ē.Boost

LIS Enhancement Module

User Guide

April 2021

PSYCHĒ
Medical Laboratory Software

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v 1.1.16

Contents

Chapter 1
Introduction

The *e.Boost Laboratory Software Extension System* is a user interface that allows you to access Psyche Systems modules, and configure parameters that are used by those modules. This document describes the standard e.Boost windows and operations. Any additional modules you have purchased from Psyche Systems are described in this document as well, with the exception of e.Dashboard. A separate document describes e.Dashboard.

The add-on modules you may run from e.Boost, if purchased, include the following:

- e.Docs - Document Scanning / Viewing
- e.Query - Design Management Reports
- e.Monitor - Monitor Interface Services
- e.Dashboard - Laboratory Management Dashboard

Behind the functions that make up e.Boost is a powerful database library that is completely user-customizable so that the system can easily meet your facility's needs. This library is described in Chapter 2.

About this manual

This manual is divided into 8 chapters, each describing one of the basic operations available in e.Boost, the available modules, plus this introduction chapter.

- Chapter 1 - Introduction

This chapter describes the basic options, as well as some of the e.Boost features that are seen throughout the system.

- Chapter 2- Library

Chapter 2 describes the tables that make up the system library and how to configure and build the library.

- Chapter 3- Human Resources

Chapter 3 describes the User table and how to add user accounts to the system.

- Chapter 4 - Configuration

Chapter 4 describes the system preferences available that allow the system manager to configure e.Boost to suit the laboratory.

- Chapter 5 - e.Monitor - Process Monitoring

Chapter 5 describes the e.Monitor module, which allows you to view the current status of processes you have running on your system.

- Chapter 6 - e.Docs - Document Scanning

Chapter 6 describes the document scanning module, e.Docs, where paper documents can be scanned and assigned to case for later retrieval.

- Chapter 7 - Management Report Designer

Chapter 7 describes the e.Query Management Report Designer, where complex user-defined management reports may be created for laboratory use.

- Chapter 8 - Run Management Reports

Chapter 8 describes how to run, print, save and view management reports.

e.Boost Window Structure

e.Boost first opens as an empty window with several buttons at the top, similar to Figure 1-1. Each button opens either one of the standard e.Boost operation windows or one of the add on extension modules that you have purchased. The main windows in e.Boost basically consist of two types, although every window varies with buttons and fields appropriate to the operation being performed in that window.

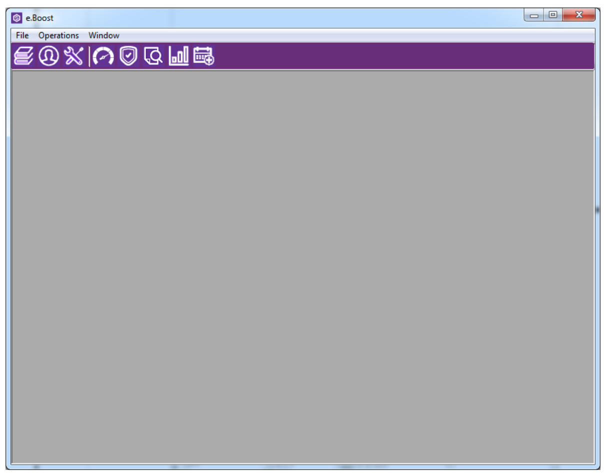


Figure 1-1 - Example of a Simple List Type Window

The *simple list type* windows, which are used to display the library tables and other data, have a list on the left and a detail grid on the right that shows all the information pertaining to the selected item in the list on the left. Figure 1-2 is an example of a simple list type window, the *User* window.

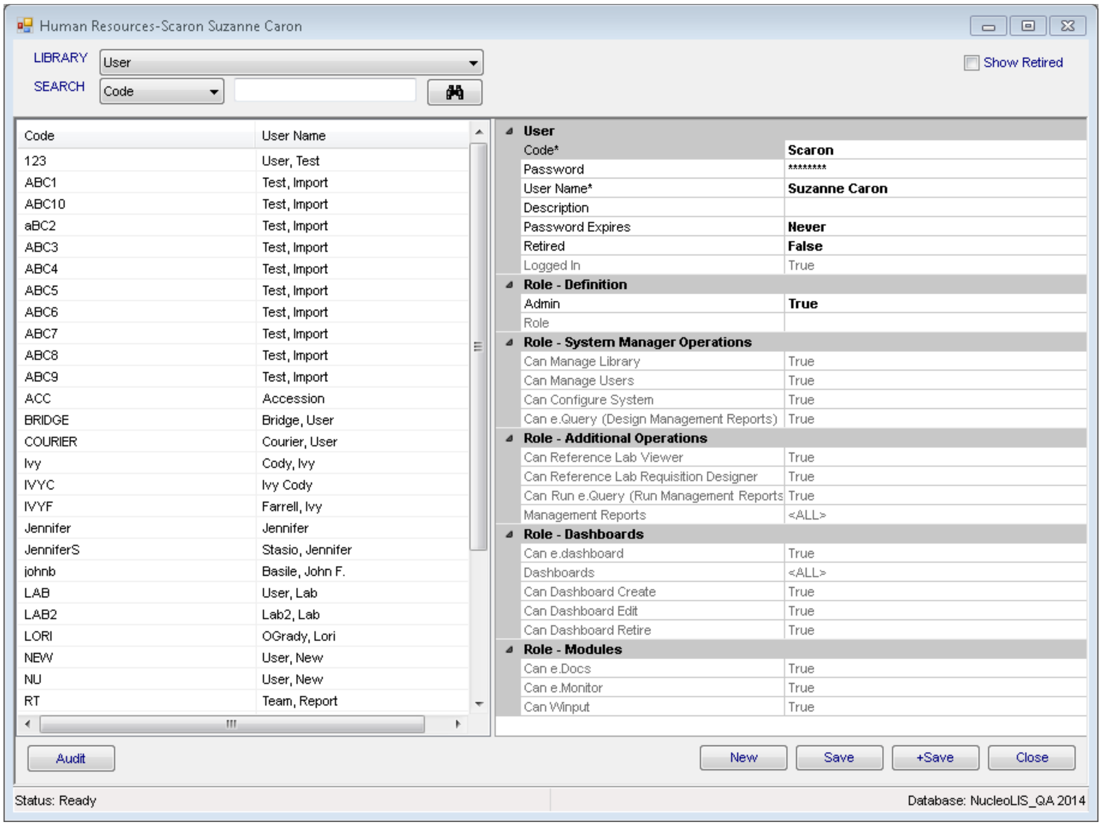


Figure 1-2 - Example of a Simple List Type Window

Another type of window in e.Boost is more complex. This *complex multi-grid type* of window displays a great deal of information in one place and is used in the *e.Query (Design Management Reports)* module. Figure 1-3 shows an example of the *e.Query* window, a very complex multi-grid type window.

Complex multi-grid type windows contain a **main data grid**, which consists of the left **directory tree** structure and the right **details grid.** Depending on what is selected in the directory tree, the entries on the right change to reflect the appropriate selection.

NOTE: *Other types of windows are found throughout e.Boost that do not follow either of these types. They are laid out in a specific way appropriate for the purpose of the window.*

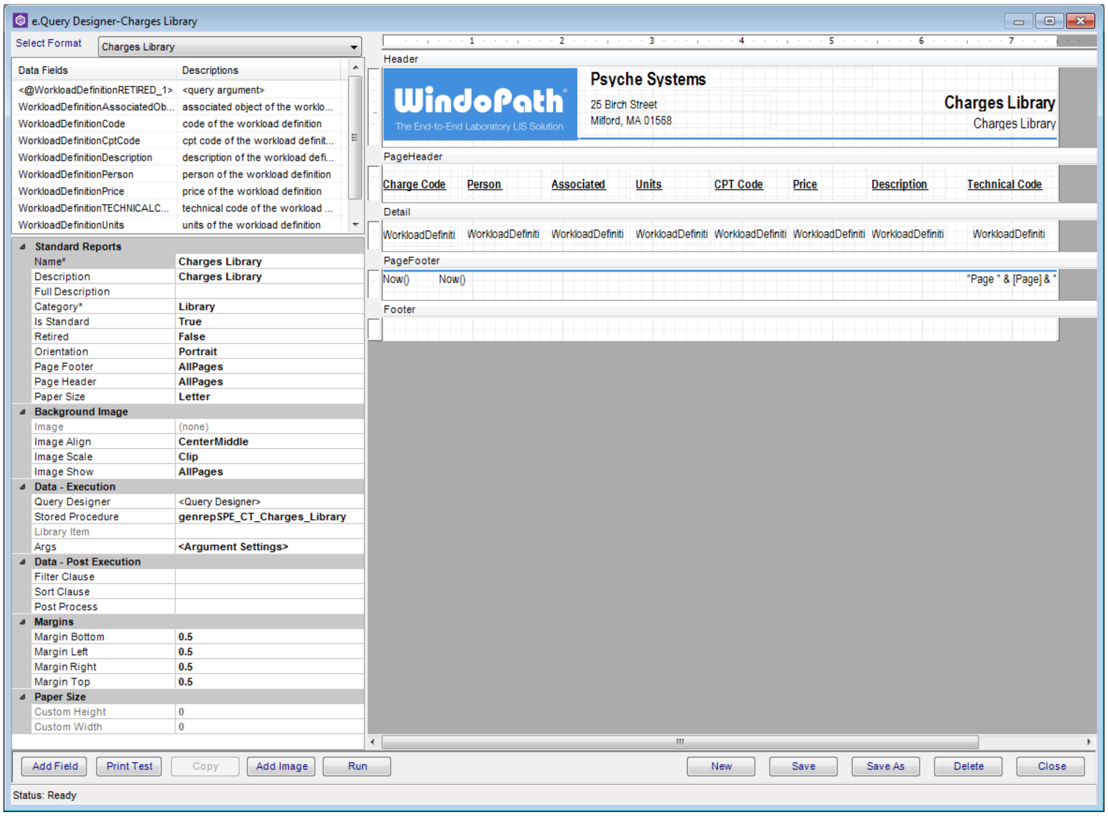
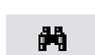


Figure 1-3 - Example of a Complex Multi-grid Type Window

Usability Features in e.Boost

A number of features that help with the usability of e.Boost are found throughout the system. These standard conventions are described in this section.

Searching for records



In most windows you need to search for some piece of information. In most windows there are some search criteria fields specific to the current window and a button that shows a picture of a pair of binoculars.

Clicking the binocular button performs the search.

Starting a search also has a shortcut keystroke of **Ctrl+R**.

The Ellipsis button (...)

Often during data entry throughout e.Boost, you may see a button at the end of the current field that displays three periods, also called an **ellipsis (...)**. This tells you that if you click on it a window will open that gives you choices that are specific for that field. These choices are usually defined in one of the tables in the Library.

Comment# fields

One of the many tables in the Library is the *Comment Definition* table. In this table all system comments are defined. Whenever you see a field label followed by the pound sign **(#)**, entering a **#** in that field opens a list of available comments for that field. Depending on the definitions in the *Link Comments* window, the options in the list may be the complete Comment Definition table or a subset.

How to link comments to a specific field is described in the Library chapter.

Required (*) fields

Fields that have as asterisk **(*)** following the label are required fields. These fields may be auto-generated when the record is saved depending on your system configuration.

Save vs Save+

In most windows there is a **Save** button, which as you would expect saves the current record with whatever changes have just been made. In some windows there is also a **Save+** button. This button usually saves the record and opens a new blank window for a new record, such as in the Library windows.

The **Save+** button may also open the next logical window in a normal work-flow. For example, clicking **Save+** after adding a new patient to the system opens the Visit window so that a visit can be created on that patient.

Ctrl+S is the keyboard shortcut for **Save**.

Ctrl+Shift+A is the keyboard shortcut for **Save+**.

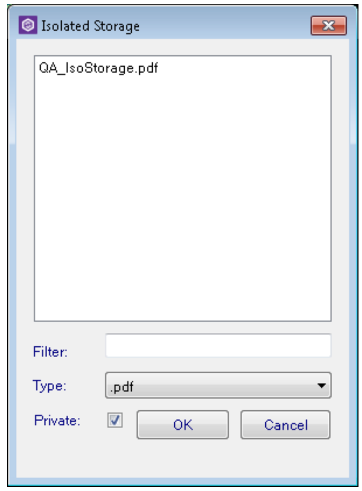
External File Storage

Most data in e.Boost is stored in multiple tables in the Chrysalis database, but external data, such as images you might add to a case or reports that you save for a special purpose, are retrieved from or stored outside the database.

If there is no defined isolated area for this storage, the location e.Boost will use is the user's workstation and opened to whatever folders they normally have access to. This may or may not be preferable and in some laboratories, prohibited. For hosted clients, Psyche sets the path for you and is typically a sub folder of where your e.Boost program resides.

In e.Boost v1.1.11, you may also set user-specific, or *private*, folders to be used when opening or saving files. When the private folders preference is set to true, the Open and Save dialog boxes appear different to the user, as shown below.

Opening files dialog box



- List of available files in either IsolatedStorageArea or Private folder are displayed in main box.
- **Filter:** Enter partial file name to filter for matching files.
- **Type:** Drop-down list to filter by file type, such as PDF or JPG.
- **Private checkbox:** Check to view files in Private folder. Uncheck to view files in main IsolatedStorageArea folder.

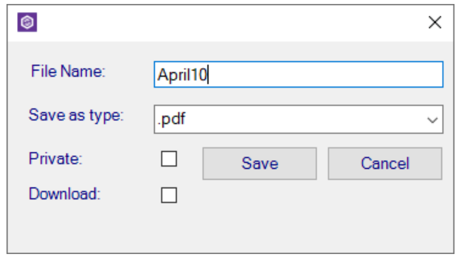
Click **OK** to continue or **Cancel** to exit.

NOTE: *The Download checkbox may be set to be checked by default by Psyche. Ask your application specialist if you would like this to be automatically checked.*

Open dialog box that uses the IsolatedStorageArea folder are in the following e.Boost fields:

- **Library:** Transfer - Import Library Item

Saving files dialog box



- **Filename:** Enter partial file name to filter for matching files.
- **Save as type:** Drop-down list to select file type, such as PDF or XML.
- **Private checkbox:** Check to save file in Private folder, named for the user. Uncheck to save file in main IsolatedStorageArea folder. e.g. *IsolatedStorage\username*.
- **Download checkbox:** Check to save file in Download subfolder of the defined Isolated Storage folder. If Private is also checked, the file is stored in a subfolder of “Download” named for the user. e.g. *IsolatedStorage\Download\username*.

Click **OK** to continue or **Cancel** to exit.

Save dialog box that uses the IsolatedStorageArea folder are in the following NucleoLIS options:

- **Library:** Transfer - Export Library Item

There are three preferences related to the Isolated Storage Folder, set by Psyche:

- **IsolatedStorageArea:** Sets a directory path to restrict file system interactions to a single directory. If no path is defined, the user accesses their own workstation file structure.
- **IsolatedStorageDownload:** Enables reading and writing to a “Download” sub directory of IsolatedStorage. Set True/False.
- **IsolatedStoragePrivate:** Enables reading and writing to a user specific sub directory of IsolatedStorage. Set True/False.

Audit table

Many of the windows have an Audit button. Clicking these buttons opens a window that displays a detailed audit trail of anything that has happened to the *current* record.

Ctrl+T is the keyboard shortcut for the *Audit window*.

Context sensitive menus

Context sensitive menus are menus that are specific to the current record. When a record is selected in the Directory Tree, and you right-click with the mouse, a menu will pop up giving you options that are appropriate for the record you have selected.

These menu options are also available in the windows menu or often an action button at the bottom of the window, but some users find the context sensitive menus easier to use.

Shortcuts

Some of the operation performed in e.Boost have a keyboard shortcut to accompany the menu selection or button that performs that action. Some of these shortcuts are listed in this section, but they are also listed along with the command in the appropriate menus. Whether you use the shortcut or select from a menu is up to the user.

Chapter 2
Library

The *Library* is where all data definitions are made for all parameters in the e.Boost module. The Library is accessed either through the Library button on the left or from the Operations Menu. Users are required to have the Admin privilege in order to access the Library.

Each definition type is stored in a separate table that has its own fields specific to the parameter that is stored. Usually there is at least a code and a description associated with each parameter.

The library definition tables include the following:

- e.Query Data Models (optional; used to create views for e.Query)
- Interface Map
- Reference Lab
- Reference Lab Order Code
- Reference Lab Result Code
- Secure Mail Definition
- User Role

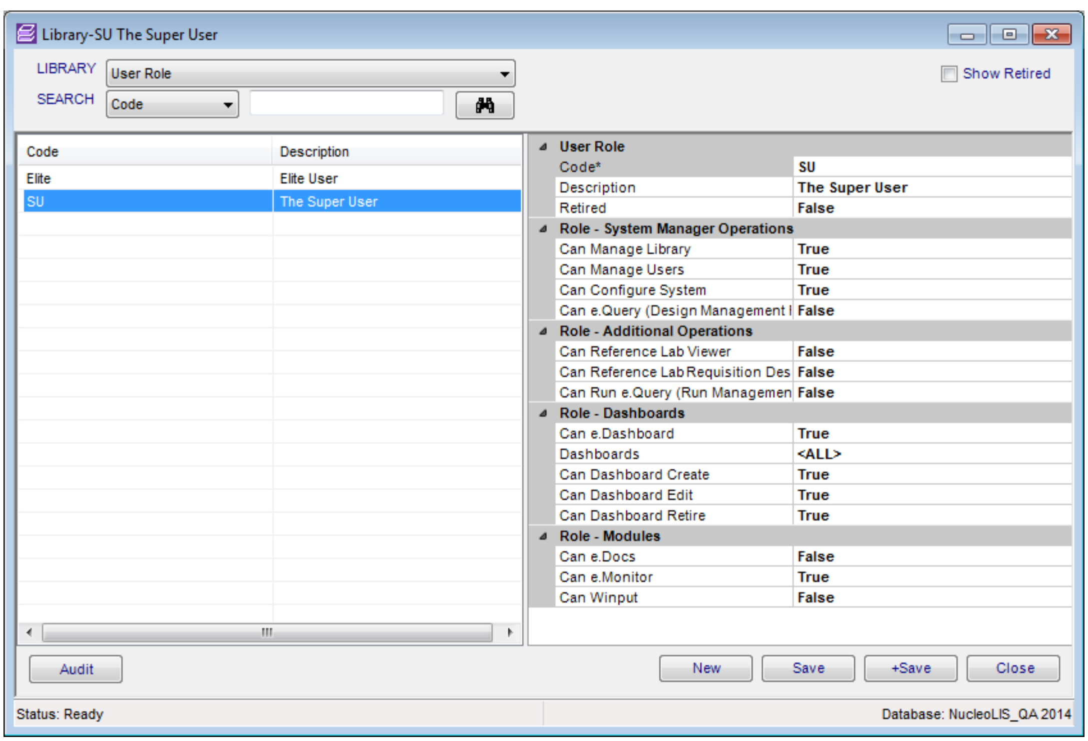


Figure 2-1 - User Role Definition Library window

Library Basics

When a library is first selected from the *Library Selection* drop-down menu, the window is blank. Figure 2-1 shows the User Role Definition Library window. To view, modify or add entries to the library, first click the binoculars. The left half of the window displays a list of the existing library items (if applicable) and the right displays the fields available for entry in the current table. The fields available for entry are library specific.

Above and below the library window grid are the following options:

Show Retired checkbox is used to display retired library items when viewing tables

Audit is used to view a simple audit log of any changes that were made to the current record.

New is used to create a new definition in that table.

Save saves the current entry.

Save+ button saves the current entry and then displays a blank entry.

Close closes the library.

Searching the library

In every table, searching can be performed based on either code or description.

To search by Code, select **Code** from the Search selection drop-down, enter the code in the criteria field and click the binoculars button.

To search by Description, select **Description** from the Search selection drop-down, enter the description in the criteria field and click the binoculars button.

With either method, if the second field is left blank, a complete list of the table contents is displayed. Select an entry in the list to display its details.

NOTE: *Use* ***<Ctrl+R>*** *to search.*

Library Tables

e.Query Data Models

The e.Query Data Models library is used to create additional *views* to be used with the e.Query Management Report Designer. NucleoLIS comes with a standard number of views to use with the e.Query Designer, but if your specific data is not included in any of the supplied views, you may need to create a special view for your purposes. Creating views requires a good understanding of your database.

Table Field	Description
Code*	User defined up to 50 characters in length
Description*	Description of the view; displayed in e.Query Query Designer window.
Full Description	Optional lengthy description of view; displayed in the e.Query Query Designer window by right-clicking selected view name.
View Definition	Clicking the ellipsis opens the *Edit View Definition* window where tables are selected to add to the view.
View Name *(read only)*	Name of the view as stored in the database and created with the Edit View Definition window
Retired	True/False
ADMIN	
Is Standard *(read only)*	True/False; whether the view was created as a Psyche standard
Is Static *(read only)*	True/False

Interface Map

Used to map codes from different sources for interface and other purposes.

Table Field	**Description** (Optional, if installed)
Connection Code	User defined up to 50 characters in length
Mapping Type*	Free text describing type of mapping; may also be used as a picklist item
Additional	
Description	Full description of the item
Retired	True/False
Mapped Values	
Internal Code*	Lab Code
External Code*	Vendor Code

Reference Lab

Used to identify each reference lab in use.

Table Field	**Description** (Optional, if installed)
Code*	User defined up to 50 characters in length
Name	
Description	Full description of the reference lab
Contact	Reference lab contact
Phone	Reference lab phone number
Retired	True/False
Address	
Address	Reference lab street address
Address2	Reference lab secondary address
City	Reference lab city
State	Reference lab state
Zip	Reference lab zip code
Requisitions	
Reference Lab Requisition	Select from down-list of previously created Lab Requisitions

Reference Lab Order Code

This library contains the vendor's test codes, blocks, and/or profiles (including all reflex tests) used with reference lab interfaces.

Table Field	**Description** (Optional, if installed)
Code*	User defined up to 50 characters in length
Description	Full description of the Order Code
Default Perform At*	Default Reference Lab where order is performed
Constituents	Reference Lab Result Codes that constitute the order
L O I N C	LOINC code for order
Retired	True/False

Reference Lab Result Code

This is the full result code library used to identify the lab's test codes, constituents, and procedures used with reference lab interfaces.

Table Field	**Description** (Optional, if installed)
Code*	User defined up to 50 characters in length
Description*	Full description of the Result Code
L O I N C	LOINC code for result
Retired	True/False

Secure Mail Definition

If using Psyche's *Secure Email Distribution*, this table is where all email addresses and their passwords are stored, if the user will be receiving secure emailed PDF reports. The passwords are needed to open the PDF reports. For integrated systems with WindoPath, a program automatically populates this table from WindoPath, although the email passwords will have to be added. individually

Table Field	**Description** (Optional, if installed)
Email*	User defined up to 50 characters in length
Password	Email password for the PDF report recipient
Retired	True/False; whether Secure Email is in use or not.

