entomo

All-in-One Channel Management Software

Entomo SmartHub®

SmartHub 11.0 User Guide

All information in this document is proprietary and confidential.

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Chapter 1 | Introduction

Channel Management Application Stack

Entomo's SmartHub all-in-one platform that transforms the way your company manages its distribution channels. Entomo's fully integrated solution stack, shown below, enables unmatched channel visibility, compliance, and partner collaboration. Benefits include revenue growth, reduced incentive over-payments, reduced inventory and compliance costs, and faster financial close cycles.
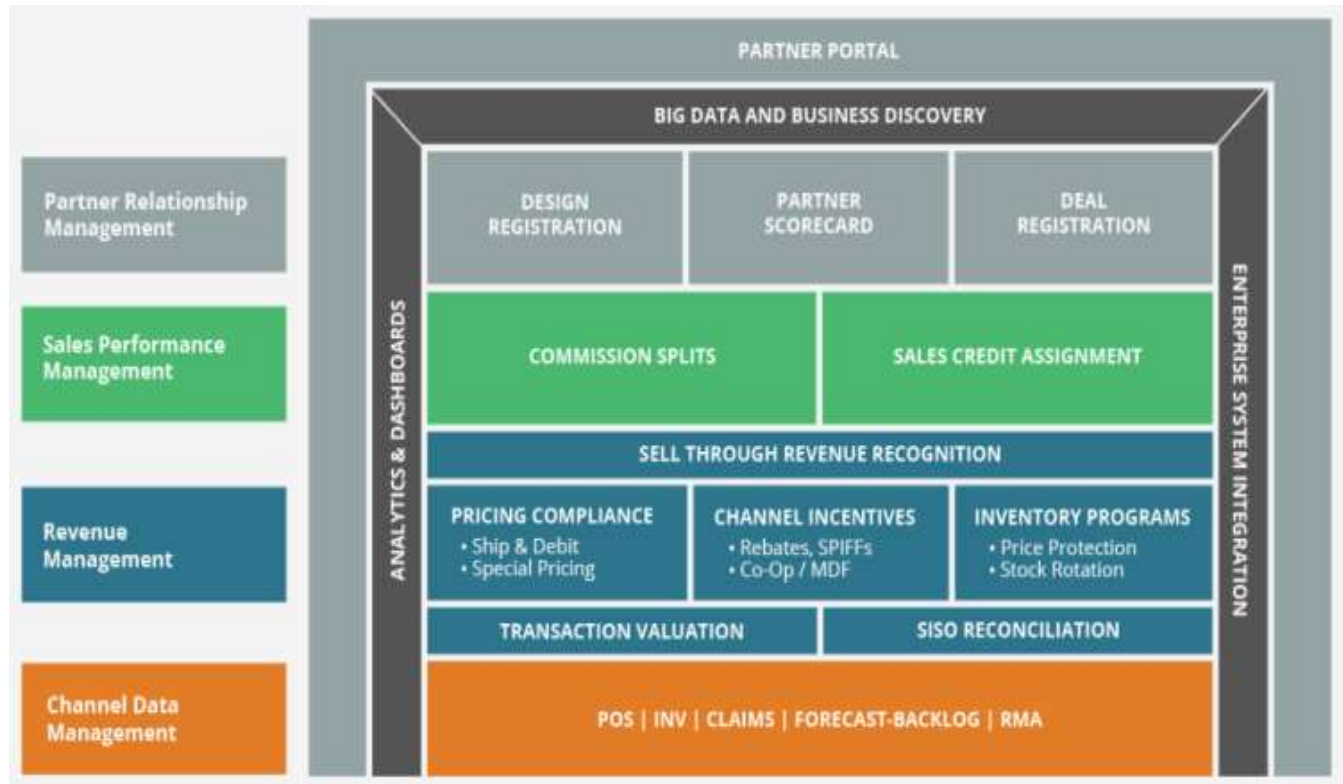
Entomo's channel management software and solutions are broadly organized according to the following business functions:

- **Channel Data Management** – Data aggregation, normalization, and enrichment of your transactional sales data from disparate external sources

- **Channel Revenue Management** – Transaction valuation, channel incentives (MDFs, rebates, etc.), inventory reconciliation, and revenue-recognition activities

- **Sales Performance Management** – Sales credit assignments, commission split calculations, and commissionable dollar calculations for internal and external sales channels

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- **Partner Relationship Management** – Partner portal, channel scorecards, and deal/design registration

- **Channel Business Intelligence** – Real-time reporting, dashboards, and analytics with an interactive business-intelligence platform for strategic planning and channel performance management

Channel Processing Pipeline

Entomo SmartHub collects channel data consisting of POS, inventory, claims, RMAs, forecasts, etc. from channel partners. The data can be formatted as Excel spreadsheets, comma-delimited (.csv) files, EDI files, XML files, or other data formats. SmartHub also loads master data from a customer's ERP/CRM systems, including their customer master, product master, invoices, forecasts, commission plans, incentive programs, shipment notices, etc. That channel data is then cleansed, normalized, transformed, enriched, and validated against the master data for further analysis by the various application modules in SmartHub.

The following diagram shows how data flows between various participants in a channel management solution.
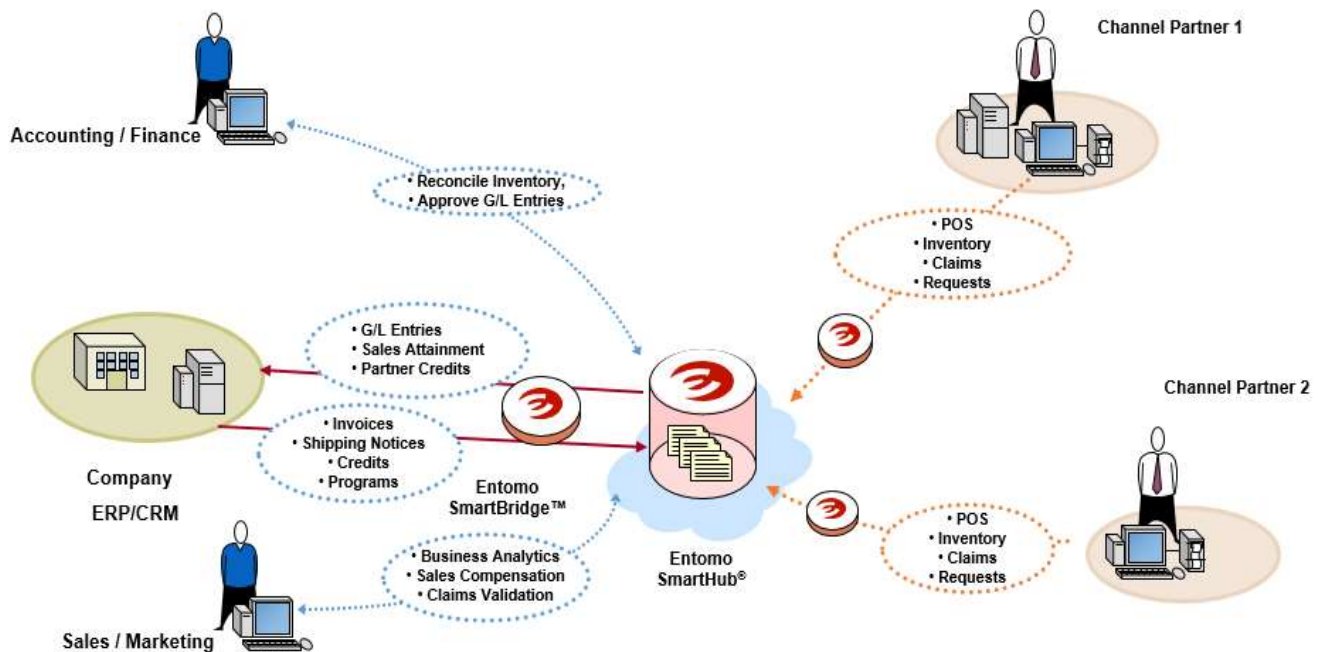
The next diagram shows the main data types in SmartHub and its various processing elements—channel data collection, master data loads, processing engines for transaction valuation, inventory reconciliation, incentives management, sales commission calculations, revenue recognition, partner score card, and analytics.
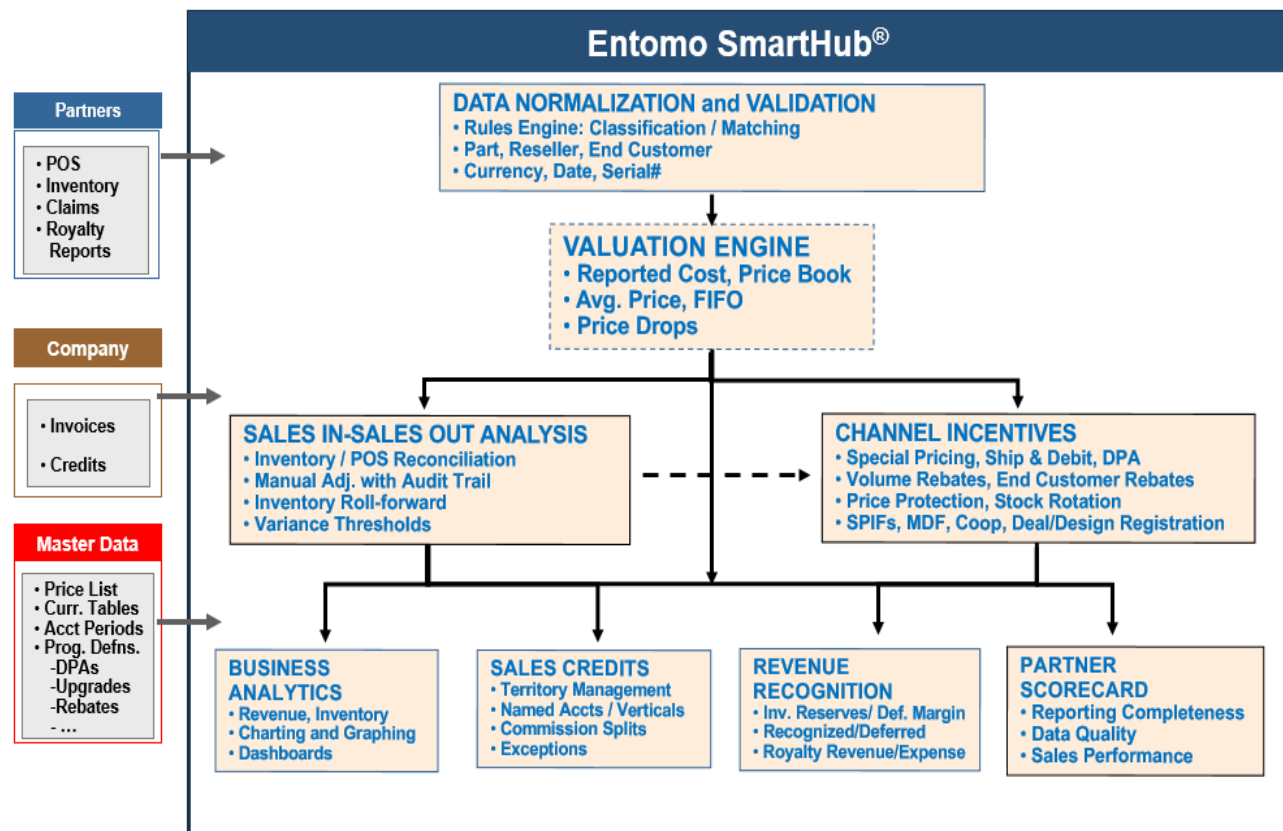
The key processing elements and steps:

1. Channel data is collected from channel partners.
2. Master data is loaded from customer's ERP/CRM system.
3. Master transaction data is also loaded from the customer's ERP system.
4. Channel data is cleansed, normalized, validated, and enriched using the master data.
5. Channel data is valued using the valuation engine.
6. The Sales-In Sales-Out module reconciles channel data and the master data for channel inventory reconciliation and calculations.
7. Channel incentives module performs analysis of the incentive programs by analyzing channel data against incentive program definitions
8. The Sales Commission module performs sales credit assignments and commission calculations.
9. The Revenue Recognition module performs journal entry generation based on the results from upstream modules.
10. Analytics allows data discovery and visualization of the analysis results from upstream modules using the Business Intelligence engine.

11. The Partner Scorecard module generates key performance metrics on channel partners based on the channel data and analysis results from various SmartHub modules.

Chapter 2 | Getting Started

At its core, SmartHub is a powerful report generator that gives you a home page (or "home base") for all your reporting activities. Depending on the permissions set by your company, the home page can give you access to your reports, charts, and workflow tasks. The following topics will help get you started.

Solution Overview

Indirect sales channels are a powerful and proven way to extend market reach, serve diverse segments, and strengthen customer relationships through value-added partners. Companies that distribute their products through VARs, resellers, retailers, distributors, or licensees are able to multiply their selling capabilities far beyond what they could accomplish with in-house resources alone.

Channel-based distribution also entails a higher level of complexity. Having multiple players in the value chain and multi-tier distribution raises the risks of stockouts, revenue leaks, sales commission inaccuracies, compliance problems, and slow responsiveness to sales trends or customer issues.

Piecemeal and stand-alone technology approaches, such as offline spreadsheets, homegrown applications, and data silos, are not capable of keeping up with the dynamic nature and complexity of today's channel. These limited-scope solutions often add to management problems by creating separate islands of data that have to be synchronized and manipulated by hand. This patchwork approach hampers timeliness and accuracy and adds cost.

To get optimal and sustainable results, companies need comprehensive channel management software and tools that can span all of these challenges. Entomo SmartHub provides these capabilities and attributes:

- Channel Data Management – Collection, normalization and channel data enrichment

- Collaboration – Workflows within enterprise and with external channel partners

- Gross margin and full channel revenue management
  - Automatic transaction valuation, claims validation, calculations of exposures and accruals
  - Adjustments, journal entries and audit trails

- Business discovery/channel business intelligence

- Integration with legacy ERP/CRM and other enterprise systems
- SSAE-16 compliance

Access to SmartHub

To access SmartHub, your company will be provided with a dedicated, secure URL created specifically for your company. When you go to that website, you will see the SmartHub Registered User Login screen. To log in, enter the Company ID, User ID, and Password provided by Entomo via a securely encrypted email.

The first time you log in, you'll see a notice about blocked pop-ups. For SmartHub to work properly, you need to allow pop-ups. For more information, see Configuring Your Browser.

As you work in SmartHub, be sure to properly log out of SmartHub at the end of each session; otherwise, you will be automatically logged out of SmartHub after one hour of inactivity.

Supported Browsers

For all browsers, you must enable JavaScript, cookies, and TLS 1.0.

The following browsers are supported for Entomo SmartHub 11.0:

- **Microsoft Internet Explorer (IE) versions 9.x, 10.x, and 11.x** – If you use IE, we recommend you use the latest version that SmartHub supports. Apply all Microsoft software updates, and observe the following restrictions:
  o SmartHub is not supported on touch screen devices.
  o IE's HTML solution editor is not supported.
  o The Compatibility View in IE is not supported.
  o The Metro version of IE 10 is not supported.

  See Configuring Internet Explorer.

- **Mozilla Firefox** - Use the most recent stable version. We make every effort to test and support the most recent version of Firefox. See Configuring Firefox.

- **Google Chrome** - Use the most recent stable version. We make every effort to test and support the most recent version of Chrome. Ensure

that the system setting **Show scroll bars** is set to **Always**. See [Configuring Chrome](#).

• **Apple Safari** on Mac OSX is not supported.

• Android, Blackberry, and iOS are not supported.

Configuring Your Browser

When you log in to our secure entomo.com site for the first time, you might see a message about the site being protected from entry until you allow that web page. The message:

> We have detected that your browser is blocking pop-up windows from our site. SmartHub makes use of pop-up windows and will not work correctly unless your browser is reconfigured.

You will need to reconfigure your browser to allow pop-ups from https://<company_name>.entomo.com. When you are finished with your reconfiguration, you can return to the log-in page.

Configuring Firefox

To ensure that SmartHub works optimally with Firefox, configure your browser as follows.

Allowing Cookies

SmartHub requires the acceptance of cookies:

1. In your Firefox browser, click **Tools > Options**.
2. In the left pane, click **Privacy**.
3. Under **History**, for the Firefox will option, select **Use custom settings for history**.
4. Select the option to **Accept cookies from sites**.
5. For the **Keep until** option, select they expire.
6. Select the option to **Clear history when Firefox closes**, then click **Settings**.
7. In the **Settings for Clearing History**, ensure that the **Cache** option is selected, then click **OK**.
8. Click **OK** to close the **Options** page, if available; otherwise, simply close the browser tab.

Clearing the Cache Manually

The settings in the procedure, above, should set Firefox to clear the cache automatically when Firefox closes, however, you can also clear the cache manually. Use one of the following methods:

1. In the Firefox browser, click **Tools > Options**.
2. In the left panel, click **Advanced**.

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3. With the **Network** tab selected, click **Clear Now** in the **Cached Web Content** section.
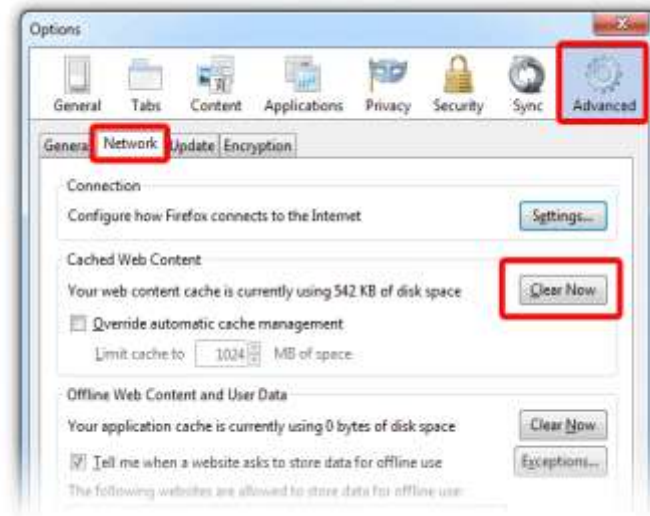
4. Click **OK**, if available; otherwise, simply close the browser tab.
5. Restart your Firefox browser.

OR

1. In the Firefox browser, click .
2. Click **History > Clear Recent History**.
3. In the **Time** range to clear drop-down, select **Everything**.
4. In the option section, select only **Cookies**, **Cache**, and **Active Logins**.
5. Click **Clear Now**.
6. Restart **Firefox**.

Configuring Internet Explorer

To maximize the performance of Internet Explorer, configure your browser as follows.

Allowing Cookies

SmartHub requires the acceptance of cookies:

1. In Explorer, click **Tools > Internet Options**.
2. In the **General** tab, do the following:
3. Click **Settings** under **Browsing History**.
4. For the **Check for newer versions of stored pages** option, select **Automatically**.
5. For the **Disk space to use** option, enter at least **50 MB**.
6. Click the **Security** tab, and do the following:
    a. Click **Custom Level** and scroll to the **Scripting** options.

b. Make sure the **Active Scripting** option is enabled. JavaScript depends on this setting being enabled.

7. Click the **Privacy** tab, and do the following:

   a. Click **Advanced**.

   b. Select the **Override** automatic cookie handling option.

   c. Select the **Always** allow session cookies option.

8. Click the **Advanced** tab, and do the following:

   a. Scroll to the **Security** section.

   b. Clear the **Do not save encrypted pages to disk** option.

   c. Clear **Use SSL 2.0**.

   d. Clear **Use SSL 3.0**.

   e. Select **Use TLS 1.0**.

   f. Select **Use TLS 1.1**.

   g. Select **Use TLS 1.2**.

9. Restart Internet Explorer.

Tip: The option called **Empty Temporary Internet Files folder when browser is closed** causes the cache to clear when Internet Explorer is shut down. This increases privacy, but it might decrease performance.

Clear the Cache Manually

1. In Explorer, click **Tools > Delete Browsing History**.

2. Select the following options:

   o Temporary Internet files and website files

   o Cookies and website data

3. Click **Delete**.

4. Click **OK**.

5. Restart Internet Explorer.

Configuring Chrome

From time to time, you'll need to clear the browsing data in Chrome.

1. Open Chrome, then click ☰ on the browser toolbar.

2. Click **Tools**.

3. Select the option to **Clear browsing data**.

4. In the dialog that opens, select the check boxes for the types of information that you want to remove.

5. Use the menu at the top to select the amount of data that you want to delete. Select **Beginning of time** to delete everything.

6. Click **Clear browsing data**.

7. Restart your Chrome browser.

Chapter 3 | Navigation Basics

Entomo SmartHub is made up of pages that allow you to navigate through and interact with your business data. Typically, your Entomo Professional Services (PS) team works with your system administrator to set up SmartHub pages for your organization, but your interaction with SmartHub will be easier if you understand the types of pages that you'll be using

Home Page Navigation

The home page is the page that opens first when you log in to SmartHub. The home page is divided into two sections. The left section is the favorite reports pane that lists the reports that are available to you. The right section is the dashboard. The home page has the following components.
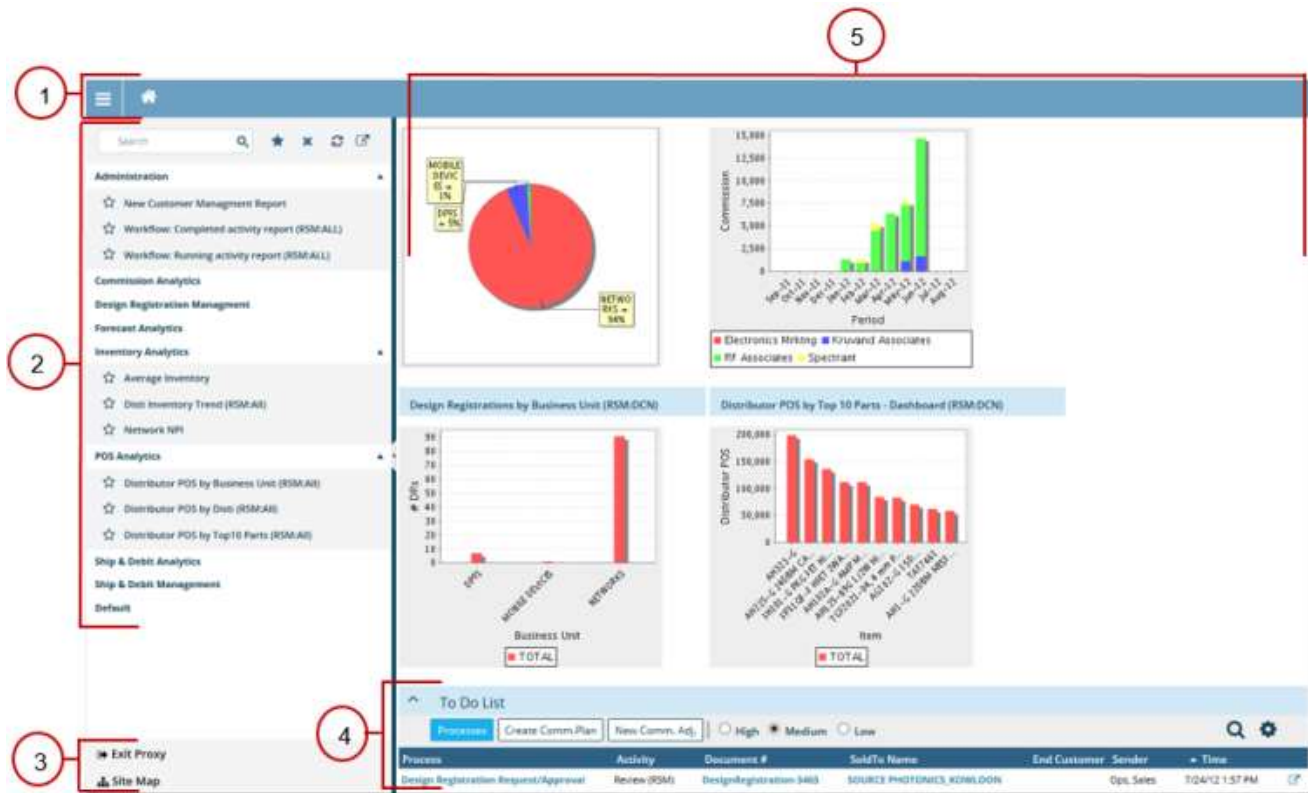
1. **Main Bar –** In the main navigation bar, click the ▤ icon to open/close the left favorites pane, which lists your saved reports.

   o Click the ⌂ icon to return to your dashboard from any page in SmartHub.

   o As you navigate through SmartHub, a breadcrumb trail (shown below) will appear to the right of the home icon to help you keep track of your location within SmartHub.
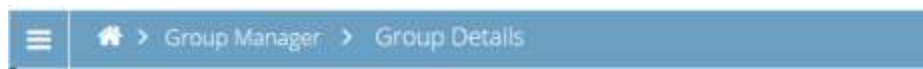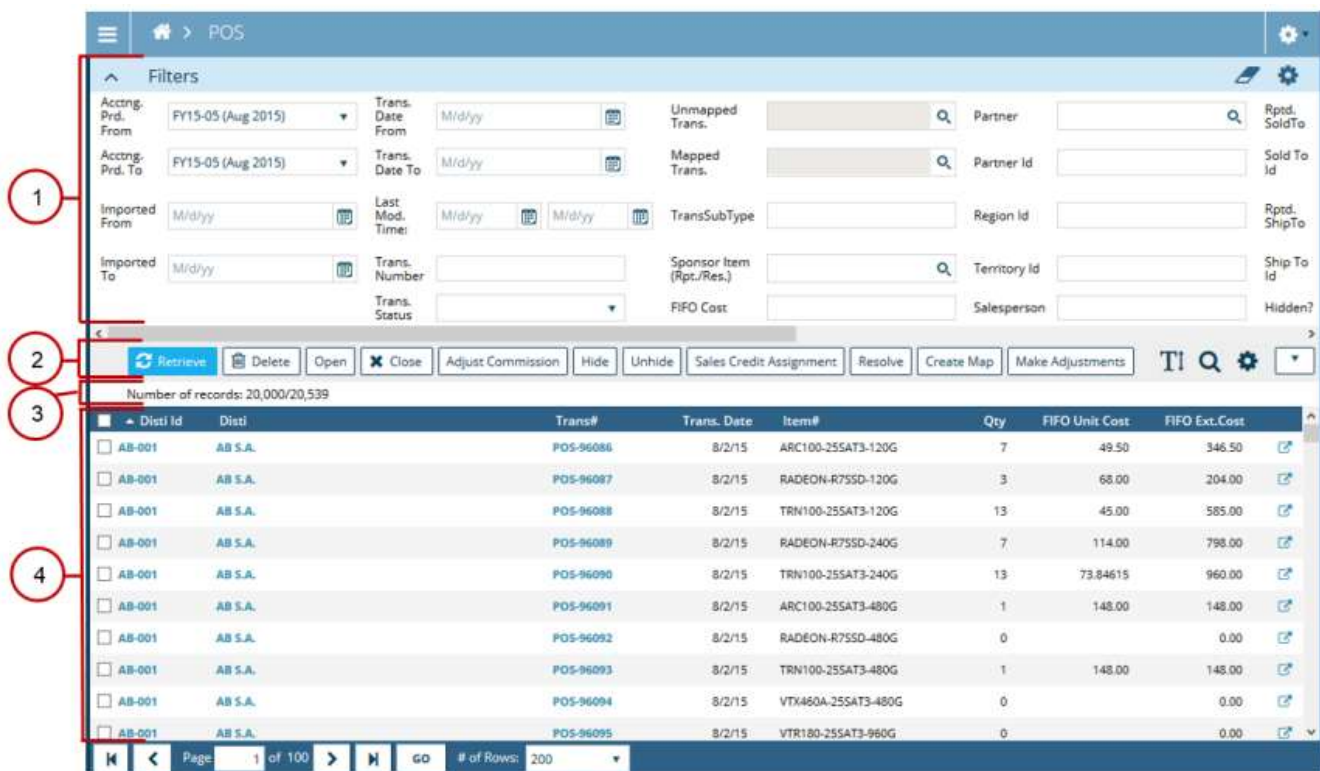
o Click the top ⚙ icon to reset your page to the previously saved report and settings.

2. **Favorites** – The left pane is your list of favorite reports. Favorite reports are built from default SmartHub pages or other reports that you customize to suit your interaction with SmartHub. Hover over a report to see the owner and last modified date.

   o **Search** – To quickly find a saved report, enter the title into the **Search** field. These searches find report names only, not report content.

   o **Star icon** – In your list of reports you can select the star to the left of a report name to flag it as a frequently used report. To see only your personal list of frequently used reports, click the star icon ★ next to the **Search** field. To clear a frequently used report, deselect the yellow star to the left of the report name in the full list of reports.

   o **Delete icon** – Click the delete icon ✖ next to the **Search** field to clear a search.

   o **Refresh** – Click the refresh icon ⟳ to refresh the list of reports in the favorites pane.

   o **View Details** – Click the details icon ↗ to see the complete list of reports available in the system. Clicking on the name of a report opens the report. Users will only be able to open the reports they have permission to open.

3. **Menus** – The bottom of the favorites pane displays the following menus:

   o **Site Map** allows you to access the default pages of various SmartHub modules. The Entomo Professional Services team will configure these default pages to create favorite reports with user-specific configuration to match your business requirements.

   o **Proxy** allows users with proxy privileges to log in as someone else. All actions as a proxy are recorded as being executed by the proxy. For example, if a program approver goes on vacation, an administrator can give proxy privileges to someone else who can approve the program in the absence of the original approver. A user with administrator privileges can manage access rights in a way that authorizes a user or an entire group of users to be proxies.

4. **To Do List** – The **To Do List** is below the dashboard. It shows you all of the items in the workflow that require your approval or other action, and is visible to you only if you're a participant in a SmartHub

workflow, such as an approval process for channel incentives, commission splits, or opportunities.

5. **Dashboard –** The dashboard is to the right of the favorites pane, and displays a set of charts and graphs, should your company choose this option. Each chart and graph is based on an analytic page. Click the chart or graph to open the report used to generate it.

List (Non-Analytic) Page Navigation

List pages allow you to create and modify non-analytic reports (without aggregation or subtotaling) by entering values/limits (a database query) into the **Filters** section, then clicking **Retrieve**. The results can then be viewed below the **Filters** section in a results table where you can search and sort the retrieved records. List pages have the following components.

1. **Filters –** The **Filters** section allows you to create queries to retrieve specific records from the SmartHub database.

    o   Click the eraser icon [eraser] to clear all values in the **Filters** section with a single click.

    o   Click the [gear] icon (if available) to add, remove, and move the fields in **Filters**. (Note that the [gear] icon above the **Filters** section resets the page to the previously saved report.) Column configuration changes will persist after the report is saved.

    o   Pressing **Enter** in most filter fields is the same as clicking **Retrieve**.

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o   Press **Tab** to move to the next filter in the column.

2.   **Action Bar –** The action bar allows you to manipulate retrieved data. The buttons in the action bar will change depending on where you are in the system. A button appears to the far right whenever the page width is resized to the point that it is too narrow to show the buttons.

3.   **Info Bar –** The information bar displays summary info about your retrieved data. A temporarily yellow box at the top of the page might also display the status or number of the records retrieved. In the following image, both the yellow notice and the **Number of records** indicator lets the user know the number of records they're allowed to see (usually 500) versus the total in the database.
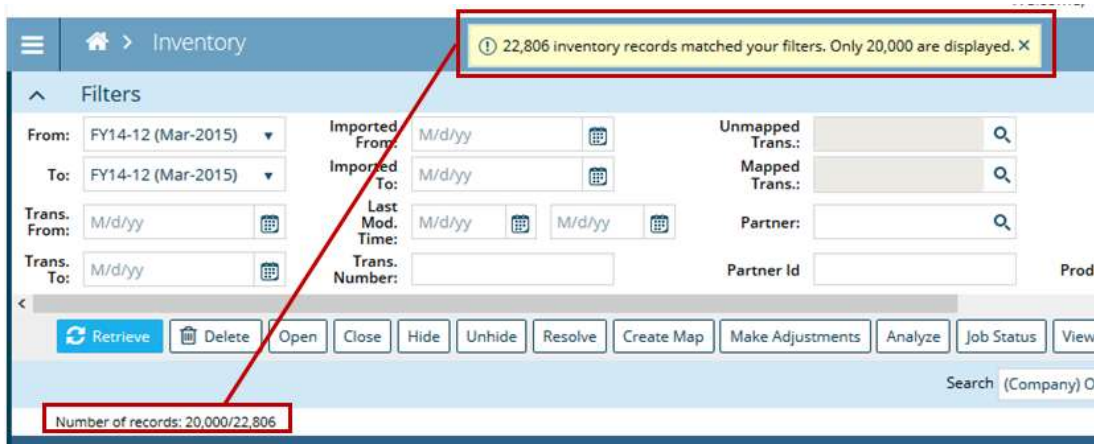
The user is limited to seeing 20,000 records versus the 22,806 total records in the database. Your company sets the number of records you can see. If your queries need to return more than that limit, consider asking your system administrator to revise the limit upward.
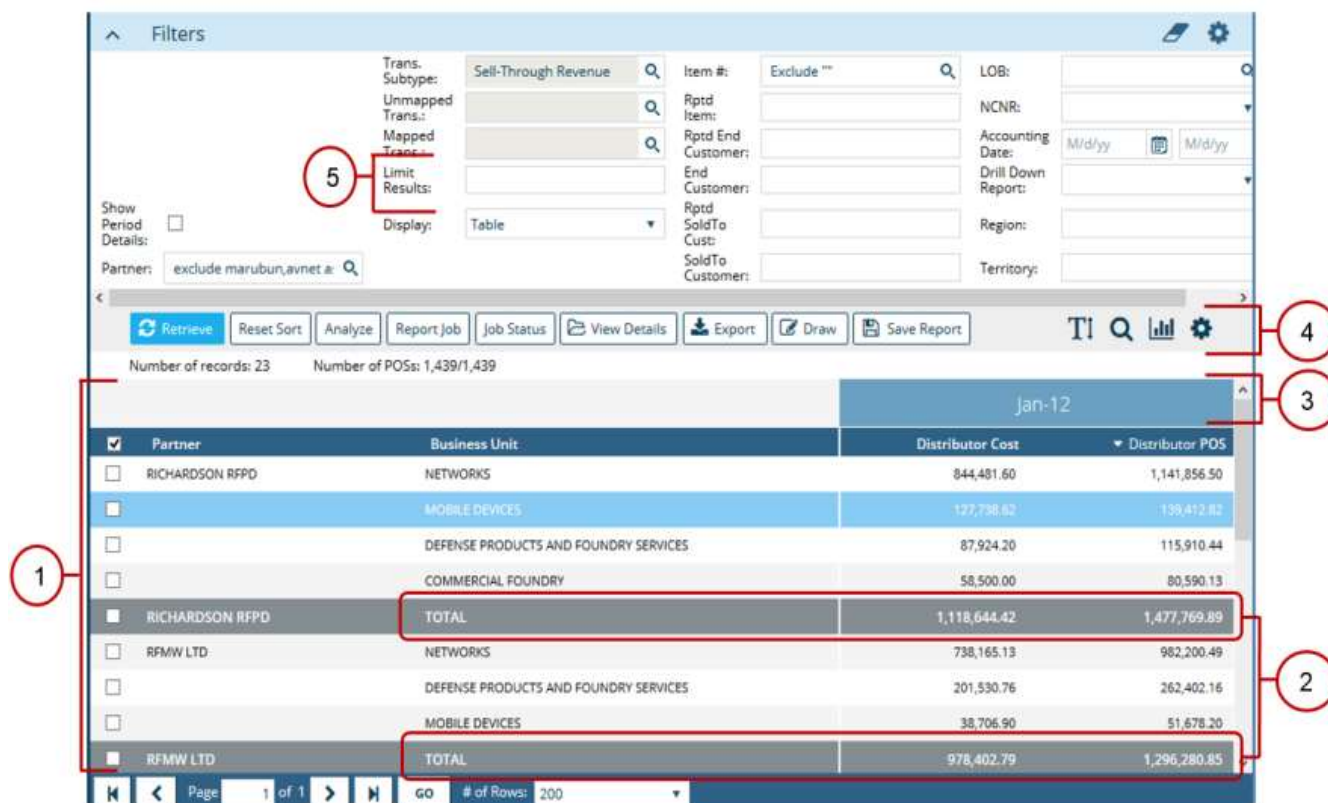
4.   **Results Table –** Below the information bar is the table that displays your retrieved records. The column labels are specific to the report you are generating. Use the following actions and icons to work with the records.

o   **Details –** Click any linked item in the table to see additional information about the item. Some drill down pages are editable, depending on your permissions, while others are view-only.

o   **Sort –** Click a column label to make the sort arrow appear so you can sort the contents of the entire table in ascending/descending order. To add multiple columns to the sort, perform the sort first, then press **Ctrl** while clicking additional columns. The added columns will be numbered in the order you click them. To remove the multi-column sort, release the **Ctrl** key and click any column.

o   **Long/Short Labels –** Click [icon] to toggle between the short and long column labels.

o   **Highlighting –** Click any row to highlight it. To highlight multiple rows, press and hold the **Ctrl** key while clicking at the

beginning of the rows you want to highlight. Highlighting persists until you click elsewhere in the table.

o **Row Selection** – Select a checkbox on the left to select a row before clicking an action button. Your selection will persist until you deselect the checkbox or click **Retrieve**.

o **Search** – Click the 🔍 icon to reveal a search bar where you can search the results of your most recent data retrieval. In the left field, select a column to search, then enter the value you're looking for in the right field. Depending on whether you're search is textual or numeric, enter letters for textual searches, and enter numerals and decimal points for numeric searches. Searches are often more successful if you use wildcards (*) before and/or after a search term. Table searches are limited to the data loaded in the table, without retrieving data again from the database. Click the ⊗ icon to clear the search. Click the 🔍 icon again to hide the search bar. Both clicks return you to the full list of retrieved records.

o **Hidden Buttons** – The ▾ button appears when the screen narrows enough to hide any of the buttons in the action bar. Click the button to see links to the hidden buttons.

o **Configure Columns** – Click the ⚙ icon (if available) to open the **Select and Order Visible Columns** dialog box, where you can change column labels, specify which columns you see/hide, and reorder columns. The dialog box also allows access to the **Configure Page** dialog box. For more information, see [Change the Visibility and Order of Columns](#).

o **View All Fields** – Tables are usually configured to display a limited number of fields. To see all available fields, click the ↗ icon to the far right of the table. The extended line format (ELF) view lets you step through records one-by-one by clicking the **Previous** and **Next** buttons in the ELF dialog.

Analytic Page Navigation

Analytic pages allow you to aggregate (or group) records using one or more dimensions (for example, by partner, item, or customer, or any combination) and see subtotals for those dimensions. For example, in the **POS Analytics** page, you might aggregate sales revenue by partner and item so you can view sales revenue for different items for a given partner. The **Filters** section, action bar, and info bar in analytic pages function the same as in non-analytic (list) pages. The following components are on analytic pages.

1. **Results Table –** Below the info bar in an analytic page is a results table that displays data that is aggregated, subtotaled, and reported according to the reporting period selected in **Filters**. For more information, see Filters.

2. **Aggregating and Subtotaling –** You can see analyzed data separated into subtotals per product family and type, and per distributor. The grand total for the analysis is at the end of the table. The table supports aggregate dimensions, display dimensions, and measures (numeric data). Use aggregate dimensions to subtotal the measures. Use display dimensions to display values without subtotaling.

   The rows for a group (defined by the first dimension column) are always kept together. If a dimension column is used as a sort column, the groups are first sorted by the values in the dimension column. If only measure columns are selected, the groups are ordered based on the totals for the measure columns.

   For more information, see Configuring an Analytic Page.

3. **Displaying Data by Period –** Analytic pages also allow you to view numeric data for every period selected in **Filters**. For example, in the **POS Analytics** page, if the periods selected are January and February, you will be able to view the sales revenue for January and February for the primary dimensions selected, such as partner, item, and customer. You can use the **Show Period Details** option in **Filters** to

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toggle between viewing the results by each period or totals across all the selected periods.

4. **Icons** – The following icons are on analytic pages:

   o **Charts** – Click the Configure Chart icon ▥ to set up a chart based on the retrieved data. To display the chart, go to the **Display** field in **Filters,** select **Chart** or **Table and Chart**, then click the **Draw** button in the action bar. The chart will be displayed below the results table.

   o **Configure** – Click the ⚙ icon to open the **Select and Order Aggregate Columns** dialog, where you can configure the columns of the analytic page. Column configuration changes will persist after the report is saved.

5. **Limiting Results** – Use the **Limit Results** filter on an analytic page to configure the number of records in the table. Enter a comma-separated list of integers (for example, "10,10,5") as limits for each aggregation level. Use a positive integer to show only the first n records. Use a negative integer to show everything except the first n records. Press **Enter** to apply the limits. Leave the filter blank if no limits are needed.
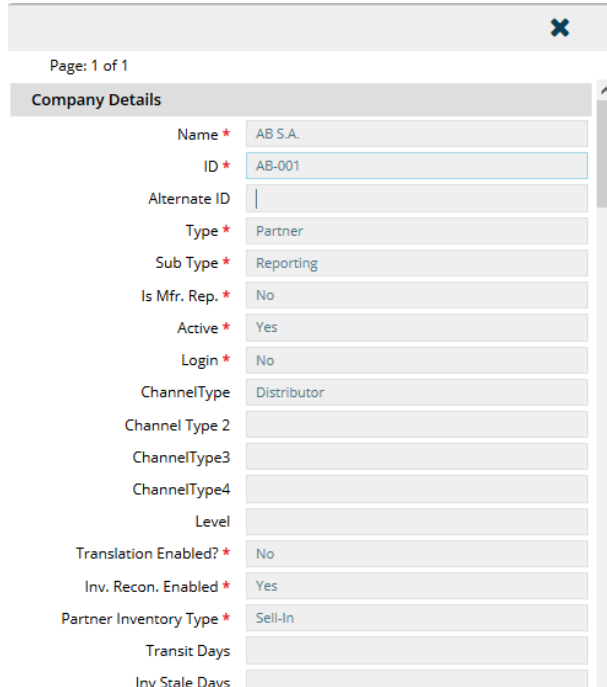
   Note that limits are based on the current sort order. For example, suppose that a **POS Analytics** report aggregates results by distributor and bill-to state. If you sort the **Disti Name** column in ascending order, then enter "10" in the **Limit Results** field, only the first 10 distributors groups will be displayed, ordered alphabetically. To get the top 10 distributors by revenue, sort the **Revenue** column in descending order, then ether "10" in the **Limit Results** filter.

   For more information and instructions, see Configuring an Analytic Page.

About Detail Pages

Detail pages allow you to view the complete details of one record, such as an item, a customer, or a POS transaction. Some detail pages are editable, depending on your permissions, while others are read-only. Still others allow you to see additional details about a specific item, then let you step through the details for every item in a report, item-by-item.

One type of detail page is a read-only dialog box that shows you more information about a specific item in a results table. To open a detail page, click the unique ID for any record in the results table. For example, the **Company Detail** dialog, below, shows all attributes about a specific company from the Customer Master.

Another type of detail page is an actionable dialog box that allows you to add/edit information to multiple rows in a table. For example, you can use the **POS Details** dialog, below, to change transaction information in a specific record, then click **Next** go through the records one at a time without leaving the dialog. Note that clicking **Apply** lets you save and

remain in the dialog box, but if you exit the dialog box without also clicking **Save**, your changes will be lost.

Other detail pages, like the **CIM Programs** page, are full, actionable pages. For example, the **CIM Programs** page allows you to see program details to clone the program, create a claim, and manage the details of the program. Note that detail pages like this contain two movable panes. You can resize the panes by hovering over the central horizontal line to get the double-arrow pointer that allows you to drag the line up and down.

