Notification Module Script

The notification module enables the user to specify a set of notification events that could occur during data transactions and as a result trigger the automatic generation of emails that will be sent to a predetermined set of recipients.

A notification event is an alert triggered by a condition being met as previously configured. Such conditions are configured by the user to describe the occurrence of a data equality or inequality. For example, we could select a particular data element from any table in our database and whenever this data element is part of data transaction and it meets a condition contained in the notification event configuration, the system will trigger an email alert. In the configuration of a notification event, we can specify the list of email recipients to receive the email alert.

The Notification module is meant to be mainly used by the CENTRE administrator in configuring notification modules and notification events for the user community, but can also be used by other users provided they have a reasonably good understanding of the underlying system database schema. The notification events module provides a capability applicable to any ODBC compliant database.

In CENTRE, the Notification Module is accessible from the Admin Tab and Main Tables screen.
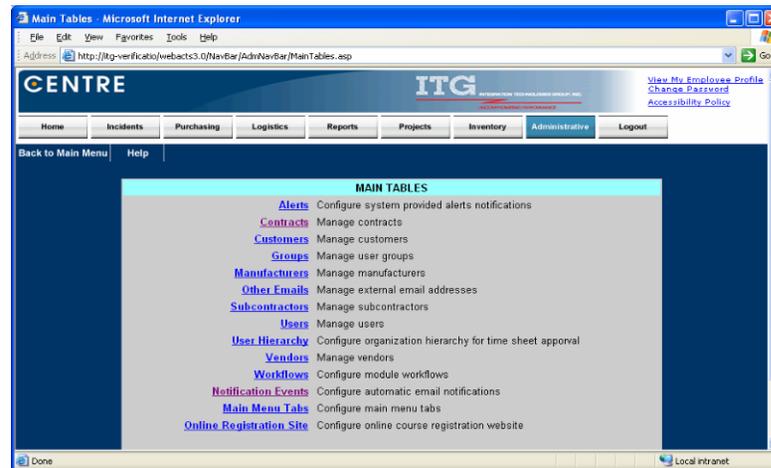
Clicking on the Notification Events link contained in the Main Tables screen, will display the Modify Notification Modules screen where an authorized user can create/edit notification modules.

Creating a Notification Module

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From the Modify Notification Modules screen, clicking the Edit link to the right of each notification module record will enable the user to edit that Notification Module record.

Note that only one notification module record can be created per table. This means that if the Service Record table is being referenced in one notification module record, we will not be able to reference it again in another record.
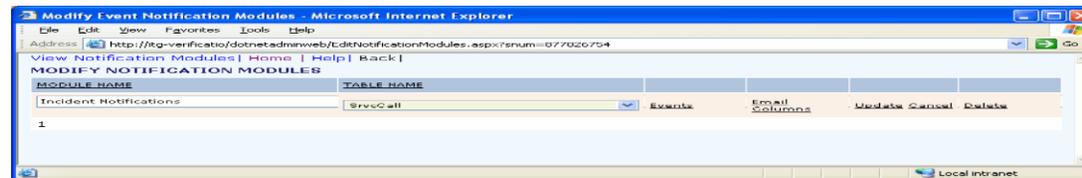
Specifying a Notification Module Email Column
The notification module provides the capability to use either the UserID value or e-mail address of the users that exist in the selected table to automatically augment the specified list of event e-mail recipients without having to manually enter their e-mail addresses. This applies in certain cases such as in Service Records where a Technical Account Manager is designated or in Change Requests where the initiator and the heads of the affected Departments and Contracts are identified. While editing a notification module record, clicking the Email Columns link will display the Email Column identification screen.

It is in this screen where we will inform the system of any columns in the module selected table that contain an e-mail address to be used as an automatic e-mail notification recipient for any of the events created.

Creating a Notification Event

To create an Event record under a selected Notification Module, simply provide an appropriate name reflecting the nature of the data to trigger the e-mail notification, select the data element found in the table chosen when defining the Notification module record, and finally provide the data element type. For example, a notification event can be created called ETA Change based on the ETADate column of the Incident table, and it is of type Text.
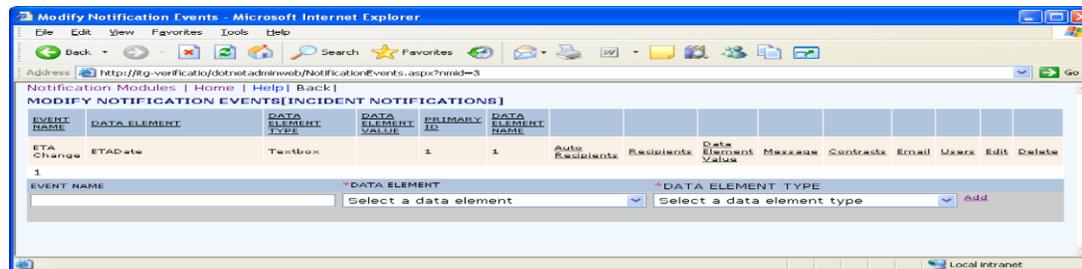
Once the event record has been created and displayed in the Notification Events screen, we may begin to configure the e-mail recipients starting with the Auto-Recipients link. This link will display the Auto Recipients configuration, and it will show e-mail address columns as they were defined previously during the Notification Module creation step. This e-mail data is found in the record that will trigger the e-mail notification event.