User Role

Table Field	**Description**
Code*	User defined up to 50 characters in length to define the user role
Description	Full description for the user role
Retired	True/False
Role - System Manager Operations	
Can Manage Library	True/False; determines whether user can run Library
Can Manage Users	True/False; determines whether user can run Human Resources
Can Configure System	True/False; determines whether user can run Configuration
Can Design Management Reports	True/False; allows user to use e.Query module to create or modify management reports
Can WP Report Design	True/False; if enabled, True allows role access to WindoPath Report Designer for clients with WindoPath E.ssential.

Table Field	Description
Role - Additional Operations	
Can Reference Lab Viewer	True/False; determines whether user can open the Reference Lab Viewer window, if Reference Lab Module is configured.
Can Reference Lab Requisition Designer	True/False; determines whether user can open the Reference Lab Requisition Designer and Reference Lab Label Designer windows, if Reference Lab Module is configured.
Can Run Management Reports	True/False; determines whether user run Management Reports; if true, opens ManagementReports field to optionally limit the reports user can run.
Management Reports	List of Management reports the user can run; only available if user role CanRunManagementReports is True. If left blank, user role can run all management reports.
Role - Dashboards	(Optional, if installed)
Can e.Dashboard	True/False; whether user can run e.Dashboard, if purchased. True opens up the following four fields.
Dashboards	Select from a picklist the available Dashboards to allow the user to access. If none are selected, user can access all available Dashboards.
CanDashboardCreate	True/False; whether user can create new Dashboards
CanDashboardEdit	True/False; whether user can edit existing Dashboards
CanDashboardRetire	True/False; whether user can retire existing Dashboards
Role - Modules	(Optional, if installed)
Can e.Docs	True/False; whether user can run e.Docs, if purchased
Can e.Monitor	True/False; determines whether user can run e.Monitor, if purchased

Library Menu

Menu Option	Description
File	**Show User** - shows current user **Version** - Displays e.Boost current version **Exit** - exits e.Boost
Operations	**Library** - opens the Library window **Human Resources** - opens the Human Resources window **Configuration** - opens the Configuration window **e.Dashboard** - if purchased, opens the e.Dashboard window – see separate documentation **e.Monitor** - if purchased, opens the e.Monitor window – see separate documentation **e.Docs:** if purchased, opens the e.Docs module **e.Query (Design Management Reports)** - opens the e.Query Management Report Designer **Run e.Query (Run Management Reports)** - opens the Management Report window **Reference Lab Viewer:** if purchased, opens the Reference Lab Viewer for transactions **Reference Lab Requisition Designer:** if purchased, opens the Reference Lab Requisition Designer **Reference Lab Label Designer:** if purchased, opens the Reference Lab Label Designer **WindoPath Report Designer:** if enabled, opens Result Report Designer for WindoPath E.ssential users.
Window	Shows currently opened window(s) to select
Search	**Run (Ctrl+R)** - searches using current criteria
All	**New (Ctrl+N)** - new record for current table **Save (Ctrl+S)** - save current record **Save+ (Ctrl+Shift+A)** - save current record and open new window **Audit (Ctrl+T)** - shows audit table of current record
Transfer	**Export Library Item** - Used to export library entities **Import Library Item** - Used to import library entities

Notes

Chapter 3
Human Resources

Human Resources is where all users' information is stored in the system. It is used to add new, modify existing, and retire valid users for system access.

In order for anyone to use e.Boost, they must have a user account.

Human Resources is accessed either through the Human Resources icon on the left or from the Operations Menu. Users are required to have the Admin privilege or a privileged User Role in order to access Human Resources.

User Table

The *User Table*, shown in Figure 3-1, stores all the information on e.Boost module users. Every person who needs to use the e.Boost module must have a user account.

To open the User table, select **User** from the *Library* drop-down menu. Once a user is selected, all related fields are displayed in the detail grid.

The data tree on the left side of the window displays the following:

- Code
- User name

Searching for Existing Users

Searches can be performed by either code or user name.

To search by Code, select **Code** from the Search selection drop-down, enter the code in the second criteria field and click the binoculars button.

To search by User name, select **Username** from the Search selection drop-down, enter the username in the second criteria field and click the binoculars button.

With any method, if the search criteria field is left blank, a complete list of the table contents is displayed. Highlight the specific record in the data tree and the details are displayed on the right.

NOTE: *Searches can also be performed by pressing* ***<Ctrl+R>***

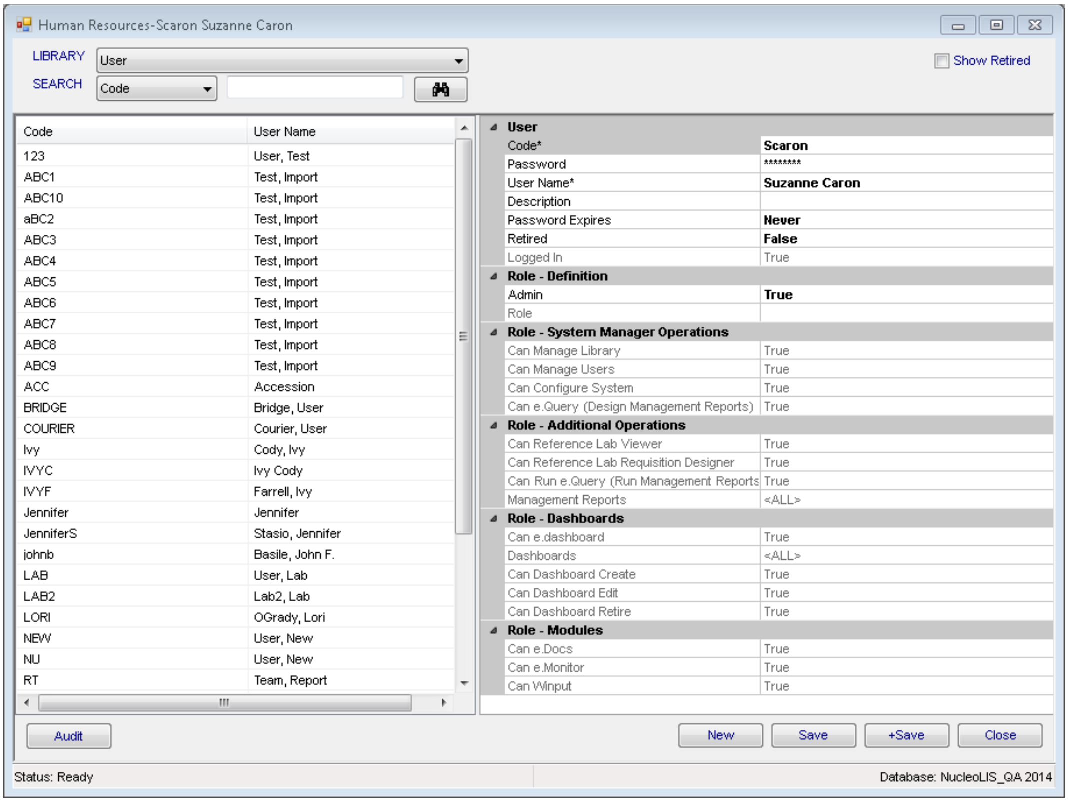


Figure 3-1 - User Table

User table field descriptions

Table Field	Description
Code	Required field; used as user code at login; not case sensitive.
Password	User passwords must be a minimum of 6 characters. Passwords are not required to be alphanumeric although it is recommended. Note: The System Manager should assign a default password for use at initial login. When the user logs on for the first time, they will be forced to change their password.
Username	User's name in the format “last,[space]first”
Description	Free text. Anything for informational purposes is entered here.
Password Expires	Indicates how long until the current password will expire. There are three options: Never - never expires, Default - expires in the number of days set in the configuration and Expired - used to force the user to change their password at initial login. Psyche does not recommend/support that passwords are set to never expire.
Retired	True/False; whether the user is active/inactive in the system
Logged In	True/False; dithered however will display whether or not a user is logged into the system

Table Field	Description
Role	
Admin	True/False; whether or not the user should have rights to administrative functions, such as Human Resources, Configuration, Label Designer, Library, on the system
Role	Choose from the roles defined in the User Role library. Users must either be set as Admin or assigned a User Role.
User Role Settings Display	
Role - System Manager Operations **Role - Additional Operations** **Role - Dashboards** **Role - Modules**	The rest of the fields are display only and show the settings for the specific role entered in the Role field above. Refer to the Library Chapter for more information on User Role settings.

To add a new user:

1. **Click New. A blank detail grid is displayed.**
2. **Fill in the appropriate fields.**
3. **Click Save.**

To modify an existing user:

1. **Locate the user by one of the search methods.**
2. **Change the field data to the new information.**
3. **Click Save.**

Human Resources Menu

Menu Option	Description
File	**Show User** - shows current user information **Version** - Displays the current e.Boost version number **Exit** - exits e.Boost
Operations	**Library** - opens the Library window **Human Resources** - opens the Human Resources window **Configuration** - opens the Configuration window **e.Dashboard** - if purchased, opens the e.Dashboard window – see separate documentation **e.Monitor** - if purchased, opens the e.Monitor System Monitor window – see separate documentation **e.Docs** - if purchased, opens the e.Docs Document Scanner window - see separate documentation **e.Query (Design Management Reports) -** if purchased, opens the e.Query Management Report Designer window that allows you to create complex management reports easily - see separate documentation **Run e.Query (Run Management Reports)** - opens the Management Report window to run a management report in the database **Reference Lab Viewer** - if purchased, opens the Reference Lab Viewer for transactions **Reference Lab Requisition Designer** - if purchased, opens the Reference Lab Requisition Designer **Reference Lab Label Designer** - if purchased, opens the Reference Lab Label Designer
Window	Shows currently opened windows to select
Search	**Run (Ctrl+R)** - searches using current criteria
All	**New (Ctrl+N)** - new record for current table **Save (Ctrl+S)** - save current record **Save+ (Ctrl+Shift+A)** - save current record and open new window **Audit (Ctrl+T)** - shows audit table of current record
Transfer	**Export** - Used to export libraries **Import** - Used to import libraries
User	**Reset Logged** - Allows Admin users to reset a logged user status by selecting the user account in the Human Resources window and clicking Reset Logged.
Other	**EMR Client Set Up** - opens the EMR Client Configuration window for client set up, if available.

Chapter 4
Configuration

Configuration allows system managers to define the settings for use with e.Boost. These settings determine how the system functions. e.Boost is installed with a standard set of preferences and settings that may be changed at any time.

Users without the Administration privilege will not be able to access the Preferences window.

The Preferences Window

The Preference window is accessed by clicking the icon (at left) or selecting Configuration from the Operations menu. At first, the window is blank to allow searching in one of two ways.

- Click the drop-down arrow in the Search field box to display a list of preferences, then click the Search icon to find that preference.
- Leave the Search field blank and click the Search icon to get a list of all preferences.

NOTE: *The Scope selection should be left at All or Site Wide to see all preferences.*

When all preferences are listed, the Preferences window will look similar to the image displayed in Figure 4-1.

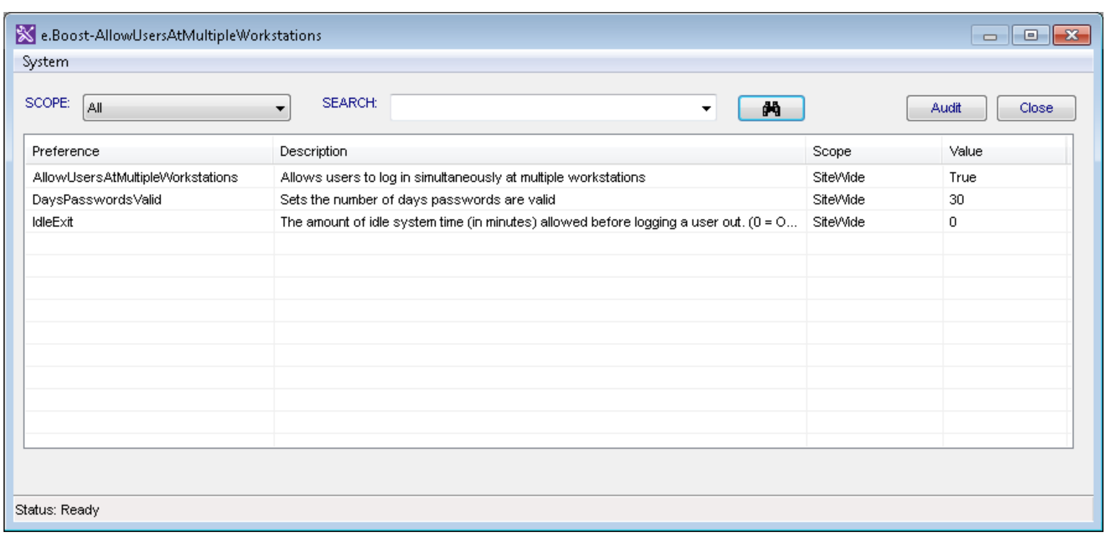


Figure 4-1 - Preferences Window

NOTE: *System Menu is for Psyche use only.*

The Preference window displays the following columns of information:

- Preference (name)
- Description
- Scope (All, SiteWide, User)
- Value (most are either True or False)

Changing Preferences

To modify a preference value, double-click the row in the Configuration window. If the item has a True/False value, a prompt is displayed confirming the change. For those preferences that require a numeric or other value, a dialog box to enter the value.

Audit Button

Once a preference is highlighted, the Audit button in the upper right becomes available. Clicking Audit opens the audit trail of all changes made to that preference, similar to the window below in Figure 4-2.

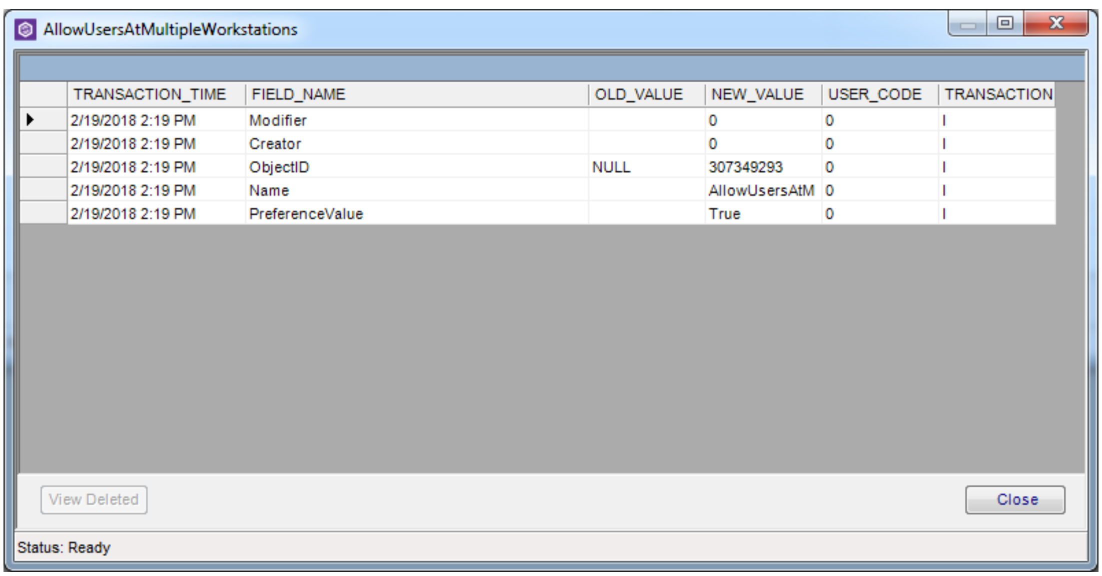


Figure 4-2 - Preference Audit Window

SiteWide Preferences

Additional information on shaded preferences can be viewed by right-clicking on preference. The following table lists the site wide preferences.

Preference	Description	Scope	Value
AllowUsersAtMultipleWorkstations	Allows users to log in simultaneously at multiple workstations	SiteWide	True/False
DaysPasswordsValid	Sets the number of days passwords are valid	SiteWide	Days
IdleExit	The amount of idle system time (in minutes) allowed before logging a user out	SiteWide	Minutes

Notes

Chapter 5
e.Monitor - Process Monitoring

e.Monitor is a software module designed to watch your system processes, display indicators noting there's a problem, and notify the system manager with alert displays and email notices of any issues. Processes that may be monitored with e.Monitor include, but are not limited to: email delivery, Fax delivery, Outreach orders to LIS, LIS results to Outreach, WindoPath Results and EMR Connections status. You may view the status of running processes at any time through the e.Monitor window, which also allows you to drill down to view details about the specific process.

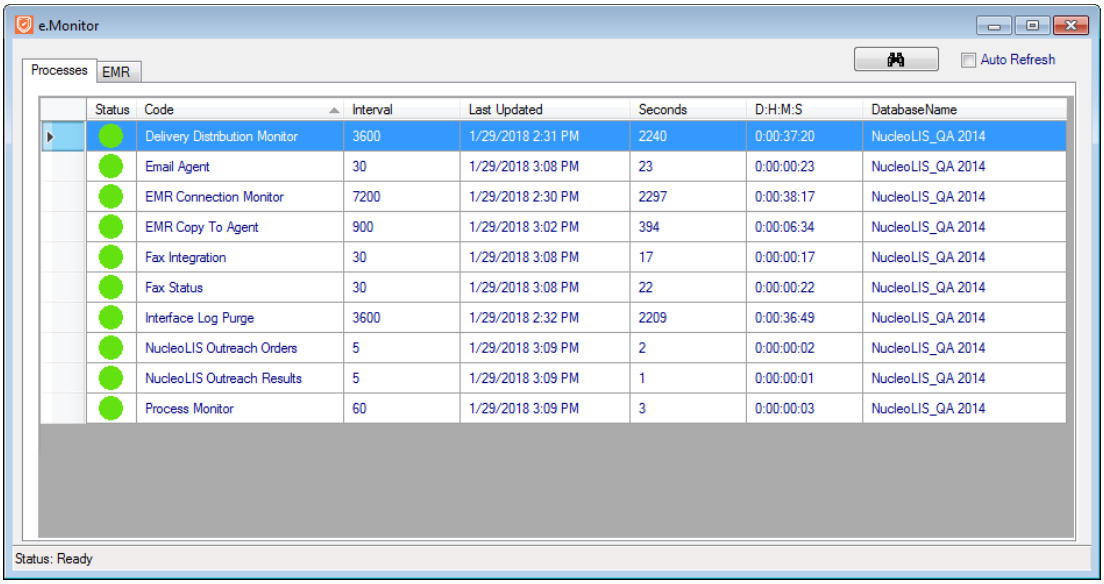
By getting notifications from e.Monitor, you can troubleshoot and resolve issues quickly. The processes displayed in e.Monitor by default are basic internal processes, such as faxing, email processes, etc., including the process that monitors them. Interface monitoring is available as an add-on module.

In recent versions, the ability to "hide" processes, which you might want to do for those processes that don't need much attention, has been added to e.Monitor, along with being able to stop and start certain processes. These are described later in this chapter.

Once enabled, e.Monitor is available from within any e.lixa product: NucleoLIS, MicroPath, e.Outreach, and e.Boost, by clicking the e.Monitor icon, shown on the left, in the product toolbar. The e.Monitor window shown in Figure 1 opens within the current product window.

e.Monitor Window

Once the e.Monitor window opens, there are two tabs available to access different processes (or plugins). The **Processes** window displays initially as the default and the second tab displays any active EMR interfaces that have been installed and enabled.



Status	Code	Interval	Last Updated	Seconds	D:H:M:S	DatabaseName
	Delivery Distribution Monitor	3600	1/29/2018 2:31 PM	2240	0:00:37:20	NucleoLIS_QA 2014
	Email Agent	30	1/29/2018 3:08 PM	23	0:00:00:23	NucleoLIS_QA 2014
	EMR Connection Monitor	7200	1/29/2018 2:30 PM	2297	0:00:38:17	NucleoLIS_QA 2014
	EMR Copy To Agent	900	1/29/2018 3:02 PM	394	0:00:06:34	NucleoLIS_QA 2014
	Fax Integration	30	1/29/2018 3:08 PM	17	0:00:00:17	NucleoLIS_QA 2014
	Fax Status	30	1/29/2018 3:08 PM	22	0:00:00:22	NucleoLIS_QA 2014
	Interface Log Purge	3600	1/29/2018 2:32 PM	2209	0:00:36:49	NucleoLIS_QA 2014
	NucleoLIS Outreach Orders	5	1/29/2018 3:09 PM	2	0:00:00:02	NucleoLIS_QA 2014
	NucleoLIS Outreach Results	5	1/29/2018 3:09 PM	1	0:00:00:01	NucleoLIS_QA 2014
	Process Monitor	60	1/29/2018 3:09 PM	3	0:00:00:03	NucleoLIS_QA 2014

Figure 5-1 - e.Monitor Process Window

The Processes tab displays the status of faxing, email processes, etc., including the process that monitors them. Interface monitoring is available as an add-on module.

EMR tab displays all installed EMR interfaces and their status.

The original sorting in the e.Monitor window is by Code/process name, but could be sorted by any column by clicking on the column header. Columns can be resized and will maintain those sizes when you exit and return within that session.

Hide/Show processes from view

From the e.Monitor process window, you may *hide*, *show* and *remove* processes from view by right-clicking on a process row and selecting an option from the menu. This assists in maintaining a simpler display for general daily monitoring.

- **Hide:** Removes the process from display in the e.Monitor window, but keeps it running. Hidden items will continue to be monitored by the Process Monitor.
- **Show:** Available on any process when a process was previously hidden. The Show menu includes a sub menu of each currently hidden process.
- **Remove:** The Remove option should only be used for processes that are no longer valid items. If an item is removed, and is an active and valid process, the item will be added back to the list the next time the process runs. Removed menu items are NOT monitored by the Process Monitor.

Stop/Start/Restart BackBone processes in e.Monitor

If enabled, background processes that are controlled by the Psyche BackBone Service may be stopped, started or restarted (stop, then started) from e.Monitor.

These process are identified in the e.Monitor window by right-clicking the process and opening the context sensitive menu for that process. which will include the following menu options after *Hide* and *Show*:

- **Start:** Starts the current process
- **Stop:** Stops the current process.
- **Restart:** Stops, then Starts the current process; takes longer than start or stop.

NOTE: *This functionality is not available for all processes seen in e.Monitor. Processes that run as windows services (traditional interfaces, for example) do not support this functionality.*

Processes that may be stopped, started or restarted from e.Monitor include the following. More may be added in later revisions.

- Delivery Distribution Monitor
- eBoost Maintenance
- Email Agent
- EMR Connection Monitor
- EMR Copy To Agent
- Fax Integration
- Fax Status
- Interface Log Purge
- NucleoLIS Outreach Orders
- NucleoLIS Outreach Results
- NucleoLIS Ref Lab Orders
- Outreach Maintenance
- Process Monitor

Stop/Start/Restart menu items are enabled and disabled according to the process's current state. For example, if a process is known to be enabled, Stop and Restart will be enabled. If a process is known to be disabled, only Start will be enabled.