The layout and labels of the fields that you see in detail pages are controlled by the SmartHub Model Spec, where the data types and models are defined. The Entomo Professional Services team uses the Model Spec to set up SmartHub for your company by defining a variety of attributes and behaviors for each detail page, such as:

- Field labels

- Display order of the fields, built row by row, rather than in top-to-bottom columns

- Whether the field is required to create a record

- Visibility of the field

- Whether the field is required when importing

- Whether the field is editable in the detail page

Following is an example Model Spec that defines the **Company Details** page, with a snapshot of the resulting page.

Chapter 4 | Passwords

After the initial log-in, your users will be able to set their own passwords, which must conform to the following strength requirements. These requirements are Entomo defaults, but they can be reconfigured if necessary to meet your company's security standards for password strength:
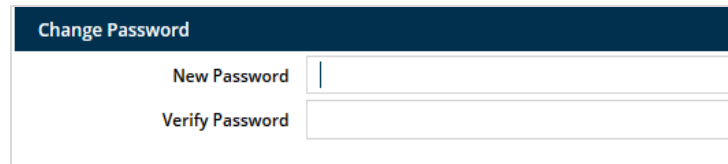
- Minimum password length – 8 alpha-numeric characters

- Minimum numeric characters – 1

- Minimum alpha characters – 2

- Maximum password age – 365 days

- Number of security questions required – 2

Reset a Password

You may reset your password as often as you want.

To reset a password:

1. Go to **Site Map > Administration > User Preferences**.
2. In the **User Preferences** page, click **Reset Password**.
3. In the **Change Password** dialog, enter a new password in both fields.

Change Password	
New Password	
Verify Password	

4. Click **OK**.

Forgotten Password

To reset a forgotten password, go to the log in page, and click **Forgot Your Password?** Instructions for resetting your password will be emailed to you.

Password Security

Answers to security questions can only be seen by the user who owns them. No one else can see the answers, including Entomo personnel and your company's system administrator.

If your company requires security questions, a set of security questions will be available to each user the first time they log in to SmartHub. To ensure security, each user must select questions and provide answers as soon as possible after logging in.

To set up or change security questions:

1. After logging in to SmartHub, click your name in the top right corner of the home page to open the **User Settings** page.

2. In the **Security Question 1** field, select the question that you want to answer.
3. Type your answer into the **Security Answer 1** field, then again into the **Confirm** field. Your answers must match exactly, including case.
4. Repeat for the **Security Question 2** and **Answer 2** fields.
5. When you are finished, click **Save**.

Your changes become effective as soon as you log out of SmartHub.

Chapter 5 | Page Configuration

Much of the overall layout of SmartHub pages and field definitions are automatically handled by the system. But with the proper permissions

you can customize the filters and tables so you can retrieve the data you need and format it in a way that is meaningful for your company.

- See Filters for information about adding, deleting, and configuring the filter fields at the top of reports.

- See Tables for information about changing column labels, reorganizing columns, changing the visibility, and sorting.

- See Analytics for information about configuring and sorting analytic pages.

Filters

Entomo SmartHub provides powerful filtering capabilities that allow you to create customized reports by selecting and parsing specific data from your full data set.

A section called **Filters** can be found at the top of most pages. Use the fields in this section to define the contents of the reports that you retrieve from the SmartHub database. You can set filters to retrieve data based on date ranges, part numbers, partners (distributors, resellers, end customers), and much more. All filter fields are case-insensitive.

The results in a report are retrieved based on the combination of all non-blank fields that are set when you click **Retrieve**. In other words, a record will be retrieved if the conditions set in all filters are true (a logical AND). For example, if you select "January 2010" as the accounting period, and set "Acme Customer" as the reported end customer, the results will be limited to the transactions in January 2010 for Acme Customer.

Using Filter Expressions
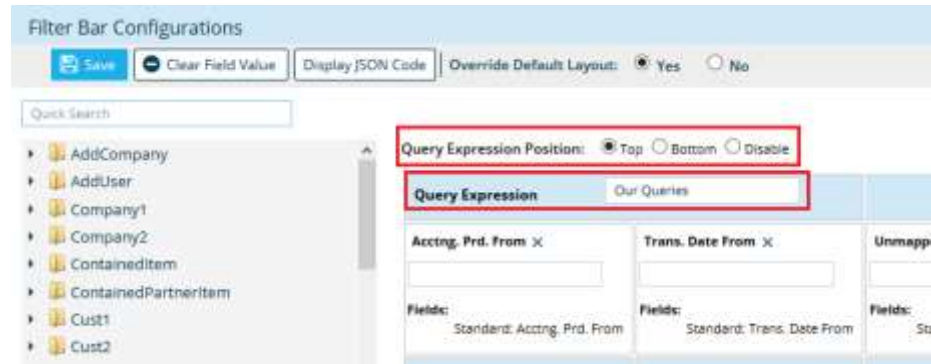
By default, the report generator in SmartHub uses AND logic, meaning that if you enter values in more than one filter field, your retrieved report will only contain records that match all the values in the filters. However, you can build even more powerful and flexible filters by enabling the **Query Expression** field, where you can use expressions that include OR, AND, and parentheses.

Note that the **Query Expression** field is currently only available on **POS** and **POS Analytics** pages, and only if you have permission to make changes.

To use the **Query Expression** field:
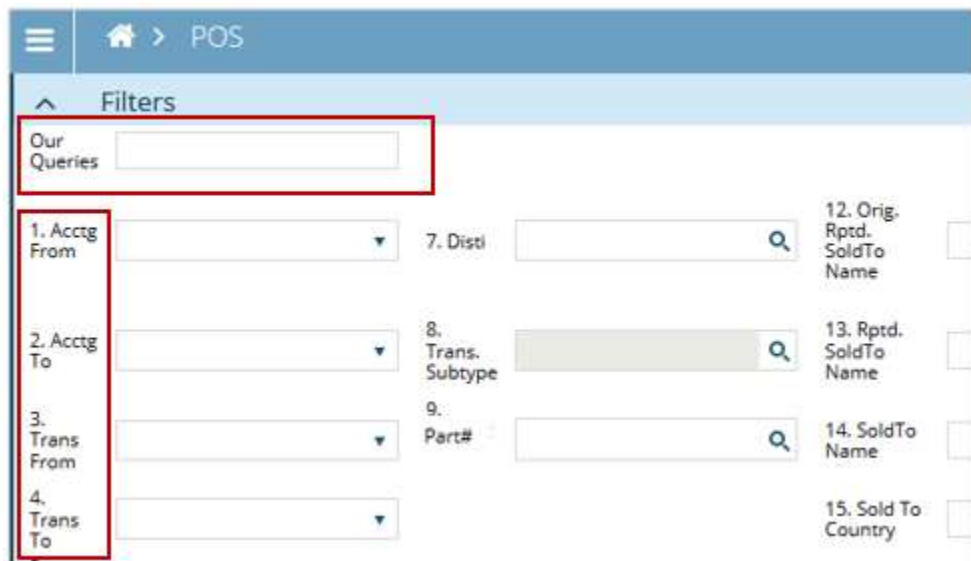
1. Open the report that you want to build the query for.

2. In upper right corner, click the Configure Filter icon ⚙ (below the Reset Page icon ⚙) to open the **Filter Bar Configurations** dialog.

3. At the top of the **Filter Bar Configuration** dialog, select either the **Top** or **Bottom** option to add the **Query Expression** field to the main page:

- o **Top** – Places the **Query Expression** field at the top of the **Filters** section.
- o **Bottom** – Places the **Query Expression** field at the bottom of the **Filters** section.
- o **Disable** – Hides the field.

4. (Optional) In the **Query Expression** field, enter a new label in the blank field to the right. This new label will appear on the main page after you save.

5. Click **Save** to return to the main page, where you can now see the **Query Expression** (or your customized name) field. The fields in the **Filters** section are now numbered so you can refer to them in queries.
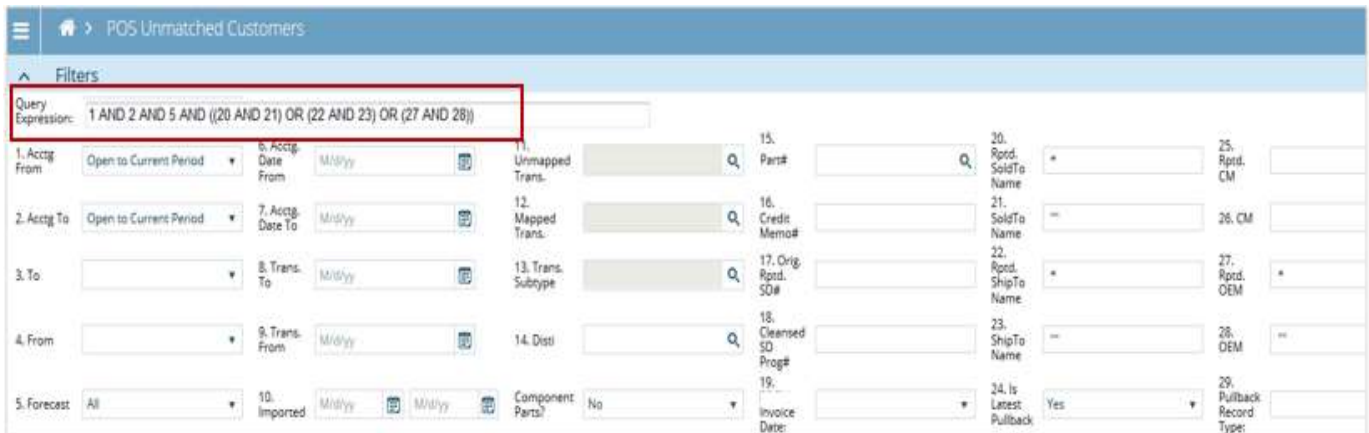
6. In the **Query Expression** field, enter an expression using the following guidelines:
- o Use "( )" (without quotation marks) as the grouping operator; use logical operators, such as AND/OR.
- o Refer to filter fields by their numbers.

- o Filters that are defined, but not used in the query expression will be ignored.
- o The system will let you know if your query is invalid.

Following is an example query, followed by its translation. The general idea of the query is to find records that contain a customer name (as reported by the distributor) that hasn't been resolved (the resolved field is blank, while the reported field is not blank).

`1 AND 2 AND 5 AND ((20 AND 21) OR (22 AND 23) OR (27 AND 28))`

Translation:

- Return records for the open to current accounting periods **AND**

- Include all forecast records **AND**

- Find all POS records with any of the following conditions:
  - o Rptd SoldTo Name is not blank **AND** SoldTo Name is blank, **OR**
  - o Rptd ShipTo Name is not blank **AND** ShipTo Name is blank, **OR**
  - o Rptd OEM is not blank and OEM is blank

Notice that field 24 in the image contains a value, but that field isn't included in the query expression. As a result, that filter is excluded from the data retrieval.

You'll see an error message if a query expression is invalid. Following are examples of invalid query expressions:

- Unmatched parenthesis: `(1 AND 2) OR 3 AND 4)`

- Unspecified field value: `(1 AND 2) AND (6 OR 8)`

- Unsupported operator: `(1 AND 2) AND NOT (5 OR 6)`

- Unsupported expression construct: `((1 OR 3) AND 4) OR (5 AND 6)`

For more information, see [Popular Expressions for Filters](#).

For advanced users, filters can also be configured using JSON scripts. For more information, see [JSON Scripts](#).

Popular Expressions for Filters

This topic contains some of the more popular search expressions that you can use in filter fields to narrow the data that is retrieved from the database. For more information, see <u>Filters</u>.

Text Fields

You can enter the following expressions in the text fields in SmartHub.

- Wildcard (*)
  - o Use a wildcard before and/or after a term as a substitute for one or more characters so you can do a partial match.
  - o For example: Enter ***52*** in the **Item#** field to retrieve all items that begin with, end with, or contain "52", including BCM56152 and BCM52833.
  - o Use a single wildcard to mean IS NOT EMPTY or IS NOT NULL.
  - o For example: Enter ***** in the **Item#** field to retrieve all records that contain any value at all in that field (in other words, all records where that field isn't empty).
  - o EXCLUDE - Use EXCLUDE as the first word in a filter to retrieve everything except the values you specify in the filter. Wildcards can be used with EXCLUDE.
  - o For example: Enter "**EXCLUDE Disti123***" (without quotation marks) in the **Partner ID** field to retrieve all partners except those that begin with "Disti123".

- Double Quotation Marks (" ")
  - o Use double quotation marks to search for a value that contains a comma.

    For example: Enter **"Disti1, Inc."** (with quotation marks) to find records for that partner.
  - o Use "" (two double quotation marks, without a space) alone in a filter to mean IS EMPTY or IS NULL.

    For example: Enter **""** in the **Item#** field to retrieve only the records that have nothing in the **Item#** field.

- Comma-Separated Values – Use commas as a logical OR expression to retrieve any record that matches any of the multiple comma-separated values in the field.

  For example: Enter "**ABC123, XYZ456**" (without the quotation marks) in the **Item#** field to retrieve records that contain ABC123 or XYZ456.

  You can also use wildcards with comma-separated values

Date Fields

You can use numeric shortcuts in date fields when you know exactly how far back you want to retrieve data. Simply enter a minus sign (-), followed

by a number, followed by one of the following terms. (If you leave out the minus sign or use a plus sign [+], it means to go forward instead of back.)

- days
- weeks
- months
- years
- periods
- end period
- begin period

Note that the qualifiers "begin" and "end" can be combined with any of the terms, not just with "period".

Examples:

Enter	Results
-30 days	Returns values from the last 30 days
-1 period	Returns values from the previous period
0 periods	Returns values from the current period
-1 end period	Returns values from the end of the previous period
-1 begin period	Returns values from the beginning of the previous period

Configuring Filter Fields

The following actions can be done in the **Filter Bar Configurations** dialog.

Add a Filter

This topic provides instructions for adding a new filter cell to the **Filter Bar Configurations** dialog, where you can configure the filters that appear in a report.

To add a new cell in the middle of an existing column or row:

1. Open the report that contains the field you want to change.

2. Click the Configure Filter icon (below the Reset Page icon) to open the **Filter Bar Configurations** dialog.

3. Right-click the cell where you want to insert the new field, then click **Insert > Shift Cells Right**.

   The **Insert** menu also allows you to make room for the new cell by shifting down the column of cells below your selected cell, but for the purposes of this procedure it is assumed that you want to shift the row to the right.

4. Do one of the following:

o   Drag and drop a new object from the left pane to the empty cell you created.

o   To find an object in the left pane, use the Search field at the top of the pane.

o   Drag and drop an existing cell into the empty cell. (Select the field title, then drag.)

o   Drag and drop an existing cell into another (non-empty) cell to override it.

5.   When you are finished, click **Save**.

When you are finished creating and moving fields, click Save to return to the main page and run a report based on the new logic. The layout will persist after the report is saved.

The following actions can also be done in the **Filter Bar Configurations** dialog.

Add or Delete Filter Rows and Columns

With the proper permission, you can use the **Filter Bar Configurations** dialog to add and delete rows and columns in the **Filters** section of a report page:

Adding

To add a row or column:

1.   Open the report that contains the field you want to change.

2.   Click the Configure Filter icon ⚙ (below the Reset Page icon ⚙) to open the **Filter Bar Configurations** dialog.

3.   Do one of the following:

o   Right-click any cell above the row where you want to insert a new row, then click **Insert > Entire Row**. A new row is added beneath the row where you clicked.

o   Right-click any cell to the right of where you would like to insert a new column, then click **Insert > Entire Column**. A new column is added to the left of the column where you clicked.

4.   Next, do one of the following:

o   Drag and drop new objects from the left pane to the empty cells you created.

o   Drag and drop existing cells (select the field title, then drag) to reorganize the grid.

5.   Click **Save**.

Deleting

To delete a row or column:

1.   Open the report that contains the field you want to change.

2. Click the Configure Filter icon ⚙ (below the Reset Page icon ⚙) to open the **Filter Bar Configurations** dialog.

3. Right-click any cell in the row or column you want to delete, then do one of the following:

   o Click **Delete > Entire Row**. Any rows below the deletion will be automatically shifted up.

   o Click **Delete > Entire Column**. Any columns to the right of the deletion will be automatically shifted to the left.

4. Click **Save**.

Configuring the Filter Grid

Filter fields are organized in a default grid of rows and columns. With the proper permissions you can reconfigure the fields two ways in the **Filter Bar Configuration** dialog:

- Use the drag-and-drop interface, which allows you to define the fields and layout.

- Use a JavaScript Object Notation (JSON) script that defines the fields, behavior, and layout of the filters on a specific page.

Drag-and-Drop Interface for Filters

On any page that displays the Configure Filter ⚙ icon in the **Filters** section, you can click the icon to open the **Filter Bar Configurations** dialog.

The **Filter Bar Configurations** dialog shows all available fields in the left pane, grouped as related objects, with different icons for each data type (text, date, numeric). The main part of the page consists of cells that represent the row and column configuration of the fields that are visible to users, in the order they appear in **Filters**. The following image shows some of the actions that can be done in the **Filter Bar Configurations** dialog.

When you are finished reconfiguring the filters, you can then save the new configuration for the page going forward. If you remove a field, it will no longer appear in the grid but it will be available again in the left pane. Empty rows and cells in the grid will appear as empty spaces in the Filters section.

Filter Names

By default, the name of the cell is the name shown in the left pane, but you can change the label by entering a new name in the blank field to the right of the cell title.

Enable Changes

To make changes to the layout, you must set the **Override Default Layout** option to **Yes**. The **No** option prevents changes. If you make changes before selecting this option, the changes will be lost and the layout will return to the default layout for your company.
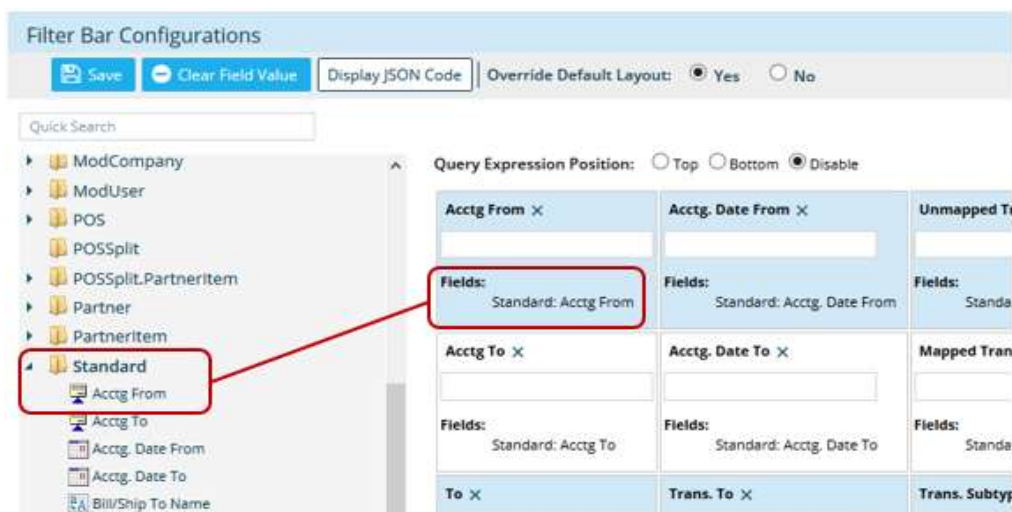
Create OR Filters

With the proper permission, you can use the **Filter Bar Configurations** page to create filters fields that use OR logic.

Each cell in the filter bar layout has a **Fields** list that shows the database objects that are associated with the cell. The objects are listed as <object folder: object name>. For example, the **Acctg From** field shown below was created by dragging the **Acctg From** object from the **Standards** folder, so the term "Standard: Acctg From" is displayed under **Fields**.

When only one field is listed, the cell uses AND logic, but if you drag another object under the **Fields** list, OR logic is created for that cell. This means that you can enter a value into that filter field to return data from more than one database object. In the following example, you'd be able to enter a date range in the **Marketing Approved Date** filter to return any transaction that has either a **Marketing Approved Date** OR a **Marketing Sent Date** within that range.

To create OR logic:

1. Open the report that contains the field you want to change.

2. Click the Configure Filter icon ⚙ (below the Reset Page ⚙ icon) to open the **Filter Bar Configurations** dialog.

---

3. In the grid, locate the filter field where you want to build the OR logic.

4. In the left pane, identify which field you want to add to the cell.

   Note that the data type (numeric, text, or date) of the second object must match the first.

5. To the list of column labels under **Fields**, drag-and-drop additional fields under **Fields** to configure the logical OR for that cell.

Delete a Filter

With the proper permission, you can use the **Filter Bar Configurations** dialog to delete a filter from a report page.

To delete a filter:

1. Do one of the following:
   o Click the **X** to the right of the field name.

   Identified Issue Types ⓧ

   Fields:
   POS Reports: Identified Issue Types

   You won't be able to delete cells that don't have an **X**. These cells are required by the system and cannot be removed.

   o Right-click the cell that you want to delete, then click **Delete > Shift Cells Left** or **Shift Cells Up**, depending on how you want to modify the layout.

2. When you are finished, click **Save** to return to the main page so you can run a report based on the new logic. The new layout will persist after the report is saved.

View Related Reports
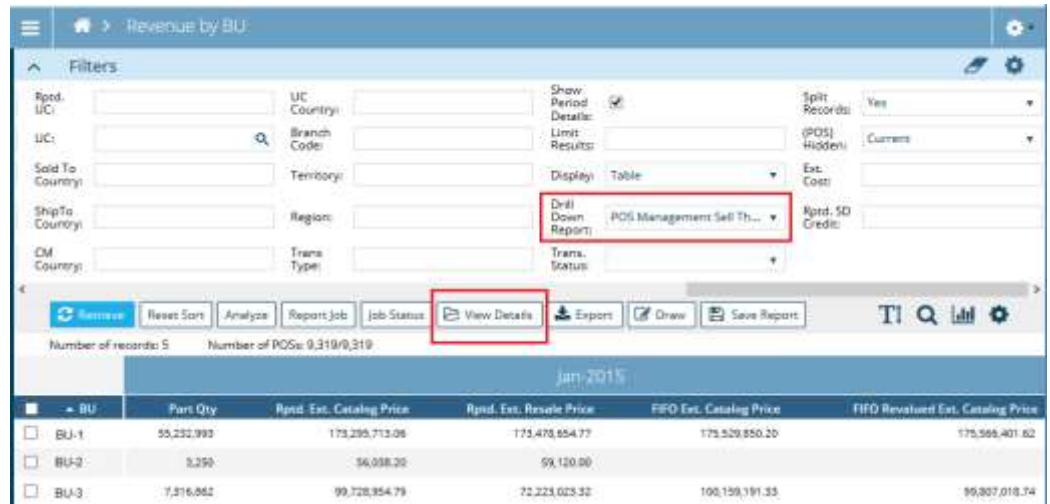
When you're working in a report, it can be helpful to see the report in the more familiar format of one of your saved reports (with your personalized table formats and labels) to help you better understand the data in the active page or report.

To see these related reports, your Entomo Professional Services team can help you set up a filter (in certain reports) called **Drill Down Reports** (or a similar name). This filter allows you to apply the format of a saved report to the active report or page. The filter will only list reports that you have permission to view. The filter works the same way in analytic and non-analytic reports.

To open a related (or drill down) report:

1. Open a report and click **Retrieve**.

2. In the **Drill Down Report** field, select a report from the list.
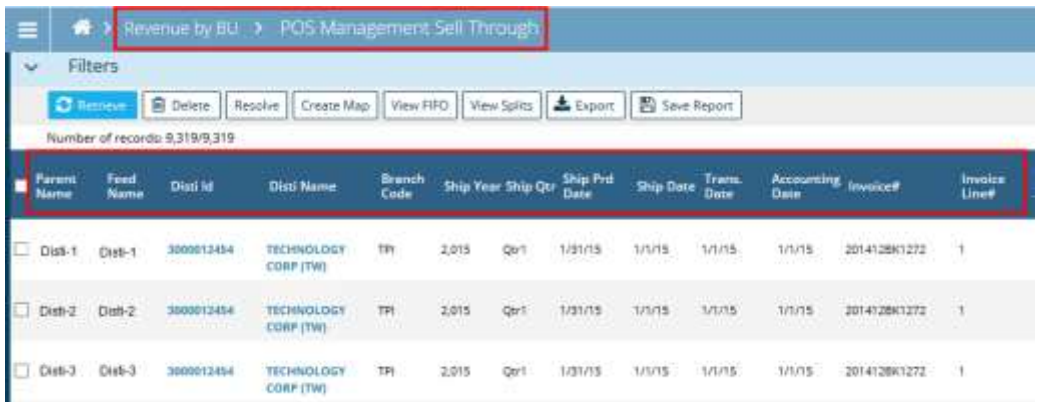
3. Click **View Details**.

The example above assumes that you retrieved revenue information according to business unit, and that you wanted to see the corresponding transactions in the format of your "POS Management Sell Through" report. The results table then will display the data of from the "Revenue by BU" report in the format of your "POS Management Sell Through" saved report, as shown here.

4. To return to the original report, click the Return arrow ⬅, or click the name of the report in the breadcrumb.

JSON Scripts

It's possible to use a JavaScript Object Notation (JSON) script to define the behavior and layout filters on a specific page. The scripting option (via the **Module Configuration** page) for configuring filters allows you to change filter labels, add/delete filter fields, and change the layout of the filter bar, among other things. The page is available for advanced users with the proper permissions, but it is usually used only by your Entomo Professional Services team.
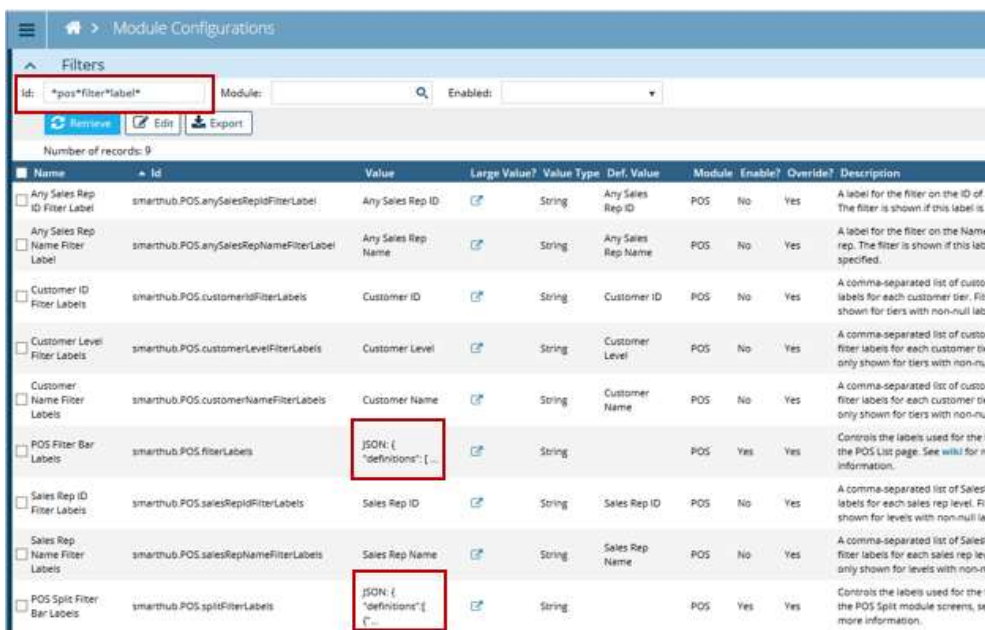
Using JSON scripts, it's possible to configure the following items:

- Widget options (text fields, select lists, combo box/multi-select fields)

- View restriction (read-only, default values, and required)

- Additional filter fields for the logical OR

- Visibility for partner/sponsor, security group, and user levels

- Filter definitions and filter layout

To access and edit a script:

1. Go to **Site Map > Administration > Module Configs**.
2. Do one of the following:
   o Click **Retrieve**.
   o Enter values in the filter fields to narrow your search to a specific filter bar configuration and module, then click **Retrieve**.

   For example, in the **ID** field, you can enter "*pos*filter*label*" (without quotation marks) to retrieve the following list of filter bar configurations that define the labels used in the various filter bars

in the system. You can identify the JSON scripts by finding the term "JSON" in the **Value** column.

3. In the results, find the line you want, then click the icon in the **Large Value** column for that line. The **Config Details** page opens. (It's possible to select a checkbox, then click **Edit**, but editing is more difficult and it's easy to accidentally remove any formatting you might have to make the script more readable.)

4. In the **Config Details** page, edit the filter bar configuration in the **Value** field.

   For example, the following script configures the filter bar shown in the image, below.

```
JSON:
{
"layouts":[
[ "ID:", "Active:", "Sales Rep.:", "Company.SAttrib7" ],
[ "Name:", "Login:", "Partner:", "Company.CustomerNumber" ],
[ "Type:", "Mfr. Rep.:", "Any Channel:=Channel Type:" ]
]
}
```


Contact your Entomo Professional Services team for help with the names of the controls defined in SmartHub.

5. When you are finished with your changes, click **Save**.

6. For the changes to take effect, log out of SmartHub and log in again.

Tables

Tables display data records that are retrieved from the SmartHub database based on the filters you set. The retrieved records are organized in rows according to columns that can include item, customer, POS transaction, etc. Column labels are specific to the report you are generating.

Change the Visibility and Order of Columns

People with the proper permission can change the labels, order, and visibility of columns in the tables that appear in pages and saved reports.

To configure the columns in a table:

1. Open the report you want to change.

2. To the right of the action bar, click the Configure Columns icon ⚙ to open the **Select and Order Visible Columns** dialog. (If this icon is missing, you can't make changes.)

   In the dialog, columns that are available but not yet selected, are in the left **Choices** pane. The right pane (named **Selections** in non-

analytic pages and **Aggregate Columns/Display Only Columns** in analytic pages) lists the columns currently visible in the table, in the
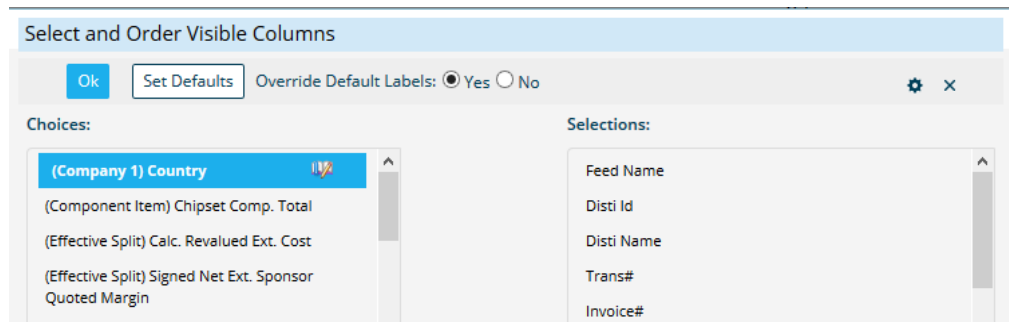
order that they appear. To customize column names, see Changing Column Labels.

3. Do any of the following, as needed:
    o To add a column to the table, do one of the following:
        ▪ Drag a column label from **Choices** to the right pane, placing the label in the position where you want the field to be displayed in the table.
        ▪ Double-click a label to move a field to the end of the list in the right pane, where you can drag-and-drop it into any position you want.
    o To remove a column from display, drag the column label from a right pane to **Choices**, or double-click it.
    o To move multiple columns at one time, hold **Ctrl** while clicking multiple column labels, then drag them to the other pane.
4. When you're finished, click **OK**.

Some people can see and click the Configure Page icon ⚙ in the right corner of the **Select and Order Visible Columns** dialog. You can ignore this icon for the most part since newer functionality supersedes most of the functions in that dialog. However, for analytic reports, a section of the dialog works. For more information, see Configuring an Analytic Page.
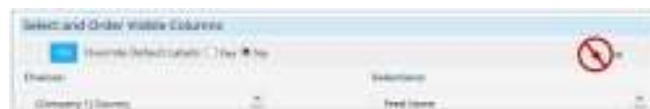
If the column you want isn't listed in the **Select and Order Visible Columns** dialog, see Configuring an Analytic Page.

Changing Column Labels

With the proper permissions, you can change the column labels in a table.

To edit column labels, do the following:

1. Open the table you want to change.

2. To the right of the action bar, click the Configure Columns icon ⚙ to open the **Select and Order Visible Column**s or **Select and Order Aggregate Columns** dialog, depending on whether you're on an analytic or non-analytic page.

3. For the **Override Default Labels** option, click **Yes**.

4. Click the column you want to change. This makes the Edit Label icon appear.
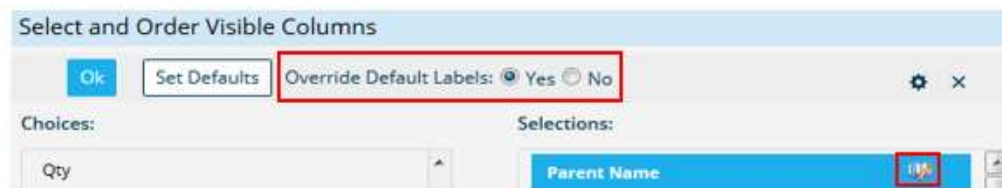
5. Click the icon and rename the column label as needed, then click the checkmark to save.

6. Save the report to preserve your changes.

The new label you entered will now be displayed on the report instead of the default label.
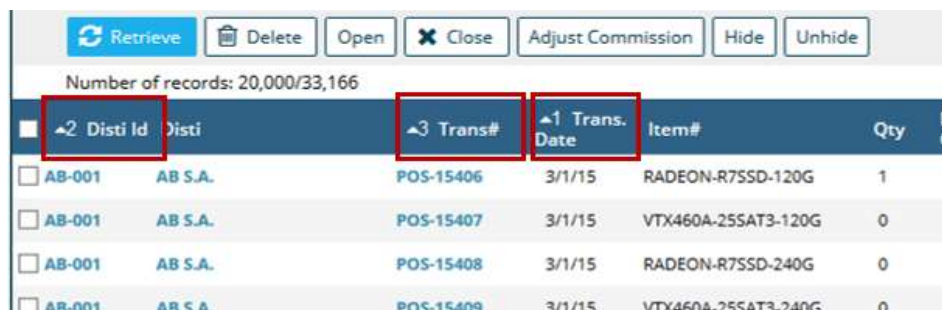
Sorting Table Columns

In any table, you can click a column label to make the sort arrow appear so you can sort the contents of the table in ascending or descending order.

To add multiple columns to the sort:

1. Click the first column label.

2. Press and hold **Ctrl**, and click another column.

   The added columns will be numbered in the order you click them.

3. To remove the multi-column sort, click any column.

The sorting configuration in a table impacts the functionality of the **Limit Results** filter. For more information, see Sorting in Analytic Pages.

Toggle the Table Labels

When default pages are set up, tables can be set to display either full column labels or a shortened version of the labels by default. Shortened labels can be useful in long tables to shrink the header row so you can see more rows without having to scroll down. If short labels are set up for a report or page, users can toggle between the long and short labels by clicking the Toggle icon.

A table showing long labels:

The same table with short labels:

When you save a report, you can override the display default, if desired.
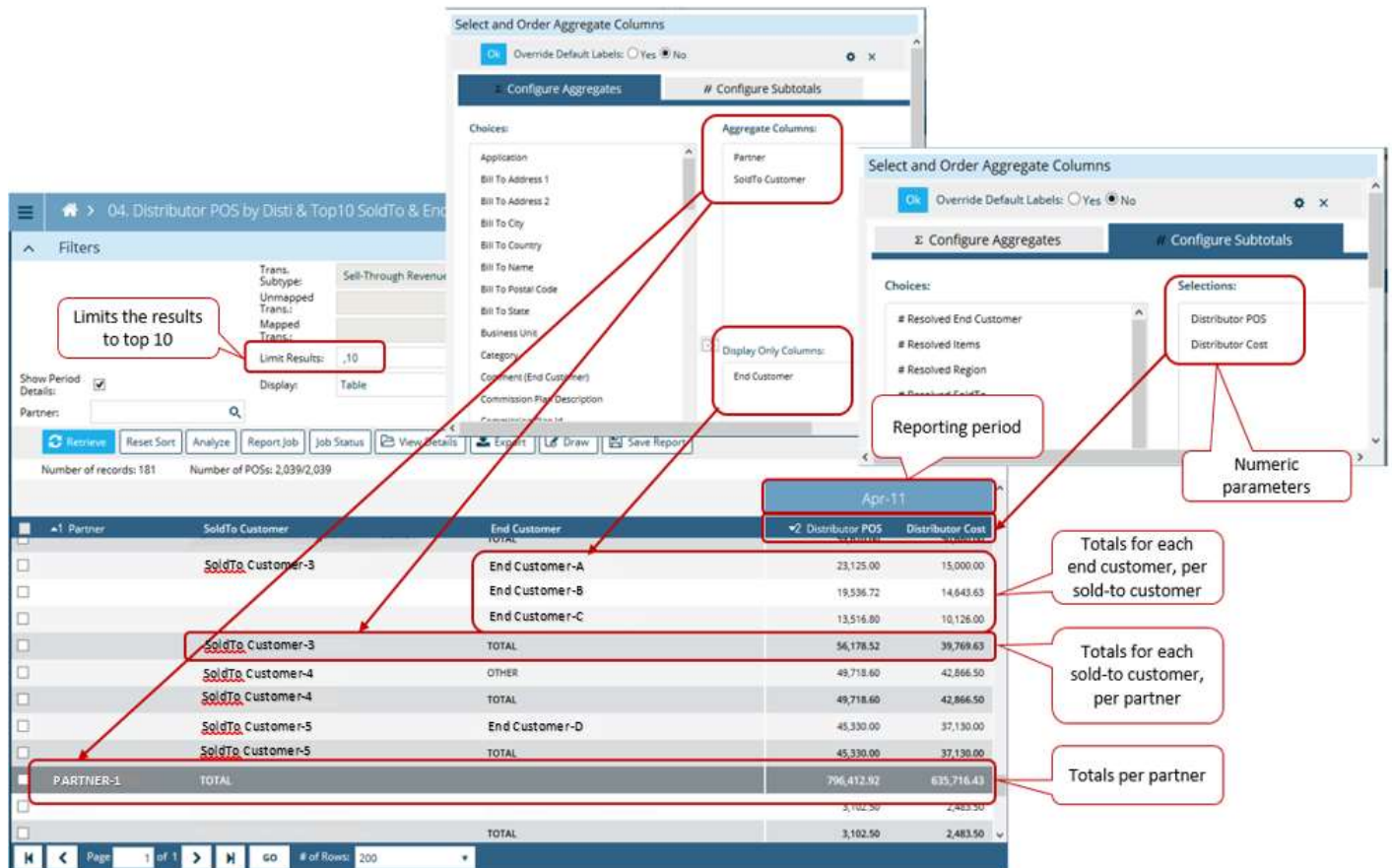
For information about configuring the behavior of labels company-wide, see Configuring an Analytic Page.

Analytic Pages

Analytic pages allow you to aggregate (or group together) records using one or more dimensions (for example, by partner, item, or customer, or any combination) and see subtotals and totals for those dimensions. For example, in the **POS Analytics** page, you might aggregate sales revenue by partner and item so you can view sales revenue for different items for a given partner.

While reports on non-analytic (list) pages (such as **POS** or **Inventory**) provide a view of large amounts of data, analytic pages allow you to focus on more specific dimensions of the data and create informative charts and graphs based on those dimensions. For a tour of an analytic page, see Analytic Page Navigation.

For example, in the **POS** page, you might see a report of all partner sales in a specific accounting period, but in the **POS Analytics** page, you can then configure a report to show sales revenue by partner, sold-to customer, and end customer so you can find your top 10 sold-to customers in a particular period. Consider the following example that shows the results of those selections.

Configuring an Analytic Page

The steps in the following procedure suggest a certain order, but many of these steps can be performed in any order.
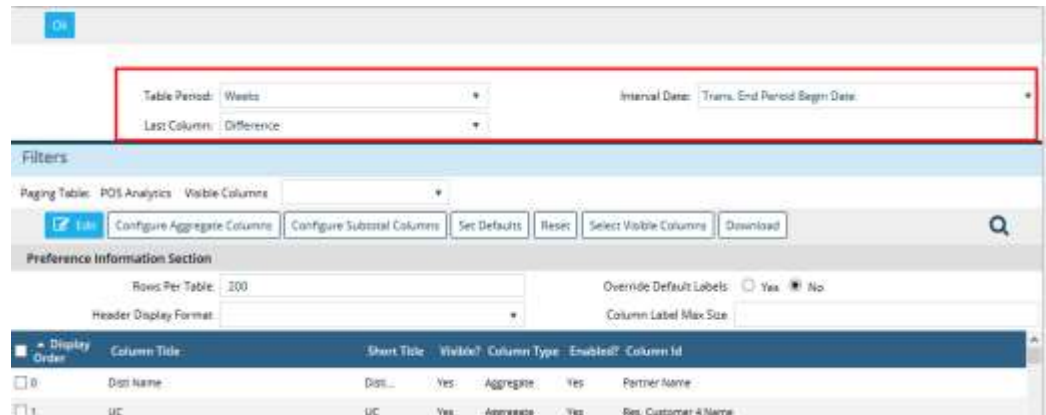
To configure the columns in an analytic page:

1. Open the analytic report that you want to change.

2. Set a date range for your report, usually in filters called something like **Accting Prd. From/Accting Prd. To** or **Trans Date From/ Trans Date To**. (If they are not available, your report has been pre-set to an accounting period so you can skip this step.)

3. On the right of the action bar, click the Configure Columns icon ⚙ to open the **Select and Order Aggregate Columns** dialog. We'll return to this dialog after a few steps.)

4. In the upper right corner of the dialog, click the Configure Page icon
   ✿ to open an untitled editing dialog. (If this icon is missing, you
   don't have permission to edit the page.)
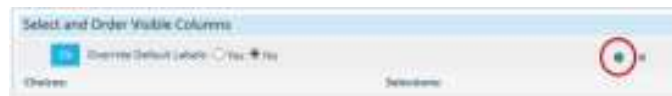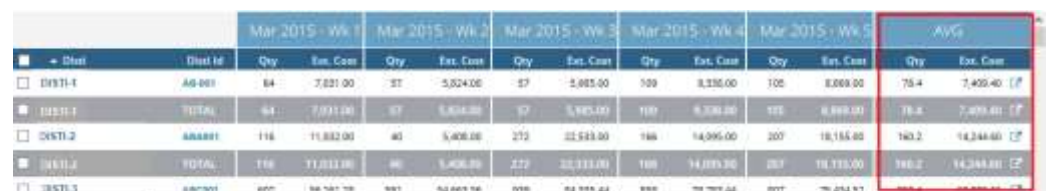
5. In the **Table Period** field, select the interval (by week, month, etc.)
   you want in your report.

6. If the **Interval Date** field is available, select an option to base the
   report on transaction end dates, transaction begin dates, or accounting
   dates.

7. In the **Last Column** field, select one of the following:
   o **Total** – The far right column will calculate the total for each row in
     the table.
   o **Average** – The far right column will calculate the average (instead
     of total) of each row in the table.

o **Difference** – The far right column will calculate the difference between any two periods selected in a table. If more than two periods are in a table, you can select the two periods that you want to compare. Click the first period, then press **Ctrl** while clicking the second period. The selected periods are indicated with double angle-brackets ».

Note that the **Difference** column always calculates "last-to-first," meaning that the difference is between the last-clicked period, then the first-clicked period.

8. In the **Records to Retrieve** field (if available), select an option to retrieve and display data from all inventory reports, or only from the first/last report.

   For instructions about how to use the other fields in this dialog, see Change the Visibility and Order of Columns.

9. Click **OK** to close the dialog.

10. Click the Configure Table icon ⚙ again to re-open the S**elect and Order Aggregate Columns** dialog.

11. Click the **Configure Subtotals** tab. The left **Choices** pane lists the columns that are available, but not selected. Decide what numeric data or dates you want to see (for example, quantities? extended prices? the number of transactions? begin/end date?). Drag those column labels from the **Choices** pane to the **Selections** pane.

