



# Inventory Manager Admin Guide

Basware P2P 18.2

# 1 Overview

Over the course of the past twenty years, many companies have made drastic changes in inventory methodologies. History demonstrates how many companies used inventory as buffer stock with the explicit purpose of reducing stock out costs. Inventory stockpiling was considered by many to be the best way to compensate for cyclical and/or significant changes in the economy. During economic downturns and recessions, stockpiles could be used as a hedge against an unstable market. Considered by many to be an integral asset to any company, inventory valuation was often scrutinized in the open market and by potential investors. Many industrial analysts often wondered how companies could reflect inventory values correctly considering the many associated costs of holding inventory stockpiles. Continual bombardment for reliable and valid inventory data caused companies to consider alternative strategies in order to remain competitive in the marketplace.

In order to understand the management issues that affect inventory today, we must look to the past for information and trends. Once a clear picture is created about previous inventory practices, corporate management will be better prepared to address the issues that will affect inventory in the future. Therefore, a reflection in time will help provide the general framework for today and the driving factors to help shape the future.

## 1.1 Traditional Ideas and Ramifications

Historically, inventory was considered the lifeline of many industries. The requisitioning, purchasing, and storage of inventory items were used in both goods and services industries. Typically, corporate executives associate large manufacturing plants with inventory. These plants had to store large amounts of inventory in order to meet production schedules. Manufacturing companies stored thousands of parts in order to produce finished products. In addition, inventory was also needed to assemble Work in Process (WIP) items that were transferred to other departments and/or companies for final assembly.

Manufacturing firms and other industries tried (often unsuccessfully) to track the physical flow of inventory in an attempt to allocate costs to different departments. However, many departments and managers within many different industries quickly realized how difficult it was to control and account for inventory.

Effective inventory management was a critical business component for goods and service companies. Firms that provide goods and services such as Kmart and Wal-Mart have similar inventory management issues that are faced by manufacturing companies like GM and General Electric. In addition, other industries such as financial services and healthcare have seen the value added benefits of incorporating sound inventory management principles into their organizations. As more companies realized the importance of tracking and controlling inventory, many innovative concepts were developed globally. Industries and companies would eventually develop concepts like Just in Time (JIT), Economic Order Quantity (EOQ), Total Quality Management (TQM), Demand forecasting techniques, and many other principles that would shape how inventory would be viewed by the corporation and in the open market.

Inventory was traditionally used for two different stocking purposes: buffer stock and hedge stock (safety stock). While similar in nature, both of these stocking methods need to be discussed separately. The

primary purpose of buffer stock is the reduction of stock outs. Stock outs occur when firms do not have the necessary materials in order to meet and satisfy the current demand. Examples of necessary materials could be raw materials, WIP items, or finished goods being sent to merchandising organizations.

Companies traditionally carried large amounts of raw materials; commodities and finished goods in order to ensure that inventory would not be depleted. In the past, the accumulation of inventory was used to meet demand. Demand could mean either the market demand for goods and services or the production demand in a manufacturing environment. Executive management members saw the need to hold inventory in order to gain a competitive advantage in the marketplace. In times of economic hardship, inventory stockpiles would be used to ensure continued operations. Usually, the largest and most lucrative companies were able to afford such luxuries. Smaller firms, on the other hand, were much more susceptible to materials shortages and would struggle to acquire inventory and move material through the supply chain. Consequently, larger firms would be able to withstand an economic downturn and continue operations, while smaller firms would experience significant cash flow problems.

The most important ramification for buffer stock came in the form of costs. Executive managers, materials managers, and accountants began to realize many different costs associated with inventory buildup. Some of the more significant costs follow:

- **Cost of Capital:** The Cost of Capital can be associated with two different functions: the Cost of Equity and the Cost of Debt. If firms did not have the ability to pay for inventory from their current cash or liquid investments, then funding options like equity and debt are the most logical alternatives. The next section, Balance Sheet Implications will review both of these costs in detail.
- **Opportunity:** Next, firms realize the opportunity costs associated with purchasing large quantities of inventory instead of using the funds for other business functions such as marketing/advertising, expansion and product development.
- **Warehouse and Carrying:** Warehouse and carrying costs are similar and may be grouped together. These costs include any direct labor and direct overhead that is associated with holding inventory for prolonged periods. In addition, companies may also realize the sunk cost of building the warehouse. Even though this is an indirect cost, it is still directly attributed to the inventory, which must be placed in the warehouse. If the warehouse was financed, then a direct loop could be drawn back to the Cost of Equity or Cost of Debt and the Opportunity Cost.
- **Obsolescence:** Companies that held large amounts of inventory would often find that certain items became obsolete after a short or extended period. Obsolescence usually occurs when new product development greatly reduces the demand for existing products that companies hold in inventory. Companies often realized that a certain percentage of their initial cash outlay used to purchase inventory would become unrecoverable. Most companies attribute obsolescence as a cost of doing business. Yet, many learning organizations began to see the financial benefit of not accepting obsolete inventory.
- The financial impact of obsolescence costs meant that firms would lose the potential return on the original inventory investment. There are scenarios when vendors would give these firms a credit when the old items were returned to the originator, but this credit would rarely be for

100% of the value of the initial purchase price. If the originators did not offer a product buy back, then firms would be faced with Disposal Costs.

- Disposal: These costs would be realized when the company paid to have the obsolete material removed from their warehouse in order to free additional floor and/or shelf space for the new products.
- Damage, Repair: Long before concepts like Total Quality Management (TQM) or quality circles were instituted, companies would often realize significant damage, repair, and salvage costs associated with inventory. Traditional warehouses were not setup for maximum efficiency and inventory was often damaged during normal warehouse and manufacturing handling. Parts that might have been acceptable upon arrival would be thrown away or repaired. If repairing the part was an option, then direct labor and direct materials costs could be associated with the items. An alternative that was often used was to sell the damaged goods for deep discounts in an attempt to recover a portion of the original investment.
- Salvage: However, if buyers for the products could not be located, then firms would realize the salvage costs associated with the item(s). Examples of salvage costs include the marketing and advertising efforts to announce a deep discount sale and the direct labor hours spent gathering and moving the inventory into auction locations.
- Theft: Another important cost associated with inventory is theft. Many traditional warehouses did not have proper security mechanisms in order to reduce the costs associated with lost or stolen inventory. Missing inventory was not realized until stock (cycle) counting was performed. When inventory was counted, notations would be made to indicate incorrect counts. However, the management of inventory shrink became difficult as managers were not able effectively to measure the various aspects of paper inventory counts and actual inventory shelf counts (e.g. damage vs. theft vs. obsolescence...etc.) Many corporate executives quickly saw the value added benefits of implementing long-term security procedures and protocols in order to reduce the amount of theft, which occurred on a regular basis. In the long-term, tighter security controls over warehouses and inventory would be combined with electronic purchasing for reliable real time data management.

The significant costs associated with inventory led corporate executives and financial accounting managers to begin instituting new policies and procedures in order to reduce the impact these costs were having on their firm's financial performance. It is important to note that many of these financial issues were highlighted about the same time innovative management techniques such as EOQ, JIT, TQM, and others were being instituted.

The second stocking method mentioned above is Hedge Stock (A.K.A. Safety Stock). Hedge stock is realized when there are a limited number of suppliers of certain products. The following example is usually directly attributed to manufacturing. Hedge stock is often associated with the metal fabrication business. With a limited number of suppliers (an oligopoly), firms that purchase sheet metal have an incentive to hold large amounts of inventory. The primary goal for these manufacturing firms who purchase from the oligopoly is to meet production at current prices. These firms usually have a very strong desire to avoid stock outs and volatile swings in price. Therefore, bulk purchases are made in order to ensure that the raw materials will be available to meet the production demand at all times. Even with contractual obligations, manufacturing firms could face significant supply shortages if one or more of the suppliers shut down operations and/or strike.

## 1.2 Balance Sheet Implications

Historically, many companies were evaluated on the value of the balance sheet. Therefore, total assets, which include inventory, could directly affect the company's stock price and possibly credit rating. Many financial lenders were more willing to give better interest rates and payment terms for companies that had high inventory valuations. In the event of loan default, the lender could turn inventory, property, plant, and equipment into cash quickly and easily. In addition, debt retirement takes precedence over equity investment in the event that firms declare bankruptcy. Therefore, inventory could be used to leverage and secure a debt instrument.

One significant aspect that needs to be addressed is the concept of padding the balance sheet. By itself, the accumulation of inventory cannot pad the balance sheet. For example, if a company has cash/investments on hand in order to pay for inventory, then the accounting department is simply changing the values of two different asset accounts. The effect is the reduction of cash and an equal increase in inventory.

Borrowing may be construed by some as a method of padding the balance sheet. Firms that do not have the liquid capital to pay for inventory may have to borrow funds in the open market. Raising capital through debt or equity will have similar impacts on the balance sheet. The inventory values will increase while the liabilities or owner's equity balances will increase by an equal value. Even if some financial managers consider this practice "Padding the Balance Sheet," there are costs involved. Financial managers typically calculate the costs for both funding options as shown below:

### Cost of Debt

The formula for the cost of debt is the following:

Yield to Maturity (1-Tax Rate).

Companies often see where issuing debt is an advantage for the following reasons:

- It is a legal contract
- Gives the borrowing company tax breaks
- Sends a message to the open market that the company is financially able to repay debt, which may lead to a stock price increase.

### Cost of Equity (Capital Asset Pricing Model)

The formula for the cost of equity is the following:

$R_f$  = Risk free rate (often linked to the T-Bill rate)

Beta = The firm's systematic risk found in Value Line and/or Moody's

Market premium = Expected return in the market –  $R_f$ .

$CAPM = R_f + B (E[r] - R_f)$

The open market and potential investors will have different reactions to debt and equity. Debt is attractive because it represents a legal contract between the lending institution and the company. In addition, debt issue can send a message that the company is financially solvent and will be able to repay the debt instrument. Equity, on the other hand, sends a message to the market that the company is prepared for growth and expansion. A new stock issue, if timed correctly, could lead to an immediate stock price pop,

which may lead to the issuance of additional shares and an increase in the market capitalization for the company.

### 1.3 Inventory Impacts on Financial Ratios

Inventory can have direct and indirect impacts upon many different financial ratios. Company executives and open market analysts constantly review financial ratios. The following financial ratios may be affected by inventory either directly or indirectly.

<b>Profitability Ratios</b>		
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Total Asset Turnover	=	Sales/Total Assets
ROA	=	$((\text{Net Income} + (1 - \text{Tax Rate})(\text{Interest Expense}) + \text{Minority Interest in Earnings}) / \text{Total Assets})$
<b>Risk Ratios</b>		
Current Ratio	=	Total Current Assets/ Total Current Liabilities
Quick Ratio	=	$(\text{Current Assets} - \text{Inventory}) / \text{Current Liabilities}$
Inventory Turnover	=	CGS/ Inventory
Days in Inventory Outstanding	=	360/ Inventory Turnover
Accounts Payable Turnover	=	Purchase/ Accounts Payable
Long-term Debt Ratio	=	LTD/ (LTD + Shareholders Equity)
Debt/Equity Ratio	=	LTD/ Shareholders Equity
LTD to Assets Ratio	=	LTD/ Total Assets
Working Capital	=	Current Assets – Current Liabilities
<b>Asset Management Ratios</b>		
Inventory to Working Capital	=	Inventory/ Working Capital
Inventory to Current Assets	=	Inventory/ Current Assets
Current Assets to TA	=	Current Assets/ Total Assets
Inventory to Sales	=	Inventory/ Sales
Avg. Inventory Investment Period	=	Current Inventory Balance/ Average daily CGS
Inventory Turnover	=	COGS/ Inventory
Days' sales in Inventory	=	365/ Inventory Turnover

## 1.4 Cash Flow Impacts

Traditional inventory purchasing required large front-end cash outlays followed by the various maintenance costs associated with holding and carrying the inventory. The large cash outlays could be considered a potential problem, especially if the firm had to borrow funds in the open market in order to raise the required capital. However, financial managers were never able to predict accurate returns on the initial cash investment since costs, such as damage, obsolescence and theft would always result in negative impacts upon the predicted returns. Corporate executives came to accept a certain amount of variance in the predictions, while not realizing that they had the power to make forecasts that are more accurate, improve inventory quality, and make smaller purchases in order to meet the current market and/or production demand.

As previously mentioned, corporate executives and open market analysts were primarily concerned with the balance sheet. In addition, sales information was used in order to view trends in cyclical products and improve forecasts. The importance and impact of the Cash Flow Statement had not become the primary evaluation tool that it is today.

## 2 Warehousing Concepts

As more companies realized the importance of tracking and controlling inventory, many innovative concepts were developed globally. Industries and companies eventually developed concepts like Just in Time (JIT), Economic Order Quantity (EOQ), Total Quality Management (TQM), Demand Forecasting techniques and many other principles that shape how inventory would be viewed by the corporation and in the open market.

### 2.1 Modern Inventory Concepts

Shortly after World War II, many management scientists began to introduce new manufacturing and inventory management techniques. Significant changes and developments

were created and implemented in Japan, as the country began the process of rebuilding its infrastructure and economy. Theories and practical solutions for strategic management issues forced corporate executives to think outside of traditional management practices and styles. Such techniques became known as “Paradigm Shifts” or “Thinking outside the box.” Companies quickly saw the competitive advantages of concepts such as JIT, MRP, TQM, EOQ, Reorder methods, Demand Forecasting, Kaizan and Kanban systems.

#### 2.1.1 JIT Systems

Just in Time inventory systems were created by the need to reduce the direct and indirect costs associated with inventory. The following chart describes five of the major goals for JIT systems:

# JIT Goals



While JIT systems create a strong competitive advantage for manufacturing companies, the goals can be directly attributed to almost any industry and/or company. JIT forced managers to rethink corporate strategies and implementation plans. In addition to the JIT goals mentioned above, the inventory control method can be applied to a purchasing environment. Purchasing departments can effectively use JIT systems in order to meet several strategic objectives. JIT methods can help the purchasing department to:

- Reduce bulk purchases and large capital outlays
- Improve alliances with vendors
- Negotiate better contracts
- Improve vendor delivery schedules and delivery systems
- Reduce overhead and expenses for storing items
- Use less storage space
- Help warehouse workers work efficiently

JIT will help to create an environment that is intolerant of waste and inefficiency. However, without a strategic commitment from the entire corporation, JIT can fail to meet the expectations of users and

company executives. JIT must be used in a learning organization in order to have success. Learning organizations are willing to make short-term mistakes in order to reach long-term goals. After all, many of the most successful organizations in today's competitive business environment are successful because they were willing to learn, adapt, and make changes. JIT will fail if companies do not trust their workers or if workers distrust the management members. JIT will also fail if the company does not build and enforce strong supplier relationships. In terms of electronic purchasing, JIT systems must be managed correctly in order to ensure that items are delivered on an as needed basis.

### 2.1.2 Kanban Systems

Manufacturing environments can incorporate Kanban systems into the inventory management process. Kanban is a Japanese word meaning, "sign" or "instruction card." The instruction cards are used to make requests for additional material. These requests come from downstream operations and indicate what parts and supplies need to be pulled from an inventory system. Purchasing departments in manufacturing environments could use Kanban systems in combination with other concepts like lead time, reorder point, reorder quantity, and safety stock in order to provide the required materials used in production at the correct time. In addition, a modified Kanban system could be created and implemented at an end user level for different industries. For example, a hospital might use Kanban cards to eliminate the paper trail in the requisitioning process. Instead of daily workers constantly bombarding a designated purchasing agent with requests, a card system could be used in order to communicate what materials need to be ordered.

