KnowledgeSync

Tutorial & Certification

V10.6

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The KnowledgeSync V10.6.5 Tutorial

KnowledgeSync (KS) is a Business Activity Monitoring application that combines Business Intelligence, Alerts, and Workflows that allow organizations identify and respond to critical, time-sensitive business data.

Use this tutorial after successfully installing KnowledgeSync (following the instructions in the Installation Guide) to learn the following KnowledgeSync tasks:

- Configuring the KnowledgeSync Windows Service
- Executing the Sample Application's Kit and installing its associated eventpak
- Connecting KnowledgeSync with a database to monitor
- Integrating KnowledgeSync with an email system
- Creating KnowledgeSync Queries and corresponding Events
- Defining and generating Crystal Reports
- Running these events and reports
- Monitoring the status of these events

1.1 KnowledgeSync Resellers & OEMs – Please Note!

This tutorial is mandatory for all KnowledgeSync resellers and OEM partners, who must submit the eventpak built at the end of this tutorial to receive their KnowledgeSync v10 Certification. The Certification enables you to receive technical support services on the KnowledgeSync product.

The tutorial is optional – but strongly recommended – for all KnowledgeSync end users who will be creating/maintaining/managing KnowledgeSync events.

In this training course, you'll use a small, sample SQL Server ERP database called *KS Sample.* You'll be able to apply everything that you learn in the tutorial to using KnowledgeSync with any business applications.

1.2 Technical Requirements

The person completing this tutorial should have the following technical expertise:

- Familiarity with Windows Services
- Email account configuration expertise
- Familiarity with database schema and schema terminology (e.g. tables, columns, links/joins)
- Familiarity with Crystal report designing

KnowledgeSync events can (optionally) be configured to write information back into a database using these API toolsets:

- REST Web Service API
- Visual Basic Scripting engine
- SQL Statement execution
- Stored Procedure execution
- Program (*.exe) submission
- XML generation
- Exporting data to flat files (e.g., csv)

Getting Started

2.1 Installation Check: Follow the Installation Guide

Please review the KnowledgeSync System Requirements guide. Following that, please use the KnowledgeSync Installation Guide to install v10, either as a fresh installation or as an upgrade to existing v8 or v9 KnowledgeSync installation. The installation password is: *knowledgesync*

There are two requirements to upgrade to version 10.6.5:

- You must be running versions 8 or 9 of KnowledgeSync.
- You must have migrated your KnowledgeSync database from MS Access to MS SQL Server.

You cannot have version 10 running on the same computer as any earlier (e.g., v9, v8) version of KnowledgeSync. If upgrading, existing events (from v8 or v9) will be automatically updated to work in the v10 release.

2.2 Configure KnowledgeSync Windows Service

After KnowledgeSync is installed, the first step in this tutorial is to configure the KnowledgeSync Windows Service.

1) Go into the **Control Panel**, select **Admin Tools** and then **Services**.
2) Right-click on the KnowledgeSync service, choose **Properties**, and click on the **Logon** tab.
3) Select the **This Account** option.
4) Enter the username and password of the account using the Service and select **OK**.
5) Start the KnowledgeSync Windows Service.

(If you are unable to start the Windows Service, please contact KnowledgeSync Support.)

2.3 Run the Sample Application "Set-Up" Procedure

Download the Tutorial and Sample application kit and then run the setup.exe program to install the sample application and its related components. Follow all on-screen instructions.

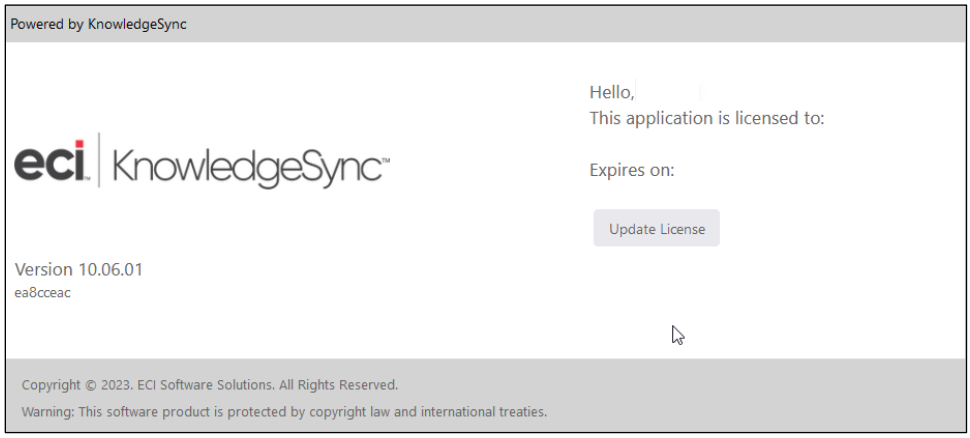
2.4 Log into KnowledgeSync

Open a web browser and log into the KnowledgeSync portal (website) based on the location and port that was specified during the installation process, such as:
http://KSServer.Organization-Name.com:8080

(The above assumes that KS was installed on port 8080.) ***Please note:*** *Apple's Safari® browser is not supported.* The following login window opens (the default username is *admin* and the default password is *password*):

2.5 KnowledgeSync License & Modules

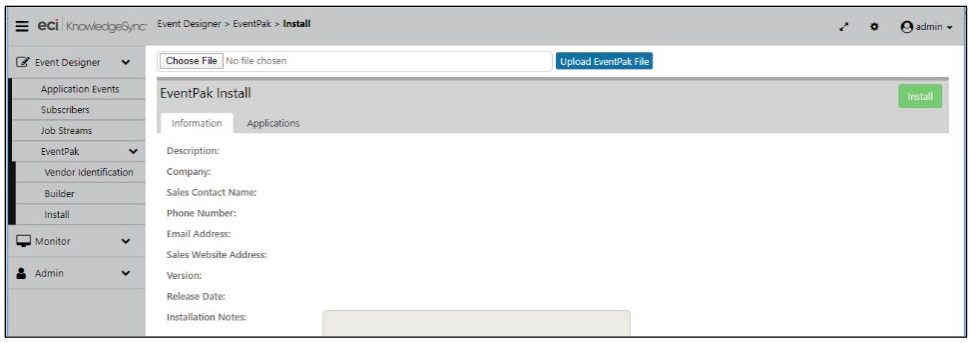
After logging in, the home window opens:



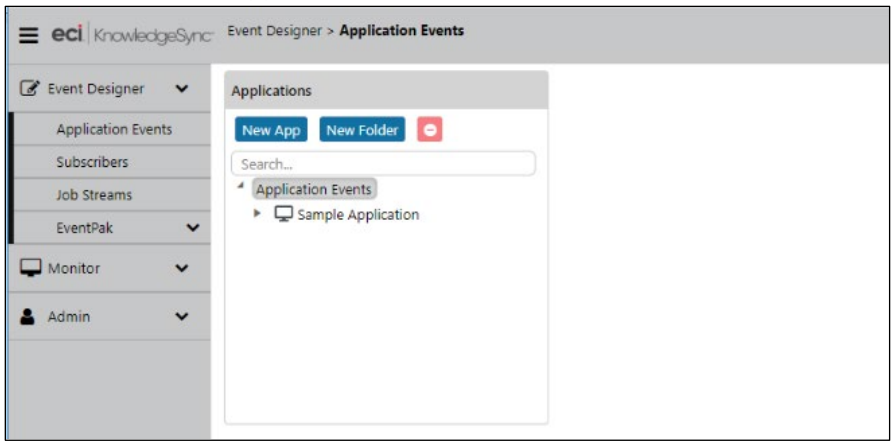
If you have received a new license for KnowledgeSync, click on the **Update License** button and enter all the fields of license details. Click on **Save** to validate the license code and to return to the previous window.

2.6 Install the Sample Application's EventPak

1. Click on **Event Designer** and select **EventPak** and **Install**. The eventpak installation window opens:

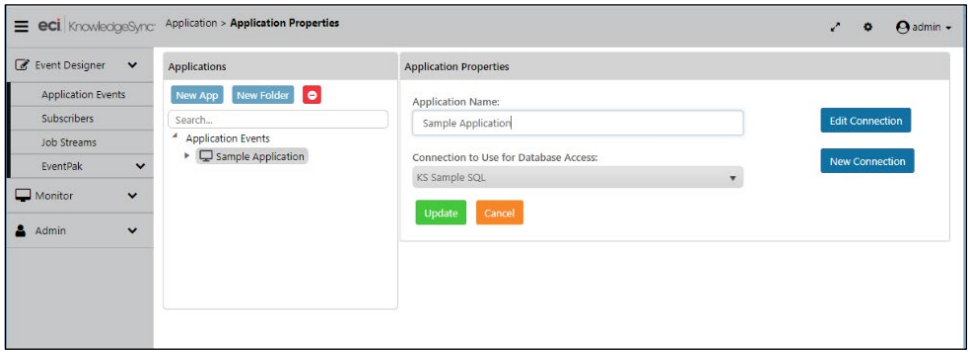


2. Click **Choose File** to navigate to **C:\Program Files\KSSample** then, select the file called **Sample_Application.epk.** Click the **Upload EventPak File** button.
3. Click **Install**. The eventpak loads. Exit out of the EventPak option.
4. Click on the **Application Events** option on the left to return to the main KS window where the sample application is now listed under Application Events:

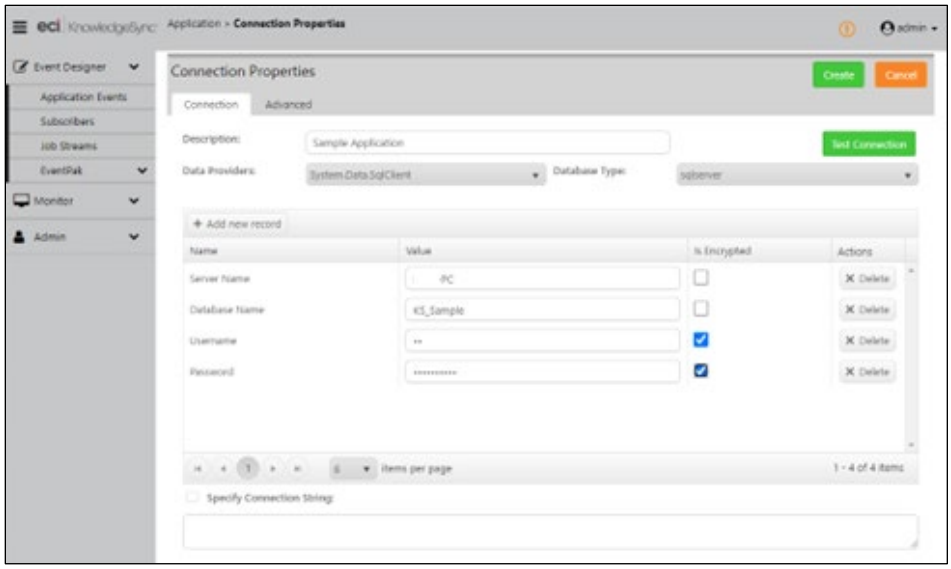


2.7 Connect KnowledgeSync to the Sample Application

1. Click on the **Sample Application** branch and the properties window opens:



2. Click on the **New Connection** button and fill in the details of the SQL .NET Provider, as shown below in the Connection Properties window. Be sure to enter your own server's name, username, and password:



3. Click on **Test Connection** to make sure KnowledgeSync can access the sample application's database.
4. Click the **Create** button and then the **Update** button to complete this configuration.

2.8 Create an Email Sending Account

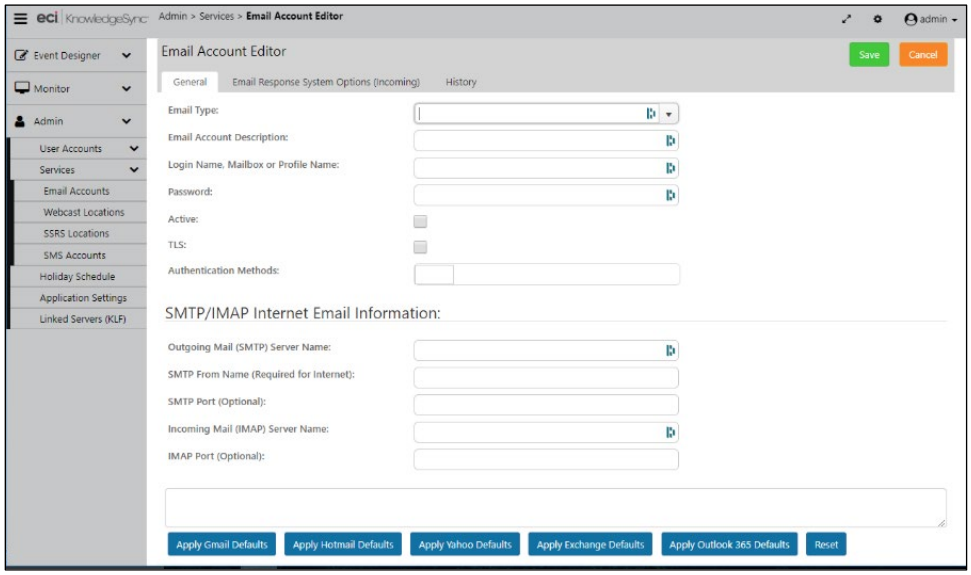
KnowledgeSync requires at least one email account configuration so it can send alert notifications.