The results table will show columns for the numeric data you selected for each of the periods you set.
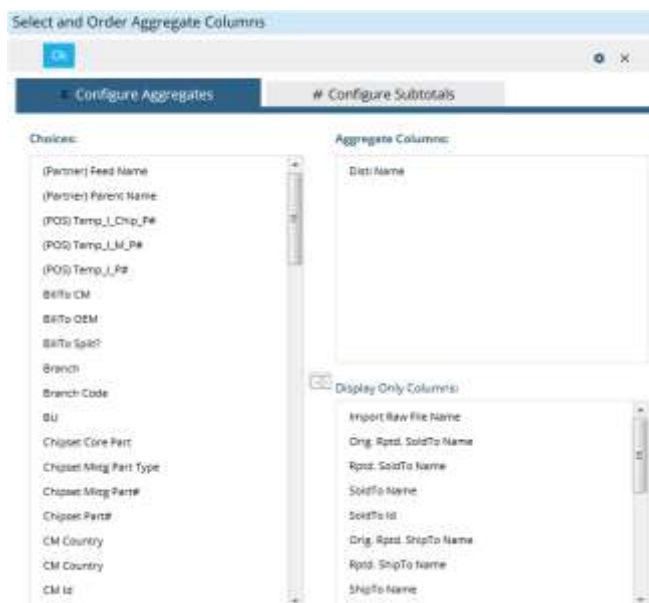
12. Click the **Configure** Aggregates tab. Decide how you want to display the numeric data (for example, by distributor? by product type? both?). These "by-what" dimensions are defined as aggregate columns and display-only columns in this tab. Drag the column labels you want from **Choices** to one of the following panes:

   o **Aggregate Columns –** A **Total** row is displayed for each group (a group is whatever you have defined as aggregate columns).

   o **Display-Only Columns –** You'll be able to see amounts in these columns, but they won't have a **Total** row.

Important: The right-most dimension (non-numeric) column in every table automatically acts like a display-only column (without a **Total** row), even if it is set as an aggregate column.

NOTE: The columns you select will appear in your table in the same order as in the dialog box. If you add more than one column to the **Aggregate Columns** pane, the order in the dialog establishes the order of aggregation of the columns in the table, with the second and subsequent columns as a subset of the first column.

Total and Subtotal Rows

The following settings create the, below, which shows how subtotal rows are added for the first and second aggregate columns.

Aggregate Columns Pane	Display-Only Columns Pane	Configure Subtotals Tab
Disti Name Trans. Type	Invoice#	Part Qty Rptd. Ext. Resale Price Rptd. Ext. Quoted Price

Clarifying Display-Only Columns

Sometimes, adding aggregate columns can create unnecessary **Total** rows. The following tables show the effect of simply changing one column from an aggregate column to a display-only column.

The first table has two aggregate columns (**Disti Name** and **UC**) and one display-only column (**UC Country**) so you can see the end/ultimate customers (UC) associated with each distributor and their countries. Totals are shown for each distributor and UC because they are both set as aggregate columns.

Aggregate Columns Pane	Display-Only Columns Pane	Configure Subtotals Tab
Disti Name Trans. Type	UC Country	Part Qty Rptd. Ext. Resale Price Rptd. Ext. Quoted Price

Results: The countries are shown for each **UC**, and a **Total** row appears for each **UC**. Notice, however, that the **Total** row for the **UC** exactly repeats the numbers in the row above it. This makes the table difficult to read. To remove the redundant **Total** row, you can change **UC** to a display-only column, as shown in the second table.

The second table in this example is identical to the first except that **UC** has been changed to a second display-only column. The redundant **Total** rows are gone, making the results table easier to read and more meaningful.

Aggregate Columns Pane	Display-Only Columns Pane	Configure Subtotals Tab
Disti Name	UC UC Country	Part Qty Rptd. Ext. Resale Price Rptd. Ext. Quoted Price

Results: The redundant **Total** rows are gone, making the results table easier to read and more meaningful.

For more examples, see Sorting in Analytic Pages.

13. Back to the procedure for configuring an analytic page, click **OK** to close the dialog.

14. In **Filters**, select the **Show Period Details** checkbox to display the accounting periods as separate columns. If that option is not selected, the results table will have a single **Total** column on the right that shows the combined total for all periods, instead of one column per period (as shown here).

15. (Optional) If you want to limit the number of records retrieved, sort the table appropriately, enter a limiting value in the **Limit Results** field in **Filters**, then press **Enter** to lock in the limits. For more information, see Sort with the Limit Results Filter, including instructions for creating "Top 10" reports with the **Limit Results** filter.

16. The results table will be automatically reconfigured. (You'll only need to click **Retrieve** if the results table should turn blank.)

With the proper permissions, you can also reconfigure the labels, order, and visibility of columns. For more information, see About Tables.

Sorting in Analytic Pages

The basic sorting functionality of analytic pages is the same as in list (non-analytic) pages, that is, clicking a column label lets you sort in ascending (or alphabetic) order, while clicking the label again sorts in descending (or reverse-alphabetic) order. (For more information, see Sorting Table Columns.) But sorting in analytic pages is more complicated because of the way that rows are grouped based on the definition of the aggregate and display-only columns in the **Configure Page** dialog.

The best way to explain the sorting behavior in analytic pages is with the examples that follow.

Sort by a Single Column

If you sort a column that is defined as an aggregate column (**Disti Name** in this example), the column is sorted the same as in a list (non-analytic) page (in this case, ascending/alphabetically).

- Default Page: **POS Analytics**

- Filter Settings: Show Period Details **– Yes**

- Table Settings: Click the Configure Table icon ⚙, then use the following settings.

Aggregate Columns Pane	Display-Only Columns Pane	Configure Subtotals Tab
Disti Name	None	Part Qty Rptd. Ext. Resale Price Rptd. Ext. Quoted Price

Results: For the company's distributors, the number of parts sold in Jan–Feb 2015 is shown, comparing the reported extended resale price and the reported extended quoted price for each distributor. A single **Total** row at the bottom of the table shows the totals of each column for all distributors. Clicking the sort arrow again on the **Disti Name** label will reverse the sort order.

Sort by Multiple Columns

If you sort on more than one aggregate column (for example, click **Disti Name**, then press **Ctrl + UC**), the contents of both columns are alphabetized, but restrained by the first aggregate column.

- Default Page: **POS Analytics**

- Filter Settings: Show Period Details – **Yes**

- Table Settings:

Aggregate Columns Pane	Display-Only Columns Pane	Configure Subtotals Tab
Disti Name UC	None	Part Qty Rptd. Ext. Resale Price Rptd. Ext. Quoted Price

- Sort Order:
  - 1 – **Disti Name**, ascending
  - 2 – **UC**, ascending

Results:

- The distributors are listed in ascending/alphabetical order, and the end customers (UC) are also in alphabetical order, per distributor.

- Clicking the sort arrow again on either of the **Disti Name** or **UC** column labels will reverse the sort order of either column, independently.

- Without the second sort on the **UC** column, the items in that column will be in random order.

Sort by a Numeric Column

Sorting by a numeric column is especially helpful to find the top distributors based on a numeric measure (for example, **Part Qty** or **Rptd. Ext. Resale Price**).

- Default Page: **POS Analytics**

- Filter Settings: Show Period Details – **Yes**

- Table Settings:

Aggregate Columns Pane	Display-Only Columns Pane	Configure Subtotals Tab
Disti Name UC	None	Part Qty Rptd. Ext. Resale Price Rptd. Ext. Quoted Price

- Sort Order: 1 – **Part Qty**, descending

Results: The contents of the **Part Qty** column are listed in ascending order, with the distributor with the highest total at the top. UCs are also sorted from highest to lowest by **Part Qty**, per distributor. Clicking the **Part Qty** column a second time will reverse the sort.

In the next example, the same settings are used, and the distributor/UC combination is again sorted by the totals in the **Part Qty** column, but the end/ultimate customers (UC) are now listed alphabetically.

- Sort Order:
  - 1 – **UC**, ascending
  - 2 – **Part Qty**, descending

Results: The distributors are listed according to highest total in **Part Qty**, and the UCs per distributor are shown in alphabetical order. Note that the **UC** column must be the first column in the sort.

The distributors with the highest total **Part Qty** are at the top of the list. You could limit this list to the top 10, for example, by using the **Limit Results** filter. For more information, see Sort with the Limit Results Filter.

Sort by Absolute Value

Pressing Shift while you click the label of a numeric (subtotal) column allows you to sort by absolute value. The signed values (positive and negative) are displayed, but negative values are sorted as positive numbers.

You can add more than one column by pressing **Ctrl + Shift** when you click the additional columns. Be sure to also press **Ctrl + Shift** when you reverse the sort order of an absolute value sort.

- Default Page: G/L Entry Analytics

- Filter Settings: Show Period Details – Yes

- Table Settings:

Aggregate Columns Pane	Display-Only Columns Pane	Configure Subtotals Tab
GL Phase GL Entry Type Line Segment 1	Account Description	Amount

- Sort Order: 1 – **Amount**, ascending

Results: The table is sorted by absolute values in the **Amount** column so you can see the offset amounts.

Sort with the Limit Results Filter

Your Entomo Professional Services team can help you set up a **Limit Results** filter (or some variation of it) in any analytic report to help you control the number of records that are displayed after a data retrieval. You can set limits for multiple aggregate columns by entering values separated by commas, in the order that the columns are listed in the **Aggregate Columns** pane.

You can use values in the **Limit Results** filter as follows.

Rule	Example	Results	Comments
Leave blank		No limits on the records retrieved.	
Use any numeral	5	Retrieve the first 5 records defined by your selection of an aggregate column.	
Use two numerals separated by a comma	5,2	Retrieve the first 5 of the records set as the 1st aggregate column, and the first 2 records set as either the 2nd aggregate column or display-only column.	If a report has multiple aggregate columns, you can enter a limit for each column, separated by commas, in the order that the columns are listed in the **Aggregate Columns** pane. You can use any number of numerals and commas in the string (e.g., 5,10,2).
Use blanks in a string	,10	Retrieve all records set as the 1st aggregate column, then the first 10 records of the 2nd aggregate column.	
	10, , 7	Retrieve the first 10 records set as the 1st aggregate column, and all records set as the 2nd aggregate column records, and the first 7 records of the 3rd aggregate or display-only column.	

Use negative values	-5	Retrieve everything except the first 5 records.	

NOTE: It's important to sort a table first, before setting limits.

To use the **Limit Results** filter:

1. Open a report, click **Retrieve**, then sort the results by a numeric column (one that is defined as a "subtotal column" in the **Configure Columns** dialog).

   The sort order that you set prior to activating the **Limit Results** filter is also used for sorting the limited results, so be sure to sort the table first, according to the type of limit you want to impose. Sorting on a numeric column usually produces the most useful results.

2. In the **Limit Results** filter, enter one or more limiting values (see the table, above, for examples).

3. While the cursor is still in the **Limit Results** filter, press **Enter**.

   You can now manipulate the limited results by doing any of the following actions:

   o   Sort on a different column.

   o   Change other filter settings. However, if you change the filter then click **Retrieve**, a new set of records will be displayed.

   o   Create a chart.

To remove the limitation, press **Enter** again (after changing the limiting values or deleting them) while the cursor is in the **Limit Results** filter, or exit the report without saving.

This feature is especially helpful for creating reports that narrow data to the "top 10." See Create a "Top 10" Report.

Create a "Top 10" Report

The **Limit Results** field is especially helpful for creating lists of the top x (number of) records per subtotal dimension, for example, "Top 5 Partners," or "Bottom 10 Parts by Revenue." The following example creates a report of distributors whose parts have the highest net revenue.

- Default Page: **POS Analytics**

- Filter Settings:
   o   Show Period Details – Yes
   o   Limit Results – 10,3

- Table Settings:

Aggregate Columns Pane	Display-Only Columns Pane	Configure Subtotals Tab
Disti Name Part #	None	Gross Revenue Net Revenue

- Sort Order: 1 – **Net Revenue**, descending

Steps to re-create:
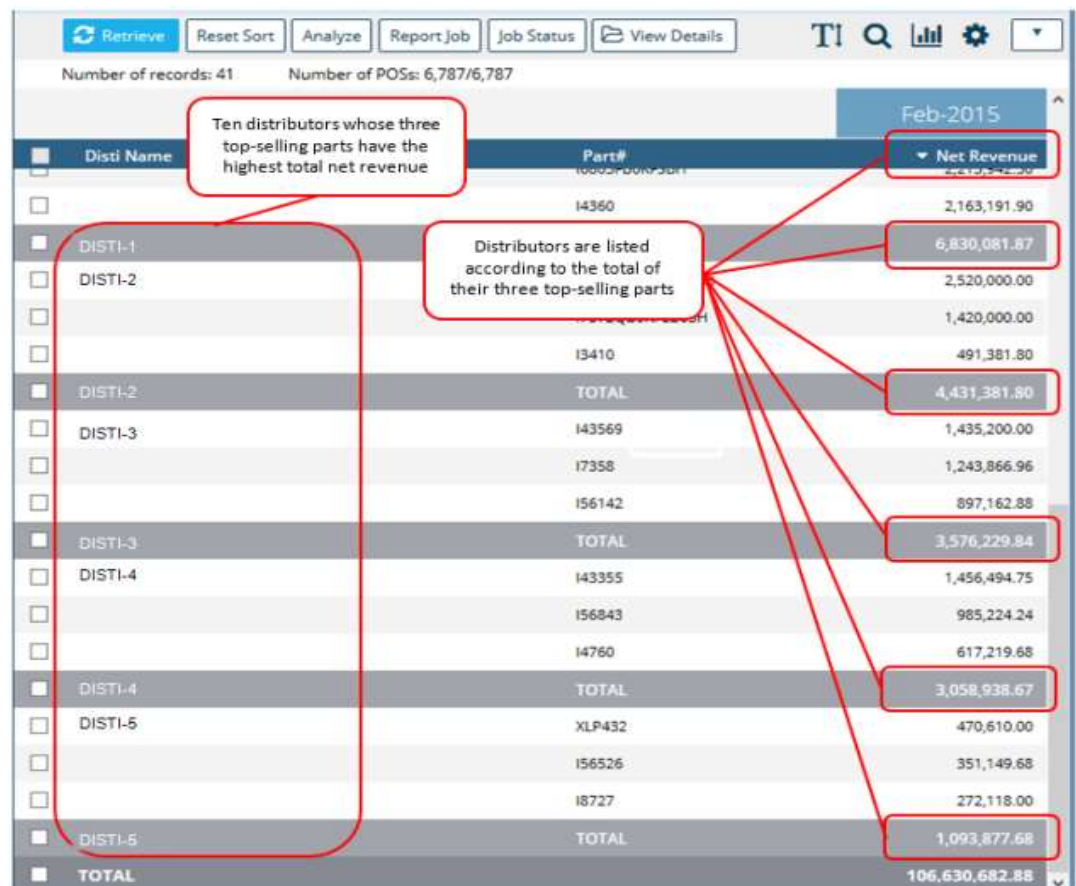
1. Open the analytic report, and click **Retrieve**.

2. Click twice on the **Net Revenue** column label to sort that column in descending order.

   The table now lists all distributors, with the parts per distributor listed according to net revenue from the highest (top-selling) to lowest. The total at the end of the table is the net revenue for all parts of all distributors.

   Note that you could easily create a "Bottom 10 Distributors" report by sorting the net revenue in ascending order.

3. In the **Limit Results** filter, enter "10,3" (without quotation marks), then press **Enter**.

   The results are still sorted by net revenue, but the list is limited to the ten distributors who have the highest total net revenue. The totals and subtotals of the limited results have been recalculated to reflect the limitation, showing the totals of the top three parts per distributor instead of the total of all parts per distributor. The total at the end of the table now reflects the total net revenue of only the three top-selling parts of those ten distributors.

You can now perform certain actions on the limited results, such as sorting on different columns and changing filter settings. Let's assume that you'd like that list in alphabetical order by distributor name, with the parts in order, too.
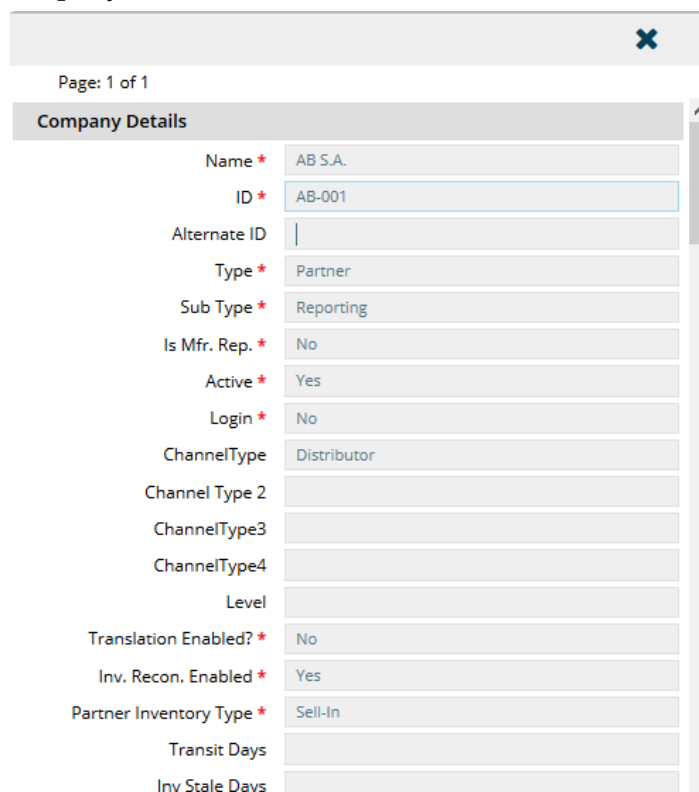
4. Click the **Disti Name** column, then press and hold **Ctrl** while clicking the **Part#** column.

The table lists the same ten distributors with the same part numbers and totals, but now the distributors are in alphabetical order, and the parts for each distributor are also in ascending order. The totals in the table are unchanged.

Detail Pages

Detail pages allow you to view the complete details of one record, such as an item, a customer, or a POS transaction. Some detail pages are editable, depending on your permissions, while others are read-only. Still others allow you to see additional details about a specific item, then let you step through the details for every item in a report, item-by-item.

One type of detail page is a read-only dialog box that shows you more information about a specific item in a results table. To open a detail page, click the unique ID for any record in the results table. For example, the **Company Detail** dialog, below, shows all attributes about a specific company from the Customer Master.

Another type of detail page is an actionable dialog box that allows you to add/edit information to multiple rows in a table. For example, you can use the **POS Details** dialog, below, to change transaction information in a specific record, then click **Next** go through the records one at a time without leaving the dialog. Note that clicking **Apply** lets you save and remain in the dialog box, but if you exit the dialog box without also clicking **Save**, your changes will be lost.

Other detail pages, like the **CIM Programs** page, are full, actionable pages. For example, **CIM Programs** page allows you to see program details to clone the program, create a claim, and manage the details of the program. Note that detail pages like this contain two movable panes. You can resize the panes by hovering over the central horizontal line to get the double-arrow pointer that allows you to drag the line up and down.

The layout and labels of the fields that you see in detail pages are controlled by the SmartHub Model Spec, where the data types and models are defined. The Entomo Professional Services team uses the Model Spec to set up SmartHub for your company by defining a variety of attributes and behaviors for each detail page, such as:

- Field labels

- Display order of the fields, built row by row, rather than in top-to-bottom columns

- Whether the field is required to create a record

- Visibility of the field

- Whether the field is required when importing

- Whether the field is editable in the detail page

Following is an example Model Spec that defines the **Company Details** page, with a snapshot of the resulting page.

Recently Accessed Reports

The **Most Recently Accessed** listing at the top of your favorites pane tracks the reports you open. Click the group to expand/hide the list. If you have marked any of them as a favorite, the star appears yellow.
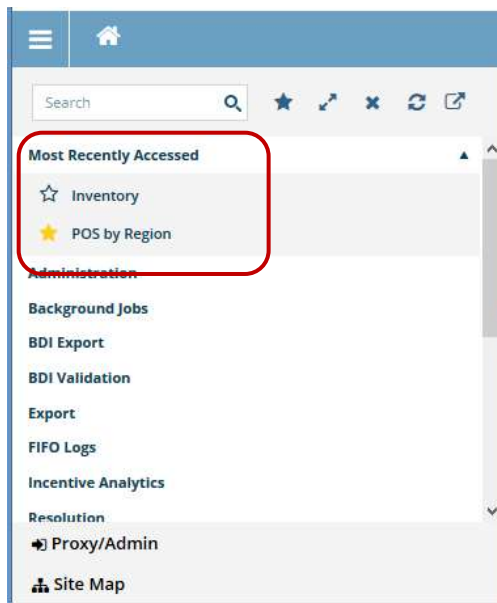
Each user controls whether the **Most Recently Accessed** list appears at the top of their favorites pane

To turn the feature on/off, do the following:

1. Click your name at the top of the page to open the **User Settings** page.
2. Select the **Enable Recently Accessed Reports** option.
3. In the **Max. Recent Reports** fields, enter the number of reports you want to see in the list on your favorites page.
4. Click **Save**.

Chapter 6 | User and Company Settings

User and company settings are used to configure SmartHub to suit the needs of companies and individuals. Every user can configure certain settings for themselves (passwords, and table and page formatting) by clicking their name in the top right corner of any page in SmartHub to open their user profile (the **User Settings** page). Other settings (user setup, resetting passwords, managing group membership and proxies) are configured by system administrators for your company.

User Settings

Every user can open their personal profile, called **User Settings**, to reset a password, manage authentication channels/devices, and personalize certain table and page behaviors. To open **User Settings**, click your name in the top right corner of any page in SmartHub.

The **User Settings page** contains the following:

- **Reset Password** – See Passwords.

- **Authentication and Remembered Devices** – See Two-Step Authentication.

- **User Name and Information** – The first five fields on the page are not editable. They are populated with information based on your user profile. Consult your system administrator if any of this information needs to be changed.

- **Customized Formatting** – You can configure certain settings for yourself. See Date and Report Formatting.

- **Security Questions** – Fields for security questions and answers appear only if your company requires them. If one or more questions are required, you'll be prompted to answer the security questions upon log-in. You can select alternate questions or change your answers as needed. The input in the Confirm fields must match your entry in the answer fields. For more information, see Password Security.

- **Recent Reports** – See Recently Accessed Reports.

Set Up Date and Report Formatting

To set up date and report formatting:

1. Click your name in the top right of the home page to open the **User Settings** page.

The **Login ID**, **First Name**, **Last Name**, **Company Name**, and **Email** fields are automatically populated from your system information.

2. In the **Date Format** field, select the date format from the list that you want to use.

3. (Optional) In the **Rows Per Page** field, enter the number of rows that you want to see per page on reports. This default number can be modified in any active report by changing the **# of Rows** value at the bottom of all reports.

4. (Optional) In the **Paging Table Header Display Format** field, select the size for your column labels in reports. (The term "paging table" simply means a table that can span more than one page.)

   o Select **Long** to see the full names of columns.

   o Select **Short** to narrow the header row to a single row (which shortens the labels if the company has entered short names in **Company Settings)**.

   Your selection becomes the default behavior, but you can toggle between **Short** and **Long** in any report by clicking the T! icon. Table label formatting can be set company-wide. See Table Label Formatting.

5. (Optional) In the **Paging Table Column Short Label Max Size** field, enter a number to limit the number of characters in a **Short** label.

6. (Optional) The **Favorites Pane Expand Mode** field, refers to the behavior of the report groups in the favorites pane:

   o **Single** – Restricts the expansion behavior so you can only expand one report group at a time.

   o **Multiple** – Allows you to expand more than one report group at the same time, as shown below.

   o If left blank, the company default is used.

Multiple is the default, as shown in the following image.
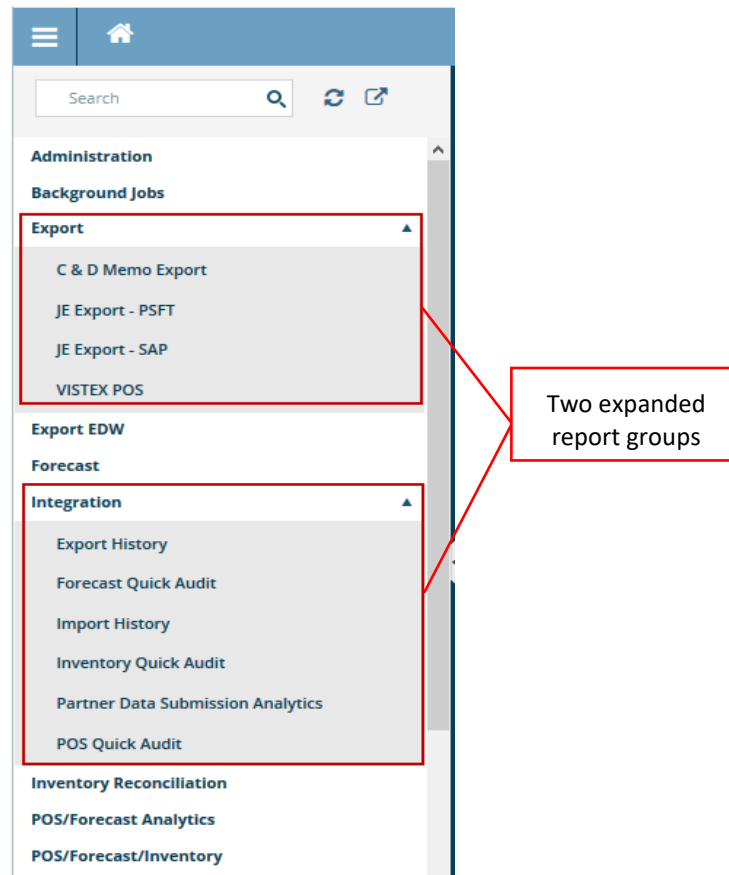
7. When you are finished, click **Save.**

8. Log out of SmartHub and log in again to apply the new settings.

Table Settings

With the proper permissions, you can configure the behavior of tables and pages for the entire company. Users can override some of the company settings with their individual settings (via **User Settings**) and by customizing the formatting of the reports they use.

This section configures the default currency precision and label behavior in all SmartHub tables.

To set the number of decimal places displayed for currency.

1. Go to **Site Map > Administration > Company Settings**.

2. In the **Number Formatting** section, enter the number of decimal places that you want for displaying currency values in the following fields:

   o **Min. Currency Precision** – The minimum number of decimal places to display for currency values (other than for unit values).

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o **Max. Currency Precision** – The maximum number of decimal places to display for currency values (other than for unit values).

o **Min. Unit Currency Precision** – The minimum number of decimal places to display for unit values.

o **Max. Unit Currency Precision –** The maximum number of decimal places to display for unit values.

For example, if you import records that report unit values to four decimal places, you might want to set **Max. Unit Currency Precision** to "4" so you can see all of the imported decimal places, but set **Max. Currency Precision** to "2" so extended currency values are displayed with only two decimal places. The results of these settings might show 200 units, for example, with a unit cost of $4.*2945* each, but with an extended total cost of $858.*90*.

3. (Optional) In the **Paging Table Header Format** field, do one of the following:

o Select **Long** to display the full names of column labels.

o Select **Short** to display table labels in a single row (and shorten the labels).

Your selection of **Long** or **Short** sets the default behavior for all tables, but users will be able to toggle between long and short labels by clicking the toggle T! icon on any table.

4. (Optional) In the **Paging Table Short Label Max Size** field, enter the maximum number of characters allowed for a short label. This value will limit the width of a **Short** label.

5. When you are finished, click **Save**. Continue with Page Configuration, if needed.

User Manager

The **User Manager** page controls how users interact with SmartHub at an administrative level. With the proper permission, you can access **Site Map > Administration > User Manager** to add/delete users from SmartHub, add/edit/delete group memberships, export a list of users, manage user proxies, and more.

User Manager – Filters

The **Filters** section has the following fields that you can use to narrow your data retrieval.

- **Company** – To narrow the data retrieved to a single company, select that company from the dropdown list; otherwise, leave blank or click the blank option at the top to retrieve groups for all companies.

- **User** – To narrow the retrieval to specific users, either type in the login IDs for those users, or click the magnifying glass icon and select the checkboxes for users you want.

- **Group** – Use the dropdown to narrow the retrieval to a specific security group.

- **Role** – A role is a group that is assigned to a workflow (such as an approval workflow).
    - Select **Yes** to retrieve users who have been assigned a role in a workflow.
    - Select **No** to retrieve users who have no roles assigned.
    - Select the blank option at the top to retrieve both sets of users.

- **Active** – Select **Yes** to retrieve users who currently have an active status. Select **No** to retrieve users that are not active.

- **Category** – Double-click the field or click the magnifying glass icon to select users designated by a certain category (such as various types of incentive programs) or set of categories.

User Manager – Actions

- **Retrieve** – Click to return a list of users based on your settings in **Filters**.

- **New** – Click to add a new user to the system. For instructions, see Add a New User.

- **Export** – Click to open the **Export As** dialog that allows you to select between various export options. For more information, see Exporting Reports.

- **Save Report** – Click to open the **Create a New Report** dialog that allows you to save a report based on the **User Manager** page.

Add a New User

With the proper permissions, you can add users to SmartHub.

To add a new user:

1. From your home page, go to **Site Map > Administration > User Manager**.
2. Click **New** to open the **User Details** page.
3. In the **Login** field, enter a login ID for the user.
4. In the **First Name** field, enter the user's first name.
5. In the **Last Name** field, enter the user's last name.
6. Depending on the configuration of your system, the **Company Name** and **Company ID** fields might already display your company's info, which cannot be changed. However, if partner companies are enabled for log-in, the **Company Name** field will display a drop-down list with the names of the partner companies. If the field is editable, select the appropriate company name for the user.

7. Double-click the **Email** field or click the ▣ icon to the right to open the **Email** dialog, then do one of the following:

   o **New Email** – Enter a new email address in the text field at the top of the dialog, then click the Add Address ✉ icon. Repeat for each email that you want to add.
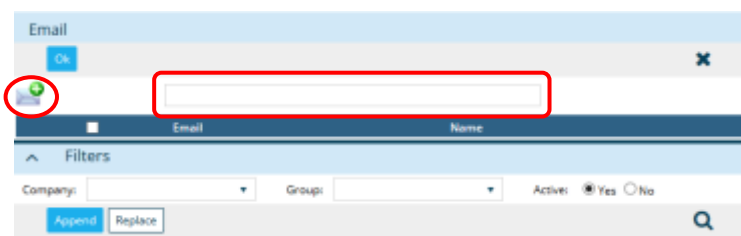
   o **Existing Email** – Select the checkbox of an existing email address from the list, click **Append** (to add to an address already in the **Email** field) or click **Replace** (to replace an address already in the **Email** field). The address now appears at the top of the dialog.

8. When you are finished, click **OK** to return to the **User Details** page. The new email address will now appear in the **Email** field.

9. (Optional) In the **Phone Number** field, enter a phone number for the user.

10. (Optional) In the **Fax Number** field, enter a fax number for the user.

11. In the **Active** field, do one of the following:

    o Select **Yes** to allow the user immediate access the system.

    o Select **No** to set up a user without activating them.

12. (Optional) In the **Federated ID** field, enter a federated ID for the user.

13. (Optional) In the **Home Page** field, select a home page for the user. If no home page is selected, the system will assign one based on the user's group membership.

14. In the **Category** field, assign a category (for example, an incentive program) to the user, if applicable.

15. In the **CBI** enabled field, select **Yes** if your company uses CBI (Consolidated Business Intelligence) within SmartHub; otherwise, set to **No**.

16. When you are finished, click **Apply** to save and continue with the next procedure; otherwise, click **Save** to save your changes and exit.

Create or Reset a Password

With the proper permissions, you can set up a new password for a new user or reset a password for a user who has forgotten theirs.

To create or reset a password:

1. Do one of the following:

o To continue from the previous procedure, remain in the **User Details** page and skip to step 2.

o From your home page, go to **Site Map > Administration > User Manager,** click **Retrieve**, then click the name of the person for whom you want to create a password.

2. Do one of the following:

o In the **New Password** and **Verify New Password** fields of the **Password Settings** section, enter a password.

o Click the **Generate Password** button to auto-generate a password, which populates both the **New Password** and **Verify New Password** fields.

3. Click **Apply**.

4. Click **Email Password** to send the password to the email address shown in the **Email** field.

5. In the **Force Password Change** field, select **Yes** to force the user to change the password from the temporary one you emailed to a more secure one that has not been sent via email.

6. When you are finished, click **Apply** to save and continue with Manage Password Settings; otherwise, click **Save** to save your changes and exit.

Manage Password Settings

With the proper permissions, you can manage certain password behavior for other users. For information about how a user can reset their own password, see Create or Reset a Password.

To manage password settings for an individual user:

1. Do one of the following:

o To continue from the previous procedure, remain in the **User Details** page and skip to step 2.

o From your home page, go to **Site Map > Administration > User Manager,** click **Retrieve**, then click the name of the person for whom you want to make changes.

2. In the **Password Settings** section, use the following fields to manage the password behavior for the user.

Field	Purpose
Force Password Change	By default, this field reflects the company-level setting in **Administration > Security Settings**. Select **Yes** to require the user to change their password the next time they log in.
Answer Security Questions	By default, this field reflects the company-level setting in **Administration > Security Settings**. To change the setting for an individual, select **Yes** to require the user to answer security questions upon log-in.

Field	Purpose
Enable Admin Mode?	By default, this field reflects the company-level setting in **Administration > Security Settings.** Select **Yes** to grant the user administrative privileges.
Password Min. Age	(Optional) A value in this field prevents a user from changing their password until that number of days has passed since their last password change. For example, to allow only one password change every 30 days, enter **30**.
Password Max. Age	(Optional) A value in this field requires the user to change their password after that number of days. For example, to require the user to change their password every 3 months, enter **90**.
Account Locked?	By default, this field is set to **No**. Select **Yes** to prevent a specific user from logging in to SmartHub.

The remaining fields are automatically populated by the system when a user is created or updated.

3. When you are finished, click **Apply** to save and continue with Assign or Modify Group Membership; otherwise, click **Save** to save your changes and exit.

Assign or Modify Group Membership

The **User Security Group** tab on the **User Details** page provides a quick and simple way to assign users to one or more security groups that are defined for your company.

To assign or modify group membership:

1. Do one of the following:
   o To continue from the previous procedure, remain in the **User Details** page and skip to step 2.
   o From your home page, go to **Site Map > Administration > User Manager,** click **Retrieve**, then click the name of the person you want to assign to a security group.
2. Click the **User** Security **Group** tab.
3. Click **Edit Group Membership** to see a list of all security groups defined for your company.
4. Select one or more checkboxes to assign the user. (Clicking the name of any group opens the **Group Details** page so you can see the responsibilities associated with the group and the people already assigned to it.)
5. When you are finished, click **Apply** to save and continue with Proxies; otherwise, click **Save** to save your changes and exit.

Proxies

In SmartHub, the ability to log in as a different user is called being a *proxy*. For example, if a program approver goes on vacation, an administrator can give proxy privileges to another person who can approve the program in the absence of the original approver.

Before you can proxy someone else's account, you must be granted permission by someone with administrator privileges. An administrator can give a proxy privilege to one or more individual users or to an entire group of users. The timeframe of proxy privileges can also be controlled.

CAUTION: When a person proxies someone else's account, everything they do in that account is as if the account owner made the changes.

Note that the proxy feature does *not* affect or redirect anyone's email.

Grant Proxy Privileges

To set up proxy privileges:

1. From your home page, click the **Proxy** link at the bottom of the **Favorites** pane, or go to **Site Map > Administration > User Manager**.

2. In the **User Manager** page, do one of the following:

   o Click **Retrieve**, then click the name of the user you want to give the ability to proxy. When their **User Details** page opens, click the **User Proxy Settings** tab. You can modify an existing proxy privilege or click **Add Line** to create a new one. The instructions in this procedure assume that you added a line.
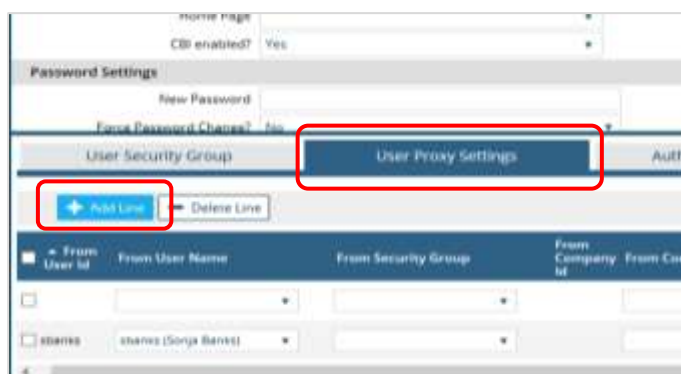
   o Click the **Manage User Proxies** button to open the **User Proxy Map** page, then click **Retrieve > Edit > New**.

3. Use the **By User Name** or **By Security Group** fields to select the user or group that you want to allow to act as proxies.

4. Use the **For User Name** or **For Security Group** fields to select the accounts that will be accessed.

You can set up proxies various ways:

o **Group to Group** – Anyone in the **By Group** can log in as any member in the **For Group**.

o **User to User** – The **By User** can log in as the **For User**.

o **User to Group** – The **By User** can log in as anyone in the **For Group**.

o **Group to User** – Anyone in the **By Group** can log in as the **For User**.

For example, if an approver is on vacation, an alternate approver can log in as the original approver and approve workflow items for the original approver. The settings might look like this:

By User Name	By Security Group	For User Name	For Security Group
Alternate approver		Original approver	

Alternately, if any member of a group can be the alternate approver, the settings would be like this:

By User Name	By Security Group	For User Name	For Security Group
	Anyone in the group of alternate approvers	Original approver	

Likewise, anyone in a **By Group** can log in as anyone in a **For Group** like this:

By User Name	By Security Group	For User Name	For Security Group
	Anyone in the group of alternate approvers		Anyone in the original group of approvers

5. (Optional) You can set a time limit on any proxy. Use the **Valid From** and **Valid To** fields to specify a time limit for the proxy privilege. The day after the **Valid To** date, the proxy privilege will expire.

6. (Optional) Click New again to create another proxy privilege. You can grant multiple proxies to a single individual.

7. (Optional) Select check boxes on the left to save specific lines. (If you don't select specific check boxes, all lines are saved.)

8. Select the checkbox for the new proxy.

9. Click **Save** to save and go back to the **User Manager** page. (Clicking **Apply** will let you save, but remain on the page.)

Acting as a Proxy

Before you can log in to someone else's account as a proxy, a person with administrative privileges must first grant you proxy privileges. See Grant Proxy Privileges.

One person can access (proxy) multiple accounts as long as they've been granted proxy privileges for each of those accounts, but accounts can only be proxied one at a time.

To log in as a proxy:

1. Do one of the following:
   o Go to **Site Map > Administration > User Manager**.
   o From your home page, click **Proxy** at the bottom of the favorites pane.
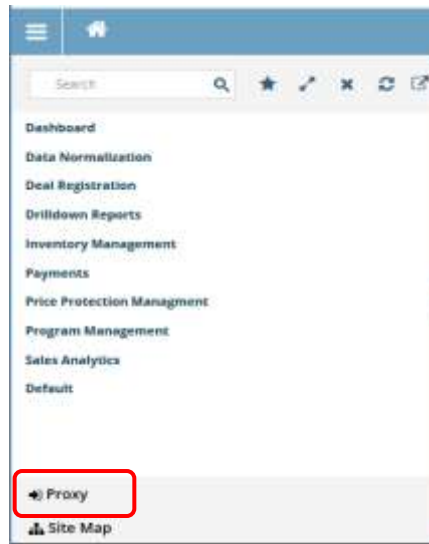
2. In the **User Manager** page, locate the account you want to access, and click the **Login** icon 🔁 to the left of the user's name.
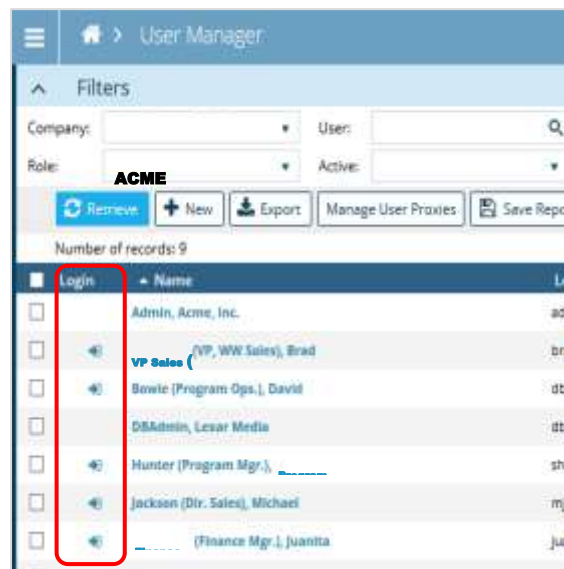
3. In the confirmation dialog, click **OK** to end your own session and log in to the other person's account.
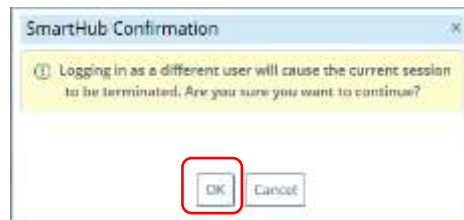
Note that everything you do is as if the other person was doing it.

4. To end your proxy session, click **Exit Proxy** at the bottom of your favorites pane.
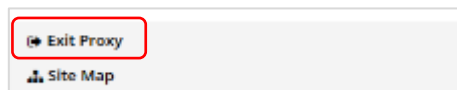
An individual can proxy multiple accounts, but not at the same time. For each account, start with step 1 of this procedure.

Update an Existing User Profile

To update the profile of an existing user:

1. From your home page, go to **Site Map > Administration > User Manager**.

2. (Optional) Set filters to narrow your retrieval. For descriptions of the filters, see User Manager - Filters.

3. Click **Retrieve**.

4. In the **Name** column, click the name of the user you want to update.

5. In the **User** Details page, make changes as needed. For descriptions of the fields and action buttons on this page, see the various sub-sections of Add a New User.

6. When you are finished, click **Save** to return to the **User Manager** page.

Two-Step Authentication

SmartHub offers an optional verification process that provides an extra level of security for user accounts. When the authentication feature is activated, you are required to log in to SmartHub with a dynamically generated, one-time security code in addition to your regular password. The security code is retrieved from an email account, text message, or the Google Authenticator app (on a Smartphone). In SmartHub, these authentication methods/types are called factors. It's possible to configure multiple factors, including multiples factors of the same type, such as two different email addresses.

Another optional feature is the ability to configure SmartHub to remember the browser that you use to log in to SmartHub. Creating a

remembered device allows you to log in to SmartHub with a password alone (without a security code) when you use a remembered browser. This feature is especially helpful if you log in to SmartHub on multiple devices (like a tablet and a Smartphone).
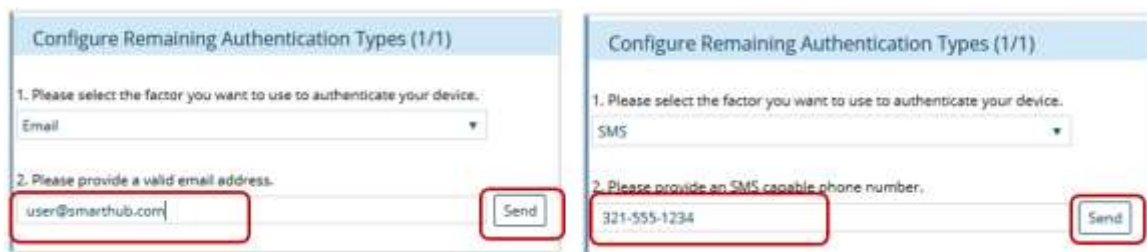
Your system administrator can limit the length of time that a browser can be remembered. When that time expires, you will be required to repeat the authentication process.

