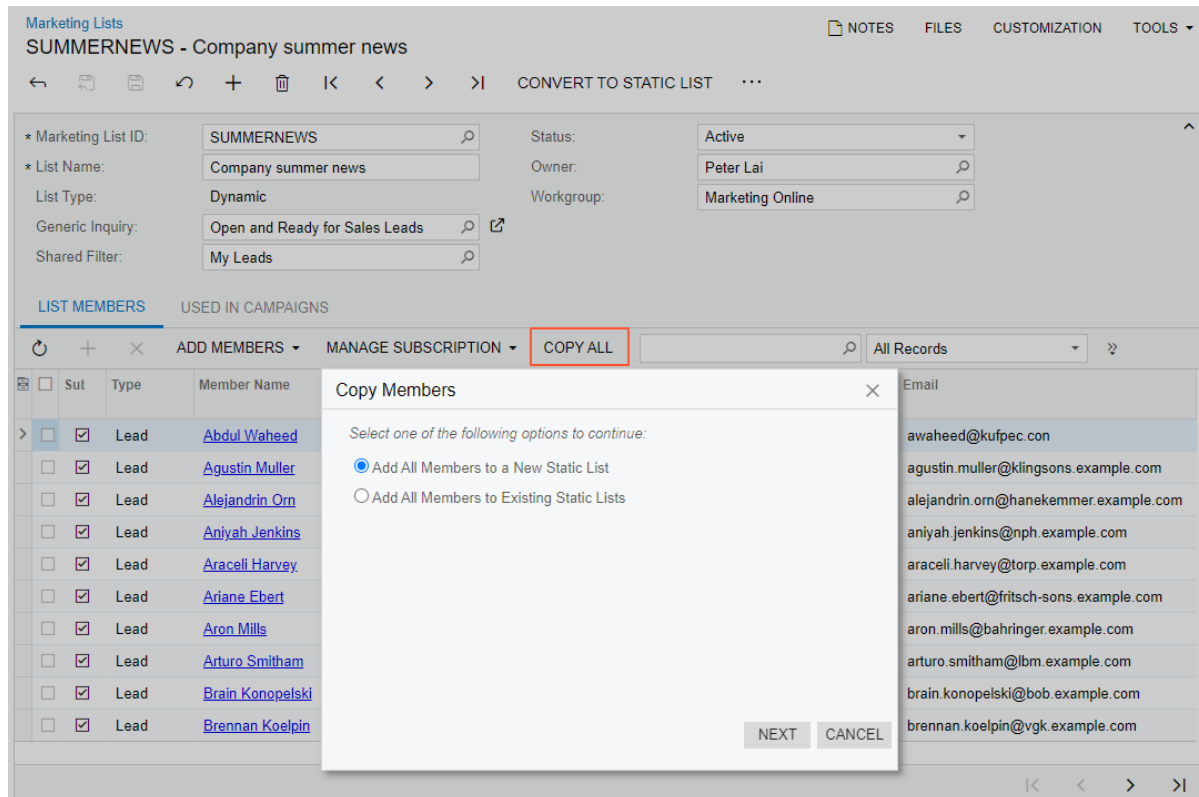
Clicking the **Subscribe All** or **Unsubscribe All** button subscribes or unsubscribes only members that are displayed in the table when the user clicks the button (not all members of the list).

Depending on when the user clicks the menu command, the user can do any of the following:

- Subscribe or unsubscribe all the members listed on the tab to the marketing list. In this case, the user would click the menu command without first filtering records.
- Search for the records that meet the needed criteria (for example, email address and business account) and then click the menu command to subscribe or unsubscribe all the members that meet these criteria.
- Select a filter among any available filters, and then click the menu command to subscribe or unsubscribe all the members that are included in the filter.

## Copying of Members Between Marketing Lists

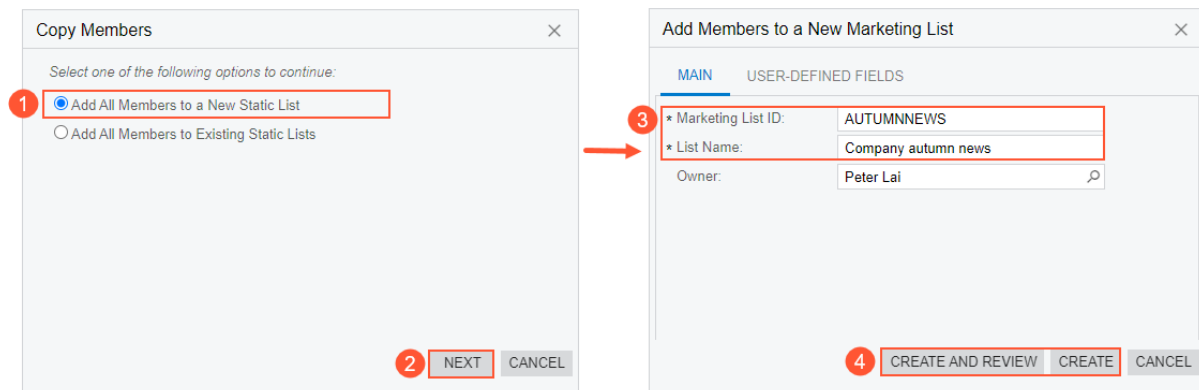
A user can copy members from a dynamic or static marketing list to a new static list or to any number of selected static lists. On the **List Members** tab of the *Marketing Lists* (CR204000) form, when the user clicks the **Copy All** button on the table toolbar, the first page of the Copy Members wizard opens (see the following screenshot).



**Figure: The opening page of the Copy Members wizard**

On this page of the wizard, if the user selects **Add All Members to a New Static List** (see Item 1 in the left screenshot below) and clicks **Next** (Item 2), the **Add Members to a New Marketing List** page opens, and the user can do any of the following:

- Populate the required UI elements with values and create a new list by clicking **Create** (Items 3 and 4 in the right screenshot)
- Populate the required UI elements with values, create the new list, and open the new marketing list on the same form by clicking **Create and Review**
- Cancel the creation of the list by clicking **Cancel**



**Figure: The creation of a new marketing list**

On the first page of the wizard, if a user selects **Add All Members to Existing Static Lists** (see Item 1 in the left screenshot below) and clicks **Next** (Item 2), the **Add Members to Marketing Lists** page opens, and the user can do either of the following:

- Copy all members from the current marketing list to the selected marketing lists by selecting the target lists and clicking **Copy** (Items 3 and 4 in the right screenshot)
- Cancel the copying of the members from the current list to the selected marketing lists by clicking **Cancel**

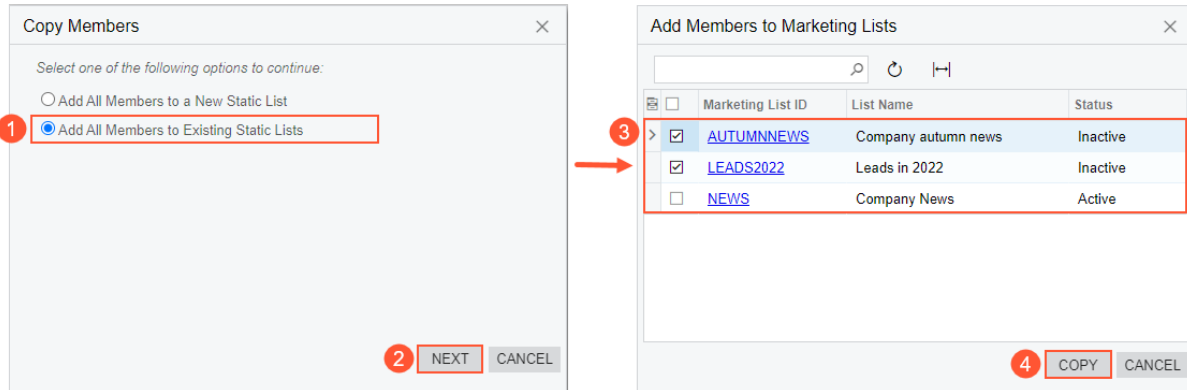


Figure: The addition of members from the current marketing lists to the selected lists

## Improved Layout of the Marketing Campaigns Form

In previous versions of Acumatica ERP, on the [Marketing Campaigns](#) (CR202000) form, a user could add multiple members to a campaign by using the **Add Members** dialog box. This process involved many unnecessary clicks, and the user needed to apply multiple filters in order to manage members being added to the campaign.

Starting in Acumatica ERP 2022 R2, on the [Marketing Campaigns](#) form, the new **Marketing Lists** tab has been added (see the following screenshot). The tab shows all the static and dynamic marketing lists available in the system. The user can add members from a list or multiple lists by selecting the needed check boxes left of the marketing list IDs and saving the changes to the form. If the user changes the set of selected marketing lists and clicks **Save**, the system shows the following warning message: *You have updated the set of marketing lists for the campaign. You can update the campaign members or keep the current members.* The user can keep the current campaign members or update the members from the newly selected set of marketing lists.

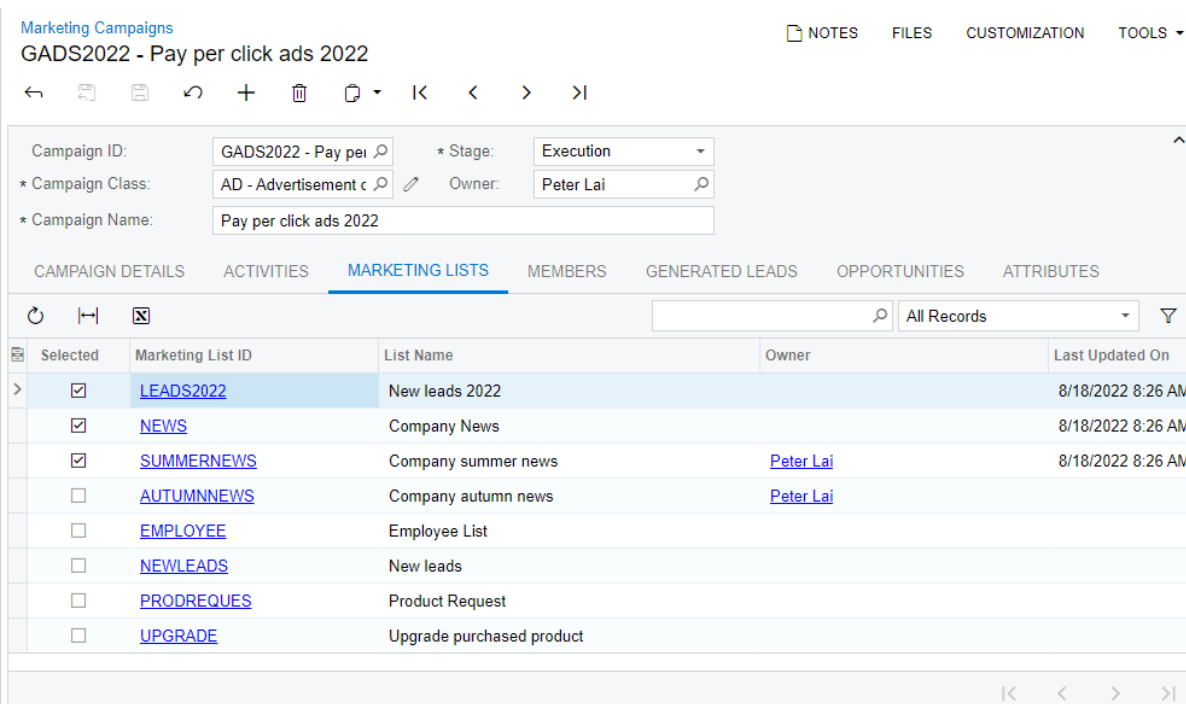


Figure: The Marketing Lists tab of the Marketing Campaigns form

On the **Members** tab of the [Marketing Campaigns](#) form, the following changes have been made (see the screenshot below):

- The **Update List** button has been added (see Item 1 in the following screenshot). If a user clicks the button, the system updates the members that have been added from marketing lists to the campaign. Thus, any changes that have been made to the members of the marketing lists will be applied to the members of the marketing campaign. Manually added members remain in the campaign.
- A Search box has been added.
- The **Clear All** button has been added (Item 2). A user can filter records in the table or search for records that meet the needed criteria and delete the selected members. Alternatively, the user can delete all the members currently listed in the table.
- The **Add New Members** button has been removed.
- The **Marketing List ID** column has been added (Item 3). In this column, a user can see the source of the listed members.

Marketing Campaigns  
GADS2022 - Pay per click ads 2022

NOTES FILES CUSTOMIZATION TOOLS

← ↻ ↺ + 🗑️ 📄 ⏪ < > ⏩

Campaign ID: GADS2022 - Pay per click ads 2022 \* Stage: Execution  
\* Campaign Class: AD - Advertisement Campaign Owner: Peter Lai  
\* Campaign Name: Pay per click ads 2022

CAMPAIGN DETAILS 1 ACTIVITIES MARKETING LISTS 2 MEMBERS GENERATED LEADS OPPORTUNITIES ATTRIBUTES

🔄 + ✕ UPDATE LIST ADD ACTIVITY CLEAR ALL 🗑️ 📄 📄

Type	Member Name	Job Title	Marketing List ID	Account ID	Account Name	Email
Lead	Rik Broekman	Manager	LEADS2022		N.V. Nationale Borg-Maatschappij	rbroekman@nationale-borg.com
Lead	Benedicte Cou...	Network manager	LEADS2022		S.G. Daedalus	bcoudane@daedalus.com
Lead	Joao Pereira	Graphic Designer	LEADS2022		Inspire Creative Solutions	jpereira@inspire.com
Lead	Anders Nylander	Sales manager	LEADS2022	AFTONBLADE	Aftonbladet	anylander@aftonbladet.com
Lead	Kenneth Ocklund	Systems Developer	LEADS2022		Aftonbladet	kocklund@aftonbladet.com
Lead	Anders Wikholm	Software Engineer	LEADS2022		EFG Investment Bank	awikholm@efgbank.com
Lead	Howard Nelson	Finance Director	LEADS2022		Bighams	hnelson@bighams.com

Figure: The Members tab of the Marketing Campaigns form

## Subscription Management for a Particular Lead, Contact, or Business Account

In previous versions of Acumatica ERP, in order to subscribe a member (a lead, contact, or business account) to a marketing list, a user had to manually add a static marketing list to the **Marketing Lists** tab of the [Leads](#) (CR301000), [Contacts](#) (CR302000), or [Business Accounts](#) (CR303000) form, respectively.

Starting in Acumatica ERP 2022 R2, static and dynamic marketing lists are added to the **Marketing Lists** tab of the [Leads](#), [Contacts](#), and [Business Accounts](#) form automatically. A user can subscribe the member (that is, the lead, contact, or business account selected on the form) to the needed static marketing lists by selecting the **Subscribed** check box (which is initially cleared for a newly created list) for the list and saving these changes.

Also, on the **Marketing Lists** tab of the [Leads](#), [Contacts](#), and [Business Accounts](#) forms, the **Manage Subscription** menu has been added (see the following screenshot). By using its **Subscribe All** and **Unsubscribe All** commands, a user can subscribe the member to all the marketing lists shown on the tab or unsubscribe the member from all these lists.

Leads  
Lacy Green - Cummings, Waelchi and Predovic

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Lead ID: Lacy Green  
Status: Open  
Reason: Potential Interest  
Description:

Contact: [Search]  
Business Account: [Search]  
Owner: Maxwell Baker  
Source: [Dropdown]  
Source Campaign: [Search]  
Duplicate: Not Validated

CONTACT INFO ACTIVITIES CRM INFO ATTRIBUTES RELATIONS CAMPAIGNS **MARKETING LISTS** OPPORTUNITIES

MANAGE SUBSCRIPTION [Dropdown] [Filter] [Filter] All Records [Dropdown]

	List Name	Marketing List ID	List Type
<input type="checkbox"/>	Company News	NEWS	Static
<input checked="" type="checkbox"/>	Company summer news	SUMMERNEWS	Dynamic

Figure: The updates to the Marketing Lists tab on the Leads form

A user can also unsubscribe a member from a marketing list by doing either of the following on the **List Members** tab of the [Marketing Lists](#) (CR204000) form:

- For a dynamic or static marketing list, clearing the **Subscribed** check box for the member
- For a static marketing list, deleting the member and saving the changes

In either of these cases, for the member, the system will clear the **Subscribed** check box for the marketing list on the **Marketing Lists** tab of the [Leads](#), [Contacts](#), or [Business Accounts](#) form.

## Minor Enhancements to the Leads, Contacts, and Business Accounts Forms

On the **Campaigns** tab of the [Leads](#) (CR301000), [Contacts](#) (CR302000), and [Business Accounts](#) (CR303000) forms, a Search box has been added and the set of columns has been changed (see the following screenshot).

Leads  
Lacy Green - Cummings, Waelchi and Predovic

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Lead ID: Lacy Green  
Status: Open  
Reason: Potential Interest  
Description:

Contact: [Search]  
Business Account: [Search]  
Owner: Maxwell Baker  
Source: [Dropdown]  
Source Campaign: [Search]  
Duplicate: Not Validated

CONTACT INFO ACTIVITIES CRM INFO ATTRIBUTES RELATIONS **CAMPAIGNS** MARKETING LISTS OPPORTUNITIES

[Search] [Filter] [Filter] All Records [Dropdown]

Campaign ID	Campaign Name	Marketing List ID	Start Date	End Date	Promo Code	Owner	Member Since
> <a href="#">GADS2022</a>	Pay per click ads 2022	<a href="#">LEADS2022</a>	1/1/2022	12/30/2022	GADS2022	<a href="#">Peter Lai</a>	6/20/2022

Figure: The updates to the Campaigns tab on the Leads form

## Additional Information

For details about the management of marketing lists and campaigns, see [Managing Marketing Lists](#) and [Managing Marketing Campaigns](#).

# CRM: Side Panels with Marketing Data for CRM Entities

In Acumatica ERP 2022 R2, a side panel has been added to the lists of marketing campaigns and marketing lists, and a tab has been added to the side panels of the lists of business accounts and contacts. These side panels give a user the ability to view the list of records while simultaneously viewing (and modifying, if necessary) various information related to any record selected in the list.

On the side panel of the *Marketing Lists (CR2040PL)* list of records, the settings of the selected marketing list on the *Marketing Lists (CR204000)* form can be viewed. On the side panel of the *Marketing Campaigns (CR2020PL)* list of records, the **Campaign Summary** tab has been added, which allows the user to view a dashboard showing summary statistics of the selected campaign, along with the progress and results of the selected marketing campaign.

On the side panels for the *Business Accounts (CR3030PL)* and *Contacts (CR3020PL)* lists of records, the **Marketing** tab has been added to give users easy access to key statistics related to the marketing campaigns that are associated with the selected contact or business account.

## Side Panels for the Lists of Marketing Campaigns and Marketing Lists

In previous versions of Acumatica ERP, to see details about a particular marketing campaign or marketing list while viewing the list of records, a user had to open the record, view the information, and then close the entry form to return to the list of records; this process could be time-consuming. Starting in Acumatica ERP 2022 R2, side panels are shown on the *Marketing Campaigns (CR2020PL)* and *Marketing Lists (CR2040PL)* lists of records. With these side panels, a user can have a comprehensive view of the settings of a record without opening it on the form. Thus, the user can quickly find, view, and modify information related to the selected record.

When a user selects a record on the *Marketing Lists* list of records, the settings of the selected marketing list on the *Marketing Lists (CR204000)* form are shown on the side panel. (See the following screenshot.)

The screenshot shows the Acumatica ERP interface for the Marketing Lists list of records. The main window displays a table of marketing lists, with the 'PRODREQUES' record selected. The side panel is open, showing the settings for the selected marketing list. The side panel is titled 'Marketing Lists PRODREQUES' and contains the following information:

- Marketing List ID: PRODREQUES
- List Name: Product Request
- List Type: Dynamic
- Generic Inquiry: Marketing Lists migrated
- Shared Filter: PRODREQUES
- Status: Active
- Owner: [Empty field]
- Workgroup: [Empty field]

Below the settings, there are two tabs: 'LIST MEMBERS' and 'CAMPAIGNS'. The 'LIST MEMBERS' tab is active, showing a table of members:

Subscribed	Type	Member Name	Job Title
<input checked="" type="checkbox"/>	Contact	Adam Wilson	District Tactics Coordinator
<input checked="" type="checkbox"/>	Contact	Adrian Perez	Central Mobility Analyst
<input checked="" type="checkbox"/>	Lead	Alberta Erickson	International Functionality Designer
<input checked="" type="checkbox"/>	Lead	Abvin Stokes	Regional Brand Designer

**Figure:** The side panel of the *Marketing Lists* list of records

On the *Marketing Campaigns* list of records, in addition to the ability to view the details of the selected record, a user can view summary analytics and statistics about the progress and effectiveness of the marketing campaign selected in the list of records.

The following screenshot shows the **Campaign Summary** tab (Item 1) on the side panel of the *Marketing Campaigns* list of records.



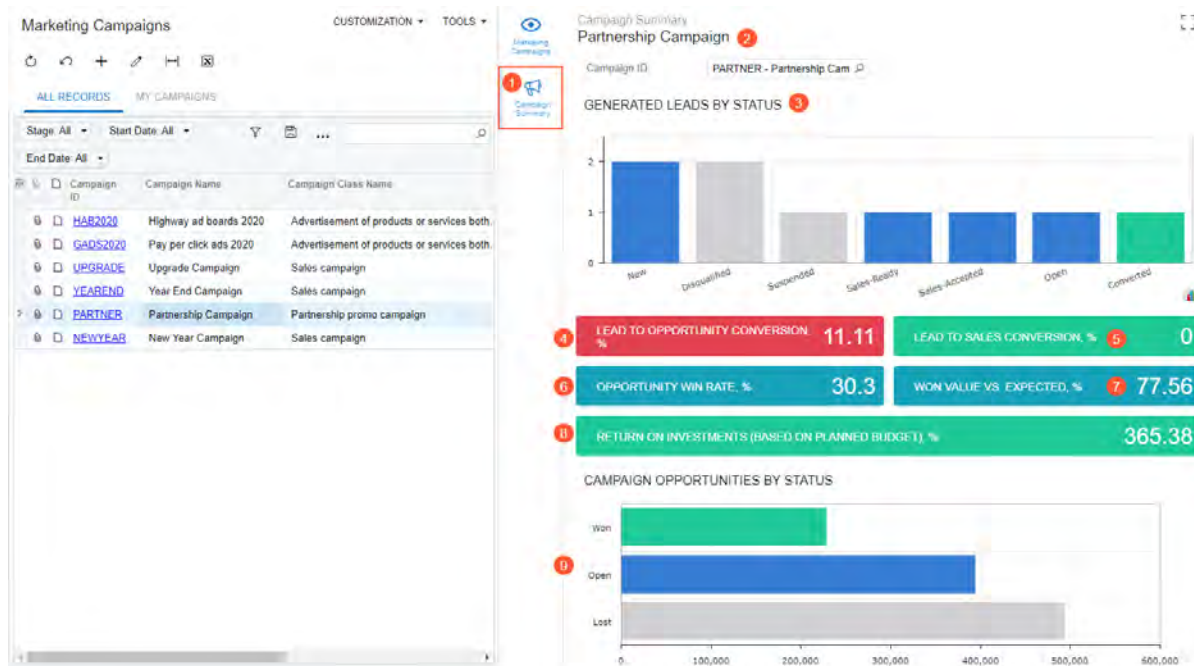


Figure: The Campaign Summary tab on the side panel

For the selected campaign (Item 2), the dashboard on the tab displays the following widgets (Items 3–9 in the previous screenshot):

- **Generated Leads by Status:** This widget (Item 3) shows the number of leads generated by the selected marketing campaign by lead status. The user can use this information to estimate how the sales have been progressing since the campaign was started. To show leads with different statuses, the following color-coding of columns is used: blue for leads in work, gray for disqualified leads, and green for converted leads. The color-coding can be changed by a system administrator.
- **Lead to Opportunity Conversion, %:** This widget (Item 4) shows how many leads generated as a result of the selected marketing campaign were converted to opportunities. The value is calculated by the following formula and expressed as a percentage:  $(\text{Leads Converted} / \text{Leads Generated}) * 100$ . These calculations are based on the settings specified on the **Campaign Details** tab of the [Marketing Campaigns](#) (CR202000) form. To show the level of lead conversion, the following color-coding of the widget is used: red for less than 13%, and green for 13% or more. The value of the threshold can be changed by a system administrator.
- **Lead to Sales Conversion, %:** This widget (Item 5) shows the proportion of the number of qualified leads generated by the selected marketing campaigns that have resulted in sales to the total number of leads generated by the campaign. The value is calculated by the following formula and expressed as a percentage:  $(\text{Won Opportunities} / \text{Leads Generated}) * 100$ . These calculations are based on the settings specified on the **Campaign Details** tab of the [Marketing Campaigns](#) form.
- **Opportunity Win Rate, %:** This widget (Item 6) shows the proportion of the number of opportunities with the *Won* status to the total number of opportunities created from the selected marketing campaign. The value is calculated by the following formula and displayed as a percentage:  $(\text{Won Opportunities} / \text{Opportunities}) * 100$ . These calculations are based on the settings specified on the **Campaign Details** tab of the [Marketing Campaigns](#) form.
- **Won Value vs. Expected, %:** This widget (Item 7) shows the comparison of the actual value of the opportunities with the *Won* status to the expected value of opportunities for the campaign. The value is calculated by the following formula and expressed as a percentage:  $(\text{Won Opportunities Value} / \text{Expected Return}) * 100$ . These calculations are based on the settings specified on the **Campaign Details** tab of the [Marketing Campaigns](#) form.
- **Return on Investments (Based on Planned Budget), %:** This widget (Item 8) shows the profitability of the campaign. The value is calculated by the following formula and expressed as a percentage:  $(\text{Won}$



$\frac{\text{Opportunities Value} - \text{Planned Budget}}{\text{Planned Budget}} * 100$ . These calculations are based on the settings specified on the **Campaign Details** tab of the *Marketing Campaigns* form.

- *Campaign Opportunities by Status*: This widget (Item 9) shows the number of opportunities generated by the selected marketing campaign by status. This data can help the user to estimate how many opportunities could be successful. To show opportunities with different statuses, the following color-coding of bars is used: blue for open opportunities, gray for lost opportunities, and green for won opportunities. The color-coding can be changed by a system administrator.

Lists of records are also generic inquiry forms that generic inquiry designers sometimes modify on the *Generic Inquiry* (SM208000) form. If the *CR-Campaigns* or *CR-Marketing Lists* generic inquiry (which corresponds to the *Marketing Campaigns* or *Marketing Lists* list of records, respectively) has been modified before the upgrade to the Acumatica ERP 2022 R2, a generic inquiry designer should reset the settings of this form to the default settings before or after the upgrade has been done. This step ensures that the new side panels of these lists of records can be used. To reset the settings of the generic inquiry, the designer selects the generic inquiry on the *Generic Inquiry* form and clicks **Clipboard > Reset to Default** on the form toolbar.

## Marketing Tab on the Side Panels for Business Accounts and Contacts

In previous versions of Acumatica ERP, a user had to seek and collect information about marketing campaigns associated with a selected contact or business account and their leads. This involved manually opening different forms and finding needed records, which could be labor-intensive. Starting in Acumatica ERP 2022 R2 the user can get all this information by clicking the **Marketing** icon on the side panel of the *Business Accounts* (CR3030PL) or *Contacts* (CR3020PL) list of records.

The following screenshot shows the *Business Accounts* (CR3030PL) form with the **Marketing** tab selected on the side panel (Item 1).

The screenshot displays the 'Business Accounts' list of records in Acumatica ERP. The 'Marketing' tab is selected on the side panel, showing a dashboard for the selected business account, 'Cheapergold.com'. The dashboard includes four widgets: 'ALL CAMPAIGNS' (3), 'CAMPAIGNS IN PROGRESS' (4), 'ALL LEADS GENERATED BY CAMPAIGNS' (5), and 'OPEN LEADS GENERATED BY CAMPAIGNS' (6). The main window shows a list of business accounts, with 'CHEAPGOLD' selected.

Type	Class	Customer Status
Business Account	Customer	Active
CARIBBEAN	Caribbean Secretary Online	Customer
CARRDEV	Carr Development Inc.	Customer
CARTRIDGE	Cartridge World Inc	Customer
CASHCONNEC	Cash Connection	Customer
CBSITWORK	CB Sitework, Inc.	Vendor
CENTFIRE	Century Fire Protection	Vendor
CERAMICAT	Ceramica Tiles Company	Vendor
CHEAPGOLD	Cheapergold.com	Business Account
CHOCOLATE	Chocolate By Design	Customer
CIDISKOMM	CIDIS Kommunikatons Sy...	Vendor
CITYOFSE	City of San Francisco	Vendor
CJOEQUIP	Jersey Central Office Equip	Customer

**Figure: The Marketing tab on the side panel of the Business Accounts list of records**

The **Marketing** tab contains a dashboard with four widgets for the selected business account (Item 2 in the previous screenshot), to quickly provide information about marketing campaigns to the user. The first two widgets (Items 3 and 4) give the user summary information about marketing campaigns associated with the selected business account. The remaining widgets (Items 5 and 6) provide information about the leads generated by campaigns.

Lists of records are also generic inquiry forms that generic inquiry designers sometimes modify on the *Generic Inquiry* (SM208000) form. If the *CR-BusinessAccounts2018R1* or *CR-Contacts2018R1* generic inquiry (which corresponds to the *Business Accounts* or *Contacts* list of records, respectively) has been modified before the upgrading to Acumatica ERP 2022 R2, a generic inquiry designer should reset the settings of this form to the default

settings before or after the upgrade has been done. This step ensures that the new side panels of these lists of records can be used. To reset the settings of the generic inquiry, the designer selects the generic inquiry on the [Generic Inquiry](#) form and clicks **Clipboard > Reset to Default** on the form toolbar.

# CRM: The Currency of Business Accounts and Related Entities

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In Acumatica ERP 2022 R2, users can select a currency for a business account class and a particular business account. If a business account is extended to be a customer, the currency is synchronized between the business account and the associated customer. Also, the default currency of an opportunity or sales quote is affected by the business account specified for it.

The following sections describe these dependencies and the changes on the CRM forms.

## Changes to the Customer Management Preferences Form

In previous versions of Acumatica ERP, on the *Customer Management Preferences* (CR101000) form, an administrator specified the default currency for customer relationship management (CRM) and indicated whether it could be overridden.

Starting in Acumatica ERP 2022 R2, the **Default Currency** box and **Enable Currency Override** check box have been removed from the **General** tab (**Miscellaneous Settings** section) of the *Customer Management Preferences* form. Users can specify these currency settings for each business account class and business account specified in an opportunity or a sales quote. For details, see the following sections.

## Currency Selection for Business Account Classes and Business Accounts

In previous versions of Acumatica ERP, users could not select the default currency for a particular business account. For example, if the company using Acumatica ERP was located in the United States and a prospect was located in Canada, it was not possible to specify Canadian dollars as the prospect's currency and calculate prices in the opportunity in this currency.

Starting in Acumatica ERP 2022 R2, a user can select a currency in a business account class and a business account of the *Prospect* customer status.

On the **Details** tab of the *Business Account Classes* (CR208000) form, the **Financial Settings** section, which contains the **Currency ID** box and the **Enable Currency Override** check box, has been added (see the following screenshot).

Business Account Classes

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STORE

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\* Business Account Class ID: STORE 🔍  Internal

Description: Supermarkets, stores, groceries

DETAILS ATTRIBUTES MAILING & PRINTING

DATA ENTRY SETTINGS

Default Owner: Do Not Change ▾

Assignment Map: [🔗](#)

EMAIL SETTINGS

Default Email Account: 🔍

FINANCIAL SETTINGS

Currency ID: USD 🔍

Enable Currency Override

**Figure:** The Financial Settings section of the Business Account Classes form

The system inserts the default currency settings for each new business account class depending on the settings on the **General** tab (**Data Entry Settings** section) on the [Customer Management Preferences](#) (CR101000) form as follows:

- If an account class is specified in the **Default Business Account Class** box, copies the currency specified in the **Currency ID** box and the state of the **Enable Currency Override** check box on the [Business Account Classes](#) form from the default account class to each new account class
- If no account class is specified in the **Default Business Account Class** box of the [Customer Management Preferences](#) form, leaves the **Currency ID** box empty and selects the **Enable Currency Override** check box for a new account class

When a user creates a business account and selects the business account class, the currency and the state of the check box for the class are copied to the business account. The **Financial Settings** section has been added on the **CRM Info** tab of the [Business Accounts](#) (CR303000) form. This section contains the **Currency ID** box and the **Enable Currency Override** check box (see the following screenshot). The user can change the currency and the status of the check box in a particular business account (even if the **Enable Currency Override** check box is cleared for the business account class).



If a business account class is changed or removed for a business account that has been extended to be a customer, the account's currency settings are not changed.

The screenshot shows the 'Business Accounts' form for 'EGREENEX - Egreenex Store'. The 'CRM INFO' tab is active. The 'Business Account' is 'EGREENEX - Egreenex Store' and the 'Customer Status' is 'Prospect'. The 'Class' is 'STORE - Supermarkets, stores, groce'. The 'Financial Settings' section is highlighted with a red box, showing 'Currency ID' set to 'USD' and the 'Enable Currency Override' checkbox checked. Other sections include 'CRM', 'CONTACT PREFERENCES', and 'ACTIVITIES'.

Figure: The Financial Settings section of the Business Accounts form

## The Currency of a Business Account Extended To Be a Customer

If a business account is extended to be a customer, the system copies the currency and the state of the **Enable Currency Override** check box from the customer class on the [Customer Classes](#) (AR201000) form to both the business account on the [Business Accounts](#) (CR303000) form and the customer on the [Customers](#) (AR303000) form.

The currency settings are synchronized between a business account and a customer. If the currency settings are changed for a customer, the same settings are changed for the corresponding business account. Similarly, if the currency settings are changed for a business account, the same settings are changed for the corresponding customer.

## The Currency of an Opportunity and a Sales Quote

On the [Opportunities](#) (CR304000) and [Sales Quotes](#) (CR304500) forms, the system inserts the currency in the **Currency** box of the Summary area based on the **Business Account** setting of the record (when a user creates a new record, changes the setting, or clears the box).

To determine the currency, the system considers the **Currency** setting and the state of the **Enable Currency Override** check box of the business account on the [Business Accounts](#) (CR303000) form. It also considers the current currency of the opportunity or sales quote and whether there are lines on the **Details** tab of the [Opportunities](#) or [Sales Quotes](#) form. The system determines the currency to be inserted for the opportunity or sales quote based on the following rules:

- If no business account is specified for the opportunity or sales quote, the system inserts the base currency of the record's branch; this branch is specified in the **Branch** box on the **Financial** tab (**Financial Settings** section) of the [Opportunities](#) or [Sales Quotes](#) form. This rule is applicable both when a new record is created and when a user clears the **Business Account** box.



The base currency of the branch is specified for the company on the **Details** tab of the [Companies](#) (CS101500) form.

- If the selected business account has a different currency than the opportunity or sales quote currently has, the **Enable Currency Override** check box is selected for the business account, and the opportunity or sales quote has no detail lines, the currency of the opportunity or sales quote is changed to the currency of the business account.

- If the selected business account has the same currency as the opportunity or sales quote currently has, the currency of the opportunity or sales quote remains unchanged. This rule applies whether or not the opportunity or sales quote has detail lines.
- If the selected business account has a different currency than the opportunity or sales quote currently has, the **Enable Currency Override** check box is selected for the business account, and the opportunity or sales quote has at least one detail line, the currency of the opportunity or sales quote remains unchanged.
- If the selected business account has a different currency than the opportunity or sales quote currently has, the **Enable Currency Override** check box is cleared for the business account, and the opportunity or sales quote has at least one detail line, the system displays an error message and the user cannot save the changes to the [Opportunities](#) or [Sales Quotes](#) form.
- If the selected business account has a different currency than the opportunity or sales quote currently has, the **Enable Currency Override** check box is cleared for the business account, and the opportunity or sales quote has no detail lines, the currency of the opportunity or sales quote is changed to the currency of the business account.

## Mobile App

In the Acumatica mobile app, the **Currency ID** box has been added to the *Business Account* screen of the mobile app, as shown in the following screenshot. The box is unavailable for editing.

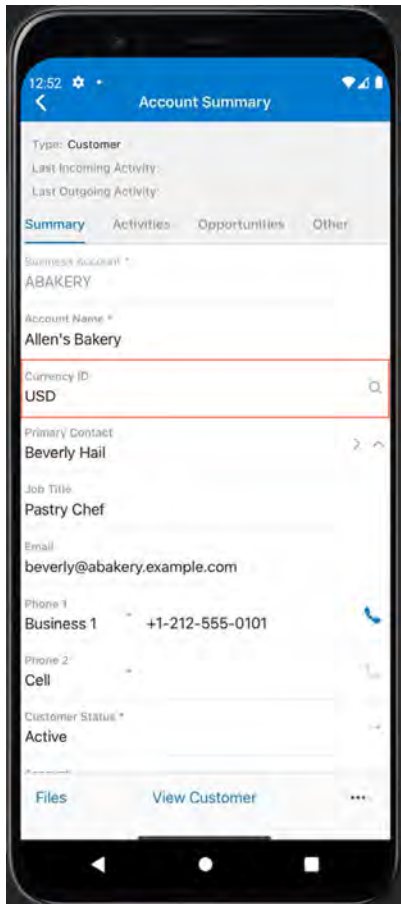


Figure: The Currency box on the Business Account screen

## Additional Information

For details about the currency of business accounts and the related entities, see [Opportunity Management: Currency in Opportunities and Sales Quotes](#).

# CRM: The Ability to Change the Business Account in Opportunities and Sales Quotes

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In Acumatica ERP 2022 R2, users can change a business account in an opportunity or a sales quote, even if the opportunity or the sales quote has rows added on the **Details** tab of the [Opportunities](#) (CR304000) or [Sales Quotes](#) (CR304500) form.

Also, users can create sales quotes that are associated with the same opportunity for multiple business accounts (which may be prospects or customers).

## Changing of the Business Account in an Opportunity

In previous versions of Acumatica ERP, if at least one row had been added to an opportunity on the **Details** tab of the [Opportunities](#) (CR304000) form, a user could not change the business account in an opportunity. For example, if the prospect or customer specified in the **Business Account** box became a different legal entity, the user had to either create a new opportunity for the new business account or to remove the rows from the **Details** tab before making this change. Also, if a user had to create an opportunity for a business account that was similar to an opportunity for an existing account, the user could not copy the existing opportunity and specify a different account in the new opportunity.

Starting in Acumatica ERP2022 R2, a user can change a business account in the **Business Account** box for an opportunity that has rows on the **Details** tab if both of the following conditions are met:

- The opportunity has the *New* or *Open* status.
- If the opportunity has any sales quotes (primary or non-primary), each quote has the *Draft* status.

If the user changes the business account, the system does the following based on the settings of the new business account:

- Recalculates the following settings in the Summary area of the [Opportunities](#) form: **Amount**, **Discount**, **Tax Total**, and **Total**
- Recalculates the settings on the **Taxes** and **Discounts** tabs
- Updates the following settings: **Location**, **Contact**, and **Currency**

For details about the changing of the currency in an opportunity after the business account has been changed, see [CRM: The Currency of Business Accounts and Related Entities](#). For details about the changing of the contact in an opportunity after the business account has been changed, see [CRM: Other Improvements](#).

## Changing of the Business Account in a Sales Quote

In previous versions of Acumatica ERP, if at least one row had been added to a sales quote on the **Details** tab of the [Sales Quotes](#) (CR304500) form, a user could not change the business account in the sales quote.

Starting in Acumatica ERP2022 R2, a user can change the business account in the **Business Account** box for a sales quote if both of the following conditions are met:

- The quote (whether it is primary or non-primary) has the *Draft* status.
- The opportunity associated with the sales quote has the *New* or *Open* status.

If the user attempts to change the business account for a sales quote, the system displays a warning dialog box (see the following screenshot) if on the **Contact** tab, the **Override** check box has been selected, meaning that the quote's contact settings may have been modified. The user needs to select one of the buttons to indicate how the system should proceed.

The screenshot shows the 'Sales Quotes' form for 'OP000392 Q000015 - Widget Opportunity for Alta Ace'. The form is in the 'CONTACT' tab. A 'Warning' dialog box is open, asking: 'Would you like the overridden settings on the Contact tab to be replaced with the settings from the newly selected entity?'. The dialog has 'YES', 'NO', and 'CANCEL' buttons. The background form shows contact information for Amelia Armstrong at Alta Ace, including email, phone, and address.

Figure: The warning about changing the account in a quote with modified contact settings

## Creation and Tracking of Sales Quotes for Multiple Prospects or Customers

Starting in Acumatica ERP2022 R2, if an opportunity has multiple sales quotes on the [Sales Quotes](#) (CR304500) form, an opportunity can have multiple sales quotes whose business accounts differ from the business account specified for the opportunity on the [Opportunities](#) (CR304000) form.



A sales quote can have a different business account than that of the opportunity only if the following conditions are met:

- The quote (whether it is primary or non-primary) has the *Draft* status.
- The opportunity associated with the sales quote has the *New* or *Open* status.

In an opportunity that has sales quotes for different prospects or customers, a user can easily see the business account, location, and contact of each sales quote. On the **Quotes** tab of the [Opportunities](#) form, the following columns have been added to the list of available columns: **Business Account**, **Location**, and **Contact**. A user can add these columns to the list of the selected columns by using the **Column Configuration** dialog box (see the following screenshot).



Opportunities  
 OP000392 - Widget Opportunity for Alta Ace

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Opportunity ID: OP000392 Business Account: AACUSTOMER - Alta Ace  Manual Amount  
 Status: Open Location: MAIN - Primary Location Amount: 3,100.00  
 \* Class ID: PRODUCT - Product Sales Opportunit Contact: Amelia Armstrong Discount: 0.00  
 Stage: Solution \* Currency: USD 1.00 VIEW BASE Tax Total: 0.00  
 \* Estimated Close Date: 3/31/2020 Owner: Steve Church Total: 3,100.00  
 \* Subject: Widget Opportunity for Alta Ace

ACTIVITIES DETAILS **QUOTES** CONTACT CRM INFO FINANCIAL SHIPPING ATTRIBUTES RELATIONS TAXES DISCOUNTS

🔄 + COPY QUOTE SET AS PRIMARY |🔍| 🗑️ All Records

<input type="checkbox"/>	<input type="checkbox"/>	Primary	Quote Nbr.	Type	Business Account	Location	Contact	*Description	Status
>	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Q000014</a>	Sales Quote	AACUSTOMER	MAIN	Amelia Armstrong	Widget Opportunity for Alta Ace	Draft
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Q000015</a>	Sales Quote	AACUSTOMER	MAIN	Amelia Armstrong	Widget Opportunity for Alta Ace	Draft
	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Q000016</a>	Sales Quote	ABCHOLDING	MAIN	Eva Lawrence	Widget Opportunity for ABC Holdings	Draft
	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Q000017</a>	Sales Quote	ABCVENTURE	MAIN	Ray Newman	Widget Opportunity for ABC Capital	Draft

Figure: New columns on the Quotes tab of the Opportunities form


# CRM: Relations Between Sales Orders and Associated Entities

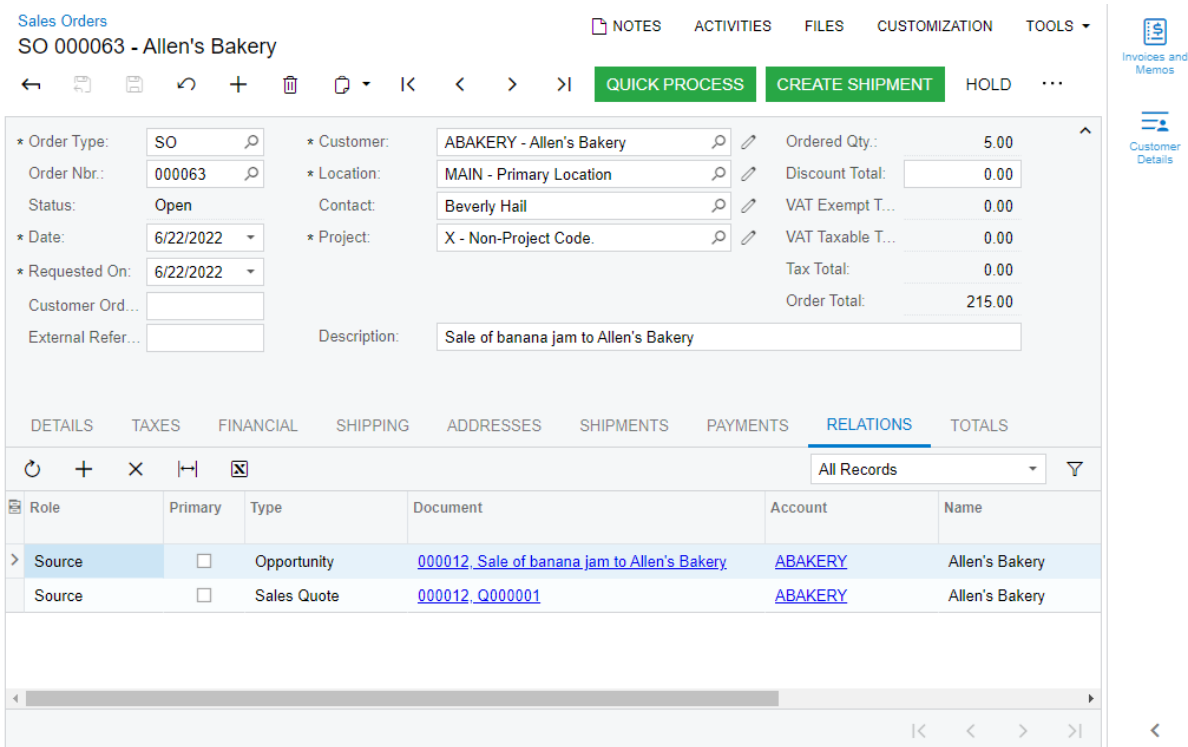
Acumatica ERP 2022 R2 introduces the ability to track and manage bidirectional relations between a sales order, an opportunity, and a sales quote. Also, a user can track one-way relations between a sales order and a variety of records associated with it. These records include CRM entities and other system entities, such as an AR invoice, an expense receipt, a purchase order, or a vendor. While viewing a sales order on the [Sales Orders](#) (SO301000) form, a user can now manually associate any of these records with the sales order and view the associated records on the **Relations** tab.

The following sections provide additional details about the new functionality of relations between these entities.

## Relations Between Sales Orders, Opportunities, and Sales Quotes

In previous versions of Acumatica ERP, if a sales order was associated with an opportunity or a sales quote, the relation between the sales order and the opportunity and between the sales order and the sales quote was shown only on the [Opportunities](#) (CR304000) or [Sales Quotes](#) (CR304500) form, respectively. Starting in Acumatica ERP 2022 R2, on the [Sales Orders](#) (SO301000) form, the **Relations** tab appears on the form, and it shows the relations between the selected sales order and an opportunity and between the sales order and a sales quote (see the following screenshot). The tab also shows any other relations that have been manually added for the sales order.

 The **Relations** tab is shown on the [Sales Orders](#) form only if the *Customer Management* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.



The screenshot shows the 'Sales Orders' form for 'SO 000063 - Allen's Bakery'. The 'RELATIONS' tab is selected, displaying a table of related records:

Role	Primary	Type	Document	Account	Name
> Source	<input type="checkbox"/>	Opportunity	<a href="#">000012_Sale of banana jam to Allen's Bakery</a>	<a href="#">ABAKERY</a>	Allen's Bakery
Source	<input type="checkbox"/>	Sales Quote	<a href="#">000012_Q000001</a>	<a href="#">ABAKERY</a>	Allen's Bakery

Figure: The Relations tab of the Sales Orders form

## Relational Roles Supported for Sales Orders

Acumatica ERP supports *one-way* and *bidirectional* relations between a sales order and the associated records. The pairs of bidirectional roles are shown in the following table. With bidirectional roles, roles are associated with each other in both directions: an original role (shown on the **Relations** tab of the record where the relation was originally specified) and a reverse role (shown on the **Relations** tab of the associated record). For example, if a sales order (original record) is created from a sales quote (associated record), then the quote becomes the source of the sales order, and the sales order becomes the derivative document for the quote. The relations between the bidirectional roles are established in the system, a fixed set of relations between the roles is supported, and no pairs can be used beyond those listed in the table.

**Table: Bidirectional Roles**

Original Role	Reverse Role
<i>Source</i>	<i>Derivative</i>
<i>Derivative</i>	<i>Source</i>
<i>Parent</i>	<i>Child</i>
<i>Child</i>	<i>Parent</i>

A user can manually add bidirectional roles to the **Relations** tab if the user created a sales order directly on the [Sales Orders](#) (SO301000) form or if a sales order was imported to the system.

The system also supports the one-way *Related Entity* relational role for sales orders. By using this role, the user can manually add relations with such entities as business accounts, cases, or employees, or other sales orders to a sales order. The *Related Entity* role is shown only on the [Sales Orders](#) form for a sales order.

The **Role** column on the **Relations** tab shows one-way and bidirectional roles for a sales order. If a sales order has a relation with an opportunity that is the source of the sales order, then the **Relations** tab shows a relation with the opportunity, and the relation has the *Source* role (Item 1 in the following screenshot). In the **Type** column, the *Opportunity* entity type is shown (Item 2). The user can select various types of entities that can be associated with a sales order (Item 3). The **Add to CC** check box—which indicates, if selected, that the contact should receive a copy of notification emails—for the reverse role is always cleared (Item 4), but the user can manually select the check box.

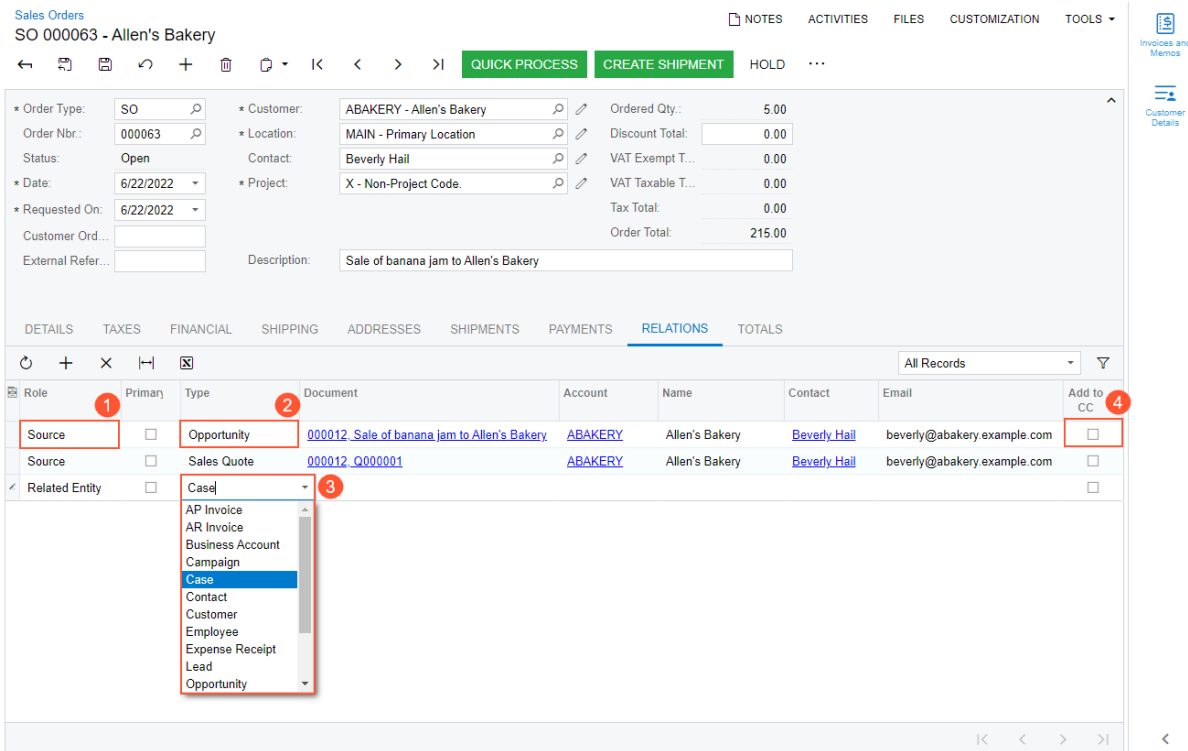


Figure: Roles and types of entities on the Relations tab for a sales order

For this opportunity, the **Relations** tab of the **Opportunities** (CR304000) form shows a relation with the sales order, and the relation has the *Derivative* role (see the following screenshot).

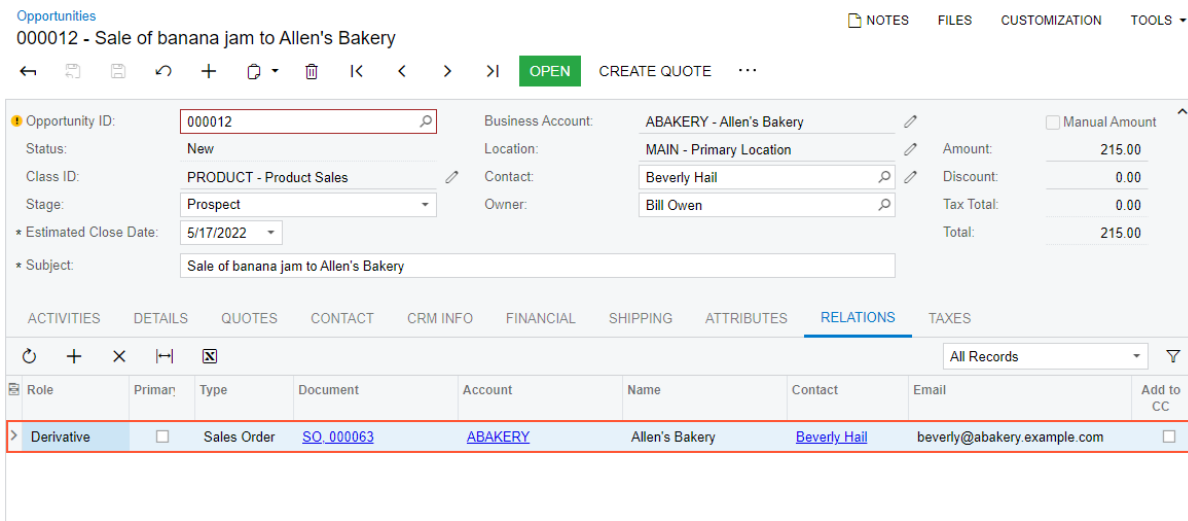


Figure: A relation with the sales order on the Opportunities form

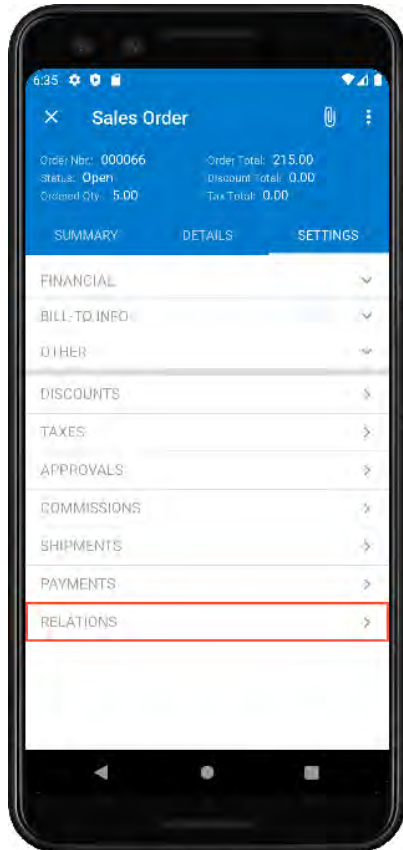
### Usage Notes

A user can manually delete relations from the **Relations** tab of the **Sales Orders** (SO301000) form unless the sales order has the *Completed* or *Canceled* status. If it has one of these statuses, the set of roles in the table is unavailable for editing.

If a user copies a sales order by using the **Copy** command on the **Clipboard** menu or the **Copy Order** command on the More menu, the roles on the **Relations** tab are not copied to a new sales order.

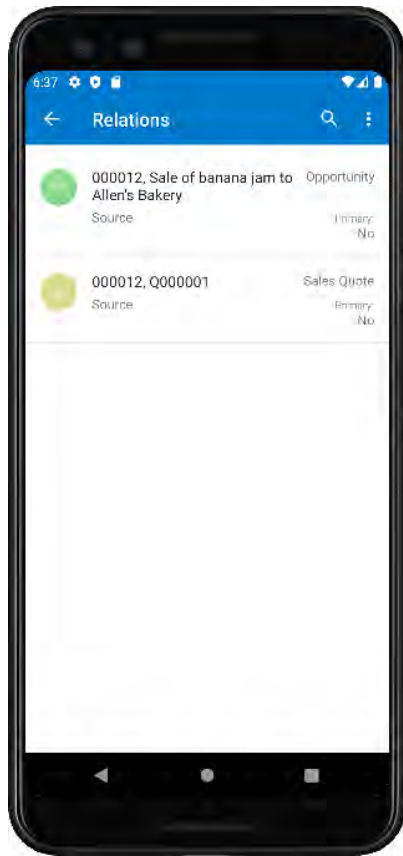
## Relations for Sales Orders in the Mobile App

In the Acumatica mobile app, the **Relations** tab has been added to the *Sales Order* screen (see the following screenshot).



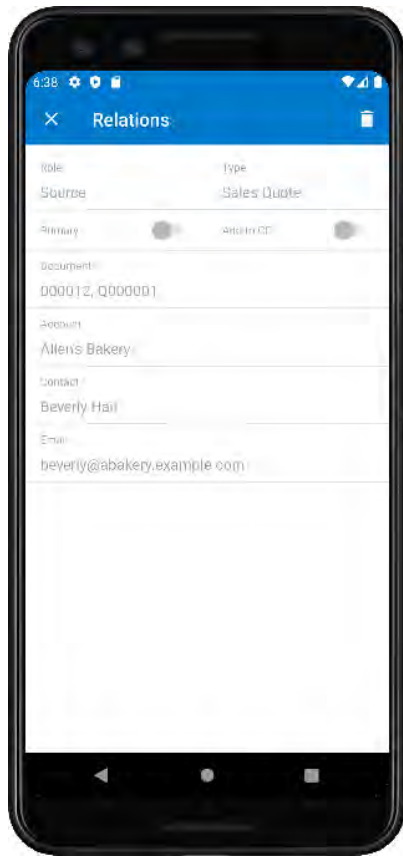
*Figure: The Relations tab in the list of tabs of the Sales Order screen*

If the user taps **Relations**, the user can see the list of the sales order's relational roles (see the following screenshot).



**Figure: The Relations tab**

If the user taps a row of the tab, the user can view the relational role of the associated entity and information about the entity. The following screenshot shows information about the sales quote that is associated with the sales order.



*Figure: Settings of a sales quote related to the sales order*

## Additional Information

For details about the relations between sales orders, opportunities, and other associated entities, see [Relations: Sales Orders, Opportunities, and Other Entities](#).

# CRM: Other Improvements

Acumatica ERP 2022 R2 introduces multiple improvements to the customer relationship management (CRM) functionality, as described below.

## The Ability to Create a Contact in a Sales Quote

In Acumatica ERP2022 R2, users can create a new contact or business account associated with a sales quote directly from the [Sales Quotes](#) (CR304500) form. On the More menu (under **Record Creation**), the **Create Contact** and **Create Account** commands have been added (see the following screenshot). The **Create Contact** command is available if the quote has the *Draft* status and the **Contact** box in the Summary area is empty. The **Create Account** command is available if the quote has the *Draft* status and the **Business Account** box in the Summary area is empty.

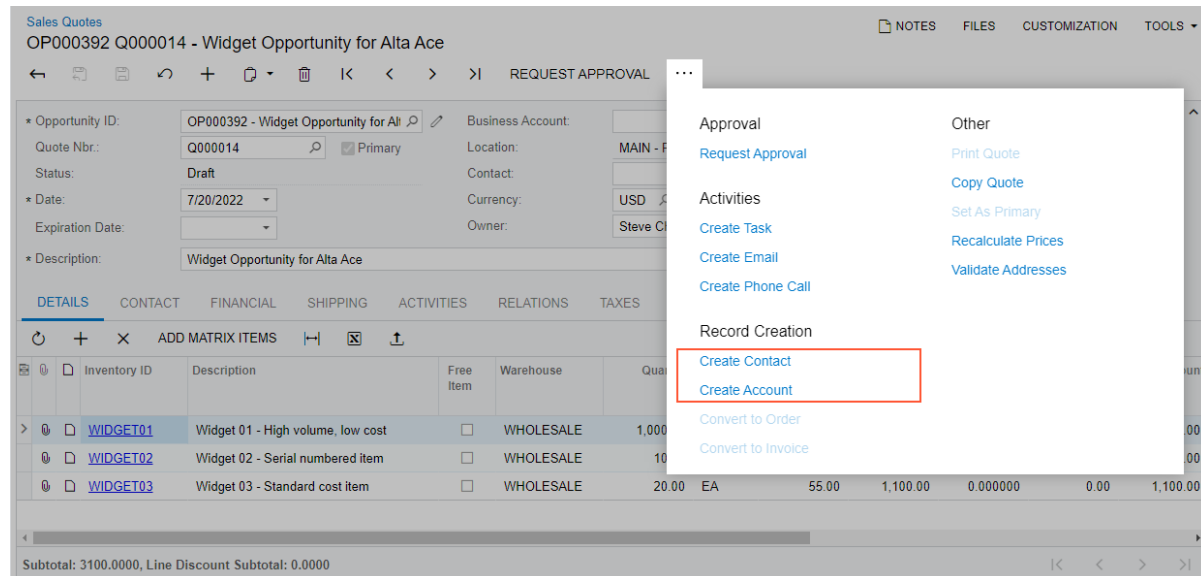


Figure: New commands on the More menu of the Sales Quotes form

## Enhancements to the Changing of a Contact in CRM Entities, Project Quotes, and Sales Orders

Starting in Acumatica ERP 2022 R2, the system uses new rules to insert a contact in the **Contact** box of particular forms. These rules apply if a user changes or initially specifies the business account in the **Business Account** box of the Summary area of the following forms:

- [Opportunities](#) (CR304000)
- [Sales Quotes](#) (CR304500)
- [Cases](#) (CR306000)
- [Project Quotes](#) (PM304500)

To insert the new contact in the **Contact** box of these forms, the system uses the following rules, which are based on the business account's settings on the [Business Accounts](#) (CR303000) form:

- If the business account has an active primary contact specified on the **General** tab, it inserts this contact.
- If the business account has only one active contact specified on the **Contacts** tab, it inserts this contact.
- If the business account has no active primary contact and no associated active contacts specified on the **Contacts** tab, or the account has more than one active contact, it leaves the box empty.



- If the business account has no active primary contact and more than one associated active contact specified on the **Contacts** tab, it leaves the box empty.

If a user changes or initially specifies the customer in the **Customer** box on the *Sales Orders* (SO301000) form for a sales order, the system uses the following rules, which are based on the customer's settings on the *Customers* (AR303000) form, to find and insert the contact in the **Contact** box:

- If the customer has an active primary contact specified on the **General** tab, it inserts this contact.
- If the customer has only one active contact specified on the **Contacts** tab, it inserts this contact.
- If the customer has no active primary contact and no associated active contacts specified on the **Contacts** tab or the customer has more than one active contact, it leaves the box empty.
- If the customer has no active primary contact and more than one associated active contact specified on the **Contacts** tab, it leaves the box empty.



If a contact is specified in the **Contact** box on the *Opportunities*, *Sales Quotes*, *Cases*, *Project Quotes*, or *Sales Orders* form, and a user clears the **Business Account** box and saves changes to the form, the contact remains unchanged.

## Extended Data in CRM Records

Starting in Acumatica ERP 2022 R2, new available columns have been added to CRM lists of records. Before a user exports records to Excel, the user can add these columns to the list of selected columns by using the **Column Configuration** dialog box, and this data will also be exported.

*Table: New Columns in CRM Lists of Records*

List of Records	Added Column or Columns
<i>Leads</i> (CR3010PL)	<b>Lead Contact ID</b>
<i>Contacts</i> (CR3020PL)	<b>Contact ID</b>
<i>Business Accounts</i> (CR3030PL)	<b>Primary Contact ID</b>
<i>Cases</i> (CR3060PL)	<ul style="list-style-type: none"> <li>• <b>Contact ID</b></li> <li>• <b>Contact Email</b></li> </ul>
<i>Opportunities</i> (CR3040PL)	<ul style="list-style-type: none"> <li>• <b>Source Lead Contact ID</b></li> <li>• <b>Main Contact ID</b></li> </ul>

A column that contains the contact associated with the applicable entity has been added to the list of available columns on the following tabs of CRM data entry forms.

*Table: New Columns in CRM Data Entry Forms*

Form Name	Tab Name	Column Name
<i>Contacts</i> (CR302000)	<b>Leads</b>	<b>Lead Contact ID</b>
<i>Business Accounts</i> (CR303000)	<b>Leads</b>	<b>Lead Contact ID</b>
<i>Business Accounts</i>	<b>Opportunities</b>	<ul style="list-style-type: none"> <li>• <b>Source Lead Contact ID</b></li> <li>• <b>Main Contact ID</b></li> </ul>

Form Name	Tab Name	Column Name
<i>Business Accounts</i>	<b>Cases</b>	<b>Contact ID</b>

Also, on the *Customers* (AR303000) and *Vendors* (AP303000) forms, the **Contact ID** column, which contains the associated contact's ID, has been added to the table on the **Contacts** tab.

# Documentation: Improvements in User Guides

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In Acumatica ERP 2022 R2, multiple 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 changes and enhancements have been made in the Implementation guide:

- The Implementing Taxes part of the guide has been updated with new chapters describing how to set up a value-added tax (VAT) and a withholding tax; the chapters now include activities that users can perform by using the *U100* dataset. Activities related to VAT and withholding taxes have been added to the chapters that describe the setup of a tax agency, a tax report, and tax zones and categories.
- The Implementing Service Management part of the guide has been updated with new chapters describing how to create the following entities, which are required for the implementation of the service management functionality:
  - Branch locations
  - Service classes
  - Billing cycles
  - Skills
  - Licenses
  - Services
  - Service areas
  - Staff members
  - Staff schedules

The chapters include activities that users can perform by using the *U100* dataset.

The following chapters have been expanded and updated:

- Basic Service Management Configuration
- Service Management with Inventory Sales
- The Implementing Manufacturing part of the guide has been updated with the new Implementing Production with Scrap, Waste, and By-Products chapter, in which users will learn how to perform the minimum configuration of the item production, which may include scrap, waste, and by-products.

## Customer Relationship Management Guide

The following changes and enhancements have been made in the Customer Relationship Management guide:

- The Managing Marketing Lists and Managing Marketing Campaigns chapters have been significantly updated, including the activities that users can perform by using the *U100* dataset.
- In the Creating Opportunities chapter, an activity has been added to describe the creation of an opportunity with an item that has no inventory ID. Users can perform this activity by using the *U100* dataset.
- In the Managing Opportunities chapter, a topic about currency in opportunities and sales quotes has been added.
- In the Managing Relations chapter, a topic about the relational roles for a sales order has been added.

## Financial Management Guide

The Taxes part of the Financial Management guide has been updated with new chapters describing how to process AR and AP documents with VAT, pay taxes directly to the tax agency, process documents with withholding taxes,

prepare a tax report with VAT, and apply VAT variations to documents (a deductible VAT, a reverse VAT, and a pending VAT). These chapters in the guide include activities that users can perform by using the *U100* dataset.

## **Manufacturing Guide**

In the Manufacturing guide, the Tracking Scrap and Waste in Production chapter has been added, in which users will learn how to track scrap and waste during production in Acumatica ERP Manufacturing Edition.

## **Service Management Guide**

Multiple changes and enhancements have been made in the Service Management guide. All chapters have been significantly updated, and all the activities can now be performed by using the *U100* dataset. New chapters have been added that include general information topics and activity topics.



The screenshot shows the configuration interface for a system email account. At the top, the account is identified as 'sysadmin@gmail.com - Standard'. A toolbar includes a 'SIGN IN' button. The configuration is divided into several sections:

- Account Information:** Email Account ID and Account Name are both 'sysadmin@gmail.com'. The account is checked as 'Active'.
- SERVER INFORMATION:** Incoming Mail Protocol is 'IMAP', Root Folder is 'Inbox', Incoming Mail Server is 'imap.gmail.com', and Outgoing Mail Server is 'smtp.gmail.com'.
- SERVER PORT NUMBERS:** Incoming server port is 143, and Outgoing server port is 25. The outgoing server encrypted connection is set to 'None' and the timeout is '1 Minute'.
- AUTHENTICATION:** The 'Authentication Method' is 'OAuth2', which is highlighted with a red box. The 'External Application' is '4 - SysAdmin Gmail'.
- RECEIVING:** The 'Alter Receiving' option is set to 'Mark Email on Server as Read'.

**Figure: Sample configuration of a system email account for Gmail**

With this configuration, the **Sign In** button becomes available on the form toolbar of the *System Email Accounts* form. The system administrator can click **Sign In** to verify that the system can sign in to the specified external application using provided configuration.

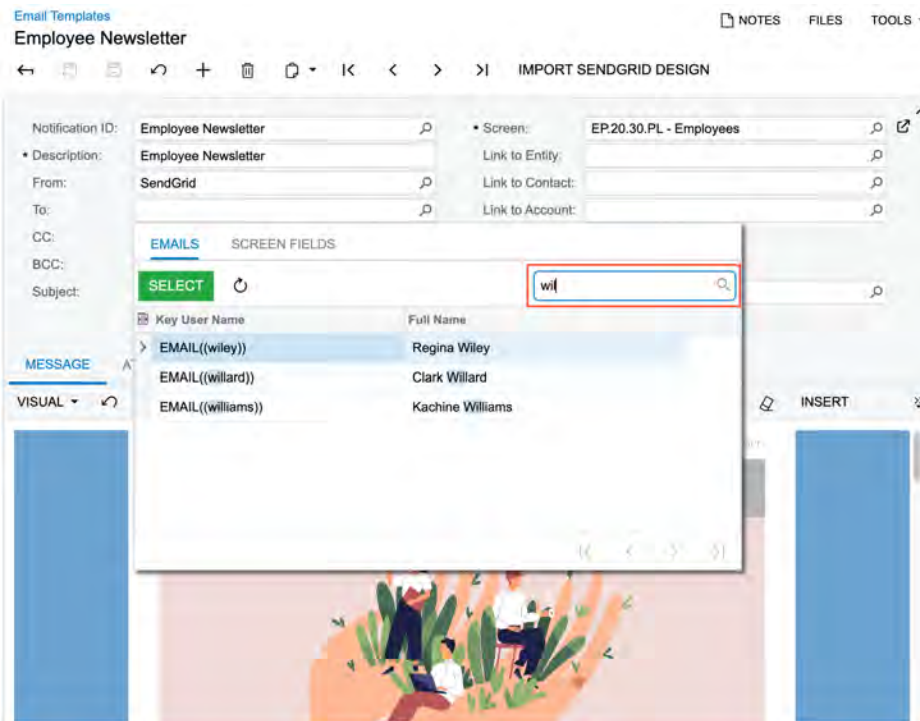
# Email Processing: Email Template Enhancements

Acumatica ERP 2022 R2, the lookup table used to specify the placeholders of email recipients has been redesigned. Additionally, support for the use of templates in mass emails has been added. In earlier versions of Acumatica ERP, templates could be used only for an email activity.

## The Redesigned Lookup Table

The *Notification Templates* (SM204003) form has been renamed to *Email Templates*. The redesigned lookup table is now used for the following boxes on the *Email Templates* (SM204000) form: **To**, **CC**, and **BCC**.

The list of placeholders for employee email addresses is available for selection on the **Emails** tab of the selector. A user can search for an employee by using the search box on the tab, as the following screenshot shows.



*Figure: A search for an employee in the list*

On the **Screen Fields** tab of the selector, a user can select data fields that store an email address provided by the form or a generic inquiry specified in the **Screen** box. The user can search for a data field as well (see the following screenshot).

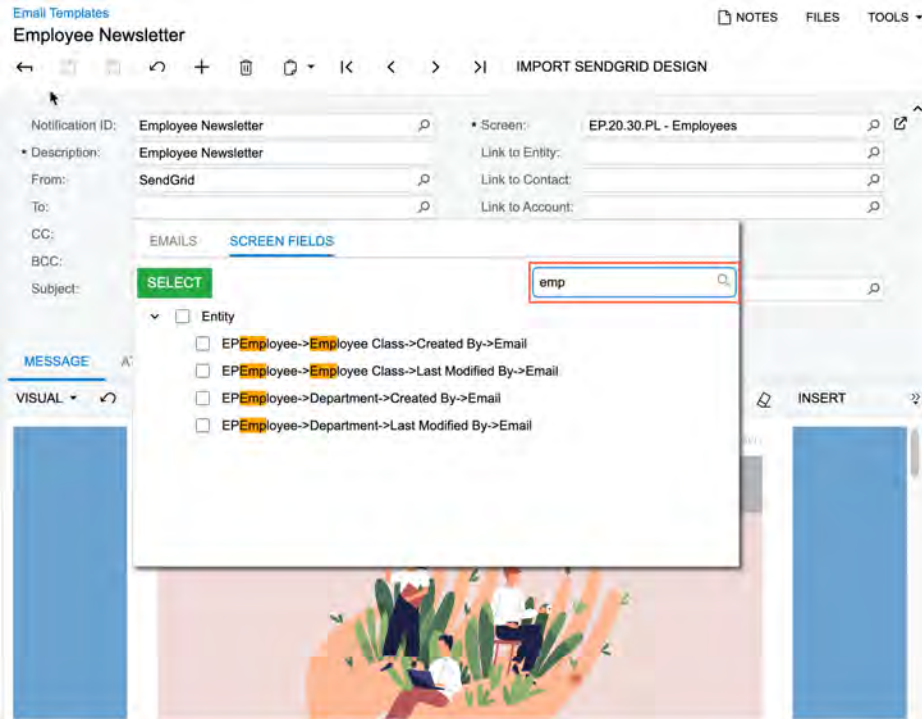


Figure: A search for a data field in the list

## The Use of Email Templates for Mass Email

The **Select Template** button has been added to the toolbar of the *Mass Emails* (CR308000) form (see the following screenshot). The button becomes available after a user saves a mass email for the first time. When the user clicks **Select Template**, the system opens the **Select Template** dialog box, where the user can select the email template whose content will replace or be appended to the text entered on the **Message** tab of the mass email.

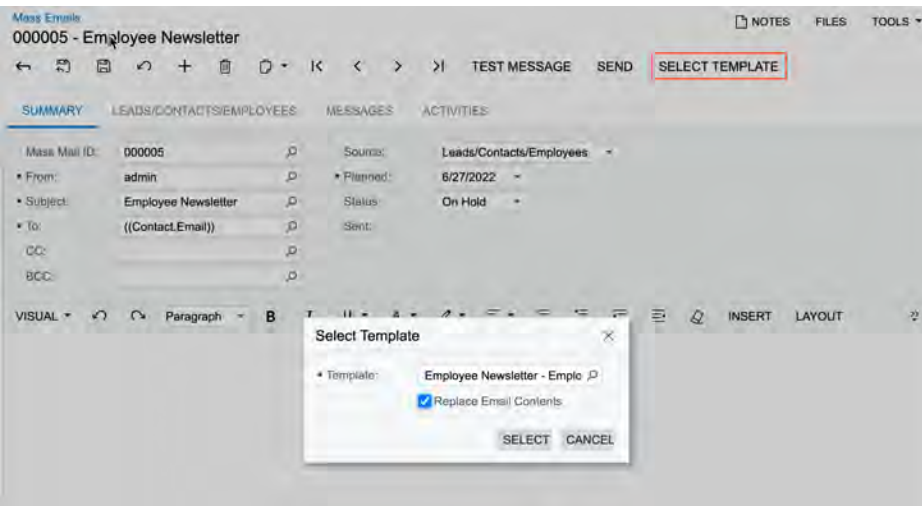


Figure: The new Select Template button



# Field Services: Appointment Schedule Optimization with Consideration of the Staff Members' Skills

In Acumatica ERP, the system can be integrated with the third-party service WorkWave Route Optimizer. This service is used to optimize the scheduling of appointments—that is, the system automatically assigns staff members to appointments according to the available hours in the staff members' work calendars. An administrative user configures the integration with WorkWave by enabling the *Workwave Route Optimization* feature in the *Third Party Integrations* group of features on the [Enable/Disable Features](#) (CS100000) form, and specifying the WorkWave API URL and the valid license key in the **Schedule Optimization Settings** section of the [Service Management Preferences](#) (FS100100) form. Once the integration has been configured, a user runs the process of appointment optimization on the [Optimize Appointment Scheduling](#) (FS501400) form.

Starting in Acumatica ERP 2022 R2, the appointment scheduling optimization functionality has been enhanced so that the system considers a staff member's skills when assigning staff members to appointments. Now when a user runs the optimization process on the [Optimize Appointment Scheduling](#) form with the new **Consider Skills** check box selected, the system assigns staff members to appointments not only according to staff members' work calendars but also by considering the staff members' skills.

With the new functionality, the system can assign an appropriate staff member to each appointment, and each staff member has the proper skill set needed to perform the services specified in each particular appointment.

## Processing the Appointment Schedule Optimization with Consideration of Staff Members' Skills

To run the appointment scheduling optimization process—that is, to assign staff members automatically to appointments with consideration of staff members' work calendars and skills, on the [Optimize Appointment Scheduling](#) (FS501400) form, a user should do the following:

- Select *Unassigned Appointments* in the **Type** box of the Summary area (see Item 1 in the following screenshot)
- Fill in the **Branch**, **Branch Location**, and **Date** boxes (Item 2)
- Select the new **Consider Skills** check box (Item 3)

**Figure:** The new *Consider Skills* check box

Then in the staff member list (the right table), the user selects the staff member or staff members for which appointment schedule optimization should be performed, and in the appointment list (the left table), the user selects the appointments to be optimized.

Once the user clicks **Process** on the form toolbar, the system selects the staff member to be assigned to each particular appointment while considering all of the following

- The skills specified for each staff member on the **Skills** tab of the [Employees](#) (EP203000) form

- The skills needed for performing the appointment's services, which are specified for each service on the **Service Skills** tab on the *Non-Stock Items* (IN202000) form
- The time availability of each employee, which has been entered in the work calendar specified in the **Calendar** box on the **General Info** tab of the *Employees* form

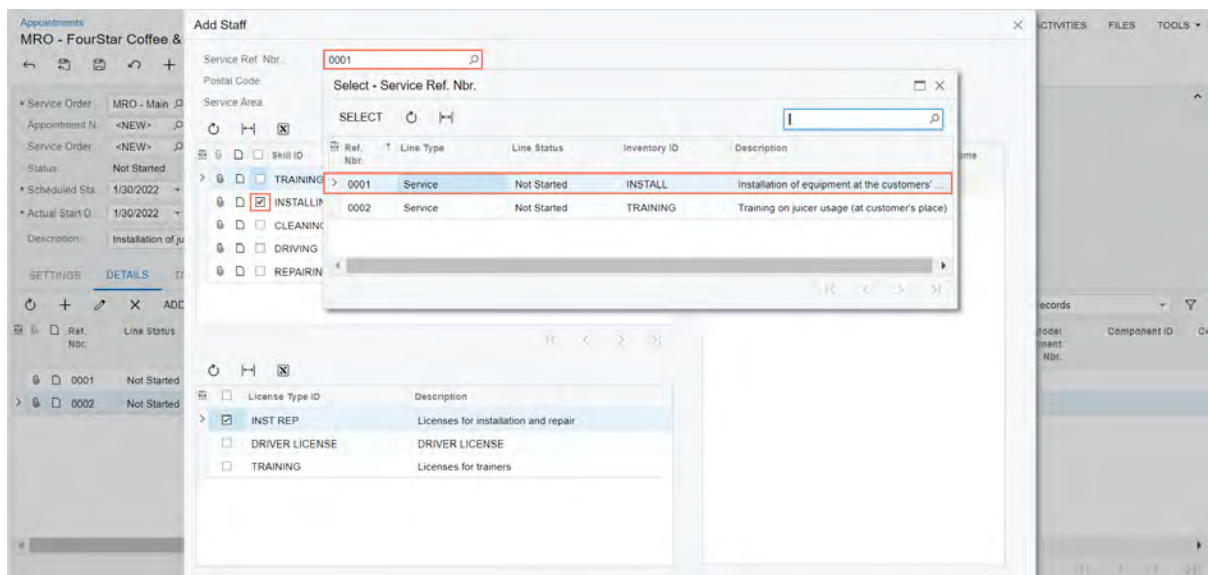
The system also calculates the optimal schedule for each selected staff member for the selected date by updating the scheduled start times of the assigned appointments.

## Troubleshooting Any Issues That Occur

If the appointment schedule optimization process fails, it may be due to one of the following reasons:

- No employee satisfies the skills required to perform appointment's services: If during the appointment schedule optimization process with the **Consider Skills** check box selected, the system could not find any employee with the skill set required to perform services specified in the appointment, the system shows the following error message: *This appointment could not be assigned to a staff member because no employee satisfies the skills required to perform the services in this appointment.*

In this case, the user running the process can verify which skills are required to perform services by clicking the appointment reference number in the **Appointment Nbr.** column in the appointment list, which is in the left table of the *Optimize Appointment Scheduling* (FS501400) form. The system will open the *Appointments* (FS300200) form, on which the user should open the **Add Staff** dialog box by clicking **Add Staff** on the table toolbar of the **Details** tab, and view the required skills for each service of the appointment. To view the needed skills for each service of the appointment, this user should select a particular service in the **Service Ref. Nbr.** box in the Selection area of the dialog box. (See the following screenshot.)