A process's current state is not always in sync with the Green\Red\Yellow indicators in e.Monitor. For example a row may display a Red indicator, yet be enabled. (This scenario is indicative of a problem)

Activating Stop/Start/Restart

Once one of the menu items is initiated, the request launches a progress bar, which is used to communicate that work is in process and the status of the request to the user. The progess bar should not be closed giving the process a chance to complete.

When complete, the progress window indicates "Request Ended" followed by the outcome of the request.

- "Request Ended (Compete)" which indicates success.
- "Request Ended (Expired)" indicates that the Backbone did not respond within the time allocation (set at 2 minutes). Expired does not necessarily indicate failure, but likely does.

To check the status of the process on which an action was attempted, you can right-click on the process to see the available actions at that point. For example, if the process has started, Start will not be an option.

A database refresh of the e.Monitor window is executed upon closing the Progress window.

Processes Window

The process plugins available for display in e.Monitor can be categorized into three categories, as shown in the list below. Interface monitoring is available as an add-on module. The actual list of processes (or plugins) seen in the e.Monitor window depends upon what is installed and configured on your system and enabled.

System Monitor Services

Watch other processes making sure they are working as intended

- **Delivery Distribution Monitor**
  Monitors the delivery of faxes and emails, whether reports or alerts; sends alerts when there's a failure to send
- **EMR Connection Monitor**
  Monitors the status of enabled EMR Connections and sends alert notices when there is an issue
- **EMR Copy To Agent**
  Monitors the process that handles Copy To reports
- **Interface Log Purge**
  Monitors the process that purges interface logs
- **Process Monitor**
  Monitors the health of all the other plugin processes and sends alert notices when there's an issue.

Delivery Services

Plugins that manage delivery of faxes, email, and printed reports.

- **Email Agent**
  Monitors the delivery of all emails
- **Fax Integration**
  Executes the faxing of reports via Interfax
- **Fax Status**
  Monitors the status of delivered faxes to Interfax until deemed successful

Interface Services

May include various types of interfaces

- **NucleoLIS Outreach Orders**
  Monitors the process that sends orders from Outreach to NucleoLIS
- **NucleoLIS Outreach Results**
  Monitors the process that sends results from NucleoLIS to Outreach
- **NucleoLIS WP Link Orders**
  Monitors the process that sends orders from WindoPath to NucleoLIS
- Any instrument or device interface you have may be listed, if configured.

Process Window Columns

- **Status Indicator** - The name of each process is preceded by a color indicator as described below to make identifying issues easier.

Indicator Color	What it means
Green	Indicates that the process has last run at the predefined interval
Yellow	Indicates the process has not run within the predefined interval, but it is within the allowed grace period percentage (usually 5 min)
Red	Indicates the process has not run within the predefined interval or allowed grace period percentage (usually 5 min); *action should be taken*
Blue	Indicates the process uses a non-numeric interval, such as Monday, Tuesday

- **Code** - Name of the Plugin Process
- **Interval** - Number of seconds that plugin is configured to run; when starting or stopping a process, the interval must pass before the indicator reflects the change.
- **Last Updated** - Date/time the process last ran
- **Seconds** - Number of seconds since last time Process ran
- **D:H:M:S** - How long ago the process last ran (days:hours:minutes:seconds)

The **Binoculars** button can be used to perform a refresh of the available EMR Clients display or checking the Auto-Refresh checkbox will automatically refresh the display every 15 seconds.

Process Detail Windows

You may drill-down to view more details on a process by double-clicking that process row. Depending on the process, either the **Delivery Monitor** window opens or the **Interface log** window.

Delivery Monitor Window

The *Delivery Monitor* window, shown in Figure 2, opens when you double-click one of the processes listed below.

The difference between each window display is that filters are filled in to sort and only display data significant to that particular process.

- **Delivery Distribution Monitor:** opens the Delivery Monitor window with filter fields set to display *Delivery Distribution Monitor* emails sent
- **EMR Connection Monitor:** opens the Delivery Monitor window with filter fields set to display *EMR Connection Monitor* emails sent
- **EMR Copy To Agent:** no details to display currently
- **Interface Log Purge:** no details to display currently
- **Process Monitor:** opens the Delivery Monitor window with filter fields set to display *Process Monitor* emails sent
- **Email Agent:** opens the Delivery Monitor window with filter fields set to display *all* emails sent

- **Fax integration:** opens the Delivery Monitor window with filter fields set to display faxes sent
- **Fax Status:** opens the Delivery Monitor window with filter fields set to display faxes sent

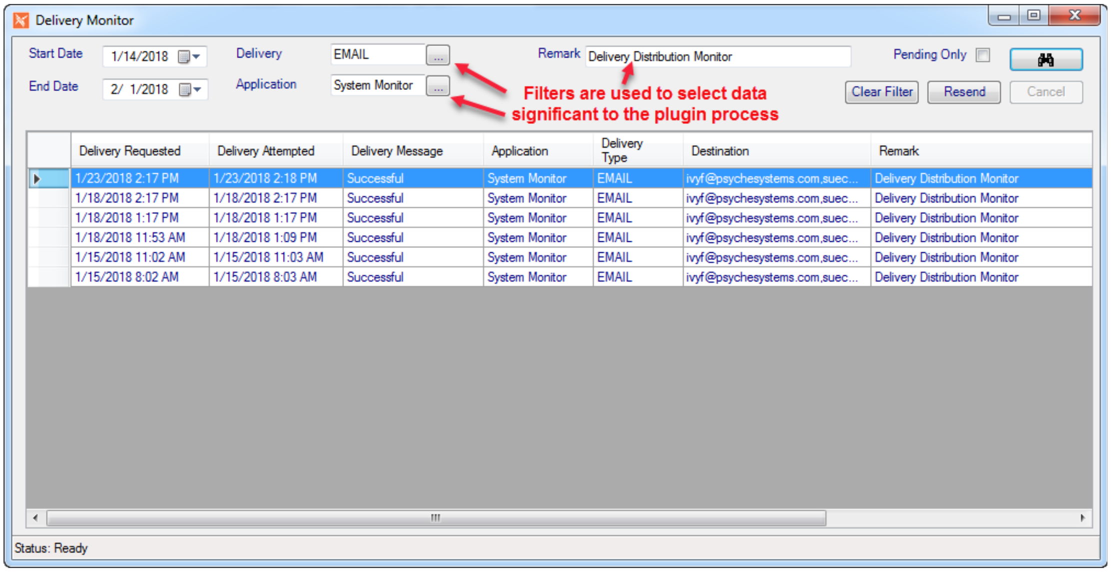


Figure 5-2 - Delivery Monitor Window - opened from Delivery Distribution Monitor process

Delivery Monitor Window Columns

Field or Button	Description
Delivery Requested	Date/Time the process received the distribution request
Delivery Attempted	Date/Time the process attempted to distribute the request
Delivery Message	Varying messages, such as Sent, Successful, Canceled by x, or failure error message
Application	Depends on what applications you have installed: NucleoLIS, EMR II, Outreach, WindoPath, etc.
Delivery Type	One of the following delivery methods: Email, Fax (Interfax), Print, RFAX (RightFax)
Destination	Email, printer, or Fax number
Remark	Report messages include the case number, destination, report status; other messages may include process name; Remarks are filled in from monitor processes to limit transactions related to that process. For example, when you drill down to details for the EMR Connection Monitor, the remark field is filtering records with the remark “EMR Connection Monitor”.

With the fields at the top of the Delivery Monitor window, you can filter the display by any or a combination of the following:

- **Start Date / End Date:** Used to limit the display to a specified date range.
- **Delivery:** Click drop-down box to select one of the four available delivery methods: Email, Fax, Print, RFAX (RightFax).
- **Application:** Click drop-down box to select one of the possible applications installed, such as NucleoLIS, Outreach, EMR II.
- **Remarks:** Text can be entered to filter specific messages, such as doctor or group name.
- **Pending Only:** Click checkbox to filter pending distributions only.

Delivery Monitor Window Buttons

- **Binoculars:** Start search, as in throughout the NucleoLIS program.
- **Clear Filter:** Clears any selected filters applied and refreshes display.
- **Resend:** The Resend button is used to resend a report or transaction. Highlight the specific record and click Resend to submit it again.
- **Cancel:** The Cancel button is used to stop a transaction that was just resent. If a report has been queued and is in the process of being resent, Cancel will stop the process.

Interface Log Window

The **Interface Log** window, shown in Figure 3, opens when you double-click one of the processes listed below or any configured interface process. For example:

NucleoLIS Outreach Orders: opens the Interface Log window with filter fields set to display Outreach Orders that were sent to NucleoLIS (or any LIS)

NucleoLIS WP Link Results: opens the Interface Log window with filter fields set to display NucleoLIS WP Link Results that were sent to WindoPath

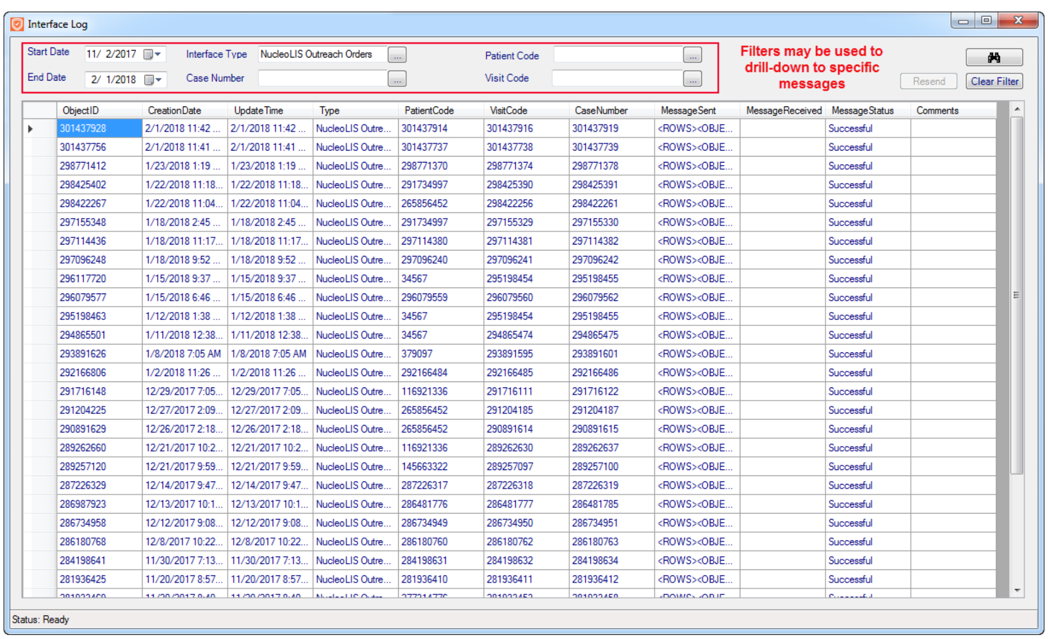


Figure 5-3 - Sample Interface Log Window - opened from NucleoLIS Outreach Orders process

Interface Log Window Columns

Field or Button	Description
ObjectID	Internal record identification number
Creation Date	Date/Time the transaction was received by the interface
Update Time	Date/Time the record was updated, if appropriate
Type	Type of interface, such as NucleoLIS Outreach Results
Patient Code	Patient identification code of transaction
Visit Code	Visit identification code of transaction
Case Number	Case number of transaction
Message Sent	Message that was sent; clicking in cell displays raw message
Message Received	Message that was received; clicking in cell displays raw message
Message Status	Status of transaction, such as Successful or Pending
Comments	Any additional comments from interface

With the fields at the top of the Delivery Monitor Window, you can filter the display by any or a combination of the following:

- **Start Date / End Date:** Used to limit the display to a specified date range.
- **Interface Type:** Click drop-down list to select one of the available interface types.
- **Case Number:** Enter a case number to limit transactions to that case.
- **Patient Code:** Enter a patient number to limit transactions to that patient.
- **Visit Code:** Enter a visit number to limit transactions to that visit.

Interface Log Window Buttons

- **Binoculars**: Starts search, as in throughout the NucleoLIS program.
- **Resend:** The Resend button is used to resend a transaction. Highlight the specific record and click Resend to submit it again.
- **Clear Filter:** Clears any selected filters applied and refreshes display.

NOTE: *The Resend feature is not available for all interfaces and transactions. If not available, the Resend button will be dithered.*

EMR Window

The list of EMR interfaces seen in the e.Monitor EMR tab depends upon what EMR and/or AutoPrint connections you have installed, configured and enabled on your system. Figure 4 shows an e.Monitor **EMR** window with one client having passed status checks and one that has not.

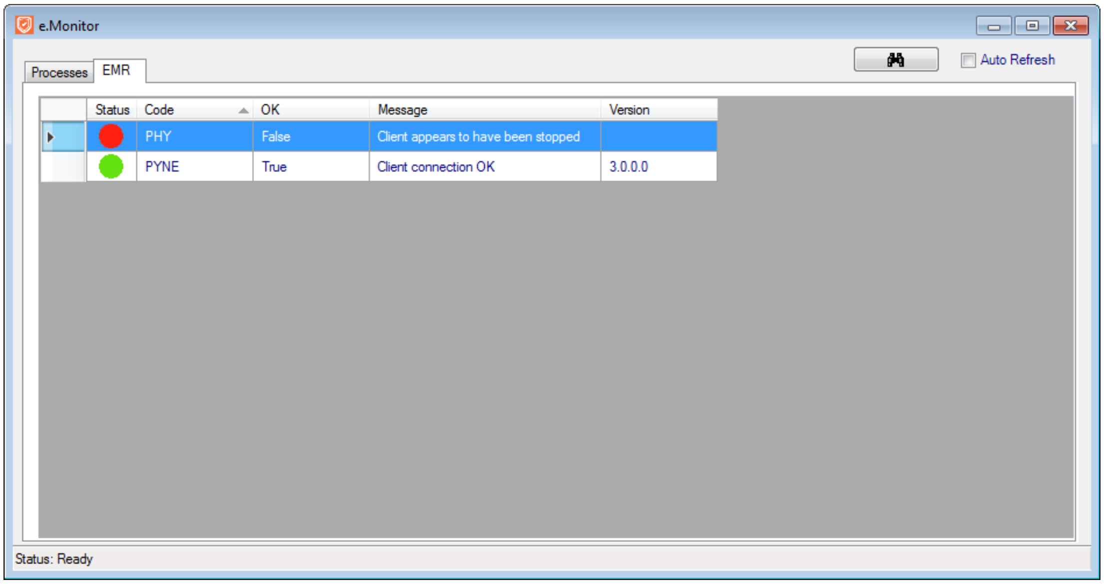


Figure 5-4 - e.Monitor EMR Window

EMR Window Columns

- **Status Indicator** - The code of each EMR client is preceded by a color indicator as described below to make identifying issues easier.

Indicator Color	What it means
Green	Indicates that the process has last run at the predefined interval
Yellow	Indicates the process has not run within the predefined interval, but it is within the allowed grace period percentage
Red	Indicates the process has not run within the predefined interval or allowed grace period percentage or EMR Interface has had one, or more, failures; *action should be taken*

- **Code** - Code for the EMR Client
- **OK** - All connection checks have passed; True/False
- **Message** - Message regarding current status; e.g. “Client connection OK”, “Client appears to have been stopped”.
- **Version** - Version number of EMR interface for that client

The Binoculars button can be used to perform a refresh of the available EMR Clients display or checking the Auto-Refresh checkbox will automatically cause a refresh every 15 seconds.

Double-click a client row to open the EMR Client Details window for that client.

EMR Client Details Window

The EMR Client Details window is separated into two sections. The top section includes all the *Transaction Activity* that has occurred for that EMR. Various filters are available to sort the transactions to what you want to see. The bottom section of the window displays *Pending Reports*, if there are any. In times of high volume, you are more likely to see pending reports.

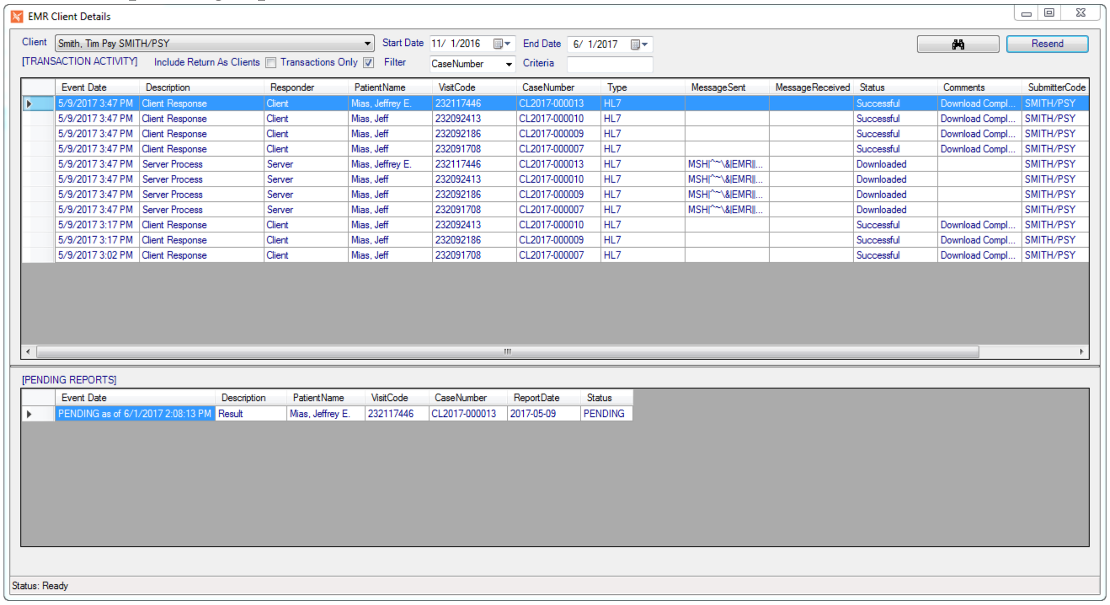


Figure 5-5 - EMR Client Details Window

EMR Transaction Activity Columns

Field or Button	Description
Event Date	Date/Time the transaction occurred
Description	Description of transaction, such as “Client Response”, “Server Process”
Responder	The entity that is sending the transaction, such as Client, Server
PatientName	Name of patient, if result transaction
VisitCode	Visit identification code of patient, if result transaction
CaseNumber	Case number, if result transaction
Type	The format type of the report being sent, such as HL7, PDF64
MessageSent	Message that was sent; clicking in cell displays raw message
MessageReceived	Message that was received; clicking in cell displays raw message
Status	Status of transaction, such as Successful, Pending
Comments	Any additional comments from interface, or version number for non-transaction records
SubmitterCode	Submitter Code, if result transaction
SubmitterGroup	Submitter Group Code, if result transaction

EMR Pending Reports Columns

Field or Button	Description
Event Date	Date/Time the transaction occurred
Description	Description of transaction, such as “Report”
PatientName	Name of patient
VisitCode	Visit identification code of patient
CaseNumber	Case number
ReportDate	Date the report was first sent
Status	Status of transaction, such as Pending

With the fields at the top of the EMR Client Details window, you can filter the display by any or a combination of the following:

- **Start Date / End Date:** Used to limit the display to a specified date range.
- **Include Return As Clients:** Check to include those accounts that have been linked to an existing EMR account for result delivery to a single practice.
- **Transactions Only:** Use this checkbox to limit records that are report transactions; most likely used often.
- **Filter:** Select one of the following from drop-down list: CaseNumber, PatientName, SubmitterCode, SubmitterGroup, and VisitCode.

Then depending on the Filter choice, enter the appropriate criteria in the Criteria field.

EMR Client Detail Window Buttons

- **Binoculars:** Starts search, as in throughout the NucleoLIS program.
- **Resend:** The Resend button is used to resend a transaction. Highlight the specific record and click Resend to submit it again.

NOTE: *The indicators for both processes and EMR Interface Connections (including AutoPrint) reflect the status of the process or connection itself, and not every transaction that the program processed. In order to view the status of individual messages and transactions, you need to drill-down to see individual transactions in the detailed windows.*

Examples of Alert Email Messages

From Process Monitor – When EMR Connection Monitor (or any process) not running/stopped

Process Monitor
Reporting status at 5/30/2019 12:58:15 AM

Alert: Process EMR Connection Monitor last ran at 5/29/2019 10:52:57 PM

From Delivery Distribution Monitor when Fax delivery has timed out and Fax canceled

Delivery Distribution Monitor
Reporting activity from 5/18/2019 12:05:57 PM to 5/18/2019 1:05:57 PM

The following records have failed delivery since 5/18/2019 12:05:57 PM
NucleoLIS-FAX - Canceled by 0 (Case Report - M2017-000006 \ Pyne, Warren \ FINAL) Scaron

From Delivery Distribution Monitor when invalid Fax# is used for physician recipient and using Interfax

Delivery Distribution Monitor
Reporting activity from 6/1/2019 2:48:23 PM to 6/1/2019 3:48:23 PM

The following records have failed delivery since 6/1/2019 2:48:23 PM
NucleoLIS-FAX - FAIL-Error Code:-111 Attempting to fax to a number that is not the designated fax number in a developer account. (Case Report - M2019-000006 \ Pyne, Warren \ FINAL)

From Delivery Distribution Monitor when destination printer is out of paper.

Delivery Distribution Monitor
Reporting activity from 11/19/2019 7:24:04 PM to 11/19/2019 11:24:04 PM

The following records have been pending delivery for at least 30 minutes
NucleoLIS-PRINT - Printer Error - No Paper (Case Report - M2019-000033 \ Pyne, Warren \ FINAL) Scaron

From EMR Connection Monitor – possible EMR client alerts

EMR Connection Monitor
Reporting activity from 4/19/2019 1:21:38 PM to 5/4/2019 1:54:29 PM

EMR2:Client not activated
EMRACCT:Client not activated
GROUP:Client side processing failures detected (1)
APA:Client side processing failures detected (1)
PHY:Client appears to have been stopped

Do NOT put a linefeed (crlf) after the last line, otherwise it will crash.

Chapter 6
e.Docs - Document Scanning/Viewing

e.Docs is a Psyche Systems software module that allows you to scan paper documents, assign them to a specific case, store them digitally, and then view at any time. You would need a WIA (Windows Image Acquisition) compliant flatbed or sheet-fed type scanner, with or without an automatic document feeder. The scanner can be installed on the computer from which you will be scanning or a network server.

Once enabled, e.Docs is available from within any e.lixa product: NucleoLIS, MicroPath, e.Outreach, and e.Boost, by clicking the e.Docs icon, shown on the left, in the product toolbar or selecting e.Docs from the Operations Menu. The **e.Docs Window** shown in Figure 6-1 opens within the current product window.

In *WindoPath*, you access the e.Docs module directly by selecting **Scanned Documents** from the *Display* menu on the *Accession* window or any window where a case has been accessed.

NOTE: *In order to access e.Docs directly from WindoPath, you must be logged in WindoPath with a User Account that exists in e.Boost and has privilege to run e.Docs.*

If you have a Psyche product that is integrated with e.Docs, you may scan documents to attach to a case directly from the product's *Accession Window*. See **Product Integration** below.

