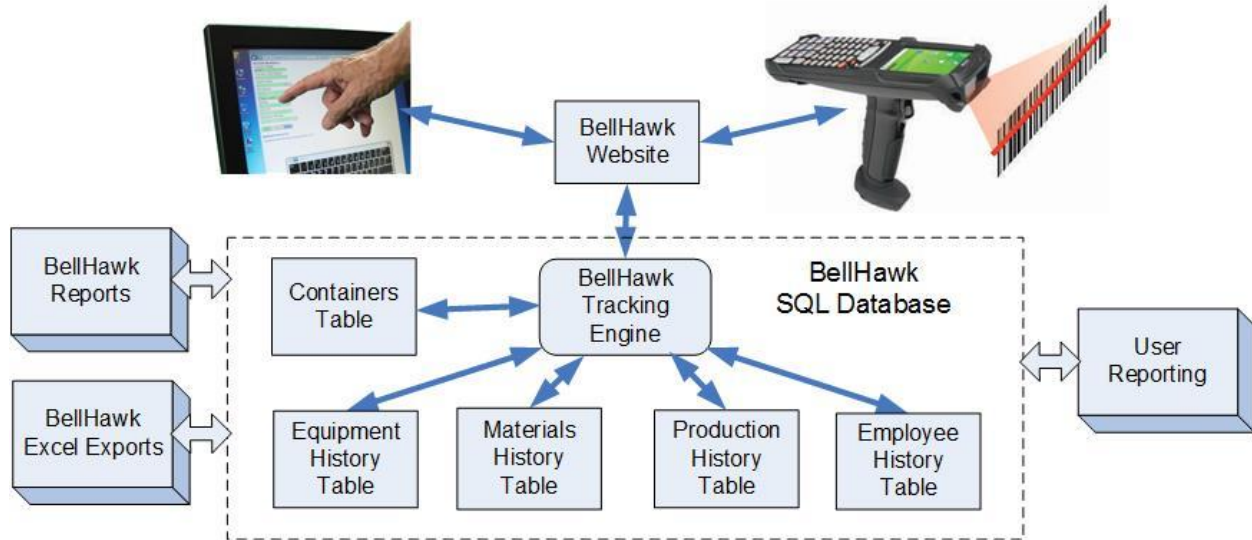




BellHawk Reports - User Manual



Introduction

BellHawk tracks the status of containers of material in its Containers table. It also tracks all transactions related to materials, work orders, employees and equipment in history tables.

BellHawk comes with a standard set of reports and Excel exports that enable users to see the real-time status of their operations as well as report on historical data. These reports come as part of the different base systems and optional modules within BellHawk

These standard reports are designed to meet the real-time operational needs of most organizations but not the breadth of historical reporting typically required by many different departments in an industrial organization.

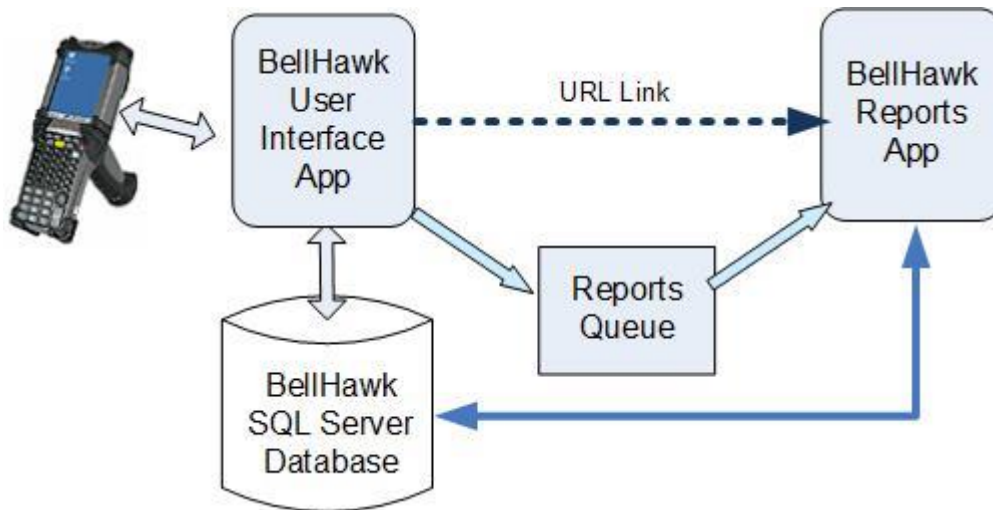
For this reason, BellHawk supports an extensive set of options for users to create their own custom reports. These reports may simply use standard external report generator software, such as Access or Crystal Reports, to access the open-architecture BellHawk SQL Server database. They may also include using software, such as SSRS (SQL Server Reporting Tool), in conjunction with the Visual Studio .Net Integrated Development Environment, to develop custom reports that are fully integrated with the BellHawk web-based report generation mechanism.