The Japanese word for continuous improvement (CI) is called Kaizan. Inventory managers and purchasing departments can use CI methods to identify inefficiencies and create purchasing process changes. Kaizan will only work in a learning organization that is willing to identify strategic issues and commit to a continual process of change. Kaizan practices help organizations change outdated patterns of thinking. It also empowers many employees to help create and implement new processes' with the organization. As quality circles are usually used in Kaizan, the organization may gain significant long-term benefits from individual empowerment. Such benefits may include increased job satisfaction and a greater sense of loyalty to the management structure and/or company. A typical process design for continual improvement is shown below.

- Identify problem
- Devise and coordinate strategy
- Propose solution
- Test solution
- Evaluate solution
- Review alternatives
- Implement new process
- Review process periodically

If corporate managers implement a process of continual improvement, flaws in the current inventory and/or purchasing system will be identified on a routine basis. This type of proactive management will allow any company to remain competitive and cut many non-essential tasks.

### 2.1.3 Purchasing and MRP System

Technological improvements in PC computing applications have changed the uses of Material Requirements Planning (MRP) systems. Complex mathematical computations that normally required hours of processing time on company mainframes could now be performed in a matter of seconds on a personal computer. MRP systems have three input sections, which are included in the program. These inputs are the following:

- Master Production Schedule
- Bill of Materials File
- Inventory Records File

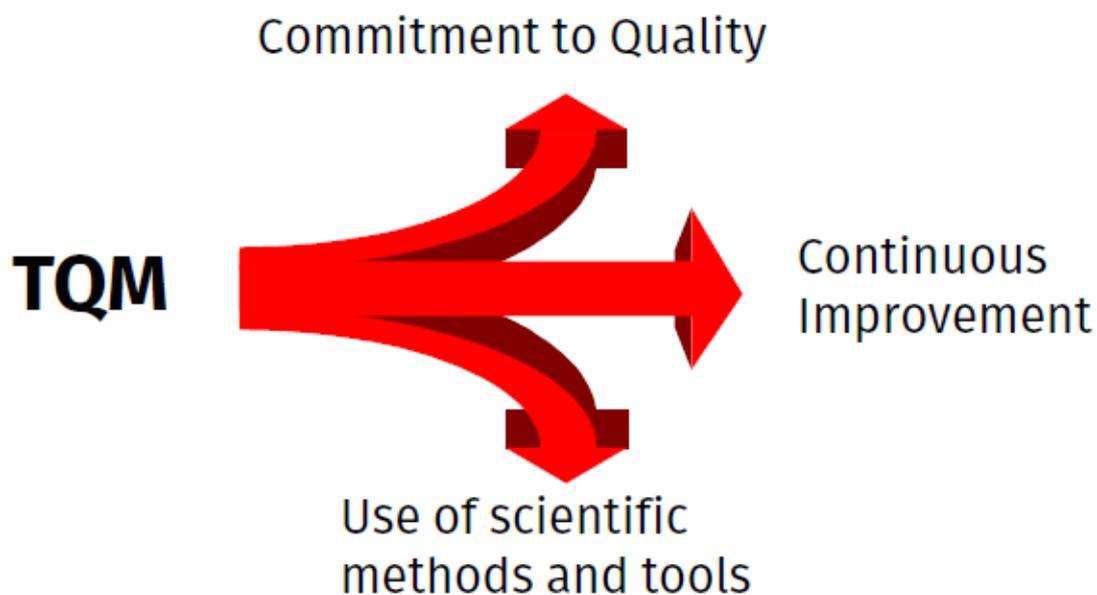
In terms of inventory management, MRP's purpose is to order the correct part(s) in the right quantity at the right time. An advantage of MRP is the reduction in inventory and the significant cost advantages that are associated with inventory reduction. MRP combined with JIT can provide companies with significant advantages in the marketplace. A drill down of MRP will reveal purchase order scheduling and JIT delivery. For manufacturing firms, purchase order scheduling and execution is the most critical business component. Proper scheduling and execution will ensure that materials are delivered just in time to meet production demand. Many purchasing managers understand the responsibility that is associated with timely and accurate purchasing. Worst-case scenarios can lead to a production halt, which will cause the company to experience irreversible harm in the marketplace. In response to the market impact issues that were created around MRP, a definitive need for effective purchasing solutions was identified. Purchasing software packages needed to be able to address the issues of JIT and the expandable Bill of Materials file (BOM), while allowing real time inventory calculations to be performed. Many companies saw a competitive advantage in loading BOM files into a purchasing system. The result is that a purchasing manager would order one main item (e.g. a farm tractor) from a purchasing system and the software would automatically generate a purchase order for all the required parts necessary to produce the farm tractor. The value-added benefits for the organization are tremendous cost savings in terms of labor hours used to identify and order the necessary parts for one final product. Once identified, the purchase orders would be generated automatically to the vendor(s) assigned to the specific parts. The vendor information (name, address, fax number, or email address) would have already been loaded into the software.

MRP, JIT, and Purchasing systems by themselves will not work without the definitive commitment of top management. Traditional MRP systems are tools, which must be used correctly in order to gain the maximum benefit. The same concept holds true for the purchasing systems that are incorporated into the MRP packages. The quality, reliability, and flexibility of any software purchasing system needs to meet the expectations and needs of the entire organization.

### 2.1.4 Purchasing and Total Quality Management

Purchasing departments for any organization can benefit by formulating and implementing TQM into their infrastructure. The ideal situation for any organization is to order and receive items from vendors with zero defects. Large contractual obligations between a supplier and a buyer could force vendors to adopt zero defect shipping rules. This type of proactive management helps to create product quality at the

origination source. The long-term benefits of instituting such measures will ensure the operational success for the buyer and subsequent long-term contracts for the vendor. Purchasing departments will realize appraisal and prevention costs with using TQM. The appraisal costs could be the direct labor time that is used for materials and/or supplies inspections. Prevention costs might be the costs associated with training warehouse workers on proper handling procedures and the creation of safe storage conditions. In the end, the correct identification and implementation of effective micro-management measures will benefit purchasing departments. Finally, TQM systems empower lower level employees to make decisions that should follow the company's strategic objectives and/or mission statement. Three key aspects of TQM are highlighted below.



### 2.1.5 Purchasing with Demand Calculations

Many purchasing management decisions cause managers to track and evaluate purchasing data. Data gathering and analysis are both critical components of any purchasing decision. The following is a list of concept issues that are faced by purchasing managers in today's competitive environment.

What...

- is the annual demand for the items?
- is the historical demand growth?
- is the reorder point for the items?
- is the reorder quantity for the items?
- should be the safety stock for the items?
- is the lead-time for the items?
- is the maximum amount of stock that should be kept on hand?
- types of demand forecasting methods should be used?
- alternatives could be used instead of the Economic Order Quantity?

Only an organized and careful evaluation of these and other critical purchasing questions will lead to effective purchasing and inventory management. If an organization cannot or does not take the initiative to evaluate these issues, then the purchasing software system will not be used to its maximum capability. A common misconception among many organizations is that the cost and time spent on these critical issues will not lead to any cost improvements. Yet, the companies and corporate executives who make the strategic commitment to tackle these issues and create teams from IS, Accounting, Purchasing, Inventory and Warehouse departments will quickly see the benefits of such an undertaking. Companies have much more information on purchasing and inventory functions, yet the assimilation of the proper team is necessary in order for this information to be “discovered.”

### 2.1.6 Today's Financial Considerations

As mentioned previously, the balance sheet used to be the primary measure of a company's financial performance. However, as modern technology allows data to move freely and easily from the company to the market, investors and analysts demand a wide variety of financial statements in order to track company and industry developments. While the balance sheet is still a useful tool, other financial measures like the Cash Flow Statement, Income Statement, and Company specific Inventory Statements are used to gain detailed information about inventory and the impacts that it has on firm's operating revenues. Inventory valuation methods also become important aspects to consider. GAAP officially recognizes three valuation methods: FIFO, LIFO and weighted average. However, other methods are used such as moving averages for perpetual systems. It is important to know which inventory valuation methods are used by companies and to understand the benefits and/or drawbacks of using such systems.

Most modern day managers understand the various costs associated with holding large amounts of inventory. At the same time, an evaluation of item pricing needs to be considered. Companies may realize financial benefits by taking advantage of bulk purchase pricing discounts. In addition, pricing discounts may be offered to preferred customers when vendors begin a sale and/or promotional campaign. It is recommended that a SWOT analysis (strengths, weakness, opportunities, and threats) be performed in order to see if bulk purchase item pricing discounts outweigh the relevant costs associated with holding inventory.

Another issue that affects the financial condition of a firm is the concept of inventory “shrink” as it relates to cycle counting. Inventory shrink is the process where the actual inventory in stock does not match the inventory reported on paper. Cycle counting is the method and procedure that a company uses to check for inventory accuracy. Cycle counting methods will affect the accuracy of inventory valuation statements if not performed correctly. For example, if cycle counts on capital items are performed after the quarterly statements are completed, then the statements cannot be considered accurate. Theft, unreported scrap, and inadequate inventory tracking methods will add to the inventory shrink that is discovered when inventory counting is performed.

### 2.1.7 Accounting Impacts

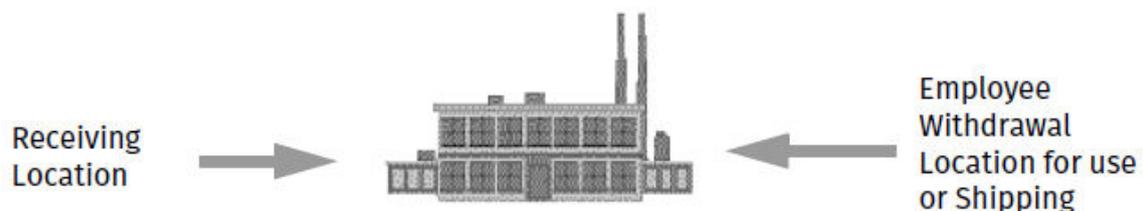
Efficient inventory management and purchasing processes can have positive impacts on many accounting functions. Accurate inventory tracking and control combined with pre-planned cycle counting methods

will provide accurate data for the accounting department, which will appear in many of the financial statements used by the corporation. As global competition increases the need for real time data management, accounting departments will benefit from the pressures to change outdated policies and procedures. In addition to accurate information, the real time data management issues will allow accounting departments to record correct information on a timely basis. Another benefit can be found in cash flow statements and future projections. Using real time data management, cash flow statements will record and report information to executives and the open market quickly and easily.

Electronic purchasing and receiving functions both affect the accounting reconciliation process. With the strategic commitment of setting up policies and procedures before instituting an electronic purchasing system, invoice and/or statement reconciliation will be processed with minimal errors. Accounts Payable personnel will be able to cross check receiving reference information (designated and required during the receiving process) with vendor invoice information. Consequently, disbursement checks will be cut and recorded correctly. Over and under payment problems of the past will become obsolete. In addition, an indirect benefit will be realized in the improved relations that are developed by the vendor and the client. Vendors will receive the proper payment for goods shipped. Finally, accounting departments can minimize additional finance charges from appearing on future statements.

### 2.1.8 Asset Management

The most fundamental component to any electronic inventory and purchasing system is asset security. Inventory management will become very complex without the development and implementation of sound security measures. Access to warehouses and/or storerooms becomes critical issues. In addition, an established documentation system should be established. A short diagram of suggested security alternatives follows:



#### Receiving Security

Sign off delivery statement = as good sare loaded into inventory + Employee ID (number, name, etc.)

#### User Security

- Lock & Key system
- Pass codes for entry
- ID badge
- Other forms of user identification
- Procedures for who or what is allowed to enter warehouse with employees
- Other people

- Transportation devices such as (boxes, crates, vehicles)

### Item Removal Security

- Sign out sheet (traditional, yet lead to many errors)
- Bar code scanning that allows unit multiples
- Electronic tagging of items (similar to methods used by libraries and department stores)
- Fail-safe user exits
- Security guard to check for accuracy
- Computer scanning (similar to metal detectors in airports) which check for electronic tags

### Warehouse Design and Construction

Identification of entry points and by-pass alternatives:

- Doors
- Window
- Drainage systems
- Cooling systems
- Roof access
- Power supplies
- Alarm systems

Many organizations address warehouse security with mixed emotions. The identification of security problems and the subsequent proposal of solutions can take a great deal of time and effort. Security systems are quite expensive to purchase and periodic maintenance costs can be costly. However, companies today cannot afford proper security mechanisms for warehouses. As the global marketplace shrinks barriers to market entry, Companies are constantly trying to reduce as many costs as possible. The solution for many of these issues lies within the data that a corporation currently collects. The best financial measure to determine if a security system should be installed is to perform a Net Present Value (NPV) analysis. The formula for the NPV is shown below:

(Cost of purchasing the security system) + Present Value theft savings = Net Present Value of the project

For example, historical company information shows that the Bakerz Company loses \$1M each year in inventory due to lost or stolen goods. A security system can be purchased which costs \$3M (included maintenance fees) and has an expected useful life of 5 years. The Company has identified an acceptable discount rate of 8%. Should the security system be purchased?

Answer: Use the NPV analysis to see if the present value of the cost savings are greater that the price of the security system.

Solution:

$$\text{NPV} = (\$3\text{M cash outlay}) + \$1\text{M}/1.08 + \$1\text{M}/1.082 + \$1\text{M}/1.083 + \$1\text{M}/1.084 + \$1\text{M}/1.085$$

$$\text{NPV} = (3,000,000) + 925925 + 857338 + 793832 + 735029 + 680583$$

$$\text{NPV} = (3,000,000) + 3992707$$

The security system for this example should be purchased. Unfortunately, many companies still do not make strategic purchasing decision based upon NPV. Most companies use alternative methods such as payback in order to make decisions of this nature. Until companies change behavior patterns and critical thinking skills, inventory will continue to disappear from the lack of well-defined and implemented security systems.

### 2.1.9 Inventory Tracking and Control

Inventory items have different functional purposes and uses for organizations. Some inventory items need periodic review, while others may require a perpetual review system. Therefore, inventory classification systems need to be developed and implemented by organizations. One of the most common types of inventory tracking is called ABC Inventory. **Do not confuse this term with Activity Based Costing.** ABC Inventory is a method for analyzing inventory based on value combined with cycle counting techniques discussed in the next section. Each letter in the ABC system is used for different inventory volumes. The letter A is usually associated with high dollar volume, B with moderate dollar volume and C with low dollar volume. An important point to identify for the ABC analysis is the dollar volume not unit price. For example, a firm might have an item with a low unit price and high volume. This could be considered an A item. Companies need to practice extreme caution when classifying items under the ABC system. Finally, companies may use different alpha and/or numeric classification systems for inventory. As long as these processes are well documented, their incorporation into an electronic purchasing system would not be difficult.

### 2.1.10 Inventory Cycle Counting

Inventory tracking and control mechanisms will directly affect how cycle counting is performed. Cycle counts are performed at different periods and become dependent upon the tracking and control mechanism. For example, companies may identify a need to count type A items more frequently than type B or C items in the Warehouse. System settings in electronic procurement systems can be enabled in order to perform such functions automatically. Once the classification systems and cycle counts are created, the procurement system will prompt the user to count the desired items at pre-designated times. Companies will benefit tremendously from this process as counting will not cause warehouses and inventory movements to shut down completely. Many companies still incorporate a policy of shutting down all operating activities in order to perform semi-annual inventory counting.

For large companies, electronic counting can be used instead of manual methods. Many of today's larger firms are expressing interest in loading inventory software on handheld devices that have bar code scanning capabilities. The result is that technological innovations will greatly reduce the labor time and expense of manually counting inventory. It will also give companies the real time data desired by upper management. No longer will corporate executives wait until counting is complete and inventory reports written. Instead, company executives will see the status of inventory counts quickly and accurately. These functional changes will drastically alter traditional inventory counting methods. Traditional fiscal and/or periodic inventory counting will eventually be replaced with perpetual inventory systems as security is improved and real time data management becomes dominant.

