Contents

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Software Version: 2018 R1

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Introduction

This document provides important information about fixes, enhancements, and key features that are available in Acumatica ERP 2018 R1. The document is designed particularly for to those who install Acumatica ERP or develop applications for it. All users can benefit from reviewing this content to determine how they may benefit from the changes in this release.

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 partner portal.

Installation and Upgrade Notes

For a detailed description of the general procedure of updating Acumatica ERP, see *Updating Acumatica ERP* in the Installation Guide.

We strongly recommend that before you update Acumatica ERP to a newer product version, you back up all configuration files and databases used by the application instances. An upgrade to Acumatica ERP 2018 R1 from previous major versions (such as Version 2017 R2) may cause issues with customizations and dashboards.

Multiple changes have been made in Acumatica ERP 2018 R1 in comparison to Version 2017 R2 that may affect customizations and integrations. For details, see *Upgrade Procedure: Customizations*.

If your Acumatica ERP instance was integrated with software provided by an independent software vendor (ISV) partner, we recommend that you consult with your partner about the compatibility of their products with Acumatica ERP 2018 R1.

Upgrade Policy

On the *Apply Updates (SM203510)* form, only minor updates for your current version of Acumatica ERP are available. You should upgrade your Acumatica ERP instance from previous major versions of the system to Version 2018 R1 manually on the server. (An upgrade through the web interface is not supported because the customization of your Acumatica ERP instance may be incompatible with Version 2018 R1 due to changes in Version 2018 R1.)

Prerequisite Steps

Before users install or upgrade Acumatica ERP 2018 R1 locally, they need to do the following:

1. Switch the Internet Information Services application pool where your Acumatica ERP 2018 R1 instance will be installed to Integrated mode. (Classic mode is not supported.)

2. Install Microsoft .NET Frameworks 4.7.1 on the server where your Acumatica ERP 2018 R1 instance will be installed.

3. If the Service Management module was deployed in Version 6.1 and users need to use this module in Version 2018 R1, a system administrator have to prepare the system before upgrading it, as described in *Service: Integration*.

Upgrade Notes

Upgrade to Acumatica ERP 2018 R1 must be performed as described in the following table. The upgrade process depends on the version from which you are upgrading.

From Version	Upgrade Path
2017 R2	A direct upgrade to Acumatica ERP 2018 R1 is supported.
6.2	A direct upgrade to Acumatica ERP 2018 R1 is supported.
6.1	A direct upgrade to Acumatica ERP 2018 R1 is supported.
6	Incremental upgrade is required. The following steps must be performed in the listed order: 1. Upgrade to the latest 2017 R2 X build available. 2. Upgrade to Version 2018 R1.

From Version	Upgrade Path
5.3	Incremental upgrade is required. The following steps must be performed in the listed order: 1. Upgrade to the latest 2017 R2 X build available. 2. Upgrade to Version 2018 R1.

: You cannot upgrade from Acumatica ERP 6.1X and 2017 R2 X to Acumatica ERP 2018 R1 if your build of Acumatica ERP 6.1X or 2017 R2 X was released later than the build of Acumatica ERP 2018 R1 that you are going to upgrade, because some Acumatica ERP 6.1X and 2017 R2 X fixes might not be included in Version 2018 R1.

If you are upgrading from Version 6.1 and earlier and use the Projects module and related project functionality in the system, for upgrade notes, see *Projects: Upgrade Notes*.

Upgrade Procedure: Customizations

Multiple changes have been made since Acumatica ERP 2017R2 Update 6 (17.206.0030), which may affect reports, customizations, and integrations that were implemented by the developers for the prior versions.

To prevent breaking changes in the customizations, the developer should do the following:

1. Analyze the customization projects.

2. Carefully read the list of breaking changes in the *Upgrade Procedure: Breaking Changes* section.

3. Replace the changed objects with their alternatives. See additional recommendations in the sections below.

4. If the objects used in the customization projects were removed and no alternatives were provided, consider creating new customization projects.

After an upgrade to Acumatica ERP 2018 R1, to detect the changes that break existing customization projects, the developer can check the compatibility of the code included in all published customization projects with the original code. For details, see *To Validate the Compatibility of the Published Customization with a New Version Before an Upgrade* in the Customization Guide.

: The validation that detects breaking changes is turned on by default in Acumatica ERP 2018 R1. If any errors occur during the validation, see *To Resolve an Issue Discovered During the Validation* topic in the Customization Guide.

For the complete list of the changes with the suggested alternatives, see the Acumatica ERP 2018 R1 *Technical Release Notes* document on the Acumatica partner portal.

Upgrade Procedure: Breaking Changes

Multiple changes have been made since Version 2017 R1 Update 6 (17.206.0030) that may affect reports, customizations, and integrations that were implemented by the developers for the prior versions. The basic changes are listed in this topic. The complete list of the changes with the possible alternatives is provided in the Acumatica ERP 2018 R1 *Technical Release Notes* document.

Removed Screens

No screens that were present in prior versions have been removed.

Removed Tables

The following tables that were present in prior versions have been removed from the database.

Table Name
CABankStatement
CABankStatementAdjustment
CABankStatementDetail
FSAppointmentInventoryItem
PaymentType
PaymentTypeDetail
PaymentTypeInstance
PaymentTypeInstanceDetail
PREmployeeJob
PRJobCode
PRSetup
PRShiftCode
PTInstRecon
PTInstStatement
PTInstStmtDetail
PTInstTran

Removed Fields

The following fields that were present in prior versions have been removed.

Table Name	Field Name
APPayment	PTInstanceID
ARInvoice	CuryRUTROTTotalAmt
ARInvoice	RUTROTOtherCost
ARInvoice	RUTROTMaterialCost

Table Name	Field Name
ARInvoice	RUTROTWorkPrice
ARInvoice	RUTROTTotalAmt
ARInvoice	RUTROTDeductionPct
ARInvoice	RUTDeductionPct
ARInvoice	ROTDeductionPct
ARInvoice	RUTROTAutoDistribution
ARInvoice	IsRUTROTClaimed
ARInvoice	RUTROTType
ARInvoice	CuryRUTROTPersonalAllowance
ARInvoice	RUTROTPersonalAllowance
ARInvoice	CuryROTPersonalAllowance
ARInvoice	ROTPersonalAllowance
ARInvoice	CuryROTExtraAllowance
ARInvoice	ROTExtraAllowance
ARInvoice	CuryRUTPersonalAllowance
ARInvoice	RUTPersonalAllowance
ARInvoice	CuryRUTExtraAllowance
ARInvoice	RUTExtraAllowance
ARInvoice	CuryRUTROTDistributedAmt
ARInvoice	RUTROTDistributedAmt
ARInvoice	ROTEstateAppartment
ARInvoice	ROTAppartment
ARInvoice	ROTEstate
ARInvoice	ROTOrganizationNbr
ARInvoice	RUTROTClaimDate
ARInvoice	RUTROTClaimFileName
ARInvoice	RUTROTDistributionLineCntr
ARInvoice	RUTROTExportRefNbr
CABankTran	CuryOrigAmt
CABankTran	PayeeMatched
CABatch	OwnerID
CADeposit	EntryTypeID
CASetup	CuryRateTypeID
CASetup	PTInstStmtNumbering

Table Name	Field Name
CASetup	MatchInSelection
CATransfer	LineCntr
Contract	CampaignID
CROpportunity	BranchID
CROpportunity	BAccountID
CROpportunity	ProjectID
CROpportunity	OpportunityName
CROpportunity	Description
CROpportunity	Amount
CROpportunity	CuryAmount
CROpportunity	ProductsAmount
CROpportunity	CuryProductsAmount
CROpportunity	CampaignSourceID
CROpportunity	IsTaxValid
CROpportunity	CuryID
CROpportunity	CuryInfoID
CROpportunity	WorkgroupID
CROpportunity	OwnerID
CROpportunity	TaxZoneID
CROpportunity	ARRefNbr
CROpportunity	CuryTaxTotal
CROpportunity	TaxTotal
CROpportunity	CuryLineTotal
CROpportunity	LineTotal
CROpportunity	ManualTotalEntry
CROpportunity	ContactID
CROpportunity	LocationID
CROpportunity	CROpportunityClassID
CROpportunity	OpportunityNumber
CROpportunity	OrderType
CROpportunity	OrderNbr
CROpportunity	DiscTot
CROpportunity	CuryDiscTot
CROpportunity	CuryOrigDiscAmt

Table Name	Field Name
CROpportunity	OrigDiscAmt
CROpportunity	CuryDiscTaken
CROpportunity	DiscTaken
CROpportunity	CuryDiscBal
CROpportunity	DiscBal
CROpportunity	VatTaxableTotal
CROpportunity	CuryVatTaxableTotal
CROpportunity	VatExemptTotal
CROpportunity	CuryVatExemptTotal
CROpportunity	AllowOverrideContactAddress
CROpportunity	OpportunityAddressID
CROpportunity	OpportunityContactID
CROpportunity	ProductCntr
CROpportunityProducts	CROpportunityProductID
CROpportunityProducts	CROpportunityID
CROpportunityProducts	TransactionDescription
CROpportunityTax	OpportunityProductID
CSCalendar	SunUnpaidTime
CSCalendar	MonUnpaidTime
CSCalendar	TueUnpaidTime
CSCalendar	WedUnpaidTime
CSCalendar	ThuUnpaidTime
CSCalendar	FriUnpaidTime
CSCalendar	SatUnpaidTime
EPExpenseClaimDetails	Submited
FeaturesSet	Payroll
FeaturesSet	MultipleWorkShifts
FinPeriod	PRClosed
FSAppointmentDet	BillableTime
FSAppointmentDet	ServiceID
FSSchedule	CustomStartDate
FSSchedule	EnableCustomStartDate
FSServiceContract	EnableExpirationDate
FSSODet	BillableTime

Table Name	Field Name
FSSODet	ServiceID
GIDesign	PagerStyle
PMProforma	DetailTotal
PMProforma	CuryDetailTotal
PMSetup	CommitmentTracking
PMTask	RetainagePct
PMTax	CuryOrigTaxableAmt
PMTax	OrigTaxableAmt

Modified Field Types

The following table lists the fields whose types have been modified.

Table Name	Field Name	Old Scale	New Scale	Old Max. Length	New Max. Length
FSAppointment	EstimatedLineTotal	6	4	0	0
FSAppointmentDet	EstimatedTranAmt	6	4	0	0
FSAppointmentDet	TranAmt	6	4	0	0
FSSODet	ApptTranAmt	6	4	0	0
FSSODet	EstimatedTranAmt	6	4	0	0
PMBillingRecord	BillingTag			20	30
SFSyncRecord	LocalID			30	36

Removed Data Access Classes

The following data access classes that were present in prior versions have been removed.

Namespace	Class Name
PX.Objects.CR	CampaignDocuments+SOOrderAlias
PX.Objects.CR	CampaignDocuments+ARInvoiceAlias
PX.Objects.CR	CampaignDocuments+Filter
PX.Objects.CR	OpportunityMaint+ConvertedFilter
PX.Objects.PR	PREmployeeJob
PX.Objects.PR	PRShiftCode
PX.Objects.PR	PRJobCode
PX.Objects.PR	PRSetup

Removed Graphs

No graphs that were present in prior versions have been removed.

Removed Constants

The following table lists the constants that have been removed from the database.

Namespace	Name
PX.Objects.CR	OpportunityStatusAttribute+New
PX.Objects.CR	OpportunityStatusAttribute+Open
PX.Objects.CR	OpportunityStatusAttribute+Won
PX.Objects.CR	OpportunityStatusAttribute+Lost
PX.Objects.GL	BatchModule+modulePR
PX.Objects.EP	PXDBTimeSpan2Attribute+zero
PX.Objects.CA	CABankStatementStatus+hold
PX.Objects.CA	CABankStatementStatus+balanced
PX.Objects.CA	CABankStatementStatus+released
PX.Objects.AP	MISC1099EFileFilter+include+allMarkedBranches

Distribution: Advanced Processing of Sales Orders Invoices

In Acumatica ERP 2018 R1, a new *Advanced SO Invoices* feature has been added to the *Enable/Disable Features (CS100000)* form (listed in the **Advanced Distribution** group). With this feature enabled, a user can add stock items directly to a Sales Orders invoice without creating and processing an associated sales order and shipment.

To an advanced SO invoice, a user can add both sale and return lines. To reflect inventory movements, a user can link a sale line to an opened line of the sales order, and link a return line to the original sales invoice. The system updates inventory when a user releases such an advanced Sales Orders invoice (which can be created without processing a shipment). The *Advanced SO Invoices* feature is to be used with external POS (point of sale) system integration to simplify the processing of direct sales. For more information, see *Point-of-Sale Integration*.

Stock Items in Sales Orders Invoices

If the *Advanced SO Invoices* feature is enabled, when a user enters a document of any type on the *Invoices (SO303000)* form, the user can now add lines with stock items on the **Document Details** tab. A sale line can be linked to a sales order or not linked to any sales order. A return line can be linked to the original sales invoice. In documents of the *Invoice* and *Credit Memo* type created on this form, a user can enter positive and negative quantities (see the screenshot below). Thus, the user can process the sale and return of stock items in one invoice. When the system creates a batch of General Ledger transactions for the invoice, lines with negative quantities are processed as lines of the reversing documents.

Figure: Adding stock items to a Sales Orders invoice

Inventory Update from a Sales Orders Invoice

When a Sales Orders invoice is released, the system now generates an IN issue document and updates the inventory. If a stock item line in the Sales Orders invoice is linked to a sales order, the system also creates an automatically generated shipment line, which can be reviewed on the **Shipments** tab of the *Sales Orders (SO301000)* form.

Changes to the User Interface

The following changes has been introduced to the *Invoices (SO303000)* form:

1. New columns have been added to the **Document Details** tab:

    *   **Warehouse** and **Location**: If the *Multiple Warehouses* or *Multiple Locations* feature is enabled on the *Enable/Disable Features (CS100000)* form, these columns are required for Sales Orders invoice lines with stock items. If the user enters a Sales Orders invoice directly on the *Invoices (SO303000)* form, this column is available for use. For Sales Orders invoices prepared from shipments and sales orders, the system fills in this column automatically.

    *   **Lot/Serial Nbr.** and **Expiration Date**: If the *Lot and Serial Tracking* feature is enabled on the *Enable/Disable Features* form, these columns are required for Sales Orders invoice lines with lot- or serial-tracked stock items.

    *   **Inventory Ref. Nbr.**: This column shows a link to the corresponding IN issue that updated the inventory.

    *   **Orig. Inv. Nbr.** and **Orig. Inv. Line Nbr**: For the return lines, in this column, the system fills in a link to the original invoice and the line number.

2. For the documents of the *Credit Memo* type, the **Applications** tab has been added.

Distribution: Quick Order Processing

With Acumatica ERP 2018 R1 users can process an order in one click: the sequence of standard order processing actions is managed and launched from a single dialog box. The system performs selected steps and keeps the user informed on each step completion and outcome.

Users can enable quick processing and configure the list of actions selected by default for all order types, except for order types that are based on the *quote* and *RMA order* automation behaviors.

Quick Processing Setup

Users enable the quick processing for an order type by selecting the **Allow Quick Process** check box on the **Template Settings** tab on the *Order Types (SO201000)* form. The **Quick Process Settings** tab becomes visible on the form.

Figure: Enabling quick process for SO order type

On the **Quick Process Settings** tab processing actions eligible for this type are listed. Users specify actions they want to be performed by default by selecting corresponding check boxes. The list of selected actions can be adjusted for each order processed.

Figure: Setting up default actions for sales order processing

Quickly Processing an Order

After users have completed the setup, the system will display the **Quick Process** button on the *Sales Orders (SO301000)* form. Users click the button for order with the *Open* status, and the **Process Order** dialog box is displayed.
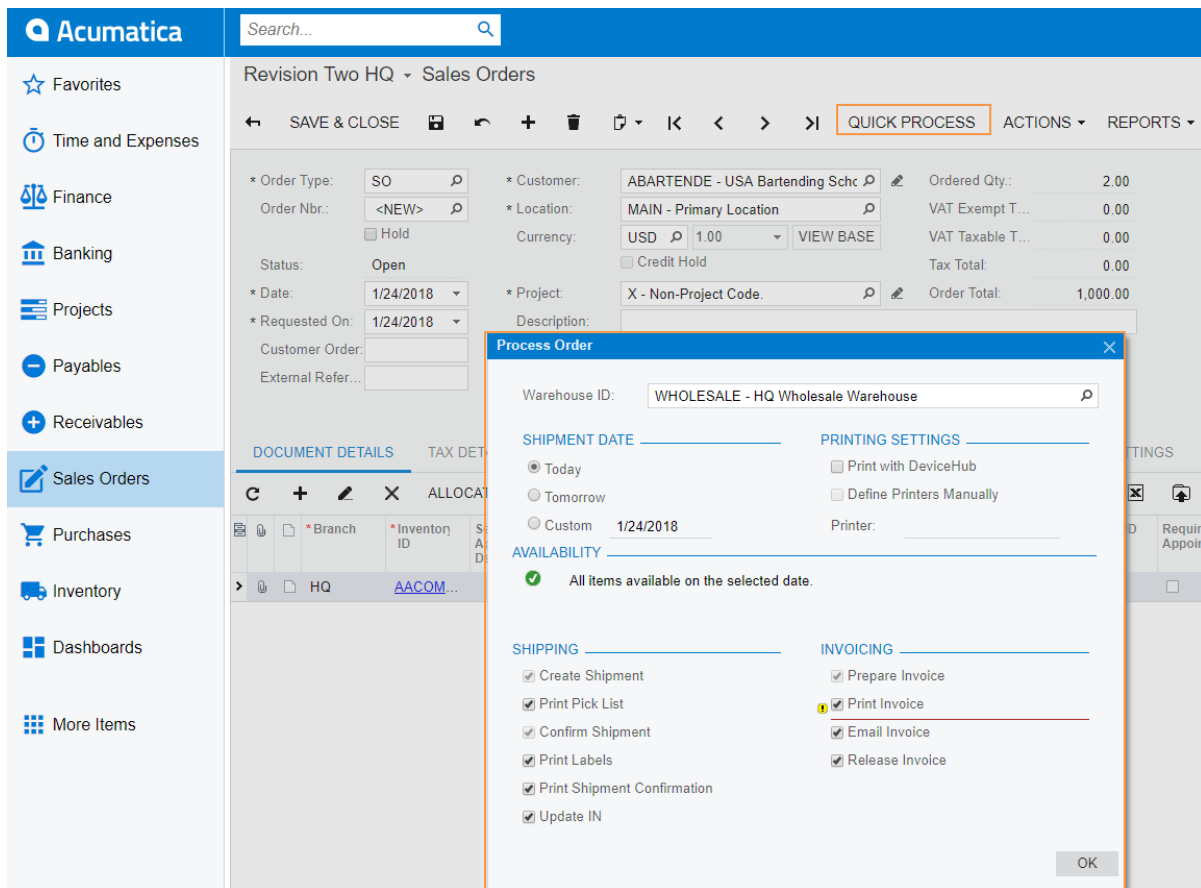
Figure: Adjusting processing actions for a sales order

In the dialog box, users can change the shipment date if needed. The system will validate items availability for the specified date and display the result in the **Availability** section of the dialog box. In the following sections, users can adjust the list of processing steps to be performed by selecting or clearing corresponding check boxes.

: The system will warn users if printing and emailing preferences of the selected customer differ from the configured processing flow.

After reviewing the processing details, users click **OK** and the system launches processing of the order. During the processing the system notifies a user about each step completion and outcome.

Figure: Processing of the sales order

After processing is complete users can view created documents by clicking document identifiers and send for printing prepared forms by clicking a corresponding form name. The system will open each link in a new tab, so users can easily return to the processing results.

Figure: Reviewing processing results of the sales order

The quick order processing is mostly intended for use by points of sales with a single warehouse. Therefore, if a sales order contains items located in the different warehouses, users will need to run the quick processing for each warehouse. The next run of the quick processing for such a sales order is available after the shipment from the previous processing is completed.

Also, the sales order lines that are marked for PO will not be processed, as creation of a purchase order is not included.

For more information, see *Quick Order Processing*.

Distribution: Retainage in Purchase Orders

A new *Retainage Support* feature has been added to the *Enable/Disable Features (CS100000)* form (listed in the **Advanced Financials** group of features). When this feature is enabled, the user can specify the retainage amount in a purchase order; when the Accounts Payable bill is created based on this order, the system will specify the retainage settings in the bill based on the purchase order settings. For the complete description of processing retains in Accounts Payable bills, see *Finance: Retainage in Accounts Payable Bills and Accounts Receivable Invoices*.

Defining the Retainage Amount in a Purchase Order

When entering a purchase order on the *Purchase Orders (PO301000)* form, a user can select the **Apply Retainage** check box on the **Other Information** tab to indicate that the purchase order is subject to retainage. The document-level retainage percent, which is used by default in purchase order lines, is specified in the **Retainage Percent** box. (See the following screenshot.)

Figure: Purchase order subject to retainage

If needed, the user can override the **Retainage Percent** or **Retainage Amount** value of the purchase order in particular lines of the purchase order, as shown in the following screenshot.

Figure: Retainage amount in purchase order lines

When an Accounts Payable bill is prepared on the *Bills and Adjustments (AP301000)* form for the purchase order, the retainage settings are copied from the purchase order to the bill as follows:

- The document-level retainage percent is copied from the purchase order summary to bill summary.

- The line-level retainage percents are copied from the purchase order lines to the bill lines.

- The line-level retained amounts are copied from the purchase order lines that have been billed in full. For the purchase order lines that have been billed partially, the retained amounts in the bill are recalculated proportionally.

- The line amounts are recalculated on bill creation and are not copied from the purchase order.

User Interface Changes in the Purchase Orders Module

For the purchase orders of the *Normal*, *Blanket*, and *Standard* types, the **Apply Retainage** check box has been added to the **Other Information** tab of the *Purchase Orders (PO301000)* form. If this check box is selected, the purchase order is subject to retainage and the following UI elements appear on the form:

- The **Retainage Percent** box on the **Other Information** tab: The retainage percent specified in this box is applied to all newly added purchase order lines.

- The **Retainage Percent** and **Retainage Amount** columns on the **Document Details** tab: In these columns, users specify the retainage settings for purchase order lines.

- The **Retainage Total** box in the Summary area of the form: This is the total retainage amount for the purchase order. This box is shown for only purchase orders that are subject to retainage.

- The **Retained Taxable** and **Retained Tax** columns on the **Tax Details** tab: In these columns, users specify the taxes calculated on retainage amount.