The BellHawk reports mechanism enables reports to be viewed and printed out on any web-browser based device. It also enables these reports to be created as PDF documents that can be sent as attachments to people. With the use of the MilramX toolset reports can be automatically generated on a periodic basis or when specific events occur and automatically sent to a specific list of people.

This user manual starts with an overview of the BellHawk reports mechanism works. This is then followed by a description of the standard reports available from BellHawk and how to print out these reports and create PDF files from them.

The rest of the manual is then devoted to people who need to develop custom reports. This includes details of the data available for reporting from the BellHawk database and how to integrate custom reports into BellHawk using tools such as SSRS.

How the BellHawk Reports Mechanism Works



Data from transactions is captured in the BellHawk database. When a user requests a report through the BellHawk User Interface, a print request is placed in the Reports Queue table. This request lists the report name to be produced as well as parameters to be passed to the report generation program, such as the date range for which to report on shipments.

The BellHawk user interface App then send an HTTP link request to the BellHawk Reports App, which resides on the same server as the BellHawk user interface App. This URL link request lists the index in the reports queue of the report request as its parameter.

The Reports App then appears in a separate Tab, on the users Web Browser, from the user screen on which the report is requested. The Reports App then reads the record in the Reports Queue table, generates the requested report and makes it appear in the new tab. From here the user can print the report or save it as a PDF file.

The benefit of this approach is that the user can continue to use the User Interface App while a report is open in another Tab. As a result, the user can open multiple reports open for on-screen viewing in different tabs, which can be beneficial when comparing data, without the need to print each report.

When the user is finished with a report they can simply close the browser Tab for that report.

The BellHawk User Interface App and the Reports App run as web server pool processes that are automatically instantiated as needed so there can be multiple users generating multiple reports at any one time.

Also, there can be multiple different Reports Apps running at the same time. BellHawk uses a Reports App written using the DevX reports library to generate its standard reports. It also supports the use of an SSRS Reports App that enables SSRS (SQL Server Reporting Service) to be used to generate custom reports.

Using Standard Reports

The ability to see and use the buttons on the main switchboard depend on the roles that the user has been assigned. These roles also control which reports users can view