The ability to define multiple sending accounts allows KS to send out messages from different origins (e.g., some alerts from the sales department, others from the service department) depending on the type of alert being sent.

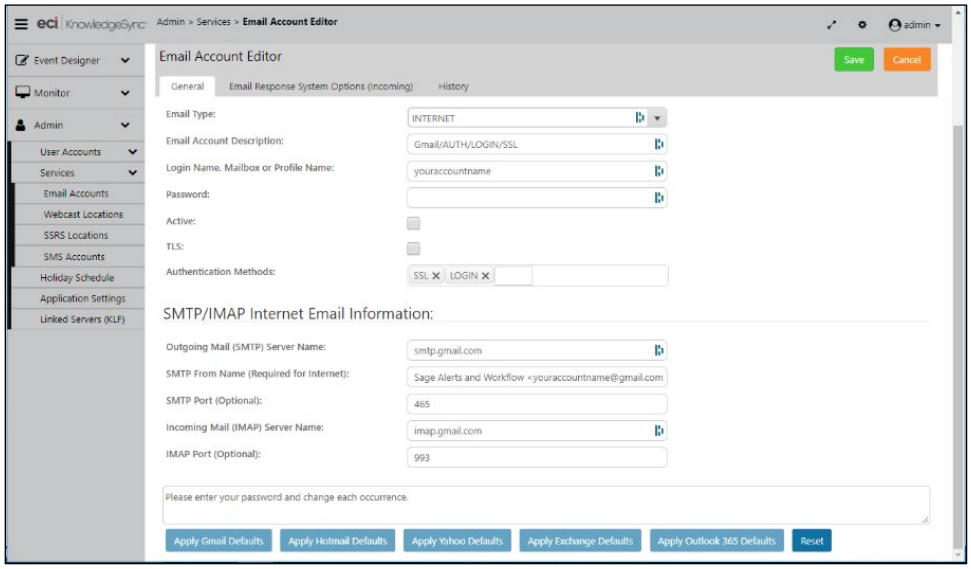
We recommend using the "default configuration" buttons at the bottom of the email account configuration window.

To configure an email sending account, follow these steps:

- From the KS main window, go to the **Admin** option in the left menu > **Services** > **Email Accounts**. Click the **Add** button and the **Email Account Editor** window opens:



- If possible, use one of the five default buttons at the bottom of this window to pre-load the email account settings. In the example below, the Gmail defaults button has been selected:



2.9 Email Account Configuration Steps

If using a web-based email account, it may need to be configured to *allow access for less secure applications.* This is done to allow KnowledgeSync or other applications the ability to relay mail through the email provider. For a web-hosted email account, follow these instructions:

1) Expand the KnowledgeSync Admin and Services, then click Email Accounts.

2) Click the Add button located at the top left of the window.
3) Click the appropriate Apply… button from the bottom of the workspace, selecting the appropriate email provider.

4) In the email Account Description: field, users may change the text BEFORE the first slash to reflect a description of the account, but it is critically important not to delete or change the remainder of the information.
5) In the Login Name, Mailbox or Profile Name: field enter the user ID. This ID will be the full email address account name; for example, MyAccount@gmail.com.
6) In the Password field, enter the password for the email account.
7) Ensure the Active box is checked.
8) In the SMTP from Name field, change the text between the < and > symbols to reflect the same address entered in the Login Name field. This is the name that appears as the sender of the mail. This is required for type INTERNET and it must be a valid address with a valid domain name, e.g. certify@knowledgesync.com.
9) Do not change any of the remaining fields.
10) Click **Save**.

If using an internal, MS Exchange-based email account:

1) Expand the KnowledgeSync Admin and Services, then click Email Accounts.
2) Click the Add button located at the top left of the window.
3) Click the Apply Exchange Defaults button.
4) Populate the fields with information provided from the customer/customer's I/T resource for their mail server.
5) Refer to the following section on the configuration of the Authentication type for the email account.
6) After changes are completed, click Save.

Test the email account to confirm that it works as expected:

1) Click on the Description of the email account that was just created so the line becomes highlighted.
2) Click the Perform Email Test button.
3) Enter the desired recipient email address and click OK.
4) Check the recipient's email account to see if the test message was sent successfully. If the test message is not sent or is pending, check the Monitor or Corrective Action area of Administrator. If items are not sending but also are not displaying an error in the Monitor, try restarting KnowledgeSync.
   If the email sending account still doesn't work, please contact KnowledgeSync Technical Support.

2.10 Email Account Notes

- The type *Internet with Exchange* is recommended if the exchange server is configured for SMTP and POP3.
- HTML-formatted email alerts are supported only with an email type of *Internet*.
- If users can send email within their domain but not outside of it, this is because the SMTP Server does not have *Relay* turned on. Once the server is set to allow *Relay,* verify that no servers other than the servers within the domain can use that SMTP server for relay purposes.

2.11 Authentication Types Supported

Authentication is enabled for Internet-based email systems. There are six options:

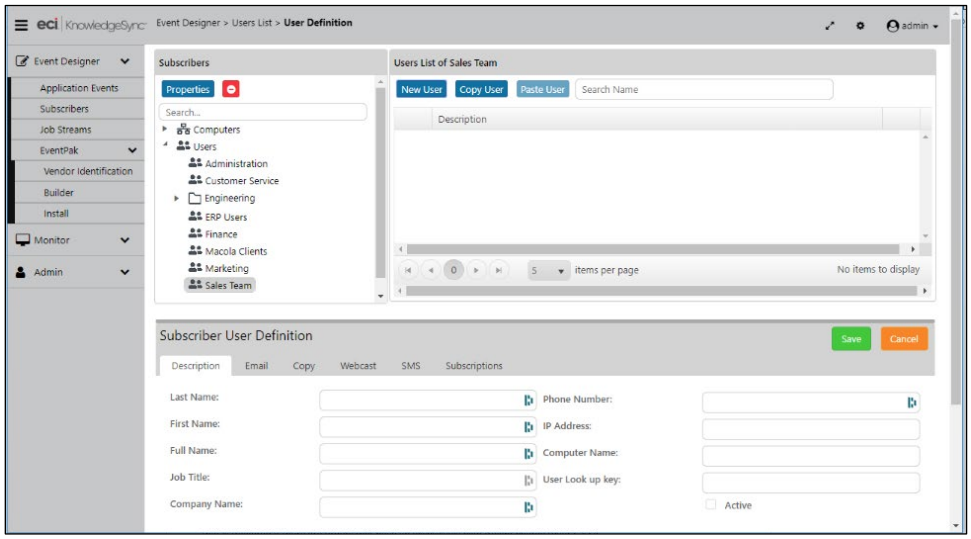
- SSL: choose Port 465
- LOGIN:
- NTLM: choose Port 25
- MSN:
- CRAM-MD5:
- AUTO:

Please refer to your IT administrator regarding the type of authentication required by your email system.

2.12 Define Two Alert Recipients (Subscribers)

Anyone who receives a KnowledgeSync alert is referred to as a subscriber. For this tutorial, you will add yourself as a subscriber; if you are a KnowledgeSync reseller or OEM partner, you must also add a subscriber called *KS Certification*.

1) On the main KS window, expand the **Event Designer** option and click on the **Subscribers** option. Expand the **Users** branch and click on the **Sales Team**. Click on the New User button and the **Subscriber User Definition** window opens:



2) Fill in your name, title, company, and phone number. Click the **Active** checkbox.
3) Click on the **Email** tab and fill in your primary email address only (a secondary address can be for your non-work days and/or non-work hours). Select the days of the week and hours of the day when the primary address is to be used. Click on **Save** when finished.

If you are a KnowledgeSync reseller or OEM partner, please also define a *Certification* subscriber in the Sales Team:

1) Enter the last name of *Certification* and a first name of *KnowledgeSync*. Click the **Active** checkbox.
2) Click on the **Email** tab.
3) Enter certify@knowledgesync.com in both the **Address 1** and **Address 2** fields.
4) Click **Save** when finished; you are now done working with subscribers.

2.13 How a KnowledgeSync Event Works

The purpose of a KnowledgeSync event is to look for certain conditions of data (such as low stock or an overdue invoice) and trigger automated responses which may include alerts, the generation and delivery of relevant forms, documents, or reports, and the updating of application data. The most important part of an event is its trigger. A trigger not only determines what conditions an event will look for, a trigger also collects the data that an event will use in its alerts and in its application updates.

2.14 Types of Triggers

KnowledgeSync supports three kinds of triggers:

1) Database queries (.NET Provider, ODBC, OLE/DB)
2) REST web API calls
3) Visual Basic scripts.

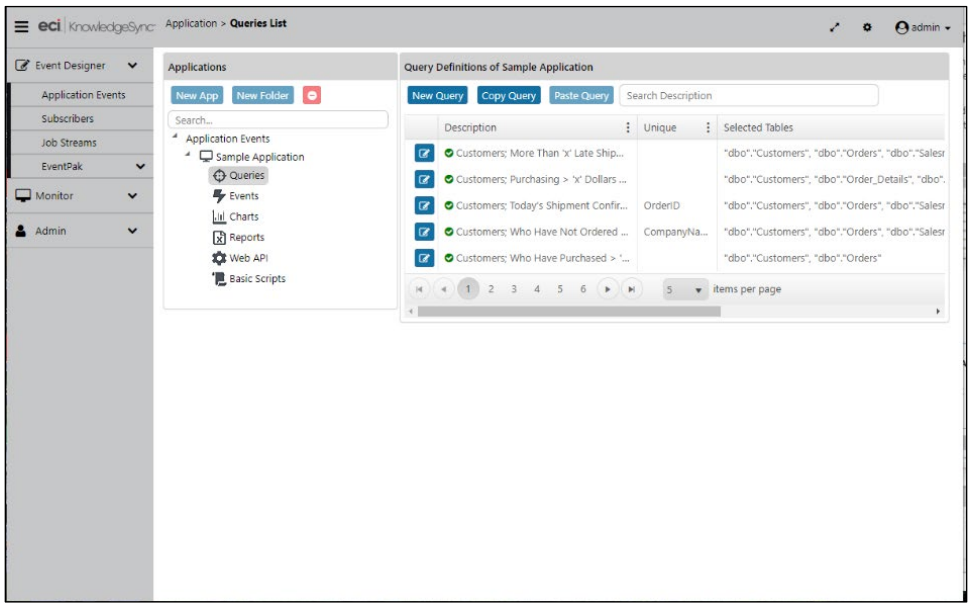
Your events will use a database query as their triggers.

Note: The tables and columns (fields) in the sample application database appear with the prefix of "dbo" -- which stands for database owner. For ease of reading, this document excludes reference to the "dbo" value.

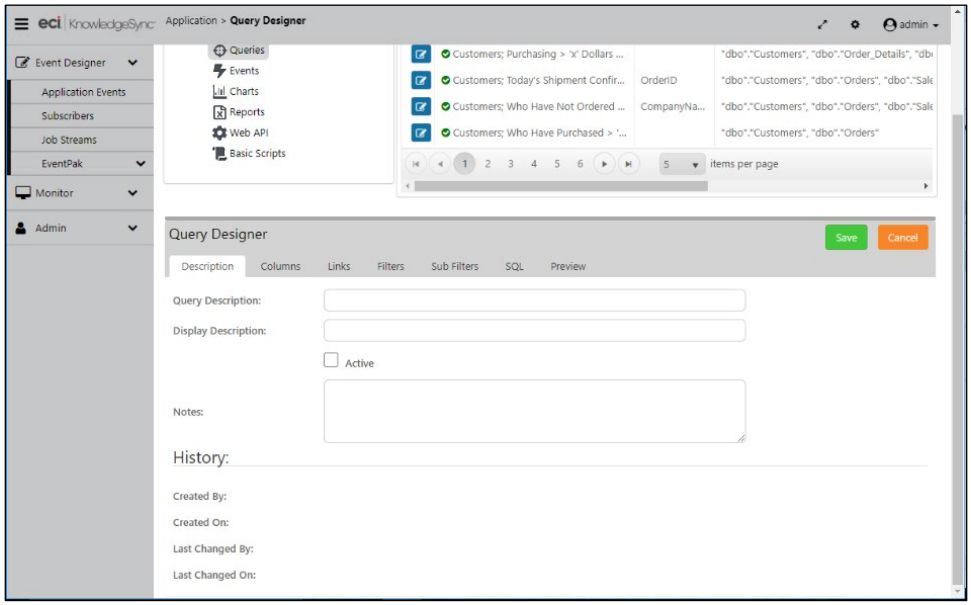
Event 1: Design the Trigger for Excessive Freight Charges

The first event will identify sales orders with excessively high freight charges (over $200). If any such orders exist, KS will deliver an email alert about them. Begin by designing the event's trigger to identify orders that meet this criterion.