**Figure: Reviewing the service skills in appointment**

If there are no appropriate employees who have the needed skills, the user can clear the **Consider Skills** check box on the *Optimize Appointment Scheduling* form, and continue appointment schedule optimization based on the staff members' working hours without the consideration of their skills.

- No employee has available working hours: If during the appointment schedule optimization process, the system cannot find the available working hours in the work calendars of the selected employees, the system shows the following error message, which has been improved in Acumatica ERP 2022 R2: *This appointment cannot be optimized because the selected employee or employees have no available working hours in their work calendars.*

In this case, the user can assign appointments to another day of the work calendar. To do this, the user must open each appointment directly on the *Appointments* form and manually change the date and time in the **Scheduled Date and Time** section of the **Settings** tab.

# Field Services: Improved Titles Related to Total Amounts on the Service Orders and Appointments Forms

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In the previous versions of Acumatica ERP, on the [Service Orders](#) (FS300100) and [Appointments](#) (FS300200) forms, there were inconsistencies in the names of the UI elements related to total amounts as well as in the logic in the naming of those elements. In Acumatica ERP 2022 R2, these names have been revised and optimized.

The benefits of these optimized names for the users of the [Service Orders](#) form include the following:

- A user (for example, a call center agent) can quickly find the estimated duration of the services and the estimated total amount to be paid for the whole service order, and provide this information to the customer.
- A user (for example, a billing agent) can quickly find the total amount to be paid by a customer for the service order depending on the billing settings specified for the customer, and provide this information to the customer.
- A user (for example, a service manager) can easily understand how the billing amounts are calculated.

The benefits of these improved names on the [Appointments](#) form include the following:

- A user (for example, a service manager) can quickly find the actual duration of the services and the actual total amount to be paid for an appointment.
- A user (for example, a billing agent or a service manager) can quickly find the total amount that the company bills for a particular appointment if the customer's billing cycle is set up to run billing for appointments.

## Optimization of the Titles in the Summary Area of the Service Orders Form

In the Summary area of the [Service Orders](#) (FS300100) form, the set and names of the UI elements displaying the total amounts have been optimized (see the screenshot below):

- **Estimated Billable Total:** The newly added box shows the total amount of the service order, which the system calculates as the sum of the values of the **Amount** column of all lines on the **Details** tab.
- **Estimated Tax Total:** In previous versions of Acumatica ERP, this box was called **Tax Amount**. It shows the total amount of the tax to be paid for the service order, which the system calculates as the sum of tax amounts of all lines on the **Tax Details** tab.
- **Estimated Total:** This box, which was called **Total** in previous versions of Acumatica ERP, shows the estimated service order total amount, which is calculated as the sum of the **Estimated Billable Total** and the **Estimated Tax Total** amounts.

The **Estimated Billable Total** and **Estimated Tax Total** boxes are located before the **Estimated Total**, which gives a user a clear view of how the service order's estimated total amount has been composed.

- **Invoice Total:** In previous versions of Acumatica ERP, this box was called **Billable Total**. This box shows the actual total amount to be paid for the service order. The system calculates the amount that it inserts in this box based on the setting of the billing cycle assigned to the customer, which the system copies to the **Billing By** box:
  - If [Appointments](#) is displayed in the **Billing By** box (which means that the billing cycle of the customer is set up to run billing for appointments), the system inserts into the **Invoice Total** box the actual billable amount paid for the appointment or appointments related to the selected service order. This amount is the sum of the **Invoice Total** amounts specified in the Summary area of the [Appointments](#) (FS300200) form for each appointment related to the service order.
  - If [Service Orders](#) is specified in the **Billing By** box (which means that billing cycle of the customer is set up to run billing for service order), the system copies the **Estimated Total** amount of the service order to the **Invoice Total** box.
- **Billing By:** This newly added read-only box indicates whether the billing cycle of the customer is set up to run billing for appointments or service orders. The system fills in this box with the setting specified on

the [Billing Cycles](#) (FS206000) form for the billing cycle assigned to the customer on the **Billing** tab of the [Customers](#) (AR303000) form.

In the previous version of Acumatica ERP, this box was displayed on the **Totals** and **Financial** tabs of the [Service Orders](#) form. In Acumatica ERP 2022 R2, it has been moved to the Summary area of the form so that a user can quickly identify that the service order is billed based on the either service order's **Estimated Total** or the **Invoice Total** amount of the included appointment or appointments.

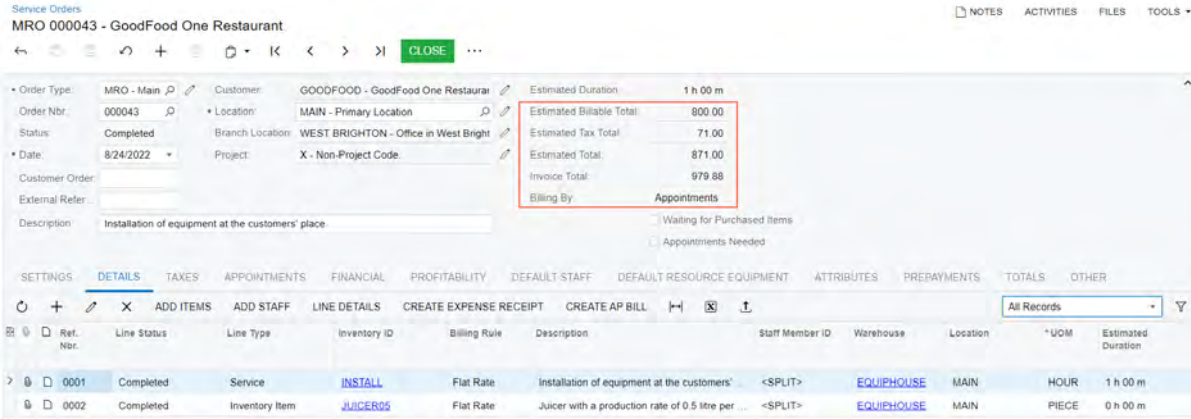


Figure: UI elements displaying the service order total amounts in the Summary area of the Service Orders form

### Optimization of the Titles on the Totals Tab on the Service Orders Form

In the **Service Order Totals** section of the **Totals** tab of the [Service Orders](#) (FS300100) form, the following UI elements have been renamed to be consistent with the corresponding UI elements of the Summary area of the form:

- **Estimated Billable Total:** This box was named **Line Total** in previous versions of Acumatica ERP.
- **Estimated Tax Total:** This box was named **Tax Total** in previous versions of Acumatica ERP.
- **Estimated Total:** The name of this box was **Total** in previous versions of Acumatica ERP.

These elements are shown in the following screenshot.

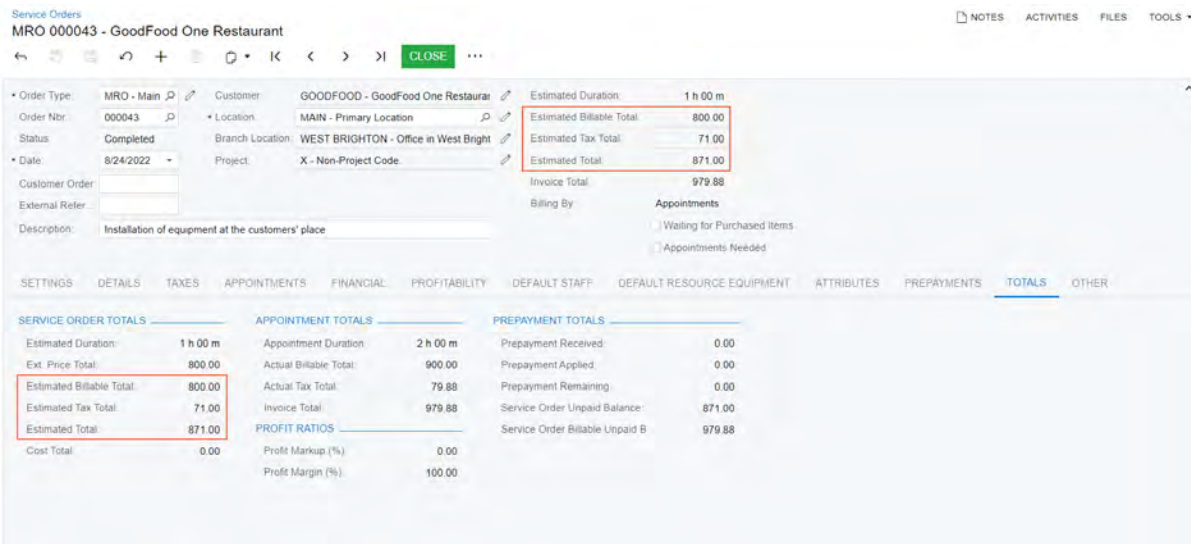


Figure: UI elements displaying the service order total amounts on the Totals tab of the Service Orders form

The following UI changes have also been made in the **Service Order Totals** section of the tab:



- The box named **Estimated Total** in previous versions of Acumatica ERP is now named **Ext. Price Total**. It shows the total price of the service order, which is the sum of the values of the **Amount** column of all line items of the **Details** tab.
- The **Cost Total** box has been moved from the Summary area of the [Service Orders](#) form.

In the **Appointment Totals** section of the **Totals** tab of the [Service Orders](#) form, the following UI elements have been renamed to be consistent with the corresponding UI elements of the Summary area of the [Appointments](#) (FS300200) form:

- **Actual Billable Total:** This box was named **Line Total** in previous versions of Acumatica ERP.
- **Actual Tax Total:** This box was named **Tax Total** in previous versions of Acumatica ERP.
- **Invoice Total:** This box was named **Total** in previous versions of Acumatica ERP.

## Optimization of the Titles on the Appointments Tab on the Service Orders Form

On the **Appointments** tab of the [Service Orders](#) (FS300100) form, two additional columns, **Actual Billable Total** and **Actual Tax Total**, have been added to give a user the ability to view the amounts from which the final amount to be paid for an appointment by the customer (**Invoice Total**) is calculated. The **Invoice Total** column was named **Billable Amount** in the previous version of Acumatica ERP.

If the billing cycle assigned to a customer is set up to run billing for appointments (that is, if the *Appointments* is specified in the **Billing By** box in the Summary area of the form) and the service order has only one appointment, then the system inserts the amount specified in the **Invoice Total** column of the **Appointments** tab as the **Invoice Total** in the Summary area of the form (see the following screenshot). If multiple appointments are associated with the service order, the system adds the values of the **Invoice Total** column of the **Appointments** tab, and inserts the sum of these amounts in the **Invoice Total** box in the Summary area of the form.

Appointment Nbr.	Confirmer	Status	Scheduled Start Date	Scheduled Start Time	Scheduled End Date	Scheduled End Time	Actual Billable Total	Actual Tax Total	Invoice Total	Cost Total
000043-1		Completed	8/24/2022	8:30 AM	8/24/2022	9:30 AM	900.00	79.88	979.88	0.00

Figure: Revised and renamed columns on the Appointments tab of the Service Orders form

## Other Improvements in the Summary Area of the Service Orders Form

On the [Service Orders](#) (FS300100) form, in the Summary area, the names of the following boxes have been optimized (as the screenshot below shows) so that a user can view the full box name without hovering over the label:

- **Service Order Type** has been renamed to **Order Type**.
- **Service Order Nbr.** has been renamed to **Order Nbr.**

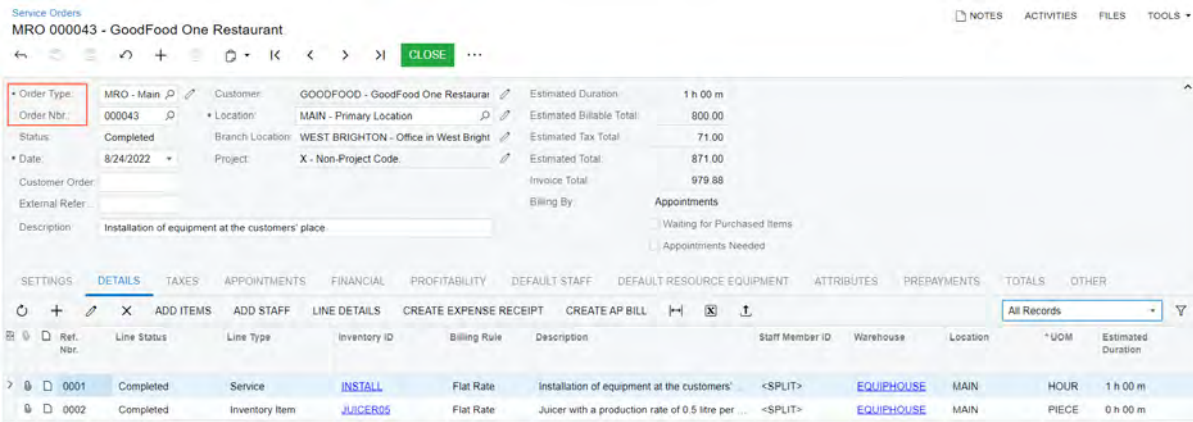


Figure: The new Order Type and Order Nbr. box names

### Optimization of the Titles in the Summary Area on the Appointments Form

In the Summary area of the [Appointments](#) (FS300200) form, the list of UI elements displaying the total amounts and their names have been optimized, as shown in the following screenshot.

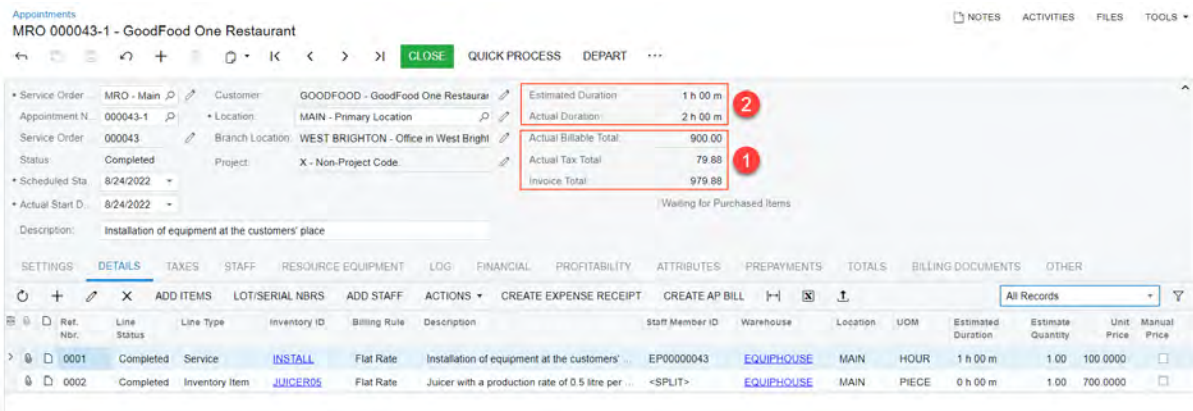


Figure: UI elements displaying the appointment total amounts in the Summary area of the Appointments form

The following elements combine to give a user a clear view of the actual amounts to be billed for the appointment:

- **Actual Billable Total:** This newly added box displays the total billable amount of the appointment, which is calculated as the sum of the amounts of the **Billable Amount** column of the **Details** tab.
- **Actual Tax Total:** This box displays the total amount of tax paid for the appointment, which is the sum of the tax amounts of all lines on the **Tax Details** tab of the current form.
- **Invoice Total:** In previous versions of Acumatica ERP, this box was called **Appointment Total**. It shows the final amount billed to the customer for the appointment, which is calculated as the sum of the amounts in the **Actual Billable Total** box and the **Actual Tax Total** box.

In the Summary area of the [Appointments](#) form, the following UI names have also been optimized so that a user can view the full box name without hovering over the label:

- **Estimated Service Duration** has been renamed to **Estimated Duration**.
- **Actual Service Duration** has been renamed to **Actual Duration**.

## Optimization of the Titles on the Totals Tab on the Appointments Form

In the **Appointment Totals** section of the **Totals** tab of the *Appointments* (FS300200) form, the UI elements have been renamed to be consistent with the corresponding UI elements of the Summary area of the form, as shown in the following screenshot.

The screenshot displays the 'Appointments' form for 'MRO 000043-1 - GoodFood One Restaurant'. The 'Totals' tab is active, showing a summary of financial data. A red box highlights the 'Appointment Totals' section, which includes the following values:

Category	Value
Actual Billable Total	900.00
Actual Tax Total	79.88
Invoice Total	979.88

Other sections visible in the screenshot include 'Service Order Totals' (Estimated Total: 871.00, Invoice Total: 979.88) and 'Prepayment Totals' (Prepayment Received: 0.00, Prepayment Applied: 0.00, Prepayment Remaining: 0.00). The 'Profit Ratios' section shows Profit Markup (%) at 0.00 and Profit Margin (%) at 100.00.

*Figure: UI elements displaying the appointment total amounts on the Totals tab of the Appointments form*

The following UI changes have been made in the **Appointment Totals** section the **Totals** tab:

- **Ext. Price Total** was named **Actual Total** in previous versions of Acumatica ERP. This box contains the total price of the appointment, which is the sum of the values of the **Actual Amount** column of all lines of the **Details** tab.
- **Actual Billable Total** was named **Line Total** in previous versions of Acumatica ERP.
- **Actual Tax Total** was named **Tax Total** in previous versions of Acumatica ERP.
- **Invoice Total** was named **Appointment Total** in previous versions of Acumatica ERP.
- The **Cost Total** box was moved to this section from the Summary area of the form.

In the **Service Order Totals** section of the **Totals** tab, the following boxes have been renamed to be consistent with the corresponding UI elements on the *Service Orders* (FS300100) form:

- **Total** has been renamed to **Estimated Total**.
- **Billable Total** has been renamed to **Invoice Total**.

## Report Improvements

The *Service Order Summary* (FS651000) and *Appointment Summary* (FS652500) reports have been enhanced.

In the *Service Order Summary* report, the **Transaction Amount** column has been renamed to **Estimated Billable Total** to be consistent with the corresponding UI element located in the Summary area of the *Service Orders* (FS300100) form.

In the *Appointment Summary* report, the **Transaction Amount** column has been renamed to **Actual Billable Total** to be consistent with the corresponding UI element located in the Summary area of the *Appointments* (FS300200) form. The following screenshot presents an example of the *Appointment Summary* report.

Appointment Summary

PRINT SEND EXPORT

Type your query here

Appointment Summary Start Date: 1/1/2023 Page: 1 of 1  
 Company: Company End Date: 1/30/2023 Date: 8/29/2022 1:27 PM  
 User: Pam Bravner

Type	Ref. Nbr.	Date	Status	Customer ID	Customer Name	Location ID	Location Name	Est. Duration	Est. Qty.	Actual Duration	Qty.	Actual Billable Total
INST	000001-1	1/7/2023	Billed	TOMYUM	Thai Food Restaurant	MAIN	Primary Location	1 h 00 m	2.00	1 h 00 m	2.00	4,100.00
INST	000002-1	1/9/2023	Billed	HMBAKERY	HM's Bakery & Cafe	MAIN	Primary Location	1 h 00 m	2.00	1 h 00 m	2.00	2,600.00
INST	000003-1	1/15/2023	Billed	GOODFOOD	GoodFood One Restau	MAIN	Primary Location	1 h 00 m	4.00	1 h 00 m	4.00	6,700.00
INST	000004-1	1/18/2023	Closed	COFFEESHOP	FourStar Coffee & Svc	MAIN	Primary Location	1 h 00 m	2.00	1 h 00 m	2.00	4,100.00
INST	000005-1	1/23/2023	Closed	RETSALE	Individual Retail Custon	MAIN	Primary Location	1 h 00 m	1.00	1 h 00 m	1.00	100.00
INST	000005-2	1/28/2023	Closed	RETSALE	Individual Retail Custon	MAIN	Primary Location	0 h 45 m	0.75	0 h 45 m	0.75	37.50
INST	000006-1	1/24/2023	Closed	TOMYUM	Thai Food Restaurant	MAIN	Primary Location	1 h 00 m	1.00	1 h 00 m	1.00	100.00
INST	000006-2	1/28/2023	Closed	TOMYUM	Thai Food Restaurant	MAIN	Primary Location	0 h 45 m	0.75	0 h 45 m	0.75	37.50
MRO	000007-1	1/28/2023	Closed	RETSALE	Individual Retail Custon	MAIN	Primary Location	1 h 00 m	1.00	1 h 00 m	1.00	15.00
MRO	000008-1	1/28/2023	Closed	TOMYUM	Thai Food Restaurant	MAIN	Primary Location	1 h 00 m	1.00	1 h 00 m	1.00	15.00
MRO	000009-1	1/28/2023	Closed	GOODFOOD	GoodFood One Restau	MAIN	Primary Location	0 h 45 m	0.75	0 h 45 m	0.75	37.50
MRO	000009-2	1/28/2023	Closed	GOODFOOD	GoodFood One Restau	MAIN	Primary Location	1 h 00 m	1.00	1 h 00 m	1.00	15.00
MRO	000039-1	1/30/2023	Not Started	GOODFOOD	GoodFood One Restau	MAIN	Primary Location	1 h 45 m	1.75	0 h 00 m	0.00	137.50
MRO	000040-1	1/30/2023	Not Started	GOODFOOD	GoodFood One Restau	MAIN	Primary Location	1 h 45 m	1.75	0 h 00 m	0.00	137.50
TRN	000010-1	1/30/2023	Not Started	COFFEESHOP	FourStar Coffee & Svc	MAIN	Primary Location	0 h 45 m	0.75	0 h 00 m	0.00	37.50
<b>Total by USD:</b>								15 h 30 m	21.50	11 h 15 m	17.25	18,170.00

Figure: The new Actual Billable Total column in the Appointment Summary report



# Field Services: Profit Margin Calculation

In previous versions of Acumatica ERP, only the profit markup value (but not the profit margin) of a service order and an appointment was calculated by the system and displayed on the [Service Orders](#) (FS300100) and [Appointments](#) (FS300200) forms. In Acumatica ERP 2022 R2, in addition to the profit markup, the profit margin is calculated for a service order and appointment.

On the **Totals** tab of the [Service Orders](#) and [Appointments](#) forms, the new **Profit Ratio** section has been added, in which the **Profit Markup (%)** and **Profit Margin (%)** boxes are displayed. In these boxes, the values calculated for the entire service order or the appointment, respectively, are shown.

On the **Profitability** tab of the [Service Orders](#) and [Appointments](#) forms, the new **Profit Markup (%)** and **Profit Margin (%)** columns have also been added. These columns show the values calculated for each line item displayed on the tab.

The following sections describe the changes on the UI of these forms, as well as the calculation of the profit-related elements.

## Profit Markup and Profit Margin on the Service Orders Form

The new **Profit Ratios** section has been added on the **Totals** tab of the [Service Orders](#) (FS300100) form, as the following screenshot shows.

The screenshot shows the 'Service Orders' form for 'MRO 000043 - GoodFood One Restaurant'. The 'Totals' tab is selected, and the 'Profit Ratios' section is highlighted with a red box. The 'Profit Ratios' section displays the following values:

Category	Item	Value
SERVICE ORDER TOTALS	Estimated Duration	1 h 00 m
	Ext. Price Total	800.00
	Estimated Billable Total	800.00
	Estimated Tax Total	71.00
APPOINTMENT TOTALS	Appointment Duration	2 h 00 m
	Actual Billable Total	900.00
PREPAYMENT TOTALS	Prepayment Received	0.00
	Prepayment Applied	0.00
PROFIT RATIOS	Profit Markup (%)	0.00
	Profit Margin (%)	100.00

**Figure:** The new Profit Ratio section on the Totals tab of the Service Orders form

The calculation of the profit markup and profit margin percentages for the service order is based on the settings of the billing cycle assigned to the selected customer. Under **Run Billing For** on the [Billing Cycles](#) (FS206000) form, the appropriate option button is selected to indicate whether billing is run for service orders or appointments.

If the billing cycle of the customer is set up to run billing for service orders, the system uses the following formulas:

- $$\text{Profit Markup (\%)} = (\text{Estimated Billable Total} - \text{Cost Total}) / \text{Cost Total} * 100$$
- $$\text{Profit Margin (\%)} = (\text{Estimated Billable Total} - \text{Cost Total}) / \text{Estimated Billable Total} * 100$$

If the billing cycle of the customer is set up to run billing for appointments, the system uses the following formulas:

- $$\text{Profit Markup (\%)} = (\text{Actual Billable Total} - \text{Cost Total}) / \text{Cost Total} * 100$$
- $$\text{Profit Margin (\%)} = (\text{Actual Billable Total} - \text{Cost Total}) / \text{Actual Billable Total} * 100$$

The system calculates these values when a user saves a service order. The calculation does not depend on the status of the service order, so a user can clearly see the profitability of the service order based on the available totals, whether or not the linked appointments have started or completed.

On the **Profitability** tab of the [Service Orders](#) form, the **Profit Markup (%)** and **Profit Margin (%)** columns have been added, as the following screenshot shows.

Staff Member	Unit Price	Unit Cost	Estimated Quantity	Estimated Amount	Estimated Cost	Actual Cost	Actual Duration	Actual Quantity	Actual Amount	Ext. Cost	Billable Quantity	Billable Amount	Profit	Profit Markup (%)	Profit Margin (%)
at the customers'...	100.0000	0.0000	1.00	100.00	0.00	0 h 00 m	1.00	100.00	0.00	1.00	100.00	100.00	0.00	0.00	100.00
production rate of ...	2,500.0000	2,000.0000	1.00	2,500.00	2,000.00	0 h 00 m	1.00	2,500.00	2,000.00	1.00	2,500.00	500.00	25.00	20.00	

**Figure: Profit Markup (%) and Profit Margin (%) on the Profitability tab of the Service Orders form**

On the tab, the **Profit Markup (%)** and **Profit Margin (%)** values are calculated for each line item of the service order. The user can review the profitability of each line item based on the cost and billable amount. The system calculates the values in these columns as follows:

- $$\text{Profit Markup (\%)} = (\text{Billable Amount} - \text{Ext.Cost}) / \text{Ext.Cost} * 100$$
- $$\text{Profit Margin (\%)} = (\text{Billable Amount} - \text{Ext.Cost}) / \text{Billable} * 100$$

### Profit Markup and Profit Margin on the Appointments Form

The new **Profit Ratios** section has been added on the **Totals** tab of the [Appointments](#) (FS300200) form, as the following screenshot shows.

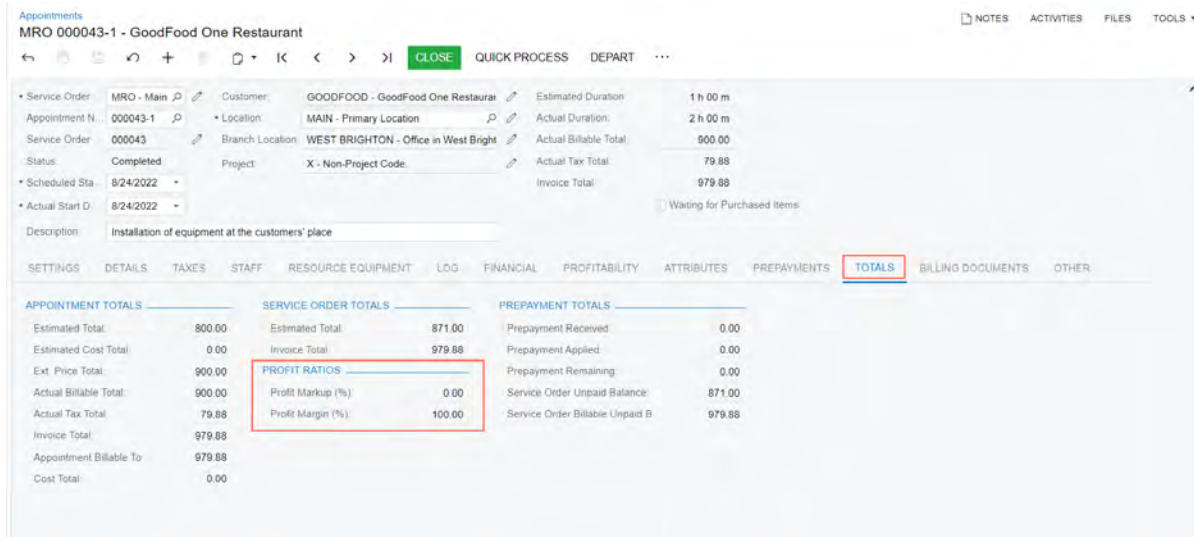


Figure: The new Profit Ratios section on the Totals tab of the Appointments form

The **Profit Markup (%)** box displays the value that was displayed in the **Profit (%)** box in the Summary area in the previous versions of Acumatica ERP. The **Profit Margin (%)** box is a newly added box that shows the profitability of the billable amount before tax.

The system calculates the profit markup and profit margin percentages for the entire appointment by using the following formulas:

- $$\text{Profit Markup (\%)} = (\text{Actual Billable Total} - \text{Cost Total}) / \text{Cost Total} * 100$$
- $$\text{Profit Margin (\%)} = (\text{Actual Billable Total} - \text{Cost Total}) / \text{Actual Billable Total} * 100$$

The system calculates these values when a user saves the appointment. The calculation does not depend on the status of the appointment, so a user can clearly see the profitability of the appointment based on the available totals, whether or not the appointment has started or completed.

On the **Profitability** tab of the *Appointments* form, the **Profit Markup (%)** and **Profit Margin (%)** columns have been added, as the following screenshot shows.

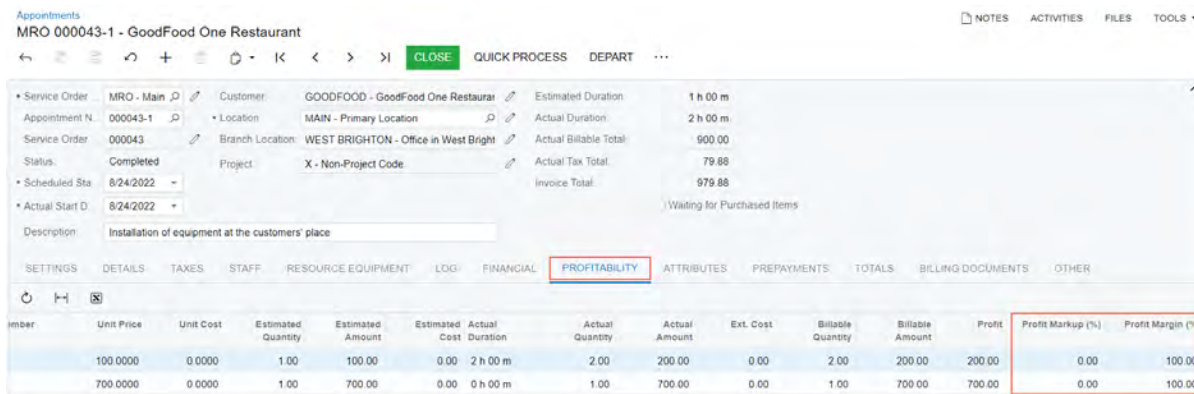


Figure: Profit Markup (%) and Profit Margin (%) on the Profitability tab of the Appointments form

To calculate the profit markup and profit margin of each particular line on the **Profitability** tab, the system uses the values from the lines in the following formulas:

- $$\text{Profit Markup (\%)} = (\text{Billable Amount} - \text{Ext. Cost}) / \text{Ext. Cost} * 100$$
- $$\text{Profit Margin (\%)} = (\text{Billable Amount} - \text{Ext. Cost}) / \text{Billable Amount} * 100$$

# Field Services: Improvements in the Mobile App

Because some of the UI elements have been revised and renamed on the *Appointments* (FS300200) form in Acumatica ERP 2022 R2 (for details, see *Field Services: Improved Titles Related to Total Amounts on the Service Orders and Appointments Forms*), the similar UI elements have also been renamed on the *Appointments* screen of the Acumatica mobile app for consistency.

## The Renamed UI Elements of the *Appointments* Screen

On the *Appointments* screen, in the Summary area, the **Appointment Total** has been renamed to **Invoice Total**, as the following screenshot shows.

The screenshot shows the 'Appointments' screen with the following details:

- App. Nbr.: 000019-1
- Est. Duration: 1 h 45 m
- Status: Billed
- Act. Duration: 2 h 00 m
- Invoice Total: 150.00** (highlighted with a red box)

The screen includes a navigation bar with tabs: SUMMARY, DETAILS, STAFF, LOG, and TOTALS. The 'SUMMARY' tab is selected. Below the navigation bar, the following information is displayed:

- Service Order Type: TRN - Customer Training Services (with a 'VIEW ON MAP' button)
- Service Order Nbr: 000019 (with a 'Finished' toggle switch)
- Customer: HMBAKERY - HM's Bakery & Cafe
- Location: MAIN - Primary Location
- Branch: SWEETEQUIP - Service and Equipment Sales
- Branch Location: WEST BRIGHTON - Office in West Brighton Center
- Project: Non-Project Code
- Description: Training on juicer usage (at customer's place)
- Comment

**Figure:** The Invoice Total box in the Summary area

On the **Totals** tab of the *Appointments* screen, the following UI elements have been renamed for consistency with the corresponding UI elements on the **Totals** tab of the *Appointments* (FS300200) form of the Acumatica ERP (see the screenshot below):

- **Actual Total** has been renamed to **Ext. Price Total**.
- **Line Total** has been renamed to **Actual Billable Total**.
- **Tax Total** has been renamed to **Actual Tax Total**.
- **Appointment Total** has been renamed to **Invoice Total**.
- **Total** has been renamed to **Estimated Total** and placed in the new **Service Order Totals** section.
- **Billable Total** has been renamed to **Invoice Total** and placed in the new **Service Order Totals** section.

The screenshot shows the 'Appointments' screen with the 'TOTALS' tab selected. The appointment details are: App. Nbr: 000019-1, Status: Billed, Invoice Total: 150.00, Est. Duration: 1 h 45 m, Act. Duration: 2 h 00 m. The 'APPOINTMENT TOTALS' section includes: Estimated Total (137.50), Ext. Price Total (150.00), Actual Billable Total (150.00), Actual Tax Total (0.00), Invoice Total (150.00), Estimated Cost Total (110.00), and Cost Total (120.00). The 'SERVICE ORDER TOTALS' section includes: Estimated Total (137.50) and Invoice Total (150.00). A 'PREPAYMENTS' section is also visible at the bottom.

APPOINTMENT TOTALS	
Estimated Total	137.50
Ext. Price Total	150.00
Actual Billable Total	150.00
Actual Tax Total	0.00
Invoice Total	150.00
Estimated Cost Total	110.00
Cost Total	120.00
SERVICE ORDER TOTALS	
Estimated Total	137.50
Invoice Total	150.00
PREPAYMENTS:	

**Figure:** The renamed UI elements on the Totals tab

The new **Service Order Totals** section has been added to clearly distinguish the totals of the appointment and the service order in which it is included.



# Field Services: Updating the Unit Cost of Non-Stock Items to Be Purchased

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When an item of the *Non-Stock Item* or *Service* type is included in a service order and an appointment, the system inserts the item's default unit cost, which it copies from the **Current Cost** box of the **Price/Cost** tab of the [Non-Stock Items](#) (IN202000) form. If the item is purchased (that is, if a purchase order is created for the service document), the unit cost may be changed in the associated purchase order or AP bill.

In previous versions of Acumatica ERP, the default unit cost in the service documents was not updated in this case.

## Updating of the Unit Cost Column

In Acumatica ERP 2022 R2, if the unit cost of an item has been updated in the purchase order or AP bill associated with a service document, the system updates the **Unit Cost** value for the corresponding line item in the service document.

Specifically, on the **Details** tab of the [Service Orders](#) (FS300100) and [Appointments](#) (FS300200) forms, the **Unit Cost** value will be updated in the lines with the *Service* and *Non-Stock Item* type and the **Mark for PO** check box selected if one of the following conditions occur:

- The unit cost of the item is changed in the purchase order that has been created from the service document (appointment or service order).
- The unit cost value is changed in the AP bill that has been created from the purchase order associated with the service document, and the bill is released.

The unit cost value is updated in the service orders and appointments regardless of their status. If multiple AP bills are released from the same purchase order, the appointment and service order are updated with the unit cost value of the last AP bill.

## Ability to Edit the Unit Cost Column

On the **Details** tab of the [Service Orders](#) (FS300100) and [Appointments](#) (FS300200) forms, the **Unit Cost** column is available for editing in the applicable lines if any of the following conditions occurs:

- The detail line has the *Non-Stock Item* or *Service* type.
- The appointment document has any status except *Closed*, *Canceled* or *Billed*
- The service order document has any status except *Closed* or *Canceled*

The ability to edit the **Unit Cost** column manually has been implemented in order to provide users with the opportunity to adjust the unit cost in scenarios that are not covered by the current functionality.



Editing rights can be granted or limited for a role assigned to a user by setting up the role's access rights to the form elements, so that an administrative user can control access to any form elements. For details, see [User Roles: Restriction Level Options](#).

## Recalculation of Amounts That Use the Unit Cost

When the unit cost of a service order and an appointment is updated (whether by the system or by a user), the system recalculates the following amounts on the [Service Orders](#) (FS300100) and [Appointments](#) (FS300200) forms, which use the value in the **Unit Cost** column:

- **Cost Total** (on the **Appointments** and **Totals** tabs of the [Service Orders](#) form; on the **Totals** tab of the [Appointments](#) form)
- **Profit Markup (%)** and **Profit Margin (%)** (on the **Profitability** and **Totals** tabs of the [Appointments](#) form)

- **Ext. Cost** (on the **Details** and **Profitability** tabs of the [Service Orders](#) and [Appointments](#) forms)
- **Estimated Cost** (on the **Profitability** tab of the [Service Orders](#) and [Appointments](#) forms)
- **Estimated Cost Total** (on the **Totals** tab of the [Appointments](#) form)

## Upgrade Notes

During an upgrade to Acumatica ERP 2022 R2, the **Unit Cost** values on the [Service Orders](#) (FS300100) and [Appointments](#) (FS300200) forms will not be updated in the existing service orders and appointments, even if the purchase orders or AP bills created for these service documents contain updated unit costs.

To update the unit costs in the existing service documents, a user should follow the procedure described in the following knowledge base article: [How to update the Unit Cost value in service order and appointment lines marked for PO after upgrade to Acumatica ERP 2022 R2](#)



# Finance: AP Debit Adjustments with Retainage

In previous versions of Acumatica ERP, users could not manually create AP debit adjustments with retainage if a small correction of an AP bill with retainage was required. The only way to create a debit adjustment with retainage in the system was to reverse a bill with retainage or a retainage bill. Also, debit adjustments paid by line could not be created in the system.

Starting in Acumatica ERP 2022 R2, when processing debit adjustments, users can perform the following:

- Create debit adjustments with retainage.
- Create debit adjustments with or without retainage, which are paid by line.
- Reverse debit adjustments with or without retainage, which are paid by line.
- Add lines with negative amounts to AP documents paid by line. (The total balance of such documents will still be positive so that the documents can be released.)
- Process cash discounts for lines with negative amounts.

## Changes to the Accounts Payable Preferences Form

On the [Accounts Payable Preferences](#) (AP101000) form, the **Automatically Release Retainage Bills** check box on the **General** tab has been renamed to **Automatically Release Retainage Documents**, as shown in the following screenshot.

The screenshot displays the 'Accounts Payable Preferences' form with the 'GENERAL' tab selected. The 'RETAINAGE SETTINGS' section is visible, where the checkbox 'Automatically Release Retainage Documents' is checked and highlighted with a red box. Other settings include 'Batch Numbering Sequence' (BATCHAP - AP Batch), 'Bill Numbering Sequence' (APBILL - AP Bill), 'Debit Adjustment Numbering Sequence' (APBILL - AP Bill), 'Credit Adjustment Numbering Sequence' (APBILL - AP Bill), 'Payment Numbering Sequence' (APPAYMENT - AP Payment), and 'Price Worksheet Numbering Sequence' (APPRICEWS - AP Price Work). The 'AGING SETTINGS' section shows 'Aging Period 1' (7 Days), 'Aging Period 2' (14 Days), and 'Aging Period 3' (30 Days). The 'DATA ENTRY SETTINGS' section includes 'Default Vendor Class ID', 'Combine Expense Sub. From' (III-III), 'Use Intercompany Expense Account From' (Inventory Item), and 'Payment Lead Time' (7 Days). The 'POSTING SETTINGS' section has 'Automatically Post on Release' checked. The 'VAT RECALCULATION SETTINGS' section has 'Debit Adjustment Description'.

Figure: The UI change on the Accounts Payable Preferences form

## Changes to the Bills and Adjustments Form

On the [Bills and Adjustments](#) (AP301000) form, the following UI changes have been introduced for documents with the *Debit Adj.* type (Item 1) selected in the **Type** box:

- The **Apply Retainage** and **Pay by Line** check boxes (Item 2) appear in the Summary area of the form
- The **Retainage Percent** and **Retainage Amount** columns (Item 3) appear on the **Details** tab

- The **Retainage** tab (Item 4) appears on the form

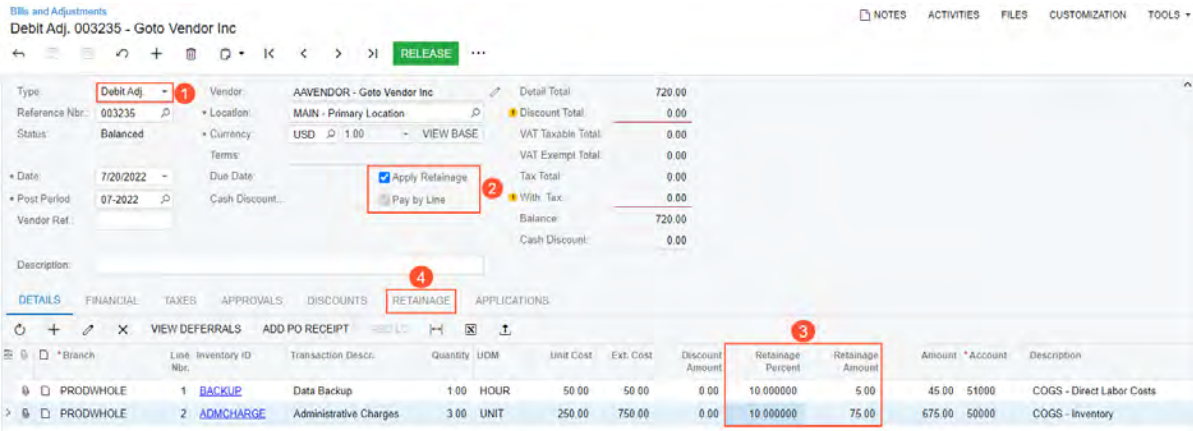


Figure: UI changes on the Bills and Adjustments form

For retainage documents, in the Summary area, the **Retainage Bill** check box has been renamed to **Retainage Document**, as shown in the following screenshot.

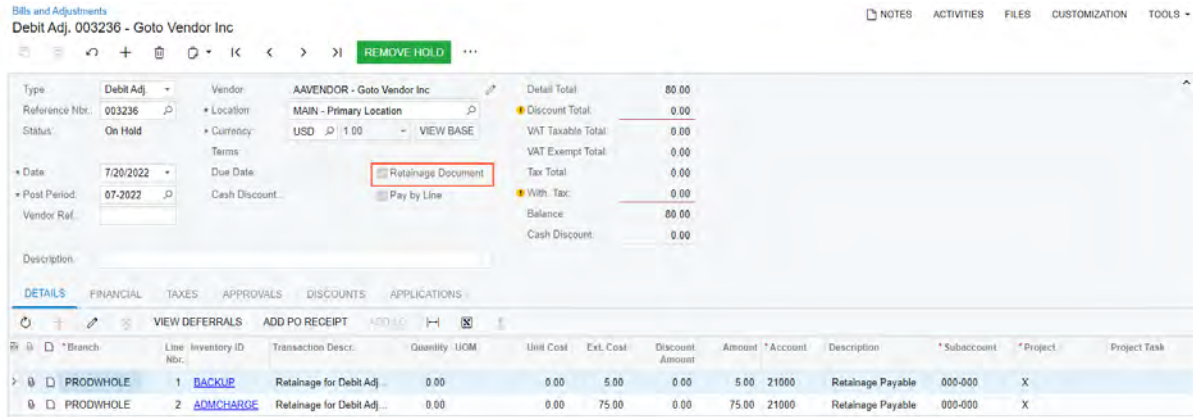


Figure: The Retainage Document check box on the Bills and Adjustments form

For a retainage debit adjustment that has the *On Hold* or *Balanced* status, the following settings can be edited: **Date**, **Post Period**, **Description**, **Location**, **AP Account**, **AP Subaccount**, **Payment Method**, **Cash Account**, **Workgroup ID**, and **Owner**.

The post period of a retainage debit adjustment must not be earlier than the post period of the original debit adjustment.


**Reversal of Debit Adjustments with Retainage and Retainage Debit Adjustments**

For original debit adjustments with retainage and retainage debit adjustments with the *Open* and *Closed* status, the **Reverse** command has been added to the More menu of the *Bills and Adjustments* (AP301000) form. The **Reverse** command is not available for original and retainage debit adjustments created automatically on reverse of an original bill or a retainage bill.

If a user reverses a debit adjustment, the system performs the following actions on the *Bills and Adjustments* form:

1. Creates a credit adjustment with the *On Hold* or *Balanced* status, depending on whether the **Hold Documents on Entry** check box is selected on the *Accounts Payable Preferences* (AP101000) form.
2. For the credit adjustment, fills in the **Original Document** box on the **Financial** tab with the **Ref. Nbr.** of the debit adjustment being reversed.

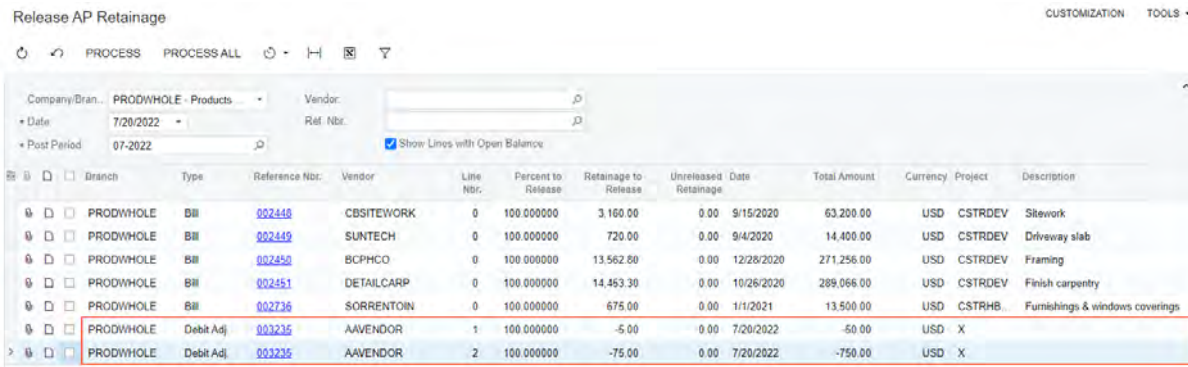
- On release of the credit adjustment, creates a GL transaction by using the same rules as for manually created credit adjustments.

 On reverse of a debit adjustment created for a tax agency in a foreign currency, the system will not use the document rate to convert the amount to the base currency amount. The same rule is applied when a user is reversing a tax bill in a foreign currency.

An original debit adjustment cannot be reversed if it has open retainage debit adjustments or unreversed applications.

### Changes to the Release AP Retainage Form

On the [Release AP Retainage](#) (AP510000) form, the system loads released debit adjustments with the *Open* status, which have an unreleased retainage, as shown in the following screenshot.



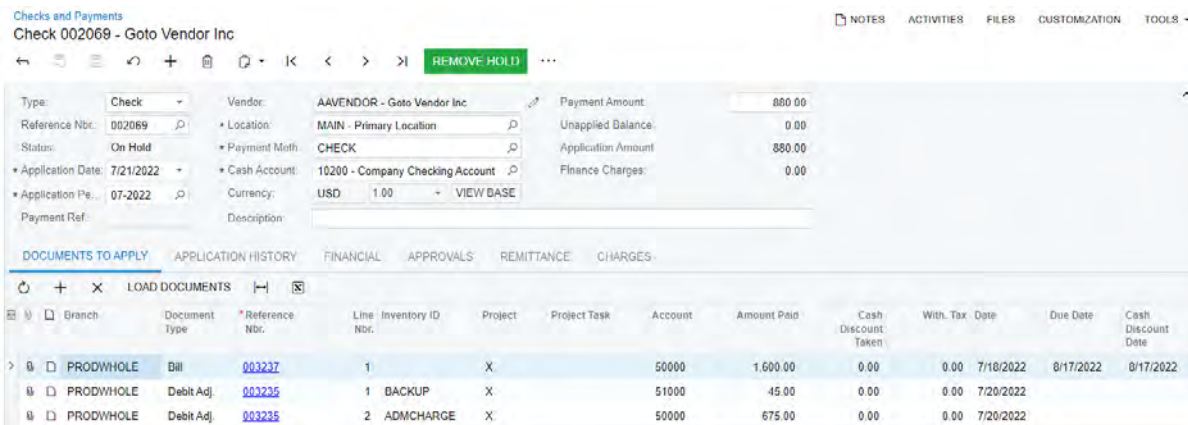
Branch	Type	Reference Nbr.	Vendor	Line Nbr.	Percent to Release	Retainage to Release	Unreleased Retainage	Date	Total Amount	Currency	Project	Description
PRODWHOLE	Bill	002448	CBSITWORK	0	100.000000	3,160.00	0.00	9/15/2020	63,200.00	USD	CSTRDEV	Stework
PRODWHOLE	Bill	002449	SUNTECH	0	100.000000	720.00	0.00	9/4/2020	14,400.00	USD	CSTRDEV	Driveway slab
PRODWHOLE	Bill	002450	BCPHCO	0	100.000000	13,562.80	0.00	12/28/2020	271,256.00	USD	CSTRDEV	Framing
PRODWHOLE	Bill	002451	DETAILCARP	0	100.000000	14,453.30	0.00	10/26/2020	289,066.00	USD	CSTRDEV	Finish carpentry
PRODWHOLE	Bill	002736	SORRENTOIN	0	100.000000	675.00	0.00	1/1/2021	13,500.00	USD	CSTRHB	Furnishings & windows coverings
PRODWHOLE	Debit Adj.	003235	AAVENDOR	1	100.000000	-5.00	0.00	7/20/2022	-50.00	USD	X	
PRODWHOLE	Debit Adj.	003235	AAVENDOR	2	100.000000	-75.00	0.00	7/20/2022	-750.00	USD	X	

Figure: Debit adjustment lines on the Release AP Retainage form

For debit adjustments, the amounts in the **Retainage to Release**, **Unreleased Retainage**, and **Total Amount** are shown with the negative sign.

### Changes to the Checks and Payments Form

On the [Checks and Payments](#) (AP302000) form, debit adjustments that have the **Pay by Line** check box selected can be applied to checks and vendor refunds by selecting debit adjustment lines on the **Documents to Apply** tab, as shown in the following screenshot.



Branch	Document Type	Reference Nbr.	Line Nbr.	Inventory ID	Project	Project Task	Account	Amount Paid	Cash Discount Taken	With. Tax	Date	Due Date	Cash Discount Date
PRODWHOLE	Bill	003237	1		X		50000	1,600.00	0.00	0.00	7/10/2022	8/17/2022	8/17/2022
PRODWHOLE	Debit Adj.	003235	1	BACKUP	X		51000	45.00	0.00	0.00	7/20/2022		
PRODWHOLE	Debit Adj.	003235	2	ADMCHARGE	X		50000	675.00	0.00	0.00	7/20/2022		

Figure: Debit adjustment lines and a bill applied to a check

On the [Checks and Payments](#) form, if a user selects *Debit Adj.* in the **Type** box and a reference number of a debit adjustment with the **Pay by Line** check box selected, the system shows a warning message that such a document is paid by line and can be applied by creating a check and applying a bill and the debit adjustment lines to it.

### Changes to the Prepare Payments Form

On the [Prepare Payments](#) (AP503000) form, the table shows individual lines of open debit adjustments with the **Pay by Line** check box selected, which have the line balance more than 0.00, as shown in the following screenshot.

Prepare Payments

PROCESS PROCESS ALL

Branch: PRODWHOLE - Products Wholesale Vendor Class: Vendor: AAVENDOR - Goto Vendor In GL Balance: 98,628,833.82  
 Payment Mth: CHECK Vendor: AAVENDOR - Goto Vendor In Available Bal: 98,636,278.77  
 Cash Account: 10200 - Company Checking Account Project: Selection Total: 0.00  
 Payment Date: 7/21/2022 Pay Date Within: 7 Days Number of Ro.: 0  
 Post Period: 07-2022 Due Date Within: 7 Days  
 Currency: USD 1.00 Cash Discount Expires Within: 7 Days  
 Always Take Cash Discount

DOCUMENTS TO PAY EXCEPTIONS

Document Type	Reference Nbr.	Vendor ID	Line Nbr.	Vendor Name	Project	Project Task	Account	Inventory ID	Location	Pay Separately	Retainage Document	Original Document	Pay Date
Bill	003238	AAVENDOR	1	Goto Vendor Inc	X		50000		MAIN	<input type="checkbox"/>	<input type="checkbox"/>		8/20/2022
Bill	003238	AAVENDOR	2	Goto Vendor Inc	X		50000		MAIN	<input type="checkbox"/>	<input type="checkbox"/>		8/20/2022
Debit Adj.	003236	AAVENDOR	1	Goto Vendor Inc	X		21000	BACKUP	MAIN	<input type="checkbox"/>	<input checked="" type="checkbox"/>	003235	7/20/2022
Debit Adj.	003236	AAVENDOR	2	Goto Vendor Inc	X		21000	ADMCHARGE	MAIN	<input type="checkbox"/>	<input checked="" type="checkbox"/>	003235	7/20/2022

Figure: Debit adjustments paid by line on the Prepare Payments form

### Addition of Lines with Negative Amounts to AP Documents Paid by Line

On the [Bills and Adjustments](#) (AP301000) form, AP documents with the **Pay by Line** check box selected can have lines with the negative amount in the **Ext. Cost**, **Retainage Amount**, and **Amount** columns on the **Details** tab, as shown in the following screenshot.

Bills and Adjustments

Bill 003239 - Goto Vendor Inc

NOTES ACTIVITIES FILES CUSTOMIZATION TOOLS

REMOVE HOLD

Type: Bill Vendor: AAVENDOR - Goto Vendor Inc Detail Total: 5,328.00  
 Reference Nbr.: 003239 Location: MAIN - Primary Location Discount Total: 0.00  
 Status: On Hold Currency: USD 1.00 VAT Taxable Total: 0.00  
 Terms: 30D - 30 Days VAT Exempt Total: 0.00  
 Date: 7/21/2022 Due Date: 8/20/2022 Apply Retainage Tax Total: 0.00  
 Post Period: 07-2022 Cash Discount: 8/20/2022 Pay by Line With Tax: 0.00  
 Vendor Ref.: 001aav Balance: 5,328.00  
 Cash Discount: 0.00

DETAILS FINANCIAL TAXES APPROVALS DISCOUNTS RETAINAGE APPLICATIONS

Branch	Line	Inventory ID	Transaction Descr.	Quantity	UOM	Unit Cost	Ext. Cost	Discount Amount	Retainage Percent	Retainage Amount	Amount	Account	Description
PRODWHOLE	1			0.00		0.00	5,690.00	0.00	10.000000	569.00	5,121.00	50000	COGS - Inventory
PRODWHOLE	2			0.00		0.00	355.00	0.00	10.000000	35.50	319.50	50000	COGS - Inventory
PRODWHOLE	3			0.00		0.00	-125.00	0.00	10.000000	-12.50	-112.50	50000	COGS - Inventory

Figure: A line with a negative amount on the Bills and Adjustments form

Such documents can be released if their balance is greater than or equal to 0.00.

The system does not allow adding lines with negative amounts to documents with the **Pay by Line** and **Joint Payees** check box selected.



On reversal of an AP document with a negative amount in a line, a related document is created with the same signs of amounts in the document lines.

When releasing retainage for documents with retainage and paid by line, depending on the sign of the total retainage to release for each original document, the system will generate either a retainage bill if retainage to release is greater or equal to 0.00 or a retainage debit adjustment if retainage to release is less than 0.00.

### Processing of Cash Discounts for Lines with Negative Amounts

On the *Bills and Adjustments* (AP301000) form, for bills and debit adjustments that have lines with a negative amount, the cash discount amount will also be negative, as shown in the following screenshot.

Branch	Line Inventory Nbr. ID	Transaction Desc.	Quantity	UOM	Unit Cost	Ext. Cost	Discount Amount	Retainage Percent	Cash Discount Balance	Retainage Amount	Unreleased Retainage	Retained Tax	Amount	Balance
PRODWHOLE	1		0.00		0.00	5,690.00	0.00	10.000000	153.64	569.00	569.00	0.00	5,121.00	5,121.00
PRODWHOLE	2		0.00		0.00	355.00	0.00	10.000000	9.50	35.50	35.50	0.00	319.50	319.50
PRODWHOLE	3		0.00		0.00	-125.00	0.00	10.000000	-3.38	-12.50	-12.50	0.00	-112.50	-112.50

Figure: The cash discount of a line with a negative amount

For the document to be released, the total cash discount shown in the **Cash Discount** box in the Summary area must be greater than or equal to 0.00.

On the *Checks and Payments* (AP302000) form, the amount in the **Cash Discount Taken** column for a line with a negative amount can be less than or equal to 0.00, as shown in the following screenshot.

Branch	Document Type	Reference Nbr.	Line Inventory ID	Project	Project Task	Account	Amount Paid	Cash Discount Taken	With. Tax	Date	Due Date	Cash Discount Date	Cross Rate
PRODWHOLE	Bill	003239	1	X		50000	4,967.36	153.64	0.00	7/21/2022	8/20/2022	7/31/2022	1.00000000
PRODWHOLE	Bill	003239	2	X		50000	309.92	9.50	0.00	7/21/2022	8/20/2022	7/31/2022	1.00000000
PRODWHOLE	Bill	003239	3	X		50000	-109.12	-3.38	0.00	7/21/2022	8/20/2022	7/31/2022	1.00000000

Figure: Cash Discount Taken for a line with a negative amount

### Changes in Calculation of Amounts in Reports and Forms

Multiple reports have been updated to support debit adjustments with retainage and retainage debit adjustments. On the following reports and forms, amounts of debit adjustments, which have the negative sign, are considered in the calculation of amounts:

- *AP Open Documents by Vendor* (AP634000)

- [AP Open Documents by Project](#) (AP634100)
- [AP Retainage Register](#) (AP634500)
- [AP Aging](#) (AP631000) with the *Detailed with Retainage* format
- [AP Retained Balance](#) (AP635000)
- [Vendors](#) (AP303000), the **Retained Balance** box in the Summary area
- [Vendor Details](#) (AP402000)
- [Vendor Summary](#) (AP401000)

## Additional Information

For details on creating debit adjustments with retainage, see [To Enter a Debit Adjustment with Retainage](#).

For details on creating debit adjustments applied by line, see [To Enter a Debit Adjustment that Can Be Applied by Line](#).

# Finance: Approval of GL Transactions

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Some companies require an approval process for journal transactions in the general ledger. Starting in 2022 R2, Acumatica ERP makes it possible to release and post GL transactions only after they have been approved by an authorized employee. The system assigns the appropriate approver, which it determines based on an approval map defined by a company administrator, either unconditionally or if the transaction meets the specified conditions. These conditions depend on the properties of GL transactions, such as the amount or account. When multiple approvals are required, they can be configured to occur in parallel or in sequential steps (a multistep approval).

Only transactions entered directly from the general ledger on the [Journal Transactions](#) (GL301000) form are subject to approval. That is, approvals of GL transactions are not applied to transactions that have originated from accounts receivable, accounts payable, inventory, and other subledgers.

Administrators can configure rules describing who should approve transactions and under which conditions GL transaction approvals are needed. The rules can be specified for multiple types of batches of transactions. These types include batches created during consolidation, trial balance entry, allocation, and reclassification.

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

## Workflow for a Transaction Requiring Approval

In an approval process with one stage and a single approver, the approval workflow for each transaction subject to approval consists of the following steps:

1. The user who is entering GL transactions (the *requester*) creates a transaction on the [Journal Transactions](#) (GL301000) form, removes it from hold, and waits for transaction approval or rejection.
2. The approver receives an email notification about a transaction that needs approval.
3. The approver approves or rejects the transaction and specifies a comment, if comments are required.
4. If the transaction is approved, the requester completes the processing of the transaction.
5. Optional: If the transaction is rejected, the requester can delete the transaction or modify it according to the approver's comment, if one has been specified.
6. The requester resubmits the transaction for approval.
7. Optional: If an approved transaction has been modified, the requester submits it for approval again, and the approval process continues from Step 2.

## Changes to the Approval Maps Form

On the [Approval Maps](#) (EP205015) form, the new *Journal Transaction* option has been added to the **Entity Type** box, as shown in the following screenshot.

Approval Maps

Map: GL Transactions Entity Type: **Journal Transactions**

\* Name: GL Transactions

Steps

ADD STEP + >

Step

Rule

CONDITIONS RULE ACTIONS

\* Description: Rule

Active

Active	Brackets	* Entity	* Field Name	* Condition	Value	Value 2	Brackets	Operator
<input checked="" type="checkbox"/>	((	GL Batch	Debit Total	Is Greater Than	1,100.00		-	And
<input checked="" type="checkbox"/>	-	GL Batch	Currency	Equals	USD		)	Or
<input checked="" type="checkbox"/>	(	GL Batch	Debit Total	Is Greater Than	900.00		-	And
<input checked="" type="checkbox"/>	-	GL Batch	Currency	Equals	EUR		)	Or
<input checked="" type="checkbox"/>	(	GL Transaction	Account	Equals	12100		)	Or
<input checked="" type="checkbox"/>	(	GL Account	Account Class	Equals	EXPERTS		))	And

**Figure: The Journal Transactions option on the Approval Maps form**

With this entity type selected, the created approval map applies to documents that are processed on the [Journal Transactions](#) (GL301000) form.

If [Journal Transactions](#) is selected in the **Entity Type** box of the [Approval Maps](#) form, the **Conditions** tab lists the conditions that the GL transaction must meet to be assigned for approval. In the **Entity** column, the administrator specifies the entity (which in this case indicates the database table) whose field will be used for the condition in the row. The administrator can select one of the following options:

- *Approval*: The system will use a field of the approval request in this condition.
- *GL Account*: The system will use a field that represents one of the GL accounts involved in the transaction in this condition.
- *GL Batch*: The system will use a field of the Summary area of the [Journal Transactions](#) form in this condition.
- *GL Transaction*: The system will use a field of the lines of GL transactions as a condition.

On the **Rule Actions** tab of the lower right pane, the **Reason Settings** section has been added with the **Reason for Approval** and **Reason for Rejection** boxes, as shown in the following screenshot.



Approval Maps

NOTES ACTIVITIES FILES CUSTOMIZATION TOOLS

Map: GL Transactions Entity Type: Journal Transactions

\* Name: GL Transactions

Steps

ADD STEP + ↑ ↓ ×

Step

Rule

CONDITIONS RULE ACTIONS

APPROVAL SETTINGS

Approver: Employee

Employee: Bill Owen

Workgroup:

\* Decision Wait Time: 000 d 00 h 00 m

On Approval: Collect All Approvals from This Step

REASON SETTINGS

Reason for Approval: Is Not Prompted

Reason for Rejection: Is Required

**Figure: The Reason Settings section**

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

- *Is Optional*: The approver is prompted to enter a reason when approving or rejecting a GL transaction, but the reason is an optional setting.
- *Is Required*: The approver is prompted to enter a reason when approving or rejecting a GL transaction and the reason must be specified.
- *Is Not Prompted*: The approver is not prompted to enter a reason when approving or rejecting a GL transaction.

The approval maps created for GL transactions on the [Approval Maps](#) forms are also visible on the [Assignment and Approval Maps](#) (EP205500) form.

Administrators can create different approval maps with different conditions and different approvers. They can then specify the appropriate map for multiple types of GL transactions that are processed on the **Approvals** tab of the [General Ledger Preferences](#) (GL102000) form. For details, see the [Changes to the General Ledger Preferences Form](#) section below.

## Addition of New Email Template for Approvals

On the [Email Templates](#) (SM204003) form, formerly titled *Notification Templates*, a new email template—*Journal Transaction Approval*—has been added, as shown in the following screenshot.

Notification ID: Journal Transaction Approval

• Screen: GL.30.10.00 - Journal Transactions

• Description: Journal Transaction Approval

From: [Field]

To: ((Approval.OwnerID.Email))

CC: [Field]

BCC: [Field]

Subject: Journal Transaction ((BatchModule.BatchNbr)) is awaiting your approval

Link to Contact: [Field]

Link to Account: [Field]

Attach Activity

MESSAGE ATTACHED REPORTS SEND BY EVENTS

VISUAL Paragraph B I U A INSERT

Dear ((Approval.OwnerID.Title)) ((Approval.OwnerID.FirstName)) ((Approval.OwnerID.LastName))

This is an automatic email to notify you that you have a new journal transaction ((BatchModule.BatchNbr)) awaiting your approval.

Description: ((BatchModule.Description))  
 Branch: ((BatchModule.BranchID.BranchCD))  
 Ledger: ((BatchModule.LedgerID.LedgerCD))  
 Date: ((BatchModule.DateEntered))  
 Post Period: ((BatchModule.FinPeriodID))  
 Amount: ((BatchModule.CuryDebitTotal)) ((BatchModule.CuryID))

**Figure: The new email template**

An administrator can edit this predefined template and select it for any approval map listed on the **Approval** tab of the [General Ledger Preferences](#) (GL102000) form.

The administrator can create multiple templates and select a particular template for each transaction type listed on this tab. For details about the form, see the next section.

For a transaction that is subject to approval, the template specified for the transaction type is triggered automatically when the transaction's status changes from *On Hold* to *Pending Approval*.

## Changes to the General Ledger Preferences Form

On the [General Ledger Preferences](#) (GL102000) form, all the UI elements that were available on the form before 2022 R2, have been moved to the new **General** tab. The **Approval** tab has been added to the form, as shown in the following screenshot.

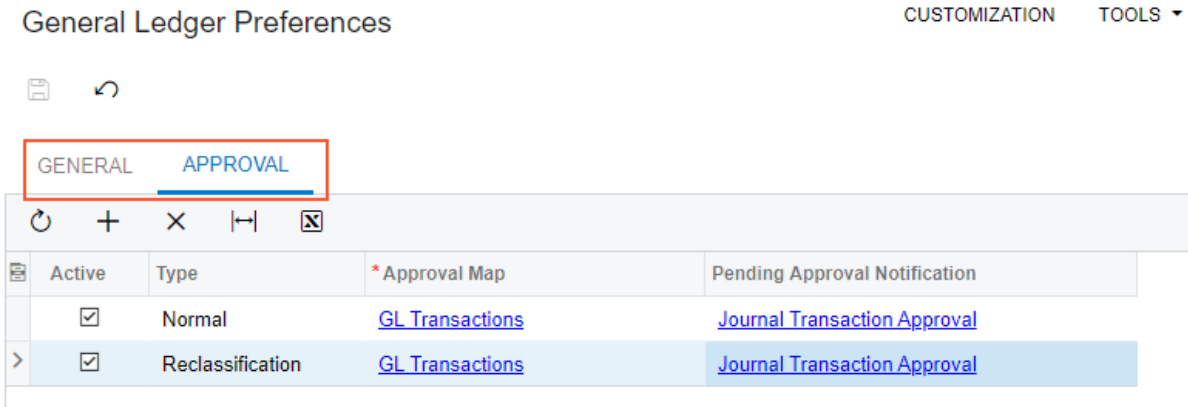



Figure: The new tabs on the General Ledger Preferences form

On the **Approval** tab, an administrator can add rows for different GL transaction types and select for each type an approval map with the *Journal Transactions* entity type that has been created on the [Approval Maps](#) (EP205015) form. Also, for each GL transaction type, the administrator can select an email template that has been created on the *Email Templates* (SM204003) form. A unique approval map and email template can be configured and specified for each type, or the same map and template can be used for multiple types.

The following table shows the GL transaction types that are available for selection in the **Type** column of the tab.

Type	Description	Scenarios After Which Approvals Can Be Applied
<i>Normal</i>	A GL transaction that has been manually created on the <a href="#">Journal Transactions</a> (GL301000) form or generated by the system on the <a href="#">Generate Recurring Transactions</a> (GL504000) form	<p>Any of the following activities:</p> <ul style="list-style-type: none"> <li>On the <a href="#">Journal Transactions</a> form, a GL transaction is created with the <i>On Hold</i> status and is removed from hold. The resulting status is <i>Pending Approval</i>.</li> <li>On the <a href="#">Journal Transactions</a> form, a GL transaction is created for which the <b>Auto Reversing</b> check box is selected and the status is <i>On Hold</i>; the transaction is then removed from hold.</li> </ul> <div style="border: 1px solid orange; padding: 5px; margin: 10px 0;"> <p> Approvals are not applied to automatically created reversing transactions for which the <b>Reversing Entry</b> check box is selected on the <a href="#">Journal Transactions</a> form, because they are always created with the <i>Unposted</i> or <i>Posted</i> status.</p> </div> <ul style="list-style-type: none"> <li>On the <a href="#">Generate Recurring Transactions</a> (GL504000), a GL transaction is created with the <i>On Hold</i> status and is removed from hold. The resulting status is <i>Pending Approval</i>.</li> </ul>
<i>Consolidation</i>	A GL transaction generated by the system when a user runs the process of importing data from consolidation units to the parent company on the <a href="#">Import Consolidation Data</a> (GL509000) form	On the <a href="#">Import Consolidation Data</a> (GL509000) form, a new GL transaction is generated with the <i>On Hold</i> status and is removed from hold. The resulting status is <i>Pending Approval</i> .

Type	Description	Scenarios After Which Approvals Can Be Applied
<i>Trial Balance</i>	A GL transaction generated by the system when a user releases a trial balance on the <i>Trial Balance</i> (GL303010) form	On the <i>Trial Balance</i> form, a new GL transaction is generated with the <i>On Hold</i> status and is removed from hold. The resulting status is <i>Pending Approval</i> .
<i>Reclassification</i>	A GL transaction generated by the system when a user reclassifies a GL transaction with the <i>Normal</i> type on the <i>Reclassify Transactions</i> (GL506000) form	<p>If on the <i>General Ledger Preferences</i> (GL102000) form, the <b>Automatically Release Reclassification Batches</b> check box is cleared and the <b>Hold Batches on Entry</b> check box is selected, a new reclassification transaction is generated on the <i>Reclassify Transactions</i> form. The system assigns the transaction the <i>On Hold</i> status but immediately removes the transaction from hold and changes its status to <i>Pending Approval</i>.</p> <div style="border: 1px solid orange; padding: 10px; margin-top: 10px;">  <p>If an approval map is active for <i>Reclassification</i> transactions and the <b>Automatically Release Reclassification Batches</b> check box is selected on the <i>General Ledger Preferences</i> form, the system displays an error message when a user tries to save the changes on the <i>Reclassify Transactions</i> form. The administrator can remove the approval map, deactivate it on the <b>Approval</b> tab, or clear the <b>Automatically Release Reclassification Batches</b> check box.</p> </div>
<i>Allocation</i>	A GL transaction generated by the system when a user runs the allocation process on the <i>Run Allocations</i> (GL504500) form	On the <i>Run Allocations</i> form, an allocation transaction is generated with the <i>On Hold</i> status and is immediately removed from hold. The resulting status is <i>Pending Approval</i> .

The **Approvals** tab is visible on the form if the *Approval Workflow* feature is enabled on the *Enable/Disable Features* (CS100000) form.

## Changes to the Journal Transactions Form

On the *Journal Transactions* (GL301000) form, the new **Details** tab has been added, which holds the table and table toolbar that were available on the form before 2022 R2. The following UI changes, which are shown in the screenshot below, have also been introduced:

- The **Approval** tab has been added (Item 1 in the screenshot). This tab provides a row with the details of each approval or rejection of the GL transaction selected on the form.
- On the form toolbar, the **Approve** button (Item 2) has been added. The equivalent **Approve** command has been added to the More menu (under **Approval**). By clicking this button or command, an approver can approve the transaction selected on the form.
- On the form toolbar, the **Reject** button (Item 3) has been added. The equivalent **Reject** command has been added to the More menu (under **Approval**). By clicking this button or command, an approver can reject the selected transaction.

The **Approve** and **Reject** buttons and commands are displayed on the form if the selected GL transaction has the *Pending Approval* status.

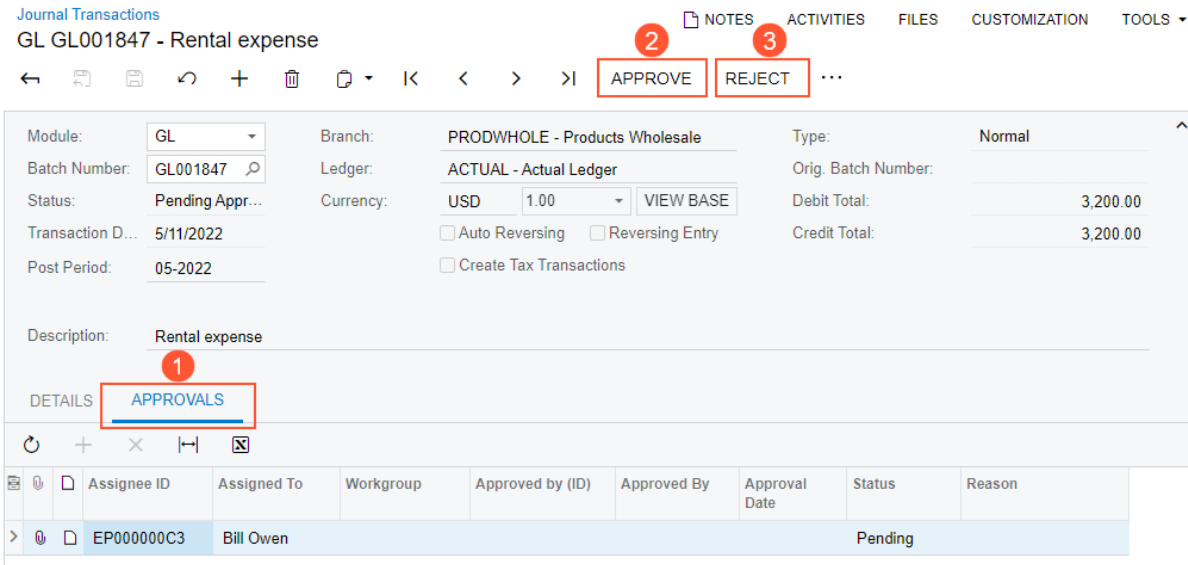


Figure: UI changes on the Journal Transactions form

The approver may need to specify a reason for approval or rejection if *Is Optional* or *Is Required* is selected in the **Reason for Approval** or **Reason for Rejection** box of the [Approval Maps](#) (EP205015) form. In this case, when an approver clicks **Approve** or **Reject**, the system displays the **Enter Reason** dialog box, as shown in the following screenshot.

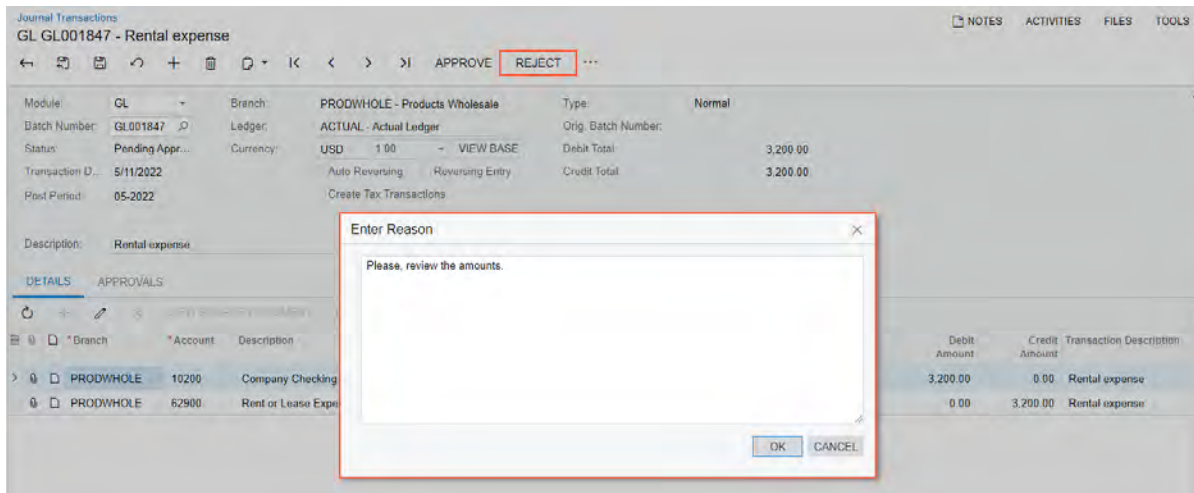



Figure: The Enter Reason dialog box

In this dialog box, the approver can or must (depending on the corresponding setting on the [Approval Maps](#) form) enter the reason for the approval or rejection of the GL transaction.



If on the [Approvals](#) (EP503010) form, the approver tries to approve or reject a transaction that requires a reason to be entered, the system displays an error message. The approver will have to approve or reject the transactions and enter a reason on the [Journal Transactions](#) form.

## Workflow Changes

When the *Approval Workflow* feature is enabled on the [Enable/Disable Features](#) (CS100000) form and at least one approval map with the *Journal Transactions* entity type is selected and active on the [General Ledger Preferences](#)

(GL102000) form, the system will use a new workflow of processing GL transactions that may require approvals. For the changed workflow, the following new statuses have been introduced for GL transactions.

Status	Description
<i>Pending Approval</i>	<p>This status is assigned to a GL transaction when a user clicks <b>Remove Hold</b> on the <a href="#">Journal Transactions</a> (GL301000) form if the transaction is subject to approval—that is, if it meets the conditions specified in an approval map.</p> <p>The approver must approve or reject the transaction on the <a href="#">Journal Transactions</a> or <a href="#">Approvals</a> (EP503010) form. If the transaction is approved, its status is changed to <i>Balanced</i> and it can be processed further.</p>
<i>Rejected</i>	<p>This status is assigned to a GL transaction when an approver clicks <b>Reject</b> on the <a href="#">Journal Transactions</a> or the <a href="#">Approvals</a> form.</p> <p>If a transaction is rejected, a user can assign it the <i>On Hold</i> status by clicking <b>Hold</b>, adjust it, and then resubmit it for approval. Alternatively, the user can delete the transaction.</p>

## Changes to the Manage Financial Periods Form

Transactions with the *Pending Approval* status prevent the system from closing a selected period, and transactions with the *Rejected* status do not prevent the system from closing periods. On the [Manage Financial Periods](#) (GL503000) form, if a user clicks **Unposted Documents** on the form toolbar, the system opens the [Unposted GL Documents](#) (GL656100) report in a separate tab and displays GL transactions with the *Pending Approval* status. GL transactions with the *Rejected* status are not shown on the report.

## Other UI Changes

The following reports and inquiries now display transactions with the *Pending Approval* and *Rejected* statuses:

- [Account Details](#) (GL404000) when the **Include Unreleased** check box is selected on that form
- [GL Edit Summary](#) (GL611500)
- [GL Edit Detailed](#) (GL610500)
- [GL Edit Account Distribution](#) (GL611000)

## Additional Information

For details about settings up approvals of GL transactions and processing GL transactions with approvals, see [Processing Transactions with Approvals](#).

# Finance: Approval of GL Transactions in the Mobile App

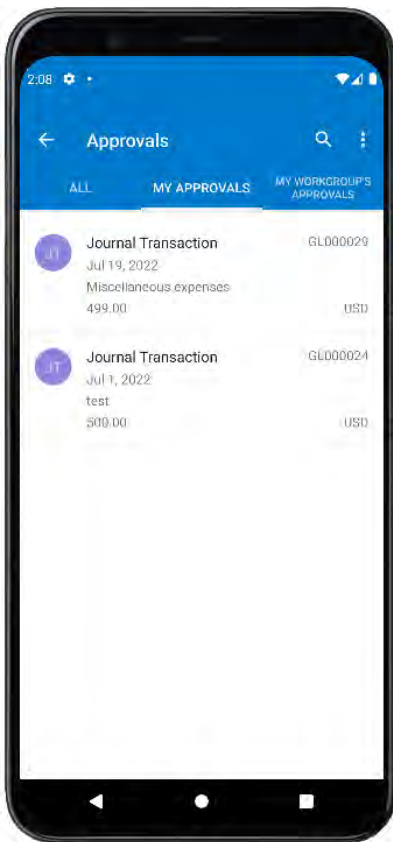
The Acumatica mobile app connected to an instance of Acumatica ERP 2022 R2 now supports approvals of GL transactions. For more details on GL transaction approvals, see [Finance: Approval of GL Transactions](#).

In the Acumatica mobile app, a user with appropriate access rights can do the following:

- Review a list of GL transactions with the *Pending Approval* status
- Approve or reject a transaction on the *Approvals* screen
- Use the *Journal Transactions* screen to review a transaction submitted for approval
- Approve or reject a transaction on the *Journal Transactions* screen

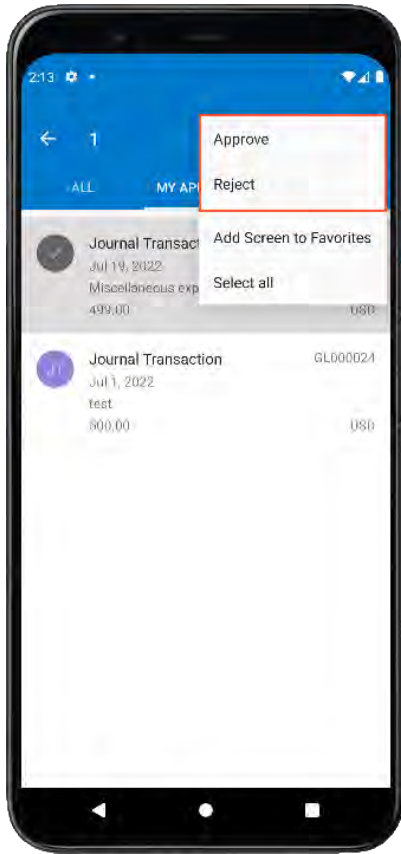
## Changes to the Approvals Screen

GL transactions with the *Pending Approval* status are displayed on the *Approvals* screen, as shown in the following screenshot.