First Authentication

If your company opts to use two-step authentication, use the following procedure to log in to SmartHub for the first time.

To log in to SmartHub the first time with authentication:

1. Log in to SmartHub with your company ID, login ID, and password.

    The **Configure Remaining Authentication Types** dialog opens.

2. If you see a dropdown list in field 1, select either Google Authenticator, email, or SMS (text message) as the method for authenticating your log-in credentials; otherwise, if no dropdown is offered, skip to the next step.

3. In field 2, do one of the following:

    o **Email or SMS –** If you select **Email** or **SMS**, one of the following dialogs open; otherwise, you will see one of them by default.

    a. Enter the email address or phone number that you want to use for authentication purposes.

    b. Click **Send**.

        A new verification code is sent to you via email or text message. (If you can't find the new password in your email, check your **Spam** folder.)

    c. Go to step 4.

    o **Google Authenticator –** If you select Google Authenticator, the following dialog box opens. Field 2 offers both a key (an alphanumeric string) and a Quick Response (QR) code that can be scanned with your Smartphone, assuming that you already have Google Authenticator installed.

4. Do one of the following:

   o **Alphanumeric Key** – Enter the key in field 2 into Google Authenticator, then click Add in the Authenticator to produce a six-digit, one-time password. Go to step 4.

   o **QR Scanner** – If the Google Authenticator app on your phone is set up for QR scanning, use your phone to scan the QR barcode that appears in the dialog box. Google Authenticator will generate a six-digit, one-time password. Go to step 4.

5. After retrieving the new password/verification code from your email/text message/Google Authenticator, enter the code into the field designated in the SmartHub dialog, then click **Verify**.

6. Depending on your previous choices one or more of the following questions now appear in the dialog box:

   o **Primary Factor** – Whenever you set up multiple factors (for example, an email account and a Google Authenticator instance), you can designate one as your primary so it will be automatically selected when you next login. Select **Yes** to make the current factor the primary.

   o **Remembered Device** – Decide whether you want SmartHub to remember the browser you are currently using.

   If you select **Yes**, you won't have to perform the authentication steps (retrieving the code from email/text/Google Authenticator) for the length of time determined by your system administrator. When that time expires, you will be required to repeat the steps above to log in and remember your computer again.

   o **Device Name** – When you choose to have SmartHub remember your browser, you have the option to assign a name to it (for example, "Chrome at Work" or "Firefox on Tablet"). This name will appear in the **Remembered/Authenticated Devices** page of your user profile in **User Settings**.

It's helpful to assign a name to a remembered device if you use multiple browsers so you can differentiate between them in the user profile list.

7. When you are finished, click **Save**.

8. If another authentication factor is required by your company (in addition to your password), repeat steps 1-6 as needed.

9. Click **Login**.

Every time you create an authentication factor or remembered device, your **User Settings** page is updated. You can add/delete factors. For more information, see <u>Add a New Authentication Factor</u>.

Add a New Authentication Factor

Users can set up as many authentication factors and remembered devices as they want in their user profile. It can be helpful to set up more than one authentication method in case something happens to the first factor, such as a lost or damaged cell phone.

The **Authentication Factors** and **Authenticated Devices** tabs in a user profile (**User Settings**) show all of the authentication factors and devices you set up. For the tabs to appear, the **Second Factor Authentication Settings** and **Devices Registration Settings** must be enabled at the administrative level. For more information, see <u>Authentication Settings</u>.

To add a new factor:

1. From the home page, click your name in the upper right corner to open **User Settings**.

2. Click Two-Factor Authentication.
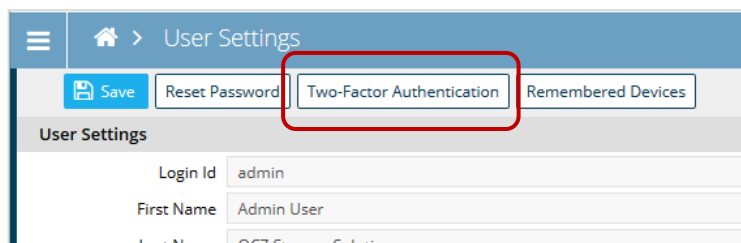
The **Authentication Factors** page opens. Previous keys, if any, are listed in the **Value** column. You can delete any of them by selecting a checkbox, then clicking **Delete**. Click in the **Type** column to change the setting for **Primary**, if needed.

3. In the **Authentication Factors** page, click **New**.
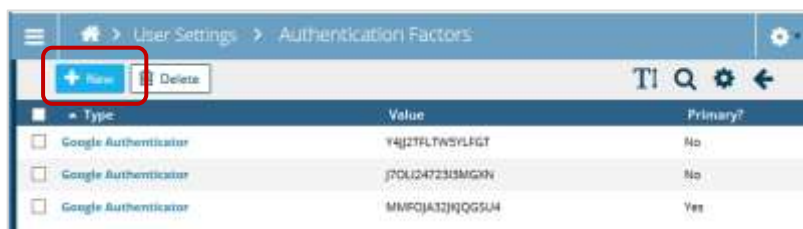
4. In the **Two-Factor Settings** dialog, select an authentication factor (the method you want to use to retrieve the security code) in field 1.
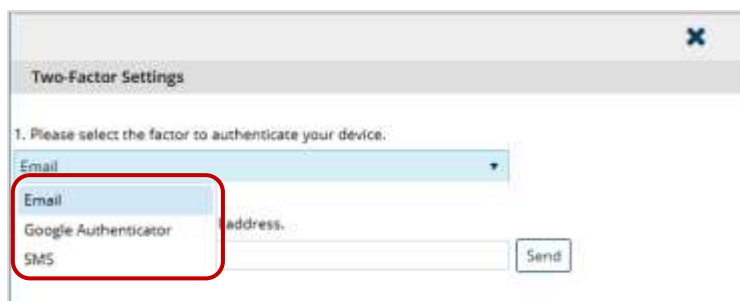
5. Depending on your selection, do one of the following:
    o   **Email or SMS –** If you select **Email** or **SMS**, one of the following dialogs open.
        a. Enter the email address or phone number that you want to use for authentication purposes, then click **Send**.
        b. A new verification code is sent to you via email or text message. (If you can't find the new password in your email, check your **Spam** folder.)
        c. Go to step 6.
    o   **Google Authenticator –** If you select **Google Authenticator**, the following dialog box opens. Field 2 offers both a key (an alphanumeric string) and a Quick Response (QR) code that can be scanned with your Smartphone, assuming that you already have Google Authenticator installed.

6. Do one of the following:

- o **Alphanumeric Key** – Enter the key in field 2 into Google Authenticator, then click **Add** in the Authenticator to produce a six-digit, one-time password. Go to step 6.
- o **QR Scanner** – If the Google Authenticator app on your phone is set up for QR scanning, use your phone to scan the QR barcode that appears in the dialog box. Google Authenticator will generate a six-digit, one-time password. Go to step 6.

7. After retrieving the new password/verification code from your email/text message/Google Authenticator, enter the code into the field designated in the SmartHub dialog, then click **Verify**.

> Enter the verification code sent to you.
>
> [   ] [Verify]

8. In field 4, decide whether you want to establish the factor you just created as the primary authentication method. Select **Yes** to make the current factor the primary.

> 4. Do you want to use this as your primary factor?
>
> ● Yes ○ No

If you set up more than one factor (for example, an email account and a Google Authenticator instance), it's helpful to designate one as the primary so it will be automatically selected when you next need to authenticate your log-in.

9. When you are finished, click **Save**.
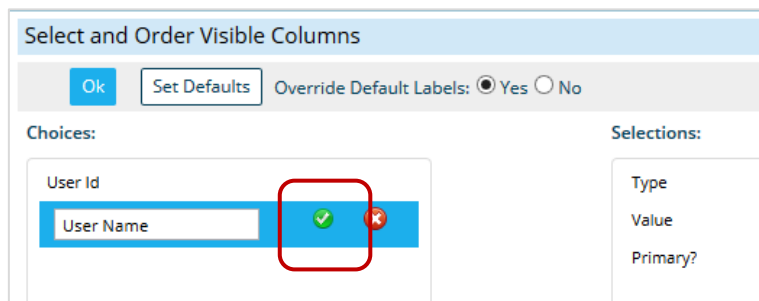
Configure the Authentication Tabs

Users can configure the columns and behavior of the Authentication Factors and Authenticated Devices tabs in their profile pages.

To configure the authentication tabs:

1. From the home page, click your name in the upper right corner to open **User Settings**.

2. In the **Authentication Factors** page, click the Configure Columns ⚙ icon to open the **Select and Order Visible Columns** dialog.

   Only columns in the **Selections** pane are viewable. Move the columns you want to see from the **Choices** pane to the **Selections** pane (or vice versa to hide them).

3. (Optional) To change a label, do the following:

   a. Set the **Override Default Layout** option to **Yes** (the **No** option lets you move columns, but not change the labels).

   b. Click the label you want to rename.

   c. When the Edit icon appears, click it.

   d. In the field, change the column label by entering a new one.

e. Click the green arrow to save.
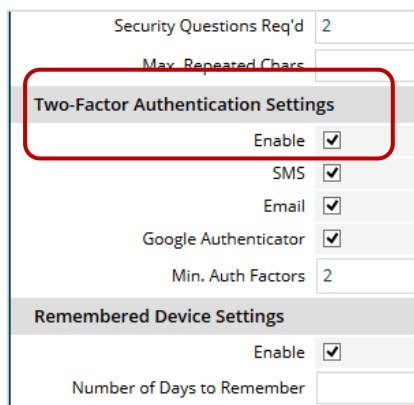
f. Repeat for any other label that you want to change.

g. When you are finished, click **OK** to save and return to the **Authentication Factors** page; otherwise, you can further configure the behavior of the columns by clicking the **Configure Page** ⚙ icon for the current session only. Changes are lost when you leave the page.

   For instructions about changing page behavior, see Date and Report Formatting.

4. When you are finished, click **OK** to return to the **Authentication Factors** page.

Authentication Settings

With the proper permissions, you can set the number of required layers of authentication and the length of time that they are remembered. Users can see their own authentication settings in their individual user profiles.

To enable and configure authentication settings company-wide:

1. From the home page, go to **Site Map > Administration > Security Settings**.

2. In the **Two-Factor Authentication Settings** section, select the **Enable** option.

3. Use the **Email**, **SMS**, and **Google Authenticator** checkboxes to select all of the options that you want to make available for users.

4. In the **Min. Auth Factors** field, select the number of authentication factors (email, SMS, or Google Authentication) that you want to require each user to configure.

   If this field is left blank, users will not be required to set up any authentication factors, but they can choose to set up one, if they want.

5. (Optional) In the **Remembered Device Settings** section, click **Enable** to allow users the option of having the system remember their browser upon log-in, and skip authentication for the length of time set in the **Number of Days to Remember** field.

   If this option is left blank, authentication will be required every time users log in.

6. In the **Number of Days to Remember** field, enter the number of days a browser can be remembered.

7. When you are finished, click the **Test Security Settings** to ensure that your changes are valid. Make corrections, if needed.

8. When you are finished, click **Save**.

Recover Lost Authentication Factors

When a second factor is lost, contact your system administrator, who can delete the lost factor for the user. This might cause the user to reconfigure their factors on the next log-in. If security questions are configured, the user might also be required to answer one of them at log-in. More drastic measures (resetting password, security questions) can be taken if password theft is assumed.

Authentication Privileges

The following responsibilities allow administrative users to configure two-factor authentication and manage the authentication factors and remembered devices for other users. No special responsibilities are required for a user to manage their own authentication factors and remembered devices.

- The "Two Factor Authentication View" privilege lets a user view factors for other users.

- The "Two Factor Authentication Delete" privilege lets a user delete factors for other users.

- The "User Device View" privilege lets a user view and reset remembered devices for other users.

- The "Two Factor Authentication Config View" privilege lets a user view the **Security Settings** page.

- The "Two Factor Authentication Config Modify" privilege lets a user edit the **Security Settings** page.

Manage Table Behavior Company-Wide

Use the lower section of the **Company Settings** page to set the default table behavior for specific reports.

To format table behavior:

1. If you're continuing from the previous procedure, remain in the **Company Settings** page; otherwise, go to **Site Map > Administration > Company Settings**.

2. In the **Paging Table Header Format** field, do one of the following:

   o Select **Long** to display the full names of column labels.

   o Select **Short** to display table labels in a single row (and shorten the labels).

   Your selection of **Long** or **Short** sets the default behavior for the selected report-building page, but users can still toggle between long and short labels by clicking the toggle ⊤ icon.

3. (Optional) In the **Column Label Max Size** field, enter a number of characters to limit the width of a **Short** label.

4. (Optional) To create shortened labels, select the checkboxes for the labels you want to shorten, then click **Edit** to open the **UI Table Configuration** page. Simply type a new, shortened name into the **Short Title** field for each column. When you are finished, click **OK** to return to the **Company Settings** page.

5. When you are finished, click **Save**.

6. Log out of SmartHub and log in again to apply the new settings.

The table formatting is this procedure can be overridden by individual settings (via **User Settings**), settings in a specific saved report, or by page-specific settings within **Company Settings** at the individual report level, as in the next procedure.

Set Up Report-Building Pages

With the proper permissions, you can use the lower portion of the **Company Settings** page to configure the behavior for specific pages that users can then use to create their own views or versions (a.k.a. "saved reports") that can be saved to their favorites pane.

To configure a report-building page:

1. If you're continuing from the previous procedure, remain in the **Company Settings** page; otherwise, go to **Site Map > Administration > Company Settings**.

2. In the **List Page Selection** field (in the **Page Configuration** section), select the page you want to configure. Your selection automatically displays the columns associated with that page.

   The following steps let you set the visibility of columns for people who use a report-building page. If you need to add or remove columns from this list of available columns, see Enabling/Disabling Columns.

3. (Optional) Use the **Visible Columns** field to narrow the display of columns:

   o Select **Yes** to display the visible columns only.

   o Select **No** to display the hidden columns only.

   o Click the blank row at the top of the list (or leave blank) to display the full set of columns.

4. In the **Rows per Table** field, enter the number of rows you want to display as the default for the selected report-building page. The default is 200 rows.

5. In the **Paging Table Header Format** field, select **Long** or **Short** as the default behavior for all of the column table labels in the page you're configuring.

   This setting overrides the setting in the **Paging Table Header Format** field above (under **General Settings**) for the selected page. Leave it blank to use the value in the **Paging Table Header Format** field.

6. (Optional) In the **Paging Table Short Label Max Size** field, enter a number of characters to limit the width of a **Short** label.

   This setting overrides the setting in the **Paging Table Short Label Max Size** field above (under **General Settings**). Leave it blank to use the value in the **Paging Table Header Format** field.

7. Perform any of the following actions as needed:

Goal	Action
Create a short label	Select the checkboxes for the labels you want to shorten, then click **Edit** to open the **UI Table Configuration** page. Simply type a new, shortened name into the **Short Title** field for each column. When you are finished, click **OK** to return to the **Company Settings** page.
Change column visibility	Click **Configure Visible Columns** to open a dialog where you can move columns between the **Choices** pane (to hide them) and the panes on the right (to make them visible). Click **OK** when you're finished.
Reset column labels	Select the checkboxes for the rows you want to change, then click **Set Defaults.**
Reset entire page	Click **Reset**.
Create spreadsheet with current settings	To create a comma-delimited file, click **Download**, then follow the prompts.

8. When you are finished, click **Save** to save your current settings, and remain on the page.

9. Either repeat the steps in this procedure to configure another report-building page or exit the page by clicking the home icon.

10. Log out of SmartHub and log in again for your changes to take effect.

Enabling/Disabling Columns

While implementing your SmartHub solution, your Entomo Professional Services team works with your company to determine what columns are needed for reporting. With this information, report-building pages are then configured and made available at **Site Map > Administration >**
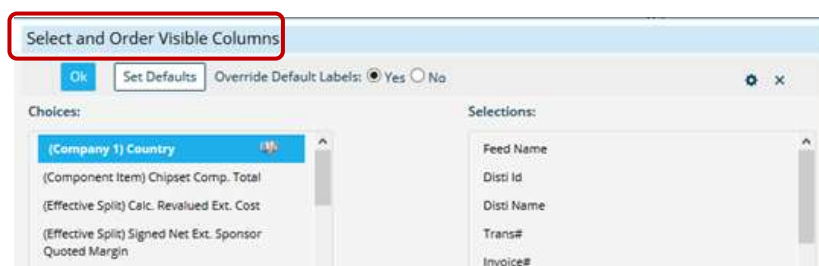
Reports. Anyone with the proper permission can use these pages to create a saved report (or view) and change the visibility of columns in that report by using the **Select and Order Visible Columns** dialog (via the Configure Columns icon ⚙).

Use the following procedure to manage the list of columns available in the **Select and Order Visible Columns** dialog for a specific report-building page.

- **Enable** – To enable a column means that it is available in the **Select and Order Visible Columns** dialog.

- **Visible** – To make a column visible means that it will appear by default in the report-building page. When a user wants to hide the column for a saved report, they can move the column from **Selections** to **Choices** in the **Select and Order Visible Columns** dialog.

To enable/disable the columns that appear in the **Select and Order Visible Columns** dialog:

1. Go to **Site Maps > Administration > Company Settings**.

2. In the **Page Configuration** section, select from the **Page** field the page you want to change. Your selection automatically displays all of the columns available for that page.

3. Select the checkboxes of the columns you want to enable/disable.

4. Click **Edit**.

5. In the list of columns on the **UI Table Configuration** page, do one of the following:

---

o Select/deselect individual checkboxes in the **Enabled** column. Enabled columns will be available for selection in the **Select and Order Visible Columns** dialog.

o Use the **Disable All Columns** or **Enable All Columns** buttons in the action bar to change all of the columns at once.

6. In the **Visible** column, select/deselect checkboxes to determine whether a column will appear by default in the page:

o **Enabled, But Not Visible –** The column will appear in the **Select and Order Visible Columns** dialog, but it will not appear on the report-building page until a user moves the column from **Choices** to a right pane in the **Select and Order Visible Columns** dialog.
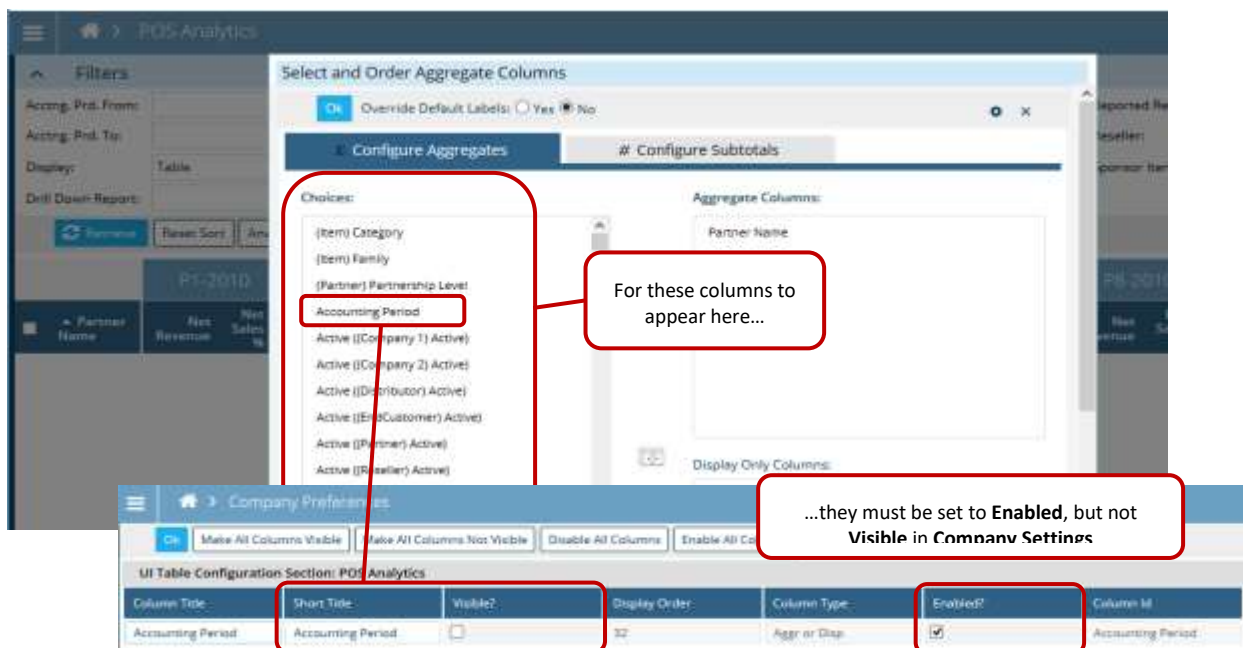
o **Enabled and Visible –** The column will appear in the **Selection** pane of the **Select and Order Visible Columns** dialog and it will appear by default on the report-building page. Users can hide the column for a saved report by moving the column back to **Choices** in the **Select and Order Visible Columns** dialog.

For this column to appear by default in the report-building page (and in the **Select and Order** dialog)

...it must be set to **Enabled** and **Visible** in **Company Settings**
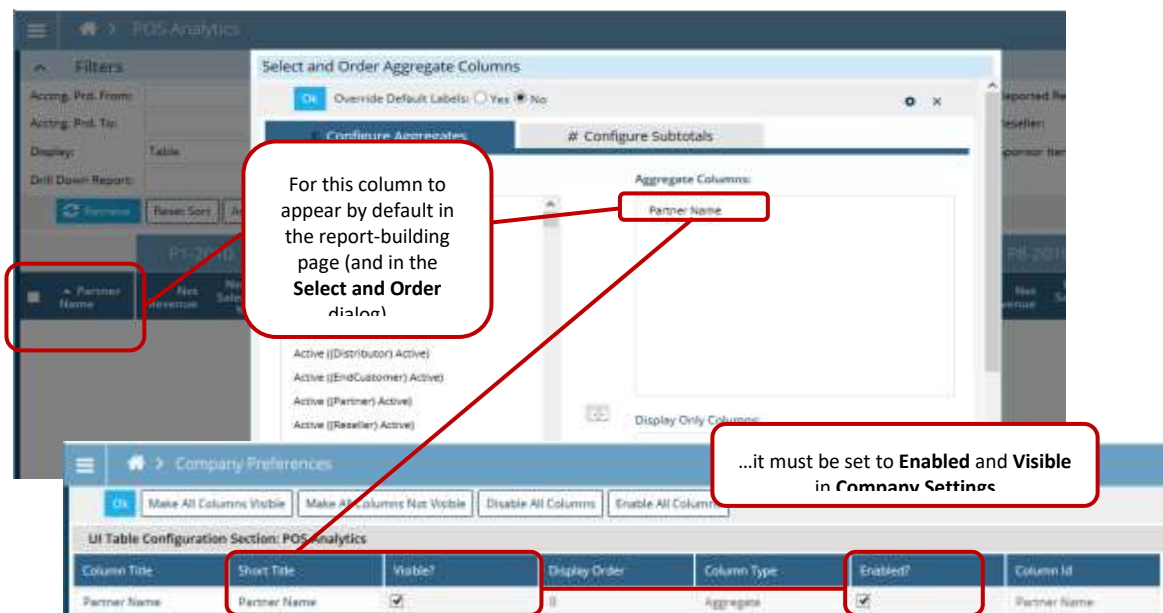
- o **Visible, but Not Enabled** – This is an invalid choice. The system automatically sets the column to "not visible."

7. Click **OK** to return to the **Company Settings** page. Your changes are not yet saved.

8. To save your changes, click **Save**.

9. Log out of SmartHub and log in again for your changes to take effect.

Chapter 7 | Security Groups
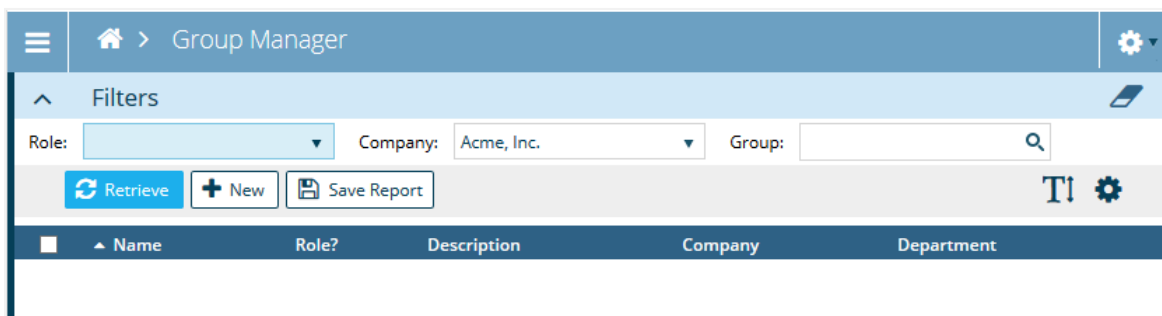
In SmartHub, application security (permissioning) is managed through the **Group Manager** page, which uses the following hierarchy of privileges, responsibilities, and groups to control user access to modules and to actions within the modules:

- **Privilege** – A specific action or group of actions (for example, to view, create, import, open, analyze, resolve) that are predefined in SmartHub.

- **Responsibility** – A collection of related privileges that permit users to interact with a specific SmartHub function or feature. For example, the Background Job Responsibility might contain privileges that grant permission to delete/modify/schedule a job, create/delete/modify/view a job template, and create a company-level job template.

- **Security Group** – A collection of responsibilities granted to a specific business group. For example, you might want to limit the Direct Sales group to certain responsibilities, such as Item Cost View and Item Price View (in the Item Responsibilities category) so that all users in the Direct Sales group will only have permission to view (not edit) Item Cost and Item Price information.

Your Entomo Professional Services team will work with you to set up specific groups of users (for example, Executive, Finance, and Marketing) and assign responsibilities to those groups based on the needs of your company. Users with administrative roles can then use the **Group Manager** page to add and remove users from these groups, and create new security groups.

Group Manager Page

With the proper permissions, you can access **Site Map > Administration > Group Manager**, where you find the following fields, buttons, and tabs to create and manage your company's security groups.

Group Manager – Filters

The **Filters** section has the following fields that you can use to narrow your data retrieval. Filters are cumulative.

- **Role** – The term *role* is used in SmartHub to designate a person who is assigned to a workflow (such as an approval workflow).
  - Select **Yes** to retrieve people who are assigned to workflows.
  - Select **No** to retrieve everyone who is not assigned to a workflow.
  - Select the blank option at the top to retrieve users without considering role.

- **Company** – If you want to narrow the data retrieved to a single company, select that company from the dropdown list; otherwise, click the blank option at the top to retrieve groups for all companies.

- **Group** – If you want to retrieve a specific group, you can enter the name of the group; otherwise, click the magnifying glass to open a dialog that lists all groups. You can select one or more groups. Clicking **Append** will add your selections to any value already populating the Groups field. Clicking **Replace** will replace any value in the **Groups** field with your current selection. To clear the field, do one of the following:
  - Press **Backspace**.
  - Click the magnifying glass, make no selections in the dialog that opens, then click **Replace**.

Group Manager – Actions

- **Retrieve** – Click to return a list of groups based on the parameters you set in **Filters**.

- **New** – Click to open the **Group Details** page, where you can create a new security group. For instructions, see Create a New Security Group.

- **Save Report** – Click to open the **Create a New Report** dialog, where you can save your filter settings and page configuration to your favorites pane and/or associate a favorite group to the report.

Create a New Security Group

With the proper permissions, you can create new groups in the **Group Details** page.

To create a new group:

1. From your home page, click **Site Map > Administration > Group Manager**.
2. Click **New**.

3. In the **ID** field of the **Group Details** page, enter a name for the new security group (usually something like <name, department, action>).
4. (Optional) In the **Description** field, click the pencil icon to open a dialog where you can describe the group. When you're finished, click **OK** to close the dialog.
5. (Optional) If the group members are all from one company, select that company from the **Company Name** list.

   The **Group Members** tab is now populated with the users associated with the company you selected.
6. In the **Role** field, select **Yes** to assign the group to an approval workflow (groups are called "roles" when they become part of a workflow); otherwise, select **No**.

   The **Responsibilities** tab displays the responsibility sets that are available.

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7. (Optional) In the **Category** field, select a responsibility set from the list to limit the responsibilities that are displayed.

8. (Optional) Use the **Enabled** field to filter the list based on whether a responsibility set is assigned to the group:

   a. Select **Yes** to show only the assigned responsibilities.

   b. Select **No** to show only the unassigned responsibilities.

   c. Select the blank option at the top to retrieve all responsibilities.

9. In the **Description** column, select the responsibilities you want to assign to the group by selecting their associated checkboxes.

10. In the Group **Members** tab, select the checkbox of each user that you want to assign to the new group.

11. (Optional) Use the **Enabled** field to filter the list based on whether a user is selected.

    o Select **Yes** to show only the selected.

    o Select **No** to show only unselected users.

    o Select the blank option at the top to retrieve the entire list of available users.

12. Click **Save** to save and exit; click **Apply** to save without exiting. (You can click the Cancel icon ← here to exit completely without saving.)

Delete a Security Group

Once you create a group, it cannot be deleted if it has other dependencies in the system, such as an associated report or job, until you remove those dependencies. The following steps assume that the security group that you want to delete has no dependencies.

To delete a group that has no dependencies:

1. From your home page, click **Site Map > Administration > Group Manager**.

2. In the **Group** field in **Filters**, click the magnifying glass icon to open a dialog.

3. In the dialog, select one or more groups that you want to delete, then click **Append** to add your selections to the search field.

4. Click **Retrieve**.

5. In the table, click the name of a group to open the **Group Details** page.

6. Click **Delete**.

7. Repeat steps 5 and 6 as needed for any other groups you want to delete.

Change Responsibilities or Members in a Security Group

Users (usually administrators) with the User Management privilege can edit user records using the following steps. Users with the User View

privilege can view the group details, but they cannot edit. Users without User View cannot access the **Group Manager** page.

To change information in an existing group:

1. From your home page, click **Site Map > Administration > Group Manager**.
2. Click **Retrieve**.
3. Click the name of the group you want to change.
4. In the **Group Details** page, click **Edit**, and do one or both of the following:
   o **Change Responsibilities** – With the **Responsibilities** tab active, click **Edit Responsibilities**, then select/deselect the responsibility checkboxes in the **Description** column as needed. When you are finished, click **Apply** to save without exiting.
   o **Change Group Membership** – To add and remove group membership, click the **Group Members** tab, then select/deselect users as needed. Use the **Enabled** field to see only the actively assigned people (**Yes**), only the unassigned people (**No**), or everyone (leave blank). When you are finished, click **Apply** to save without exiting.
5. When you are finished making changes, click **Save** to save and return to the main **Group Manager** page.

Security Groups for Workflows

SmartHub allows your company to set up automated workflows according to rules and business processes that you define, such as an approval process for channel incentives, commission splits, or other programs. These workflows can include specific activities, such as multi-level approvals.

Workflow membership is defined by security groups that are customized for your company by your Entomo Professional Services team. When you assign a user to a workflow security group, they are assigned the **Role** attribute so you can set filters based on Role.

When a workflow item requires approval or some other action, the item will appear in the **To Do List** (on the home page) of the person with the appropriate role (as defined by the workflow). (The **To Do List** is only visible when a user is required to participate in a workflow.) When the action is completed, the item then advances to the next step in the workflow.

Audit Report for Responsibilities

With the proper permissions, you can see a report that lists all of the responsibilities currently assigned to users.

To audit responsibilities:

1. Go to **Site Map > Administration > User Summary**.
2. Do one of the following:
   o Click **Retrieve**.
   o Enter values in the Filters section to narrow your search, then click **Retrieve**.

   The **User Summary** page lists the security groups and responsibilities currently assigned to each user.
3. (Optional) For more detail, click one of the following links:
   o **Login ID** – Opens the **User Details** page for a specific user.
   o **Company Name** – Opens the **Company Details** dialog box.
   o **Group Name** – Opens the **Group Details** page for more information about a specific security group.
4. (Optional) To export specific rows to a spreadsheet or comma-delimited (.csv) file, select the checkbox for one or more rows, the click **Export.**

User Summary – Filters

The **Filters** section of the **User Summary** page has the following fields that you can use to narrow your data retrieval. Filters are cumulative.

- **Company** – If your system is set up with multiple companies, select one from the list; otherwise, accept the default.

- **Responsibility** – Click the magnifying glass to select and search for one or more responsibilities. In the dialog, move the responsibilities that you want into the **Selections** pane, then click **OK**.

- **Mfr. Rep** – Select **Yes** to narrow your search to manufacturer reps only. Select **No** to retrieve everyone except manufacturer reps.

- **User** – Click the magnifying glass to narrow your search to one or more users. In the dialog, select as many users as needed, then either click **Append** to add the selected users to any names already in the filter field, or click **Replace** to replace anything in the filter field with the currently selected names.

- **Resp. Category** – Click the magnifying glass to select and search for one or more responsibility categories (such as **Administrator**, **Audit**, **Workflow**, etc.). In the dialog, move the categories that you want into the **Selections** pane, then click **OK**.

- **Any Channel** – If your system implements multiple sales channels (such as distributor, end customers, and reseller), select one to narrow your search.

- **Group** – Select a security group to narrow your search to people who belong to that group.

- **Type and Category** – If these fields are active for your system, use them to narrow your search to a specific type and category of security group.

- **Active** – Select **Yes** to narrow your search to active users only. Select **No** to retrieve everyone except active users.

- **Role** – Select **Yes** to narrow your search to users who are assigned roles in any workflow. (In SmartHub, when a user is assigned to a security group that is designated as an approval workflow, the user has a role.) Select **No** to retrieve everyone except users with roles.

- **Add Time** – Enter a date range to narrow your search to new responsibilities added within that date range.

- **Mod Time** – Enter a date range to narrow your search to responsibilities modified within that date range.

User Summary – Actions

The action bar on the **User Summary** page provides the following:

- **Retrieve** – Return a list of users and their currently assigned security groups and responsibilities based on the parameters you set in **Filters**.

- **Export** – Export the rows you select by checking the checkboxes to the right of the **User Name** column.

- **Save Report** – Click to open the **Create a New Report** dialog. For more information, see Saving Reports.

- **Configure Columns** – Use the ⚙ icon to show/hide the columns that are displayed in the table on this page. Some of the more helpful columns include **Active (Effective)**, **(Group) Add User ID**, and **(Group) Last Mod. Time**, which show the dates when a user was made active, the date a user was added, and the date that a group was last modified. For more information, see Modify Report Columns.

Security-Based Ownership

In SmartHub, the data you can access and the actions available to you are controlled by the security groups to which you are assigned. Specific reports, dashboards, home pages, and favorites lists are controlled by, and restricted to, an owner or set of owners.

Ownership can be assigned to a company, security group, or individual user. If a company is the owner, all users belonging to that company will have access. If a security group is the owner, all users belonging to that security group will have access. If a user is selected as the owner, only that user will have access.

Ownership can be designated as follows:

- **Reports** – When you save a new report, you can designate the owner as a company, security group, or user. See [Creating and Saving Reports](#).

- **Dashboards** – When you set up a new dashboard, you can designate the owner as a company, security group, or user. See [Creating Dashboards](#).

- **Favorites** – When you set up a new favorites list, you can designate the owner as a company, security group, or user. See [Configure a Favorites List](#).

- **Home Pages** – When creating a new home page, you can designate the owner as a company, security group, or user. See [Create a New Home Page.](#)

If your access to anything in this list is erroneously prohibited, contact your system administrator.

Chapter 8 | Reports

With SmartHub, a wide variety of reports are possible, most of which will be customized for each Entomo customer. Because reports are so customized, it isn't possible to explain in this guide how to use individual reports. Instead, this section covers the basic functionality of reports, in general. For information about how to use specific reports, contact your Entomo Professional Services team.

SmartHub has two types of reports:

- **Default Reports** – With the proper privilege, you can access default (template) reports in SmartHub via the **Site Map** menu. Once in a default report, you can use the Configure Columns ⚙ icon to see all of the currently enabled columns, with their default labels, and additional columns that are available but not active.

- **Saved Reports** – The reports in the favorites pane ▤ are customized and saved versions of default reports. Typically, your Entomo Professional Services team works with your company to create a list of reports that all users can see in their favorites pane when they log in to SmartHub for the first time. The reports you have permission to see will appear in your favorites list.

Opening Reports

You can open/run reports on any data in the SmartHub database that you have permission to access based on your security group assignments. For example, Distributor A might have permission to see a report that contains data related to their own company's transactions, but not the transactions of Distributors B through Z. Likewise, data can be permissioned according to departments, where Department X can't access

or run a report that contains sensitive data that only Department Z should see.

To open a saved report in your favorites pane:

1. Click ☰ to open the f**avorites** pane.
2. Click the name of the report you want to open.

Some reports run automatically with preset filters when you click the name of the report, but if you open a report and the page opens without a results table, click **Retrieve**. If you still don't see results, consider the following:

- Check the filter parameters. If needed, expand the **Filters** section by clicking the down arrow. Consider revising your filter criteria to include parameters that will ensure that data will be returned. For example, have you selected a valid accounting period that contains the data you're looking for?

- Check date ranges. The values you specified in date fields might be outside the acceptable range. Consider revising them to ensure that data will be returned.

- Check your permissions. You might not belong to the security group that can access the data. Contact your system administrator for help.

Saving and Creating Reports

You can save reports by clicking **Save Report** on any page that offers that button. You can save a report three ways: save your changes as a new report, update an existing report, or rename an existing report.

To save or create reports:

1. Open the report that you want to modify or use as the basis for your new report.
2. Modify the filters or column configuration as needed.
3. Click **Save Report** to open the **Create a New Report** dialog.
4. In the dialog, select one of the following options:
   - **New** – Saves your changes as a new report, and assigns it to a new user or security group.
   - **Update** – Saves your changes to an existing report, without changing its name or who it's assigned to.
   - **Rename** – Saves your changes and rename the report, without changing who it's assigned to.
5. If **Report Name** is available, enter a new name for the report.

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6. The **Create Output Types** field is available only after you retrieve a report. If it is available, the retrieved results can be saved and made viewable from **Site Map > Administration > Reports**. In the **Create Output Types** field, choose a format for the output:

   o **CSV** for a comma-separated file (the output will match the columns in the report)

   o **PDF** for a portable document file (.pdf)

   o **Excel** for an Excel spreadsheet

7. For new reports, the fields in the **Owner Type** row will change depending on your selection in the **Owner Type** field. Select **Company**, **Security Group**, or **User**, then specify a company, security group, and/or individual from the other dropdown lists in the row.

8. In **Report Description**, click the edit pencil to open the **Description** dialog, where you can add a description, then click **OK**.

9. In **Report Group**, select one of the groups in your favorites pane ≣ to assign the report to that group.

10. Select the **Retrieve Results on Run** option to set the report to automatically retrieve results when the report is opened. The results will be based on your saved filters.

11. You will only need the **Select Favorites This Report Belongs To** section if more than one favorites pane is available to you based on your security group assignments. If needed, move one or more items from the **Choice List to the Selections** list with the arrow buttons between the two panes or by double-clicking your selection.

12. Click **OK** to save and close the dialog.

13. At the top of the favorites pane, click the Refresh ↻ icon.

If you chose to include the new/updated/modified report in your favorites pane ≣, it is now displayed.

Report Maximums

The maximum number of records that can be retrieved (usually 500) is set by your company with the help of your Entomo Professional Services team. If you run a report that returns more than the maximum allowed records, you'll be able to view (in the results table) only the maximum records allowed.

To view *all* of the records (including those that exceed your company's maximum), you can export the results as a .csv or DDF file. (For more information, see Exporting Reports.) Otherwise, consider revising your filter criteria to return a subset of data rather than all records, or limit the scope of the data to a specific date range.

Modify Report Columns

The columns that appear in reports are defined in **Site Map > Company Preferences**. Your Entomo Professional Services team will work with your company to design a default set of reports for each business group that uses SmartHub. Users will be allowed to use those default reports, and also create customized versions, as needed. For more information, see Configuring Tables.

Exporting Reports

Data can be exported from SmartHub whenever the **Export** command is available in the action bar. To print a report, you must first export it.

To export a report:

1. From the action bar, click **Export**.

2. In the **Export As** section, select a format for your data:
   - **CSV** creates a comma-separated (.csv) file (the output will match the columns in the report).
   - **Excel** creates a spreadsheet.
   - **PDF** creates a .pdf file.
   - **DDF** creates a file in the Data Definition Format (DDF). Usually, this option is only used by the Entomo Professional Services team. Instead of showing you the columns in your saved report, this file shows all possible columns that could be used in the report. (Rarely does any company use all of the columns that are available.) In addition, the column names in the file will be the ones used to import data instead of the names that might have been customized for your company.

3. In the **Export To** section, do one of the following, depending on where you want to save the file:
   - **Desktop** – Select this option to save the file in the format you selected, above, to a local or network drive; alternately, you can open the file without saving.

o **FTP –** Select this option to run a report in the background, then save the finished report to the Entomo FTP site, assuming that your company has access to the site. Typically, exports to the FTP site are automatically uploaded by whatever company-based system needs the information.
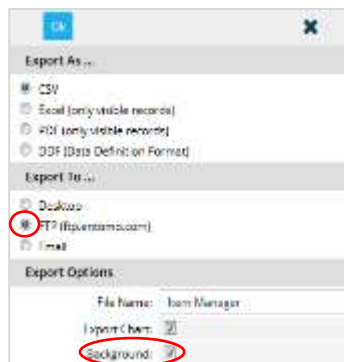
Selecting this option allows you to navigate away or log off the system while the report is being generated. You can opt to be notified by email when the report is complete.

o **Email –** Similar to the **FTP** option, the **Email** option allows you to run a report in the background and then email it to one or more recipients without requiring them to log into the system. This option is especially useful for generating large reports that will take more than a few seconds to run.
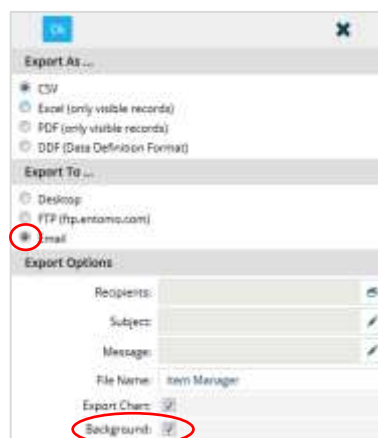
4. In the **Export Options** section, click the **Recipients** icon.
5. Select the checkbox for each recipient, then do one of the following:
    o   Click **Append** to add your selection to the list of recipients already listed.
    o   Click **Replace** to overwrite an existing list with your new selections.

6. If you need to add an external email address, enter the email address in the top (unnamed) field, then click the envelope icon to add the address to your selection list. Repeat this step as needed for additional addresses.
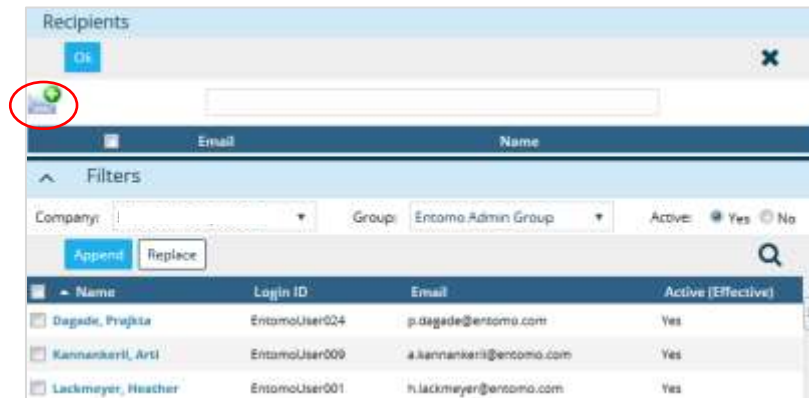
7. Select the checkboxes for the recipients you want, then click **OK** to return to the previous page. SmartHub will generate the report and email it to the designated recipients.