## 2.2 The Future of Inventory Management

### Real Time Data Management

The purchasing and inventory manager of tomorrow will require real time data in order to perform daily job functions. Warehouse security procedures and protocols will be in place and many of the current costs associated with inventory will become irrelevant. The benefits of real time data management are far reaching. The bulleted items below highlight some of the advantages that real time data management will bring:

- Reduction of paper trail
- Reduction in labor time spent performing routine tasks
- Increased level of integration between purchasing, inventory and accounting departments
- Faster decision making ability
- Quicker response to demand
- Adaptability to market changes and economic shifts
- Ability to forecast future demand
- On-line reporting in a wide variety of output methods

Thus, corporate managers must perform a careful evaluation of the implicit and explicit costs of electronic inventory and purchasing management. Companies that lack the foresight and strategic commitment to the long-term will not survive as other companies flourish. Decisions to purchase procurement and automation software will be secondary considerations. The primary consideration will be the time and effort spent gathering valid and reliable data, performing a SWOT analysis on current processes and changing infrastructure thought patterns. Companies will always be split into different groups (i.e. accounting, purchasing, inventory, and warehouse managers). Only when these departments are assimilated into a “Virtual Team” will changes take place. Job titles and seniority will take a back seat to the betterment of the organization. Organizational structures will become flatter as businesses adapt to the changing work conditions and expectations of tomorrow’s work force.

### Purchasing & Inventory Revolutions

In the future, inventory and purchasing system will change drastically. Significant changes are already happening in how companies view inventory and warehouse options.

Inventory options such as vendor supplied inventory and consignment supplied inventory will take precedence over alternative methods. In addition, inventory tracking will be used to eliminate double counting for inter-company transfers of WIP items. Many manufacturing organizations currently experience difficulty in tracking WIP “farm outs.” Farm outs occur when WIP items are transferred to other physical manufacturing locations in order to produce a finished good. Firms will incorporate asset tracking, BOM (kitting), and develop other system requirements that match companies’ strategic objectives.

## 3 Warehouse Setup

The purpose of this chapter is to provide a guideline for setting up warehouses and warehouse groups in the system that is related to the Inventory module. Explanations of general set-up are outlined in the General Administration manual. This chapter is dedicated to warehouse related set-up only, however, the Inventory module is closely associated with the Purchase and Assets modules.

### 3.1 Setting Up Inventory - Functional Summary

With any inventory permission, the user will see the Inventory section tab on the page. Construction of a warehouse profile requires that certain other entities be created first. There are seven steps to manage the inventory process.



1. Create a Location Group. All locations must be associated with a location group.
2. Create a location. All users and warehouses must be identified with a location.



---

All warehouses set up must be linked to a location. Although not necessary, it is recommended that a separate or independent location be created for each warehouse in the system. Taxes that can be added to the warehoused items will be defined in the location profile. For further details on setting up location groups and locations refer to Admin Guide - General/Security Chapter.

---

3. Create a Warehouse Group. This group represents the collection of users who will order from a warehouse.
4. Create a user group. This group is to be associated with a corresponding warehouse group, and assign permissions to this group. For a user to be able to request warehouse items, a user must be in a user group that is joined to a warehouse group that contains at least one warehouse with stock.



---

All user groups must belong to a warehouse group. For further details on setting up user groups and users, refer to Admin Guide - General/User Management – Groups.

---

5. Add users. These users will need to request items from the warehouse.
6. Create a replenishment user. This user is the one who will represent the warehouse when requests are automatically generated to replenish warehouse stock.



Although not required, a replenishment user should be created and linked to each warehouse especially if multiple warehouse locations exist. The reasoning for this action is because the ship to address for replenishment orders for a warehouse is derived from the ship to location of the warehouse replenishment user. The replenishment user must have the warehouse location in the ship to location.

7. Create a Warehouse. Now all of the previous steps can be joined together in a new warehouse profile. Each warehouse must either source its material from another warehouse or from the default vendor who supplies the item. Orders sent to a warehouse are called transfer orders and orders sent to vendors are called purchase orders.

## 3.2 Warehouse Group Setup

Users can be divided among multiple warehouses. Specifically defined user groups can be linked to warehouse groups.

Logistics is defined as the process of strategically managing the movement of materials from suppliers to the end user. This requires thoughtful consideration to warehouse placement, qualification of inventory, level of inventory, delivery method, delivery routing, and careful alignment of requisitioner with supply sources, whether the source is a supplier or a warehouse.

In P2P Inventory Manager, logistics concerns are focused on aligning users with the proper warehouses. With planning, the process of correctly choosing the appropriate source of materials can be completely automated for the end user. To begin the planning process, an organization will need to identify, for each warehouse or group of warehouses, which group of people will need to request items from that warehouse group and corresponding warehouses.

Users can be associated with “groups.” The ability to manage users in groups is a great benefit to user management. A warehouse can also be associated to a warehouse group. Users are only able to request items from a warehouse if they are members of a user group that is associated with a warehouse group containing the particular warehouse.

The following permission is required when implementing this functionality:

- 44 – Manage Warehouses

### 3.2.1 Warehouse Group Management

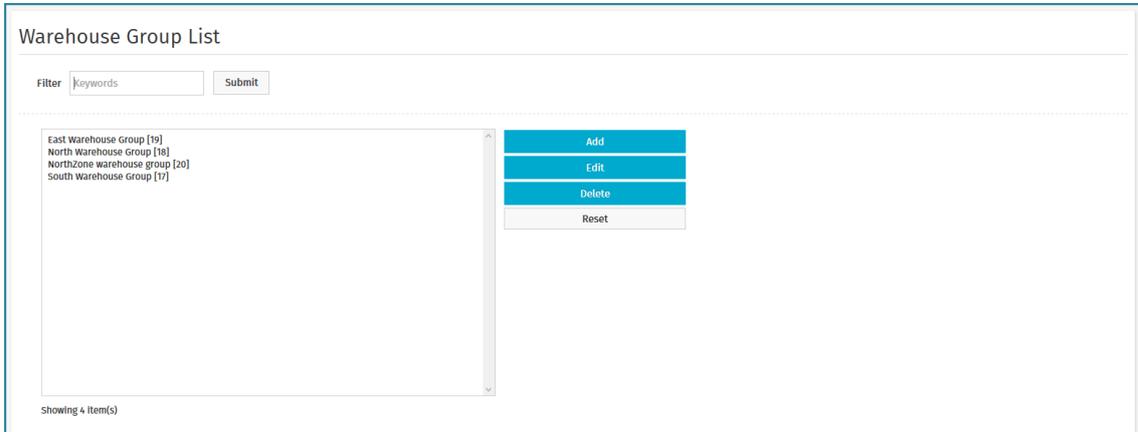


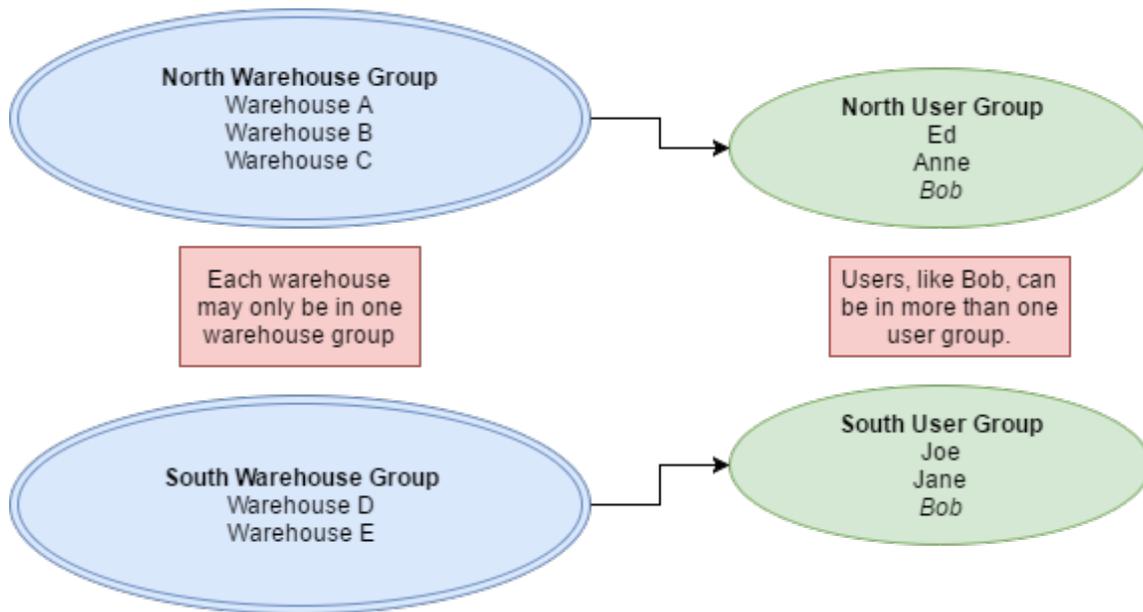
Figure 1: Warehouse Group Management page

Table 1: Warehouse Group Management page action definitions

Action	Definition
Edit	Allows the user to edit an existing warehouse group.
Add	Allows the user to add a new warehouse group.
Delete	Allows the user to delete a warehouse group.
Clear Entries	Allows the user to clear any unsaved entries.

### 3.2.2 Warehouse Groups vs User Groups

While a user can be a member of more than one user group, a warehouse cannot be a member of more than one warehouse group. The diagram below represents the result.



The conditions are as follows: Ed and Ann are in the North region. Warehouses A, B and C are in the North region. Joe and Jane are in the South region. Warehouses D and E are in the South region. Bob is in both the South and North region.

For the purpose of the example, we will say that users in the North User Group need to access warehouse items in the North and users in the South User Group need to access warehouse items in the South. Bob can have access to any of the warehouses. Therefore, during implementation, two user groups and two warehouse groups will need to be created. Bob will be associated with both groups. Southern users will be associated with the South Warehouse Group and Northern users will be associated with the North Warehouse Group. With these associations in place, everyone will have access to the correct warehouses and only the correct warehouses.

In addition, for manually placing orders with vendors for stock or JIT replenishment, a user without warehouse access must be created. This process ensures that when an order is placed, an actual purchase order is created and sent to an assigned or designated vendor and not an accessible warehouse.

Users can be divided among multiple warehouses. Specifically defined user groups can be linked to warehouse groups.

### 3.2.3 Warehouse Groups Addition and Editing

The Add Warehouse Group page and the Edit Warehouse Group page have the same attributes.

**New Warehouse Group**

---

Warehouse Group Name \*

Account code

---

Add Warehouse Group
Clear Entries

**Figure 2: Add Warehouse Group page**

**Table 2: Add Warehouse Group page field definitions**

Field	Definition
Warehouse Group Name	Enter a name for the warehouse group.
Account Code	Enter an accounts string, if any.

### 3.2.3.1 Adding a Warehouse Group

To add a warehouse group:



1. From the Dashboard, navigate to > **Geographic > Warehouse Groups.**
2. Click **Add.**
3. Enter the required fields.
4. Click **Add Warehouse Group.**

### 3.2.3.2 Editing a Warehouse Group

To edit a warehouse group:



1. From the Dashboard, navigate to > **Geographic > Warehouse Groups.**
2. Select the warehouse group to be edited and click **Edit.**
3. Edit the necessary fields.
4. Click **Edit Warehouse Group.**

### 3.2.4 Deleting Warehouse Groups

To delete a warehouse group:



1. From the Dashboard, navigate to > **Geographic > Warehouse Groups.**
2. Select the warehouse group to be deleted and click **Delete.**
3. Click **OK** on the pop up window.

### 3.3 Warehouse Setup

After adding all appropriate warehouse groups, location groups, and locations, specific warehouses may be added. All warehouses set up must be linked to a location.

The following permission is required when implementing this functionality:

- 44 – Manage Warehouses

#### 3.3.1 Warehouse Management

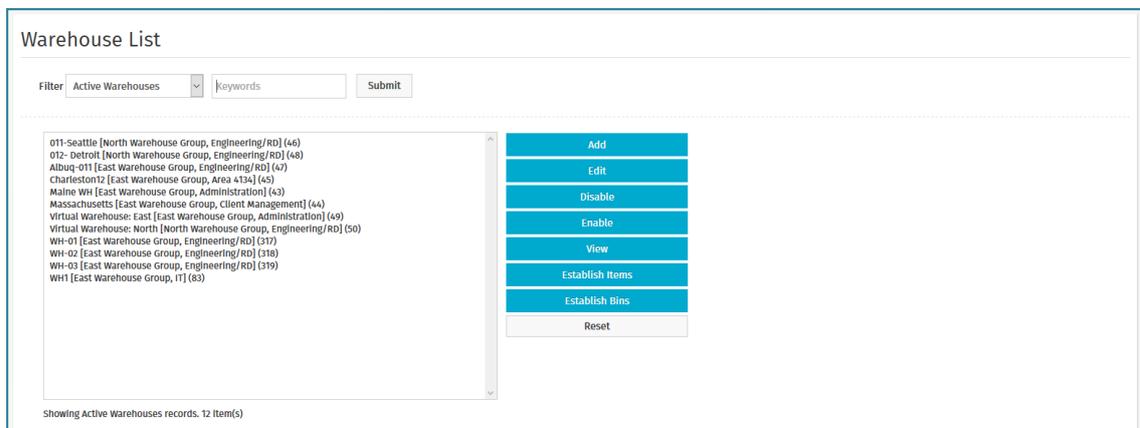


Figure 3: Warehouse Management page

Table 3: Warehouse Management Page action definitions

Action	Definition
Edit	Allows the user to edit an existing warehouse.
Add	Allows the user to add a new warehouse.
Disable	Allows the user to disable a warehouse. Disabling a warehouse will add an * before the warehouse name.
Enable	Allows the user to enable a warehouse that has been disabled.
View	Allow the user to view an item without the editing function.
Establish Items	Allows the user to establish all the items that have been added in one warehouse into another warehouse.
Establish Bins	Allows the user to add/edit or delete warehouse bins.
Clear Entries	Allows the user to clear any unsaved entries.

The list of warehouse displayed in the Warehouse list can be filtered based on these options:

- Show All: Use this option to display all warehouses.
- Active Warehouses: Use this option to display only active warehouses.
- Discontinued Warehouses: Use this option to display only the warehouses that have been disabled.

- To further filter for a specific warehouse, enter the warehouse name in the and field, select show all in the filter drop-down field and click Retrieve.

### 3.3.1.1 Warehouse Addition and Editing

The Add Warehouse and the Edit Warehouse pages have the same attributes.

The screenshot shows a 'New Warehouse' form with the following fields and controls:

- Warehouse Name \***: Text input field.
- Location \***: Searchable dropdown menu with a magnifying glass icon.
- Warehouse Group \***: Dropdown menu with 'East Warehouse Group' selected.
- Replenishment User \***: Searchable dropdown menu with a magnifying glass icon.
- Warehouse Type**: Text input field with '0' entered.
- Warehouse Priority ID**: Text input field with '0' entered.
- Account Code**: Text input field.
- Sourcing Warehouse \***: Dropdown menu with '\* From Default Vendor' selected.
- Notes**: Text area for additional information.
- Buttons**: 'Add Warehouse' (blue) and 'Clear Entries' (grey).