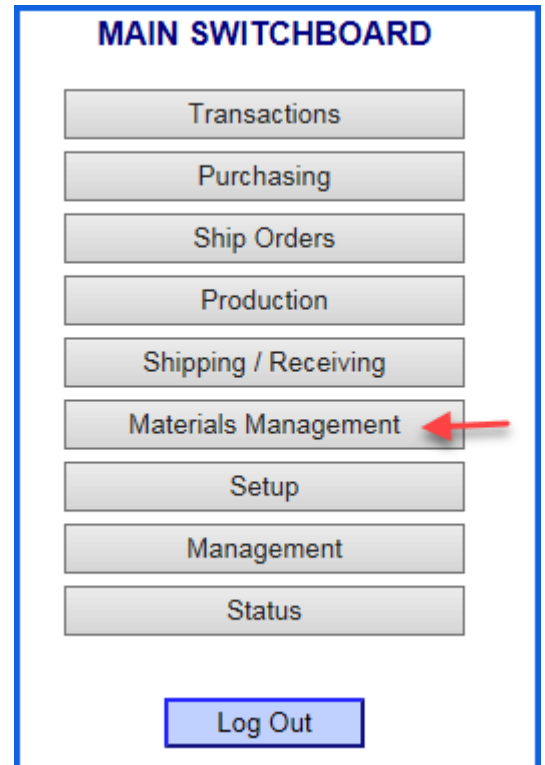


MATERIALS MANAGEMENT SWITCHBOARD

- View Containers
- Pick Orders
- Inventory Excel Reports
- Available Inventory
- Add/Edit Item Masters
- View Reports
- Print Location Labels

Return

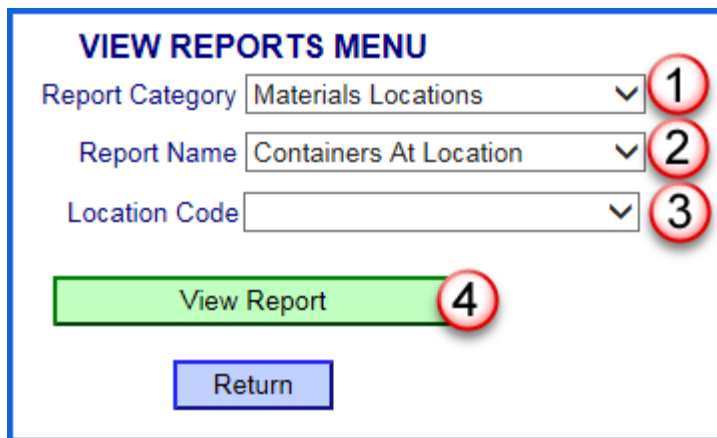
There are different standard reports available for each section and role, which are reachable from the main switchboard, such as on the Materials Management switchboard, as shown here.



MAIN SWITCHBOARD

- Transactions
- Purchasing
- Ship Orders
- Production
- Shipping / Receiving
- Materials Management
- Setup
- Management
- Status

Log Out



VIEW REPORTS MENU

Report Category: Materials Locations (1)

Report Name: Containers At Location (2)

Location Code: (3)

View Report (4)

Return

then

Selecting the [View Reports] button brings up the reports menu. Here the user is able to select from the report categories (1) available to the selected role (such as Materials Management). The user can select from amongst the reports available (2) within the report category.

Then, if specified for the report, one or more parameter values (3) will be requested that will be used by the Report Generation App to limit the scope of the report. Leaving a field blank will cause all entries with that field to be selected.

Finally the report is generated (4) and appears as below on the user's browser screen.

Containers At Location

All Locations

Location: 649 Press

Part Number	Container Tag	Parent Tag	Lot Number	Quantity Units
49L-48AMID	1141	1141		1 LBS
		Total Weight: 1141	0 lbs	
49L-48DSMPET	1515	1515		14 LBS
		Total Weight: 1515	0 lbs	
Total Weight: 649 Press			0 lbs	

The report is shown with a control ribbon at top. From this control ribbon:

1. The user can print out the report on the default printer (1) or a selected printer (2)
2. They can select which page of the report to show on the screen (3)
3. They can select an export format (4) and then export this to disk (5) or Email it (6).

With complex formatted reports, such as that shown above, generally only the PDF export is useful. While the DevX software package that is used to generate the reports can support formats such as Excel, the reports need to be simple tabular reports to make these useful. In general, in such situations, it is better to use the Excel Report Exports available with BellHawk as these are correctly formatted according to the columnar data type.

The report will appear in a new browser tab (if so supported by the browser).

This tab (1) and the report will remain visible until the tab is closed. The user can then continue working in the main tab (2), including creating more reports in additional tabs. This enables users to compare data in different reports, on the screen, without the need to print out the reports.

Please note that there is no [Return] button on the report screen as, once launched, the report exists in a separate process from the main user thread.