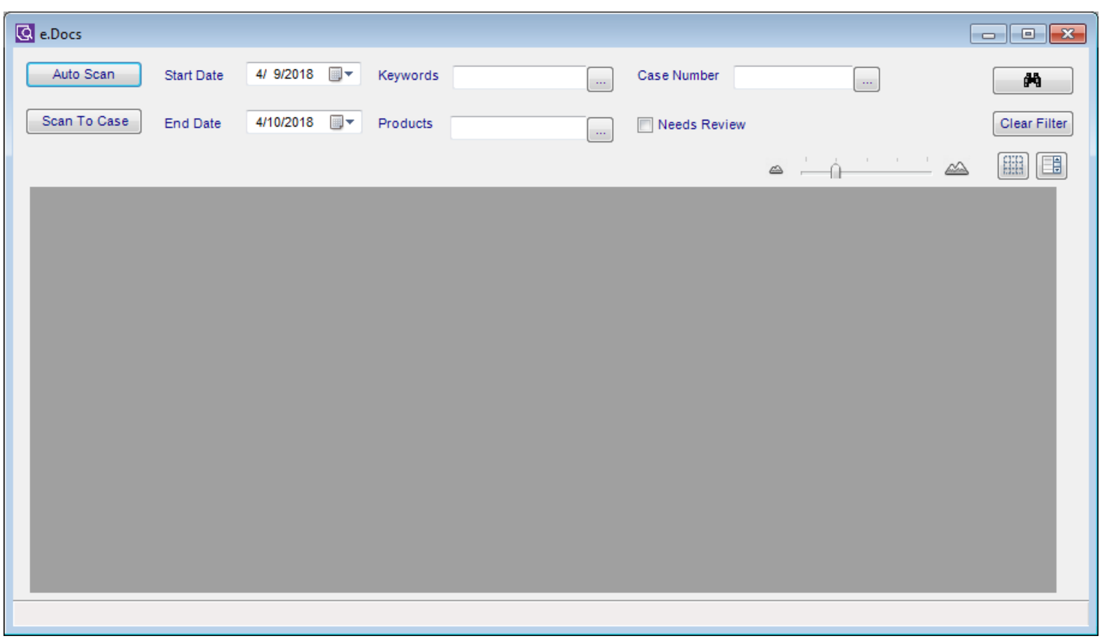


Figure 6-1 - e.Docs Window

Scanning new documents

There are two ways a document can be scanned from within e.Docs and assigned to a case. Either a barcode label of the Case Number can be affixed to the document and e.Docs automatically locates and reads the Case Number from the barcode *or* during the scanning process, you enter the Case Number to which you want to attach the document.

Click one of the two buttons shown below to initiate a new scan. The method you choose depends on your laboratory's work flow.

	Use to automatically scan documents that have a supported barcode attached of the Case Number to which you want to attach it.
	Use to scan directly to a Case; a dialog box prompting for the Case Number opens. See Figure 2.

1 **With either method, e.Docs present a window where you select from available scanners set up on your computer. Using multiple scanners and mixed scanner types (auto-feed, flatbed, etc.) is supported.**

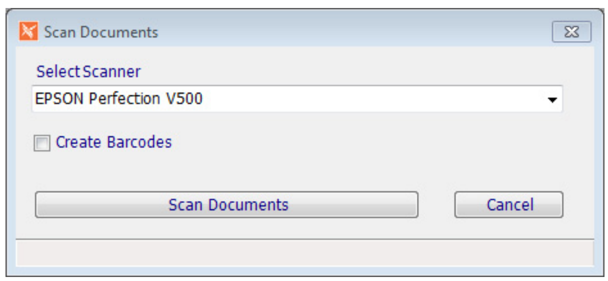


Figure 6-2 - e.Docs Select Scanner dialog box

2 **Select the scanner you want to use from the drop-down list. Check *Create Barcodes* if you want e.Docs to digitally add a barcode to the scanned document. Barcodes are positioned in the upper-left corner.**

3 **Once the scanner is selected, e.Docs scans the document and locates the barcode (if using the automatic option), and processes the document. You will see a message box telling you can continue other work.**

4 **If scanning to a case number, the following prompt is displayed:**

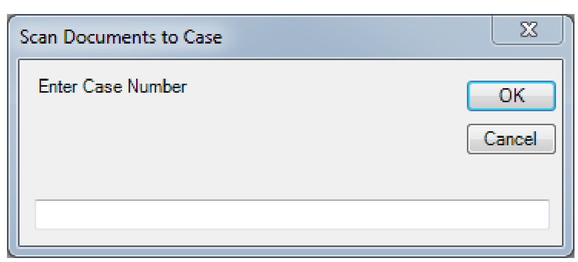


Figure 6-3 - Scan Documents to Case prompt.

5 **Enter the Case Number to which you want to attach the document. If the Case Number entered is found to be valid in either NucleoLIS, MicroPath, or WindoPath, depending on what products you have, e.Docs continues and a Windows dialog box opens to select the scanner device to use.**

You will see a message box telling you can continue other work.

6 Click OK to return to the e.Docs Window and scan another document if needed.

It can take several seconds to complete the process, but once completed, the scanned document file is stored in the configured *Filestore* folder and can be accessed by clicking the binoculars performing a search.

Product Integration

If you have other Psyche products, such as NucleoLIS, MicroPath, or WindoPath, you may use e.Docs to attach scanned documents to a case from within the program's *Accession* window. With a case selected in *NucleoLIS* or MicroPath, select the **Scanned Documents** option from the Scan menu item and the scanner selection window shown in Figure 2 above opens.

If you are using *WindoPath* and have a case accessed, select **Scan a Document** from the *Display* menu to initiate scanning.Scanning proceeds as described above. Depending on your system's configuration, you may be prompted to select a workstation before selecting a scanner.

NOTE: *When scanning with e.Docs, the program controls the scanner and you should **not** press any buttons on the scanner to initiate scanning.*

To locate previously scanned documents

Once the *e.Docs Window*, shown in Figure 1, is opened by clicking the e.Docs icon or by selecting e.Docs from the Operations, *Filter Fields* are used to select, view and print documents that have been previously scanned and stored with e.Docs.

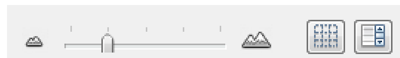
With WindoPath, you can locate previously scanned documents from any window where a case is accessed and the Display menu is available. Select **Scanned Documents** from the *Display* menu to open the e.Docs Window.

Filter Field	Use
Start/End Date	Enter start and end dates to search for case documents that have been scanned within that date range. Default is one month.
KeyWords	If you are searching for a particular phrase or code, such as a diagnosis, you can select one from the keyword drop-down list by clicking the keyword elipsis (...). As e.Docs scans each document, it creates a library of words and numeric sequences it was able to extract from the documents and makes them available as searchable keywords. These keywords are displayed in the Keyword drop-down list.
Products	Depending on which Psyche products you have installed, you may limit your search by the products listed in the Products drop-down list.
Case Number	If Case Number is known, it can be entered in this field to access only documents assigned to that case. The specified date range is ignored when searching by Case number.
Needs Review Check box	Check to search for documents that do not have a Case Number assigned and are labeled "UNKNOWN".

Filter Field	Use
	Standard Search button to initiate a search using current filter settings
Clear Filter Button	Clears the filter fields

Tools

Above and right corner of the document display area are tools that are used when viewing scanned documents.



- **Size Slider:** The slider modifies the size of the document thumbnail images in the e.Docs Window that were retrieved from a document search while in *Grid View*.
- **Grid View:** Displays retrieved documents as image thumbnails (default); newest documents are to the right/bottom. See Figure 6-4.
- **List View:** Displays retrieved documents in a list, as seen in Figure 6-5. Newest documents are at the end of the list.

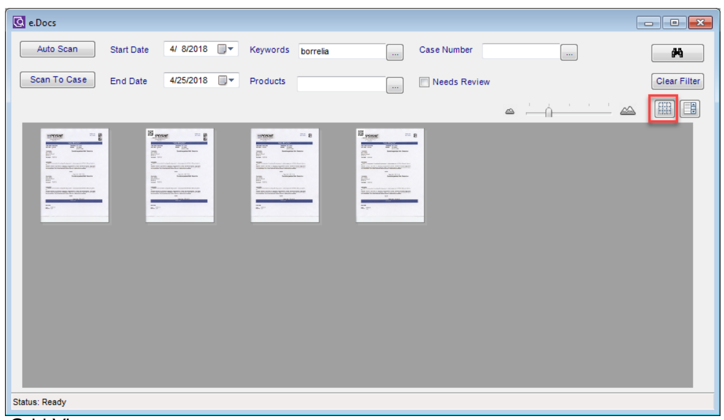


Figure 6-4 - e.Docs with Retrieved Documents in Grid View

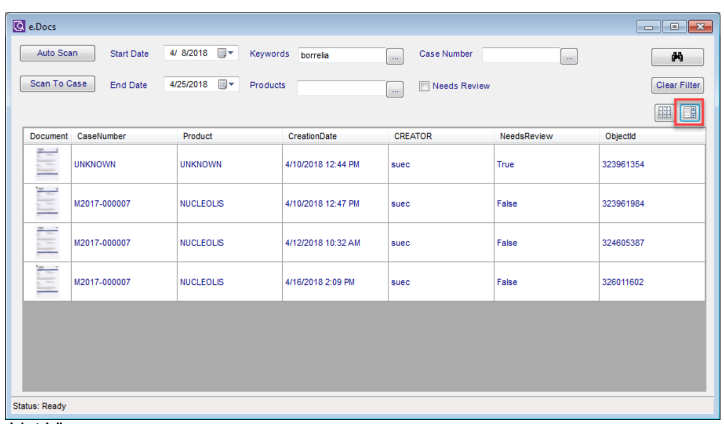


Figure 6-5 - e.Docs with Retrieved Documents in List View

NOTE: *During the scanning process, if e.Docs cannot locate the detected or entered Case Number as a valid case in the database, the document will be labeled as “UNKNOWN” in e.Docs.*

e.Docs Image Viewer Window

Once a document has been located by any search method, they can be viewed individually in the Image Viewer Window shown in Figure 6-6. Whether in Grid or List View, click the document you want to view to open the Image Viewer for that case.

If multiple documents have been scanned for the case, a thumbnail image of each document is displayed on the left and each attached document can be viewed.

Use normal Windows close button to close a case’s documents.

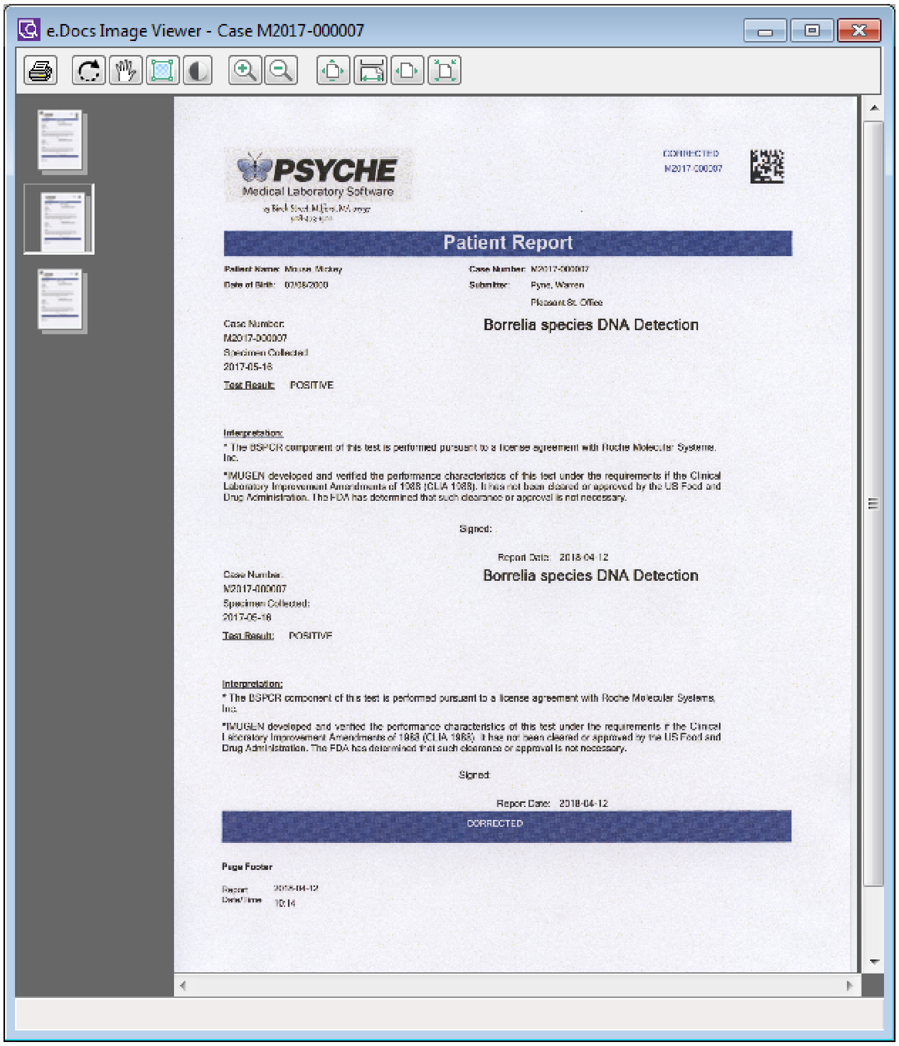


Figure 6-6 - e.Docs Image Viewer Window

Image Viewer Tools

Once you have a document open in the Image Viewer, you can use the Image Viewer Tools to zoom in or manipulate the display as needed.

Tool Icon	Use
Print Image	Opens a Windows dialog box to select a printer for printing
Rotate Image	Rotates image in the Viewer, if it was scanned horizontally
Pan Image	If zoomed in, allows you to drag the image to view another area
Select Image	Allows you to select a specific area to zoom into
Invert Image	Changes a negative image to positive and positive to negative
Zoom In	Zooms in incrementally to make image larger
Zoom Out	Zooms out incrementally to make image smaller
Full Page View	Displays full image regardless of Image Viewer window size
Page Width View	Fills the width of the window with the image, but does not distort
Stretch Image View	Stretches the image so that the width fills the window; may distort image
Actual Size View	Displays image in actual size

NOTE: *When designing reports to be scanned to e.Docs or affixing labels for e.Docs to locate and read, a reasonable amount of white space needs to be present around the barcode so it can be located by e.Docs.*

Recommended report barcode formats are Code 39, Code 93, Code 128, and Data Matrix 2D, but multiple formats may be supported.

- **LocalScannersOnly:** Set to **False**. (If site network installation is accommodating, this may be able to be set to True, in which case only the current user's workstation and scanner will be available.)
- **NucleoLISDisplay:** Set to **True** to display e.Docs Documents field on Case in Accession and Result Manager. Field ellipsis opens e.Docs module.
- **(O849)** If site network installation is accommodating, this may be able to be set to False, in which case only the current user's workstation and scanner will be available.)

NOTE: *In order to access e.Docs directly from WindoPath, you must be logged into WindoPath with a User Account that exists in e.Boost and has privilege to run e.Docs.*

Chapter 7
ē.Query - Management Report Designer

Psyche e.lixa applications have the ability to design user-defined Management Reports which are used for tracking and many other management statistics you need for your lab. These reports are stored and then may be run by designated users. There is a great amount of flexibility built into the *e.Query Management Report Designer* allowing simple or complex reports to be created as needed. You may require assistance from Psyche to get your reports just right.

This chapter also describes the *e.Query Data Analysis Window*, which allows e.Query users to run *adhoc* queries on the database using e.Query functionality.

e.Query Management Report Designer Window

You access the e.Query Management Report Designer Window by clicking the e.Query icon, shown on the left or from the e.Boost Operations tool bar menu.

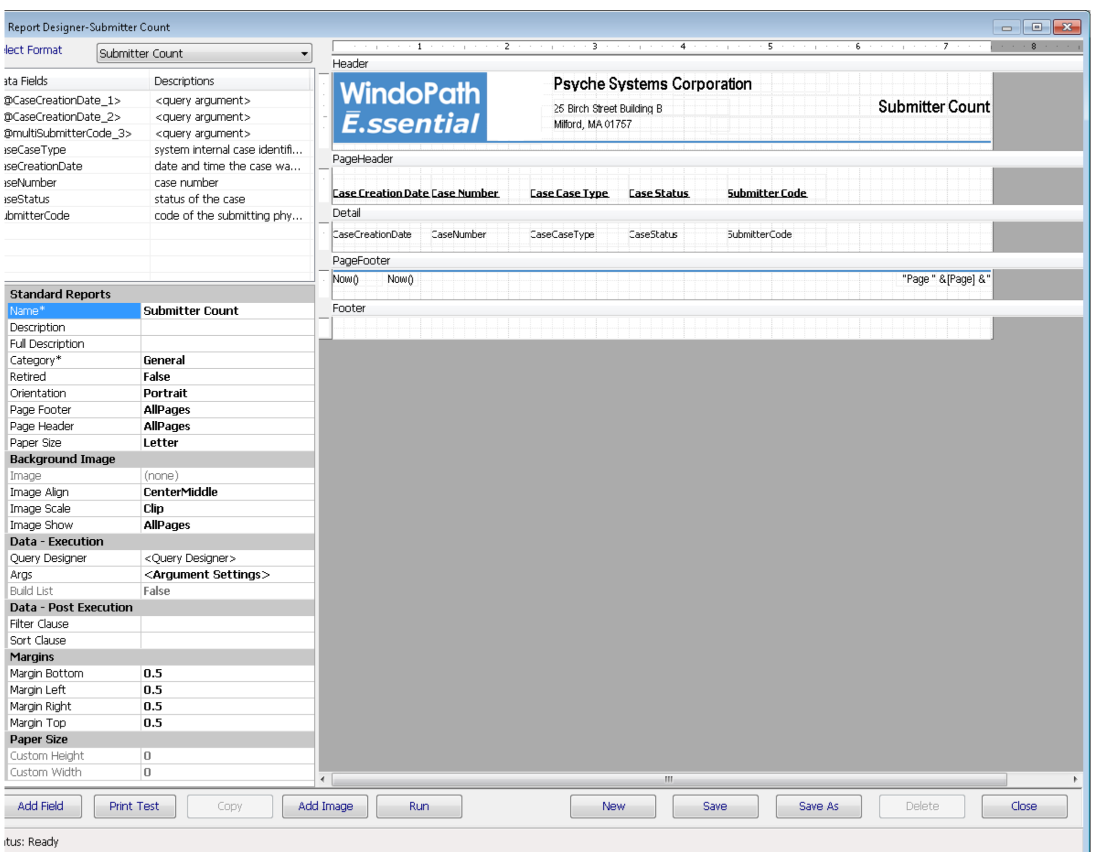


Figure 7-1 - e.Query Management Report Designer Window

NOTE: *WindoPath users can access e.Query Report Designer and Generator from within WindoPath by choosing them from the Commands -> Ancillary Programs menu.*

The **Select Format** drop-down list allows you to select one of the existing report formats to review or modify.

Available **Data Fields** are displayed on the upper-left corner of the designer and added to the report by double-clicking the field. Each field can be set with certain parameters (e.g. height, width, font type, etc). Different report sections can be added to the report along with signatures for users, logos and defining information about the laboratory.

With the *e.Query Management Report Designer*, Data Fields can be easily added as you design your report in the Query Designer Window.

Report Format Editing Notes

- e.Boost is installed with a set of standard management reports. As you use your system, additional management reports may have been added as requested.
- Report formats considered *Psyche Standard* may only be modified by Psyche. If you would like to use a standard report, but with a small modification, you will need to make a copy of it (Save As), modify as you wish, and use the copy in production.
- *Non-standard* report formats created prior to the availability of e.Query Management Report Designer may be modified by the System Admin or anyone who has been granted the *Can Design Management Reports* privilege through their *User Role*. These reports may be edited within the e.Query Management Report Designer main window.
- Only new reports created with the e.Query Management Report Designer can be modified through the **Query Designer Window,** described later in this chapter.

To distinguish between a management report format that was created prior to the e.Query Management Report Designer and one that was created using the Query Designer, refer to the **Data - Execution** parameter section of the report:

For report formats created...	Field	Value
Prior to e.Query Management Report Designer	Query Name	Stored procedure name
With the e.Query Management Report Designer, using the Query Designer	Query Designer	**<Query Designer>** Click to open Query Designer window

Report parameters

Different *parameters* are available depending on whether you have selected the main report (click gray area), a section separator, or a field.

Parameter	Description
Standard Reports	

Parameter	Description
Name	The name of the report seen in the Run Management Reports Report drop-down menu; entered in the Query Designer if using the enhanced version; name must be unique.
Description	Short description of the report that appears on the Management Report named “Management Reports”; will also automatically display in report header field named REPORT_DESC.
Full Description	Full description of the report that will appear on the Management Report named “Management Reports”.
Category	Select from list of available categories or enter new category name; categories are used to sort types of reports when selecting them in Run Management Reports.
IsStandard	True/False; indicates Psyche standard reports; only available for Psyche users.
Retired	True/False; True removes reports from the Management Report Designer list, unless the **Show Retired** command has been executed and also removes them from the Run Management Reports list. Psyche Standard Reports must be set to retired using the **Toggle Retired** command from the Commands Menu, since Psyche Standard Reports cannot be altered.
Orientation	Auto is default and usually works best, or can set to Portrait or Landscape, if using non-standard paper size.
PageFooter	Defines when the PageFooter should print: AllPages, NotWithReportHdr, NotWithReportFtr, NotWithReportHdrFtr. Report formats can have separate footers for pages versus the report itself.
PageHeader	Defines when the PageHeadeer should print: AllPages, NotWithReportHdr, NotWithReportFtr, NotWithReportHdrFtr. Report formats can have separate headers for pages versus the report itself.
Paper Size	Select from a list of standard paper sizes; default is Letter.
Background Image	
Image	Location and name of the image used as a background
Image Align	Multiple choices for alignment; Center Middle is common choice
Image Scale	Clip, Stretch, Scale, Tile, Hide
Image Show	NoPages, AllPages, FirstPage, AllButFirstPage
Data – Execution	
Query Name Query Designer	**Stored procedure name** - For report formats created prior to the Enhanced Designer. **<Query Designer>** - For report formats created with the e.Query Designer. Click the ellipsis to open the Query Designer window.

Parameter	Description
Args	Whether the report was created with the Query Designer Window or prior to its development, clicking the Args ellipsis opens the Argument Editor Window to make specific argument modifications.
Data – Post Execution	
Filter Clause	Additional Filter may be added through Edit Filter Clause window.
Sort Clause	Sorting may be added through Edit Sort Clause window.
Margins	
MarginBottom	Distance report will print from bottom in inches
MarginLeft	Distance report will print from left in inches
MarginTop	Distance report will print from top in inches
MarginRight	Distance report will print from right in inches
Paper Size	
Custom Height	If Custom is selected as paper size, enter paper height in inches
Custom Width	If Custom is selected as paper size, enter paper width in inches

Section parameters

These parameters become available when a section is selected.