1) Open **Event Designer** > **Application Events** and then expand the Sample **Application** branch. Six sub-branches appear; click on the **Queries** sub-branch:



2) Click on the **New Query** button and the Query Designer window opens:

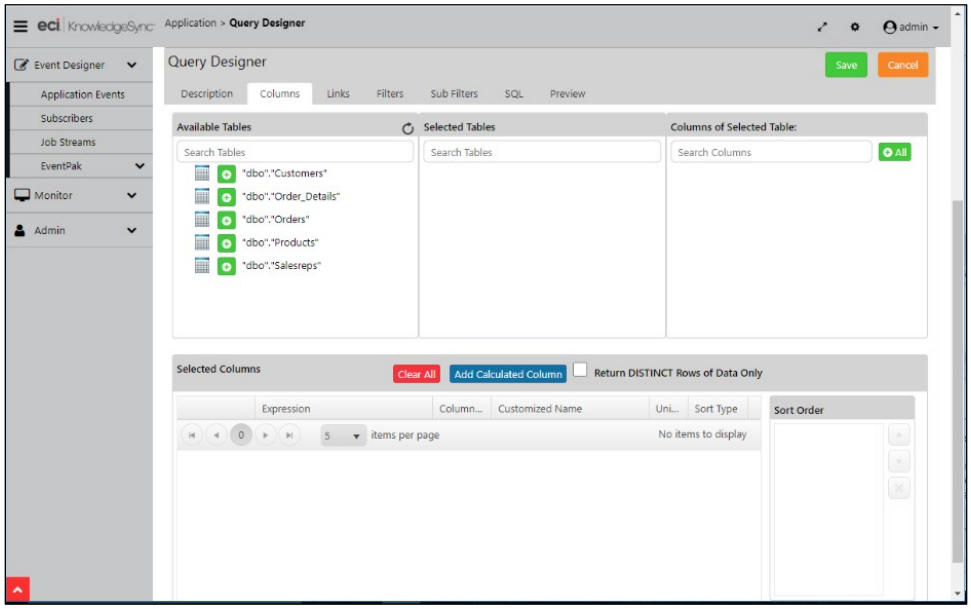


3.1 Specify the Query's Description

1) Key in a query description of: **Orders; Excessive Freight**.
2) Press your tab key to copy this value into the display description field.
3) Click the **Active** checkbox.

3.2 Specify the Query's Tables. Columns & Sort Order

1. Click on the Columns tab; the Query Designer window opens:



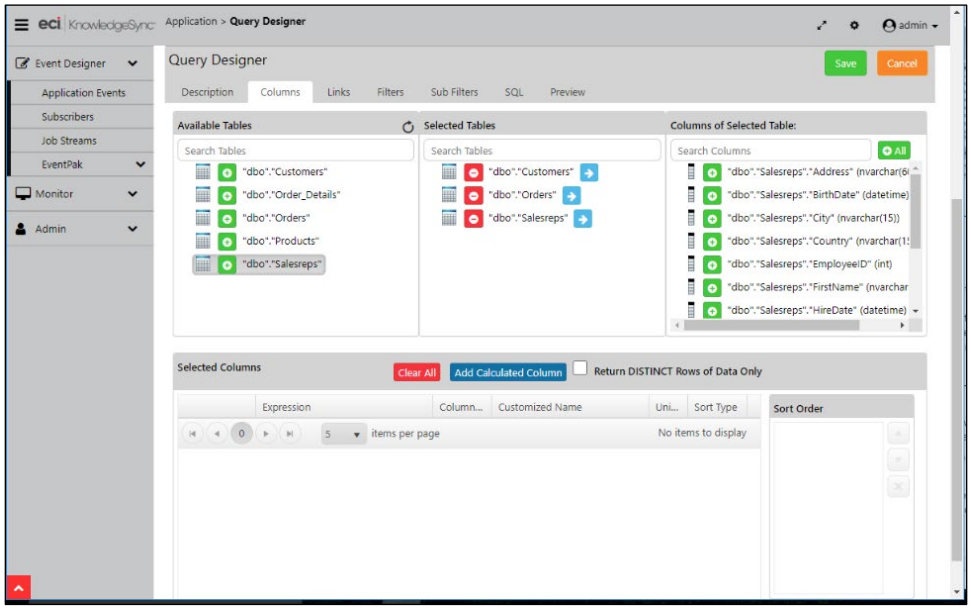
All the tables in a database (and all the data fields columns) within them are displayed in this tab. Since this event will send out email alerts, you need to identify the columns that you want to put into those alerts. Choosing those fields is done in the Columns tab of a query.

Tip: Before designing a query, sketch out what you'd like your alert message to look like. In this alert, you'd probably want the customer's name, their sales rep's name, the order number, required ship date, order total and freight total.

Before you can select the columns for a query, you need to identify which tables contain those columns.

2. Select (click on the plus sign next to) the Customers, Orders, and Salesreps tables.

Rule: If you wish to include application data in an alert, you must select the table(s) in which that data resides:



3.3 Select the Query's Columns (Fields)

Select those fields of data to include in alert messages. Start with the **Customers** table.

1) Under *Selected Tables,* click on the arrow to the right of the customers table to show its contents under **Columns of Selected Table**.
2) Click on the plus sign to the left of the *Company Name* column to add this column to the query.
3) From the *Orders* table, select the freight, order date, order ID, required date, and total columns.
4) From the *Salesreps* table, select the first name and last name columns for the query.

3.4 Using Calculations

Notice that in the orders table there is one field for an order's required date and another field for the shipped date. What if you wanted a field that showed the number of days between the two?

KS lets you perform field-based calculations; these include date calculations as well as arithmetic calculations, such as summing a client's sales, counting the number of sales, or determining a client's average sales amount.

We'll create a calculated field a little later in this course; full details on calculations may be found in the user manual.

3.5 How KnowledgeSync Keeps Track of Triggered Records

Consider an event that checks for new orders and runs hourly; when a new order is found, KS sends an email. Now consider an order that is placed at 8:30 a.m.; KS runs the event at 9 a.m. and sends its email.

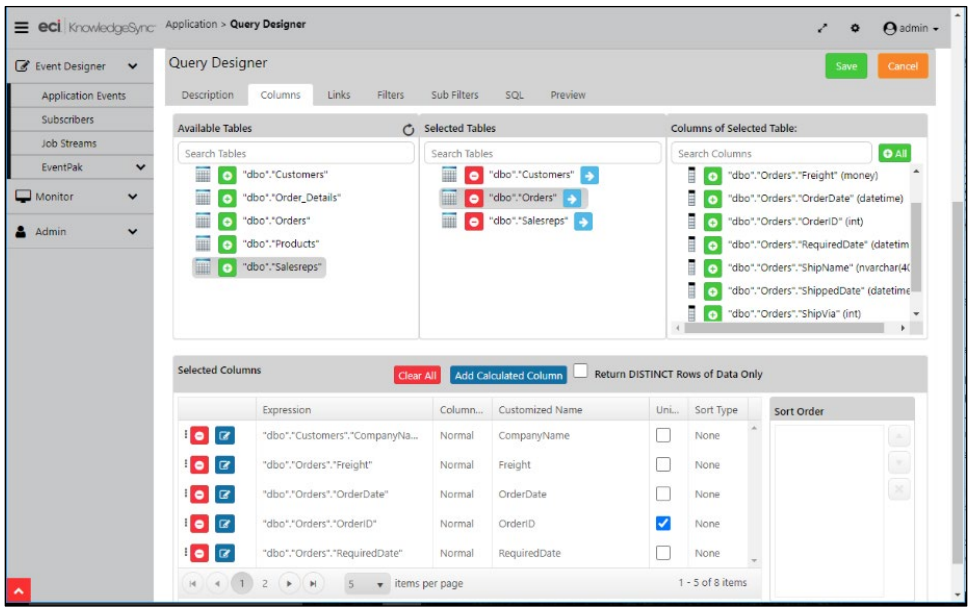
At 9:30 a.m., another order is placed.

When the event runs next – at 10 a.m. – you do not want KS to send out another email for the order from 8:30, but you do want KS to send out an email for the order from 9:30.

KnowledgeSync uses something called the "unique column" of a query to remember which records it has already processed. The "unique column" refers to a value that uniquely identifies every record in a table. Many software applications refer to the unique column of a table as the table's primary key.

Let's identify the unique column for the query you're building:

- The *order ID* uniquely identifies each order record.
- On the lower part of the *Columns* tab (under *Selected Columns*), locate the **OrderID** Expression and check the **Unique** box:



Note #1: If there are some events that you want to trigger repeatedly (e.g. if a record continues to meet an event's criteria), this topic is covered in a later section.

Note #2: Some tables' unique value is drawn from a combination of fields – such as a combination of the Order number and the Line Number. See note #3.

Note #3: Incorrectly defining items in the Unique column often results in missing data (e.g., an alert containing order line-item details will show only the first line item of an order if the unique is defined as the Order Number). In such a scenario, the unique item needs to be defined as the combination of the Order Number and Line Number.

3.6 Column Type & Customized Name

Under the *Selected Columns* for a query, you'll see a field called *Column Type* – and it defaults to **Normal** for all selected columns. This field allows you to perform aggregate functions, such as summing the contents of a numeric field to get the total amount for all orders per customer, per region, or per sales rep.

➔ Leave the Column Type fields with their default values. We'll change this value in our second event.

The *Customized Name* field allows you create friendly names for the columns selected for a query (e.g., for a column whose name is rdate you could change its customized name to something more obvious, such as required_date.)

➔ Leave the Customized Name fields with their default values for this query.

3.7 Select the Query's Sorting Order

When this query runs, KnowledgeSync may find one or more matching sales orders. If multiple orders are found, KS uses the Sorting definition to determine the order in which these records will be displayed within the corresponding event's alert messages.

➔ From the list of *Selected Columns* for this query, locate the *Freight* column.
➔ Scroll the window right, until you see the *Sort Type* field. Change the value from None to **Descending**.

3.8 Link the Query's Tables

When a query uses more than one table, you must tell KS how those tables are linked together. If you do not know how tables are linked in an application, please refer to the application's database schema.

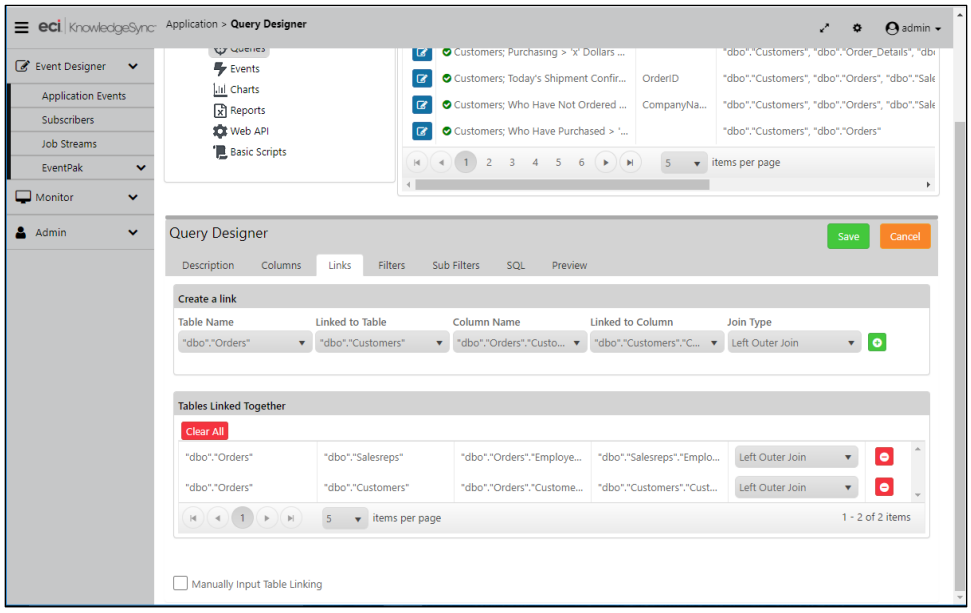
Rule: *The first table that you choose when linking must be the primary table from which the query retrieves data.*

Since this query retrieves order records, the first table we will choose for linking will be the *Orders* table.

1) Click on the **Links** tab and under *Create a link*, click under *Table Name* and select the **Orders** table.
2) Under *Linked to Table*, select **Salesreps**.
3) Under *Column Name*, select **Orders.EmployeeID** and under *Linked to Column* the **Salesreps.EmployeeID** should appear by default.
4) The *Join Type* defaults to Left **Outer Join**. Leave that value as is and click on the green plus sign to add the first link. Next, you need to link the orders and customers tables.
5) Under *Create a link*, click under *Table Name* and select (or confirm) **Orders**.
6) Under *Linked to Table*, select **Customers**.
7) Under *Column Name*, select **Orders.CustomerID** and under *Linked to Column*, the **Customers.CustomerID** should appear by default.
8) The *Join Type* defaults to **Left Outer Join**. Click on the green plus sign to add the second link.