Figure 4: Add Warehouse page

Table 4: Add Warehouse Page field definitions

Field	Definition
Warehouse Name	Enter the name of the warehouse the company will be using.
Location	Select a location from the drop- down list box that the warehouse is assigned.
Warehouse Group	Select a warehouse group from the drop-down list box.   This warehouse group will have a corresponding user group assigned.
Replenishment User	Use the magnifying glass icon to select the replenishment user. This may or may not be a real person. The warehouses will represent/use this user for purchase orders.
Warehouse Type	Enter a number value for warehouse type. This is an optional field.
Warehouse Priority ID	Sets the ID of the warehouse that will be used first.
Account Code	Enter an accounting code if applicable.
Sourcing Warehouse	Select a sourcing warehouse from the drop-down list. For example, select the Southern warehouse to be the sourcing warehouse for the Northern warehouse.
Notes	Enter any notes (optional).

### Adding a Warehouse

To add a warehouse:



1. From the Dashboard, navigate to  > **Geographic** > **Warehouses**.
2. Click **Add**.
3. Enter the required fields.
4. Click **Add Warehouse**.

### Editing a Warehouse

To edit a warehouse:



1. From the Dashboard, navigate to  > **Geographic** > **Warehouses**.
2. Select the warehouse to be edited, and click **Edit**.
3. Edit the necessary fields.
4. Click **Edit Warehouse**.

#### 3.3.1.2 Disabling a Warehouse

Only a warehouse with no purchase orders associated to it can be disabled.

To disable a warehouse:



1. From the Dashboard, navigate to  > **Geographic** > **Warehouses**.
2. Select an active warehouse to be disabled, and click **Disable**.
3. Click **OK** on the confirmation pop-up window.

#### 3.3.1.3 Enabling a Warehouse

To enable a warehouse:



1. From the Dashboard, navigate to  > **Geographic** > **Warehouses**.
2. Select a discontinued warehouse that needs to be enabled, and click **Enable**.

### 3.3.2 Establish Items in Warehouses

Permissions Required:

- 45 – Manage Inventory in Warehouses
- 52 – Warehouse Assignment



Click the Select Warehouses link and grant permissions to both the warehouses (one where the items need to be established and another to where it needs to be established).

**Establish Items in a Warehouse**

---

Source Warehouse \*

Destination Warehouse \*

Transfer WAC \*  YES  NO

---

**Figure 5: Establish Items in Warehouse page**

**Table 5: Establish Items in Warehouse page field definitions**

Field	Definition
From Warehouse	Select the warehouse where the items are established.
Into Warehouse	Select the warehouse into which the items need to be established.
Transfer WAC	Select Yes or No Radio to determine whether the weighted average cost values need to be transferred as well.

**3.3.2.1 Adding Items Established from One Warehouse into Another**

To add the items from one warehouse into another:



1. From the Dashboard, navigate to > **Geographic > Warehouses**.
2. Select a warehouse and click **Establish Items**.
3. Select the *Source Warehouse* and the *Destination Warehouse* in the drop-down fields.
4. Select *YES* or *NO* depending if if the WAC (weighted average cost) needs to be transferred also.
5. Click **Set**.

**3.3.3 Establish Bins**

The following permission is required when implementing this functionality:

- 44 – Manage Warehouses

Warehouse bins refer to specific locations in the warehouse where items are stored. The bin functionality allows the users to store and manage items in multiple bins.

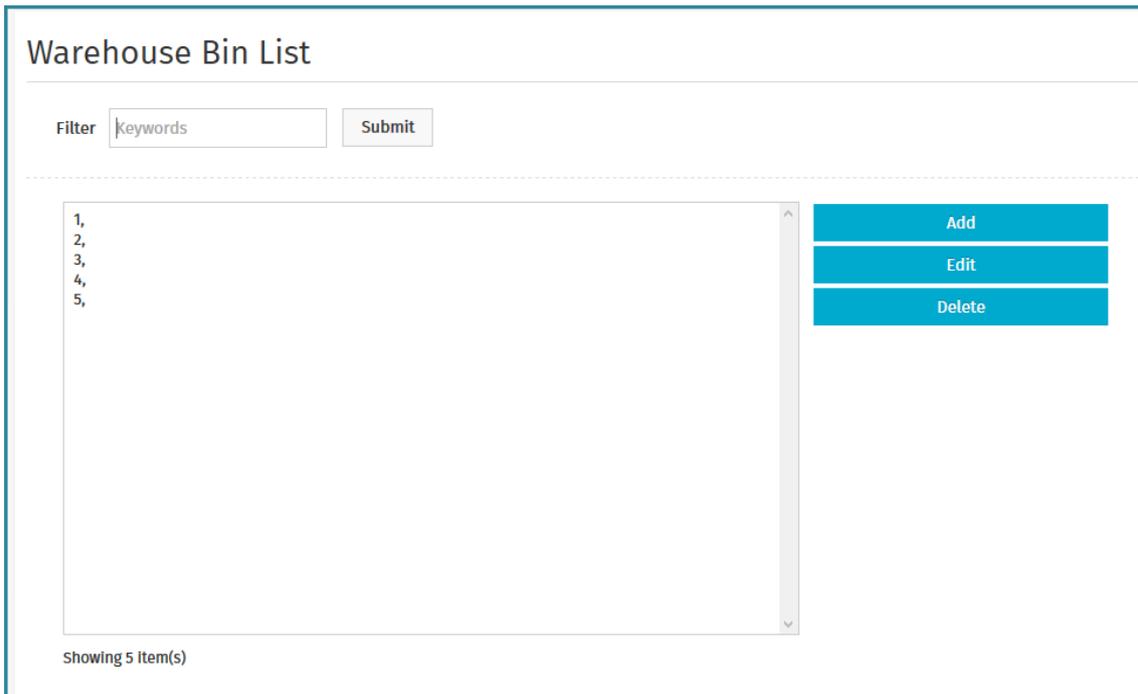


Figure 6: Warehouse Bin List page

Table 6: Add Warehouse Bin page action definitions

Field	Definition
Edit	Allows the user to edit existing bin information.
Add	Allows the user to add a new bin to the warehouse.
Delete	Allows the user to delete an existing bin in the warehouse.

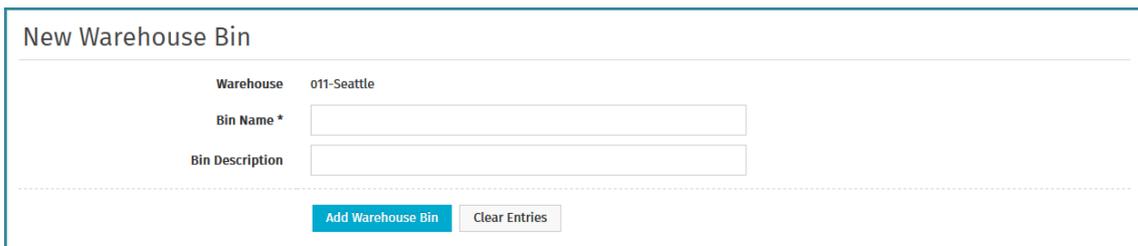


Figure 7: Add Warehouse Bin page

### 3.3.3.1 Establishing Bins in a Warehouse

To establish bins in a warehouse:



1. From the Dashboard, navigate to  > **Geographic** > **Warehouses**.
2. Select a warehouse where the bins need to be established, and click **Establish Bins**.
3. Click **Add**.
4. Enter a name that will be used to reference this bin in the bin name field.

5. If needed enter the description specifying what the bin is used for in the bin description field.
6. Click **Add Warehouse Bin**.

### 3.3.3.2 Editing Bins in a Warehouse

To edit existing bins in a warehouse:



1. From the Dashboard, navigate to  > **Geographic** > **Warehouses**.
2. Select a warehouse where the bins need to be edited, and click **Establish Bins**.
3. Select the bin to be edited, and click **Edit**.
4. Edit the name that is used to reference this bin in the bin name field.
5. If needed edit the description specifying what the bin is used for in the bin description field.
6. Click **Edit Warehouse Bin**.

### 3.3.3.3 Deleting a Bin in a Warehouse

Only bins that do not have any items stocked can be deleted from the warehouse. If a bin with stock needs to be deleted, transfer the items to a different bin using bin transfer functionality on the Inventory List page.

To delete bins in a warehouse:



1. From the Dashboard, navigate to  > **Geographic** > **Warehouses**.
2. Select a warehouse where the bins need to be deleted, and click **Establish Bins**.
3. Select the bin to be deleted, and click **Delete**.
4. Click **OK** on the pop up verification window.

## 3.4 Location-Based and Warehouse-Based Permissions

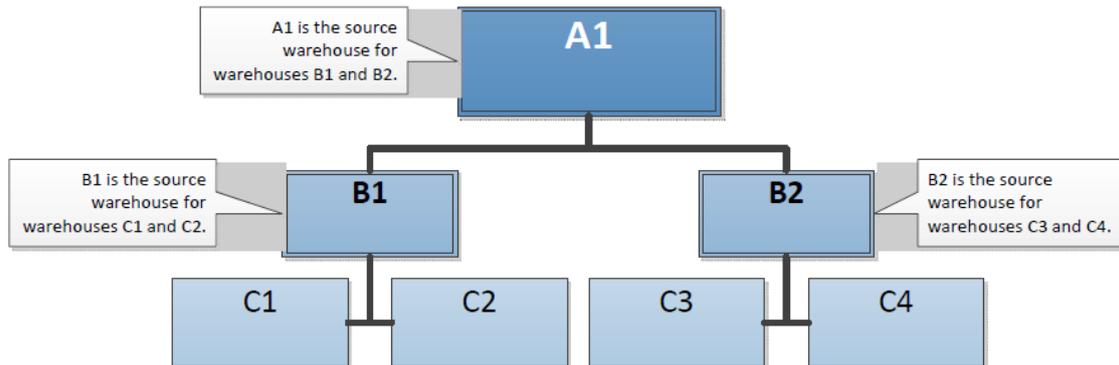
As a follow-up to establishing the locations and warehouses, appropriate location-based and warehouse based-permissions will need to be assigned to those with related responsibilities.

With purchasing permissions, those who need to monitor and manage purchase orders generated automatically by the warehouse will need to have purchasing permissions for the warehouse locations. Users who need to review shipments, enter counting, and manage inventory item data, will need to have, in addition to user/group permissions for those tasks, inventory permissions for the warehouse(s) for which they have responsibility. Lastly, users who need to receive items into inventory will also need to have requesting and receiving permissions for those warehouse location(s).

### 3.5 Multi-Level Warehouse Implementation

When multiple levels of warehousing exist such that a centralized warehouse is a source of stock for another warehouse, then implementation requires that all of the warehouse information be entered for the more central warehouses first.

For example, the diagram below shows seven warehouses, A1, B1, B2, and C1, C2, C3, C4.



**Figure 8: Multi-Level Warehouse Implementation setup**

In a system of warehouses, such as that above, the sourcing warehouses must be created first – level A warehouses must be created before level B warehouses and Level B warehouses must be created before Level C warehouses. Since the sourcing warehouses are created first, they will be available for identification as the warehouses that draw items from them are created.

### 3.6 Stock Selection Method

Stock selection method can be used to prioritize the selection of items to be shipped in any way that suits the company's business needs, such as guaranteeing that either lots received first are the ones which are shipped first, lots received last should be the ones that are shipped first or ship items based on their expiration dates.

Use the following system setting to determine the stock selection method that should be used by your Organization:

- 6400 – Method to use to remove items from Inventory

Administrators can select one of these stock selection methods:

- FIFO: Select this option to first ship items from the lot that was received first.
- LIFO: Select this option to first ship items from the lot that was received last.
- Expiration Date and FIFO: If items that expire soon and were received from the lots that were received first then use this option.
- Expiration Date and LIFO: If items that expire soon and are from the lot that was received last, then use this option.

### 3.7 Shipping Management

Users can set up and maintain different shipping options used by the organization.

For details on Managing Shipping Options, refer to *General Admin Guide - Shipping Options*.

### 3.8 Synchronizing Account Codes with Inventory

If needed, the system can be integrated with the organization's accounting interface for managing any account codes related to Inventory. To implement this interface, contact your Basware Implementation or Client Care Team.

### 3.9 Withdrawn Bin Account Code Fields

The withdraw bin can be configured to allow for account code entry that is similar to the shopping cart. This functionality works in conjunction with the account code entry throughout the system, and the behavior is similar to the account code entry in the shopping cart.

The screenshot displays the 'Admin (4) - Direct Withdrawal Bin' interface. At the top, there is a search bar and a warehouse dropdown menu currently set to 'Albuq-011'. Below this is a 'Submit' button. The main area contains a table with the following columns: SKU (ID), Name & Description, Unit, Cost, Available Quantity, Withdrawal Quantity, Accounts Coding, and Delete. A single row is visible for 'MulchAsset1 (550806)' with the description 'Cedar Mulch [IC Code: Asset Category] [Accounts Coding: ] [Albuq-011] [E]'. The unit is 'POUND(1)', cost is '\$1.00', available quantity is '9', and withdrawal quantity is '0'. The 'Accounts Coding' field is highlighted with a red box and contains three sub-fields: 'Location', 'Site', and 'SubLocation', each with a 'Start Typing' input field. At the bottom right, the 'Estimated Order Total: \$1.00' is displayed. There are also buttons for 'Revise Request', 'Clear Entries', and 'Start Withdrawal'.

**Figure 9: Withdraw Bin page with Account Code field**

Use the following system settings to set up withdraw bin account code entry to meet your organization's requirements:

- 726 – System Item Category Account Code Label
- 727 – Display Item Category Account Code on All Relevant Screens
- 728 – Display Description for Account Codes
- 729 – Format for Account Code Display When Using Drop-down List Selection
- 762 – Label for Account Code across the System
- 763 – Format to Display for Account Code Input Field in Shopping Cart and Expense Reports (XX-XXX-XXXX)
- 824 – Manually Enter the Account Code in the Split Account Codes Screen
- 827 – Shopping Cart Display Type

- 828 – Accounting Code: Enable Verification
- 829 – Accounting Code Selection Type
- 841 – Accounting Code: Verification Type
- 842 – Accounting Code Expansion Formula
- 843 – Accounting Code Length for Expansion
- 848 – Account Code Verification Formula
- 857 – Accounting Code: Required for Requesting
- 859 – Off catalog and Shopping Cart Account Code Display Width
- 886 – Accounting Code: Enable Verification against User Masks
- 887 – Accounting Code: User Account Codes Masks Attribute Type
- 888 – Accounting Code: Mask Character
- 897 – Display Split Account Code on All Relevant Screens
- 925 – Account Code Verification Data Source Name
- 926 – Account Code Verification SQL

### 3.10 Inventory Audit

The inventory audit provides an audit trail of the actions performed on inventory stock, such as the shipment, adjustment of stock levels, receiving into warehouse, etc.

Pipe 109 (PIP109) - Audit History (Current Stock Qty. 6 Units.)										1-6 of 6 Items processed
Detail ID	Audit Type	Date	Time	Unit	Quantity	User	Cost	Asset	Notes	
62211	RECEIVE	07/01/2015	06:55 AM	PIECE	1.00	Sharon	150.00	55324	ASSET_ID: 55323	
62210	RECEIVE	07/01/2015	06:55 AM	PIECE	1.00	Sharon	150.00	55323	ASSET_ID: 55322	
62209	RECEIVE	07/01/2015	06:55 AM	PIECE	1.00	Sharon	150.00	55322	ASSET_ID: 55321	
62208	RECEIVE	07/01/2015	06:55 AM	PIECE	1.00	Sharon	150.00	55321	ASSET_ID: 55320	
62207	RECEIVE	07/01/2015	06:55 AM	PIECE	1.00	Sharon	150.00	55320	ASSET_ID: 55319	
62206	RECEIVE	07/01/2015	06:55 AM	PIECE	1.00	Sharon	150.00	55319	ASSET_ID: 55318	

**Figure 10: Inventory Audit**

Inventory audit records transactions related to

- Physical Goods (In/Out)
- Impact Cost (Average Cost)
- Zero Marks (errors that are introduced in the Inventory Cost due to calculations involving decimals)
- Inventory Discrepancies
- Counting Adjustments
- Other Adjustments

For further details on viewing the Inventory audit details, refer to *Inventory Manager User Guide - Chapter 2*.