Parameter	Description
Section Display	
KeepTogether	True/False; if a section is long enough that it will wrap onto another page the report will move that section to the next page in an attempt to keep the entire section on one page. In the event that a section is longer than a page in length the section will continue onto a second page regardless.
BackColor	Defines the background color of the report section
CanGrow	True/False; allows section to expand as needed
CanShrink	True/False; allows section to shrink as needed
ForcePageBreak	Causes a page break where positioned
Repeat	True/False; if true this section will repeat on every page.
Visible	True/False; if true this section will be visible on the report

Field Parameters

These parameters become available when a field is selected.

Parameter	Description
Identity	
Name	Name to identify the field
Border	
Border	Transparent, Solid, Dash, DashDot, DashDotDot
BorderColor	Specifies border color
BorderWidth	Specifies border width with 0 equaling none
Picture	
Picture	Location of image if auto-loaded, such as a logo
PictureAlign	Specifies the alignment of the image withing the image box; LeftTop (default), CenterTop, RightTop, etc.
PictureScale	Clip, Stretch, Scale, Tile, Hide; Scale maintains image proportions
Position	
Anchor	Orientation for field position; Top, Bottom, TopAndBottom
Left	Distance from the left margin in *twips. (Twips are screen-independent units to ensure that the proportion of screen elements are the same on all display systems. A twip is defined as being 1/1440 of an inch.)*
Top	Distance from the top margin in *twips*
Size	
CanGrow	True/False; allows the data to exceed the size of the field, pushing any data following down the report.
CanShrink	True/False; use when the field is capable of shrinking based on the contents of the field; useful to hide images dynamically, if not present; property will not hide any borders present; Report Section must also be set to CanShrink
Height	Height of the field in *twips*
Width	Width of the field in *twips*
TextDisplay	
BackColor	Defines the background color of the field
BarCode	To print the data in barcode format, select one of the possible symbologies from the list: Code 39, Code 93, Code 128. 2D barcodes are added through the Commands menu.
Font	Defines the font and size for how the data is printed
ForeColor	Defines the color of the field text

Parameter	Description
HideDuplicates	True/False; if a field is repeated, additional instances of that field can be hidden. e.g. on a case with multiple specimens a single specimen number has multiple profiles. We don't need to see that specimen number listed next to each profile, so True can hide the specimen number next to successive profile name. Right-clicking on the *HideDuplicates* link opens an option to check *ForceUniqueRows*, which ensures that rows that appear duplicate due to column selections appear on report, if unique for other fields. The default and general setting is to check both HideDuplicates and ForceUniqueRows.
KeepTogether	True/False; if a field wraps and is long enough that it will wrap onto another page the report, True will move that field to the next page in an attempt to keep the entire field on one page. In the event that a field is longer than a page in length, the field will continue onto a second page regardless. Note: any other fields in line with this field will also be moved down to the next page.
RTF	True/False; when True, rich text formatting may be entered in the text field; e.g. Result{\super\ xyz} will print as Result^{xyz}.
Text	For field labels, this is the actual text that will print on the report.
TextAlignment	Alignment of text within the field; LeftTop (default), CenterTop, RightTop, etc.; helpful to keep consistent
TextDirection	Direction of text within the field; Normal, Up or Down
WordWrap	Allows value to wrap to second line, if needed; use with CanGrow

Creating a Report with the Query Designer Window (Enhanced)

If the e.Query Management Report Designer is configured in your system, clicking the **New** button on the Report Designer opens the Query Designer Window, shown below, for privileged users. The Query Designer Window displays the following three tabs that take you through building your management report.

- **Design Query Tab – where you select the fields to print on your report and define the filters to be used to select the data; displayed as the default**
- **Preview Query Data Tab – where you can get a preview of the selected data based on the query you created in the first tab**
- **Report Setup Tab – where you specify a name for the report and other formatting options**

NOTE: *To edit a query on a report that was previously created with the e.Query Designer version, click the ellipsis at the end of the* ***<Query Designer>*** *field.*

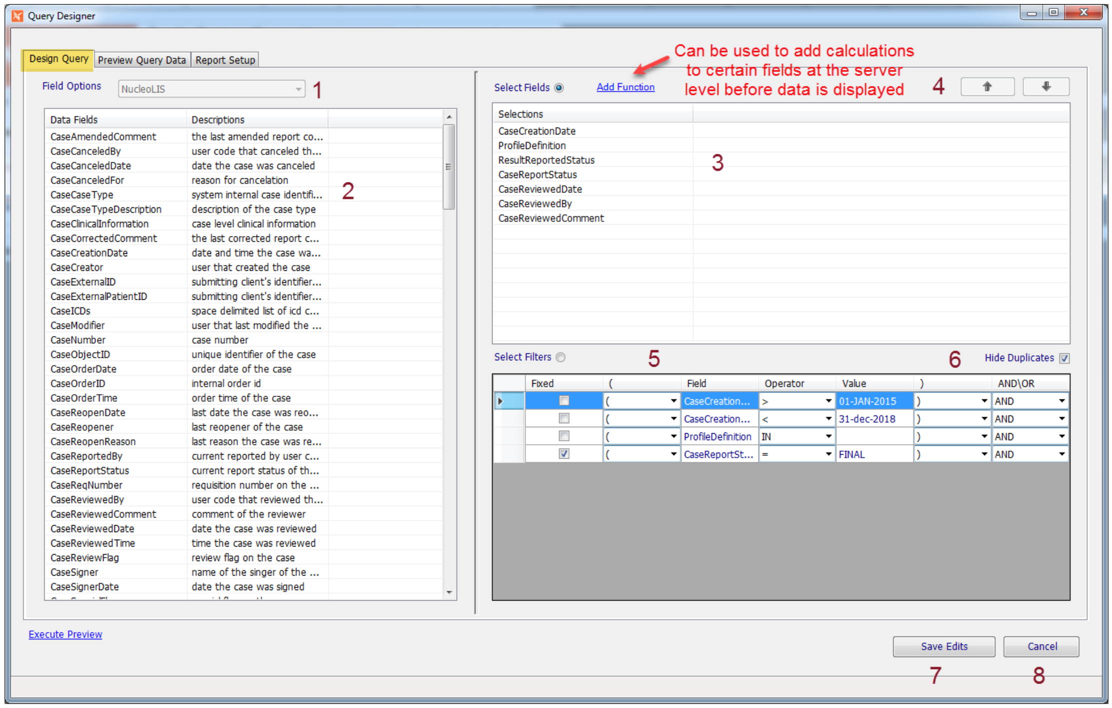


Figure 7-2 - Query Designer Window - Design Query Tab

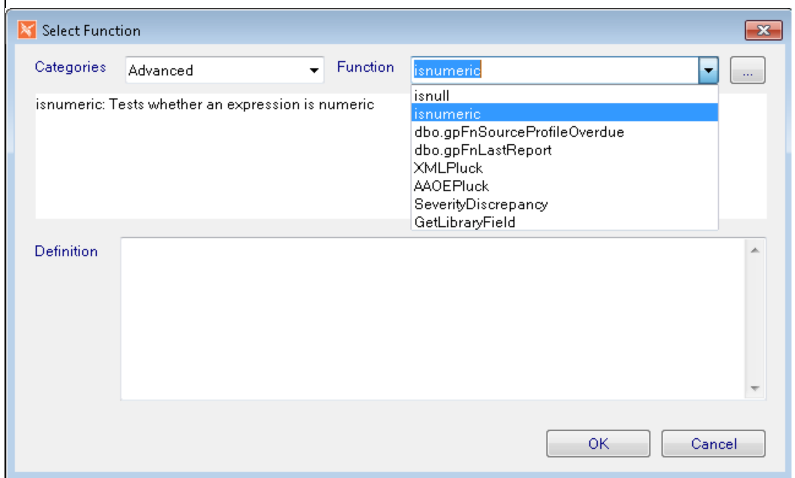
Design Query Tab

The Design Query Tab shown above is split into available field choices on the left and on the right, the selected fields and filters chosen for the report. The first step in creating a new report is to select a database **View** from the Field Options pick list, which offers a subset of fields in the database to choose from to create your report. As of this writing, the following standard Views are available in e.Boost. Additional views may be created through the *e.Query Data Models* library.

- Windopath - Blocks
- Windopath - Billing
- Windopath - Orders
- Windopath Library - Case Types
- Windopath Library - Sources
- Windopath Library - Blocks
- Windopath Library - Procedures
- Windopath Library - Coded Phrases
- Windopath Library - Workloads
- Windopath Library - Paragraphs
- Windopath Library - Diagnosis Text
- Windopath Library - Users
- Windopath Library - Yellow Pages
- Windopath Library - Pathologists
- Windopath Library - CPT Codes
- Physicians and Groups
- Windopath - Special Flags
- Windopath - Consults
- Windopath - Full
- Windopath - Historical

The Design Query Tab contains the following components:

Window Component	Function
Field Options (1)	This drop-down list contains a list of *SQL Views* configured by Psyche based on the Psyche products you own. The options listed are named to reflect the collection of fields they contain. For example, select NucleoLIS for general NucleoLIS reports, NucleoLIS w\constituents when your NucleoLIS report requires constituent data, Charges for NucleoLIS Charges, or Physician and Groups for Physician and/or Group data. WindoPath clients may have a longer list, including Library options. Select the one appropriate for the report you are creating. If the view displayed in Field Options has had a full description stored for it, right-clicking the view name allows you to display the full description.
Data Fields List and Descriptions (2)	Once a *Field Option* has been selected, the *Data Fields* and Descriptions are filled in the left grid according to what is defined in the selected *Field Option*. Descriptions are computer generated and can be modified by the user by right-clicking on the description and selecting **Set Column Description**. Enter a more user-friendly description in the next box.
Select Fields Building Box (3)	Here is where you add the fields you want to print on your report. To add fields, make sure the *Select Fields* button is highlighted and double-click the chosen fields from the *Data Fields* list. They will added to the *Field Selections* box, one per line in order of selection.
Arrows (4)	If you decide you want your fields in a different order after selecting them, select the field you want to move and use the *Up* and *Down* arrows to move it to the desired location.
Select Filters Building Box (5)	Here is where you add the filters you want to select data by when running the report. To add filters, make sure the *Select Filters* button is highlighted and double-click the chosen fields from the *Data Fields* list. They will added to the *Field Selections* box, one per line in order of selection. At least one filter needs to be added in order to create a report and you may have up to 18 filters saved in a single report.
Hide Duplicates (6)	If checked (default), complete duplicate rows will only print once on the report.
Create Report / Save Edits (7)	When creating a new report, the *Create Report* button becomes available after adding at least one filter and a Report Name. The report is then saved and you are returned to the Management Report Designer window. If updating a previously saved report, click *Save Edits* to save any modifications made in this session.

Window Component	Function
Add Function (optional)	Click **Add Function** to open the *Select Function* window where server side *Query Language* functions can be added to your query. Basic knowledge of Query Language is helpful when adding functions. A categorized list of functions is available for selection. The text box below the drop-down lists displays a description of the function.  The list of functions are categorized as: *Date*, *String*, *Math* and *Advanced*. The fist 3 categories are using standard query language and would be described in an external Query Language reference. The *Advanced Functions* may include specialized functions that were created by Psyche Systems to generate date specific for Psyche products, among other advanced functions. The Advanced Functions include: • **cast:** Converts a value (of any type) into a specified datatype • **coalesce:** Returns the first non-null value in a list • **convert:** Converts a value (of any type) into a specified datatype • **isnull:** Return a specified value if the expression is NULL, otherwise return the expression • **isnumeric:** Tests whether an expression is numeric • **dbo.gpFnSourceProfileOverdue:** *NucleoLIS* - Returns the overdue objective for the source\profile combination passed • **dbo.gpFnLastReport:** NucleoLIS - Returns the selected field on the last result report generated on a case • **XMLPluck:** *Psyche* - Extracts values from XML based data based on instructions. It helps to understand the XML structure you are pulling data from. *(See TM#163572)* • **AAOEPluck:** *Psyche* - Extracts answers from XML based AskAtOrder question data • **SeverityDiscrepancy:** *WindoPath* - Calculates severity discrepancy of two diagnosis codes • **GetLibraryField:** Extracts a field value from a valid library, physician, or user table in the database. • **gpFnFullDateTime:** (in Date category) *NucleoLIS* - combines a date field and a time field to return a single datetime value.

Window Component	Function
	If the function requires arguments, the button next to the function drop-down list becomes an ellipsis. Clicking the ellipsis loads the Argument builder window, where parameters for the argument are selected and entered. If the function does not require arguments, the button next to the function drop-down list display a "+". Clicking the "+" adds the function. Click **OK** to add the function to your list of selected fields. **Note:** Previously built functions may be edited by right-clicking the function in the *Select Fields* building box. The *Add Function* window opens for edits.
Other Menu	If enabled *(SWR preference ManagementReports: AdHocEnabled)*, the **Other** menu in the upper right corner of the *Design Query* tab allows you to select previously created queries with **Select Query**. See *e.Query (Data Analysis)* section for more details.
Cancel (8)	Closes the Query Designer Window without saving the report.

Creating Filters

In the Select Filters Building Box, filter rows are added by clicking the Check Filters button and then double-clicking the Data Field you want the report to use to filter the selected data. Once a Data Field has been added, filters are edited by modifying the following criteria.

Filter Criteria	Definition
First Column	To create a “picklist” for the user to select values when running the report, right-click on the left box for the filter for which you want to add choices. The Configure Filter window, shown below opens.
Fixed	Check the Fixed box if you want this filter to be applied each time the report is run and not give the user prompted options.
(	Default; start of contained expression; select blank for more complicated queries
Field	This is the name of the field you selected by double-clicking one from the Data Fields List.

Filter Criteria	Definition
Operator	**equal (=)** - filters records where field contents is equal to filter value
	not equal (<>) - filters records where field contents is not equal to filter value
	greater than (>) - filters records where field contents is greater than filter value
	greater than or equal to (>=) - filters records where field contents is greater than or equal to filter value
	less than (<) - filters records where field contents is less than filter value
	less than or equal to (<=) - filters records where field contents is less than or equal to filter value
Additional Operators	**BEGINS WITH** - filters records where field contents begin with the filter value
	ENDS WITH - filters records where field contents end with the filter value
	CONTAINS - filters records where field contents contain the filter value
	IN - to build a comma separated list (ABC,DEF); IN is used when a pick list is created for the filter. See *Configure Filter Window* below
	IS NULL - filters records where field contents is null or empty'
	NOT CONTAINS - filters records where field contents do not contain the filter value
	NOT BEGINS WITH - filters records where field contents do not begin with the filter value
	NOT ENDS WITH - filters records where field contents do not end with the filter value
Value	Enter the actual field value on which you want the filter to match; MIN / MAX can be used for default date range using wide limits. Numeric values can be used for dates, such as -365 for one year back, 0 for today.
)	Default; end of contained expression; select blank for more complicated queries
AND/OR	Use **AND** to apply this filter row *and* the next one in the query Use **OR** to apply this filter row *or* the next one in the query

Configure Filter Window

To create a *"pick list"* for the user to select values when running the report, right-click on the left box for the filter for which you want to add choices. The Configure Filter window, shown below opens.

- **Set Argument Display:** the prompt the user sees for this argument when running the report. The report generator inserts spaces in logical places automatically. e.g. ProfileDefiniton will display as Profile Definition when run.
- **Set Pick List Item:** When creating a limited Pick List, Pick List items may be added to the Pick List by entering each in this field and clicking Add.
- **Pick List Options:** To display all possible options from which to select, click **Load**, then double-click each option to add them to the Pick List on the right.
- **Pick List:** Displays all added items added to the Pick List. Check the ones you want to be default selections.

- **Use Dynamic Pick List:** Check to create a Pick List of all possible values.
- **Allow Multi Select**: Check to allow the user to select multiple values when running the report.

Click **OK** to save pick list or **Cancel** to exit window without saving.

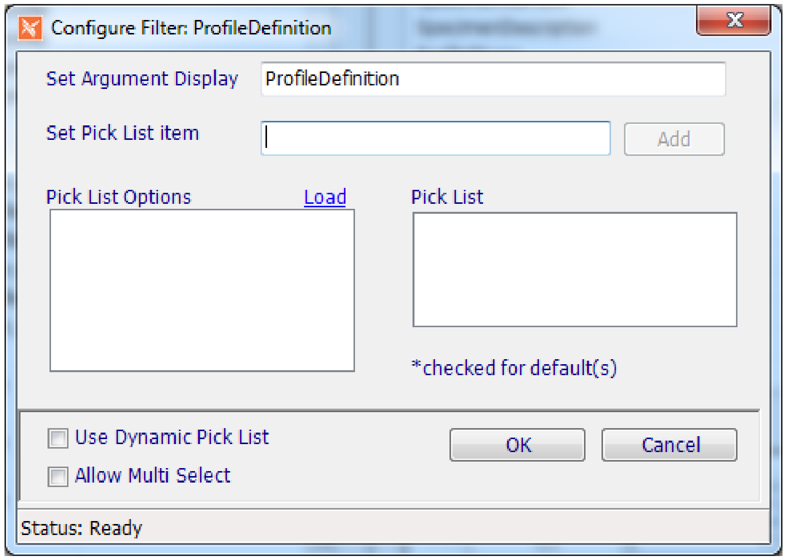


Figure 7-3 - Configure Filter Window for editing filter ‘picklists’.

Execute Preview

Opens a *Query Filter* window displaying filter prompts that have been included in the report. Once filter prompts are entered or selected, the selected report data is displayed in the *Preview Query Data Tab*.

Preview Query Data Tab

Once a report query has been created in the Design Query Tab, or any time you open the Query Designer for an enhanced report, Click the Execute Preview hyperlink to display a preview of the report’s contents. This is useful to check that you created the report as you intended and may also be used as a quick online lookup.

After clicking Execute Preview, the Preview Query Tab is displayed showing the report’s data, similar to the example below.

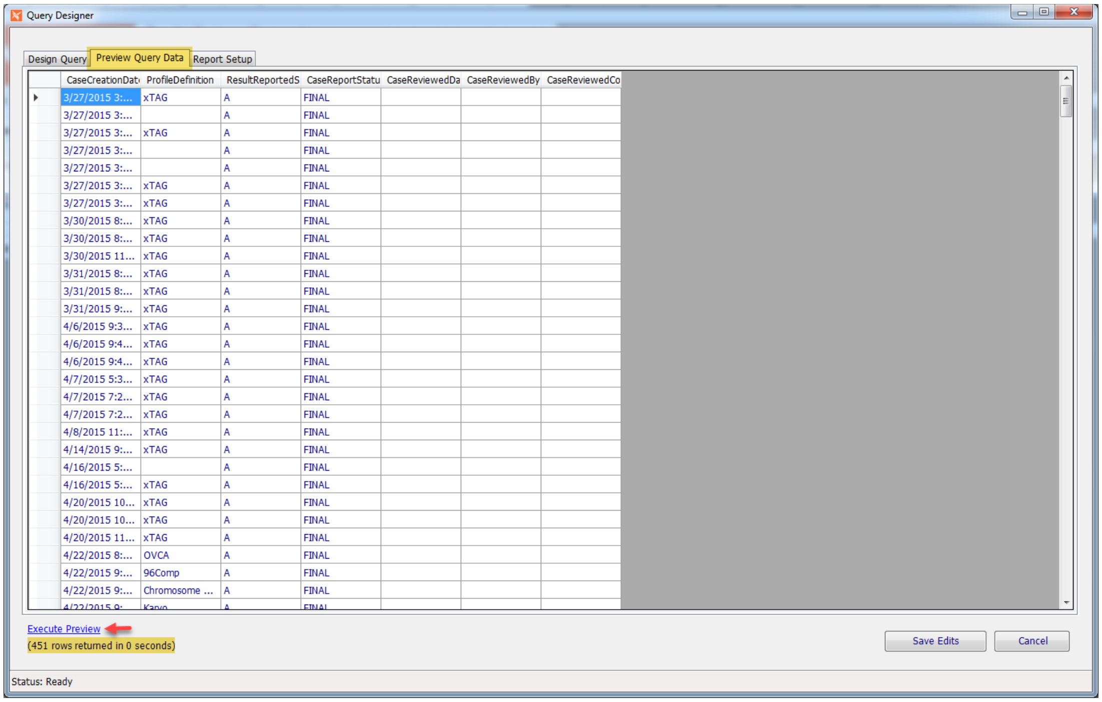


Figure 7-4 - Query Designer Window - Preview Query Tab

If you are satisfied with the report data extracted and displayed and this is an existing report, you can Save Edits in the Preview Query Tab, or if it's a new report, click the *Report Setup Tab* to enter the Report Name and other optional fields.

Report Setup Tab

Most of the Report Setup Tab fields are display only or may be configured on the main Report Designer window. Refer to the Report Parameters section on Page 2 for descriptions on those fields.

Name*: Required field; you only need to enter the Name in order to create the report. Once a name has been entered, the Create Report button becomes available and the report can be saved with the current settings.

Description: Description that will be displayed on default template, if the REPORT_DESC field is present.

Full Description: optional; will print on Management Reports Report as a more complete description of what the report generates.

Category*: Required field; defaults to General; select other Category if desired; category allows users to sort by reports by management report category when selecting a Management Report to run.

When Name at least is entered, click Create Report to create and save the new report or Saved Edits to save modifications to an existing report.