Note the following about linking tables:

- Use a *Link Type* of left outer join unless you know that your database recommends a different type.
- KnowledgeSync supports multi-field links – refer to the user manual for details.
- A query typically has several links that are equal to one fewer than the number of tables you have selected for the query (e.g., the current query has '3' tables and '2' links):



3.9 The Query's Filer

On the *Filters* tab, specify the condition(s) that records must meet to be retrieved by the query. KS filters can test for such conditions as:

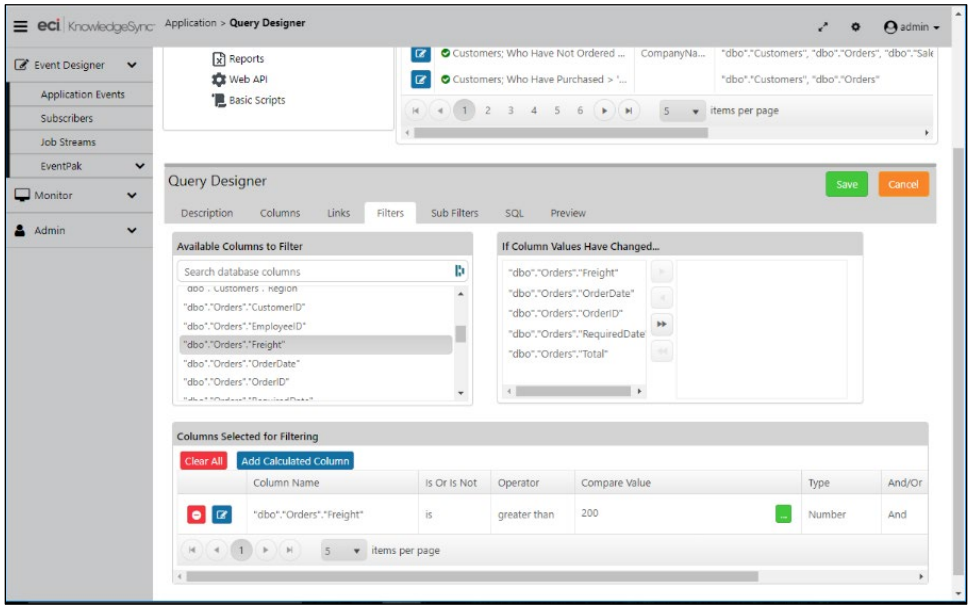
- Orders placed today

- Inventory items approaching their re-order level
- Clients who have not ordered within the last X days
- Invoices that are overdue for payment
- Orders whose freight charge is greater than X

For this query, you'll be using the last of these examples as your filter. Follow these steps:

1) Click on the **Filters** tab.
2) In *Available Columns to Filter*, locate and double-click on the **Orders.Freight** field. This field then appears under *Columns Selected for Filtering*.
3) Under *Columns Selected for Filtering*, leave the value of *is or is not* as **is**.
4) Click in the **Operator** field, click on the drop-down and change to **greater than**.
5) Click in the **Compare Value** field, remove the ? and type in **200**. (This enables this query to retrieve any orders that have a freight value of greater than $200.)
6) Leave the rest of the columns with their default values.

Your resulting filter window should look like the following:



The Query's Filter

3.10 Make the Query Parameter-Driven

Before we use this query in an event, we're going to make it a bit more powerful – by making it parameter-driven.

Currently, the query retrieves orders whose freight charge is over $200. But what if one person wants to know about charges more than $200, someone else wants charges over $400, and a third person wants charges over $1,000?

You can make one query serve all three scenarios by making your query parameter-driven:

1) In the filter you just added, click in **Compare Value**, remove 200, and type in '**?**' (without the quotes).
2) Scroll your filter to the right and click in the field called **Optional Prompt**.
3) Delete the default Optional Prompt text and type in **Freight Amount is Greater Than**?

You'll be able to see the results of this parameter-driven query when you preview it in the next step.

3.11 Skip the Sub-Filter & SQL Tabs

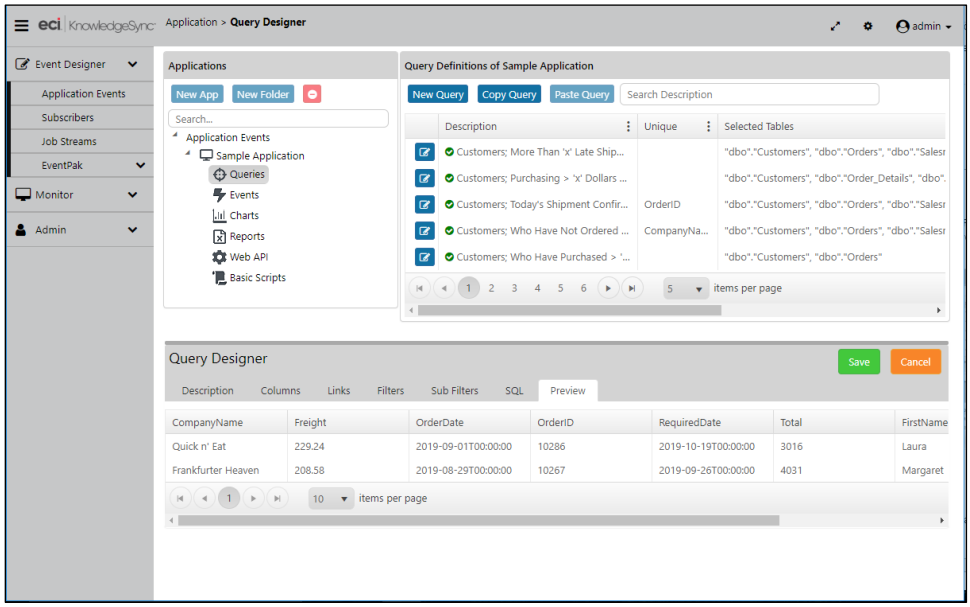
The **Sub Filters** tab is not used in this query; you'll use it in an aggregate query a little later. The SQL tab lets you view the SQL syntax that this query will execute.

➔ Skip the Sub Filters and SQL tabs.

3.12 Preview the Results of the Query

The Preview tab lets you review the results of your query.

1. Click on the **Preview** tab. A text that reads ***Freight Amount is Greater Than?*** opens.
2. Remove the **?** and enter 100. Click on **See Preview**.
   The matching results are listed on the lower-right side of the Preview workspace. There should be nine matching records.
3. Click off the Preview tab to any other tab and then back onto Preview to test it a second time. Enter 200 as the freight amount; there should be two records that meet the query's criteria.
4. Click on **Save** (or **Update**) to retain the query's configuration.



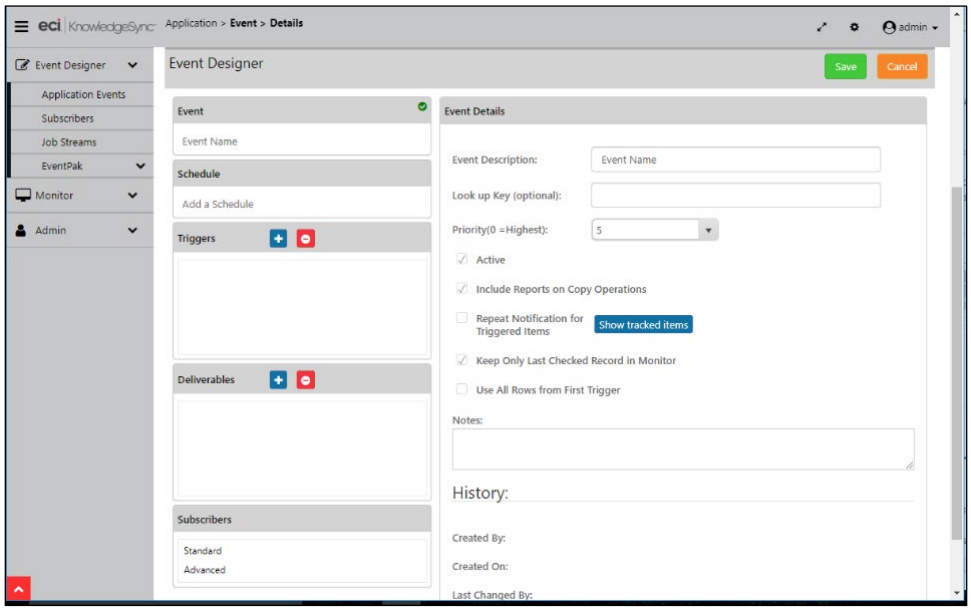
Query Preview Results: Freight > $200

3.13 Task #2: Design the Event for Excessive Freight Charges

Once you have created an event's trigger, the next step is to design its event. All events consist of five components:

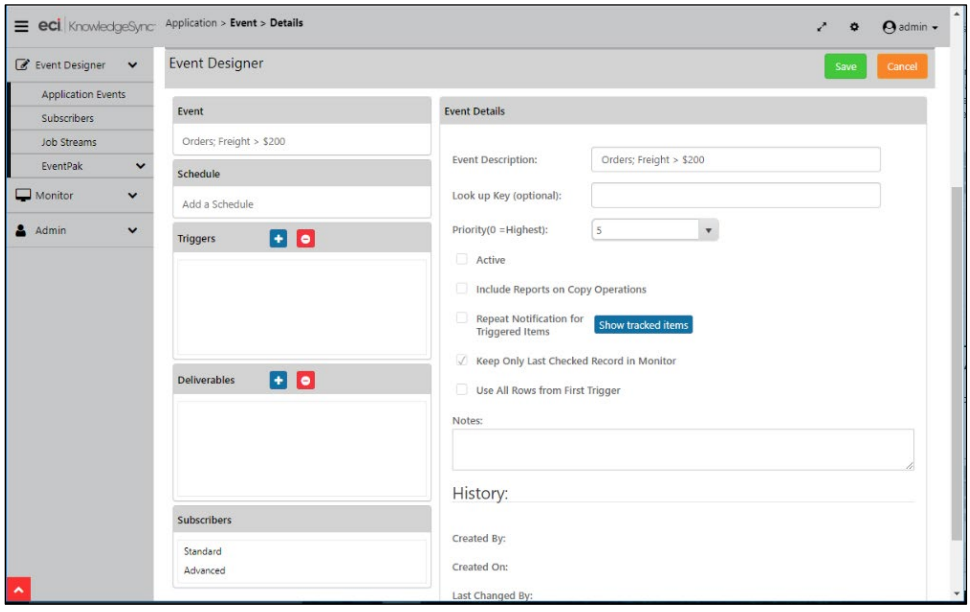
- Name & general details
- Schedule (how often KnowledgeSync checks for an event's conditions)
- Trigger(s) (the query you just created)
- Deliverables (the alerts, reports, charts and actions an event executes IF it is triggered)
- Subscribers (the people who receive alerts, reports, & charts IF the event is triggered)

1) Expand the *Sample Application* branch, click on the **Events** sub-branch and click on the **New Event** button:



The Event Designer

2) Under *Event Description*, remove the default text and key in **Orders; Freight > $200**.
3) Leave the *Lookup Key* field blank
4) The *Priority* field is controls the order of execution of events that are scheduled to run at the same time; higher priority events are executed first. Select a priority of **5**.
5) Uncheck the **Active** box. (We'll want to test the event before we activate it.)
6) Uncheck the **Include Reports on Copy Operations** box, as this event does not generate reports.
7) Uncheck the **Repeat** box. (You want to be notified only once for each order with high freight charges.)
8) Leave the **Keep only last checked record in Monitor** box checked. (This reduces the history that KS retains.)
9) Uncheck the **Use All Rows from First Trigger** box, as this event uses only a single trigger (query).

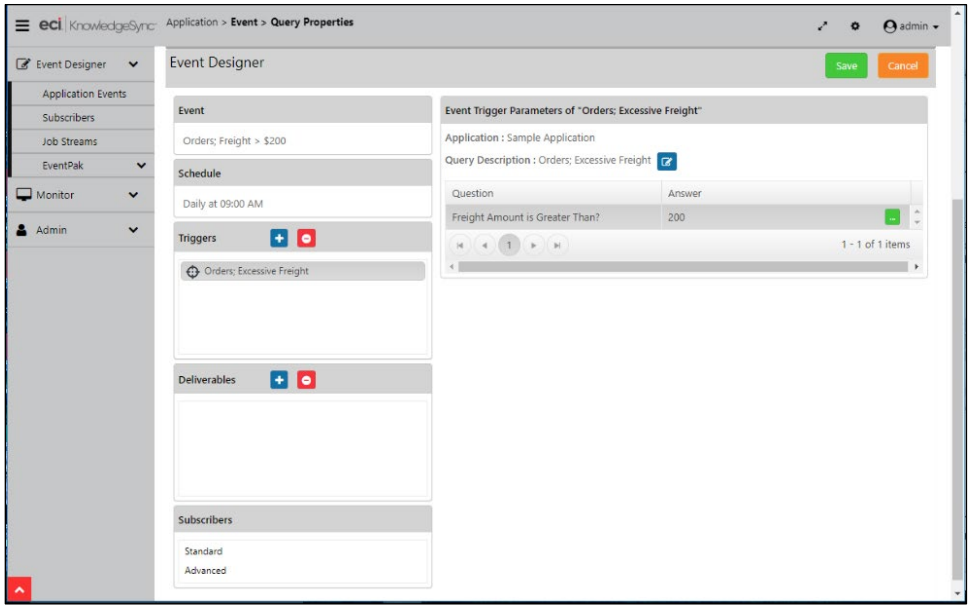


The Event's Description & Details

3.14 The Event's Triggers

An event may use one or more triggers; this event will use the query that you designed earlier:

1) Click on the plus sign next to *Triggers* and select **Query**. A new window opens on the right.
2) Locate and click on the query called **Orders; Excessive Freight** and click on the **Add Query** button.
3) You are prompted to specify a threshold for the freight charges. Click in the *Answer* field and type in **200**.



