



End-User Course: Inventory Replenishment and Purchase Requisitions

Luis Pingarron

Product Support Team Lead | lpingarron@Acumatica.com

Timing

August 14th, 2019 @ 9:00 AM – 11:00 AM PDT (12:00 PM – 2:00 PM EST)

- Replenishment of Stock Items in Acumatica ERP.

August 15th, 2019 @ 9:00 AM – 11:00 AM PDT (12:00 PM – 2:00 PM EST)

- Calculation of Replenishment Parameters Based on the Demand Forecast and Basic and Advanced Purchase Requisition Processes in Acumatica ERP.

Session Rules

- Download training materials that you have received from Acumatica Training team by email.
- Use the tenant you have been assigned to for the webinar. The tenant number, login, and password can be found in the email that has been sent to you by Acumatica Training team several hours before the class.
- Feel free to ask questions during the session: write your question to a chat and raise your hand.
- Answer three polling questions per each CPE credit (6 questions, 2 CPE credits).
- Fill in the evaluation survey at the end of Session 2.

Agenda

- Company Story
- Replenishment of Stock Items in Acumatica ERP
- Lesson 1: Replenishment Configuration
- Lesson 2: Replenishment Preparation and Execution by Transfer
- Lesson 3: Replenishment Preparation and Execution by Purchase
- Lesson 4: Replenishment Preparation and Execution by Purchase Through the Distribution Center
- Calculation of Replenishment Parameters Based on the Demand Forecast
- Lesson 5: Calculation of Replenishment Parameters
- Basic Process for Purchase Requisitions in Acumatica ERP
- Lesson 6: A Purchase Requisition Based on Customer Requests
- Lesson 7: A Purchase Requisition Based on Internal Requests
- Advanced Process for Purchase Requisitions in Acumatica ERP
- Lesson 8: A Purchase Requisition Based on Internal Requests That Require Approval

Company Story

Company Story

Company Structure

SweetLife Office and Wholesale Center

- This branch of the company consists of a jam factory and a large warehouse where fruit (purchased from wholesale vendors) and the produced jam are stored.

SweetLife Store

- This branch has a retail shop with a small warehouse, to which the goods to be sold are distributed from the company's main warehouse.

SweetLife and Equipment Sale Center

- This branch is a service center with a small warehouse where juicers are stored. This branch sells juicers, installs juicers, trains customers' employees to operate juicers, and provides juicer servicing.

Company Story

Operational Activity

- The company has been operating starting in the 01-2018 financial period. In November 2018, the company started using Acumatica ERP as an ERP and CRM system and migrated all data of the main office and retail store to Acumatica ERP. Because the company has grown, the equipment center has begun its operations in 01-2019.

Company Purchases

- The company purchases fruits and spices from large fruit vendors for sale and for jam production. For producing jams and packing jams and fruits, the company purchases jars, labels, and paper bags from various vendors. For the internal needs of the main office and store, the company purchases stationery (printing paper, pens, and pencils), computers, and computer accessories from various vendors. The company also purchases juicers for sale from a large juicer vendor and purchases the installation service or provides the installation service on its own depending on the complexity of the installation.

Company Story

Company Sales and Services

SweetLife Office and Wholesale Center

- In this branch, jams and fruit are sold to wholesale customers, such as restaurants and cafés. The company also conducts home canning training at the customer's location, and webinars on the company's website.

SweetLife Store

- In the store, small retail customers purchase fresh fruit, berries, and jams, or pick up the goods they have ordered on the website. Some of the goods listed in the website catalog are not stored in the retail warehouse, such as tropical fruits (which are purchased on demand) and tea (which is drop-shipped from a third-party vendor).

SweetLife and Equipment Sale Center

- This branch sells juicers, provides training on equipment use, and offers equipment installation, including site review and maintenance services.