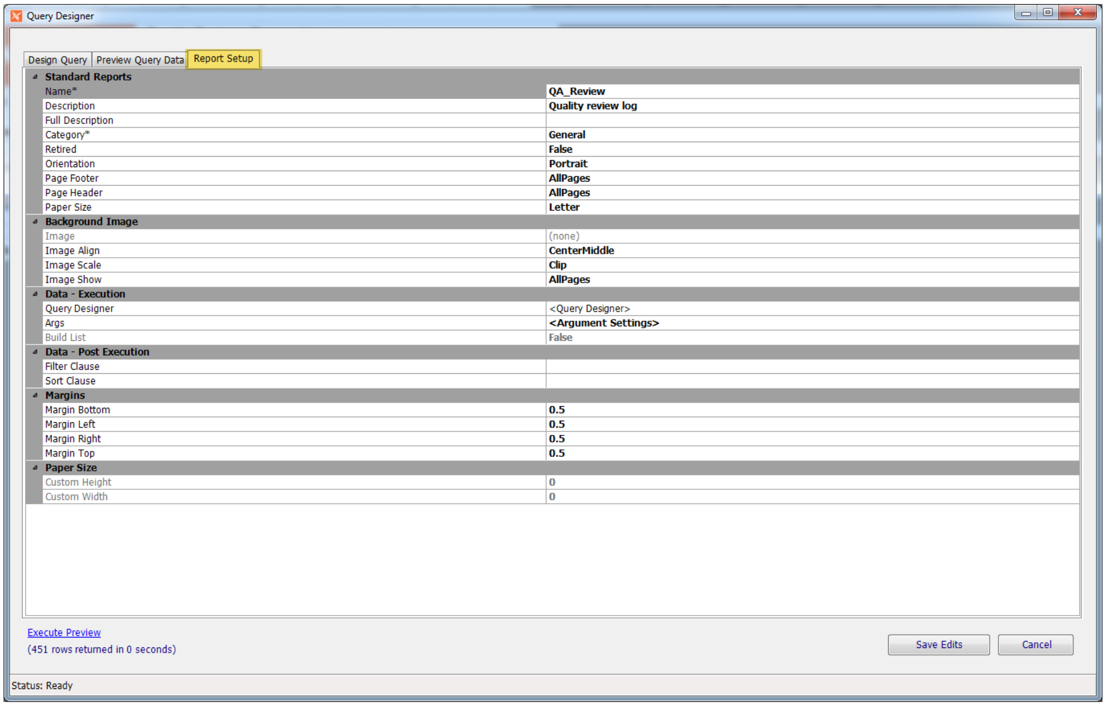


Figure 7-5 - Query Designer Window - Report Setup Tab

e.Query Menus

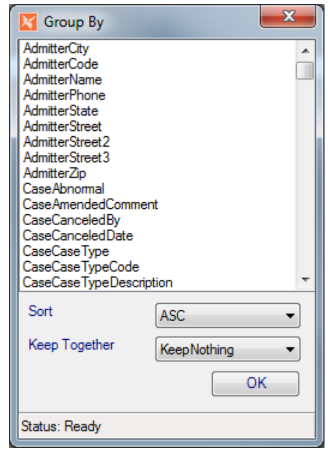
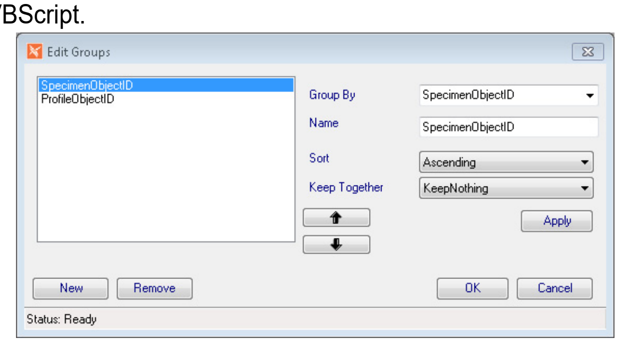
Transfer/Other Menu

Menu Option	Description
Import Format	Allows you to select and import a Component One report file format (XML) created from another area or installation.
Export Format	Allows you to export a Component One report file format (XML) of the current report so that it can be imported into another area or version.
Transfer	**Import Library Item:** Allows import of the library of Management Reports. **Export Library Item:** Allows export of the library of Management Reports.
All Args Display	Prints all arguments used in the report format on the report for reference.

Commands Menu

The Report Designer Commands Menu offers many specialized options to help with formatting the report.

Menu Option	Description
Date [long]	Inserts date in format: *Day, Month date, Year* (e.g. Tuesday, August 15, 2017)
Date [short]	Inserts date in format: *mm/dd/yyyy* (e.g. 8/15/2017)
Time [long]	Inserts time in format: *hh:mm:ss AM/PM* (e.g. 3:24:46 PM)
Time [short]	Inserts time in format: *hh:mm AM/PM* (e.g. 3:24 PM)
Page	Adds page number
Page w\Count	Adds page number of total. (e.g. Page 1 of 4)
Select All (Ctrl+Shift+A)	Selects every element that has already been placed on the report
Add Computed \ Inline	Opens a window where you can add calculations to the report. Optionally, your system may be configured to allow inline Rich Text Formatting configuration through this window as well. *See below for more details.*
Add Header	If not using templates for management reports, Add Header places these standard header type fields at the top of the report: REPORT_NAME, REPORT_DESC, SITE_LOGO, SITE_NAME, SITE_ADD1, SITE_ADD2.
Add Template	Templates can be used to create a series of fields that have the same properties. You add the template, format it to what you want...bold, larger font, etc. Then each time you add a template, it will look like the one you just formatted.
Add Pagebreak	Adds a page break at that point of the report, causing report to feed to next page when printing.
Add 2D Barcode	Opens a dialog box to select the Data Field you want to configure the bar code as.
Add Combo Field	Allows you to add a field that contains multiple data fields and optionally literal text. In the Combo Field dialog box, select the Data Fields and enter and add literal text. Use arrows to rearrange. Once added, Combo Fields can be opened by double-clicking them.
Add Background Image	Allows you to select an image file that will be used as a background for the report, such as a light colored watermark image. You will not be able to see the image until you print a test page. Only one image can be added to the master report. No sub-report or dynamic inserted report will display a background image.
Clear Background Image	Clears any background image that has been added.
Formatting >	Opens a submenu of formatting and alignment options when multiple fields are selected: Set Table Row, Align Left, Align Center, Align Right, Align Top, Align Middle, Align Bottom, Equal Height, Equal Width, Equal Size

Menu Option	Description
Add Group	Adding a Group inserts a sorting sub-section into the report using a Data Field selected in the *Group By* window. A sub-header and footer are created for the Group, if needed. Selecting **Add group** opens this Group By window where Sort order and Keep Together are also available.  **Sort:** ASC = Ascending; DESC = Descending. **Keep Together:** **KeepNothing:** Do not try to keep the group together. **KeepWholeGroup:** Keep the group header, detail, and footer together on a page. **KeepFirstDetail:** Keep the group header and first detail section together on a page.
Edit Groups *(replaces Add Group and Remove Group)*	In *Edit Groups* all defined groups are displayed in the list box on the hand side. Selecting a group from the list box displays it's properties on the right hand side. The properties (such as Sort, KeepTogether) can be edited as desired. The Apply button confirms the edits and refreshes the display in the list box **New:** Adds a new group. (initiates an "Apply" operation on the currently selected record first) **Remove:** Removes the selected group **OK:** Accepts the changes and passes them to the designer. **Cancel:** Cancels the changes. The **Name** entry field is informational (previously hidden). **Note:** The Group By field can contain a computed item utilizing VBScript. 

Menu Option	Description
Remove Group	Removes any Group that has been inserted into the report, allowing you to select the Data Field used in the group to remove.
Bring To Front	Brings the selected element to the top layer of the report placing it on top of other elements.
Send To Back	Moves the selected element to the bottom layer of the report placing it under other elements.
Toggled Retired	Allows end user to retire reports that can't be modified, such as Psyche standard report.
Show Retired	Displays any reports that may have been created and retired in the Select Format drop-down report list.
Snap To Grid On	Turns on invisible grid that elements will position to making alignment of elements easier
Snap To Grid Off	Turns off invisible grid for alignment of elements
Conditional Formatting	If enabled, opens a window where you can build formatting statements for data that appears on the report. *See below for more details.*

Add Computed \ Inline Window

The *Add Computed \ Inline Command* allows you to create calculations and data manipulations to fields that appear on the report. In this window you are building a query to perform these actions and the process can be simple or very complicated.

Query functions are made available along with choices for fields and specific formatting settings. e.Boost database structure is very helpful, but you may need to work with your application specialist to achieve your final result.

The Add Computed \ Inline window contains *2 tabs*: one for **computed functions** and one for **inline data changes and RTF formatting**. In the Add Computed tab you have the following fields:

- **Common Functions** and then a drop-down field to select the report field on which to apply the common function. If the Common Functions list does not contain what you need, use the Function Categories to select a specific function. The **Add** button adds the common function to the query building box at the bottom.
- **Function Categories** for more complicated functions and then a drop-down list to select the specific function within that category. Once a function is selected, click the **ellipsis** (...), if present, to open a second window where parameters (*or arguments*) are entered specific to that function. Usually a report field is selected here. The **Add** button adds the advanced function to the query building box at the bottom.
- The bottom of the Add Computed \ Inline window shows available *fields* from the report, a list of *query syntax commands* that *advanced* users may click to create complicated computations, and a *building box* showing the actual query being built.

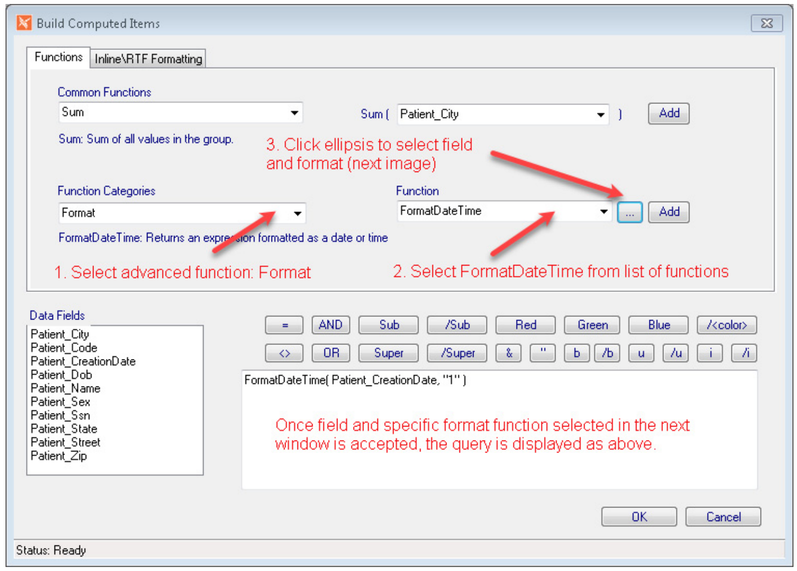


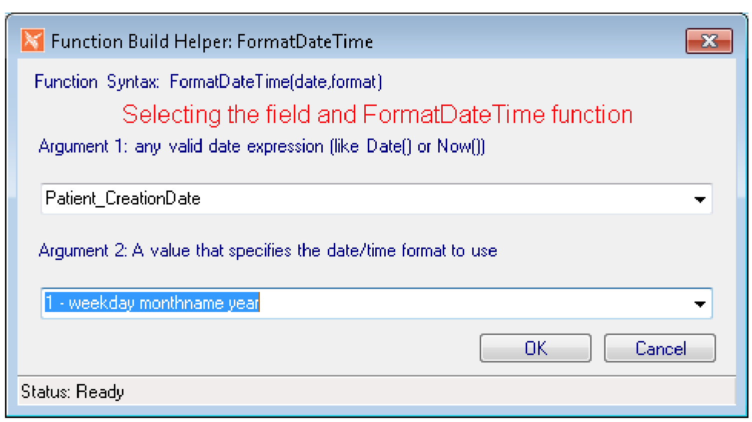
Figure 7-6 - Build Computed Items - Functions Tab

Computed Example

In the example above, we are formatting a date field to use a particular date format. Select the date field you want to format and select Add Computed \ Inline from the Commands menu. If you don't select a field beforehand, one will be added after the query is built.

Following the steps shown in Figure 7-6:

1. **Select Format from the Function Categories.**
2. **Select FormatDateTime from the list of functions.**
3. **Click the ellipsis to open the following window:**



4. **Select the Patient_CreationDate field for Argument 1.**

   NOTE: *Make sure the data you are applying the function to is compatible with the function. e.g using the FormatDateTime will not work on a field that contains only a date.*

5. **For Argument 2, select a date format. 1- weekday monthname year was chosen. Friday, May 01, 2020, which displays dates in the format: *Friday, June 12, 2020*.**
6. **Click OK from both windows to exit Function Builder, then save the report.**

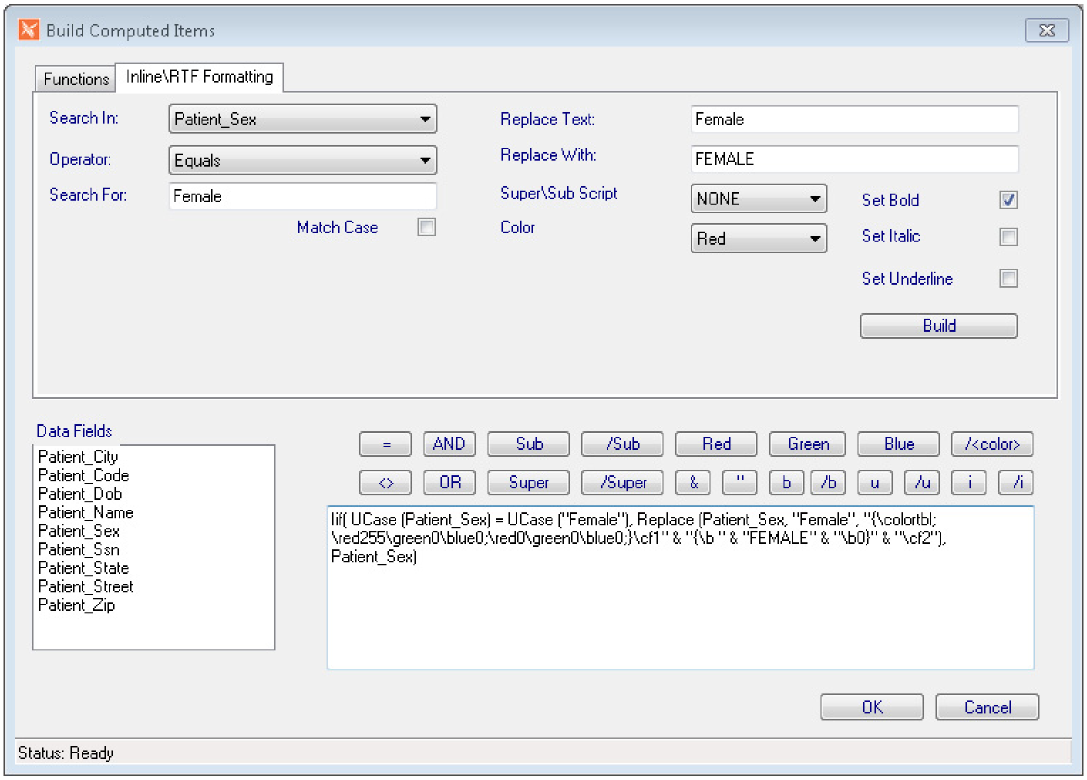


Figure 7-7 - Build Computed Items - Inline\RTF Formatting Tab

Inline \ RTF Formatting Example

In the example shown in Figure 7-7 we are searching in the *Patient_Sex* field for the text of “Female” and replacing “Female” with upper-case “FEMALE”, while bolding and making the text red.

With these formatting changes the report displays any patient sex not in the database as “Female” as the field parameters dictate, but “Female” will display as **FEMALE**.

The formatting parameters you may set using the Inline\RTF Formatting tab include:

- Super\Subscript
- Color of text
- Bolding text
- Italic text
- Underlined text

To create an Inline\RTF Format modification:

1. **In the Inline\RTF Formatting tab, select the field that contains the text you want to modify.**
2. **Enter the text to match and what to replace it with.**
3. **Select the formatting parameters you want to set.**
4. **Once all are specified, click Build. The query displays in the building box.**
5. **Click OK and save the report.**

NOTE: *When setting Inline\RTF formatting to a field, the RTF Text Display field must be set to* ***True****. See Page 6.*

Conditional Formatting Window

The Conditional Formatting window allows you to add a considerable amount of Structured Query Language (SQL) to your report to modify any of the report fields. The window offers you a list of fields available on the report, a list of valid arguments that may be used, and buttons to help you enter proper syntax. As fields, functions and arguments are selected, the SQL function is built in the building box. A good understanding of SQL is recommended, but basic formatting can be easily achieved.

The example in Figure 7-8 shows a formatting function that is set to COUNT the number of values in the ConstituentResult column that equal “DETECTED”. If that count is zero (0), then in the field named “NOPATH”, display the text *“No Pathogens Identified”* and give NOPATH a height of 225. If that statement is not true, such as the count is greater than zero, display nothing in NOPATH field and drop the field height to zero.

The ConstituentObjectID is included with the ConstituentResult since the object ID would always be unique and therefore the tally of DETECTED is for unique profile constituents.

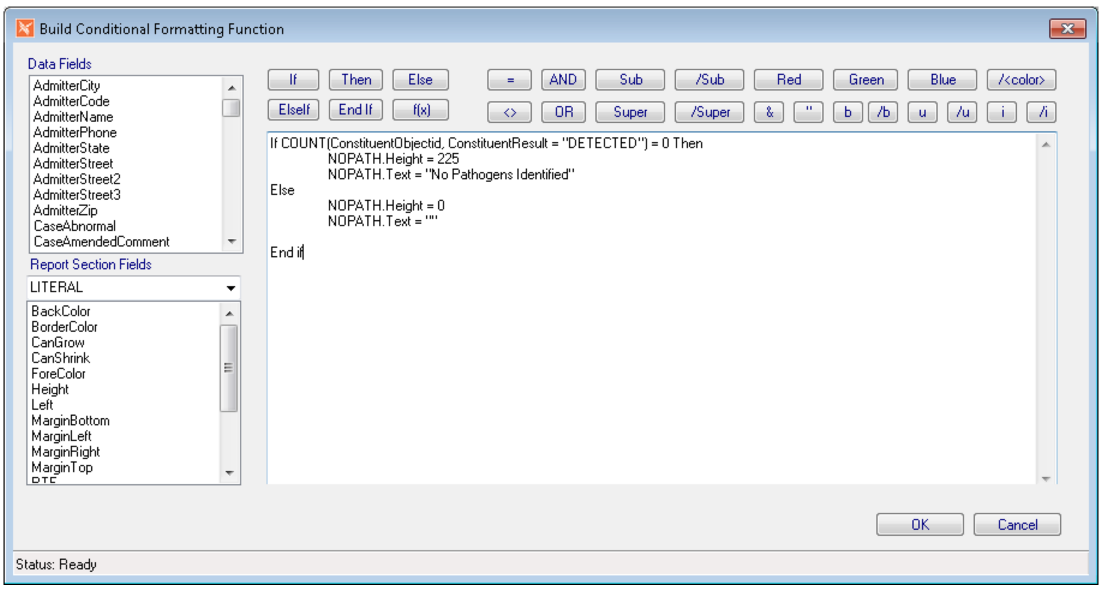


Figure 7-8 - Conditional Formatting Functions Example

NOTE: *You must first select a data field before the Conditional Formatting menu option is enabled on the Commands Menu.*

Audit Menu

Menu Option	Description
Show Audit	Opens a window listing all changes that have been made to the current report

Operational Buttons

Button	Operation
Add Field	Adds a generic text field that can be changed to any text
Print Test	Opens print dialog box so you can print a test of the report
Copy	Makes a copy of the currently selected field
Add Image	Opens a search window to locate an image to add to the report
Run	Previews the current report design to the screen
New	Clears all fields to create a new report
Save	Saves the currently displayed report format
Save As	Prompts for a filename to save the displayed report with a new name
Delete	Deletes the currently displayed report
Close	Closes the report designer

Standard e.Query Views for WindoPath

Code	Description
exVwPhysicianAndGroups	Physicians and Groups
STANDARD_MASTER	Windopath - Full
wpVwAllCharges	Windopath - Billing
wpVwAllConsults	Windopath - Consults
wpVwAllOrders	Windopath - Orders
wpVw AllSpecialFlags	Windopath - Special Flags
wpVwAllView	Windopath
wpVwAllViewBlocks	Windopath - Blocks
wpVwLibBlockProcedures	Windopath Library - Procedures
wpVwLibBlockTypes	Windopath Library - Blocks
wpVwLibCaseTypes	Windopath Library - Case Types
wpVwLibCodedPhrases	Windopath Library - Coded Phrases
wpVwLibCPTCodes	Windopath Library - CPT Codes
wpVwLibDiagnosisDefinitions	Windopath Library - Diagnosis Text
wpVwLibParagraphDefinitions	Windopath Library - Paragraphs
wpVwLibSourceDefinitions	Windopath Library - Sources
wpVwLibWorkloadDefinitions	Windopath Library - Workloads
wpVWPathologIsts	Windopath Library - Pathologists

Code	Description
wpVwUsers	Windopath Library - Users
wpVwYellowPages	Windopath Library - Yellow Pages

e.Query (Data Analysis)

An optional tool is available on the e.Boost Operations Menu that allows you to query the database *on-the-fly* for quick statistics gathering. If enabled, selecting **e.Query (Data Analysis)** opens a window that is very similar to the window you see when you create a query in e.Query. See Figure 7-9 below.

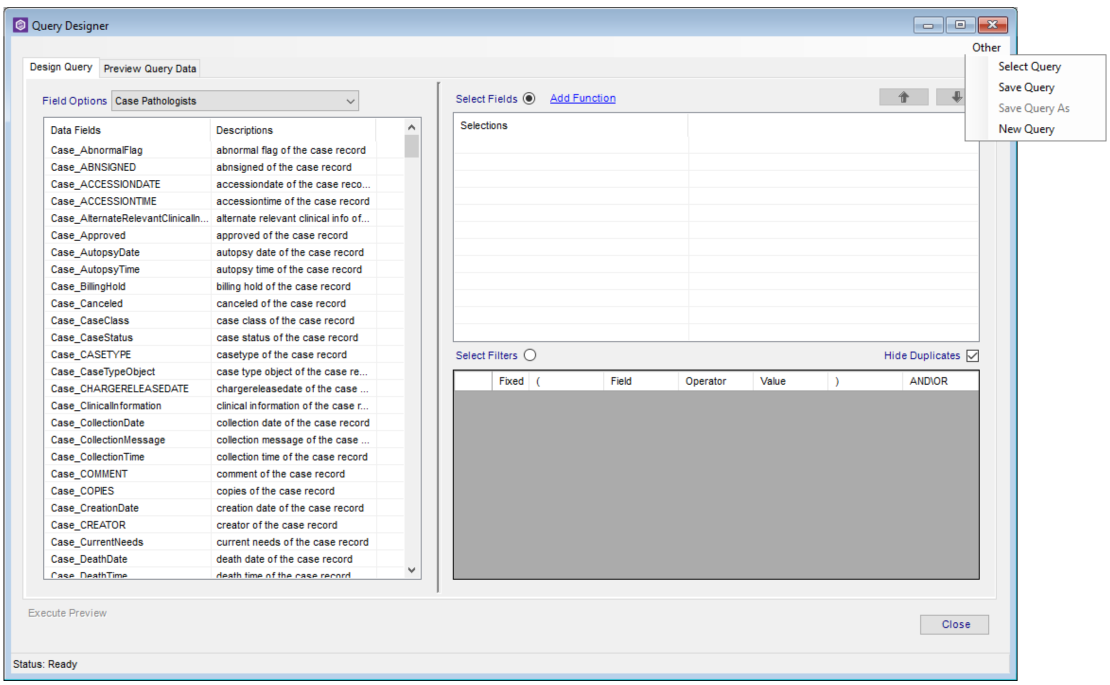


Figure 7-9 - e.Query (Data Analysis)

The *e.Query (Data Analysis)* window includes the *Design Query* and *Review Query Data* tabs, described earlier in this chapter. It does not contain the *Report Setup* tab. If you wish to create a report, use *e.Query (Design Management Reports)*.

Other Menu

In the upper-right corner of the e.Query (Data Analysis) window is the **Other** popup menu that allows you to open existing queries, save updates, create new or save copies.

- **Select Query:** Selecting the Select Query menu option opens the Select Saved Query window, shown below.

NOTE: *Only the Select Query option is available when running e.Query Designer.*

- **Save Query:** Saves any changes made to the opened query.
- **Save Query As:** Opens a library type window where you can name and save the query. You can also right-click a listed query to open the query's library window and retire it.