**Figure:** GL transactions on the Approvals screen

The user should tap the record in the list and tap the More button on the screen toolbar to open the toolbar menu, where the user can either approve or reject the transaction, as shown in the following screenshot.

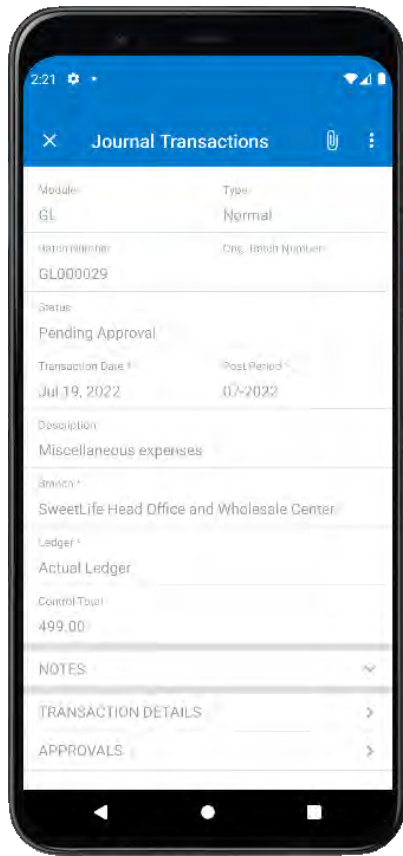


*Figure: The toolbar menu on the Approvals screen*

## The Journal Transactions Screen

If the user selects a GL transaction on the *Approvals* screen by tapping the transaction header, the mobile app opens the GL transaction on the *Journal Transactions* screen, where the user can review the details of the transaction, as shown in the following screenshot. This screen is the mobile version of the [Journal Transactions](#) (GL301000) form.





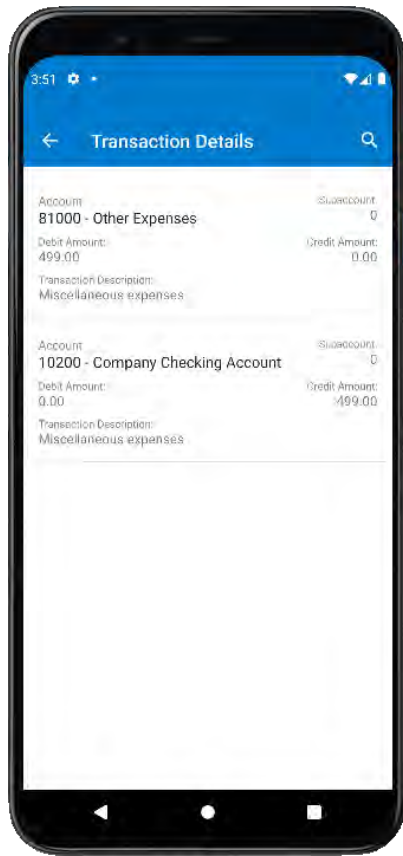
**Figure:** The *Journal Transactions* screen



The *Journal Transactions* screen is not available in the mobile site map, and users cannot create GL transactions from the Acumatica mobile app.

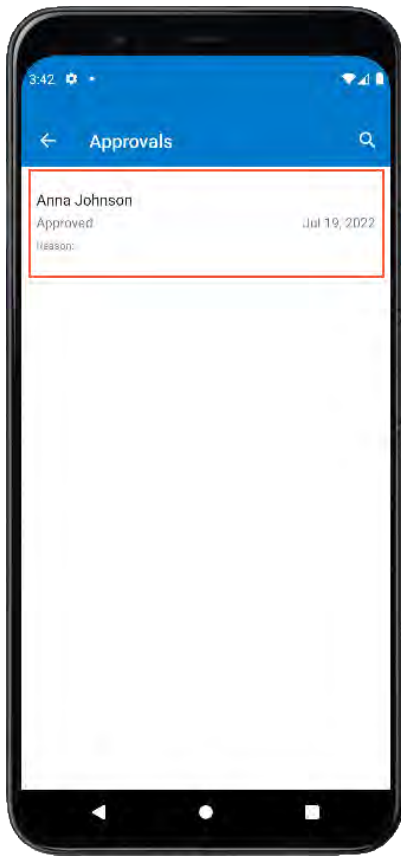
On the *Journal Transactions* screen, the user can tap **Batch Summary**, **Notes**, **Transaction Details**, and **Approvals** to view more information related to the transaction.

The user taps **Transaction Details** to view the list of entries in the selected batch of transactions, including the account, subaccount, debit and credit amounts, and transaction description, as shown in the following screenshot.



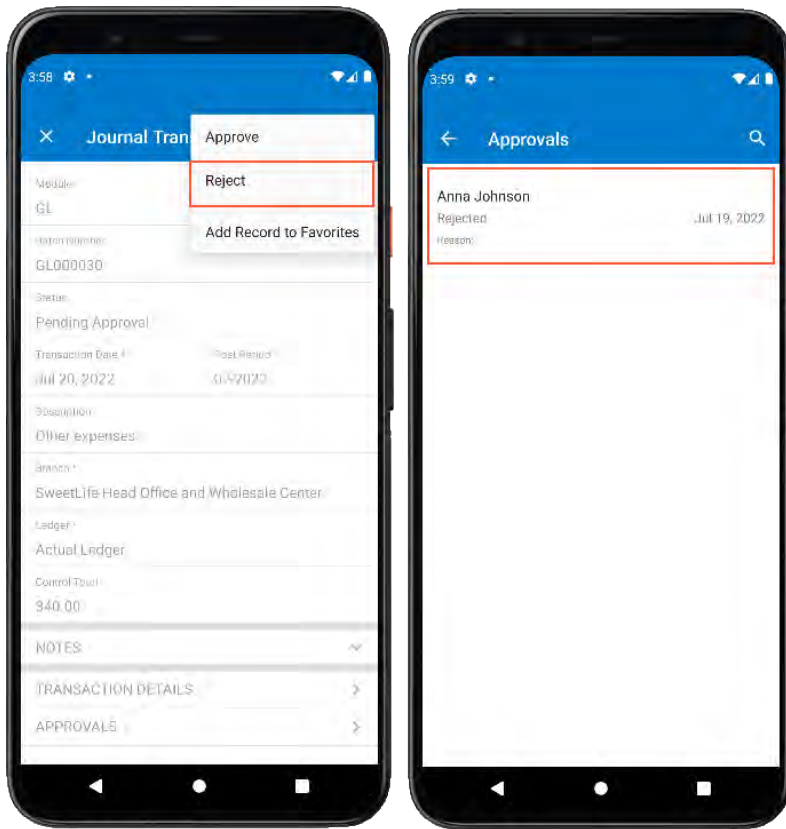
*Figure: Transaction Details on the Journal Transactions screen*

To approve a GL transaction, the user should tap **Approve** on the More menu. The transaction status is changed to *Approved*, as shown in the following screenshot.



*Figure: The approved transaction on the Journal Transactions screen*

To reject a GL transaction, the user should tap **Reject** on the More menu, as shown in the first screenshot below. The transaction status is changed to *Rejected*, as shown in the second screenshot.



**Figure:** A rejected transaction on the Journal Transactions screen

# Finance: Automatic Assignment of the Tax Zone to Sales Orders and Invoices

---

In previous versions of Acumatica ERP, when a sales document (a sales order or an SO invoice) was created, the tax zone for the document was copied from customer location settings on the [Customer Locations](#) (AR303020) form. If no tax zone was specified for the customer location, the system searched for a tax zone for which the needed postal code was specified on the **Zip Codes** tab of the [Tax Zones](#) (TX206000) form.

On this tab, it was not possible to specify a range of postal codes for which a tax zone was applicable. A tax zone could not be defined to apply to a country, country and state, or country and postal code.

To address this issue, in Acumatica ERP 2022 R2, the following enhancements have been introduced:

- On the [Tax Zones](#) form, tax zones can be defined more flexibly based on combinations of country, state, and postal code, and ranges of postal codes can be specified. The system supports three types of tax zones:
  - Tax zones based on one country or multiple countries. With this type of tax zone, a user can include entire countries in the tax zone.
  - Tax zones based on one state or multiple states. A user can assign any combination of states of the same country to this tax zone. With this type, the tax zone consists of the entire state or states.
  - Tax zones based on one postal code or multiple postal codes. Multiple ranges of postal codes within the same country can be assigned to this tax zone.

- On data entry forms where the tax zone corresponding to the shipping address was copied from the **Zip Codes** tab on the [Tax Zones](#) form, the logic of the system's search for a tax zone has been modified. If a customer has an empty tax zone, the system searches for a tax zone that matches the range of postal codes specified on the [Tax Zones](#) form. If no tax zone is found, the system continues searching for a tax zone that matches the state of the shipping address. If no tax zone is found, the system searches for a tax zone that matches the country of the shipping address.

This behavior has been implemented on the following forms: [Invoices and Memos](#) (AR301000), [Sales Orders](#) (SO301000), [Invoices](#) (SO303000), [Opportunities](#) (CR304000), [Project Quotes](#) (PM304500), [Sales Quotes](#) (CR304500), [Service Orders](#) (FS300100), and [Appointments](#) (FS300200).

- The system now considers the combination of the country, state, and postal code in the shipping address while searching for a matching tax code.

## Changes to the Tax Zones Form

On the [Tax Zones](#) (TX206000) form, the **Zip Codes** tab has been replaced with the **Ship-To Address** tab, which is shown in the following screenshot.

Tax Zones

CANADAAB - Canada - Alberta

NOTES ACTIVITIES FILES CUSTOMIZATION TOOLS

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\* Tax Zone ID: CANADAAB

Description: Canada - Alberta

Default Tax Category: TAXABLE - Taxable Goods and Service

External Tax Provider

APPLICABLE TAXES: SHIP-TO ADDRESSES

Tax Zone Is Based On: States

Country: CA - Canada

🔄 + × |←| 🗑️ ↕

* State	Name
AB	Alberta
> BC	British Columbia

Figure: The Ship-to-Addresses tab on the Tax Zones form

In the **Tax Zone Is Based On** box on this tab, a user can select one of the following options:

- **Countries** (default): The tax zone is based on any number of countries. If the user selects this option, the **Country** box on this tab becomes unavailable. To add each country in the tax zone, the user clicks **Add Row** on the table toolbar and selects the country from the list in the **Country** column.
- **States**: The tax zone is based on any number of states of a specific country. If the user selects this option, the **Country** box on this tab becomes available. The user selects a country in the **Country** box and then adds each state in the tax zone by clicking **Add Row** on the table toolbar and selecting the state in the list in the **State** column.
- **Postal Codes**: The tax zone is based on any number of ranges of postal codes within a specific country. If this option is selected, the **Country** box on this tab is available. The user selects a country in the **Country** box and then adds each range of postal codes in the tax zone by clicking **Add Row** on the table toolbar and entering the needed values in the **From Postal Code** and **To Postal Code** columns.

## Upgrade Notes

After an upgrade to Acumatica ERP 2022 R2, on the [Tax Zones](#) (TX206000) form, for each tax zone, the settings on the deprecated **Zip Codes** tab will be converted to settings on the **Ship-To Addresses** tab as follows:

- The **Tax Zone Is Based On** box will be filled in with the *Postal Codes* option. The **Country** box will be left empty.
- Each row in the table on the deprecated **Zip Codes** tab will be converted into one row on the **Ship-To Addresses** tab. The rows will be converted according to the following rules:
  - If *1* was specified in the **Zip Code+4 (Min)** column and *9999* was specified in the **Zip Code+4 (Max)** column, the **From Postal Code** and **To Postal Code** columns will be filled in with the one that had been specified in the **Zip Code** column for the row.  
If settings other than *1* and *9999* were specified in the **Zip Code+4 (Min)** and **Zip Code+4 (Max)** columns, respectively, the **From Postal Code** column will be filled in with the postal code followed by a hyphen and then the value in the **Zip Code+4 (Min)** column. The **To Postal Code** column will be filled in with the postal code followed by a hyphen and then the value in the **Zip Code+4 (Max)** column.
  - The values in the **Zip Code+4 (Min)** and **Zip Code+4 (Max)** columns, when concatenated with a postal code added after a postal code and a hyphen, will be formatted to four digits with leading zeroes.

The following table shows an example of how the settings on the deprecated **Zip Codes** tab are converted to the **Ship-To Addresses** tab.

Zip Codes Tab			Ship-To Addresses Tab	
Zip Code	Zip Code+4 (Min)	Zip Code+4 (Max)	From Postal Code	To Postal Code
12345	1	9999	12345	12345
12345	67	890	12345-0067	12345-0890
A1A 1A1	1	9999	A1A 1A1	A1A 1A1

# Finance: Changes in 1099 Boxes

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The naming of 1099 boxes on Acumatica ERP forms has been changed from numeric format to alphanumeric format. Acumatica ERP 2022 R2 includes these changes, which were initially introduced in Acumatica ERP 2021 R2.

Instead of having names such as *Box 1*, 1099 boxes now have a code and a description on multiple data entry forms and in lookup tables, as described in the following sections. The alphanumeric code of each 1099 box begins with *MISC* or *NEC*, which indicates whether amounts for this 1099 box are included in the 1099-MISC or 1099-NEC form. The number after *MISC* or *NEC* indicates the box of the form where the amount is included. For example, for the *MISC02* 1099 box, the amount is included in Box 2 of the 1099-MISC form. If the amount can be included in both the 1099-MISC form and the 1099-NEC form, both forms and their respective boxes are mentioned in the name (as with the *MISC07/NEC02* 1099 box). The descriptions of 1099 boxes have been changed so that the names of the boxes in Acumatica ERP match the names of the same boxes on the Internal Revenue Service (IRS) website.

## Changes to the Accounts Payable Preferences Form

On the **1099 Settings** tab of the [Accounts Payable Preferences](#) (AP101000) form, the **Box** column has been renamed to **1099 Box**, as shown in the screenshot below. This column now shows the codes of 1099 boxes.

The descriptions of 1099 boxes, which are shown in the **Description** column, have been updated based on their descriptions on the IRS website.



## Accounts Payable Preferences

NOTES FILES CUSTOMIZATION TOOLS ▾

GENERAL PRICING APPROVAL **1099 SETTINGS** MAILING & PRINTING

Report Direct Sales On:

* 1099 Box	Description	Minimum Report Amount	Account
> MISC01	Rents	600.0000	<a href="#">62900</a>
MISC02	Royalties	10.0000	<a href="#">51400</a>
MISC03	Other Income	0.0000	
MISC04/NEC04	Federal Income Tax Withheld	0.0000	
MISC05	Fishing Boat Proceeds	0.0000	
MISC06	Medical and Health Care Payments	0.0000	
MISC07/NEC02	Direct Sales	5,000.0000	
MISC08	Substitute Payments in Lieu of Dividends or Interest	0.0000	
MISC09	Crop Insurance Proceeds	0.0000	
MISC10	Gross Proceeds Paid to an Attorney	0.0000	
MISC11	Fish Purchased for Resale	600.0000	
MISC12	Section 409A Deferrals	0.0000	
MISC13	Excess Golden Parachute Payments	0.0000	
MISC14	Nonqualified Deferred Compensation	0.0000	
MISC15	State Tax Withheld	0.0000	
MISC17	State Income	0.0000	
NEC01	Nonemployee Compensation	600.0000	<a href="#">51250</a>

Figure: UI changes on the Accounts Payable Preferences form

## Changes to the Bills and Adjustments and Quick Checks Forms

On the **Details** tab of the [Bills and Adjustments](#) (AP301000) and [Quick Checks](#) (AP304000) forms, if a user clicks the lookup button in the **1099 Box** column, the lookup table shows the 1099 box codes and descriptions, as shown in the following screenshot.

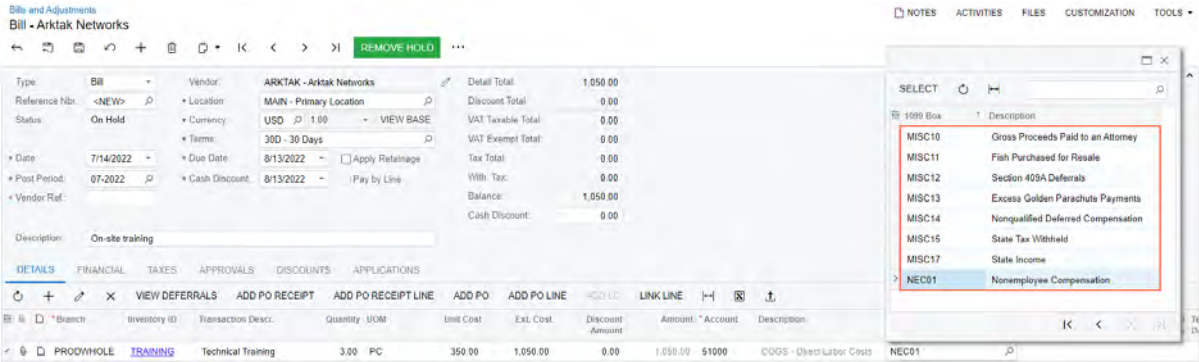


Figure: The lookup box on the Bills and Adjustments form

### Changes to the 1099 Vendor History Form

On the [1099 Vendor History](#) (AP405000) form, the **Box** column has been renamed to **1099 Box**, as shown in the following screenshot. The column displays the codes of 1099 boxes.

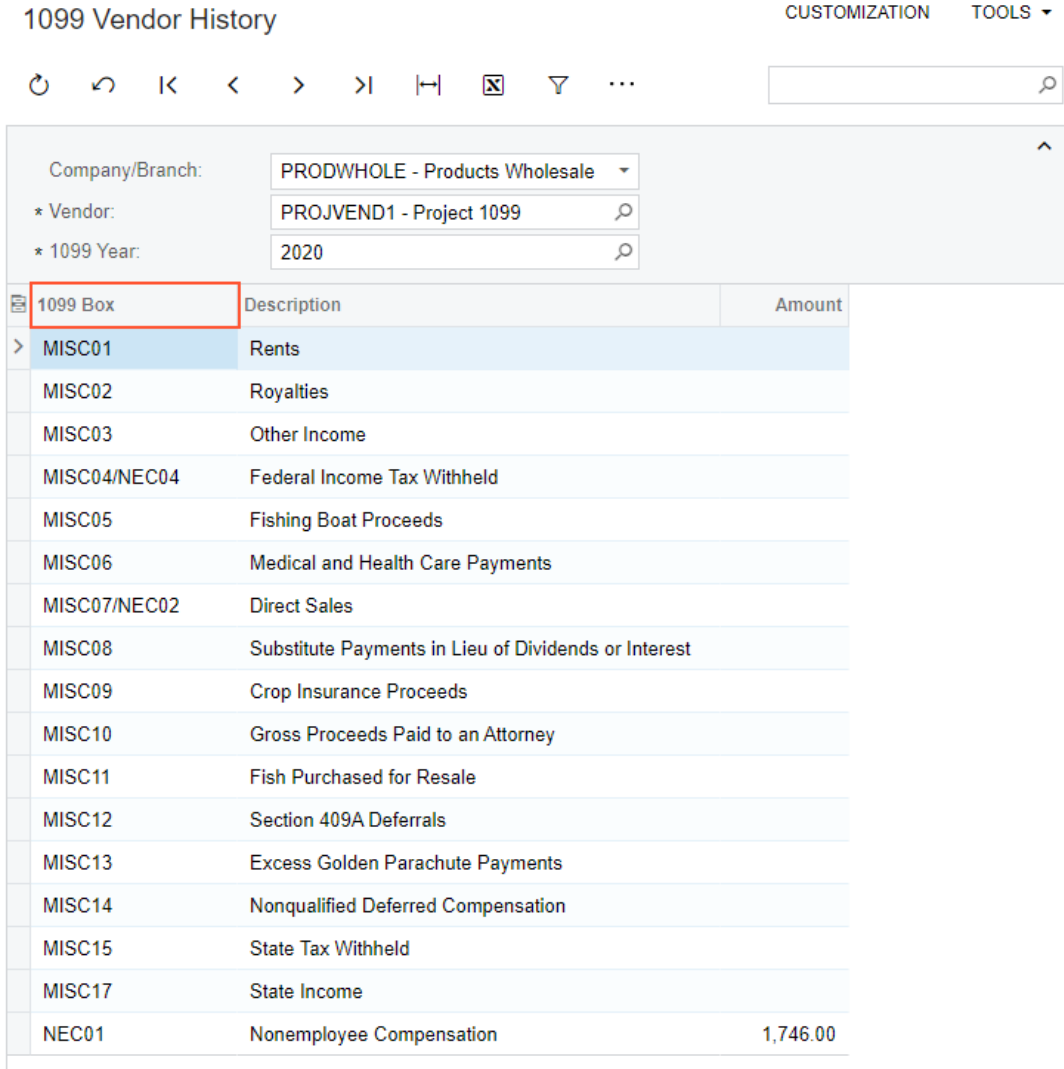


Figure: UI changes on 1099 Vendor History form

## Changes to the Close 1099 Year Form

On the [Close 1099 Year](#) (AP507000) form, the **Box** column has been renamed to **1099 Box**, as shown in the following screenshot. The column displays the codes of 1099 boxes.

Close 1099 Year CUSTOMIZATION TOOLS ▾

* Company:	PRODUCTS - Revision Two F
* 1099 Year:	2020
Status:	Open

1099 Box	Description	Amount
> MISC01	Rents	
MISC02	Royalties	
MISC03	Other Income	
MISC04/NEC04	Federal Income Tax Withheld	
MISC05	Fishing Boat Proceeds	
MISC06	Medical and Health Care Payments	
MISC07/NEC02	Direct Sales	
MISC08	Substitute Payments in Lieu of Dividends or Interest	
MISC09	Crop Insurance Proceeds	
MISC10	Gross Proceeds Paid to an Attorney	
MISC11	Fish Purchased for Resale	
MISC12	Section 409A Deferrals	
MISC13	Excess Golden Parachute Payments	
MISC14	Nonqualified Deferred Compensation	
MISC15	State Tax Withheld	
MISC17	State Income	
NEC01	Nonemployee Compensation	3,346.00

*Figure: UI changes on the Close 1099 Year form*

## Changes to the Create E-File Form

On the [Create E-File](#) (AP507500) form, the following UI changes have been introduced:

- The **NEC (Box 7)** box has been renamed to **Include** (Item 1 in the following screenshot)
- The *Only Box 7* option in the list has been renamed to *Only Nonemployee Compensation* and the *Except Box 7* option has been renamed to *Except Nonemployee Compensation* (Item 2).

Create E-File CUSTOMIZATION TOOLS ▾

PROCESS

---

Transmitter: PRODWHOLE - Products ...  Prior Year

\* 1099 Year: 2019  Correction File

File Format: MISC  Last Filing

Prepare For: Transmitter Only  Direct Sales Only

Include: All Boxes  Test File

VIEW 1099 VENDOR All Records

<input type="checkbox"/>	Vendor	Vendor Name	Amount	Tax Registration ID	Payer
<input checked="" type="checkbox"/>	TEMP1099	Rapid Staffing Services	9,000.00		PRODWHOLE

Figure: UI changes on the Create E-File form

### Changes to the 1099 Reports

On the [1099-MISC Form](#) (AP653000) report, the **NEC (Box 7)** box has been renamed to **Include**. The *Only Box 7* option in the list has been renamed to *Only Nonemployee Compensation* and the *Except Box 7* option has been renamed to *Except Nonemployee Compensation*.

The layout of the [1099 Year Details](#) (AP654500) report has been changed, and the new layout is shown in the following screenshot. The 1099 box and description are now shown for every 1099 vendor.

1099 Year Details Page: 1 of 1

Company/Branch: PRODWHOLE 1099 Year: 2020 Date: 7/14/2022 5:22 AM

User: admin admin

Vendor	Type	Ref. Nbr.	Date	Invoice Ref. Nbr.	Payment Date	Pay Ref.	Branch	Orig. Amount	Amount to Report
<b>PROJVEND1 - Project 1099</b>									
<b>NEC01 - Nonemployee Compensation</b>									
	Bill	002190	3/5/2020	PROJ032020	4/30/2020	1540	PRODWHOLE	970.00	970.00
	Bill	002263	5/1/2020	PROJ20	6/30/2020	1582	PRODWHOLE	776.00	776.00
								<b>Box NEC01 Total:</b>	<b>1,746.00</b>
								<b>Vendor Total:</b>	<b>1,746.00</b>
<b>TEMP1099 - Rapid Staffing Services</b>									
<b>NEC01 - Nonemployee Compensation</b>									
	Bill	002294	6/16/2020	2323	7/31/2020	1606	PRODWHOLE	1,600.00	1,600.00
								<b>Box NEC01 Total:</b>	<b>1,600.00</b>
								<b>Vendor Total:</b>	<b>1,600.00</b>
								<b>Company Total:</b>	<b>3,346.00</b>

Figure: The updated layout of the 1099 Year Details report

# Finance: Dunning Level by Customer Class

In Acumatica ERP 2022 R2, if dunning levels have been defined on the [Accounts Receivable Preferences](#) (AR101000) form, these dunning levels can also be specified for specific customer classes. For example, different dunning processes can be required for business-to-business (B2B) customers and business-to-consumer (B2C) customers, for key customers and regular customers, and for customers located in different countries.

## Changes to the Customer Classes Form

On the [Customer Classes](#) (AR201000) form, the **Dunning** tab has been added, as shown in the following screenshot. The tab contains a table specifying the dunning levels for customers of this customer class. These dunning levels are used when preparing and releasing dunning letters.

Customer Classes  
KEY - Key Customers

NOTES ACTIVITIES FILES CUSTOMIZATION TOOLS

← ↻ ↺ + 🗑️ 📄 ▾ INCLUDE CUSTOMERS IN RESTRICTION GROUP

\* Class ID: KEY  
Description: Key Customers

GENERAL GLACCOUNTS **DUNNING** ATTRIBUTES MAILING & PRINTING SERVICE BILLING

	Dunning Letter Level	Days Past Due	Days to Settle	*Description	Dunning Fee
>	1	30	3	30 Days	0.00
	2	60	3	60 Days	0.00
	3	90	3	90 Days Past Due	0.00
	4	120	3	120 Days Past Due	0.00

**Figure:** The Dunning tab on the Customer Classes form

This tab appears on the form if the *Dunning Letter Management* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

When a user creates a new customer class on the [Customer Classes](#) form, the list of dunning levels are copied to the **Dunning** tab from the [Accounts Receivable Preferences](#) (AR101000) form.

The user can delete unneeded levels, change the settings of existing levels, and add new levels not defined on the [Accounts Receivable Preferences](#) form. Dunning levels specified for a customer class on the [Customer Classes](#) form and on the [Accounts Receivable Preferences](#) form can be changed at any time.

The dunning levels specified on the [Accounts Receivable Preferences](#) form are used for creation of new customer classes. If the dunning settings on the [Accounts Receivable Preferences](#) form are changed, the dunning level settings defined for existing customer classes are not updated. To change the dunning levels for existing customers, the user should update the dunning levels of the appropriate customer class on the [Customer Classes](#) form.

## Changes to the Prepare Dunning Letters Form

On the [Prepare Dunning Letters](#) (AR521000) form, the process of preparing dunning letters uses the dunning level settings defined for the customer class that a user selects on the form.

If no customer class is selected (Item 1 in the following screenshot) and the **Dunning Letter Level** option button is selected, the setting in the **To** box (Item 2) is used as the maximum dunning level in all customer classes when the dunning letters are prepared. The following screenshot illustrates the these settings.

Prepare Dunning Letters CUSTOMIZATION TOOLS ▾

---

Customer Class:  1

Dunning Letter Date: 5/12/2022

Add Coming-Due Invoices  Add Open Payments and Credit Memos

Include:  All Overdue Documents  Dunning Letter Level

From:

To:  2

<input type="checkbox"/>	Customer Class	Customer	Customer Name	Earliest Due Date	Branch	Overdue Balance	Number of Overdue Documents	Customer Balance	Number of Documents	Dunning Letter Level	Last Dunning Letter Date
> <input type="checkbox"/>	INTLEU	CARIBBEAN	Caribbean Secretary Online	3/2/2022	PRODWHOLE	43,971.98	2	43,971.98	2	1	
<input type="checkbox"/>	INTLCA	VANCOUVER	Vancouver Supplies	3/30/2022	PRODWHOLE	7,840.00	1	7,840.00	1	1	
<input type="checkbox"/>	INTL	WATERPROC	CHENGDU RONGYI WATER PROCESSING	3/2/2022	PRODWHOLE	43,550.00	2	43,550.00	2	1	

**Figure: The Prepare Dunning Letters form without a customer class selected**

If a customer class is selected, the setting in the **To** box is used as the maximum dunning level in the selected customer class when the dunning letters are prepared.

If the *Parent-Child Customer Relationship* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, in the table, a single row for a parent and its child customers is shown with the customer class of the parent customer and the balances and number of documents totaled from the documents of all these customers. When the system processes the documents of these customers, to populate the table and create dunning letters, the system uses the dunning levels configured for the customer class of the parent customer. Thus, the dunning levels configured for the child customers will be ignored. When one of these dunning letters is released, the system applies the dunning fee from the customer class of the parent customer.

### Upgrade Notes

During an upgrade to Acumatica ERP 2022 R2, the system will copy the dunning levels from the **Dunning** tab of the [Accounts Receivable Preferences](#) (AR101000) form to the **Dunning** tab on the [Customer Classes](#) (AR201000) form for each customer class.

# Finance: Enhancements in GL Error Detection

The *GL Anomaly Detection* feature was implemented in Acumatica ERP 2022 R1 and was based on the system's analysis of abnormal amounts posted to a particular account, subaccount, branch, module, vendor, or customer. The system analyzed historical data for the previous 6 months and based its detection on this analysis. This approach was based on reclassified transactions, but it had multiple usage restrictions, and some companies do not use reclassification in their processes.

In Acumatica ERP 2022 R2, this approach was replaced with one based on multiple anomaly types. Now each transaction has four scores calculated based on different anomaly types, such as the following:

- Account
- Branch, account, and subaccount
- Account and inventory ID
- Account and customer or account and vendor

A new machine learning model has been introduced that analyzes transactions by four groups of key transaction parameters. Now the system analyzes historical data for the previous 18 months and assigns an anomaly score to each group of parameters. The highest score is displayed on the [Review Anomaly Predictions](#) (GL406000) form.



The feature switch for *GL Anomaly Detection* has been moved to the **Experimental Features** section on the [Enable/Disable Features](#) (CS100000) form.

## Changes to the Account Details Form

On the [Account Details](#) (GL404000) form, the following UI elements have been removed because they were related to the previous implementation of the GL anomaly detection functionality:

- The **Show Predictions**, **Hide Predictions**, and **Mark as Correct** toolbar buttons
- The **Anomaly Score**, % column that was in the table
- The sorting and the red color from the table lines

The updated [Account Details](#) form is shown in the following screenshot.

Account Details

RECLASSIFY RECLASSIFY ALL

Company/Branch: PRODWHOLE - Products

Ledger: ACTUAL - Actual Ledger

From Date: 9/1/2021 To Date: 2/28/2022

From Period: 09-2021 To Period: 02-2022

Account: 20100 - Inventory Purchase A

Subaccount:

Beginning Balance: 3,500.00

Turnover: 0.00

Ending Balance: 3,500.00

Module	Batch Number	Trans. Date	Period ID	Description	Ref. Number	Branch	Account	Subaccount	Orig. Balance	Debit Amount	Credit Amount	Ending Balance	Reclass. Batch Number
IN	00006943	9/1/2021	09-2021	Letter Paper Ream Standard	001635	PRODWHOLE	20100	CON-000	3,500.00	0.00	3,600.00	-100.00	
IN	00006943	9/1/2021	09-2021	Pens - Box of 100	001635	PRODWHOLE	20100	CON-000	-100.00	0.00	2,000.00	-2,100.00	GL001758
IN	00006943	9/1/2021	09-2021	Pencils - Box of 100	001635	PRODWHOLE	20100	CON-000	-2,100.00	0.00	3,000.00	-5,100.00	GL001757
GL	GL001757	9/1/2021	09-2021	Pencils - Box of 100	001635	PRODWHOLE	20100	CON-000	-5,100.00	3,000.00	0.00	-2,100.00	
GL	GL001757	9/1/2021	09-2021	Pencils - Box of 100	001635	PRODWHOLE	20100	000-000	-2,100.00	0.00	3,000.00	-5,100.00	
GL	GL001758	9/1/2021	09-2021	Pens - Box of 100	001635	PRODWHOLE	20100	CON-000	-5,100.00	2,000.00	0.00	-3,100.00	
GL	GL001758	9/1/2021	09-2021	Pens - Box of 100	001635	PRODWHOLE	20100	ELE-000	-3,100.00	0.00	2,000.00	-5,100.00	
IN	00006947	9/1/2021	09-2021	Lenovo laptop computer	001639	PRODWHOLE	20100	ELE-000	-5,100.00	0.00	53,185.00	-58,285.00	
IN	00006948	9/1/2021	09-2021	Lobster Portable Tennis Ball Machine	001640	PRODWHOLE	20100	CON-000	-58,285.00	0.00	13,982.50	-72,267.50	
IN	00006948	9/1/2021	09-2021	Stamina In-Motion Elliptical Trainer	001640	PRODWHOLE	20100	CON-000	-72,267.50	0.00	1,657.50	-73,825.00	
IN	00006948	9/1/2021	09-2021	Skywalker trampoline - 15ft round	001640	PRODWHOLE	20100	CON-000	-73,825.00	0.00	207,270.00	-281,095.00	
IN	00006948	9/1/2021	09-2021	Bowflex Adjustable Dumbbells	001640	PRODWHOLE	20100	CON-000	-281,095.00	0.00	146,510.00	-427,605.00	
IN	00006950	9/1/2021	09-2021	Eddy Insulated Bottle - 5L	001642	PRODWHOLE	20100	CON-000	-427,605.00	0.00	35,340.00	-462,945.00	

Figure: The Account Details form



## The Review Anomaly Predictions Form

The [Review Anomaly Predictions](#) (GL406000) form has been added to the **Finance** workspace under the **Inquiries** category. The form is not listed on the quick menu of the workspace. To view the listed form, the user should click **Show All** at the bottom of the workspace.

The [Review Anomaly Predictions](#) form appears in the system if the *GL Anomaly Detection* feature is enabled on the [Enable/Disable Features](#) (CS100000) form. The form is visible to only users to which any of the following roles have been assigned on the [User Roles](#) (SM201005) form: *Administrator*, *GL Admin*, *GL Clerk*, or *AcumaticaSupport*.

The form shows all released GL transactions for the selected account and the defined parameters. The lines that have high scores are highlighted on the form, so that a user can prepare corrective actions for them. The following screenshot illustrates the [Review Anomaly Predictions](#) form with an account and a period selected.

The screenshot shows the 'Review Anomaly Predictions' form interface. At the top, there are navigation buttons: RECLASSIFY, MARK AS VALID, and MARK FOR REVIEW. Below these are filters for Company/Branch (PRODWHOLE - Products), Ledger (ACTUAL - Actual Ledger), Period (10-2021), and Account (40000 - Sales Revenue). There are also input fields for Highlight Score Over (50.00) and Highlight Amount Over (0.00). The main table displays a list of transactions with the following columns: Status, Anomaly Score, % (Anomaly Score, %), Transaction Date, Transaction Description, Ref. Number, Subaccount, Debit Amount, Credit Amount, Branch, Reclass. Batch Number, Project Trans. ID, Batch Number, Customer/Vendor, and Inventory ID. The table contains 12 rows of data, with the first three rows highlighted in red, indicating high anomaly scores.

Status	Anomaly Score, %	Transaction Date	Transaction Description	Ref. Number	Subaccount	Debit Amount	Credit Amount	Branch	Reclass. Batch Number	Project Trans. ID	Batch Number	Customer/Vendor	Inventory ID
Pending Review	99.21	10/31/2021	Custom bar pieces	AR010282	000-000	0.00	160,000.00	PRODWHOLE			AR010215	ABARTENDE	SPECIALORD
Pending Review	92.55	10/1/2021	Acer Laptop Computer	AR010226	000-000	0.00	45,000.00	PRODWHOLE			AR010161	JEVTCOMPUT	AACOMPUT01
Pending Review	69.24	10/1/2021	Acer Laptop Computer	AR010231	000-000	0.00	35,000.00	PRODWHOLE			AR010164	BEAUTYSCH	AACOMPUT01
Pending Review	25.10	10/12/2021	Skywalker trampoline - 15	AR010267	CON-000	0.00	75,637.10	PRODWHOLE			AR010191	SNOSHORT	CONTRAMPL
Pending Review	24.55	10/11/2021	Acer Laptop Computer	AR010239	000-000	0.00	15,000.00	PRODWHOLE			AR010163	WESTWOOD	AACOMPUT01
Pending Review	23.35	10/1/2021	Setup: Software license, b...	AR010202	000-000	0.00	10,000.00	PRODWHOLE			AR010154	ETELLIGENT	SOFTLIC01
Pending Review	23.35	10/1/2021	Acer Laptop Computer	AR010229	000-000	0.00	10,000.00	PRODWHOLE			AR010162	PRECISION	AACOMPUT01
Pending Review	23.03	10/1/2021	Setup: Software license, a...	AR010202	000-000	0.00	-4,000.00	PRODWHOLE			AR010154	ETELLIGENT	SOFTLIC02
Pending Review	22.84	10/1/2021	Software SaaS, base prod.	00001514	000-000	0.00	416.67	PRODWHOLE			GL001765	ACTIVESTAF	SOFTSAAS1
Pending Review	22.84	10/1/2021	Software SaaS, base prod.	00001516	000-000	0.00	416.67	PRODWHOLE			GL001765	NSSGLOGCON	SOFTSAAS1
Pending Review	22.84	10/1/2021	Setup: Software SaaS, ba...	00001522	000-000	0.00	416.67	PRODWHOLE			GL001765	CJEEQUIP	SOFTSAAS1

**Figure: The Review Anomaly Predictions form**

The form toolbar contains the following buttons:

- **Reclassify:** Navigates to the [Reclassify Transactions](#) (GL506000) form, where the user can reclassify the selected transaction. When the reclassification batch is released, the status of the transaction in the **Status** column is changed to *Reclassified*. After reclassification, the value in the **Anomaly Score, %** column is not changed.
- **Mark as Valid:** Marks the selected transaction as correct and sets the transaction status to *Valid*. Only a transaction that has an anomaly score that is greater than 0 can be marked as valid. After the transaction has been marked as valid, the value in the **Anomaly Score, %** column is not changed.
- **Mark for Review:** Marks the selected transaction as needing to be reviewed by the user and sets its status to *Pending Review*. Only a transaction that has the *Valid* status can be marked for review.

The Selection area of the form provides settings that the user can specify to narrow the range of transactions that should be displayed in the table.

The table on the form displays transactions for the selected account and financial period. Transactions are sorted first by their status and then by their anomaly score in descending order.

The **Status** column of the table displays the current status of each transaction in the table. The following table lists the possible statuses and their descriptions.



Status	Description
<i>Not Processed</i>	The transaction has not been sent for initial training to the machine learning model and has an empty anomaly score in the <b>Anomaly Score, %</b> column.
<i>Pending Review</i>	The transaction has received its score from the model and should be reviewed by the user.
<i>Reclassified</i>	The transaction has been reclassified.
<i>Valid</i>	The transaction has been marked as valid by the user.
<i>No Data</i>	The transaction does not have a score specified by the model, because the model returned the <i>Failed</i> or <i>LackData</i> status of the database.

The **Anomaly Score, %** column displays the maximum transaction score among the anomaly types returned by the model. If the user clicks the link in the **Anomaly Score, %** column (Item 1), the system opens the **Anomaly Scores** dialog box (Item 2), as shown in the following screenshot.

The screenshot shows the 'Review Anomaly Predictions' window. On the left, there are filters for Company/Branch (PRODWHOLE - Products), Ledger (ACTUAL - Actual Ledger), Period (10-2021), and Account (40000 - Sales Rev). The main table lists transactions with columns for Status, Anomaly Score, % (with a red box around the column header and a red circle around a value of 25.10), and a 'Pending Review' status. A dialog box titled 'Anomaly Scores' is open, showing a table with the following data:

Score	Description	Anomaly Type	Reason
17.77190	The score indicates the probability of an unusually large amount for a transaction with a specific type of anomaly.	Account	Predicted
69.04156	The score indicates the probability of an unusually large amount for a transaction with a specific type of anomaly.	Account, Branch, Subaccount	Predicted
19.34689	The score indicates the probability of an unusually large amount for a transaction with a specific type of anomaly.	Account, Inventory ID	Predicted
16.02978	The score indicates the probability of an unusually large amount for a transaction with a specific type of anomaly.	Account, Customer/Vendor	Predicted

**Figure: The Anomaly Scores dialog box**

In the **Anomaly Scores** dialog box, the following columns are displayed:

- **Score:** The score for a specific anomaly type.
- **Description:** A message that explains the calculated score.
- **Anomaly Type:** The UI name of the anomaly type from the **Anomaly Score, %** column.
- **Reason:** The value returned by the model, which can be one of the following: *Predicted*, *Lack of Data*, or *Failed*.

## Additional Information

For more details on GL anomaly detection, see [GL Anomaly Detection: General Information](#).

For details on setting up a schedule for GL anomaly detection, see [GL Anomaly Detection: Scheduled Mode](#).

# Finance: Exclusion of Payments and Voided Payments from Open Item Statements

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In previous versions of Acumatica ERP, when a customer statement was generated, the document balances were calculated based on the document applications on the statement date. If a document with an open balance, such as a payment, was voided, it was still shown on the customer statement, even if the customer's statement type was *Open Item*.

Starting in Acumatica ERP 2022 R2, the logic of generating customer statements with the *Open Item* type has been modified so that the documents closed before or on the statement date are not included in the customer statement.

If a customer has *Open Item* selected in the **Statement Type** box on the **Billing** tab of the *Customers* (AR303000) form, when a statement is generated, the system performs an additional verification for all documents included in the statement: payments, voided payments, customer refunds, and voided customer refunds. If a document is closed on a date earlier than or the same as the statement date, this document is not included in the statement.

The system performs this verification on the following forms:

- *Prepare Statements* (AR503000)
- *Print Statements* (AR503500) when a user selects *Regenerate Statement* in the **Actions** box of this form
- *Customers* when a user clicks **Generate on Demand** and then **Regenerate Last Statement** on the More menu (under **Statements**)

# Finance: Inclusion of All Documents with Open Balances in Dunning Letters

In previous versions of Acumatica ERP, dunning letters included only invoices and debit memos with open balances. Other documents with open balances, such as credit memos and payments, were not included in dunning letters. Consequently, dunning letters did not accurately reflect customers' balances for a specific date.

Starting in Acumatica ERP 2022 R2, users can also include the following documents, in addition to overdue and open invoices and debit memos, in dunning letters:

- Open credit memos
- Open payments, prepayments, and customer refunds

## Changes to the Accounts Receivable Preferences Form

On the **Dunning** tab of the [Accounts Receivable Preferences](#) (AR101000) form, the following UI changes have been introduced:

- The **Dunning Letter Settings** section has been added (Item 1 in the screenshot below).
- The **Include Other Unpaid Documents** check box has been renamed to **Add Coming-Due Invoices** (Item 2) and moved from the **Dunning Process Settings** section to the **Dunning Letter Settings** section. This check box is selected by default.
- The **Add Open Payments and Credit Memos** check box (Item 3) has been added to the **Dunning Letter Settings** section. This check box is cleared by default.

Accounts Receivable Preferences

NOTES FILES CUSTOMIZATION TOOLS

GENERAL PRICING APPROVAL **DUNNING** MAILING & PRINTING

**DUNNING PROCESS SETTINGS**

Dunning Process: By Customer

Automatically Release Dunning Letters

**DUNNING FEE SETTINGS**

Dunning Fee Item:

Terms:

Automatically Release Dunning Fee Documents

**DUNNING LETTER SETTINGS**

Add Coming-Due Invoices

Add Open Payments and Credit Memos

Dunning Letter Level	Days Past Due	Days to Settle	Description	Dunning Fee
1	30	3	30 Days	0.00
2	60	3	60 Days	0.00
3	90	3	90 Days Past Due	0.00
4	120	3	120 Days Past Due	0.00

Figure: UI changes on the Accounts Receivable Preferences form

## Changes to the Prepare Dunning Letters Form

On the [Prepare Dunning Letters](#) (AR521000) form, the following UI changes have been made to the Selection area:

- The **Include Other Unpaid Documents** check box has been renamed to **Add Coming-Due Invoices** (Item 1 on the screenshot below). By default, the state of this check box is the same as the state of the **Add Coming-Due Invoices** check box on the [Accounts Receivable Preferences](#) (AR101000) form.
- The **Add Open Payments and Credit Memos** check box (Item 2) has been added. By default, the state of this check box is the same as the state of the **Add Open Payments and Credit Memos** check box on the [Accounts Receivable Preferences](#) form.

- The **Include** section has been removed and replaced by the **Include** label (Item 3). The section had appeared on the form if on the [Accounts Receivable Preferences](#) form, *By Document* was selected in the **Dunning Process** box (**Dunning** tab). The option buttons from the **Include** section are now right of the **Include** label, but the **From** and **To** boxes have been moved out of the **Include** section.

Prepare Dunning Letters CUSTOMIZATION TOOLS ▾

PROCESS PROCESS ALL

Customer Class: INTLEU 3 Include:  All Overdue Documents

Dunning Letter Date: 5/12/2022 1  Add Coming-Due Invoices 2  Add Open Payments and Credit Memos

From: 1 To: 4

Customer Class	Customer	Customer Name	Earliest Due Date	Branch	Overdue Balance	Number of Overdue Documents	Customer Balance	Number of Documents	Dunning Letter Level	Last Dunning Letter Date
INTLEU	CARIBBEAN	Caribbean Secretary Online	3/2/2022	PRODWHOLE	43,971.98	2	43,971.98	2	1	
INTLEU	FDIQVIK	Qvik Process GmbH	3/3/2022	PRODWHOLE	172,310.81	3	172,310.81	3	1	

Figure: UI changes on the Prepare Dunning Letters form

Depending on the states of the **Add Coming-Due Invoices** and **Add Open Payments and Credit Memos** check boxes, the following documents can be included in the generated dunning letters.

Add Coming-Due Invoices	Add Open Payments and Credit Memos	System Behavior
Cleared	Cleared	Overdue invoices and debit memos are included in the dunning letter. (This system behavior existed before 2022 R2 and has not changed.)
Selected	Cleared	Open invoices and debit memos are included in the dunning letter. (This system behavior existed before 2022 R2 and has not changed.)
Cleared	Selected	Overdue invoices, overdue debit memos, open credit memos, and open payments are included in the dunning letter. (This system behavior is new to 2022 R2.)
Selected	Selected	Open invoices, open debit memos, open credit memos, and open payments are included in the dunning letter. (This system behavior is new to 2022 R2.)

### Inclusion of Additional Documents on the Dunning Letters Form

If the **Add Open Payments and Credit Memos** check box has been selected on the [Prepare Dunning Letters](#) (AR521000) form, when a user clicks a row and clicks **View Dunning Letter** on the table toolbar of the [Print/Release Dunning Letters](#) (AR522000) form, the system includes all documents with open balances in the dunning letter that opens on the [Dunning Letter](#) (AR306000) form.

On the [Print/Release Dunning Letters](#) form, the amount in the **Overdue Balance** column in the table is calculated without the amounts of credit memos, payments, prepayments, and customer refunds.

### Changes to the Dunning Letter Report

When a user runs the [Dunning Letter](#) (AR661000) report, the amounts of documents are shown with the plus sign (+) to increase the customer's balance and with the minus sign (-) to decrease the customer's balance.

The following table lists the types of documents that can be included in the dunning letter and notes the amount sign of each.

Document Type	Amount Sign
<i>Invoice</i>	+
<i>Debit Memo</i>	+
<i>Overdue Charge</i>	+
<i>Credit Memo</i>	-
<i>Payment</i>	-
<i>Prepayment</i>	-
<i>Customer Refund</i>	+

The layout of the *Dunning Letter* report has been changed as follows:

- The **Invoice Number** column has been replaced with two columns—**Doc. Type** and **Ref. Number**.
- The **Falling Due** column has been renamed to **Due Date**.
- For invoices, debit memos, and overdue charges, the **Due Date** column shows *Current* if the document is not overdue. For credit memos, payments, prepayments, and customer refunds, the **Due Date** column is empty.
- The amounts in the **Original Amount**, **Outstanding**, and **Outstanding <base currency>** columns are shown with a sign that depends on the document type.
- The **Total Due** amount is calculated based on the signs of the amounts.
- If *By Document* is selected in the **Dunning Process** box on the **Dunning** tab of the *Accounts Receivable Preferences* (AR101000) form, all documents are split into groups with same **Dunning Letter Level**. Within each group, documents are sorted by their **Doc. Date** and **Ref. Number**.



Because credit memos, payments, prepayments, and customer refunds have the **Dunning Letter Level** of 0, all these documents are shown in the last listed group along with invoices that are not yet due.

- If *By Customer* is selected in the **Dunning Process** box on the **Dunning** tab of the *Accounts Receivable Preferences* form, all documents are shown in the same group. Within this single group, documents are sorted by their **Doc. Date** and **Ref. Number**. Credit memos, payments, prepayments, and customer refunds are shown within this group.

The following screenshot illustrates the *Dunning Letter* report if the *By Document* option is selected on the *Accounts Receivable Preferences* form.



## DUNNING LETTER

Date: May 12 2022

Products Wholesale  
 11235 SE 6th St.  
 Suite 140  
 Bellevue, WA, 98004  
 Phone: 206-555-1212  
 Web: www.revisiontwo.com

**ADDRESS:**

Star America Toys  
 6780 58th Ave  
 Vero Beach FL 32967  
 United States of America

Dear Customer,

The following invoices had not been paid by 5/12/2022. Would you please settle these accounts by 5/15/2022? Our accounts reflect payments received until 5/12/2022. If you made the payment after this date please ignore this letter.

TOYSTAR						Reminder Nbr.:	1	
NO.	Doc. Type	Ref.Number	Date	Due Date	Currency	Original Amount	Outstanding	Outstanding USD
1	INVOICE	<a href="#">AR010353</a>	11/11/2021	12/11/2021	USD	141,905.40	141,905.40	141,905.40
2	INVOICE	<a href="#">AR010460</a>	12/15/2021	1/14/2022	USD	232,163.40	232,163.40	232,163.40
3	INVOICE	<a href="#">AR010466</a>	12/19/2021	1/18/2022	USD	114,131.60	114,131.60	114,131.60
4	INVOICE	<a href="#">AR010560</a>	1/9/2022	2/8/2022	USD	228,343.20	228,343.20	228,343.20
5	INVOICE	<a href="#">AR010616</a>	1/28/2022	2/27/2022	USD	118,999.20	118,999.20	118,999.20
6	OVERDUE CHARGES	<a href="#">AR010723</a>	2/28/2022	2/28/2022	USD	14,407.06	14,407.06	14,407.06
7	INVOICE	<a href="#">AR010670</a>	2/6/2022	3/8/2022	USD	115,199.40	115,199.40	115,199.40
						Reminder Nbr.:	0	
NO.	Doc. Type	Ref.Number	Date	Due Date	Currency	Original Amount	Outstanding	Outstanding USD
8	CREDIT MEMO	<a href="#">AR010726</a>	3/8/2022		USD	-3,659.00	-3,659.00	-3,659.00
							<b>Total Due (USD):</b>	<b>961,490.26</b>
							<b>Overdue Amount (USD):</b>	<b>965,149.26</b>

Figure: The updated layout of the Dunning Letter report

### Upgrade Notes

After an upgrade to Acumatica ERP 2022 R2, the system will apply the following changes on the **Dunning** tab of the **Accounts Receivable Preferences** (AR101000) form:

- The **Add Coming-Due Invoices** check box will inherit its state from the **Include Other Unpaid Documents** check box of the previous version.
- The new **Add Open Payments and Credit Memos** check box will be cleared.

Customized dunning letter reports will still work, but if on the [Accounts Receivable Preferences](#) form, the **Add Open Payments and Credit Memos** check box is selected, the system administrator should review how credit memos and payments are shown in these reports. If they are not shown in an acceptable way, we recommend that standard reports be used instead of customized ones, or that the company create a new customized report.

# Finance: Improved Processing of Batch Payments

In previous versions of Acumatica ERP, after the release of a batch of Automated Clearing House (ACH) payments, the batch could be exported to a file that would be sent to a bank. As a result, if the bank rejected one payment in the batch, a user had to void all payments in the batch, create new payments again, and create a new batch of payments that excludes the rejected payment. Starting in Acumatica ERP 2022 R2, the following improvements have been made to ease the processing of ACH payment batches:

- A batch can be exported before release.
- An exported batch can be corrected so that incorrect payments can be excluded from the batch.
- Vendors' payment details can be changed, and a batch can be reexported.
- A batch payment can be canceled, and all released payments in the batch can be voided at once.
- A released batch payment can be voided, which causes all the payments in the batch to be voided at once.
- Payments can be added to an existing batch.

The following sections provide more information about these improvements and the related changes that have been made to forms.

## Changes to the Payment Methods Form

On the **Settings for Use in AP** tab of the *Payment Methods* (CA204000) form, the **Release Batch Payments Before Export** check box has been added, as shown in the following screenshot.

The screenshot shows the 'Payment Methods' form for 'FEDWIRE - Fedwire'. The 'Settings for Use in AP' tab is active. Under 'EXPORT SETTINGS', the 'Release Batch Payment Before Export' checkbox is highlighted with a red box. Below this, a table lists 'Payment Method Details'.

ID	Description	Required	Sort Order	Entry Mask	Validation Reg. Exp.
1	Beneficiary Account No:	☑			^d{1,17}\$
2	Beneficiary Name:	☑			^([w] s){0,22}\$
3	Bank Routing Number (ABA):	☑		000000000	^d{9,9}\$
4	Bank Name:	☑			^([w] s){0,22}\$

**Figure: The Release Batch Payments Before Export check box**

If this check box is cleared, batches can be exported before they are released. In this case, if a bank rejects a payment or if there is an error in the payment details, a user can roll back the batch status to *Balanced* and edit the batch by excluding the payment or updating the details. The batch can then be exported again.

If this check box is selected, batches can be exported after they are released. (This was the system behavior in Acumatica ERP versions prior to 2022 R2.)



## Changes to the Batch Payments List of Records

On the *Batch Payments (AP3050PL)* list of records, the following UI changes have been introduced:

- The **New Record** button (see Item 1 in the following screenshot) has been added to the form toolbar. By clicking this button, a user can create a new batch and add payments with the *Pending Print* status to this batch.
- The **Status** column (Item 2) has been added to the table.

Batch Payments CUSTOMIZATION ▾ TOOLS ▾

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Drag column header here to configure filter

Reference Nbr.	Status	Batch Date	Description	Document Ref.	Batch Total	Currency	Cash Account	Payment Method	File Export Time	Created On
000101	Exported	6/17/2022			17,871.90	USD	10200	FEDWIRE		6/17/2022
000100	Balanced	6/20/2022	Batch payment		13,184.00	USD	10200	FEDWIRE		6/17/2022
000098	Released	2/1/2022			583,440.00	USD	10200	FEDWIRE	2/3/2022	2/3/2022
000096	Released	1/15/2022			162,474.00	USD	10200	FEDWIRE	1/15/2022	1/15/2022
000093	Released	11/11/2021			279,030.00	USD	10200	FEDWIRE	11/2/2021	11/2/2021
000091	Released	10/11/2021			76,150.00	USD	10200	FEDWIRE		10/3/2021
000087	Released	7/3/2021			78,803.40	USD	10200	FEDWIRE	7/3/2021	7/3/2021
000085	Released	6/1/2021			669,360.00	USD	10200	FEDWIRE	6/1/2021	6/1/2021

1-8 of 51 records 1 of 7 pages

**Figure: UI changes on the Batch Payments (AP3050PL) form**

On the *Batch Payments (AP305000)* form, the UI changes shown in the screenshot below have been introduced:

- The **Add Payments** button (see Item 1 in the following screenshot) has been added to the table toolbar.
- When the user clicks **Add Payments**, the system opens the **Add Payments** dialog box (Item 2), where the user can select the payments that should be added to the batch.

Batch Payments  
10200 Company Checking Account NOTES FILES CUSTOMIZATION TOOLS ▾

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Reference Nbr: <NEW> Cash Account: 10200 - Company Checking P Batch Total: 0.00  
 Status: On Hold Payment Method: FEDWIRE Batch Seq. Number:  
 Batch Date: 6/17/2022 Bank: File Export Time:  
 Document Ref.:

ADD PAYMENTS

Add Payments

Next Check Number: 002060

Type	Reference Nbr.	Payment Ref.	Payment Date	Currency	Payment Amount	Cash Account	Description	Payment Method
<input checked="" type="checkbox"/>	002060		6/20/2022	USD	6,300.00	10200	Company...	FEDWIRE
<input checked="" type="checkbox"/>	002061		6/20/2022	USD	694.00	10200	Company...	FEDWIRE
<input checked="" type="checkbox"/>	002062		6/20/2022	USD	5,990.00	10200	Company...	FEDWIRE

ADD & CLOSE CANCEL

**Figure: UI changes on the Batch Payments (AP305000) form**

If a batch is created on the *Batch Payments* form, the **Cash Account** and **Payment Method** settings of the Summary area are required. The values in these two boxes are used as selection criteria when the system loads payments in the **Add Payments** dialog box.

In the **Add Payments** dialog box, when the user specifies a value in the **Next Check Number** box, selects payments, and clicks **Add & Close**, the selected payments are added to the batch. For each payment, the status is changed to *Printed*, and the **Batch Payment Nbr.** is set to the **Reference Nbr** of the payment.

On the More menu of the *Batch Payments* form, the **Corrections** category has been added, as shown in the screenshot below. The category includes the following commands:

- **Correct:** Changes the batch's status from *Exported* to *Balanced*, so that the user can add payments to or remove payments from the batch. This command is available if the status of the batch is *Exported*.
- **Cancel:** Removes all unreleased payments or voids released payments at once from the batch and assigns the *Canceled* status to the batch. This command is available if the status of the batch is *Exported*.
- **Void:** Voids the released payments in a released batch and the batch itself. The status of the batch is changed to *Voided*. This command is available if the status of the batch is *Released*.

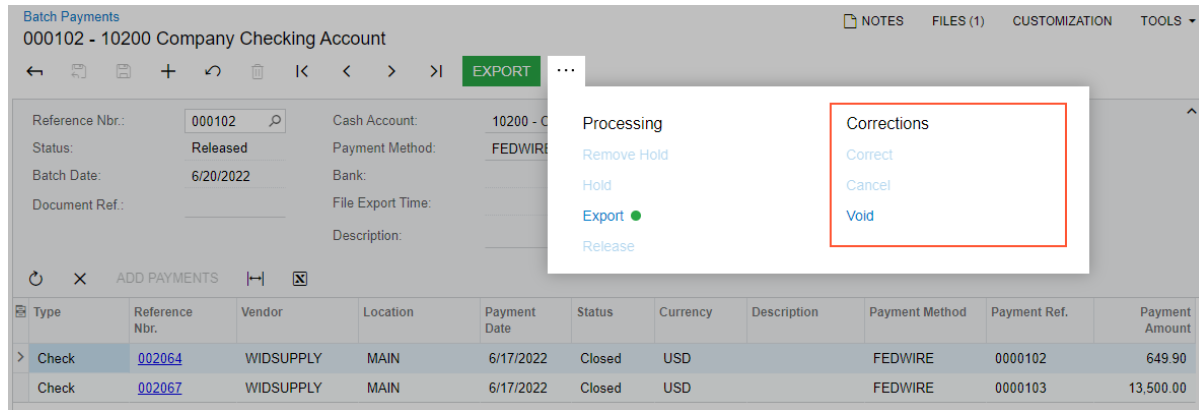


Figure: The More menu of the Batch Payments form

### Changes to the Workflow of Batch Payment Processing

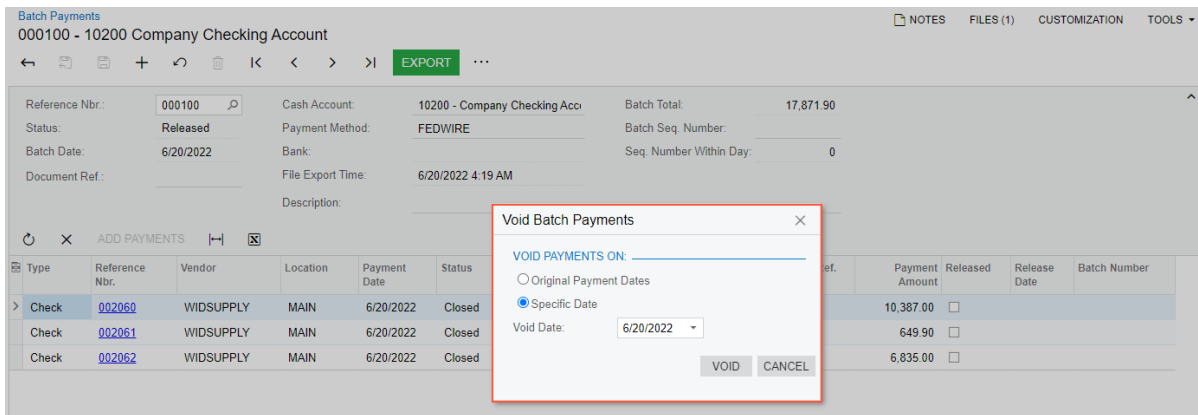
The workflow of processing batch payments has been changed. The following table shows the statuses that can be assigned to a batch and the commands available for each status on the More menu of the *Batch Payments* (AP305000) form (some of which are also buttons on the form toolbar).

Status	Description	Available Commands/Buttons
<i>Balanced</i>	<p>The batch has been created and can be exported if the <b>Release Batch Payments Before Export</b> check box is cleared on the <i>Payment Methods</i> (CA204000) form for the payment method or released if the <b>Release Batch Payments Before Export</b> check box is selected. This status is also assigned to a batch that was unsuccessfully exported.</p> <p>This status is assigned to a new batch if the <b>Hold Documents on Entry</b> check box is cleared on the <i>Accounts Payable Preferences</i> (AP101000) form.</p> <p>Users can add payments to a batch of this status or delete payments from the batch if the payments are not released.</p>	<ul style="list-style-type: none"> <li>• <b>Hold</b></li> <li>• <b>Release</b> (if the <b>Release Batch Payments Before Export</b> check box is selected on the <i>Payment Methods</i> (CA204000) form)</li> <li>• <b>Export</b> if the <b>Release Batch Payments before Export</b> check box is cleared on the <i>Payment Methods</i> form</li> <li>• <b>Cancel</b></li> </ul>

Status	Description	Available Commands/Buttons
<i>On Hold</i>	The batch has been created and can be edited. This status is assigned to a new batch if the <b>Hold Documents on Entry</b> check box is selected on the <a href="#">Accounts Payable Preferences</a> form.  Users can add payments to a batch with this status or delete payments from the batch if the payments are not released.	<b>Remove Hold</b>
<i>Released</i>	All the payments in the batch have been released.	<ul style="list-style-type: none"> <li>• <b>Void</b></li> <li>• <b>Export</b> if the <b>Release Batch Payments before Export</b> check box is selected on the <a href="#">Payment Methods</a> form</li> </ul>
<i>Exported</i>	The batch has been exported to a file and is locked for editing. The unreleased payments in the batch remain unreleased.	<ul style="list-style-type: none"> <li>• <b>Correct</b></li> <li>• <b>Cancel</b></li> <li>• <b>Release</b> if the <b>Release Batch Payments before Export</b> check box is cleared on the <a href="#">Payment Methods</a> form</li> </ul>
<i>Canceled</i>	All unreleased or voided released payments have been removed from the batch.	N/A
<i>Voided</i>	All payments included in the batch have been voided and the GL transactions generated for the payments have been voided.	N/A

### Voiding of Batch Payments

If a user voids a batch by clicking **Void** on the More menu of the [Batch Payments](#) (AP305000) form, the system displays the **Void Batch Payments** dialog box, as shown in the following screenshot.



**Figure: The Void Batch Payments dialog box**

In this dialog box, the user can select an option button indicating the date or dates as of which the batch will be voided. The following option buttons are available:

- **Original Payment Dates:** The payments in the batch will be voided as of their dates.
- **Specific Date:** The payments in the batch will be voided on the specific date selected in the **Void Date** box, which appears in the dialog box. This date must be the same as or later than the date of the most recent payment in the batch.

## Upgrade Notes

After an upgrade to Acumatica ERP 2022 R2, the **Release Batch Payments Before Export** check box will be cleared for all ACH payment methods on the [Payment Methods](#) (CA204000) form.

## Additional Information

For more details on how to correct batches, see [To Correct a Batch of ACH Payments](#).

# Finance: Improvements in the Straight-Line Depreciation Method

Starting in Acumatica ERP 2022 R2, the logic for calculating depreciation by using the *Straight-Line* calculation method and the *Full Day* averaging convention has been reimplemented by using a new depreciation engine.

## Changes to the Fixed Asset Classes Form

On the [Fixed Asset Classes](#) (FA201000) form, the state of the **Accelerated Depreciation for SL Depr. Method** check box is now ignored for *Straight-Line* calculation methods that use the *Full Day* averaging convention.

On the [Fixed Assets](#) (FA303000) form, the system shows a warning message advising the user to specify the *Remaining Value* calculation method for the asset if the following conditions are met:

- Also on the [Fixed Assets](#) form, the fixed asset has the *Straight-Line* depreciation method with the *Full Day* averaging convention.
- For the asset class specified for the asset, the **Accelerated Depreciation for SL Depr. Method** check box is selected on the [Fixed Asset Classes](#) form.

The message is shown on the **Balance** tab if the user clicks **Calculate Depreciation** on the More menu.

## Changes to the Calculate Depreciation Form

The warning message shown on the [Fixed Assets](#) (FA303000) form is also shown on the [Calculate Depreciation](#) (FA502000) form after the end of processing if at least one book in the asset uses a depreciation method based on the *Straight-Line* calculation method and the *Full Day* averaging convention. The following screenshot illustrates the warning message shown on the [Calculate Depreciation](#) form.

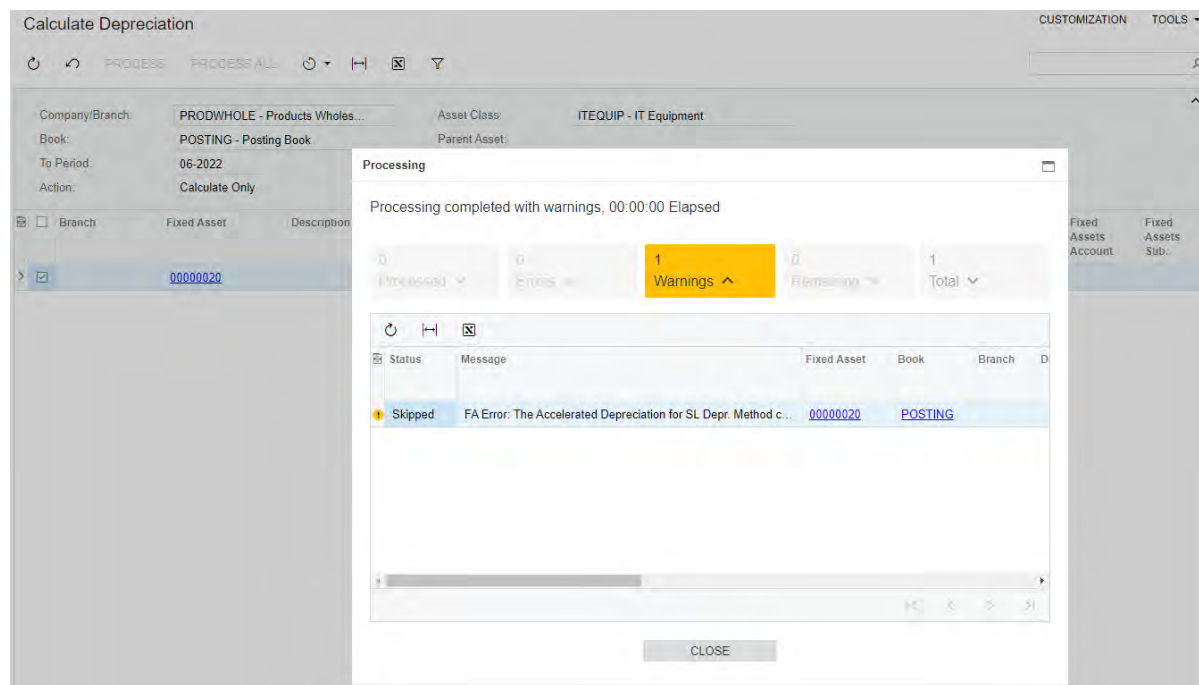


Figure: The warning message on the Calculate Depreciation form

## Prevention of the Depreciation of Assets with the Straight-Line Method

A fixed asset depreciated in the period specified in the **Depr. to Period** column on the **Balance** tab of the *Fixed Assets* (FA303000) form is assigned the *Fully Depreciated* status if the following conditions are met:

- The asset's depreciation method, which is selected on the **Balance** tab of the *Fixed Assets* form, has the *Straight-Line* calculation method and the *Full Period* or *Full Day* averaging convention specified on the *Depreciation Methods* (FA202500) form.
- On the *Fixed Asset Classes* (FA201000) form, the **Accelerated Depreciation for SL Depr. Method** check box is selected for the asset's depreciation method.
- On the *Fixed Assets Preferences* (FA101000) form, the **Automatically Release Depreciation Transactions** check box is selected.

The asset's **Net Value** specified on the **Balance** tab of the *Fixed Assets* form may not be equal to 0 (if the asset has additions), although users expect the net value to be 0.

To prevent this possible confusion, on the *Calculate Depreciation* (FA502000) form, the following enhancements have been introduced:

- The system excludes from depreciation the lines corresponding to the asset's book that has the following settings:
  - The *Straight-Line* calculation method with the *Full Period* or *Full Day* averaging convention
  - The **Accelerated Depreciation for SL Depr. Method** check box selected for the depreciation method on the *Fixed Asset Classes* form.
  - At least one addition was created outside of the period specified in the **Depr. From Period** column on the **Balance** tab of the *Fixed Assets* form
- If *Calculate Only* is selected in the **Action** box, the system displays a warning message but still processes the asset. If *Depreciate* is selected in the **Action** box, the system displays an error message and does not allow a user to select or process the asset.

# Finance: Integration with Bank Feeds

In previous versions of Acumatica ERP, users had to download a file with transactions from the bank and import the file to Acumatica ERP. If they needed to create an expense receipt linked to a bank transaction, they had to do this manually.

Acumatica ERP 2022 R2 introduces integration with Plaid and MX, which are financial service companies that provide secure bank feeds. A bank feed is a secure link between Acumatica ERP and a company's bank profile that can include multiple bank accounts. A bank feed is used for the automatic import of bank transactions into the system. Different bank feeds are created for different banks or if the accounts in one bank are registered to different users, each having a separate set of credentials. With this integration, Acumatica ERP users can automatically import bank transactions and create expense receipts based on these transactions.



In Acumatica ERP 2022 R2, integration with Plaid and MX works only for financial institutions in the United States and Canada.

The following sections provide information about this integration, including details about the related changes to the system.

## Changes to the Enable/Disable Features Form

On the [Enable/Disable Features](#) (CS100000) form, the **Bank Feed Integration** check box has been added to the **Third Party Integration** group.

If the corresponding feature is enabled, Plaid and MX subscription will become available to users in Acumatica ERP without the need to register in Plaid and MX. Acumatica ERP will store and return Plaid and MX authentication by using a special proxy server through API.

The *Bank Feed Integration* feature is subject to licensing. If an organization needs to create more than one bank feed, it should buy an appropriate license.

## Changes to the License Monitoring Console Form

On the [License Monitoring Console](#) (SM604000) form, the following changes have been introduced:

- In the **System Constraints** section on the **License** tab, the **Maximum Number of Bank Feed Accounts** box has been added, as shown in the following screenshot.

License Monitoring Console CUSTOMIZATION TOOLS ▾

LICENSE STATISTICS WARNINGS CONSTRAINT HISTORY

License Status:	Valid		
* License Tier:	E Series, Tier 5		
<b>LICENSE DETAILS</b>		<b>SYSTEM CONSTRAINTS</b>	
Monthly Number of Commercial Transactions:	500000	Maximum Number of Web Services API Users:	50
Monthly Number of ERP Transactions:	10000000	Maximum Number of Concurrent Web Services API Requests:	20
Database Storage Included (GB):	999	Maximum Number of Web Services API Requests per Minute:	500
<b>RECOMMENDED MAXIMUMS</b>		Maximum Number of Lines per Transaction:	3000
Daily Commercial Transactions:	25000	Maximum Number of Serial Numbers per Document:	10000
Daily ERP Transactions:	500000	Maximum Number of Employees Paid by Month:	250
Concurrent Users:	100	Maximum Number of Expense Receipts Recognized per Month:	1000
		Maximum Number of Bank Feed Accounts:	10

*Figure: The License tab of the License Monitoring Console form*

- On the **Constraint History** tab, the **Active Bank Feeds (% of Limit)** column has been added, as shown in the following screenshot.

License Monitoring Console CUSTOMIZATION TOOLS ▾

LICENSE STATISTICS WARNINGS **CONSTRAINT HISTORY**

Per Tenant

RECOGNITION HISTORY

Date	Tenant ID	Employees Paid by Month (% of Limit)	Expense Receipts Recognized by Month (% of Limit)	Active Bank Feeds (% of Limit)
> 6/23/2022	2	0 (0%)	0 (0%)	0 (0%)
6/23/2022	3	0 (0%)	0 (0%)	0 (0%)
6/23/2022	4	0 (0%)	0 (0%)	2 (20%)
6/22/2022	2	0 (0%)	0 (0%)	0 (0%)
6/22/2022	3	0 (0%)	0 (0%)	0 (0%)
6/22/2022	4	0 (0%)	0 (0%)	2 (20%)
6/21/2022	2	0 (0%)	0 (0%)	0 (0%)
6/21/2022	3	0 (0%)	0 (0%)	0 (0%)
6/21/2022	4	0 (0%)	0 (0%)	0 (0%)
6/20/2022	2	0 (0%)	0 (0%)	0 (0%)
6/20/2022	3	0 (0%)	0 (0%)	0 (0%)
6/20/2022	4	0 (0%)	0 (0%)	0 (0%)
6/19/2022	2	0 (0%)	0 (0%)	0
6/19/2022	3	0 (0%)	0 (0%)	0

|< < > >|

**Figure: The Constraint History tab of the License Monitoring Console form**

This column shows the number of bank feeds per tenant (if the **Per Tenant** check box is selected) or for all tenants (if the **Per Tenant** check box is cleared). In parentheses, the percentage of the limit from the applicable license is shown. The percentage is calculated as the number of bank feeds divided by the maximum from the license and multiplied by 100.

- On the **Warnings** tab, the system now shows a warning message if the number of bank feeds exceeds the limit of the current license.

**The Retrieve Bank Feed Transactions Form**

The [Retrieve Bank Feed Transactions](#) (CA507500) form (see the following screenshot) has been added to Acumatica ERP. A user with the *Administrator*, *CA Admin*, or *CA Clerk* role assigned can access the form in the **Processes** category of the **Banking** workspace. The form is used both as a processing form and as a list of bank feeds.

Retrieve Bank Feed Transactions CUSTOMIZATION TOOLS ▾

PROCESS PROCESS ALL

Bank Feed ID	Bank Feed Type	Description	Financial Institution	Status	Retrieval Status	Retrieval Date	Error message	Accounts	Unmatched Accounts
> <input type="checkbox"/> PLAUD	Plaid		Chase	Active				1	0

**Figure: The Retrieve Bank Feed Transactions form**

On this form, a user can create a new bank feed connecting to Plaid or MX. The user can then import bank transactions for the selected bank feeds manually or schedule the import of transactions for specific bank feeds.



## The Bank Feeds Form

If a user clicks **Add New Record** on the form toolbar of the [Retrieve Bank Feed Transactions](#) (CA507500) form, the system opens the new [Bank Feeds](#) (CA205500) form, which is shown in the following screenshot.

The screenshot shows the 'Bank Feeds' form for a 'PLAID' connection to 'Chase'. The form is titled 'Bank Feeds' and 'PLAID'. It includes a toolbar with 'UPDATE CREDENTIALS' and other options. The main form area contains the following fields:

- Bank Feed ID:** PLAID
- Financial Institution:** Chase
- Status:** Active
- Bank Feed Type:** Plaid
- Import Start Date:** 6/1/2022
- Description:** (empty text box)

There are two checkboxes:  Create Expense Receipts and  Create Expense Receipts for Pending Transactions. Below the form are tabs for 'CASH ACCOUNTS', 'CORPORATE CARDS', and 'EXPENSE ITEMS'. The 'CASH ACCOUNTS' tab is active, showing a table with the following data:

Account Name	Account Mask	Description	Cash Account	Statement Period	Statement Start Day	Import Transactions From	Currency	Account Type	Account Subtype	Retrieval Status	Retrieval Date	Error message	Account ID
Plaid Checking	0000		20500	Month	1	6/1/2022	USD	depository	checking				onqe1X7q59HJQ/00N1...

*Figure: The Bank Feeds form*

The Summary area of the form contains the following elements if *Plaid* is selected in the **Bank Feed Type** box (as is the case in the previous screenshot):

- **Bank Feed ID:** The ID of the bank feed defined by a user.
- **Status:** The status of the bank feed connection. This box is read-only. Initially, *Disconnected* is specified. Other possible values are *Active*, *Suspended*, *Setup Required*, and *Login Failed*.
- **Bank Feed Type:** The type of bank feed connection—*Plaid* or *MX*.
- **Description:** The description of the bank feed connection.
- **Import Start Date:** The date starting from which transactions will be imported. This date will be used as the default date in the **Import Transactions From** column on the **Cash Accounts** tab on the *Bank Feeds* form for all mapped accounts in the feed. However, this date will be recalculated for each account depending on existing bank transactions that have been entered manually or imported earlier from other sources. For example, if **Import Start Date** is *01/01/2022* but a user manually entered bank transactions for the selected account with dates from *02/01/2022* to *02/04/2022*, the system will recalculate the **Import Transactions From** date for this account as *02/05/2022*.
- **Financial Institution:** The name of the financial institution linked to the bank feed. This box is read-only.
- **Create Expense Receipts:** A check box that indicates (if selected) that expense receipts will be created for transactions that can be matched to a corporate card. This check box appears on the form if the *Expense Management* feature is enabled on the [Enable/Disable Features](#) (CS100000) form. If this check box is selected, the **Corporate Cards** and **Expense Items** tabs, shown in the screenshots below, appear on the form.
- **Create Expense Receipts for Pending Transactions:** A check box that indicates (if selected) that expense receipts will be created for pending transactions (transactions that have not yet been fully settled). This check box appears on the form if the *Expense Management* feature is enabled on the [Enable/Disable Features](#) form. This check box can be selected if the **Create Expense Receipts** check box is selected.

The following screenshot shows the **Corporate Cards** tab of the *Bank Feeds* form.

Bank Feeds  
PLAID

Bank Feed ID: PLAID Financial Institution: Chase  
 Status: Active  Create Expense Receipts  
 Bank Feed Type: Plaid  Create Expense Receipts for Pending Transactions  
 \* Import Start Date: 6/1/2022  
 Description:

CASH ACCOUNTS **CORPORATE CARDS** EXPENSE ITEMS

* Account Name	Cash Account	Field to Match	Rule	Value	* Corporate Card ID	Card Number	Name	* Employee ID	Employee Name
Plaid Checking	20500				000001	EXEC01	Corporate Visa for Executives	EP00000001	Michael Andrews

Figure: The Corporate Cards tab

On this tab, a user can define whether expense receipts should be created and for which employee and corporate card they should be created, based on the transaction account and optional user-defined conditions. This tab appears on the form if the *Expense Management* feature is enabled on the [Enable/Disable Features](#) form and the **Create Expense Receipts** check box is selected in the Summary area of the [Bank Feeds](#) form.

The following screenshot shows the **Expense Items** tab of the [Bank Feeds](#) form.

Bank Feeds  
PLAID

Bank Feed ID: PLAID Financial Institution: Chase  
 Status: Active  Create Expense Receipts  
 Bank Feed Type: Plaid  Create Expense Receipts for Pending Transactions  
 \* Import Start Date: 6/1/2022  
 Description:

CASH ACCOUNTS **CORPORATE CARDS** **EXPENSE ITEMS**

\* Default Expense Item: TRAVEL - Business Travel - A

* Field to Match	* Rule	* Value	Expense Item	Skip
Category	Contains	Food and Drink	MEALS	<input type="checkbox"/>
Name	Starts With	Car	CARRENT	<input type="checkbox"/>
Category	Contains	Payment		<input checked="" type="checkbox"/>

Figure: The Expense Items tab

On the **Expense Items** tab, a user can define expense items for expense receipts based on the transaction category or name. This tab appears on the form if the *Expense Management* feature is enabled on the [Enable/Disable Features](#) form and the **Create Expense Receipts** check box is selected in the Summary area of the [Bank Feeds](#) form.

In the **Default Expense Item** box on this tab, the user must select a non-stock item with the *Expense* type. This expense item will be used by default if a transaction cannot be matched to any expense item in the table.