Replenishment of Stock Items in Acumatica ERP

Replenishment of Stock Items in Acumatica ERP

- By using replenishment in Acumatica ERP, you can maintain the needed level of stock at your warehouses by purchasing the appropriate quantity of items from vendors or by transferring that quantity from other warehouses
- **Configuration of Automated Replenishment**
 1. Create replenishment classes
 2. Create seasonalities
 3. Specify default replenishment classes for each warehouse that is involved in replenishment
 4. Specify default replenishment settings for each item class whose items will be replenished
 5. Specify replenishment settings for each stock item for which replenishment will be performed
 6. Specify replenishment settings for item-warehouse combinations

Replenishment of Stock Items in Acumatica ERP

■ Replenishment Settings

- Specify the following replenishment settings:
- The replenishment source (None, Purchase, Transfer, Drop-Shipment)
- The replenishment method (None, Min./Max.)
- The reorder point, which is used as the trigger of replenishment
- The replenishment warehouse
- The demand forecast model and parameters for the model (the period type, number of periods to analyze, and service level):
- The method of calculating the demand

Lesson 1: Replenishment Configuration

Lesson 1: Replenishment Configuration

- In this lesson, you will learn how to configure replenishment in Acumatica ERP.

Lesson 1: Replenishment Configuration

- Story
 - The company buys spices from the Tea Company Syndicate vendor. The replenishment frequency and volume of each spice depends on the seasonal demand for the particular spice. Suppose that in autumn, a high season for apples, your company makes more apple jam with cinnamon than in other seasons; therefore, demand for cinnamon is higher than it is in other seasons.
 - The SweetLife Head Office and Wholesale Center branch orders spices directly from the vendor. The warehouse in the SweetLife Store branch is small, and stock is refilled from the warehouse in the SweetLife Head Office and Wholesale Center branch
- Configuration Overview
 - The following features have been enabled on the Enable/Disable Features (CS101000) form.
 - *Standard Inventory*
 - *Inventory*
 - *Advanced Inventory*
 - *Multiple Warehouses*
 - *Inventory Replenishment*

Lesson 1: Replenishment Configuration

- **Process Overview**

- During the configuration of replenishment, you do the following:
 1. On the Replenishment Classes (IN208800) form, configure the needed replenishment classes.
 2. Create any needed replenishment seasonalities by using the Replenishment Seasonality (IN206600) form.
 3. Check the default replenishment settings for each warehouse on the Warehouses (IN204000) form.
 4. Specify the replenishment settings for the needed item classes by using the Item Classes (IN201000) form. These settings will be applied by default when new inventory items are created and an item class with replenishment settings is selected.
 5. Use the Stock Items (IN202500) form to specify the replenishment settings for particular stock items.
 6. On the Item Warehouse Details (IN204500) form, specify the replenishment settings for each item-warehouse pair if the stock item has warehouse-specific replenishment settings.

Lesson 2: Replenishment Preparation and Execution by Transfer

Lesson 2: Replenishment Preparation and Execution by Transfer

- In this lesson, you will learn how to prepare and perform replenishment in Acumatica ERP.

Lesson 2: Replenishment Preparation and Execution by Transfer

- Story
 - In this branch, replenishment is performed by transfer from the SweetLife Head Office and Wholesale Center branch
- Configuration Overview
 - The following features have been enabled on the Enable/Disable Features (CS101000) form.
 - Standard Inventory
 - Inventory
 - Advanced Inventory
 - Multiple Warehouses
 - Inventory Replenishment

Lesson 2: Replenishment Preparation and Execution by Transfer

Process Overview

- Prepare and execute the replenishment of inventory items by transfer,
 - Prepare the list of items that require replenishment
 - Prepare and process the documents for shipping items from the Wholesale warehouse
 - Prepare and process the documents for receiving items in the Retail warehouse



Lesson 3: Replenishment Preparation and Execution by Purchase

Lesson 3: Replenishment Preparation and Execution by Purchase

In this lesson, you will learn how to prepare replenishment for items and perform replenishment by purchasing the required amount of items from a vendor.

Lesson 3: Replenishment Preparation and Execution by Purchase

Story

- Procure items that require replenishment in the SweetLife Head Office and Wholesale Center branch and refill stock. The SweetLife Head Office and Wholesale Center branch orders fruits directly from vendors.