- **New Query:** At any time, opens the Design Query tab with blank fields to start a new query.

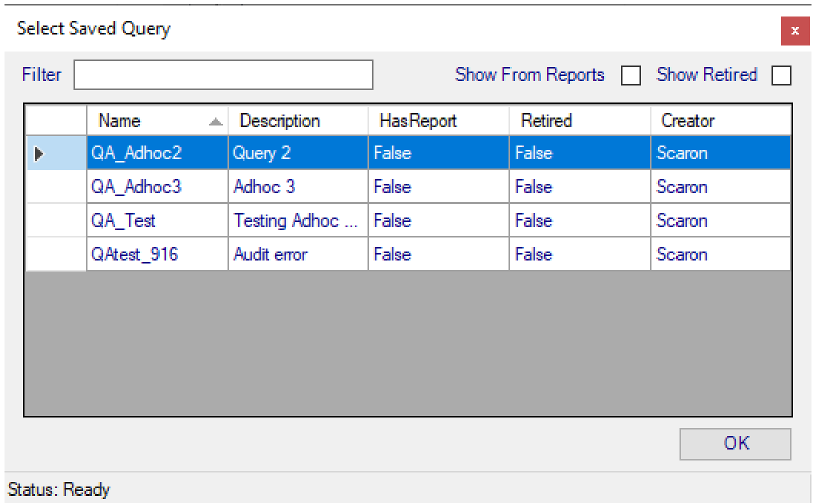


Figure 7-10 - Select Saved Query Window

The following are the types of queries you may access:

- Any queries that have been previously saved are listed when you open the window.
- Click the Show From Reports checkbox to view queries that have been built into reports.
- Click the Show Retired checkbox to view queries that have been retired.

You may also use the filter field to find a query by name, if there are many queries saved.

Any user who has the privileges to run *e.Query (Design Management Reports)* can run *e.Query (Data Analysis)*.

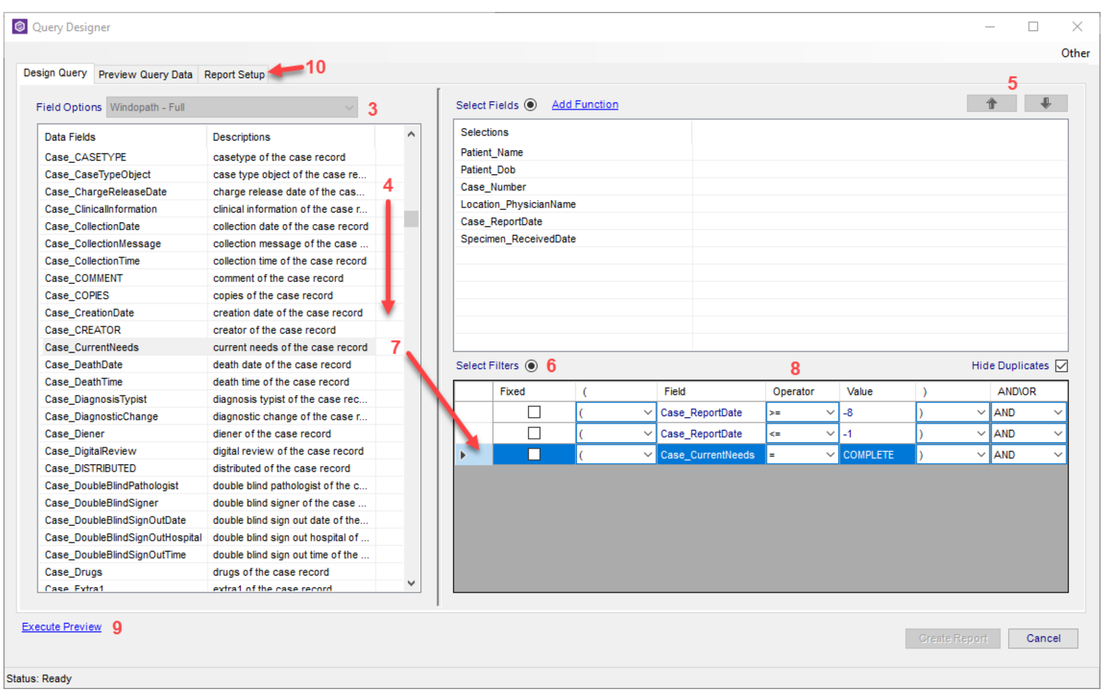
e.Query Quick Start Guides

This section includes a series of procedures that can be used as a quick reference to some of the more used features in e.Query. As additional Quick Start Guides are created, they will be added to this section.

QS - Creating a Report

To create a new report, follow these steps:

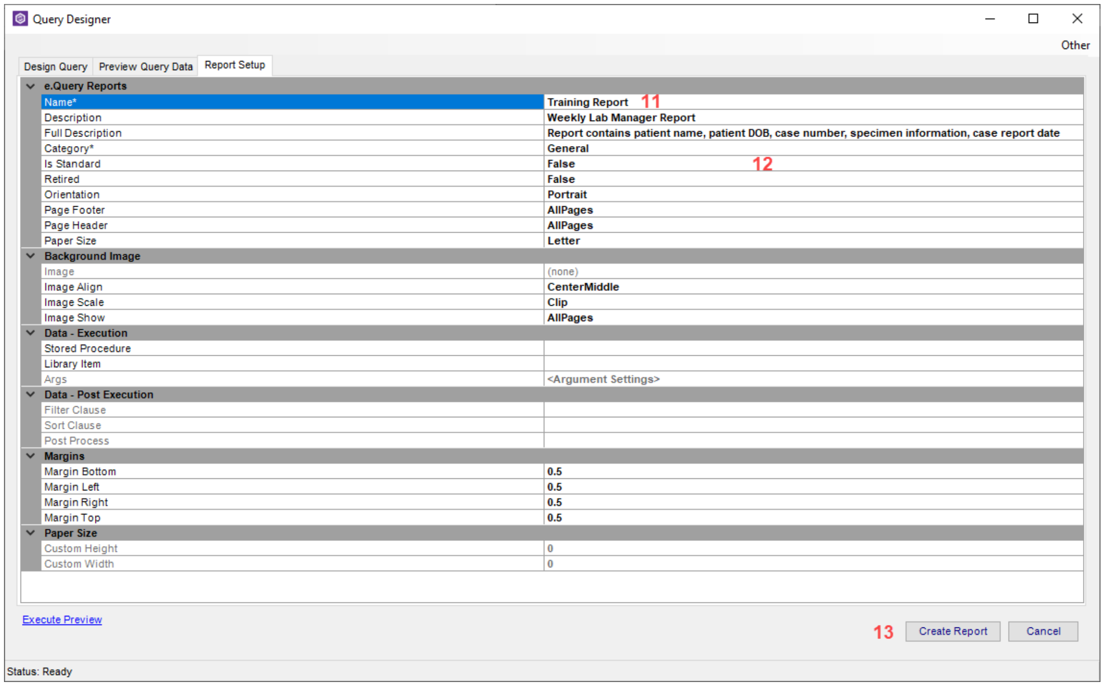
1. **Open e.Query by either clicking the e.Query icon or selecting e.Query (Management Report Designer) from the Operations menu.**
2. **Click the New button in the lower right corner.**
3. **Select a view in the drop-down list labeled “Field Options”.**
4. **Double-click any Data Fields on the left to add as a field on the report (Fields contain information that displays on the report). As items are selected, they appear on the right.**
5. **Use the arrow keys to determine the order you want the information to appear on the report.**
6. **Click the Select Filters radio button.**
7. **Double-click Data Fields to use as filters. Every report needs at least one filter (so the report will not display every patient in the database).**
8. **Adjust the Operator and Value as needed. In the example below, these filters are looking for (1) case was reported greater than or equal to (on or before) 8 days ago, (2) case was reported less than or equal to (on or before) one day ago, and (3) case current needs status is complete.**
9. **Click the Execute Preview link to ensure you are getting the data you are expecting.**
10. **Click the Report Setup tab in the upper left corner of the Query Designer Window.**



11 **Add a Name for the report.**

12 **Add/edit any additional options here, including report descriptions, paper orientation, header/footer information, margins, etc.**

13 **Click Create Report button.**



QS - Totals and Counts

e.Query allows users to count and sum fields. In order to use the sum function, your data fields must contain a number.

If you are looking for a total number of cases, use the count function. The count function will add up the number of instances in a data field (in this case, the number of cases). Trying to sum the cases numbers won't work, as it would be trying to add non-numeric values. For example, you cannot add S2021-0001 + P2021-0003, but you can count S2021-0001 as one case, and P2021-0003 as the second case, etc).

To add a count total:

1 **From the Commands menu, select Add Computed/Inline.**

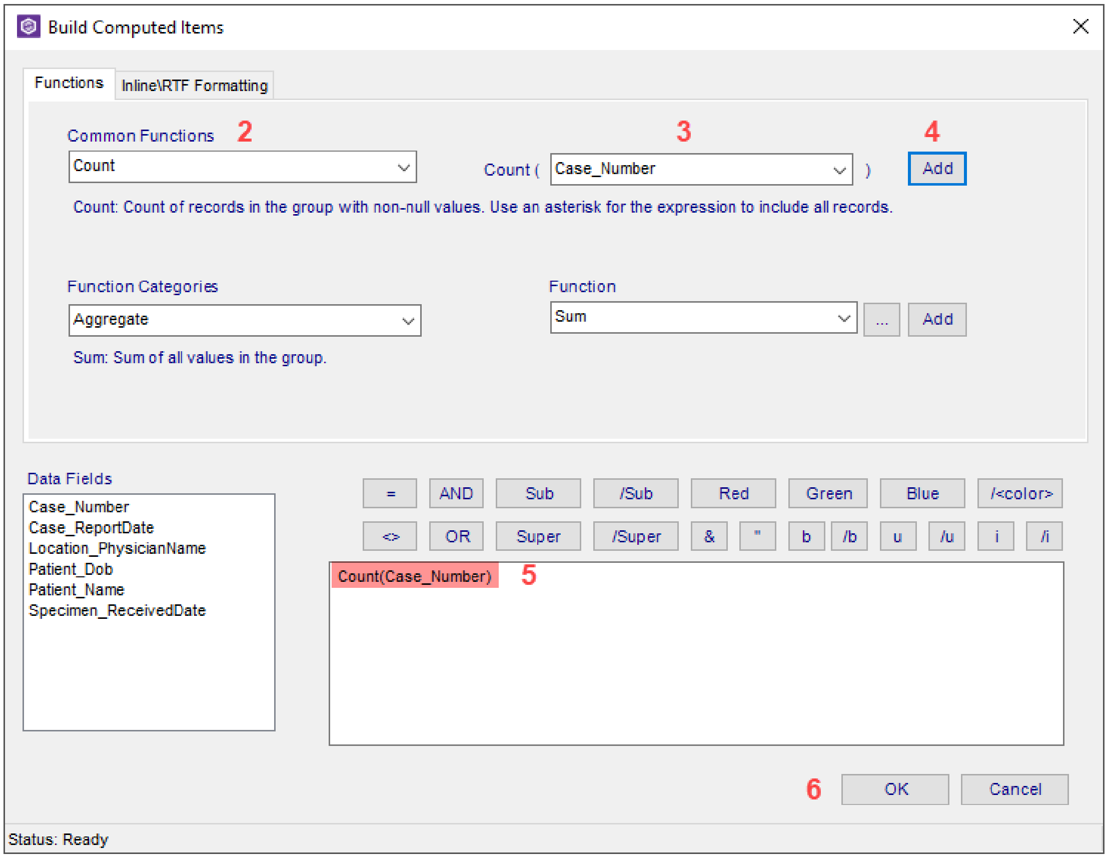
2 **In the Common Functions drop-down list, select Count.**

3 **In the Count drop-down list, select the field you want to count (in the example below, it is Case_Number, which will count the number of cases).**

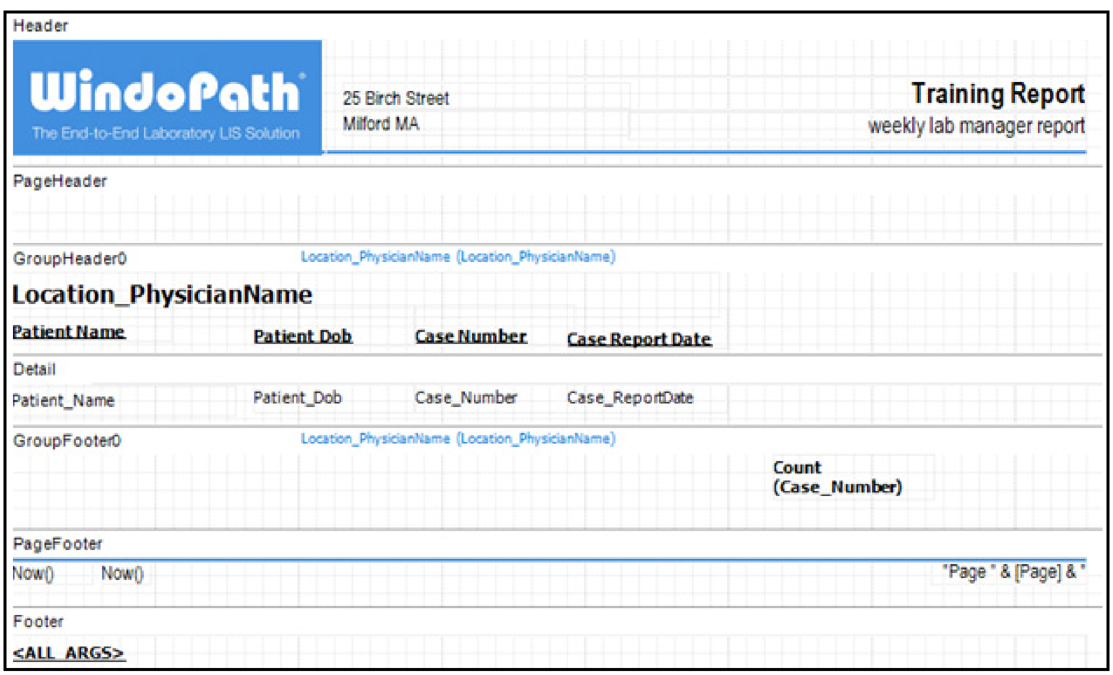
4 **Click the Add button.**

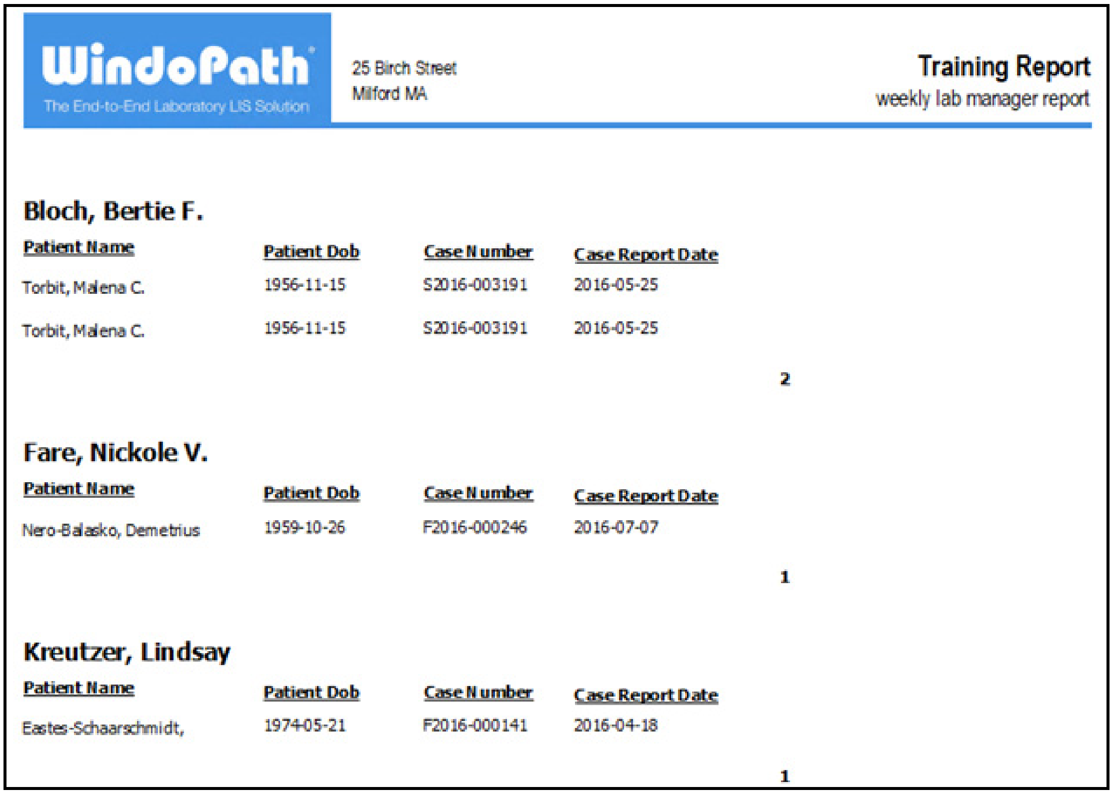
5 **Note the SQL statement that was populated in the box at the bottom. There should not be a need to change it.**

6 **Click OK.**



7 **The Count will be added as a data element. In the example below, the Count was moved to the Group Footer, so the count of the cases will appear in the footer of each group**





WindoPath
The End-to-End Laboratory LIS Solution

25 Birch Street
Milford MA

Training Report
weekly lab manager report

Bloch, Bertie F.

Patient Name	Patient Dob	Case Number	Case Report Date	
Torbit, Malena C.	1956-11-15	S2016-003191	2016-05-25	
Torbit, Malena C.	1956-11-15	S2016-003191	2016-05-25	
				2

Fare, Nickole V.

Patient Name	Patient Dob	Case Number	Case Report Date	
Nero-Balasko, Demetrius	1959-10-26	F2016-000246	2016-07-07	
				1

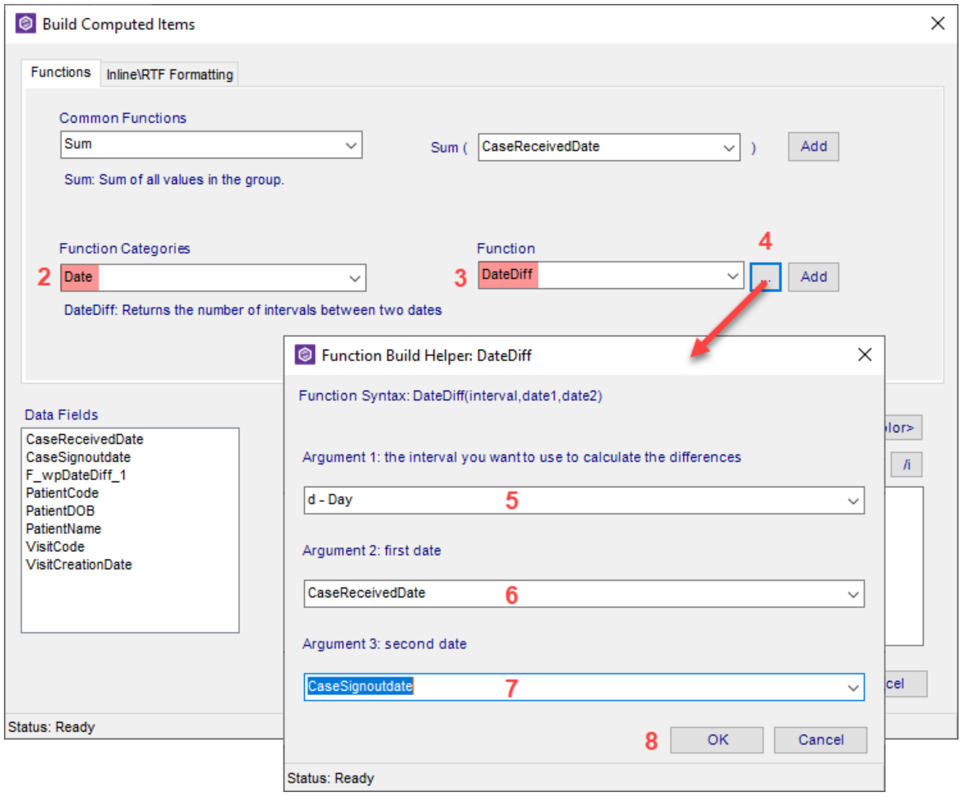
Kreutzer, Lindsay

Patient Name	Patient Dob	Case Number	Case Report Date	
Eastes-Schaarschmidt,	1974-05-21	F2016-000141	2016-04-18	
				1

QS - Calculating Time Between Two Dates (Date Differentials)

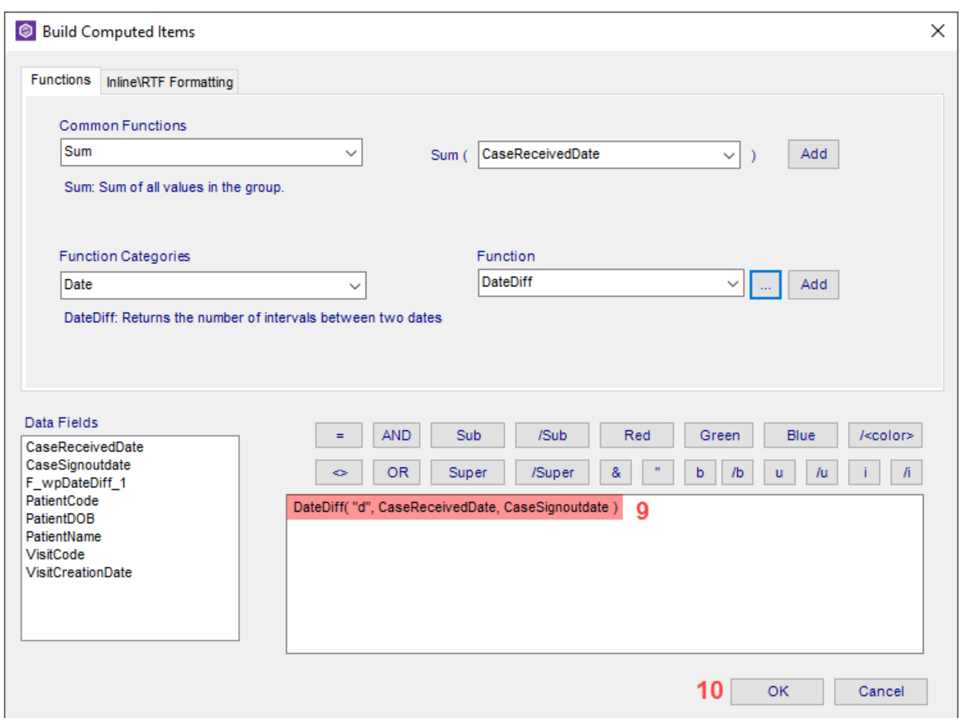
To calculate the amount of time between two dates, use the Date Differential function.