- The **Retained Discount** column on the **Discount Details** tab: This column shows the part of the discount that is deducted from the retained amount.

If the *Purchase Order (PO641000)* report is prepared for a purchase order that is subject to retainage, the report now displays a line with the total retainage amount.

For the list of other user interface changes in the Accounts Payable and Accounts Receivable modules that are related to the *Retainage Support* feature, see *Finance: Retainage in Accounts Payable Bills and Accounts Receivable Invoices*.

Finance: Formulas for Descriptions in Contract Invoices

In previous versions of Acumatica ERP, invoice descriptions and line descriptions in contract invoices were predefined in the code; therefore, these descriptions could not be modified according to user requirements. In Version 2018 R1, users can customize the descriptions by using formulas and translate formula elements into the required languages.

The new **Invoice Description** and **Line Description** boxes have been added to the **Summary** tab of the *Contract Templates (CT202000)* and *Customer Contracts (CT301000)* forms (see the following screenshots). In these boxes, users can specify the formulas for invoice and line descriptions by using the standard formula editor.

Figure: The new boxes on the Contract Templates form

Figure: The new boxes on the Customer Contracts form

: On the *Customer Contracts* form, the new boxes are available for editing only when the **Enable Overriding Formulas in Contracts** check box is selected on the *Contract Templates* form.

In a formula for an invoice description, the entities listed in the following table can be used.

Entity	Values	Description
Parameters	`ActionInvoice`	This parameter returns a contract action which caused the invoice generation. Possible values are the following: • *Contract Activation* • *Contract Setup* • *Contract Upgrade* • *Contract Billing* • *Contract Renewal* • *Contract Termination* • *Activate/Renew* • *Setup* • *Setup Upgrade* • *Upgrade Activation*
Operations	All standard operations	

Entity	Values	Description
Functions	All standard functions	
Objects	`Contract` `ContractTemplate` `Customer` `Location` `ContractBillingSchedule` `AccessInfo`	

In a formula for a line description, the entities listed in the following table can be used.

Entity	Values	Description
Parameters	`Prefix`	One of the following prefixes will be returned: *Prepaid* *Included* *Overused* *Included Usage* *Prepaid Usage*
	`ActionItem`	This parameter returns a contract action which caused the invoice generation. Possible values are the following: *Contract Activation* *Contract Setup* *Contract Upgrade* *Contract Billing* *Contract Renewal* *Contract Termination* *Activate/Renew* *Setup* *Setup Upgrade* *Upgrade Activation*
Operations	All standard operations	
Functions	All standard functions	
Objects	`Contract` `Customer` `ContractItem`	The `Usage(PMTran)` object can be used only for contracts with the *Detailed* billing format. If this object is used in a contract with the

Entity	Values	Description
	- InventoryItem - PMTran - ContractDetail - ContractBillingSchedule - UsageData - AccessInfo	*Summary* billing format, the formula will be ignored by the system.

Finance: Rounding Settings for Currencies

In Acumatica ERP 2018 R1, the Invoice Rounding feature has been enhanced and now a capability to round amounts in Accounts Payable and Accounts Receivable documents by using the settings specified for the document currency has been added. Thus, invoices issued in different currencies can be rounded by different rules.

A user should do the following to configure currency-specific rounding settings:

1. On the *Enable/Disable Features (CS100000)* form, make sure that the *Invoice Rounding* feature is enabled.

2. Make sure that the required currencies are defined in the system.

3. On the *Currencies (CM202000)* form, select the currency for which you need to specify rounding settings.

4. On the new **Rounding Settings** tab (see the following screenshot), specify the necessary rounding settings.

:

- The **Rounding Settings** tab appears on the *Currencies* form only when the *Invoice Rounding* feature on the *Enable/Disable Features* form is enabled.

- For a base currency, the system uses the rounding rules specified on the *Accounts Payable Preferences (AP101000)* form for Accounts Payable documents and the *Accounts Receivable Preferences (AR101000)* form for Accounts Receivable documents. Users cannot override these rules.

Figure: The Rounding Settings tab on the Currencies form

Finance: Retainage in Accounts Payable Bills and Accounts Receivable Invoices

In Acumatica ERP 2018 R1, the new *Retainage Support* feature has been implemented. On the *Enable/Disable Features (CS100000)* form, this feature is listed under **Advanced Financials** (see the screenshot below). With this feature enabled, it is possible to retain part of the amount of Accounts Payable bills and Accounts Receivable invoices.

Figure: The Retainage Support feature

Retainage in Accounts Payable Bills

To assure that a vendor will satisfy its obligations and complete a project, your company can retain a part of a bill amount until the necessary work is complete and pay the retained amount when all the terms of the agreement are met. When entering the bill on the *Bills and Adjustments (AP301000)* form, a user can select the **Apply Retainage** check box in the Summary area to indicate that a part of the bill amount is retained on the Retainage Payable account until the user releases the retainage for payment. The user specifies the document-level retainage percent, which is used by default for all lines of the bill, in the **Default Retainage Percent** box on the **Retainage** tab. (See the following screenshot.)

Figure: New elements on the Bills and Adjustments form

The user can specify the value manually in the **Default Retainage Percent** box; the box is filled in by default if a value has been specified for the selected vendor in the **Retainage Percent** box on the *Vendors (AP303000)* form. (The default vendor value can be overridden.) Also, if needed, the user can override the **Retainage Percent** value in particular lines of the bill, as shown in the following screenshot.

Figure: The retainage bill

The total amount of the bill is calculated as the sum of the amounts of each line; the amount of each line is calculated as **Ext. Cost** – **Discount Amount** – **Retainage Amount**. When a user releases a bill with a retained amount, the total amount of the bill credits the Accounts Payable account and the retainage amount (that is displayed in the **Original Retainage** box on the **Retainage** tab) credits the Retainage Payable account specified in the bill (defaulted for the vendor), as the following screenshot shows.

Figure: The GL batch of the original bill

To create a bill for a retained amount on the *Bills and Adjustments* form, the user invokes the **Release Retainage** command on the **Actions** menu. In the **Release Retainage** dialog box, which opens, the user specifies the percent of the retained amount or the amount to be released (see the screenshot below) and the reference number of the related vendor document (if necessary), and clicks **Release**.

Figure: The Release Retainage dialog box

On the *Bills and Adjustments* form, the created retainage bill opens (with the **Retainage Bill** check box selected), as the following screenshot shows.

Figure: The retainage bill

When the retainage bill is released, the Retainage Payable account is debited and the Accounts Payable account is credited with the amount of the released retainage bill.

For mass creation of retainage bills, the new *Release AP Retainage (AP510000)* form has been created (see the screenshot below). On this form, the user can prepare retainage bills based on original bills that have a nonzero unreleased retainage.

Figure: The Release AP Retainage form

The user can configure the system to automatically release retainage bills generated on this form by selecting the **Automatically Release Retainage Bills** check box on the *Accounts Payable Preferences (AP101000)* form.

For purchase orders with retained amounts, related Accounts Payable bills can be created. For details on retainage in purchase orders, see *Distribution: Retainage in Purchase Orders*.

Changes on Forms in the Accounts Payable Module

To give users the ability to specify retainage in Accounts Payable bills, the following changes have been made in the product:

- On the *Accounts Payable Preferences (AP101000)* form, the **Retainage Settings** section has been added on the **General Settings** tab, as shown in the screenshot below. In this section, the following check boxes have been added:

  - The **Retain Taxes** check box, which the user can select to configure the system to retain taxes calculated on the retained amount.

  - The **Automatically Release Retainage Bills** check box, which the user can select to configure the system to automatically release retainage bills.

  - The **Require Single Project per Document** check box, which the user can select to link all lines of Accounts Payable documents with the same project specified by the user in the Summary area on the *Bills and Adjustments (AP301000)* form. This check box is available if the *Project Accounting* feature is enabled on the *Enable/Disable Features (CS100000)* form.

Figure: The Retainage Settings section on the Accounts Payable Preferences form

- On the **GL Accounts** tab of the *Vendor Classes (AP201000)* form, the **Retainage Payable Account** and **Retainage Payable Sub.** boxes have been added, as shown in the screenshot below. In these boxes, the account and subaccount for retained amounts can be specified for the class, to provide the default settings for vendors of the class.

Figure: The GL Accounts tab of the Vendor Classes form

- On the **General Info** tab of the *Vendors (AP303000)* form, the **Retainage Settings** section has been added. In this section, the user can select the **Apply Retainage** check box so that the system applies the same setting for bills of the vendor; in the **Retainage Percent** box, the user can also specify the default percent to be retained in bills for the particular vendor.

  On the **GL Accounts** tab of the *Vendors* form, the account and subaccount for the selected vendor can be specified or changed in the **Retainage Payable Account** and **Retainage Payable Sub.** boxes.

- On the *Vendor Locations (AP303010)* form, the **Retainage Payable Account** and **Retainage Payable Sub.** boxes have also been added.

- On the *Bills and Adjustments* form, the **Apply Retainage** check box has been added to the Summary area, as mentioned. If this check box is selected, the following new elements are displayed on the form:

- On the **Document Details** tab, the **Retainage Percent** and **Retainage Amount** columns

- On the **Financial Details** tab, the **Retained Payable Account** and **Retained Payable Sub.** columns

- On the **Tax Details** tab, the **Retained Taxable** and **Retained Tax** columns (only if the **Retain Taxes** check box is selected on the *Accounts Payable Preferences* form)

- The **Retainage** tab (which shows the details of retainage, including related retainage bills)

- On the **GL Accounts** tab of the *Taxes (TX205000)* form, the **Retainage Tax Claimable Account** and **Retainage Tax Claimable Subaccount** boxes have been added. They are available only if the **Retain Taxes** check box is selected on the *Accounts Payable Preferences* form.

- The new *Release AP Retainage (AP510000)* form has been created.

- On the *Prepare Payments (AP503000)* form, the **Retainage Bill** and **Original Document** columns have been added.

- New elements related to the *Retainage Support* feature have been added to various Accounts Payable reports and inquiries.

Retainage in Accounts Receivable Invoices

To assure that a work is done in time and according to the agreement, a customer can retain a part of an invoice amount until the necessary work is complete and pay the retained amount when all the terms of the agreement are met. When entering the invoice on the *Invoices and Memos (AR301000)* form, a user can select the **Apply Retainage** check box in the Summary area to indicate that the selected customer retains a part of the invoice amount. The document-level retainage percent, which is used by default in invoice lines, is specified in the **Default Retainage Percent** box on the **Retainage** tab. (See the following screenshot.)

Figure: New elements on the Invoices and Memos form

The user can specify the value manually in the **Default Retainage Percent** box; the box is filled in by default if a value has been specified for the selected customer on the *Customers (AR303000)* form. (The default customer value can be overridden.) Also, if needed, the user can override the **Retainage Percent** value of the invoice in particular lines of the invoice, as shown in the following screenshot.

Figure: Retainage amount in invoice lines

The total amount of the invoice is calculated as the sum of the amounts of each line; the amount of each line is calculated as **Ext. Price** – **Discount Amount** – **Retainage Amount**. When a user releases an invoice with a retained amount, the total amount of the invoice debits the Accounts Receivable account and the retainage amount (that is displayed in the **Original Retainage** box on the **Retainage** tab) debits the Retainage Receivable account specified in the invoice (defaulted for the customer), as the following screenshot shows.

Figure: The GL batch of the original invoice

To create an invoice for the retained amount, the user invokes the **Release Retainage** command on the **Actions** menu. In the **Release Retainage** dialog box, which opens, the user specifies the percent of the retained amount or the amount to be released, and clicks **Release**. On the *Invoices and Memos* form, the created retainage invoice (with the **Retainage Invoice** check box selected) opens, as the following screenshot shows.

Figure: The retainage invoice

When the retainage invoice is released, the Retainage Receivable account is credited and the Accounts Receivable account is debited with the amount of the retainage invoice.

For mass creation of retainage invoices, the new *Release AR Retainage (AR510000)* form has been created. On this form, the user can prepare retainage invoices based on original invoices that have a nonzero unreleased retainage. The user can configure the system to automatically release retainage invoices generated on this form by selecting the **Automatically Release Retainage Invoices** check box on the *Accounts Receivable Preferences (AR101000)* form.

Changes on Forms in the Accounts Receivable Module

To give users the ability to specify retainage in Accounts Receivable invoices, the following changes have been made to the product:

- On the *Accounts Receivable Preferences (AR101000)* form, the **Retainage Settings** section has been added on the **General Settings** tab. In this section, a user can configure the system to retain taxes calculated on the retained amount (by selecting the **Retain Taxes** check box) and to automatically release retainage invoices (by selecting the **Automatically Release Retainage Invoices** check box).

- On the **GL Accounts** tab of the *Customer Classes (AR201000)* form, the **Retainage Receivable Account** and **Retainage Receivable Sub.** boxes have been added. In these boxes, the account and subaccount for retained amounts can be specified for the class, to provide the default settings for customers of the class.

- On the **General Info** tab of the *Customers (AR303000)* form, the **Retainage Settings** section has been added. In this section, the user can select or clear the **Apply Retainage** check box and specify default percent to be retained on the *Invoices and Memos (AR301000)* form for the particular customer.

  On the **GL Accounts** tab of the *Customers* form, the account and subaccount for the particular customer can be specified or changed in the **Retainage Receivable Account** and **Retainage Receivable Sub.** boxes.

- On the *Customer Locations (AR303010)* form, the **Retainage Receivable Account** and **Retainage Receivable Sub.** boxes have also been added.

- On the *Invoices and Memos (AR301000)* form, the **Apply Retainage** check box has been added to the Summary area. If this check box is selected, the following new elements are displayed on the form:

  - On the **Document Details** tab, the **Retainage Percent** and **Retainage Amount** columns

- On the **Financial Details** tab, the **Retained Receivable Account** and **Retained Receivable Sub.** columns

- On the **Tax Details** tab, the **Retained Taxable** and **Retained Tax** columns (only if the **Retain Taxes** check box is selected on the *Accounts Receivable Preferences* form)

- The **Retainage** tab (which shows the details of retainage, including related retainage invoices)

- The new *Release AR Retainage (AR510000)* form has been created.

- On the **GL Accounts** tab of the *Taxes (TX205000)* form, the **Retainage Tax Payable Account** and **Retainage Tax Payable Subaccount** boxes have been added. They are available only if the **Retain Taxes** check box is selected on the *Accounts Receivable Preferences* form.

- New elements related to the *Retainage Support* feature have been added to various Accounts Receivable reports and inquiries.

Finance: Split Transactions

In Acumatica ERP, it is now possible to split a transaction amount during reclassification. Before this implementation, it was possible only to reclassify the whole amount of the journal entry to another account, subaccount, or branch. Now it is possible to transfer a part of the amount to another account, subaccount, or branch.

To implement this functionality, changes have been made in the product, as defined in the remaining sections of this topic.

Split Process

On the *Reclassify Transactions (GL506000)* form, to split the journal entry, a user clicks the line to be split and clicks the new **Split** button (shown in the screenshot below). The system adds a new entry under the original one. The original entry and each new entry are highlighted in bold during the split. In the new entry, the branch, account, and subaccount are derived from the original entry and can be changed.

For each new entry, in the **New Amount** column (also shown in the screenshot below), the user specifies the amount to be transferred from the original entry to a new one. For the original entry, in this column, the system calculates the remaining amount based on the new amounts of new entries. The total amount of new entries cannot be more than the amount of the original entry.

Negative values can be specified in the **New Amount** column; these amounts will be highlighted in red and will increase the amount of the original entry (see the screenshot below).

Additionally, the Icon column has been added, which displays icons so that the user can identify the split entry and the entries added during the split. The original entry has the following icon: ⌐. Each new line added during the split process has the ↳ icon.

Figure: New elements on the Reclassify Transactions form

Other Changes

On the *Journal Transactions (GL301000)* form, the **Remaining Reclass. Amount** column has been added, as shown in the screenshot below. This column displays the amount that is left for a journal entry if a split process has been performed.

Figure: The Remaining Reclass. Amount column

On the *Reclassification History (GL405000)* form, the following columns have been added: Selected, **Orig. Batch. Nbr.**, **Action**, **Remaining Reclass. Amount**, and Icon (see the screenshot below). In the unlabeled Selected column, a user selects the check box for each line to be reclassified. The **Orig. Batch. Nbr.** column displays the number of the batch for which the reclassification transaction has been generated. The **Action** column displays the action that has been performed for the line: *Split* or *Reclassification*. The Icon column is hidden by default on this form.

Additionally, the **Reclassification History** button has been added to the form toolbar. When a user clicks this button, a history is displayed for the selected line in the table.

Figure: New columns on the Reclassification History form

Finance: Ability to Void Vendor and Customer Refunds

In Acumatica ERP, it is now possible to void customer or vendor refunds.

To void an existing customer refund, a user opens the refund on the *Payments and Applications (AR302000)* form and clicks the new **Void** button on the form toolbar (see the following screenshot).
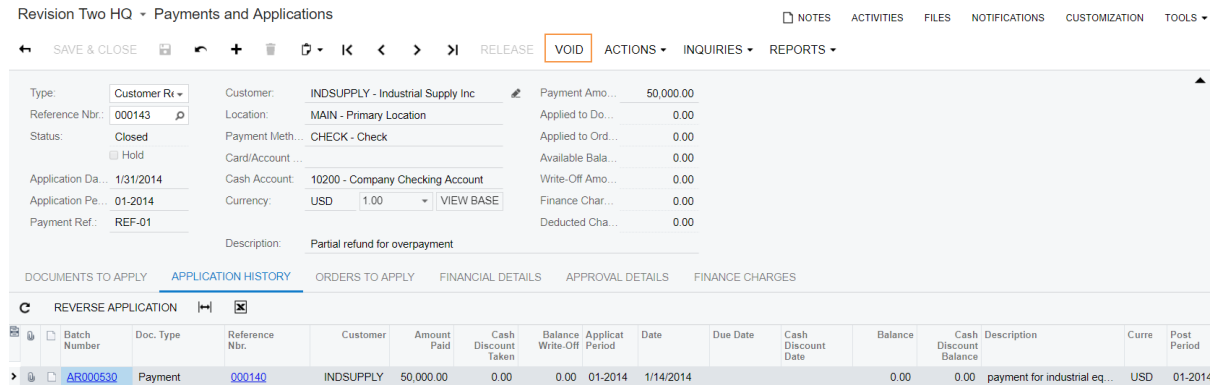
Figure: The Void button

The system creates the document of the *Voided Refund* type with a negative amount. For the voided refund, the user can specify the application date, period, and description, and then release the voided refund.

The **Void** button has also been added to the *Checks and Payments (AP302000)* form to make it possible to void a vendor refund.

Organization: Campaign Expense Accounting

If the *Project Accounting* feature is enabled on the *Enable/Disable Features (CS100000)* form, the project accounting functionality can now be used to track expenses and revenue related to a marketing campaign. The system now can regard a marketing campaign as a project and use the project budget tracking mechanism for tracking the campaign budget. For more information about project budgets, see *Project Budgets*.

Tracking of Expenses

For campaign expense tracking, a specific project dedicated to campaign expense accounting needs to be created and associated with a campaign, with proper billing and allocation rules configured. If needed, multiple campaigns may be associated with a single project.

A project can be associated with a marketing campaign through the new **Project Accounting Integration** section on the **Campaign Details** tab of the *Marketing Campaigns (CR202000)* form (as shown in the following screenshot).

Figure: Project Accounting Integration section

All the campaign-related activities, the opportunities that resulted from this campaign, and the resulting sales orders and invoices also can be associated with the previously defined project. These associations allow for accurate calculation of all expenses and revenue generated by the campaign.

Relations

In Acumatica ERP2018 R1, the *Campaign Documents (CR203000)* form has been deleted. The lists of campaign-related sales orders and invoices can be reviewed on the new *Campaign Sales Orders (CR203010)* and *Campaign Invoices (CR203000)* inquiry forms; custom inquiry forms or pivot tables can be created based on these forms.

Organization: Case Management Feature Switch

A new feature switch, **Case Management**, has been added on the *Enable/Disable Features (CS100000)* form (see the following screenshot).
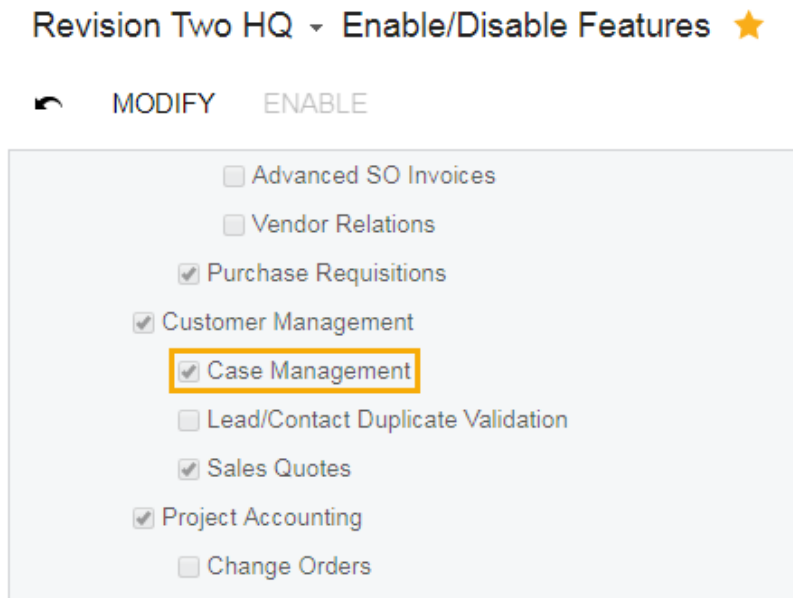
Figure: Case Management feature switch

If the *Case Management* feature is enabled, the following forms are available:

- *Cases (CR306000)*
- *Cases (CR3060PL)*
- *Case Classes (CR206000)*
- *Release Cases (CR507000)*
- *Assign Cases (CR503210)*
- *Update Cases (CR503220)*

Also, the following UI elements are available if the *Case Management* feature is enabled:

- The **Cases** tab on the *Business Accounts (CR303000)* form
- The **Case** menu command on the **Create** menu on the form toolbar of the *Incoming (CO409000)* and *Email Activity (CR306015)* forms
- The **Case Numbering Sequence**, **Default Case Class**, and **Case Assignment Map** boxes on the *Customer Management Preferences (CR101000)* form
- The **Case ID** box on the *Employee Time Activities (EP307000)*, *Employee Time Cards (EP305000)*, and *Contract Usage (CT303000)* forms
- The **Case Count Item** box on the *Contract Templates (CT202000)* and *Customer Contracts (CT301000)* forms
- The **Create New Case** check box and the **New Case Class** box on the **Incoming Mail Processing** tab of the *System Email Accounts (SM204002)* form
- All case-related reports in the Customer Management module

Organization: Enhanced Integration Between Acumatica ERP and Salesforce

The integration of Acumatica ERP with Salesforce has been enhanced as follows:

- Full data resync is now supported in both directions.