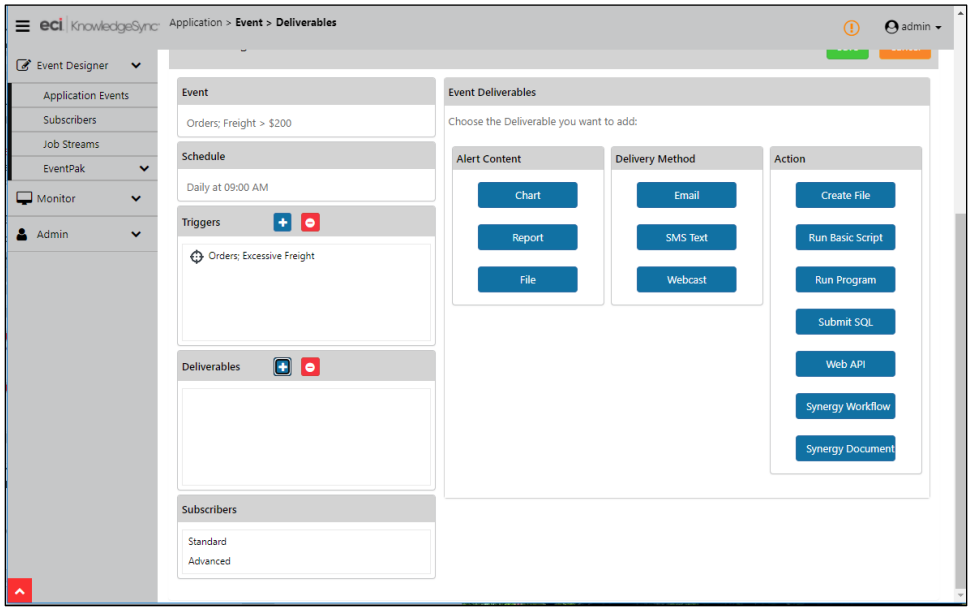
The Event's Query & Triggering Threshold ($200)

3.15 Configure the Email Alert Message

One of the ways that KS can respond to a triggered event is to send out alert messages. KS can send out alerts to any number of people (employees, clients, prospects, and vendors) via email, text message, copy/FTP/SFTP, and web dashboard ("webcast").

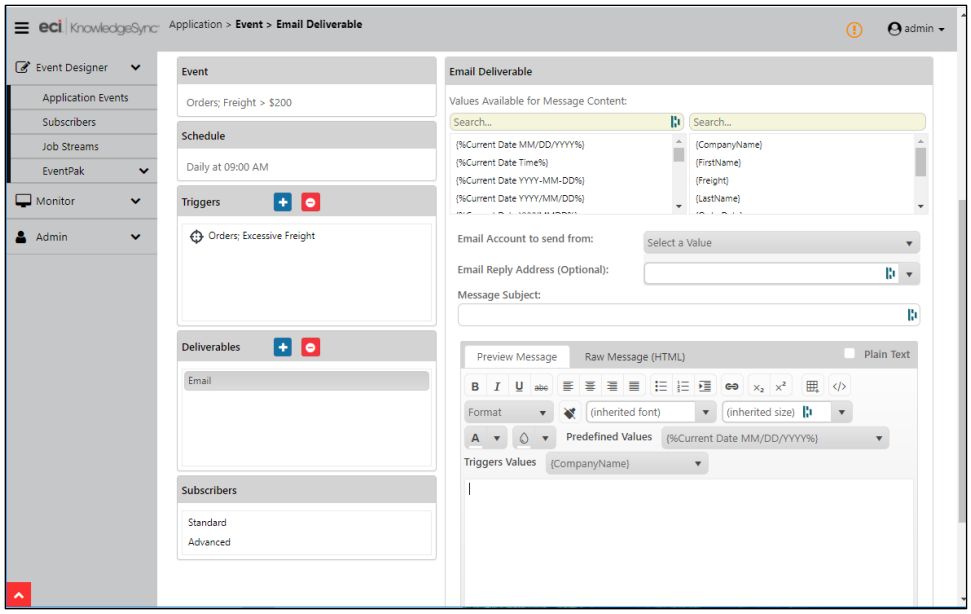
For this event, you'll configure it to send out email alerts.

1) Click on the plus sign next to **Deliverables**. The following window opens:



An Event's Deliverables
(**Note:** The two Synergy options under Actions may not appear in your installation.)

2) Click on the **Email** button under *Deliverables*. The following window will appear:



Email Alert Message Definition

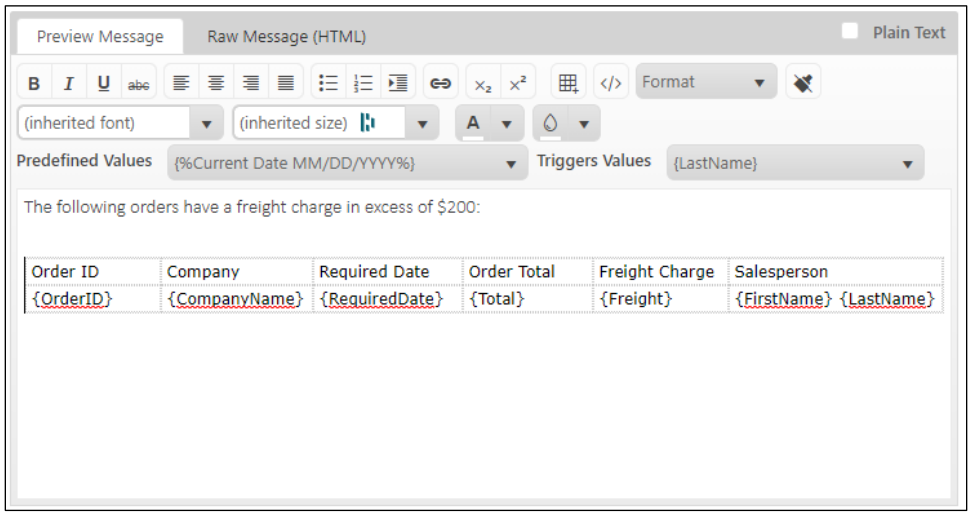
3) Enter, verify, or select the **Email Account to send from** field. (This was created earlier.)
4) The **Email Reply Address** allows a recipient of an alert to reply to a message and have the reply goes back to an appropriate person (such as a Sales Rep) instead of going back to the KS email account. Leave this field blank.
5) Key in a message subject of: Orders; Freight Charge > $200
   Make sure you are working on the **Preview Message** tab, as this enables you to use KnowledgeSync's HTML editor to create your alert message.
6) Type in the following text on the top line of the Preview Message tab (select whatever font and point size you desire):

The following orders have a freight charge in excess of $200:

7) Click the Enter key to insert a carriage return after this text.

8) Click on the  icon to create a 2 x 6 table (it allows for 6 columns of data).
9) Type in the following column headers: “Order ID”, “Company”, “Required Date”, “Order Total”, “Freight Charge”, and “Salesperson”. Use your arrow keys to move from one column to the next.
10) Position your cursor in the first column of the second row of the table, go up to the list of **Trigger Values** and select the data field called “{OrderID}”.

    Continue adding the query data field that matches with each column heading. (For “Salesperson”, select both “firstname” and “lastname” separated by a single blank space.) Your message design should look like this:



The HTML Email Alert Message

Since we want the alert message to show the details of *all records* that meets the event’s criteria, you need to tell KnowledgeSync to repeat the *details* section of the alert. This is done by adding two commands to the HTML content of the alert. Click on the Raw Message (HTML) tab of the email message window.

1) Scroll ¾ of the way down in your HTML syntax to the section between the table’s header and detail lines to where you see the following:

```
<td style="width:16.666666666666668%;">Salesperson
</td>
</tr>
<tr style="height:50%;">
<td style="width:16.666666666666668%;">{OrderID}
```

2) Insert a blank line below:

```
<td style="width:16.666666666666668%;">Salesperson
</td>
</tr>


<tr style="height:50%;">
<td style="width:16.666666666666668%;">{OrderID}
```

3) With your cursor positioned in that blank line, go up to the top of the Email Deliverable window, scroll the left-hand list of *Values Available for Message Content* to the end and double-click **on {BEGIN*REPEAT}** so that your HTML syntax now looks like this:

```
<td style="width:16.666666666666668%;">Salesperson
</td>
</tr>
<tbody class="ks-repeat"> <!--BEGIN*REPEAT-->
<tr style="height:50%;">
<td style="width:16.666666666666668%;">{OrderID}
```

4) Next, scroll the HTML message syntax to the end and insert a blank line as shown:

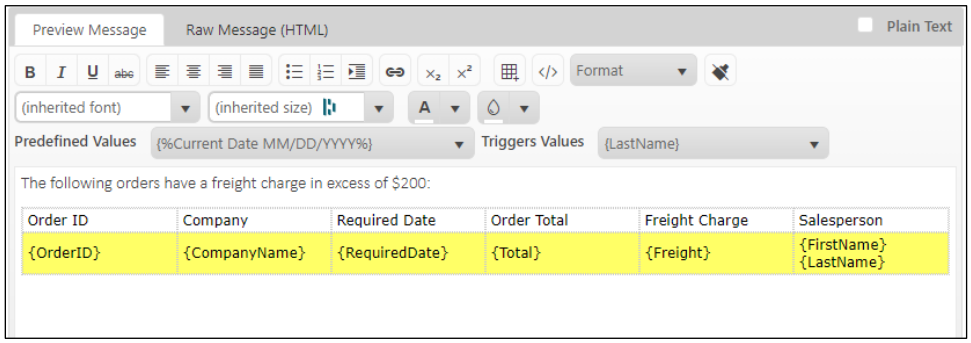
```
<td style="width:16.666666666666668%;">{FirstName} {LastName}
</td>
</tr>


</tbody>
</table>{END*HTML}
```

5) Position your cursor in the blank line, and from the list of *Values Available for Message Content* double-click on the field called **{END*REPEAT}.**

```
<td style="width:16.666666666666668%;">{FirstName} {LastName}
</td>
</tr>
<!--END*REPEAT--> </tbody>
</tbody>
</table>{END*HTML}
```

6) Click back on the *Preview Message* tab and the following alert message shows:



The finished email alert message (in html)

The highlighted section of the alert indicates that repeat is enabled for this message and that the highlighted text is repeated for each record that meets this event's criteria.

Leave the three checkboxes at the bottom of the email message configuration un-checked.

3.16 Skip the Other Alert Options

Since this event only sends out alerts via email, we will skip the other alert message configuration options.

3.17 Event Deliverable: Actions

KnowledgeSync can do much more than send out alert messages when an event is triggered:

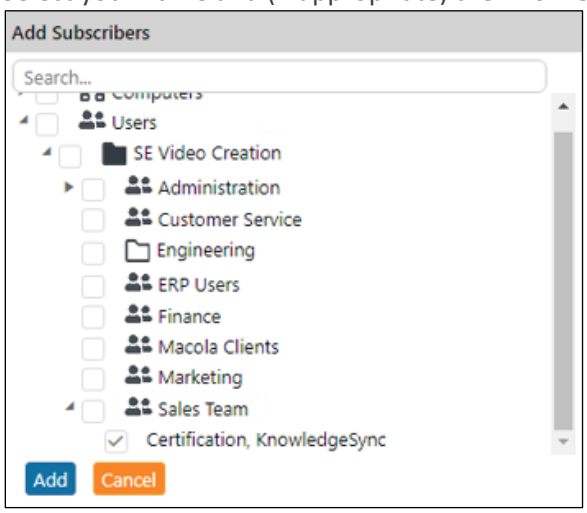
- Generate forms or documents, such as invoices or statements
- Generate analytical reports (e.g., credit reports) for the records that meet an event's criteria
- FTP reports and/or forms
- Write triggered event data to a file (and deliver it)
- Add or update records in on-prem and hosted applications
- Pass triggered event data to external programs
- Pass information to the Exact Synergy application

This event does not have any other automated responses, so skip to the next section.