## 4 Warehouse Catalog

Before establishing an item in the warehouse, the item needs to be set up in the main catalog. After the item has been created in the catalog, it may be established in one or multiple warehouses. The following sections describe the steps necessary to set up an item in the catalog, as well as, establishing the item in the warehouse.

### 4.1 Item Establishment in Inventory

The user can establish items in inventory using different methods:

- Upon creation of catalog item.
- Establish item in warehouse from Item List page.
- Add to inventory from the Inventory List page.
- Receive item into the warehouse.

It will be assumed that item categories, manufacturers, vendor types, and vendors have been added to the system prior to adding items to the catalog. See the *General Admin Guide* for details on these applications. More information on adding items to the catalog can also be found in the *General Admin Guide*.

### 4.2 System Behavior Based on Inventory Type

When users create an item for the catalog, they select an inventory type for the item they are adding. This is by far the most important setting if the company has Inventory Manager.

There are four options to choose from in this field.

**Non-Stock Item** — If this choice is selected, and then purchase orders for the specific item will be placed with the preferred and/or additional vendors only via a purchase.

**Stock Item** — This will cause the system to default internal transfer orders from the warehouse only. If the item is in stock, the request will generate an open shipment in the chosen warehouse. The open shipment is associated with a transfer order. If a stocked item is out-of-stock, then the request will generate a back order for the chosen warehouse.

**Auto** — If the inventory type is auto and the item is available in the warehouse for the quantity ordered, the request would generate an open shipment in the chosen warehouse. By definition, this shipment is a transfer order. If the auto item is out-of-stock, then the request will generate a purchase order to be delivered to the appropriate vendor. The item will be delivered directly to the ship-to indicated on the request header.

**WH Access Profile** — (Warehouse Access Profile) If this option is chosen, the system checks the user's profile to see which warehouse the user has permissions to order from. The system checks to see if there

is sufficient quantity available in one of the permissible warehouses to fulfill the requested order and generates an internal transfer order accordingly.



Items are ordered from warehouse only if the user has access to any sourcing warehouse. If the user is not linked to the warehouse where the item is stocked, a regular purchase order is created to send to the vendor instead of a transfer order to the warehouse.

When an item is received into a warehouse for the first time system setting 6065 – *Update Inventory Type upon Receiving* determines the inventory type for the received or transferred items. The system setting can be set to one of the following:

- Do Not Change (default value)
- Non-Stock Item
- Stock Item
- Auto
- WH Access Profile

### 4.3 Item Establishment in the Warehouse during Item Creation

You can establish an item in a warehouse during creation of the catalog item. This is useful if adding a few items to the catalog and each item will be established in a different warehouse.

The following permissions are required:

- 10 – Manage Items
- 45 – Manage Inventory in Warehouse
- 52 – Warehouse Assignment – Select the Warehouse in which Items need to be established.

Figure 11: Partial View of Add Item page

Add Vendor Information for AssetA

Define Unit Multiples

Unit	List Price	Multiple *	Weight	Bar Code
EACH Base Unit	0.00	1	0	

---

Replenishment / Order

Multiple	Unit
0	* Auto

---

Order Quantity

Minimum Quantity	Maximum Quantity
0 EACH Base Unit	0 EACH Base Unit

A1

Unit	SKU	Cost *	Contract	Bar Code
EACH		0.00	None	

Finish Establish in Warehouse Clear Entries

Figure 12: Add Item Step 2 page

Select Warehouse

Select Warehouse(s) \*

- 011-Seattle
- 012- Detroit
- Albuq-011
- Charleston12
- Maine WH

Change Status of Items Added to \*

Stocked Item

Transfer Item Account Codes \*

Yes No

Assign items to class \*

A

Reorder Point

0

Reorder Qty

0

Udef1

Udef2

Udef3

Add to Warehouse Clear Entries

Figure 13: Add Items to Warehouse page

Table 7: Add Items to Warehouse page field definitions

Field	Definition
Select Warehouse(s)	Allows the user to select a warehouse where the item needs to be established.
Change Status of Items Added to	Allows the user to change the status of the item set in Step 1 of add item process to either stocked, auto, or WH access profile.
Transfer Item Account Codes	Allows the user to transfer any account code for the item.
Assign Item to Class	Enter the appropriate class A, B, or C, this determines through system settings how often the item will be marked for count.
Reorder Point	Enter the quantity that will be used in the replenishment calculation so that the system will know to order this item when it falls below this point.
Reorder Qty	Enter the quantity the system will order when it falls below the re-order point.
Udef 1 - 3	Allows the user to enter any user defined information. Note: Entering a value in system settings 6100, 6101, and 6102 respectively can customize the labels for these Udef fields.

### 4.3.1 Adding an Item to the Warehouse during Item Creation

To establish an item in the warehouse during item creation:



1. From the Dashboard, navigate to  > **Catalog** > **Items**.
2. Click **Add**.
3. Enter all the required fields.
4. Click **Next**.
5. Enter the cost information for the vendors and set the replenishment unit to auto or each.



---

An inventory manager can use the replenishment unit to set items to be reordered in certain units. Or, if the replenishment unit is set to auto, then the system will automatically translate the request into exact units for the order. For example, an item is sold in boxes and cases, with 10 boxes in each case. A request for 20 boxes will be automatically translated into an order for two cases. However, there will be occasions when the company orders an odd lot or unmatched quantity. For example, if a request is generated for 13 boxes, then the replenishment unit will round up to two cases provided the appropriate inventory setting has been turned on.

---

6. Click **Establish in Warehouse**.
7. Enter the necessary fields.
8. Click **Add to Warehouse**.

### 4.4 Item Establishment in the Warehouse from Item List Page

The user can establish items in inventory from the catalog at any time by accessing the Item List page as shown below. This saves the user time, as he can select several items at once to establish in inventory.

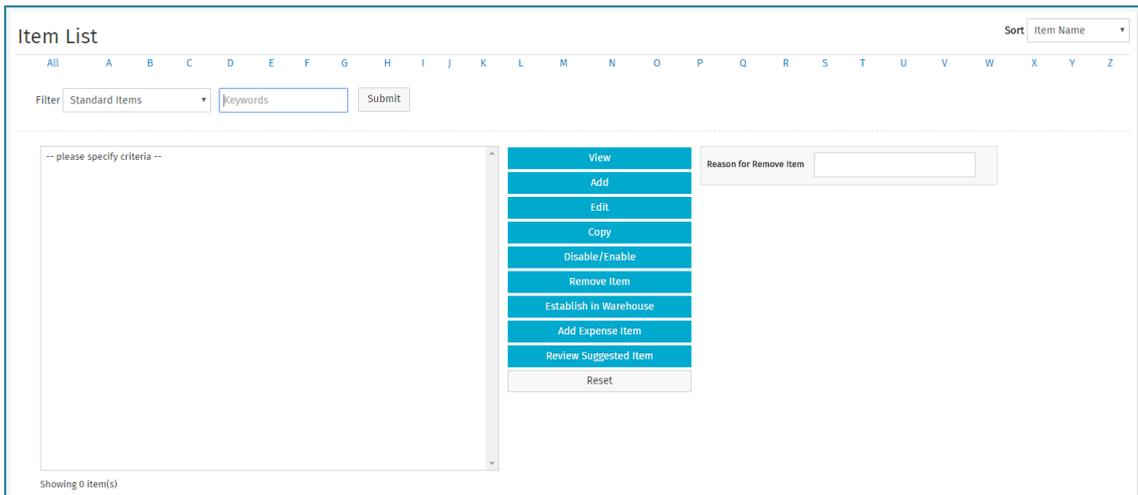


Figure 14: Item List page

#### 4.4.1 Adding an Item to the Warehouse from the Item List Page

To add an item to the warehouse from the Item List page:



1. From the Dashboard, navigate to  > **Catalog > Items**.
2. Select the item to establish in the warehouse and click **Establish in Warehouse**.



The user can select multiple items in the list at the same time to establish in one specific warehouse by clicking and dragging the mouse, or by holding the Ctrl key down and selecting specific items in the list to establish in a specific warehouse.

3. Enter the required fields and click **Add to Warehouse**.

#### 4.5 Item Establishment in the Warehouse from the Inventory List

Another option of adding items to warehouse can be done directly from the Inventory List page. The difference here is that the user can enter specific information concerning the inventory item, such as quantity, re-order amounts, location specs, etc.

Consider the following permission when implementing this functionality:

- 45 – Manage Inventory in Warehouse
- 52 – Warehouse Assignment

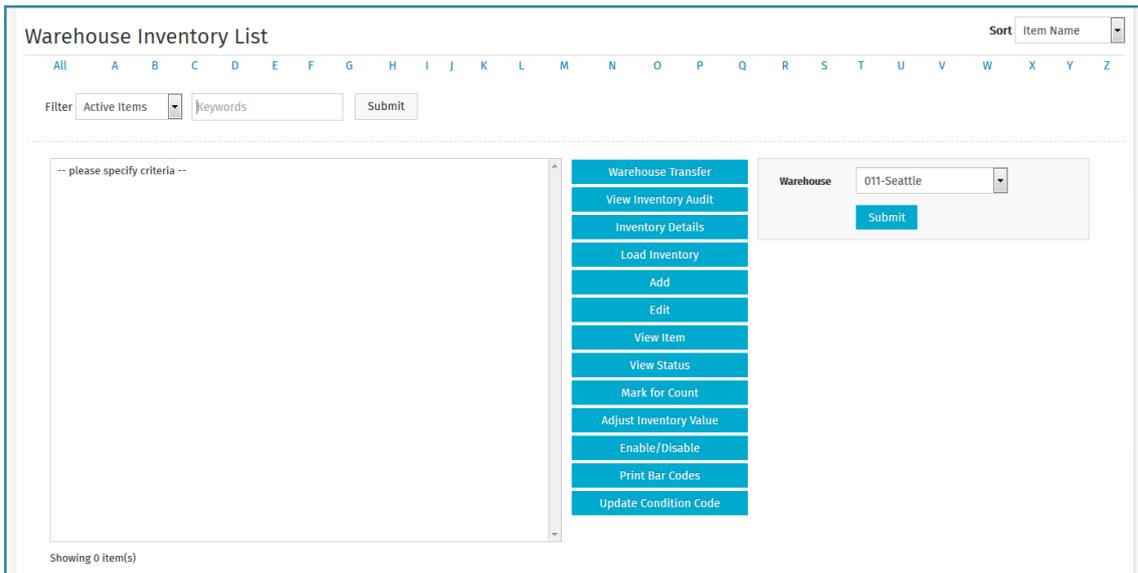


Figure 15: Inventory Management page

Action	Definition
Warehouse Transfer	Used to transfer items to other warehouses. The user must have access to two or more warehouses for this action to be displayed. Permission 52 (Warehouse Assignment) controls this.
View Inventory Audit	A useful tool, which displays the audit trail for a specific inventory item. Details in this page include the audit type, date, time, unit, quantity, user, cost, and any notes for the system.
Inventory Details	Used for reducing stock levels in the inventory.
Load Inventory	Used for increasing the quantity in stock other than by receipt of goods.   User needs permission 46 (Adjust Inventory In Warehouse) or 47 (Load Inventory or Update Inventory Count in Warehouse) to be able to perform this function.
Add	Used to add catalog items to inventory other than establishing from the item list
Edit	Similar to Add, this is an editing feature that may be chosen once the item has been added to the warehouse.
View Item	Used to view a read only page with specific information about the item.
View Status	Used to give specific information on the item such as stock quantity, available quantity, backorder quantity, ordered quantity, and last count date.
Mark for Count	Used to mark an item for count when the item is highlighted and this action is clicked. This is for the next counting cycle.
Enable/Disable	Used to provide user an option to disable the inventory or enable when needed. Before an item can be disabled, it must have 0 stock quantity.

Action	Definition
Bin Transfer	Used to transfer items from one bin to another bin in the same warehouse.   System setting 6025 (Enable Multiple Bin Selection for One Item) must be enabled for this action to be displayed.
Update Condition Code	Used to update the condition codes assigned to inventory items.   System setting 6060 (Enable Condition Code Tracking for Inventory) must be enabled for this action to be displayed.



System settings 6025 and 6060 cannot be enabled at the same time.

### New Warehouse

Warehouse Name \*

Location \*  

Warehouse Group \*  

Replenishment User \*  

Warehouse Type

Warehouse Priority ID

Account Code

Sourcing Warehouse \*  

Notes

Figure 16: Add Item to Warehouse page

Field	Definition
Warehouse	Select the appropriate warehouse to establish the item in from the drop-down selection box.
Item	Select the appropriate item.
Item Class ID	Enter the appropriate class ID; this determines through system settings how often the item will be marked for count.

Field	Definition
Default Location Ref	<p>This is an optional field; it is used as a default bin where items are established.</p> <hr/> <p> This field is only displayed when system setting 6025 (Enable Multiple Bin Selection for One Item) is enabled.</p> <hr/>
Initial Stock in Base Units	Enter quantity of stock on hand for this item.
Max Capacity	Enter the max quantity for this item that the warehouse will stock.
Mark Up Percent	Enter a markup percent; this will be added to the average cost of the item in the Shopping Cart.
Include Item in EOQ Calculation	Select radio that applies to the company. Refer to Continuous Replenishment Planning for further details.
Include Item in Demand Forecasting	Select radio that applies to your company. Refer to Continuous Replenishment Planning for further details.
Reorder Point	Enter the quantity that will be used in the replenishment calculation so that the system knows when to order this item when it falls below this point.
Reorder Qty	Enter the quantity the system needs to order when it falls below the reorder point.
Holding Cost Percent	Enter a holding cost percent if applicable
Order Cost	Used for EOQ calculation. Refer to Continuous Replenishment Planning for further details.
Lead Time (days)	Used for EOQ calculation. Refer to Continuous Replenishment Planning for further details.
Demand Qty (year)	Used for EOQ calculation. Refer to Continuous Replenishment Planning for further details.
Safety Qty	Used for EOQ calculation. Refer to Continuous Replenishment Planning for further details.
Weighted Avg. Cost	<p>Cost of the item based on the total cost of the items in inventory, the total number of units, and different vendor pricing.</p> <hr/> <p> Refer to the Weighted Average Cost section for more information.</p> <hr/>
Account Code	Enter an account code if used.
Udef1- 3	<p>Enter any user-defined information.</p> <hr/> <p> Entering values in system settings 6100, 6101, and 6102 respectively can customize the labels for these three user defined fields.</p> <hr/>
User Notes	Enter any notes in this field.

### 4.5.1 Adding Items from Inventory List



If the item is to be ordered from the warehouse, set the desired inventory type (stock or auto or WH profile) when establishing the item or after adding to the warehouse. Then edit the inventory type by editing the item.

To add items to the Inventory from the Inventory list:



1. From the Dashboard, navigate to **Inventory > Maintenance > Inventory List**.
2. Click **Add**.
3. Complete the required fields.
4. Click **Add Item**.

### 4.6 Item Establishment in the Warehouse upon Receipt

When the user receives a purchase order or a transfer order, the system provides an option for the user to select *store in warehouse* from the Receiving page for the items that are being received. The warehouses that are in this list will depend on the user's warehouse assignment permissions.

Item categories can be configured so that inventory transfer items in that item category can *always be received* into the destination warehouse, *never received* into the destination warehouse, or the *user decides* if the item is to be received into the destination warehouse. Refer to *General Admin Guide - Chapter 5* for more information.

The following permissions are required when implementing this functionality.