- Real-time synchronization of sales prices between Acumatica ERP and Salesforce is now supported, so that organizations can successfully synchronize opportunity data between the systems.

- A set of predefined export scenarios with the *Salesforce* data provider have been added to Acumatica ERP. These scenarios are available on the *Export by Scenario (SM207036)* form (see the screenshot below) and can be used to export the following entities to Salesforce: leads, contacts, business accounts, opportunities, stock and non-stock items, and sales prices.

- The *Default Prices for Export to Salesforce (SF000001)* and *Base Sales Prices for Export to Salesforce (SF000002)* generic inquiry forms have been added to the system to support the export of sales prices, which users can accomplish by using the *Export Default Prices to Salesforce* and *Export Base Sales Prices to Salesforce* export scenarios.

Revision Two HQ ▾ Export by Scenario ☆

🖫 ↶ |< < > >| PREPARE & EXPORT PREPARE EXPORT UPLOAD

* Name:	Export AP Payment to ACH 🔍	Status:	Processed

Select - Name   ◻ ✕

SELECT C |↔| 🔍

Name	↑	Screen Name	Screen Name
> Export AP Payment to ACH		AP.30.50.00	Batch Payments
Export AP Payment to ACH Balanced		AP.30.50.00	Batch Payments
Export AP Vendors		AP.30.30.00	Vendors
Export AR Customers		AR.30.30.00	Customers
Export ARM Column Set		CS.20.60.20	Column Sets
Export ARM Row Set		CS.20.60.10	Row Sets
Export Base Sales Prices to Salesforce		SF.00.00.02	Base Sales Prices for Export to Salesf...
Export Business Account to Salesforce		CR.30.30.00	Business Accounts
Export Contact to Salesforce		CR.30.20.00	Contacts
Export Default Prices to Salesforce		SF.00.00.01	Default Prices for Export to Salesforce
Export Generic Inquiry		SM.20.80.00	Generic Inquiry
Export Lead to Salesforce		CR.30.10.00	Leads
Export Leads To Hubspot		CR.30.10.00	Leads
Export Non-Stock Item to Salesforce		IN.20.20.00	Non-Stock Items
Export Opportunity to Salesforce		CR.30.40.00	Opportunities
Export Stock Item to Salesforce		IN.20.25.00	Stock Items

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Figure: Predefined export scenarios for exporting data to Salesforce

Organization: Quotes in Opportunities

A new type of document, *quote*, has been introduced in the Customer Management module of Acumatica ERP2018 R1. A quote represents a formal offer made to a particular customer based on an opportunity; the quote includes a list of products offered at specific prices. For one opportunity, users can create any number of quotes, each of which can be printed or emailed to the specified customer for review. When the customer accepts the offer, the user can create a sales order and then an invoice based on the quote.

Configuration of Quote Functionality

A new feature, *Sales Quotes*, has been added, with the corresponding check box on the *Enable/Disable Features (CS100000)* form (see the following screenshot).
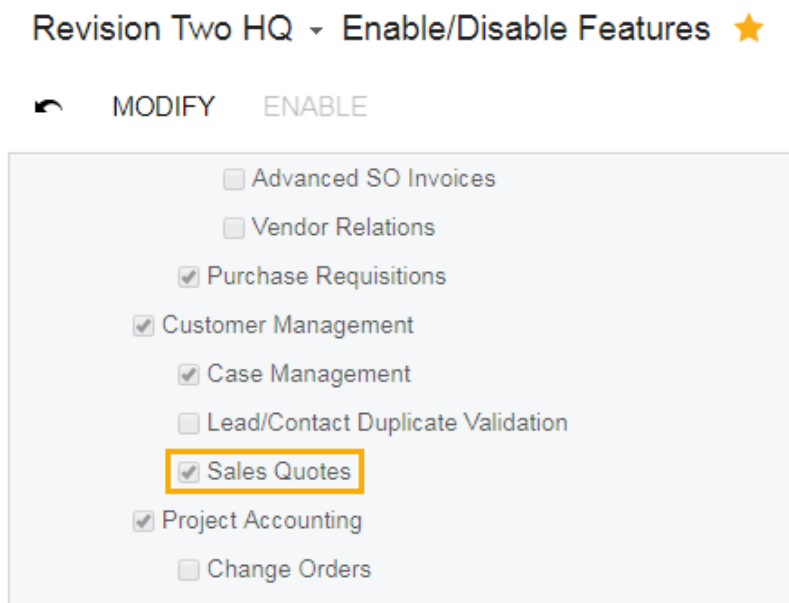
Figure: Sales Quotes check box

If the *Sales Quotes* feature is enabled, the following forms are available:

- *Quotes (CR3045PL)* form (shown in the following screenshot): This new inquiry form displays filter tabs with lists of quotes. The following predefined filter tabs are available on this form: **All Records**, **My Quotes**, and **My Quotes Expiring in a Week**.
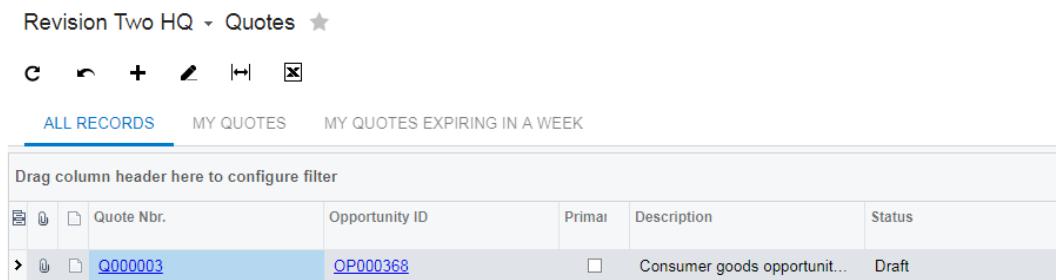
Figure: Quotes inquiry form

- *Quotes (CR304500)* form (shown in the following screenshot): By using this new data entry form, a user can create new quotes and modify or view the details of existing quotes.

Figure: Quotes data entry form

- *Quote (CR604500)* form: By using this new report form, a user can generate a report with summary information on a particular quote.

Also, if the *Sales Quotes* feature is enabled, the following UI elements are available:

- *Customer Management Preferences (CR101000)* form, **General Settings** tab : The **Quote Numbering Sequence** box and, if the *Approval Workflow* feature is also enabled, the **Quote Approval Settings** section

- *Opportunities (CR304000)* form: On the form toolbar, the **Submit Quote** and **Edit Quote** commands on the **Actions** menu and the **Create Quote** button (shown in the screenshot below); the **Quotes** tab (also shown in the screenshot)

- *Activity (CR306010)* form: The *Quote* option in the **Type** box in the **Select Entity** dialog box, which opens if a user clicks the **Related Entity** selection box

Figure: The Quotes tab on the Opportunities (CR304000) form

Creation of Quotes

A user can start creating a quote in any of the following ways:

- By clicking **Create Quote** on the form toolbar of the *Opportunities (CR304000)* form

- By clicking **Create Quote** on the table toolbar of the **Quotes** tab on the *Opportunities (CR304000)* form

- By clicking **Add New Record** on the form toolbar of the *Quotes (CR3045PL)* form

- By selecting an existing quote and then invoking the **Copy Quote** action, which is available on the **Quotes** tab on the *Opportunities (CR304000)* form and on the **Actions** menu on the form toolbar of the *Quotes (CR304500)* form; in this case, a copy of the selected quote is created

If one quote or multiple quotes are created for an opportunity, one of the quotes must be marked as the primary quote, which a user can do either during the creation of a quote or by applying the **Mark as Primary** action to a selected quote.

An opportunity uses the primary quote as the source of the following settings: the list of products, the currency and the currency rate, the location, the contact information, and the tax and discount details. If a user marks a different quote as the primary quote for the opportunity, these settings are changed in the opportunity to those of the new primary quote.

A quote can have one of the following statuses:

- *Draft*: The quote is being prepared and its details can be edited.

- *Prepared*: The quote is ready to be sent to the customer. The quote gets this status after it has been submitted or, if approval is required for quotes, after it has been approved.

- *Sent*: The quote has been emailed to the customer.

- *Pending Approval*: The quote is pending approval within the company.

- *Rejected*: The quote has been rejected by an approver within the company.

Approval of Quotes

Approval of quotes can be set up in the system if the *Approval Workflow* feature is enabled on the *Enable/Disable Features (CS100000)* form.

Quotes require approval if an approval map for quotes has been specified in the **Approval Map** box in the **Quote Approval Settings** section on the **General Settings** tab of the *Customer Management Preferences (CR101000)* form (as shown in the following screenshot).
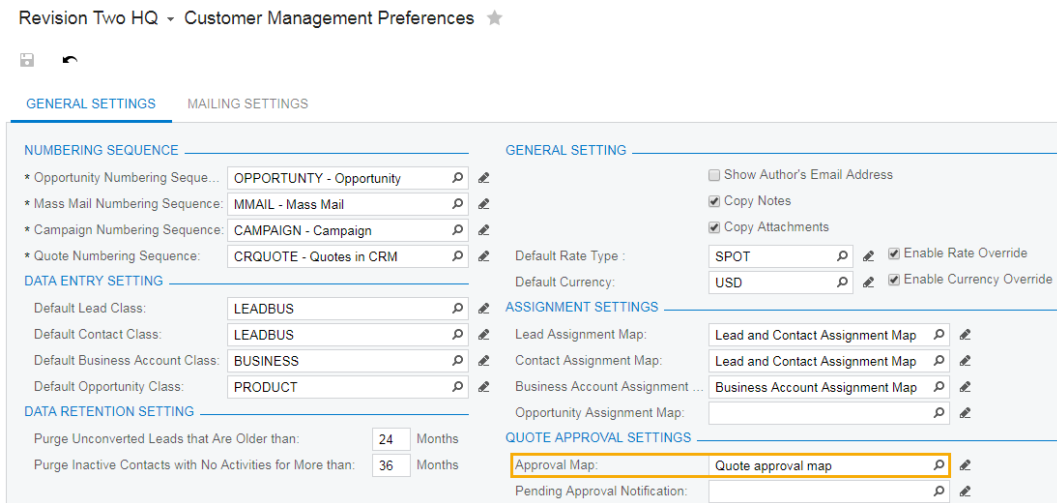
Figure: The Approval Map setting

A quote that is pending approval cannot be modified. An assigned approver can approve or reject the quote by using the standard **Approve** and **Reject** actions available on the form toolbar of the *Quotes (CR304500)* form and on the table toolbar of the **Quotes** tab on the *Opportunities (CR304000)* form. After a quote has been approved, it can be sent to the customer.

Quote Activities

On the **Activities** tab of the *Quotes (CR304500)* form, a user can create activities associated with the selected quote. On the **Activities** tab of the *Opportunities (CR304000)* form, activities related to the selected opportunity are listed along with activities related to all quotes associated with the opportunity.

Other Enhancements

Now any number of invoices and sales orders can be created for a single opportunity. By using the new **Orders** or **Invoices** tab on the *Opportunities (CR304000)* form (shown in the screenshot below), a user can review a list of all sales orders or invoices associated with the selected opportunity.

Figure: The location of the Orders and Invoices tabs

The **Mailing Settings** tab (shown in the screenshot below), which is similar to the tab with the same name on the *Customer Classes (AR201000)* and *Vendor Classes (AP201000)* forms, has been added to the *Customer Management Preferences (CR101000)*, *Business Account Classes (CR208000)*, and *Business Accounts (CR303000)* forms. This tab includes a predefined mailing and a predefined notification template to be used for sending quotes to sales contacts.

Revision Two HQ ▾ Customer Management Preferences ☆

GENERAL SETTINGS   MAILING SETTINGS

Default Sources

	*Mailing ID	Default Email Account	Report	Notification Template	Format	Active
❯	CRQUOTE		CR.60.45.00	CRQuoteNotification	PDF	☑

Default Recipients

	Contact Type	Contact ID	Forma	Active	Bcc

Figure: The Mailing Settings tab

Organization: Separate Use of Branches and Companies

In previous versions of Acumatica ERP, there was no clear difference between branches that represent legal entities and branches that represent offices or points of sales within the same legal entity.

In Acumatica ERP2018 R1, a new entity, *company*, has been introduced. A company represents a legal entity with an independent balance sheet and separate tax reporting. A company may consist of multiple branches. Accordingly, the logical entity that a user selects on the Acumatica ERP welcome page has been renamed from a *company* to a *tenant* throughout the system.

Companies

A new form, *Companies (CS101500)*, has been added (see the screenshot below). On this form, a system administrator can do any of the following:

- Create new companies (with an actual ledger created automatically for a new company)

- Maintain existing companies

- Add branches to a company (if it has any) and review the list of company branches

- Assign ledgers to companies

- Review the list of company employees

Figure: The Companies (CS101500) form

Each company has one of the following types, which is specified in the **Company Type** box on the *Companies* form:

- *Without Branches* : A company with this type cannot have any branches. If the *Multi-Branch Support* feature is not enabled on the *Enable/Disable Features (CS100000)* form, this option is selected by default and cannot be changed.

- *With Branches Not Requiring Balancing*: A company with this type must have at least one branch. If multiple branches of the company are involved in a transaction, balancing entries are not required. This option is available if the *Multi-Branch Support* feature is enabled on the *Enable/ Disable Features* form.

- *With Branches Requiring Balancing*: A company with this type must have at least one branch. If multiple branches of the company are involved in a transaction, balancing entries are required. This option is available if the *Multi-Branch Support* and *Inter-Branch Transactions* features are enabled on the *Enable/Disable Features* form.

On the **Ledgers** tab of the *Companies* form, a user can review and edit the list of the ledgers associated with the company.

On the **Logo** tab of the form (shown in the following screenshot), a user now can specify separate images for the logo displayed in the top left corner of Acumatica ERP and for the logo displayed on reports for the selected company.

Figure: The Logo tab of the Companies (CS101500) form

Branches

The *Branches (CS102000)* form has been modified as follows:

- The form is available only if the *Multi-Branch Support* feature is enabled on the *Enable/Disable Features (CS100000)* form.

- The **Company** box has been added to indicate the company to which the branch belongs. This box is unavailable if the selected branch relates to a company with the *Without Branches* type.

- A user can modify the value in the **Branch ID** box.

- On the **Ledgers** tab, the ledgers associated with the company of the branch are listed.

- On the **Logo** tab, a user can specify separate images for the logo displayed in the top left corner of Acumatica ERP and for the logo displayed on reports for the selected branch.

Ledgers

On the *Ledgers (GL201500)* form, users can maintain a list of the companies that are allowed to post to non-actual ledgers. Only the branches of a company that is associated with a particular ledger can post to that ledger.

The *Ledgers* form has been modified as follows:

- The **Consol. Branch** box and the **Branch Accounting** check box have been removed.

- On the **Companies** tab, a user can view the list of the companies associated with the ledger, link a company to the selected ledger (a company can have only one actual ledger), and delete a company from the list. An actual ledger can be detached from a listed company if the ledger contains no transactions associated with the company branches. Ledgers of other types can be linked to a company at any time, or this link can be removed.

- On the **Branches** tab, the branches of the companies associated with the ledgers are listed; only those branches are allowed to post to the ledger.

Upgrade Notes

During an upgrade to Acumatica ERP2018 R1, a branch will be converted into a company if the **Consol. Branch** box on the *Ledgers (GL201500)* form is empty for its actual ledger or if the branch itself is specified in the **Consol. Branch** box. Otherwise, this branch will be converted to a branch with the **Consol. Branch** value specified as the parent company.

If a branch is specified in the **Consol. Branch** box and the **Branch Accounting** check box is selected for its ledger, then the branch will be converted to a company with the *With Branches Requiring Balancing* type. If a branch is used as **Consol. Branch** and the **Branch Accounting** check box is cleared for its ledger, then it will be converted to a company with the *With Branches Not Requiring Balancing* type selected on the *Companies (CS101500)* form. If a branch is assigned to an actual ledger with the **Consol. Branch** box empty, then it will be converted to a company with the *Without Branches* type selected on the *Companies* form.

To avoid a branch that is not a legal entity being converted to a company, before the upgrade, a system administrator needs to create a separate branch for the parent company and select this new branch in the **Consol. Branch** box on the *Ledgers* form for the actual ledger.

Platform: Business Process Monitoring

In Acumatica ERP, various business processes are executed, which may require users to monitor different activities and events in the system. In Acumatica ERP 2018 R1, to eliminate the need for users to monitor the business processes, users can configure the system to monitor the company data and to perform an action or multiple actions in the system (such as sending an email notification or performing the instructions defined by an import scenario) based on either of the following occurrences:

- Particular data being changed in the system.

  For example, the system can send an email notification to the customer when the customer's contract is activated.

- The meeting of particular conditions, which the system checks for at the schedule you specify.

  For example, the system can send an email to the owner of an opportunity when it is one month from its estimated close date and the opportunity hasn't been updated for more than seven days.

To configure the system to monitor a business process, on the *Business Events (SM302050)* form, a user defines a *business event* that relates to this business process; when the business event occurs, the system should perform an action or multiple actions. The business event is either a data change or a set of conditions checked for on a schedule. For details on the business events, see *Business Events Related to Data Changes* and *Business Events by Schedule*.

To define the actions that the system should perform in the system when the business event has occurred, a user specifies the *subscribers* of this business event. A subscriber of a business event is an entity in the system (an email notification or a script based on an import scenario) that the system processes when the business event occurs. If the subscriber is an email notification, the system sends an email or multiple emails based on the settings of the notification template that a user has specified for the business event. If the subscriber is an import scenario script, the system executes the sequence of instructions defined by the import scenario that a user has specified for the business event. For details about subscriber types, see *Subscribers of Business Events*.

Configuration of Business Process Monitoring

To configure the system to monitor for a particular business event and to perform an action or multiple actions when the event occurs, a user defines the following:

- The data for monitoring.

  In the Summary area of the *Business Events (SM302050)* form, which is shown in the screenshot below, a user selects an existing generic inquiry form (or a generic inquiry form that you have created on the *Generic Inquiry (SM208000)* form) that defines the data for the system to monitor.

Figure: The Business Events (SM302050) form

- The conditions that must be met for the system to perform actions.

  On the **Trigger Conditions** tab of the *Business Events (SM302050)* form, the user configures the conditions for which the system should perform actions related to the business process. If the actions are performed based on changes, the user selects the type of changes for which the system should perform actions, such as when a record is added, removed, or updated, or when a field value is changed. If the actions are performed based on a schedule, the user specifies the conditions on the fields of the records of the generic inquiry. The actions are performed if the generic inquiry contains records that satisfy the specified conditions.

- The action or actions that the system should perform if the specified conditions have been met.

  On the **Subscribers** tab of the *Business Events (SM302050)* form, the user selects a subscriber that has been configured; if needed, the user can select multiple subscribers (one in each row of the table). To create a new subscriber, a user clicks **Create Subscriber** and select the type of the subscriber, which causes the system to open the Acumatica ERP form that corresponds to the subscriber type.

- The schedule or schedules that dictate when the system should check for the conditions on the data.

  If the system should check conditions on the data based on a schedule, on the **Schedules** tab of the *Business Events (SM302050)* form, the user selects a configured schedule or clicks **Create Schedule**, which opens the *Automation Schedules (SM205020)* form, where the user can create and save the schedule. In the **Screen ID** box for the schedule, the generic inquiry that defines the data for monitoring must be specified.

A user can see the history of all processed business events on the *Business Events History (SM502030)* form, which displays information about whether all subscribers of the business event have been processed successfully.

For more information about configuration of business processes, see *To Monitor Changes of the Business Process Data* and *To Monitor the Business Process Data by a Schedule*.

Platform: Changes in the Installation Wizard

The installation packages for Acumatica ERP and Acumatica Framework have been redesigned. The packages are now based on the WiX Tools so that the system can support Microsoft Visual Studio 2017.

The separate installation package for Acumatica Report Designer has been removed. Users can install Acumatica Report Designer along with Acumatica ERP (see the following screenshot) or Acumatica Framework.

The installation package of the DeviceHub application has been added to the Acumatica ERP installation package (as shown in the following screenshot) so that users can install this application along with Acumatica ERP Tools.
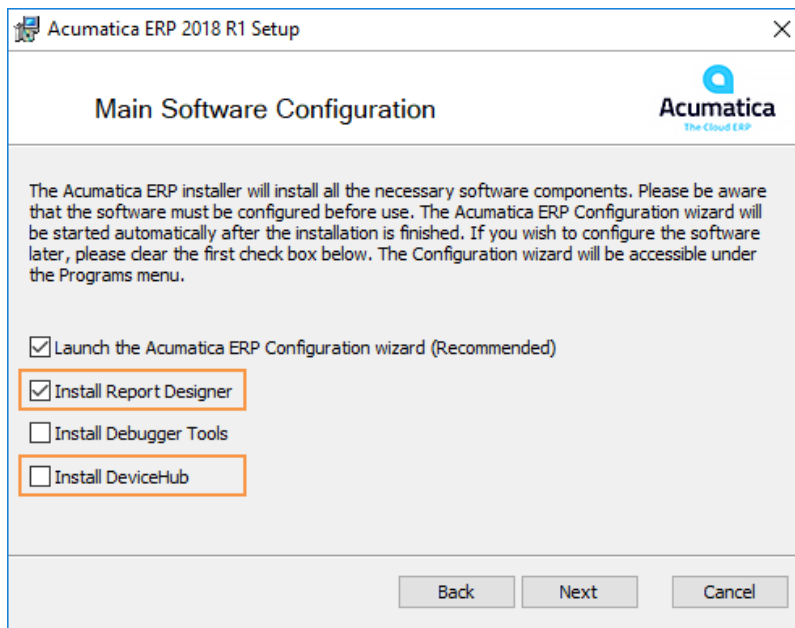
Figure: The new installation wizard

Platform: Dashboard Enhancements

In Acumatica ERP 2018 R1, changes related to dashboards have been introduced that improve filtering data on widgets and enhance look of KPI widgets.