3.18 Specify the Event's Subscribers

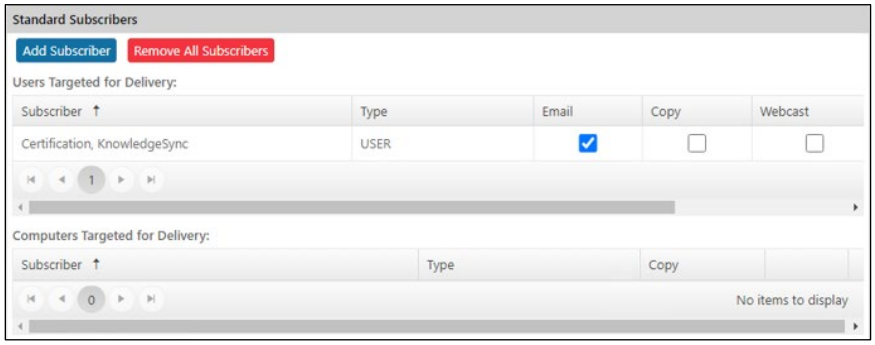
People who receive alerts are *subscribers* and KnowledgeSync can send alerts to unlimited subscribers. Subscribers may be configured within KS and may also be retrieved from external databases. For the current event, let's configure it to send alerts to yourself and (if you're a KnowledgeSync reseller or OEM partner) to the KnowledgeSync Certification account.

1) Under the *Subscribers* section at the lower left of the event design window, click on **Standard**.
2) Click on the **Add Subscriber** button.
3) Expand the *Users* branch and then expand the *Sales Team* group.
4) Select your name and (if appropriate) the KnowledgeSync Certification account:



Subscriber Selection

5) Click on the **Add** button.
6) Choose (or verify) *Email* as the delivery method. The subscribers window should look like the following:



Selected Subscribers & Their Delivery Method(s)

7) Click on the **Save** (or **Update**) button to save your event.

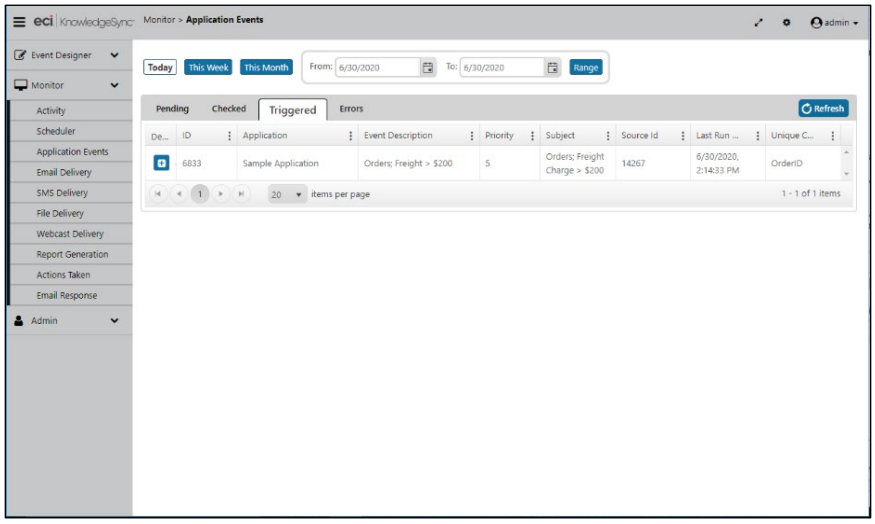
3.19 Run the Event Now

With your first event complete, let's run the event right now and review the results (an alert message).

1) Make sure that the KnowledgeSync Windows Service is running.
2) From the list of *Sample Application* events, right-click on **Orders; Freight > $200** and select **Run Now**.
3) Confirm to run the event (once) right now.
4) A confirmation message is sent. The next step is to monitor the event's progress.

3.20 Monitor the Event's Progress

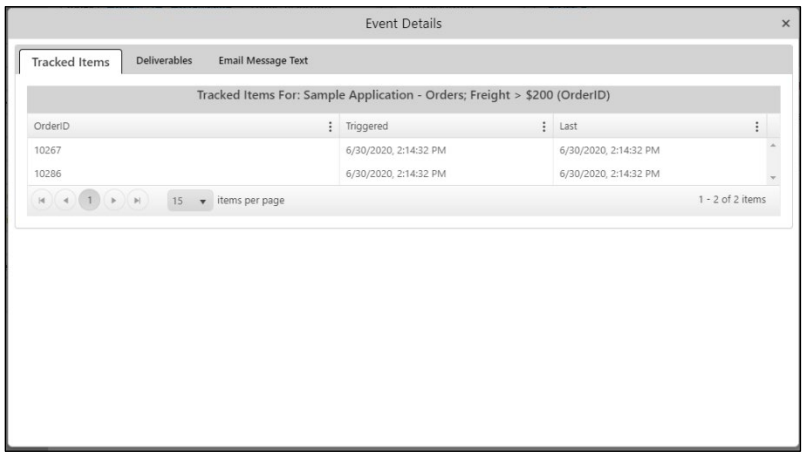
1) From the main KS window, expand the *Monitor* option on the left and click on **Application Events**.
2) Click on the **Pending** tab (and the Refresh button) to see if your event is waiting to run.
3) Click on the **Checked** tab (and Refresh) to see if your event has run successfully.
4) Click on the **Triggered** tab (and Refresh) to see If the event's conditions were met, as shown here:



A Triggered Event

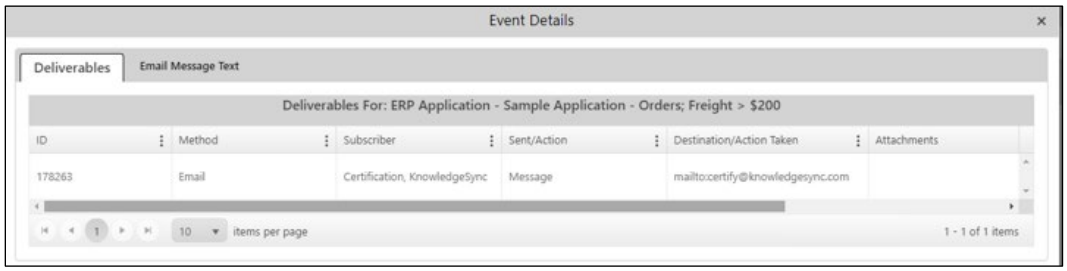
5) On the **Triggered** tab, click on the plus sign next to the event. This shows what the event did (e.g., send alerts, run reports, execute actions) and the text of its email alert (if the event was configured to send email).

6) Click on the plus sign. The first window that appears shows the *Tracked Items* for this event (the specific two orders that met this event's criteria of orders with freight in excess of $200):



A Triggered Event's Tracked Items

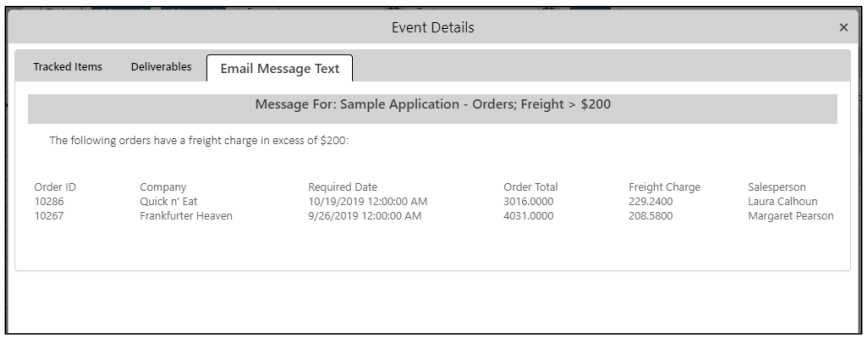
6) Click on the **Deliverables** tab to see how the event responded to its conditions (what alerts were sent, whether any reports, forms, or charts were produced, and whether the event executed any workflow):



A Triggered Event's Deliverables

This event has one deliverable, an email message sent to the KS Certification account.

7) Click on the **Email Message Text** tab to view the email alert message generated for this event:



A Triggered Event's "Email Message Text"

8) Exit from the Monitor when finished.

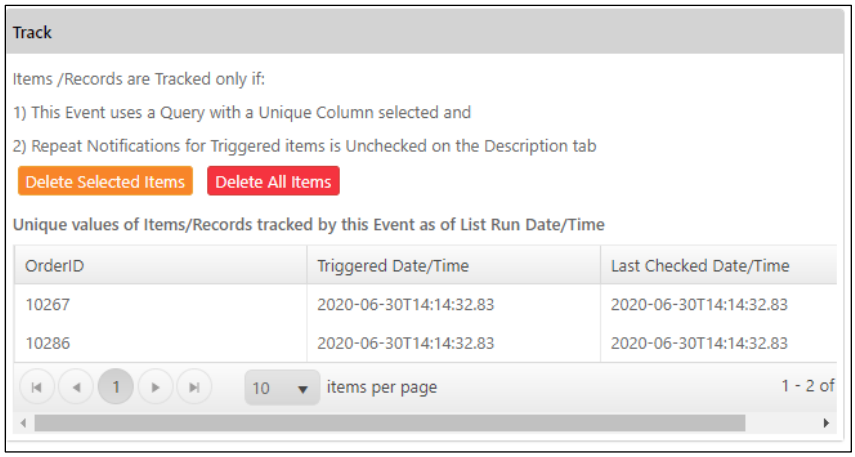
3.21 Re-Running an Event

Remember, this event is configured so that records that meet the event's criteria cause the event to trigger *once* (repeat notification for triggered items is unchecked). (If you rerun the event again right now, it will not trigger because there are no *new* orders with freight charges of more than $200.)

Repeat notification for triggered items is specified on the event's Details window.

If you wish to re-run this event and have it re-trigger for the same records, you need to remove the trigger from the two records that have already triggered the event. Follow these steps to remove an event's triggered records:

1) Go to the *Event Designer* and open (edit) the **Orders; Freight > $200** event.
2) In the *Event Details* window, click on the **Show tracked items** button. The following opens:



An Event's "Triggered Items"

3) Click on the **Delete All Items** button.
4) Confirm that you do wish to delete the triggered items.
5) Exit from the event.

You will now be able to rerun the event and retrigger it for the same records. Note: You need to take this step of removing tracked items for any event that you wish to rerun for the same triggered items if the event has the *repeat notifications* option unchecked.

3.22 Modify Event #1: Include a Report

Alerts range from simple text messages to detailed HTML messages. For more sophisticated content, use KnowledgeSync to configure an event to generate and deliver reports – Crystal and SQL Server Reporting Services (SSRS). (Other reporting applications can be integrated with KS as well; contact KS Support for details.)

Using reports as alert content is an excellent way to generate and deliver standard forms and documents. Invoices, purchase orders, etc. are all examples of report-driven forms that can be generated and delivered by KS.

Reports can be generated in 3 ways:

- On a periodic schedule, e.g., generate a stock status report daily at 9 a.m.
- When an event's conditions are met, e.g., generate an invoice when a new order is placed.
- When requested via email. Because KS can monitor incoming email, a person can request a specific report via email; KS will generate and email that report back to the person who requested it.

The Sample Application eventpak includes the following Crystal reports:

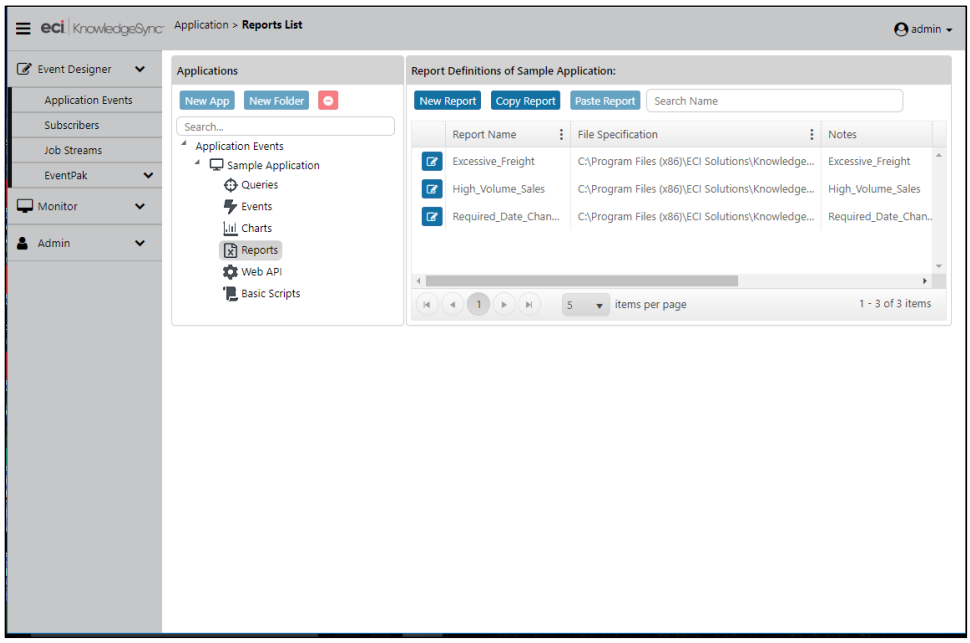
- Excessive Freight report
- High Volume Sales report
- (Order) Required Date Change report

You will modify your first event to generate an Excessive Freight report.