- 45 - Manage Inventory in Warehouse
- 8 - Manage Purchase Orders
- 2 - Can Receive Items on Own Order Requests

OR

- 33 - Can Receive Items for Selected Locations

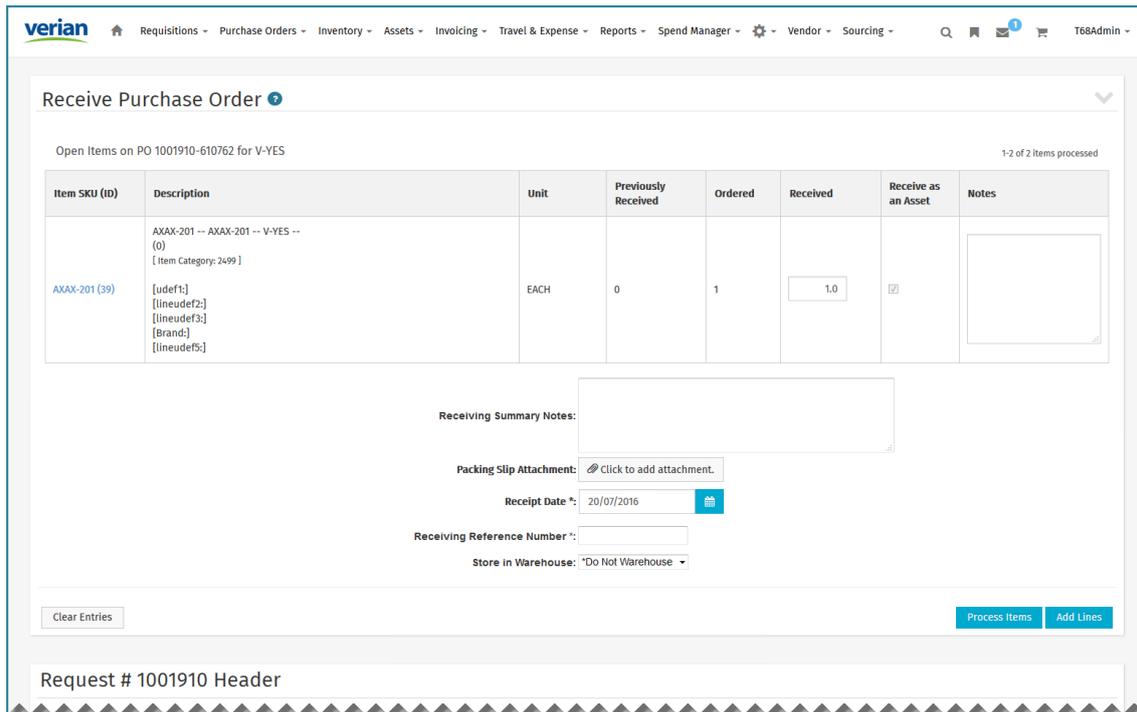


Figure 17: Receive Item page

If the user is receiving a purchase order that is not a replenishment order, and selects a warehouse from the store in warehouse list, those items will then be inventory items for that specific warehouse with a stock quantity equal to the value entered in the received field. The item’s inventory type can change depending on the value selected in system setting 6065 – *Update Inventory Type upon Receiving*. The available options are:

- Do Not Change
- Non-Stock Item
- Stock Item
- Auto
- WH Access Profile

If the system setting value is *do not change*, the inventory type remains the same. If the system setting is one of the other four, the inventory type will change. This applies for items that are received into a warehouse for the first time whether they are received or transferred.

If the user receives a transfer order and selects a *warehouse* from the *store in warehouse* list, those item(s) either will be added back to the existing warehouse or will be inventory items in the selected warehouse with a stock quantity.

The default will be *\*Do not warehouse, unless it is a replenishment order*. Replenishment orders are purchase orders that go to the vendor to replenish inventory items.

The warehouses that are listed in the *store in warehouse drop-down* list are warehouses that the user has warehouse assignment permissions.

### 4.6.1 Adding an Item in the Warehouse while Receiving the Item

To add an item to the warehouse when receiving:



1. Select the purchase order to be received, and click Receive PO.
2. Complete the required fields.
3. Select the warehouse the item needs to be established in from the *Store in Warehouse* drop-down field.
4. Click **Process Items**.

## 4.7 Weighted Average Cost

Weighted average cost (WAC) measures the total cost of items in inventory that are available for sale divided by the total number of units available for sale. There are contributing factors to consider when determining the weighted average cost when the following are used:

- Condition Codes
- Shipments
- Receiving
- Auto-Reconciliation



Condition codes are mainly used by the oil and gas industry.

If a default condition code exists in the system, an item received into inventory for the first time is assigned the default condition code. If a default condition code does not exist, the item is established in inventory without a condition code. Condition codes are based on percentage values, which are established when the condition code is configured. When receiving an item from a vendor and the default condition code is set to a percentage less than 100, the system shall receive the item and calculate the weighted average cost based on the vendor price and the default condition code.

When the condition code for an inventory/asset item is updated, the system recalculates the value of the assets in which the condition codes have changed.

The weighted average cost can be viewed on the following pages:

- View Item in Warehouse Inventory (overall weighted average cost is displayed)
- Item Inventory Audit (condition code weighted average cost is displayed)
- Edit Item in Warehouse Inventory (overall and condition code weighted average costs are displayed)

When using weighted average cost, the following invoice setting needs to be enabled:

- Update Inventory Item Cost on Reconcile

This setting, when enabled, changes the inventory value when the invoice price is different than the purchase order price.

#### 4.7.1 Basic Calculations using Weighted Average Cost (WAC)

##### Scenario 1 - One Price, no condition code

Item A – One Price	Amount
Unit Price	10.00
Quantity	20
Weighted Average Cost	10.00

$(\text{unit price} * \text{total quantity}) / \text{total quantity}$

$$(10 * 20) / 20 = 10$$

##### Scenario 2 - Multiple Prices, no condition code

Item	Amount
Item A @ price 1	
Unit Price	10.00
Quantity	20
Weighted Average Cost	10.00
Item A @ price 2	
Unit Price	15.00
Quantity	15
Weighted Average Cost	15.00
Overall Weighted Average Cost	12.14

$((\text{unit price item 1 @ price A} * \text{total quantity A}) + (\text{unit price item 1 @ price B} * \text{total quantity B})) / \text{total quantity A} + \text{total quantity B}$

$$((10*20) + (15 * 15)) / 20 + 15 = 12.14$$

#### 4.7.2 Calculations using Condition Codes

When tracking by condition codes, there are several different scenarios that need to be considered.

##### Scenario 1 – Items with One Condition Code

When an item has an assigned condition code, the following formula is used:

Item	Amount
Item A – One Condition Code	
Unit Price	10.00
Quantity	20
Condition Code	90%
Weighted Average Cost	9.00

$((\text{unit price} * \text{total quantity}) * \text{condition code}) / \text{total quantity}$

$$((10*20) * .90)/20 = 9.00$$

**Scenario 2 – Items with Multiple Condition Codes**

When an item has multiple condition codes assigned, the following formula is used:

Item	Amount
Item A – Condition Code A	
Unit Price	10.00
Quantity	20
Condition Code	90%
Value of Items in Condition Code A	9.00
Item A – Condition Code B	
Unit Price	10.00
Quantity	10
Condition Code	80%
Value of Items in Condition Code B	8.00
Overall Weighted Average Cost	8.67

$((\text{unit price} * \text{total quantity for condition code A}) * \text{condition code A}) + ((\text{unit price} * \text{total quantity for condition code B}) * \text{condition code B}) / \text{total quantity of condition code A and condition code B}$

$$((10*20) * .90) + ((10*10) * .80) / 30 = 8.67$$

**Scenario 3 – Decreasing Condition Codes in the Warehouse**

When an item in the warehouse needs to have the condition code decreased for some of the stock quantity, the following formula is used:

Item	Amount
Item A – Condition Code A	
Unit Price	10.00
Current Quantity	20
Quantity to be Adjusted	10
Current Condition Code A	90%
Adjusted Condition Code C	70%
Value of Items in Condition Code A	9.00

Item	Amount
Value of Items in Condition Code C	7.00
Overall Weighted Average Cost	5.85

$((\text{current WAC} * \text{current quantity}) - (\text{adjusted quantity} * \text{current WAC} * \text{adjusted condition code})) / \text{total quantity} =$

$$((9.00 * 20) - (10 * 9 * .70)) / 20 = 5.85$$

### Decreasing Multiple Condition Codes in the Warehouse

When an item in the warehouse needs to have multiple condition codes decreased for some of the stock quantity, the following formula is used:

Item	Amount
Item A – Condition Code A	
Unit Price	10.00
Current Quantity	100
Current Condition Code A	90%
Value of Items in Condition Code A	9.00
Overall Quantity to be Adjusted	50
Quantity to be Adjusted to Condition Code C	30
Adjusted Condition Code C	70%
Value of Items in Condition Code C	7.00
Quantity to be Adjusted to Condition D	20
Adjusted Condition Code D	60%
Value of Items in Condition Code D	6.00
Overall Weighted Average Cost	6.03

$((\text{current WAC} * \text{current quantity}) - (\text{adjusted quantity C} * \text{current WAC} * \text{adjusted condition code C}) - (\text{adjusted quantity D} * \text{current WAC} * \text{adjusted condition code D}) / \text{total quantity} =$

$$((9.00 * 100) - (30 * 9 * .70) - (20 * 9 * .60)) / 100 = 6.03$$

### 4.7.3 Condition Codes and Shipping

Shipping items with condition codes affects the weighted average cost for the remaining quantity. The following formula is used to determine the weighted average cost.

#### Scenario 1 – Items Shipped with One Condition Code

When an item with an assigned condition code is shipped, the weighted average cost is the same when all the items have the same condition code.

Item	Amount
Item A	
Unit Price	10.00

Item	Amount
Quantity	20
Shipped Quantity	10
Condition Code	90%
Overall Weighted Average Cost	9.00

**Scenario 2 – Items with Multiple Condition Codes – Only One Condition Code Shipped**

When an item with multiple condition codes assigned is shipped, the following formula is used:

Item	Amount
Item A – Condition Code A	
Unit Price	10.00
Quantity	20
Quantity Shipped	10
Condition Code	90%
Item A – Condition Code B	
Unit Price	10.00
Quantity	10
Quantity Shipped	0
Condition Code	80%
Overall Weighted Average Cost	
Overall before Shipping	8.67
Overall after Shipping	9.00
Shipped	9.00

$((WAC * total\ quantity) + ((unit\ price * (1 - condition\ code\ A) * (shipped\ quantity\ condition\ code\ A)) - (unit\ price * (1 - condition\ code\ B)) * (shipped\ quantity\ condition\ B)))) / total\ quantity$

$((8.67*30) + ((10*(.10) * (10)) - (10 *(.2)) * 0))) / 30 = 9.00$

**Scenario 3 - Items Shipped with Multiple Condition Codes**

Only one condition code per item can be shipped in a shipment.

**4.7.4 Decreasing Condition Codes when Shipping**

Decreasing condition codes when shipping affects the weighted average cost. The following formula is used to determine the weighted average cost. The adjustment value needs to be determined before the weighted average cost can be determined. The adjusted weighted average cost is used when shipped items are received into another warehouse.

Formula to Find Adjustment

$(1 - current\ condition\ code) * unit\ price * shipped\ quantity - (1 - shipped\ condition\ code) * unit\ price * shipped\ quantity$

**Scenario 1 – Items Shipped with One Condition Code Decreased**

When an item with a decreased assigned condition code is shipped, the following formula is used:

Item	Amount
Item A – Condition Code A	
Unit Price	10.00
Current Quantity	20
Quantity Shipped	10
Current Condition Code	90%
Shipped Condition Code	70%
Adjustment	-20
Overall Weighted Average Cost	
Overall before Shipment	9.00
Overall after Shipment	9.00
Shipment	8.00

$$((\text{current WAC} * \text{current quantity}) + (\text{adjustment})) / \text{current quantity} =$$

$$((9.00 * 20) + (-20)) / 20 = 8.00$$

**Scenario 2 – Items Shipped with Multiple Condition Codes – Only One Condition Code Decreased**

Only one condition code can be shipped in a shipment.

**Scenario 3 - Items Shipped with Multiple Condition Codes Decreased**

Only one condition code can be shipped in a shipment.

**4.7.5 Increasing Condition Codes when Shipping**

Increasing condition codes when shipping affects the weighted average cost when the item is received at its destination location. The following formula is used to determine the weighted average cost. The adjustment value needs to be determined before the weighted average cost can be determined. The adjusted weighted average cost is used when shipped items are received into another warehouse.

Formula to Find Adjustment

$$(1 - \text{current condition code}) * \text{unit price} * \text{shipped quantity} - (1 - \text{shipped condition code}) * \text{unit price} * \text{shipped quantity}$$

**Scenario 1 – Items Shipped with One Condition Code Increased**

When an item with an increased assigned condition code is shipped, the following formula is used:

	Amount
Item A	
Unit Price	10.00
Current Quantity	20

	Amount
Quantity Shipped	10
Quantity Remaining	10
Current Condition Code	90%
Shipped Condition Code	100%
Adjustment	10
Overall Weighted Average Cost	
Overall before Shipment	9.00
Overall after Shipment	9.00
Shipment	9.50

$((\text{current WAC} * \text{current quantity}) + (\text{adjustment})) / \text{current quantity}$

$$((9.00 * 20) + (10)) / 20 = 9.50$$

**Scenario 2 – Items with Multiple Condition Codes – Only One Condition Code Shipped and Increased**

When an item has multiple condition codes assigned and one of those condition codes is increased for shipment, the following formula is used:

Item	Amount
Item A – Condition Code A	
Unit Price	10.00
Current Quantity	20
Quantity Shipped	10
Quantity Remaining	10
Current Condition Code	90%
Shipped Condition Code	100%
Adjustment	10
Item A – Condition Code B	
Unit Price	10.00
Current Quantity	10
Quantity Shipped	0
Quantity Remaining	10
Condition Code	80%
Shipped Condition Code	N/A
Overall Weighted Average Cost (for shipment)	
Condition Code A	9.00
Weighted Average Cost (remaining quantities)	
Condition Code A	9.00
Condition Code B	8.00
Overall	8.67



Use the formula provided in Scenario 2 of Weighted Average and Condition Codes to determine the overall weighted average cost.

$$\frac{((\text{current WAC} * \text{current quantity}) + (\text{adjustment}))}{\text{current quantity}}$$

$$\frac{((8.67 * 30) + (10))}{30} = 9.00$$

**Scenario 3 - Items Shipped with Multiple Condition Codes Increased**

Only one condition code per item can be shipped in a shipment.

**4.7.6 Destination Warehouse Effect on WAC**

Receiving can affect the weighted average cost. The following formulas are used to determine the weighted average cost when items are received into a destination warehouse.