Printing a Report

To print a report in SmartHub, you must first export it. For instructions, see Exporting Reports.

Managing Reports

The **Reports** page provides a list of your company's reports. The page lists the reports that belong to you, your company, and the security groups that you belong to. You can open any of these reports. However, users with the Create Group or Company Level Report permissions can see the entire list of reports in the system and open any of them, regardless of ownership.

The **Reports** page (**Site Map > Administration > Reports**) has the following fields, buttons, and tabs.

Reports – Filters

The **Filters** section has the following fields that you can use to narrow your data retrieval. Filters are cumulative.

- **Owner** – Retrieve reports visible to a specific security group or user.

- **Owner Type** – Retrieve reports according to type of owner—users, security groups, or the entire company.

- **Report Group** – Retrieve the reports listed in a specific report group in your favorites pane ☰ .

- **Report Favorites** – Retrieve reports that belong to a specific set of favorites.

- **Report Company** – Retrieve reports that belong to a specific company.

Reports – Actions

Some of the following actions are restricted to administrators.

- **Retrieve** – Return a list of reports based on the parameters you set in **Filters**.

- **Delete** – Delete the reports that you have selected (by clicking checkboxes).

- **Export** – Export the list of reports.

- **Report Output** – View a list of your most recently saved files that were created from a job template or the **Create Output Types** section of the **Create a New Report** dialog. (See Saving and Creating Reports.) You can open reports from links in the list.

- **Manage Report Groups** – Open the **Report Groups** page, where you can see the organization of reports in your favorites pane ☰ and export a list of your report groups. With the proper permissions, you can add/delete report groups.

- **Manage Report Favorites** – Open the favorites page, where you can drill down to see a list of the reports in each of the configurations defined for the favorites pane on your system. (Most companies only create a single configuration for everyone to use, but individuals might also create their own.) With the proper permissions, you can add/delete/edit a configuration for a favorites pane. See Configuring a Favorites List.

- **Save Report** – Open the **Create a New Report** dialog. For more information, see Saving and Creating Reports.

Configuring a Favorites List

1. From the home page, go to **Site Map > Administration > Reports**.
2. In the action bar, click **Manage Report Favorites** to open the **Favorites** page.
3. Do one of the following:
   - Edit an existing favorites configuration:
     a. Click **Retrieve**.
     b. Click the name of the favorites list that you want to edit.
     c. Modify the setting in the **Favorites** page as needed.
   - Create a new favorites configuration:
     a. Click **New**.

b. Enter a name and description in the **ID** and **Description** fields.

c. In the **Enabled** field, select **Yes** for the list to be visible.

d. In the **Owner** field, assign the configuration to a user or security group.

4. The **Favorites** page lists the reports visible to the members of the security group you selected. Deselect a checkbox to remove that report from view by the members of the security group.

5. When you are finished, click **Save**.

You can toggle between favorites lists if you have permission to configure your home page. Go to **Site Map > Administration > Home Page Config**, click **Retrieve**, click **<CompanyName> Homepage**, then select the favorites list you want in the **Favorites** field.

Adding a Report to Your Favorites Pane

You can add reports to your favorites pane by clicking the **Save Report** button in a report. For more information, see Saving and Creating Reports.

Chapter 9 | Home Page and Dashboard

The home page is the page that opens first when you log in to SmartHub. With the proper permissions, the **Home Page Config** page allows you to format home pages and configure them to show different combinations of dashboards and favorites panes based on security group, user, or company.

For information about navigating the home page, see Home Page Navigation.
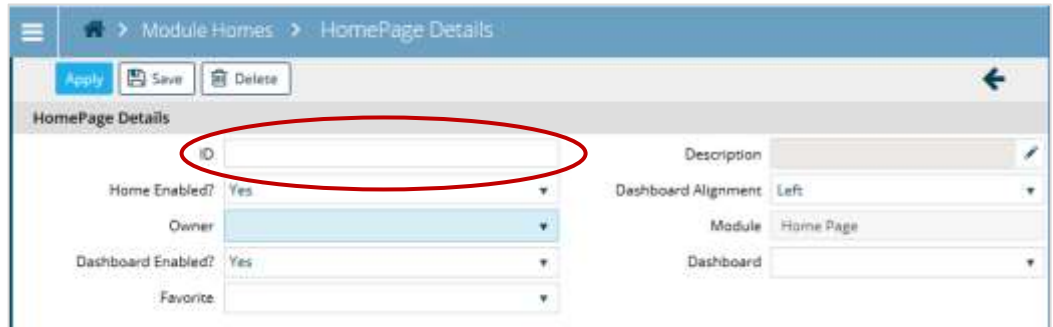
Create a New Home Page

To create a new home page:

1. From the home page, go to **Site Map > Home Page Config**.

2. Click **New** to open the **Home Page Details** page.

3. In the **ID** field, enter a unique alpha-numeric ID as a label for the new home page.

4. (Optional) In the **Description** field, click the Edit ✏ icon to open a dialog where you can enter a description. When you're finished, click **OK**.

5. In the **Home Enabled** field, select **Yes** to allow the home page to be visible as soon as you save.

6. In the **Dashboard Alignment** field, make a selection (for example, **Top**, **Left**, or **Bottom**) based on where you want the dashboard portion of the home page to appear.

7. In the **Owner** field, select a security group, individual user, or company to determine who will be able to see the home page.

   The **Module** field is not editable.

8. In the **Dashboard Enabled** field, select **Yes** to allow the dashboard that you select in the next field to be visible on the home page. If you select **No**, the dashboard will be hidden from all users.

9. In the **Dashboard** field, select an existing dashboard to associate with the new home page you're creating. See Creating a New Dashboard.

10. In the **Favorite** field, select an existing favorites list to associate with the home page.

   For instructions about how to create a favorites list, see Configure a Favorites List.

11. When you're finished, click **Save**.

12. To test the new home page, log out, then log in as a user or a member of the security group or company you associated with the new home page.

Logic for Home Page Viewing

Users see the home page (with its associated dashboard and favorites list) that is set-up and enabled for them either in the **User Details** page (**Site Map > Administration > User Manager > User Details**) or in the **Home Page Details** page (**Site Map > Administration > Home Page Config > Module Homes**) by their system administrator.

However, if a home page isn't assigned by a system administrator when multiple home pages are available to a user, SmartHub will automatically select a home page for the user based on the following logic (in the following order):

- If the user owns a home page, it is displayed; otherwise, the next rule is used.

- If the user belongs to a security group that owns a home page, it is displayed. But if the security group owns multiple home pages, they are sorted according to the owner name (in descending order), then by the ID of the home page. The home page at the top of the sorted results is displayed; otherwise, the next rule is used.

- If the user belongs to a company that owns a home page, it is displayed.

The logic above applies to the automatic selection of a dashboard and favorites list. In your home page, you can choose to specify a dashboard and favorites list, or you can leave these fields blank. If blank, SmartHub will automatically select an appropriate dashboard and/or favorites list for you using the logic above.

For information about how to create security groups with a favorites list, see Create a New Security Group.

Change a User's Home Page

Usually, system administrators either set up home pages, dashboards, and favorites lists according to security group or they set up one for the entire company. It's possible, however, with the proper permissions, to change the home page, dashboard, or favorites list for a specific user.

To change what an individual user sees on their home page:

1. From the home page, click **Site Map > Administration > User Manager**.
2. Click the magnifying glass for the **User** filter to find the user's name, then click **Append**.
3. Click the link for the user's name to open the **User Details** page.
4. From the **Home Page** dropdown, select the home page that you want the user to see.
5. Click **Apply**.

This setting will override any other home pages associated with the security groups or companies to which the user belongs.

Dashboard Configuration

The SmartHub dashboard is a set of one or more charts on the home page that are based on favorite reports. With the proper permissions, you can create new charts, then assign ownership and permission to see the charts

to a specific user, to a security group, or to the entire company. For more information, see Home Page Navigation.

Dashboard Config – Filters

The **Filters** section has the following fields that you can use to narrow your data retrieval. Filters are cumulative.

- **Owner** – Search for dashboard configurations associated with a specific security group or user.

- **Owner Type** – Search for dashboard configurations based on whether the owner is a company, security group, or individual user.

- **Report Company** – Search for dashboard configurations for a specific company; otherwise, click the blank option at the top to retrieve groups for all companies.

Dashboard Config – Actions

The following actions are available:

- **Retrieve** – Return a list of dashboard configurations based on the parameters you set in **Filters**.

- **New** – Open the **Dashboard** page, where you can create a new dashboard.

- **Delete** – Delete the dashboard that you have selected (by clicking checkboxes).

- **Export** – Export the list of dashboards.

- **Job Status** – Check the status of the most recent export.

- **Create Dashboard Charts** – Do not use. Instead, follow the procedure in Creating Charts and Graphs for the Dashboard.

Creating a New Dashboard

To add a new dashboard to the home page:

1. From the home page, click **Site Map > Administration > Dashboard Config**.
2. Select **New** to open the **Dashboard** page.
3. In the **ID** field, enter a name for the dashboard (for example, "Accounting Dashboard").
4. In the **Description** field, describe the purpose of the new dashboard.
5. In the **Owner** field, assign ownership of the dashboard to the entire company, a security group, or an individual. The owner selected for the dashboard should match the owner selected when creating a home page. For instructions about creating a home page, see Create a New Home Page.

6. In the **Enabled** field, select **Yes** or **No.** If you choose **No**, the dashboard will not be available to add to your home page. For instructions about adding a dashboard, see <u>Adding a Dashboard to the Home Page</u>.

7. In the **Width** and **Height** fields, define the size of the chart in terms of pixels (for example, 900 pixels wide and 550 pixels high). The optimal selections for width and height will vary depending on your screen size and the number of charts you wish to display.

8. In the **# Rows** and **# Columns** fields, choose the number of rows and columns you wish to display your charts in. For example, if you plan to add four charts to your home page, you might consider 2 rows and 2 columns, to format the charts in a 2x2 grid.

9. In the **Elements** section, choose **Add Line** once for each chart you want to add. A new line will allow you to specify an analytics report to appear in the dashboard.

    a. (Optional) In the **Description** field, click the pencil icon to add a description of the report.

    b. In the **Report** field, select the report that you want to appear in the dashboard.

    c. The **Width**, **Height**, **Column Idx**, **Row Idx**, **Column Span**, and **Row Span** fields are not editable, but they will be computed when you save the page. These values are determined by the total width and height you've specified for the dashboard and the number of rows and columns specified.

    d. The **Enabled** option determines whether the chart will be used on the dashboard; by default when a line is added, it is enabled.

10. When you are finished adding lines, click **Save**.

The dashboard is now available to be added to your home page. See <u>Adding a Dashboard to the Home Page</u>.

Restrictions and Interactions

The following restrictions and interactions apply to the charted data:

- The quantities to be charted are selected from the columns that are configured via the **Configure Subtotal Columns** menu item on the analytic page.

- For a trend chart, the **From** and **To** filters on the analytic page determine the span of periods for which data is charted.

- The **Show Period** Details **UI** checkbox on the analytic page controls whether or not a chart is a trend chart.

o **Checkbox Selected** – The chart is a trend chart. The labels on the x-axis of the chart are period names. The graph shows how the configured quantities vary over time.

o **Checkbox Not Selected** – The chart is not a trend chart. It does not show how the values of the configured quantities vary over time. However, the data being charted may be constrained to fall in a specific time range by specifying **From** or **To** filter values, and/or **Trans From** or **Trans To** filter values (if the analytic page supports those).

Adding a Dashboard to the Home Page

After you create a new dashboard, you will need to add it to a home page before you can use it. If you don't explicitly specify the dashboard in the home page, SmartHub will automatically choose one for you.

1. From the home page, click **Site Map > Administration > Home Page Config**.

2. Click **Retrieve**, then click the name of the home page that needs the dashboard.

   This opens the **Home Page Details** page.

   (To create a new home page, see Create a New Home Page.)

3. In the **Dashboard** field, select the dashboard you want to use. This list is populated with those dashboards that have the same owner as the owner specified on your home page. If the field is blank, your company is not using dashboards.

   For an explanation of the logic behind what users see in their home page, see Logic for Home Page Viewing.

4. In the **Dashboard Enabled** field, select **Yes.**

5. When you're finished, click **Save**.

6. To see changes to the dashboard, do one of the following:

   o Log out and log in again.

   o From the home page, select **Update Dashboard**.
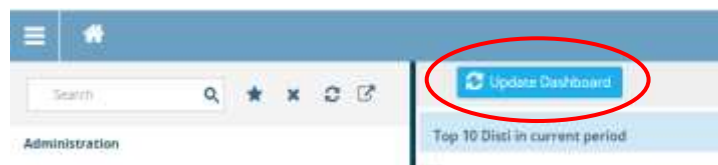
Either action will prompt a job to run in the background. When the job is complete, the updated dashboard will be available.

Adding a New Chart to the Dashboard

To add a new chart to the home page through an existing dashboard:

1. From the home page, click **Site Map > Administration > Dashboard Config**.

2. Click **Retrieve**.

3. Click the link for the dashboard you want to edit.

4. In the **Dashboard** page, go to the **Elements** section and do any of the following:

   o Click **Add Line**.

   o Select the checkbox of the chart you want to remove from the home page, then click **Delete Line**.

   o In the **Report** field, select the analytics report from which you want to generate the chart on your home page.

5. When you're finished, click **Save**.

6. To see changes to the dashboard, do one of the following:

   o Log out and log in again.

   o From the home page, select **Update Dashboard**.
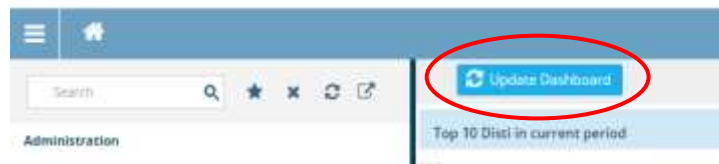
   Either action will prompt a job to run in the background. When the job is complete, the updated dashboard will be available.

If you created a new dashboard, you need to first add the dashboard to your homepage. For instructions, see Adding a Dashboard to the Home Page.

Creating Charts and Graphs for the Dashboard

With the proper permissions, you can create charts and graphs for yourself and others in your security group that can be viewed from the home page. Note that these charts are separate from the charts you can create below individual reports.

To create a new chart for the dashboard:

1. Open the analytics report that you want to add to the dashboard as a chart.

2. Set the filters and configure the table as needed to display the data you want in your chart. For more information, see Configuring Tables.

3. (Optional) Click the Chart 📊 icon to configure the chart.

   o **Chart** – Specifies the type of chart:

   o **Bar** – Groups of bars for each category

   o **Bar by Period** – Groups of bars by period and bars for each category

   o **Line** – Standard line graph that plots data points

   o **Pie** – Standard pie graph that segments the data set

o **Stacked Bar** - A bar for each category is given and each bar has a segment for each period

o **Stacked Bar by Period** – A bar for each period with a segment for each category

o **Chart Width and Height** – Manages the size of the chart in pixels

o **Chart Title Type** – Use the default title or create your own custom title

o **Only Chart Totals** – Shows no period data

o Number of Values to Chart – Either one or many

o **Values to Chart** – The data that will be charted

o **Max. Bars/Lines/Slices** – Limits the amount of data displayed. The remaining values are summed to produce an "Others" bar/line/slice.

o **Min Pie Slice Percentage** – Select the level at which data slice will be shown. All percentages below the minimum value will be aggregated into an "Other" slice.

o **Show Pie Slice Label** – Show labels for slices or to use a legend

4. Click **OK** when you finish configuring the chart.

5. Click **Save Report** to save the updated report or to save a new report.

The report is now available for selection when you configure your dashboard. See Adding a New Chart to the Dashboard.

Favorite Reports Configuration

For instructions, see Configure a Favorites List.

Chapter 10 | Jobs and Events

In SmartHub, *jobs* allow you to manage and manipulate your data, such as an analysis, resolution, export, or valuation. Jobs are usually pre-set in the **Job Template** page (**Site Map > Administration > Job Template**) by your Entomo Professional Services team for your company, but with the proper permissions, you can use the **Job Template** page to create a new one. See Run a Job and Create a Job. Then, using the **Event Template** page, you can schedule one or more jobs to run at a specific time. For more information, see Events.

Large jobs can run in the background so you can continue to navigate the system or log out of the system while a job runs.

You can also perform a job on a specific record or set of records using the **Analyze** or **Resolve** buttons that are available on certain pages, depending on your permissions. Using these buttons allows you to run a job without leaving the page. These localized jobs affect only the records that are retrieved on that page based on the filters you set. For example, you might click **Resolve** to unmap a transaction of a specific distributor after updating a pattern map, then resolve it again. This action will affect

the selected transaction only, instead of all of the transactions for that distributor.

An advantage of using the **Analyze** and **Resolve** buttons to run jobs is the ability to customize certain job options. For example, the **Resolve** button allows you to select specific rule templates and the option to unmap versus resolve. The **Analyze** button allows the option to select the type of evaluation for a POS job, and for inventory jobs, the option between price book and FIFO, and whether to set the adjusted end inventory.

Job Template - Filters

The **Job Template** page provides the following filter fields. Leave a field blank (or click the gray space at the top of the dropdown list) to retrieve jobs without that filter.

- **Type** – Retrieve jobs according to type. The list for your company might vary:
  - **CIM Analysis** – Jobs that analyze channel incentive data (in the CIM module), such as ship and debit, and price protection.
  - **CIM Reserves Analysis** – Jobs that calculate reserves (the amount set aside to cover upcoming/outstanding claims) for CIM programs.
  - **Claim Resolution** – Jobs that resolve (or possibly unmap) claim data (related to CIM).
  - **Export** – Jobs that export report data by FTP or email, or by saving the data in the system.
  - **Forecast** – Jobs that hide previous forecast/backlog reports, remove them from inventory reconciliation, and move them to the next open period (not for resolution or analysis, which are handled by other job types).
  - **G/L Analysis** – Jobs that calculate values for journal entries/general ledger entries (GLM/RRM).
  - **Integration Analysis** – Jobs that calculate the number of files received versus expected for a specific period.
  - **Inventory Reconciliation** – Jobs that run analysis to reconcile inventory (reported versus calculated for POS, sponsor sales, etc.).
  - **Inventory Resolution** – Jobs that resolve (or possibly unmap) data for inventory.
  - **Master Worker Jobs** – Jobs that run multiple other jobs in a specific order, usually referred to as *master templates*.
  - **POS Resolution** – Jobs that resolve (or possibly unmap) data for POS.
  - **Script** – Jobs that have been created to process specific records. For example, a script job can be customized to apply a flag to identify POS records that that are not unique (submitted more

than once) based on distributor + invoice number + invoice line + quantity + serial number.

- o **Shipment** – Jobs that map shipment receipts to sponsor sales.
- o **Unhide** – This job changes hidden values in records from true to false. While records are hidden, other jobs don't pay attention to them. For example, you can use the hidden flag for POS, inventory, and sponsor sales records so newly imported records don't impact already running jobs, then unhide them for a future job.
- o **Valuation** – Jobs that associate cost or price to records, and value data (for example, RMA, POS, and inventory by using Sponsor Sale FIFO).
- o **Blank** – Leave this field blank (the gray space at the top of the dropdown list) to retrieve jobs regardless of type.

- **Category** – Select **System** to retrieve jobs that are owned by the company in general or a security group. Select **User** to retrieve the jobs that are owned by a specific user.

- **Sponsor Company** – This field is not editable.

- **Owner Company** – If your system is set up with multiple companies, select a specific company to narrow your results.

- **Owner Type** – Narrow your search to a company, security group, or user.

- **Owner** – Search for jobs that are visible to a specific user or security group.

- **Job ID** – Search for a specific job number.

Job Template - Actions

- **Retrieve** – Click to return all records that meet the parameters you set in **Filters**.

- **New** – Click to open a page where you can create a new job.

- **Run** – Click to run a job, first opening the **Job Parameters** page where you can select a period and/or partner company for the job. For instructions, see Run a Job.

- **Delete** – Select the checkbox of a job you want to delete, then click this button.

- **Job Status** – Click to open the **Job History** dialog, which lists the status of all jobs. You can stop any job that is in progress. For instructions, see Stop a Job.

- **Export** – Click to export the list of retrieved jobs to a .csv, .xls, or .pdf file. For more information, see Exporting Reports.

- **Save Report** – Click to save your report as a .csv, .xls, or .pdf. For more information, see Saving and Creating Reports.

Create a Job

With the proper permissions, you can create new jobs via the **Job Template** page. The fields on the page differ depending on the type of you select.

You can also create a job by cloning an existing one. See Clone an Existing Job.

To create a new job:

1. From the home page, go to **Site Map > Administration > Job Template**.
2. In the **Job Template** page, click **New**.
3. Complete the following fields:

Field Name	Action
ID	A name for the job is entered by default, but you can change it, as needed.
Description	(Optional) Click the pencil icon and enter a description in the dialog box. When you're finished, click **OK**.
Type	Make a selection from the dropdown list. For a description of the types, see Job Template – Filters.
Category	Select **System** to create a job that is owned by the company in general or a security group. Select **User** to create a job owned by a specific user.
Owner Company	If multiple companies are available, select one from the dropdown list; otherwise, the default is not editable.
Owner Type	Select **Company**, **Security Group**, or **User** as the owner of the job.
Owner Group or Owner User	The appearance of these fields depends on your selection in **Owner Type**. Select an owner, as needed.
Script ID	This field is not editable. If a script is associated with this job later, the ID will appear in this field.
Java Class Name	This field is auto-populated and is not editable.
Is Native Java Code	This field is auto-populated and is not editable.
Comments	(Optional) Click the pencil icon to open a dialog where you can enter a freeform comment about the job. When you're finished, click **OK**.
Alert Type	This field becomes editable if you select **Yes** in the **Is Alert Enabled** field.
Is Alert Enabled	(Optional) Select **Yes** to enable the completion message for this job.

Field Name	Action
Alert Message	(Optional) Click the file icon to open a dialog where you can enter a freeform message. Click **OK** when you're finished.
Alert Recipients	(Optional) Click the file icon to open a dialog where you can manually enter email addresses or select existing SmartHub users who will be able to see the alert. When you're finished, click **OK**. See Exporting Reports for instructions about how to use a similar dialog.

4. Your selection in the **Type** field, above, determines the fields that appear in the **Parameters** section. In the **Parameters** section, enter and select the parameters needed for the job you're creating. For definitions of the parameters, see Appendix A – Parameter Definitions.

5. When you're finished, click **Save**.

The new job now appears in the **Job Template** page after you click **Retrieve**. For more information, see Run a Job.

Edit a Job

1. From the home page, go to **Site Map > Administration > Job Template**.

2. In the **Job Template** page, do one of the following:
   o Use the fields in **Filters** to narrow your search, then click **Retrieve.**
   o Click **Retrieve** for the full list of jobs.

3. In the **ID** column, click the name of the job that you want to change.

4. Click **Edit**.

5. Make changes, as needed. When you are finished, click **Save**.

Clone an Existing Job

Cloning provides an easy way to create a job based on an existing job.

To create a new job by cloning an existing job:

1. From the home page, go to **Site Map > Administration > Job Template**.

2. In the **Job Template** page, do one of the following:
   o Use the fields in **Filters** to narrow your search, then click **Retrieve.**
   o Click **Retrieve** for the full list of jobs.

3. In the **ID** column, click the linked name of the job you want to copy.

4. In the **Job Template > Job Template** page, click **Clone**.

5. The system provides a copy of the job with an auto-generated ID and editable fields. Make changes as needed. See the table in Create a Job for descriptions of the fields. Unless you change the value in the **ID**

field, the default value is used. When you're finished making changes, click **Save**.

The new job now appears in the **Job Template** page with the name that was in the **ID** field.

Run a Job
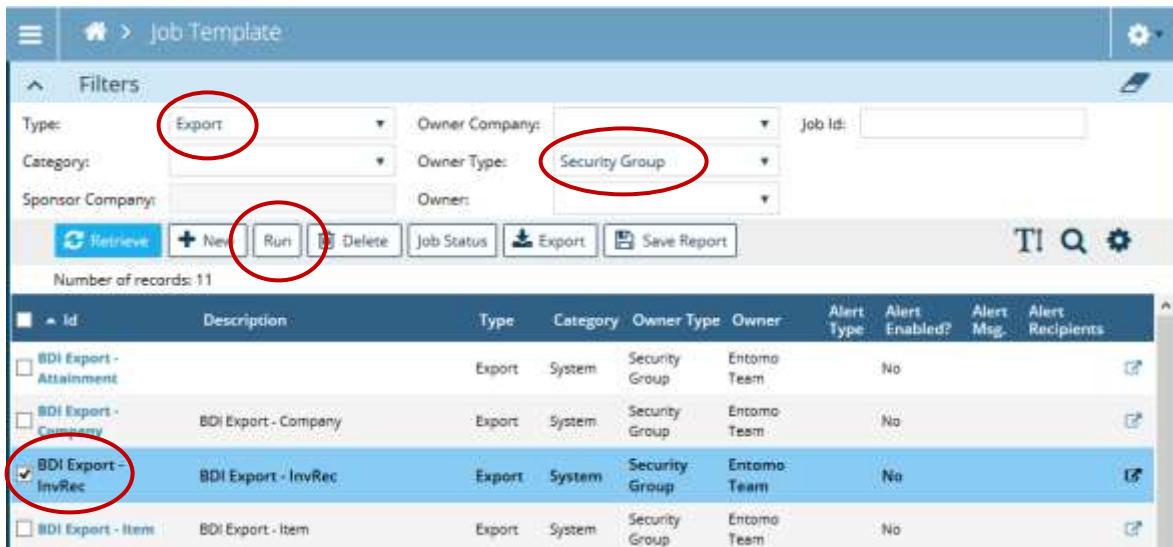
With the proper permissions, you can run jobs via the **Job Template** page. When you run a job from this page, the **Job Parameters** page opens so you can specify beginning and end periods for the job, as well as select the partner companies that will be affected.

The selections you make in the **Job Parameters** page will overwrite the defaults for the template and for the filters in the report that is associated with the job template.

When a job impacts the general ledger (G/L), all partner companies will be updated, even if you only specify one company in the setup.
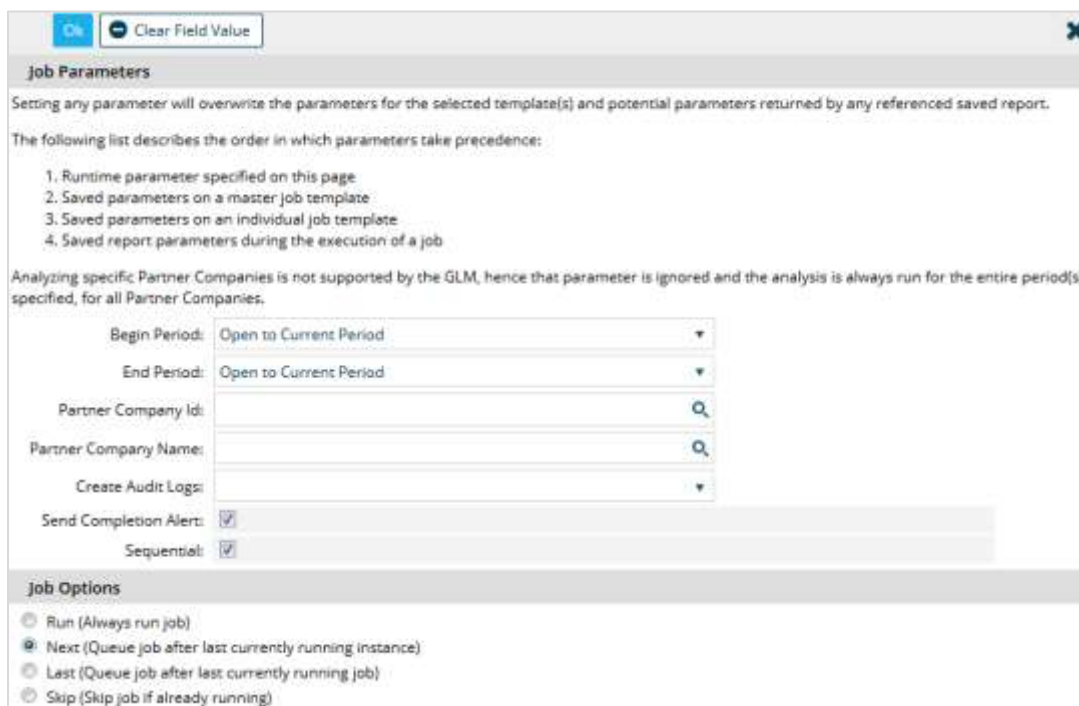
To run a job:

1. From the home page, go to **Site Map > Administration > Job Template**.
2. (Optional) In the **Job Template** page, use the fields in **Filters** to narrow your search; otherwise, skip to the next step.
3. Click **Retrieve**.
4. In the results, select the checkbox of the job you want, then click **Run**.

5. Make changes to the **Job Parameters** dialog according to the instructions in the following table:

See the note following this table.

Field Name	Action	Comment
Begin Period/ End Period	Specify the accounting periods you want for the job.	
Partner Company ID/Name	(Optional) Add one or more partner/distributors to the job by entering their name or ID, or select a name from a list using the magnifying glass icon Q .	If the job affects the G/L, ___all___ partners/distributors will be updated, not just the ones you select here.
Create Audit Logs	You might have the ability to generate logs, such as FIFO, during certain analyses. Select **Yes** if you want to generate these logs. Select **No** if you do not want to generate them.	Leave this field blank to use the setting from the job template. Selecting **Yes** can potentially increase job run times.
Send Completion Alert	Checked by default, this option will send an email to you when the job is finished.	You can see the status of a job any time in the **Job History** page.
Sequential	Checked by default, this option will run any selected job templates in sequential order.	Generally, you will want to leave this option selected.

Field Name	Action	Comment
Job Options	Use the following options to configure when the job will run: • **Run (Always run job)** – The job will start immediately after you click **OK**. • **Next (Queue job after last currently running instance)** – This job will run after any currently queued jobs of the same job type. • **Last (Queue job after last currently running job)** – This job will run after all other currently queued and running jobs are complete, including import jobs. • **Skip (Skip job if already running)** – If a currently running job is the same job type as the one you are attempting to set up, this new job will be canceled.	

NOTE: Non-blank values on the **Job Parameters** page always override the values in a master template, job template, or saved report. In general, the system looks for values in this order:

1. **Job Parameters** page

2. **Master Worker Job Template** page

3. **Job Template** page

4. A saved report

A value in a saved report is used only if that field is blank in all of the pages above it. Additionally, values in the **Job Parameters** page, master template, and job template can't change a value in a saved report to blank. For example, if a saved report specifies the **Partner Company ID** as "ABC," it is not possible to override "ABC" by making the **Partner Company ID** field blank in any of the higher levels. Thus, it's best to leave a field blank in a saved report and to specify it instead in its **Job Template** page.

6.   When you are finished, click **Save**.

An alert message will let you know when a job is running in the background. When the job is complete, you will receive an alert or email if you set up the job to produce one. Otherwise, you can check the status of the job in the **Job History** page. For more information, see Job Status.

Job Status

The **Job History** page displays the status of all jobs. You can search for specific jobs and export your search results.

To check the status of a job:

1. From the home page, go to **Site Map > Audit Trail > Job History**.
   (You can also open this page via **Site Map > Administration > Job Template > Job Status**.)

2. Do one of the following:
   - o Use the fields in **Filters** to search for a specific job, job type, or date range, then click **Retrieve**. See Job History – Filters for descriptions of the filters.
   - o Click **Retrieve** for the full list of jobs then locate the job you're looking for.

3. With the proper permissions, you can click the link in the **Status** column to open a dialog where you can see the following list of information generated by the job:

Column	Definition
Log Time	The time that the log was generated.
Severity	The severity associated with the log. • INFO – Informational. For example, a resolution job might create a message with an attachment that tracks how the system debugged the job. • WARNING – Information about results that were allowed but generally unexpected. You need to determine whether the results are an issue for your situation. • ERROR – Information about a job failure. You need to either fix the error or report it to your Entomo Professional Services team.
Module	The type of data affected by the job. (Usually, this is the same module that is associated with the job.)
User	The user who ran the job.
Job	The current job. This column is blank when the page is viewed from the **Job History** page, but will be populated with the job ID if viewed from **Site Map > Audit Trail > Module Logs**.
Event	This field is not currently used.
Company	The company associated with the job.
Message	A message associated with the log.
Attachment	The physical log file with additional details. (Some jobs generate a message without an attachment.)
Retrieve	Click to refresh the list. If this page is accessed via the **Site Map** menu, filters are applied, and **Retrieve** must be clicked to view the logs.

For more information, see Event History – Actions.

Stop a Job

With the proper permissions, you can stop a job that is currently running.

Jobs that have been stopped cannot be restarted or resumed.

To stop an active job, do the following:

1. From the home page, go to **Site Map > Audit Trail > Job Queue**.

(You can also stop a job via the **Job History** or **Job Template** pages.)

2. Do one of the following:

    o Use the fields in **Filters** to search for the job you want to stop, then click **Retrieve.** See Job History – Filters for descriptions of the filters.

    o Click **Retrieve** for the full list of jobs, then locate the job you want to stop.

3. Select the checkbox of the job you want to stop.

4. Click the **Stop** button.

Sometime jobs can stop immediately, but other jobs might need extra time to finish a process before they can stop. Some jobs can't be stopped.

Job Queue

Once you have initiated a job, you can view jobs that are running and queued through **Site Map > Audit Trail > Job Queue**.

Job Queue – Filters

*   **From/To** – Enter or select dates for the data you would like to retrieve. Usually this filter will be left blank.

*   **Type** – Use the magnifying glass icon 🔍 to select the type of job that you would like to retrieve, such as Valuation or POS Resolution.

*   **Run Status** – By default, this filter is set to **Ready/Running**, which will show those jobs that are currently running or queued to run. Selecting **Completed** will retrieve jobs that have already finished but are still being managed via the **Job Manager** page. Completed jobs are best viewed in the **Job History** page.

*   **Process State** – Jobs that have already completed will have a process state of **Shutdown**. Jobs that are currently running will have a process state of **Running**. Jobs that are waiting in queue will have a process state of **Ready**. Additional options are available, but will rarely be used. This filter will typically be left blank.

*   **Status** – Retrieve results based on the current status of the job, such as **In Progress**, **Success**, or **Initialized**. This filter will typically be left blank.

Job Queue – Actions

*   **Retrieve** – Click to return a list of jobs based on your filter selections.

*   **Export** – Click to export the retrieved data.

*   **Save Report** – Click to open the **Create a** New **Report** dialog. For more information, see Saving and Creating Reports.

- **Start** – Click to start a job that is on hold. Jobs are placed on hold if they are waiting to be run when the server is restarted.

- **Stop** – Click to stop the selected job.

- **Clear Waiting** – The **Waiting for ID** column shows a value when a job is waiting for another job to finish. If a job is waiting for another job that no longer exists or is not running, select the job and click **Clear Waiting** to clear the **Waiting for ID** and allow the job to start.

Job History

To view past jobs or currently running jobs, job history can be accessed through **Site Map > Audit Trail > Job History**.

Job History – Filter Bar

- **From/To** – Enter or select dates to specify the time period for which you would like to retrieve data.

- **Status** - Retrieve results based on the current status of the job, such as **In Progress** or **Success**.

- **Type** - Use the magnifying glass icon 🔍 to select the type of job that you would like to retrieve, such as **Valuation** or **POS Resolution**.

- **State** - Jobs that have already completed will have a process state of **Shutdown**. Jobs that are currently running will have a process state of **Running**. Additional options are available, but will rarely be used. This filter will typically be left blank.

- **Description** – This is a text field where you can search for jobs based on their description, which is set up when the job template is created.

Job History – Actions

- **Retrieve** – Click to return a list of jobs based on your filter selections.

- **Export** – Click to export the retrieved data.

- **Save Report** – Click to open the **Create a New Report** dialog. For more information, see Saving and Creating Reports.

- **Start** – Click to start a job that is on hold. Jobs are placed on hold if they are waiting to be run when the server is restarted.

- **Stop** – Click to stop the selected job.

Events

An event is a trigger that automatically sets off a process or report according to a schedule or interval. Your Entomo Professional Services team uses the **Event Template** page to schedule your jobs.

Event Template – Filters

- **Type** – Search for a specific event type:

- **Delay** – A process or report that is run at intervals from a specific start time. The interval can be in days, hours, minutes, or seconds.

- **File** – A process or report that is run when a file is created on the SmartHub server.

- **Import** – A process or report that is run whenever a file of a specified type (for example, POS) is imported.

- **Mail** – This feature is not currently supported.

- **Timer** – A process or report that is run at a specific time (month, day, day of the week, and/or time of the day [hour, minute, and second]). For example, you can set an event to trigger a resolution job every Friday at 5 p.m. If an event is set to run on a specific day of the week, it will be run at midnight unless otherwise specified.

- **Job Type** – Search for events related to specific types of jobs.

- **Owner** – Search for events owned by a specific user.

- **Sponsor Company** – This field is not editable.

Event Template – Actions

- **Retrieve** – Click to return all events that meet the parameters you set in **Filters**.

- **New** – Click to open a page where you can create a new event. See Create an Event.

- **Arm Event** – Select the checkboxes of the events that you want to activate, then click this button. After you define an event, it won't run until it is armed.

- **Disarm Event** – Select the checkboxes of the events that you want to deactivate, then click this button. Disarmed events can be armed again by clicking **Arm Event**.

- **Fire Events** – Select the checkboxes of the events that you want to run immediately, without regard for any other settings. Running a job by clicking this button is no different than just running the job, except that clicking this button will restart a delayed event/job.

- **Delete** – Select the checkbox of an event you want to delete, then click this button.

- **Export** – Click to export the list of retrieved events to a .csv, .xls or .pdf file. For more information, see Exporting Reports.

- **Timer Events** – Click to open a list of timer events or create a new one. This view has slightly different columns than the view you get when you filter for timer events.

- **Delay Events** – Click to open a list of delay events or create a new one. This view has slightly different columns than the view you get when you filter for delay events.

- **File Events** – Click to open a list of file events or create a new one. This view has slightly different columns than the view you get when you filter for file events.

- **Import Events** – Click to open a list of import events or create a new one. This view has slightly different columns than the view you get when you filter for import events.

- **Save Report** – Click to save your report as a .csv, .xls, or .pdf. For more information, see Saving and Creating Reports.

Create an Event

To create an event:

1. From the home page, go to **Site Map > Administration > Event Template**.
2. Click **New**.
3. Make a selection in the **Type** field to begin defining the new event.

Field Names	Action
Event Template	
ID	Enter a unique identifier for the event. If you make no changes, the system will use the auto-generated ID.
Description	(Optional) Click the pencil icon and enter a description. When you're finished, click **OK** to close the dialog box.
Armed	Select **Yes** to run the event as soon as it is created. If you select **No**, you can run the event any time by clicking the **Arm Event** button on the main **Event Template** page.
Type	Make a selection from the dropdown list. For a description of the types, see Event Template – Filters.
Sync Type	Select one of the following: • **Always Run Event** – The job is run regardless of other events or jobs. • **Queue Event After Last Running** – The job will begin after the last queued job. • **Queue Event If Already Running** – If a job of the same type is already running, this job will begin after that job. • **Skip Event If Already Running** – This job will *not* be run if a job of the same type is already queued or running. This option is especially helpful when you want run a job frequently but you don't want to break anything if the job runs longer than the event frequency. For example, suppose you have a job that unhides transactions every 5 minutes. You can select **Skip Event** in case an unhide job is currently running. This way, if the active job takes more than 5

Field Names	Action
	minutes to run, you don't accidentally create an ever-lengthening job queue of unhide jobs.
Job Template	Select a job to run. Your selection in the **Owner User** field determines the list in this field.
Comments	(Optional) Click the pencil icon to open a dialog where you can enter a freeform comment about the event. When you're finished, click **OK** to close the dialog box.
Alert Type	Select the type of completion message that you want this event to generate: an email, pop-up message, or log file.
Alert Enabled	Select **Yes** to have an alert message sent when this event begins. (Completion alerts are enabled in the **Job Template** page.)
Alert Message	Click the file icon to open a dialog where you can enter a freeform message. Click **OK** when you're finished.
Alert Recipients	Click the file icon to open a dialog where you can enter freeform email addresses. When you're finished, click **OK** to close the dialog box.
Last Occurrence	This field displays the date that this event last occurred.
Disable on Occurrence	Set to **Yes** to have the event disarm itself after it runs. It will only run once unless you re-arm it.
Owner User	Select an owner from the list. The selection here determines the list of jobs available in the **Job Template** field.
Delay Information	**The start time and at least one timer field is required**
Start Time	Enter the date that you want the delay timer to begin. Format the date as month/day/two-digit year.
Number of Days	Enter a number from 1 to 365 to designate the number of days after the start time that you want the job to run.
Number of Hours	Enter a number from 1 to 23 to designate the number of hours after the start time that you want the job to run.
Number of Minutes	Enter a number from 1 to 60 to designate the number of minutes after the start time that you want the job to run.
Number of Seconds	Enter a number from 0 to 60 to designate the number of seconds after the start time that you want the job to run.
File Information	**Both fields are required**
File Name	Enter a name for the trigger file.
Directory	Enter the directory path where the system will look for the trigger file.
Timer Information	**At least one timer field is required**
Month of Year	Enter a number from 1 to 12 to designate the month when this event will occur, with 1 meaning January and 12 meaning December.
Day of Month	Enter a number from 1 to 31 to designate a specific day of the month when this event will occur.

Field Names	Action
Day of Week	Enter a number from 1 to 7 to designate the day of the week when this event will occur, with 1 meaning Sunday and 7 meaning Saturday.
Hour	Enter a number from 0 to 23 to designate the hour this event will occur, with 0 meaning 12 a.m. (midnight) and 23 meaning 11 p.m.
Minute	Enter a number from 0 to 60 to designate the minute this event will occur.
Second	Enter a number from 1 to 60 to designate the second this event will occur.
Import Information	
Model Type	Select the type of imported record that will trigger this event.

4. When you are finished, click **Save**.

Event Queue

A list of queued events is available at **Site Map > Audit Trail > Event Queue**.

Event Queue – Filters

- **Type** – Select an event type to narrow the search to events that match the specified type.

- **Owner** – Select an owner to narrow the search to events owned by that user.

- **Job Type** – Select a job type to narrow the search to jobs that match.

- **Sponsor Company** – If your system is set up with multiple companies, you can narrow the search to a single company; otherwise, this field is not editable.

Event Queue – Actions

- **Retrieve** – Click to return a list of events based on your filter selections.

- **New** – Click to create a new event. See Create an Event.

- **Events** – The **Timer**, **Delay**, **Files**, and **Import** event buttons work the same as the filters.

- **Export** – Click to export the retrieved data.

- **Arm Events** – Select the checkboxes of the events that you want to activate, then click this button.

- **Disarm Events** – Select the checkboxes of the events that you want to deactivate, then click this button. Disarmed events can be armed again by clicking **Arm Event**.

- **Fire Events** – Select the checkboxes of the events that you want to run immediately, then click this button.

Event History

A list of past events is available at **Site Map > Audit Trail > Event History**.

Event History – Filters

- **From/To** – Enter or select the dates of interest.
- **Type** – Select from available choices to retrieve only events that match the specified type.

Event History – Actions

- **Retrieve** – Click to return a list of events based on your filter selections.
- **Export** – Click to export the retrieved data.

Chapter 11 | Data Interaction

SmartHub receives and processes periodic (daily, weekly, monthly, etc.) transactional data from you and your partners worldwide. This reported data is usually in files in a variety of formats, containing numerous data types. Besides the transactional data that is integrated into SmartHub, complete analyzed data is also sent from SmartHub to your systems (ERP, CRM, etc.).