Filtering Conditions in Widget Properties

Users who design dashboards can specify filtering conditions (as they can for reusable filters) for widgets that use inquiry forms as their data source (such as charts and scorecard KPI widgets) in the **Filter Settings** dialog box to limit the data shown to be the most relevant. A dashboard designer can open this dialog box by clicking the new **Filter Settings** button in the **Widget Properties** dialog box (see the following screenshot), which the designer opens for the widget by clicking Edit on the widget toolbar.
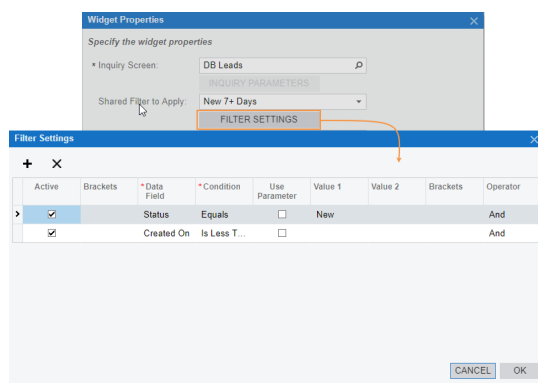
Figure: The Filter Settings dialog box for a widget

Dashboard Parameters

Users who create and design dashboards now can add parameters to a dashboard. For example, suppose that most of the widgets of the dashboard display information about all leads of a particular company, but users may want to see information about leads of the particular company for a particular owner. In this case, the dashboard parameter will be the lead owner.

To add filtering parameters to a dashboard, the dashboard owner should perform the following steps:

1. On the new **Parameters** tab of the *Dashboards (SM208600)* form, the dashboard owner adds one parameter or multiple parameters (see the following screenshot), which will be displayed in the Selection area of the selected dashboard.
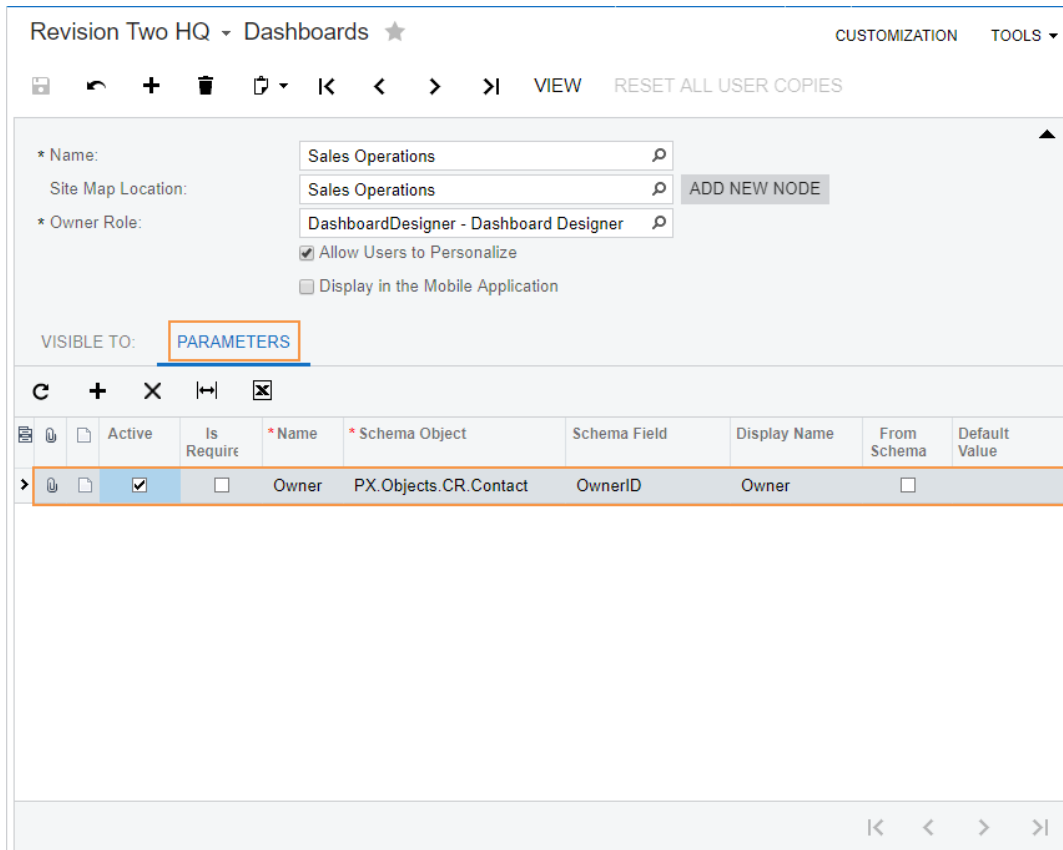
Figure: The Parameters tab on the Dashboards form

2. For each widget whose data should be filtered by the values of the parameters, the dashboard designer opens the **Widget Properties** dialog box by clicking Edit on the widget toolbar, and then opens the **Filter Settings** dialog box by clicking **Filter Settings**. In this dialog box, the dashboard designer selects the data field whose values should be filtered and selects the parameter that have been added to the **Parameters** tab of the *Dashboards* form (see the following screenshot).
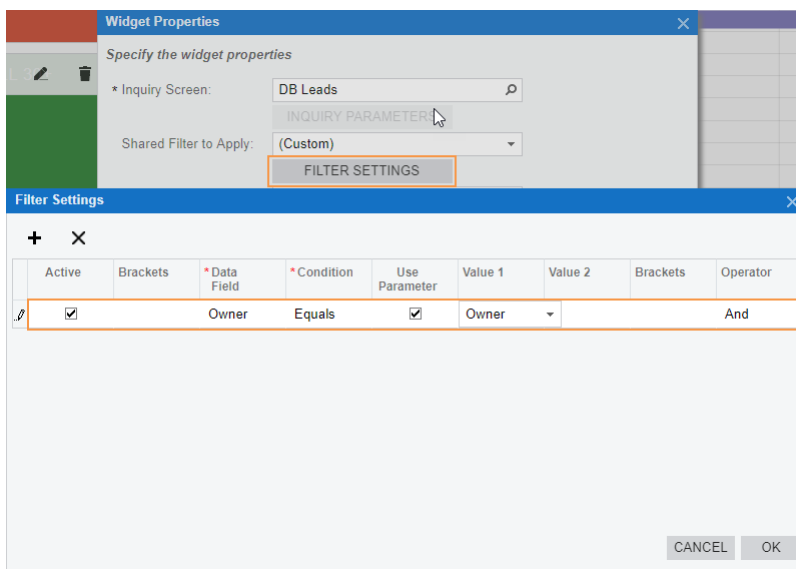
Figure: Filter settings in widget properties

After the steps described above have been performed and the dashboard designer has saved his or her changes, users can select values of the parameters that were added to the dashboard in the selection area of the dashboard and view the filtered data in those widgets that contain these parameters selected in the filtering settings (see the following screenshot). To clear the filter by the parameter value, a user can clear the value in the parameter box.
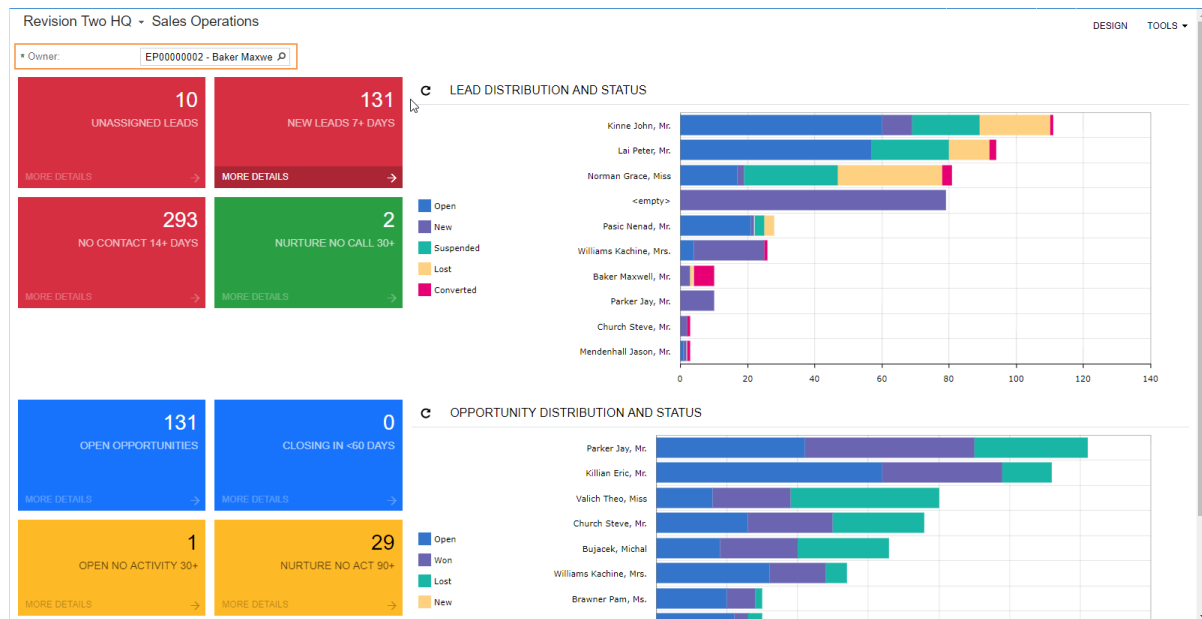
Figure: A dashboard with the Owner parameter

For more information, see *Dashboard Configuration* in the Acumatica ERP User Guide.

Scorecard KPI and Trend Card KPI Widget Enhancements

In the **Widget Properties** dialog box for the scorecard KPI and trend card KPI widgets, the following changes have been made:

- The **Scorecard Title**, **Automatically Adjust Font Size**, and **Font Size** boxes have been removed for scorecard KPI widgets. A font size for a widget of this type now is always adjusted automatically according to the widget size.

- The **Icon** box has been added for scorecard KPI widgets. In this box, users can select an icon that will be displayed in the top left corner of a widget. An icon illustrates a category of the widget parameter.

- The **Trend Card Title**, **Automatically Adjust Font Size**, and **Font Size** boxes have been removed for trend card KPI widgets. A font size for a widget of this type now is always adjusted automatically according to the widget size.

Platform: Enhanced Acumatica DeviceHub

In Acumatica ERP 2018 R1, a new *DeviceHub* feature has been implemented. On the *Enable/Disable Features (CS100000)* form, this feature is listed under **Monitoring & Automation**. With this feature enabled, a system administrator can configure a set of default printers and streamline the printing of documents for users, regardless of the physical location of the users and printers. Default settings for all printers that have been added can be configured at the user, document, and branch level to make printer selection more flexible and less error prone.

The list of documents sent for printing can be managed directly from Acumatica ERP, which provides users with the ability to preview, reprint, and cancel the printing of a document from the list. Multiple mass-processing forms have been extended with settings that make it possible for a user to select a printer manually or rely on the selection made by the system based on the default settings.

Also, a system administrator can configure restriction groups to control user access to a particular printer.

DeviceHub Deployment and Enablement

In 2018 R1 Acumatica, DeviceHub is a tool application and can be run on a workstation or a server independently from a user session. Acumatica ERP sends push notifications to DeviceHub when a printing job is requested.

The system administrator selects the **Install DeviceHub** check box in the list of Acumatica ERP tools while installing the instance (see the following screenshot).
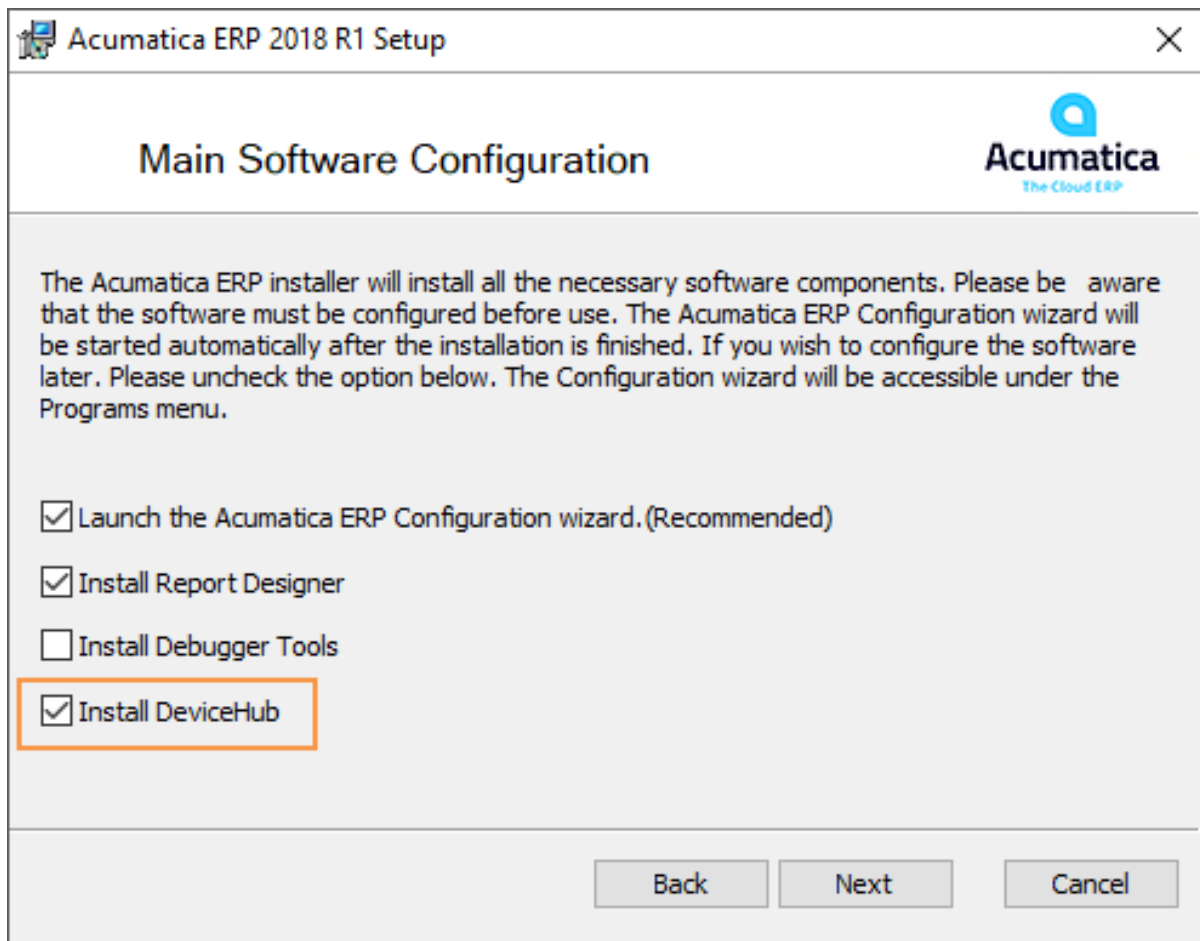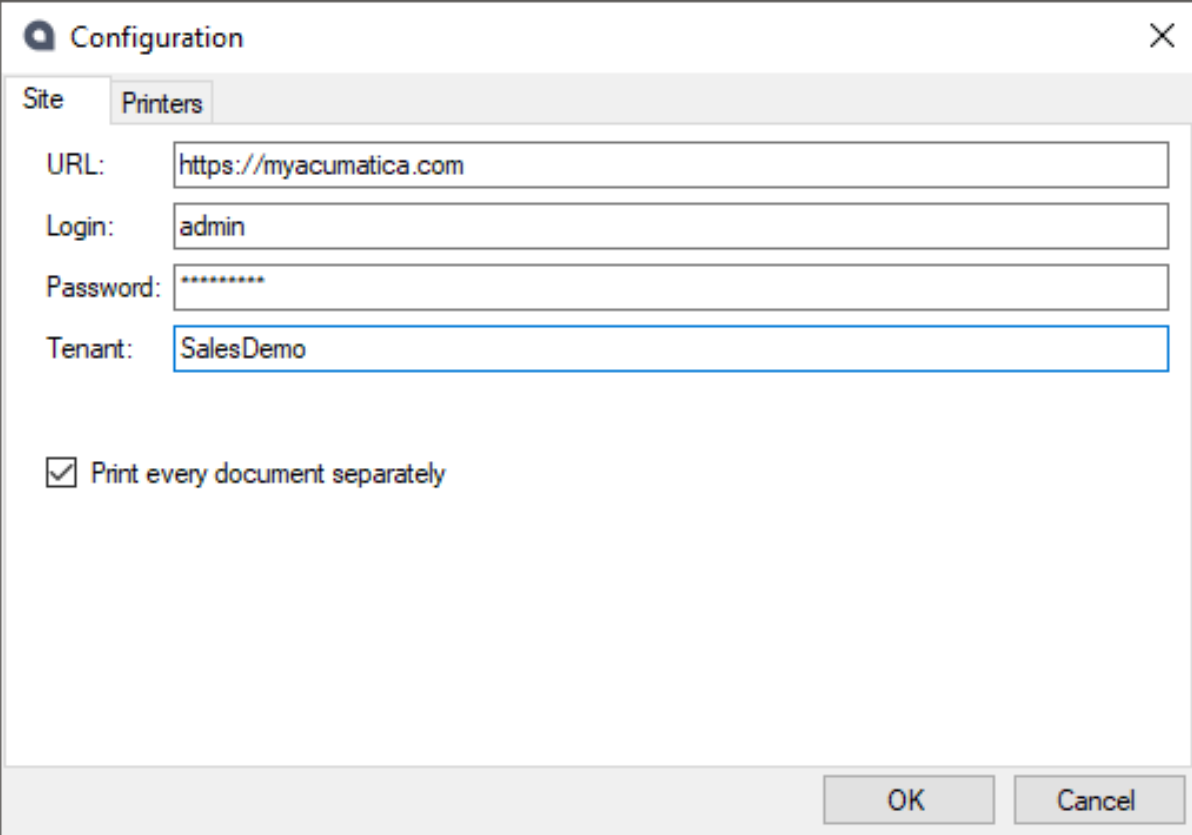
Figure: Installing DeviceHub

The Acumatica installation wizard then installs DeviceHub along with the other selected tools. A system administrator launches the application and configures the application settings and default printer settings. (See the screenshots below.) DeviceHub is associated with a particular tenant in Acumatica ERP. For multiple companies, the administrator needs to install and configure a separate DeviceHub for each tenant.

Figure: Configuring DeviceHub settings

Figure: Configuring printer settings

After DeviceHub has been installed and configured and default printer settings have been set up, the system administrator enables the *DeviceHub* feature on the *Enable/Disable Features (CS100000)* form. Then in Acumatica ERP, the administrator can do the following:

- On the *Printers (SM206510)* form, review the list of printers configured in DeviceHub and send this list to Acumatica ERP through the API

- Configure user access to printers by using the *Printer Access (SM106000)* form

- Specify the default printer for branches, users, and documents

Automatic Printer Selection

If a user decides to rely on the system for printer selection by selecting the **Print with DeviceHub** check box on a mass-processing form, the system prioritizes the printers for selection as follows:

1. The default printer specified for the currently signed-in user on the *User Profile (SM203010)* form

2. The default printer specified for the document to be printed on the **Reporting Settings** tab of the preferences form of the module of the mass-processing form—for example, *Accounts Receivable Preferences (AP101000)* for a form in the Accounts Receivable module

3. The default printer specified for the branch on the *Branches (CS102000)* form

The user can instead select a printer manually from the list of the available printers by selecting the **Define Printer Manually** check box and specifying the printer in the **Printer** box, as shown in the following screenshot.

Figure: Printing statements

Changes to the User Interface

In Acumatica ERP 2018 R1, the following new forms have been introduced:

1. *Printers (SM206510)*: This form lists the printers that have been configured in DeviceHub and sent to Acumatica ERP through the API.

2. *Print Jobs (SM206500)*: This form lists the documents sent for printing and gives the user the ability to preview, reprint, and cancel printing of a document from the list.

3. *Printer Access (SM106000)*: By using this form, the administrator can configure access to the printers.

4. *Restriction Groups by Printer (SM106001)*: This form lists the available restriction groups and their access to the selected printer.

On the following forms, the **Mailings Settings** tab has been renamed to **Reporting Settings**:

*   *Sales Orders Preferences (SO101000)*

*   *Purchase Orders Preferences (PO101000)*

*   *Purchase Requisitions Preferences (RQ101000)*

*   *Accounts Payable Preferences (AP101000)*

*   *Accounts Receivable Preferences (AR101000)*

Also, on the **Reporting Settings** tab of these forms, the **Default Sources** table now includes the **Branch** and **Default Printer** columns, so that the default printers can be specified for particular documents and branches.

The **Default Printer** box has been added to the following forms so that a default printer can be configured for particular users, branches, or companies:

- *User Profile (SM203010)*

- *Branches (CS102000)*

- *Companies (CS101500)*

Finally, the following mass-processing forms and dialog boxes have been extended with the printer selection settings:

- The *Process Shipments (SO503000)* form if one of the following actions is selected:

    - *Print Labels*

    - *Print Pick List*

    - *Print Shipment Confirmation*

- The *Process Invoices and Memos (SO505000)* form if the *Print Invoice* action is selected.

- The *Print/Email Orders (SO502000)* form if the *Print Sales Order/Quote* action is selected.

- The *Print/Email Purchase Orders (PO503000)* form if the *Print Purchase Order* action is selected.

- The *Print Invoices and Memos (AR508000)* form if the *Print Invoice/Memo* action is selected.

- The *Print Statements (AR503500)* form if the *Print Statement* action is selected.

- The *Print/Release Dunning Letters (AR522000)* form if the *Print Dunning Letter* action is selected.

- The **Process Order** dialog box, which appears when a user clicks **Quick Process** on the *Sales Orders (SO301000)* form. For more information on the quick processing of sales orders, see *Distribution: Quick Order Processing*.

Platform: Enhanced Addition of Dashboards and Generic Inquiries to the Mobile Application

In previous versions of Acumatica ERP, it took a lot of effort to add dashboards and generic inquiries to the site map of the mobile application. In Version 2018 R1, users who are designing a dashboard or generic inquiry in Acumatica ERP can also make the system expose this dashboard or generic inquiry in the mobile application.

To support this functionality, the **Expose to Mobile** check box has been added to the *Dashboards (SM208600)* and *Generic Inquiry (SM208000)* forms, as shown in the following screenshots.