3.23 Report Definition

Since the above reports are part of the Sample Application eventpak, they are already defined in KnowledgeSync. However, it's good to review the report definition process:

1) Expand the *Sample Application* branch and click on the **Reports** sub-branch. The following window opens:



Report Definitions

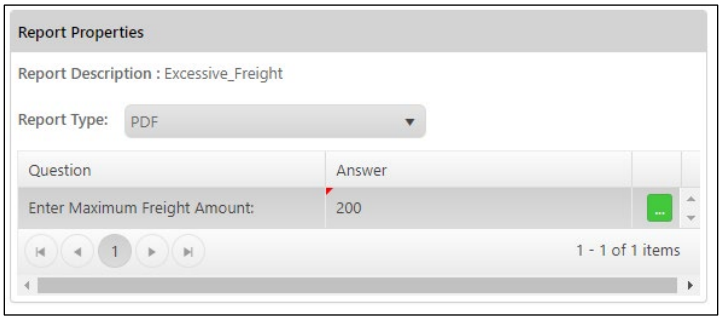
2) Click on the blue **Edit** icon to the left of the *Excessive Freight Report.* The details about this report are shown.

   The definition fields for a report vary based on whether the report is Crystal or SSRS. Details regarding the configuration of both kinds of reports can be found in the KnowledgeSync User Manual.

3) When finished reviewing these details, exit (Cancel) from this option.

3.24 Link the Freight Report to Your Event

1) Go to the *Sample Application's* list of events and open the **Orders; Freight > $200** event.
2) Click on the plus sign next to the event's *Deliverables*.
3) Under *Alert Content*, click on the **Report** button and select (add) the *Excessive Freight Report*.
4) Change the **Report (Output) Type** to PDF.
5) As this report has a parameter on the freight value, enter **200** as shown below:



A Report's Parameter & Answer

A report parameter's answer may be hard-coded. It may use date variables (such as current date), or the answer may come from a value retrieved by the corresponding trigger (query).

6) Go to the event's *Deliverables* and click on the *Email* associated with this event. At the bottom of the email configuration window, check the option to **include reports as email attachments**.
7) Click on **Update** to save and close the event.
8) Run the event and review the Monitor. You'll see the event checked and triggered. The *Report Generation* branch shows the associated report.
9) Finally, check your email client to see the email and its report.

Event #2: Totaling Customer Sales

The second event uses an aggregate function in its trigger to look at the condition of a group of records. The following are all examples of aggregate events:

- Employees with more than 10 overdue activities.
- Customers with overdue invoices totaling greater than $5,000.
- Sales reps whose average discount percentage is greater than 20%.

The three aggregate functions used most often in KS are count, summarize, and average.

4.1 Create the Aggregate Query

1) Go to the Sample Application branch, click on the Queries branch, and click on the **New Query** button.
2) Key in a description of:

   Customers; High Volume from Dates 'x' to 'y'

3) Press Tab to copy the query description to the display description and click on the **Active** checkbox.

4.2 Select the Query's Tables

➔ Click on the Columns tab.
➔ Select the Customers and Orders tables.

4.3 Select the Query's Columns

Aggregate queries perform an arithmetic function on one field of data (e.g., total sales amount) and then use a second field to specify how that data is grouped. (In this query, the order total is grouped by customers.)
Start out by identifying the column on which to perform the aggregate function.

1) Select **Orders.Total** as the first column in the query.

Since this query will *total* sales, you need to tell KS to total (or summarize) the value in the order total field.

2) Under *Selected Columns*, click in the **Column Type** field and change Normal to *Summarize*.

Whatever non-aggregate column is chosen next becomes the *group by* column. Since you want KS to group this total by customer:

3) Select **Customers.CompanyName** as the second column in the query. The Column Type remains *Normal*.

4.4 Sorting Order

Let's have KnowledgeSync list the matching customers' sales totals in descending order of their sales total:

➔ Under *Selected Columns*, click in the Sort Type field for Orders.Total and choose a sort type of *Descending*.

4.5 Link the Query's Tables

Since this query uses two tables, you need to link them together.

1) Click on the **Links** tab.
2) Under *Table Name*, select **Orders**.
3) Under *Linked to Table* field, select **Customers**.
4) Link the two tables via the **Customer ID** field.

5) Leave the Join Type as **Left Outer Join**.
6) Click on the green plus sign to add your link.

4.6 Specify the Filter

This query uses filters that are date specific. Begin by clicking on the **Filters** tab.

1) Select **Orders.OrderDate** as the first filter from the list of *Available Columns to Filter*.
2) Leave the value of *is or is not* as **is**.
3) Choose an operator of **greater than or equal to**.
4) Leave the Compare Value as a **?**.
5) Leave the *Type* and *And/Or* fields with their default values.
6) Remove the default *Optional Prompt* text and type in **Order Date Range Begins:**

Follow these steps for the second filter:

1) Select **Orders.OrderDate** a ***second time*** from the list of *Available Columns to Filter*.
2) Leave the value of *is or is not* as **is**.
3) Choose an operator of **less than or equal to**.
4) Leave the Compare Value as a **?**.
5) Leave the *Type* and *And/Or* fields with their default values.
6) Remove the default **Optional Prompt** text and type in **Order Date Range Ends:**

The order date field is used for both filters so the query retrieves only orders that fall within a date range.

4.7 Specify the Sub-Filter

Only aggregate queries use sub-filters as they let you test the aggregate result. In this query, a sub-filter allows you to retrieve only those customers whose *total sales are greater than 'x' dollars*.

1) Click on the **Sub-Filters** tab.
2) Select **SUM(Orders.Total)** as a sub-filter from the list of *Available Columns to Filter*.
3) Leave the value of *is or is not* as **is**.
4) Choose an operator of **greater than**.
5) Leave the Compare Value as a **?**.
6) Leave the *Type* and *And/Or* fields with their default values.
7) Remove the default optional prompt text and enter: **Customer Total is Greater Than:**

4.8 Preview the Results of the Query

1) Click on the **Preview** tab to review the results of your query.
2) Enter a beginning date of 08/01/2019 and enter the current date as the ending date. (Remove the default **?** from these fields.)
3) For the customer total threshold, remove the **?** and specify **5000**.
4) Click on the **See Preview** button. The results should yield one matching record: Quick n' Eat, with orders totaling $7,337.60.
5) Click the Save button to retain this query.

4.9 Add the Aggregate Event

Go to the Sample Application's *Events* branch and click on the **New Event** button.

1) Give the event a description of **Customers; High Volume**.
2) Leave the *Lookup Key* field blank.
3) Select a priority of **5**.

4) Place a checkmark in the **Active** box.
5) Place a checkmark in the **Include Reports on Copy Operations** box.
6) Check the **Repeat Notifications** box to see **all** clients who meet this event's criteria (even if they've met the criteria before, in the past).
7) Place a checkmark in the **Keep only last checked record in Monitor** option.
8) Leave the option to **Use all rows from first trigger** unchecked.

4.10 Specify the Event's Schedule

1) Click on **Add a Schedule.**
2) Click next to **Choose a Schedule to Use** and select **Every Monday at 9:00 AM**.
3) Leave the rest of the fields with their default values.

4.11 Select the Event's Trigger

1) Click on the blue plus sign in the *Triggers* box and select **Query**.
2) Select the query called **Customers; High Volume from Dates 'x' to 'y'**.
3) Click on the **Add Query** button.
4) Answer the query's questions (parameters) as follows:

    - Order Date Range Begins: You can use variables for today, yesterday, last week, and so on. Since you're using a database with information in it from 2013 type in: 8/1/2023.
    - Order Date Range Ends: Type in: 8/31/2023
    - Customer Total is Greater Than: Type in: 4000

An event must have values for its trigger parameters; if left blank, the event will fail to run successfully.

4.12 Specify the E-Mail Message Text

1) Click on the plus sign in the **Deliverables** box.
2) Under *Delivery Method*, click on the **Email** button.
3) Enter (or verify) the value in the **Email Account to Send From** field.
4) Leave the **Email Reply Address** field blank.
5) Enter the subject:

    Orders; More Than $4,000 Total Per Customer

6) Next, create a plain-text message by clicking on the **Plain Text** checkbox. On the first line of the message, type:

    The following customers placed orders totaling more than $4,000:

7) Press the Enter key twice to insert a blank line and move to line #3.
8) In line three of the alert message, type in **Customer:** followed by 2 blank spaces and then go to the top of the Email Deliverable window. In the list of *Values Available*, double-click on **{CompanyName}.**
9) Press **Enter** to move to line #4 of the alert message.
10) In line four, type in **Sales Total:** followed by 2 blank spaces and then go to the list of *Values Available* and select the field called **{Total}**.
11) Press your Enter key to add one more blank line at the end of your message.
12) Next, configure this event to send a single email containing all the customers that exceeded $4,000 in sales. Click in the second line of the message text (the blank line).
13) Go to the list of *Available values*, scroll to the end of the list and select **{BEGIN*REPEAT}.**
14) Click in the last line of your message text (the blank line after Sales Total).
15) Go to the list of *Available values*, scroll to the end of the list and select **{END*REPEAT**}.

You have finished designing the outgoing alert message.

4.13 Specify the Event's Subscribers

1) In the *Subscribers* box, click on the **Standard** option.
2) Click on the **Add Subscriber** button.
3) Expand the *Users* branch and expand the **Sales Team**.
4) Click on your name and (if you a KS reseller or OEM completing your certification), also click on the **KnowledgeSync Certification** user.
5) Click the **Add** button and make sure that *Email* is checked for both subscribers.
6) Click **Save** to retain the event just created.

4.14 Run the Event Now

With the second event's configuration complete, run the event and review the results:

1) Make sure the KnowledgeSync Windows Service is running.
2) Highlight the newly created event and click **Run Now**.
3) Confirm the event's run.
4) A run confirmation message is sent; the next step is to monitor the event's progress.

4.15 Monitor the Event's Progress

To monitor the status of the new event, follow these steps:

1) Expand **Monitor**.
2) Expand the branch called **Application Events**.
3) Click on the **Checked** tab. The event called **Customers; High Volume** should appear here. (Use the **Refresh** button to refresh your display if the event is not listed.)
4) Click on the **Triggered** tab to see this event's triggered record.
5) Click on the blue plus sign next to the triggered event.
6) Use the *Deliverables* and *Email Message Text* tabs to review the details of the event. Based on the trigger's parameters, there should be two matching records: Earnest HomeFoods and Frankfurter Heaven.
7) Exit from the Monitor when finished.

4.16 Modify Event #2: Create a Grouped Alert

The event that just ran placed all matching records into a single alert message. But, if each customer is located within a specific region, how would you go about creating separate alerts for each region?

This is a grouped alert – one where each message contains multiple similar records, but not all records.

The modification to the second event begins with its query. Follow these steps:

1) Edit the **Customers; High Volume** event.
2) In the *Triggers* box, click on the query associated with the event.
3) Click on the blue edit button next to the query's description on the right side of the Designer.
4) Click on the *Columns* tab and (using the red minus sign), remove the *CompanyName* column from this query. Confirm the deletion.
5) Add (from the customers table) the *Region* field and then re-add the *CompanyName* field.
6) Add sorting on the *Region* field (ascending) and then (in the *Sort Order* box), flip the order of the sorting so the query sorts *first* on the region value, and *second* on the *Total* field.
7) Click on **Preview** (dates of 8/1/2023 through 8/31/2023, an order total of greater than $1000). The result should contain 10 records, and they should be grouped by region.
8) Click on **Update** to save and close the query and return to the event.

9) Change the event's trigger parameter answers to use dates of 8/1/2023 through 8/31/2023 and an order total of greater than $1000.

Now, tell the event to break to a new message for each region field:

1) Click on the event's Email deliverable.
2) Modify the message's subject to:

   Orders; More Than $1,000 Total Per Customer Per Region

3) Change the email alert message text to read:

   The following customers within region {Region} placed orders totaling more than $1,000:

4) To specify message grouping, go to the *Subscribers* box and click on the **Advanced** option.
5) Click in the first field in the upper grid (under *Message Break Field*), click the **List** button, and select Region as the field to break/group by.

   (This tells KnowledgeSync to "break" to a new message whenever the value of this field changes. Since the query sorts customers by region, this configuration creates separate emails with the customers for a given region.)

6) Click on **Update** to retain this change.
7) Select the event and choose **Run Now**.
8) Review the results of the event in the *Monitor*. Instead of seeing just one triggered record for the event, there are eight triggered records – one record for each region that has high volume clients.