Configuration Overview

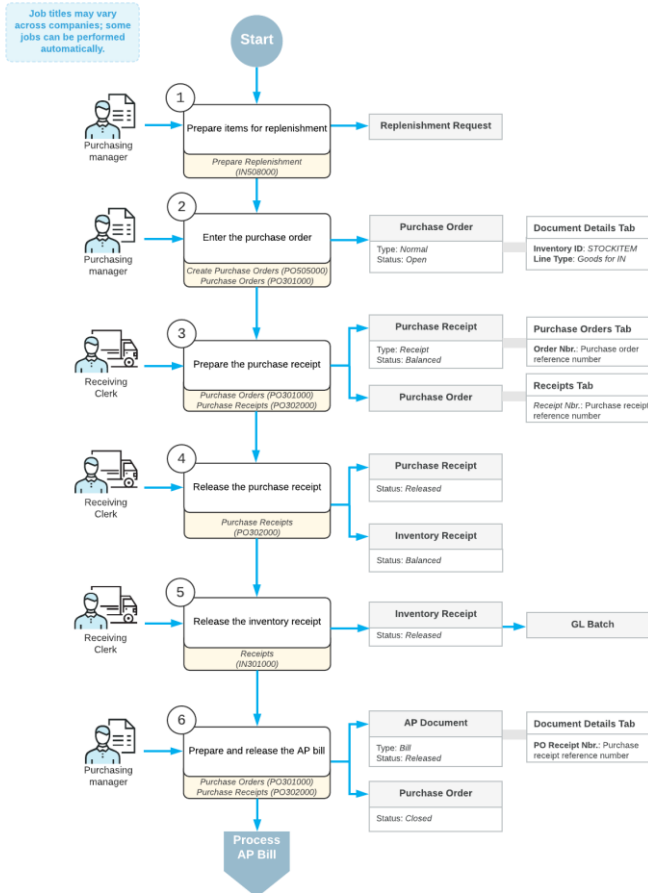
- The following features have been enabled on the Enable/Disable Features (CS101000) form.
 - *Standard Inventory*
 - *Inventory*
 - *Advanced Inventory*
 - *Multiple Warehouses*
 - *Inventory Replenishment*

Lesson 3: Replenishment Preparation and Execution by Purchase

Process Overview

- Replenishment of inventory items by purchase,
 - Prepare the list of items that require replenishment
 - Prepare purchase documents for the vendor
 - Prepare and process documents for receiving items from the vendor

Lesson 3: Replenishment Preparation and Execution by Purchase



Lesson 4: Replenishment Preparation and Execution by Purchase Through the Distribution Center

Lesson 4: Replenishment Preparation and Execution by Purchase Through the Distribution Center

In this lesson, you will learn how to prepare and perform replenishment in one warehouse by purchasing items to another warehouse (which functions as a distribution center) and transferring the items to the first warehouse.

Lesson 4: Replenishment Preparation and Execution by Purchase Through the Distribution Center

Story

- Received multiple requests for guava from your customers in the SweetLife Store branch. Sell guavas only by request, and to fill stock will order guavas from the Glory Fruit Case vendor by using the replenishment functionality. All items are delivered to the Wholesale warehouse first and then are transferred to the Retail warehouse. Send a request for purchase to the Wholesale warehouse and order guava exclusively for the Retail warehouse.