Figure: The new check box on the Generic Inquiry form
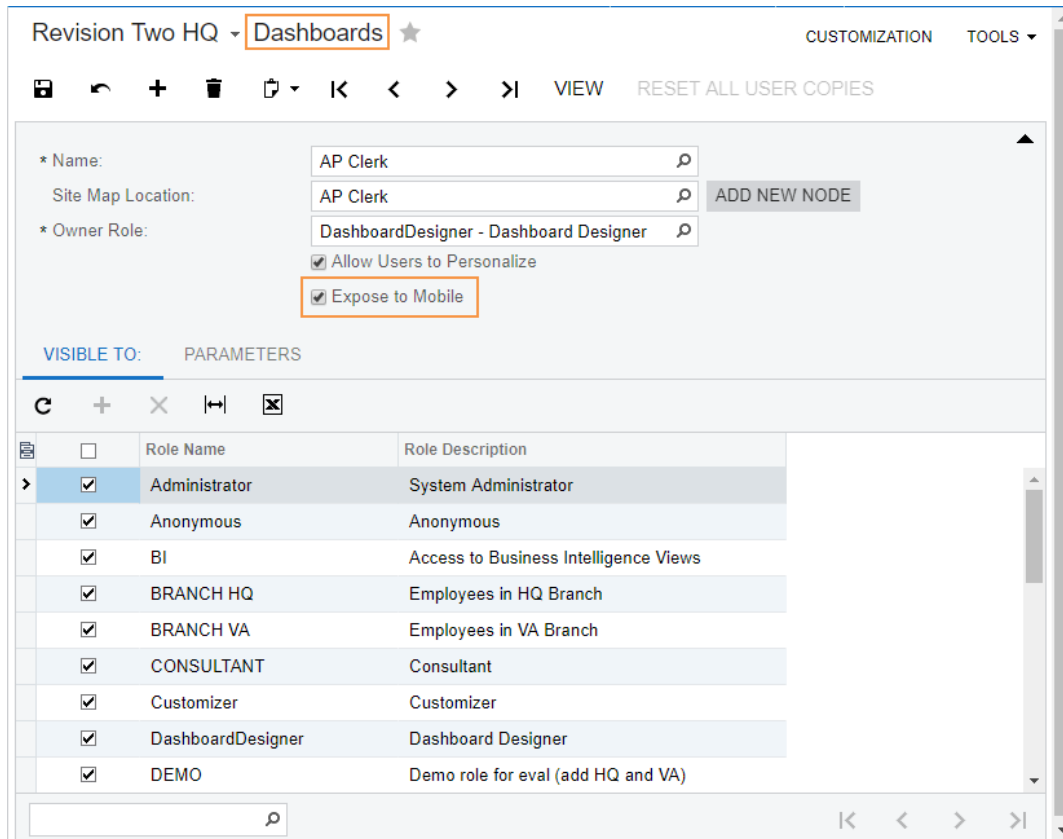
Figure: The Display in the Mobile Application check box on the Dashboards form

When the **Expose to Mobile** check box is selected for a dashboard or generic inquiry in a particular Acumatica ERP instance, the system automatically adds this dashboard or generic inquiry to the site map of the mobile application connected to this instance.

Platform: Enhanced Update of Customized Generic Inquiries

In previous versions of Acumatica ERP, if users customized a predefined generic inquiry and updated their Acumatica ERP instance with a new build, conflicts could occur if the update contained changes in this generic inquiry. In Acumatica ERP2018 R1, the system does not update the settings of customized generic inquiries during upgrade. Users can apply changes in the generic inquiries provided with an update by resetting the settings of these generic inquiries to the default settings. In this case, all customizations will be lost, and customizers should make the required changes again.

The **Reset to Default** menu item has been added to the **Clipboard** toolbar button on the *Generic Inquiry (SM208000)* form (see the following screenshot), which a user can click to reset the settings of the selected generic inquiry to the predefined settings.
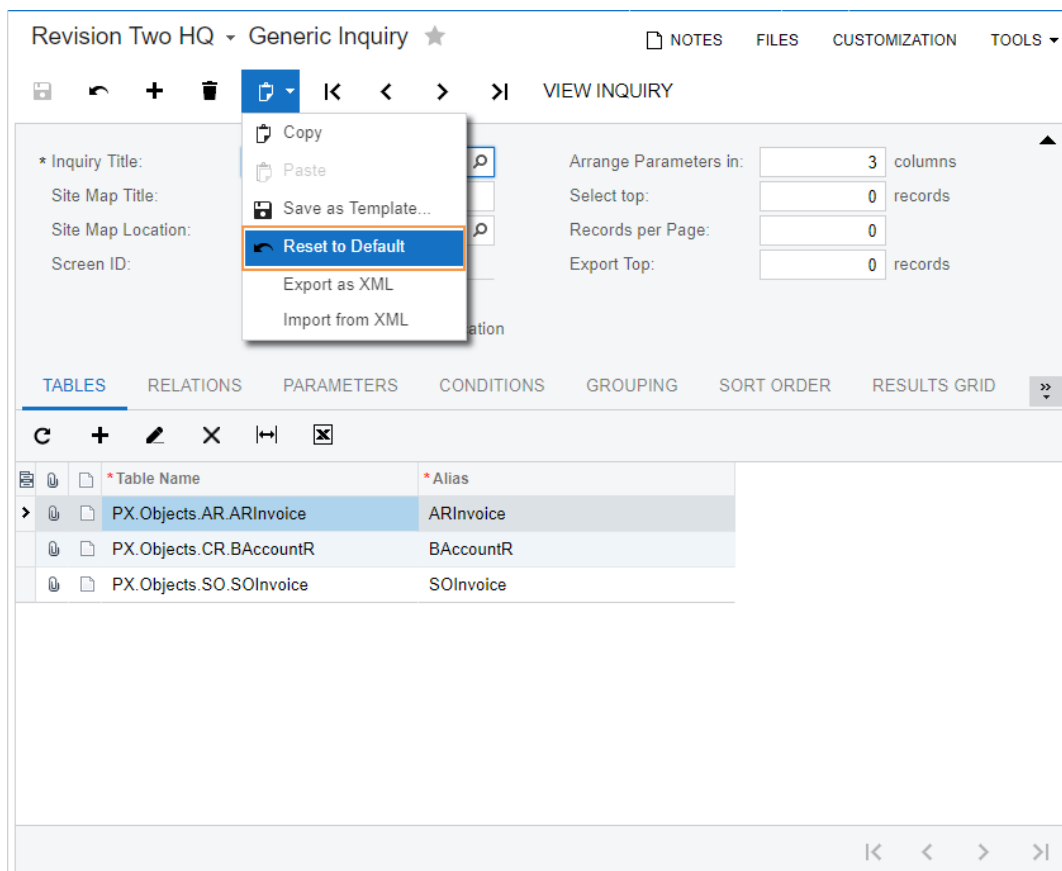
Figure: The Reset to Default menu item in the Clipboard toolbar button

For more information about update of customized generic inquiries, see *Customization of Predefined Generic Inquiries*.

Platform: Quick Filters for Generic Inquiry Results

In Acumatica ERP 2018 R1, the filtering of the results of generic inquiries has been simplified. On an inquiry form, users can now configure a filter by dragging table columns to the new filtering area (see the following screenshot) and save this filter for future use. This filter, called a *quick filter*, enhances the functionality of simple column filters.

Figure: A column being dragged to the filtering area

All users who have access to a generic inquiry form can manage quick filters as follows:

- Add as many fields to the filtering area as they need: A user drags column headers to the filtering area of a generic inquiry form.

- Filter data in the generic inquiry on the fly: In the filtering area, a user selects field values, as shown in the following screenshot.

Figure: A quick filter with a selected field value

- Save a filter for future use: When a user clicks **Save** in the filtering area, the system creates a tab for this filter on the generic inquiry form. The system saves this filter for only the signed-in user who clicked **Save**.

- Delete a filter: When a user clicks **Remove** in the filtering area, the system removes the tab with the filter from the generic inquiry form.

- Remove a field from a quick filter: A user can drag a field from the filtering area to the table area to remove the field from the quick filter.

Alternatively, users can add, remove, and modify filters based on particular columns by using column filters.

Users who have access to the *Filters (CS209010)* form can also share a quick filter and delete shared quick filters on a generic inquiry form. The system displays all shared quick filters on the *Filters (CS209010)* form.

The **Quick Filter** column has been added to the **Results Grid** tab of the *Generic Inquiry (SM208000)* form. For each row for which a generic inquiry designer selects the check box in this column, the system adds a default quick filter to the generic inquiry form (see the following screenshots).

Figure: The Quick Filters column on the Generic Inquiry form

Figure: The default quick filter on a generic inquiry form

For more information about quick filters, see *Data Presentation in Acumatica ERP*.

Platform: License Parameters for Resource Utilization

In Acumatica ERP2018 R1, the utilization of system resources is regulated by the activated license. The license purchased by each company includes the license tier (from S1 to E5) that its personnel have selected. The license tier limits the parameters that influence system performance, such as the database space allocated for Acumatica ERP data, the number of transactions, and the number of requests per hour for the web services API. The limitation of these parameters provides a flexible pricing policy because each company can purchase the system and have the performance that corresponds to their processing load.

A system administrator can monitor how the system utilizes resources by using the new *License Monitoring Console (SM604000)* form, which is shown in the following screenshot.

Figure: The License Monitoring Console form

Once any of the limits specified in the license has been exceeded, the system displays a warning on the *License Monitoring Console* form. A large number of warnings means that the license owner should speak with the license provider about a license with a higher license tier.

On the *License Monitoring Console* form, the system administrator can view the following information:

- Limits for system resources specified in the company's license

- Warnings about limit excesses

- Statistics for usage of system resources

Platform: Management of Record Number on Generic Inquiry Forms

The table footer of generic inquiry forms has been redesigned in Acumatica ERP2018 R1 so that users can always view the number of records and pages displayed by the generic inquiry.

In addition, users who design a generic inquiry can now limit the number of records that the system can export to Microsoft Excel. The limitation is useful for generic inquiries that contain a lot of data (more than 1000 records) because it significantly speeds export.

The following changes, which support the new functionality, have been made to the *Generic Inquiry (SM208000)* form (see the following screenshot):

- The **Number Pages** check box has been removed.

- The **Export Top *x* Records** box has been added. In this box, users can specify the maximum number of records that can be exported to Microsoft Excel from the generic inquiry form when a user clicks **Export to Excel** on the table toolbar.

Figure: The Generic Inquiry form

The number of pages, the navigation buttons, and the number of records are displayed on the table footer of a generic inquiry form (see the following screenshot).

Figure: The redesigned footer of a generic inquiry form

If a request to the database takes too much time, and the system cannot calculate the number of records for the generic inquiry before timeout (which is calculated based on settings of Microsoft SQL Server; the default timeout setting is 6 seconds), the system will display a warning message, and the table footer will not display the number of records and will display page navigation as it did in previous versions of Acumatica ERP.

Platform: Monitoring of Database Space

In previous versions of Acumatica ERP, customers could encounter a situation when the system was out of database space. There was no way to calculate the space used by Acumatica ERP objects (that is, tenants and snapshots) in the database. Version 2018 R1 includes tools that provide administrators with the capability to control the database space allocated for Acumatica ERP and view the current space usage.

The *Space Usage (SM203525)* form has been added, which displays the database space allocated for the system and the database space used by tenant data and snapshots (see the following screenshot).

Figure: The Space Usage form

By using the *Space Usage* form, users can view the size of particular tenants, snapshots, and tables and see which of these objects consume the most space in the database.

On the *Tenants (SM203520)* form, the **View Space Usage** button has been added to the form toolbar, which users can click to open the *Space Usage* form.

The limit of the database space allocated for Acumatica ERP can be specified in a license (by sales managers of Acumatica ERP) or in `web.config` (by administrators of the system). If the limit is not specified, users can see only the database space used.

If a limit is specified, before users copy a tenant or create, import, or restore a snapshot, they can make sure that the database contains enough space for the snapshot.

For more information, see *Database Size Monitoring and Management* in the Acumatica ERP User Guide.

Projects: Upgrade Notes

Before an instance of Acumatica ERP is upgraded from Version 6.1 or earlier to 2018 R1, we recommend that system administrators who will perform the upgrade read the information in the following sections, which is related to the changes made to the Projects module.

The Upgrade Process

During the upgrade process, the system migrates the project budget records to the new data structure, so users can view them on the *Projects (PM301000)* form after the upgrade.

While the billing rules are upgraded, for each account group in a billing rule, the system creates a step of the *Time and Material* type with an empty line amount formula. The billing rules may continue to work with an allocation process that creates transactions for these account groups. The billing rules with no line amount formula use the value of the *PMTran.Amount* data field, so that the billing result is consistent with the result in the system previously.

Actions After the Upgrade Process

After the upgrade process is complete, a system administrator needs to perform the following steps:

1. On the *Validate Project Balances (PM504000)* form, select the **Recalculate Unbilled Summary** check box, and on the form toolbar, click **Validate All** to cause the system to recalculate the amounts of the project budget records based on the project transactions generated as a result of the upgrade.

2. Optional: To enable the pro forma invoice workflow for an existing project, do the following:

   a. On the **Invoices** tab of the *Projects (PM301000)* form, make sure there are no unreleased Accounts Receivable documents related to the project.

   b. On the **Summary** tab, select the **Create Pro Forma on Billing** check box for the project.

   : To later return to processing direct Accounts Receivable invoices for the project, users should make sure there are no unreleased pro forma invoices or Accounts Receivable documents related to the project, and then clear the **Create Pro Forma on Billing** check box for the project.

Migration of Projects with the Billing Limit Amount Controlled

The limit amount, which was specified for a budget line in the **Budgeted Amount** column on the *Project Tasks (PM302000)* form and for the account group specified in the **Max. Limits Account Group** setting of the billing rule on the *Billing Rules (PM207000)* form, is now set for the budget line of the project in the **Maximum Amount** column on the **Revenue Budget** tab of the *Projects (PM301000)* form.

During the upgrade process, for each billing rule that uses limits, the system copies the limit amount from the **Budgeted Amount** column of the budget line of the task for the account group from the **Max. Limits Account Group** setting on the *Billing Rules* form to the **Maximum Amount** column on the **Revenue Budget** tab of the project on the *Projects* form for the same account group. (It is supposed that the account group of the limit is the account group of *Income* type to which the project revenues are recorded.) The **Limit Amount** check box on the **Revenue Budget** tab of the *Projects* form is selected automatically for the migrated revenue budget lines with non-zero **Maximum Amount**. As soon as at least one revenue budget line with the limit is generated during the upgrade process, the system also selects the **Use T&M Revenue Budget Limits** check box for this project on the **Summary** tab of the *Projects* form to expose the **Limit Amount** and **Maximum Amount** columns on the **Revenue Budget** tab of the *Projects* form.

For each project created in the previous version of the system that has tasks to which the billing rules with the **Limit Amount** check box applied, users need to do the following:

- After the upgrade and before the next iteration of the allocation process is run for the project, enable the pro forma invoice workflow for each project for which they want to continue using the limit amount control.

- After these users have enabled the pro forma invoice workflow for the project, resume processing the project—that is, run the allocation process, and then run the billing process, which creates a pro forma invoice where the limits are verified.

  : On the *Projects Preferences (PM101000)* form, the setting in the **Validate T&M Revenue Budget Limits** box determines whether users should receive a warning or error message on the *Pro Forma Invoices (PM307000)* form if an invoice exceeds a limit.

Functional Changes

The following functional changes have been made to the Projects module:

- The project budget is now defined on the *Projects (PM301000)* form instead of the *Project Tasks (PM302000)* form.

- The following forms have been removed:

  - *Project Budget (PM303000)*: The new *Budget Details (PMGI0010)* generic inquiry can be used to view the list of records of a project budget in the system, and the **Revenue Budget** and **Cost Budget** tabs of the *Projects* form can be used to import budget records.

  - *Project Budget by Period (PM305000)*: The project budget is no longer broken down by period.

- For project templates, the budget is now defined on the *Project Templates (PM208000)* form instead of the *Project Template Tasks (PM208010)* form, which is consistent with the changes to the *Projects* form.

- The new *TMPROJECT* segmented key, which can be viewed and edited on the *Segmented Keys (CS202000)* form, now defines the format of project template identifiers on the *Project Templates (PM208000)* form. The auto-numbering that can be specified in the *PROJECT* segmented key now applies to only the project identifiers. Auto-numbered projects and project templates may still share the same numbering sequence, if needed.

- The ability to postpone a certain amount of an invoice line until the next invoice (that is, the billing option) has been changed as follows:

  - A user can now postpone a certain amount and quantity of a line of a pro forma invoice until the next invoice or write it off. This functionality is now available on the *Pro Forma Invoices (PM307000)* form. For more information, see the *Flexible Transaction-Based Billing* section of *Projects: Billing Workflow Enhancements and Invoice Preview*.

  - The **Billing Option** column is no longer available on the **Document Details** tab of the *Invoices and Memos (AR301000)* form.

  - The scenario of postponing a partial quantity of an invoice generated by a billing procedure for a project is not supported.

- The validation of the billing limit has been changed as follows:

  - The validation of the billing limit is now performed as part of the billing process instead of the allocation process.

    In the previous versions of Acumatica ERP, the allocation process did not create a transaction if the allocated amount exceeded the limit. The billing process created the Accounts Receivable invoice in the full unbilled amount.

Now the allocation process does not validate limits; it creates all transactions according to the allocation rule. The billing process creates a pro forma invoice with all billable transactions.

- Now users can review the transactions that violated the limit and take the corrective actions on the *Pro Forma Invoices* form. The validation level may vary, from a simple warning, which does not block the processing of the pro forma invoice, to an error, which prevents the pro forma invoice from being processed further until the invoice amount is within the limit. The desired validation level is specified on the *Projects Preferences (PM101000)* form.

  For more information on this functionality, see the *Projects: Billing Workflow Enhancements and Invoice Preview* > *Flexible Transaction-Based Billing* section.

- The validation of the billing limit is no longer performed if the Accounts Receivable invoice is created directly without a pro forma invoice being processed first.

- The amount of the billing limit is now defined for a revenue budget line (on the **Revenue Budget** tab of the *Projects* form) instead of for a billing rule.

- The **Over the Limits Account Group** setting that existed on the *Billing Rules (PM207000)* form is deprecated. With the new limit validation workflow, a user can preview over-limit amounts in a pro forma invoice and make the necessary decisions without the allocation process temporarily posting these amounts to an account group for further review and adjustment.

- The ability to specify billing limits by quantity is temporarily not supported

- The ability to edit original budget amounts and quantities now depends on the budget lock status instead of the project and task statuses. For the budget lines of a project on the *Projects* form, the **Budgeted Amount** and **Budgeted Quantity** columns (on both the **Revenue Budget** and **Cost Budget** tabs) can now be protected from editing if a user applies the **Lock Budget** action to the project. The **Unlock Budget** action reverses the **Lock Budget** action and makes the columns available for editing again.

- The auto-calculation of the percentage of task completion by amount or quantity can now be based on the cost budget lines only—that is, the budget lines that can be added to the **Cost Budget** tab of the *Projects* form. Also, the **Production** column of this tab has been renamed to **Auto Completed (%)**.

- The **WIP Account Group** is now specified at the task level on the *Project Tasks* form instead of at the billing rule level on the *Billing Rules* form. During the upgrade, the system copies the WIP account group from the billing rule of a project task to the settings of the project task.

  The logic for reversing the WIP amount remains the same—that is, on release of an Accounts Receivable invoice, the system reverses the amount on the WIP account group that is specified for the project task that is being billed.

- Budgeting against an off-balance account group is available on the **Cost Budget** tab of the *Projects* form only if the account group has the **Expense** check box selected on the *Account Groups (PM201000)* form. Off-balance expense budget records are included in the *Expense Totals* row on the **Balances** tab of the *Projects* form. Budget records by non-expense off-balance account groups are included in the *Off-Balance Totals* row on the **Balances** tab.

- The ability to budget against asset, liability, and non-expense off-balance account groups is temporarily unavailable. Actual amounts for these account groups are displayed on the **Balances** tab of the *Projects* form and in the *Budget Details* generic inquiry.

- The auto-budget function is temporarily not supported.

Renamed Elements

In addition to the previously mentioned renamed elements, the following elements have been renamed:

- On the *Enable/Disable Features (CS100000)* form, the feature that makes the Projects module available for use has been renamed from *Project Management* to *Project Accounting*.

- On the *Projects (PM301000)* form, the table on the **Account Task Mapping** tab was moved to the **Default Task for GL Account** section of the **GL Accounts** tab. The **Account Task Mapping** tab was removed form the form.

Changed, New, and Removed Forms

Multiple enhancements have been made to the UI of the following forms:

- *Projects (PM301000)*

- *Project Tasks (PM302000)*

- *Project Transactions (PM304000)*

- *Project Transactions (PM401000)*

- *Tasks by Employee (PM402000)*

- *Reverse Unbilled Transactions (PM505000)*

- *Run Project Billing (PM503000)*

- *Project Balance (PM621000)*

- *Projects Preferences (PM101000)*

- *Billing Rules (PM207000)*

- *Attributes (PM202000)*

- *Project Templates (PM208000)*

- *Project Template Tasks (PM208010)*

- *Common Tasks (PM208030)*

In addition to the enhanced forms, the following forms have been added:

- *Budget Details (PMGI0010)*: A new generic inquiry under Organization > Projects > Work Area > Explore

- *Budget Summary by Account Group (PMPV0010)*: A new pivot table under Organization > Projects > Work Area > Explore

- *Pro Forma Invoices (PM307000)*: A new form under Organization > Projects > Work Area > Manage

- *Commitments (PM306000)*: A new form under Organization > Projects > Work Area > Explore

- *Process Pro Forma Invoices (PM506000)*: A new form under Organization > Projects > Processes > Recurring

- *Pro Forma Invoice (PM642000)*: A new report under Organization > Projects > Reports > Forms

Also, the following forms have been removed:

- *Project Budget (PM303000)*

- *Project Budget by Period (PM305000)*

: Custom objects, such as customizations, import/export scenarios, and screen-based API that refer to fields on the changed and removed forms may need to be updated.

Custom Reports and Generic Inquiries

The project budget is now stored in the new *PMBudget* database table. Thus, custom generic inquiries and reports should be updated so that the system can use this table to retrieve the project budget data instead of the *PMProjectStatus* or *PMHistory* tables. The *PMProjectStatus* table will no longer be updated. This table is deprecated and will soon be removed from the database schema.

Because the project budget is no longer kept by period, the columns that are listed below have been removed from the *PMHistory* table:

- *Budget PTD Amount*
- *Budget PTD Quantity*
- *Revised PTD Amount*
- *Revised PTD Quantity*

: In analytical reports, the respective options of the **Amount Type** setting of the data source of *PM* type are no longer available on the *Row Sets (CS206010)*, *Column Sets (CS206020)*, and *Unit Sets (CS206030)* forms.