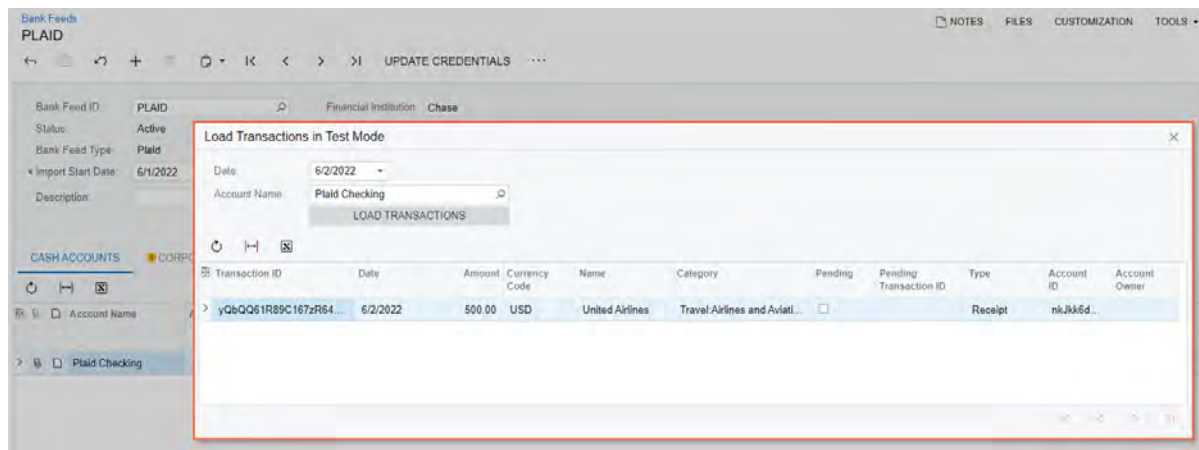
The More menu of the [Bank Feeds](#) form has the following commands:

- **Activate:** Sets the status of the bank feed to *Active*. The command is available on the More menu and shown as a button on the form toolbar if the selected feed has the *Suspended* status. If the selected cash account is already linked to an active bank feed, the system displays an error message. If the cash account has a

statement import service selected on the [Cash Accounts](#) (CA202000) form, the setting in the **Statement Import Service** box is cleared.

- **Connect:** Establishes a connection with a bank, links a bank feed to a financial institution, and sets the status of the bank feed to *Setup Required*. The command is available on the More menu and shown on the form toolbar only if no bank feed is linked to a financial institution.
- **Update Credentials:** Refreshes the authentication data. The command is available on the More menu and shown on the form toolbar only if the bank feed is linked to a financial institution.
- **Suspend:** Changes the status of the bank feed to *Suspended* so that transactions will not be imported for this bank feed. The command is available on the More menu and shown on the form toolbar if the status of the bank feed is *Active*.
- **Disconnect:** Removes the bank feed, access token, and linked accounts, and changes the status of the bank feed to *Disconnected*. The command is available on the More menu if the bank feed is linked to a financial institution.
- **Load Transactions in Test Mode:** Loads bank transactions for a particular period or account from the bank via the bank feed connection without creating related bank transactions in Acumatica ERP. By using this command, a user can ensure that their bank is able to send transactions through MX or Plaid in a suitable format without mapping bank accounts to Acumatica ERP accounts and activating the bank feed. This command is available on the More menu if the status of the bank feed is *Setup Required*, *Active*, or *Suspended*.

When a user clicks **Load Transactions in Test Mode** on the More menu, the **Load Transactions in Test Mode** dialog box, shown in the following screenshot, is displayed.



*Figure: The Load Transactions in Test Mode dialog box*

In this dialog box, the user specifies the date and the account from the bank feed for which transactions should be loaded, and then clicks **Load Transactions**. The system loads transactions to the table in the dialog box, and the user manually closes the dialog box after reviewing the transactions.

## Changes to the Expense Receipt Form

On the [Expense Receipt](#) (EP301020) form, the **Banking** tab has been added, as shown in the following screenshot.

**Figure: The Banking tab**

This tab appears on the form if the *Bank Feed Integration* feature is enabled on the [Enable/Disable Features](#) (CS100000) form and the expense receipt is created from a bank transaction and matched to it.

If a user selects an expense receipt that has the *Pending* bank transaction status and clicks **Submit** on the More menu, the system displays an error message.

### Changes to the Cash Accounts Form

On the [Cash Accounts](#) (CA202000) form, for a cash account linked to an active bank feed on the **Cash Accounts** tab of the [Bank Feeds](#) (CA205500) form, the **Statement Import Service** box has been replaced with the **Statement Import Source** box, as shown in the following screenshot.

* Payment Method	Use in AP	AP/PR Default	AP/PR - Suggest Next Number	AP/PR Last Reference Number	Batch Last Reference Number	Use in AR	AR Default	AR Default For Refund	AR - Suggest Next Number	AR Last Reference Number
> VISACORP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Figure: The Statement Import Source box**

This read-only box displays the bank feed ID that has been specified by the user on the [Bank Feeds](#) form.

## Changes to the Import Bank Transactions and Process Bank Transactions Forms

On the [Import Bank Transactions](#) (CA306500) and [Process Bank Transactions](#) (CA306000) forms, the **Retrieve Transactions** button has been added, as shown in the following screenshots.

The screenshot shows the 'Import Bank Transactions' form for account '20500 - Corporate Credit Card' as of 6/30/2022. The 'RETRIEVE TRANSACTIONS' button is highlighted in a red box in the top toolbar. Below the toolbar, there are fields for Cash Account, Reference Nbr., Statement Date, Start Balance Date, Beginning Balance, End Balance Date, Ending Balance, and Calculated Balance. A table of transactions is displayed below, with columns for Processed, Hidden, Ext. Tran. ID, Ext. Ref. Nbr., Tran. Date, Tran. Desc, Receipt, Disbursement, Card Number, Invoice Nbr., and Applied Rule.

Processed	Hidden	Ext. Tran. ID	Ext. Ref. Nbr.	Tran. Date	Tran. Desc	Receipt	Disbursement	Card Number	Invoice Nbr.	Applied Rule
<input checked="" type="checkbox"/>	<input type="checkbox"/>	9LwLLoXj9WU98e15...	9LwLLoXj9WU98e158...	6/1/2022	McDonald's	0.00	12.00			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	vjRjRjQJ8bonyRjtaN...	vjRjRjQJ8bonyRjtaN...	6/1/2022	Starbucks	0.00	4.33			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	yQbQQ61R89C167z...	yQbQQ61R89C167zR...	6/2/2022	United Airlines	500.00	0.00			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	mz9zz6xw8WIALZKx...	mz9zz6xw8WIALZKx...	6/4/2022	Uber 063015 SF**POOL**	0.00	5.40			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	bAJAARnomeUjz7k...	bAJAARnomeUjz7ko...	6/17/2022	Uber 072515 SF**POOL**	0.00	6.33			

Figure: The Retrieve Transactions button on the Import Bank Transactions form

The screenshot shows the 'Process Bank Transactions' form for account '20500 - Corporate Credit Card'. The 'RETRIEVE TRANSACTIONS' button is highlighted in a red box in the top toolbar. The form includes tabs for 'MATCH TO PAYMENTS', 'MATCH TO INVOICES', and 'MATCH TO EXPENSE RECEIPTS'. A table of transactions is displayed on the left, and a table of matched transactions is shown on the right. The matched table includes columns for Matched, Match Relevance %, Receipt Number, Description, Doc. Date, Amount in Claim Cur., Class, and Amount Difference.

Matched	Match Relevance %	Receipt Number	Description	Doc. Date	Amount in Claim Cur.	Class	Amount Difference
<input checked="" type="checkbox"/>	100.000	000311	McDonald's	6/1/2022	12.00	USD	0.00

Figure: The Retrieve Transactions button on the Process Bank Transactions form

When a user selects an account on either of the forms, the system checks the option in the **Statement Import Source** box; this option was specified for this account on the [Cash Accounts](#) (CA202000) form. For the selected cash account, if the statement import source is *Bank Feed: PLAID* or *Bank Feed: MX* and no transactions have been entered manually in the bank statement yet, the **Retrieve Transactions** button appears on the forms instead of the **Upload File** button.

For the cash account, if an option other than *Bank Feed: PLAID* or *Bank Feed: MX* is selected in the **Statement Import Service** box on the [Cash Accounts](#) form, the **Upload File** button is displayed on the form toolbar.

If the user clicks **Retrieve Transactions** on the [Import Bank Transactions](#) form or the [Process Bank Transactions](#) form, the system does the following:

1. Checks the state of the **Import Bank Statement for Single Cash Account** check box on the **Bank Statement Settings** tab of the [Cash Management Preferences](#) (CA101000) form and retrieves transactions accordingly. If the check box is selected, retrieves transactions for only one account. If the check box is cleared, retrieves transactions for all accounts of the bank feed selected in the **Statement Import Source** box on the [Cash Accounts](#) form.
2. Once the retrieval is complete, displays the most recent bank feed statement on the [Import Bank Transactions](#) form or an updated list of unmatched bank transactions for the selected account on the [Process Bank Transactions](#) (CA306000) form.

## Setup of Plaid Integration

To set up integration with Plaid, a user performs the following actions:

1. On the [Enable/Disable Features](#) (CS100000) form, the user enables the *Bank Feed Integration* feature.
2. On the [Retrieve Bank Feed Transactions](#) (CA507500) form, where the system has inserted *Plaid* as the **Bank Feed ID** in the only row, the user clicks the *PLAID* link, as shown in the following screenshot.

Retrieve Bank Feed Transactions CUSTOMIZATION TOOLS ▾

Bank Feed ID	Bank Feed Type	Description	Financial Institution	Status	Retrieval Status	Retrieval Date	Error message	Accounts	Unmatched Accounts
<a href="#">PLAID</a>	Plaid			Disconnected				0	0

**Figure: Review of the Plaid bank feed on the Retrieve Bank Feed Transactions form**

3. On the [Bank Feeds](#) (CA205500) form, the user clicks **Connect** on the form toolbar, as shown in the following screenshot.

Bank Feeds NOTES FILES CUSTOMIZATION TOOLS ▾

PLAID

Bank Feed ID:  Financial Institution: \_\_\_\_\_  
 Status:   
 Bank Feed Type:   
 Import Start Date:   
 Description:

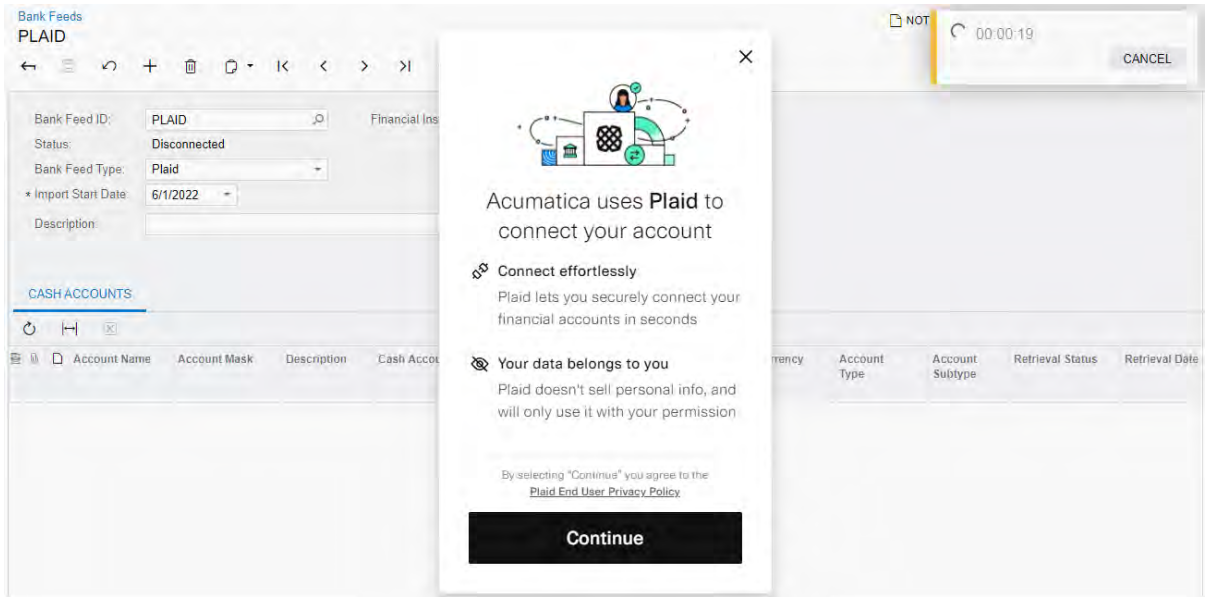
CASH ACCOUNTS

Account Name	Account Mask	Description	Cash Account	Statement Period	Statement Start Day	Import Transactions From	Currency	Account Type	Account Subtype	Retrieval Status	Retrieval Date
--------------	--------------	-------------	--------------	------------------	---------------------	--------------------------	----------	--------------	-----------------	------------------	----------------

**Figure: Connection to Plaid**

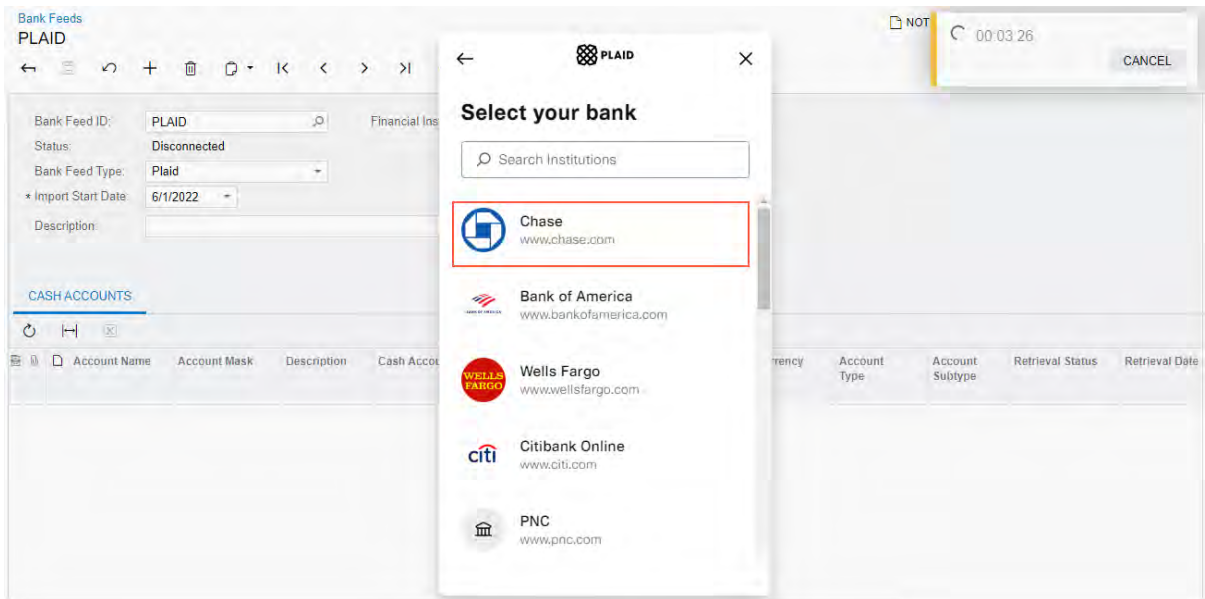
4. In the dialog box that is opened, which is shown in the following screenshot, the user clicks **Continue**.





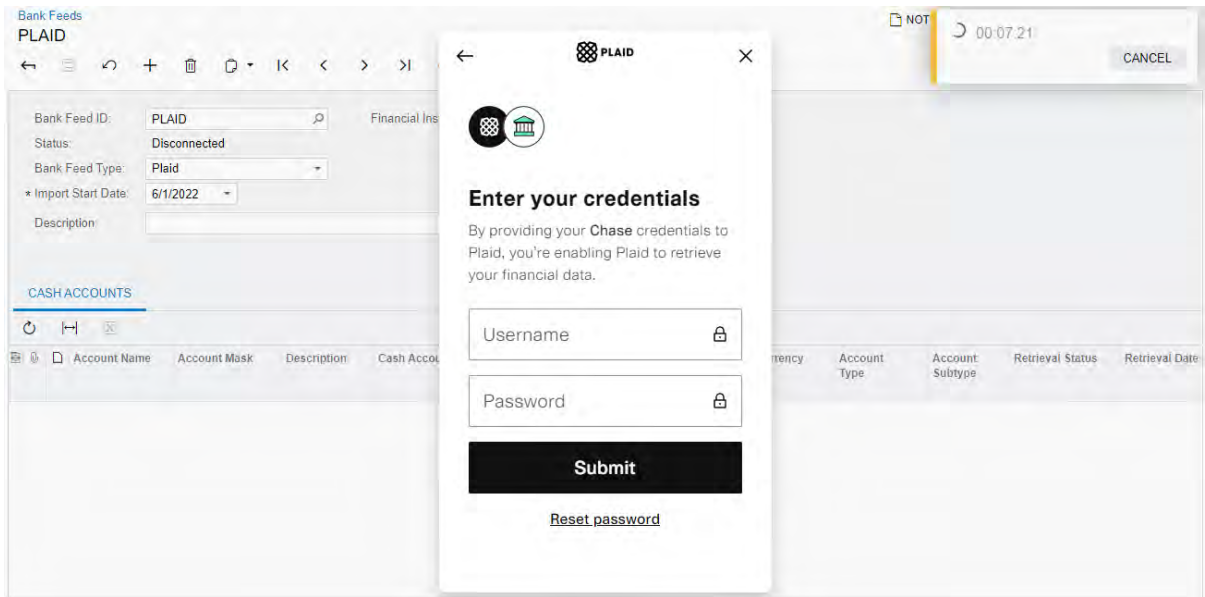
**Figure: Continuation of the connection**

5. In the next dialog box, which is shown in the following screenshot, the user selects a bank.



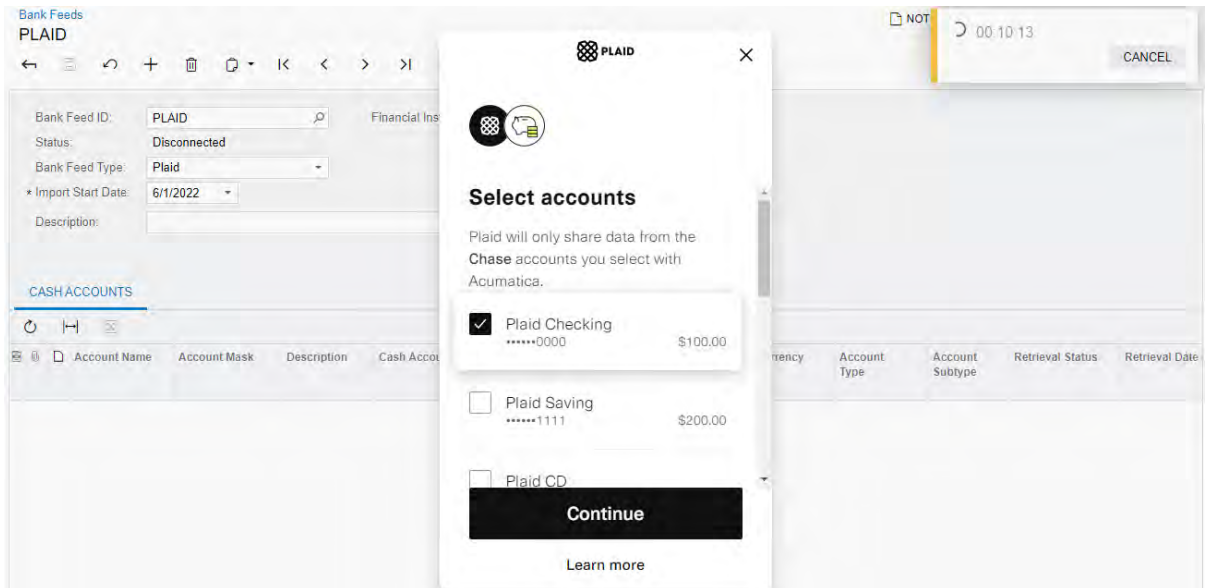
**Figure: Selection of a bank**

6. In the next dialog box, which is shown in the following screenshot, the user enters the username and password and clicks **Submit**.



*Figure: Entry of Plaid user credentials*

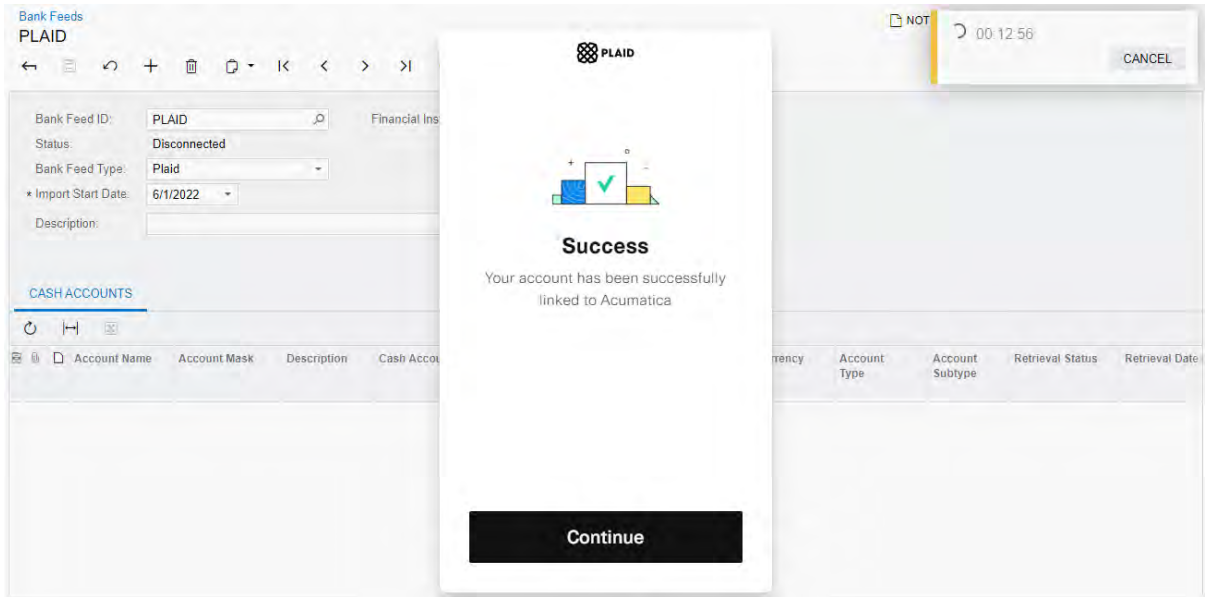
- In the next dialog box, which is shown in the following screenshot, the user selects an account or multiple accounts in Plaid and clicks **Continue**.



*Figure: Selection of accounts in Plaid*

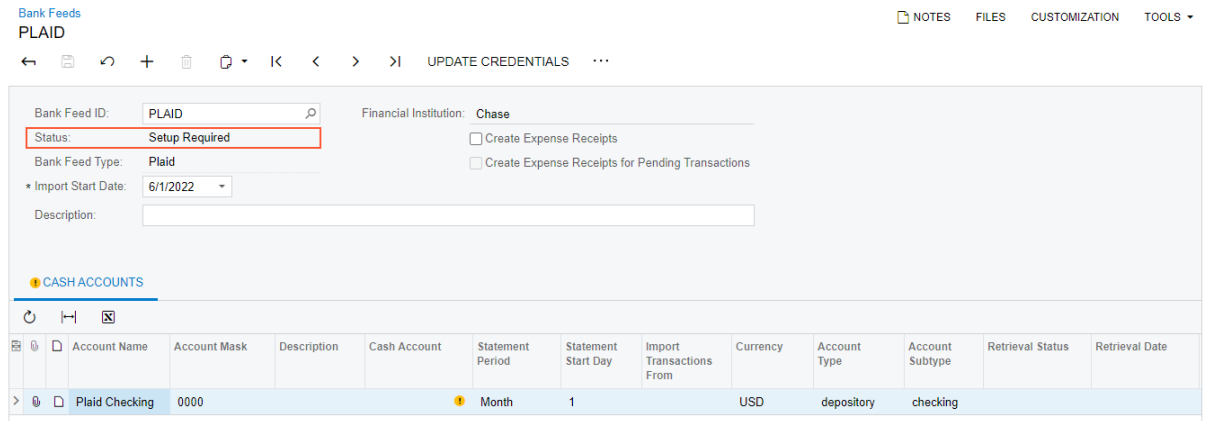
- In the next dialog box, which is shown in the following screenshot, the user clicks **Continue** to complete the linking of the account.





**Figure: Completion of the connection to Plaid**

Once the connection has been established, the status of the bank feed changes to *Setup Required*, as shown in the following screenshot.



**Figure: The updated status**

- On the **Cash Accounts** tab, the user specifies a cash account, as shown in the following screenshot. The status of the bank feed changes to *Active*.

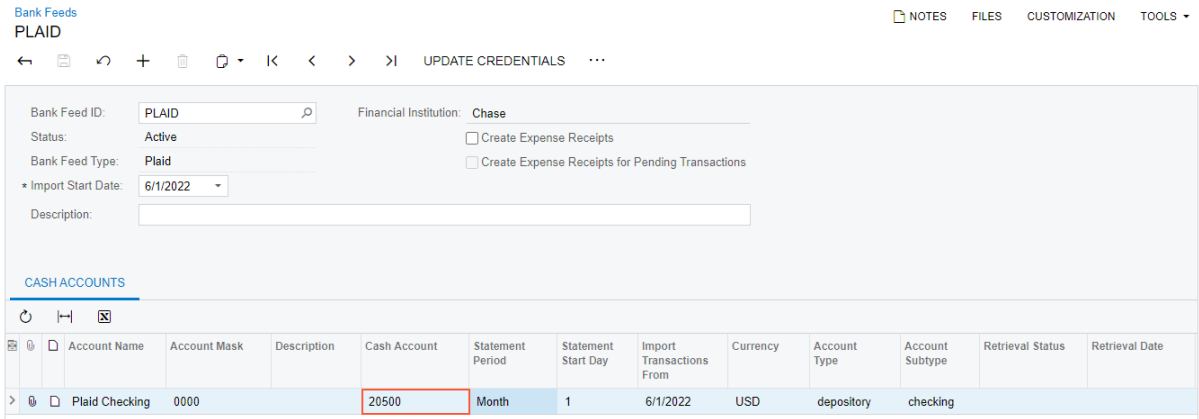


Figure: Selection of a cash account

10. If expense receipts should be created, the user selects the **Create Expense Receipts** check box in the Summary area, as shown in the following screenshot. The **Corporate Cards** tab appears on the form.

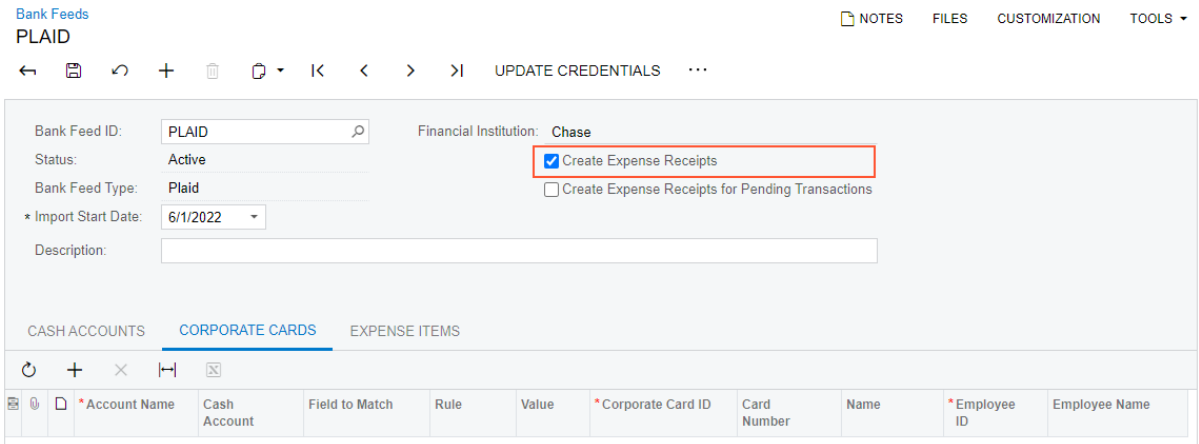


Figure: Selection of the Create Expense Receipts check box

11. On the table toolbar of the **Corporate Cards** tab, the user clicks **Add Row** and selects a corporate card, as shown in the following screenshot.

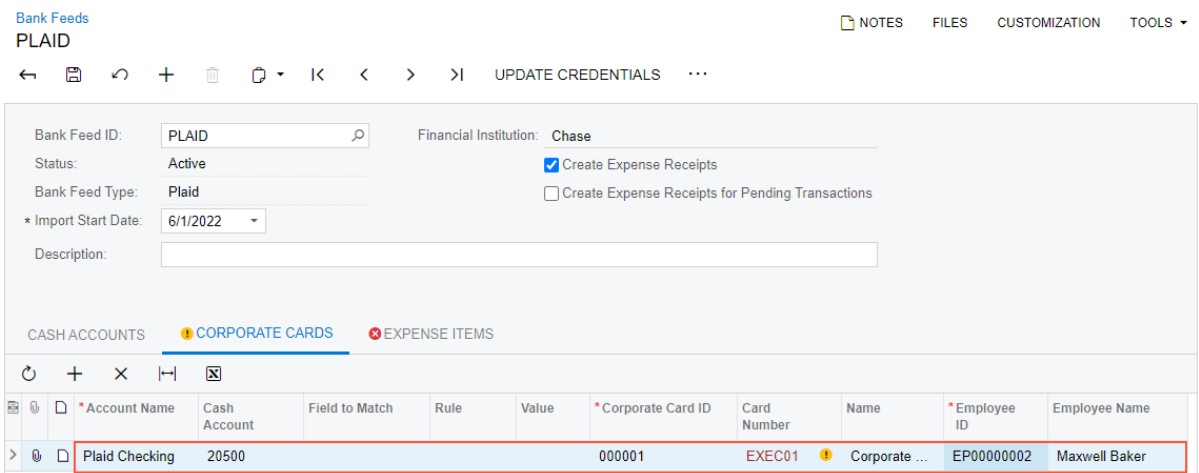

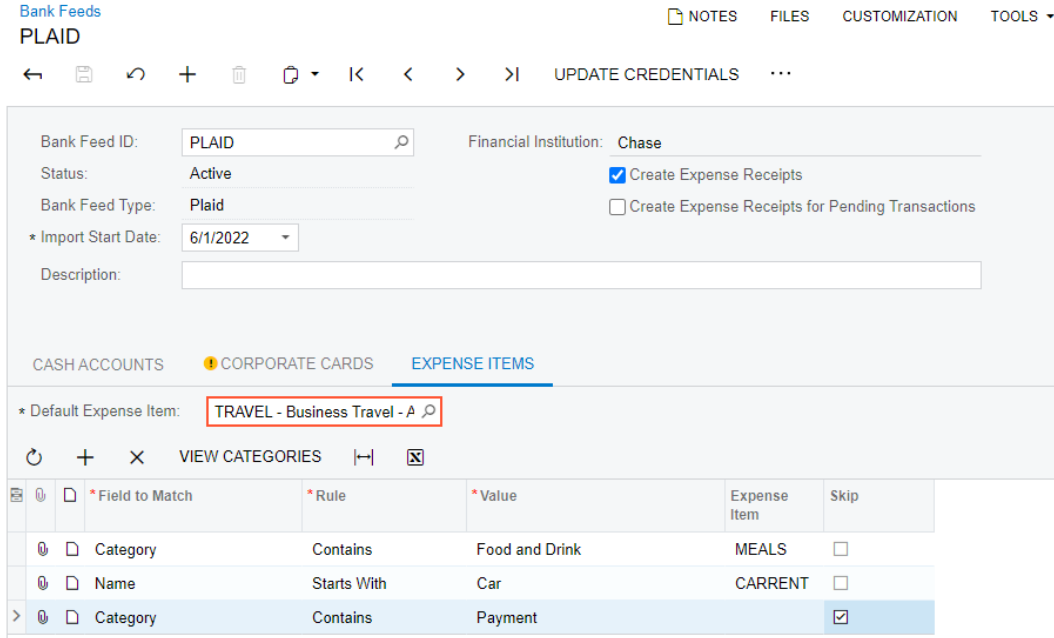


Figure: Selection of a corporate credit card on the Corporate Cards tab

 If the **Create Expense Receipts** check box is selected and a corporate card is specified, the system displays an error message that the default expense item must be selected; otherwise, the changes cannot be saved.

12. On the **Expense Items** tab, the user selects an item in the **Default Expense Item** box, as shown in the following screenshot.



Bank Feeds  
PLAID

NOTES FILES CUSTOMIZATION TOOLS

UPDATE CREDENTIALS

Bank Feed ID: PLAID Financial Institution: Chase

Status: Active  Create Expense Receipts

Bank Feed Type: Plaid  Create Expense Receipts for Pending Transactions

\* Import Start Date: 6/1/2022

Description:

CASH ACCOUNTS CORPORATE CARDS **EXPENSE ITEMS**

\* Default Expense Item: TRAVEL - Business Travel - A

VIEW CATEGORIES

	* Field to Match	* Rule	* Value	Expense Item	Skip
<input type="checkbox"/>	Category	Contains	Food and Drink	MEALS	<input type="checkbox"/>
<input type="checkbox"/>	Name	Starts With	Car	CARRENT	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Category	Contains	Payment		<input checked="" type="checkbox"/>

**Figure: Selection of the default expense item on the Expense Items tab**

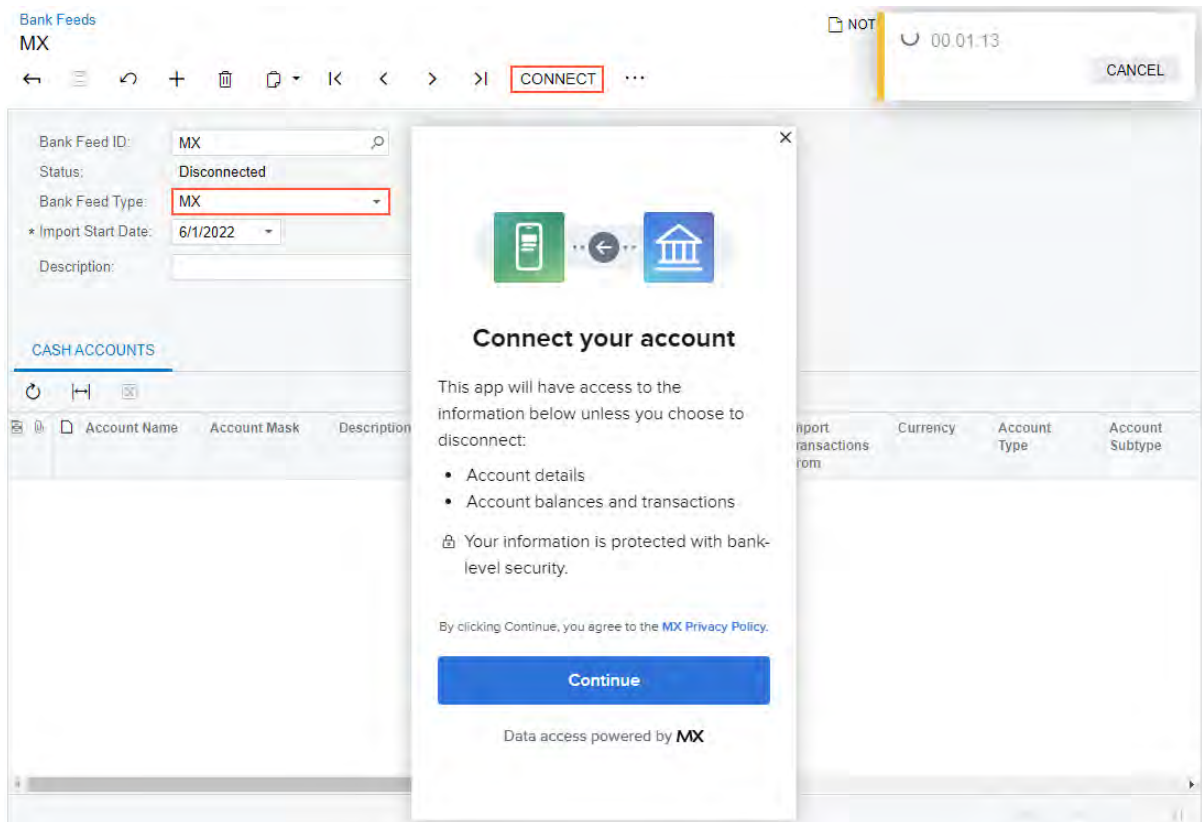
Optionally, the user can add expense categories to the table and specify the rules for matching them.

13. The user clicks **Save** to save the settings of the bank feed.

## Setup of MX Integration

To set up integration with MX, a user performs the following actions:

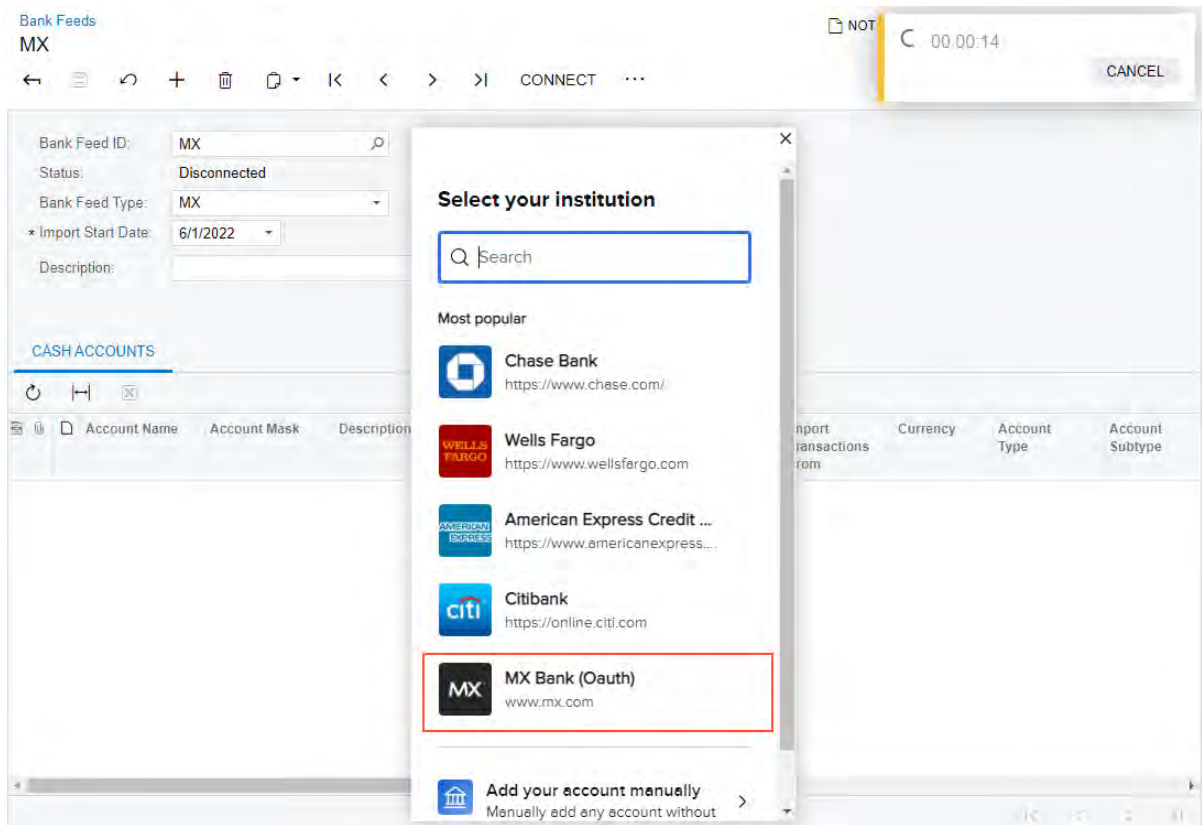
1. On the [Enable/Disable Features](#) (CS100000) form, the user enables the *Bank Feed Integration* feature.
2. On the form toolbar of the [Bank Feeds](#) (CA205500) form, the user clicks **Add New Record** to create a bank feed with the *MX* type and then clicks **Connect**, as shown in the following screenshot.



**Figure: Creation and connection of an MX bank feed**

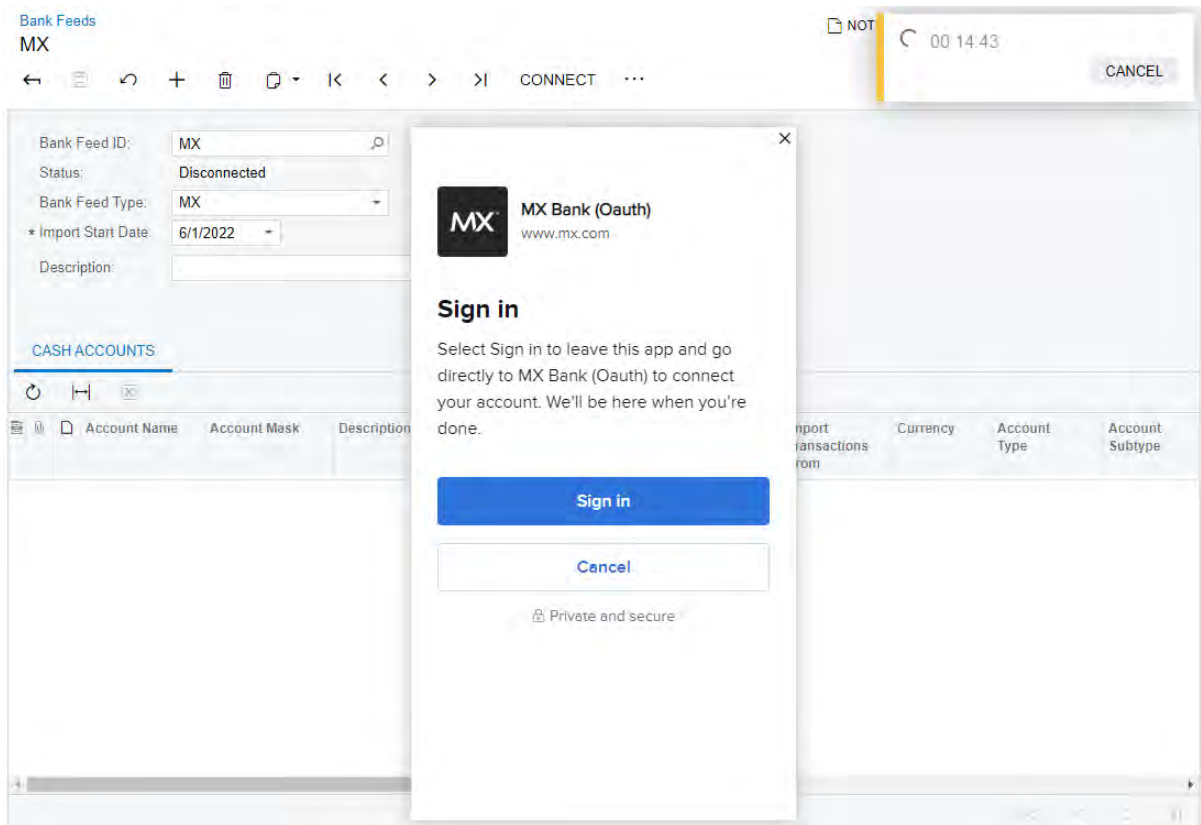
The user then clicks **Continue** in the dialog box that is opened.

3. In the next dialog box, which is shown in the following screenshot, the user clicks a bank. In this example, the user clicks **MX Bank (Oauth)**.



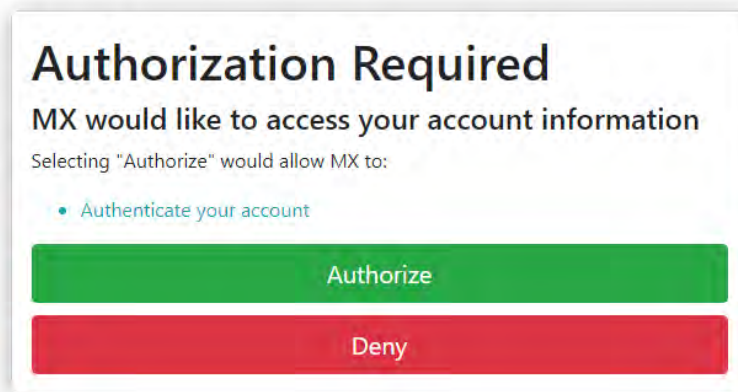
**Figure: Selection of a bank**

4. In the next dialog box, which is shown in the following screenshot, the user clicks **Sign in**, which provides the ability to sign in to a bank if **MX Bank (OAuth)** was clicked. (If any other institution was selected in the previous instruction, the user enters the credentials to access the bank account information, as was described in Instruction 6 of the previous section.)



**Figure: Sign-in to MX Bank**

- In the dialog box that is displayed, the user clicks **Authorize** to authorize in the bank.



**Figure: Authorization of the authentication in the bank**



Authentication can also be implemented by sending a code to the user's email address or phone number that is predefined in the bank profile. The authentication method depends on the selected bank.

- In the next dialog box, which is shown in the following screenshot, the user clicks **Continue** to complete the connection to the bank.

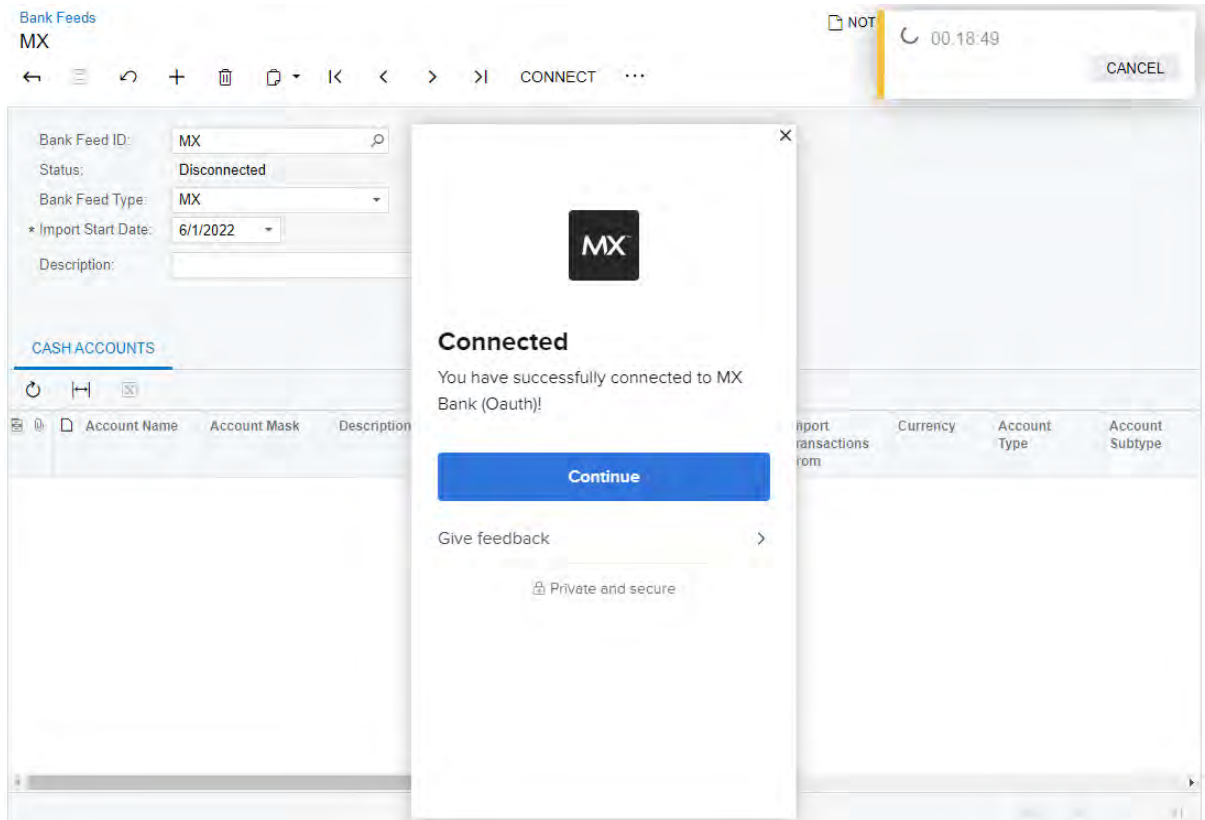



Figure: Completion of the connection to the bank

 MX does not require that the user selects accounts; this service automatically adds to the bank feed all bank accounts available for the entered credentials.

Once the connection has been established, the status of the bank feed changes to *Setup Required*, as shown in the following screenshot.

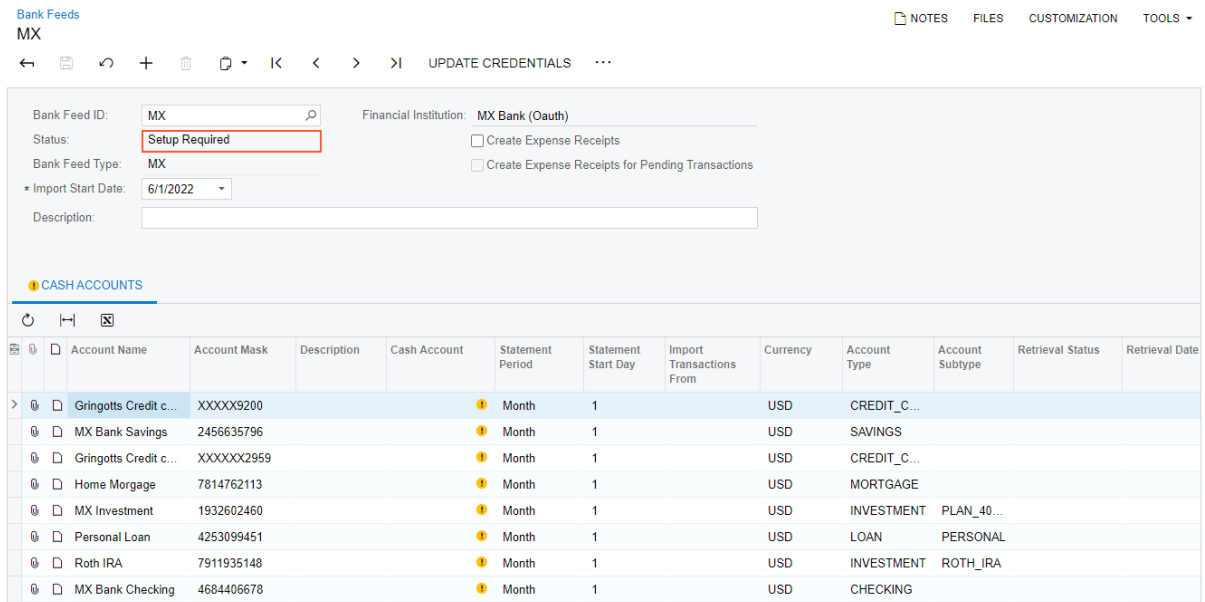


Figure: The updated status of the connection to MX

- On the **Cash Accounts** tab, the user specifies a cash account for each needed account, as shown in the following screenshot. The status of the bank feed changes to *Active*.

Bank Feeds  
MX

Bank Feed ID: MX Financial Institution: MX Bank (Oauth)  
 Status: Active  Create Expense Receipts  
 Bank Feed Type: MX  Create Expense Receipts for Pending Transactions  
 Import Start Date: 6/1/2022  
 Description:

**CASH ACCOUNTS**

Account Name	Account Mask	Description	Cash Account	Statement Period	Statement Start Day	Import Transactions From	Currency	Account Type	Account Subtype	Retrieval Status
Gringotts Credit card	XXXXX9200		10600	Month	1	6/1/2022	USD	CREDIT_CARD		
MX Bank Savings	2456635796			Month	1		USD	SAVINGS		
Gringotts Credit card	XXXXXX2959			Month	1		USD	CREDIT_CARD		
Home Mortgage	7814762113			Month	1		USD	MORTGAGE		
MX Investment	1932602460			Month	1		USD	INVESTMENT	PLAN_40...	
Personal Loan	4253099451			Month	1		USD	LOAN	PERSONAL	
Roth IRA	7911935148			Month	1		USD	INVESTMENT	ROTH_IRA	
MX Bank Checking	4684406678			Month	1		USD	CHECKING		

**Figure: Selection of a cash account**

The user should specify the settings on the **Corporate Cards** and **Expense Items** tabs and save the changes on the form by performing actions similar to those in Instructions 10-13 of the previous section.

## Import of Bank Transactions

When Plaid or MX integration has been set up, a user performs the following actions to import bank transactions into the system:

- On the *Retrieve Bank Feed Transactions* (CA507500) form, the user selects the needed bank feed and clicks **Process** on the form toolbar or clicks **Process All** to run the retrieval process for all bank feeds, as shown in the following screenshot.

Retrieve Bank Feed Transactions

PROCESS PROCESS ALL

Bank Feed ID	Bank Feed Type	Description	Financial Institution	Status	Retrieval Status	Retrieval Date	Error message	Accounts	Unmatched Accounts
MX	MX		MX Bank (Oauth)	Active				8	7
PLAID	Plaid		Chase	Active				1	0

**Figure: Retrieval of bank feeds**

Also, the user can schedule the process by clicking **Schedules** on the form toolbar.

The user waits for the process to be completed.

- On the *Import Bank Transactions* (CA306500) form, the user opens the imported bank statement, as shown in the following screenshot.



Import Bank Transactions CUSTOMIZATION ▾ TOOLS ▾

🔄 ↶ + ✎ ⏪ 🗑️

Drag column header here to configure filter								
Reference Nbr.	Cash Account	Description	Statement Date	Ending Balance	Currency	Created On		
000005	20500	Corporate Credit Card	6/30/2022	471.94	USD	6/21/2022		

**Figure:** Link to open imported bank transactions

3. The user reviews the transactions imported for the cash account, as shown in the following screenshot.

Import Bank Transactions NOTES FILES CUSTOMIZATION TOOLS ▾

000005 - 20500 Corporate Credit Card: 6/30/2022

← 🗑️ ↶ + ✎ ⏪ 🗑️ | UPLOAD FILE | PROCESS TRANSACTIONS

* Cash Account:	20500 - Corporate Credit Car	Statement Date:	6/30/2022	Start Balance Date:	6/1/2022	Beginning Balance:	0.00
* Reference Nbr.:	000005	* End Balance Date:	6/30/2022	Ending Balance:	471.94	Calculated Balance:	471.94

🔄 + × UNHIDE TRANSACTION UNMATCH UNMATCH ALL VIEW MATCHED DOCUMENT ⏪ 🗑️ ⏩

Processed	Hidden	Ext. Tran. ID	Ext. Ref. Nbr.	* Tran. Date	Tran. Desc	Receipt	Disbursement	Card Number	Invoice Nbr.	Applied Rule
<input type="checkbox"/>	<input type="checkbox"/>	WDjWX89jRzlejw9Rp...	WDjWX89jRzlj...	6/1/2022	McDonald's	0.00	12.00			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	AEAzwQmAnpcgjR6...	AEAzwQmAnp...	6/1/2022	Starbucks	0.00	4.33			
<input type="checkbox"/>	<input type="checkbox"/>	EDmdVN6m9vIZWry...	EDmdVN6m9v...	6/2/2022	United Airlines	500.00	0.00			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	8EMbjwQMpqQxz34...	8EMbjwQMpq...	6/4/2022	Uber 063015 SF**POOL**	0.00	5.40			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	gWnxMA3nbkc1Xjv...	gWnxMA3nbkc...	6/17/2022	Uber 072515 SF**POOL**	0.00	6.33			

**Figure:** Imported bank transactions to be reviewed

For the imported transactions with the *Disbursement* type, the system automatically creates expense receipts or updates existing expense receipts on the [Expense Receipt](#) (EP301020) form if the following conditions are met:

- The **Create Expense Receipts** check box is selected on the [Bank Feeds](#) (CA205500) form.
- The transaction amount is greater than 0.00.
- The transaction status is not *Pending* and the **Create Expense Receipts for Pending Transactions** check box is cleared on the [Bank Feeds](#) form, or the transaction status is *Pending* and the **Create Expense Receipts for Pending Transactions** check box is selected.
- On the **Corporate Cards** tab of the [Bank Feeds](#) form, there is a record with a cash account ID that is the same as the transaction account ID and an employee ID that is the same as the account owner of the transaction.
- On the **Expense Items** tab of the [Bank Feeds](#) form, there is a matching line with the **Skip** check box cleared, or there is no matching line.
- On the [Expense Receipt](#) form, there is no expense receipt with a **Receipt Number** that is the same as the transaction ID.

If a transaction has a pending transaction ID and an expense receipt with a **Receipt Number** that is the same as this pending transaction ID exists in the system, this expense receipt is updated.

## Upgrade Notes

If the organization used a bank feed customization project from AcuSync, after an upgrade to Acumatica ERP 2022 R2, an administrative user should perform the following steps:

1. Unlink and delete bank feeds in the customization project, so that the organization is not charged for the additional bank feeds.
2. Remove the customization project from Acumatica ERP.

3. On the [Bank Feeds](#) (CA205500) form, configure new bank feeds in the system, as described in [To Set Up Plaid Integration](#) and [To Set Up MX Integration](#).

For detailed upgrade instructions, see the following [knowledge base article](#).

## **Additional Information**

For details on bank feed integration, see [Integrating Acumatica ERP with Bank Feeds](#).

# Finance: Expense Receipt Notifications and Generic Inquiry

In Acumatica ERP 2022 R2, if the *Bank Feed Integration* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, expense receipts can be created automatically based on transactions downloaded from the bank feed.

An employee for whom an expense receipt is created needs to be notified so that they can verify the information in the expense receipt and claim it. The *Bank Feed Integration* feature includes a preconfigured business event that automatically sends a push notification to the employee's mobile device when a new expense receipt is created for them if the employee has the Acumatica ERP app installed.

For more details on the *Bank Feed Integration* feature, see [Finance: Integration with Bank Feeds](#).

A new generic inquiry has been added so that a system administrator can set up a dashboard with expense receipt information. On this dashboard, managers can review the number of expense receipts by expense item and by status.

## Business Event Configuration

The predefined business event included in the *Bank Feed Integration* feature has been configured as follows:

- On the [Mobile Notifications](#) (SM204004) form, the *New Expense Receipt* subscriber has been added, as shown in the following screenshot.

The screenshot shows the 'Mobile Notifications' form with the 'New Expense Receipt' subscriber configured. The form includes the following fields and values:

- Notification ID: New Expense Receipt
- Screen: Notification for Expense Receipts
- Description: New Expense Receipt
- To: ((EPEExpenseClaimDetails\_employeeID|UserID))
- Title: New Expense Receipt
- Delivery Method: Push
- Screen ID: EP0002DB
- Destination Screen ID: Expense Receipt
- Destination Entity ID: ((EPEExpenseClaimDetails\_notelD))

Below the configuration fields, there is a 'MESSAGE' section with the following text:

```
A new expense receipt ((EPEExpenseClaimDetails_ClaimDetailCD)) ("((EPEExpenseClaimDetails_tranDesc)): ((EPEExpenseClaimDetails_curyExtCost)) ((EPEExpenseClaimDetails_CuryID))) has been added.
```

**Figure: The New Expense Receipt subscriber**

- On the [Business Events](#) (SM302050) form, the *New Expense Receipt* business event has been configured, as shown in the following screenshot.

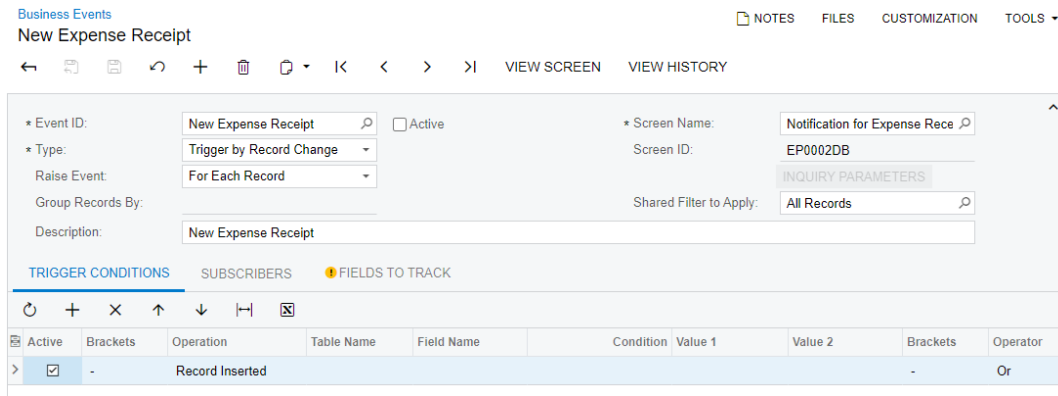


Figure: The New Expense Receipt business event

### The Notification for Expense Receipts Generic Inquiry

The *Notification for Expense Receipts (EP0002DB)* generic inquiry, which is shown in the following screenshot, has been added.



Figure: The Notification for Expense Receipts generic inquiry

### The Expense Receipts Generic Inquiry

The *Expense Receipts (EP0001DB)* generic inquiry, which is shown in the following screenshot, has been added.

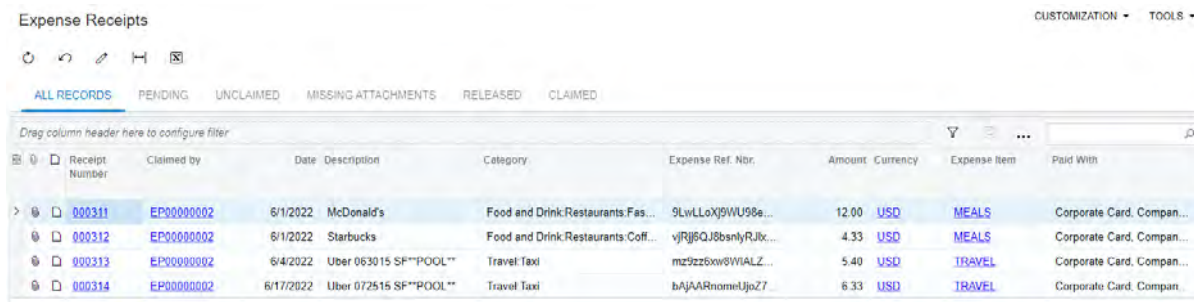


Figure: The Expense Receipts generic inquiry

This generic inquiry shows a list of expense receipts that can be used in the *Expense Receipts* dashboard. The *Expense Receipts* form includes the following tabs:

- **All Records:** Shows all expense receipts.
- **Unclaimed:** Shows the expense receipts that are not linked to expense claims.
- **Pending:** Shows the expense receipts that have the *Pending* bank transaction status. This tab appears on the form if the *Bank Feed Integration* feature is enabled on the *Enable/Disable Features (CS100000)* form.

- **Claimed:** Shows the expense receipts that are linked to expense claims.
- **Released:** Shows the expense receipts with the *Released* status.
- **Missing Attachments:** Shows the expense receipts that have no attachments.

# Finance: Modification of Dunning Fees During the Dunning Process

Starting in Acumatica ERP 2022 R2, the dunning process has been improved to allow more flexibility for users. Users can now review the documents included in dunning letters and dunning fees before they prepare and release a dunning letter. Specific documents can be excluded from the dunning letter, and the dunning fee amount can be modified. When the dunning letter is released, the system creates a dunning fee invoice based on the dunning fee specified in the dunning letter.



The *Dunning Letter Management* feature must be enabled on the [Enable/Disable Features](#) (CS100000) form for this functionality to be used.

On all forms where dunning fees can be specified, only positive values may be specified for dunning fees. A positive amount can be entered for a dunning fee if an item is selected in the **Dunning Fee Item** box on the **Dunning** tab of the [Accounts Receivable Preferences](#) (AR101000) form.

Users can modify dunning fees if the following conditions are met on the **Dunning** tab of this form:

- *By Document* is selected in the **Dunning Process** box.
- The **Automatically Release Dunning Letters** check box is cleared. Dunning letters are created with the *Draft* status and their settings can be modified.



If *By Customer* is selected in the **Dunning Process** box on the [Accounts Receivable Preferences](#) form, the **Automatically Release Dunning Letters** check box is always selected, and dunning letters are created with the *Released* status. The default dunning fees specified on the [Customer Classes](#) (AR201000) form for the customer class are used in these letters and cannot be modified by users.

The scenario in which a user can remove documents from the dunning letter, modify dunning fees, or perform both of these actions includes the following steps:

1. On the [Prepare Dunning Letters](#) (AR521000) form, the user prepares dunning letters.
2. On the [Print/Release Dunning Letters](#) (AR522000) form, the user reviews the prepared dunning letters by clicking **View Dunning Letter** on the table toolbar.
3. On the [Dunning Letter](#) (AR306000) form, which opens, the user reviews the dunning letter, removes documents and modifies the value in the **Dunning Fee** box of the Summary area if the dunning fee should be updated.
4. The user releases the dunning letters by clicking **Release** on the form toolbar of the [Dunning Letter](#) or [Print/Release Dunning Letters](#) form.
5. For each released dunning letter, the system creates a dunning fee invoice with the dunning fee specified by the user. (The user can open the dunning fee invoice by clicking the link in the **Fee Reference Nbr.** box on the [Dunning Letter](#) form.)

## Changes to the Prepare Dunning Letters Form

On the [Prepare Dunning Letters](#) (AR521000) form, the **Currency** column has been added to the table, as shown in the following screenshot. The column shows the base currency of the tenant to which the user is signed in. The column is visible on the form if the *Multicurrency Accounting* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

Prepare Dunning Letters CUSTOMIZATION TOOLS ▾

PROCESS PROCESS ALL

Customer Class: KEY  
 Dunning Letter Date: 6/14/2022  
 Add Coming-Due Invoices  
 Add Open Payments and Credit Memos

<input type="checkbox"/>	Customer Class	Customer	Customer Name	Earliest Due Date	Branch	Overdue Balance	Number of Overdue Documents	Customer Balance	Number of Documents	Dunning Letter Level	Currency	Last Dunning Letter Date	
>	<input type="checkbox"/>	KEY	ABARTENDE	USA Bartending School	3/2/2022	PRODWHOLE	199,971.00	3	199,971.00	3	1	USD	
	<input type="checkbox"/>	KEY	ABCHOLDING	ABC Holdings Inc	3/19/2022	PRODWHOLE	252,026.25	2	252,026.25	2	1	USD	
	<input type="checkbox"/>	KEY	WIDGETBUY	Widget Connection	3/2/2022	PRODWHOLE	78,401.00	4	78,401.00	4	1	USD	
	<input type="checkbox"/>	KEY	WIDPARENT	Widget Consolidated Holdings	3/14/2022	PRODWHOLE	45,607.50	2	45,607.50	2	1	USD	

Figure: UI changes on the Prepare Dunning Letters form

The **Dunning Fee** column has been removed from the table.

### Changes to the Print/Release Dunning Letters Form

On the [Print/Release Dunning Letters](#) (AR522000) form, the following UI changes have been introduced:

- The **Dunning Fee** column (see Item 1 in the following screenshot) has been added to the table. The column is read-only.
- The **Currency** column (Item 2) has been added to the table. The column is read-only and appears on the form if the *Multicurrency Accounting* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

Print / Release Dunning Letters CUSTOMIZATION TOOLS ▾

PROCESS PROCESS ALL

Action: Print Dunning Letter  Show All  
 Start Date: 6/14/2022 End Date: 6/14/2022

VIEW DUNNING LETTER

<input type="checkbox"/>	Branch	Customer	Dunning Letter Date	Dunning Letter Level	Overdue Balance	Dunning Fee	Currency	Final Reminder	Don't Print	Printed	Don't Email	Emailed
>	<input type="checkbox"/>	PRODWHOLE	AACUSTOMER - Alta Ace	6/14/2022	1	275,034.94	5.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	PRODWHOLE	ACTIVESTAF - Active Staffing Service	6/14/2022	1	7,000.00	5.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	PRODWHOLE	ALPHABETLD - Alphabetland School Center	6/14/2022	1	2,800.00	5.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	PRODWHOLE	ANTUNSWEST - Antun's of Westchester	6/14/2022	1	7,000.00	5.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	PRODWHOLE	APOSTELSCH - Church of The Apostles	6/14/2022	1	83,396.98	5.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	PRODWHOLE	ARTCAGES - Artcages	6/14/2022	1	67,840.00	5.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	PRODWHOLE	BEAUTYSCH - New York International Beauty Sc...	6/14/2022	1	35,800.00	5.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	PRODWHOLE	BIBIMBAB - Bibimbab Korean Restaurant	6/14/2022	1	78,131.20	5.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	PRODWHOLE	BNRCONTRAC - BNR Contractors	6/14/2022	1	0.00	5.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	PRODWHOLE	BORDERSHOP - Borders Books, Music & Cafe	6/14/2022	1	7,000.00	5.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	PRODWHOLE	BOULDERCR - Boulder Couriers Denver	6/14/2022	1	7,000.00	5.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	PRODWHOLE	BRASSKEY - Brass Key Bar	6/14/2022	1	120,700.00	5.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	PRODWHOLE	CASHCONNEC - Cash Connection	6/14/2022	1	4,550.00	5.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	PRODWHOLE	CJOEQUIP - Jersey Central Office Equip	6/14/2022	1	24,000.00	5.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure: UI changes on the Print/Release Dunning Letters form

### Changes to the Dunning Letters Form

On the [Dunning Letter](#) (AR306000) form, the following UI changes have been introduced:

- The **Customer** box (see Item 1 in the following screenshot) now displays the customer ID and customer name.
- The **Dunning Fee** box (Item 2) has been added. Users can edit the value in this box if the status of the dunning letter is *Draft*.

- The unnamed Currency box (Item 3) has been added to the right of the **Dunning Fee** box. The box shows the base currency of the tenant to which the user is signed in. The box appears on the form if the *Multicurrency Accounting* feature is enabled on the *Enable/Disable Features* form.

Dunning Letter NOTES FILES CUSTOMIZATION TOOLS ▾

📄 🗑️ ↶ 🗑️ RELEASE VOID PRINT

Status: **Draft**      \* Customer: ABCHOLDING - ABC Holdings Inc 1

Dunning Letter Level: **1** 2      Dunning Fee: 10.00 USD 3

Dunning Letter Date: **6/14/2022**      Fee Reference Nbr.: \_\_\_\_\_

↶ ✕ REVOKE ⏪ 🗑️

Type	*Reference Nbr.	Due Date	Original Document Amount	Overdue Balance	Dunning Letter Date	Dunning Level
> Invoice	<a href="#">AR010700</a>	3/28/2022	97,276.25	97,276.25	6/14/2022	1
Invoice	<a href="#">AR010721</a>	3/19/2022	154,750.00	154,750.00	6/14/2022	1

Figure: UI changes on the Dunning Letters form

## Upgrade Notes

After an upgrade to Acumatica ERP 2022 R2, the **Dunning Fee** setting on the *Dunning Letter* (AR306000) form will be updated as follows:

- If the status of a dunning letter is *Draft*, the **Dunning Fee** box will be populated with the dunning fee specified for the customer class on the **Dunning** tab of the *Customer Classes* (AR201000) form.
- If the status of a dunning letter is *Released*, the **Dunning Fee** box will be populated with the **Detail Total** amount of the dunning fee invoice whose identifier is specified in the **Fee Reference Nbr.** box on the *Dunning Letter* form. If no dunning fee invoice was generated, the **Dunning Fee** box will be populated with *0.00*.



# Finance: Preventing Creation of Documents with Dates in the Distant Future

In previous versions of Acumatica ERP (prior to 2019 R1), when a user was creating a document, dates were validated against the financial period: The financial period to which the date belonged had to exist in the system. When the *Multiple Calendar Support* feature was introduced, this validation was removed from the system. Thus, from Acumatica ERP 2019 R1 to 2022 R1, users could specify any date in the **Date** box on data entry forms.

This lack of validation created some problems. Sometimes a user accidentally entered an invalid year without noticing the mistake (for example 7/20/7020). The system showed a warning message if the date was outside of the specified period, but the user could still process the document. The most typical issues with entering dates were the following:

- A user created a payment with an incorrect date in the future and then needed to void the payment. Such a payment could be voided only if on the **Settings for Use in AR** tab of the *Payment Methods* (CA204000) form, the **Default Void Date to Document Date** check box was selected.
- A user accidentally created an invoice with the incorrect date in the future. As a result, this invoice was never shown in aging reports. On the other hand, the payment to which the invoice is applied is shown in the aging reports for several years. Also, there were often errors in the application dates in such payments.
- A user accidentally created an invoice with an incorrect date in the past. This invoice was always shown in aging reports for any period while it retained the *Open* status.


Starting in Acumatica ERP 2022 R2, the validation of dates has been implemented. On data entry forms, the system will not allow users to enter dates that do not correspond to any financial period specified on the *Master Financial Calendar* (GL201000) form. On all affected forms, the system will display an error message near the corresponding date box if the date is not valid. The new validation has been added on each data entry form where the financial period is inserted by default from the entered date.

## The List of Affected Forms

The following table lists the form where the date validation has been implemented.

Area	Form	The Box Where the Date Validation Is Added
Manufacturing (Production Management)	<i>Materials</i> (AM300000)	<b>Date</b>
	<i>Labor</i> (AM301000)	<b>Date</b>
	<i>Disassembly</i> (AM301500)	<b>Date</b>
	<i>Move</i> (AM302000)	<b>Date</b>
	<i>WIP Adjustment</i> (AM308000)	<b>Date</b>
Accounts payable	<i>Bills and Adjustments</i> (AP301000)	<b>Date</b>
	<i>Checks and Payments</i> (AP302000)	<b>Application Date</b>
	<i>Quick Checks</i> (AP304000)	<b>Date</b>
	<i>Prepare Payments</i> (AP503000)	<b>Payment Date</b>
	<i>Release AP Retainage</i> (AP510000)	<b>Date</b>

Area	Form	The Box Where the Date Validation Is Added
Accounts receivable	<i>Invoices and Memos</i> (AR301000)	<b>Date</b>
	<i>Payments and Applications</i> (AR302000)	<b>Application Date</b>
	<i>Cash Sales</i> (AR304000)	<b>Date</b>
	<i>Write Off Balances and Credits</i> (AR505000)	<b>Doc. Date</b>
	<i>Auto-Apply Payments</i> (AR506000)	<b>Application Date</b>
	<i>Release AR Retainage</i> (AR510000)	<b>Date</b>
	<i>Generate Payments</i> (AR511000)	<b>Payment Date</b>
Cash management	<i>Funds Transfers</i> (CA301000)	<b>Transfer Date, Receipt Date, Doc. Date</b> (table column)
	<i>Cash Transactions</i> (CA304000)	<b>Tran. Date</b>
	<i>Bank Deposits</i> (CA305000)	<b>Deposit Date</b>
	<i>Process Bank Transactions</i> (CA306000)	<b>Payment Date</b> (the <b>Create Payment</b> tab with the <b>Create</b> check box selected)
Deferred revenue	<i>Deferral Schedule</i> (DR201500)	<b>Date</b>
Service Management	<i>Run Appointment Billing</i> (FS500100)	<b>Billing Date</b>
	<i>Inventory Updates</i> (FS500500)	<b>Document Date</b>
	<i>Run Service Order Billing</i> (FS500600)	<b>Billing Date</b>
	<i>Run Service Contract Billing</i> (FS501300)	<b>Billing Date</b>
General ledger	<i>Journal Transactions</i> (GL301000)	<b>Transaction Date</b>
	<i>Trial Balance</i> (GL303010)	<b>Import Date</b>
	<i>Journal Vouchers</i> (GL304000)	<b>Transaction Date</b>
	<i>Run Allocations</i> (GL504500)	<b>Allocation Date</b>
Inventory	<i>Receipts</i> (IN301000)	<b>Date</b>
	<i>Issues</i> (IN302000)	<b>Date</b>
	<i>Adjustments</i> (IN303000)	<b>Date</b>
	<i>Transfers</i> (IN304000)	<b>Date</b>
	<i>Kit Assembly</i> (IN307000)	<b>Date</b>

Area	Form	The Box Where the Date Validation Is Added
Projects	<i>Project Transactions</i> (PM304000)	<b>Date</b> (table column) <div style="border: 1px solid orange; padding: 10px; margin-top: 10px;">  <p>When the form is opened for the entry of a new record, the business date is inserted as the default setting and the validation is not performed. The date is validated only if the user manually changes the column value.</p> </div>
	<i>Pro Forma Invoices</i> (PM307000)	<b>Invoice Date</b>
	<i>Run Project Billing</i> (PM503000)	<b>Invoice Date</b>
Purchase orders	<i>Purchase Receipts</i> (PO302000)	<b>Date</b>
	<i>Landed Costs</i> (PO303000)	<b>Date</b>
Sales orders	<i>Invoices</i> (SO303000)	<b>Date</b>
Taxes	<i>Tax Bills and Adjustments</i> (TX303000)	<b>Date</b>

# Finance: Support of Multiple Base Currencies for Contracts

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The *Multiple Base Currencies* feature was implemented in Acumatica ERP in 2021 R1, although it could not be enabled if multiple other features were enabled, including *Contract Management*. Thus, it was not possible for companies to use both contract management and multiple base currencies.

Starting in Acumatica ERP 2022 R2, contracts can be created and processed for companies in the same tenant with different base currencies. A contract can be successfully billed and an AR invoice can be created if the base currency of the contract's customer is the same as the base currency of the originating branch in the AR invoice. The sections below describe the details of multiple base currencies with contracts.

## Changes to the Enable/Disable Features Form

On the [Enable/Disable Features](#) (CS100000) form, the *Multiple Base Currencies* feature can be enabled if the *Contract Management* feature is enabled.

The following sections describe changes in the logic of various forms in Acumatica ERP 2022 R2 if the *Multiple Base Currencies* and *Contract Management* features are both enabled.

## Changes to the Customer Contracts Form

On the [Customer Contracts](#) (CT301000) form, if a user is creating an invoice, the system displays an error message if the following currencies are different:

- The base currency of the shipping branch, which is specified for the contract in the **Shipping Branch** box of the **Summary** tab (**Billing Information** section). If no shipping branch is specified, the current branch (the branch to which the user is signed in) is used for comparison.
- The base currency of the customer to be billed; this customer is determined by the option in the **Bill To** box in the **Billing Information** section of the **Summary** tab. The base currency of the customer is specified in the **Currency ID** box (**Financial** tab) on the [Customers](#) (AR303000) form.

When the user makes changes to a contract that could affect pricing, the system recalculates the current and pending prices shown on the **Details** and **Recurring Summary** tabs of the [Customer Contracts](#) form in the contract currency, which is specified on the **Summary** tab (**Contract Settings** section) of the [Customer Contracts](#) form. The system selects and calculates the current and pending prices as follows:

- If the customer's base currency is the same as the contract currency, the system uses the default price of each inventory item on the **Details** tab, in the customer's base currency, for the current and pending prices. The default price of an item is specified in the **Default Price** box on the **Price/Cost** tab of the [Non-Stock Items](#) (IN202000) or [Stock Items](#) (IN202500) form.
- If the customer's base currency differs from the contract currency, the system recalculates the prices to the contract currency by using the base currency of the selected customer.
- If the selected customer has no base currency specified—that is, if the customer has been extended from a branch—the system recalculates the current and pending prices to the contract currency by using the base currency of the current branch.

## Changes to the Run Contract Billing Form

For an invoice to the contract's bill-to customer, if a shipping branch is specified for the contract in the **Shipping Branch** box (**Summary** tab) of the [Customer Contracts](#) (CT301000) form, when a user is running contract billing on the [Run Contract Billing](#) (CT501000) form, the system will create an invoice by using this shipping branch as the originating branch and using the base currency of the shipping branch.

If no shipping branch is specified in the contract settings, the system will copy the current branch to the created invoice. If the base currency of the current branch differs from the base currency of the bill-to customer, the contract will not be billed, and the system will display an error message.

### Changes to the Renew Contracts Form

For an invoice to the contract's bill-to customer, if a shipping branch is specified for the contract in the **Shipping Branch** box (**Summary** tab) of the *Customer Contracts* (CT301000) form, when a user is renewing a contract with creating an invoice on the *Renew Contracts* (CT502000) form, the system will create an invoice by using this shipping branch as the originating branch and using the base currency of the shipping branch.

If no shipping branch is specified in the contract settings, the system will copy the current branch to the created invoice. If the base currency of the current branch differs from the base currency of the bill-to customer, the contract will not be renewed, and the system will display an error message.

### Changes to the Contract Usage Form

On the *Contract Usage* (CT303000) form, when contract usage is entered manually, the lookup table in the **Branch** column shows only the branches that have the same base currency as the contract's bill-to customer.

If the contract has a bill-to customer without a base currency—that is, if the customer has been extended from a branch—a user can select any branch in the lookup box in the **Branch** column.

### Changes to the Cases and Release Cases Forms

If a contract is specified for a case in the **Contract** box on the **Additional Info** tab on the *Cases* (CR306000) form, and a user clicks **Release** on the *Cases* or *Release Cases* (CR507000) form to release the case and create contract usage, the system verifies whether the current branch has the same base currency as the bill-to customer specified for the contract. If these base currencies are different, the system displays an error message.

If the contract has a bill-to customer without a base currency—that is, if the customer has been extended from a branch—the case can be released regardless of the current branch.

### Changes to the Release Time Activities Form

If a contract is selected in the **Contract** box of the Selection area of the *Release Time Activities* (EP507020) form and a user selects any activities to process them and create contract usage, the system verifies whether the current branch has the same base currency as the bill-to customer of the contract. If these base currencies are different, the system displays an error message.

If the contract has a bill-to customer without a base currency—that is, if the customer has been extended from a branch—the activity can be processed regardless of the current branch.

### Changes to the Bill Expense Claims Form

In a claim of a customer, if a contract is specified in the **Project/Contract** column on the **Details** tab of the *Expense Claim* (EP301000) form, when a user is processing selected records on the *Bill Expense Claims* (EP502000) form and creates contract usage, the system verifies whether the current branch has the same base currency as the bill-to customer of the contract. If these base currencies are different, the system displays an error message.