Configuration Overview

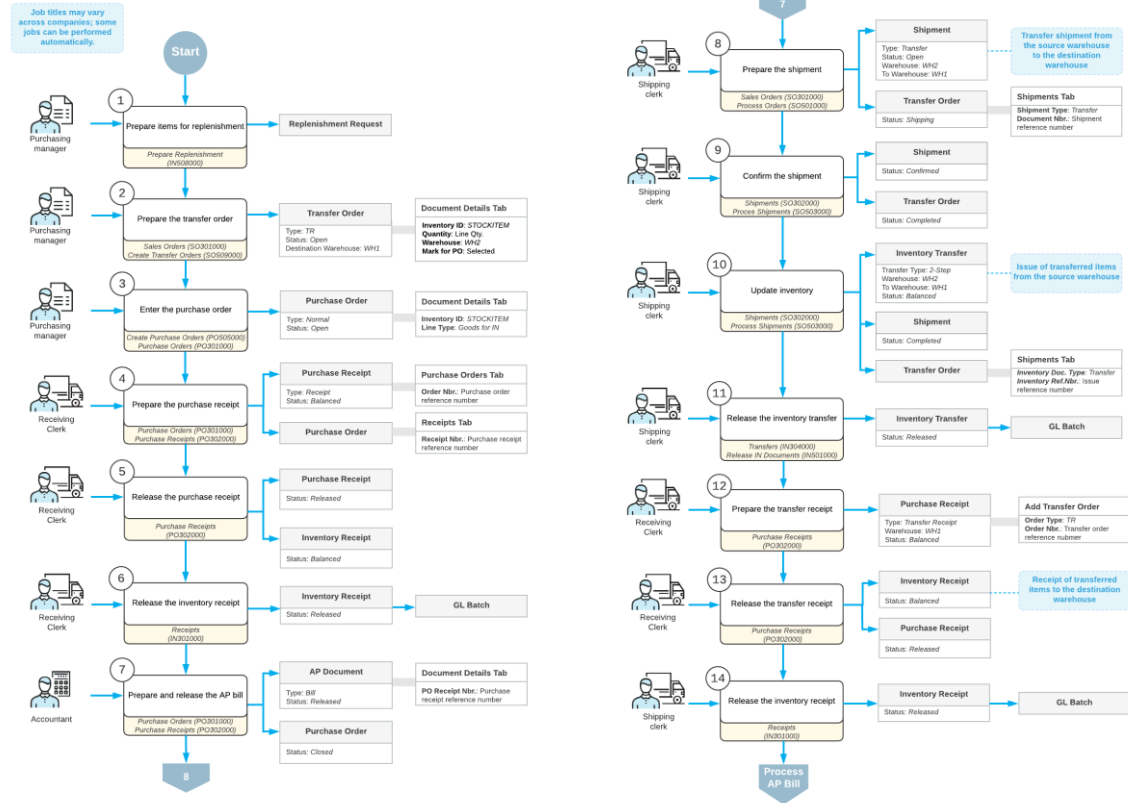
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 - *Standard Inventory*
 - *Inventory*
 - *Advanced Inventory*
 - *Multiple Warehouses*
 - *Inventory Replenishment*

Lesson 4: Replenishment Preparation and Execution by Purchase Through the Distribution Center

Process Overview

- Replenishment of inventory items by purchase through the distribution center
 - Prepare a replenishment for items in the Retail warehouse
 - Prepare a transfer order
 - Prepare a purchase order for the vendor to the Wholesale warehouse
 - Prepare and process the documents for receiving items from the vendor to the Wholesale warehouse
 - Prepare and process the documents for shipping items from the Wholesale warehouse
 - Prepare and process the documents for receiving items in the Retail warehouse

Lesson 4: Replenishment Preparation and Execution by Purchase Through the Distribution Center



Calculation of Replenishment Parameters Based on the Demand Forecast

Calculation of Replenishment Parameters Based on the Demand Forecast

Acumatica ERP uses the moving average model to forecast demand. With this model, you can calculate the demand for a specific future period based on the historical sales data of multiple consecutive periods in the recent past.

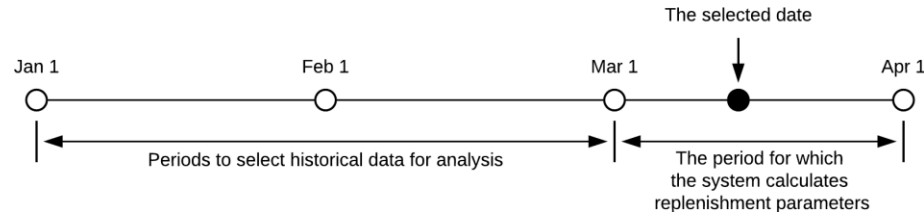
Calculation of Replenishment Parameters Based on the Demand Forecast

Replenishment Settings

- The moving average model of forecasting demand is configured at the item level.
 - Forecast Period
 - Period to Analyze
 - Service Level
 - Seasonality

Calculation of Replenishment Parameters

- The period for which the system calculates replenishment parameters is the period to which the Forecast Date (selected on the Calculate Replenishment Parameters form) belongs
- The periods whose historical data the system analyzes for the calculation are consecutive calendar periods from the closest whole period before the selected date