Changes to the Acumatica Mobile App

The following mobile screens have been updated to reflect the changes made to the respective forms:

- *Projects*: Multiple enhancements have been made to this screen.
- *Project Tasks*: This screen is hidden in the site map of the mobile app and opens only if the user selects the **View Task** action in the detailed view of a project task on the *Projects* mobile screen.

Projects: Change Management

In Acumatica ERP 2018 R1, a new change order functionality has been introduced. The users of Acumatica ERP now can control changes of the project's budgeted and committed values and control the profitability of every change initiated by a customer. The change order is a document for profitability analysis and an audit trial of changes to the project revenue budget, commitments, and budgeted costs. Change orders do not alter the original figures of a project directly; they are tracked separately from the original figures for analysis.

Change orders provide the following functionality:

- The ability to record changes to project revenue budget, cost budgets, and commitments. With the change order workflow enabled for a project, the revised values of the project are calculated as original values affected by change orders as follows: Revised Amount = Original Amount + Released Change Orders.

  The screenshots below show change order columns on the **Revenue Budget** and **Cost Budget** tabs of the *Projects (PM3010000)* form.

Figure: The values of the revenue budget of a project affected by change orders

Figure: The values of the cost budget of a project affected by change orders

- The ability to review the list of change orders related to a project on the **Change Orders** tab of the *Projects (PM301000)* form, as shown in the following screenshot:

Figure: The change orders related to the project

- The ability to see on the *Commitments (PM306000)* form changes for each purchase order as well as the original and committed values, as shown in the following screenshot:

Figure: The values of commitments affected by change orders

- The ability to see on the **Change Orders** tab of the *Purchase Orders (PO301000)* form the list of change orders that affect the purchase order, as shown in the following screenshot:

Figure: The change orders related to the purchase order

- The ability to see the profitability of every change of the project budget initiated by the customer.

The following primary concepts of change order functionality are described in the remaining sections of this topic:

- *Projects with the Change Order Workflow*
  - *Project Budget Freeze*
- *Change Order Creation*
- *Change Order Approval*

- *Change Order Printing*

- *Release of a Change Order*

- *Change Order Reversal*

- *Change Order Classes*

- *Purchase Order Workflow with Change Orders*

    - *Ability to Control the Original Committed Values*

Projects with the Change Order Workflow

To enable the change order workflow for a project, a user should do the following:

1. On the *Enable/Disable Features (CS100000)* form, enable the *Change Orders* feature.

2. On the **Summary** tab of the *Projects (PM101000)* form, select the **Change Order Workflow** check box, and save changes to the project.

The change order workflow may include the following stages:

- Change order entry

- Change order approval

- Change order printing and emailing

- Change order release

- Change order reversal

Project Budget Freeze

During the initial stage of a project, after the project budget has been agreed upon, the user can lock the original figures from further editing by using the **Lock Budget** action on the *Projects (PM301000)* form. After the original values are locked, the following scenarios can be used to update the revised budget figures:

- If the project does not use the change order workflow, the revised budget figures can be edited manually on the *Projects (PM301000)* form.

    The following columns of the project with the locked budget are read-only on the **Revenue Budget** and **Cost Budget** tabs of the *Projects (PM301000)* form: **Budgeted Quantity**, **Unit Rate**, and **Budgeted Amount**.

- With the change order workflow enabled for the project, the revised budget figures become read-only, and all changes to the project budget can be made only with change orders. The system updates the revised budget figures based on the change orders as follows: **Revised Amount** = **Original Amount** + the amount of the released change orders.

    The following columns of the project with the locked budget are read-only on the **Revenue Budget** and **Cost Budget** tabs of the *Projects (PM301000)* form: **Budgeted Quantity**, **Unit Rate**, **Budgeted Amount**, **Revised Quantity**, and **Revised Amount**.

The **Lock Budget** action on the *Projects (PM301000)* form applies to both the **Revenue Budget** and **Cost Budget** tabs of the *Projects (PM301000)* form. The **Unlock Budget** action makes the original budget figures available for editing even if the change order workflow has been enabled for the project.

Change Order Creation

A new change order can be created either directly on the *Change Orders (PM308000)* form or on the *Projects (PM301000)* form if the user clicks **Create Change Order** on the form toolbar. In the change order, the user can enter the necessary amendments to the project budget and commitments. The

change order provides the ability to see the original budgeted amounts, the approved and draft change order amounts, and the revised budgeted amounts when a user edits a change order line. The following user scenarios are supported on the *Change Orders (PM308000)* form:

- On the **Revenue Budget** and **Cost Budget** tabs (see the following screenshots):

  - Creation of a new budget line with a positive amount

  - Creation of a new budget line with a negative amount

  - Addition to an existing budget line

  - Deduction from an existing budget line

Figure: The Revenue Budget tab of the *Change Orders (PM308000)* form

Figure: The Cost Budget tab of the *Change Orders (PM308000)* form

- On the **Commitments** tab (see the following screenshot):

  - Creation of a new purchase order with a new line

  - Addition of a new line to an existing purchase order

  - Addition to an existing purchase order line

  - Deduction from an existing purchase order line

    : The deduction from the amount and quantity of a purchase order line can be no greater than the **Received Qty.** and **Received Amount** of the line.

Figure: The Commitments tab of the *Change Orders (PM308000)* form

A change order document can also have the following attributes:

- Notes and attachments at the change order summary level

- Notes and attachments at the change order detail level

- Detailed description of the change order

A change order document has the following reference numbers:

- **Reference Nbr.**: The number of the change order in the system. This number is assigned to each change order based on the *CHANGEORD* numbering sequence, which is selected on the *Project Preferences (PM101000)* form and can be reviewed or modified on the *Numbering Sequences (CS201010)* form.

- **Revenue Change Nbr.**: The number of the change order within the project. Each project has its own numbering sequence of change orders for printing. The **Revenue Change Nbr.** is an integer that the system assigns sequentially, starting from 1 and then 2, 3, and so on. The last assigned number for the project is shown in the **Last Revenue Change Nbr.** box in the **Project Properties** area of the **Summary** tab of the *Projects (PM301000)* form.

  A user can manually change the **Revenue Change Nbr.** of a particular change order. (Duplicate numbers within a project are not allowed.) In this case, the user should respectively change the **Last Revenue Change Nbr.** of the corresponding project so that the system continues to assign these numbers correctly.

- **External Reference Nbr.**: The external reference number. This number is entered manually and can be populated with an identifier required by the customer or with the number from an external system integrated with Acumatica ERP.

For information about particular UI elements on the *Change Orders (PM308000)* form, see the *Change Orders* form reference topic in the Acumatica ERP User Guide.

Change Order Approval

A change order supports the standard Acumatica ERP approval process.

The approval map can be configured on the *Assignment and Approval Maps (EP205500)* form and then specified on the *Project Preferences (PM101000)* form along with the default pending change order approval notification, as shown in the following screenshots:

Figure: An approval map for change orders

Figure: The approval map and approval notification to be used for change orders

The approval process is optional; the configuration of the approval process can be skipped and a user can create an approved change order right away.

Change Order Printing

A user can print a change order with any status. For the printing of change orders, the system uses the form that is specified on the **Mailing Settings** tab of the *Project Preferences (PM101000)* form. By default, this is the *Change Order (PM643000)* report, which is shown in the screenshot below. This report supports the printing of revenue budget lines, header-level and line-level notes, and detailed descriptions of change orders.

A user can override the default printed form by defining a project-specific report on the **Mailing Settings** tab of the *Projects (PM301000)* form. For a project, a user can specify a custom print form and email notification template that should be used for the printing and emailing of change orders

prepared for the project. On the **Billing Settings** tab of the *Projects* form, a user can also specify the contact information of the customer to whom change orders prepared for the project should be sent.

Figure: Change Order (PM643000) report

Release of a Change Order

When a change order is released, the balances and commitments of the corresponding project are updated as follows:

- If the project has a revenue budget line with the same project task, cost code or inventory item, and account group as a revenue budget line of the change order, the system updates the following columns of the revenue budget line of the project on the **Revenue Budget** tab of the *Projects (PM301000)* form:

    - **Budgeted CO Quantity** = The total quantity of released change orders

    - **Budgeted CO Amount:** = The total amount of released change orders

    - **Revised Budgeted Quantity** = **Original Budgeted Quantity** + **Budgeted CO Quantity**

    - **Revised Budgeted Amount** = **Original Budgeted Amount** + **Budgeted CO Amount**

    - **Pending Invoice Amount** = **Completed (%)** * **Revised Budgeted Amount** – **Actual Amount** – **Draft Invoices Amount**

        : As the result of the update, this amount can take rational values, including negative ones.

- If the project does not have a revenue budget line with the same project task, cost code or inventory item, and account group as a revenue budget line of the change order, the system creates a new revenue budget line for the project based on the revenue budget line of the change order.

- If the project has a cost budget line with the same project task, cost code or inventory item, and account group as a cost budget line of the change order, the system updates the following columns of the cost budget line of the project on the **Cost Budget** tab of the *Projects* form:

  - **Budgeted CO Quantity** = The total quantity of released change orders

  - **Budgeted CO Amount:** = The total amount of released change orders

  - **Revised Budgeted Quantity** = **Original Budgeted Quantity** + **Budgeted CO Quantity**

  - **Revised Budgeted Amount** = **Original Budgeted Amount** + **Budgeted CO Amount**

- If the project does not have a cost budget line with the same project task, cost code or inventory item, and account group as a cost budget line of the change order, the system creates a new cost budget line for the project based on the cost budget line of the change order.

- If a commitment line of the change order has the *Update* status, the system updates the following values of the corresponding purchase order line on the **Document Details** tab of the *Purchase Orders (PO301000)* form based on the commitment line of the change order:

  - **Order Qty.** = Original **Order Qty.** of the purchase order line + **Quantity** of the commitment line of the change order

  - **Open Quantity** = **Order Qty.** – **Qty. on Receipts**

  - **Ext. Cost** = Original **Ext. Cost** of the purchase order line + **Amount** of the commitment line of the change order

  - **Open Amount** = **Ext. Cost** – **Received Amount**

  - **Requested Date** = **Date** of the commitment line of the change order

- If a commitment line of the change order has the *New Line* status, the system adds a new line with the following values to the corresponding purchase order to the **Document Details** tab of the *Purchase Orders* based on the commitment line of the change order:

  - **Order Qty.** = **Quantity** of the commitment line of the change order

  - **Ext. Cost** = **Amount** of the commitment line of the change order

  - **Requested Date** = **Date** of the commitment line of the change order

- If any commitment lines of the change order have the *New Document* status, the system groups these lines by vendor and produces a new purchase order document for each vendor based on the commitment lines of the change order as follows:

  - The **Order Date** of a created purchase order is the earliest date of the commitment lines of the change order.

  - The **Requested Date** of each purchase order line is the **Date** of the commitment line of the change order.

  - The system generates the default description of a created purchase order by using the following formula: **Description** = `'Change Order #' + [PMChangeOrder.RefNbr]`.

  A purchase order that originates from a change order cannot be edited or removed and can be only canceled, completed, or altered by a yet another change order.

- For each purchase order line updated by a change order, the system updates the corresponding project commitment on the *Commitments (PM306000)* form. For each purchase order line created

from a change order, the system creates a new project commitment. In these commitments, the following values are updated as follows:

- **Revised Committed Quantity** = **Order Qty.** of the purchase order line

- **Revised Committed Amount** = **Ext. Cost** of the purchase order line

- **Committed CO Quantity** = **Revised Committed Quantity** – **Original Committed Quantity**

- **Committed CO Amount** = **Revised Committed Amount** – **Original Committed Amount**

- **Committed Open Amount** = **Open Amount** of the purchase order line

If the project has a cost budget line with the same project task, cost code or inventory item, and account group as an updated or newly created commitment, the system updates the cost budget line of the project on the **Cost Budget** tab of the *Projects* form. Otherwise, the system creates a new cost budget line for the project based on the commitment.

For information about particular UI elements on the *Projects (PM301000)* form, see the *Projects* form reference topic in the Acumatica ERP User Guide.

Change Order Reversal

After release, a change order can no longer be changed and can only be reversed. When the change order is reversed, the system creates a new change order with lines that reverse the impact of the original change order. In this reversing change order, the quantity and amount of a commitment line cannot be greater than the **Received Qty.** and **Received Amount** of the corresponding purchase order line. A commitment line of this reversing change order also cannot reduce the **Order Qty.** of a purchase order line to zero. A user may cancel the purchase order line in this case.

Change Order Classes

Change order classes make it possible to split change orders by their impact on projects and by additional attributes that classes can have. A user can also segregate changes by class in reports to analyze, for example, which types of changes have the greatest impact on project profitability. For instance, by using a change order class, a user can create an internal change order that does not affect the revenue budget of projects and is not assigned any reference number within a project. This class of change orders does not have the **Revenue Budget** tab on the *Change Orders (PM308000)* form.

A list of attributes can be also specified for a change order class to be available in each change order belonging to the class. Change order classes support the use of global attributes defined on the *Attributes (CS205000)* form.

Change order classes can be configured on the *Change Order Classes (PM203000)* form, which is shown in the following screenshot.

Figure: Change Order Classes (PM203000) form

The default change order class, which is assigned to each newly created documents on the *Change Orders* form, can be specified on the *Project Preferences (PM101000)*, as shown in the following screenshot.

Figure: The default change order class

For information about particular UI elements on the *Change Order Classes (PM203000)* form, see the *Change Order Classes* form reference topic in the Acumatica ERP User Guide.

Purchase Order Workflow with Change Orders

Change orders can be created for the *Normal* type of purchase orders. The change order workflow affects the standard purchase order life cycle as follows:

- The change order workflow is automatically enabled for a normal purchase order if at least one purchase order line refers to a project with the change order workflow enabled.

- After a purchase order with the change order workflow has been assigned the *Open* status, the purchase order cannot be removed or put on hold.

- A purchase order with the *Pending Print* or *Pending Email* status cannot be removed from the system if there is a change order that refers to this purchase order.

- A purchase order with the *Open* status and with the change order workflow enabled can be modified by means of change orders only.

- A purchase order with the *Open* status or an open line of this purchase order can be canceled or completed.

Ability to Control the Original Committed Values

At the initial stage of a project, after the original commitments have been agreed on with vendors and entered into the system, a user can lock the commitments for the project, after which all further amendments to the committed figures should be tracked as project changes by change orders. The following commands in the **Actions** menu become available on the *Projects (PM301000)* form when the change order workflow is enabled for a project:

- **Lock Commitments**: When this action is applied for a project, purchase orders for this project cannot be created directly on the *Purchase Orders (PO301000)* form, existing purchase orders cannot be put on hold, and the commitments of the project can be modified by means of change orders only.

- **Unlock Commitments**: This action gives users the ability to directly enter purchase orders for the project.

Projects: Cost Codes

In Acumatica ERP 2018 R1, a new cost code feature has been introduced. Cost codes represent an additional classification level for project revenues and project costs, as subaccounts do in the General Ledger module. The **Cost Code** element has been added to various forms in the system so that it can be specified for General Ledger transactions and all document lines across the system where projects can be referenced, such as the lines of project budgets, Accounts Payable bills, purchase orders, Accounts Receivable invoices, expense entries, time cards, and rate tables of projects.

The cost codes feature can be used only with the Construction Edition. To start using the feature, on the *Enable/Disable Features (CS100000)* form, a user enables the *Cost Codes* feature. The list of cost codes, which can be used system-wide, is configured on the *Cost Codes (PM209500)* form. You can manually create cost codes as well as upload a list of cost codes from an Excel file.

A cost code has the following UI elements:

- **Cost Code**: The code that is used for posting

- **Description**: The default description specified for the cost code, which can be overridden in a particular cost budget line of a project

When the *Project Accounting* feature is enabled on the *Enable/Disable Features* form, even if the *Cost Codes* feature is not enabled, the system creates the default *0000* cost code with the *DEFAULT* description. When the *Cost Codes* feature is enabled, on the *Cost Codes (PM209500)* form, a user can change this cost code and its description but cannot delete the default cost code because its system identifier is one of the components of the compound key in the `PMBudget` table in the database.

Cost codes have a segmented structure, which can be configured on the *Segmented Keys (CS202000)* form for the *COSTCODE* segmented key. Initially, *COSTCODE* is a one-segment key that consists of four numeric symbols. The following screenshot displays the *Cost Codes (PM209500)* form with the list of cost codes for which *COSTCODE* has been configured to have three segments, with each segment consisting of two numbers.

: Notice that the **Cost Code** of the *DEFAULT* cost code has been also changed.

ERP Solutions SF ▾ Cost Codes ☆

			*Cost Code	*Description
	◊	☐	00-00-00	DEFAULT
	◊	☐	01-00-00	GENERAL REQUIREMENTS
	◊	☐	01-10-00	SUMMARY
	◊	☐	01-11-00	Summary of Work
	◊	☐	01-11-13	Work Covered by Contract Docum
	◊	☐	01-11-16	Work by Owner
	◊	☐	01-11-19	Purchase Contracts
	◊	☐	01-12-00	Multiple Contract Summary
	◊	☐	01-12-13	Summary of Contracts
	◊	☐	01-12-16	Work Sequence
	◊	☐	01-12-19	Contract Interface
	◊	☐	01-14-00	Work Restrictions
	◊	☐	01-14-13	Access to Site
	◊	☐	01-14-16	Coordination with Occupants
	◊	☐	01-14-19	Use of Site
	◊	☐	01-18-00	Project Utility Sources
	◊	☐	01-20-00	PRICE AND PAYMENT PROCEDURES
	◊	☐	01-21-00	Allowances
	◊	☐	01-21-13	Cash Allowances
	◊	☐	01-21-16	Contingency Allowances
	◊	☐	01-21-19	Testing and Inspecting Allowan
	◊	☐	01-21-23	Installation Allowances
	◊	☐	01-21-26	Product Allowances
	◊	☐	01-21-29	Quantity Allowances
	◊	☐	01-21-43	Time Allowances
	◊	☐	01-22-00	Unit Prices

Figure: The list of three-segment cost codes

The following primary concepts of the cost codes feature are described in the remaining sections of this topic:

- *Project Budgets with Cost Codes*
- *Project Billing by Task and Cost Code*
- *Forms That Support Cost Codes*
- *Forms That Temporarily Do Not Support Cost Codes*

Project Budgets with Cost Codes

With the *Cost Codes* feature enabled on the *Enable/Disable Features (CS100000)* form, on the **Summary** tab of the *Projects (PM301000)* form, in the **Revenue Budget Level** box, the revenue budget of a project can be defined at the *Task and Cost Code* detail level, as shown in the following screenshot.
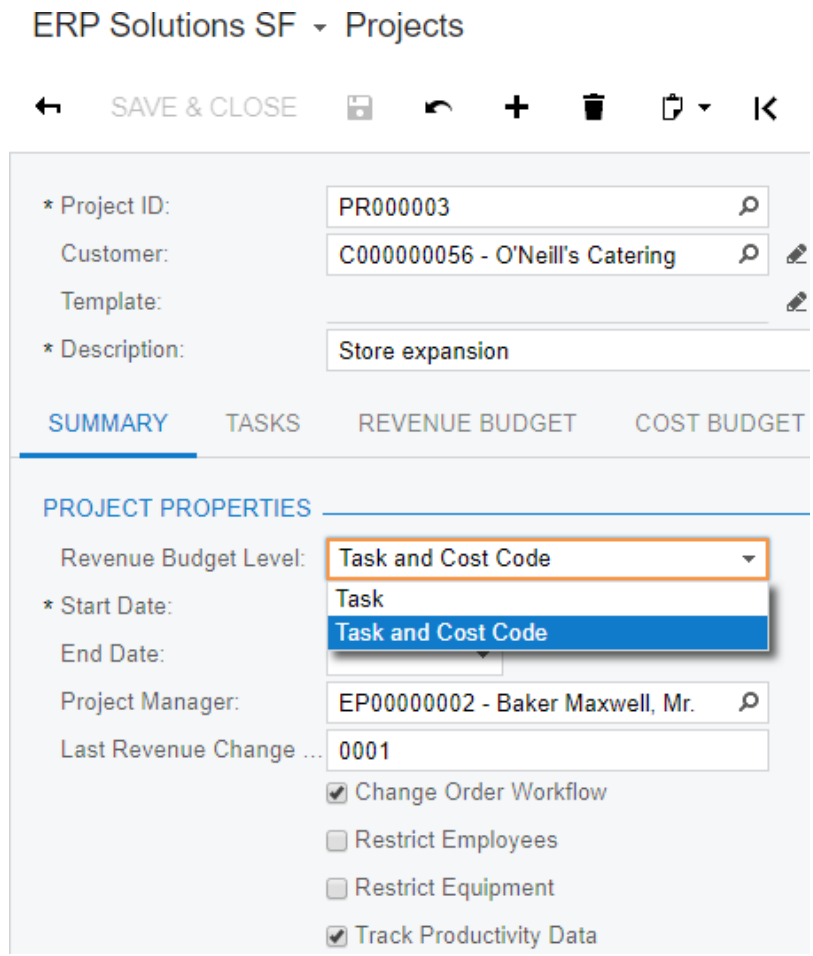
Figure: The revenue budget level of a project

Project budget lines are now represented by cost codes instead of inventory items, as shown in the following screenshots.