If the contract has a bill-to customer without a base currency—that is, if the customer has been extended from a branch—the selected record can be processed regardless of the current branch.

# Finance: Support of Multiple Base Currencies for the Dunning Process

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The *Multiple Base Currencies* feature was implemented in Acumatica ERP in 2021 R1, although it could not be enabled if multiple other features were enabled, including *Dunning Letter Management*. Starting in Acumatica ERP 2022 R2, the dunning process can be used and invoices with dunning charges can be created if multiple companies with different base currencies are configured in the same tenant.

## Changes to the Enable/Disable Features Form

On the [Enable/Disable Features](#) (CS100000) form, the *Multiple Base Currencies* feature can be enabled if the *Dunning Letter Management* feature is enabled.

Depending on the system settings, if a user tries to enable the *Multiple Base Currencies* feature, the system displays error messages if any of the following pairs of settings is specified on the **General** tab (**Consolidation Settings** section) of the [Accounts Receivable Preferences](#) (AR101000) form:

- *Consolidated for All Companies* is selected in the **Prepare Statements** box, and *Consolidated for All Companies* is selected in the **Prepare Dunning Letters** box.
- *Consolidated for All Companies* is selected in the **Prepare Statements** box, and *For Each Branch or Consolidated for Company* is selected in the **Prepare Dunning Letters** box.
- *For Each Branch or Consolidated for Company* is selected in the **Prepare Statements** box, and *Consolidated for All Companies* is selected in the **Prepare Dunning Letters** box.

## Changes to the Accounts Receivable Preferences Form

On the **General** tab (**Consolidation Settings** section) of the [Accounts Receivable Preferences](#) (AR101000) form, the **Consolidate Dunning Letters for all Branches** check box has been replaced with the **Prepare Dunning Letters** box (Item 1), which is shown in the following screenshot.

## Accounts Receivable Preferences

NOTES FILES CUSTOMIZATION TOOLS ▾

GENERAL PRICING APPROVAL DUNNING MAILING & PRINTING

**NUMBERING SETTINGS**

- \* GL Batch Numbering Sequence: BATCHAR - AR Batch
- \* Invoice Numbering Sequence: ARINVOICE - AR Invoice
- \* Payment Numbering Sequence: ARPAYMENT - AR Payment
- \* Debit Memo Numbering Sequence: ARINVOICE - AR Invoice
- \* Credit Memo Numbering Sequence: ARINVOICE - AR Invoice
- \* Write-Off Numbering Sequence: ARINVOICE - AR Invoice
- \* Overdue Charge Numbering Sequence: ARINVOICE - AR Invoice
- \* Price Worksheet Numbering Sequence: ARPRICEWS - AR Price Worl
- Dunning Fee Numbering Sequence:

**POSTING SETTINGS**

- Automatically Post on Release
- Post Summary on Updating GL
- Activate Migration Mode

**DATA ENTRY SETTINGS**

- Default Customer Class ID: LOCAL
- \* Combine Sales Sub. From: LLL-LLL
- Use Intercompany Sales Account From: Customer Location
- Hold Documents on Entry
- Validate Document Totals on Entry
- Require Payment Reference on Entry
- Hold Document on Failed Credit Check
- Require Invoice/Memo Printing Before Release
- Require Invoice/Memo Emailing Before Release

**DATA PROCESSING SETTINGS**

- Enable Integrated CC Processing
- Age Credits
- Set Default Overdue Charges by Statement Cycle
- Calculate on Overdue Charge Documents
- Apply Payments to Overdue Charges First

**SALESPERSON COMMISSION SETTINGS**

- Salesperson Commission by: Payment
- Commission Period Type: Monthly

**CONSOLIDATION SETTINGS**

- Prepare Statements: For Each Branch
- Statement from Branch:
- Prepare Dunning Letters: 1 Consolidated for Company 2
- Dunning Letter from Branch:

**DEFAULT WRITE-OFF REASON CODES**

- Balance Write-Off Reason Code: BALWOFF
- Credit Write-Off Reason Code: CRWOFF

**VAT RECALCULATION SETTINGS**

- Automatically Release Credit Memos
- Credit Memo Description:

**RETAINAGE SETTINGS**

- Retain Taxes
- Automatically Release Retainage Documents

**Figure: The Prepare Dunning Letters box**

A user can select one of the following options in this box:

- *For Each Branch*: Dunning letters will be prepared separately for each branch of each company in the tenant.
- *Consolidated for Company* (Item 2): Dunning letters will be prepared for each company in the tenant. This is the default value.
- *Consolidated for All Companies*: Dunning letters will be consolidated for all companies in the tenant. This option is available if the *Multiple Base Currencies* feature is disabled.

The **Prepare Dunning Letters** box appears on the form if the *Dunning Letter Management* feature is enabled on the [Enable/Disable Features](#) (CS100000) form and either the *Multibranch Support* or *Multicompany Support*, or both features are enabled.

The **Dunning Letter from Branch** box appears on the form if the *Multiple Base Currencies* feature is disabled and is available if the *Consolidate for All Companies* option is selected in the **Prepare Dunning Letters** box.

## Changes to the Companies Form

On the [Companies](#) (CS101500) form, the **Dunning Letter Branch** column has been added to the table on the **Branches** tab, as shown in the following screenshot. This check box must be selected for one branch of the company. If the user tries to select this check box in multiple rows, the system will leave the check box selected in one row and clear the check box in the other rows.

For the branch with this check box selected, when dunning letters are prepared, the system will use this branch as the originating branch of a dunning fee invoice (if an invoice should be created) and as the source of the name and address in the dunning letter.

The screenshot shows the 'PRODUCTS - Revision Two Products' form with the 'BRANCHES' tab selected. The table below is a representation of the data shown in the screenshot:

Branch ID	Branch Name	Active	Dunning Letter Branch	Access Role	Role Description
<a href="#">PRODRETAIL</a>	Products Retail	<input checked="" type="checkbox"/>	<input type="checkbox"/>	BRANCH HQ	Product Company Role
<a href="#">PRODWHOLE</a>	Products Wholesale	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	BRANCH HQ	Product Company Role

Figure: The Dunning Letter Branch column

This column appears on the form and is available if the *Dunning Letter Management* feature is enabled on the [Enable/Disable Features](#) (CS100000) form and *Consolidated for Company* is selected in the **Prepare Dunning Letter** box on the **General** tab of the [Accounts Receivable Preferences](#) (AR101000) form.

## Changes to the Branches Form

On the [Branches](#) (CS102000) form, the **Dunning Process Settings** section has been added, as shown in the following screenshot. This section contains the **Dunning Letter Branch** check box.

The screenshot shows the 'PRODWHOLE - Products Wholesale' form with the 'BRANCH DETAILS' tab selected. The 'DUNNING PROCESS SETTINGS' section is highlighted in red and contains the following information:

- 1099-MISC Reporting Entity
- Dunning Letter Branch

Figure: The Dunning Process Settings section

This section appears on the form and the **Dunning Letter Branch** check box is available if the *Dunning Letter Management* feature is enabled on the [Enable/Disable Features](#) (CS100000) form and *Consolidated for Company* is selected in the **Prepare Dunning Letter** box on the [Accounts Receivable Preferences](#) (AR101000) form.



As is the case with this check box on the [Companies](#) (CS101500) form, if the check box is selected, when dunning letters are prepared, the system will use this branch as the originating branch of a dunning fee invoice and as the source of the name and address in each dunning letter.

## Changes to the Prepare Dunning Letters Form

On the [Prepare Dunning Letters](#) (AR521000) form, the **Company** or **Company/Branch** lookup box has been added to the Selection area; the **Company** box is shown in the following screenshot.

The screenshot shows the 'Prepare Dunning Letters' form. At the top, there are navigation buttons (refresh, back, forward, search) and a search bar. Below these are several input fields: 'Company' (set to 'PRODUCTS - Revision Two F'), 'Customer Class', 'Dunning Letter Date' (set to '7/18/2022'), and two checkboxes: 'Add Coming-Due Invoices' (checked) and 'Add Open Payments and Credit Memos' (unchecked). Below the form fields is a table with the following columns: Customer Class, Customer, Customer Name, Earliest Due Date, Branch, Overdue Balance, Number of Overdue Docume, Customer Balance, Number of Docume, Dunning Letter Level, Currency, and Last Dunning Letter Date. The table contains 15 rows of customer data.

Customer Class	Customer	Customer Name	Earliest Due Date	Branch	Overdue Balance	Number of Overdue Docume	Customer Balance	Number of Docume	Dunning Letter Level	Currency	Last Dunning Letter Date
LOCAL	AACUSTOMER	Alta Ace	3/13/2022	PRODWHOLE	275,034.94	3	275,034.94	3	1	USD	
KEY	ABARTENDE	USA Bartending School	3/2/2022	PRODWHOLE	199,971.00	3	199,971.00	3	1	USD	
KEY	ABCHOLDING	ABC Holdings Inc	3/19/2022	PRODWHOLE	252,026.25	2	252,026.25	2	1	USD	
LOCAL	ACTIVESTAF	Active Staffing Service	3/30/2022	PRODWHOLE	7,000.00	1	7,000.00	1	1	USD	
LOCAL	ALPHABETLD	Alphabetland School Center	3/2/2022	PRODWHOLE	2,800.00	1	2,800.00	1	1	USD	
LOCAL	ANTUNSWEST	Antun's of Westchester	3/2/2022	PRODWHOLE	7,000.00	1	7,000.00	1	1	USD	
LOCAL	APOSTELSCH	Church of The Apostles	3/2/2022	PRODWHOLE	83,396.98	2	83,396.98	2	1	USD	
LOCAL	ARTCAGES	Artcages	3/2/2022	PRODWHOLE	67,840.00	2	67,840.00	2	1	USD	
LOCAL	BEAUTYSCH	New York International Beauty School Ltd	3/2/2022	PRODWHOLE	35,800.00	2	35,800.00	2	1	USD	
LOCAL	BIBIMBAB	Bibimbab Korean Restaurant	3/19/2022	PRODWHOLE	78,131.20	2	78,131.20	2	1	USD	
LOCAL	BNRCONTRAC	BNR Contractors	12/15/2020	PRODWHOLE	0.00	2	0.00	2	1	USD	
LOCAL	BORDERSHOP	Borders Books, Music & Cafe	3/30/2022	PRODWHOLE	7,000.00	1	7,000.00	1	1	USD	
LOCAL	BOULDERCR	Boulder Couriers Denver	3/2/2022	PRODWHOLE	7,000.00	1	7,000.00	1	1	USD	
LOCAL	BRASSKEY	Brass Key Bar	3/30/2022	PRODWHOLE	120,700.00	1	120,700.00	1	1	USD	

Figure: The Company lookup box

If on the **General** tab of the [Accounts Receivable Preferences](#) (AR101000) form, *For Each Branch* is selected in the **Prepare Dunning Letters** box, this box is labeled as **Company/Branch** on the UI and is filled in by default with the branch to which the user is signed in. The user can select a company group, company, or branch in this box.

If on the [Accounts Receivable Preferences](#) form, *Consolidated for Company* is selected in the **Prepare Dunning Letters** box, this box is labeled as **Company** on the UI (as is the case in the screenshot above) and is filled in by default with the company of the branch to which the user is signed in. The user can select another company in this box. (Company groups and branches are not shown.)

This box appears on the form if *For Each Branch* or *Consolidated for Company* is selected in the **Prepare Dunning Letters** box on the [Accounts Receivable Preferences](#) form, regardless of whether the *Multiple Base Currencies* feature is enabled.

In the table on the form, the system loads the data related to the entity selected in the **Company** or **Company/Branch** box. The system creates dunning letters and dunning fee invoices based on the consolidation option selected on the [Accounts Receivable Preferences](#) form. For example, if *For Each Branch* is selected in the **Prepare Dunning Letters** box and a company group is selected in the **Company/Branch** lookup box, the system will prepare letters for each branch of the selected company group for which overdue documents exist.

If the *Multiple Base Currencies* feature is enabled, the **Currency** column on the [Prepare Dunning Letters](#) form shows the base currency of the branch shown in the **Branch** column. The option selected in the **Prepare Dunning Letters** box on the [Accounts Receivable Preferences](#) form determines what this branch is as follows:

- If *For Each Branch* is selected, the originating branch of the customer documents

- If *Consolidated for Company* is selected, the dunning letter branch specified on the [Companies](#) (CS101500) form

## Changes to the Print/Release Dunning Letters Form

On the [Print/Release Dunning Letters](#) (AR522000) form, the **Company/Branch** lookup box has been added to the Selection area, as shown in the following screenshot.

The screenshot shows the 'Print / Release Dunning Letters' form. The 'Company/Branch' dropdown is set to 'PROD'. A dropdown menu is open, showing a tree structure of company and branch options under 'PROD - Production Companies'. The table below lists dunning letters with columns for Dunning Letter Date, Dunning Letter Level, Overdue Balance, Dunning Fee, Currency, Final Reminder, Don't Print, Printed, Don't Email, and Emailed.

Dunning Letter Date	Dunning Letter Level	Overdue Balance	Dunning Fee	Currency	Final Reminder	Don't Print	Printed	Don't Email	Emailed
7/18/2022	1	275,034.94	0.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7/18/2022	1	199,971.00	0.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7/18/2022	1	252,026.25	0.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7/18/2022	1	7,000.00	0.00	USD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Figure: The Company/Branch lookup box**

If *For Each Branch* or *Consolidated for Company* is selected in the **Prepare Dunning Letters** box of the [Accounts Receivable Preferences](#) (AR101000) form, this box acts as a selection criteria for the letters in the table, regardless of whether the *Multiple Base Currencies* feature is enabled. A user can select a company group, company, or branch in this box.

If the *Multiple Base Currencies* feature is enabled, the **Currency** column appears on the form and shows the base currency of each dunning letter branch.

## Changes to the Dunning Letters Form

On the [Dunning Letter](#) (AR306000) form, if the *Multiple Base Currencies* feature is enabled, the **Currency** box appears on the form and shows the currency of the dunning letter branch.

## Changes to the Dunning Letter Report

The [Dunning Letter](#) (AR661000) report has been modified to support the new *Consolidated for Company* option in the **Prepare Dunning Letters** box of the [Accounts Receivable Preferences](#) (AR101000) form. When a user runs the report, the system displays it as follows, depending on the option selected in this box:

- If *Consolidated for Company* is selected, transactions related to all branches of the same company are included in one dunning letter. The dunning letter header shows the branch name and address of the branch for which the **Dunning Letter Branch** check box is selected on the [Branches](#) (CS102000) form.
- If *For Each Branch* is selected, transactions related to each branch are included in a separate dunning letter.
- If *Consolidated for All Companies* is selected, transactions related to all branches are included in a single dunning letter. In the dunning letter header, the system uses the address, phone number, and email address of the branch selected in the **Dunning Letter from Branch** box on the [Accounts Receivable Preferences](#) form.

## Upgrade Notes

During an upgrade to Acumatica ERP 2022 R2, on the [Accounts Receivable Preferences](#) (AR101000) form, the system inserts the option in the **Prepare Dunning Letters** box based on the state of the **Consolidate Dunning Letters for all Branches** check box as follows:

- If the **Consolidate Dunning Letters for all Branches** check box was selected, the *Consolidate for All Companies* option is inserted in the **Prepare Dunning Letters** box.
- If the **Consolidate Dunning Letters for all Branches** check box was cleared, the *For Each Branch* option is inserted in the **Prepare Dunning Letters** box.

If your organization uses customized reports, the system administrator should perform the steps described in *Upgrade Changes* in Release Notes for Developers.

# Finance: Other Improvements

In Acumatica ERP 2022 R2, multiple improvements to financial management processes have been introduced, as described below.

## Changes to the Selection of the Retained Earnings Account on the General Ledger Preferences Form

Early in the process of implementing Acumatica ERP, an administrator or an implementation consultant specifies various system-wide settings related to the general ledger on the *General Ledger Preferences* (GL102000) form. In the **Chart of Accounts Settings** section of the **General** tab, the lookup table that opens in the **Retained Earnings Account** box (see Item 1 in the following screenshot) lists accounts with the *Liability* type only (Item 2).

General Ledger Preferences

GENERAL

**NUMBERING SETTINGS**

- \* Batch Numbering Sequence: BATCH - GL Batch
- \* Import Numbering Sequence: TBIMPORT - GL Trial Balanc
- \* Schedule Numbering Sequence: SCHEDULE - Repeating Task
- \* Document Batch Numbering Se...: BATCH - GL Batch
- Reuse reference numbers in Journal Vouchers

**POSTING SETTINGS**

Generate Reversing En...: On Post

- Automatically Post on Release
- Restrict Access to Closed Periods
- Generate Consolidated Batches
- Automatically Release Reclassification Batches

**CHART OF ACCOUNTS SETTINGS**

- \* YTD Net Income Account: 33000 - Net Income
- \* Retained Earnings Account:   1

Sign of the Trial Balance: Select - Retained Earnings Account

**DATA ENTRY SETTINGS**

- Hold Batches on Entry
- Hold Vouchers on Entry

**Chart of Accounts Order**

- 1:Assets 2:Liabilities 3:Income
- 1:Assets 2:Liabilities 3:Income
- 1:Income 2:Expenses 3:Assets
- 1:Income and Expenses 2:Assets
- Custom Chart of Accounts O

**Select - Retained Earnings Account**


Account	Account Class	Type	Control Account Module	Description	Currency	Account Group
> 26000	RELCURLIAB	Liability		Due to Related Entity		
27001	OTHCURLIAB	Liability		Translation Gain / Loss		
30000	CAPITAL	Liability		Opening Bal Equity		
30100	CAPITAL	Liability		Capital Stock		
32000	RETEARN	Liability		Retained Earnings		

**Figure: Selection of the Retained Earnings account**







If the administrator enters an account with another type in the **Retained Earnings Account** box, the system displays an error message.

## The ACH and ACHBA Payment Methods

On the *Payment Methods* (CA204000) form, two predefined payment methods have been added. These payment methods—*ACH* and *ACHBA*—have been added. These payment methods are shown on the *Payment Methods* (CA2040PL) list of records in the following screenshot (Item 1). These payment methods have the *Direct Deposit* means of payment and use the predefined export scenarios and other settings for exporting AP payments to the Automated Clearing House (ACH).

 The existing *FEDWIRE* and *FEDWIREBA* payment methods (Item 2) are becoming obsolete and will be removed in future versions. While these payment methods can still be selected, we recommend that users select the *ACH* and *ACHBA* payment methods instead.

Payment Methods CUSTOMIZATION ▾ TOOLS ▾

Drag column header here to configure filter								
	Payment Method ID	Description	Means of Payment	Use in AP	Use in AR	Use in PR	Active	
>	<a href="#">ACH</a>	ACH	Direct Deposit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	<a href="#">ACHBA</a>	ACH Balanced	Direct Deposit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	<a href="#">AMEX</a>	American Express	Credit Card	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	<a href="#">CASH</a>	Cash Payment	Cash/Check	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<a href="#">CHECK</a>	Check	Cash/Check	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<a href="#">FEDWIRE</a>	Fedwire	Cash/Check	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<a href="#">FEDWIREBA</a>	Fedwire Balanced	Cash/Check	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<a href="#">MASTERCARD</a>	Mastercard	Credit Card	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	<a href="#">ONLINE</a>	eCommerce Online Payment	Credit Card	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	<a href="#">VISA</a>	Visa	Credit Card	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<a href="#">VISACORP</a>	Check payment for corporate card	Cash/Check	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	<a href="#">VISATOK</a>	Visa Tokenized	Credit Card	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**Figure: The predefined payment methods on the Payment Methods (CA2040PL) list of records**

During an upgrade to Acumatica ERP 2022 R2, the *ACH* and *ACHBA* payment methods will be added to the system only if payment methods with these names have not been defined manually in the tenant in a previous version.

# Integrations: Ability to Change the Dimensions of the Box on the Fly

In previous versions of Acumatica ERP, users could not change the dimensions of boxes used for packing of items on the [Shipments](#) (SO302000) form. The only way one could perform this task was opening the (CS207600) form and changing the settings of an existing box or creating a new box which made it difficult to understand if the box fit the items in the shipment or to re-use boxes received from vendors. In Acumatica ERP 2022 R2, the ability to change box dimensions on the [Shipments](#), [Pick, Pack, and Ship](#) (SO302020) forms (in Ship mode), or in the **Shop for Rates** dialog box on the [Sales Orders](#) (SO301000) form has been introduced.

## Changing the Dimensions of a Box in a Shipment

When a shipment is prepared for a sales order, the user can specify the parameters of the package for the shipment.

On the **Packages** tab of the [Shipments](#) (SO302000) form, if the user packs items to a custom box, whose dimensions differ from the dimensions of the boxes that have been predefined in the system, the user can now change the dimensions of the box in the new **Length**, **Width**, **Height** columns (shown in the following screenshot). Any changes made by the user to the values of **Length**, **Width**, **Height** columns on the **Packages** tab of the [Shipments](#) form will be reflected in the **Shop For Rates** dialog box of the [Sales Orders](#) (SO301000) form and on the **Packages** tab of the [Pick, Pack, and Ship](#) (SO302020) form in Ship mode for the shipment and vice versa.

Also, the **Linear UOM** column has been added to the **Packages** table on the [Shipments](#), [Pick, Pack, and Ship](#) forms and in the **Shop For Rates** dialog box of the [Sales Orders](#) form. The value of this column for the selected box is inherited from the **Linear UOM** column on the [Boxes](#) (CS207600) form.

[Shipments](#)  
000058 - FourStar Coffee & Sweets Shop

← ↻ 📄 ↺ + 🗑️ ⌂ < > >| CONFIRM SHIPMENT HOLD ...

Shipment Nbr.: 000058	Customer: COFFEESHOP - FourStar Coffee & Sweet	Shipped Quant... 4.00
Type: Shipment	Location: MAIN - Primary Location	Shipped Weight: 0.000000
Status: Open	Warehouse ID: WHOLESALE - Wholesale Warehouse	Shipped Volume: 0.000000
Operation: Issue	Workgroup:	Packages: 0
* Shipment Date: 1/30/2022	Owner:	Package Weight: 0.000000

Description: Shipment of jams

DETAILS ORDERS SHIPPING **PACKAGES**

Confirmer	Box ID	Type	Description	Length	Width	Height	Linear UOM	Weight	UOM	Declared Value	C.O.D. Amount
	LARGE	Manual		12	12	6	METER	0.0000	KG	0.0000	0.0000

Contents of Selected Package

Shipmer Split Line Nbr.	Inventory ID	UOM	Quantity
2	APJAM08	PIECE	2.00
4	ORJAM32	PIECE	2.00

**Figure: New Settings on the Packages tab**

If an external carrier service is used to deliver the package, the updated values of the **Length**, **Width**, **Height** columns are sent to the carrier service instead of the default values of the box dimensions to get the proper carrier rates.

# Integrations: Creation of a Shipping Manifest for the ShipEngine Carrier Service

In Acumatica ERP 2021R2, the [Create Manifest](#) (SO506000) form has been added in order to give the users the ability to create a shipping manifest for the EasyPost carrier service.






A manifest is a document that gathers the shipments that were created for a carrier on a specific calendar date. Some carriers require a printed manifest for their driver to speed up the pick-up process. When picking up the packages, the driver can scan the barcode to process all the packages at once instead of scanning them all one by one.


In Acumatica ERP 2022 R2, the ability to create a shipping manifest for the ShipEngine carrier service has been added on the [Create Manifest](#) form.

## The Create Manifest Form










The [Create Manifest](#) (SO506000) form is available in the **Processes** group of the **Sales Orders** workspace when the *Shipping Carrier Integration* feature is enabled in the [Enable/Disable Features](#) (CS100000) form (shown in the following screenshot). Users with the following roles have access to the form: *AcumaticaSupport*, *Administrator*.

Create Manifest



 CREATE    CREATE ALL    



\* Carrier:  

Shipment Date:

			<input type="checkbox"/>	Shipment Nbr.	Customer	Customer Name	Ship Via
>			<input type="checkbox"/>	<a href="#">004366</a>	ABARTENDE	USA Bartending School	FEDEX2 - FedEx Tw...
			<input type="checkbox"/>	<a href="#">004367</a>	ABCHOLDING	ABC Holdings Inc	FEDEX2 - FedEx Tw...
			<input type="checkbox"/>	<a href="#">004369</a>	ABARTENDE	USA Bartending School	FEDEX2 - FedEx Tw...

**Figure: The Create Manifest form**

On this form, the user can select a carrier in the **Carrier box** of the Selection area. The system lists all confirmed shipments for the selected carrier in the table. Then the user can select the unlabeled check box in the lines with shipments and create a shipping manifest for the ShipEngine or EasyPost carrier services by clicking **Process**. The user can also create a shipping manifest that includes all shipments in the table by clicking **Process All**.



A shipping manifest for the ShipEngine carrier service cannot be processed if it includes shipments that have more than 500 packages. Such shipments should be split to reduce the number of packages.

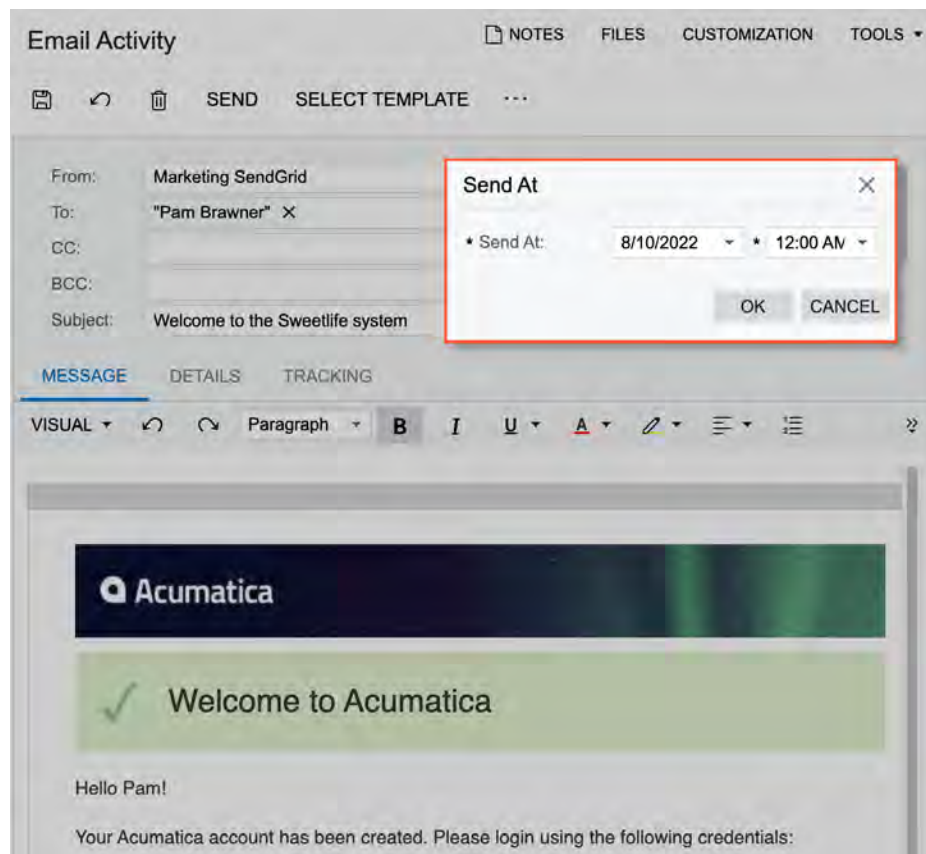
# Integrations: Enhancements to Integration with SendGrid

In earlier versions, integration with the [SendGrid](#) email platform was introduced. Acumatica ERP 2022 R2 introduces support for the ability to schedule an email delivery at a certain date and time and provides users with the ability to import designs that were created through the use of SendGrid for an email template.

## Scheduling an Email Delivery

When the integration with SendGrid is configured, a user can schedule the delivery of an email for a system email account configured to use the integration.

On the [Email Activity](#) (CR306015) form, the user creates an email to be sent from the email account that is connected to SendGrid and clicks **Send At** on the More menu. The system opens the **Send At** dialog box, where the user specifies the date and time of delayed email delivery, as the following screenshot shows.



**Figure:** The *Send At* dialog box

The system sends the data to SendGrid for processing, and upon receiving a confirmation, the system changes the email's status to *Scheduled* and displays the scheduled date and time in the **Send At** box on the **Details** tab.

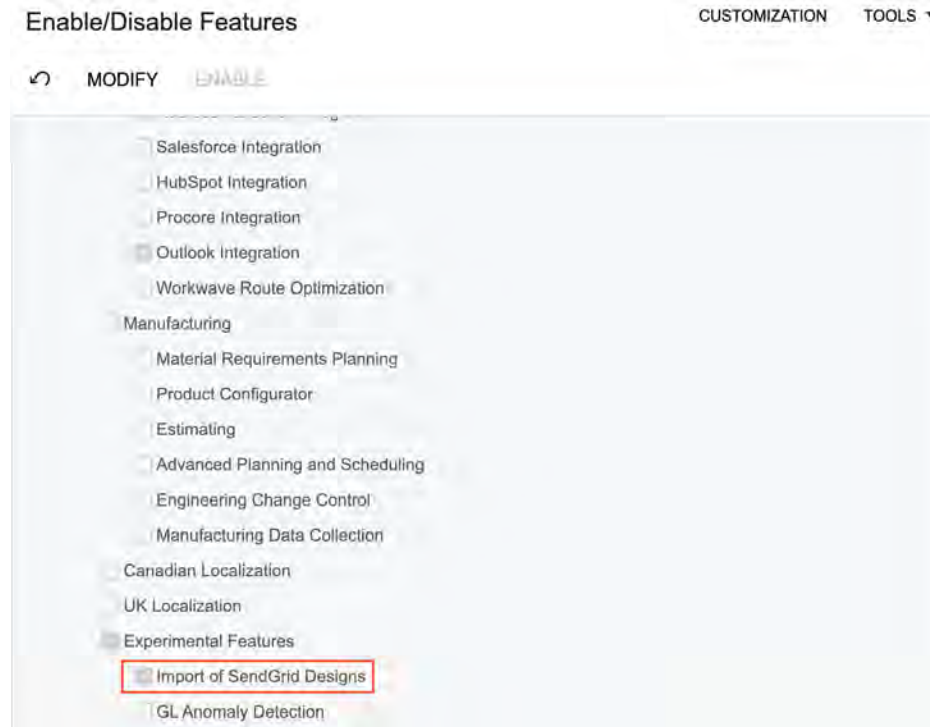
For the email activities with the *Scheduled* status, the **Cancel Sending** command is available on the More menu of the form. If a user cancels the sending of a scheduled email, the system clears the value of the **Send At** box and changes the email's status to *Draft*.

## Importing SendGrid Designs

The *Notification Templates* (SM204003) form has been renamed to [Email Templates](#). The **Import SendGrid Design** button has been added to the form toolbar. The button is displayed if the *SendGrid Integration* and *Import of*

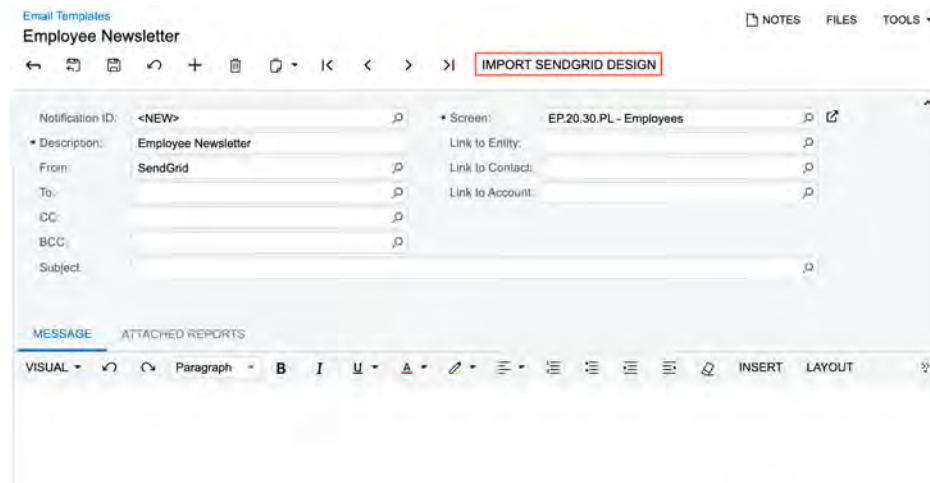


SendGrid Designs features have been enabled on the [Enable/Disable Features](#) (CS100000) form (see the following screenshot).



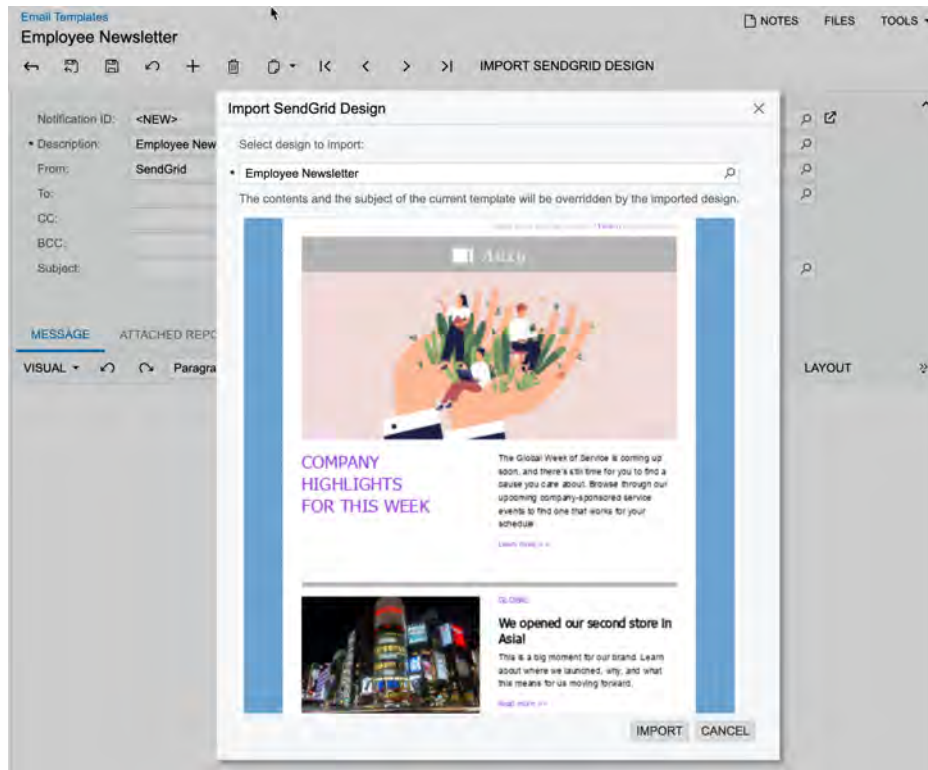
**Figure: Feature switch for importing SendGrid designs**

If an email account that has been configured for integration with the SendGrid email service is selected in the **From** box for an email template, the **Import SendGrid Design** button becomes available, as the following screenshot shows.



**Figure: The new Import SendGrid Design button**

When a user clicks **Import SendGrid Design**, the system opens the **Import SendGrid Design** dialog box, where the user selects a design to be imported by searching the list of the available templates (if any have been created in SendGrid). The following screenshot shows the **Import SendGrid Design** dialog box with the preview of the selected design loaded.



*Figure: The Import SendGrid Design dialog box*

When the user clicks **Import** in the dialog box, the system replaces the content in the **Subject** box of the Summary area and on the **Message** tab of the form. The user then can edit the imported content.

# Inventory and Order Management: Calculation of Inventory Turnover

In previous versions of Acumatica ERP, a user could evaluate the efficiency of the inventory management by using the functionality of ABC codes and movement classes.

Acumatica ERP 2022 R2 introduces the new *Inventory Turnover* (IN407010) inquiry form. By using this inquiry form, a user can calculate the stock item turnover, item average inventory for the selected period, and the average number of days (DSI) required to turn the average inventory into sales.

The inventory turnover is one of the main indexes of the inventory efficiency. This ratio can be used to achieve the following goals:

- Understand the number of times a stock item is sold and replaced during a period
- Calculate the number of days a stock item needs to be converted to sales
- Compare the benchmark ratio by the industry

## The Inventory Turnover Inquiry Form

In Acumatica ERP 2022 R2, the *Inventory Turnover* (IN407010) inquiry form (shown in the following screenshot) is available in the **Inquiries** category of the **Inventory** workspace.

Inventory ID	Description	Warehouse	UOM	Beginning Inventory (\$)	Beginning Inventory (Units)	Ending Inventory (\$)	Ending Inventory (Units)	Average Inventory (\$)	Average Inventory (Units)	Cost of Goods Sold (\$)	Qty. of Items Sold	Turnover Ratio (\$)	Days Sales of Inventory
APJAM32	Apple jam 32 oz	WHOLESALE	PIECE	0.0000	0.00	0.0000	100.00	0.0000	91.67	0.0000	0.00	-	-
LEMJAM96	Lemon jam 96 oz	RETAIL	PIECE	0.0000	0.00	0.0000	50.00	0.0000	46.83	0.0000	0.00	-	-
ORJAM32	Orange jam 32 oz	WHOLESALE	PIECE	0.0000	0.00	0.0000	150.00	0.0000	137.50	0.0000	0.00	-	-
PACKBOX	Packing box for juicers	WORKHOUSE	EA	0.0000	0.00	260.0000	100.00	238.3333	91.67	0.0000	0.00	0.0000	-
PACKTAPE	Packing tape	WORKHOUSE	METER	0.0000	0.00	20.0000	500.00	18.3333	458.33	0.0000	0.00	0.0000	-
PPEANUTS	Packing peanuts	WORKHOUSE	LITER	0.0000	0.00	150.0000	300.00	137.5000	275.00	0.0000	0.00	0.0000	-

*Figure: The Inventory Turnover form*

Before calculating the turnover, the user must specify criteria in the following boxes in the Selection area:

- **Company/Branch:** The company, branch, or a group of companies for which the user wants to calculate inventory turnover
- **From Period:** The first period of the period range for which inventory turnover will be calculated
- **To Period:** The last period of the period range for which inventory turnover will be calculated

The user can further narrow the results of the inquiry by specifying values in the following optional boxes in the Selection area:

- **Warehouse:** The warehouse of the items for which inventory turnover should be calculated.
- **Item Class:** The class of the items for which inventory turnover should be calculated.
- **Inventory ID:** The inventory ID of the item for which inventory turnover should be calculated. The user can click the **List** button next to this box and add rows with the items in the **Inventory Item List** dialog box (shown in the following screenshot).

Inventory ID	Description
APJAM32	Apple jam 32 oz
LEMJAM96	Lemon jam 9...

*Figure: The Inventory Item List dialog box*

After specifying values in the mandatory and optional boxes in the Selection area, the user clicks the **Calculate Turnover** button on the form toolbar. If a warehouse is not specified, the system calculates the turnover of the listed stock items (those that meet the other selection criteria) separately for each warehouse, with each item having one row per warehouse.

The system saves the results of each turnover calculation. If the same values are specified in the **Company/Branch**, **From Period**, and **To Period** boxes as were specified for one of the previous calculations, the system displays the existing calculation.

## Calculation Rules

The turnover ratio is calculated according the following formula:  $\text{Turnover} = \text{Cost of Goods Sold} / \text{Average Inventory}$ . The *Cost of Goods Sold* value represents the total cost of the sold quantity of the item and is calculated in the base currency, and the *Average Inventory* value represents the average inventory cost of the item within a selected period range and is calculated in the base currency and unit.

Depending on the business needs, the user can adjust which documents and lines should be taken into account in the calculation of the *Cost of Goods Sold* value. In Acumatica ERP 2022 R2, the **Inventory Turnover Settings** section has been added to the [Inventory Preferences](#) (IN101000) form (shown in the following screenshot) to give an administrative user the ability to configure the calculation.

## Inventory Preferences

Inventory Preferences

GENERAL MAILING & PRINTING WAREHOUSE MANAGEMENT GS1 UNITS

**NUMBERING SETTINGS**

\* Batch Numbering Sequence: BATCHIN - IN Batch

\* Receipt/Transfer Numbering Sequence: INRECEIPT - IN Receipt

\* Issue Numbering Sequence: INISSUE - IN Issue

\* Adjustment Numbering Sequence: INADJUST - IN Adjustment

\* Kit Assembly Numbering Sequence: INKITASSY - Predefined

\* PI Numbering Sequence: PIID - Physical Inventory ID

\* Replenishment Numbering Sequence: INREPL - IN Replenishment

**INVENTORY OPTIONS**

Replan Back Orders

Allocate Items in Documents on Hold

**ACCOUNT SETTINGS**

AR Clearing Account: 11010 - AR Accrual Account

\* In-Transit Branch: HEADOFFICE - SweetLife H

\* In-Transit Account: 12300 - Goods in Transit

\* Work In-Progress Account:

**POSTING SETTINGS**

Update GL

Post Summary on Updating GL

Automatically Post on Release

**DATA ENTRY SETTINGS**

Hold Documents on Entry

Validate Document Totals on Entry

Add One Unit per Barcode

Automatically Add Receipt Line for Barcode

Default Stock Item Class:

Default Non-Stock Item Class:

**DEFAULT REASON CODES**

\* Receipt Reason Code: INRECEIPT - Direct Receipts

\* Issue/Return Reason Code: INISSUE - Direct Issues

\* Adjustment Reason Code: INADJUST - Direct Adjustmer

\* Phys.Inventory Reason Code: PHYINVADJ - Physical Invent

**PHYSICAL INVENTORY SETTINGS**

Use Tags

Last Tag Number: 0

Turnover Periods per Year: 12

Release PI Adjustment Automatically

**INVENTORY TURNOVER SETTINGS**

Calculation Rules:

Include Sales

Include Production Orders

Include Assemblies

Include Issues and Adjustments

Include Transfers

**Figure: The Inventory Turnover Settings section**

The section contains the following check boxes:

- Include Sales:** A check box that indicates that sales of stock items are taken into account in the calculation of the *Cost of Goods Sold* value. This check box is selected and unavailable. Because it is selected, the following lines of inventory transactions increase the *Cost of Goods Sold* value when the inventory transactions are released:

  - Lines with the *Invoice*, *Debit Memo*, and *Issue* transaction types in inventory issues that are generated for sales-related documents
  - Lines with the *Invoice* and *Debit Memo* transaction types in inventory issues that are created directly on the *Issues* (IN302000) form

The following lines of inventory transactions decrease the *Cost of Goods Sold* value when the inventory transactions are released:

  - Lines with the *Return* and *Credit Memo* transaction types in inventory issues that are generated for sales-related documents
  - Lines with the *Credit Memo* transaction type in inventory issues that are created directly on the *Issues* form
- Include Production Orders:** A check box that indicates (if selected) that the lines of inventory transactions from documents related to the manufacturing functionality are taken into account in the calculation of the *Cost of Goods Sold* value. By default, this check box is cleared. When it is selected, the following lines of inventory transactions increase the *Cost of Goods Sold* value when the inventory transactions are released:

  - Lines with the *Issue* transaction type in inventory issues generated from documents related to the manufacturing functionality

- Lines with negative quantities in inventory adjustments generated from documents related to the manufacturing functionality

Lines of inventory transactions generated for material returns decrease the `Cost of Goods Sold` value when the inventory transactions are released.

The **Include Production Orders** check box appears on the *Inventory Preferences* form only if the *Manufacturing* feature is enabled on the *Enable/Disable Features* (CS100000) form.

- **Include Assemblies:** A check box that indicates (if selected) that the assembly and disassembly operations for kits and their components are taken into account in the calculation of the `Cost of Goods Sold` value. By default, this check box is cleared.

This check box appears on the *Inventory Preferences* form only if the *Kit Assembly* feature is enabled on the *Enable/Disable Features* form.

- **Include Issues and Adjustments:** A check box that indicates (if selected) that the following lines of inventory transactions are taken into account in the calculation of the `Cost of Goods Sold` value when the inventory transactions are released:

- Lines with the *Issue* transaction type in inventory issues that are created directly on the *Issues* form
- Lines with a negative quantity in inventory adjustments that are created directly on the *Issues* form or generated on release of a PI count

This check box is cleared by default.

- **Include Transfers:** A check box that indicates (if selected) that lines of outgoing transfers are taken into account in the calculation of the `Cost of Goods Sold` value. This check box is cleared by default.



Transfers between different locations of the same warehouse are not taken in account in the calculation of the `Cost of Goods Sold` value.

If the inventory turnover settings have been specified and the updated settings include documents that have already been processed in the system, the user needs to recalculate the quantities of the stock items on the *Recalculate Inventory* (IN505000) form with the **Rebuild Item History** check box selected in the Selection area. The recalculation must be performed for all periods that will be included in the turnover calculation.

## Manage Turnover History form

The calculations of turnover are stored in the database. Acumatica ERP 2022 R2 gives users the ability to create new calculations and manage the existing calculation results on the new *Manage Turnover History* (IN507000) form (shown in the following screenshot).

Manage Turnover History

* Action:	Calculate Turnover
* Company/Branch:	HEADOFFICE - SweetLife Head Offi...
* From Period:	01-2022
* To Period:	07-2022
* Calculate By:	Selected Range

<input type="checkbox"/>	Branch	From Period	To Period	Warehouse	Item Class	Inventory ID	Calculation Date and Time
> <input type="checkbox"/>	HEADOFFICE	01-2022	07-2022				

**Figure: The Manage Turnover History form**

The user can select one of the following options in the **Action** box:

- *Calculate Turnover*: When this option is selected, the user can calculate the turnover for warehouses of the branch, company, or a group of companies. Also, the *Calculate By* box appears in the Selection area, and the user can select one of the following options.
  - *Period*: The system will calculate the turnover for each period in the range that is specified in **From Period** and **To Period** boxes.
  - *Year*: The system will calculate the turnover for each calendar year in the range that is specified in **From Period** and **To Period** boxes.
  - *Selected Range* (default): The system will calculate the turnover for the selected period range that is specified in **From Period** and **To Period** boxes.
- *Delete Records*: When this option is selected, the system lists in the table all existing calculations for the range that is specified in **From Period** and **To Period** boxes. If these boxes are empty, the system lists all calculations that exist in the system. The user can select the unlabeled check box in any lines with turnover calculation records and delete the lines by clicking **Process** on the form toolbar; alternatively, the user can delete all records by clicking **Process All**.

An administrative user can automate the turnover calculation by using automation schedules. For automated turnover calculation, the administrative user can specify a period range or number of periods before the current period with the new *Calculate for Last N Periods* filter value on the **Filter Values** tab of the **Automation Schedules** form (shown in the following screenshot).

Active	Field Name	Relatv	Value	Ignore Error
<input checked="" type="checkbox"/>	Action	<input type="checkbox"/>	Calculate Turnover	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Company/Branch	<input type="checkbox"/>	HEADOFFICE	<input type="checkbox"/>
<input type="checkbox"/>	From Period	<input type="checkbox"/>	01-2022	<input type="checkbox"/>
<input type="checkbox"/>	To Period	<input type="checkbox"/>	07-2022	<input type="checkbox"/>
<input type="checkbox"/>	Calculate By	<input type="checkbox"/>	Period	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Calculate for Last N Period(s)	<input type="checkbox"/>	6	<input type="checkbox"/>

Figure: The new filter in the Automation Schedules form

## Changes to the Historical Inventory Balance and Historical Inventory Valuation Reports

During the implementation of the *Inventory Turnover* (IN407010) inquiry form, changes have been made in Acumatica ERP 2022 R2 to the release of inventory transactions, which record the movement of inventory items to and from warehouses. During this release, some data related to the documents that caused these movements of inventory items is computed differently, causing differences in particular columns of the *Historical Inventory Balance* (IN616000) and *Historical Inventory Valuation* (IN617000) reports. The specific changes depend on the documents that caused the movements of inventory items

During the release of particular inventory transactions, data related to the manufacturing documents that caused these movements of inventory items is computed differently as follows:

- During the release of an inventory issue that contains a line with the *Issue* transaction type and that is generated from documents related to the manufacturing functionality, the amount and quantity of the line increases the value in the **Assembly Out** column of the *Historical Inventory Balance* and *Historical Inventory Valuation* reports. Before the change, the amount and quantity increased the value in the **Issue** column of these reports.



- During the release of an inventory issue that contains a line with the *Return* transaction type and that is generated from documents related to the manufacturing functionality, the amount and quantity of the line decreases the value in the **Assembly Out** column of the *Historical Inventory Balance* and *Historical Inventory Valuation* reports. Before the change, the amount and quantity decreased the value in the **Issue** column of these reports.
- During the release of an inventory receipt that contains a line with the *Receipt* transaction type and that is generated from documents related to the manufacturing functionality, the amount and quantity of the line increases the value in the **Assembly In** column of the *Historical Inventory Balance* and *Historical Inventory Valuation* reports. Before the change, the amount and quantity increased the value in the **Receipt** column of these reports.
- During the release of an inventory adjustment that contains a line with a negative quantity and that is generated from documents related to the manufacturing functionality, the amount and quantity of the line increases the value in the **Assembly Out** column of the *Historical Inventory Balance* and *Historical Inventory Valuation* reports. Before the change, the amount and quantity increased the value in the **Adjustment** column of these reports.

During the release of particular inventory transactions, data related to the sales orders that caused these movements of inventory items is computed differently as follows:

- During the release of an inventory issue that contains a line with the *Issue* transaction type and that is generated from a sales order, the amount and quantity of the line increases the value in the **Sales** column of the *Historical Inventory Balance* and *Historical Inventory Valuation* reports. Before the change, the amount and quantity increased the value in the **Issue** column of these reports.
- During the release of an inventory issue that contains a line with the *Return* transaction type and that is generated from a sales order, the amount and quantity of the line increases the value in the **Credit Memo** column of the *Historical Inventory Balance* and *Historical Inventory Valuation* reports. Before the change, the amount and quantity decreased the value in the **Issue** column of these reports.

During the release of particular inventory transactions, data related to the purchase orders that caused these movements of inventory items is computed as follows:

- During the release of an inventory issue that contains a line with the *Issue* transaction type and that is generated from a purchase order, the amount and quantity of the line decreases the value in the **Receipt** column of the *Historical Inventory Balance* and *Historical Inventory Valuation* reports. Before the change, the amount and quantity increased the value in the **Issue** column of these reports.

During the release of directly entered inventory transactions, data related to these transactions is computed as follows:

- When the user releases an IN adjustment with a nonzero quantity:
  - The positive amount and quantity increases the value in the **Receipt** column of the *Historical Inventory Balance* and *Historical Inventory Valuation* reports. Before the change, the amount and quantity increased the value in the **Adjustment** column of these reports.
  - The negative amount and quantity increases the value in the **Issue** column of the *Historical Inventory Balance* and *Historical Inventory Valuation* reports. Before the change, the amount and quantity decreased the value in the **Adjustment** column of these reports.
- When the user releases an inventory issue that contains a line with the *Return* transaction type, the amount and quantity of the line increases the value in the **Receipt** column of the *Historical Inventory Balance* and *Historical Inventory Valuation* reports. Before the change, the amount and quantity decreased the value in the **Issue** column of these reports.



# Inventory and Order Management: Conversion of the Stock Status of the Item

In Acumatica ERP 2022 R2, the ability to change the stock status of items has been added. This means that users can now convert stock items to non-stock items and non-stock items to stock items. These new capabilities increase the versatility of item-related scenarios.

A user can change the status of a specific item on the form where it was created or use a new mass-processing form to change the stock status of multiple items. Also, an inquiry form has been added to display a log of converted items.

The conversion of stock status of items is available if the *Inventory* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.



The UI changes related to this new functionality do not appear if at least one of the following features is enabled on the [Enable/Disable Features](#) (CS100000) form: *Manufacturing*, *Projects*, *Time Management*, *Service Management*, and *Payroll*.

## Conversion Scenarios

The following scenarios illustrate the possible usage of the conversion of the item stock status:

- A company is going to stop selling a certain type of goods, which is recorded as a stock item in the system. The company does not plan to purchase this item for reselling it. The company can issue the remaining quantity from the stock and then convert the stock item in the system to a non-stock item to stop tracking the item in inventory.
- A company has bought prototypes of several devices. These items are registered as non-stock items in the system. After successful testing of these prototypes, the company has decided to make a purchase order for a large quantity of the devices for further reselling. To be able to track the devices in inventory, the non-stock items can be converted to stock items.

## Items That Can Be Converted

An item must meet particular conditions for its stock status to be changed. When a user clicks a command or button to begin the process of changing the stock status of one item or multiple items, the system checks the conditions in the following table to be sure the items are eligible for conversion. The following table summarizes the conditions that the system checks before it begins the process of converting each item.

**Table: Item Eligibility for Conversion**

Type of Item	Condition
Stock or non-stock	All documents that include the item must be processed to completion.
Stock	The quantity of the item in stock must be zero.
Non-stock	On the <b>General</b> tab of the <a href="#">Non-Stock Items</a> (IN202500) form, the item must have the <i>Non-Stock Item</i> type, and the <b>Require Receipt</b> and <b>Require Shipment</b> check boxes must be selected.
Stock or non-stock	The item cannot be a kit. That is, the <b>Is a Kit</b> check box is cleared on the <b>General</b> tab of the <a href="#">Stock Items</a> (IN202500) or <a href="#">Non-Stock Items</a> form.

Type of Item	Condition
Stock	The item is not a matrix item. That is, the <b>Template ID</b> box is empty on the <b>General</b> tab of the <a href="#">Stock Items</a> form.

## New Item Conversion Commands

New commands for converting the stock status of items have been added to the More menu of the item creation forms: **Convert to Non-Stock Item** has been added to the [Stock Items](#) (IN202000) form, and **Convert to Stock Item** has been added to the [Non-Stock Items](#) (IN202000) form. Each of these commands can be used to change the stock status of the item selected on the form.

The use of these commands is described in the *Conversion of the Item's Stock Status on the Stock Items Form* and *Conversion of the Item's Stock Status on the Non-Stock Items Form* sections of this topic.

## New Mass-Processing Form for Changing Stock Statuses

The new [Change Stock Status of Items](#) (IN503000) mass-processing form has been added to the system (shown in the following screenshot). The new mass-processing form is available in the **Processes** category of the **Inventory** workspace.

Change Stock Status of Items

PROCESS PROCESS ALL

STOCK ITEM SETTINGS

Action: Convert Non-Stock to Stock

Item Class: JAM - Jam

Valuation Method: Average

Inventory ID: LIST

Posting Class: FDI - Food Items

Lot/Serial Class: DEFAULT

Inventory ID	Description	Type	Valuation Method	Item Class	Posting Class	Lot/Serial Class	Base Unit	Tax Category
DEPOSIT	Contract deposit	Non-Stock Item	Standard		LABOR		ITEM	EXEMPT
EMPTEA	Emperor's Fate - Rare Ceylon tea	Non-Stock Item	Standard		NONSTOCK		BOX	EXEMPT
GIFTWRAP	Gift Wrapping	Non-Stock Item	Standard		NONSTOCK		EA	EXEMPT
KINGTEA	King's Destiny - Rare Ceylon tea	Non-Stock Item	Standard		NONSTOCK		BOX	EXEMPT
OFLCOURSE	Home canning courses at customer's place...	Non-Stock Item	Standard	TRAINING	AOL		DAY	EXEMPT

Figure: The Change Stock Status of Items mass-processing form

In the Selection area of the mass-processing form, the following options are available in the **Action** box:

- **Convert Non-Stock to Stock:** When this option is selected, the system displays non-stock items in the table. The user can narrow the list of items by specifying an item class, an item, or both settings in the Selection area. In the **Stock Item Settings** section, the user must specify the settings of stock items to which the non-stock items will be converted. That is, the **Item Class**, **Posting Class**, **Valuation Method**, and **Lot/Serial Class** boxes must be filled in
- **Convert Stock to Non-Stock:** When this option is selected, the system displays stock items in the table. The user can narrow the list of items by specifying an item class, an item, or both settings in the Selection area. In the **Non-Stock Item Settings** section, the user can specify the settings of non-stock items to which the stock items will be converted. The **Posting Class** setting is mandatory, and the **Item Class** setting is optional.

For the new non-stock items, the system inserts the *Non-Stock Item* type and selects the **Require Receipt** and **Require Shipment** check boxes on the **General** tab of the [Non-Stock Items](#) (IN202000) form; these settings are unavailable for editing.

## Item Conversion Log Inquiry Form

A new [Item Conversion Log](#) (IN408500) inquiry form has been added to the system (shown in the following screenshot). On this form, users can view the details of each item conversion operation, including the date of the

conversion, the user who converted the item, the form on which the item was converted, and new stock status of the item after conversion (in the **Converted To** column). The new inquiry form is available in the **Inquiries** category of the **Inventory** workspace.

Item Conversion Log

⏪ ⏩ ⏴ ⏵

Drag column header here to configure filter

Inventory ID	Description	Converted To	User Name	Full Name	Conversion Date and Time	Converted On
> DEPOSIT	Contract deposit	Stock Item	gibbs	Kimberly Gibbs	8/26/2022 8:...	IN 50.30.00
GIFTWRAP	Gift Wrapping	Stock Item	gibbs	Kimberly Gibbs	8/26/2022 8:...	IN 50.30.00
KINGTEA	King's Destiny - Rare Ceylon tea	Stock Item	gibbs	Kimberly Gibbs	8/26/2022 8:...	IN 50.30.00
EMPTEA	Emperor's Fate - Rare Ceylon tea	Stock Item	gibbs	Kimberly Gibbs	8/26/2022 8:...	IN 50.30.00
QFLCOURSE	Home canning courses at customer's place...	Stock Item	gibbs	Kimberly Gibbs	8/26/2022 8:...	IN 50.30.00

Figure: The Item Conversion Log inquiry form

## Conversion of the Item's Stock Status on the Stock Items Form

When the user invokes the **Convert to Non-Stock Item** command on the [Stock Items](#) (IN202500) form for a stock item, the system checks whether the quantity of the item in stock is zero and whether there are the documents with this item that have not been processed to completion. If these conditions are not met, the system shows an error message, and the conversion is prohibited.

If the quantity is zero and all documents with this item have been processed, the system opens the item on the [Non-Stock Items](#) (IN202000) form. On the **General** tab, the system inserts the *Non-Stock Item* type and selects the **Require Receipt** and **Require Shipment** check boxes for the new non-stock item; these settings are unavailable for editing. Some settings—such as tax category, default warehouse, UOMs, price and cost information, and deferrals—are inherited from the stock item settings. Once the item class is selected for the non-stock item, the inherited settings are not replaced with the settings of the new item class. The user can change these settings manually. The conversion of the item is not complete until the user saves the item on the [Non-Stock Items](#) form.

When the conversion is complete, the user can view all the reports related to this item for the periods when it was a stock item. The user can also reverse AP bills and SO invoices and reopen sales and purchase orders that contain the item as a stock item. In the reopened order, the lines with the converted item cannot be edited.

When the user adds the converted item to any new documents, the item is processed as any other non-stock item would be.

If the COGS account specified in the **Shipped-Not-Invoiced Account** box on the [Order Types](#) (SO201000) form was used in a sales order, a shipment for this sales order was confirmed, and the inventory was updated for a stock item that was converted to a non-stock item later, then when you release the SO invoice after the conversion, the COGS account is copied from the non-stock item settings.

## Conversion of the Item's Stock Status on the Non-Stock Items Form

When the user invokes the **Convert to Stock Item** command on the [Non-Stock Items](#) (IN202000) form for a non-stock item, the system checks whether there are documents with this item that have not been processed to completion. If any documents with the item have not been processed to completion, the system shows an error message, and the conversion is prohibited.

If all documents with this item have been processed to completion, the system opens the item on the [Stock Items](#) (IN202500) form. Some settings—such as tax category, default warehouse, UOMs, price and cost information, and deferrals—are inherited from the non-stock item settings. Once the item class is selected for the non-stock item, the inherited settings are not replaced with the settings of the new item class. The user can change these settings manually. The conversion of the item is not complete until the user saves the item on the [Stock Items](#) form.

The user can reverse AP bills, SO invoices, AR invoices, cash entry documents, cash sale documents, and void quick checks that contain the item as a non-stock item. The user can also reopen sales and purchase orders that contain the item as a non-stock item. In the reopened order, the lines with the converted item cannot be edited.

When the user adds the converted item to any new documents, the item is processed as any other non-stock item would be.

If the **Accrue Cost** check box was selected on the **Price/Cost** tab of the *Non-Stock Items* form for the non-stock item, and a shipment was confirmed with this item but no invoice was prepared, then after the conversion to the stock item, when the user releases the SO invoice for the shipment, the system will not post any transactions to Cost of Goods Sold and Expense Accrual accounts. The system will show the item's standard cost (if the standard cost is defined) from this invoice in the sales profitability reports.

## Limitations After Item Conversion

The following limitations apply to items that have been converted:

- The user cannot process a return of the converted item by selecting the unlabeled check box in PO receipt line on the *Purchase Receipts* (PO302000) form in a purchase receipt that was created before the conversion and clicking **Return** on the form toolbar. To process the return of the converted item, the user should add the item directly to a PO return document on the *Purchase Receipts* form.
- The user cannot process a landed cost for a PO receipt line with the converted item if the purchase receipt was created before the conversion. To add the landed cost amount for the converted item, the user should use the *Adjustments* (IN303000) form if it was a non-stock item that was converted to a stock item or the *Journal Transactions* (GL301000) form if it was a stock item that was converted to a non-stock item.
- If a debit adjustment is created on the reversal of an AP bill linked to a purchase order or purchase receipt, and the adjustment includes a non-stock item that was converted to a stock item after the release of the bill, the **Inventory ID** column on the **Details** tab of the *Bills and Adjustments* (AP301000) will be empty for the line with this stock item. The **Account** and **Subaccount** columns on this tab will be empty for all lines with converted stock and non-stock items. The user should manually specify the value of these columns for the lines with converted items. On release of this debit adjustment, the purchase receipt and purchase order lines with the converted items will not be marked as unbilled.
- If a shipment contains only non-stock items and at least one of the items was converted to a stock item, the shipment cannot be corrected.

## Conversion of Items with Multiple Base Currencies

If the **Multiple Base Currencies** feature is enabled on the *Enable/Disable Features* (CS100000) form when an item is converted, the currency-specific item settings are inherited only for the base currency of the current branch.

## Vendor and Customer Prices and Discounts in Converted Items

If vendor or customer prices are defined and vendor or customer discounts are applied to a stock or non-stock item, these prices and discounts will be retained for the converted item.

# Inventory and Order Management: Selection of a Cost Layer Type for Inventory Transactions

In earlier versions of Acumatica ERP, a separate cost center for project costs was introduced. Acumatica ERP 2022 R2 has expanded this functionality by adding the ability to select the type of the cost layer that will be affected by the release of inventory transactions.

## New Settings on Inventory Forms

On the [Receipts](#) (IN301000), [Issues](#) (IN302000), [Adjustments](#) (IN303000), and [Transfers](#) (IN304000) forms, the new **Cost Layer Type** column has been added to the **Details** tab (shown in the screenshot below for the [Receipts](#) form). The option in the column defines the type of the cost layer affected by the inventory transaction in the row.



The **Cost Layer Type** column appears on these forms only if the *Project-Specific Inventory* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

The column has the following options:

- *Normal* (default): The cost layer for inventory transactions that are not related to project tracked by quantity and cost.
- *Project*: A project-specific cost layer for inventory transactions which are created for project items. This option can be used only for projects that have the *Track by Project Quantity and Cost* option selected on the **Inventory Tracking** box on the **Summary** tab of the [Projects](#) (PM301000) form.

Also, on the [Transfers](#) form, the **To Cost Layer Type** column has been added to the **Details** tab. The **To Cost Layer Type** column appears by default only for single-step transfers.

The screenshot shows the 'Receipts' form for 'The receipt of apples'. The 'DETAILS' tab is active. The table below shows the line item details:

Branch	Inventory ID	Warehouse	Location	Quantity	UOM	Unit Cost	Ext. Cost	Reason Code	Cost Layer Type	Project
HEADOFFICE	APPLES	WHOLESALE	MAIN	100.00	LB	2.2900	0.00		Normal	X

**Figure: The new Cost Layer Type column**

If a user is creating an inventory document manually on any form where the cost layer type can be specified and the user intends to select the *Project* option in the **Cost Layer Type** column (and in the **To Cost Layer Type** column for single-step transfers), the user should specify this option before adding the settings of the project to the line.

In the application database, the new `INCostCenter` table has been added to support this functionality. This table will now store the parameters of the cost centers, including project cost centers (the table will be used instead of the `PMCostCenter` table).

# Inventory and Order Management: Other Improvements

In Acumatica ERP 2022 R2, improvements to order management processes have been introduced, as described below.

## Changes to the Copying Settings for Notes and Attachments

In previous versions of Acumatica ERP, the copying settings of notes and attachments were situated in the **Order Settings** section of the **General** tab of the *Order Types* (SO201000) form along with other settings, which could reduce the visibility of the settings and degrade the user experience. These settings are check boxes that determine whether notes and attachments are copied when an order of the order type is copied.

In Acumatica ERP 2022 R2, a new **Copying Settings** section has been added to the **General** tab of the *Order Types* form. The copying settings of notes and attachments have been moved to the new section (see the following screenshot).

Order Types  
SO - Sales Order

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ORDER SETTINGS	ACCOUNTS RECEIVABLE SETTINGS
* Order Numbering Sequence: <input type="text" value="SOORDER"/>	* Invoice Numbering Sequence: <input type="text" value="ARINVOICE"/>
Days To Keep: <input type="text" value="0"/>	<input type="checkbox"/> Mark as Printed
<input type="checkbox"/> Hold Orders on Entry	<input type="checkbox"/> Mark as Emailed
<input type="checkbox"/> Hold Document on Failed Credit Check	<input type="checkbox"/> Hold Invoices on Entry
<input type="checkbox"/> Require Control Total	
<input type="checkbox"/> Bill Separately	<b>POSTING SETTINGS</b>
<input type="checkbox"/> Ship Separately	Use Sales Account from: <input type="text" value="Inventory Item"/>
<input checked="" type="checkbox"/> Calculate Freight	* Freight Account: <input type="text" value="51300 - COGS - Freight"/>
<input type="checkbox"/> Ship in Full if Negative Quantity Is Allowed	Use Freight Account from: <input type="text" value="Ship Via"/>
<input type="checkbox"/> Allow Refund Before Return	Discount Account: <input type="text"/>
<input type="checkbox"/> Require Customer Order Nbr.	Use Discount Account from: <input type="text" value="Customer Location"/>
Customer Order Nbr. Validation: <b>Allow Duplicates</b>	<input type="checkbox"/> Use Shipped-Not-Invoiced Account
<b>COPYING SETTINGS</b>	Shipped-Not-Invoiced Account: <input type="text"/>
<input type="checkbox"/> Copy Notes	<input type="checkbox"/> Auto Write-Off
<input type="checkbox"/> Copy Attachments	<b>INTERCOMPANY POSTING SETTINGS</b>
<input type="checkbox"/> Copy Header Notes to Shipment	Use Sales Account from: <input type="text" value="Inventory Item"/>
<input type="checkbox"/> Copy Header Attachments to Shipment	Use COGS Account from: <input type="text" value="Inventory Item"/>
<input type="checkbox"/> Copy Header Notes to Invoice	
<input type="checkbox"/> Copy Header Attachments to Invoice	
<input type="checkbox"/> Copy Line Notes To Shipment	
<input type="checkbox"/> Copy Line Attachments To Shipment	
<input type="checkbox"/> Copy Line Notes To Invoice	
<input type="checkbox"/> Only Non-Stock	
<input type="checkbox"/> Copy Line Attachments To Invoice	
<input type="checkbox"/> Only Non-Stock	

**Figure: The Copying Settings section**

Also, four new check boxes have been added to the copying settings:

- **Copy Header Notes to Shipment:** A check box that indicates (if selected) that when a shipment is created for a sales order, the system should copy the note attached to the sales order record to the shipment record. This note is attached to the record as a whole.
- **Copy Header Attachments to Shipment:** A check box that indicates (if selected) that when a shipment is created for a sales order, the system should copy any files attached to the sales order record to the shipment record. These files are attached to the record as a whole.

- **Copy Header Notes to Invoice:** A check box that indicates (if selected) that when an invoice is created for a sales order, the system should copy the note attached to the sales order record to the invoice record. This note is attached to the record as a whole.
- **Copy Header Attachments to Invoice:** A check box that indicates (if selected) that when an invoice is created for a sales order, the system should copy any files attached to the sales order record to the invoice record. These files are attached to the record as a whole.

The visibility of these new check boxes on the [Order Types](#) form depends on the following settings of the order type:

- If the order type has the *Blanket Order* or *Quote* option in the **Automation Behavior** box (**Template** tab), the new check boxes do not appear on the form.
- If the order type has the *Invoice* or *Credit Memo* option in the **Automation Behavior** box (**Template** tab), the **Copy Header Notes to Shipment** and **Copy Header Attachments to Shipments** check boxes do not appear on the form.
- If the order type has the *No Update* option in the **AR Document Type** box (**Template** tab), the **Copy Header Notes to Invoice** and **Copy Header Attachments to Invoice** check boxes are unavailable on the form.

If a user creates one shipment or invoice for multiple sales orders and any new check boxes are selected for the types of the orders, the following rules apply to the notes and attachments:

- The note attached to only the first sales order in the shipment or invoice are copied to the shipment or invoice.
- The files attached to all sales order in the shipment or invoice are copied to the shipment or invoice.

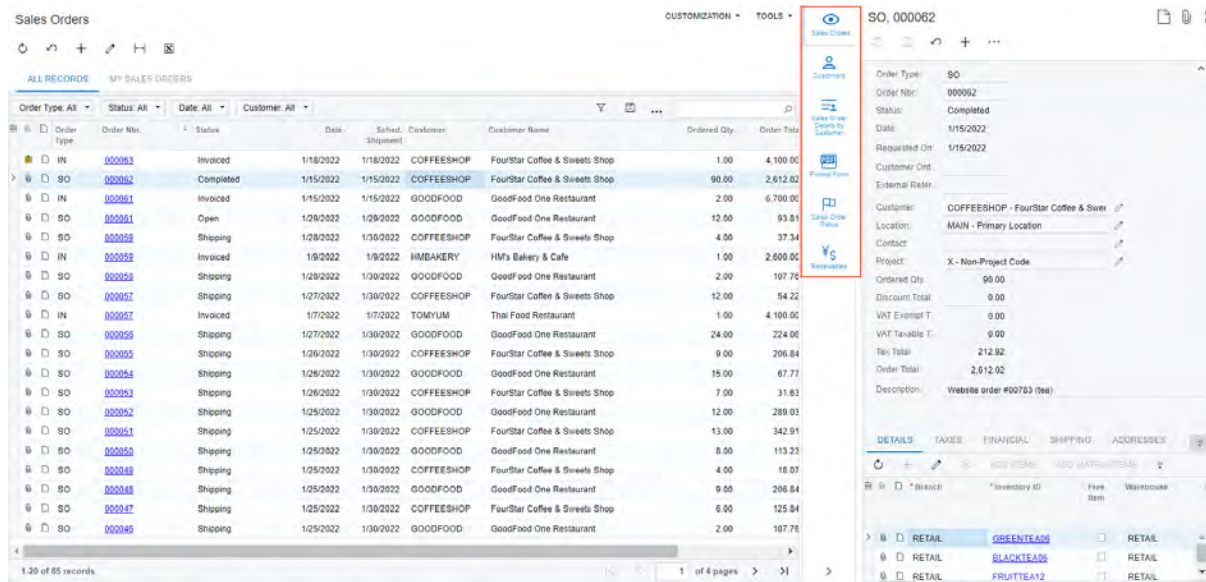


# Inventory and Order Management: Side Panel Support

In Acumatica ERP 2022 R2, a side panel has been added to various lists of records and data entry forms related to the inventory and order management functionality, which gives a user the ability to view the list of records while simultaneously viewing (and modifying, if necessary) various information related to any listed record or opened entity on a data entry form.

A side panel may have only one tab with a form related to the selected record, or it may have multiple tabs. If the side panel has multiple tabs, a user views a tab by clicking its icon.

The following screenshot shows the side panel for the *Sales Orders (SO3010PL)* list of records. Notice that for the selected record, the side panel has icons for six tabs.




**Figure:** The side panel of the Sales Orders list of records

The following table notes each list of records or data entry form to which a side panel has been added, along with the tab or tabs on the side panel for this list of records or form.


**Table:** Lists of Records and Forms with Side Panels

List of Records or Form	Tab or Tabs of the Side Panel	Description of the Tab
Sales Orders (SO3010PL) list of records	<b>Sales Orders:</b> The <a href="#">Sales Orders</a> (SO301000) form	The settings of the selected sales order and any files and notes applied to this sales order. The user can modify the data in the order.
	<b>Customers:</b> The <a href="#">Customers</a> (AR303000) form	The settings of the customer specified in the selected sales order and any files and notes applied to the customer record. The user can modify the data in the customer's record. This tab is not displayed if the selected sales order has an order type with the <i>Transfer Order</i> automation behavior.



List of Records or Form	Tab or Tabs of the Side Panel	Description of the Tab
	<p><b>Sales Order Details by Customer:</b> The <a href="#">Sales Order Details by Customer</a> (SO611000) report</p>	<p>The details of sales orders created for the customer specified in the selected sales order for the month before the order date. The user can view the details of sales orders created for the past month, navigate to a sales order that was previously placed, and copy and paste any order to create a new one. This tab is not displayed if the selected sales order has an order type with the <i>Transfer Order</i> automation behavior.</p>
	<p><b>Printed Form:</b></p> <ul style="list-style-type: none"> <li>The <a href="#">Sales Order</a> (SO641010) report unless the selected sales order has a type with <i>Quote</i> or <i>Blanket Order</i> automation behavior</li> <li>The <a href="#">Blanket Sales Order</a> (SO641040) report if the selected sales order has a type with <i>Blanket Order</i> automation behavior</li> <li>The <a href="#">Quote</a> (SO641000) report if the selected order has a type with <i>Quote</i> automation behavior</li> </ul>	<p>A printed form with the settings of the selected sales order, to give the user the ability to print and email this order.</p>
	<p><b>Sales Order Status:</b> The <i>Sales Order Status</i> (SO3010DB) dashboard</p> <div style="border: 1px solid orange; border-radius: 10px; padding: 10px; margin-top: 10px;">  <p>This dashboard was introduced in Acumatica ERP 2022 R1 with the <i>Sales Orders</i> title. In Acumatica ERP 2022 R2, some minor changes have been made to the dashboard to extend and improve the provided data.</p> </div>	<p>A dashboard with widgets that show the details of all sales orders related to the customer specified in the selected sales order, including open and completed sales orders and the number of late sales orders. This tab is not displayed if the selected sales order has a type with the <i>Transfer Order</i> automation behavior.</p>

List of Records or Form	Tab or Tabs of the Side Panel	Description of the Tab
	<p><b>Receivables:</b> The <i>Receivables (AR3010DB)</i> dashboard</p> <div style="border: 1px solid orange; padding: 5px;">  This dashboard was introduced in Acumatica ERP 2022 R1. In Acumatica ERP 2022 R2, some minor changes have been made to the dashboard to improve the provided data. </div>	<p>A dashboard with widgets that show the details of customer invoices created for the customer specified in the selected sales order, including the customer's balance and payment history. This tab is not displayed if the selected sales orders has a type with the <i>Transfer Order</i> automation behavior.</p>
<p><i>Sales Orders (SO301000)</i> data entry form</p>	<p><b>Invoices and Memos:</b> The <i>Invoices for Sales Orders (SO3031SP)</i> inquiry form</p>	<p>An inquiry form that displays a list of the financial documents linked to the sales order and to the orders related to this sales order. For example, for an order with the <i>CM</i> type that was created for an order with the <i>IN</i> type, the system will display the credit memo related to the order and the invoice related to the <i>IN</i> order. If the selected order is a blanket order, the financial documents related to its child orders are displayed. This tab is not displayed if the selected sales order has a type with the <i>Transfer Order</i> or <i>Quote</i> automation behavior.</p>
	<p><b>Customer Details:</b> The <i>Customer Details (AR402000)</i> report</p>	<p>The details of the customer specified in the order selected on the form. This tab is not displayed if the sales order has a type with the <i>Transfer Order</i> automation behavior.</p>
<p><i>Shipments (SO3020PL)</i> list of records</p>	<p><b>Shipments:</b> The <i>Shipments (SO302000)</i> form</p>	<p>The settings of the selected shipment and any files and notes applied to this shipment. The user can modify the data in the shipment.</p>
	<p><b>Shipment Confirmation:</b> The <i>Shipment Confirmation (SO642000)</i> report</p>	<p>A printed form with the settings of the selected shipment, to give the user the ability to print and email this shipment.</p>

List of Records or Form	Tab or Tabs of the Side Panel	Description of the Tab
	<b>Shipment Details by Customer:</b> The <i>Shipment Details by Customer</i> (SO621000) report	The details of the shipments for the customer of the selected shipment for the month before the shipment's date. The user can view the details of the shipments created for the past month, navigate to a shipment that was previously created, and review the shipping terms and other details. This tab is not displayed if the selected shipment has the <i>Transfer</i> type.
<i>Invoices (SO3030PL)</i> list of records	<b>Invoices:</b> The <i>Invoices</i> (SO303000) form	The settings of the selected invoice and any files and notes applied to this invoice. The user can modify the data in the invoice.
	<b>Customers:</b> The <i>Customers</i> (AR303000) form	The settings of the customer specified in the selected invoice and any files and notes applied to the customer's record. The user can modify the data.
	<b>Sales Orders:</b> The <i>Sales Orders (SO3012SP)</i> inquiry form	An inquiry form that displays a list of the sales orders linked to the selected invoice.
	<b>Printed Form:</b> The <i>Invoice &amp; Memo</i> (SO643000) report	A printed form with the settings of the selected invoice, to give the user the ability to print and email this invoice.
	<b>Receivables:</b> The <i>Receivables (AR3010DB)</i> dashboard	A dashboard with widgets that show the details about any invoices created for the customer specified in the selected invoice, including the customer balance and payment history.
	 This dashboard was introduced in Acumatica ERP 2022 R1. In Acumatica ERP 2022 R2, some minor changes have been made to the dashboard to improve the provided data.	
	s	
<i>Purchase Orders (PO3010PL)</i> list of records	<b>Purchase Orders:</b> The <i>Purchase Orders</i> (PO301000) form	The settings of the selected purchase order and any files and notes applied to this purchase order. The user can modify the data in the purchase order.

List of Records or Form	Tab or Tabs of the Side Panel	Description of the Tab
	<b>Vendors:</b> The <i>Vendors</i> (AP303000) form	The settings of the vendor specified in the selected purchase order and any files and notes applied to the vendor's record. The user can modify the details in the vendor's record.
	<b>Purchase Order Details by Vendor:</b> The <i>Purchase Order Details by Vendor</i> (PO611000) report	The details of the purchase orders for the vendor specified in the selected purchase order for the month before the order date. The user can view the details of purchase orders created for the past month, navigate to a purchase order that was previously placed, and copy and paste any order to create a new one.
	<b>Printed Form:</b> The <i>Purchase Order</i> (PO641000)	A printed form with the settings of the selected purchase order, to give the user the ability to print and email this purchase order.
	<b>Purchase Order Status:</b> The <i>Purchase Order Status</i> (PO3010DB) dashboard	A dashboard with widgets that show the details of all purchase orders related to the vendor specified in the selected purchase order, including open, completed, and closed purchase orders and the number of late purchase orders.
	<b>Payables:</b> The <i>Payables</i> (AP3010DB) dashboard	A dashboard with widgets that show the details about any bills and adjustments related to the vendor specified in the selected purchase order, including the prepayment balance and the history of payments to the vendor.
<i>Purchase Orders</i> (PO301000) data-entry form	<b>Preferred Vendor Items:</b> The <i>Preferred Vendor Items</i> (IN2025SP) inquiry form	The inquiry form that displays the list of the stock items for which the vendor of the selected purchase order is specified in the <b>Preferred Vendor</b> box on the <i>Item Warehouse Details</i> (IN204500) form or is selected as the default vendor on the <b>Vendors</b> tab of the <i>Stock Items</i> (IN202500) form.
	<b>Vendor Details:</b> The <i>Vendor Details</i> (AP402000) form	The details of the vendor specified in the selected purchase order.

List of Records or Form	Tab or Tabs of the Side Panel	Description of the Tab
<i>Purchase Receipts (PO3020PL)</i> list of records	<b>Purchase Receipts:</b> The <i>Purchase Receipts</i> (PO302000) form	The settings of the selected purchase receipt and any files and notes applied to this purchase receipt. The user can modify the data in the purchase receipt.
	<b>Purchase Receipt Allocated and Backordered:</b> The <i>Purchase Receipt Allocated and Backordered</i> (PO622000) report	Detailed information about the items in the selected receipt by vendor for the month before the receipt date. This tab is not displayed if the selected receipt has the <i>Transfer Receipt</i> type.
	<b>Purchase Receipt Details by Vendor:</b> The <i>Purchase Receipt Details by Vendor</i> (PO621000) report	The details of the purchase receipts for the vendor of the selected purchase receipt for the month before the receipt date. This tab is not displayed if the selected receipt has the <i>Transfer Receipt</i> type.
	<b>Printed Form:</b> The <i>Purchase Receipt</i> (PO646000)	A printed form with the settings of the selected purchase receipt, to give the user the ability to print and email this purchase receipt.
<i>Non-Stock Items (IN2020PL)</i> list of records	<i>Non-Stock Items:</i> The <i>Non-Stock Items</i> (IN202000) form	The details of the selected non-stock item and any files and notes applied to this non-stock item. The user can modify the data in the non-stock item settings.
<i>Non-Stock Items</i> (IN202000) data-entry form	<b>Item Sales Prices:</b> The <i>Sales Prices</i> (AR202000) form	The sales prices for the item selected on the form.
	<b>Item Vendor Prices:</b> The <i>Vendor Prices</i> (AP202000) form	The vendor prices for the item selected on the form.
	<b>Kit Specifications:</b> The <i>Kit Specifications</i> (IN209500) form	The settings of the kit specification for the revision that was last modified. The tab is displayed if for the selected non-stock item, the <b>Is Kit</b> check box is selected on the <i>Non-Stock Items</i> form.
<i>Stock Items (IN2025PL)</i> list of records	<b>Stock Items:</b> The <i>Stock Items</i> (IN202500) form	The settings of the selected stock item and any files and notes associated with this stock item. The user can modify the data in the stock item settings.
<i>Stock Items</i> (IN202500) data entry form	<b>Item Sales Prices:</b> The <i>Sales Prices</i> (AR202000) form	The sales prices for the item selected on the form.