Calculation of Replenishment Parameters Based on the Demand Forecast

Formulas Used for Calculation

- The system calculates the Reorder Point and Safety Stock parameters used in automated replenishment based on the average daily demand (daily sales), average lead time, and their standard deviation values by using the following formulas
 - $\text{Reorder Point} = \text{Average Daily Demand} * \text{Average Lead Time} + \text{Safety Stock}$
 - $\text{Safety Stock} = \text{NORMSINV}(\text{Service Level}) * \text{SQRT}((\text{Average Lead Time} * \text{STDEV}(\text{Daily Demand}))^2 + (\text{Average Daily Demand} * \text{STDEV}(\text{Lead Time}))^2)$
 - $\text{Max Qty.} = \text{Reorder Point}$
 - $\text{Daily Demand Forecast} = \text{Average Daily Demand}$
 - $\text{Average Lead Time} = \text{SUM}(\text{Requested on Date} - \text{Purchase Receipt Date}) / \text{Amount of Purchase Orders}$

Lesson 5: Calculation of Replenishment Parameters

Lesson 5: Calculation of Replenishment Parameters

In this lesson, you will learn how to calculate and apply replenishment parameters for stock items.

Lesson 5: Calculation of Replenishment Parameters

Story

- Suppose that you are a purchasing manager of the SweetLife Fruits&Jams company, and you want the system to calculate replenishment parameters for reordering oranges based on historical sales of the three previous weeks. The system will use the moving average model to calculate demand forecast.

Configuration Overview

- The following features have been enabled on the Enable/Disable Features (CS101000) form.
 - *Standard Inventory*
 - *Inventory*
 - *Advanced Inventory*
 - *Multiple Warehouses*
 - *Inventory Replenishment*

Lesson 5: Calculation of Replenishment Parameters

Process Overview

- To calculate replenishment parameters
 - Configure replenishment calculation for particular items
 - Invoke the calculation of replenishment parameters for an item that requires replenishment in a particular warehouse
 - Apply the calculated parameters to the item in the particular warehouse

Basic Process for Purchase Requisitions in Acumatica ERP

Basic Process for Purchase Requisitions in Acumatica ERP

An organization may want to pursue a clear, cost-efficient purchasing process that prioritizes the purchase of items from the most appropriate vendors at the best possible time and in the right quantities. To facilitate this process, an organization can use purchase requests and requisitions—that is, documents that track the items the organization wants to purchase from vendors.

Request Classes in Acumatica ERP

- A request class is an entity in Acumatica ERP that contains the general settings for requests of a particular type.

Purchase Requisition Usage

- In a simple case of using purchase requests and requisitions, you create one request or multiple requests, and then create a purchase requisition based on the requests, manually select a vendor, and purchase items from this vendor.
- If your organization works with multiple vendors that provide you with the same type of items (such as computers), you can request and process vendor bids to select the best offers.

Basic Process for Purchase Requisitions in Acumatica ERP

Purchase Requisition Process

- Creating a request.
- Creating a purchase requisition based on one request or multiple requests.
- Selecting a vendor (or multiple vendors) for the purchase.
- Creating all needed purchase orders (and, optionally, needed sales orders for external requests).
- Sending all purchase orders that have been created to the applicable vendors.
- Providing items to requesters.

Creation of a Purchase Requisition Document

Processing and Selection of Bids

Lesson 6: A Purchase Requisition Based on Customer Requests

Lesson 6: A Purchase Requisition Based on Customer Requests

In this lesson, you will learn how to process a purchase requisition initiated by customer requests.

Lesson 6: A Purchase Requisition Based on Customer Requests

Story

- Suppose that sales managers have received the following requests from customers: The HM's Bakery & Cafe customer wants to order 200 pounds of oranges and 80 pounds of apples for a big birthday party; and the FourStar Coffee & Sweets Shop customer wants to order 30 pounds of tangerines and 43 pounds of lemons for a cocktail party. By using the purchase requisitions functionality, you will select the best vendor or vendors to fulfill the requests.