1. **From the Commands menu, select Add Computed/Inline.**
2. **In the Function Categories drop-down list, select Date.**
3. **In the Function drop-down list, select DateDiff.**
4. **Click the ellipsis button.**
5. **For Argument 1, select the interval you want to see for the amount of time between the two dates (how many years, days, hours, etc between the two dates).**
6. **Select the starting date field in the drop-down list for Argument 2.**
7. **Select the second/end date field in the drop-down list for Argument 3.**
8. **Click OK.**



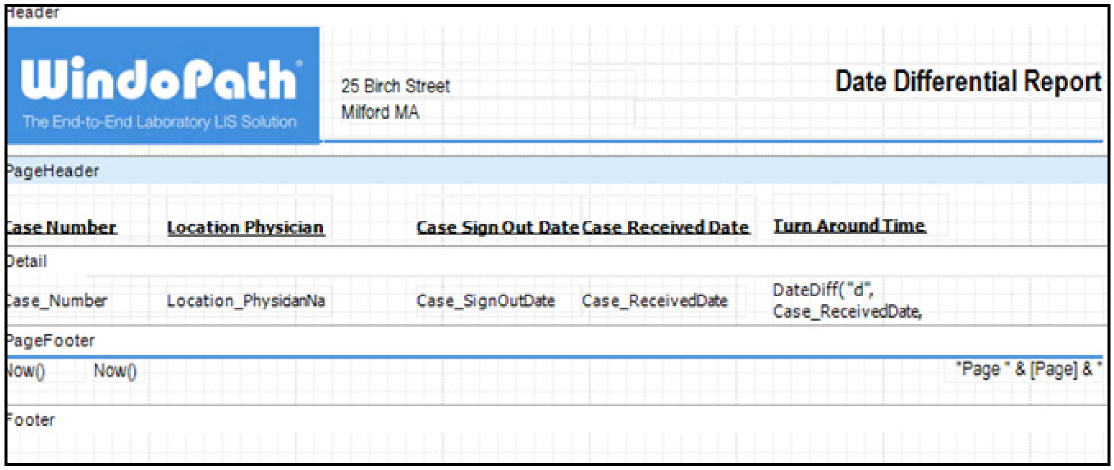
9 **Note the SQL statement is created based on your selections.**

10 **Click OK.**



11 **The data element of DateDiff appears in your workspace. Move it to where you want it to display on the report.**

12 **Add a header or label as desired by using the Add Field button in the lower left corner of the window.**



QS - Sorting and Grouping Data

Sorting Data

Once a report is created, you can sort the data to appear in the order you want. Sorting will re-order the existing data in whichever way you choose.

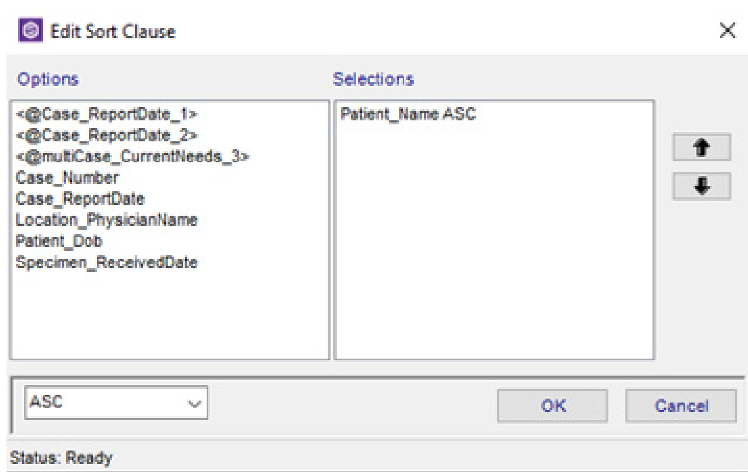
To sort data on your report:

1 **From the e.Query Designer window, click in the empty gray space to see the e.Query Reports options panel.**

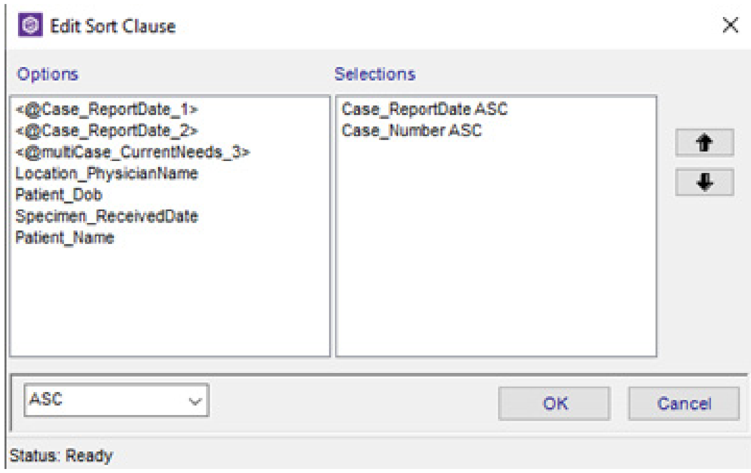
2 **Find the *Data – Post Execution* section and click in the *Sort Clause* field.**

3 **Click the ellipsis button to open the Edit Sort Clause window.**

4 **The left will display all data currently selected on your report. Double-click any data points you want to sort by. For example, if you want to sort all data alphabetically by patient name, see example A below. If you want to sort by Case Report Date, and then sort secondarily by Case Number, see example B below.**



Example A



Example B

5 **Use the arrow buttons to indicate the order you want the information to be sorted.**

6 **Use the ASC or DESC drop-down to determine if it will be sorted ascending (smallest to largest or alphabetically) or descending (largest to smallest, or reverse alphabetical order).**

7 **Click OK.**

Grouping Data

Data on your report can also be grouped. Unlike sorting, which simply re-orders the data, grouping will separate data according to how a group is set up. Sorting will still apply within groups. In order words, if you group by Submitter, but sort by Report Date and Case Number, each time you have a new Submitter listed, the data will be sorted by Report Date, and then Case number.

To create a group:

1 **From the Commands menu, select Add Group.**

2 **A Group By window appears. Select the Data Field by which you want to group the data.**

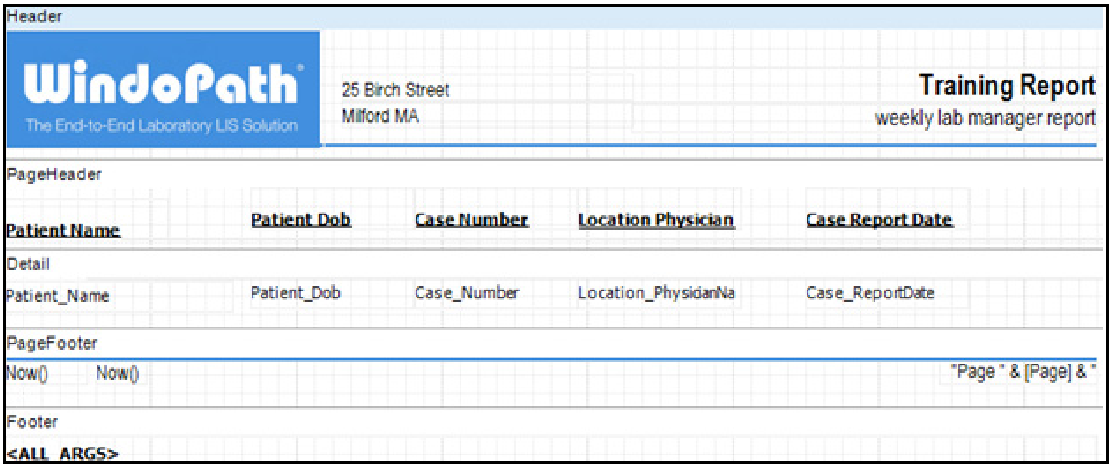
3 **Select ASC or DESC to determine if you want the information to appear in ascending or descending order.**

4 **Select appropriate Keep Together option, as desired.**

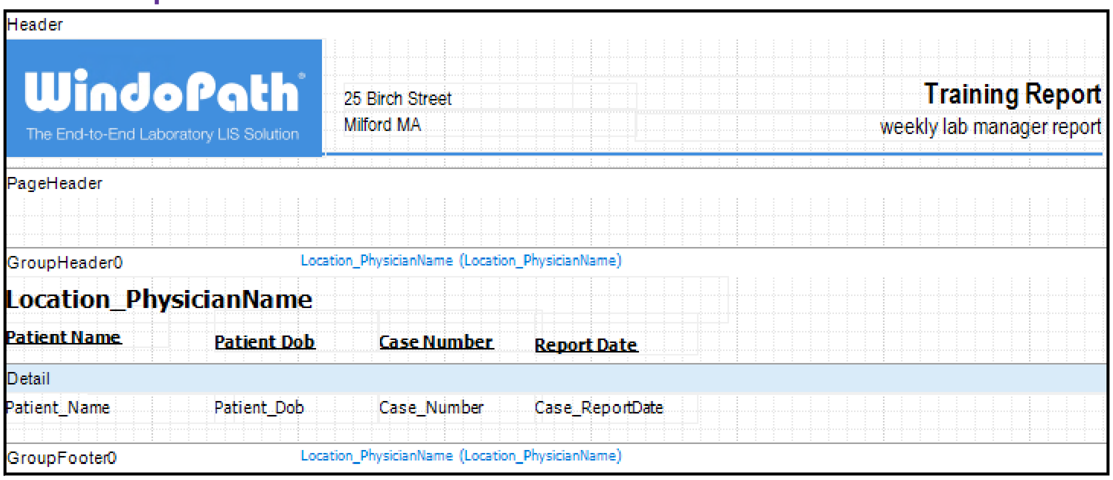
5 **Click OK.**

In the example below, the report was grouped by submitter (in this view, it is labeled as Location_PhysicianName)

Before Group

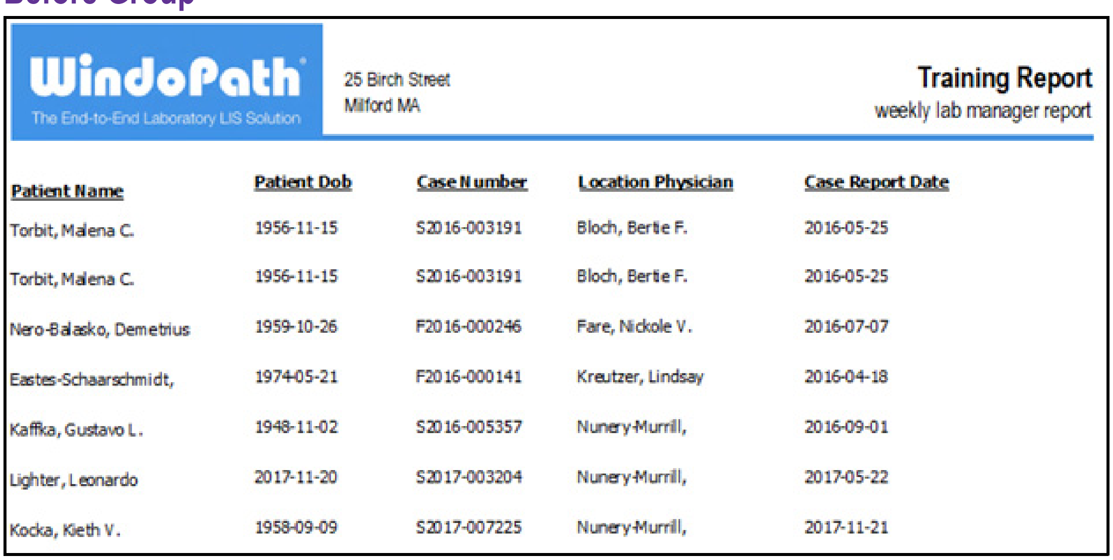


After Group



Use the Group Header and Group Footer to place data that will only appear once per group. In the example below, the submitter data field (labeled Location_PhysicianName) was moved into the Group Header. That way, instead of appearing once per line of data, it will appear once per *group* of data.

Before Group



After Group

WindoPath
The End-to-End Laboratory LIS Solution

25 Birch Street
Milford MA

Training Report
weekly lab manager report

Bloch, Bertie F.

Patient Name	Patient Dob	Case Number	Case Report Date
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Torbit, Malena C.	1956-11-15	S2016-003191	2016-05-25

Fare, Nickole V.

Patient Name	Patient Dob	Case Number	Case Report Date
Nero-Balasko, Demetrius	1959-10-26	F2016-000246	2016-07-07

Kreutzer, Lindsay

Patient Name	Patient Dob	Case Number	Case Report Date
Eastes-Schaarschmidt,	1974-05-21	F2016-000141	2016-04-18

Nunery-Murrill, Racheal

Patient Name	Patient Dob	Case Number	Case Report Date
Kaffka, Gustavo L.	1948-11-02	S2016-005357	2016-09-01
Lighter, Leonardo	2017-11-20	S2017-003204	2017-05-22
Kocka, Kieth V.	1958-09-09	S2017-007225	2017-11-21
Trover, Vi B.	1929-10-30	S2018-000126	2018-01-09
Trover, Vi B.	1929-10-30	S2018-000126	2018-01-09

Perrot, Marquita

Patient Name	Patient Dob	Case Number	Case Report Date
Bourraine, Wilson	1996-09-18	S2017-005173	2017-08-17
Bourraine, Wilson	1996-09-18	S2018-001401	2018-03-06

Chapter 8
Run Management Reports

e.Boost is delivered with several management reports used for managing your lab. Standard reports installed with your system will depend on the Psyche products you have. The Run Management Reports operation is how you run these specialized reports.

Management Report Window

You access management reports by clicking the Run Management Reports icon from the operations tool bar or menu. These reports will help to give the information needed for daily work flow and cumulative summaries.

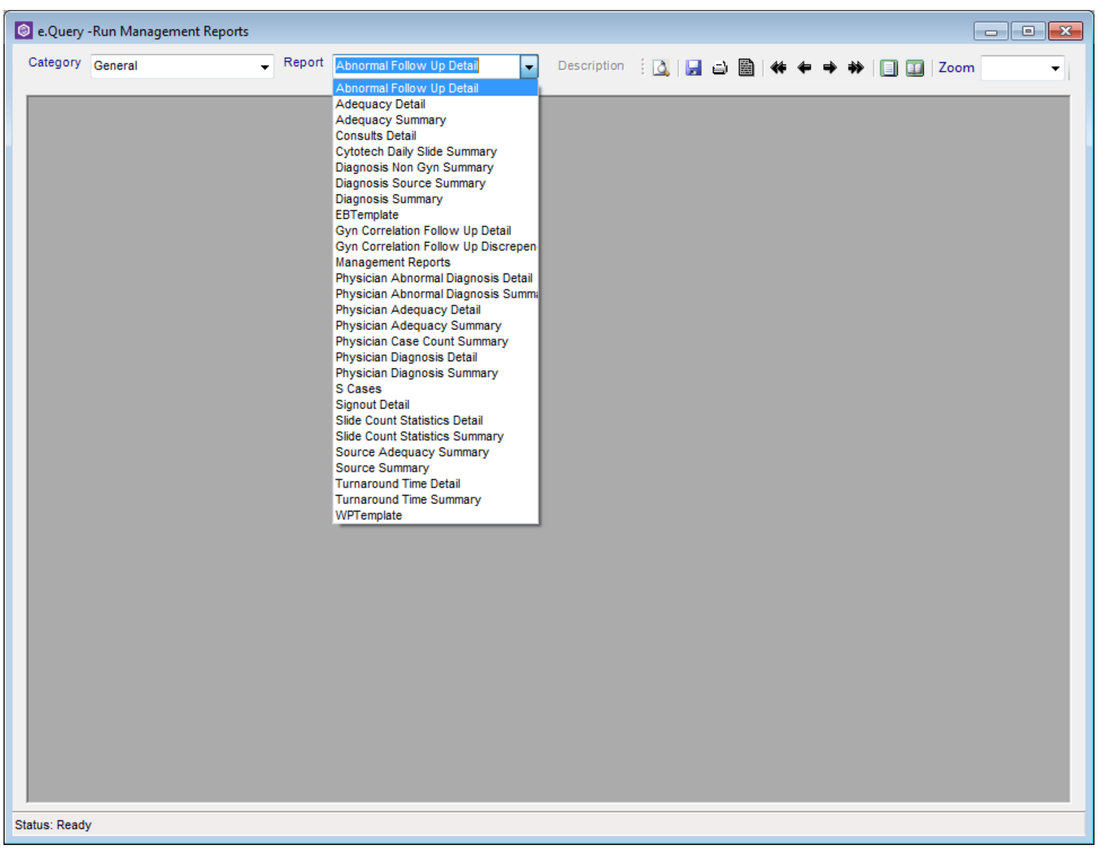

Figure 8-1 - Management Reports Window

How to Execute a Management Report

1 **Select a report Category and Report in which to execute. (Reports are grouped by various categories in accordance with the report's objective: Abnormal, General, Library, Results. Other categories may be defined.)**

2 **Click the execute report menu item.**
You may be prompted to enter parameters (such as date ranges) that serve to limit the reports data. The report displays in the window.

Other Operations

1 **Click the Save icon to save the report.**
PDF, HTML, and XLS are supported.

2 **Click the Print icon to print the report.**

3 **Use the arrows to navigate the pages of the report.**

4 **Select single or multiple page layout.**

5 **Apply a Zoom factor to increase or decrease the display size of the report.**

To Import/Export a Management Report:

1 **Save existing report in .XML format.**

2 **Export existing report and save to desktop.**

3 **Import using the Transfer tab in Outreach Manager under Design Management Reports, find the file and save it.**

4 **Or click on the Export button in the Management Report window to Export.**
Files will be exported in .csv format.

The "Management Reports" Report

e.Boost is installed with a standard report that lists *all* the standard reports provided with your system, along with the report descriptions. This is very useful when learning what each report includes and deciding which you want to use.

To generate the Management Reports report, select the Library Category and the Report name of Management Report. The Management Report will list the following for each report in the system, if available.

Report Name

Report Category

Report Description

Report Full Description

Figure 8-2 shows a current sample of the Management Report.

Psyche Systems Corporation

25 Birch Street, Bldg B
Milford, MA 01757

Management Reports

Management Reports

Report Name	Report Category	Report Description	Report Full Description
Abnormal Follow Up	General	Abnormal Follow Up Detail	
Adequacy Detail	General	Adequacy Detail	
Adequacy Summary	General	Adequacy Summary	
Consults Detail	General	Consults Detail	Displays a list of cases that have consults for a user
Cytotech Daily Slide	General	Cytotech Daily Slide Summary	
Diagnosis Non Gyn	General	Diagnosis Non Gyn Summary	
Diagnosis Source	General	Diagnosis Source Summary	
Diagnosis Summary	General	Diagnosis Summary	
Gyn Correlation	General	Gyn Correlation Follow Up Detail	
Gyn Correlation	General	Gyn Correlation Follow Up Discrepency	
Management Reports	General	Management Reports	Displays a listing of all active Management Reports sorted
Physician Abnormal	General	Physician Abnormal Diagnosis Detail	
Physician Abnormal	General	Physician Abnormal Diagnosis Summary	
Physician Adequacy	General	Physician Adequacy Detail	
Physician Adequacy	General	Physician Adequacy Summary	
Physician Case Count	General	Physician Case Count Summary	Displays a count of cases and percentage per submitter
Physician Diagnosis	General	Physician Diagnosis Detail	
Physician Diagnosis	General	Physician Diagnosis Summary	
Signout Detail	General	Signout Detail	
Slide Count Statistics	General	Slide Count Statistics Detail	
Slide Count Statistics	General	Slide Count Statistics Summary	
Source Adequacy	General	Source Adequacy Summary	
Source Summary	General	Source Summary	
Turnaround Time	General	Turnaround Time Detail	

10/24/2018 1:37 Page 1 of 2

CAP Related Reports for WindoPath

In e.Boost version 1.1.12, several standard WindoPath reports were added to the e.Query Management Reports module that aid the laboratory in complying with *CAP CytoPathology Checklist requirements (CYP)*. These reports may be found in the *CAP Standards* category and are listed below with a description of each.

Psyche CYP.07400 Month|y

Number of Cytopathological Specimens, types of specimens, and cases by diagnostic category.

Psyche CYP.07478 Cases

Rescreen gynecologic cases with comparison to original results

Psyche CYP.07478 Monthly

10% Rescreen of cytotech gynecologic cases

Psyche CYP.07517

High Grade paps with previous Negative pap within 5 years for retrospective review. Report assumes that Diagnosis Severity is set to HGSIL/Malignant.

Psyche CYP.07650 ASC-SIL Ratio

Report determines the ASC/SIL ratio by adding the total number of cases with ASC-US (including high grade cases) diagnoses, and dividing it by the number of cases with low grade diagnoses.

Report includes all cases that contain diagnosis text of "atypical squamous cells of undetermined significance" or "high grade squamous intraepithelial lesion" or "low grade squamous intraepithelial lesion". May need to be edited by lab if different value(s) used. If any of these values change (or more are added) the ASC/SIL FormatPercent Count formula will have to be changed to match.

Psyche CYP.07653 HR-HPV Records

Report assumes the following:

- ASC-US cases are defined (filtered) as containing diagnosis text "Atypical squamous cells of undetermined significance." May need to be edited by lab if different values used.
- Report filters out diagnosis text containing "high grade" in post execution. May need to be edited by lab if different values used.
- SpecimenBlockProcedure_Code (Code in Procedure Library) contains "HPV" May need to be edited by lab if different values used.
- A positive HPV result is indicated by the word "positive" as the SpecimenBlockProcedure_RESULT for the above-defined SpecimenBlockProcedure_Code(s). May need to be edited by lab if different values used. Edit te Count of the "Total Positive HPV tests on ASCUS cases" to match.
- The "% of ASCUS cases w/Positive HPV" calculates the total number of positive HPV cases divided by the total number of HPV cases as defined above. Adjust the formula as necessary if changes made to any above items.

Psyche CYP.07675

Compares previous Non-Gyn cytology cases with current Surgical cases. This report assumes that users enter clinical information into the case tab clinical information box and not the specimen level clinical information box. Also, it primarily looks at time proximity between the 2 cases and does not pull based on if the specimens from each case are the same or related.

Psyche CYP.08400

Slide count of workload screening for each technician daily. Report assumes that default slide count is assigned in the case type library and the cytotecnologist adjusts count manually as necessary. Built to satisfy CAP reports: CYP.08400 and CYP.08550.

Psyche CYP.07600 1 Monthly

Gynecologic Cytopatholgy Cases by Diagnostic Category CYP 07600 1

Psyche CYP.07600 3 Monthly

Gynecologic Cytopatholgy negative cases rescreened before sign out CYP 07600 3

Psyche CYP.076004

GYN Cases Reclassified as Pre-Malignant or Malignant CYP.7600 part 4

Psyche CYP.7600 5

Cases for which histopathology results are available to compare with malignant or with high-grade cytopathology results. Report assumes that Diagnosis Severity is set to HGSIL/Malignant.

Turnaround Time Excluding Weekends

Calculates number of days from case creation date to case report date excluding weekends. This report assumes that all case types are reported.

Turnaround Time Including Weekends

Calculates number of days from case creation date to case report date including weekends. This report assumes that all case types are reported.

Notes