All of your data, regardless of the source, can be transmitted periodically or on-demand via EDI, email, or FTP, and is accepted either as a flat file (.csv or .txt) or as an Excel spreadsheet.

Data Types

SmartHub collects two main types of data: data from you (master and transactional) and data from your reporting partners (usually only transactional).

Master Data

Master data is the non-transactional data that comes from your company. SmartHub uses master data to process and enrich your company's transactional data and reporting processes. Master data is usually imported from your company systems, but it can also be provided by your partners.

Master data includes (but is not required or limited to):

- **Customer Master** – A complete list of all customers (distributors, contract manufacturers, resellers, dealers, original equipment manufacturers [OEMs], operators, end customers) and their

attributes, such as address, contact information, industry, and partner type/level.

- **Product (Item) Master** – A complete list of your products and their hierarchy/attributes.

- **Distributor Price Books** – A list price of all of your products, including relevant parameters, such as distributor, region, etc.

- **Incentive Authorizations** – A list of pre-existing and externally managed incentive and commission programs, with the details and parameters required for validating and enforcing them.

- **Chart of Accounts** – A list of the accounts in your general ledger.

- **Mapping Rules** – A set of rules that match the data reported from your partners (such as items and customers) to the data in the master lists. For example, if a partner reports an item number that doesn't directly match your item master, a mapping can be provided to link the reported value with the official record.

Your Transactional Data

SmartHub can use the following transactional data from your company:

- **Sponsor Sales** – Your transactional invoice data, such as sales from you to your distribution partners (such as distributors and resellers).

- **Sell-In POS** – Your transactional data from your direct sales (not through distributors) to end customers.

- **Backlogged Transactions** – Sponsor sale (invoice) data for products not yet shipped.

- **Return Merchandise Authorizations (RMAs)** – Data about returned products that result in refunds.

When data needs to be corrected or updated, it is generally corrected or appended in your internal system, then resubmitted to SmartHub via your usual method. With the proper permissions, records that contain erroneous data can also be exported from SmartHub, then corrected and reimported.

Partner Data

Master data for partner data is rare, but possible when mapping rules are needed for partner-specific data. For more information, contact your Entomo Professional Sales team.

Partner data usually involves the following transactional data:

- **Point of Sale (POS)** – Data about sales made by distributors to end customers, including information about OEMs.

- **Inventory** – Data about stock on hand for all distributors and OEMs.

- **Shipment Receipts –** Data about shipments from your company.

- **Forecasts –** Data about projected sales by distributors to end customers.

- **Incentive Claims –** Data about incentive programs, royalty agreements, and sales credit assignments.

SmartHub tracks imported files, including the date, time, status, and statistics for each file. The **Integration History** page allows you to review the status of imported files and access the raw data. For more information, see Integration History.

Correcting Partner Data

When partner data contains errors, the correction process depends on whether your company uses SmartHub's pullback capabilities, which automatically replace duplicate transactions with corrected transactions.

To make corrections:

- With Pullbacks
  - o Omitted transactions:
  - a. Submit the missing transactions using your usual method and format.
  - b. Submit a complete, corrected file using your usual method and format.
  - o Incorrect transactions:
  - a. Submit the corrected erroneous transactions.
  - b. Submit a new, complete and corrected report using your usual method and format.

- Without Pullbacks
  - o Omitted transactions:
  - a. Submit the missing transactions using your usual method and format.
  - b. Submit a new file with corrections, then notify your customer service team so the previously submitted (erroneous) file can be removed from the system.
  - o Incorrect transactions:
  - a. Export erroneous transactions from system, update/correct the appropriate fields without changing the Transaction ID, then re-import the transactions to update the corrected fields.
  - b. Submit a new file with corrections, then notify your customer service team so the previously submitted (erroneous) file can be removed from the system.

Data Flow

The following diagram shows how SmartHub processes the data feeds from distributors and manufacturers.
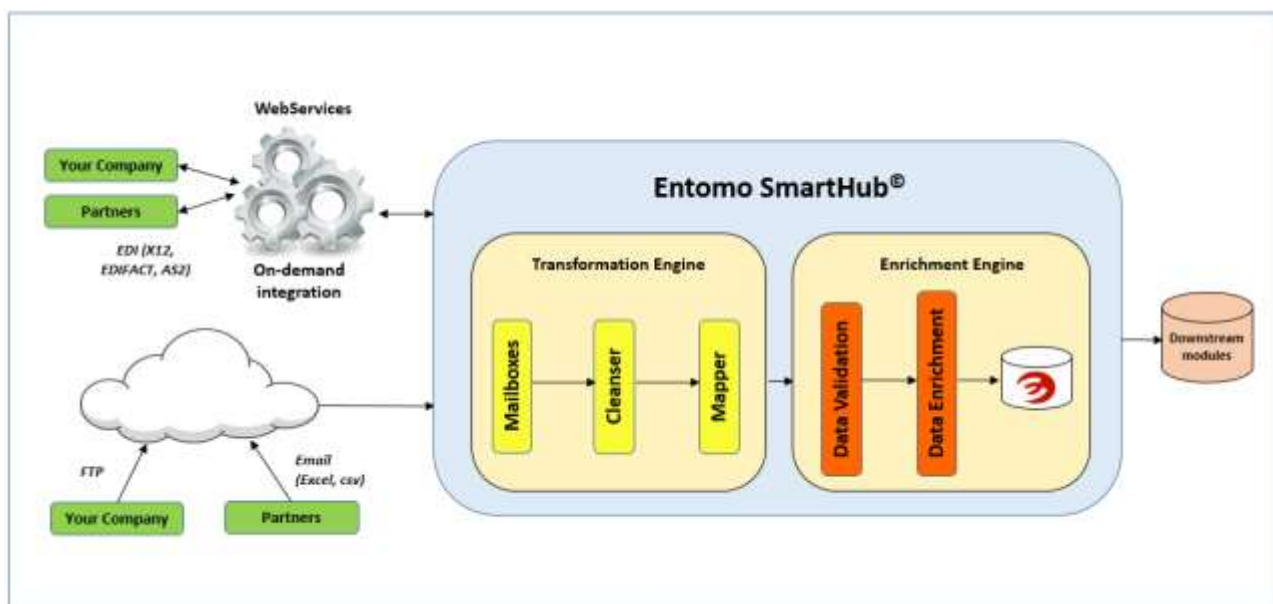
In general, distributor data is processed as follows:

1. SmartHub performs the following automated processes on the files submitted by your partners:
   o Standardize date formats and field names.
   o Check for missing required fields.
   o Remove extraneous data and enrich data.
   o Flag duplicate file submissions.

2. After the files have been error-checked and normalized to a standard format, the rule templates and resolution process are completed. This step is customized to codify your specific business rules, but usually we:
   o Resolve sponsor items and any item attributes or hierarchy using the item master and pattern maps.
   o Resolve country using the country master and pattern maps.
   o Resolve territory and region based on territory master and pattern maps.
   o Enrich any custom attributes after running all resolution rules.
   o Resolve customer information.

Expected Data Configuration

The **Expected Data Config** page provides an overview of the type, size, and date of all the imported data expected from your

partners/distributors. With the proper permissions, you can define the parameters of (or configure) a new import, clone a new configuration from an existing one, and edit an existing configuration.

For each import that you expect from a partner/distributor, you can configure the following information:

- The number and type of files expected from each partner

- The recipients of email alerts about missing files, late arrivals, and files with errors

- The timing of files considered missing or late, and when to send reminders

SmartHub uses this import configuration to automatically generate emails/reminders about missing, late, and erroneous files, and generate statistics about partner submissions via the **Integration Analysis** page.

Expected Data Config – Filters

- **Imported From/To** – Enter or select dates to retrieve records within that range.

- **Company** – Search for, or enter, the name of a company to narrow your search.

- **Model Type** – Select from the search dialog to narrow your search to a specific type of information.

Expected Data Config – Actions

- **Retrieve** – Return a list of configurations based on your filter selections.

- **New** – Create a new import configuration. See Create a New Import Configuration.

- **Delete** – Delete selected records.

- **Export** – Export the data in the results table to a .csv file, Excel spreadsheet, or PDF.

Create a New Import Configuration

To configure an imported file to generate emails:

1. From the home page go to **Site Map > Administration > Expected Data Config**.
2. Click **New**.
3. Complete the following fields as needed.

Field Name	Action
Company ID	Make a selection in the **Company Name** field to automatically populate this field with the unique identifier for the partner/distributor you select.

Field Name	Action
Company Name	Enter the name of the partner/distributor.
Model Type ID	Select the type of information that will be imported.
Model Subtype ID	If you need to refine the model type, enter a description.
File Name Pattern	Enter the naming convention for the imported file, such as "*.xlsx" (without quotation marks) for an Excel spreadsheet.
Period Type ID	Select the accounting period expected to be used in the imported file.
File Data Count	Enter the number of records expected in the imported file.
Effective Date	Select the date the first import is expected. This setting and the **Period Type ID** determine when import files are expected to be imported. The period starts at midnight.
Enabled	Select **Yes** to allow the import to begin immediately. If you select **No**, you can change it to **Yes** when you want imports to begin.
Automatic Review	Select **Yes** to automatically apply the conditions and restraints you set up on this page as soon as an imported file is received; otherwise, select **No** to manage the process manually.
Alert Timely Error Imports	Select **Yes** to send an email whenever an imported file is received on time for the accounting period, but with one or more errors.
Alert Late Imports	Select **Yes** to send an email whenever an imported file is received, but it is late for the accounting period.
Remind to Submit Imports	Select **Yes** to send an email whenever the number of imported files is less than expected for the accounting period, but the deadline for the import is still in the future.
Alert Missing Imports	Select **Yes** to send an email whenever the number of imported files is less than expected for the accounting period, and the deadline for the import has passed.
...Recipients (4 fields)	Enter a comma-separated list of email addresses for the people who will receive the notifications about late, missing, and erroneous files.
Min Cutoff Offset	Enter the number of hours past midnight (of the accounting period start) when an arriving import file starts to be considered part of that period.
Late Import Alert Offset	Enter the number of hours past midnight (of the accounting period start) when an arriving import files starts to be considered as late.
Submit Import Reminder Offset	Enter a comma-separated list of numbers as the hours (past midnight) that reminders emails are sent if files are late.
Missing Import Alert Offset	Enter a comma-separated list of numbers as the hours (past midnight) that reminders emails are sent if files are missing.
Use File Arrival Date	Select **Yes** to use the date that the file was actually received, rather than the original date, which is when it should have been received.
Original Import Date	(Read-only) The date that the file should have been received, as recorded in the **Expected Data Config** page.
Original Import File Name	(Read-only) The name of the file after import, as recorded in the **Expected Data Config** page.
Original Raw File Name	(Read-only) The file name assigned by the submitter, as recorded in the **Expected Data Config** page.
Original Import File ID	(Read-only) The unique identifier assigned by the submitter, as recorded in the **Expected Data Config** page.

4. When you're finished, click **Save**.

For more information about reviewing the imports and emailed reminders, see Integration Analytics. The analyzer can be set up as a job and scheduled to run automatically, as needed.

For information about stopping emails for a period of time, see About Notifications.

Edit or Clone an Import Configuration

To change/update an import configuration:

1. From the home page go to **Site Map > Administration > Expected Data Config**.
2. (Optional) Narrow your search by entering values in the **Filters** fields.
3. Click Retrieve.
4. Click the link in the **ID** or **Description** columns to open the detail page for an import configuration.
5. Do one of the following:
   a. Click **Edit** to change the page to edit mode. Make changes as needed, then click **Save**.
   b. Click **Clone** to duplicate the page. Make changes as needed, then click **Save**.

Chapter 12 | Audit Trail

In SmartHub, you can audit imported data using the following pages:

- Integration History
- Integration Analytics
- Analyzed Imports
- Module Log
- User Sessions
- User Session Analytics
- About Notifications

Integration History

The **Integ. History** page allows you view all of the files imported into SmartHub, including master data and raw files submitted by your partners/distributors. You can use the page to review those files for errors/warnings that might have occurred during import.

The following filters and action buttons are standard, but you might see other options customized for your company.

For instructions about how to fix import errors, see Review Import Activity.

Integ. History – Filters

- **From/To** – Search for records based on start date of the import.

- **Record Dates** – Search for imports that contain records with transaction dates within a specified date range. The dates of some retrieved records might fall outside this range, but the transaction dates you request will be there as well.

- **File Arrival Time** – Search for records based on the time they were submitted to SmartHub.

- **Model** – Search for a specific type of record.

- **Company** – Search by name for a specific company or set of companies.

- **Company ID** – Search by ID for one or more companies.

- **Attention** – Search for records based on whether they have been marked during import as containing errors/warnings or have been manually flagged as needing attention (by a person with the appropriate permissions).

- **Yes** – Retrieve records that contain errors or warnings.

- **No** – Retrieve only records that are not flagged (as needing attention).

- **Blank** – Retrieve records regardless of the flag status.

- **Reviewed** – Search for records based on their review status:
  - **None** – Records start without a review status.
  - **Manual** – Records can be marked a manually reviewed by a person with the appropriate permissions.
  - **Cleared** – Status can be cleared by a person with the appropriate permissions.
  - **Automatic** – Records can be marked as automatically reviewed by the import analysis if they are recognized as an expected import and the Expected Data Config is set up to automatically mark imports.

- **Display** – Show retrieved records as a chart, table, or both.

Integ. History – Actions

- **Retrieve** – Return a list of files based on the parameters you set in **Filters**.

- **Save** – Save the changes you make to retrieved records, such as updated comments.

- **Delete Data and History** – With proper permissions, delete selected records from the import history, including all associated data.

- **Export** – Export the retrieved data.

- **Analyze** – Run the import analysis and optionally sends email alerts about the status of the retrieved files. For more information, see About Notifications.

- **Job Status** – Open the **Job History** page as a dialog so you refer to the list of jobs while staying in the **Integ. History** page.

- **Clear Analysis** – Clear the analysis for selected items.

- **Close for Notify** – Specify a date or accounting period as the starting point for sending email notifications.

- **Set Reviewed** – Mark selected records as reviewed.

- **Clear Reviewed** – Mark selected records as cleared after a review.

- **Import** – Open the **Import Wizard** page, where you can perform a manual import.

- **Save Report** – Open the **Create a New Report** dialog. For more information, see Saving and Creating Reports.

- **Draw** – Redraw a table or chart without retrieving new data.

Import Data Manually

Although most imports jobs are automated for you by your Entomo Professional Services team, with the proper permissions you can manually import files if needed.

To import a file:

1. Do one of the following:
   - From the home page, go to **Site Map > Audit Trail > Integ. History**, then click **Import**. (This option returns you to the **Integ. History** page when the import is complete.)
   - From the home page, go to **Site Map > Administration > Import**.
     (This option returns you to the home page when the import is complete. You'll have to navigate to the **Integ. History** page to follow-up on the import.)

2. The **Model Type** field will be auto-populated, if possible, after you select a file.

3. In the **Data Format** field, select the type of file you will be importing.

4. In the **Delimiter** field, select the character that will separate each data item in the import.

5. In the **Quote Character** field, select the character that surrounds a data value if that value contains the delimiter character that you set in the **Delimiter** field.

   For example, if you select commas as your delimiter, any time a comma is used in an imported data field, that data field must be enclosed by the character specified here as the quote character.

6. Click **Browse**, then navigate to the file you want to import.

7. Click **Upload**.

   The **Stage** field will change automatically with the current status of the import operation.

8. When the status turns to **Upload** Complete, three buttons appear in the **Import Action** line. Click one of the following:

   o Click **Single-Stage Import** to parse, validate, and commit individual records one-by-one. Validated records are automatically committed, while records that do not pass validation are rejected. This option requires you to stay on the page until the import finished.

   o Click **Multi-Stage Import** to parse the entire file (click **Parse**), then validate the entire file (click **Validate**), the commit the entire file (click **Commit**). Data is broken into columns based on the delimiter you select.

      This option is useful if you want to ensure that the entire file passes validation before committing anything. This option requires you to stay on the page until the import is finished.

   o Click **Background Import Job** to import the file as you continue to work in SmartHub.

   The **Import Stage Status Summary** section of the page opens when the import is complete, showing the errors (rejected lines and warnings) that might have occurred during import.

9. Click **Done** to return to the **Integ. History** page, where you can see the data about the import.

   o The **Status** column provides the overall status of the imported file.

   o Click the status to view a list of errors with line numbers, which are sometimes listed as a range of lines for a single error.

   o If any part of the import failed, you can click in the **Reject File** column to open a file that contains the failed lines so you can correct and reimport them.

Review Import Activity

In SmartHub, the import process is referred to as *integration*. The **Integration History** page allows you to check import files for errors and ensure that data from your distributors/partners was imported successfully.

To review recent import activity:

1. From the home page, go to S**ite Map > Audit Trail > Integ. History**.

2. In the **From** and **To** fields, select a date or define a date range. For example, enter "–30 days" in the **From** field to retrieve imports that occurred during the last thirty days.

3. Click **Retrieve**.

4. In the results, you can do any of the following:

Goal	Action	Comments
View details about a file with warnings or errors	Click the **Status** link to see a list of errors with line numbers.	You can use this information to further investigate exact lines the import file or raw file.
View details about an aborted import	Click the **Abort** link in the **Status** column to open a dialog that provides a reason for the import failure.	
Add comments about your review/investigation	For the line you reviewed, click the pencil icon in the **Comments** column (on the far right of the **Integ. History** page) to open a dialog where you can add freeform comments. When you are finished, click **Save.**	
Mark files as reviewed	Select the checkbox for the file, then click **Set Reviewed**.	By tagging files as reviewed, you can search for files that haven't been reviewed using the Reviewed filter.

Set System-Wide Import Analysis Notifications

From the **Integ. History** page, you can set a system-wide begin date or period for email notifications to be sent by SmartHub in response to imported data.

The following types of emails can be sent:

- Submit import reminder

- Missing import alert

- Timely error import alert

- Late import alert

To set a date or period for import notifications:

1. From the home page, go to **Site Map > Audit Trail > Integ. History**.

2. Click **Close for Notify**.

3. In the **Close for Notification** dialog, use the fields to define the beginning date or period to send emails. No emails will be sent prior to this begin date, despite the dates set for individual imports.

4. Click **OK**.

Run a Manual Import Analysis

Usually, integration (import) analysis jobs are set up by your Entomo Professional Services team to be run automatically based on the timing of the imports from your partners/distributors. However, you can also run a manual analysis any time, as needed. When you run a manual analysis, you can choose whether to also send out emails in response to missing and late files.

The results of a manual analysis can be retrieved in the **Integ. Analytics** page.

To run a manual import analysis:

1. From the home page, go to **Site Map > Audit Trail > Integ. History**.

2. Use the filters to locate one or more imports that you want to analyze, then click **Retrieve**.

3. Click **Analyze**.

4. In the **Set Analyze Options** dialog, select one or more of the following options depending on whether, and how, you want to send email notifications based on this analysis:

   o **Run as Job** – Run the analysis as a background job on all import records that match the filters, regardless of which records are selected in the retrieved results. When this option is not set, the analysis is only run on the records that are retrieved and selected. This option is independent of the email options above it.

   o **Submit Import Reminder** – Send reminders to distributors/partners to submit their files.

   o **Missing Import Alert** – Send emails if expected files have not been received.

   o **Timely Error Import Alert** – Send emails if files are submitted on time, but imported with errors or warnings.

   o **Late Import Alert** – Send emails for expected files received after the specified date.

5. Click **OK**.

Delete an Imported File

If a file contains errors, it's possible to delete the file so it can be fixed and resubmitted, but the dependencies need to be deleted first. Deleting a problematic file can help you avoid having to do a pullback.

To delete an imported file:

1. From the home page, go to **Site Map > Audit Trail > Analyzed Imports**.

2. Use the filters (usually by date or file ID) to locate the analyzed import record that corresponds with the import file you want to delete, then click **Retrieve**.

3. Select the checkbox for the record that needs to be deleted, then click **Delete**.

4. Go to **Site Map > Audit Trail > Integ. History**.

5. Use the filters (usually by date or file ID) to locate the import imported file you'd like to delete, then click **Retrieve**.

6. Select the checkbox of the item you want to delete.

7. Click **Delete Data and History**.

As long as all dependencies (for example, an analyzed import file) have been removed, the system will confirm the deletion; otherwise an alert will let you know that there's a problem. In this case, contact your Entomo Professional Services team.

Integration Analytics

The **Integ. Analytics** page allows you to determine whether partner/distributor files have been received as expected based on the frequencies specified on the **Expected Data Config** page. The analyzer can be setup as a job template to run according to your company's reporting needs.

The results table on the **Integ. Analytics** page can be configured to show the number of received files versus the number of expected files, and the difference (or variance) between them.

When you retrieve records in the **Integ. Analytics** page, the data you see is either from the most recent analytics job (run automatically) or the most recent manual analysis done in the **Integ. History** page (clicking the **Analyze** button). For more information, see Integration History.

The following filters and action buttons are standard, but you might see other options customized for your company.

For instructions for fixing import errors, see Review Import Activity.

For instructions about how analytic pages work, see Analytic Page Navigation and Configuring an Analytic Page.

Integ. Analytics – Filters

- **From/To** – Search for records based on the accounting period assigned to the import in the **Expected Data Config** page.

- **Imported From/To** – Enter or select dates to retrieve records with import dates within that range.

- **Display** – Select from the dropdown list to determine whether retrieved data will be displayed in a table, chart, or both.

- **Limit Results** – Limit the number of records retrieved. For more information, see Sort with the Limit Results Filter.

- **Company** – Enter or select the name of a company (or set of companies) to retrieve records that belong to that specific company.

- **Model Type** – Click the magnifying glass icon to specify the type of information you want to retrieve. Move your selections from the **Choice List** pane to the **Selections** pane, then click **OK**.

- **Show Period Details** – Select this option to display accounting periods in the results table as separate columns. If the option is not selected, the results table will have a single **Total** column on the right that shows the combined total for all periods, instead of one column per period. For more information, see Configuring an Analytic Page.

- **Drill Down Report** – The report you select in this field will be displayed when you click the **View Details** button, allowing you to see the records you retrieved in the format of the selected report. If no report is selected, the **Analyzed Imports** page is displayed when you click **View Details**.

- **Variance** – Narrow your search to expected imports that are missing a specific number of files. Enter a value greater than zero (>0).

Integ. Analytics – Actions

- **Retrieve** – Return a list of records based on the parameters you set in **Filters**.

- **Delete** – With proper permissions, delete selected records.

- **View Details** – For selected records, open to the report specified in the **Drill Down Report** filter. If no report is specified in the **Drill Down Report** filter, the **Analyzed Imports** page opens.

- **Export** – Export the retrieved data.

- **Draw** – If you have selected **Chart** or **Table & Chart** in the **Display** filter, click **Draw** to see the retrieved data formatted as a chart.

- **Save Report** – Open the **Create a New Report** dialog. For more information, see Saving and Creating Reports.

View Import Analytics

To review the submission analytics and send reminders, the Integration Analyzer must be run. The analyzer can be scheduled to run periodically (and automatically) as a job template, or it can be run manually. For more information, see Run a Manual Import Analysis.

For instructions about how analytic pages work, see Analytic Page Navigation and Configuring an Analytic Page.

To view partner submission analytics:

1. From the home page, go to **Site Map > Audit Trail > Integration Analytics**.

2. In the **From** and **To** filters, set a date range for the records you want to view.

3. Click **Retrieve**.

Analyzed Imports

The **Analyzed Imports** page is similar to the **Integ. History** page, except that it provides additional details about each imported file. The **Analyzed Imports** page is the source page for the **Integ. Analytics** page, and provides some information about file expectations. After an imported file has been analyzed, the analyzed record must be deleted from the **Analyzed Imports** page before you can delete if from I**nteg. History**.

For instructions about deleting an import file, see Delete an Imported File.

Analyzed Imports – Filters

- **From/To** – Search for records based on the accounting period assigned to the import in the **Expected Data Config** page.

- **Trans From/To** – Search for records with transaction dates within a specified range, or enter a value such as "–30 days" in the **Trans. From** field to retrieve records with transaction dates in the last 30 days.

- **Imported From/To** – Search for records imported within a specified date range, or enter a value such as "–30 days" in the **From** field to retrieve records for the last 30 days.

- **Company** – Enter or select the name of a company (or set of companies) to retrieve records that belong to that specific company.

- **Model Type** – Click the magnifying glass icon to specify the type of information you want to retrieve. Move your selections from the **Choice List** pane to the **Selections** pane, then click **OK**.

- **Drill Down Report** – The report you select in this field will be displayed when you click the **View Details** button, allowing you to see the records you retrieved in the format of the selected report. If no report is selected, the **Analyzed Imports** page is displayed when you click **View Details**.

Analyzed Imports – Actions

- **Retrieve** – Return a list of files based on the parameters you set in **Filters**.

- **Delete** – With proper permissions, delete selected records.

- **View Details** – For selected records, navigates to the report specified in the **Drill Down Report** filter, or to the **Integ. History** page if no report is specified.

- **Export** – Export the retrieved data.

- **Save Report** – Open the Create **a New Report** dialog. For more information, see Saving and Creating Reports.

Module Log

The **Module Log** page provides a running list of logs that reflect the resolutions, jobs, and warnings that occur in SmartHub. With the proper permissions, the log attachments can be opened. The page can also be accessed by a person with administrative permissions from the **Job History** page by clicking in the **Status** column. Your Entomo Professionals Services team uses these logs to investigate and resolve processing issues.

Module Log – Filters

- **From/To** – Search for records based on the accounting period assigned to the import in the **Expected Data Config** page.

- **From Date/To Date –** Search for records within a specified date range, or enter a value such as "–30 days" in the **From** field to retrieve records for the last 30 days.

- **Module –** Search for records related to a specific SmartHub module, such as CIM or POS.

- **Severity –** Narrow the search to a specific severity level.

- **User** – Narrow the search to a specific user.

- **Sponsor Company –** Narrow the search to a specific company.

Module Log – Actions

- **Retrieve** – Return a list of records based on the parameters you set in **Filters**.

- **Delete** – With proper permissions, delete selected records.

User Sessions

With the proper permissions, the **User Sessions** page allows you to monitor the log-in activity of SmartHub users, including their proxy user name, the length of time in the system, their current status, and more.

User Sessions – Filters

- **From/To** – Search for log-in activity on a specific date or within a range of dates.

- **Status –** Search based on a specific activity status; otherwise, leave blank to retrieve all records, regardless of status.

- **Session Type –** Narrow your search to a type of user session, for example, a browser, proxy, Salesforce, or web services session. Click

the magnifying glass icon to see a list of available session types. Move your selections from the **Choice List** pane to the **Selections** pane, then click **OK**.

- **Sponsor Company –** This field is not editable.

- **User Company –** To narrow your search by company name, enter company names separated by a comma or click the magnifying glass icon to open a dialog where you can select one or more companies.

User Sessions – Actions

- **Retrieve –** Return a list of users based on the parameters you set in **Filters**.

- **Delete –** (Admin only) Delete specific records after you selected the checkboxes of the line items that you want to remove.

- **Logout Session –** (Admin only) Log off the user associated with the session.

- **Export –** Export the data in the results table to a .csv file, Excel spreadsheet, or PDF.

- **Save Report –** Click to open the **Create a New Report** dialog. For more information, see Saving and Creating Reports.

View User Activity

With the proper permissions, you can use the **User Sessions** page to view user activity, including the proxy user name, data about the length of time in the system, the current status, and more.

To view user activity:

1. From the home page, go to **Site Map > Audit Trail > User Sessions**.
2. In the **Filters** section, create one or more filters to locate the user or group of users you are interested in viewing.
3. Click **Retrieve**.

Log Off a User

With the administrative permissions, you can end a user session in SmartHub.

1. From the home page, go to **Site Map > Audit Trail > User Sessions**.
2. In the **Filters** section, create one or more filters to locate the user or group of users you are interested in.
3. Click **Retrieve**.
4. Select the checkboxes of the users whose sessions you need to end.
5. Click **Logout Session**.

User Sessions Analytics

The **User Sessions Analytics** page provides overviews and totals of user access in SmartHub over time.

For instructions about how analytic pages work, see Analytic Page Navigation and Configuring an Analytic Page.

User Sessions Analytics – Filters

- **Login From/To** – Search for log-in activity on a specific date or within a range of dates.

- **Status** – Search based on a specific activity status; otherwise, leave blank to retrieve all records, regardless of status.

- **Session Type** – Narrow your search to a type of user session, for example, a browser, proxy, Salesforce, or web services session. Click the magnifying glass icon to see a list of available session types. Move your selections from the **Choice List** pane to the **Selections** pane, then click **OK**.

- **User Company** – To narrow your search by company name, enter company names separated by a comma or click the magnifying glass icon to open a dialog where you can select one or more companies.

- **Portal Type** – Narrow your search based on **Desktop** or **Mobile**, or leave blank.

- **Show Period Details** – Select this option to format the results table according to accounting period.

- **Show Totals** – Select this option to include a set of total columns in the results table.

- **Drill Down Report** – The report you select in this field will be displayed when you click the **View Details** button, allowing you to see the records you retrieved in the format of the selected report. If no report is selected, the **User Sessions** page is displayed when you click **View Details**.

User Sessions Analytics – Actions

- **Retrieve** – Return data based on the parameters you set in **Filters**.

- **Export** – Export the retrieved data.

- **Save Report** – Open the Create **a New Report** dialog. For more information, see Saving and Creating Reports.

- **View Details** – For selected records, open to the report specified in the **Drill Down Report** filter. If no report is specified in the **Drill Down Report** filter, the **Analyzed Imports** page opens.

About Notifications

The **Notifications** page provides a record of all email alerts and notifications sent from SmartHub. These notifications can include reminders about workflow approvals, job completion alerts, and file import alerts. With the proper permissions, you can delete the record of a notification.

Caution: If you select a line item in the results table, then click **Delete**, the record of the notification will be permanently deleted from the system.

Notifications – Filters

- **From/To** – Search for records based on the date of the notification.

- **Type** – Narrow your search to **Alert** or **Reminder** emails, or leave blank to retrieve both types.

Notifications – Actions

- **Retrieve** – Return a list of users based on the parameters you set in **Filters**.

- **Delete** – With proper permissions, delete selected records.

- **Export** – Export the retrieved data.

Chapter 13 | Accounting Periods

About Accounting Periods

In SmartHub, the default is that calendar weeks start on Sunday, and that a calendar month starts on the first full week of each month. You can, however, define SmartHub accounting periods to match those used in your company. Accounting periods are used throughout the system, for example, to group data for data retrieval and to ensure that transactions are assigned to the correct period. You can also set up your accounting periods to reflect a 52-53 (or 4-4-5) fiscal year.

SmartHub uses the following terms, each with very specific meanings:

- **Accounting Period** – In SmartHub, an *accounting period* is a unit of time defined by 4-5 calendar weeks, at the end of which the books are balanced and financial statements prepared. Multiple accounting periods comprise a fiscal year. Accounting periods can be opened and closed.

- **Accounting Week/Month/Quarter/Semi-Annual/Year** – In SmartHub, *accounting weeks/months/etc.* are periods of time *not* based on calendar weeks. For example, an *accounting month* might begin on the 1st and end on the last calendar day of that month. These periods cannot be opened or closed; rather, they are for reporting only, to

allow you to report on fractions or multiples of your accounting periods in a way that isn't based on calendar weeks.

The following rules apply to accounting periods in SmartHub:

- Every transaction date must belong to exactly one accounting period.

- Accounting periods can be imported from comma-separated (.csv) files.

Period List – Filters

The following filters are available:

- **Period Type** – If your system is set up with different types of accounting periods, narrow your search to a specific type of period (daily, weekly, monthly, etc.).

- **State** – Narrow your search to closed periods by selecting the **Closed** option, to open periods by selecting the **No Snapshot** option.

Period List – Actions

- **Retrieve** – Return records based on the parameters you set in **Filters**.

- **Delete** – With proper permissions, delete selected records.

- **Close** – Close the oldest open period. Click again to close the next oldest period, and so on.

- **Reopen** – Reopen the closed period with the most recent date. Click again to reopen the next previous period.

- **Export** – Export the retrieved data.

View Accounting Period Status

Use this procedure to view the beginning, end, and cutoff dates for each period, including the time of closure if applicable.
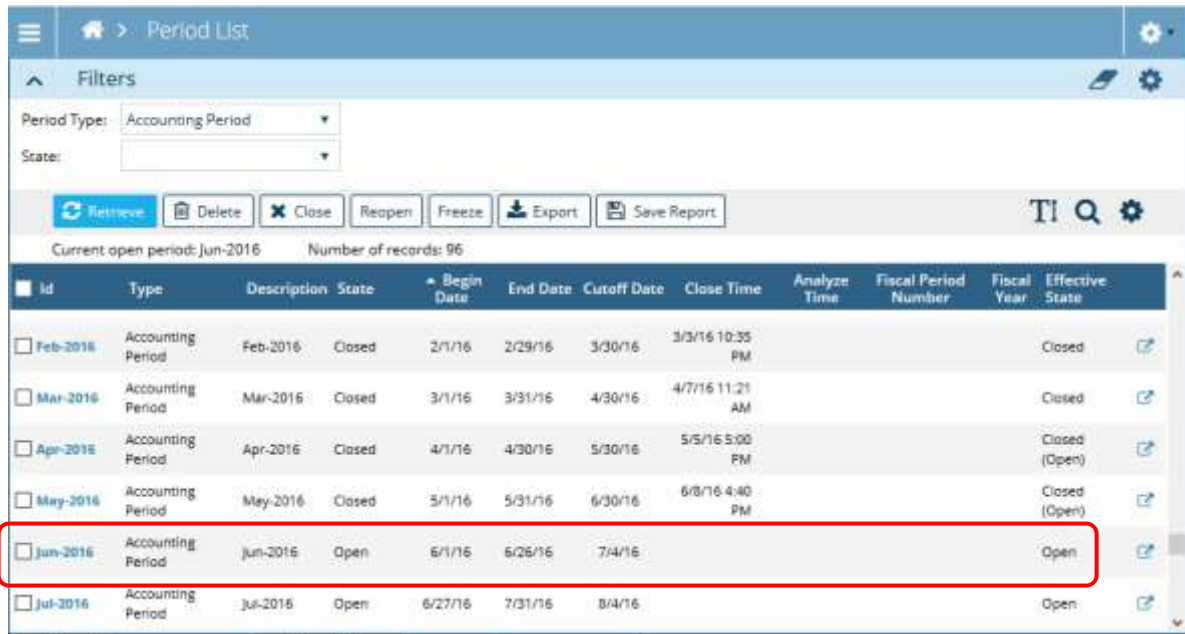
1. Go to **Site Map > Administration > Accounting Period** to open the **Period List** page.
2. In the **Period Type** field, select the type of period you want to find.
3. In the **State** field, select the type of period you want to find: **Open, Frozen, Closed**, or blank (to return all period types).
4. Click **Retrieve**.

Close an Accounting Period Leaving a Module Open

It's possible (with the proper permissions) to close an accounting period while keeping the Claims Incentive Module (CIM) open so you can continue to post outstanding claims. Currently, this functionality is only available with the CIM module.
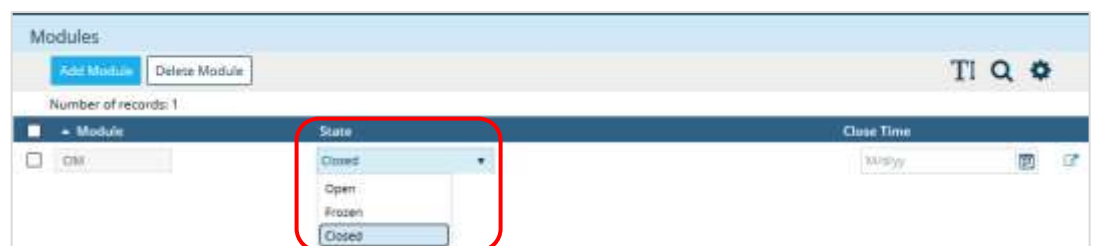
1. Go to **Site Map > Accounting Period** to open the **Period List** page.

2. In **Filters**, set the **Period Type** and **State** fields to retrieve the period you want to close.

3. Click **Retrieve**.

4. In the results, click the link in the **ID** column for the period you want to close.

5. In the **Period List > Accounting Page**, click **Edit**.

6. If **CIM** isn't already listed in the **Modules** section, click **Add Module**. (Because the CIM is currently the only module that can be left open when the period is closed, it alone appears in the list.)

7. In the **State** dropdown, select **Closed**.

8. Click **Save** to return to the **Period List** page.

9. You can now close the accounting period while the CIM remains open. Select the checkbox of the period you want to close, then click the **Close** button.

Note: Sometimes, an **Effective State** column is available. If so, the period will now be listed as **Closed (Open)** as long as the CIM remains open while the period is closed.

While CIM remains open, you can do the following:

*   Import/resolve explicit claims

*   Import payments

*   Run certain jobs

*   Make adjustments

*   Make payments and miscellaneous deletions/modifications (such as comments)

*   Make payments
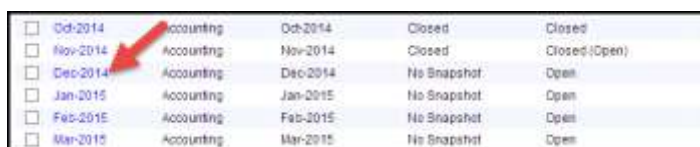
Closing a Module and Accounting Period

This procedure assumes that the Channel Incentive Module (CIM) was left open while the accounting period was closed, as described in

Accounting Period Leaving CIM Open. When you finish posting all incentives for the period, use the following procedure to close CIM and finish closing the accounting period.
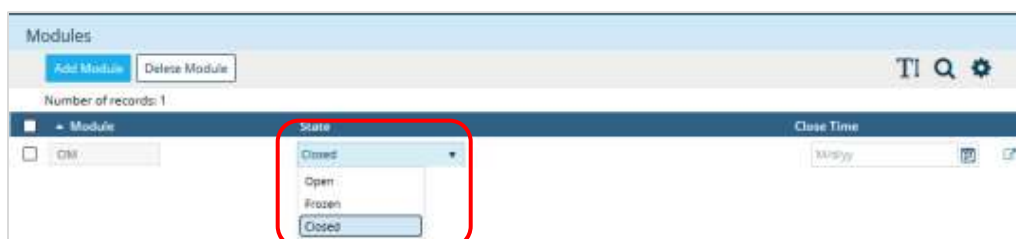
To close CIM after all the claims have been received:

1. Go to **Site Map > Administration > Accounting Period** to open the **Period List** page (or use the report created by your Entomo Professional Services team).

2. Set filters as needed to locate the period that contains the CIM you want to close, then click **Retrieve**.

3. In the results, click the link for the period you want to close.

4. In the **Period List > Accounting** page, click **Edit**.

5. In the **Modules** section, select **CIM**.

6. In the **State** dropdown, select **Closed**.

7. In the **Close Time** field, enter/select a date for the closure.

8. Click **Save**.

Chapter 14 | POS

In SmartHub, the Point of Sales (POS) module provides access to information (such as point-of-sale transactions and forecast data) submitted to SmartHub by your partners/distributors. Typically, incoming data is processed automatically, either upon receipt or at scheduled intervals. Portions of the data, such as reported item and reported customers, can then be resolved to master values in SmartHub. Data can also be enhanced per your specifications. For more information, see Resolve POS Transactions.

The POS module also provides analytic capabilities. While the POS page provides a view of large amounts of data, the POS Analytics page allows you to focus on more specific dimensions of the data and to create informative charts and graphs based on those dimensions. For more information, see About the POS Analytics Page.

For a tour of an analytic page, see Analytic Page Navigation. For an example, see About Analytic Pages.

In general, your Entomo Professional Services team will configure and schedule POS jobs that automatically resolve and analyze your data for you. POS data can be viewed and managed in the following pages:

- About the POS Page

- About the POS Analytics Page

About the POS Page

It's likely that your Entomo Professional Services team created a version of the POS page as a POS report, with filters configured specifically for your company, accessible from your favorites pane. For a description of the filters in your company-specific reports, consult your implementation guide. The following fields are a sample of the more frequently used filters on the **POS** page.

POS Page – Filters

- **Acctng. Prd. From/To** – Retrieve transactions based on a range of accounting periods. A transaction belongs to an accounting period based on its accounting date.

- **Acctng. Date From/To** – Retrieve transactions based on a range of accounting dates.

- **Trans. Prd. From/To** – Retrieve transactions based on a range of transaction periods. The period a transaction belongs in is determined by its transaction date.

- **Trans. Date From/To** – Retrieve transactions based on a range of transaction dates.

- **Imported From/To** – Retrieve transactions based on the date they were imported into SmartHub.

- **Trans. Type** – Retrieve data based on the transaction types defined for your company. Leave the field blank to retrieve all.

- **Trans. Status** – Retrieve transactions based on whether they are open or closed. Leave the filter blank to retrieve all transactions regardless of status.

- **Unmapped Trans.** – Click the magnifying glass icon to select one or more rule templates to retrieve transactions that are not yet resolved for the selected rule templates.

- **Mapped Trans.** – Click the magnifying glass icon to select one or more rule templates to retrieve transactions that were resolved using those rule templates.

- **Trans. Number** – Retrieve transactions by entering one or more transaction numbers, separated by commas.

- **Partner** – Retrieve transactions according to partner or distributor name.

- **Partner Channel Type** – Retrieve transactions based on channel type (such as distributor or reseller), or leave the field blank to retrieve all channel types.

- **Sponsor Item (Rpt./Res.)** – Select an item number from the item master or enter an item number to retrieve only the transactions that contain the selected item number as either reported or resolved.

- **Eff. Mod. Time** – Retrieve transactions based on a range of dates when the transactions were last modified.

POS Page – Actions

Typically, many of these functions are built into automated jobs by your Entomo Professional Services team; however, they are available to those with the proper permissions when manual processing is needed.

- **Retrieve** – Return records based on the parameters you set in **Filters**.

- **Delete** – Delete any selected transaction (checkbox is selected).

- **Open** – Open a transaction so it can be updated, either manually or through analysis.

- **Close** – Close a transaction so no further updates can be made to it.

- **Adjust Commission** – Open the **Adjust Commissions** page so you can modify any selected transaction (checkbox is selected).

- **Hide** – Temporarily hide selected transactions so you can retrieve data without them. For more information, see About Hidden Records.

- **Unhide** – Make hidden transactions available again for retrieval. For more information, see About Hidden Records.

- **Sales Credit Assignment** – Open a dialog so you can assign/remove a sales credits and run a new analysis for the transactions you selected in the **POS** page.

- **Resolve** – Run the resolution process. For more information, see Resolve POS Transactions.

- **Create Map** – Open the **Pattern Map** page, so you can create a new pattern map.

- **Make Adjustments** – Open the **POS Adjustment** page where you can modify status, dates, quantities, etc. for any transactions selected in the **POS** page. Only open transactions can be adjusted. For instructions, see Adjusting POS Transactions.

- **Job Status** – Open the **Job History** page so you can see the current status of any POS-related jobs.

- **Export** – Export the currently retrieved data.

- **Save Report -** Open the **Create a New Report** dialog, where you can save your filter settings and page configuration to your favorites pane and/or associate a favorite group to the report.

- **Bulk Edit** – Open the **Bulk Edit** dialog so you can modify multiple transactions at the same time.

About Resolutions

During a POS or inventory resolution job, one or more predefined rules (sometimes referred to as rule templates, pattern maps, and enrichment scripts) are applied to your transactional data to enrich and resolve it.

- Data resolution involves converting the data reported by your partners (such as customer names, item numbers, and countries) into values that conform to your customer, item, and country master files in SmartHub.

  For example, a partner might report an outdated part number as "12345ABCD". Because the outdated part number is not in the item master, a pattern map can be created that maps "12345ABCD" to the current part number "XYZ12345" to ensure that SmartHub records the correct item number with the proper transaction.