Configuration Overview

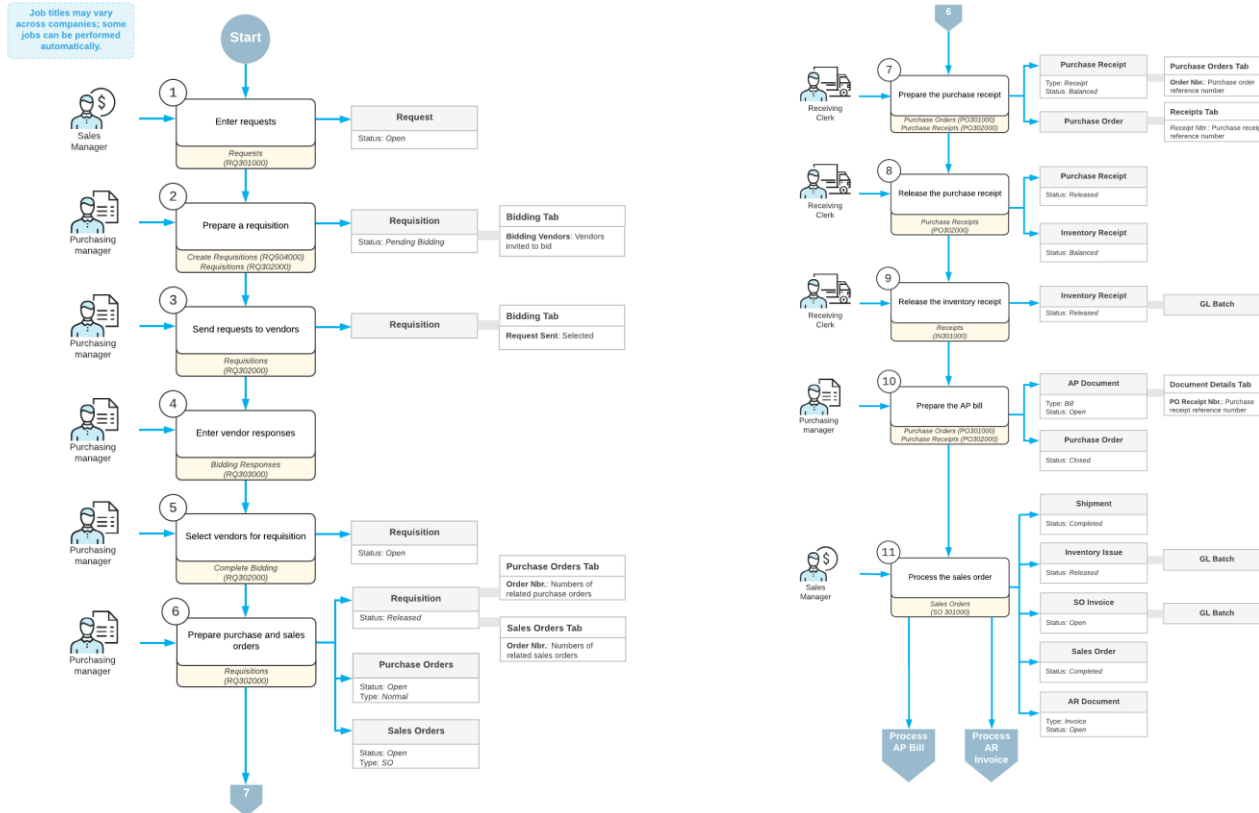
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 - *Inventory*
 - *Advanced Inventory*
 - *Multiple Warehouses*
 - *Purchase Requisitions*

Lesson 6: A Purchase Requisition Based on Customer Requests

Process Overview

- Prepare and process a customer's order of inventory items by using the requisitions functionality of Acumatica ERP
 - Enter the customer's requests into the system
 - Create a purchase requisition for the customer's requests
 - Send the requisition to the vendors that may participate in bidding
 - Enter responses (bids) from vendors into the system
 - Initiate automatic bidding among the vendors or manually select a vendor
 - Prepare the purchase order and send it to the selected vendor
 - Prepare the document or documents for receiving the ordered stock items
 - Prepare the documents for shipping the stock items to the customer

Lesson 6: A Purchase Requisition Based on Customer Requests



Lesson 7: A Purchase Requisition Based on Internal Requests

Lesson 7: A Purchase Requisition Based on Internal Requests

In this lesson, you will learn how to perform a purchase requisition initiated by requests within the company that do not require approval.