List of Records or Form	Tab or Tabs of the Side Panel	Description of the Tab
	<b>Item Vendor Prices:</b> The <i>Vendor Prices</i> (AP202000) form	The vendor prices for the item selected on the form.
	<b>Inventory Summary:</b> The <i>Inventory Summary</i> (IN401000) form	Summary information about the available quantities of the item selected on the form.
	<b>Inventory Allocation Details:</b> The <i>Inventory Allocation Details</i> (IN402000) form	Detailed information on how the quantities of the item selected on the form are allocated among warehouses and locations.
	<b>Inventory Transaction History:</b> The <i>Inventory Transaction History</i> (IN405000) form	Detailed information on inventory transactions posted with the item that is selected on the form.
	<b>Dead Stock:</b> The <i>Dead Stock</i> (IN405500) form	Information about the dead stock quantity for the item selected on the form. By default, the information is displayed for the warehouse that is selected as the default one for the item, but the user can change this warehouse.
	<b>Kit Specifications:</b> The <i>Kit Specifications</i> (IN209500) form	The settings of the kit specification for the revision that was last modified. The tab is displayed if for the selected stock item, the <b>Is Kit</b> check box is selected on the <i>Stock Items</i> form.
<i>Kit Assembly (IN3070PL)</i> list of records	<b>Kit Assembly:</b> The <i>Kit Assembly</i> (IN307000) form	The settings of the selected kit assembly and any files and notes applied to this kit assembly record. The user can modify the data in the kit assembly record.
<i>Template Items (IN2030PL)</i> list of records	<b>Template Items:</b> The <i>Template Items</i> (IN203000) form	The settings of the selected template item and any files and notes applied to the selected template item. The user can modify the data in the template item.

For details about side panels, see [Side Panels of Generic Inquiry Forms](#).

# Inventory and Order Management: Tracking Data and Processes by Using Predefined Dashboards

In previous versions of Acumatica ERP, users of the inventory and order management functionality did not have predefined dashboards to track the data and processes related to inventory, sales, and purchases.

In Acumatica ERP 2022 R2, a variety of predefined dashboards have been implemented to give employees a window into the current state of the company's inventory, sales, and purchases.

## New Predefined Dashboards by Job Duties

Each of the new predefined dashboards has been developed for employees with specific job duties in the company, so that they can view the information that is most pertinent to their work. The following predefined dashboards are now available:

- *Sales Manager (SO3015DB)*: A dashboard designed for a sales manager who oversees the work of a sales team. On this dashboard, the sales manager can review the current state of open orders and invoices, as well as quarterly statistics related to income, trends, customer growth, and the productivity of each salesperson. The dashboard also presents information about the top customers, top products, and overall income for sales.



The dashboard does not contain information related to customer relationship management (CRM). It is designed to be used if the CRM functionality of Acumatica ERP is not enabled in the system.

- *Purchasing Manager (PO3015DB)*: A dashboard tailored to the needs of a purchasing manager who oversees purchasing operations for the company or a particular branch. On the dashboard, this manager can review basic metrics related to purchase orders, some statistics related to the purchased products, and suggestions for purchase.
- *Warehouse Manager (IN3015DB)*: A dashboard developed for a warehouse manager who is responsible for controlling and planning warehouse operations. By using the dashboard, the warehouse manager can review information about productivity during the day, as well as expected shipments, receipts, and the current state of open sales orders and purchase orders. The manager can also analyze metrics that will help them to plan future work.
- *Receiving Clerk (PO3025DB)*: A dashboard geared toward a receiving clerk who manages incoming deliveries to a warehouse by verifying and signing for receipts, unloading and storing the received items, and processing incoming returns. On the dashboard, the receiving clerk can review information about purchase orders that are expected to be received on the current day, as well as statistics about late receipts and sales returns that may arrive. The receiving clerk can also review a list of items that have not been put away yet.
- *Shipping Clerk (SO3025DB)*: A dashboard designed for a shipping clerk who manages the work of a team and tracks the outgoing shipments. On the dashboard, the shipping clerk can review information about the shipments to be shipped today, as well as the overall status of shipments and orders to be shipped.

The predefined dashboards are made up of widgets that are grouped logically and designed to make key information easy to comprehend. Each widget is a component that provides a particular type of information, such as a key performance indicator (KPI), metric, or chart. Many of these widgets use generic inquiries to gather the underlying data. Users can access the dashboards from the **Dashboards** workspace, where they are listed under the **Dashboard: Inventory** category.

The contents of these dashboards are described in the following sections.

## The Sales Manager Dashboard

The *Sales Manager (SO3015DB)* predefined dashboard is shown in the following screenshot.





**Figure:** The Sales Manager predefined dashboard

In the **Branch** box at the top of the dashboard, the user can select the branch whose data will be shown on the dashboard.

The **Current Sales Status** section of the dashboard contains the following widgets:

- *Open Quotes*: The number of sales orders with the *Quote* automation behavior and the *Open* status.
- *Open Orders*: The number of sales orders with the *Sales Order* or *Invoice* automation behavior and the *Open* status.
- *Orders Pending Approval*: The number of sales orders with the *Pending Approval* status.
- *Orders Awaiting Payments*: The number of sales orders with the *Awaiting Payments* status.
- *Orders Awaiting Purchases*: The number of sales orders with the *Sales Order* automation behavior that have lines with the **Mark for PO** check box selected on the **Details** tab of the *Sales Orders* (SO301000) form, and for which purchase orders have not yet been created for the full quantity of at least one sales order line.
- *Late Orders*: The number of sales orders with the *Sales Order* or *Invoice* automation behavior and the *Open* status for which the date in the **Requested On** box in the Summary area of the *Sales Orders* form is earlier than today's date.
- *Invoices Awaiting Payments*: The number of sales order invoices with the *Open* status.
- *Overdue Invoices*: The number of sales order invoices with the *Open* status for which the date in the **Due Date** box in the Summary area of the *Invoices* (SO303000) form is earlier than today's date.

The **Profitability This Quarter** section of the dashboard contains the following widgets:

- *Net Sale Trend*: The trend of net sales for the current quarter in comparison with the previous quarter.
- *Profitability Trend*: The trend of profitability for the current quarter in comparison with the previous quarter.
- *Deal Size Trend*: The trend of the deal size for the current quarter in comparison with the previous quarter.
- *New Customers*: The number of new customers that have received an invoice from the company or branch for the first time in the current quarter.
- *Completed Orders*: The number of orders that have been fully shipped and billed this quarter.

The **Overall Statistics** section of the dashboard contains the following widgets:

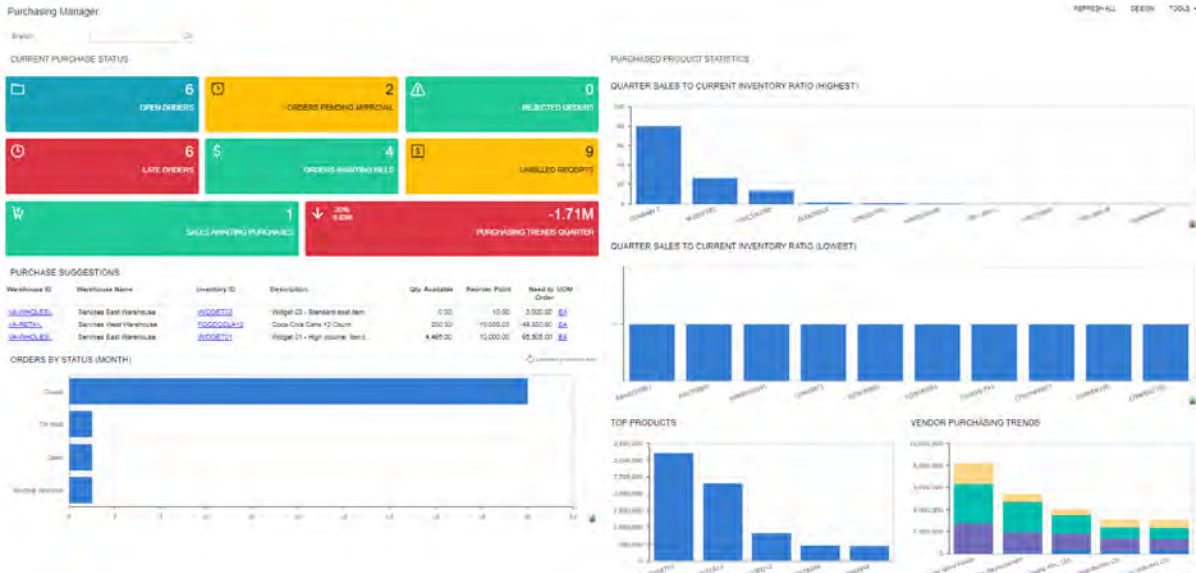
- *Net Sale (Last 12 Months)*: The net sales for the last 12 months.
- *Top Sold Items (Quarter)*: The most sold items (by amount) for the quarter.
- *Sales by Person (Quarter)*: The total amount on invoices for each salesperson for the current quarter.



- *Top 10 Customers (Quarter)*: Ten customers with the highest amount on all open and closed sales order invoices for the quarter.

## Purchasing Manager Dashboard

The following screenshot shows the *Purchasing Manager (PO3015DB)* predefined dashboard.



**Figure:** The Purchasing Manager predefined dashboard

In the **Branch** box at the top of the dashboard, the user can select the branch for which the dashboard will display data.

The **Current Purchase Status** section of the dashboard contains the following widgets:

- *Open Orders*: The number of purchase orders with the *Open* status.
- *Orders Pending Approval*: The number of purchase orders with the *Pending Approval* status.
- *Rejected Orders*: The number of purchase orders with the *Rejected* status.
- *Late Orders*: The number of purchase orders with the *Open* status whose expected arrival date is earlier than today's date.
- *Orders Awaiting Bills*: The number of unbilled purchase orders with the *Open* status and with vendors that have the **Allow AP Bill Before Receipt** check box selected on the **Purchase Settings** tab of the *Vendors* (AP303000) form.
- *Unbilled Receipts*: The number of receipts for which no vendor bill has been received.
- *Sales Awaiting Purchases*: The number of sales orders that include lines with the **Mark for PO** check box selected on the **Details** tab of the *Sales Orders* (SO301000) form and for which a purchase order has not yet been created for the full quantity.
- *Purchasing Trends Quarter*: The total purchase amount by quarter and the trend in comparison with the previous quarter.
- *Purchase Suggestions*: The items for which the value in the **Reorder Point** column on the **Replenishment** tab of the *Stock Items* (IN202500) form is less than the available quantity. The **Need to Order** quantity is calculated as the maximum quantity minus the available quantity for items with the *Min./Max.* replenishment method selected on the **Replenishment** tab of the *Item Warehouse Details* (IN204500) form and as the minimum quantity minus the available quantity for items with other replenishment methods.
- *Orders by Status (Month)*: The number of purchase orders of each status for the current month.

The **Purchased Product Statistics** section of the dashboard contains the following widgets:

- *Highest Turnover Items*: 10 items with the highest turnover ratio calculated as an average of turnover ratios that have been calculated for warehouses at which the item was processed during the past year.
- *Lowest Turnover Items*: 10 items with the lowest turnover ratio calculated as an average of turnover ratios that have been calculated for warehouses at which the item was processed during the past year.
- *Top Products*: The items that were ordered the most for the quarter (by quantity).
- *Vendor Purchasing Trends*: The trends in purchasing by amount in the quarter.



In order to have data displayed in the *Highest Turnover Items* and *Lowest Turnover Items*, the inventory turnover should be calculated on the *Inventory Turnover* (IN407010) form. For details on the inventory turnover calculation, see *Inventory Turnover: General Information*. If the user wants to view the turnover of items for a different period of time, the *Inventory Turnover for Past Year* (IN4070BI) generic inquiry, which is used for these widgets, should be modified.

## Warehouse Manager Dashboard

In the following screenshot, the *Warehouse Manager* (IN3015DB) predefined dashboard is shown.



Figure: The Warehouse Manager predefined dashboard

In the **Warehouse** box at the top of the dashboard, the user can select the warehouse for which the dashboard will display data.

The **Shipping** section of the dashboard contains the following widgets:

- *Orders to Ship*: The quantity of sales orders with the *Sales Order* automation behavior and with the *Open* or *Shipping* status.
- *Late Sales Orders*: The quantity of sales orders with the *Sales Order* automation behavior and with the *Open*, *Back Order*, or *Shipping* status and for which the date in the **Requested On** box in the Summary area of the *Sales Orders* (SO301000) form is earlier than today's date.
- *Open Shipments*: The number of shipments with the *Open* status for the warehouse.
- *Fill Rate (This Month)*: The percent of the order fill rate for the current month. The fill rate is calculated as follows:  $(\text{the number of shipped items} / \text{the number of placed items}) * 100$ .

The **Receiving** section of the dashboard contains the following widgets:

- *Purchases to Be Received*: The number of purchase orders with the *Open* status and at least one item that has not yet been fully received.
- *Pending Transfers*: The number of transfers to be received at the warehouse.
- *Incoming Returns*: The number of orders to be returned to the warehouse.
- *Late Purchase Orders*: The number of purchase orders with the *Open* status whose expected arrival date is earlier than today's date.

The **Today's Statistics** section of the dashboard contains the following widgets:

- *Processed Shipments*: The number of shipments of the *Issue* type that have been confirmed today.
- *Processed Receipts*: The number of receipts that have been released today.
- *Picking Productivity*: The number of items that have been picked by each worker today. This widget contains data only if the *Paperless Picking* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

The **Planning** section of the dashboard contains the following widgets:

- *On-Time Shipping Ratio*: The ratio of on-time shipments by month.
- *Avg. Nbr. of Shipments per Day*: The average number of confirmed shipments per day to the previous 12 months.
- *Avg. Nbr. of Receipts per Day*: The average number of released receipts per day to the previous 12 months.
- *Avg. Picking Productivity per Day (This Month)*: The average number of items picked by picker per day for this month. This widget contains data only if the *Paperless Picking* feature is enabled on the [Enable/Disable Features](#) form.
- *Return Rate*: The percentage of sales against returns for the current quarter.
- *Goods to Put Away*: The list of items to put away (that is, the items that have been received but have not yet been transferred to the destination warehouse or location). This widget contains data only if the *Receiving* feature is enabled on the [Enable/Disable Features](#) form.

## Receiving Clerk Dashboard

The *Receiving Clerk* (PO3025DB) predefined dashboard is shown in the following screenshot.



**Figure:** The *Receiving Clerk* predefined dashboard

In the **Warehouse** box at the top of the dashboard, the user can select the warehouse for which data will be shown in the dashboard.

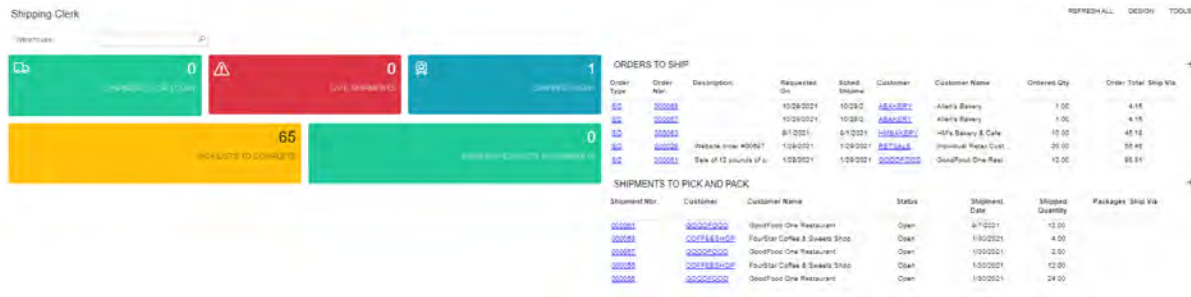
The dashboard contains the following widgets:

- *Receipts Expected Today*: The number of purchase orders with the *Open* status whose items which have not yet been fully received.
- *Pending Transfers*: The number of transfer orders to be received at the warehouse.
- *Incoming Returns*: The number of orders to be returned to the warehouse.

- *Late Orders*: The number of open purchase orders whose expected arrival date is earlier than today's date.
- *Received Today*: The number of released receipts with the current date.
- *Goods to Put Away*: The list of items to put away (that is, items that have been received but have not yet been transferred to the destination warehouse or location). This widget contains data only if the *Receiving* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

## Shipping Clerk (SO3025DB) Dashboard

The following screenshot displays the *Shipping Clerk (SO3025DB)* predefined dashboard.



**Figure:** The *Shipping Clerk* predefined dashboard

In the **Warehouse** box at the top of the dashboard, the user can select the warehouse for which data will be shown in the dashboard.

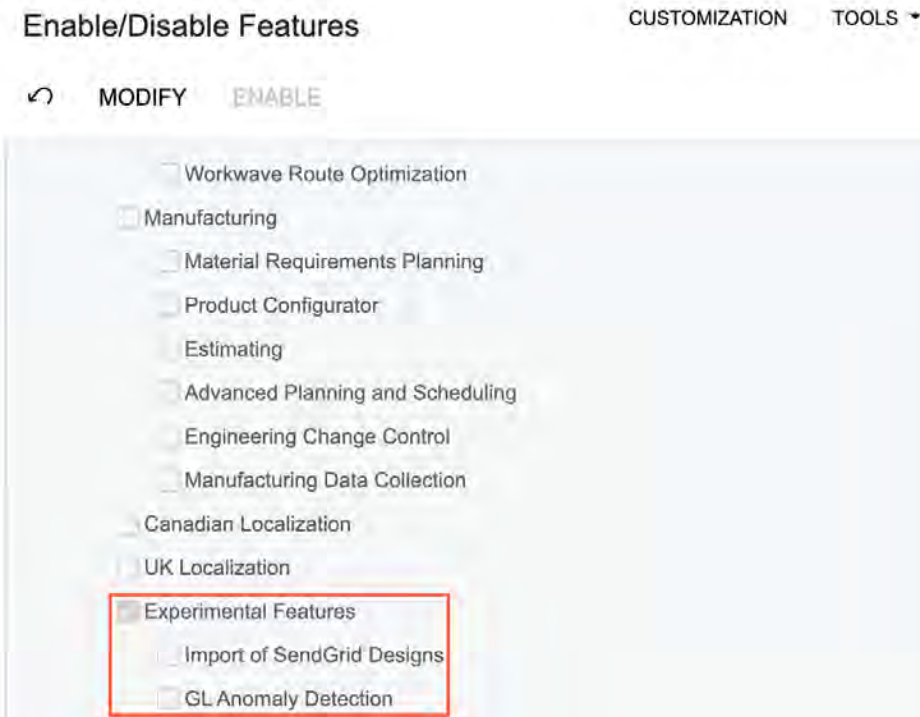
The dashboard contains the following widgets:

- *Shipments for Today*: The number of open shipments for which the shipment date is the current date.
- *Late Shipments*: The number of open shipments that have a shipment date that is earlier than the current date.
- *Shipped Today*: The number of confirmed shipments for which the shipment date is the current date.
- *Pick Lists to Complete*: The number of pick lists with the *Added to Queue* or *Assigned* status and the current date. This widget contains data only if the *Paperless Picking* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.
- *Urgent Pick Lists to Complete*: The number of pick lists with the *Added to Queue* or *Assigned* status, the *Urgent* priority, and the current date. This widget contains data only if the *Paperless Picking* feature is enabled on the [Enable/Disable Features](#) form.
- *Orders to Ship*: The list of orders with the *Open* status and the *Sales Order* automation behavior.
- *Shipments to Pick and Pack*: The list of shipments with the *Open* status and the *Issue* operation type.

# Licensing: Experimental Features

In Acumatica ERP 2022 R2, the new **Experimental Features** group of features has been added to the [Enable/Disable Features](#) (CS100000) form. The features in this group may be discontinued in the future or may be substantially changed, requiring the company to reimplement the functionality.

In 2022 R2, the following features are listed under the section: **Import of SendGrid Designs** and **GL Anomaly Detection** (see the following screenshot).



*Figure: The new Experimental Features group of features*

# Localization: Canadian Localization at the Company Level

In previous versions of Acumatica ERP, if the *Canadian Localization* feature was enabled, the Canadian functionality was enabled for all companies in the tenant. It was not possible to configure only one Canadian company in the system.

In Acumatica ERP 2022 R2, the implementation of Canadian localization has been modified to enable the setup of companies located in different countries and to apply the Canadian localization at the company level. This functionality includes the support of tax registration numbers, correction of cash discounts in sales orders and accounts receivable, modified printed forms, support of printing parameters for Canadian taxes, and the T5018 reporting.

The following sections describe this functionality and the UI changes related to it.

## Changes to the Companies Form

On the [Companies](#) (CS101500) form, the **Localization** box has been added to the **Configuration Settings** section on the **Company Details** tab, as shown in the following screenshot.

The screenshot displays the 'Companies' form for 'CAPITAL - Revision Two Capital'. The 'Configuration Settings' section is expanded, showing the 'Localization' dropdown menu set to 'Canada'. The 'Localization' box is highlighted with a red border. Other visible fields include 'Company ID', 'Company Name', 'Company Type', 'Main Contact', 'Main Address', 'Base Currency Settings', 'Tax Registration Info', and 'Miscellaneous Settings'.

**Figure: The Localization box on the Companies form**

This box appears on the form if the *Canadian Localization* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

The box contains the following options:

- *None*: No localization is applied to the company. If this option is selected and a user selects *Canada* in the **Country** box (**Main Address** section), the system displays a warning message that *Canada* must also be selected in the current box.
- *Canada*: The functionality related to the Canadian localization is applied to the company.



If *Canada* is selected in the **Localization** box for a company, the **Taxes** tab on the *Companies* form becomes visible, as shown in the following screenshot.

The screenshot shows the 'Companies' form for 'CAPITAL - Revision Two Capital'. The 'Taxes' tab is highlighted with a red box. Below the tabs, there is a table with the following data:

*Tax ID	Description	*Tax Registration Number
CBCPST	Canada BC PST	12477834
> CAGST	Canada GST	786568113 RT0001

**Figure: The Taxes tab on the Companies form**

On this tab, the user can specify tax registration numbers for Canadian taxes that are applied to the company and its branches.

## Changes to the Taxes Form

On the *Taxes* (TX205000) form, the **Printing Parameters** tab appears on the form if the following conditions are met:

- The *Canadian Localization* feature is enabled on the *Enable/Disable Features* (CS100000) form
- A Canadian tax agency is selected in the **Tax Agency** box on the **Tax Settings** tab of the *Taxes* form. For such a tax agency, *Canada* must be specified in the **Country** box (**General** tab) of the *Vendors* (AP303000) form.

## Changes to the Printed Forms with Taxes

If *Canada* is selected in the **Localization** box on the *Companies* (CS101500) form for a specific company, some of the printed forms (that is, printed versions of documents entered in the system) for this company will be replaced with the corresponding Canadian forms. This change affects the printed forms generated when you run the following reports:

- *Invoice/Memo* (AR641000)
- *ProInvoice/Memo* (PM641000)
- *Quote* (SO641000)
- *Sales Order* (SO641010)
- *Matrix Sales Order* (SO641020)
- *Invoice & Memo* (SO643000)
- *Matrix Invoice/Memo* (SO643010)

## Changes in Cash Discount Calculation for Sales Orders and Invoices

If *Canada* is selected in the **Localization** box on the *Companies* (CS101500) form for a specific company, the Canadian cash discount calculation will be applied to the documents originating from this company and its branches. If a user changes the originating branch of a document on a data entry form, cash discounts will be automatically recalculated by the system.

The system recalculates these discounts for documents that have been created and processed on the following data entry forms:

- [Sales Orders](#) (SO301000)
- [Invoices](#) (SO303000)
- [Process Invoices and Memos](#) (SO505000)
- [Invoices and Memos](#) (AR301000)
- [Cash Sales](#) (AR304000)
- [Bills and Adjustments](#) (AP301000)
- [Quick Checks](#) (AP304000)

This recalculation is performed during the following processes that generate AR and AP documents:

- Project billing, which is run when a user clicks **Run Project Billing** on the form toolbar of the [Projects](#) (PM301000) form
- Contract billing, which is run when a user clicks **Run Contract Billing** on the form toolbar of the [Customer Contracts](#) (CT301000) form
- Service order billing, which is run when a user selects at least one service order in the table and clicks **Process** on the form toolbar of the [Run Service Order Billing](#) (FS500600) form
- Service contract billing, which is run when a user selects at least one service contract in the table and clicks **Process** on the form toolbar of the [Run Service Contract Billing](#) (FS501300) form
- Appointment billing, which is run when a user selects at least one record in the table and clicks **Process** on the form toolbar of the [Run Appointment Billing](#) (FS500100) form

## Changes to the Canadian T5018 Functionality

On the [Create T5018 E-File](#) (AP507600) form, the lookup table that is opened in the **Transmitter** box displays only companies and branches for which *Canada* is selected in the **Localization** box on the [Companies](#) (CS101500) form.

## Limitations

If the *Canadian Localization* feature is enabled and Canadian localization is set up for a company, when a user launches reports that are accessed through workspaces, the system displays the base versions of the reports by default (that is, the versions without the Canadian localization applied to them).

To make it possible for users to launch Canadian versions of these reports, an administrative user should manually add the Canadian versions of reports to the site map. If predefined Canadian versions of reports are available, they have the same names as the base versions with *.CA* added before the file extension. For example, if the base version of a report is *SO641010.rpx*, the Canadian version is *SO641010.CA.rpx*.

To add a Canadian version of a report to the site map, the administrative user should do the following:

1. On the [Site Map](#) (SM200520) form, click **Add Row**.
2. In the **Screen ID** column for a new row, specify a form ID that has not been used yet.
3. Specify the following settings for the new row:
  - **Title:** The name of the form that will be displayed on UI, such as *Sales Order (Canada)*
  - **URL:** The URL of the report



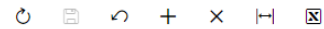
Make sure that the report ID in the URL is the Canadian version—for example *SO641010.CA.rpx*.

- **Workspaces:** The workspace from which the form can be accessed
  - **Category:** *Printed Forms*
4. On the form toolbar, click **Save**.

The following screenshot illustrates the addition of the Canadian version of the [Sales Order](#) (SO641010) report.



## Site Map



Screen ID	Title	URL	Graph Type	Workspaces	Category	Is Substitute
SO.64.10.00	Quote	~/Frames/ReportLauncher.aspx?ID=SO641000.rpx		Sales Orders	Printed Forms	<input type="checkbox"/>
SO.64.10.10	Sales Order	~/Frames/ReportLauncher.aspx?ID=SO641010.rpx		Sales Orders	Printed Forms	<input type="checkbox"/>
SO.64.10.20	Matrix Sales Order	~/Frames/ReportLauncher.aspx?ID=SO641020.rpx		Sales Orders	Printed Forms	<input type="checkbox"/>
SO.64.10.40	Blanket Sales Order	~/Frames/ReportLauncher.aspx?ID=SO641040.rpx		Sales Orders	Printed Forms	<input type="checkbox"/>
SO.64.10.CA	Sales Order (Canada)	~/Frames/ReportLauncher.aspx?ID=SO641010.CA.rpx		Sales Orders	Printed Forms	<input type="checkbox"/>

**Figure: The addition of the Canadian version of the report**

The added report can now be opened from the workspace specified in the site map.



If the reports are run when a user clicks a command on the corresponding data entry forms, the system displays the Canadian version of the printed forms if *Canada* is selected in the **Localization** box on the *Companies* (CS101500) form for the company.

## Upgrade Notes

During an upgrade to Acumatica ERP 2022 R2, if the tenant had the *Canadian Localization* feature enabled before the upgrade, the system will insert *Canada* in the **Localization** box of the *Companies* (CS101500) form for all companies in the tenant.

If the tenant had the *Canadian Localization* feature disabled before the upgrade, during the upgrade, the system will insert *None* in the **Localization** box of the *Companies* form for all companies in the tenant.

# Localization: Support of BACS Standard 18 for Lloyds Bank

In Acumatica ERP 2022 R2, support for Standard 18 issued by Lloyds Bank has been added to the Bankers Automated Clearing Service (BACS) functionality. Users can export released batch payments into a BACS payment file that complies with the specific BACS requirements of the Lloyds bank.

The functionality described below is available if the *UK Localization* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

## Changes to the Payment Methods Form

In the Summary area of the [Payment Methods](#) (CA204000) form, a new option—*BACS Lloyds payment*—has been added to the **Direct Deposit File Format** box, as shown in the following screenshot.

The screenshot shows the 'Payment Methods' form for 'CASH - Cash Payment'. The 'Direct Deposit File Format' dropdown is highlighted with a red box and contains the option 'BACS Lloyds payment'. Other settings include 'Use in AP' checked, 'Use in AR' unchecked, 'Use in PR' checked, and 'Require Remittance Information for Cash Account' checked. Below the form is a table of 'ALLOWED CASH ACCOUNTS'.

Cash Account	Description	Branch	Use in AP	Use in PR	AP/PR Default	AP/PR - Suggest Next Number	AP/PR Last Reference Number	Batch Last Reference Number
10100	Petty Cash	PRODWHOLE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CASH00003	
10300	Company Savings Account	PRODWHOLE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

**Figure: The Summary area of the Payment Methods form**

A user can select the *BACS Lloyds* option in the **Direct Deposit File Format** box if the means of payment for the selected payment method is *Direct Deposit* and a file format for direct deposits has been configured in the system.

With this option selected, the settings on the **Settings for Use in AP** and **Remittance Settings** tabs of the [Payment Methods](#) form are automatically populated by the system based on Lloyds requirements for BACS implementation (see Item 1, Item 2, and Item 3 in the following screenshots).

Payment Methods NOTES ACTIVITIES FILES CUSTOMIZATION TOOLS

### CASH - Cash Payment

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\* Payment Method ID:   Use in AP  Set Payment Date to Bank Transaction Date  
 Active  Use in AR  Require Remittance Information for Cash Account  
 Means of Payment:   Use in PR  
 Direct Deposit File For...:

\* Description:

ALLOWED CASH ACCOUNTS **SETTINGS FOR USE IN AP** SETTINGS FOR USE IN PR REMITTANCE SETTINGS

**ADDITIONAL PROCESSING** **EXPORT SETTINGS**

Print Checks  Create Batch Payments  Not Required

\* Export Scenario:  1

Skip Payments with Zero Amount  
 Require Batch Seq. Number  
 Release Batch Payment Before Export

**Payment Method Details**

🔄 + × |←| 🗑️

ID	Description	Required	Sort Order	Entry Mask	Validation Reg. Exp.
1	Destination sorting code number	<input checked="" type="checkbox"/>	1	000000	^d{6,6}\$
2	Destination Account Number	<input checked="" type="checkbox"/>	2	00000000	^d{8,8}\$
3	Destination Account Name	<input checked="" type="checkbox"/>	3	CCCCCCCCCCCC...	

Figure: UI changes on the Settings for Use in AP tab

Payment Methods NOTES ACTIVITIES FILES CUSTOMIZATION TOOLS

### CASH - Cash Payment

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\* Payment Method ID:   Use in AP  Set Payment Date to Bank Transaction Date  
 Active  Use in AR  Require Remittance Information for Cash Account  
 Means of Payment:   Use in PR  
 Direct Deposit File For...:

\* Description:

ALLOWED CASH ACCOUNTS SETTINGS FOR USE IN AP SETTINGS FOR USE IN PR **REMITTANCE SETTINGS**

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ID	Description	Required	Sort Order	Entry Mask	Validation Reg. Exp.
1	Originating sorting code number	<input checked="" type="checkbox"/>	1	000000	^d{6,6}\$
2	Originating account number	<input checked="" type="checkbox"/>	2	00000000	^d{8,8}\$

Figure: UI changes on the Remittance Settings tab

The *BACS Lloyds payment* export scenario has been added to the system to support BACS Standard 18. This export scenario can be viewed and edited on the [Export Scenarios \(SM207025\)](#) form. The system inserts this export scenario in the **Export Scenario** box of the **Settings for Use in AP** tab of the [Payment Methods](#) form if *BACS Lloyds payment* is selected in the **Direct Deposit File Format** box of this form.

## Export of Payments in the BACS Payment File

To generate a batch of payments in Standard 18 for Lloyds Bank, users should do the following:

1. On the [Payment Methods](#) form, define a payment method with the following settings:
  - **Means of Payment:** *Direct Deposit*
  - **Direct Deposit File Format:** *BACS Lloyds payment*
2. On the [Batch Payments](#) (AP305000) form, create a batch payment by clicking **Export** on the form toolbar. A batch file with payments will be attached to the form.

## Additional Information

For details on setup and use of BACS payments, see [Processing BACS Payments](#).

# Manufacturing: Engineering Workbench

A manufacturing engineer may need to create and modify multilevel bills of material (BOMs)—that is, BOMs that contain subassemblies. In the previous versions of Acumatica ERP Manufacturing Edition, to work with multilevel BOMs, the engineer had to create a BOM for each level separately by using the *Bill of Material* (AM208000) form. They could then view the components of the top-level BOM by using the *Visual BOM* (AM216000) form, but they could not modify any of the components.

In Acumatica ERP Manufacturing Edition 2022 R2, a manufacturing engineer can view, create, and modify a multilevel bill of material displayed in a tree structure by using the new *Engineering Workbench* (AM208100) form.

## The Engineering Workbench Form

The *Engineering Workbench* (AM208100) form consists of the following main parts, which are shown in the following screenshot:

1. Summary area (see Item 1 in the screenshot): A manufacturing engineer can select an existing BOM in the **BOM ID** box and view its general information. The engineer can also select the **Hold** check box to modify the BOM.
2. Left pane (Item 2): The engineer can view the BOM structure in the tree and modify the BOM by dragging the tree nodes to the needed locations.
3. Right pane (Item 3): The engineer can view the settings of the selected tree node, such as an operation or a material, and make changes if needed.

The screenshot displays the Engineering Workbench form with three main sections highlighted by red boxes and numbered 1, 2, and 3.

**Section 1 (Summary area):** Contains fields for BOM ID (BOM000001), Revision (A - Assemble Printed Circuit), Status (Active), Inventory ID (MGPCB - Printed Circuit Board), Warehouse (WHOLESALE - Wholesale Warehouse), Start Date (8/11/2020), End Date, and Description (Assemble Printed Circuit Board).

**Section 2 (Left pane):** A tree view showing the BOM structure. The root node is BOM000001 - A (MGPCB). It has two children: 0010 - WC10 - Assembly and 0020 - WC30 - Final Assembly. The 0010 - WC10 - Assembly node is expanded, showing two sub-nodes: MGCIRBOARD - Circuit Board (1.00 EA) and MGRESISTOR - Resistor (4.00 EA).

**Section 3 (Right pane):** The 'SELECTED OPERATION' settings for the selected node (0010 - WC10 - Assembly). It includes fields for Operation ID (0010), Work Center (WC10), and Operation Description (Assembly). Below this is a tabbed interface with 'OPERATION' selected. The 'GENERAL SETTINGS' section includes fields for Operation ID (0010), Work Center (WC10 - Assembly), Oper Desc (Assembly), Setup Time (01:00), Run Units (10.00), Run Time (01:00), Machine Units (0.00), and Machine Time (01:00). There are also checkboxes for Backflush Labor and Control Point, and fields for Queue Time (00:00), Finish Time (00:00), Move Time (00:00), and Scrap Action (No Action).

**Figure:** The major parts of the Engineering Workbench form

The More menu on the form toolbar contains the commands shown in the following screenshot. This set of commands includes most of the same commands that are on the *Bill of Material* (AM208000) form, except for **Visual BOM** and **Engineering Workbench**.

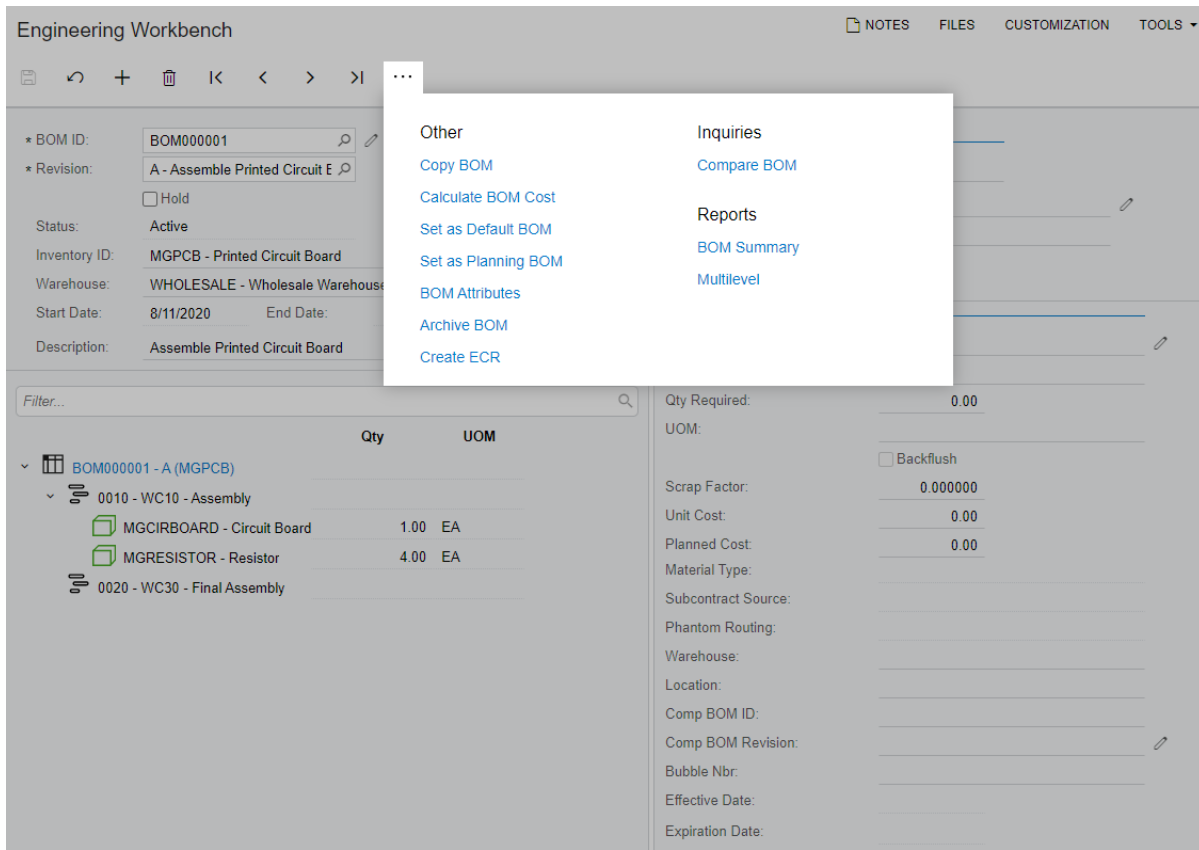


Figure: The More menu of the Engineering Workbench form

The left and right panes are described in detail in the following sections.

### Engineering Workbench: BOM Tree

The BOM tree on the left pane of the *Engineering Workbench* (AM208100) form contains the following elements (see the screenshot below):

1. The **Filter** box (Item 1 in the screenshot). If a user enters keywords, the system displays only the tree nodes that contain the keywords in the ID or description.
2. The BOM tree (Item 2), which displays the operations and materials. If a material is a subassembly, all the nested operations and materials are also displayed.
3. The **Qty** and **UOM** columns (Item 3), which display the quantity and the unit of measure for each material.
4. The Commands column (Item 4). When commands are applicable for the tree node, the column contains the More button, which the user can click to view these commands on the More menu. The following table describes the possible commands.

Command	Description
	If the tree node is a bill of material, the following command is available in the More menu.
<b>Add child</b>	Adds a new operation.
	If the tree node is an operation, the following commands are available in the More menu.
<b>Add sibling</b>	Adds a new operation on the same level as the current operation.

Command	Description
<b>Add child</b>	Adds a new material beneath the operation.
<b>Delete</b>	Deletes the operation.
If the tree node is a material, the following commands are available in the More menu.	
<b>Add sibling</b>	Adds a new material on the same level as the current material.
<b>Delete</b>	Deletes the material.

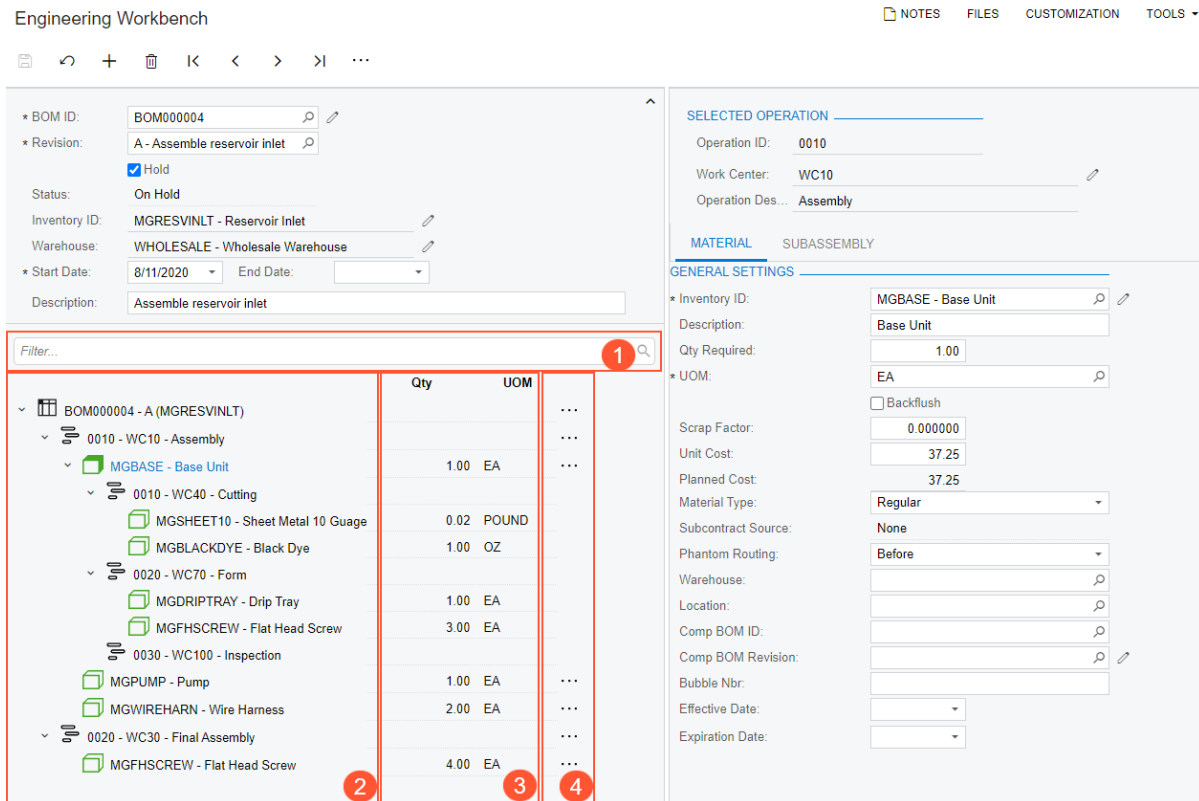


Figure: The left pane with the BOM tree












In the BOM tree, a manufacturing engineer can do any of the following when the **Hold** check box in the Summary area is selected:

- Change the order of operations
- Change the order of materials within an operation
- Move materials between operations
- Add new operations or materials
- Delete operations or materials


To move a node within the tree, the engineer drags the node to the needed position. Some movements are forbidden, such as the movement of an operation under another operation or the movement of a material under another material. If the engineer attempts a forbidden movement, the system displays an error message and does not move the node.

## Icons in the BOM Tree

Depending on the BOM structure, the BOM tree on the left pane of the *Engineering Workbench (AM208100)* form may display any of the icons listed and described in the following table.

Icon	Description
	The top-level bill of material.
	An operation that is performed internally.
	An outside operation.
	A material that is a subassembly. This material has an assigned bill of material.
	A material that is a phantom subassembly.
	A material of an outside operation that is a subassembly.
	A material that is a finished stock item.
	A material that is a finished phantom item.
	A material of an outside operation that is a finished stock item.
	A material that is a non-stock item.
	A material that is a phantom non-stock item.

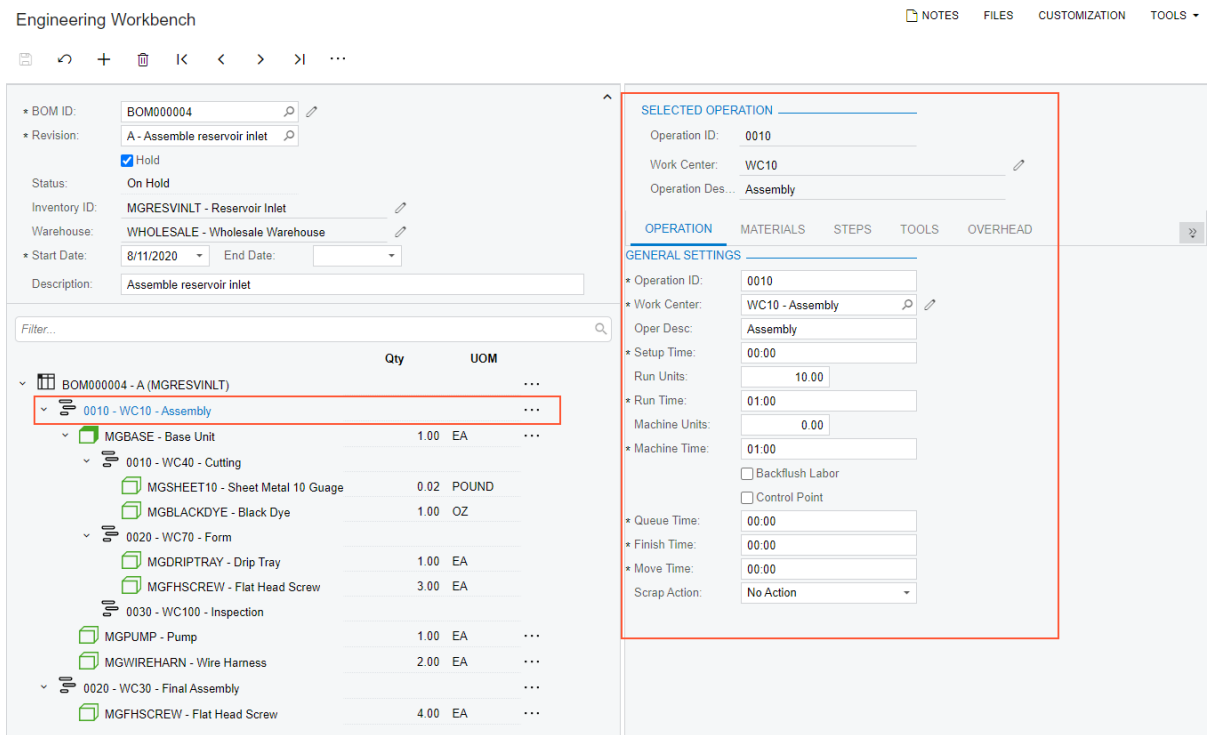


Icon	Description
	A material of an outside operation that is a non-stock item.

## Engineering Workbench: Operation and Material Details

In the right pane of the *Engineering Workbench* (AM208100) form, the manufacturing engineer can view the settings of the tree node selected in the left pane. The pane contains the following information, which depends on the selected tree node:

- For an operation: The pane displays the summary settings of the operation and the operation the detailed settings of the operation on the **Operation**, **Materials**, **Steps**, **Tools**, and **Overhead** tabs (see the following screenshot).



*Figure: Operation details on the right pane*

- For a material: The pane displays the summary settings of the operation and the settings of the material (see the following screenshot).

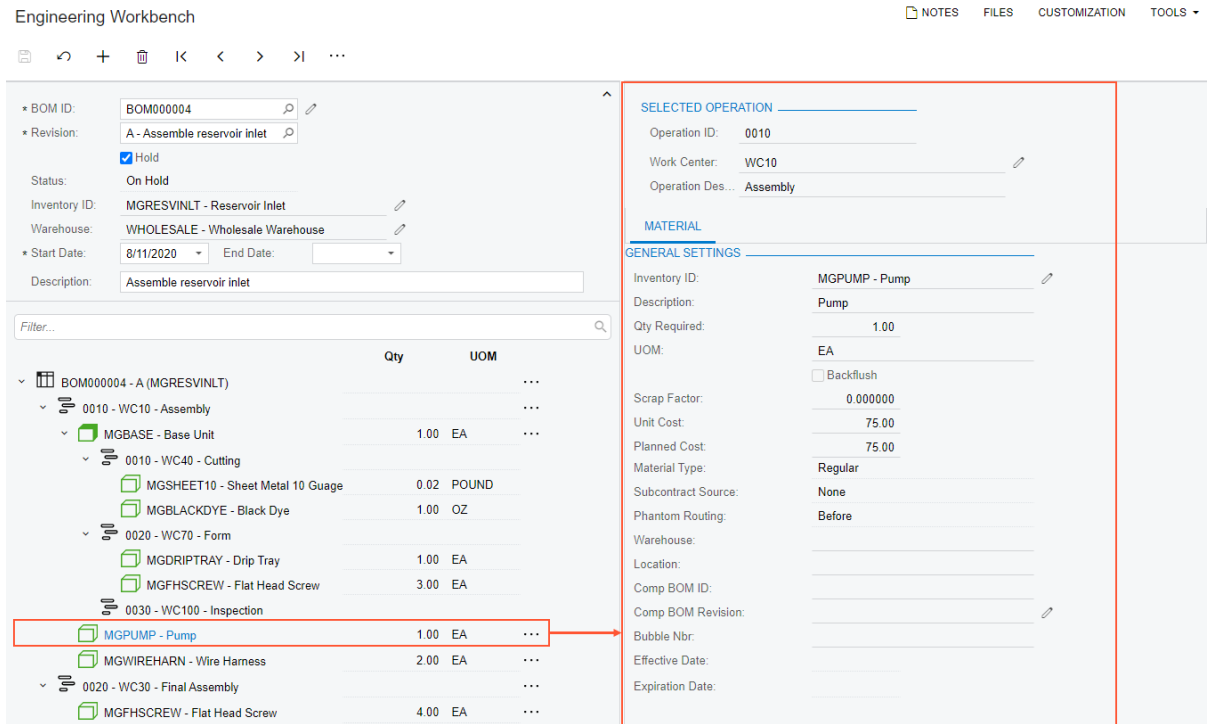


Figure: Material details on the right pane

- For a material that is a subassembly: The pane displays the summary settings of the operation, the settings of the material, and general information about the bill of material that is used for the production of the material (see the following screenshot).

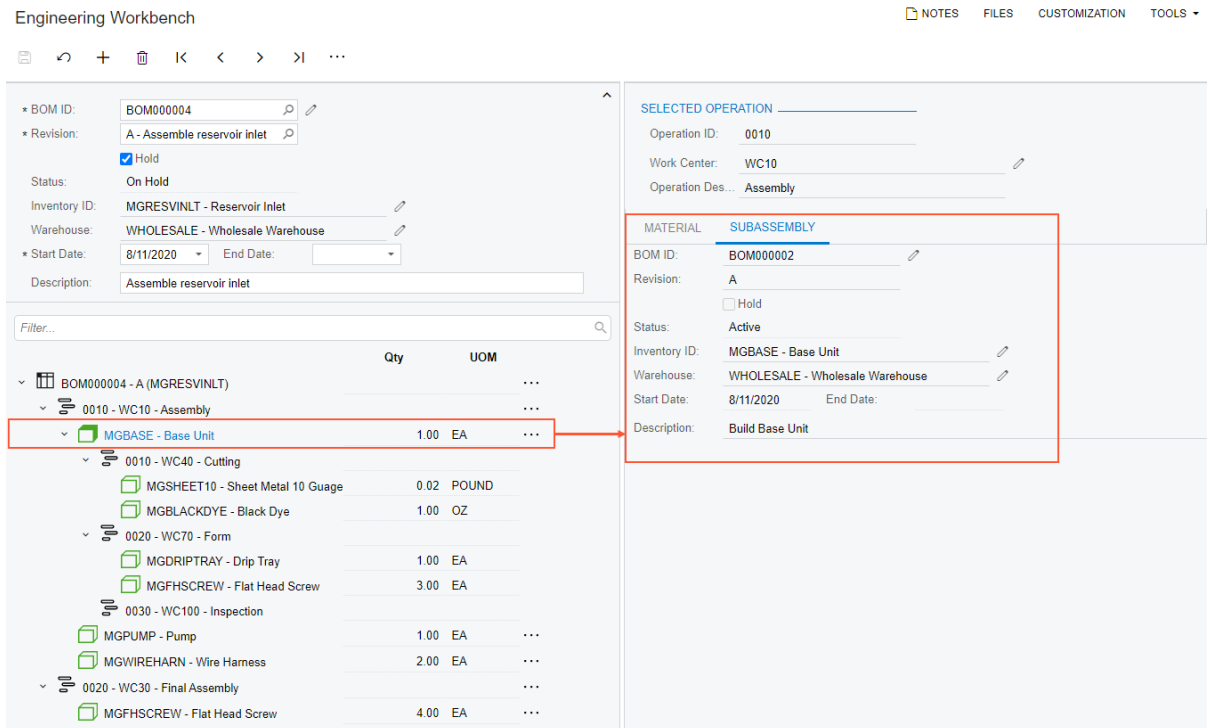


Figure: Subassembly details on the right pane

- For a material that is a part of a subassembly: The pane displays the summary settings of the subassembly bill of material and the operation, as well as the settings of the material (see the following screenshot).

Engineering Workbench

NOTES FILES CUSTOMIZATION TOOLS

BOM ID: BOM000004  
 Revision: A - Assemble reservoir inlet  
 Hold  
 Status: On Hold  
 Inventory ID: MGRESVINLT - Reservoir Inlet  
 Warehouse: WHOLESALE - Wholesale Warehouse  
 Start Date: 8/11/2020 End Date:   
 Description: Assemble reservoir inlet

Filter...

	Qty	UOM
BOM000004 - A (MGRESVINLT)		
0010 - WC10 - Assembly		
MGBASE - Base Unit	1.00	EA
0010 - WC40 - Cutting		
MGSHEET10 - Sheet Metal 10 Gauge	0.02	POUND
MGBLACKDYE - Black Dye	1.00	OZ
0020 - WC70 - Form		
MGDRIPTRAY - Drip Tray	1.00	EA
MGFHSCREW - Flat Head Screw	3.00	EA
0030 - WC100 - Inspection		
MGPUMP - Pump	1.00	EA
MGWIREHARN - Wire Harness	2.00	EA
0020 - WC30 - Final Assembly		
MGFHSCREW - Flat Head Screw	4.00	EA

**SELECTED BOM**

BOM ID: BOM000002  
 Revision: A  
 Hold  
 Status: Active  
 Inventory ID: MGBASE - Base Unit  
 Warehouse: WHOLESALE - Wholesale Warehouse  
 Start Date: 8/11/2020 End Date:   
 Description: Build Base Unit

**SELECTED OPERATION**

Operation ID: 0010  
 Work Center: WC40  
 Operation Des... Cutting

**MATERIAL**

**GENERAL SETTINGS**

\* Inventory ID: MGSHEET10 - Sheet Metal 10 Gauge  
 Description: Sheet Metal 10 Gauge  
 Qty Required: 0.02  
 \* UOM: POUND  
 Backflush  
 Scrap Factor: 0.000000  
 Unit Cost: 25.00  
 Planned Cost: 0.50  
 Material Type: Regular

Figure: Details of a subassembly material on the right pane

## Creation of a Bill of Material

To create a bill of material on the *Engineering Workbench* (AM208100) form, a manufacturing engineer does the following:

1. In the **Inventory ID** box of the Summary area, selects a stock item to be produced.
2. Optionally, in the **Warehouse** box, selects a warehouse and specifies other settings in the Summary area.
3. Saves these changes. The node for the bill of material appears in the tree.
4. In the More menu of the BOM node, selects **Add child**.
5. Clicks the **New Operation** node, which appears under the BOM node, and on the **Operation** tab of the right pane, specifies the needed settings for the operation.
6. Saves these changes.
7. If the operation requires materials, does any of the following for each material, which the engineer first selects in the BOM tree:
  - a. On the **Material** tab of the right pane, clicks **Add Row** on the table toolbar and specifies the needed material settings, as is done on the *Bill of Material* (AM208000) form.
  - b. On the More menu of the operation node, selects **Add child**. The engineer then clicks the **New Material** node that appears in the BOM tree and specifies the needed material settings on the **Material** tab of the right pane.
8. Specifies the steps, tools, overhead, or outside processing settings on the corresponding tabs of the right pane.
9. Saves these changes.
10. Adds as many operations as are needed.

## Other UI Changes

On the *Bill of Material* (AM208000) form, the **Engineering Workbench** command has been added to the More menu (see the following screenshot). A user clicks this command to open the *Engineering Workbench* (AM208100) form for the bill of material that was selected on the *Bill of Material* form.

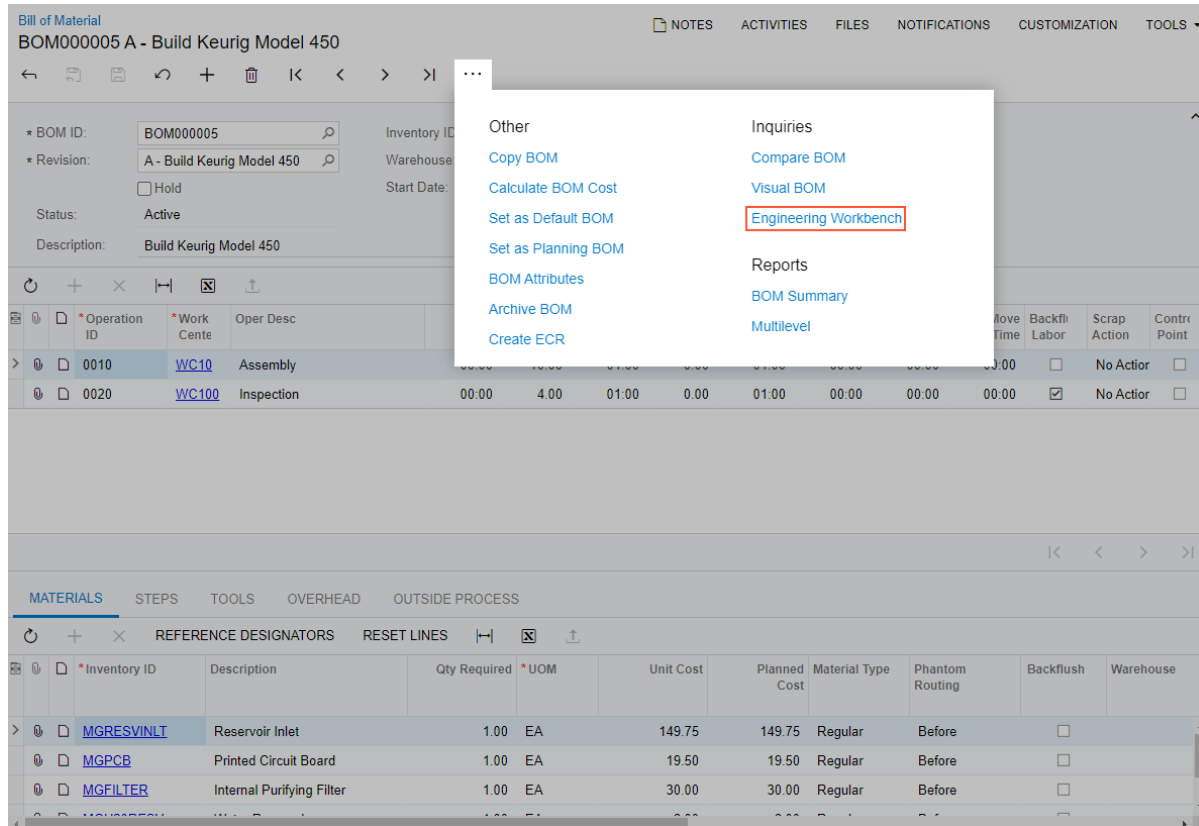


Figure: The Engineering Workbench command on the Bill of Material form

## Additional Information

For detailed information about bills of material, see [Bills of Material: General Information](#).

# Manufacturing: Enhanced Support for Transfers in MRP

In previous versions of Acumatica ERP Manufacturing Edition, when the system performed material requirements planning (MRP), it did not create planned orders for possible transfer orders. Instead, the planning engineer reviewed MRP results on the [MRP Display](#) (AM400000) form and determined whether an item could be transferred from another warehouse. If so, they created the needed transfer orders on the [Sales Orders](#) (SO301000) form and had to regenerate MRP so that the system considered the new transfer orders. Additionally, there was no specific setting for transfer lead time for items used in manufacturing.

In Acumatica ERP Manufacturing Edition 2022 R2, during MRP, the system creates planned transfer orders for items that can be transferred from another warehouse and uses the new transfer lead time settings to calculate the action dates for the orders—that is, the dates in the **Action Date** column of the [MRP Display](#) form.

## Planned Transfer Orders in MRP

The system generates a planned transfer order for an item during MRP when all of the following is true:

- The available item quantity in a warehouse specified in a demand document is insufficient to meet the demand
- The item can be transferred from a different (transfer) warehouse according to the item settings, that is, *Transfer* is specified in the **Replenishment Source** box and the transfer warehouse is specified in the **Replenishment Warehouse** box of the **Replenishment** tab on the [Item Warehouse Details](#) (IN204500) form for the combination of the item and the source warehouse

For a planned transfer order, the system creates the following records on the [MRP Display](#) (AM400000) form:

- The record for the demand document that contains the item (the same as in previous versions). This record has the source of *Transfer* and the transfer warehouse specified, as shown in the first line of the following screenshot.
- The supply record for the planned transfer order itself (the implemented behavior). This record has the type of *Planned Transfer Demand*, as shown in the second line of the following screenshot.

MRP Display

PURCHASE MANUFACTURE TRANSFER ...

Inventory ID	Description	Source	Warehouse	Transfer Warehouse	Base Qty	Promise Date	Action Date	Type	Related Document	Related Parent Document	Related Product Document	Item Class
AMKEURIG45	Keurig Model 450	Transfer	RETAIL	WHOLESALE	30.00	8/18/2022	8/18/2022	Sales Order	SO_S0005777	SO_S0005777	SO_S0005777	MFGFG --
AMKEURIG45	Keurig Model 450	Manufacturing	WHOLESALE		19.00	8/18/2022	8/18/2022	Planned Transfer Demand	PLTR1	SO_S0005777	SO_S0005777	MFGFG --

**Figure:** The records for items to be transferred on the MRP Display form

The reference numbers of planned transfer orders are generated automatically and have the PLTR prefix (see the **Related Document** column in the second line of the screenshot above).

If the source and manufacturing warehouses are located far from each other and it takes a day or more to transfer items between warehouses, a planning engineer can specify the transfer lead times for the warehouses in the new **Transfer Lead Time** table on the **Manufacturing** tab of the [Warehouses](#) (IN204000) form, shown in the following screenshot. With the source warehouse selected on the form, the engineer lists each transfer warehouse for which items may be moved to the warehouse selected on the form. In the **Transfer Lead Time** column for the warehouse, the lead time between the warehouses is specified.

Warehouses

RETAIL - Retail Warehouse

NOTES ACTIVITIES (1) FILES CUSTOMIZATION TOOLS

Warehouse ID: RETAIL Location Entry: Allow On-the-Fly Entry

Branch: PRODRETAIL - Prod Avg. Default Returns C... Average

Replenishment Class: PURCHASE - Purch... FIFO Default Returns C... Average

Active

Description: Retail Warehouse

LOCATIONS CARTS TOTES GLACCOUNTS ADDRESS MANUFACTURING

MRP SETTINGS

Forecasts  Purchase Orders

Inventory On Hand  Production Orders

MPS  Sales Orders

Shipments

SCRAP

Scrap Warehouse:

Scrap Location:

**Transfer Lead Time**

* Replenishment Warehouse	Transfer Lead Time (Days)
> WHOLESALE	2

Figure: The new Transfer Lead Time table on the Warehouses form

If the transfer lead time is item-specific for any item in a particular transfer warehouse, the planning engineer can specify the lead time in the new **Transfer Lead Time** box of the **Manufacturing** tab on the *Item Warehouse Details* form for the combination of the item and the transfer warehouse (see the following screenshot).

Item Warehouse Details

NOTES ACTIVITIES FILES CUSTOMIZATION TOOLS

Inventory ID: AMKEURIG45 - Keurig Model 450  Override Product Manager

Warehouse: RETAIL - Retail Warehouse Product Workgroup:

Status: Active Product Manager:

GENERAL REPLENISHMENT PRICE/COST **MANUFACTURING**

**GENERAL**

Default BOM ID:   Scrap Override

Planning BOM ID:  Scrap Warehouse:

Configuration ID:  Scrap Location:

**PLANNING SETTINGS**

Safety Stock: 0.00

Reorder Point: 0.00

Min Order Qty: 1.00  Override

Max Order Qty: 0.00  Override

Lot Size: 1.00  Override

MFG Lead Time: 0  Override

**Transfer Lead Time: 3  Override**

Days of Supply: 0  Override

Figure: The new Transfer Lead Time box on the Item Warehouse Details form

When the system calculates the action date of a planned transfer order, it now uses the requested date specified in a demand document (such as a sales order) and subtracts the transfer lead time from this date if the transfer lead time is specified either for the warehouse or for the combination of the item and the warehouse.

If a planning engineer decides to transfer items as was suggested by MRP, on the [MRP Display](#) form, the engineer selects the needed record or records in the table and clicks **Transfer** on the form toolbar. The system creates a transfer order on the [Sales Orders](#) (SO301000) form with a number of lines on the **Details** tab that is equal to the number of the selected records and a **Ship On** date for each line equal to the action date of each planned transfer order that was selected.

## New Exception Messages

On the [MRP Exceptions](#) (AM403000) form, the following new exception messages have been added:

- *Transfer without Repl. Warehouse:* The replenishment source has been set as *Transfer* for the item and source warehouse combination on the **Replenishment** tab of the [Item Warehouse Details](#) (IN204500) form but the replenishment warehouse is not specified on the same tab.
- *Circular Transfer:* One or more warehouses make a closed loop for transferring the item.

## Other UI Enhancements

The following UI enhancements have been introduced to make it easier to find the settings related to item planning:

- On the [Detail Inquiry](#) (AM404000) form, the **Replenishment Source**, **Replenishment Warehouse**, **Transfer Lead Time**, and **Lead Time** boxes have been added to the Selection area (see the following screenshot) for the convenience of a planning engineer who is viewing information about planned documents for a particular item as a result of MRP. In addition, the **Warehouse Details** button (also shown in the following screenshot) has been added to the form toolbar, which opens the [Item Warehouse Details](#) (IN204500) form in a new browser tab for the item specified in the **Inventory ID** box and the warehouse specified in the **Warehouse** box.

Detail Inquiry CUSTOMIZATION TOOLS ▾

WAREHOUSE DETAILS

* Inventory ID:	AMKEURIG45 - Keurig Mode	Safety Stock:	0.00
* Warehouse:	RETAIL - Retail Warehouse	Min. Order Qty:	1.00
Qty On Hand:	0.00	Max. Order Qty:	0.00
Base Unit:	EA	Lot Qty:	1.00

Replenishment Source:	Transfer
Replenishment Warehouse:	WHOLESALE - Wholesale Ware
Transfer Lead Time:	0
Lead Time:	0

REFRESH | ADJUST | EXPORT

Type	Promise Date	Related Document	Qty	Qty On Hand
MRP Plan	8/18/2022	SO_SO006777	30.00	30.00
Sales Order	8/18/2022	SO_SO006777	-30.00	0.00

Figure: The Detail Inquiry form

- The **General** section of the **Manufacturing** tab on the [Warehouses](#) (IN204000) form has been renamed to **MRP Settings**, as shown in the following screenshot.

Warehouses NOTES ACTIVITIES (1) FILES CUSTOMIZATION TOOLS ▾

RETAIL - Retail Warehouse

Warehouse ID: RETAIL Location Entry: Allow On-the-Fly Entry

Branch: PRODRETAIL - Prod Avg. Default Returns C...: Average

Replenishment Class: PURCHASE - Purch: FIFO Default Returns C...: Average

Active

Description: Retail Warehouse

LOCATIONS CARTS TOTES GLACCOUNTS ADDRESS **MANUFACTURING**

**MRP SETTINGS**

Forecasts  Purchase Orders

Inventory On Hand  Production Orders

MPS  Sales Orders

Shipments

Scrap Warehouse:

Scrap Location:

**Transfer Lead Time**

* Replenishment Warehouse	Transfer Lead Time (Days)
WHOLESALE	2

Figure: The Manufacturing tab on the Warehouses form

- The **Replenishments** section of the **Manufacturing** tab on the [Stock Items](#) (IN202500) and [Item Warehouse Details](#) (IN204500) forms has been renamed to **Planning Settings** to better indicate that the settings in



this section impact only planning in manufacturing. In addition, the **MRP Consolidation** section has been removed and the **Days of Supply** box has been moved to the **Planning Settings** section. These changes are shown in the following screenshots.

Stock Items NOTES ACTIVITIES FILES CUSTOMIZATION TOOLS

AMKEURIG45 - Keurig Model 450

Inventory ID: AMKEURIG45 - Keurig Model 450 Product Workgroup:   
 Item Status: Active Product Manager:   
 Description: Keurig Model 450

GENERAL PRICE/COST **MANUFACTURING** WAREHOUSES VENDORS ATTRIBUTES PACKAGING CROSS-REFERENCE RELATED ITEMS

**GENERAL** **SCRAP** **SCHEDULING**

Default BOM ID: BOM000005 - Build Keurig M   
 Planning BOM ID:   
 Configuration ID:   
 Dflt Mark For: Production   
 Make to Order Item   
 MRP Item   
 Quantity Round Up   
 CTP Item

Scrap Warehouse:   
 Scrap Location:   
 Check for Material Availability

**PLANNING SETTINGS**

Source: Manufacturing  Override   
 Safety Stock: 20.00  Override   
 Reorder Point: 0.00  Override   
 Min Order Qty: 1.00   
 Max Order Qty: 0.00   
 Lot Size: 1.00   
 MFG Lead Time: 0   
**Days of Supply: 0**  Override

Figure: The Manufacturing tab of the Stock Items form

Item Warehouse Details NOTES ACTIVITIES FILES CUSTOMIZATION TOOLS

Inventory ID:   
 Warehouse:   
 Status: Active   
 Override Product Manager   
 Product Workgroup:   
 Product Manager:

GENERAL REPLENISHMENT PRICE/COST **MANUFACTURING**

**GENERAL** **SCRAP**

Default BOM ID:   
 Planning BOM ID:   
 Configuration ID:   
 Scrap Warehouse:  Scrap Override   
 Scrap Location:

**PLANNING SETTINGS**

Safety Stock: 0.00   
 Reorder Point: 0.00   
 Min Order Qty: 0.00  Override   
 Max Order Qty: 0.00  Override   
 Lot Size: 0.00  Override   
 MFG Lead Time: 0  Override   
 Transfer Lead Time: 0  Override   
**Days of Supply: 0**  Override

Figure: The Manufacturing tab of the Item Warehouse Details form

## Additional Information

For information about setting up transfers in MRP, see [MRP Configuration: General Information](#).

For details about planning transfers in MRP, see [Material Requirements Planning: Planning Transfers in MRP](#).

# Manufacturing: Control of Excessive Item Quantity for Operations

In the previous versions of Acumatica ERP Manufacturing Edition, when a shop floor operator created a move transaction on the *Move* (AM302000) form or a labor transaction on the *Labor* (AM301000) form, the operator could mistakenly enter an excessive quantity of completed items for production operations or record completion of the same items several times. If the quantity of completed items exceeded the quantity to produce specified in the production order, the excessive quantity caused inaccurate cost of the production order.

In version 2022 R2, to give production managers the ability to minimize or eliminate these data entry mistakes, the **Exceeding Qty. for Operations** setting (see Item 1 in the following screenshot) has been introduced on the *Production Order Types* (AM201100) form.

The screenshot displays the 'Production Order Types' form for 'RO - Regular Orders'. The form is divided into several sections: GENERAL, ACCOUNT SETTINGS, ORDER DEFAULTS, PRINTING, SCHEDULING, NUMBERING SETTINGS, SCRAP, COPY BOM NOTES, and DATA ENTRY SETTINGS. The 'DATA ENTRY SETTINGS' section is highlighted, and two settings are circled in red with numbered arrows: 'Exceeding Qty. for Operations' (Item 1) and 'Exceeding Qty. for Orders' (Item 2), both set to 'Warn'. Other settings include 'Under Issue Material' (Warn), 'Under Issue Backflush Material' (Allow), 'Over Issue Material' (Warn), 'Issue Material Not On Order' (Warn), and 'Move on Completed Operations' (Warn). There are also checkboxes for 'Include unreleased batch qty', 'Default operation move qty', and 'Allow Preassigning Lot/Serial Numbers', and a dropdown for 'Require Parent Lot/Serial Number' set to 'Never'.

**Figure: Production Order Types form**

In the **Exceeding Qty. for Operations** box, a production manager can select an option that determines whether a shop floor operator can release a move or labor transaction with a quantity of completed items that exceeds the quantity to produce specified in a production order as follows:

- If the operator is allowed to release a move or labor transaction with any completed quantity, the manager selects *Allow*.
- If the operator is allowed to release a move or labor transaction with an excessive quantity of completed items, but the system should display a warning message, the manager selects *Warn*.
- If the operator is forbidden to release a move or labor transaction with an excessive quantity of completed items, the manager selects *Do Not Allow*; the system will display an error message and prevent the operator from releasing the move or labor transaction. To release the transaction, the operator must reduce the completed quantity.

In addition, the setting previously named **Over Complete Orders** has been renamed to **Exceeding Qty. for Orders** (see Item 2 in the screenshot above). Note that the **Exceeding Qty. for Orders** setting controls only the quantity recorded for the last operation in a production order, but the **Exceeding Qty. for Operations** setting controls the quantity recorded for each operation.

# Manufacturing: Restricted Visibility of Customers and Vendors

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Starting in 2022 R2, on forms of Acumatica ERP Manufacturing Edition, lists of customers and vendors are displayed according to the access rights of the signed-in user and the restriction settings specified in customer or vendor classes. An implementation manager can restrict the visibility of customers or vendors of a particular class by branch or by company.

This functionality is available only when the *Customer and Vendor Visibility Restriction* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

## Manufacturing Forms that Support Visibility Restrictions

On the following forms, customer accounts that are displayed or available for selection may be limited based on visibility restrictions:

- [Production Order Maintenance](#) (AM201500)
- [Forecast](#) (AM202000)
- [Generate Forecast](#) (AM502000)

On the following forms, vendor accounts that are displayed or available for selection may be limited based on visibility restrictions:

- [Vendor Shipments](#) (AM310000)
- [Production Order Details](#) (AM209000)
- [Critical Materials](#) (AM401000)
- [MRP Display](#) (AM400000)
- [Estimate Operation](#) (AM304000)

## Additional Information

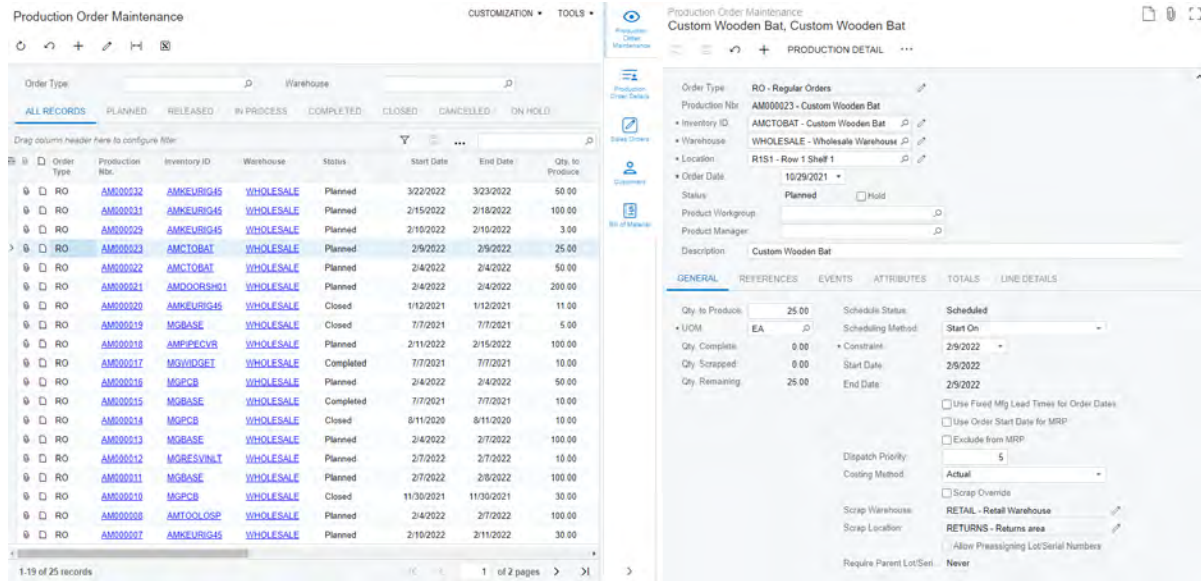
For more information on restricting the visibility of customer or vendor accounts, see the following Help topics:

- [Customer Visibility: General Information](#)
- [Vendor Visibility: General Information](#)

# Manufacturing: Side Panel Support for Lists of Records

In Acumatica ERP Manufacturing Edition 2022 R2, a side panel has been added to multiple lists of records. A side panel is a navigation option where users can drill down to relevant details about any record they select in a list of records. A side panel may have only one tab with a form related to the selected record, or it may have multiple tabs. If the side panel has multiple tabs, a user views a tab by clicking its icon.

The following screenshot shows the side panel for the *Production Order Maintenance (AM2015PL)* list of records. Notice that for the selected record, the side panel has icons for five tabs.



**Figure:** The side panel of the *Production Order Maintenance* list of records

The following table notes each list of records to which a side panel has been added, along with the tab or tabs on the side panel for this list of records. The tabs whose icons are displayed on the side panel may vary depending on the settings of the record that is selected in the list of records; the **Availability** column describes when each tab is available.

**Table:** Lists of Records with Side Panels

List of Records	Tab or Tabs of the Side Panel	Availability
<i>Production Order Maintenance (AM2015PL)</i>	<a href="#">Production Order Maintenance (AM201500)</a>	Always available.
	<a href="#">Production Order Details (AM209000)</a>	Always available.
	<a href="#">Sales Orders (SO301000)</a>	Available if for the selected record, a sales order is specified in the <b>SO Order Nbr.</b> box on the <b>References</b> tab of the <i>Production Order Maintenance</i> form.
	<a href="#">Customers (AR303000)</a>	Available if for the selected record, a customer is specified in the <b>Customer</b> box on the <b>References</b> tab of the <i>Production Order Maintenance</i> form.