Figure: The revenue budget of a project defined at the task and cost code level

Figure: The cost budget of a project defined at the task and cost code level

The cost codes presented in project budgets are considered project-specific. The **Cost Codes** selector on Acumatica ERP forms has the corresponding **Project Codes** filter tab. When a user selects a cost code for a document line with the selected project, project task, and account, on the **Project Codes** filter tab of the lookup table, the system shows the cost codes that are used in budget lines of the same project, for the same project task, and for the same account group that corresponds to the account (see the following screenshot). The cost code description that is displayed in the **Project Codes** filter tab of the selector is retrieved from the corresponding project budget line. The **All Records** filter tab of the selector lists all the existing cost codes.
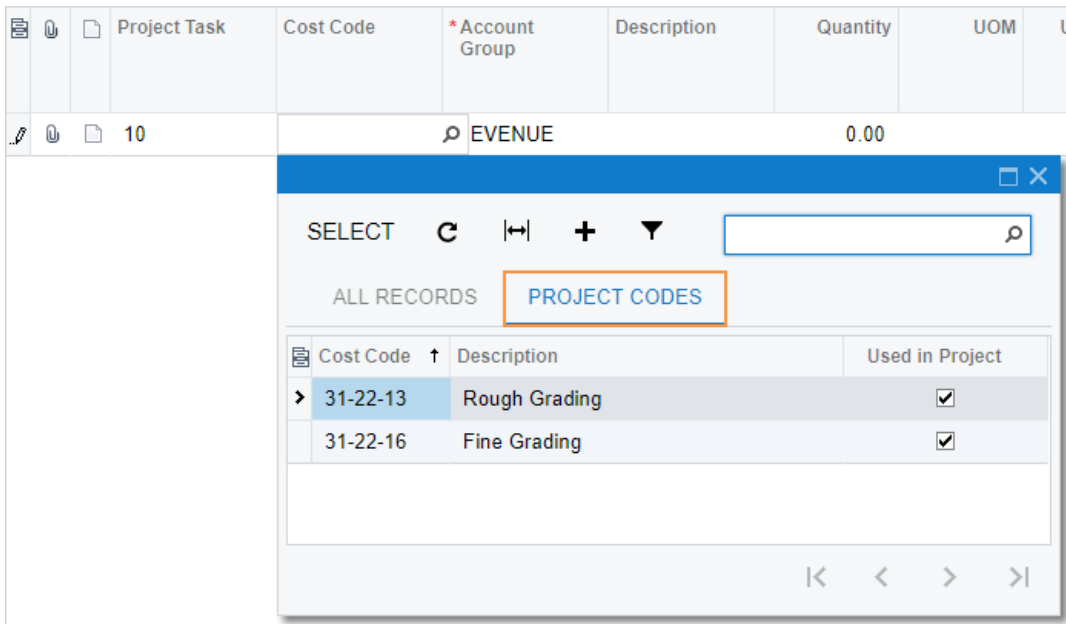
Figure: The Project Codes filter tab of the Cost Codes selector

For information about project budgets with cost codes, see the *Project Cost Codes* topic in the Acumatica ERP User Guide.

Project Billing by Task and Cost Code

With the *Cost Codes* feature enabled on the *Enable/Disable Features (CS100000)* form, a project can be billed by task and cost code. Progress billing by task and cost code is available for projects with the *Task and Cost Code* revenue budget level (see the following screenshot). Time and material billing by task and cost code is available for a project with any revenue budget level. Both types of billing work similarly to billing by task and inventory item.
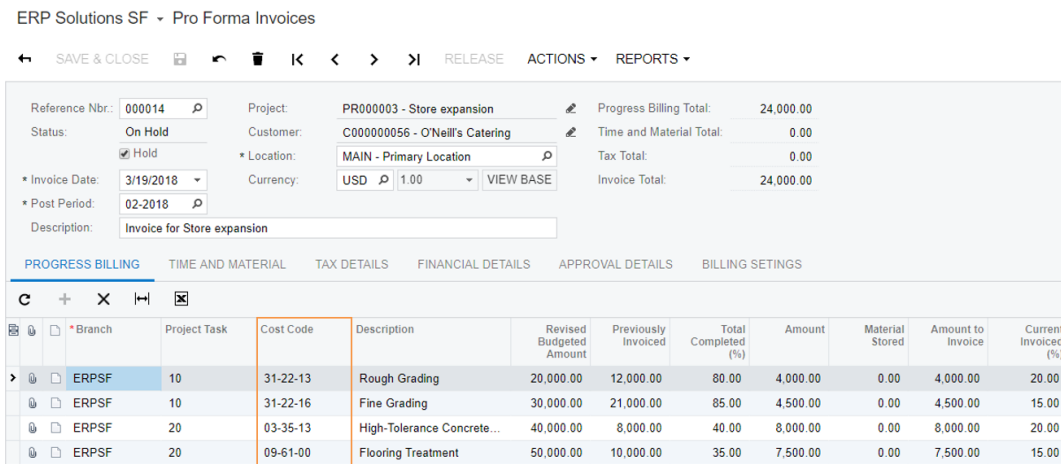
Figure: The *Pro Forma Invoices (PM307000)* form with the *Cost Codes* feature enabled

For information about project billing, see the *Project Billing* topic in the Acumatica ERP User Guide.

Forms That Support Cost Codes

A user can create purchase orders, Account Payable bills, and other entities for which cost codes are specified and can use cost codes in reports and pivot tables. The following list of forms and documents now includes the **Cost Code** element:

- *Project Transactions (PM304000)* form
- *Change Orders (PM308000)* form: The **Revenue Budget** (when the **Revenue Budget Level** is *Task and Cost Code*), **Cost Budget**, and **Commitments** tabs
- *Pro Forma Invoices (PM307000)* form: The **Progress Billing** and **Time and Material** tabs
- *Projects (PM301000)* form: The **Revenue Budget** (when the **Revenue Budget Level** is *Task and Cost Code*) and **Cost Budget** tabs
- *Cost Codes (PM209500)* form
- *Project Budget (PM309000)* form
- *Project Transactions (PM401000)* inquiry form
- *Commitments (PM306000)* inquiry form
- *Pro Forma Invoice (PM642000)* report
- *Change Order (PM643000)* report
- *Project Balance (PM621000)* report
- *Project Templates (PM208000)* form: The **Revenue Budget** (when the **Revenue Budget Level** is *Task and Cost Code*) and **Cost Budget** tabs
- *Task (CR306020)* form
- *Activity (CR306010)* form
- *Event (CR306030)* form
- *Email Activity (CR306015)* form: The **Details** tab
- *Employee Time Activities (EP307000)* form
- *Employee Time Card (EP305000)* form: The **Summary** and **Details** tabs
- *Equipment Time Card (EP308000)* form: The **Summary** and **Details** tabs
- *Expense Receipt (EP301020)* form
- *Expense Claim (EP301000)* form: The **Expense Claim Details** tab
- *Journal Transactions (GL301000)* form
- *Journal Vouchers (GL304000)* form
- *Transactions (CA304000)* form
- *Bills and Adjustments (AP301000)* form
- *Quick Checks (AP304000)* form
- *Invoices and Memos (AR301000)* form
- *Cash Sales (AR304000)* form
- *AR Invoice (AR641000)* report
- *Sales Orders (SO301000)* form
- *Invoices (SO303000)* form
- *Purchase Orders (PO301000)* form
- *Purchase Receipts (PO302000)* form
- *Purchase Order (PO641000)* report
- *Receipts (IN301000)* inquiry form

- *Issues (IN302000)* inquiry form

Forms That Temporarily Do Not Support Cost Codes

The support of cost codes is planned for the future for the following forms:

- *Rate Tables (PM204200)* form
- *Rate Lookup Rules (PM205000)* form.
- *Row Sets (CS206010)* form
- *Column Sets (CS206020)* form
- *Unit Sets (CS206030)* form
- *Purchase Order (PO641000)* report
- *AR Invoice (AR641000)* report

> **:** As a workaround for the *Purchase Order (PO641000)* and *AR Invoice (AR641000)* reports, a user can add the **Cost Code** column to these reports by creating a custom version of the report.

Projects: Other Improvements

Retainage in Project Invoices

The ability to specify retainage in project invoices is now available for any project if the *Retainage Support* feature is enabled on the *Enable/Disable Features (CS100000)* form. A user can specify the default retainage percentage for a project on the **Summary** tab of the *Projects (PM301000)* form, as shown in the following screenshot.

Figure: Defining the default retainage for a project

Retainage tracking is supported for progress billing and time and material billing of projects. If the draft invoice (that is, pro forma invoice) workflow is used, the retained amounts are copied from the pro forma invoice to the Accounts Receivable invoice when the latter is created. The screenshot below shows a pro forma invoice of a project with retainage percentages and amounts in the document lines. Also, for a particular project, a user can review the information on the retainage held, released, and paid by invoice on the **Invoices** tab of the *Projects (PM301000)* form.

Figure: Viewing retainage in a pro forma invoice

For details on accounting for retainage, see *Finance: Retainage in Accounts Payable Bills and Accounts Receivable Invoices*.

Retainage in Project Cost Commitments

Project cost commitments are calculated with respect to retainage in purchase orders. The amount values on the *Commitments (PM306000)* form include the retained amount, while the related purchase order line itself contains the amount after retainage in the **Amount** box on the **Document Details** tab of the *Purchase Orders (PO301000)* form. The following elements on the *Commitments (PM306000)* form are calculated including the retainage:

- **Original Committed Amount**
- **Committed CO Amount**
- **Revised Committed Amount**
- **Committed Open Amount**
- **Committed Invoiced Amount**

On the **Cost Budget** tab of the *Projects (PM301000)* form, the commitment-related columns display values consistent with those on the *Commitments (PM306000)* form.

For details on using retainage in purchase orders, see *Distribution: Retainage in Purchase Orders*.

The Material Stored Amount in a Progress Billing Pro Forma Invoice

A progress billing pro forma invoice supports the scenario of including the material stored amount in the amount to be invoiced. If the *Construction* feature is enabled on the *Enable/Disable Features (CS100000)* form, the following columns are available on the **Progress Billing** tab of the *Pro Forma Invoices (PM307000)* form:

- **Amount**: The original line amount calculated by the progress billing rule
- **Material Stored**: The amount of the material stored

The value of the **Amount to Invoice** column, which is also located on the **Progress Billing** tab, is calculated as the sum of the values in the **Amount** column and the **Material Stored** column. The following screenshot displays the **Progress Billing** tab of the *Pro Forma Invoices (PM307000)* form with material stored amount specified.

Figure: Specifying the material stored amount

Production Data Tracking

A new set of columns is available on the **Cost Budget** tab of the *Projects (PM301000)* form if the **Track Production Data** check box is selected on the **Summary** tab of this form for the project. The new columns, which reflect the current production values, are the following:

- **Cost to Complete**: The current projected amount that is required to complete the cost budget line, as reported from the field.

- **Cost at Completion**: The current projected total cost amount of the cost budget line, as reported from the field.

- **Percentage of Completion**: The current approximate percentage of project completion that corresponds to the cost budget line, as reported from the field.

> **:** The importing of data into these columns can be scheduled on a regular basis by means of an import scenario or with a web service API call.

The additional columns listed below have been added to the **Cost Budget** tab of the *Projects* form so that users can import extra information to be tracked in the system and analyzed against the budget figures. The columns are intended primarily for capturing production data that can be regularly received from the field to support the following scenarios:

- The project manager has access to the current production values and can compare them to the planned budget figures to determine the project productivity at the moment.

- The project manager can build the production trend based on the history of the imported values to determine if any corrective actions need to be taken to reach the planned values.

Every time a new value is entered into one of the columns listed above and the user's changes are saved, the system copies the previous value in the column to one of the following corresponding columns:

- **Last Cost to Complete**: The previous **Cost to Complete** value

- **Last Cost at Completion**: The previous **Cost at Completion** value

- **Last Percentage of Completion**: The previous **Percentage of Completion** value

The first screenshot below shows the **Cost Budget** tab of the *Projects (PM301000)* form with the production data populated, and the second screenshot shows a sample pivot table (provided with the *SalesDemo* data set) for comparison of the figures.

Project Task	Cost Code	Account Group	Description	Original Budgeted Quantity	UOM	Unit Rate	Original Budgeted Amount	Budgeted CO Amount	Revised Budgeted Amount	Original Committed Quantity	Original Committed Amount	Committed CO Quantity	Committed CO Amount	Revised Committed Quantity	Revised Committed Amount	Committed Invoiced Amount	Committed Open Amount	Actual Amount	Cost to Complete	Cost at Completion	Percentage of Completion	Last Cost to Complete	Last Cost at Completion	Last Percentage of Completion
10	31-2...	EQUIP...	Grading - equi...	20.00	PIE...	100.00	2,000.00	500.00	2,500.00	20.00	1,800.00	5.00	450.00	25.00	2,250.00	1,350.00	900.00	3,350.00	1,500.00	4,500.00	60.00	2,000.00	4,000.00	0.00
10	31-2...	LABOR	Grading - labor	100.00	HO...	50.000	5,000.00	1,500.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000.00	1,200.00	7,000.00	70.00	1,500.00	6,500.00	75.00
10	31-2...	MATERI...	Grading - mat...	80.00	KG	40.000	3,200.00	400.00	3,600.00	160.00	6,400.00	10.00	400.00	170.00	6,800.00	5,600.00	1,200.00	8,800.00	3,000.00	9,000.00	55.00	0.00	3,200.00	50.00
20	09-6...	EQUIP...	Flooring - equi...	10.00	PACK	90.000	900.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	900.00	0.00	900.00	900.00	1,000.00	1,000.00	0.00	0.00	0.00	0.00
20	09-6...	LABOR	Flooring - labor	100.00	HO...	80.000	8,000.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8,000.00	8,000.00	8,000.00	0.00	0.00	0.00	0.00
20	09-6...	MATERI...	Flooring - mat...	100.00	SQFT	70.000	7,000.00	0.00	7,000.00	0.00	4,000.00	0.00	0.00	0.00	4,000.00	0.00	4,000.00	7,000.00	7,000.00	7,000.00	0.00	0.00	0.00	0.00

Figure: Tracking the production data for a project

BUDGET SUMMARY BY ACCOUNT GROUP

Type	Account Group	Budgeted Amount	Revised Amount	Actual Amount	Cost to Complete	Cost at Completion	Percentage of Completion
Asset	Total			3,750.00			
Expense	EQUIPMENT	2,900.00	3,400.00	4,250.00	2,500.00	5,500.00	60.00
	LABOR	13,000.00	14,500.00	13,000.00	9,200.00	15,000.00	70.00
	MATERIAL	10,200.00	10,600.00	15,800.00	10,000.00	16,000.00	55.00
	Total	26,100.00	28,500.00	33,050.00	21,700.00	36,500.00	185.00
Income	REVENUE	140,000.00	140,000.00	38,000.00			
	Total	140,000.00	140,000.00	38,000.00			
Liability	Total			-22,500.00			

Figure: Using a pivot table to compare the production data for a project

The columns described in this section are available in the `PMBudget` table for generic inquiries and Report Designer reports. The history of values that were imported into the current production columns is stored in the new `PMBudgetProduction` table, which is also available for use in custom generic inquiries and Report Designer reports. If necessary, the set of production columns can be extended by means of standard customization techniques. For instance, hours to complete, hours at completion, and other metrics can be added.

Improvements to the Project Balance Report

The following enhancements have been introduced in the *Project Balance (PM621000)* report:

- Project and task report input parameters
- Subtotals by project task and balance type
- Project totals by balance type, with the profitability margin calculated as total income minus total expenses
- Enhanced layout
- Improved error and warning messages to help the user to troubleshoot issues

The updated *Project Balance (PM621000)* report is shown in the following screenshot.

Figure: Viewing enhancements to the Project Balance report

Now users can access the *Project Balance (PM621000)* report from the *Projects (PM301000)* form by selecting the **Print Project Balance** command on the **Reports** menu, as the following screenshot shows.
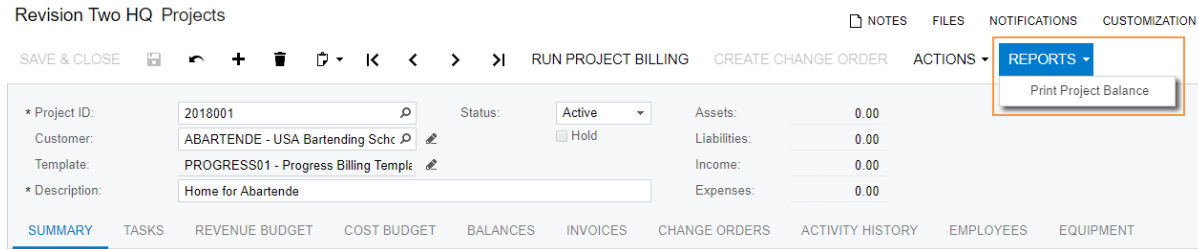
Figure: Accessing the report from a project

Service: Integration

Starting from Version 2017 R2, the Service suite is fully integrated with Acumatica ERP and its license policies. The modules of the Service suite will no longer be provided as a customization and are offered as a feature of Acumatica ERP.

Important: If the Service Management customization has been used in Version 6.1 or earlier, users have to prepare the system before upgrading it, as described below.

System Upgrade Procedure

If the Service Management customization has been used, to upgrade the system for the new version, users should perform the following steps:

1. On the *Customization Projects (SM204505)* form, install the latest Service Management customization release for Acumatica 6.10 (with the **Publish with Cleanup** check box selected in the **Publish to Multiple Companies** dialog box). Customization can be downloaded from the *Partner Portal*. On the portal, users can find instructions.

2. Unpublish the Service Management customization file. It also can be deleted.

3. Upload and publish the `SM_Upgrade2017R2.zip` customization file (which can also be downloaded from the *Partner Portal*). This step clears the site map for the Service suite.

4. Unpublish the `SM_Upgrade2017R2.zip` customization file. It also can be deleted.

5. Install the release 2017R2 Beta.

6. Upgrade the environment.

7. On the *Enable/Disable Features (CS100000)* form, enable the necessary features of the Service suite: *Service Management*, *Equipment Management*, and *Route Management*. Under the *Service Management* feature, also select a *Staff Member Pack* to be used in the system, which is one of the following: *10 Staff Members*, *50 Staff Members*, or *Unlimited Staff Members*. Under the *Route Management* feature, also select a *Vehicle Pack* to be used in the system, which is one of the following: *10 Vehicles*, *50 Vehicles*, or *Unlimited Vehicles*.

   : Make sure that the license includes the necessary features for the company's needs.

Service Implementation Through Features

The Service suite—which consists of the Service Management, Equipment Management, and Route Management modules—is now fully integrated with Acumatica ERP.

Before the integration, the user had to install the Service suite by using a customization file. Now the Service suite code is fully integrated with the core Acumatica ERP code. That is, the features of the Service suite can be enabled or disabled on the *Enable/Disable Features (CS100000)* form (see the following screenshot).

Revision Two HQ ⏷ Enable/Disable Features

↶ MODIFY **ENABLE**

- ☑ Customer Portal
  - ☑ B2B Ordering
  - ☑ Case Management on Portal
  - ☑ Financials on Portal
- ☑ Service Management
  - ☑ Staff Member Pack
    - ☐ 10 Staff Members
    - ☐ 50 Staff Members
    - ☑ Unlimited Staff Members
  - ☑ Equipment Management
  - ☑ Route Management
    - ☑ Vehicle Pack
      - ☐ 10 Vehicles
      - ☐ 50 Vehicles
      - ☑ Unlimited Vehicles

Figure: The features of the Service suite on the Enable/Disable Features (CS100000) form

In addition, this new functionality restricts the number of staff members—that is, active employees and vendors that perform services—that can be maintained in the Service Management module. The options are 10 staff members (the default option of the *Service Management* feature), 50 staff members, or an unlimited number of staff members. Users should make sure that their license includes the correct staff member pack for their company's needs.

As with the staff member pack, the number of active vehicles in the system is restricted by the new functionality. The options are 10 vehicles (the default option of the *Route Management* feature), 50 vehicles, or an unlimited number vehicles. Users should make sure that their license includes the correct vehicle pack for their company's needs.

Changed Form IDs from *SD* to *FS*

All form IDs in the Service suite have changed to replace the *SD* (for *Service Dispatch*) abbreviation with the *FS* (for *Field Service*) abbreviation. This modification was made so that the form IDs match the suite abbreviation of the Service suite database tables and code references. Now all screen IDs and database and code references follow the same standard.

For example, the form ID *SD100100* (for the *Service Management Preferences* form) is now *FS100100*.

📝 **:** We recommend that the users take these changes into consideration and update any customizations and reports made for the Service suite as follows:

- Modify every file name from `SDXXXXXX` to `FSXXXXXX`.

- Modify every directory file name from `/SD/` to `/FS/`.

- Modify every solution name space from `FieldService.ServiceDispatch` to `PX.Objects.FS.`

Service: Multi-Currency Support

Starting from Version 2018 R1, the Service suite supports multiple currencies. If your company provides services for companies in different countries with different currencies, now it is possible to create service orders, appointments, and service contracts. This gives you the ability to support a multinational company that provides services across multiple countries.

Figure: The currency setting of a service order

When a user creates a service order or an appointment, the system automatically selects the currency defined for the selected customer on the *Customers (AR303000)* form. If needed, the user can manually modify the currency or rate.

Service: New Life Cycle of Service Contracts

In previous versions of Acumatica ERP, in the Equipment Management and Route Management modules, the *Service Contracts (FS305700)* and *Route Service Contracts (FS300800)* forms had the **Status** box, in which a user could change the status of a contract (which could be *Open*, *On Hold*, or *Inactive*) at any time. The system did not update the status automatically when contracts were expired. In Acumatica ERP 2018 R1, the following new statuses have been added: *Draft*, *Active*, *Suspended*, *Canceled*, and *Expired*.

New elements related to the service contract life cycle have been added to various forms of the system. The following sections describe the changes in details.

Upgrade Notes

After the upgrade to Acumatica ERP 2018 R1, the *Generate from Service Contracts (FS500300)* and *Generate Route Appointments (FS500200)* forms will show schedules based on the next execution date. This date is now shown in the **Next Execution Date** box of the *Service Contract Schedules (FS305100)* and *Route Service Contract Schedules (FS305600)* forms. For the schedules created before the system upgrade, to calculate the next execution date, a user has to click the **Fix Schedules Without Next Execution Date** button (shown in the following screenshot) on the *Generate from Service Contracts* and *Generate Route Appointments* form.

Figure: The Fix Schedules Without Next Execution Date button

This step needs to be done only once.

The Draft Status of Service Contracts

The *Draft* status, shown in the following screenshot, is the initial status of a contract that indicates that the contract is not yet activated, and a user cannot generate schedules and invoices.

Figure: The Draft status of a contract

A contract with the *Draft* status can be activated or canceled.

The Active Status of Service Contracts

The *Active* status indicates that a user can generate schedules and invoices for a contract. To give the contract this status, the user has to invoke the new **Activate Contract** action (see the screenshot below).

Figure: The Activate Contract action

Contracts with the *Draft* and *Suspended* statuses can be activated. If a contract has the *Suspended* status and a user invokes this action, the **Activation Contract** dialog box appears, in which you can select a date of activation in the **Activation Date** box and an **Effective Recurrence Start Date** for each active schedules of the contract. (See the following screenshot.)

Figure: The Activation Contract dialog box

For example, suppose that a contract starting January 1 has a schedule with occurrence every 6 months on the 1st day of the month. If the contract is reactivated on March 3, the user can select whether to **Change Recurrence** and make **Next Execution** date calculated from the reactivation date or from the custom **Effective Recurrence Start Date**, or keep the original next execution date (which is June 1).