Lesson 7: A Purchase Requisition Based on Internal Requests

Story

- Suppose that you are an office manager in the SweetLife company who orders office supplies (such as pens or printing paper) for all departments of the company. You aggregate requests and send the aggregated order to the Spectra Stationery Office vendor (thus bidding is not involved in this process). Employees can select only items from a predefined list. Office supplies do not require approval from department leads due to their low value

Configuration Overview

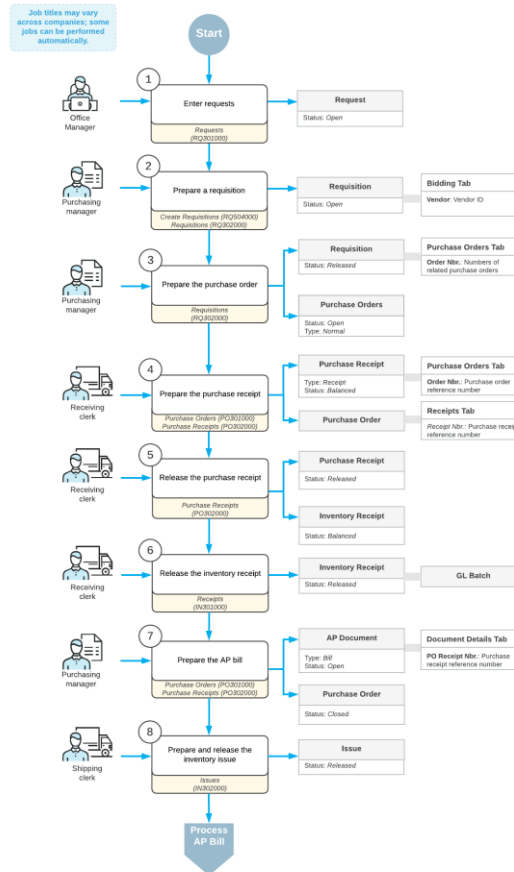
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 - *Advanced Inventory*
 - *Multiple Warehouses*
 - *Purchase Requisitions*

Lesson 7: A Purchase Requisition Based on Internal Requests

Process Overview

- Prepare and process an order of inventory items to fulfill an internal request (or multiple requests) by using the requisitions functionality of Acumatica ERP without bidding
 - Enter all requests from employees into the system
 - Create a purchase requisition based on the employees' requests
 - Prepare a purchase order and send it to the selected vendor
 - Prepare the documents for receiving the ordered stock items
 - Create the documents to reflect issuing the items to the employees who requested them

Lesson 7: A Purchase Requisition Based on Internal Requests



Advanced Process for Purchase Requisitions in Acumatica ERP

Advanced Process for Purchase Requisitions in Acumatica ERP

If your organization takes measures to secure the purchasing process against fraud and unnecessary expenses, in Acumatica ERP, you can configure the following additional steps in the requisitions process:

- Budget validation, Request approval, Requisition approval

Advanced Purchase Requisition Process

- Creating a request
- Validating a request against a budget
- Approving the request
- Creating a purchase requisition based on one request or multiple requests
- Approving the requisition
- Sending notifications to vendors
- Entering vendor responses
- Running automatic bidding
- Selecting a vendor (or multiple vendors) for the purchase
- Creating all needed purchase orders (and, optionally, needed sales orders for external requests)
- Sending all purchase orders that have been created to the applicable vendors
- Receiving items in a warehouse
- Providing items to requesters

Advanced Process for Purchase Requisitions in Acumatica ERP

Request and Requisition Approvals

Budget Validation for Requests

- Defining the way the system will calculate the costs of items included in a request
- Enabling budget validation in the settings of each needed request class

Lesson 8: A Purchase Requisition Based on Internal Requests That Require Approval

Lesson 8: A Purchase Requisition Based on Internal Requests That Require Approval

In this lesson, you will learn how to validate purchase requests against budgets, approve requests, and perform a purchase requisition based on internal requests.

Lesson 8: A Purchase Requisition Based on Internal Requests That Require Approval

Story

- In this lesson, you will act as two different employees. As a purchasing manager, you will receive internal requests for purchasing computers and computer accessories from employees of your company and purchase the requested items from vendors. The items that cost more than \$300 must be approved by the lead of the department in which the employee works. In addition, you have the budget limitation of \$1500 per month for computers and accessories established in the organization.
- Also, as a departmental lead, you will approve the requests from your subordinates.