List of Records	Tab or Tabs of the Side Panel	Availability
	<a href="#">Bill of Material</a> (AM208000)	Available if for the selected record, a bill of material is specified in the <b>BOM ID</b> box on the <b>References</b> tab of the <a href="#">Production Order Maintenance</a> form.
	<a href="#">Projects</a> (PM301000)	Available if for the selected record, a project is specified in the <b>Project</b> box on the <b>References</b> tab of the <a href="#">Production Order Maintenance</a> form.  The project-related functionality is available in the system only if the <i>Projects</i> feature is enabled on the <a href="#">Enable/Disable Features</a> (CS100000) form.
	<a href="#">Project Tasks</a> (PM302000)	Available if for the selected record, a project task is specified in the <b>Project Task</b> box on the <b>References</b> tab of the <a href="#">Production Order Maintenance</a> form.  The project-related functionality is available in the system only if the <i>Projects</i> feature is enabled on the <a href="#">Enable/Disable Features</a> (CS100000) form.
<a href="#">Bill of Material</a> (AM2080PL)	<a href="#">Bill of Material</a> (AM208000)	Always available.
	<a href="#">BOM Attributes</a> (AM208500)	Always available.
<a href="#">Engineering Change Request</a> (AM2100PL)	<a href="#">Engineering Change Request</a> (AM210000)	Always available.
	<a href="#">Engineering Change Order</a> (AM215000)	Available if for the selected record, an engineering change order is specified in the <b>ECO ID</b> box in the Summary area of the <a href="#">Engineering Change Request</a> form.
<a href="#">Engineering Change Order</a> (AM2150PL)	<a href="#">Engineering Change Order</a> (AM215000)	Always available.
	<a href="#">Engineering Change Request</a> (AM210000)	Available if an engineering change request is specified in the <b>ECR ID</b> column of the <a href="#">Engineering Change Order</a> (AM2150PL) list of records.
<a href="#">Configuration Maintenance</a> (AM2075PL)	<a href="#">Configuration Maintenance</a> (AM207500)	Always available.
	<a href="#">Bill of Material</a> (AM208000)	Always available.
<a href="#">Estimates</a> (AM3030PL)	<a href="#">Estimate</a> (AM303000)	Always available.
	<a href="#">Business Accounts</a> (CR303000)	Available when for the selected record, both of the following conditions are met: <ul style="list-style-type: none"> <li>A business account is specified in the <b>Customer</b> box on the <b>References</b> tab of the <a href="#">Estimate</a> form</li> <li>The <i>Customer Management</i> feature is enabled on the <a href="#">Enable/Disable Features</a> form.</li> </ul>

List of Records	Tab or Tabs of the Side Panel	Availability
	<a href="#">Opportunities</a> (CR304000)	Available when for the selected record, both of the following conditions are met: <ul style="list-style-type: none"> <li>An opportunity is specified in the <b>Opportunity ID</b> box on the <b>References</b> tab of the <a href="#">Estimate</a> form.</li> <li>The <i>Customer Management</i> feature is enabled on the <a href="#">Enable/Disable Features</a> form.</li> </ul>
	<a href="#">Sales Quotes</a> (CR304500)	Available when for the selected record, both of the following conditions are met: <ul style="list-style-type: none"> <li>A sales quote and an opportunity are specified in the <b>Quote Nbr</b> and <b>Opportunity ID</b> boxes, respectively, on the <b>References</b> tab of the <a href="#">Estimate</a> form.</li> <li>If the <i>Sales Quotes</i> feature is enabled on the <a href="#">Enable/Disable Features</a> form.</li> </ul>
	<a href="#">Sales Orders</a> (SO301000)	Available if for the selected record, values are specified in both the <b>Order Type</b> and <b>Order Nbr</b> boxes of the <b>References</b> tab of the <a href="#">Estimate</a> form.
	<a href="#">Quote</a> (SO641000)	Available if for the selected record, <i>Sales Order</i> is specified in the <b>Quote Source</b> box of the Summary area and a reference number of a quote is specified in the <b>Quote Nbr</b> box on the <b>References</b> tab of the <a href="#">Estimate</a> form.
	<a href="#">Projects</a> (PM301000)	Available if for the selected record, a project is specified in the <b>Project</b> box on the <b>References</b> tab of the <a href="#">Estimate</a> form.  The project-related functionality is available in the system only if the <i>Projects</i> feature is enabled on the <a href="#">Enable/Disable Features</a> (CS100000) form.
	<a href="#">Project Tasks</a> (PM302000)	Available if for the selected record, a project task is specified in the <b>Project Task</b> box on the <b>References</b> tab of the <a href="#">Estimate</a> form.  The project-related functionality is available in the system only if the <i>Projects</i> feature is enabled on the <a href="#">Enable/Disable Features</a> (CS100000) form.
<i>Estimate Operation</i> (AM3040PL)	<a href="#">Estimate Operation</a> (AM304000)	Always available.
	<a href="#">Estimate</a> (AM303000)	Always available.
	<a href="#">Business Accounts</a> (CR303000)	Available when for the estimate that contains the selected operation, both of the following conditions are met: <ul style="list-style-type: none"> <li>A business account is specified in the <b>Customer</b> box on the <b>References</b> tab of the <a href="#">Estimate</a> form</li> <li>The <i>Customer Management</i> feature is enabled on the <a href="#">Enable/Disable Features</a> form.</li> </ul>



List of Records	Tab or Tabs of the Side Panel	Availability
	<a href="#">Opportunities</a> (CR304000)	Available when for the estimate that contains the selected operation, both of the following conditions are met: <ul style="list-style-type: none"> <li>An opportunity is specified in the <b>Opportunity ID</b> box on the <b>References</b> tab of the <a href="#">Estimate</a> form.</li> <li>The <i>Customer Management</i> feature is enabled on the <a href="#">Enable/Disable Features</a> form.</li> </ul>
	<a href="#">Sales Quotes</a> (CR304500)	Available when for the estimate that contains the selected operation, both of the following conditions are met: <ul style="list-style-type: none"> <li>A sales quote and an opportunity are specified in the <b>Quote Nbr</b> and <b>Opportunity ID</b> boxes, respectively, on the <b>References</b> tab of the <a href="#">Estimate</a> form.</li> <li>If the <i>Sales Quotes</i> feature is enabled on the <a href="#">Enable/Disable Features</a> form.</li> </ul>
	<a href="#">Sales Orders</a> (SO301000)	Available if for the estimate that contains the selected operation, values are specified in the <b>Order Type</b> and <b>Order Nbr</b> boxes on the <b>References</b> tab of the <a href="#">Estimate</a> form.
	<a href="#">Quote</a> (SO641000)	Available if for the estimate that contains the selected operation, <i>Sales Order</i> is specified in the <b>Quote Source</b> box of the Summary area and a value is specified in the <b>Quote Nbr</b> box on the <b>References</b> tab of the <a href="#">Estimate</a> form.
	<a href="#">Projects</a> (PM301000)	Available if for the estimate that contains the selected operation, a project is specified in the <b>Project</b> box on the <b>References</b> tab of the <a href="#">Estimate</a> form.  The project-related functionality is available in the system only if the <i>Projects</i> feature is enabled on the <a href="#">Enable/Disable Features</a> (CS100000) form.
	<a href="#">Project Tasks</a> (PM302000)	Available if for the estimate that contains the selected operation, a project task is specified in the <b>Project Task</b> box on the <b>References</b> tab of the <a href="#">Estimate</a> form.  The project-related functionality is available in the system only if the <i>Projects</i> feature is enabled on the <a href="#">Enable/Disable Features</a> (CS100000) form.

For details about side panels, see [Side Panels of Generic Inquiry Forms](#).

# Manufacturing: Support of Blanket Sales Orders in MRP

For companies that have long lead times to produce a finished good or have long lead times for purchase the components of a finished good, planning for future sales demand is critical to meet the dates when delivery to the customer was promised. These companies need material requirements planning (MRP) to include the lines of blanket sales orders as a part of the demand calculation. In Acumatica ERP Manufacturing Edition 2022 R2, blanket lines of a blanket sales order that are planned for dates in the future are now included in MRP and are processed similarly to forecasts. Child sales orders generated from a blanket sales order are also included in MRP and are processed the same as regular sales orders are.

MRP uses the value of the **Sched. Shipment Date** column in the line or line detail (if details have been added for the line) on the **Details** tab of the *Sales Orders* (SO301000) form as the promise date on the *MRP Display* (AM400000) form. On this form, the planned orders based on blanket sales orders have the *Blanket Order* type, as shown in the following screenshot.

Inventory ID	Description	Source	Warehouse	Base Qty	Promise Date	Action Date	Type	Related Document	Related Parent Document	Related Product Document	Item Class
AMKEURIG45	Keurig Model 450	Manufacturing	WHOLESALE	8.00	6/1/2022	6/1/2022	Forecast	FCST000002	FCST000002	FCST000002	MFGFG --
AMKEURIG45	Keurig Model 450	Manufacturing	WHOLESALE	100.00	7/1/2022	6/28/2022	Forecast	FCST000002	FCST000002	FCST000002	MFGFG --
AMKEURIG45	Keurig Model 450	Manufacturing	WHOLESALE	90.00	8/1/2022	7/27/2022	Forecast	FCST000002	FCST000002	FCST000002	MFGFG --
AMKEURIG45	Keurig Model 450	Manufacturing	WHOLESALE	10.00	8/17/2022	8/17/2022	Sales Order	SO_S006774	SO_S006774	SO_S006774	MFGFG --
AMKEURIG45	Keurig Model 450	Manufacturing	WHOLESALE	85.00	9/1/2022	8/29/2022	Forecast	FCST000002	FCST000002	FCST000002	MFGFG --
AMKEURIG45	Keurig Model 450	Manufacturing	WHOLESALE	100.00	10/1/2022	9/27/2022	Forecast	FCST000002	FCST000002	FCST000002	MFGFG --
AMKEURIG45	Keurig Model 450	Manufacturing	WHOLESALE	15.00	9/30/2022	9/30/2022	Blanket Order	BL_S006773	BL_S006773	BL_S006773	MFGFG --

Figure: The MRP Display form

If the **Sched. Shipment Date** column of the blanket sales order line or line detail is empty on the *Sales Orders* form, the exception of the *Order Without Sched. Shipment Date* type is displayed on the *MRP Exceptions* (AM403000) form, as you can see in the following screenshot.

Inventory ID	Description	Type	Ref Type	Related Document	Quantity	Required Date	Promise Date	Warehouse	Supply Qty	Supply Warehouse	Item Class
AMKEURIG45	Keurig Model 450	Order Without Sched. Shipment Date	Blanket Order	BL_S006773	75.00	7/21/2022	7/21/2022	WHOLESALE	0.00		MFGFG --
FOODCOLA12	Coca-Cola Cans 12 Count	Late Order	Transfer Supply		100.00	7/21/2022	1/1/1900	WHOLESALE	100.00		FOOD-450-SODA
MGRESVINLT	Reservoir Inlet	Delete	Production Order	RO_AM000002	10.00	2/7/2022	2/7/2022	WHOLESALE	0.00		MFGSUBASSY--
MGRESVINLT	Reservoir Inlet	Late Order	Production Order	RO_AM000002	10.00	2/7/2022	2/7/2022	WHOLESALE	0.00		MFGSUBASSY--
MGPCB	Printed Circuit Board	Delete	Production Order	RO_AM000003	15.00	2/7/2022	2/7/2022	WHOLESALE	0.00		MFGSUBASSY--
MGPCB	Printed Circuit Board	Late Order	Production Order	RO_AM000003	15.00	2/7/2022	2/7/2022	WHOLESALE	0.00		MFGSUBASSY--
AMKEURIG45	Keurig Model 450	Defer	Production Order	RO_AM000007	30.00	5/1/2022	2/11/2022	WHOLESALE	30.00		MFGFG --
AMKEURIG45	Keurig Model 450	Late Order	Production Order	RO_AM000007	30.00	5/1/2022	2/11/2022	WHOLESALE	30.00		MFGFG --
AMTOOLOSP	Sterilized Scalpel	Delete	Production Order	RO_AM000008	100.00	2/7/2022	2/7/2022	WHOLESALE	0.00		MFGFG --
AMTOOLOSP	Sterilized Scalpel	Late Order	Production Order	RO_AM000008	100.00	2/7/2022	2/7/2022	WHOLESALE	0.00		MFGFG --
MGRBASE	Base Unit	Delete	Production Order	RO_AM000011	100.00	2/8/2022	2/8/2022	WHOLESALE	0.00		MFGSUBASSY--
MGRBASE	Base Unit	Late Order	Production Order	RO_AM000011	100.00	2/8/2022	2/8/2022	WHOLESALE	0.00		MFGSUBASSY--
MGRESVINLT	Reservoir Inlet	Delete	Production Order	RO_AM000012	10.00	2/7/2022	2/7/2022	WHOLESALE	0.00		MFGSUBASSY--

Figure: The MRP Exceptions form

The system also uses data from blanket sales orders when calculating forecast that is dependent on sales orders.

A planning engineer can decide whether to include in MRP blanket sales orders that have expired. If the orders should be included in MRP calculation then the engineer selects the **Include Expired Blanket Sales Orders** check

box on the [MRP Preferences](#) (AM100000) form, shown in the following screenshot. By default, expired blanket sales orders are excluded from MRP.

MRP Preferences CUSTOMIZATION TOOLS ▾

📄 ↺

**EXCEPTIONS**

Days Before:

Days After:

**FORECAST**

Demand Time Fence:

Numbering Sequence:  ↻ ↗

**MPS**

Time Fence:

Default Type:  ↻ ↗

**GENERAL**

\* Plan Order Type:  ↻ ↗

Grace Period:

Stocking Method:

Purchase Calendar ID:  ↻ ↗

Include On Hold Sales Orders

Include On Hold Purchase Orders

Include On Hold Production Orders

Use Fixed Manufacturing Times

Include Expired Blanket Sales Orders

**CONSOLIDATION**

Use Days of Supply to Consolidate Orders

Use Long-Term Consolidation Bucket

**Figure:** The Include Expired Blanket Sales Orders check box on the MRP Preferences form

# Manufacturing: Other Enhancements

In Acumatica ERP Manufacturing Edition 2022 R2, multiple improvements to the UI and manufacturing management processes have been introduced, as described below.

## Management of the Initial Status for New BOM Revisions

In previous versions of the system, the initial status of each new revision of a bill of material (BOM) was *On Hold*. This could be inconvenient for organizations that create bills of material based on engineering change orders or that have integrated Acumatica ERP Manufacturing Edition with a product lifecycle management system and manage bills of material in this system.

Now a production manager can control whether all new BOM revisions will have a status of *On Hold*. The new **Hold BOM Revisions on Entry** check box has been added to the *BOM Preferences* (AM101000) form, as shown in the following screenshot. The production manager can clear this check box if they want all new BOM revisions to be created with the *Active* status; thus, the BOM revisions can be used in production immediately after creation. Otherwise, the revisions will be created with the *On Hold* status.

For companies that are upgrading their system from previous versions, the check box will be selected to preserve the existing behavior.

The screenshot shows the 'BOM Preferences' form with the following settings:

- NUMBERING SETTINGS**
  - \* BOM Numbering Sequence: AMBOM
  - ECR Numbering Sequence: AMECR
  - ECO Numbering Sequence: AMECO
- DATA ENTRY SETTINGS**
  - Default Revision: A
  - Duplicates on BOM: Allow
  - Duplicates on Operation: Allow
  - Default Work Center: [Empty]
  - Operation Time Format: 00:00
  - Total Time Format: #### h ## m
  - Require ECR/ECO for New BOM Revisions
  - Require ECR before Creating ECO
  - Hold BOM Revisions on Entry
- COST ROLL**
  - Allow Archive without Update Pending
  - Auto Archive when Update Pending
- WORK CENTER DEFAULTS**
  - \* Default Queue Time: 00:00
  - \* Default Finish Time: 00:00
  - \* Default Move Time: 00:00

Figure: The Hold BOM Revisions on Entry check box on the BOM Preferences form

## Enhanced Calculation of the Ship On Date for Transferred Materials

When a production manager creates a transfer order for materials needed in a particular production order by using the [Critical Materials](#) (AM401000) form, the system now performs enhanced calculation of the **Ship On** date in the transfer order. The system inserts the calculated date in the **Ship On** column of the [Sales Orders](#) (SO301000) form (**Details** tab) for the item of the transfer order. The **Ship On** date is now calculated as the date at which the materials are required (based on the scheduling settings of the production order) adjusted to account for the transfer lead time for the item to be produced.

The transfer lead time is specified either in the new **Transfer Lead Time** table on the **Manufacturing** tab of the [Warehouses](#) (IN204000) form or in the new **Transfer Lead Time** box of the **Manufacturing** tab on the [Item Warehouse Details](#) (IN204500) form for the combination of the item and the warehouse. For more information about these settings, see [Manufacturing: Enhanced Support for Transfers in MRP](#).

## Changes in Visibility of Bills of Material Through Branches and Companies

On the [Bill of Material](#) (AM208000) form, the **Warehouse** box is now optional. This provides the ability for production managers to centrally manage bills of material regardless of a company or branch to which the managers have access. All entities that a bill of material includes (such as work centers or materials) are also visible through all branches and companies. Production managers can add any of these entities to a bill of material.

If a production manager would like to make a bill of material warehouse-specific, on the [Item Warehouse Details](#) (IN204500) form, they create a record for the needed combination of this item to be produced and the warehouse and then specify this bill of material in the **Default BOM ID** box on the **Manufacturing** tab.

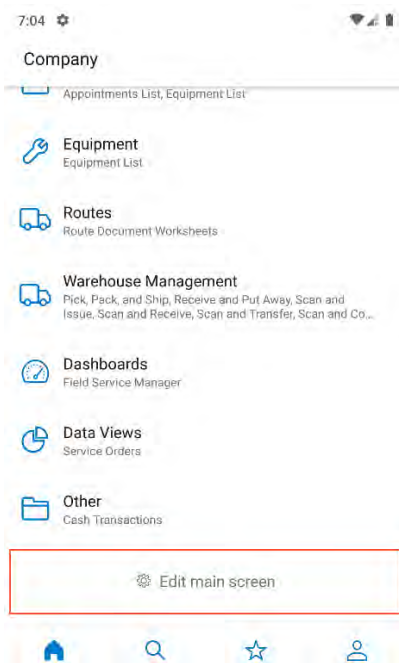
# Mobile: Ability to Edit the Main Screen

In the Acumatica mobile app connected to an instance of Acumatica ERP 2022 R2, a user can now select which of the following sections should be displayed on the main screen and change their order:

- KPIs
- Recently visited records
- Favorite screens and records
- Workspaces

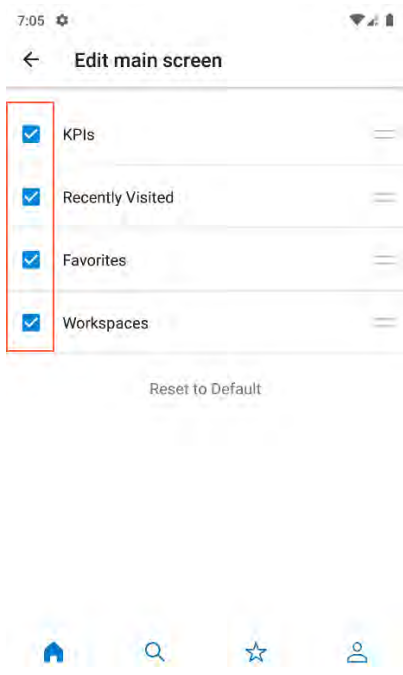
To edit the main screen of the mobile app, the user should do the following:

1. On the main screen of the Acumatica mobile app, scroll toward the bottom of the screen until the **Edit main screen** button appears, as shown in the following screenshot.



*Figure: The main screen of the mobile app*

2. Tap **Edit main screen**.
3. On the *Edit Main Screen* screen, which opens, select the check boxes of the sections that should be displayed, as shown in the following screenshot.



**Figure: The Edit Main Screen screen**

To change the order of the sections, the user should tap and hold the section name and drag it to the needed place.

4. Tap the back arrow to save the changes and return to the main screen.

By default, all sections are displayed.

# Mobile: Adjustment of Colors to Fit the Company's Color Scheme

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The Acumatica mobile app connected to an instance of Acumatica ERP 2022 R2 now adjusts the color of the UI elements on the following screens according to the primary color specified on the [Companies](#) (CS101500), [Branches](#) (CS102000), or [Site Preferences](#) (SM200505) form:

- Sign-In screen
- Main menu
- Workspaces
- Screens that correspond to Acumatica ERP forms

The app changes the color automatically when a user signs in to the instance.



# Payroll: Enhanced Conditions for Final Paycheck Release

Previously, the system allowed the release of a final paycheck even if paychecks had already been released for the employee for pay periods that followed the pay period of the final paycheck.

Starting in Acumatica ERP 2022 R2, an error message appears (as shown in the following screenshot) if a user attempts to release a final paycheck for an employee who has released paychecks for later pay periods.

Paychecks and Adjustments  
Final 000503 - Layla Beauvoir

NOT

**PR Error: Paycheck FIN,000503 cannot be released because it has the Final type and is supposed to be a final paycheck, but at least one other paycheck has already been released in a later pay period for the same employee.**

Type: Final  
Reference Nbr.: 000503  
Status: Paid  
Pay Group: MONTHLY - Monthly Pa  
Pay Period: 11-2021  
Posting Period: 11-2021  
Gross Pay: 6,667.40  
Deductions: 433.39  
Taxes: 1,816.53  
Net Pay: 4,417.48  
Termination Reason: Terminated for Cause  
Termination Date: 2/28/2022

Employee: EP00000003 - Layla Beauvoir  
Payment Method: FEDWIRE - Fedwire  
Cash Account: 10200 - Company Checking Account  
Period Start: 11/1/2021  
Period End: 11/30/2021  
Transaction Date: 11/1/2021  
Description: Paycheck for Layla Beauvoir - 11-2021

**EARNING** SUMMARY DEDUCTIONS TAXES PAID TIME OFF WORKERS' COMPENSATION UNION CERTIFIED PROJECT FINANCIAL

COPY SELECTED ENTRY OVERTIME RULES IMPORT TIME ACTIVITIES

*Branch	*Date	*Code	Description	*Location	Hours	Units	Unit Type	Rate	Manual Rate	Amount	Account	Subaccount
> SERVEAST	11/1/2021	RG	Regular Hours	MCLEAN	8.00		Hour	50.48	<input type="checkbox"/>	403.84	69500	000-000
SERVEAST	11/1/2021	OT	Overtime	MCLEAN	32.00		Hour	75.72	<input type="checkbox"/>	2,423.04	69500	000-000

**Figure: Error message on the Paychecks and Adjustments form**

To be able to release this final paycheck, the user first needs to void all the employee's paychecks for later pay periods.

# Payroll: Improvements to the User Interface

In Acumatica ERP 2022 R2, multiple improvements have been introduced to the user interface in the payroll functional area.

## Renamed Forms and Elements

The forms with the *PR3050PL* and *PR305000* form IDs, which were previously named *Payment Batch*, have been renamed to *Payment Batches*.

The form that was previously named *Employee Class (PR202000)* has been renamed to *Employee Payroll Class*.

The inquiry form that was previously named *Pay Stubs (PR405000)* has been renamed to *My Payroll Documents*.

On the **Employee** tab of the *Payroll Batches (PR301000)* form, the **Add Bulk Employees** button on the table toolbar has been renamed to **Add Employees**.

On the **Time Activities** tab of the *Weekly Crew Time Entry (EP307100)* form, the **Enter Bulk Time** button on the table toolbar has been renamed to **Mass Enter Time**.

On the **General** tab of the *Employee Payroll Settings (PR203000)* form, the **Use Class Default Value** check box in the **Work Locations** section has been renamed to **Use Class Default Work Locations**, as shown in the following screenshot.

The screenshot shows the 'Employee Payroll Settings' form for employee EP00000003 - Layla Beauvoir. The 'GENERAL' tab is active. The 'WORK LOCATIONS' section contains the following elements:

- Use Payroll Work Location from Project:
- Use Class Default Value:
- Use Class Default Work Locations**:  (highlighted with a red box)

Below these options is a table of work locations:

Location	Location Name	Default
> MCLEAN	Service East Location	<input checked="" type="checkbox"/>

The 'GENERAL INFO' section on the right includes fields for Class ID (SALARIED), Employee Type (Salaried Non-Exempt), Pay Group (MONTHLY - Monthly Paygroup), Calendar (PST - Pacific Time Zone), Working Hours per Week (40.00), Working Weeks per Year (52), Working Hours per Year (2,080.00), and various checkboxes for 'Use Class Default Value'.

Figure: Renamed check box on the Employee Payroll Settings form

## Optimization of UI Elements

On the *Payment Batches (PR305000)* and *Paychecks and Adjustments (PR302000)* forms, the commands on the More menu have been grouped by categories, as shown in the following screenshots.

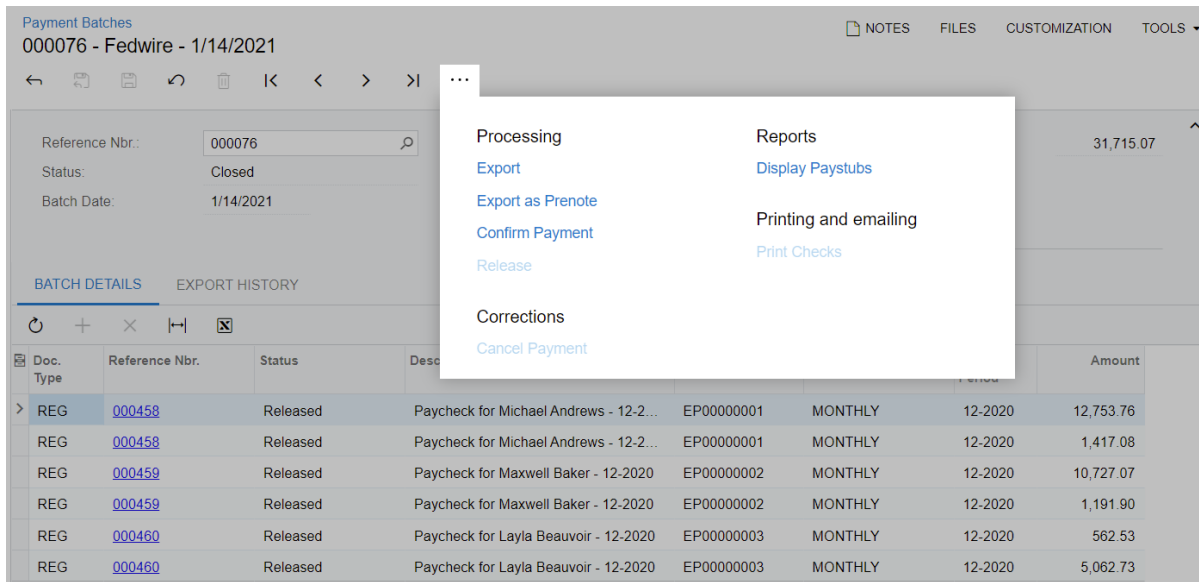


Figure: The More menu of the Payment Batches form

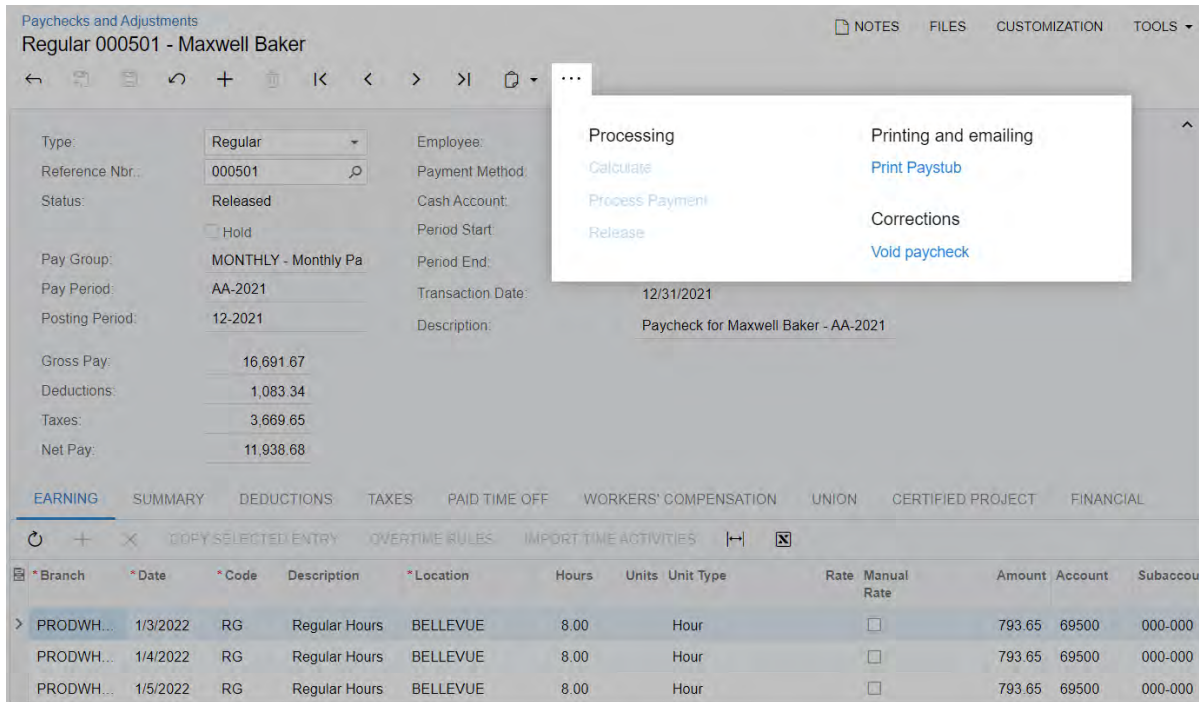


Figure: The More menu of the Paychecks and Adjustments form

On the **General** tab of the *Employee Payroll Settings* (PR203000) form, the **Use Payroll Work Location from Project** check box and the related **Use Class Default Value** check box have been moved from below the **Work Locations** table to the area above this table, as illustrated in the following screenshot.

Employee Payroll Settings  
 EP00000003 - Layla Beauvoir NOTES FILES CUSTOMIZATION TOOLS

← ↻ 🖨️ ↶ + 🗑️ ⌂ < > >| EDIT EMPLOYEE RECORD

\* Employee ID: EP00000003 - Layla Beauvoir  Active  
 Employee Name: Layla Beauvoir

GENERAL EMPLOYMENT HISTORY TAX SETTINGS TAXES COMPENSATION DEDUCTIONS AND BENEFITS PAID TIME OFF PAYMENT GL ACCOUNTS

**ADDRESS INFO**

ADDRESS LOOKUP  
 Address Line 1: 6839 Redmond Dr  
 Address Line 2:  
 City: McLean  
 \* Country: US - United States of America  
 State: VA - VIRGINIA  
 Postal Code: 22101

**WORK LOCATIONS**

Use Payroll Work Location from Project  Use Class Default Value  
 Use Class Default Work Locations

* Location	Location Name	Default
> MCLEAN	Service East Location	<input checked="" type="checkbox"/>

**GENERAL INFO**

\* Class ID: SALARIED  
 Employee Type: Salaried Non-Exempt  Use Class Default Value  
 Pay Group: MONTHLY - Monthly Paygroup  Use Class Default Value  
 Calendar: PST - Pacific Time Zone  Use Class Default Value  
 Working Hours per Week: 40.00  
 Working Weeks per Year: 52  Use Class Default Value  
 Working Hours per Year: 2,080.00  
 Override Hours per Year for C...  Use Class Default Value  
 Exempt from Overtime Rules  Use Class Default Value  
 Default Union:  Use Class Default Value  
 Default WCC Code: 9999  Use Class Default Value  
 Exempt from Certified Reporti...  Use Class Default Value

**PERSONAL INFO**

Date Of Birth:

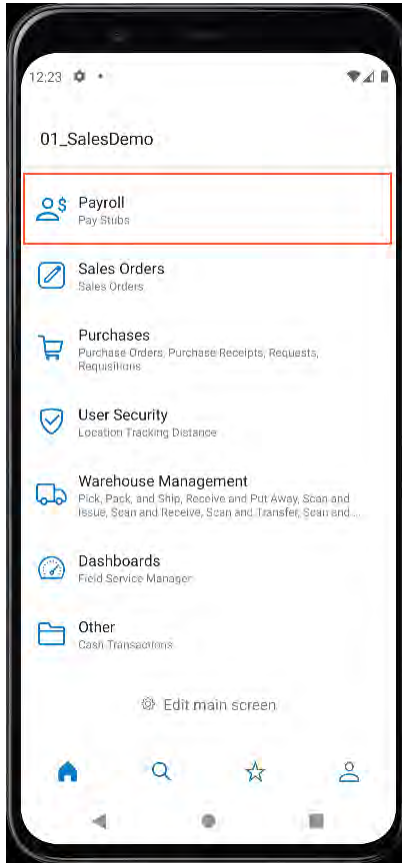
Figure: New location of check boxes on the Employee Payroll Settings form

Similarly, on the **Payroll** tab of the *Employee Payroll Class* (PR202000) form, the **Use Payroll Work Location from Project** check box has been moved to the area above the **Work Locations** table (between the section caption and the table toolbar).

# Payroll: Pay Stubs in the Mobile App

In Acumatica ERP 2022 R2, the new *Pay Stubs* mobile screen has been introduced. In the Acumatica mobile app connected to an instance of Acumatica ERP 2022 R2, users can now view and print their own pay stubs by using this screen.

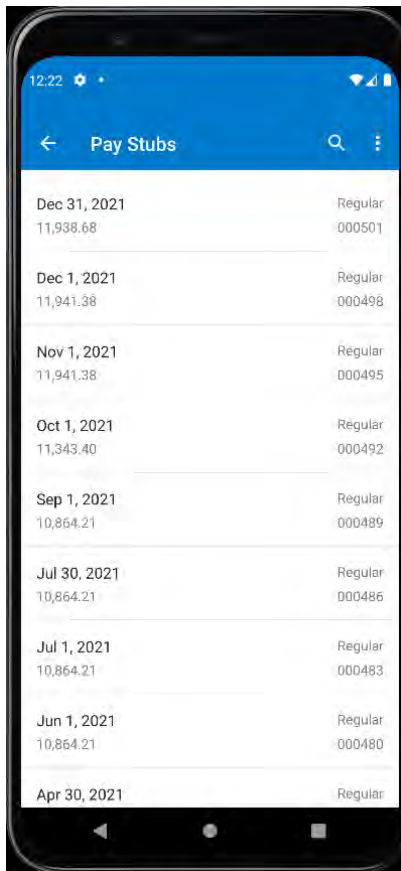
The **Payroll** workspace is now available on the main menu of the mobile app, as shown in the following screenshot. This workspace contains the **Pay Stubs** menu item.



**Figure: Payroll workspace in the mobile app**

If a user opens the **Payroll** workspace and taps **Pay Stubs**, the system opens the *Pay Stubs* screen, which lists the existing pay stubs of the employee linked with the user (see the screenshot below). For each pay stub, the system shows the following information:

- Payment date
- Net pay amount
- Payment type
- Payment identifier



**Figure:** The Pay Stubs screen with the list of documents

On the *Pay Stubs* screen, the user can tap a record tile to open a pay stub and review its details. To print the pay stub, the user should do the following: tap **View Pay Stub** on the More menu, as shown in the first screenshot below, and when the printable report opens, tap **Open with** on the More menu to select an external app on the device, as shown in the second screenshot, and print the pay stub by using that app.

1. Tap **View Pay Stub** on the More menu, as shown in the first screenshot below
2. When the printable report opens, tap **Open with** on the More menu to select an external app on the device, as shown in the second screenshot
3. Print the pay stub by using the external app

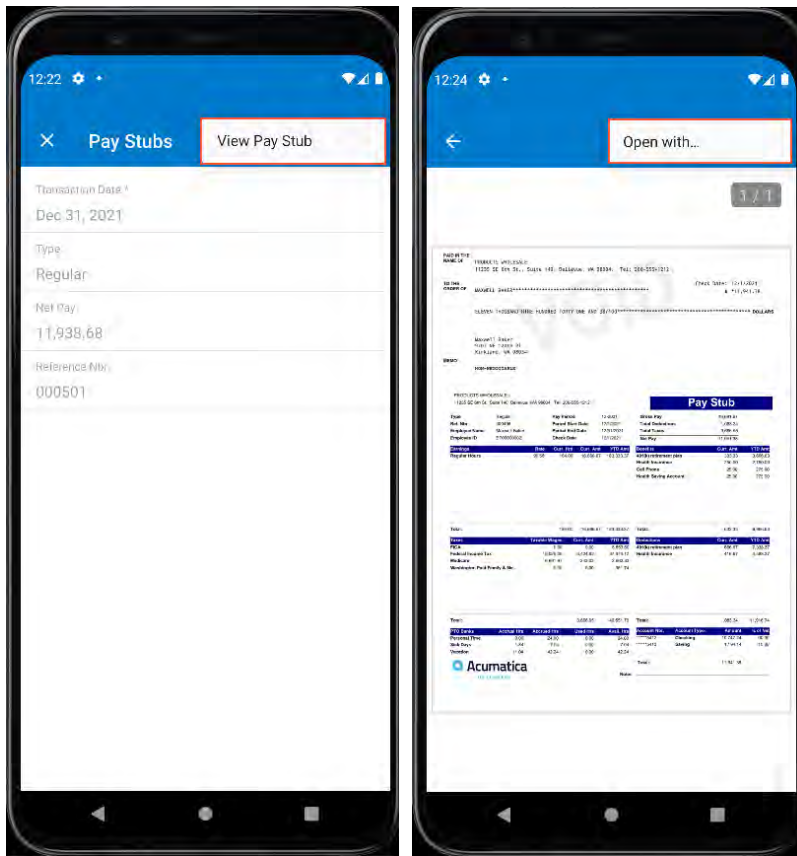


Figure: Pay stub report opened for printing

# Platform: Ability to Specify a Custom Title to Side Panels

In previous versions of Acumatica ERP, a user could only change the icon of a side panel tab. In Acumatica ERP 2022 R2, the ability to specify a custom title of the tab has been added.

## Changes to Generic Inquiry Settings

On the **Navigation** tab of the *Generic Inquiry* (SM208000) form, the new **Side Panel Settings** section has been added (shown in the following screenshot).

The screenshot shows the 'Generic Inquiry' form with the 'NAVIGATION' tab selected. A red box highlights the 'SIDE PANEL SETTINGS' section, which includes an 'Icon' field, a 'visibility' toggle, and a 'Custom Title' text box. Below this, the 'NAVIGATION PARAMETERS' table is visible, listing fields like 'OrderType' and 'OrderNbr' with their corresponding parameters and schema information.

*Field	*Parameter	From Schema
OrderType	SOOrder.OrderType	<input type="checkbox"/>
OrderNbr	SOOrder.OrderNbr	<input type="checkbox"/>

**Figure: The Side Panel Settings section**

The **Side Panel Settings** contains the existing **Icon** box and new **Custom Title** box. By using the **Custom Title** box, the user can change the title of the side panel tab. If the **Custom Title** box is empty, the tab has the default title which is predefined in the system.

The new section appears if the *Side Panel* option is selected in the **Window Mode** column of the **Navigation Targets** table for the selected entity.

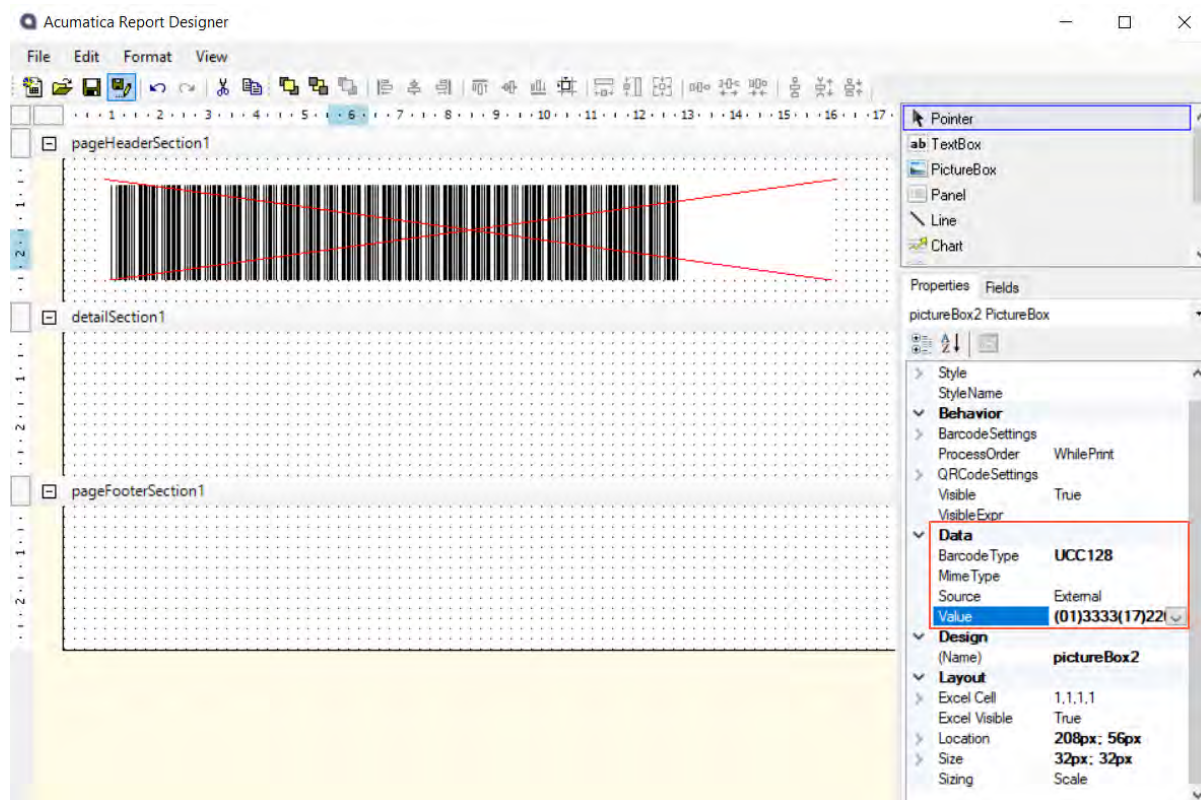


# Platform: Ability to Generate GS1 EAN/UCC-128 Barcodes in Report Designer

In previous versions of Report Designer for Acumatica ERP, the system did not support the GS-128 EAN/UCC-128 barcodes. In Report Designer for Acumatica ERP 2022 R2, the ability to generate barcodes of this type has been implemented.

## Creation of a UCC-128 Barcode

To create a GS1 EAN/UCC-128 barcode, a user needs to add **PictureBox**, which is a barcode container, to the report and specify the *UCC128* value in the **Barcode Type** box and *Barcode* in the **Source** box. After that, the user may type human-readable values in the **Value** box to generate the required GS1 barcode (shown on the following screenshot).



**Figure: Barcode settings**

The user should use brackets as a separator for values in GS1 barcodes. That is, if the user needs to generate a GS1 barcode which contains the *Item Code*, *Expiration Date*, *Lot/Serial Nbr.* and *Quantity* values, they may specify the following value in the **Value** box: *(01)3333(17)220909(10)LREX50(37)15*. This value consists of the following elements:

- *(01)*: The GS1 code for the item ID.
- *3333*: The item ID
- *(17)*: The GS1 code for the expiration date
- *220909*: The expiration date in the *YYMMDD* format
- *(10)*: The GS1 code for the lot/serial number
- *LREX50*: The lot number
- *(37)*: The GS1 code for the quantity

- 15: The quantity of the item in the lot

# Platform: Depreciation of MSMQ for Internal Notification Queues

---

In Acumatica ERP 2022 R2, Microsoft Message Queuing (MSMQ) technology has been replaced with a cross-platform technology that consists of the RabbitMQ message broker and a local file storage. This technology is supported in .NET Core and .NET 5.0. Internal queues—such as the queues for push notifications, business events, and commerce notifications—now use the RabbitMQ service by default.

## Installation and Update Notes

By default, during the deployment of a new version of Acumatica ERP or during the update of an instance through the use of the Acumatica ERP Configuration Wizard, the following configuration steps are now performed:

- RabbitMQ is installed.
- Acumatica ERP is configured to use RabbitMQ and a local file storage for the processing of internal queues.



If RabbitMQ is already installed in the environment, the Acumatica ERP Configuration Wizard does not install RabbitMQ; it configures Acumatica ERP to use RabbitMQ and a local file storage.

If the **Don't install RabbitMQ** check box is selected in the Acumatica ERP Configuration Wizard during the installation or update, RabbitMQ is not installed and MSMQ is used, as it was in previous versions of Acumatica ERP.

If the instance is updated through the web interface and the `web.config` file of the instance is not configured to use RabbitMQ, the instance continues to use MSMQ.

# Platform: Improved Diagnostics for Business Events and Push Notifications

In Acumatica ERP, push notifications and messages triggered by business events are queued for processing. In some circumstances queues may become overloaded and the system may stop queuing and processing messages. In 2022 R2, the functionality of the [System Queue Monitor](#) (SM302010) form (formerly titled *System Queues Monitor*) has been reworked to provide tools for monitoring and troubleshooting a queue's health.

## Management of Queues

In the Summary area of the [System Queue Monitor](#) (SM302010) form, the system lists the queues available for monitoring, which are the queues for push notifications, business events, and commerce. For each queue, a system administrator can view the current status, number of queued messages, queue size, and name (see the following screenshot).

The screenshot displays the 'System Queue Monitor' form. At the top, there are buttons for 'SHOW ERRORS', 'RESTART DISPATCHER', and 'CLEAR QUEUE'. Below this is a table listing three queues: 'Push Notifications', 'Business Events', and 'Commerce'. Each queue has a status of 'OK', 0 messages, and a queue size of 0/102400 KB. Below the queue list, there are tabs for 'STATISTICS' and 'PERFORMANCE ISSUES'. The 'STATISTICS' tab is active, showing a 'Keep Statistics and Log For (Days)' field set to 2 and a 'Log Trigger Details' checkbox. Below this, there are tabs for 'GROUPED BY HOUR' and 'GROUPED BY MINUTE'. The 'GROUPED BY HOUR' tab is active, showing a 'CLEAR STATISTICS' button and a table with columns: 'Date', 'Queued', 'Processed', 'Max. Queue Size (KB)', 'Avg Processing Time (ms)', and 'Max. Processing Time (ms)'. The table shows data for the dates 29-08-2022 from 02:01 to 06:01, with all values being 0.

Queue Type	Stats	Messages	Queue Size (KB)	Queue Name
Push Notifications	OK	0	0/102400	primaryQueue1C33F8B7...
Business Events	OK	0	0/102400	eventQueue1C33F8B7E...
Commerce	OK	0	0/102400	commerceQueue1C33F...

Date	Queued	Processed	Max. Queue Size (KB)	Avg Processing Time (ms)	Max. Processing Time (ms)
29-08-2022 06:01	0	0	0		
29-08-2022 05:01	0	0	0		
29-08-2022 04:01	0	0	0		
29-08-2022 03:01	0	0	0		
29-08-2022 02:01	0	0	0		

*Figure: The list of the queues available for monitoring*

For the queue selected in the Summary area, a system administrator can restart its processing by clicking the **Restart Dispatcher** button or clear the queue by using the **Clear Queue** button.

## Viewing of Processing Errors

For a queue, a system administrator can view the list of errors by clicking the **Show Errors** button on the form toolbar. The system opens the **Errors** dialog box, where the system administrator can review the details of each notification whose processing raised an error (see the following screenshot).

The screenshot shows the 'System Queue Monitor' interface. An 'Errors' dialog box is open, displaying a table of error records. The table has the following columns: Destination ID, Notification Source, Internal Source Event, Error, and Date. One error record is visible:

Destination ID	Notification Source	Internal Source Event	Error	Date
98c0e942-582e-4	DB-Cases	[\"Id\": \"59820f02-cf4...	Can not select notification data. Exc...	8/29/2022 2:23:59 PM

The background interface shows the 'STATISTICS' tab selected. It includes a 'Keep Statistics and Logs For (Days)' field set to 2, a 'Log Trigger Details' checkbox, and a table for queue statistics grouped by hour. The table has the following columns: Date, Queued, Processed, Max. Queue Size (KB), Avg Processing Time (ms), and Max. Processing Time (ms). Two rows of data are visible:

Date	Queued	Processed	Max. Queue Size (KB)	Avg Processing Time (ms)	Max. Processing Time (ms)
29-08-2022 07:07	1	1	0	796.00	796.00
29-08-2022 06:01	14	14	20	382.39	885.00

Figure: The Errors dialog box

## Viewing of the Statistics for a Queue

For the queue selected in the Summary area, on the **Statistics** tab of the form, a system administrator can review the statistics of the queue performance and specify logging settings. The **Grouped by Hour** and **Grouped by Minute** tabs (see Item 3 in the following screenshot) display the same statistics grouped by hour and by minute, respectively.

In the **Keep Statistics and Log For (Days)** box (Item 1) of the tab, the system administrator can specify the number of days the system should keep statistics and long processing logs in the database. The records that are older than the specified period will be removed automatically. If there is no need to collect the statistics at all, 0 should be specified in this box.

Also, if the system administrator selects the **Log Trigger Details** check box (Item 2), the system will save detailed statistics for queue selected in the Summary area. The administrator can view the saved details by clicking a link in the **Date** column (Item 4) of the table on the **Grouped by Hour** or **Grouped by Minute** tab.

System Queue Monitor CUSTOMIZATION TOOLS ▾

SHOW ERRORS RESTART DISPATCHER CLEAR QUEUE

Queue Type	Stat	Messages	Queue Size (KB)	Queue Name
Push Notifications	OK	0	0/102400	primaryQueue1C33F6B...
Business Events	OK	0	0/102400	eventQueue1C33F6B7...
Commerce	OK	0	0/102400	commerceQueue1C33...

STATISTICS PERFORMANCE ISSUES

Keep Statistics and Logs For (Days):   Log Trigger Details

GROUPED BY HOUR GROUPED BY MINUTE

CLEAR STATISTICS

Date	Queued	Processed	Max. Queue Size (KB)	Avg Processing Time (ms)	Max. Processing Time (ms)
29-08-2022 09:01	14	14	20	362.39	885.00
29-08-2022 08:01	0	0	0		
29-08-2022 07:01	0	0	0		
29-08-2022 06:01	0	0	0		

**Figure: The Statistics tab**

When the system administrator clicks a link in the **Date** column, the system opens the **Trigger Details** dialog box (see the following screenshot), where the user can review the list of fields from a generic inquiry that triggered the sending of the notification and the list of the involved DACs. By using this information, the administrator can adjust the list of monitored fields to improve performance, if needed.

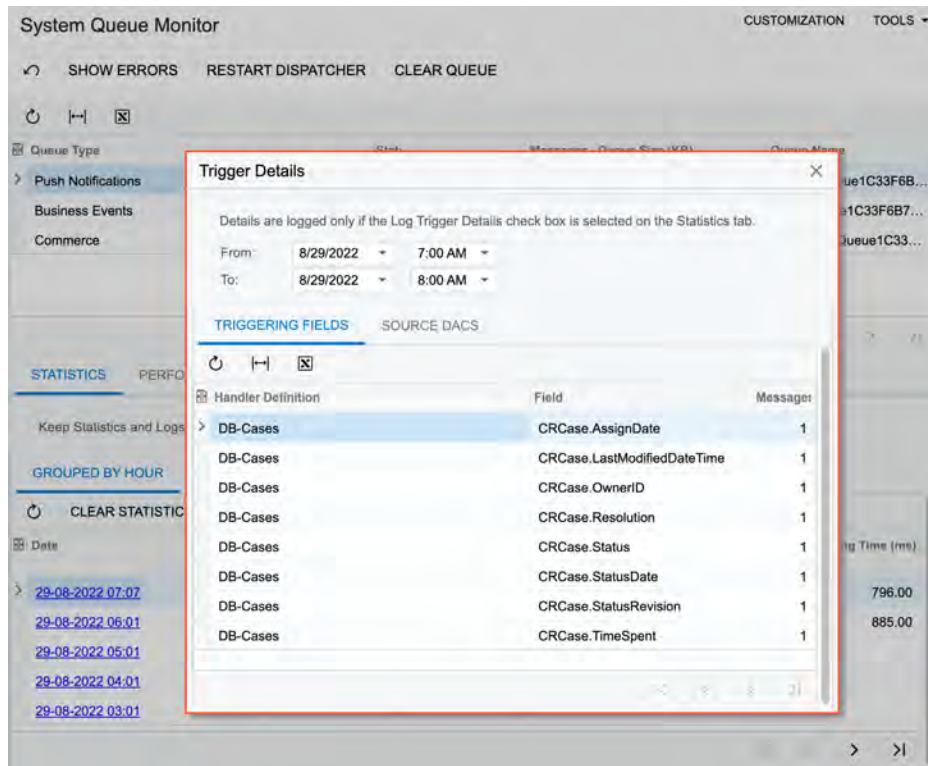


Figure: The Trigger Details dialog box

## Viewing of Performance Issues

For a queue selected in the Summary area, on the **Performance Issues** tab of the form, a system administrator can review processing details for queues whose processing time exceeds the specified threshold.

The administrator can also configure conditions for the system to save the processing details of a queue. In the **Number of Records in Detailed Log** box (see Item 1 in the following screenshot), the user specifies the number of log events to be logged during processing of a transaction. The log is to be displayed in the **Queue Processing Log** dialog box that is opened by clicking a link in the **Date** (Item 3) column from the table below.

In the **Processing Time Threshold (s)** box (Item 2), the user specifies the processing time threshold in seconds, which is set to 2 by default. If the processing time of a record exceeds this value, the system saves the processing details.



System Queue Monitor CUSTOMIZATION TOOLS ▾

SHOW ERRORS RESTART DISPATCHER CLEAR QUEUE

Queue Type	Stat	Messages	Queue Size (KB)	Queue Name
Push Notifications	OK	0	0/102400	primaryQueue1C33F6B...
Business Events	OK	0	0/102400	eventQueue1C33F6B7...
Commerce	OK	0	0/102400	commerceQueue1C33...

STATISTICS **PERFORMANCE ISSUES**

Number of Records in Detailed Log: 100 1 Processing Time Threshold (s): 2.00 2

CLEAR LOGS

Date 3 Processing Time (ms) | Queries

No records found.

Figure: The Performance Issues tab

## Upgrade Notes

After an upgrade to 2022 R2, the default settings on the *System Queue Monitor* (SM302010) form will be changed as follows:

- The value of **Processing Time Threshold (s)** will be changed from 30 to 2 (meaning that the threshold will be two seconds).
- The value of **Keep Statistics and Log For (Days)** will be set to 2 (that is, two days).
- The **Log Trigger Details** check box will be cleared.




# Projects and Construction: Enhancements in Change Management

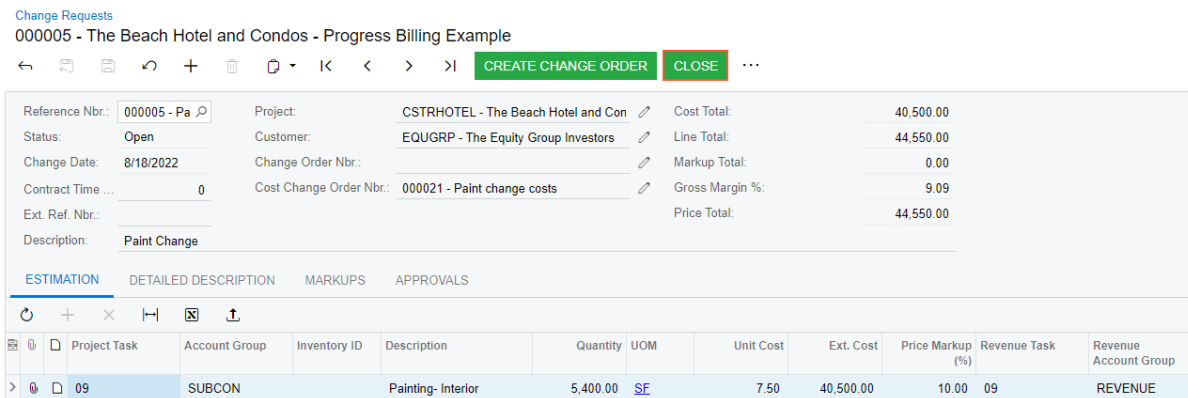
In Acumatica ERP 2022 R2, additional scenarios have been implemented for change management. Now users can close change requests that are linked to cost-only change orders, cancel change orders and change requests, and keep rejected change orders and change requests without these rejected documents affecting the project budget amounts.

## Cost-Only Change Requests

If a customer has not approved the revenue part of the change request, a user may need to process a only the cost part of a change request and decline the revenue part of the change request. In Acumatica ERP 2022 R2, the user can process a cost change order on the [Change Orders](#) (PM308000) form and then close the change request manually without processing a change order for the revenue part on the [Change Requests](#) (PM308500) form.

 A cost change order is a change order of a change order class that has the **Cost Budget** check box selected and the **Revenue Budget** check box cleared on the [Change Order Classes](#) (PM203000) form.

To give the user this capability, the new **Close** button has been added to the form toolbar of the [Change Requests](#) form (see the following screenshot). This button appears on the toolbar for a change request that has the *Open* status and is linked to a cost change order that has the *Closed* status.



**Figure: Closing a change request without processing the revenue part**

When the user clicks **Close**, the system assigns the change request the *Closed* status and decreases the **Potential CO Quantity** and **Potential CO Amount** in the corresponding revenue budget lines on the **Revenue Budget** tab of the [Projects](#) (PM301000) form.

## New Document Statuses and Updated Rules of Project Budget Calculation

With previous versions of Acumatica ERP, users had to delete change orders and change requests with the *Rejected* status; if they were not deleted, these documents were added to the budgeted potential amounts, and the system did not exclude the documents after they were rejected. Also, there was no capability to keep the documents for which a project manager or a customer had decided to stop the processing of these changes because unless they were deleted, these documents affected the potential values in the project budget.

In Acumatica ERP 2022 R2, users can keep change orders and change requests with the *Rejected* status for historical purposes. These documents no longer affect any values in the project budget. Potential values in a project budget are now calculated excluding the following:

- The values of all rejected change requests

- The values of the rejected change orders and all change requests linked to these change orders.

Also, a new *Canceled* status has been introduced for change requests and change orders. If a change request or a change order should not be processed, the user cancels the document by clicking **Cancel** on the More menu of the [Change Requests](#) (PM308500) or [Change Orders](#) (PM308000) form, respectively. The document is assigned the *Canceled* status, and the quantity and amount of this document (which has been previously added to the potential values in the project budget) are subtracted from the **Potential CO Amount** and **Potential CO Quantity**.

Now the following values in project budgets on the [Projects](#) (PM301000) form are calculated by the described rules:

- **Potential CO Quantity** on the **Revenue** tab: The system calculates this quantity as the total quantity of the estimation lines of change requests that have the *Open* status (excluding the change requests that are linked to change orders that have the *Canceled* or *Rejected* status) plus the total quantity of the revenue budget lines of change orders that have the *On Hold*, *Open*, or *Pending Approval* status and are associated with the same project, project task, account group, and cost code or inventory item.
- **Potential CO Amount** on the **Revenue** tab: This amount is calculated as the total amount of the estimation lines of change requests that have the *Open* status (excluding the change requests that are linked to change orders that have the *Canceled* or *Rejected* status) plus the total amount of the revenue budget lines of change orders that have the *On Hold*, *Open*, or *Pending Approval* status and that are associated with the same project, project task, account group, and cost code or inventory item.
- **Potential CO Quantity** on the **Cost** tab: This quantity is calculated as the total quantity of the estimation lines of change requests that have the *Open* status plus the total quantity of the cost budget lines of change orders that have the *On Hold*, *Open*, or *Pending Approval* status and are associated with the same project, project task, account group, and cost code or inventory item.
- **Potential CO Amount** on the **Cost** tab: The system calculates this amount as the total amount of the estimation lines of change requests that have the *Open* status plus the total amount of the cost budget lines of change orders that have the *On Hold*, *Open*, or *Pending Approval* status and are associated with the same project, project task, account group, and cost code or inventory item.

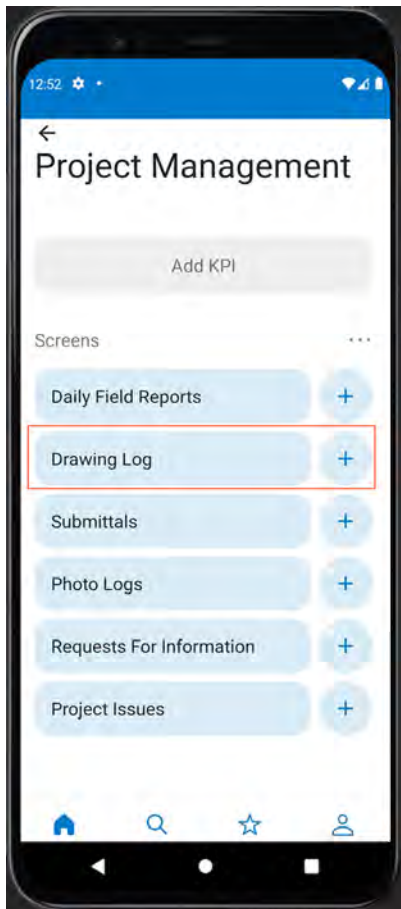
# Projects and Construction: Mobile App Enhancements

Previously, in the Acumatica mobile app, a user could not work with the submittals and drawing logs that are available in Acumatica ERP Construction Edition.

In Acumatica ERP 2022 R2, the new *Drawing Log* and *Submittal* mobile screens have been introduced. In the Acumatica mobile app connected to an instance of Acumatica ERP 2022 R2, the user can now view, create, and update drawing logs and submittals by using these screens.

## Drawing Logs in the Mobile App

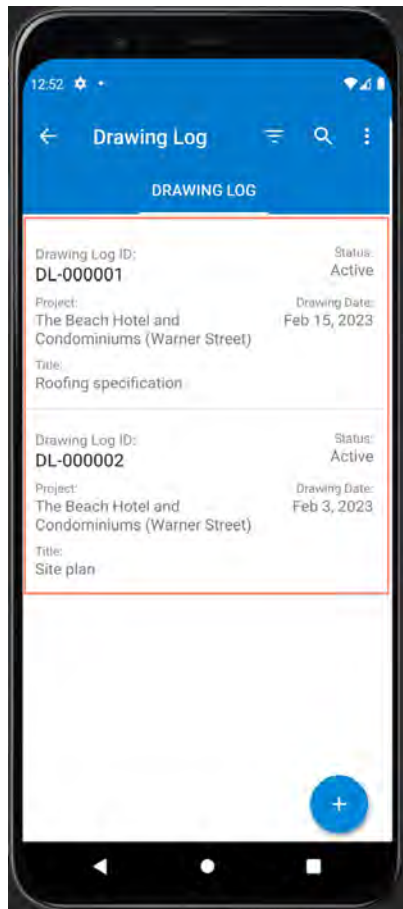
The **Drawing Log** menu item is now available in the **Project Management** workspace, as shown in the following screenshot.



*Figure: Drawing Log menu item in the mobile app*

When a user opens the **Project Management** workspace and taps **Drawing Log**, the system opens the *Drawing Log* screen, which lists the existing drawing logs (see the screenshot below). For each drawing log, the system shows the following information:

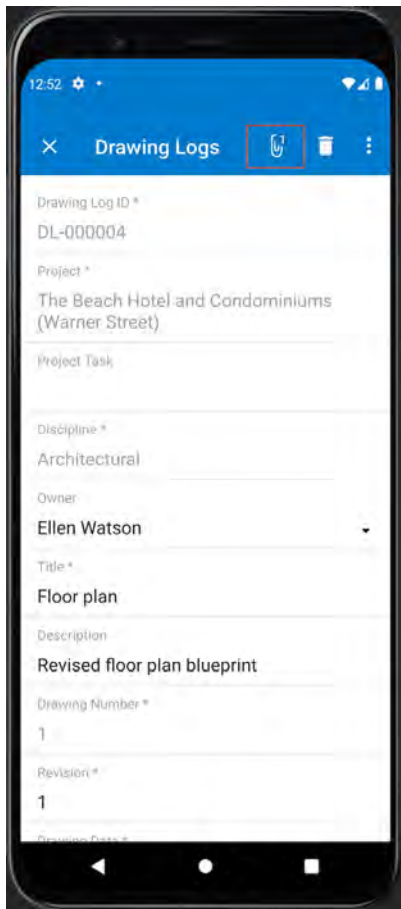
- Drawing log ID
- Status
- Project
- Drawing date
- Title



**Figure:** The Drawing Log screen with the list of documents

On the *Drawing Log* screen, the user can tap a record tile to open a drawing log and review its details, or create a new drawing log by tapping the Add button in the bottom of the screen.

In the top right area of the screen, the number that overlaps the Files button screen indicates the number of attached files (see the following screenshot). To review the files attached to the document or attach a new file, the user can tap the Files button.

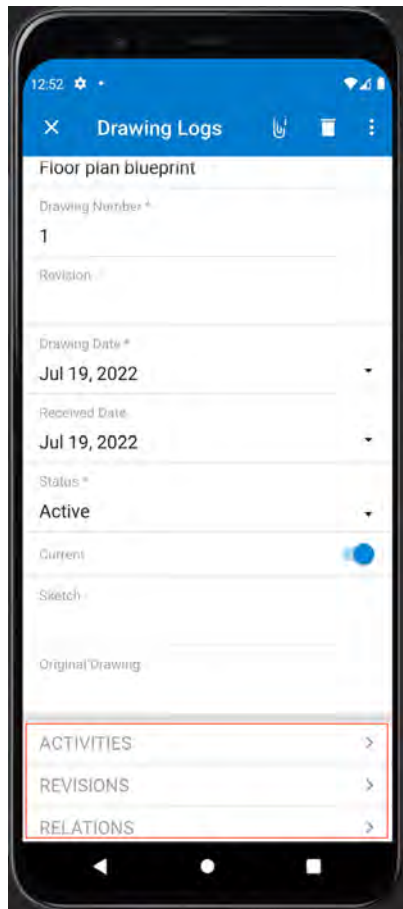


*Figure: Drawing log opened for review*

The system opens the preview of the files and photos attached to the drawing log, as shown in the following screenshot. The user can tap the **Camera** button to take and upload a photo, or tap the **Gallery** button to upload a file from the mobile device and attach it to the document. In the top right of the screen, the user can delete any of these files or photos by selecting the file to be deleted and tapping the Delete button.



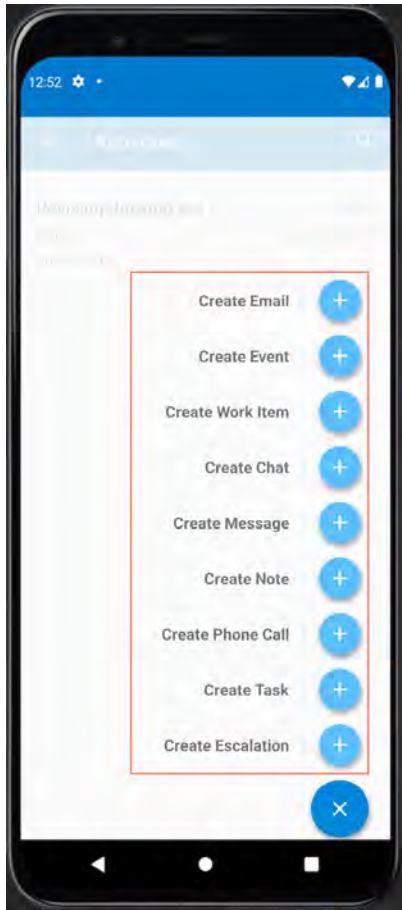
For each drawing log, the user can also review additional information related to the drawing log, as shown in the following screenshot.



**Figure:** Additional information for the drawing log

The following additional information can be reviewed for the drawing log:

- Activities (emails, events, work items, chats, messages, notes, phone calls, tasks, and escalations): When the user taps **Activities**, the system opens the list of activities linked to the drawing log. The user can tap the Add button in the bottom of the screen to create a new activity linked to the drawing log. The system then displays the list of activities that the user can create, as shown in the first screenshot below.
- Revisions of the current drawing log: When the user taps **Revisions** on the screen with the opened drawing log, the system opens the list of revisions that have been created for this drawing log, as shown in the second screenshot below. The user can tap the tile to open the revision for review.
- Requests for information and project issues linked to the current drawing log: When the user taps **Relations** on the screen with the opened drawing log, the system opens the list of requests for information and project issues that have been linked to this drawing log, as shown in the third screenshot below. The user can tap the tile to open the document for review.



*Figure: Types of activities that can be created and linked to the drawing log*





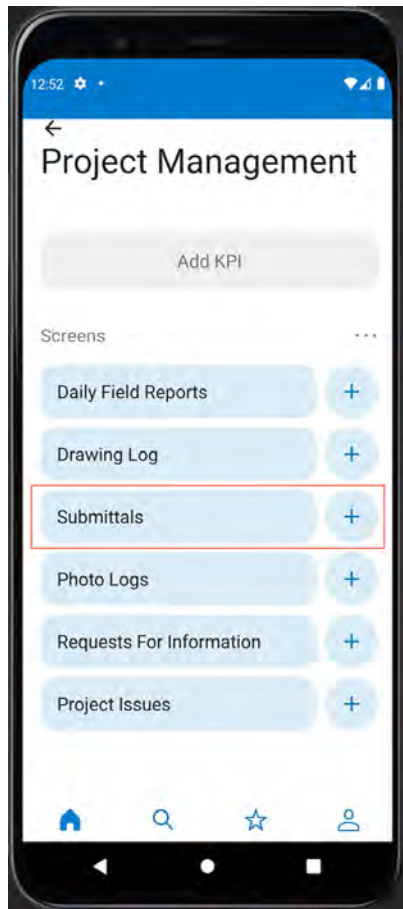
*Figure: Revisions of the drawing log*



*Figure: Documents linked to the drawing log*

## Submittals in the Mobile App

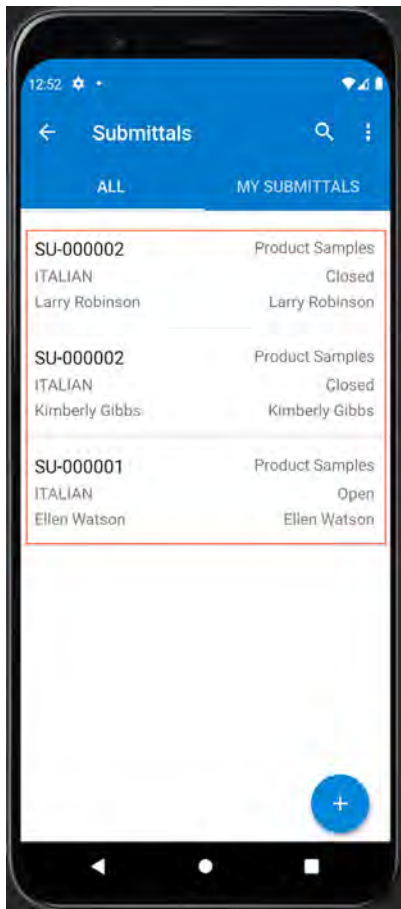
The **Submittals** menu item is now available in the **Project Management** workspace, as shown in the following screenshot.



*Figure: Submittals menu item in the mobile app*

When the user opens the **Project Management** workspace and taps **Submittals**, the system opens the *Submittals* screen, which shows the list of existing submittals (see the screenshot below). For each submittal, the system shows the following information:

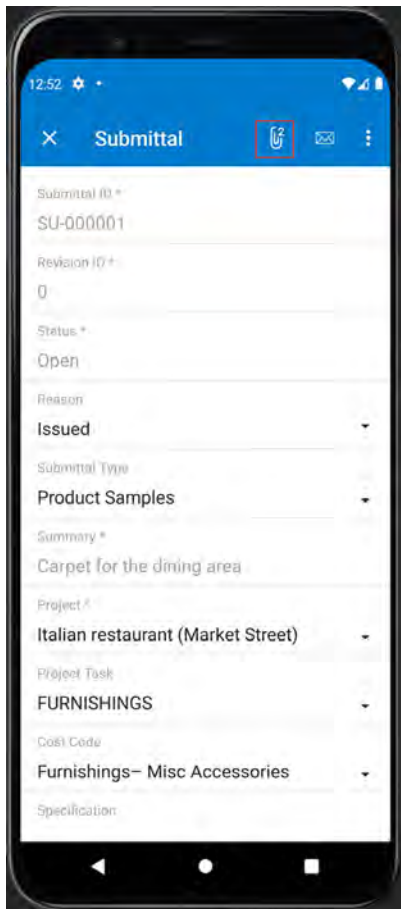
- Submittal ID
- Submittal type
- Project
- Status
- Owner
- Ball in court



**Figure: The Submittals screen with the list of documents**

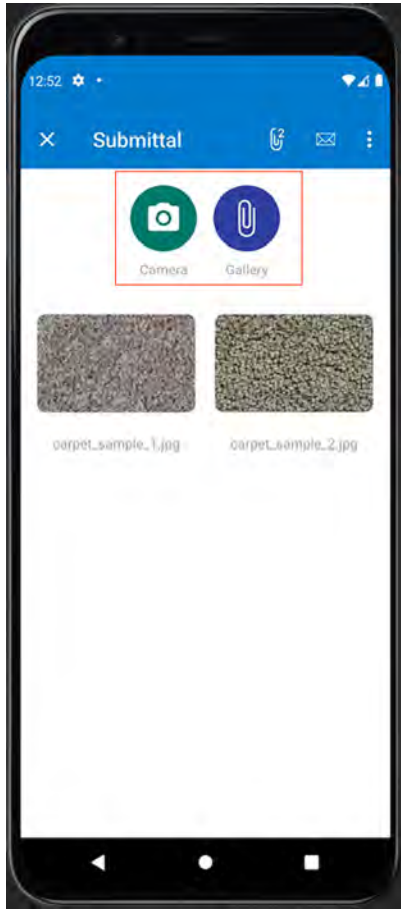
On the *Submittals* screen, the user can tap a record tile to open a submittal and review its details or create a new submittal by tapping the Add button in the bottom of the screen.

In the top right area of the screen, the number that overlaps the Files button, shows the number of attached files (see the following screenshot). To review the files attached to the document or attach a new file, the user can tap the Files button.

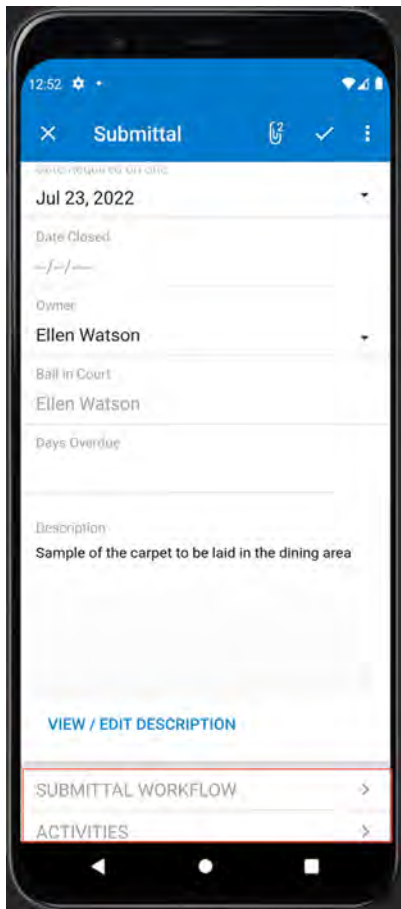


*Figure: Submittal opened for review*

The system opens the preview of the files and photos attached to the submittal, as shown in the following screenshot. The user can tap the **Camera** button to take and upload a photo, or tap the **Gallery** button to upload a file from the mobile device and attach it to the document. In the top right of the screen, the user can delete any of these files or photos by selecting the file to be deleted and tapping the Delete button.



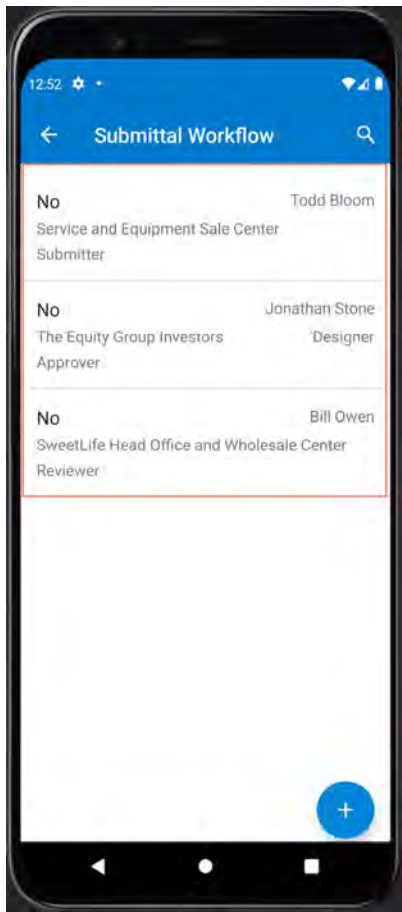
For each submittal, the user can also review the submittal workflow details and list of activities, as shown in the following screenshot.



**Figure: Additional submittal information**

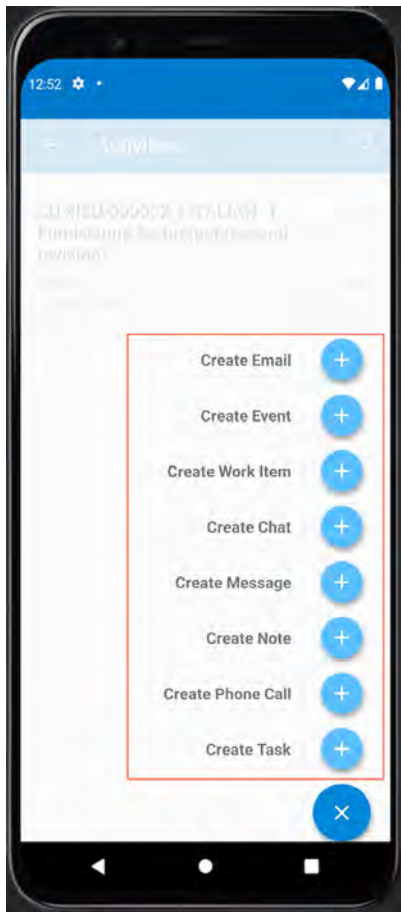
The following additional information can be reviewed for the submittal:

- Submittal workflow: When the user taps **Submittal Workflow** on the screen with the opened submittal, the system opens the list of responsible persons (submitters, approvers, and reviewers) that have been specified in the submittal (see the first screenshot below). The user can tap the tile to open the details for review.
- Activities (emails, events, work items, chats, messages, notes, phone calls, tasks, and escalations): When the user taps **Activities**, the system opens the list of activities linked to the submittal. The user can tap the Add button in the bottom of the screen to create a new activity linked to the submittal. The system then displays the list of activities that the user can create, as shown in the second screenshot below.



*Figure: Workflow of the submittal*





*Figure: Types of activities that can be created and linked to the submittal*

## Known Limitations

Currently the following limitations apply to the drawing log and submittal functionality in the mobile app:

- A user cannot create a new revision of a drawing log.
- A user cannot delete a revision of a drawing log.
- A user cannot link a new project issue or request for information to a drawing log.
- A user cannot delete a project issue or request for information linked to a drawing log.
- A user cannot create a new revision of a submittal.
- A user cannot delete a submittal revision.
- A user cannot delete an activity linked to a submittal.

# Projects and Construction: Tracking Project Progress by Unit

In previous versions of Acumatica ERP Construction Edition, foremen and site supervisors did not have the ability to capture units that were installed or used during the execution of a construction project task. Also, project managers did not have the ability to quickly track unit usage in projects.

In Acumatica ERP 2022 R2, new functionality for tracking project productivity has been introduced. With this new functionality, employees working on a construction site can capture project activities on the unit level and track project progress by using a new type of document: progress worksheets. In the daily field report, a user can add cost budget lines and capture units used on the construction site during the working day. This functionality helps project managers to track project productivity and define the potential impact of these activities on the project schedule and cost budget.

## New Progress Worksheet (PM303000) Form

To give users the ability to capture units used for projects, a new type of document—progress worksheet—has been introduced in Acumatica ERP 2022 R2. A progress worksheet is entered on the new document entry form—[Progress Worksheets](#) (PM303000). This form is available in the system if the *Construction* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

On this form, a user captures the units that have been installed during execution of each project task. The user creates a new progress worksheet, selects a project for which progress should be captured, adds cost budget lines, and specifies the quantity of units that have been used for the project.

The user may be able to add cost budget lines, depending on the option specified in the **Productivity Tracking** column on the **Cost Budget** tab of the [Projects](#) (PM301000) form for the selected project.

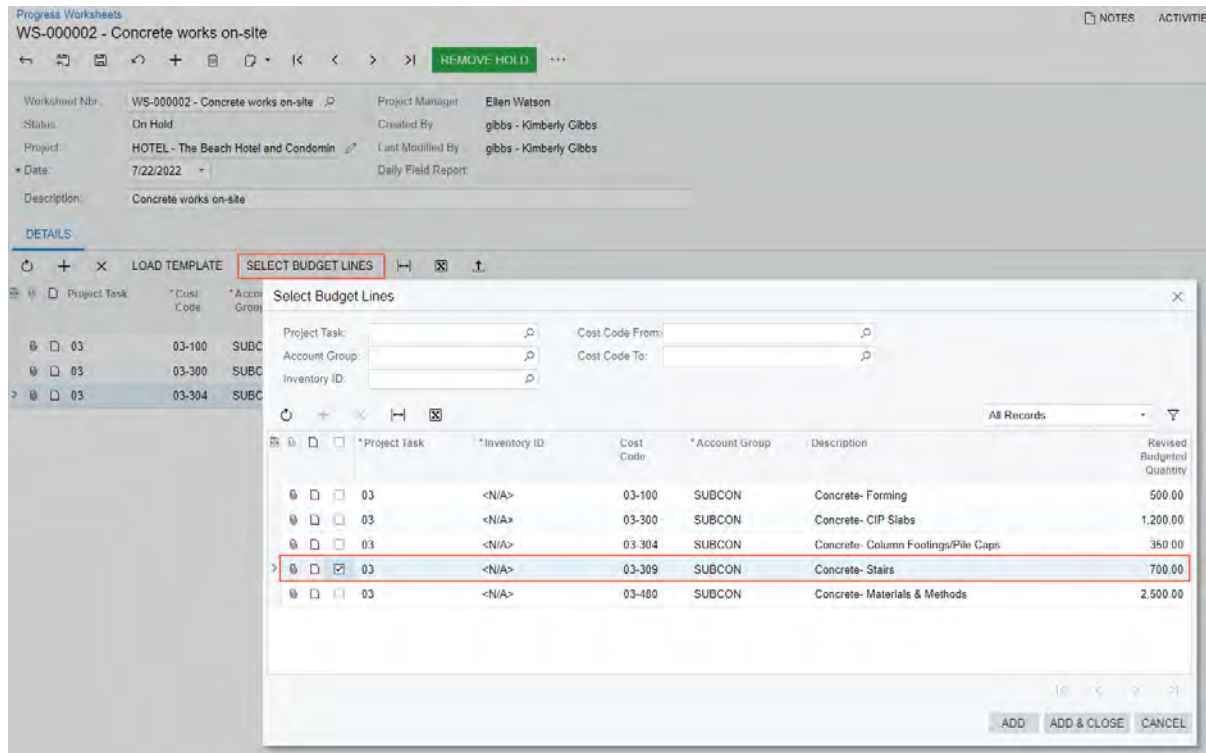
If the user clicks **Load Template** on the table toolbar of the **Details** tab of the *Progress Worksheets* form (see the following screenshot), the system automatically loads all cost budget lines of the selected project for which **Productivity Tracking** is set to *Template* on the [Projects](#) form.