The formatting of the email message as shown in the Monitor may differ slightly from the final formatting in the email alert message that is delivered.

Event #3: Advanced Event Designing

The final trigger and event makes use of two advanced design tools:

- Monitoring a database field for a change to its value
- Performing calculations on database fields

5.1 Copy a Query

Since the next event uses a query like one before, copy it and make the necessary modifications:

1) Display the list of *Queries* for the Sample Application.
2) Locate and single click on the query called **Orders; Excessive Freight**.
3) Click on the **Copy Query** button followed by the **Paste Query** button. (There are now two identically-named queries listed.)
4) Open the second of these queries and change the query description and display description to:
   Orders; Required Date Change

5.2 Create a Calculated Column

Add one new field (the shipped date) and two new calculated fields:

1) On the *Columns* tab, add the column for the order **shipped date**.
2) Click on the button **Add Calculated Column** to create a field that computes an order's total amount. (This opens the KnowledgeSync calculated column editor window.)
3) Under *Database Columns to use in Calculation*, double-click on the order **total** field. This field now appears in the Workbox area.
4) Click your cursor next to the **dbo.Orders.Total** field in the Workbox and manually type in the plus sign.
5) Go to *Database Columns to use in Calculation* and double-click on **Orders.Freight**.
   (Note: The table prefix "dbo" may or may not appear in your work – it makes no difference.)

   The new calculated column is: **"dbo"."Orders"."Total"+"dbo"."Orders"."Freight"**
6) Click on **OK** to return to the main *Columns* tab.
7) Locate the new calculated field and change the column's customized name to read **Grand_Total**.
   Note: If you wish to view or modify a calculated column within a query, simply click on the blue Edit button.

5.3 Create a Date-Calculation Column

One of the more common calculations is to determine how many days have passed since something has happened, has not happened, or is supposed to happen. Next, create a field that calculates the number of days between an order's shipped date and its required date.

1) On the *Columns* tab, click **Add Calculated Column**.
2) In the list of *Calculations to Perform*, double-click on the calculation called **DateDiff – Difference in Days between two dates**. The workbox area should look like this:

   DATEDIFF(DAY,$Column$,$Column$)
3) Go to the list of *Database Columns* and double-click on "**dbo"."Orders"."ShippedDate"**. The workbox looks like this (your query may or may not include the table prefix dbo):

   DATEDIFF(DAY,"dbo"."Orders"."ShippedDate",$Column$)

4) From the *Database Columns* list, double-click on the field called "**dbo"."Orders"."RequiredDate"**. The workbox looks like this:

   DATEDIFF(DAY,"dbo"."Orders"."ShippedDate","dbo"."Orders"."RequiredDate")

5) Click **OK** to return to the main *Columns* tab. Change the Customized Name of the calculated column just created to **Ship_Require_Diff**.

5.4 Sorting Order

➔ Remove any sorting entry from this query.

5.5 Specify the Filters

Specify two filters on the query: orders whose value is greater than 'x' and orders whose required date has changed.

1) Click on the *Filters* tab and delete the existing filter.
2) Go to the *Columns* tab and copy (CTRL/C) the syntax of column that was created to calculate the order total:

   "dbo"."Orders.Total"+"dbo"."Orders"."Freight"

3) Go back to the *Filters* tab and click on **Add Calculated Column**.
4) Click in the *Workbox* window, paste in the above syntax, and click on **OK**.
5) Select the operator: **is greater than or equal to**.
6) Leave the Compare Value as: **?**.
7) Leave the *Type* and *And/Or* fields with their default values.
8) Remove the default *Optional Prompt* text and key in: **Order Grand Total is Greater than:**

5.6 Specify the Value Change Filter

To monitor a change to an order's required date, follow these steps:

1) On the *Filters* tab, locate the box titled *If Column Values Have Changed.*
2) Select (highlight) the *required date field* on the left side of this window.
3) Click on the single right-arrow button to add this field to the right-side of the window.

5.7 Preview the Results of the Query

1) Click on **Preview**.
   Note: Preview mode has no knowledge of previous field values and so any data change filters are ignored when previewing the query.
2) Enter an order grand total of $2,500 (2500) and the resulting record set should contain 6 records. Notice the values of your calculated fields: grand total and ship_require_diff.
3) Click the **Update** button to save the query.

5.8 Add the Value Change Event

Copy the first event and modify it to meet the criteria of the newly designed query:

1) Click on the **Events** branch for the *Sample Application*.
2) Single-click on the event called **Orders; Freight > $200**.
3) Click on the **Copy Event** button followed by the **Paste Event** button.
4) Edit the copied event and change its description to: **Orders; High Val; Req Date Chg**
5) Leave the *Lookup Key* blank.
6) Select a priority of **5**.
7) Place a checkmark in the **Active** box.
8) Leave the *Include Reports* box unchecked.

9) Check in the **Repeat Notifications** box to be notified whenever the required date changes.
10) Place a checkmark in **Keep only last checked record** and leave the *Use all rows* option unchecked.

5.9 Specify the Event's Schedule

➔ Click on the query's schedule and select the schedule called *Every Hour*.

5.10 Select the Event's Trigger (Query)

1) In the **Triggers** box, highlight the query and use the red minus sign to remove it.
2) Click on the blue plus sign to select the query that was just created (*Orders; Required Date Change*).
3) Specify a grand total value of **$2,500** (do not include the currency symbol or comma).

5.11 Remove the Excessive Freight Report

➔ Click on the Crystal report deliverable for this event and click on the red minus sign to remove it.

5.12 Modify the Email Message Text

1) Click on the **Email** deliverable, verify the account to send from and leave the email Reply Address field blank.
2) Change the message subject to **Order Required Date Changed**.
3) Since this event send one email for each order whose required date has changed, delete the event's existing HTML alert message.
4) Enter the following on line #1 of the *Preview Message* tab:

   The following order has had its required date changed:

5) Insert a blank second line, move to line #3, and key in the following values (one on each line). When done, select your choice of font and point size for the text (e.g., Arial, 12 point):

   Order ID:
   Order Date:
   Company Name:
   Grand Total:
   Old Required Date:
   New Required Date:
   Days Between Require & Ship Date:

6) From the *Trigger Values* list, select the database fields that correspond to each of the previous labels.
7) For the Old Required Date, select **{*Last_Value@"dbo"."Orders"."RequiredDate"}** -- at the top of the list of available values. For the *New Required Date*, select the field called **{RequiredDate}.**
8) For the *Days Between* value, select the field called **{Ship_Require_Diff}.**
9) Leave the checkboxes at the bottom of the email deliverable with their default values.

5.13 Specify the Event's Subscribers

1) Confirm the selection yourself and (if you're taking this course as part of your certification) the "KnowledgeSync Certification" as standard subscribers. (The subscribers are retained from the event you copied.)
2) Make sure that the Email delivery method is selected.
3) Click **Update** to save the event just created.

5.14 Run the Event Now

With this event's configuration complete, run it and review the results:

➔ Single-click on this event and click on Run Now. Confirm that you wish to run the event.

5.15 Monitor the Event's Progress

Review the status of the event you just submitted:

1) Go to the *Monitor*.
2) Expand the branch called *Application Events.*
3) Click on the tabs for **Pending** and **Checked** to confirm that the event ran successfully.
4) Click on the **Triggered** tab. This event isn't listed here because initial runs of data change events load KS with the current values of the field(s) being monitored for a change.
   (A value-change event triggers on a successive run of the event if the field(s) being monitored for a change have had their value changed since the previous run of the event.)

5.16 Modify Event #3: Include a Report

1) Edit the **Orders; High Val; Req Date Chg** event.
2) Click on the blue plus sign in the *Deliverables* box and click on the **Report** button under Alert *Content*.
3) Select the *Required Date Changed* report and click on **Add Report**.
4) Select a report type of **PDF**.
5) This report has a parameter *Enter Order ID*. This is where KS tells the report which orders had their require date changed. So, this is where you specify the name of the query data field that contains the changed order's ID.
6) Click in the answer field and click on the green list button that appears there. In the field *Enter Order ID*, click on the down-arrow button to see a list of all the fields retrieved by the event's query.
7) Choose the field called **{OrderID}** then click **OK**.

Note: When this event runs, the query may find one or more matching order records. KnowledgeSync passes each of those order IDs to the report, which then generates a separate report for each order.

8) Go to the event's Email and make sure that the option to *include reports as email attachments* is checked.
9) Click the **Update** button to save the event.

Note: This event triggers ONLY if you run the event, go into the KS Sample application database, and change the value of the required date of any order in the Orders table whose grand total is greater than $2,500.

5.17 Create a Scheduled Report Event

The previous event generates and delivers a report of when (and if) certain event conditions prove true.

Now you're going to create a scheduled report event – an event that does not use a trigger. Its purpose is to generate and deliver one or more specific reports on a recurring interval.

5.18 Select the Report(s) to be Scheduled

1) Expand the *Sample Application*, click on the **Events** branch, and select New Event.
2) Give the event a description of **High Volume Sales Report**, select a priority of **5**, make the event active, and check on the options for **Include Reports on Copy Options** and **Keep only last checked record** box.
3) Click on the blue plus sign in **Deliverables** and then on the **Report** button under *Alert Content*.
4) Select the *High Volume Sales Report*, click on **Add Report**, and select an output type of *PDF*.
5) Specify a begin date of **09/01/2023**, an end date of **09/30/2023**, and a sales total of **$1,000**.
6) Click again on the blue plus sign in *Deliverables* and then on the *Email* option. Select the email account to send from, a message subject of Daily High Volume Sales Report, and a message body of *See attached report*.
7) Make sure the option to *Include reports as email attachments* is checked.
8) For Subscribers, choose yourself (and, if appropriate, the KnowledgeSync Certification user) and select a delivery method of *Email*.
9) Save and close the event.
10) Run the report now.
11) The event is listed under the Monitor's *Report Generation* branch. Open your email to see the report.

A single scheduled report event may generate output from multiple reports. You can also output the report in HTML – and embed that HTML within the body of the outgoing email message.

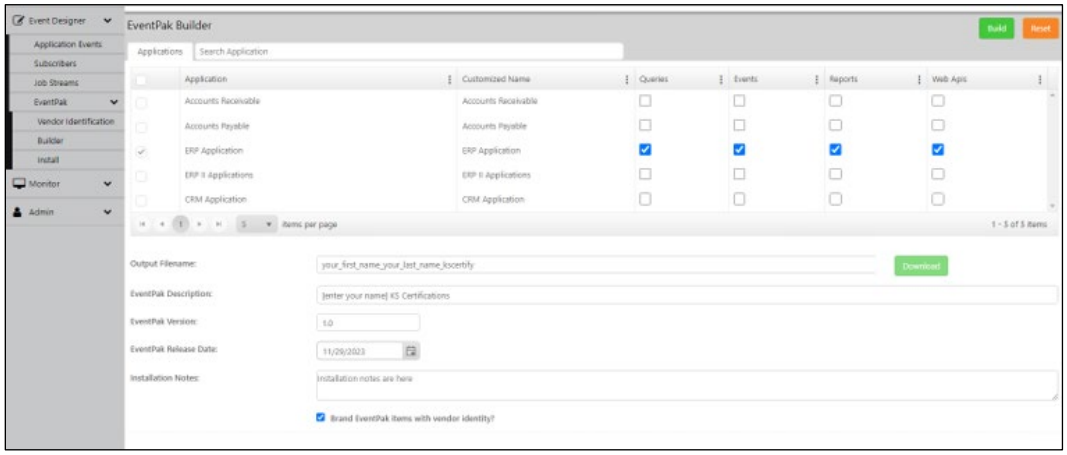
5.19 Build an EventPak

A great way to pack up the designed events and share them with colleagues (or send them to our Support department, if you've having difficulties with an event) is by building an EventPak.

Note: If you are a KnowledgeSync reseller or OEM partner, you must send us your completed eventpak of all the work you've done in this tutorial – so that we may review it and issue your certification.

To create an EventPak, follow these steps:

1) Expand the *Event Designer* option, choose **EventPak** and then **Builder**. The EventPak Builder window opens:



Eventpak Builder

2) In the top grid, check the Sample Application along with its **Queries**, **Events**, and **Reports**.
3) For the EventPak Output Filename, please name the EventPak as follows:

`[your_first_name]_[your_last_name]_kscertify`

(as in firstname_lastname__kscertify)

4) Give the EventPak a description such as **[Enter Your name]KS Certifications (substitute your own name).**
5) Leave version as 1.0.
6) Leave the other fields with their default values and click on the **Build** button.
7) Once built, select the option to download the eventpak. (It will have a .epk file extension.)
8) Once downloaded, please email it to certify@knowledgesync.com.

For KnowledgeSync resellers and OEM partners only, we shall review the contents of certification eventpaks to make sure that all the steps were completed successfully, and then we shall send you a KnowledgeSync Certification Completion Confirmation email.

Thank you – and congratulations on completing the KnowledgeSync tutorial!