Configuration Overview

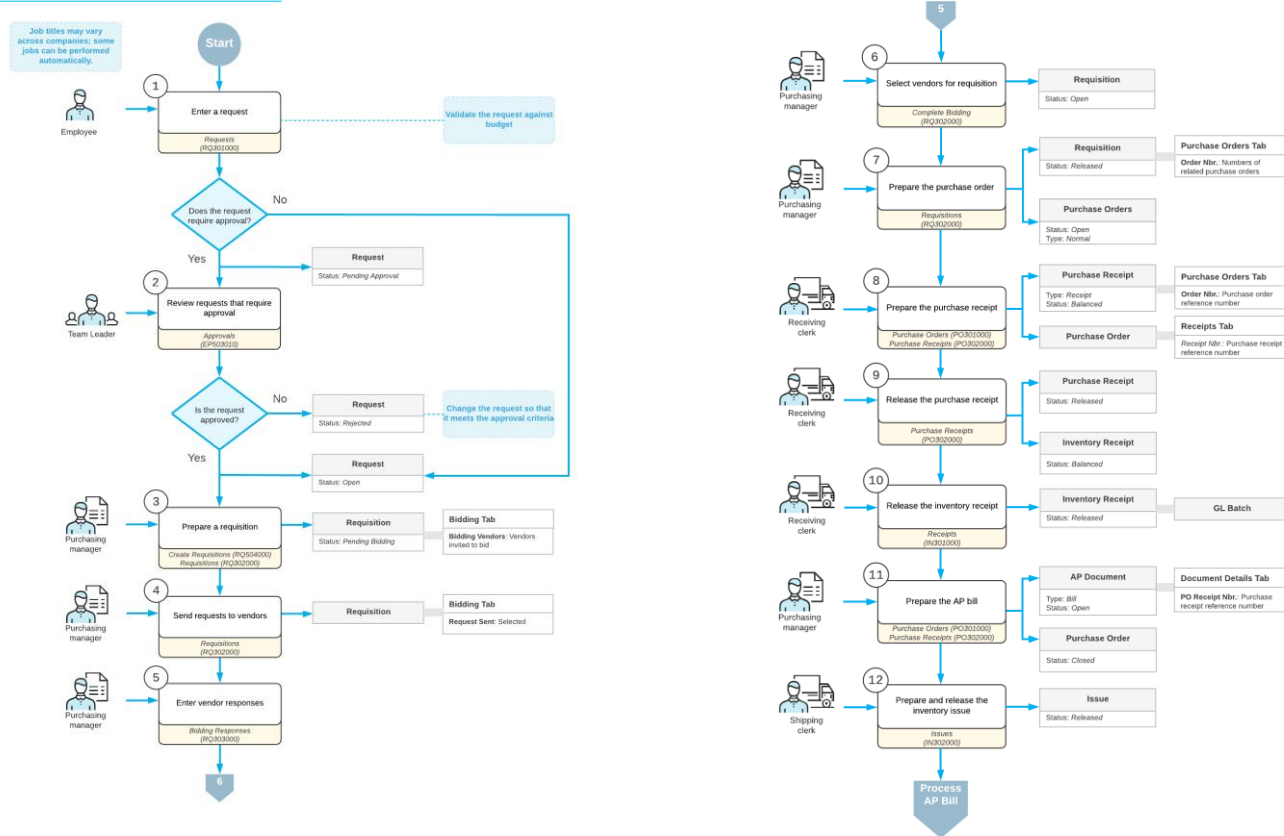
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 - *Inventory*
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 - *Multiple Warehouses*
 - *Purchase Requisitions*

Lesson 8: A Purchase Requisition Based on Internal Requests That Require Approval

Process Overview

- Prepare and process an order of inventory items to fulfill an internal request (or multiple requests) by using the requisitions functionality (as well as approvals and validation against the budget) of Acumatica ERP
 - Enter all requests from employees into the system
 - Check the results of the validation of the requests against the budget
 - Approve the requests that meet the criteria for being sent to approval
 - Create a purchase requisition for the requests
 - Send the requisition to the vendors that may participate in bidding
 - Enter responses (bids) from vendors into the system
 - Initiate automatic bidding among the vendors or manually select a vendor
 - Prepare purchase order and send the prepared order to the selected vendor
 - Prepare the documents for receiving the ordered stock items
 - Issue the items to the employees who requested them

Lesson 8: A Purchase Requisition Based on Internal Requests That Require Approval



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Thank You!

Luis Pingarron

Product Support Team Lead | lpingarron@Acumatica.com