**Scenario 1 – Items Received into a Warehouse for the First Time**

When an item is received into a warehouse for the first time, the following formula is used:

Item	Amount
Destination Warehouse Item (not established)	
Current Unit Price	0
Current Quantity	0
Current Weighted Average Cost	0
Received Item	
Quantity Received	10
Received Unit Price	10.00
Overall Weighted Average Cost	10.00

$$\frac{((\text{destination WAC} * \text{destination quantity}) + (\text{unit price of received item} * \text{received quantity}))}{\text{shipped quantity} + \text{destination quantity}}$$

$$\frac{((0 * 0) + (10 * 10))}{10 + 0} = 10.00$$

**Scenario 2 – Items Received into a Warehouse with a Different Vendor Price**

When an item is received into a warehouse with a different vendor price, the following formula is used:

Item	Amount
Destination Warehouse Item	
Current Unit Price	12.00
Current Quantity	20
Current Weighted Average Cost	12.00
Received Item	
Quantity Received	10
Received Unit Price	10.00

Item	Amount
Overall Weighted Average Cost	11.33

$((\text{destination WAC} * \text{destination quantity}) + (\text{unit price of received item} * \text{received quantity})) / \text{shipped quantity} + \text{destination quantity}$

$$((12 * 20) + (10 * 10)) / 10 + 20 = 11.33$$

**Scenario 3 – Items Received into a Warehouse for the First Time with Condition Code**

When an item, with a condition code, is received into a warehouse for the first time, the following formula is used:

Item	Amount
Destination Warehouse Item (not established)	
Current Unit Price	0
Current Quantity	0
Current Weighted Average Cost	0
Received Item	
Quantity Received	10
Received Unit Price	10.00
Received Condition Code	90%
Overall Weighted Average Cost	9.00

$((\text{destination WAC} * \text{destination quantity}) + (\text{unit price of received item} * \text{condition code of received item} * \text{received quantity})) / \text{shipped quantity} + \text{destination quantity}$

$$((0 * 0) + (10 * .9 * 10)) / 10 + 0 = 9.00$$

**Scenario 4 – Items Received into a Warehouse with the Same Condition Code**

When an item is received into a warehouse as an existing item, the following formula is used:

Item	Amount
Destination Warehouse Item	
Current Unit Price	15.00
Current Quantity	20
Condition Code	90%
Current Weighted Average Cost	13.50
Received Item	
Quantity Received	10
Received Unit Price	20.00
Received Condition Code	90%
Overall Weighted Average Cost (after receiving)	11.25

$((\text{destination WAC} * \text{destination quantity}) + (\text{unit price of received item} * \text{condition code of received item} * \text{received quantity})) / \text{shipped quantity} + \text{destination quantity}$

$$((13.5 * 20) + (20 * .9 * 10)) / 20 + 20 = 11.25$$

**Scenario 5 – Items Received into a Warehouse with a Different Condition Code**

When an item is received into a warehouse with a different condition code, the following formula is used:

Item	Amount
Destination Warehouse Item	
Current Unit Price	15.00
Current Quantity	20
Condition Code	90%
Current Weighted Average Cost	13.50
Received Item	
Quantity Received	10
Received Unit Price	20.00
Received Condition Code	80%
Overall Weighted Average Cost (after receiving)	10.20

$((\text{destination WAC} * \text{destination quantity}) + (\text{unit price of received item} * \text{condition code of received item} * \text{received quantity})) / \text{shipped quantity} + \text{destination quantity}$

$((13.5 * 20) + (10 * .8 * 30)) / 30 + 20 = 10.20$

**Scenario 6 - Items Received into a Warehouse with Multiple Condition Codes**

Only one condition code per item is allowed in a shipment.

**4.7.7 Auto-Reconciliation**

When auto-reconciling is enabled for transfer orders, the following calculation is used to determine the weighted average cost based on quantity in the warehouse and after a transfer order has been auto-reconciled.

The following system setting is required:

- 6480 – Auto Reconcile Warehouse Transfers on Receiving

**Scenario 1 - Auto-Reconciliation**

Quantity in Warehouse A

Item	Amount
Item A	
Ordering Unit	Box
Receiving Unit	Piece
Total Quantity	100
Unit Price	10.00
Condition Code A (90%)	30
Condition Code B (80%)	50
No Condition Code	20

Item	Amount
Overall Weighted Average Cost	8.70
Condition Code A	9.00
Condition Code B	8.00
No Condition Code	8.70

$((\text{unit price} * \text{total quantity for condition code A}) * \text{condition code A}) + ((\text{unit price} * \text{total quantity for condition code B}) * \text{condition code B}) + (\text{unit price} * \text{total quantity}) / \text{total quantity of condition code A} + \text{B} + \text{None} =$

$$(((10 * 30) * .9) + ((10 * 50) * .8) + ((10 * 20))) = 8.70$$



When there are multiple condition codes and there are items with no assigned condition codes, the weighted average cost for the items without assigned condition codes is the overall weighted average cost.

**Table 8: Transfer Order Request for Location B**

Item	Amount
Item A	
Ordering Unit	100

**Table 9: Shipment Information from Warehouse A to Location B**

Item	Amount
Item A	
Ordering Unit Ordered	100
Receiving Unit Shipped	3
Condition Code Shipped	None

**Table 10: Receiving Information for Location B**

Item	Amount
Item A	
Received	1

**Table 11: Updated Warehouse A Information after Shipment is Received**

Item	Amount
Item A	
No Condition Code	17
Overall Weighted Average Cost	8.70

**Table 12: Auto-Reconciliation Results**

Item	Amount
Item A	
Start Quantity	100
PO Quantity	100
Received Quantity	33.3
Invoice Quantity	0.26

Received Quantity

$(\text{Ordering Unit Quantity} / \text{Receiving Unit Quantity}) * \text{Received Quantity at location Quantity} = \text{Received Quantity}$

$$(100/3) * 1 = 33.3$$

Invoice Quantity

$\text{Condition Code WAC} / \text{Received Quantity} = \text{Invoice Quantity}$

$$(8.70 / 33.3) = 0.26$$

## 4.8 Assets in Inventory

Basware P2P Inventory Manager is an integrated warehouse management system that automates materials management and allows maintenance of assets and non-assets in warehouses.

### 4.8.1 View Item in Warehouse Inventory

When an inventory item is also an asset, the View Item in Warehouse Inventory page has an asset field that displays a link to the associated assets. When the user clicks on the Asset List link, the Asset List page for that asset is displayed. To view the attributes associated with each asset click the plus [+] icon next to the asset description. To hide the attributes associated with each asset click the minus [-] icon.

View Item in Warehouse Inventory

Warehouse 011-Seattle  
 Item ID 389037  
 SKU A112A  
 Item Asset 112  
 Item Class ID A  
 Item Desc. Asset 112  
 Item Status in Warehouse Active  
 Current Stock in Base Units 3.00  
 Item storage Unit EACH  
 Location Ref  
 Location Specs  
 Max Capacity 0.00  
 Reorder Point 0.00  
 Reorder Qty 0.00  
 Holding Cost Percent 0.00  
 Order Cost \$ 0.00  
 Discount Percent 0.00  
 Lead Time 0  
 Demand Qty 0.00  
 Safety Qty 0.00  
 Weighted Avg. Cost 14.00  
 Tax Percent 0.00  
 Account Code  
 Udef1  
 Udef2  
 Udef3  
 Last Counted On 06/13/2014  
 Last counted by  
 YTD Counts 0  
 Discrepancy Counts 0  
 User Notes  
 System Notes  
 Asset [Asset List\(G\)](#)

Figure 18: View Item in Warehouse Inventory that is also an asset

Asset List Cancel

13 of 3 Item(s)

Asset #	Asset Description	Serial #	Asset Bar Code	Location	Condition Code	Asset Value
41670	Asset 112 (-)			Engineering/RD		\$14.00
41671	Asset 112 (-)			Engineering/RD		\$14.00
41672	Asset 112 (-)			Engineering/RD		\$14.00

Cancel

Figure 19: The Asset List page after the asset list link is clicked on the View Item in Warehouse Inventory page

### 4.8.2 Transferring Assets in Inventory

When assets are being transferred from one warehouse to another, the system reduces the quantity from the source warehouse and adds the quantity to the destination warehouse. The transfer quantity field is disabled because the user needs to select the assets to be transferred. In the transfer quantity column, there is a magnifying glass icon to select the assets to be transferred.

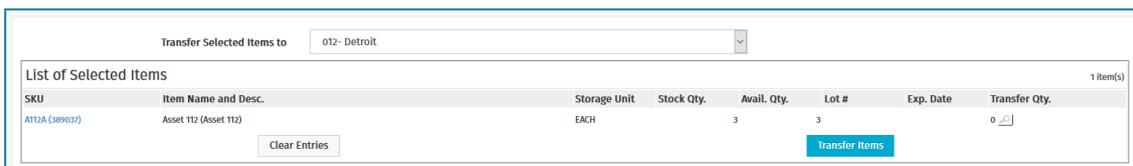


Figure 20: Transferring assets to another warehouse

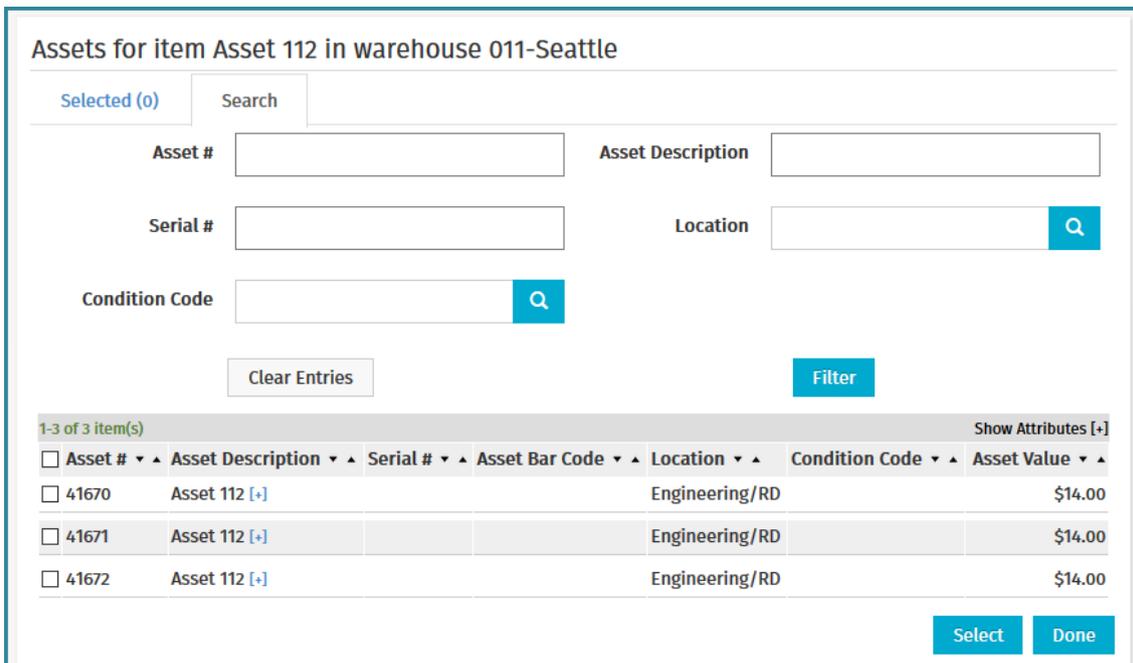


Figure 21: Select Asset page

#### 4.8.2.1 Transferring Assets between Warehouses

To transfer assets from one warehouse to another:



1. From the Dashboard, navigate to **Inventory > Maintenance > Inventory List**.
2. Select the warehouse the assets to be transferred are currently located in and click **Submit**.
3. Select the asset to be transferred and click **Warehouse Transfer**.
4. Click the magnifying glass  icon.
5. In the pop-up, select the assets to be transferred by clicking the checkbox beside each desired asset and clicking **Select**.
6. Click **Done** when all assets have been selected.
7. Select the warehouse that the assets are to be transferred to.
8. Click **Transfer Items**.

A success message is displayed. The stocked quantity for the item from the sourcing warehouse is decreased by the number of assets transferred and the stocked quantity for item is increased by the number of assets transferred.

### 4.8.3 Loading Assets in Inventory

If an asset in inventory is selected and the load inventory action is clicked, a message is displayed stating that assets cannot be loaded into inventory. The user is asked to load the assets from the Asset module.

### 4.8.4 Inventory Count for Asset Items

If an asset in inventory is marked for count and the **Enter Item Count** link is clicked, the assets listed will be included in the count. To dispose an asset or assets, click the magnifying glass icon to display the Select Asset page. Select the assets to be removed and click Remove. Depending on the number of assets selected, the system automatically reduces the count for that item.

SKU (ID)	Item Name and Desc.	Storage Unit	Inventory Count	Current Stock	Update Count
38J2- P9H9D-7GYMH- JX2RB-Y8FWG (257008)	Access 2010 (Access 2010)	CRTGD	<input type="text" value="0"/>		1 <input type="checkbox"/>
BVGGQ-DFDQI-82RD4-M9FCV-CJCGK (257080)	Access 2010 (Access 2010)	CRTGD	0		0 <input type="checkbox"/>
AT12A (389037)	Asset 112 (Asset 112)	EACH	<input type="text" value="0"/>		3 <input type="checkbox"/>
ALZ (270632)	AssetItem2 ()	EACH	0		0 <input type="checkbox"/>
CPUZ15 (550888)	Desktop CPU ()	CRTGD	<input type="text" value="0"/>		2 <input type="checkbox"/>
AT1 (548700)	WhitemA (WhitemA)	EACH	<input type="text" value="6"/>		6 <input type="checkbox"/>

Figure 22: Enter Counts for Inventory Items page with an asset item

#### 4.8.4.1 Marking Assets for Count

To transfer assets from one warehouse to another:



1. From the Dashboard, navigate to **Inventory > Maintenance > Inventory List**.
2. Select the warehouse the assets are to be marked for count and click **Submit**.
3. Select the assets that are to be marked for count and click **Mark for Count**.
4. Navigate to **Inventory > Maintenance > Enter Item Count**.
5. Click the magnifying glass icon to select the assets that need to be counted.
6. Select the assets that are to be counted. Click **Done** when finished.
7. Click the check box in the update count column.
8. Click **Enter Inventory Count**.
9. Click **OK**.

## 4.9 Continuous Replenishment Planning (CRP)

Inventory Manager is an integrated warehouse management system that automates materials management decisions throughout the supply chain, thereby reducing response time, improving customer service, and lowering inventory levels and costs.

During the implementation stage, an organization will need to make several decisions about how the inventory and purchasing process will be managed and enhanced by Inventory Manager. These areas of decision-making cover Continuous Replenishment Planning and Cycle Counting.

Inventory Manager provides for the automation of the replenishment process.

Inventory Manager can successfully direct the movement of reserve stock from central storage to the end user while generating purchase orders for items that have met their reorder point. Inventory Manager contains both global and item-by-item settings that are meant to affect the proper levels of stock in each warehouse.

If desired, Inventory Manager can automatically determine what the proper stock level should be based on demand and order cost. The system then adjusts the appropriate reorder point, reorder quantity, and demand quantity. This, in turn, will create shipment requests, which will perform the following functions:

- Transfer stock between warehouses
- Automatically generate purchase orders
- Send purchase orders to vendors

The key to understanding Inventory Manager's implementation of the continuous replenishment is to understand how the inventory-related items profile settings and inventory-related system settings are interacting with the item's inventory profile settings. During the operation of this system, user-purchasing patterns will interact with order processing automation settings to determine the appropriate size for replenishment orders and the most appropriate stock levels.

### 4.9.1 Global System Settings Related to CRP

The following gives detailed descriptions for the global system settings relating to CRP:

- 6205 - Enable Demand Quantity Forecasting

Demand forecasting can calculate new reorder points for an item based on its order history. For this to occur, the system setting and the inventory profile setting for this function must be set to yes. If no is entered for this system setting, demand forecasting will be disabled for all inventory items.

Decision: Yes or No

- 6201 - Enable EOQ Calculation

The Economic Order Quantity (EOQ) represents the most efficient reorder quantity for an inventory item. The EOQ is calculated by taking into account the costs associated with ordering an item, the cost of storing an item and utilization. If yes is entered for this setting, the system will automatically calculate the reorder quantity and update the reorder quantity field in the item's inventory profile. EOQ calculation can

be turned off or on in the item's inventory profile. If no is chosen, EOQ calculation will be disabled for all inventory items.

Decision: Yes or No

- 6202 - EOQ Calculation Frequency in Days

This is the number of days between subsequent calculations of EOQ for items in inventory. See Enable EOQ calculation above for more information.