The screenshot shows the 'Progress Worksheets' form for 'WS-000002 - Concrete works on-site'. The 'DETAILS' tab is active, and the 'LOAD TEMPLATE' button is highlighted. Below the form fields is a table with the following data:

Project Task	Cost Code	Account Group	Description	UOM	Previously Completed Quantity	Completed Quantity	Prior Period Quantity	Current Period Quantity	Total Completed Quantity	Completed (%), Total	Total Budgeted Quantity
03	03-100	SUBCON	Concrete- Forming	HOUR	0.00	220.00	0.00	0.00	220.00	44.00	500.00
03	03-300	SUBCON	Concrete- CIP Slabs	HOUR	0.00	100.00	0.00	0.00	100.00	8.33	1,200.00
03	03-304	SUBCON	Concrete- Column Footings/Pile Caps	HOUR	0.00	100.00	0.00	0.00	100.00	28.57	350.00

**Figure: Template lines loaded to a progress worksheet**

If the user clicks **Select Budget Lines** on the **Details** tab of the *Progress Worksheets* form (see the following screenshot), the system opens the **Select Budget Lines** dialog box, in which the system shows the cost budget lines that the user can add manually. The table shows only the lines for which **Productivity Tracking** is set to *Template* and *On Demand* on the [Projects](#) form.



**Figure:** Lines that can be added to the progress worksheet

A progress worksheet has one of the following statuses:

- *On Hold:* The document was saved and can be edited.
- *Pending Approval:* The document needs to be approved by the responsible approvers, who are assigned according to the approval map specified on the **General** tab of the *Projects Preferences* form. This status is available only if the *Approval Workflow* feature is enabled on the *Enable/Disable Features* (CS100000) form and an approval map has been specified for progress worksheets on the *Projects Preferences* (PM101000) form.
- *Open:* The document is ready to be released.
- *Closed:* The document has been released.
- *Rejected:* The document has been rejected by the responsible approvers, who are assigned according to the approval map specified on the **General** tab of the *Projects Preferences* form. This status is available only if the *Approval Workflow* feature is enabled on the *Enable/Disable Features* form and an approval map has been specified for the progress worksheet on the *Projects Preferences* form.

For more information on the processing of progress worksheets, see [Unit Tracking in Projects: General Information](#).

## Recalculation of the Project Budget

If a progress worksheet has the *Closed* status, and a user has removed or modified the corresponding cost budget lines in the related project on the *Projects* (PM301000) form, the lines of progress worksheets may become inconsistent with the cost budget lines.

To update project progress related to deleted and restructured project budget lines, a user needs to run the budget recalculation process. The user can run the process for only the inconsistent project on the *Projects* or for multiple inconsistent projects on the *Recalculate Project Balances* (PM504000) form. The system will recreate the cost budget lines based on the progress worksheets that have been processed.

## Changes to the Daily Field Report (PJ304000) Form

On the *Daily Field Report* (PJ304000) form, which is available if the *Construction Project Management* feature is enabled on the *Enable/Disable Features* (CS100000) form, the new **Progress Worksheets** tab has been added (see the following screenshot). On this tab, a user can add cost budget lines and capture units used on-site during the working day.

When the user clicks **Complete** on the form toolbar of the *Daily Field Report* form, the system creates a progress worksheet linked to the daily field report and saves this progress worksheet with the *On Hold* status. The reference number and status of the created worksheet are shown in each of the lines on the **Progress Worksheets** tab.

Worksheet Nbr.	Status	Project Task	Cost Code	Account Group	Description	UOM	Previously Completed Quantity	Completed Quantity	Prior Period Quantity	Current Period Quantity	Total Completed Quantity	Completed (% Total)	Total Budgeted Quantity
WS-000002	On Hold	03	03-100	SUBCON	Concrete- Forming	HOUR	120.00	200.00	0.00	120.00	320.00	21.33	1,500.00
WS-000002	On Hold	03	03-300	SUBCON	Concrete- CIP Slabs	HOUR	100.00	20.00	0.00	100.00	120.00	60.00	200.00
WS-000002	On Hold	03	03-304	SUBCON	Concrete- Column ...	HOUR	300.00	100.00	0.00	300.00	400.00	93.02	430.00

Figure: Progress worksheet lines linked to a daily field report

## New Settings on Other Project-Related Forms

On the **Cost Budget** tab of the *Projects* (PM301000) form and the *Project Templates* (PM208000) form, the **Productivity Tracking** column has been added.



The column appears on these forms only if the *Construction* feature is enabled on the *Enable/Disable Features* (CS100000) form.

The column has the following options, as shown in the following screenshot:

- *Not Allowed* (default): The cost budget line cannot be added to a progress worksheet.
- *Template*: The cost budget line can be preloaded to a progress worksheet if a user clicks the **Load Template** button on the **Details** tab of the *Progress Worksheets* (PM303000) form, or the line can be added manually.
- *On Demand*: The cost budget line can be added to a progress worksheet manually.

Projects

HOTEL - The Beach Hotel and Condominiums (Warner Street) NOTES FILES CUSTOMIZATION TOOLS

← ↻ 🗑️ + 🗑️ ⏪ ⏩ COMPLETE PROJECT RUN PROJECT BILLING ⋮

\* Project ID: HOTEL - The Beach Hotel and Condo... Status: **Active** Actual Income: 22,667,202.71

Customer: EQUGRP - The Equity Group Investor Actual Expenses: 12,735,076.16

Template: The Beach Hotel and Condominiums (Warner Street) Margin: 9,932,126.55

\* Description: The Beach Hotel and Condominiums (Warner Street)

Currency Rate for Budget: USD 1.00 VIEW BASE %: 43.82

SUMMARY TASKS REVENUE BUDGET **COST BUDGET** BALANCES INVOICES CHANGE ORDERS UNION LOCALS ACTIVITIES EMPLOYEES

Project Task:   Group by Task

VIEW TRANSACTIONS All Records

Revised Budgeted Amount	Actual Quantity	Actual Amount	Performance (%)	Auto Complete (%)	Projected Cost to Complete	Projected Cost at Completion	Projected Quantity to Complete	Projected Quantity at Completion	Projected Completed (%)	Unit Price	Revenue Task	Productivity Tracking
365,194.00	0.00	350,000.00	95.84	<input type="checkbox"/>	0.00	0.00	0.00	0.00	0.00	0.0000		Not Allowed
226,315.00	0.00	226,780.00	100.21	<input type="checkbox"/>	0.00	0.00	0.00	0.00	0.00	0.0000		Not Allowed
0.00	600.00	41,200.00	0.00	<input type="checkbox"/>	0.00	0.00	0.00	0.00	0.00	0.0000		Template
800,000.00	0.00	800,000.00	100.00	<input type="checkbox"/>	0.00	0.00	0.00	0.00	0.00	0.0000		Template
0.00	0.00	0.00	0.00	<input type="checkbox"/>	0.00	0.00	0.00	0.00	0.00	0.0000		Not Allowed On Demand
0.18,000.00	0.00	1,018,000.00	100.00	<input type="checkbox"/>	0.00	0.00	0.00	0.00	0.00	0.0000		Not Allowed
290,000.00	0.00	290,000.00	100.00	<input type="checkbox"/>	0.00	0.00	0.00	0.00	0.00	0.0000		Not Allowed
0.00	0.00	950,000.00	95.00	<input type="checkbox"/>	0.00	0.00	0.00	0.00	0.00	0.0000		Not Allowed
0.00	0.00	139,300.00	0.00	<input type="checkbox"/>	0.00	0.00	0.00	0.00	0.00	0.0000		Not Allowed
980,000.00	0.00	0.00	0.00	<input type="checkbox"/>	0.00	0.00	0.00	0.00	0.00	0.0000		Not Allowed
300,000.00	0.00	300,000.00	100.00	<input type="checkbox"/>	0.00	0.00	0.00	0.00	0.00	0.0000		Not Allowed

Figure: The Productivity Tracking column

On the **General** tab of the *Projects Preferences* (PM101000) form, the following boxes have been added:

- **Progress Worksheet Numbering Sequence:** The numbering sequence used to number the newly created progress worksheets
- **Progress Worksheet Approval Map:** The map to be used to assign progress worksheet to employees for approval
- **Progress Worksheet Approval Notification:** The notification template that the system uses to generate notification emails for employees assigned to approve progress worksheet

**Other Enhancements**

On the *Approval Maps* (EP205015) form, the new *Progress Worksheet* entity type has been added to give administrators the ability to configure approvals for progress worksheets.

On the *Numbering Sequences* (CS201010) form, the new *PROGRESSWS* numbering sequence has been added. This numbering sequence is used by default for numbering progress worksheets.

**Upgrade Notes**

After the upgrade to Acumatica ERP 2022 R2, the system specifies *Not Allowed* in the **Productivity Tracking** column of the **Cost Budget** tab of the *Projects* (PM301000) form and the *Project Templates* (PM208000) form for all cost budget lines of all projects and project templates, respectively. To start using the progress worksheet functionality in an existing project, a project manager should update the **Productivity Tracking** column in cost budget lines of applicable projects and project templates.

## Known Limitations

In the **Select Budget Lines** dialog box on the *Progress Worksheets* (PM303000) and *Daily Field Report* (PJ304000) forms, a user can add cost budget lines only by using the **Add & Close** button. That is, at this time, the user cannot click **Add** to add a line and then click **Close** to close the dialog box.

# System Administration: Trace Improvements

Acumatica ERP 2022 R2 introduces an improved Trace page. The improved page allows users and system administrators to view the following:

- All recent operations performed by the current user on a single page
- All messages, SQL statements, and exceptions logged in the system
- Logs that will be sent to Acumatica
- Information about the system performance, even if the Request Profiler is turned off

The information on the page is preserved even after a user's session expires, and is limited by only the number of requests.

Users and system administrators access the Trace page the same way as they did before: by clicking **Tools > Trace** on the title bar of any Acumatica ERP form.

## Trace Page Overview

The Trace page consists of the following parts, which are shown in the following screenshot and described in detail in the following sections.

- Header (see Item 1 in the screenshot)
- Table with recent requests (Item 2)
- Local environment section (Item 3)
- **Request** section with general information about the selected request (Item 4)
- Table with the logged information (Item 5)

The screenshot displays the Trace Page interface. It features a header with the title 'Last Requests' and a 'SUBMIT LOGS' button. Below the header is a table of recent requests with columns for Screen, Type, Command, Duration, and Time. To the right of the table is a 'Request' section showing details for a selected request, including Screen, Type, Command, Time, CompanyID, and Keys, along with a 'Performance' section showing Server Time, CPU Time, SQL Time, Wait Time, SQL Count, and SQL Rows. Below the request details is a 'MESSAGES' section with a dropdown arrow and a message indicating an error. At the bottom of the page is a local environment section showing user information, version, and customizations.

Screen	Type	Command	Duration, ms	Time (UTC)
SO301000	LongRun	Save	15 290	09:15:26
SO301000	Screen	Save	910	09:15:26
SO301000	Screen	FetchRow	680	09:15:20
SO301000	Screen	FetchRow	1 999	09:15:05
SO301000	Screen	DropDown	822	09:15:01
SO301000	Screen	InitRow	694	09:15:01
SO301000	Screen	Save	4 449	09:14:42
SO301000	Screen	Save	1 503	09:14:33
SO301000	Screen	DropDown	373	09:14:32
SO301000	Screen	Insert	755	09:14:28

Request		Performance	
Screen	SO301000	Server Time	911
Type	Screen	CPU Time	813
Command	Save	SQL Time	124
Time	2022-09-05 09:15:26 UTC	Wait Time	0
CompanyID		SQL Count	44
Keys	OrderType=IN;OrderNbr=000113;	SQL Rows	13

MESSAGES (1)    SQL (20)    EXCEPTIONS (5)

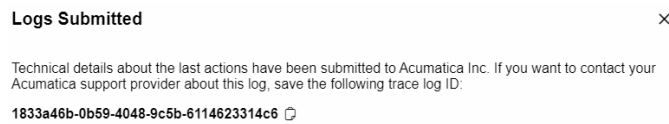
> Error 2022-09-05 09:15:26 UTC  
Error: Inserting 'Sales Order Line Split' record raised at least one error. Please review the errors.

User: gibbs@U100:HEADOFFICE    Local Time: 2022-09-05 12:15:42  
Version: 22.200.0090    UTC Time: 2022-09-05 09:15:42  
Customizations: None

Figure: The Trace Page

## Header

The header contains the page title (**Last Requests**) and the **Submit Logs** button. If an administrator clicks this button, the **Logs Submitted** pop-up window is displayed (see the following screenshot).



*Figure: The Logs Submitted pop-up window*

In this pop-up window, the administrator can copy the trace log ID by clicking the Copy icon.

## Last Requests Table

This table displays information about the last ten requests performed by the user on all forms and in all dialog boxes and pop-up windows. The requests are grouped by operation and sorted by their **Time (UTC)**.

If a user clicks a request in the table, the detailed information about this request is displayed in the **Request** section and in the table with messages. This information includes the ID of the form on which the request was performed, the type of the request, the command that the user invoked, the duration of the request, the number of issues that occurred on the form, and the time when the request occurred.

## Local Environment Section

This section contains the following information about the user's environment:

- **User:** The current user's name, the tenant, and the branch to which the user is signed in
- **Version:** Acumatica ERP version
- **Local Time:** Local time and date
- **UTC Time:** UTC time and date
- **Customizations:** The customization project or projects that are published in the current Acumatica ERP instance

## Request Section

The **Request** section contains the **Request** and **Performance** columns. The **Request** column duplicates the information displayed in the **Last Requests** table for the selected request. In the **Performance** column, the user can see what resources the system used to process the request.

## Table with Logged Information

In this table, a user can view information messages, SQL statements, and exceptions that have occurred in the system.

On the **Messages** tab of the table, the user views system messages, errors, and warnings. The displayed information depends on the type of request.

On the **SQL** tab, the user views the list of database tables involved in the request processing, the SQL statements that the system has generated, and the stack trace (see the following screenshot). For each record on this tab, the user can see the total time spent on the request, the number of code executions, and the number of affected table rows.



MESSAGES (0) [SQL \(13\)](#) EXCEPTIONS (4)

Tables	Total time	Executions	Rows
▼ Widget <pre> SELECT /* DB.00.00.15 */[Widget].[DashboardID], [Widget].[WidgetID], [Widget].[OwnerName], [Widget].[Caption], [Widget].[Column], [W FROM [Widget] [Widget] WHERE ([Widget].[CompanyID] IN ( 1, 3) AND 32 = SUBSTRING( [Widget].[CompanyMask], 1, 1) &amp; 32) AND ([Widget].[DashboardID] = ORDER BY [Widget].[DashboardID], [Widget].[WidgetID] OPTION(OPTIMIZE FOR UNKNOWN)           </pre>	1	3	42
<pre> at PX.Common.PXStackTrace.GetStackTrace(Int32 skipFrames, Boolean needFileInfo) at PX.SM.PXPerformanceInfo.AddSqlSample(String cmdText, String parameterDeclaration, Boolean queryCache) at PX.Data.PXSqlDatabaseProvider.ExecuteReaderInternal(IDbCommand command, CommandBehavior behavior) at PX.Data.PXSelectResult.PXSelectResultEnumerator.System.Collections.IEnumerator.MoveNext() at PX.Data.PXView.GetResult(Object[] parameters, PXFilterRow[] filters, Boolean reverseOrder, Int32 topCount, at PX.Data.PXView.Select(Object[] currents, Object[] parameters, Object[] searches, String[] sortcolumns, Boo at PX.Dashboards.Tools.SelectWithinDelegate(PXView view) at PX.Dashboards.LayoutMaint.widgets() at _CustomMethod(Object , Object[] ) at PX.Data.PXView.InvokeDelegate(Object[] parameters) at PX.Data.PXView.Select(Object[] currents, Object[] parameters, Object[] searches, String[] sortcolumns, Boo at PX.Data.PXView.SelectMultiBound(Object[] currents, Object[] parameters) at PX.Data.PXSelectBase`1.selectBound(Object[] currents, Object[] arguments) at PX.Data.PXSelectBase`1.SelectSingle(Object[] arguments) at PX.Dashboards.LayoutMaint.get_IsUserCopy() at PX.Dashboards.LayoutMaint.Dashboard_RowSelected(PXCache cache, PXRowSelectedEventArgs e) at PX.Data.PXCache.OnRowSelected(Object item) at PX.Dashboards.LayoutMaint.GenerateFilterFields() at PX.Data.PXGraph.CreateInstance(Type graphType, String prefix) at PX.Web.UI.PXDashboardDataSource.InstantiateDataGraph(Type type) at PX.Web.UI.PXBaseDataSource.CreateDataGraphAsSingleton(Type type) at PX.Web.UI.PXBaseDataSource.CreateDataGraph(Type type) at PX.Web.UI.PXBaseDataSource.get_DataGraph() at PX.Web.UI.PXBaseDataSource.PrepareDataBinding() at PX.Web.UI.PXBaseDataSource.OnInit(EventArgs e) at System.Web.UI.Control.InitRecursive(Control namingContainer) at System.Web.UI.Control.InitRecursive(Control namingContainer) at System.Web.UI.Control.InitRecursive(Control namingContainer) at System.Web.UI.Control.InitRecursive(Control namingContainer) at System.Web.UI.Control.InitRecursive(Control namingContainer) at System.Web.UI.Page.ProcessRequestMain(Boolean includeStagesBeforeAsyncPoint, Boolean includeStagesAfterAsy at System.Web.UI.Page.ProcessRequest() at System.Web.UI.Page.ProcessRequest(HttpContext context) at PX.Web.UI.PXPage.ProcessRequest(HttpContext context)           </pre>			
> @@DBTS, IDENT_CURRENT('WatchDog') OPTION(OPTIMIZE FOR UNKNOWN) /* */	0	3	0
> Dashboard	0	1	1

Figure: The SQL tab

On the **Exceptions** tab, the user views the exceptions that occurred in the system during the request selected in the **Last Requests** table. The tab contains the name and type of the exception, the message, and the stack trace.

# System Administration: Cloud Service Diagnostics

Previous versions of Acumatica ERP implemented some functionality that uses a cloud service, such as detection of GL anomalies, recognition of incoming AP bills, and image recognition for business cards and expense receipts. In some cases, it was not clear why some functionality connected to the cloud service was not working, and there was no way to collect the information needed for troubleshooting.

In Acumatica ERP 2022 R2, to give system administrators a tool to collect diagnostic information about a cloud service, the *Cloud Service Diagnostics (SM205090)* form has been implemented (see the following screenshot). The form lists the supported services, whose names typically correspond to the features on the [Enable/Disable Features \(CS100000\)](#) form. If a feature that uses a cloud service is enabled on [Enable/Disable Features](#), the system selects the corresponding check box on the *Cloud Service Diagnostics (SM205090)* form.

The screenshot shows the 'Cloud Service Diagnostics' form. At the top, there are tabs for 'CUSTOMIZATION' and 'TOOLS'. Below the title bar, there is a search icon and a refresh icon. The form is divided into several sections:

- SERVICE INFORMATION:** Contains fields for Discovery URI (https://apis-us-east-1.acumatica.com/discovery/), Client ID (ED4B50A1D57DD9D34944), Client Secret (d7\*\*\*\*\*cd), and Tenant ID (7c96402c-66fe-459b-8bf1-282a0d25961f).
- SUPPORTED SERVICES:** A list of services with checkboxes for customization certification. The services listed are:
  - AP Document Recognition Service
  - GL Anomaly Detection
  - HMRC Making Tax Digital
  - Image Recognition for Business Cards
  - Image Recognition for Expense Receipts
- DIAGNOSE** and **EXPORT RESULTS** buttons.
- Results:** A table showing the status of various diagnostic steps.
 

Step	Status	Message
Validate configuration	Success	
Establish contact with the ...	Success	
Obtain a token	Success	eyJhbGciOiJSUzI1NiIsImtpZCI6ImRlODJlNGNjYjk5YWU3...
Discover a service	Success	{ "bank-feeds" : "https://apis-us-east-1.acumatica.com/vb...

**Figure:** The new Cloud Service Diagnostics form

If issues occur, a system administrator uses this form to run diagnostics for the connected cloud services. The administrator clicks **Diagnose**, and the system checks the connection to the services by using the credentials in the **Service Information** section. The system displays the results in the **Results** table of the form.

The administrator can export the diagnostic results by clicking **Export Results**. The system offers to download a .txt file, which can be shared with Acumatica support.

# Usability: Built-In Infotips

In Acumatica ERP 2022 R2, context-sensitive Help infotips have been introduced to give users an explanation of a UI element right on the spot. An infotip is a small pop-up window that describes the UI element the user is hovering over or pointing to.



In this first phase of infotip implementation, the infotips may not be displayed for some supported elements on the forms. Infotip coverage will be increased with every Acumatica ERP release.

## Configuration of Displaying Infotips

Each user can select the way they display infotips by selecting the corresponding option in the **Infotip Settings** box on the [User Profile](#) (SM203010) form, as shown in the following screenshot. By default, the *Hover Over to Show* option is selected, which means that the system displays an infotip when the user has hovered over the label of a UI element for 1.5 seconds. If the user instead selects the *Ctrl+Alt+Click* option in the **Infotip Settings** box and saves these changes, the user can view an infotip by pressing Ctrl+Alt while clicking the label of the element.

The screenshot shows the 'User Profile' form with the 'Infotip Settings' dropdown menu open. The dropdown menu has three options: 'Hover Over to Show' (selected), 'Ctrl+Alt+Click to Show', and 'None'. The 'Infotip Settings' label is highlighted with a red box, and a blue box highlights the 'Hover Over to Show' option in the dropdown. The form also shows other settings like 'Login', 'First Name', 'Last Name', 'Email', 'Password', and 'Personal Settings'.

**Figure: Specification of the way to display infotips**

The infotips can be turned off for an instance if an administrator changes the value of the `wiki:tooltips:enabled` key to `False` in its `web.config` file.

## Infotip Usage

When a user initiates the display of an infotip, the system displays the first paragraph from the respective element description and the *More* link in a pop-up window.

To learn more about the element, the user can click *More* (see Item 1 in the following screenshot). To change the way the system displays the infotips, the user can click the gear icon (Item 2); the system opens the [User Profile](#) (SM203010) form in a new browser tab.

The screenshot shows the 'Journal Transactions' form for 'AP AP00000002 - Power bill for February'. A tooltip is displayed over the 'Transaction Date' field, which is set to '2/23/2022'. The tooltip contains the text: 'Transaction Date: The date when the batch was created, which can be filled in by the user or the system.' A red box labeled '1' highlights the 'More' link in the tooltip, and another red box labeled '2' highlights the gear icon in the top right corner of the tooltip.

* Branch	* Account	Description	Project/Contract	Project Task	Cost Code	Ref. Number	Transaction Date
HEADOFFICE	20000	Accounts Payable	X		00-000	0000000002	2/23/2022
HEADOFFICE	63300	Utilities	X		00-000	0000000002	2/23/2022

**Figure: The infotip for the Transaction Date box**

When a user clicks *More*, the system hides the infotip and opens a pane that partially overlaps the working area of the screen and contains the complete element's description, as the following screenshot shows.

At the bottom of the pane, there is a link to the complete reference topic for the form (see Item 2 in the following screenshot). If the user clicks the link, the system opens the corresponding wiki article in a new browser tab.

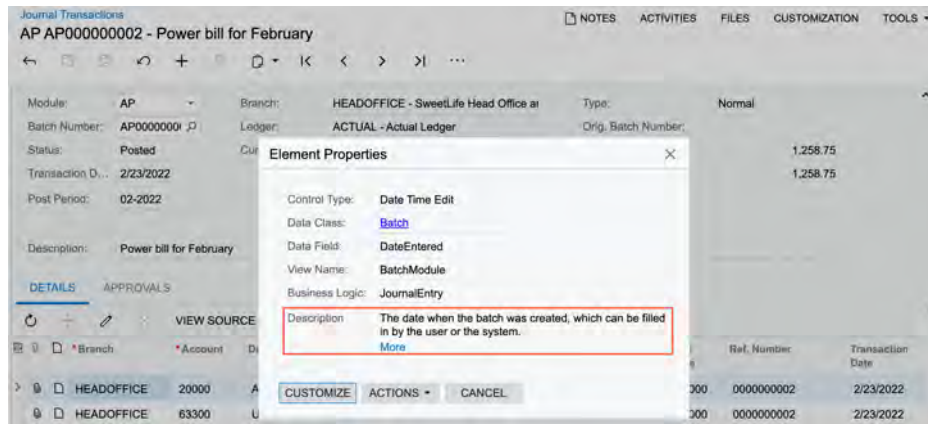
If the user clicks the arrow in upper left corner of the pane (Item 1), the system opens the Help menu for the form with the list of the links of the wiki articles that contain information regarding the form functionality. For details about the Help menu, see [Help](#).

The screenshot shows the 'Journal Transactions' form with the 'Transaction Date' description pane open on the right side. The pane contains the following text: 'Transaction Date: The date when the batch was created, which can be filled in by the user or the system. This date relates to the transaction dates of the journal entries as follows:'. Below this text are two bullet points: 'For a manually created batch: For all Journal entries included in the batch, the system inserts this transaction date in the Transaction Date column of the table.' and 'For a batch generated automatically originating in an Acumatica ERP subledger: Each Journal entry included in the batch can have its own transaction date specified in the Transaction Date column of the table, based on the transaction date specified in the corresponding subledger.' At the bottom of the pane, there is a 'Form Reference' section with a link to 'Journal Transactions (GL301000)'. A red box labeled '1' highlights the arrow in the upper left corner of the pane, and another red box labeled '2' highlights the 'Form Reference' link.

**Figure: The element description is shown on the side panel**

To close the pane (or the Help menu, if the user has switched to the menu), the user clicks somewhere on the form.

If a user has the *Customizer* role assigned, this user can also view the description of the element in the **Description** box of the **Element Properties** dialog box, as the following screenshot demonstrates. Also, the **Element Properties** dialog box is shown instead of the pop-up window if the *Ctrl+Alt+Click to Show* option is selected for this user in the **Infotip Settings** box on the [User Profile](#) (SM203010) form.



*Figure: The Element Properties dialog box with the element's description*

## Infotip Limitations

In Acumatica ERP 2022 R2, infotips are not shown for the following elements:

- Captions of tabs on a form
- Elements on the form title bar, form toolbar, and table toolbar
- Form-specific commands displayed on the **More** menu
- Dialog boxes or elements within them

Also, infotips are not supported for Acumatica ERP forms that are generic inquiry forms, report forms, or ARM reports.



# Commerce Connector: API Changes

---

In Acumatica ERP 2022 R2, multiple changes have been made in the API of the Acumatica Commerce Framework. Developers that created commerce connectors for previous versions of Acumatica ERP need to update the code of the connectors, as described in this topic.

## Removed Connector Descriptor Class

The connector descriptor class has been removed. The developer should move the implementation of the methods of the class as follows:

- The `GenerateLocalID` and `GenerateExternID` methods to the connector factory class. The default implementation of the `GenerateLocalID` method is available in the base connector factory class. For details about the connector factory class, see [Connector Factory Class](#).
- The `GetExternalFields` method to the connector class. For more information about this class, see [Connector Class](#).

## Removed IProcessorsFactory Interface

The `IProcessorsFactory` interface has been removed. The developer should not implement any custom processor factory class. Instead of a custom processor factory class, the developer should use the predefined `PX.Commerce.Core.ProcessorFactory` class in the constructor of the connector factory class. The order of entities that was specified in the `IProcessorsFactory.GetProcessorTypes()` method in previous versions now should be specified in the `SortOrder` property of the `BCProcessor` attribute.

## Changes to the BCProcessor Attribute

The `SortOrder` required property has been added to the `BCProcessor` attribute. The property defines the order of entities on the [Prepare Data](#) (BC501000), [Process Data](#) (BC501500), and other forms. In this order the system prepares and processes records. The developer can specify the same value for the property as the value that was returned by the removed `IProcessorsFactory.GetProcessorTypes()` method.

Acumatica Commerce Framework now collects processor attributes from extensions.

## Changes to the Connector Class

The `GetSchema` method has been removed from the connector class because the method was not used.

## Support of Asynchronous Operations

Multiple changes have been made to support asynchronous operations in Acumatica Commerce Framework. These changes may affect customizations that have been implemented by developers for prior versions of Acumatica ERP.

The following methods can now be executed asynchronously:

- For the connector class:
  - `ProcessHook`
  - `ProcessPush`
  - `Process`
- For the processor classes:
  - `Process`
  - `ProcessHook`

- ProcessPush
- FetchBucketsImport
- GetBucketForImport
- MapBucketImport
- SaveBucketImport
- FetchBucketsExport
- GetBucketForExport
- MapBucketExport
- SaveBucketExport
- PullEntity
- PullSimilar
- For the CBAPIService class:
  - GetAll
  - GetGIResult

For the full list of changed methods, see Reference List of Changes in Release Notes for Developers.

The developer needs to modify the code of a custom commerce connector so that it supports asynchronous operations. An example of these changes is shown with bold type in the following code.

```
using System.Threading.Tasks;

public virtual async Task<ConnectorOperationResult> Process(
    ConnectorOperation operation,
    int?[] syncIDs = null,
    CancellationToken cancellationToken= default)
{
    LogInfo(operation.LogScope(), BCMessages.LogConnectorStarted, NAME);

    EntityInfo info = GetEntities().FirstOrDefault(e =>
        e.EntityType == operation.EntityType);
    using (IProcessor graph = (IProcessor)CreateInstance(info.ProcessorType))
    {
        graph.Initialise(this, operation);
        return await graph.Process(syncIDs, cancellationToken);
    }
}
```

The `CancellationToken` propagates a notification that the operation should be canceled. We recommend that the developer pass the cancellation token in every method that supports it, such as in the methods that retrieve data from an external system.

# Customization: Independent Publishing and Unpublishing of Customization Projects for the Self-Service Portal

---

In previous versions of Acumatica ERP, when a customization project was published on the Self-Service Portal, the customization items of this project were shared with the Acumatica ERP instance because the Self-Service Portal shares a database with the Acumatica ERP instance. Thus, if projects published for Acumatica ERP and the Self-Service Portal contained customization items of the same type (particularly, components of a workflow), customization items of this type could replace the existing ones.

Now customization projects published on the Self-Service Portal are independent from the Acumatica ERP instance due to the addition of a new column to databases tables that store workflow customization items. This column identifies whether the customization item belongs to Acumatica ERP or to the Self-Service Portal.

## Related Links

- [Publishing Customization Projects](#)



# Customization: Publishing of a Customization Project Using Web API

In Acumatica ERP 2022 R2, a developer can publish and unpublish a customization project via the web API. The new API gives developers the following capabilities:

- To import a customization project
- To delete a customization project
- To publish a customization project for which the developer can do any of the following:
  - Specify the tenant or tenants where the customization project should be published: the current tenant, a list of tenants, or all tenants
  - Apply changes only to the database and skip the update of the website
  - Execute all database scripts included in the customization project (the same as the **Publish with Cleanup** menu command in the Customization Project Editor)
  - Perform only validation of a customization project
- To publish multiple customization projects at once
- To unpublish all customization projects
- To get the list of published customization projects and all items in them

To send requests, a developer should use POST methods and the following URL.

```
http://<Acumatica ERP instance URL>/CustomizationApi/<method>
```



Using the API, a customization project can be published to Acumatica ERP or to the Self-Service Portal, depending on where sign-in was performed before the start of the publication.

## Example of Publishing a Customization Project

The publication of a customization project via the API is implemented asynchronously. To start the publication, a developer should use the `PublishBegin` method. As soon as the developer gets a successful response, they should start calling the `PublishEnd` method until it returns `"isCompleted": true`. To check whether the publishing was completed successfully, a developer can check for the `"isFailed": false` in the response to the `PublishEnd` method.

Without a call to the `PublishEnd` method, the publication cannot be completed. Once a publication has started, a logical lock occurs in the database that prevents multiple publications from running simultaneously on the same database.

Suppose that a developer needs to publish the *VisualWorkflow* and *Dashboards* projects. Further suppose that the *Dashboards* project is already imported in the instance. To publish the customization projects by using the API, a developer should do the following:

1. Sign in to the instance. For details, see [Sign In to the Service](#).
2. Import the *VisualWorkflow* customization project by using the `Import` method.

An example of the request body looks as follows.

```
{
  "projectLevel": 1,
  "isReplaceIfExists": true,
  "projectName": "VisualWorkflow",
  "projectDescription": "Workflow for Sales Orders form",
  "projectContentBase64": "UEsDBBQAAAAACauNVQAAA..."
}
```

```
}

```

The request above imports the *VisualWorkflow* project and replaces a project with the same name if one exists. The `projectContentBase64` parameter contains a zip file with a project in the Base64 format.

The response to the request looks as follows.

```
{
  "log":
  [
    {
      "timestamp": "2022-03-01T01:27:36.8487004Z",
      "logType": "information",
      "message": "Create new project: VisualWorkflow"
    }
  ]
}
```

### 3. Publish the customization projects by using the `PublishBegin` method.

An example of the request body looks as follows.

```
{
  "isMergeWithExistingPackages": false,
  "isOnlyValidation": false,
  "isOnlyDbUpdates": false,
  "isReplayPreviouslyExecutedScripts": false,
  "projectNames": [ "VisualWorkflow", "Dashboards" ],
  "tenantMode": "Current"
}
```

The request above publishes the projects listed in the `projectNames` parameter in the tenant where the developer signed in. The publication should be performed without cleanup according to the `isReplayPreviouslyExecutedScripts` parameter.

The response to the request looks as follows.

```
{
  "log":
  [
    {
      "timestamp": "2022-05-12T08:02:21.0555556Z",
      "logType": "information",
      "message": "Publishing has started."
    }
  ]
}
```

### 4. Start calling the `PublishEnd` method without parameters to check whether the publication is completed.

The response indicating that the publication is completed looks as follows.

```
{
  "isCompleted": true,
  "isFailed": false,
  "log": [
    {
      "timestamp": "2022-05-18T11:20:04.187",
      "logType": "information",
      "message": "Copying the website C:\\Builds\\ErpProduct_22.103.0018.0116"
    }
  ]
}
```

```

        \\Customization\\apicust3\\apicust3Validation\\apicust3Website"
    },
    {
        "timestamp": "2022-05-18T11:20:04.217",
        "logType": "information",
        "message": "Patching the file C:\\Builds\\ErpProduct_22.103.0018.0116
                    \\Customization\\apicust3\\apicust3Validation\\apicust3Website
                    \\CstPublished\\pages_so\\so301000.aspx"
    },
    {
        "timestamp": "2022-05-18T11:20:04.22",
        "logType": "information",
        "message": "Patching the file C:\\Builds\\ErpProduct_22.103.0018.0116
                    \\Customization\\apicust3\\apicust3Validation\\apicust3Website
                    \\CstPublished\\pages_so\\so301000.aspx.cs"
    },
    ...

    {
        "timestamp": "2022-05-18T11:21:19.91",
        "logType": "information",
        "message": "Sql Sql#xUpdatesDates (skipped, already applied)"
    },
    {
        "timestamp": "2022-05-18T11:21:19.94",
        "logType": "information",
        "message": "Updating website files"
    },
    {
        "timestamp": "2022-05-18T11:21:57.57",
        "logType": "information",
        "message": "The website has started."
    },
    {
        "timestamp": "2022-05-18T11:21:57.677",
        "logType": "information",
        "message": "Plug-in ExternalCarriersCstPlugIn"
    },
    {
        "timestamp": "2022-05-18T11:21:57.72",
        "logType": "information",
        "message": "Post updating the company Company"
    },
    {
        "timestamp": "2022-05-18T11:21:57.727",
        "logType": "information",
        "message": "Updating the database"
    },
    {
        "timestamp": "2022-05-18T11:21:57.737",
        "logType": "information",
        "message": "Actions#SO301000"
    }
]
}

```

### Related Links

- [To Manipulate Customization Projects Using REST API](#)

# Developer Documentation: New Guides

---

In Acumatica ERP 2022 R2, a developer can find new and reworked information in the following developer guides.

## Acumatica Unit Test Framework Guide

The [Unit Test Framework Guide](#) provides information about how to create unit tests for extension libraries that are used in customization projects for Acumatica ERP. This guide explains how to use the Acumatica Unit Test Framework for this purpose.

## Barcode-Driven Engine Guide

With Acumatica's barcode-driven engine, the developer can convert an Acumatica ERP form, which is operated via a mouse and keyboard, into a console-type experience for a barcode-driven form. A user interacts with this form mostly via text commands that the user enters into a special field of the form manually or by scanning a barcode. The barcode-driven form guides the user through a certain input route by showing input prompts. This console-type experience is useful when it is necessary to simplify the work with a particular form to the level of sequential text inputs.

In the [Barcode-Driven Engine Guide](#), the developer can find information about how to customize existing Acumatica ERP forms that use the barcode-driven engine and how to implement custom barcode-driven forms.

## Workflow API Guide

The [Workflow API Guide](#) describes how to develop a workflow by using the Workflow API. The topics in the guide are organized as activities that developers can perform by using the dataset from the *T220 Data Entry and Setup Forms* course. In addition to activities, the guide includes information about the following:

- Screen configuration
- The process of defining conditions
- The implementation and configuration of actions and action categories
- The configuration of field states
- The process of defining workflow states
- The implementation of workflow transitions
- The implementation of dialog boxes
- The implementation of workflow events and event handlers
- The customization of a predefined workflow

Each concept contains lists of workflow API methods that can be used to configure the workflow element described in the concept.

## Workflow UI Guide

The [Workflow UI Guide](#) describes how to work with workflows without the need to write code. The topics in the guide are organized as activities that users can perform by using the *U100* dataset. In addition to activities, the guide includes concepts that describe how to do the following:

- Use the tools that Acumatica ERP provides for workflow customization
- Create custom workflows
- Create customized workflows
- Configure various elements in a workflow
- Test customization projects that modify the workflows

- Upgrade customized workflows

## Customization Tool Reference Guide

The [Customization Tool Reference](#) guide contains topics that describe the pages of the Customization Project Editor and other customization-related tools, such as the Customization Menu and the Element Inspector.

# Integration Development: Use of Acumatica ERP as an Identity Provider via OIDC

Acumatica ERP 2022 R2 can be used as an identity provider via the OpenID Connect (OIDC) protocol. A client application that is registered at Acumatica ERP as having the *OpenID Connect* sign-in method uses the Acumatica ERP Sign-In page for authentication. During the first sign-in, the client application requests access to the user attributes; for the application to be signed in, a user must confirm the granting of access to these attributes.

On the [Connected Applications](#) (SM303010) form, support for OIDC has been added for the *Authorization Code* and *Implicit* flows. Additionally, the *Hybrid* flow has been added, for which support for OIDC has been implemented. To use OIDC, a client application includes the *openid* value in the scope of a request.

The configuration of the OpenID protocol that is used by an Acumatica ERP website can be displayed by a request to the following URL: [*<Acumatica ERP instance URL>/identity/.well-known/openid-configuration*]. In this request, [*<Acumatica ERP instance URL>*] stands for the URL of the Acumatica ERP website.

On the new **Claims** tab of the [Connected Applications](#) form, the check box should be selected in the **Active** column for the claims that will be included in the token in the response to the client application (when OIDC is used). By default, Acumatica ERP contains a set of claims and a set of scopes; each scope defines the claims that will be included in a response when the scope is specified in a request. These sets of scopes and claims can be redefined in a customization project (a plug-in). If a plug-in is selected in the Summary area of the [Connected Applications](#) form, the claims that are defined in this plug-in are added to the table on the **Claims** tab; in this table, these claims are marked as belonging to the plug-in.

Connected Applications CUSTOMIZATION TOOLS ▾

Client ID:

\* Client Name:

Active

Flow:

Plug-In:

SECRETS REDIRECT URIS **CLAIMS**

Active	Claim Name	Scope	Plug-In	Descriptive
<input checked="" type="checkbox"/>	email	email	Built-In	
<input checked="" type="checkbox"/>	family_name	profile	Built-In	
<input checked="" type="checkbox"/>	given_name	profile	Built-In	
<input checked="" type="checkbox"/>	name	profile	Built-In	
<input checked="" type="checkbox"/>	phone_number	phone	Built-In	
<input checked="" type="checkbox"/>	preferred_username	profile	Built-In	

**Figure: Claims tab**

Acumatica ERP contains an active key pair for signing and validating tokens. On the new *OpenID Connection Preferences* (SM303030) form, a user can click the **Generate New Key** button to generate a new key pair. At the generation of a new key pair, the existing signing key is deactivated immediately, while either the existing validation key can be deactivated immediately, or a period for its deactivation can be specified.

# Platform API: Dropped Support of Obsolete Acumatica Framework Development Tools

---

In Version 2022 R2, the following Acumatica Framework development tools are not supported:

- Visual Web Designer for Visual Studio
- Data Access Class Generator in Visual Studio
- Layout Editor in Visual Studio
- A set of page templates in Visual Studio
- The Acumatica Framework Configuration Wizard

These tools were a part of Acumatica Framework product, which is no longer provided as a separate product and is unavailable for downloading for Version 2022 R2.

Instead of the unsupported tools, a developer can use the following tools:

- The Customization Project Editor  
The developer can use the Customization Project Editor to create customization projects and generate and edit data access classes (DACs), graphs, and ASPX pages. To launch the editor, the developer uses the **Customization** menu of any Acumatica ERP form or the [Customization Projects](#) (SM204505) form.
- A collection of Visual Studio code snippets  
The developer can generate the code of DACs, DAC fields, and graph event handlers with these code snippets. To find related information and download the code snippets, see the [CodeSnippets](#) repository on GitHub.
- Acuminator  
With Acuminator, the developer can find common mistakes in Acumatica Framework-based code, colorize and format business query language (BQL) statements, and review the structure of code files. To use Acuminator, install the Acuminator extension for Visual Studio. For details about Acuminator, see the [Acuminator](#) repository on GitHub.



# Platform API: Optimization of the PXSetup<Table> Implementation

---

The `PXSetup<Table>` generic class reads graphs' preferences from the database. In Acumatica ERP 2022 R2, the implementation of this generic class has been optimized so that the preferences of graphs can be read more quickly.

Now for each type parameter `Table`, data is read from the database only once and then stored in a database slot (that is, in the cache). In all subsequent uses of the `PXSetup<Table>` generic class with this type parameter, the class reads data from the database slot, not from the database itself.

# Platform API: Signature Capturing on Mobile

---

In Version 2022 R2, Acumatica Framework provides a new static method for capturing a user's signature on a mobile device and storing it in a PDF version of the report. The method is defined in the `PX.Data.Api.Mobile.SignManager` namespace.

When a signed report is required, a developer calls the new method in the application business logic code, as shown in the following example. (In this example, `Document` is a data view of a graph.)

```
Document.View.Sign(file.UID, out signedReportUID)
```

When the method is called, the following things happen on the mobile device:

1. The mobile device displays the contents of the report whose file identifier is specified in the input parameter of the method. A user can review the contents by scrolling, panning, or zooming in on the report.
2. The user either declines to sign the report or signs the report by writing a signature on the device screen and providing their name.

Depending on the outcome, the method returns one of the following:

- `SignDialogResult.None`: The signing process was interrupted abnormally.
- `SignDialogResult.Rejected`: The user declined to sign the report.
- `SignDialogResult.Complete`: The user signed the report. The file identifier of the signed PDF is available in the output parameter of the method.



This method has no effect in the web version of Acumatica ERP.

# Web Services: Introduction of the Default/22.200.001 Endpoint

---

In Acumatica ERP 2022 R2, a new version of the *Default* endpoint has been introduced, which is *Default/22.200.001*.

## E-Commerce-Related Functionality

All the functionality that is exposed in the *eCommerce/20.200.001* endpoint has been made available in the *Default/22.200.001* endpoint.

## Payroll-Related Functionality

The *Default/22.200.001* endpoint makes it possible for users to work with employee payroll settings and payroll batches through the REST API.

By using the *Default/22.200.001* endpoint, users can also do the following:

- Create, update, and delete the preferences and profiles required for setting up employee payroll profiles, and get the results of these operations
- Create, update, and delete the payroll settings for an employee, and get the results of these operations
- Create, update, and delete the preferences and profiles that are required for the creation of payroll batches, and get the results of these operations
- Create, update, and delete payroll batches, and get the results of these operations

## Project-Related Functionality: Workflow Actions

In the *Default/22.200.001* endpoint, many workflow actions of entities are mapped. Workflow actions are actions that change the state of an entity.

The following actions are mapped:

- **Hold, Activate, Complete, Suspend, and Cancel** (in the `Project` entity)
- **Hold** and **Remove Hold** (in the `ChangeOrder` entity)
- **Hold** and **Remove Hold** (in the `ProFormaInvoice` entity)
- **Hold, Activate, Complete, and Cancel** (in the `ProjectTask` entity)
- **Hold** and **Activate** (in the `ProjectTemplate` entity)

## Project-Related Functionality: Added Mapping

In the *Default/22.200.001* endpoint, the [Labor Rates](#) (PM209900) screen (form) is mapped to the `LaborCostRate` entity.

## Project-Related Functionality: Added Fields

In the *Default/22.200.001* endpoint, for the `ProjectGLAccount` and `ProjectTaskDefaultValues` entities, the `DefaultExpenseAccountID` and `DefaultExpenseSubID` fields are mapped to the `DefaultCostAccount` and `DefaultCostSubaccount` fields, respectively.

Also, for the `ChangeOrderCommitment` entity, the `POOrderType` field is mapped to the `POType` field.

## Project-Related Functionality: Renamed Fields

In the *Default/22.200.001* endpoint, for the `Event`, `Task`, and `TimeEntry` entities, the date and time fields are mapped to the fields with the same name, without underscores, suffixes, or prefixes.

In the `ProjectTask` entity, the `Attribute` field has been renamed to `Attributes`.

## Project-Related Functionality: Removed Fields and Entities

The following fields, which existed in the *Default/20.200.001* endpoint, do not exist in the *Default/22.200.001* endpoint:

- `OpenAmount` (for the `ChangeOrder.Commitments` entity)
- `ActualAmount`, `ActualQty`, `Completed`, `DraftInvoicesAmount`, `OriginalBudgetedAmount`, and `OriginalBudgetedQty` (for the `ChangeOrder.RevenueBudget` entity)

Also, the following entities do not exist in the *Default/22.200.001* endpoint:

- `AllocationRule`
- `CommonTask`
- `ProjectBilling`
- `ProjectBillingRules`

## Distribution-Related Functionality: Renamed Fields

The following fields in the *Default/20.200.001* endpoint have been renamed in the *Default/22.200.001* endpoint:

- `FreightAmount` to `FreightPrice` (for the `Shipment` entity)
- `Freight` to `FreightPrice` (for the `SalesOrder.ShippingSettings` entity)

## Web Services: Creation of a Shipment with Allocations and Package Contents in One Call

In Acumatica ERP 2022 R2, a developer can use one REST API call to create a shipment with allocations and package contents.

For example, the following request creates a shipment for the *ABARTENDE* customer. The items to be shipped belong to the *SO006778* and *SO006779* sales orders. The items are picked from different locations and are packed into a large box.

```
PUT ?$expand=Details,Details/Allocations,Packages,Packages/PackageContents HTTP/1.1
Host: [<Acumatica ERP instance URL>]/entity/Default/22.200.001/Shipment
Accept: application/json
Content-Type: application/json

{
  "BaseCurrencyID": { "value": "USD" },
  "ControlQty": { "value": 13 },
  "CreatedDateTime": {
    "value": "2022-06-15T15:45:54.463+03:00"
  },
  "CurrencyRate": { "value": 1 },
  "CurrencyViewState": { "value": false },
```

```

"CustomerID": { "value": "ABARTENDE" },
"Details": [
  {
    "Allocations": [
      {
        "InventoryID": { "value": "AACOMPUT01" },
        "LocationID": { "value": "R1S1" },
        "LotSerialNbr": { "value": "" },
        "OrderNbr": {},
        "OrderType": { "value": "SO" },
        "Qty": { "value": 2 },
        "UOM": { "value": "EA" }
      }
    ],
    "Description": { "value": "Acer Laptop Computer" },
    "FreeItem": { "value": false },
    "InventoryID": { "value": "AACOMPUT01" },
    "LocationID": { "value": "R1S1" },
    "LotSerialNbr": { "value": "" },
    "OpenQty": { "value": 0 },
    "OrderedQty": { "value": 2 },
    "OrderLineNbr": { "value": 1 },
    "OrderNbr": { "value": "SO006778" },
    "OrderType": { "value": "SO" },
    "OriginalQty": { "value": 2 },
    "ShippedQty": { "value": 2 },
    "UOM": { "value": "EA" },
    "WarehouseID": { "value": "WHOLESALE" }
  },
  {
    "Allocations": [
      {
        "InventoryID": { "value": "AALEGO500" },
        "LocationID": { "value": "R1S1" },
        "LotSerialNbr": { "value": "" },
        "OrderNbr": {},
        "OrderType": { "value": "SO" },
        "Qty": { "value": 1 },
        "UOM": { "value": "EA" }
      },
      {
        "InventoryID": { "value": "AALEGO500" },
        "LocationID": { "value": "R2S1" },
        "LotSerialNbr": { "value": "" },
        "OrderNbr": {},
        "OrderType": { "value": "SO" },
        "Qty": { "value": 2 },
        "UOM": { "value": "EA" }
      }
    ],
    "Description": { "value": "Lego 500 piece set" },
    "FreeItem": { "value": false },
    "InventoryID": { "value": "AALEGO500" },
    "LocationID": {},
    "LotSerialNbr": { "value": "" },
    "OpenQty": { "value": 0 },
    "OrderedQty": { "value": 3 },

```

```

    "OrderLineNbr": { "value": 3 },
    "OrderNbr": { "value": "SO006778" },
    "OrderType": { "value": "SO" },
    "OriginalQty": { "value": 3 },
    "ShippedQty": { "value": 3 },
    "UOM": { "value": "EA" },
    "WarehouseID": { "value": "WHOLESALE" }
  },
  {
    "Allocations": [
      {
        "InventoryID": { "value": "AAMACHINE1" },
        "LocationID": { "value": "R1S1" },
        "LotSerialNbr": { "value": "SRF000011" },
        "OrderNbr": {},
        "OrderType": { "value": "SO" },
        "Qty": { "value": 1 },
        "UOM": { "value": "EA" }
      }
    ],
    "Description": {
      "value": "Injection molding machine - serial numbered"
    },
    "FreeItem": { "value": false },
    "InventoryID": { "value": "AAMACHINE1" },
    "LocationID": { "value": "R1S1" },
    "LotSerialNbr": {},
    "OpenQty": { "value": 0 },
    "OrderedQty": { "value": 2 },
    "OrderLineNbr": { "value": 3 },
    "OrderNbr": { "value": "SO006779" },
    "OrderType": { "value": "SO" },
    "OriginalQty": { "value": 2 },
    "ShippedQty": { "value": 2 },
    "UOM": { "value": "EA" },
    "WarehouseID": { "value": "WHOLESALE" }
  }
],
"EffectiveDate": { "value": "2013-01-01T00:00:00+04:00" },
"FreightAmount": { "value": 10 },
"FreightCost": { "value": 0 },
"FreightCurrencyID": { "value": "USD" },
"GroundCollect": { "value": false },
"Hold": { "value": false },
"LocationID": { "value": "MAIN" },
"Operation": { "value": "Issue" },
"PackageCount": { "value": 1 },
"Packages": [
  {
    "BoxID": { "value": "LARGE" },
    "CODAmount": { "value": 0 },
    "Confirmed": { "value": false },
    "DeclaredValue": { "value": 2050 },
    "PackageContents": [
      {
        "InventoryID": { "value": "AACOMPUT01" },
        "LotSerialNbr": { "value": "" },

```

```

        "Quantity": { "value": 2 },
        "UOM": { "value": "EA" },
        "OrigOrderType": { "value": "SO" },
        "OrigOrderNbr": { "value": "SO006778" }
    },
    {
        "InventoryID": { "value": "AAMACHINE1" },
        "LotSerialNbr": { "value": "SRF000011" },
        "Quantity": { "value": 1 },
        "UOM": { "value": "EA" },
        "OrigOrderType": { "value": "SO" },
        "OrigOrderNbr": { "value": "SO006779" }
    },
    {
        "InventoryID": { "value": "AALEGO500" },
        "LotSerialNbr": { "value": "" },
        "Quantity": { "value": 3 },
        "UOM": { "value": "EA" },
        "OrigOrderType": { "value": "SO" },
        "OrigOrderNbr": { "value": "SO006778" }
    }
]
}
},
"ShipmentDate": { "value": "2022-06-15T00:00:00+03:00" },
"ShippingTerms": { "value": "CFR" },
"Type": { "value": "Shipment" },
"UseCustomersAccount": { "value": false },
"WarehouseID": { "value": "WHOLESALE" }
}

```

## Web Services: Creation and Update of an Inventory Issue

In Acumatica ERP 2022 R2, an inventory issue can be created and updated with REST API requests.

For example, the following request creates an inventory issue for the *AAMACHINE1* and *AACOMPUT01* items.

```

PUT ?$expand=Details,Details/Allocations HTTP/1.1
Host: [<Acumatica ERP instance URL>]/entity/Default/22.200.001/InventoryIssue
Accept: application/json
Content-Type: application/json

{
  "ControlAmount": { "value": 60800 },
  "ControlQty": { "value": 3 },
  "Date": { "value": "2022-05-26T00:00:00+03:00" },
  "Description": { "value": "Descr" },
  "Details": [
    {
      "Allocations": [
        {
          "InventoryID": { "value": "AAMACHINE1" },
          "Location": { "value": "R1S1" },
          "LotSerialNbr": { "value": "SRF000009" },
          "Qty": { "value": 1 },

```

```

        "UOM": { "value": "EA" }
    },
    {
        "InventoryID": { "value": "AAMACHINE1" },
        "Location": { "value": "R1S1" },
        "LotSerialNbr": { "value": "SRF000010" },
        "Qty": { "value": 1 },
        "SplitLineNumber": { "value": 6 },
        "UOM": { "value": "EA" }
    }
],
"Branch": { "value": "PRODWHOLE" },
>Description": {
    "value": "Injection molding machine - serial numbered"
},
"ExtCost": { "value": 40000 },
"ExtPrice": { "value": 60000 },
"InventoryID": { "value": "AAMACHINE1" },
"LineNumber": { "value": 1 },
"Location": { "value": "R1S1" },
"LotSerialNbr": {},
"Project": { "value": "X" },
"Qty": { "value": 2 },
"ReasonCode": { "value": "INISSUE" },
"TranType": { "value": "Issue" },
"UnitCost": { "value": 20000 },
"UnitPrice": { "value": 30000 },
"UOM": { "value": "EA" },
"Warehouse": { "value": "WHOLESALE" }
},
{
    "Allocations": [
        {
            "InventoryID": { "value": "AACOMPUT01" },
            "Location": { "value": "R1S1" },
            "LotSerialNbr": { "value": "" },
            "Qty": { "value": 1 },
            "UOM": { "value": "EA" }
        },
        {
            "InventoryID": { "value": "AACOMPUT01" },
            "Location": { "value": "R2S3" },
            "LotSerialNbr": { "value": "" },
            "Qty": { "value": 1 },
            "UOM": { "value": "EA" }
        }
    ],
    "Branch": { "value": "PRODWHOLE" },
>Description": {
    "value": "Acer Laptop Computer"
},
"ExtCost": { "value": 250 },
"ExtPrice": { "value": 800 },
"InventoryID": { "value": "AACOMPUT01" },
"LineNumber": { "value": 3 },
"Project": { "value": "X" },
"Qty": { "value": 2 },

```



```

        "ReasonCode": { "value": "INISSUE" },
        "TranType": { "value": "Issue" },
        "UnitCost": { "value": 250 },
        "UnitPrice": { "value": 800 },
        "UOM": { "value": "EA" },
        "Warehouse": { "value": "WHOLESALE" }
    }
],
"ExternalRef": { "value": "Ext2" },
"PostPeriod": { "value": "052022" },
"TotalAmount": { "value": 61600 },
"TotalCost": { "value": 40250 },
"TotalQty": { "value": 4 }
}

```

The following request releases the created inventory issue.

```

POST / HTTP/1.1
Host: [<Acumatica ERP instance URL>]/entity/Default/22.200.001/InventoryIssue/
ReleaseInventoryIssue
Accept: application/json
Content-Type: application/json

{
  "entity": {
    "ReferenceNbr": {
      "value": "<Inventory_issue_ID>"
    }
  }
}

```

## Web Services: Creation of a Return Order

---

In Acumatica ERP 2022 R2, a return order (that is, a return for credit) can be created with a REST API request.

For example, the following request creates a return for credit to return 10 units of the item listed in line 2 of the *AR010707* invoice, 11 units of the item listed in line 4 of the *AR010707* invoice, and all units of all items listed in the *AR010693* invoice.

```

PUT / HTTP/1.1
Host: [<Acumatica ERP instance URL>]/entity/Default/22.200.001/SalesOrder
Accept: application/json
Content-Type: application/json

{
  "BaseCurrencyID": { "value": "USD" },
  "CustomerID": { "value": "AACUSTOMER" },
  "Description": { "value": "API" },
  "Details": [
    {
      "InvoiceType": { "value": "Invoice" },
      "InvoiceNbr": { "value": "AR010707" },
      "InvoiceLineNbr": { "value": "2" },
      "OrderQty": { "value": "10" }
    }
  ],
}

```

```

    {
      "InvoiceType": { "value": "Invoice" },
      "InvoiceNbr": { "value": "AR010707" },
      "InvoiceLineNbr": { "value": "4" },
      "OrderQty": { "value": "11" }
    },
    {
      "InvoiceType": { "value": "Invoice" },
      "InvoiceNbr": { "value": "AR010693" }
    }
  ],
  "LocationID": { "value": "MAIN" },
  "OrderType": { "value": "RC" }
}

```

## Web Services: Creation of a Credit Memo

In Acumatica ERP 2022 R2, a credit memo can be created with a REST API request.

For example, the following request creates a credit memo to return 10 units of the item listed in line 7 of the *AR008287* invoice, all units of the item listed in line 1 of the *AR008281* invoice, and all units of the item listed in the *AR008285* invoice.

```

PUT / HTTP/1.1
Host: [<Acumatica ERP instance URL>]/entity/Default/22.200.001/SalesInvoice
Accept: application/json
Content-Type: application/json

{
  "CreditHold": { "value": false },
  "Currency": { "value": "USD" },
  "CustomerID": { "value": "AACUSTOMER" },
  "Details": [
    {
      "OrigInvLineNbr": { "value": 7 },
      "OrigInvNbr": { "value": "AR008287" },
      "OrigInvType": { "value": "Invoice" },
      "Qty": { "value": 10 }
    },
    {
      "OrigInvLineNbr": { "value": 1 },
      "OrigInvNbr": { "value": "AR008281" },
      "OrigInvType": { "value": "Invoice" }
    },
    {
      "OrigInvNbr": { "value": "AR008285" },
      "OrigInvType": { "value": "Invoice" }
    }
  ],
  "Project": { "value": "X" },
  "Type": { "value": "Credit Memo" }
}

```

## Web Services: Retrieval of the Available Quantity of an Inventory Item

In the *Default/22.200.001* endpoint, the `InventoryQuantityAvailable` entity is mapped to the *Available Quantity by Inventory Item (GI640590)* generic inquiry. This generic inquiry is used to retrieve the quantity of the inventory item for which the inventory ID is specified and whose record is modified not before the specified date.

For example, the following request retrieves the quantity of the *AACOMPUT01* items, as long as the last modification date of the database record is not before June 7, 2016.

```
PUT ?$expand=Results HTTP/1.1
Host: [<Acumatica ERP instance URL>]/entity/Default/22.200.001/InventoryQuantityAvailable
Accept: application/json
Content-Type: application/json

{
  "InventoryID": {
    "value": "AALEGO500"
  },
  "LastModifiedDateTime": {
    "value": "6/7/2016"
  }
}
```

## Web Services: Specification of Tax Details in Purchase Orders

In Acumatica ERP 2022 R2, during the creation or update of a purchase order with a REST API request, the value of the `IsTaxValid` field of the `PurchaseOrder` entity is used to determine how the tax details are calculated.

If the `IsTaxValid` field is specified in the request body, its value is set to *true*, and an external tax zone is specified, then the tax details from the request body are used without modification and no other taxes are applied.

If the `IsTaxValid` field is specified in the request body, its value is set to *true*, and an internal tax zone is specified, then the tax details from the request body are compared to those calculated by the system. If the taxes specified in the request body are present among those calculated by the system, then the tax details from the request body are used without modification and no other taxes are applied. If there is a tax in the request body that is not present among those calculated by the system, the request execution fails.

If the `IsTaxValid` field is not specified in the request body or its value is not set to *true*, tax calculation is performed by the system.

For example, the following request can be used to create a purchase order. In this sample code, an external tax zone and two new tax codes are used; the tax amount is then calculated based on these tax codes.

```
PUT ?$expand=Details,TaxDetails HTTP/1.1
Host: [<Acumatica ERP instance URL>]/entity/Default/22.200.001/PurchaseOrder
Accept: application/json
Content-Type: application/json

{
  "BaseCurrencyID": { "value": "USD" },
  "Branch": { "value": "PRODWHOLE" },
  "ControlTotal": { "value": 1102.50 },
  "CurrencyEffectiveDate": { "value": "2013-01-01T00:00:00+04:00" },
  "CurrencyID": { "value": "USD" },
```

```

"CurrencyRate": { "value": 1 },
"CurrencyReciprocalRate": { "value": 1 },
>Date": { "value": "2022-06-03T00:00:00+03:00" },
"Details": [
  {
    "BranchID": { "value": "PRODWHOLE" },
    "Cancelled": { "value": false },
    "Completed": { "value": false },
    "CompleteOn": { "value": 100 },
    "ExtendedCost": { "value": 1000 },
    "InventoryID": { "value": "AACOMPUT01" },
    "LineDescription": { "value": "Acer Laptop Computer" },
    "LineNbr": { "value": 1 },
    "LineType": { "value": "Goods for IN" },
    "MaxReceiptPercent": { "value": 100 },
    "MinReceiptPercent": { "value": 0 },
    "OrderQty": { "value": 1 },
    "OrderType": { "value": "RO" },
    "Promised": { "value": "2022-06-08T00:00:00+03:00" },
    "QtyOnReceipts": { "value": 0 },
    "ReceiptAction": { "value": "Accept but Warn" },
    "Requested": { "value": "2022-06-03T00:00:00+03:00" },
    "TaxCategory": { "value": "EXEMPT" },
    "UnitCost": { "value": 1000 },
    "UOM": { "value": "EA" },
    "WarehouseID": { "value": "WHOLESALE" }
  }
],
"Hold": { "value": true },
"IsTaxValid": { "value": true },
"Location": { "value": "MAIN" },
"TaxDetails": [
  {
    "TaxableAmount": { "value": 1000 },
    "TaxAmount": { "value": 37.50 },
    "TaxID": { "value": "NEWTAX1" },
    "TaxRate": { "value": 4 }
  },
  {
    "TaxableAmount": { "value": 1000 },
    "TaxAmount": { "value": 0 },
    "TaxID": { "value": "WA COUNTY TAX" },
    "TaxRate": { "value": 0 }
  },
  {
    "TaxableAmount": { "value": 900 },
    "TaxAmount": { "value": 70 },
    "TaxID": { "value": "NEWTAX2" },
    "TaxRate": { "value": 6.50 }
  }
],
"TaxTotal": { "value": 102.50 },
"Terms": { "value": "30D" },
>Type": { "value": "Normal" },
"VendorID": { "value": "AAVENDOR" },
"VendorRef": {},
"VendorTaxZone": { "value": "EXT" }

```

```
}

```

## Web Services: Overriding of Values in the Item Warehouse Details

In Acumatica ERP 2022 R2, during the specification of item warehouse details, fields can be marked as overridden and their new values can be set in one REST API call.

For example, in the details for the *AACOMPUT01* inventory item and the *WHOLESALE* warehouse, the following request marks the *InventorySubaccount*, *MaxQty*, *ReorderPoint*, and *SafetyStock* fields as overridden and specifies their new values.

```
PUT / HTTP/1.1
Host: [<Acumatica ERP instance URL>]/entity/Default/22.200.001/ItemWarehouse
Accept: application/json
Content-Type: application/json

{
  "InventoryID": { "value": "AACOMPUT01" },
  "InventorySubaccount": { "value": "WID000" },
  "MaxQty": { "value": 2222 },
  "MSRP": { "value": 600 },
  "OverrideInventoryAccountSubaccount": { "value": true },
  "OverrideMaxQty": { "value": true },
  "OverridePreferredVendor": { "value": false },
  "OverridePrice": { "value": false },
  "OverrideProductManager": { "value": false },
  "OverrideReorderPoint": { "value": true },
  "OverrideReplenishmentSettings": { "value": false },
  "OverrideSafetyStock": { "value": true },
  "OverrideStandardCost": { "value": false },
  "PreferredLocation": { "value": "MAIN" },
  "PreferredVendor": { "value": "ELEEASTCOM" },
  "ReorderPoint": { "value": 14 },
  "ReplenishmentClass": { "value": "PURCHASE" },
  "ReplenishmentMethod": { "value": "Min./Max." },
  "ReplenishmentSource": { "value": "Purchase" },
  "SafetyStock": { "value": 244 },
  "Seasonality": { "value": "NONE" },
  "ServiceLevel": { "value": 87 },
  "WarehouseID": { "value": "WHOLESALE" }
}
```

# Web Services: Innovations in the Implementation of the REST API

---

In Acumatica ERP 2022 R2, innovations have been introduced in the implementation of the REST API.

## New Common Fields in REST Responses

Now every REST response body with payload has additional fields as follows:

- For every returned record that corresponds to a top-level entity, there is a `_links/self` field in the response. The value of this field is part of the URL of a GET request for the retrieval of this top-level entity by its ID. The same URL can be used in a DELETE request for the deletion of this entity.
- For every returned record, there is a `_links/files:put` field in the response. The value of this field is part of the URL template that must be used in a request for attaching a file to this record. This field is returned not only for top-level entities but also for detailed records, and so now files can be attached to detailed records as well.

Following is an example of the new fields in a response that returns a `Bill` entity.

```
"_links": {
  "self": "/SalesDemo/entity/Default/20.200.001/Bill/2b7001ab-7b00-ed11-9e53-9828a61840c3",
  "files:put": "/SalesDemo/entity/Default/20.200.001/files/PX.Objects.AP.APIInvoiceEntry/Document/2b7001ab-7b00-ed11-9e53-9828a61840c3/{filename}"
}
```

## Multiple Conditions for the Same Field in a Filter

Now a user can specify multiple conditions for the same field in a filter by using the AND and OR operators.

For example, a request with the following URL retrieves sales orders that have the `SO003731`, `SO003732`, or `SO003733` order number.

```
http://<Acumatica ERP instance URL>/entity/default/20.200.001/SalesOrder?&filter=OrderNbr eq 'SO003731' or OrderNbr eq 'SO003732' or OrderNbr eq 'SO003733'
```

## Retrieval of All Localized Values of Multi-Language Fields

In Acumatica ERP 2022 R2, a new way to retrieve multi-language fields has been introduced.

To retrieve all localized values of all requested fields, a developer only needs to add the `&expand=Translations` parameter to the request. For example, the following request can be used to retrieve all stock items that are registered in the system; during the execution of this request, all the field values with all available localizations are requested.

```
GET ?&expand=Translations HTTP/1.1
Host: [<Acumatica ERP instance URL>]/entity/Default/20.200.001/StockItem
Accept: application/json
Content-Type: application/json
```

In this request, [<Acumatica ERP instance URL>] should be replaced with the URL of the Acumatica ERP instance to which the request is made.

Below is an example of the returned data.

```
[
  ...
  {
    "id": "8ecd4ca7-30d1-ec11-839d-085bd61190bc",
    ...
    "Description" : {
      "value": "Description in English",
      "Translations": {
        "en": "Description in English",
        "fr": "Description en français"
      }
    },
    ...
  },
  ...
]
```

# Web Services: Update of Tax Details During Bill Creation or Update

---

In Acumatica ERP 2022 R2, the following changes have been made to the functionality exposed by the *Default/20.200.001* endpoint: During the creation or update of a bill (through the use of the *Bill* entity) or invoice (through the use of the *Invoice* entity), the value of the *IsTaxValid* field determines how the tax details are calculated. If the *IsTaxValid* field is specified in the request body and its value is set to *true*, the tax details are copied from the request body. Otherwise, tax calculation is performed by the system.

For example, the following request creates or updates a bill and at the same time updates the details of the *CAGST* tax, so that its taxable amount is set to *1000*, its tax amount is set to *150*, and its expense amount is set to *0*.

```
PUT ?$expand=TaxDetails HTTP/1.1
Host: [<Acumatica ERP instance URL>]/entity/Default/20.200.001/Bill
Accept: application/json
Content-Type: application/json

{
  ...
  "IsTaxValid": { "value": true },
  "TaxDetails": [
    {
      "TaxID": { "value": "CAGST" },
      "TaxableAmount": { "value": 1000.0 },
      "TaxAmount": { "value": 150.0 },
      "ExpenseAmount": { "value": 0.0 }
    }
  ],
  ...
}
```



# Workflow: Enhancements to the Workflow Engine

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In Acumatica ERP 2022 R2, several enhancements to the workflow engine have been implemented. A customizer can now do the following:

- In a workflow state, specify the default values for fields of non-primary DACs.  
For details about how a developer can implement this functionality by using Workflow API, see [Specifying Default Values for Fields](#).  
For details about how a customizer can implement this functionality by using the Customization Project Editor, see [Specifying Default Values for All Fields](#).
- In a dialog box, obtain the values of a combo-box field from a source state or a target state of a transition where the dialog box is shown.



Obtaining values of a combo-box field from a target state cannot be used if multiple transitions can be performed for the same initial state depending on a condition, because in that case, the field values cannot be determined in advance.

For details about how a developer can implement this functionality by using Workflow API, see [Obtaining the Value of a Combo Box Field from a Source or Target State](#).

For details about how a customizer can implement this functionality by using the Customization Project Editor, see [Obtaining Values for Drop-Down Lists from Target States or Source States of a Transition](#).

- In a dialog box, hide fields depending on a condition.



If all fields of a dialog box should be hidden and the dialog box does not contain fields which value is required and has no default value, the dialog box will not be displayed. In that case, a transition before which the dialog box is shown, is still performed.

For details about how a developer can implement this functionality by using Workflow API, see [Hiding Fields in a Dialog Box](#).

For details about how a customizer can implement this functionality by using the Customization Project Editor, see [Hiding Fields in Dialog Boxes](#).

## Workflow: Enhancements to the Customization Project Editor

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This section describes the enhancements to the workflow-related pages of the Customization Project Editor that have been implemented in Acumatica ERP 2022 R2.

### Specifying Default Values for All Fields

In the previous versions of Acumatica ERP, a customizer could specify default values for fields in only the initial state of the workflow. In Version 2022 R2, the customizer can specify the default values for all fields added to the customization project.

On the Fields page of the Customization Project Editor, the **Default Value** and **From Schema** columns have been added to the table (see the following screenshot). The customizer can enter the needed values for fields or select one of the values available in the database. The customizer can also use the Formula Editor to specify values that depend on the values of other fields (for example, *Type* or *Status*).

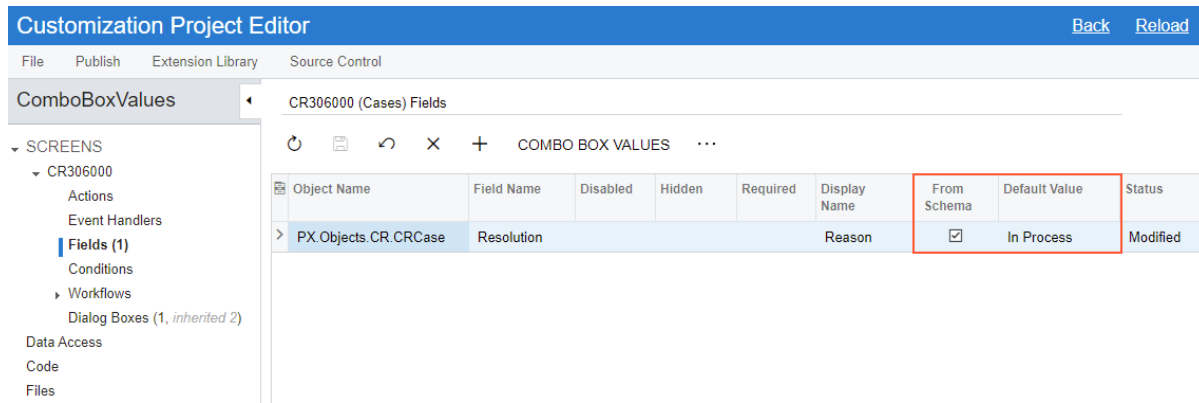


Figure: The Default Value and From Schema columns on the Fields page

## Obtaining Values for Drop-Down Lists from Target States or Source States of a Transition

A customizer can select the source of values that will be available in dialog boxes that the system displays when a user invokes certain actions on a form. Instead of specifying drop-down values for each dialog box explicitly, the customizer can indicate that these values should be the same as in the target state or source state of the transition. This functionality allows the customizer to use only one dialog box for all actions in a workflow.

In the Customization Project Editor, the customizer selects the source of values in the **Combo Box Values** dialog box. For a custom or customized workflow, the customizer opens this dialog box by clicking **Combo Box Values** on the table toolbar of the **Dialog Box Fields** table of the Dialog Boxes page.

In the **Source of Values** box of the dialog box, the customizer selects one of the following options (see the screenshot below):

- *Take From Source State*: The values from the source state of the transition are used. This is the default option for a new dialog box.
- *Take From Target State*: The values from the target state of the transition are used.
- *Specify Explicitly*: The values are selected in the table in the dialog box as they were in the previous versions of Acumatica ERP. This is the default option for an existing dialog box.

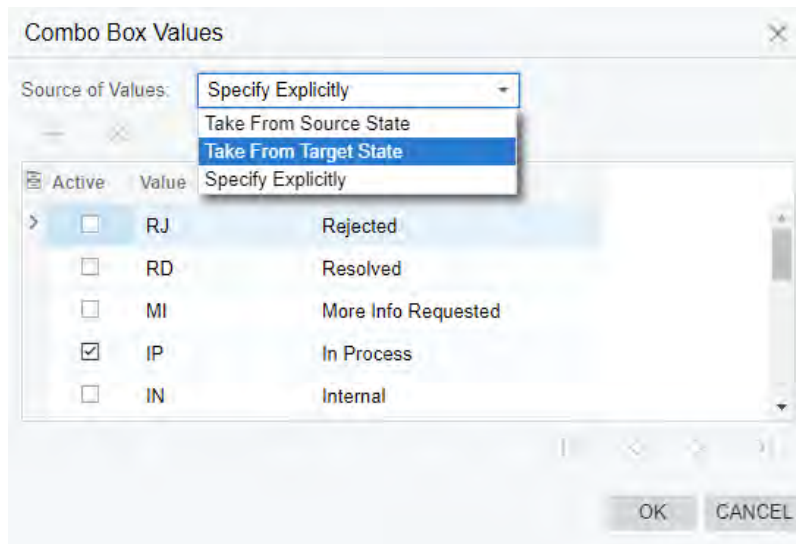


Figure: The Source of Values box of the Combo Box Values dialog box

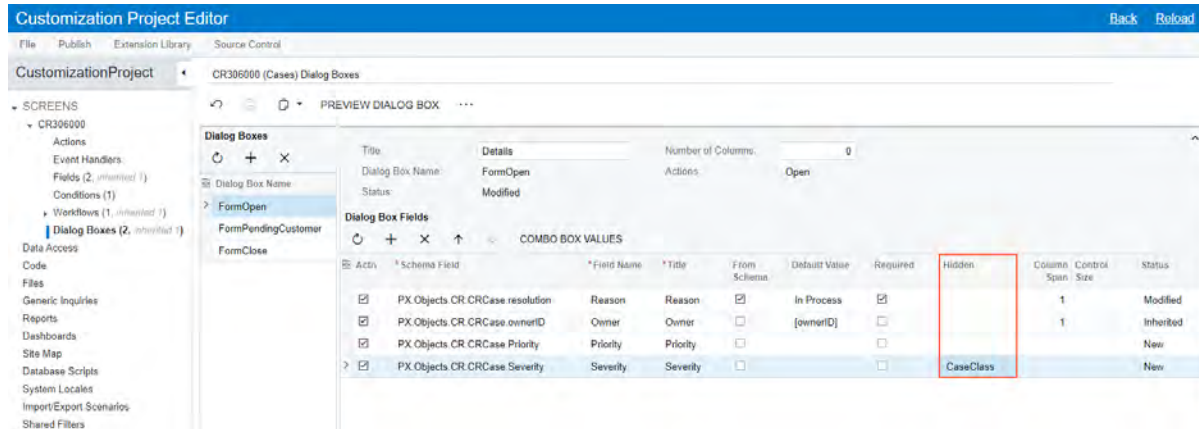


If an action triggers transitions to multiple target states, we recommend that the customizer use the *Specify Explicitly* or *Take from Source State* option.

## Hiding Fields in Dialog Boxes

A customizer can hide fields in dialog boxes depending on conditions.

In the **Dialog Box Fields** table of the Dialog Boxes page of the Customization Project Editor, the **Hidden** column has been added (see the following screenshot). In this column, the customizer selects the conditions for particular fields; if these conditions are met, the fields are not displayed in the dialog box.



**Figure: The Hidden column in the Dialog Box Fields table**

If all fields of a dialog box are hidden, this dialog box is not displayed. If particular fields are hidden but have default values specified for them, these fields are not displayed in the dialog box; however, in the target state of the transition, these default values are assigned to the fields.

The customizer can also permanently hide a particular field in the dialog box by selecting *True* in the **Hidden** column for this field. This functionality can be useful if the field has been added in the predefined workflow but is not required in the customized workflow; also, no additional workflow modifications are required in this case.

## Workflow: Enhancements to Workflow API

This section describes the enhancements that have been implemented to Workflow API in Acumatica ERP 2022 R2.

### Specifying Default Values for Fields

In a screen configuration, a developer now has the ability to specify a default value for a DAC field. To do this, a developer can call one of the following methods while adding field states to the screen configuration in the `WithFieldStates` method:

- `WithDefaultValue`  
This method allows the developer to specify the exact value.
- `WithDefaultExpression`  
This method allows the developer to provide a BQL expression that selects the proper value.

An example is shown in the following code.

```
context.AddScreenConfigurationFor(screen =>
{
```

```

return screen
    .StateIdentifierIs<CRCCase.status>()
    .AddDefaultFlow(DefaultCaseFlow)
    ...
    .WithFieldStates(fields =>
    {
        fields.Add<CRCCase.resolution>(field => field
            .SetComboValues(
                (_reasonRejected, "Rejected"),
                (_reasonResolved, "Resolved"),
                ...
                (_reasonUnassigned, "Unassigned"),
                (_reasonAssigned, "Assigned"),
                (_reasonUpdated, "Updated"))
            .WithDefaultValue("Assigned"));
    })
});

```

In the code above, the `CRCCase.resolution` field is added to the screen configuration. The default value of the field is specified in the `WithDefaultValue` method.



If a field has combo box values, the default value should be one of the values listed in the `SetComboValues` method.

For more details on specifying default values for fields in a screen configuration, see [Field States: General Information](#).

## Obtaining the Value of a Combo Box Field from a Source or Target State

In a workflow state, a developer can use the `WithFieldStates` method to specify the possible values of fields similarly to what is described in the previous section. In a dialog box, a developer can now specify that the set of values for a combo box field should be taken from a source state or a target state.

To specify that the set of combo box values of a dialog box field should be taken from a source or target state, while adding the field to a dialog box, the developer needs to call the `ComboBoxValuesSource` method and in a parameter, specify from where the values should be taken (a source state, a target state, or explicit values specified in the dialog box definition).

For example, suppose that in some state, a set of values for the `CRLead.resolution` field is specified. The workflow includes a transition where this state is a target state, and a dialog box that is shown during this transition. Further suppose that the dialog box includes the `Reason` field, whose configuration is provided by the `CRLead.resolution` field (through the developer's use of the `WithSchemaOf` method). To specify that the values of the `Reason` field should be taken from the target state of a transition where the dialog box is used, a developer should use the following code in the dialog box.

```

.WithForms(forms => {
    forms.Add("FormOpen", form =>
        form.WithFields(fields =>
        {
            fields.Add("Reason", field => field
                .WithSchemaOf<CRLead.resolution>()
                .IsRequired()
                .Prompt("Reason")
                .ComboBoxValuesSource(ComboBoxValuesSource.TargetState));
        })
    });

```

```
})
```

For more details on configuring combo box values in a dialog box, see [Configuration of the Fields of a Dialog Box](#).

## Hiding Fields in a Dialog Box

In a dialog box, developer now can hide a field depending on a condition. To do this, a developer should call the `IsHiddenWhen` method while adding a field to a dialog box in a screen configuration and specify a condition as a parameter.



The condition specified in the `IsHiddenWhen` method is not checked during mass processing of records.

Also, a developer can always hide a field by calling the `IsHiddenAlways` method. This method may be useful to hide a field in a dialog box of a custom workflow if this field is included in this dialog box in a predefined workflow.

An example is shown in the following code.

```
.WithForms(forms => {
  forms.Update("FormOpen", form =>
    form.WithFields(fields =>
      {
        fields.Add("Reason", field => field.WithSchemaOf<CROpportunity.resolution>()
          .Prompt("Reason")
          .IsHiddenWhen(hideReason));

        fields.Update("Stage", field => field.WithPrompt("Stage ID").IsHiddenAlways());
      }
    ));
})
```

In the code above, the `FormOpen` dialog box is updated in the following ways:

- The `Reason` field of the `FormOpen` dialog box is added and hidden when the `hideReason` condition is `True`.
- The `Stage` field is always hidden.

For more details on configuring field appearance in a dialog box, see [Configuration of the Fields of a Dialog Box](#).

# Fixes and Enhancements

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You can find fixes and minor enhancements introduced in Acumatica ERP 2022 R2 in the following document:

[\*Acumatica ERP 2022 R2 Release Notes: Fixes and Enhancements.\*](#)