- Data enrichment depends on the needs of your company. For example, if your company uses week-ending dates, an enrichment script can be created to automatically populate them.

The resolution and enrichment rules that are applied during a resolution job are created by your Entomo Professional Services team to specifically meet the needs of your company. Resolution jobs can be scheduled to run automatically or they can be run on-demand.

With the proper permission, you can also use the **Resolve** button on the **POS** page to select and run specific rule templates on specific transactions. For more information, see [Resolve POS Transactions](#).

About Valuations

A POS resolution job is usually followed by a POS valuation job that associates predefined costs and prices to individual transactions. Usually, your Entomo Professional Services team will include a valuation job as part of a string of jobs that begin with a resolution process, but a valuation job can also be run automatically (as an event) or on-demand.

With the proper permissions, a valuation can be run when you click the **Analyze** button on a **POS** page or report based on that page, or on a **POS Analytics** page or report based on that page. You can set the source of these costs/prices to be transaction unit price (the price reported by your

partners/distributors), price book, or sponsor sales using the first-in, first-out (FIFO) methodology.

The **Analyze** button won't work on closed transactions. The valuation process can be repeated as many times as needed, which allows for updates to sponsor sales or the price book.

Run a Valuation Manually

To run a valuation manually:

1. Go to **Site Map > Sales > POS** or open the POS report configured for you by your Entomo Professional Sales team in your favorites pane.

   You can also run a valuation from the **POS Analytics** page or a configured analytics report.

2. Use the **Filters** section to specify item numbers, partners, or time periods that will retrieve the transactions you want to value. (Skip to the next step if you are using report with pre-defined filters.)

3. Click **Retrieve**.

4. Click **Analyze**.

5. In the **Values to Update** dialog, select an option to update costs, prices, or both.

6. In the **Valuation Source** section, select the option that you want to use as the source:

   o **Sponsor Sale FIFO** – This option matches sponsor sale records to POS transactions using the resolved item numbers and transaction dates to determine matches. POS transactions can then be valued using the price provided on the sponsor sale transaction.

   o **Price Book** – This option assigns prices by matching resolved item numbers to price book records. If validity dates are specified in the price book, they will be used to match POS transaction dates.

7. In the **Job Options** section, select one of the following options based on when you want the job to run:

   o **Run (Always run job)** – The valuation job will start immediately after you click **OK**.

   o **Next (Queue job after last currently running instance)** – The valuation job will run after any currently queued jobs of the same job type.

   o **Last (Queue job after last currently running job)** – The valuation job will run after all other currently queued and running jobs are complete, including import jobs.

   o **Skip (Skip job if already running)** – If a currently running job is the same job type as the one you are attempting to set up, this new job will be canceled.

8. Click **OK**.

About Resolve vs. Analyze

In SmartHub, three processes are important to understand: resolve, analyze, and unmap. Even though the resolve and analyze actions are sometimes used interchangeably, they have specific meanings:

- *Resolve* refers to the application of rules to your reported data to make your data more uniform for all partners. The goal is to ensure that the data conforms to your master files. For more information, see About Resolutions.

- *Analysis* refers to the algorithms that a specific module runs based on "analyzing" multiple transactions and types of transactions simultaneously. The output of an analysis is usually meta-data that can be found in an analytic page. For example, the IRM uses POS, Inventory, Sponsor Sales, In-transits, RMAs, etc. in its analysis. The results of the analysis are inventory reconciliation records, which can be viewed in summary form via a configured report. For more information, see Configuring an Analytic Page.

- *Unmap* refers to the process of undoing the results of a resolution or analysis action.

Typically, your Professional Services team will create several resolver reports configured specifically for your company, such as:

- POS Resolver Report

- Inventory Resolver Report

About Quick Audits

Typically, your Entomo Professional Services team creates for your company a set of quick audit reports for POS and inventory that will allow you to do a sanity check to ensure that all records are correctly imported into SmartHub. Quick audits are particularly useful for validating files submitted by partners who occasionally modify formats and content in unexpected ways that result in omissions and misinterpretations.

The audit numbers in the quick audit reports are identified according to distributor and import file name with the number of transactions, quantities, and the reported net extended cost, if applicable. To confirm the accuracy of this data, validate these numbers against the numbers in the raw files.

To run a quick audit, open the report designated by your Entomo Professional Service team in your favorites pane, then click **Retrieve**.

To check for errors in the import history, see Integration History.

Find a Transaction

To view POS (transactional/sales) data:

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1. Go to **Site Map > Sales > POS** or open the POS report configured for you by your Entomo Professional Sales team in your favorites pane.

2. Use the **Filters** section to specify item numbers, partners, or time periods that will retrieve the transactions you want. (Skip to the next step if you are using report with pre-defined filters.)

3. Click **Retrieve**.

For instructions about creating and modifying reports, see Creating and Saving Reports.

About Hidden Records

POS, inventory, and sponsor sales transactions can be imported as hidden records. The files that contain these transactions appear in the import history, but the transactions remain hidden until specifically unhidden. Your Entomo Professional Services team can create and schedule an unhide job for you. Records can also be manually unhidden, outside of normally scheduled events.

You can set up an unhide job to run for any or all distributors, based on what your company needs. A job that unhides records is usually run before a resolution job.

If it makes sense for your company, your Entomo Professional Services team can also configure a variety of sell-through and inventory management reports that allow you to view hidden records.

Include Hidden Records in a Report

The **POS** and **Inventory** pages usually provide a filter (labeled something like **Hidden?**) that allows you to see hidden records and include them in a report.

To include hidden records in a POS report:

1. Go to **Site Map > Sales > POS** or open the POS report configured for you by your Entomo Professional Sales team in your favorites pane.

2. In the **Filters** section, set the **Hidden?** field to one of the following options:
   o **Yes** – The results will show only hidden data.
   o **No** – The results will show only data that is not hidden.
   o **Blank** – The results will show both hidden and unhidden data.

3. Click **Retrieve**.
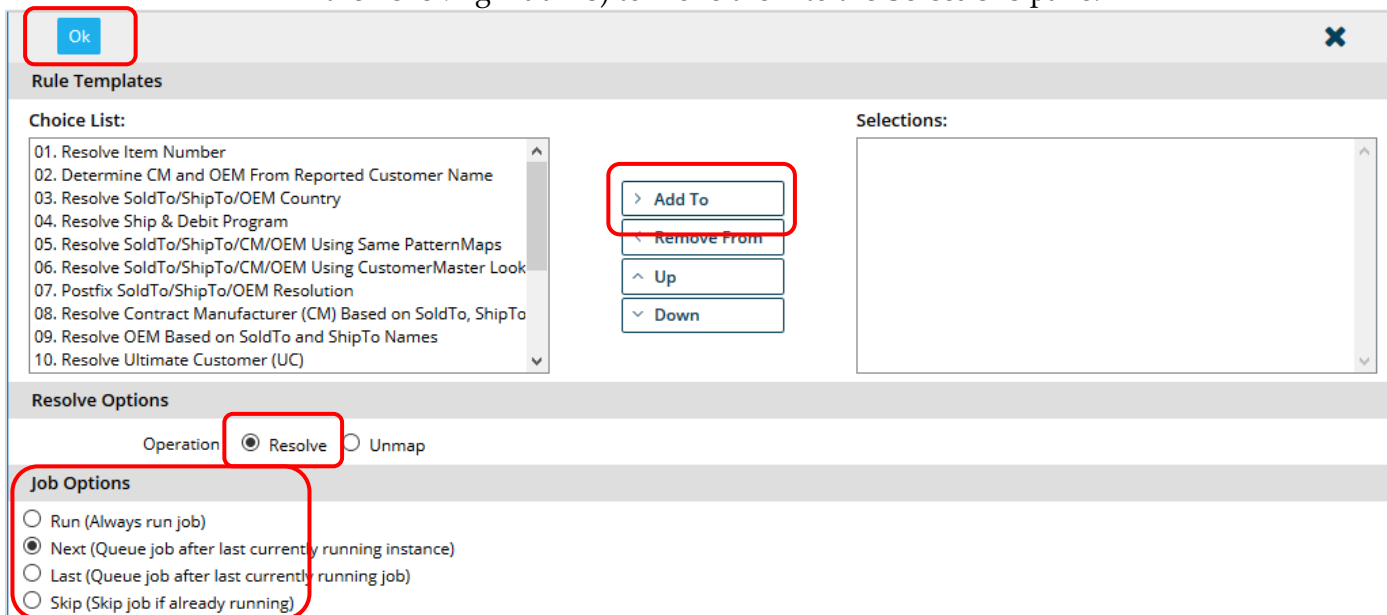
Resolve POS Transactions

In general, your Entomo Professional Services team will configure POS jobs that automatically resolve your data for you on a schedule (for example, once a day, or once a month); however, with the proper permissions, you can also run a resolution process manually.

For example, if a file is received shortly after a scheduled resolution job, you might not want to wait 23 hours until the next automated resolution job is run, so you do a manual resolution. For more information, see About Resolutions. Note that you can also run an off-schedule resolution job from the Job Templates page.

To manually resolve POS transactions:

1. Go to **Site Map > Sales > POS** or open the POS resolver report (in your favorites pane) that was configured by your Entomo Professional Sales team.

2. Use the **Filters** section to locate the transactions that you want to manually resolve.

3. Click **Retrieve**.

4. If you don't want to resolve all of the transactions in the results, select the checkboxes of the lines you want to resolve.

5. Click **Resolve** to open the **Rule Templates** dialog.

6. In the dialog, move the rules that you want to apply during the resolution process by double-clicking them (or highlighting them, then clicking **Add To**) to move them to the **Selections** pane.

7. In the **Resolve Options** section, ensure that **Resolve** is selected.

8. In the **Job Options** section, set the timing of the resolution by selecting one of the following options. These options are the same as the options used in the **Job Templates** page. For more information, see Run a Job.

    o **Run (Always run job)** – The resolution job will start immediately after you click **OK**.

o **Next (Queue job after last currently running instance)** – This resolution job will run after any currently queued jobs of the same job type.

o **Last (Queue job after last currently running job)** – This resolution job will run after all other currently queued and running jobs are complete, including import jobs.

o **Skip (Skip job if already running)** – If a currently running job is the same job type as the one you are attempting to set up, this new job will be canceled.

9. When you finish making your selections, click **OK** to close the **Job Templates** dialog and resolve the transactions. The resolver runs as a background job.

To check the status, click the **Job Status** button or go to the **Job History** page. For more information, see About Job History.

If the results show unmatched transactions, see Resolve Unmatched POS Transactions.

Resolve Unmatched POS Transactions

Unmatched transactions are the result of a resolution process, and they can occur for a variety of reasons, such as receiving additional data after a resolution job, receiving data that doesn't match the master files, or receiving data that is invalid (for example, icons were used instead of numbers). It is advised that you work with your Entomo Professional Services team to determine how to best handle these transactions.

The best practice for updating the item and company master data in SmartHub is to use periodic, automatic feeds. This allows your company to control the data and ensure the accuracy of the data in SmartHub without human intervention. However, with the proper permissions, you can add and modify data in the SmartHub item master and company master.

To manually resolve an unmatched POS transaction:

1. Go to **Site Map > Sales > POS** or open the POS resolver report (in your favorites pane) that was configured by your Entomo Professional Sales team.

2. In the **Filters** section, click the magnifying glass icon on the **Unmapped Trans** field. (Skip to the next step if you are using report with pre-defined filters.)

   This opens the **Select Unmapped Fields** dialog.

   NOTE: The use here of the term "unmapped" actually means "unmatched." Don't get it confused with the term "unmap," which is the reversal of a resolution or analysis action. For more information, see About Resolve vs. Analyze.

3. In the **Select Unmapped Fields** dialog, double-click the types of unmatched transactions you want to retrieve.

   Double-clicking is the same as highlighting an item, then clicking **Add To** to move it to the **Selections** pane. (Mapping types are configured specifically for your company, so your list might be different than shown below.)

4. When you are finished selecting unmapped types, click **OK** to return to the **POS** page.

5. Review the results to determine how to proceed. You might need to switch to a different procedure instead of continuing with this procedure. For example, you might need to create a new pattern map to link a reported value to the value in the master files, or you might need to update the master files. A variety of solutions are possible.

6. Click **Resolve** to open the **Rule Templates** dialog.

7. In the **Rule Templates** dialog, move the rules that you want to apply during the resolution process by double-clicking them (or highlighting them, then clicking **Add To**) to move them to the **Selections** pane.

8. In the **Resolve Options** section, ensure that **Resolve** is selected.

9. In the **Job Options** section, set the timing of the resolution by selecting one of the following options. These options are the same as the options used in the **Job Templates** page. For more information, see Run a Job.

   o **Run (Always run job)** – The resolution job will start immediately after you click **OK**.

   o **Next (Queue job after last currently running instance)** – This resolution job will run after any currently queued jobs of the same job type.

   o **Last (Queue job after last currently running job)** – This resolution job will run after all other currently queued and running jobs are complete, including import jobs.

   o **Skip (Skip job if already running)** – If a currently running job is the same job type as the one you are attempting to set up, this new job will be canceled.

10. When you finish making your selections, click **OK** to close the **Job Templates** dialog. The resolver will run at the time you selected and the newly resolved transactions will be posted to the **Job History** page. For more information, see About Job History.

Note that the **POS** page will not be automatically updated. To check the status of the transactions that you hoped to resolve, reset the filters on the **POS** page to find those specific transactions (and clear the **Unmapped Trans** filter), the click **Retrieve** again.
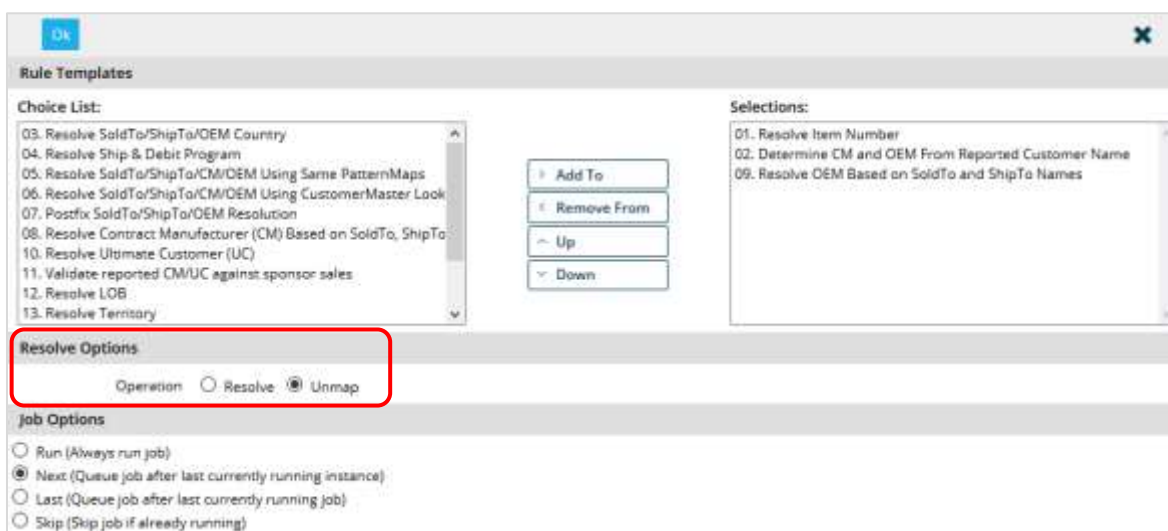
Reverse a Resolution Job

It's possible to undo a POS resolution job using the **Unmap** option from the **POS** page. In this context, unmap refers to the process of reversing

the results of a resolution action, which disassociates reported values from the master files.

To reverse a resolution process:

1. Go to **Site Map > Sales > POS** or open the POS resolver report (in your favorites pane) that was configured by your Entomo Professional Sales team.

2. Use the **Filters** section to locate the transactions that you want to manually unmap.

3. Click **Retrieve**.

4. In the results, select the checkboxes of the lines you want to unmap or select the checkbox for all lines.

5. Click **Resolve** to open the **Rule Templates** dialog.

6. In the dialog, move the rules that you want to reverse by moving them to the **Selections** pane (double-click or highlighting them, then click **Add To**).

7. In the **Resolve Options** section, select **Unmap**.

8. In the **Job Options** section, set the timing of the resolution by selecting one of the following options.

   o **Run (Always run job)** – The unmap job will start immediately after you click **OK**.

   o **Next (Queue job after last currently running instance)** – The unmap job will run after any currently queued jobs of the same job type.

   o **Last (Queue job after last currently running job)** – The unmap job will run after all other currently queued and running jobs are complete, including import jobs.

       o   **Skip (Skip job if already running)** – If a currently running job is the same job type as the one you are attempting to set up, this new job will be canceled.

9. When you finish making your selections, click **OK** to close the **Job Templates** dialog and reverse the transactions. The reversed transactions will now appear in the **Job History** page.

Delete POS Transactions

With the proper permissions, it's possible to delete transactions, but caution is advised because it's easy to delete transactions that you don't recognize, only to realize later that they shouldn't have been deleted. The best practice is to contact your Entomo Professional Services team to delete transactions so they can properly research the need for deletion.

Transactions cannot be deleted if they are in a closed period or if they are referenced by other SmartHub modules.

To delete POS transactions:

1. Go to **Site Map > Sales > POS** or open the POS report (in your favorites pane) that was configured by your Entomo Professional Sales team.

2. Use the **Filters** section to locate the transactions that you want to delete.

3. Only transactions in an open accounting period can be deleted.

4. If your company uses split records, be sure to set the **Split Records** field to **No**.

5. Click **Retrieve**.

6. In the results, select the checkboxes of the lines you want to remove, then click **Delete**.

The transactions are removed from SmartHub.

Adjust Commissions

If your company uses SmartHub to track commissions, you can use the POS page to add, delete, or modify commissions for transactions in any open accounting period.

To adjust commissions:

1. Go to **Site Map > Sales > POS** or open the POS report (in your favorites pane) that was configured by your Entomo Professional Sales team.

2. Use the **Filters** section to locate the transactions that contain the commissions that you want to adjust. (Using this procedure on transactions without commissions will result in an error.)

3. Click **Retrieve**.

4. Select the checkbox of the transaction you want to adjust, then click **Adjust Commissions** to open the **POS > Adjustments** page.

5. Click Adjust**? Yes** to make the transaction editable.

6. Do one of the following to make adjustments:

   o **Delete** – Select the line that you want to delete, then click **Remove Slot**.

   o **Add** – Click **Add Slot** to add a new commission level, then fill in the fields to define the new level.

   o **Modify** – Select the line you want to modify, then click **Edit** and make the necessary changes.

7. When you're finished, click **Save**.

Adjusting POS Transactions

Adjustments are often needed to compensate for things like loss, breakage, and getting products unexpectedly from another partner. Generally, such adjustments are handled by a reconciliation, but it's also possible to make adjustments in the POS page.

To manually adjust POS transactions:

1. Go to **Site Map > Sales > POS** or open the POS report (in your favorites pane) that was configured by your Entomo Professional Sales team.

2. Use the **Filters** section to locate the transactions you want to adjust.

3. Click **Retrieve**.

4. Click **Make Adjustments** to open the **POS Adjustment** page.

5. In the **Convert To** field, select the proper adjustment type, then click **Save**.

6. Perform a reconciliation to apply the adjusted transactions.

For instructions about how to do a resolution, see About Resolutions.

For information about how to transfer inventory records, see About Transfers.

Edit Transactions in Bulk

The ability to edit in bulk is possible in SmartHub, but it is individually configured per company, and only upon request. Bulk editing is configured for specific data points, and it requires proper permissions.

If large-scale changes are needed for incoming data, your Entomo Professional Services team will usually either create a script to match reported values to master values upon resolution, or they will request a fresh, corrected file from you instead of making manual changes in SmartHub. However, bulk editing might be the preferred solution when changes are needed infrequently for a specific data point that might involve just a handful of distributors.

Work with your Entomo Professional Services team to provide specific instructions for your company. The following instructions are very general.

To edit in bulk:
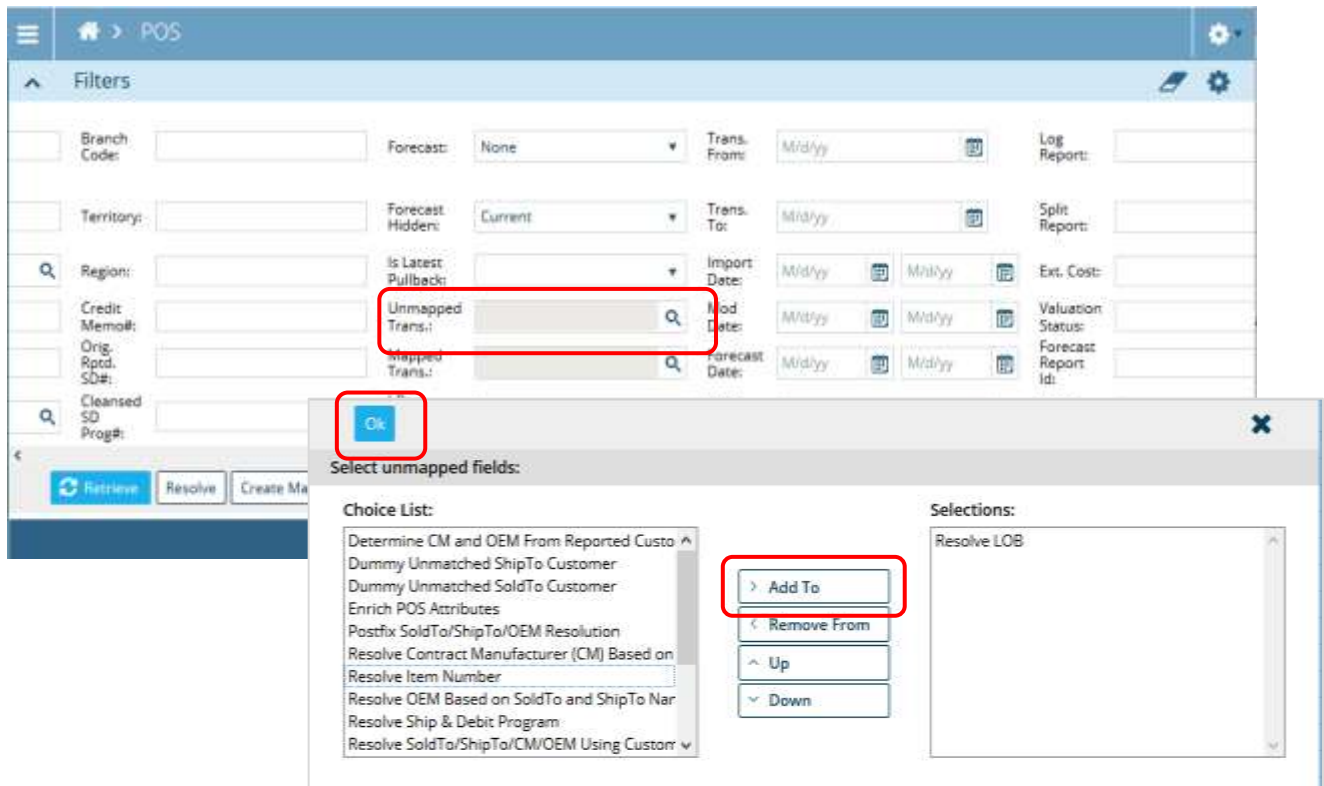
1. Go to **Site Map > Sales > POS** or open the POS report (in your favorites pane) that was configured by your Entomo Professional Sales team.
2. Use the **Filters** section to locate the transactions you want to edit.
3. Click **Retrieve**.
4. In the results, select the checkboxes of the transactions that need to be edited, then click **Bulk Edit**.
5. Enter the value that will be added to, or modified in, the selected transactions.
6. Add a comment.
7. Click **Apply** (to save but keep making changes) or **Apply and Save** (to save and exit).
8. The updates will need to be resolved. Select the updated transactions by clicking **Select All Bulk Edit Rows**, then click **Resolve**.
9. In the **Rules Templates** dialog, select the necessary rules.

   Unless you know exactly what rules need to be run for the bulk edits, it's best to run all the rules.
10. Click **Add To**.
11. Ensure that the **Resolve** option is selected.
12. Click **OK**.

Opening and Closing Transactions

With the proper permissions, individual transactions can be opened and closed using the **Open** and **Close** buttons on the **POS** page or in any report created from the **POS** page. Closing a transaction locks it and prevents the transaction from being updated, for example, by resolution rules or by commission updates in an open accounting period.

Closing an individual transaction assures that the transaction will not be changed if its accounting period is reopened.

A closed transaction can be reopened for additional updates by clicking the **Open** button as long as its associated accounting period is open.
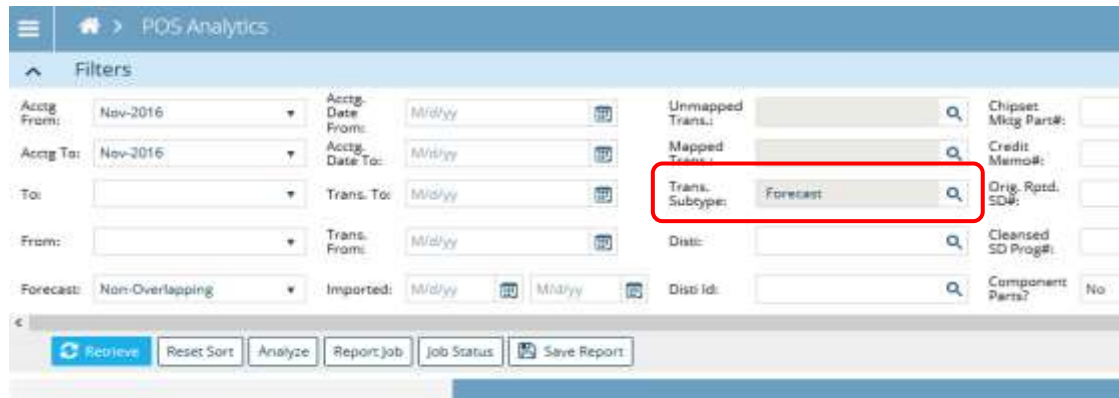
For more information about opening and closing transactions, contact your Entomo Professional Services team.

About Forecasting

The forecasting feature in SmartHub allows you to consolidate and analyze future sales and inventory projections from your partners/distributors. When forecast data is imported into SmartHub

(usually weekly), older forecast data is hidden so you analyze only the newest data.

Your Entomo Professional Services team will work with you to configure forecasting reports specific to your company's needs. Working with forecast data is the same as working with POS data except that **To/From** filters are set to a future date and the **POS Subtype** filter is set to **Forecast**. You can perform both resolutions and valuations on forecast data.

If your company is using the forecast feature, some or all of the following filters and reports might be used:

- **Unhide Report –** When forecast files are imported, the transactions are hidden. Your Entomo Professional Services team can configure a job called something like "Run Unhide" to set the most recent forecast import to be unhidden and all others to hidden.

- **POS Hidden Filter** has the following options:
    o **Current –** Retrieves the most recent forecast data received.
    o **Previous –** Retrieves all but the most recent forecast data.
    o **Both –** Retrieve all forecast data.

- **Forecast Filter** has the following options. Selecting **None** or **All** can improve processing performance:
    o **Non-Overlapping –** Compares POS to forecast transactions and removes any transaction that might have been reported as a forecast transaction but actually happened, leaving only forecast data.
    o **None –** Retrieves no forecast data.
    o **All –** Retrieves all data, including overlapping forecast data.

- **Forecast Report ID –** Each set of forecast records imported from a partner is called a *forecast report.* This filter retrieves a set of forecast records according to the ID number assigned the set. (Individual

forecast records are retrieved using a regular transaction ID number, the same as non-forecast records.)

About the POS Analytics Page

The following filters and actions are available on the **POS Analytics** page and reports based on this page. For information about setting up an analytic page, see Configuring an Analytic Page.

POS Analytics – Filters

- **Acctng. Prd. From/To** – Retrieve transactions according to an accounting period. A transaction belongs to an accounting period based on its accounting date.

- **Acctng. Date From/To** – Retrieve transactions based on a range of accounting dates.

- **Trans. Prd. From/To** – Retrieve transactions according to transaction period. The period a transaction belongs in is determined by its transaction date.

- **Trans. Date From/To** – Retrieve transactions based on a range of transaction dates.

- **Imported From/To** – Retrieve transactions based on the date they were imported into SmartHub.

- **Trans. Subtype** – Retrieve data based on the transaction subtypes defined for your company. Leave the field blank to retrieve all.

- **Convert To** – Select the currency you want to see.

- **Trans. Status** – Retrieve transactions based on whether they are open or closed. Leave the filter blank to retrieve all transactions regardless of status.

- **Unmapped Trans**. – Click the magnifying glass icon to select one or more rule templates to retrieve transactions that are not yet resolved for the selected rule templates.

- **Mapped Trans.** – Click the magnifying glass icon to select one or more rule templates to retrieve transactions that were resolved using those rule templates.

- **Trans. Number** – Retrieve transactions by entering one or more transaction numbers, separated by commas.

- **Partner** – Retrieve transactions according to partner or distributor name.

- **Partner Channel Type** – Retrieve transactions based on channel type (such as distributor or reseller), or leave the field blank to retrieve all channel types.

- **Sponsor Item (Rpt./Res.)** – Select an item number from the item master or enter an item number to retrieve only the transactions that contain the selected item number as either reported or resolved.

- **Show Period Details** – Display retrieved data by period, at a specified interval (such as weekly, quarterly, etc.). Leave the option blank to see a total only.

- **Display** – Change the format of the retrieved data between a results table only, a chart only, or both.

- **Drill Down Report** – Select a report from the dropdown list to designate that report as the target report when the **View Details** button is selected.

POS Analytics – Actions

- **Retrieve** – Return records based on the parameters you set in **Filters**.

- **Reset Sort** – Clear the current sort logic and resets it to the default ascending sort order on the first column set as the basis for the aggregation. For more information about sorting, see Sorting in Analytic Pages.

- **Analyze** – Open the **Values to Update** dialog, where you can define a valuation job. For more information, see About Valuations.

- **Report Job** – Open the **Create a New Report** dialog to save a new report. For more information, see Saving and Creating Reports.

- **Job Status** – Open the **Job History** page as a dialog so you can refer to the list of jobs while staying in the **POS Analytics** page.

- **View Details** – For selected rows (or retrieved rows, if no rows are selected), show the underlying transactions that use the report designated in the **Drill Down Report** field in the **Filters** section.

- **Export** – Export the data in the active results table.

- **Draw** – Update all displayed charts without having to retrieve data again.

- **Save Report** – Open the **Create a New Report** dialog, where you can save your filter settings and page configuration to your favorites pane and/or associate a favorite group to the report. For more information, see Saving and Creating Reports.

Chapter 15 | Inventory

The **Inventory**, **Inventory Analytics, Inventory Reconciler**, and **Inventory Reconciliation Summary** pages work together to allow you to manage and create reports based on the inventory data that is submitted to SmartHub by your company and your partners/distributors. SmartHub calculates your period end inventory by gathering data about

partner beginning inventory, sponsor sales/returns, partner sales/returns, and last reported inventory.

Like POS data, inventory data is processed automatically, either upon receipt or at scheduled intervals. For inventory, the value most often resolved is the reported item number, which is matched to products in the item master or to values indicated through pattern maps. Data can also be enhanced per your specifications. For more information, see Resolve Inventory Records.

In general, your Entomo Professional Services team will configure and schedule inventory jobs that automatically resolve and analyze your data for you.

Inventory data can be viewed and managed in the following pages:

- About the Inventory Page
- About the Inventory Reconciler Page
- About the Inventory Reconciliation Summary

About the Inventory Page

It's likely that your Entomo Professional Services team created a version of the **Inventory** page as a report, with filters configured specifically for your company, accessible from your favorites pane. For a description of the filters in your company-specific reports, consult your implementation guide. The following fields are a sample of the more frequently used filters.

Inventory Page – Filters

- **From/To –** Retrieve inventory records by accounting period. A transaction belongs to an accounting period based on its inventory date.

- **Trans. From/To –** Retrieve inventory records based on a range of dates.

- **Imported From/To –** Retrieve inventory records based on a range of dates that they were imported into the system.

- **Convert To –** Select the currency you want to see.

- **Trans. Status –** Retrieve inventory records based on whether the associated transaction is open or closed. Leave the filter blank to retrieve all transactions regardless of status.

- **Unmapped Trans**. **–** Click the magnifying glass icon to select one or more rule templates to retrieve transactions that are not yet resolved for those rule templates.

- **Mapped Trans.** – Click the magnifying glass icon to select one or more rule templates to retrieve inventory records that were resolved using those rule templates.

- **Trans. Number** – Retrieve inventory records by entering one or more transaction numbers, separated by commas.

- **Partner** – Retrieve inventory records according to partner or distributor name.

- **Sponsor Item (Rpt./Res.)** – Select an item number from the item master or enter an item number to retrieve only the transactions that contain the selected item number as either reported or resolved.

- **Eff. Mod. Time** – Retrieve inventory records based on a range of dates when the transactions were last modified.

- **Inv**. **Report** – Retrieve inventory records based on whether they were received first or last, and based on the arrival time or report date. Select all to retrieve all inventory records without considering their arrival time or report dates.

Inventory Page – Actions

Typically, many of these functions are built into automated jobs by your Entomo Professional Services team; however, they are available to those with the proper permissions when manual processing is needed.

- **Retrieve** –Return inventory records based on the parameters you set in **Filters**.

- **Delete** – Delete any selected inventory record (checkbox is selected).

- **Open** – Open an inventory record so it can be updated, either manually or through analysis.

- **Close** – Close a record so no further updates can be made to it.

- **Hide** – Temporarily hide selected records so you can retrieve data without them. For more information, see About Hidden Records.

- **Unhide** – Make hidden transactions available again for retrieval. For more information, see About Hidden Records.

- **Resolve** – Run the resolution process. For more information, see Resolve POS Transactions.

- **Create Map** – Open the **Pattern Map** page, so you can create a new pattern map.

- **Make Adjustments** – Open the **POS Adjustment** page where you can modify status, dates, quantities, etc. for any transactions selected in the POS page. Only open transactions can be adjusted.

- **Analyze** – Open the **Values to Update** dialog, where you can define a valuation job. For more information, see About Valuations.

- **Job Status** – Open the **Job History** page so you can see the current status of any inventory-related jobs.

- **View FIFO** – Open the **FIFO Logs (Inventory)** dialog, where you can view the invoices used for valuation.

- **Export** – Export the currently retrieved data.

- **Save Report** - Open the **Create a New Report** dialog, where you can save your filter settings and page configuration to your favorites pane and/or associate a favorite group to the report.

About Inventory Resolution

The resolution process for inventory data is the same as for POS data. For more information, see About Resolutions. For instructions about resolving inventory manually, see Resolve Inventory Records.

About Inventory Valuation

The valuation process for inventory data is the same as for POS data. For more information, see About Valuations. For instructions about running a manual valuation, see Run a Valuation Manually.

Find an Inventory Record

To view inventory data:

1. Go to **Site Map > Inventory > Inventory** or open the inventory report configured for you by your Entomo Professional Sales team in your favorites pane.
2. Use the **Filters** section to specify item numbers, partners, or time periods that will retrieve the record you want. (Skip to the next step if you are using report with pre-defined filters.)
3. Click **Retrieve**.

For instructions about creating and modifying reports, see Saving and Creating Reports.
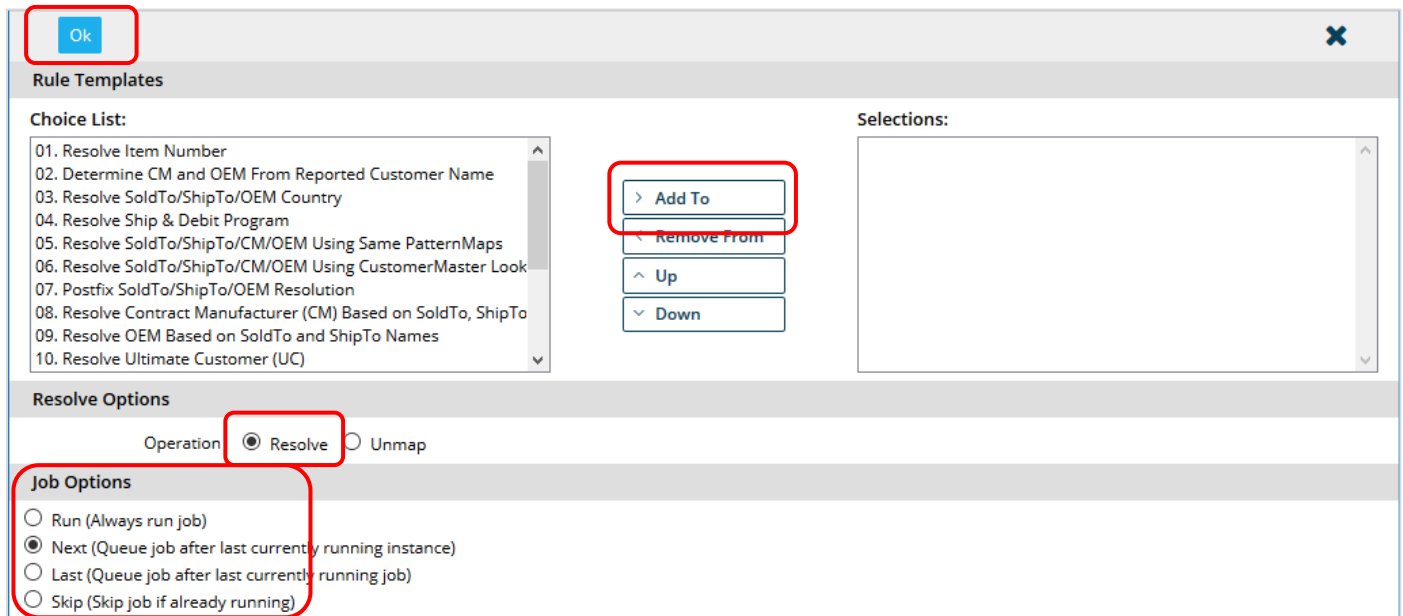
Resolve Inventory Records

In general, your Entomo Professional Services team will configure inventory resolution jobs that automatically resolve your data on a schedule (for example, once a day, or once a month); however, with the proper permissions, you can also run a resolution process manually. Note that you can also run a manual resolution job from the Job Templates page.

To manually resolve inventory records:

1. Go to **Site Map > Inventory > Inventory** or open the inventory resolver report (in your favorites pane) that was configured by your Entomo Professional Sales team.

2. Use the **Filters** section to locate the inventory records that you want to manually resolve.

3. Click **Retrieve**.

4. In the results, select the checkboxes of the lines you want to resolve or select the checkbox for all lines.

5. Click **Resolve** to open the **Rule Templates** dialog.

6. In the dialog, move the rules that you want to apply during the resolution process by double-clicking them (or highlighting them, then clicking **Add To)** to move them to the **Selections** pane.

7. In the **Resolve Options** section, ensure that **Resolve** is selected.

8. In the **Job Options** section, set the timing of the resolution by selecting one of the following options. These options are the same as the options used in the **Job Templates** page. For more information, see Run a Job.

   o **Run (Always run job)** – The resolution job will start immediately after you click **OK**.

   o **Next (Queue job after last currently running instance)** – This resolution job will run after any currently queued jobs of the same job type.

   o **Last (Queue job after last currently running job)** – This resolution job will run after all other currently queued and running jobs are complete, including import jobs.

   o **Skip (Skip job if already running)** – If a currently running job is the same job type as the one you are attempting to set up, this new job will be canceled.

9. When you finish making your selections, click **OK** to close the **Job Templates** dialog and resolve the transactions. The resolver will run on the selected transactions and the job can be viewed via the **Job History** page. For more information, see About Job History.

If the results show unmatched transactions, see Resolve Unmatched POS Transactions.

Resolve Unmatched Inventory Records

Unmatched inventory records can occur for a variety of reasons, such as receiving additional since the last resolution job, receiving data not currently in the master files, or receiving data that is invalid (for example, icons instead of numbers). It is advised that you work with your Entomo Professional Services team to determine how to best handle these transactions.

The best practice for updating the item and company master data in SmartHub is to use periodic, automatic feeds. This allows your company to control the data and ensure the accuracy of the data in SmartHub without human intervention. However, with the proper permissions, you can add and modify data in the SmartHub item master and company master.

To manually resolve unmatched inventory records:

1. Go to **Site Map > Inventory > Inventory** or open the inventory resolver report (in your favorites pane) that was configured by your Entomo Professional Sales team.

2. In the **Filters** section, click the magnifying glass icon on the **Unmapped Trans** field. (Skip to the next step if you are using report with pre-defined filters.)

   This opens the **Select Unmapped Fields** dialog.

   NOTE: The use here of the term "unmapped" actually means "unmatched." Don't get it confused with the term "unmap," which is the reversal of a resolution or analysis action. For more information, see About Resolve vs. Analyze.

3. In the **Select Unmapped Fields** dialog, double-click the types of unmatched transactions you want to retrieve. Double-clicking is the same as highlighting an item, then clicking **Add To** to move it to the **Selections** pane. (Mapping types are configured specifically for your company, so your list might be different than shown below.)

4. When you are finished selecting unmapped types, click **OK** to return to the **POS** page.

5. Review the results to determine how to proceed. You might need to switch to a different procedure instead of continuing with this procedure. For example, you might need to create a new pattern map to convert a reported value into the format used in the master files, or you might need to update the master files. A variety of solutions are possible.

6. To continue resolving transactions, in the **Filters** section, select the accounting period or date range that contains the unmatched transactions, then click **Retrieve**.

7. In the results, select the checkboxes of the unmatched transactions that you want to resolve, then click **Resolve** to open the **Rule Templates** dialog.

8. In the **Rule Templates** dialog, move the rules that you want to apply during the resolution process by double-clicking them (or highlighting them, then clicking **Add To)** to move them to the **Selections** pane.

9. In the **Resolve Options** section, ensure that **Resolve** is selected.

10. In the **Job Options** section, set the timing of the resolution by selecting one of the following options. These options are the same as the options used in the Job Templates page. For more information, see Run a Job.

    o **Run (Always run job)** – The resolution job will start immediately after you click **OK**.

    o **Next (Queue job after last currently running instance)** – This resolution job will run after any currently queued jobs of the same job type.

    o **Last (Queue job after last currently running job)** – This resolution job will run after all other currently queued and running jobs are complete, including import jobs.

    o **Skip (Skip job if already running)** – If a currently running job is the same job type as the one you are attempting to set up, this new job will be canceled.

11. When you finish making your selections, click **OK** to close the **Job Templates** dialog. The resolver will run at the time you selected and the job can be viewed via the **Job History** page. For more information, see About Job History.

    Note that the **Inventory** page will not be automatically updated. To check the status of the transactions that you hoped to resolve, reset

the filters on the **Inventory** page to find those specific transactions (and clear the **Unmapped Trans** filter), then click **Retrieve** again.

Reverse an Inventory Resolution Job

Reversing an inventory resolution job is the same as reversing a POS resolution. For instructions, see Reverse a Resolution Job, but use the **Inventory** page rather than the **POS** page.

Delete Inventory Records

With the proper permissions, it's possible to delete inventory records, but caution is advised because it's easy to delete records that you don't recognize, only to realize later that they shouldn't have been deleted. The best practice is to contact your Entomo Professional Services team to delete anything so they can properly research the need for deletion.

Inventory records cannot be deleted if they are in a closed period or if they are referenced by other SmartHub modules.

To delete inventory records:

1. Go to **Site Map > Inventory > Inventory** or open the inventory report (in your favorites pane) that was configured by your Entomo Professional Sales team.
2. Use the **Filters** section to locate the records that you want to delete.
3. Records can be deleted only if they are in an open accounting period.
4. If your company uses split records, be sure to set the **Split Records** filter to **No**.
5. Click **Retrieve**.
6. In the results, select the checkboxes of the lines you want to remove, then click **Delete**.