Decision: A Number

- 6206 - Annual Demand growth percentage

This is the percentage of yearly growth to be applied when calculating demand quantity based on demand history. This setting must be a number; i.e. a percentage represented in decimal format just as .05 would represent 5%.

Decision: A Percentage

- 6207 - Demand Calculation Frequency in Days

This is the number of days between subsequent calculations of Demand Quantity for items with Demand Forecasting enabled.

Decision: A Number

- 6204 - Enable Automatic Reordering for Replenishment

If yes is entered, the system will monitor all stock type inventory items that have a numeric (defaults to 0) reorder point and non-zero reorder quantity. When the stock level of such items fall below the reorder point, an order is generated to the sourcing warehouse or to the vendor, depending on the item's warehouse setting (from default vendor or another warehouse).

If no is chosen, then reorders for stock will have to be initiated by manually entering requests or by enabling the Just-In-Time feature which automatically orders items for the warehouse based on quantities requested by requisitioner.

Decision: Yes or No

- 6040 - Enable Automatic Just in Time Inventory Reordering

The Just-in-Time feature, when enabled, will cause the system to create replenishment orders for JIT type items. Any item established in a warehouse containing a reorder quantity of zero (0) is classified as a JIT item.



The effect of enabling Just in Time order processing automation can be disabled on an item-by-item basis by entering a number (e.g., 1) in the reorder quantity or reorder point field of the item's inventory profile.

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Decision: Yes or No

- 6041 - Just In Time Order Processing Frequency in Hours

This is the frequency in hours at which the system should check for requests and process orders for JIT enabled items. This will affect system behavior only if JIT is enabled.

Decision: Number of Hours

## 4.9.2 Inventory Item Settings Related to CRP

The Inventory list is accessible by using the Inventory List link on the Inventory sidebar. Click on Add/Edit to view the page.

Details explanation of fields related to CRP

- Include Item in EOQ Calculation

This setting allows EOQ calculation to be enabled or disabled on an item-by-item basis when EOQ calculation is enabled as a system setting. If EOQ calculation is disabled as a system setting, no inventory items will be affected by EOQ calculation whether the item level EOQ calculation setting is enabled or not.

- Include Item in Demand Forecasting

This setting allows Demand Forecasting to be enabled or disabled on an item-by-item basis when Demand Forecasting is enabled as a system setting. If Demand Forecasting calculation is disabled as a system setting, no inventory items will be affected by Demand Forecasting whether the item level Demand Forecasting setting is enabled or not.

- Reorder Point

P2P Inventory Manager can be customized, via settings, to reorder inventory items when their stock levels have fallen below certain quantities. This quantity, or reorder point, can be set and customized on an item-by-item basis. The reorder point must be set to zero if the item is to be ordered on a JIT basis. In addition, the reorder point must equal the lowest denominator for the specific item.

For example, the company orders a box of writing pads. Each box contains 10 actual writing pads. Assume the reorder point is 3 boxes. The catalog manager would enter 30 (3 boxes \* 10 pads per box) as the number to reorder. The system will make the conversion automatically and generate a purchase order for 3 boxes. This process is directly linked to how the specific catalog items are set up. In this example, the replenishment unit is (box). This unit can be changed on an item-by-item basis.

Partial unit ordering is also worthy of discussion. For example, the company has an item (Loan Applications) that is delivered to various branches by the box, but the purchasing department orders the item by the case (20 boxes = 1 case). Let us say the reorder quantity is 30 boxes, which equals 1.5 cases. A normal vendor will not ship one half of a case, yet the system has already compensated for this specific scenario. System administrators can access system settings from the Administrator page and enable a function to Round up Quantity on Replenishment Orders. For the example above, a purchase order for 2 cases would be generated for the desired vendor automatically.

- Reorder Quantity

The reorder quantity is the specific number of units to be reordered when the stock level of the item falls below a specified level (the reorder point). As described above, the reorder quantity must be in the lowest denominator for the item. (See Reorder Point above for an example)

- Holding Cost Percent

Annual cost to keep an item in the warehouse. This cost is expressed as a percentage of the unit cost. This percentage is used to calculate the Economic Order Quantity. The percent must be expressed as a decimal (e.g. .05 for 5%).

- Order Cost

Enter the estimated cost, in dollars, for the item to be purchased. This cost can include the cost of approval time, accounting, processing time, etc. This figure is used for Economic Order Quantity calculation.

- Lead Time (Days)

The time it takes from the creation of an order to the reception of the order.

- Demand Qty (Year)

The annual quantity for specific items that the company uses. This figure can be calculated for items that have Demand Forecasting enabled. The Demand Forecasting System Setting must also be enabled. This figure is used for Economic Order Quantity calculation.

- Safety Quantity

This is the minimum amount of stock that should be maintained in inventory. The difference between the safety quantity and the reorder point is that the reorder points can be affected by demand forecasting. Having a safety quantity setting allows an organization to maintain a minimum amount of stock for an item regardless of the stock level suggested by demand forecasting.

## 5 Inventory Receiving

The inventory receiving process is similar to receiving process in purchasing. The system enables the receiving process for transfer order or replenishment orders to be automated. It provides certain warehouse managers the flexibility to enable auto-receiving on an order basis.

### 5.1 Transfer Order Receipt

After the user creates transfer orders for Inventory items, he will need to receive the items. When receiving is performed correctly, the inventory item quantities will be adjusted during the receiving process.

Users can receive transfer orders manually or auto receiving can be set for transfer orders shipped by using permission 55 – *Can Auto Receive Inventory Shipments*.



When the Asset module is enabled and the Set Date in Service field is set to I for the receiving location, the system sets the receiving date as the date in service for the asset. The date in service determines when depreciation starts calculating for an asset.

---

One of the following permissions is required to receive transfer orders:

- 2 – Can Receive Items on Own Order Requests

OR

- 33 – Can Receive Items for Selected Locations – Select the locations for which the user should be able to receive items.

### 5.1.1 Receiving Transfer Orders Manually

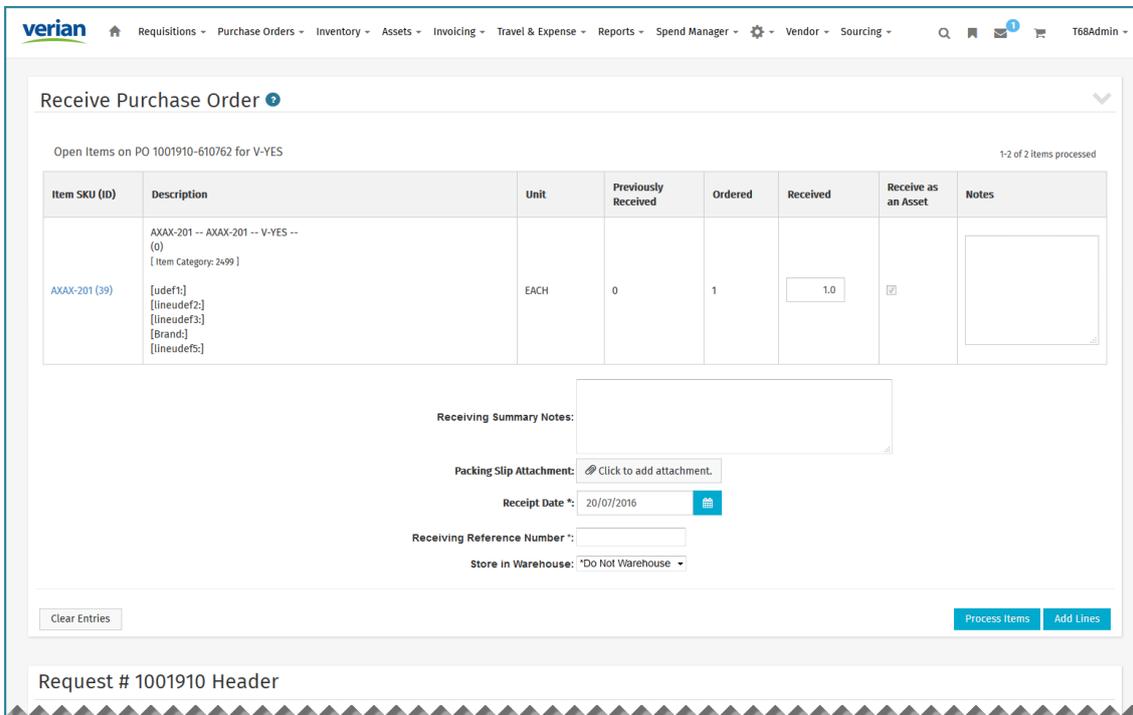


Figure 23: Receive Items page

To receive items on transfer orders manually:



1. Once the shipment is created, from the Dashboard, navigate to **Purchase Orders > Manage/Track > Purchase Orders**.
2. Select the order to be received, and click **Receive PO**.



The Receiving Reference document is pre-populated with the packing slip number.

3. Enter the number of items received in the Received field or click **Pre-Fill All** to fill in the quantity received.
4. Click **Process Items**.

The shipment status is changed from in transit to received.

### 5.1.2 Auto Receive Transfer Orders

Required Permission

- 55 – Can Auto Receive Inventory Shipments

Related System Setting

- 6470 – Default for Auto Receive of Shipments

When a user/group is given this permission, the New Shipment Information page will display an additional Auto Receive field when this user or a user in the group is creating shipments. When checked, the particular transfer order will be auto received. The status for the shipment is received.

When system setting *6470 – Default for Auto Receive of Shipments* is enabled, the Auto Receive field is checked by default. When system setting *6470* is disabled, the Auto Receive field is not checked by default.

Figure 24: New Shipment Information page – Displaying Auto Receive field

## 5.2 Receiving Replenishment Orders

To receive items on replenishment orders:



1. Once the purchase order is created, from the Dashboard, navigate to **Purchase Orders > Manage/Track > Purchase Orders**.
2. Select the order to be received and click **Receive PO**.



The Store in Warehouse field is pre-populated with the warehouse selected when creating the replenishment order.

3. Enter the number of items received in the Received field.
4. Enter the reference number in the Receiving Reference Document field.
5. Click **Process Items**.

The purchase order is now fully received and the inventory stock will be adjusted for the received amount. The user can view the adjustment from the Inventory Details page.

### 5.3 Item Returns to Inventory

There are times when the user may make an error during the receiving process or needs to return items to inventory that are not needed.



The transfer order should not be set to be auto-receive.

#### Required Permission

- 73 – Can Return Internal Shipments
- 30 – Manage All Order Requests
- 8 – Manage Purchase Orders

Figure 25: Return Items page

#### 5.3.1 Returning Items on Transfer Orders that Have Been Fully Received

To return items on transfer orders that have been fully received:



1. Once the shipment is received, from the Dashboard, navigate to **Requisitions > Manage/Track > Manage Requests**.
2. Select the order for which items need to be returned, and click Restart Receiving. The status of the request changes to *user opened*.

3. Select the order request whose status was changed and click Return Items.



If the Receiving Reference Document field is pre-populated with the packing slip number, CHANGE the returning reference document number to a different number.

---

4. To return the line items, enter the number of items to be returned in the Return column for each line.
5. Select the warehouse the items were received into from the Store in Warehouse drop-down field, this is important, as it will update the inventory count with the returned items.
6. Click **Process Returns**.

### 5.3.2 Returning Items on Transfer Orders that Have Been Partially Received

To return items on transfer orders that have been partially received:



1. Once the shipment is partially received, from the Dashboard, navigate to **Requisitions > Manage/Track > Manage Requests**.
2. Select the order for which items need to be returned, and click **Return PO**.



If the Receiving Reference Document field is pre-populated with the packing slip number, CHANGE the returning reference document number to a different number.

---

3. To return the line items, enter the number of items to be returned in the Return column for each line item.
4. Select the warehouse the items were received into from the Store in Warehouse drop-down field. This is important, as it will update the inventory count with the returned items.
5. Click **Process Returns**.

## 6 Appendix A: Troubleshooting

### 6.1 Inventory Troubleshooting

#### Question 1

**I cannot see the Inventory module.**

Try resetting the system and see what message is displayed. The warehouse vendor is probably set to manual in the system; this will cause the viewing of the module to be disabled. For the Inventory module to be available, the vendor set as the warehouse vendor in system setting 6300 should have Auto Generate PO set to *Yes*.

#### Question 2

**On the Items to Order Screen, there are certain line items with a 'Configuration Error' message stating that the user may not have access to the warehouse. What does this mean and how do I correct this problem?**

The item is a stocked item that has been discontinued in the warehouse or the user requesting the item does not have access to request from the warehouse in which the item is stocked.

When a user requests a stocked item that is set-up in a warehouse, the user does not have access to or the item has been discontinued in the warehouse or in the system, the system will send the item to the Items to Order screen and display the above message.

#### *Solution*

- Verify the item is an active item (not discontinued in the warehouse). If the item needs to be discontinued system wide, discontinue the item in the catalog. If you would like the item to be ordered directly from the vendor, change the item stock type to *non-stock*.
- Verify the user has access to the warehouse this item is established in (by associating the warehouse group that the warehouse belongs to the group that the user belongs to) if this item needs to be requested via the warehouse by the user.

To clear the items currently stuck in the Items to Order screen with the above message, decline the line items and reorder the items.

#### Question 3

**My item cost in inventory (WAC) is not accurate based on the cost of the item on the PO it was received on.**

Reset the weighted average cost (WAC) of an item in Inventory by reducing quantity to 0.

There would be a discrepancy between the vendor cost of the item and the WAC in the warehouse for the item, as there may be multiple receiving and invoicing for this item in inventory at different costs.

The most common reason for the cost change is due to the difference between the PO cost and the invoiced cost for the item. The total cost difference will be reflected in the remaining stock of the item in the warehouse.

When an invoice is reconciled against a replenishment order, the difference in the receiving cost and invoice cost is distributed amongst the stock on hand for that item in inventory.

#### *Example*

Item X was 100 units received at \$10.00 into the warehouse

50 units of Item X were shipped from the inventory.

An invoice for the 100 units at \$20.00 was received from the vendor.

The WAC for the remaining items in inventory goes up to \$30.00

#### *Solution*

1. Identify the cause of the change in cost by reviewing the audit history of the item in inventory.
2. If the cost change is related to an invoice (indicated by "reconciliation offset"), verify the invoice cost as entered in the system.
3. To readjust the WAC, reduce the inventory of the item in the warehouse to 0 quantity.
4. Modify the WAC for the item in warehouse by editing the inventory item in the Inventory list.
5. Reload the current stock back in inventory for the item.

#### **Question 4**

**When running the replenishment, a message stating that items have been recognized but not processed comes across and the replenishment is not successful.**

There is an item in the Shopping Cart of the replenishment user.

Look at the warehouse that is affected and go into the profile of the warehouse. Determine the replenishment user and check if there are any items that are in that user's Shopping Cart, if so clear the Shopping Cart.

#### **Question 5**

**Off-catalog items are appearing in the Inventory list.**

This happens when a warehouse is selected when creating an order request for off-catalog items.

Do not select a warehouse when ordering off catalog items. It will create a replenishment order and automatically add the item to inventory.

#### **Question 6**

**While trying to replenish, I am getting one item put in the Shopping Cart while many other items are ordered correctly or all items are going into the Shopping Cart.**

Check vendor order amount minimums - all set to zero

Check min qty at item level - all set to zero

Check permissions - all permissions

Ensure that the vendor is not disabled

Ensure that the item is not disabled

Check the following for the specific item in the specific warehouse. Keep in mind that the same item in different warehouses can be set up for different replenishment behavior: 1) reorder point is greater than or equal to the current stock. 2) Item is not discontinued in catalog 3) Item is not discontinued in inventory 4) The warehouse is not discontinued. 5) Auto Ordering is enabled. System setting 6204 is turned on.