Certain elements will be read-only once the contract is activated, such as **Billing Type**.

The Suspended Status of Service Contracts

The *Suspended* status indicates that a contract is on hold and can be activated at any time. A user cannot generate service orders and appointments from contracts with this status. Only contracts with the *Active* status can be suspended.

To suspend a contract, the user invokes the **Suspend Contract** action (see the following screenshot).
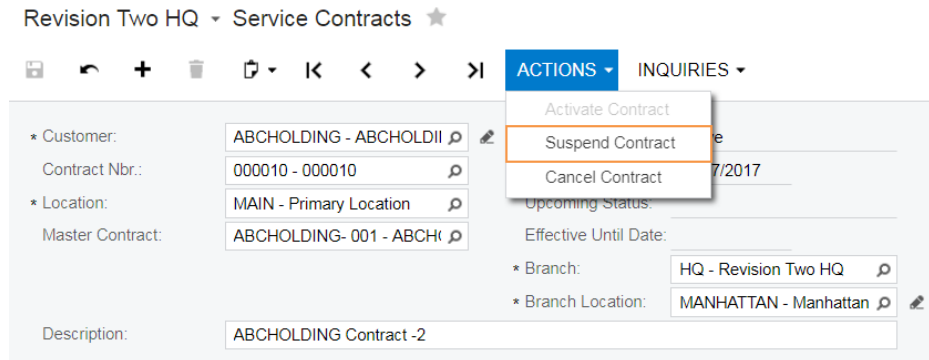
Figure: The Suspend Contract action

When the user invokes this action, the **Suspend Contract** dialog box opens, in which the user specifies the suspension date, as the screenshot below shows. The system deletes the documents that were generated for the dates that are the same as or later than the suspension date.
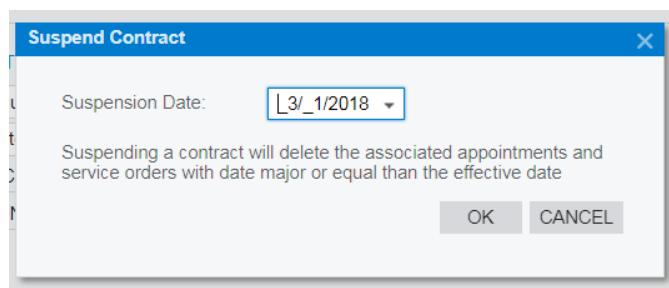
Figure: The Suspend Contract dialog box

A contract with the *Suspended* status is read-only; it can be activated or canceled.

The Canceled Status of Service Contracts

The *Canceled* status indicates that a contract has been terminated and cannot be activated. A user cannot generate service orders and appointments from a canceled contract. A contract can be canceled if it has the *Active* or *Suspended* status.

To cancel a contract, the user invokes the **Cancel Contract** action (see the following screenshot).

Figure: The Cancel Contract action

When the user invokes this action, the **Terminate Contract** dialog box opens, in which the user specifies the cancellation date, as the screenshot below shows. The system deletes the documents that were generated for the dates that are equal to or greater than the cancellation date.

Figure: The Terminate Contract dialog box

A contract with the *Canceled* status is read-only.

The Expired Status of Service Contracts

The *Expired* status indicates that the expiration date specified for a contract has passed, and no further activities for the contract are needed (see the following screenshot).

Figure: The Expired status of a contract

To update the status of a contract, the *Update to Upcoming Status* action has to be selected and performed for the contract on the *Process Service Contracts (FS501200)* form. To automatically invoke this action for contracts in the system, the *Update Service Contract Status* automation schedule has been created on the *Automation Schedules (SM205020)* form. This schedule runs daily at midnight. You can modify this schedule if necessary.

New Elements of the Service Contracts (FS305700) and Route Service Contracts (FS300800) Forms

The new **Effective From Date** box has been added to the Summary area of the *Service Contracts (FS305700)* and *Route Service Contracts (FS300800)* forms (see the screenshot below). This box displays the date from which the status of the contract is effective. Additionally, the **Upcoming Status** and **Effective Until Date** boxes have been added to show the upcoming status of the contract and the date until which the status of the contract will be effective, respectively.

Figure: New elements in the Summary area

The **Contract History** tab has been added to the forms (see the screenshot below). On this tab, a user can review the actions performed upon a contract and its schedules. The following actions on the contract can be tracked on the tab: *Create*, *Activate*, *Suspend*, *Cancel*, and *Expire*. The following actions on the schedule can be tracked on the tab: *Create*, *Deactivate*, and *Delete.* The tab also reflects the changes in schedule recurrence after the user reactivates the contract.

Figure: The Contract History tab

Other Modifications

The following changes has been made on the *Service Contract Schedules (FS305100)* and *Route Service Contract Schedules (FS305600)* forms:

- The start and expiration dates of schedules are now independent from those of the contract. A user can modify these dates in the **Start Date** and **Expiration Date** boxes.

- The **Enable Custom Start Date** check box has been removed. To change the upcoming execution date, a user now modifies the start date.

- The **Last Processed** box has been removed. Now the **Next Execution Date** box indicates the upcoming execution date of a schedule.

The following changes have been made on the *Generate from Service Contracts (FS500300)* and *Generate Route Appointments (FS500200)* forms:

- On the **Run History** tab, the **Rollback Latest Generation Process** action has been removed.

- The forms now only display those schedules for which documents can be generated within the specified period.

Service: Standardized Billing Service Contract

In previous versions of Acumatica ERP, the billing for a service contract was performed after the appointments were attended based on what was done during the appointment. Now Acumatica ERP provides the ability to set up a standardized billing service contract so that a user can define the services that will be covered in the billing period, the number of appointments or hours, the fee to pay in the billing period, and the overage price if the specified number of appointments or hours within the period is exceeded. At the end of each billing period, the customer will receive an invoice that includes the covered amount plus the overage price and the non-covered items used in the appointments within the billing period.

Billing Types

To implement the billing functionality, the following billing types have been added to the *Service Contracts (FS305700)* and *Route Service Contracts (FS300800)* forms:

- *As Performed Billings*: This type is used for contracts for which the billing occurs after appointments have been attended, and invoices are generated that include the provided items and services during appointments. This type of billing was used for all service contracts in previous versions of Acumatica ERP.

- *Standardized Plus Usage/Overage Billings*: This type is used for contracts for which the duration of billing periods and the items to be provided for the service contract have been agreed upon. An invoice is generated at the end of each defined billing period and includes the agreed-upon amount as well as any overage and non-covered items used during the appointment of the period.

Life Cycle of a Contract with Standardized Billing

A service contract with standardized billing is processed as follows:

- Creation and activation of the service contract: A user creates a contract of the *Draft* status and specifies the *Standardized Plus Usage/Overage Billing* billing type for the contract. On the **Service per Period** tab, the user specifies the billing period and the items that have to be provided during the period. The user activates the contract and the contract enters the service contract cycle until the contract is expired, canceled, or suspended.

  When the user activates the contract, the first billing period is automatically activated.

- Collection of money of the service contract (optional): At any time of the service contract cycle, a customer can submit a prepayment for the service contract that a responsible person of your company will record on the *Payment and Applications (AR302000)* form .

- In-period appointments: Appointments can be created from the associated recurring schedule of the contract or can be created on the fly. The appointments will be completed by a staff member and closed by a manager. The billing price of an appointment depends on the remaining amount of the item for the current billing period.

- Generation of an invoice from the service contract: The invoice is generated for the billing period. If appointments or service orders have been created, during the generation process, the system compares the items included in the appointments or service orders to those included in the contract. An invoice is created with the covered amount plus any overage and non-covered items used during the in-period appointments.

- Readjustment of the upcoming billing period (optional): Before the upcoming billing period is activated, the user can readjust the items to include in the upcoming billing period, as well as their quantities and prices.

- Activation of upcoming billing period (optional based on configuration): The user activates next upcoming period. This activation indicates that appointments for this period can be attended, and the period can no longer be modified. If appointments have already been scheduled for the upcoming billing period, when the user activates the period, the system releases these appointments (and related service orders) from hold and calculates the estimated billing amount. Additionally, the next billing period for the service contract is generated.

  You can set up the system to automatically activate each upcoming billing period after a service contract invoice is created.

Changes to the Equipment Management Preferences (FS100300) and Route Management Preferences (FS100400) Forms

The **Invoice Generation Settings** section has been added to both the *Equipment Management Preferences (FS100300)* and *Route Management Preferences (FS100400)* forms to give you the ability to set up the invoice generation preferences for service contracts (see the screenshot below, which shows the section on the *Equipment Management Preferences* form). The section includes the following elements:

- **Generates Invoice In**: Defines in which module the invoice is generated: **Accounts Receivable** or **Sales Order**. **Accounts Receivable** is used if the appointments and service orders of contracts never contain stock items. **Sales Order** is used if the appointments and service orders of contracts can contain stock items.

- **Default Terms**: Defines the credit terms that are used when the system generates a document in the Sales Orders or Accounts Receivable module if the customer has no default terms defined.

- **Use Sales Account**: Defines the source of the sales account used for the transactions. This setting is used for items associated with the service contract.

- **Combine Sales Sub. From**: Defines the rule of composing the subaccount from other related subaccounts. This setting is used for items associated with the service contract.

Figure: The Invoice Generation Settings section

Changes on the Service Contracts (FS305700) and Route Service Contracts (FS300800) Forms

The **Summary** tab has been added to the *Service Contracts (FS305700)* and *Route Service Contract (FS300800)* forms (see the screenshot below). The following modifications have been made related to this tab:

- The following elements that were in the Summary area of the form have been moved to the new **Summary** tab: **Start Date**, **Expiration Date**, **Salesperson**, **Commissionable**, **Vendor**, and **Schedule Generation Type**.

- The **Enable Expiration Date** check box, which was in the Summary area of the form, has been replaced with the **Expiration Type** box on the Summary tab, which contains the following options: *Expiring* and *Unlimited*.

- The **Billing Type** box has been added so the user can specify a type of contract (*Standardized Plus Usage/Overage Billings* or *As Performed Billings*).

- If the **Billing Type** is *As Performed Billings*, the **As Performed Settings** section is now displayed on the tab. The section includes some elements that previously were in the Summary area of the form, such as the **Billing Settings** box that is now called **Take Price From**.

- If the **Billing Type** is *Standardized Plus Usage/Overage Billings*, the **Standardized Billing Settings** section is now displayed on the tab. In the section, the user specifies the period of the standardized billing by selecting one of the following options: *Week*, *Month*, *Quarter*, *Half a Year*, and *Year*. The section also includes the **Last Period Date** and **Next Period Date** boxes, which contain information on period dates.

- The new **Bill To** box now has been added to the tab, so that a user can send a bill to a customer or customer location that is different from the customer or customer location specified for the contract. A user can select the *Specific Account* option to send a bill to a customer or customer location that is different than the customer or customer location specified for the contract (which is indicated by the default *Customer Account* option).

Revision Two HQ ▾ Service Contracts ☆

💾 ↩ ✚ 🗑 🗐 ▾ |< ‹ › >| ACTIONS ▾ INQUIRIES ▾

＊ Customer:	ABCHOLDING - ABCHOLDII 🔍 ✎	Status:	Draft
Contract Nbr.:	000012 - 000012 🔍	Effective From Da...	
＊ Location:	MAIN - Primary Location 🔍	Upcoming Status:	
Master Contract:	ABCHOLDING- 001 - ABCH(🔍	Effective Until Date:	
		＊ Branch:	HQ - Revision Two HQ 🔍
		＊ Branch Location:	MANHATTAN - Manhattan 🔍 ✎
Description:	ABCHOLDING Contract - 1		

SUMMARY   SCHEDULES   SERVICES PER PERIOD   CONTRACT HISTORY

CONTRACT SETTINGS ⎯⎯⎯⎯   **STARDANDIZED BILLING SETTINGS** ⎯⎯

＊ Start Date:	12/28/2017 ▾	Usage Billing ...	AP AP - Invoice By App
Expiration Type:	Unlimited ▾	Period:	Month ▾
Expiration Date:	▾	Last Period D...	
Schedule Gen...	Service Orders ▾	Next Period D...	
Vendor:	🔍 ✎	Bill To:	Customer Account ▾
Salesperson ID:	🔍 ✎	Account:	ABCHOLDING - ABCH ✎
	☐ Commissionable	Location:	MAIN - Primary Locatio ✎

BILLING SETTINGS ⎯⎯⎯⎯

Billing Type: Standardized Plus Us ▾

| As Performed Billings |
| **Standardized Plus Usage/Overage Billings** |

Figure: The Summary tab

If the billing type of a contract is *Standardized Plus Usage/Overage Billings*, the **Services per Period** tab is displayed, in which a user defines the information for the standardized billing. If the coverage of the service applies for only one equipment entity, the user can enter the associated target equipment. For every service and non-stock item, the user can enter a rate or recurring item price that will be used per hour or quantity in the standardized billing. On this tab, the user can also specify the overage item price that will be used in the usage billing if the contract amount is exceeded. The user can also see the usage of current running billing period as well as history of past billing periods.
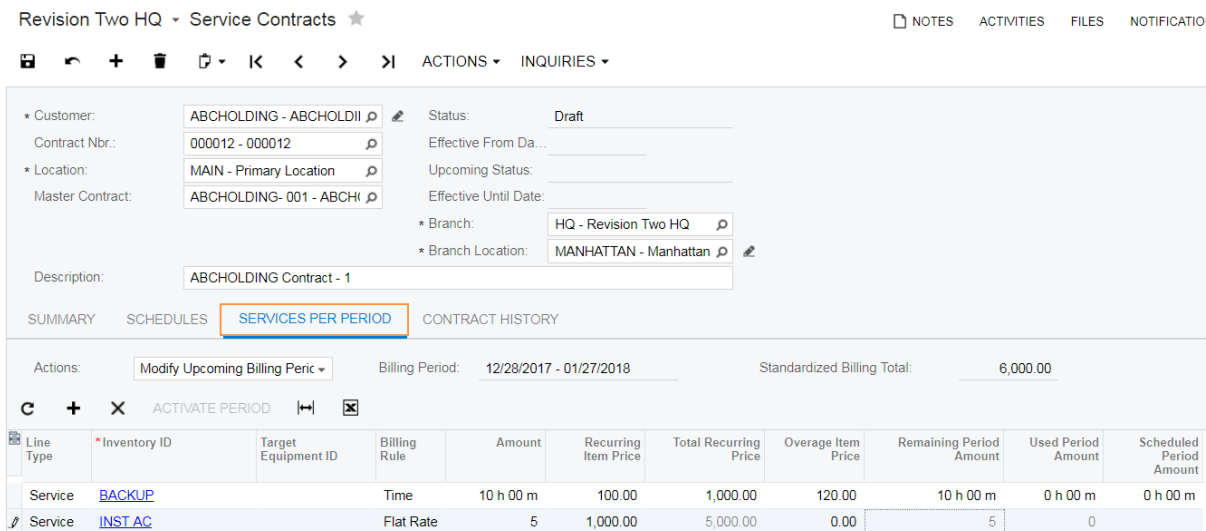
Figure: The Services per Period tab

The **Services** and **Inventory Items** tabs have been removed. Instead, a menu command has been added (**Inquiries** > **Contract Schedule Details**), which users can click to navigate to the *Contract Schedule Details Summary (FS400600)* form and review the services and inventory items added to the schedules of a contract. Menu commands that users can click to navigate to some other forms have been added to the **Inquiries** menu, as the following screenshot shows.
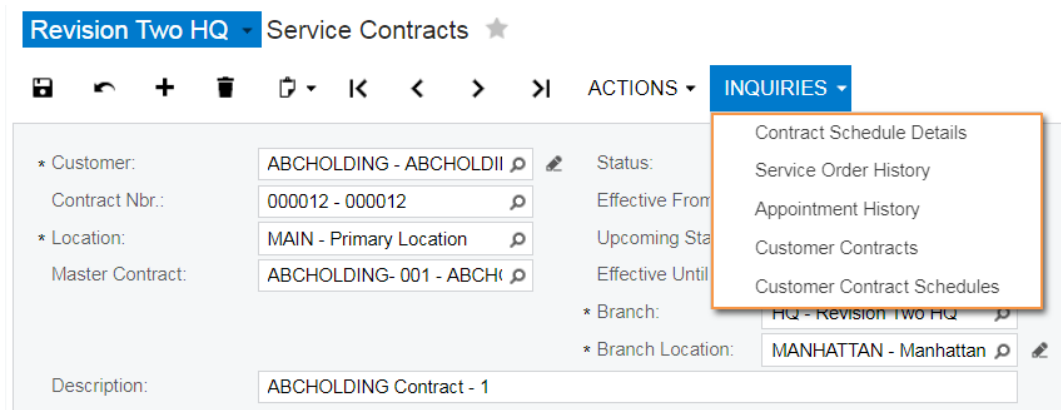
Figure: The Inquiries menu

Changes on the Service Orders (FS300100) and Appointments (FS300200) forms

The following changes have been made on the *Service Orders (FS300100)* and *Appointments (FS300200)* forms (see the screenshot below):

- In the Summary area, the **Service Contract** box has been added so the user can associate a service order or appointment with a standardized billing service contract or route service contract.

- On the **Services** tab, the new **Overage Unit Price**, **Covered Quantity**, and **Overage Quantity** columns are displayed if the document is included in a standardized billing contract. The overage unit price is a price based on the contract. The covered quantity and overage quantity are calculated based on the remaining and scheduled amount of the contracts, respectively. The transaction amount of the service line now includes the covered and overage quantity and covered and overage price.

Figure: The changes on the Appointments form

If the appointment or service order is not yet closed, it causes the system to update the service contract's lines in the **Scheduled Period Amount** on the **Service per Period** tab of the *Service Contracts (FS305700)* form. Once the appointment or service order is closed, the system modifies values in the **Remaining Period Amount** and **Used Period Amount** columns.

New Forms Related to Invoice Generation

The *Generate Invoices from Contracts (FS501300)* form, shown in the following screenshot, has been created to implement the possibility to generate invoices associated with service contracts of the *Standardized Plus Usage/Overage Billings* billing type. The invoices are generated based on the services defined on the **Services per Period** tab of the *Service Contracts (FS305700)* form. Each invoice is created with the covered amount plus any overage and non-covered items used in the appointments or service orders of the periods.

Figure: The Generate Invoices from Contracts form

When the invoice generation process is complete, the batch number appears in the **Batch Nbr.** column. If a user clicks the link in this column, the new *Contract Invoice Generation Batches (FS306100)* form opens. On this form, the user can view a batch of invoices generated for contracts with standardized billing.

Other Changes

On the *Billing Cycles (FS206000)* form, if the billing cycle is assigned to a customer with at least one service order associated with a standardized billing contract, the system does not allow a user to save the form after selecting a different option button under **Generate Invoices From**.

On the *Customers (AR303000)* form, the system does not allow a user to change a billing cycle if at least one service order with a standardized billing contract is associated with the customer.

Other Improvements

Installation

AC-85073: Acumatica Framework now supports Microsoft Visual Studio 2017.

AC-98991: The deployment of Acumatica Framework Templates is now performed by the VSIX installer. In the Acumatica Framework Configuration Wizard, when a user clicks **Deploy Acumatica Framework Tools** and clicks **Finish**, the system opens the **VSIX Installer** dialog box, where the user selects the version or versions of Visual Studio to which the Acumatica Framework Templates should be installed and then launches the installation. For details, see *To Install Acumatica Framework Templates*.

Platform

AC-70218: Acumatica ERP 2018 R1 provides the following enhancements for shared filters:

- To find a filter in the **Select - Filter ID** dialog box of the *Filters (CS209010)* form, in the Search box, a user can enter the name of the form to which the filter is applied.

- If a user has sufficient access rights to work with shared filters, this user can modify a particular filter by using the form to which the filter is applied.

AC-78426: If a KPI widget was created based on a generic inquiry that used the `Group By` clause, it could return incorrect results.

AC-89294: Acumatica ERP now supports the `TLS 1.2` protocol, which is used as the preferred security protocol in the settings of each system email account on the *System Email Accounts (SM204002)* form.

AC-91108: The **Show Full Menu** button has been added to a workspace footer that toggles the workspace to the **All Items** view. This button is displayed in the **Quick Menu** view of workspace items. When a workspace is displayed in the **All Items** view, the button changes its name to **Show Quick Menu**. By clicking the button, a user toggles the workspace to the **Quick Menu** view.

AC-92490: The following shortcut keys related to the **Search** box and workspaces have been added to the modern UI:

- `Ctrl+Q`: Places the cursor in the **Search** box.

- `Alt+G`: Opens the current workspace (which is highlighted in the main menu when you have a form, dashboard, or report of that workspace open).

- `Esc`: Closes the opened workspace.

AC-103106: An error occurred if a user tried to drill down to a generic inquiry from a dashboard that used aggregation in the chart parameters and if a grouping condition was used in the generic inquiry.

Distribution

AC-98475: The *Purchase Requisitions* feature of the Distribution suite has been separated from the **Advanced Distribution** group of features. On the *Enable/Disable Features form (CS100000)*. the **Purchase Requisitions** check box is now located under the **Distribution** group of features.

Services

AC-95684: The system did not allow the creation of automated notifications to send emails from the Service Management forms. On the *Automation Notification (SM205040)* form, if *Service Orders* or *Appointments* was selected in the **Screen ID** box, *Action* was selected in the **Data Source** box, *Reports* was selected in the **Action Name** box, and the **Menu Text** box did not show any options.

AC-97816: The *Generate Invoices from Appointments (FS500100)* and *Generate Invoices from Service Orders (FS500600)* forms displayed a button that, when clicked, was supposed to fix documents without a billing cycle, but the action did not work as intended.

AC-98248: The functionality of sales price calculation has been integrated with the Service suite. For details on managing sales prices, see *Managing Sales Prices*.

AC-98814: Form-related activities now can be created for the following forms of the Service suite:

- *Service Orders (FS300100)*

- *Appointments (FS300200)*

- *Equipment (FS205000)*

- *Service Contracts (FS305700)*

- *Route Service Contracts (FS300800)*

- *Route Document Details (FS304000)*

AC-100305: The *Clone Appointments (FS500201)* form did not display the generated appointment documents as hyperlinks.

Mobile Application

AC-84401: The layout of the *Expense Receipts* and *Expense Claims* application forms has been optimized for quick entry of documents.

AC-101166: For all fields defined with MSDL, `ForceRequired` was by default set to *false* instead of *null*. This caused all fields defined with MSDL to be non-mandatory in the Acumatica ERP mobile application regardless of the corresponding field states on the application server.