The records are removed.

About Inventory Analytics

The **Inventory Analytics** page allows you to focus on more specific dimensions of the data and create informative charts and graphs based on those dimensions. The analysis process also associates the costs/prices from your price book with each inventory item.

For a tour of an analytic page, see Analytic Page Navigation. For an example, see About Analytic Pages.

It's likely that your Entomo Professional Services team created a version of the **Inventory Analytics** page as a report, with filters configured specifically for your company, accessible from your favorites pane. For a description of the filters in your company-specific reports, consult your implementation guide. The following fields are a sample of the more frequently used filters.

For information about setting up an analytic page, see Configuring an Analytic Page.

Inventory Analytics – Filters

- **From/To** – Retrieve inventory records according by accounting period. A transaction belongs to an accounting period based on its inventory date.

- **Trans. From/To** – Retrieve inventory based on a range of dates.

- **Imported From/To** – Retrieve inventory data based on the date it was imported into SmartHub.

- **Convert To** – Select the currency you want to see.

- **Trans. Status** – Retrieve transactions based on whether they are open or closed. Leave the filter blank to retrieve all transactions regardless of status.

- **Unmapped Trans.** – Click the magnifying glass icon to select one or more rule templates to retrieve unresolved transactions that use those rule templates.

- **Mapped Trans.** – Click the magnifying glass icon to select one or more rule templates to retrieve transactions that were resolved using those rule templates.

- **Trans. Number** – Retrieve transactions by entering one or more transaction numbers, separated by commas.

- **Partner** – Retrieve transactions according to partner or distributor name.

- **Partner Channel Type** – Retrieve transactions based on channel type (such as distributor or reseller), or leave the field blank to retrieve all channel types.

- **Sponsor Item (Rpt./Res.)** – Select an item number from the item master or enter an item number to retrieve only the transactions that contain the selected item number as either reported or resolved.

- **Show Period Details** – Display retrieved data by period, at a specified interval (such as weekly, quarterly, etc.). Leave the option blank to see a total only.

- **Display** – Change the format of the retrieved data between a results table only, a chart only, or both.

- **Drill Down Report** – Select a report from the dropdown list to designate that report as the target report when the **View Details** button is selected.

Inventory Analytics – Actions

- **Retrieve** – Return records based on the parameters you set in **Filters**.

- **Reset Sort** – Clear the current sort logic and resets it to ascending sort order on the first column that is the basis for the aggregation. For more information about sorting, see Sorting in Analytic Pages.

- **Analyze** – Open the **Values to Update** dialog, where you can define a valuation job. For more information, see About Valuations.

- **Report Job** – Open the **Create a New Report** dialog to save a new report. For more information, see Saving and Creating Reports.

- **Job Status** – Open the **Job History** page as a dialog so you can refer to the list of jobs while staying in the **Inventory Analytics** page.

- **View Details** – For selected rows (or retrieved rows, if no rows are selected), show the underlying transactions that use the report designated in the **Drill Down Report** field in the **Filters** section.

- **Export** – Export the data in the active results table.

- **Draw** – Update all displayed charts without having to retrieve data again.

- **Save Report** – Open the **Create a New Report** dialog, where you can save your filter settings and page configuration to your favorites pane and/or associate a favorite group to the report. For more information, see Saving and Creating Reports.

About the Inventory Reconciler Page

The **Inventory Reconciler** page (and any report based on that page) allows you to view and analyze (or reconcile) all of your most recently resolved POS, inventory, sponsor sales, and RMA data in one place. The results table will show one record for each partner-item combination for every item carried by any distributors for the period you select in the **Filters** section. For the reconciler to be up-to-date, you must first resolve and analyze your POS and inventory data. For more information, see Resolve POS Transactions and Resolve Inventory Records. For instructions about how to run a reconciliation, see Reconcile the Inventory.

After you run the reconciler (via the **Analysis** button or scheduled job), you can use the **Inventory Reconciler Summary** page (and any report based on that page) to find discrepancies (or variances) between physical inventory and reported inventory. For more information, see About the Inventory Reconciliation Summary.

It's likely that your Entomo Professional Services team created a version of the **Inventory Reconciliation** page as a report, with filters configured specifically for your company, accessible from your favorites pane. For a description of the filters in your company-specific reports, consult your

implementation guide. The following fields are a sample of the more frequently used filters.

Inv. Reconciler – Filters

- **From/To** – Retrieve inventory records according to accounting period.

- **Audit** – Click the magnifying glass icon to open a dialog where you can select one or more audit types (such as **Adjusted**, **No Adjusted Variance**, or **Unreconciled**) to retrieve inventory records according to status.

- **Partner** – Retrieve inventory records for one or more partners according to name.

- **Partner ID** – Retrieve inventory records for one or more partners according to ID number.

- **Partner Type** – Retrieve inventory records according to type, such as **Sell-In** or **All Indirect**.

- **Item ID** – Retrieve inventory records according to item number.

- **Item Type** – Retrieve inventory records for one or more items by type.

- **Display** – Select an option to display results as a table, a chart, or both.

- **POS Report** – Select the POS report that has the format you'd like to see when you click the **View POS** button. The dropdown will list all of the reports configured from the default **POS** page.

- **Inventory Report –** Select the inventory report that has the format you'd like to see when you click the **View Inventory** button. The dropdown will list all of the reports configured from the default **Inventory** page.

- **Log Report –** Select the FIFO log report that has the format you'd like to see when you click the **View FIFO** button. The dropdown will list all of the reports configured from the default **FIFO Log** page.

- **Sponsor Sale Report –** Select the sponsor sales report that has the format you'd like to see when you click the **View Sponsor Sale** button. The dropdown will list all of the reports configured from the default **Sponsor Sales** page.

Inv. Reconciler – Actions

- **Retrieve** – Return records based on the parameters you set in **Filters**.

- **Save** – Save your changes without leaving the page.

- **Delete** – Delete all lines with selected checkboxes.

- **Mark** – Flag selected lines as having been reviewed:

o Records marked as **Reconciled** are locked for users and the system, and no further changes can occur in this state.

o Records marked as **Reviewed** have been reviewed, and variances are acceptable. The **Reviewed** flag is cleared if the calculated ending inventory or calculated reported ending inventory change.

- **Set Adjusted** – Open the **Set Adjusted Ending Inventory** dialog, where you can configure the effects of changing set adjusted ending inventory to calculated reported ending inventory. For more information, see Adjust Ending Inventory.

- **Transfer** – Select the records from which you want to remove inventory, then click **Transfer** to open the **Inv. Recon. Transfer (Sources)** dialog, where you can select the records that you want to receive the transferred inventory. For more information, see About Transfers.

- **Select Open Rows** – Select the checkboxes of all lines that are in the open accounting period.

- **Analyze** – Open the **Values to Update** dialog, where you can define a valuation job. For more information, see About Valuations.

- **Job Status** – Open the **Job History** page as a dialog so you can refer to the list of jobs while staying in the page.

- **View Sponsor Sale** – Open the report you set in the **Sponsor Sale Reports** filter (or the **Inv. Reconciler > Sponsor Sale** page if that filter is blank), to see all the sponsor sales used for the reconciliation. To view the details of a specific line, first select the checkbox for that line. If the line you select has no sponsor sales, the report or **Inv. Reconciler > Sponsor Sale** page will list nothing.

- **View POS** – Open the report you set in the **POS Reports** filter (or the **Inv. Reconciler > POS** page if that filter is blank), where you can see the sales transactions used for the reconciliation. To view the details of a specific line, first select the checkbox for that line. If the line you select has no POS, the **Inv. Reconciler > POS** page will list nothing.

- **View Inventory** – Open the report you set in the **Inventory Reports** filter (or the **Inv. Reconciler > Inventory** page if that filter is blank), where you can see the inventory records used for the reconciliation. To view the details of a specific line, first select the checkbox for that line.

- **View FIFO** – Open the report you set in the **FIFO Reports** filter (or the **Inv. Reconciler > FIFO Log** page if that filter is blank) so you can see how inventory was calculated for the reconciliation. For more information, see Find Invoices Used in a Reconciliation.

- **Export** – Export the data in the active results table.

- **Draw** – Update all displayed charts without having to retrieve data again.

- **Save Report** – Open the **Create a New Report** dialog, where you can save your filter settings and page configuration to your favorites pane and/or associate a favorite group to the report. For more information, see Saving and Creating Reports.

Reconcile the Inventory

It's important to reconcile the discrepancies between your calculated inventory and your reported inventory for a variety of reasons. It's the best way to track down discrepancies in POS reporting (due to loss and damage, RMAs, inaccurate reporting, or from the fact that inventory might be in transit between you and your distributors/partners). Inventory is required if your company is doing FIFO or sell-through recognition so inventory numbers are accurate when posting G/L entries. Inventory reconciliation is required if you use SmartHub to calculate inventory-based incentive programs so inventory can be priced on specific dates.

The inventory reconciler calculates ending inventory as follows:

	Beg. Inv.	The ending inventory from the previous period
+	Sponsor Sales	Your company's direct sales
−	Sponsor Returns	Your company's returns
−	POS	Sales by your partners for the current period
+	POS Returns	Returns to your partners
=	Calc. End. Inv.	The calculated ending inventory for the current period

It's best to reconcile inventory using the automated job that your Entomo Professional Services configures specifically for your company, but these step-by-step instructions can help you understand the process.

To reconcile inventory:

1. Go to **Site Map > Inventory > Inv. Reconciler** or open the reconciler report (in your favorites pane) that was configured by your Entomo Professional Sales team.

2. Use the **Filters** section to retrieve all the records in the open period.

3. Click **Retrieve**.

4. Click **Analyze**.

The results of the reconciliation will be available in the **Inv. Recon. Summary** (or the report configured for you based on that page), where you can set variance thresholds, drill down into invoice details, and make adjustments to the ending inventory. For instructions, see Adjust Ending Inventory.

Adjust Ending Inventory

After POS and inventory records are resolved, analyzed, and reconciled, use the **Inventory Reconciliation Summary** to review for inventory discrepancies and the **Inventory Reconciler** page to adjust inventory. Ending inventory can be adjusted one record at a time or in bulk.

To adjust variances in ending inventory:

1. Go to **Site Map > Inventory > Inv. Reconciler** or open the reconciler report (in your favorites pane) that was configured by your Entomo Professional Sales team.

2. Use the **Filters** section to find the records that you want to adjust, then click **Retrieve**.

3. In the results, select the checkbox of the items that you want to adjust, then do one of the following:

   o **Adjust Individual Records** – For the selected records, edit the **Adj. End. Inv.** column, enter a comment in the **Comments** column, then click **Save**.

   o **Adjust Multiple Records** – After selecting the records that you want to change, click **Set Adjusted** to open the **Set Adjusted Ending Inventory** dialog.

   a) In the **Set Adj. End Inv**. **to** field, select an option based on the values you want to use instead of the adjusted ending inventory.

   b) In the **When No Last Rept. Inv**. field, select an option based on how you want the system to handle the adjustment for records with no last reported inventory value.

   c) In the **Overwrite Existing Adjustment** field, select **Yes** if you want your adjustment to overwrite all other adjustments.

   d) In the **Comment** field, select an option about the formatting of the comments that you enter in the unnamed field under the **Comments** field:

      - **Append** – Add your comment to any existing comments.
      - **No Change** – Select this option if you have no comments.
      - **Overwrite** – Your new comments will replace any existing comments. (Click **Reset Comment** to return to the most recently saved comment.)

e) In the **Update Records As** section, select an option based on how you want to mark the adjusted records.

f) When you are finished, click **OK** to update the status of the selected records.

About the Inventory Reconciliation Summary

The **Inventory Reconciliation Summary** page (and any report based on that page) allows you to review your inventory by monitoring variances (discrepancies) between physical and reported inventory, monitoring exceptions, and performing trend analysis.

It's likely that your Entomo Professional Services team created a version of the **Inv. Recon. Summary** page as a report, with filters configured specifically for your company, accessible from your favorites pane. For a description of the filters in your company-specific reports, consult your implementation guide.

Inv. Recon. Summary – Filters

- **From/To** – Retrieve inventory records according to accounting period.

- **Limit Results** – Control the number of records that are displayed after a data retrieval. For more information, see <u>Sorting in Analytic Pages</u>.

- **Partner** – Retrieve inventory records for one or more partners according to name.

- **Partner ID** – Retrieve inventory records for one or more partners according to ID number.

- **Partner Type** – Retrieve inventory records according to type, such as **Sell-In** or **All Indirect**.

- **Item Type** – Retrieve inventory records for one or more partners by name.

- **Qty. Variance** – Set a threshold for tolerating discrepancies in quantity. For more information, see <u>About Inventory Variances</u>.

- **Convert To** – Select the currency you want to see.

- **Val. Variance** – Set a threshold for tolerating discrepancies in inventory values (dollar amounts). For more information, see <u>About Inventory Variances</u>.

- **Show Period Details** – Display the results by period.

- **Show Period Totals** – Display the results by total across all selected periods.

- **Is Last Rptd Inv Stale** – Retrieve records based on whether they are flagged as stale, meaning that they have been adjusted, but an analysis job has not yet been run.

Inv. Recon. Summary – Actions

- **Retrieve** – Return records based on the parameters you set in **Filters**.

- **Reset Sort** – Clear the current sort logic and resets it to ascending sort order on the first column that is the basis for the aggregation. For more information about sorting, see Sorting in Analytic Pages.

- **Analyze** – Open the **Values to Update** dialog, where you can define a valuation job. For more information, see About Valuation.

- **Job Status** – Open the **Job History** page as a dialog so you can refer to the list of jobs while staying in the **Inv. Recon. Summary** page.

- **View Details** – For selected rows (or retrieved rows, if no rows are selected), show the underlying transactions that use the report designated in the **Drill Down Report** field in the **Filters** section.

- **Export** – Export the data in the active results table.

- **Draw** – Update all displayed charts without having to retrieve data again.

- **Save Report** – Open the **Create a New Report** dialog, where you can save your filter settings and page configuration to your favorites pane and/or associate a favorite group to the report. For more information, see Saving and Creating Reports.

About Inventory Variances

You can use the **Inv. Recon. Summary** page (and any reports based on it) to perform threshold analysis and review valuation details for a period based on sponsor sales, returns, POS sales, and reported ending inventory. The page has two valuable filters for exception and variance analysis:

Qty. Variance:		Val. Variance:	1000

Use one or both of these filters to establish a tolerance level for inventory reconciliation. If a part falls out of the tolerance based the setting in these filters, the out-of-tolerance parts will be identified as being above or below the set tolerance. In the following example, the distributor has 7 parts above the threshold and 1,045 parts within.

Dist	Threshold	# Price Buckets	Beg. Inv.	Net Sponsor Sales	Net POS	Adj. Net POS	Calc. End. Inv.	Calc. Rptd. End. Inv.	Variance	Signed Variance	Adj. End. Inv.	Effective Inv.	Beg. Inv. $	Net Sponsor Sale $	Net POS $	Adj. Net POS $	Calc. End. Inv. $	Adj. End. Inv. $	Variance ($)
Company ABC	Above	7	279	0	163	163	116	884	768	-768	116	77	13,469.25		4,569.25	4,569.25	8,900.00	8,900.00	53,924.75
	Below	1,045	3,457	26,158	145	145	29,470	29,504	254	-34	29,470	3,347	27,356.18	196,264.40	3,762.95	3,762.95	219,858.53	219,858.53	1,073.54
Company ABC	TOTAL	1,052	3,736	26,158	308	308	29,586	30,388	1,022	-802	29,586	3,424	40,825.43	196,264.40	8,331.38	8,331.38	228,758.53	228,758.53	54,998.29
TOTAL		1,052	3,736	26,158	308	308	29,586	30,388	1,022	-802	29,586	3,424	40,825.43	196,264.40	8,331.38	8,331.38	228,758.53	228,758.53	54,998.29

For instructions about adjusting variances, see Using the Reconciliation Summary.

Using the Reconciliation Summary

After POS and inventory records are resolved, analyzed, and reconciled, use the **Inventory Reconciliation Summary** to adjust inventory discrepancies, monitor inventory exceptions, and perform trend analysis. For more information about setting up analytic pages, see [Configuring an Analytic Page](#).

To adjust variances in ending inventory:

1. Go to **Site Map > Inventory > Inv. Recon. Summary** or open the reconciler summary report (in your favorites pane) that was configured by your Entomo Professional Sales team.

2. In the **Filters** section, select the report that you want to use from the **Drill Down Report** field, then click **Retrieve**. (If your report is set to automatically retrieve when opened, you can skip this step.)

3. In the results, select the checkbox of the record you want to review, then click **View Details** to open the **Inv. Reconciler** page (or the inventory reconciliation report that is selected in the **Drill Down Report** filter), where you can make adjustments as needed. Review the records to see whether inventory has been applied to the correct end customer and whether the quantities are correct.

    TIP: You can sort on the **Variance** or **Adj. End. Inv.** columns by holding the shift key and clicking on the column. This sorts quantities by absolute value, which might make it easier to see misplaced quantities as positive and negative values side by side.

4. (Optional) Select the checkboxes of items you want to review, then click the **View POS**, **View Sponsor Sale**, **View Inventory**, and **View FIFO** buttons to see the details of the reconciliation. For more information about the FIFO page, see [About the FIFO Logs (IRM) Page](#).

About the FIFO Logs (IRM) Page

The **FIFO Logs** page lists the invoices that were used for a specific reconciliation process.

FIFO Logs (IRM) – Filters

- **From/To** – Retrieve records according to accounting period.
- **Trans. From/To** – Retrieve records based on a date range.
- **Qty ID** – Retrieve records according to invoice type, such as **Avg. Weekly Sales**, **Adj. Net Partner Sales**, etc.
- **IRM Transfer #** – Retrieve records using a transfer ID number.
- **Trans#** – Retrieve records according to invoice number.

FIFO Logs (IRM) – Action Bar

- **Retrieve** – Returns records based on the parameters you set in **Filters**.

- **Delete** – Deletes all lines with selected checkboxes.

- **Export** – Exports the data in the active results table.

- **Save Report** – Opens the **Create a New Report** dialog, where you can save your filter settings and page configuration to your favorites pane and/or associate a favorite group to the report. For more information, see Saving and Creating Reports.

Find Invoices Used in a Reconciliation

Use the **FIFO Logs** page to see the invoices used in the most recent reconciliation.

To see the invoices used in a reconciliation:

1. Go to **Site Map > Inventory > Inventory Reconciler**.
2. Use the **Filters** section find the records that you want to adjust, then click **Retrieve**.
3. In the results, select the checkbox of the item for which you want to see invoices, the click **View FIFO**.
4. In the **FIFO Logs** page, you can see all the invoices used in the reconciliation of the item you selected.

Typically, the **FIFO Logs** page is used to adjust ending inventory. For instructions, see Adjust Ending Inventory.

About Transfers

For some companies, it's possible (although infrequent) for distributors/partners to sell (or *transfer*) inventory to another distributor. In this case, a transfer must be done to adjust the ending inventory in the inventory reconciliation records, reducing the inventory associated with one record (a negative sale, or return, for the transferor) and adding it to the other record (a positive sale for the purchasing partner). The transfer date must be used as the transaction date for both the sale and return.

Transfers can be done automatically or manually. When the following criteria are met, the system is able to complete a transfer automatically:

- The total adjusted ending inventory variance for the product is zero.

- The net adjusted ending inventory for the product is *not* zero.

- One or more products have a negative adjusted ending inventory.

- The records involved in the transfer are open and in an open accounting period.

In order to perform a transfer, the records must first be resolved, valued, and reconciled.

If your company uses transfers, your Entomo Professional Services team will configure a filter field called something like "Auto-Transferable?" to flag records that satisfy the above conditions.

For instructions, see:

- Transferring Inventory Automatically

- Transferring Inventory Manually

- Transferring by Import

Transferring Inventory Automatically

Before transferring inventory, be sure that POS transactions and inventory have been resolved, valued, and reconciled. The records involved in a transfer must be open and in an open accounting period. For additional criteria, see About Transfers.

To transfer inventory automatically:

1. Go to **Site Map > Inventory > Inv. Reconciler** or open the reconciler report (in your favorites pane) that was configured by your Entomo Professional Sales team.

2. Use the **Filters** section find the accounting period that contains the records you want to transfer.

3. Set the **Audit** filter to **Auto Transferable**.

4. Click **Retrieve**.

   A column called "Auto-Transferable" can be configured to help you locate fields that can be transferred automatically. If the column isn't visible on your page, click the Configure Columns icon ⚙ and move **Auto-Transferable** to the **Selections** pane, then click **OK** to return to the **Inv. Reconciler** page.

5. In the results, select the checkboxes of the lines that you want to adjust.

6. Click **Transfer**.

   The adjustment will be made automatically, if possible. If not, the **Inv. Recon. Transfer (Sources)** dialog opens so you can make a manual adjustment. Skip to Transfer Inventory Manually.

7. In the **Transfer Type** dialog, select one of the following options:
   o **Automatic (Stop on Error)** means that if an issue is encountered, the automatic transfer process will not complete.

- o **Automatic (Ignore on Error)** means that if an issue is encountered, the transfer process will skip the issue and finish what it can. You will then be given the option to view errors when the analysis is complete.
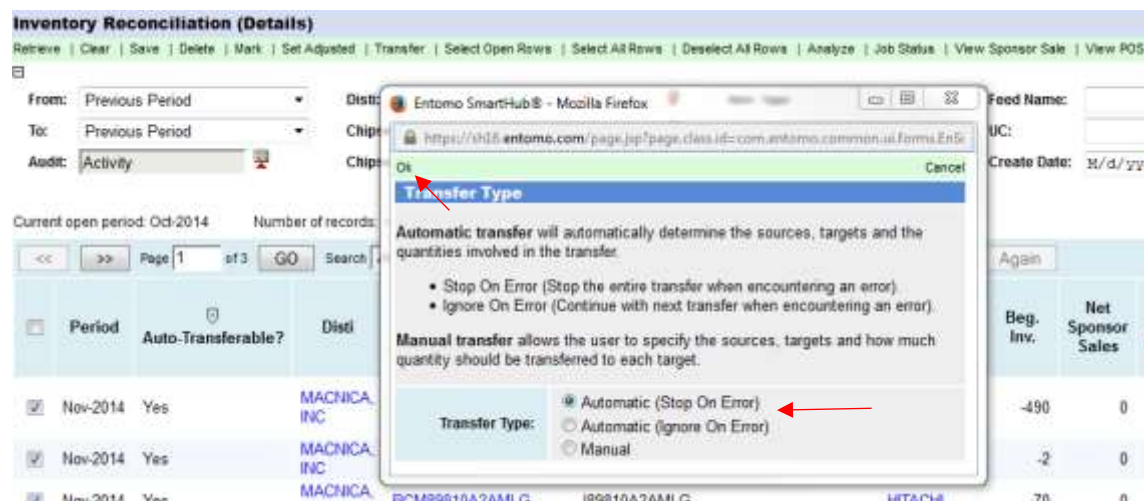
8. Click **OK**.

   The system automatically determines the sources, targets, and quantities involved, and the transfer is completed.

Transferring Inventory Manually

For instances where automatic transfers cannot be completed, a manual transfer can be done. Manual transfers allow you to transfer to IRM records with non-negative adjusted ending inventory, which is not possible with the automatic transfers.

As with automatic transfers, before transferring inventory be sure that POS transactions and inventory have been resolved, valued, and reconciled. The records involved in a transfer must be open and in an open accounting period. For additional criteria, see About Transfers.

To transfer inventory manually:

1. Go to **Site Map > Inventory > Inv. Reconciler** or open the reconciler report (in your favorites pane) that was configured by your Entomo Professional Sales team.
2. Use the **Filters** section find the accounting period that contains the records you want to transfer.
3. Click **Retrieve**.
4. In the results, select the checkboxes of the lines that you want to adjust, then click **Transfer.**
5. If the **Transfer Type** dialog opens, select **Manual**, then press **OK**; otherwise, click **OK** in the confirmation dialog.

The **Inv. Recon. Transfer (Sources)** dialog opens, displaying the records that can be used as the source of the transfer.

6. Select the checkbox of the record you want to use as the source.

7. In the **Transfer Qty** field, enter the number of items you need to transfer.

8. (Optional) In the **Comments** field, enter an explanation for the transfer.

9. When you are finished, click **Next**.

10. In the **Inv. Recon. Transfer (Target)** dialog, select the checkbox of one or more records that will receive the transferred inventory, then click **Next** to return to the **Inv. Recon. Transfer (Sources)** dialog.

11. The **Inv. Recon. Transfer (Sources)** dialog now lists all of the applicable invoices with the quantities that are available for transfer. Select enough invoices to match the quantities that need to be transferred.

12. When you are finished, click **Finish**.

All valid transfers will be completed.

Transferring by Import

Some transfers can only be completed via file import. With this method, you must manually update the reversal and correction sponsor sale entries in a DDF file, update any required part and customer information, then re-import the file into SmartHub.

To transfer inventory by importing an updated file:

1. Go to **Site Map > Inventory > Inv. Reconciler** or open the reconciler report (in your favorites pane) that was configured by your Entomo Professional Sales team.

2. In the **Filters** section, select the transfer report that you want to use from the **Log Report** field, then click **Retrieve**.
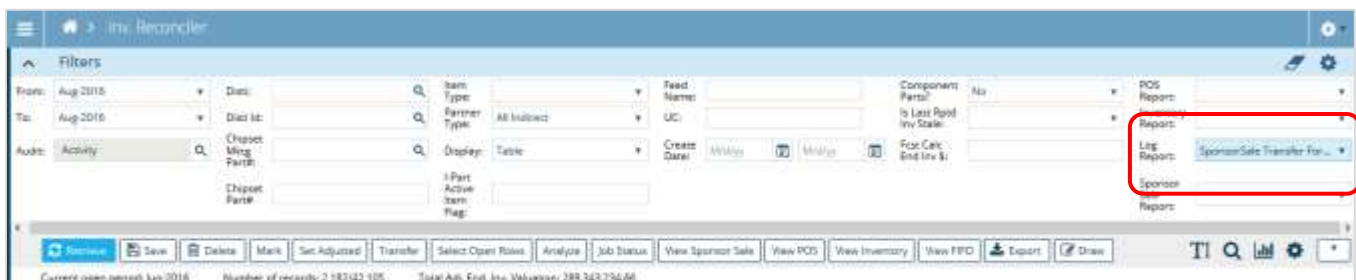
3. Click View **FIFO**.
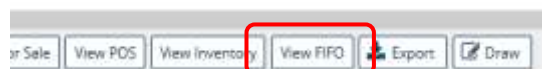
4. In the **SponsorSale Transfer Form** page, narrow the results using the **Qty ID** field. Enter "adj. ending inventory" (or asterisks work too, as in "adj*end*inv*"), then press **Enter**.
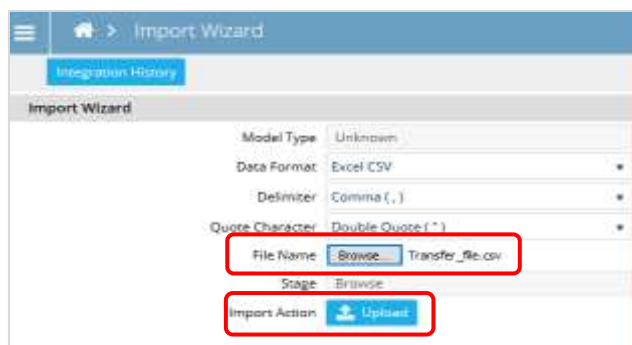
   Now only the invoices used for the adjusted ending inventory are displayed.

5. Select the checkboxes of the invoices that you want to update, then click **Export**.

6. In the **Export** dialog, select the **CSV** option, select where you want to send the file, name the file, then click **OK**.

7. In the .cvs export file, create the transfer with reversals and correction entries:

   o Reversal entries must have negative quantities.

   o The exported source invoices must be copied to the transfer file twice, first as reversal entries with quantities and extended price negated, then as correction entries with distributor ID, end customer, and positive quantities updated, leaving the part number from the source invoices intact.

DDFType	DDFVersion	DDFAction	PartnerCoChannelTypeId	CorrectionType	TransType	TransSubType	PriceBookId	PartnerCoId	PartnerCoName
SponsorSale	10.0.0	Insert	Distributor	Reversal	SALE	Invoice	GPB	530007020	AVNET ASIA PTE LTD, TAIWAN BRANCH
SponsorSale	10.0.0	Insert	Distributor	Reversal	SALE	Invoice	GPB	530007019	AVNET TECHNOLOGY HONG KONG LTD
SponsorSale	10.0.0	Insert	Distributor	Correction	SALE	Invoice	GPB	530007019	AVNET TECHNOLOGY HONG KONG LTD
SponsorSale	10.0.0	Insert	Distributor	Correction	SALE	Invoice	GPB	530007019	AVNET TECHNOLOGY HONG KONG LTD

TransEndDate	ReceivedDate	ItemNumber	TransNumber	LineNumber	PartnerItemNumber	Cust4Id	Cust4Name	Qty	UnitPrice	ExtendedPrice	Line Comments
4/29/2014	4/29/2014	BCM5718B0KFBG	53858273-R01	1	I5718B0KFBWH	PRT000137	NEC	-119	11	-1309	
4/25/2014	4/25/2014	BCM5718B0KFBG	53856469-R01	1	I5718B0KFBH	PRT000112	CELESTICA	-37	11	-407	
4/29/2014	5/2/2014	BCM5718B0KFBG	53858273-C01	1	I5718B0KFBH	PRT000894	ADVANCED MIC	119	11	1309	
4/25/2014		BCM5718B0KFBG	53856469-C01	1	I5718B0KFBH	PRT000894	ADVANCED MIC	37	11	407	

8. To re-import the transfer (.cvs) file, go to **Site Map > Administration > Import** to open the **Import Wizard**.

9. Click **Browse** and navigate to the appropriate file, then click **Upload.**

10. Select **Background Import Job**, then **Done** to finish the import.

    To help you confirm that a transfer is complete, your Entomo Professional Services team can configure a column (named something like **Stale?**) in your inventory reconciliation report that gets set to **Yes** when an adjustment is made. After the appropriate analysis jobs have

been run, the flag in the **Stale?** column will return to **No**. Transfers cannot be performed on records marked as stale because information from the analyses is required for transfers.

11. To complete the transfer, run the master reconciliation job configured for your company by your Entomo Professional Services team. Typically, the master job would include the following jobs/processes:

    o A resolution of POS and inventory for the records involved in the transfer

    o An RMA valuation

    o An inventory reconciliation

12. When the master job is complete, open your inventory reconciliation report to review the transferred transactions. When a record is reviewed and/or reconciled, select the record and click **Mark** to open the **Update Records As** dialog.

13. Mark the selected records**:**

    o Select **Reconciled** to lock the record for users and the system.

    o Select **Reviewed** to indicate that the records has been reviewed and that remaining variances are acceptable. The **Reviewed** flag is cleared if the calculated ending inventory or calculated reported ending inventory change.

14. Click **OK.**

About Exception Reports

Exception reports help you review unmatched or unresolved data in the system. Your Entomo Professional Services team will usually set up exception reports for you. The following reports are examples:

- **POS Unmatched Items** – Lists POS transactions with unresolved parts reported.

- **POS Unmatched Sold-To** – Lists POS transactions that have unknown sold-to customers reported.

- **POS Unmatched Ship-To** – Lists POS transactions that have unknown ship-to customers reported.

- **POS Unmatched UC** – Lists POS transactions that have unknown end customers (or ultimate customers).

- **POS Unmatched Ship-To Country** – Lists POS transactions that have no resolved ship-to country.

For information about how to use the reports configured for your company, consult your Entomo Professional Services team.

About Return Merchandise Authorizations (RMAs)

RMAs that are in transit (because they did not sell out or because a POS return exists for the items) are included in the calculated ending inventory and should be part of the inventory reserves. RMAs that are not in transit are not included in inventory reserves and should be calculated to be part of RMA reserves for journal entries.

Appendix A   – Parameter Definitions

The parameters on the **Job Template > New** page change based on your selection in the **Type** field. The following table defines the use of each parameter. For a definition of each job type, see Job Template - Filters.

CIM Analysis | Reserves Analysis

Field Name	Action	Comment
Begin Period/ End Period	Specify the accounting periods you want for the job.	This accounting period will be overwritten if you specify different periods when you run the job or on a master worker job template. If this field is blank, the filters in the report will determine the accounting periods for the job.
Partner Company ID/Name	Add one or more partner/distributors to the job by entering their name or ID, or select a name from a list using the magnifying glass icon 🔍 .	The partner IDs here will be overwritten if you specify different partners when you run the job or in a master worker job template. If this field is blank, the filters in the saved report determine the partners for the job.
Report Name	Select a report to invoke it when the job is run.	The list might be limited based on your selection in the **Type** field.

Claim Resolution | Inventory Resolution | POS Resolution

Field Name	Action	Comment
Begin Period/ End Period	Specify the accounting periods you want for the job.	This accounting period will be overwritten if you specify different periods when you run the job or in a master worker job template. If this field is blank, the filters in the report will determine the accounting periods for the job.
Partner Company ID/Name	Add one or more partner/distributors to the job by entering their name or ID, or select a name from a list using the magnifying glass icon 🔍 .	Partner IDs in this field will be overwritten if you specify different partners when you run the job or in a master template that runs this job. If this field is blank, the filters in the report determine the partners for the job.
Report Name	Select a report to run.	The list might be limited based on your selection in the **Type** field.

Field Name	Action	Comment
Model Type	Select the data that will be affected by this job, for example: • **ClaimCIMLine** • **Inventory** • **OpportunityElement** • **POS**	Your selection in this field determines the rules that are available in the **Rule Templates** field.
Operation	Select the process you want to use for this job: • **Map** – Resolves the data • **Unmap** – Reverses the previous resolution • **Audit** – Shows the results of a resolution operation without affecting the data	Records will be mapped or unmapped according to the rules selected in the **Rule Templates** field.
Rule Templates	Click the magnifying glass icon 🔍 to open a dialog that allows you to select rules for the job. Move the rules you want from the **Choice List** to the **Selections** pane, then click **OK**.	The rules available are based on your selection in the **Model Type** field.

Export

Field Name	Action	Comment
Report Name	Select a report to run.	
Format	Select a format for the data export.	For a definition of the file formats, see Exporting Reports.
Quote Character	Select the character that you want to surround a data item if the item contains the delimiter character that you set in the **Delimiter** field. For example, if you select commas as your delimiter, any time a comma is used in the imported data, the comma will be surrounded by the character you enter in this field.	
Delimiter	Select the character that you want to use to separate each data item in the export.	
Target	Select a destination for the exported data: **Save Report, Email, FTP, Salesforce**	
File Name	Enter a name for the export file.	
Date Position	Select **Prefix** to add the date to the beginning of the file name. Select **Suffix** to append the date to the end of the file name.	
Date Format	Enter the following terms (without quotes) in the order that you want for the	

Field Name	Action	Comment
	date in the file name, for example "yyyyMMdd": • "yyyy" for the year • "MM" for the month • "dd" for the day • "HH" for the hour (optional) • "mm" for the minute (optional) • "ss" for the second (optional)	
To, Cc, and **Bcc**	Click the file icon to open a dialog where you can select the recipients of the export file. When you are finished, click **OK**.	You can narrow the list in the dialog with the **Company** and **Security Group** filters.
Email Subject	Click the pencil icon to enter a freeform title for the email. When you are finished, click **OK**.	
Email Message	Click the pencil icon to enter a freeform email message. When you are finished, click **OK**.	
Export Chart	Select **Yes** to include a chart of the data with the export file.	
Bypass if No Record Found	Select **Yes** to avoid sending an email if the export job results in an empty file.	
Export Script	If applicable, select an export script that will be executed just prior to the export.	If your Entomo Professional Services team has written scripts for you, they will appear in this field. For example, you might have a script that truncates address fields to 50 characters, leaving them at full value in the database.

Forecast

Field Name	Action	Comment
Begin Period/ End Period	Specify the accounting periods you want for the job.	This accounting period will be overwritten if you specify different periods when you run the job or in a master worker job template. If this field is blank, the filters in the report determine the accounting periods for the job.
Partner Company ID/Name	Add one or more partner/distributors to the job by entering their name or ID, or select a name from a list using the magnifying glass icon 🔍 .	Partner IDs in this field will be overwritten if you specify different partners when you run the job or in a master template that runs this job.

Field Name	Action	Comment
		If this field is blank, the filters in the report determine the partners for the job.
Report Name	Select a report to run.	The list might be limited based on your selection in the **Type** field.
Model Type	Select the data that will be affected by this job, for example: • **Sponsor Sales** • **POS**	
Hide Previous Forecast	Select this option to set all forecast transactions to a hidden status, except for the most recently received.	Hiding outdated forecast transactions prevents them from being used unnecessarily in the analysis.
Remove From Inv. Recon.	Select this option to remove forecast data from IRM records in the selected period.	
Move to Next Open Period	Select this option to retrieve applicable transactions and set their accounting date to the begin date of the first open accounting period.	

G/L Analysis

Field Name	Action	Comment
Begin Period/ End Period	Specify the accounting periods you want for the job.	This accounting period will be overwritten if you specify different periods when you run the job or in a master worker job template.

Integration Analysis

Field Name	Action	Comment
Report	Select a report to run.	
Emails	Select the type of alerts you'd like to send when the analysis is complete: • **Late Import Alert** – Send an alert if an expected file is received after the specified cutoff. • **Missing Import Alert** – Send an alert if an expected file is not received. • **Submit Import Reminder** – Send a reminder to distributors/partners to submit their files. • **Timely Error import Alert** – Send an alert if files are submitted on time, but imported with errors or warnings.	

Inventory Reconciliation

Field Name	Action	Comment
Begin Period/ End Period	Specify the accounting periods you want for the job.	This accounting period will be overwritten if you specify different periods when you run the job or in a master worker job template. If this field is blank, the filters in the report will determine the accounting periods for the job.
Partner Company ID/Name	Add one or more partner/distributors to the job by entering their name or ID, or select a name from a list using the magnifying glass icon 🔍 .	The partner ID will be overwritten if you specify different partners when you run the job or in a master worker job template. If this field is blank, the filters in the report determine the partners for the job.
Report Name	Select a report to run.	
POS Evaluation Type	Select an option to specify the source of the values that will used for the POS reconciliation: • None • Price Book • Price Book (Closest Date) • Sponsor Sale FIFO	
INV Evaluation Type	Select an option to specify the source of the values that will be used for the inventory reconciliation: • None • Price Book • Price Book (Closest Date) • Sponsor Sale FIFO	
Delete Existing Records	Select an option to determine the behavior of the job toward existing IRM records before it runs the analysis: • **None** – Existing IRM records are unchanged when the analysis is run. • **Delete All Records** – Existing IRM records in the selected begin/end periods are removed. • **Delete Open Records** – Removes existing IRM analysis for all open periods in the selected period range. • **Delete Unadjusted Open Records –** Removes existing IRM analysis for open periods in the selected period range that have not been adjusted. This option preserves changes made by users so you	Caution: The **None** option can leave records from a previous analysis that are no longer relevant and that are not be created by a fresh analysis. For example, if a POS record has the wrong item and is corrected, the IRM might have a record for that item that is incorrect and should not exist.

Field Name	Action	Comment
	don't have to keep making adjustments over and over.	
Set Adj. End. Inv. To	Select a value for the adjusted ending inventory field: • Calc. End. Inv. • Last Rptd. Inv. • Calc. Rptd. End. Inv. • Zero	
Create FIFO Logs	Select this option to generate records with details about the analysis.	

Master Worker Jobs

A master job is a template that can be set up to run multiple other "worker" jobs, either sequentially or at the same time. Setting up a master job allows you to easily schedule a lot of jobs with a single event template. For more information, see Event Template.

Field Name	Action	Comment
Begin Period/ End Period	Specify the accounting periods you want for the job.	This accounting period will be overwritten if you specify different periods when you run the job or in a master worker job template. If this field is blank, the filters in the report will determine the accounting periods for the job.
Partner Company ID/Name	Add one or more partner/distributors to the job by entering their name or ID, or select a name from a list using the magnifying glass icon 🔍 .	The values specified here apply to all worker jobs. The exception is for G/L Analysis jobs, which will include all partners/distributors, not just the ones you select here. If this field is blank, the parameters in the worker jobs or the filters in their reports will determine the partners for the job.
Type	Select whether you want the jobs in this template to run one after the other (**Sequential**) or at the same time (**Concurrent**).	
Create Audit Logs	Select **Yes** to create audit logs for the associated worker jobs, if applicable.	If this field is blank, the parameters in the worker jobs will determine whether audit logs are created.
WorkerJob 1-20	Select the jobs that you want to run through this master job.	If you select **Sequential** in the **Type** field, the order of the jobs is

Field Name	Action	Comment
		determined by the order of these fields.

Sales Credit Assignment

Field Name	Action	Comment
Begin Period/ End Period	Specify the accounting periods you want for the job.	This accounting period will be overwritten if you specify different periods when you run the job or in a master worker job template. If this field is blank, the filters in the report will determine the accounting periods for the job.
Report Name	Select a report to run.	
Operation	Select **Assign** to process sales credits/commissions to the distributor/partner that earned them. Select **Unassign** to reverse the most recent sales credit assignments.	

Script

Sometimes, scripts (special code) might be necessary to run a customized process that is outside of SmartHub's usual processes. This template allows you to set up and run those scripts. Scripts are usually run only by your Entomo Professional Services team.

Field Name	Action	Comment
Begin Period/ End Period	Specify the accounting periods you want for the job.	This accounting period will be overwritten if you specify different periods when you run the job or in a master worker job template.
Partner Company ID/Name	Add one or more partner/distributors to the job by entering their name or ID, or select a name from a list using the magnifying glass icon 🔍 .	The partner ID will be overwritten if you specify different partners when you run the job or in a master worker job template. If this field is blank, the filters in the report determine the partners for the job.
Script	Select the script you want from the list, if applicable.	If your Entomo Professional Services team has written scripts for you, they will appear in this field.
Create Audit Logs	Select this option to auto-generate audit logs when this job is run.	

Shipment

Field Name	Action	Comment
Begin Period/ End Period	Specify the accounting periods you want for the job.	This accounting period will be overwritten if you specify different periods when you run the job or in a master worker job template.
Partner Company ID/Name	Add one or more partner/distributors to the job by entering their name or ID, or select a name from a list using the magnifying glass icon 🔍 .	The partner ID will be overwritten if you specify different partners when you run the job or in a master worker job template.
Operation	Select **Map shipment receipts to sponsor sales** to match shipment receipt records to sponsor sale records. Select **Unmap shipment receipts from sponsor sales** to clear the association between the shipment receipt records and sponsor sale records.	
Report Name	Select a report to run, if applicable.	

Unhide

Field Name	Action	Comment
Partner Company ID/Name	Add one or more partner/distributors to the job by entering their name or ID, or select a name from a list using the magnifying glass icon 🔍 .	The partner ID will be overwritten if you specify different partners when you run the job or in a master worker job template.
Model Type	Select the data that will be affected by this job, for example: • Inventory • POS • Sponsor Sale	

Valuation

Field Name	Action	Comment
Begin Period/ End Period	Specify the accounting periods you want for the job.	This accounting period will be overwritten if you specify different periods when you run the job or in a master worker job template.
Partner Company ID/Name	Add one or more partner/distributors to the job by entering their name or ID, or select a name from a list using the magnifying glass icon 🔍 .	The partner ID will be overwritten if you specify different partners when you run

Field Name	Action	Comment
		the job or in a master worker job template. If this field is blank, the filters in the report determine the partners for the job.
Model	Select the data that will be affected by this job, for example: • Inventory • POS • RMA	
Report	Select a report to run, if applicable.	
Values	Select **Cost** to use cost values for the valuation. Select **Price** to use price values for the valuation.	
Value Source	Select the reference that you want to use as the source of the values for this job.	