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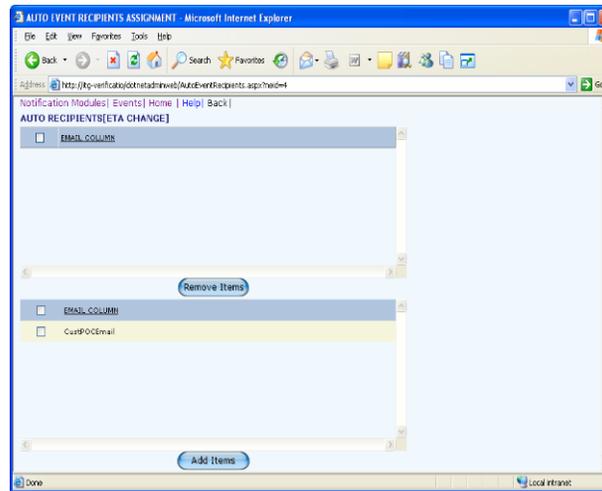
Creating a Notification Event Recipients List

Another way to add to the notification e-mail recipient list is to click the Recipients link from the event record displayed in the Notification Events screen. This action will display the Recipients screen illustrated below where columns from the Notification Module configured table could be used to reference an e-mail address from another table related to the record of interest. For example, the SupportUserID found in the incident table can be used to identify the user name and e-mail address contained in the Users table record with the matching UserID value (i.e., via a foreign key relationship).

The reference or relationship information is derived by the data provided by the user in each of the dropdown list boxes found in the top part of the screen.
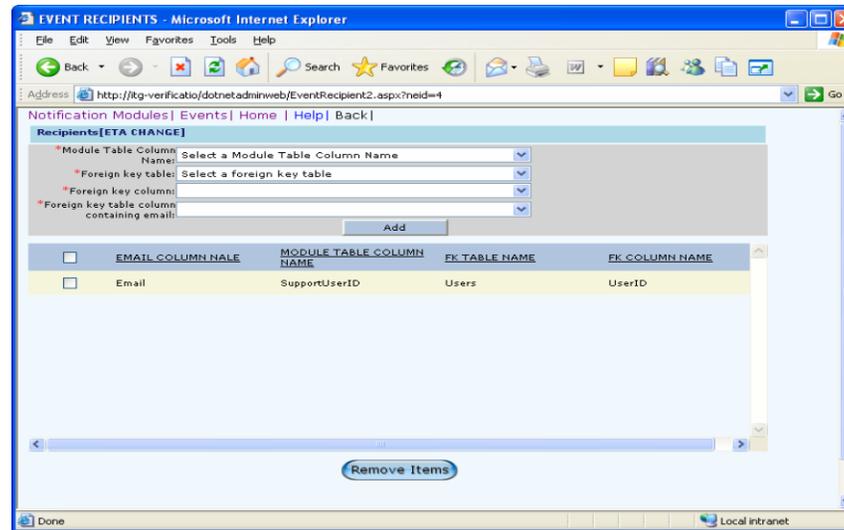
A new record of this type can be created by providing the correct data and clicking the Add button.

Creating a Notification Event Email Trigger Condition
To configure the email notification event Trigger against the Data Element previously selected during the Notification Event definition, click on the Data Element Value link located on the Modify Notification Events screen to the right of the event record being configured.

If the Data Element is of type Text, then the ensuing displayed screen is the Text Box data Element screen indicating three possible comparison condition options.

The first option is a simple comparison between the new and old values contained in the data element of the record of interest (e.g., any service record as it is being saved) where any detected change from the previously held value will trigger the notification email.
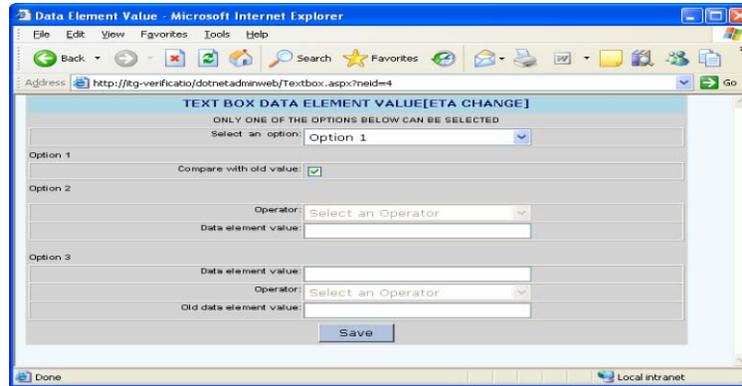
The second option involves the comparison of the new value contained in the data element of the record of interest (e.g., any service record as it is being saved) with a selected comparison operator contained in the Option 2 operator dropdown list.
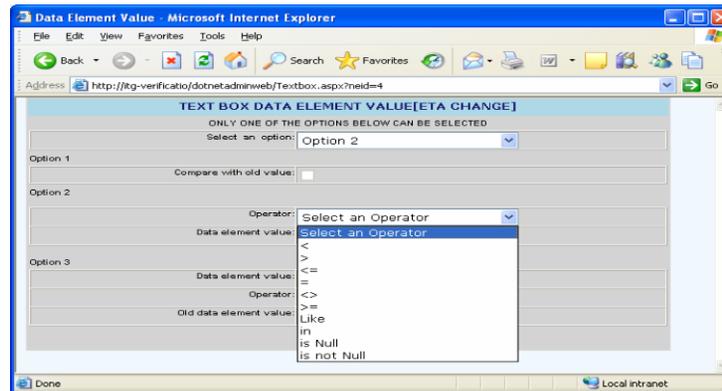
The third option involves the comparison of the new and old values contained in the data element of the record of interest (e.g., any service record as it is being saved) with a selected comparison operator contained in Option 3 operator dropdown list.
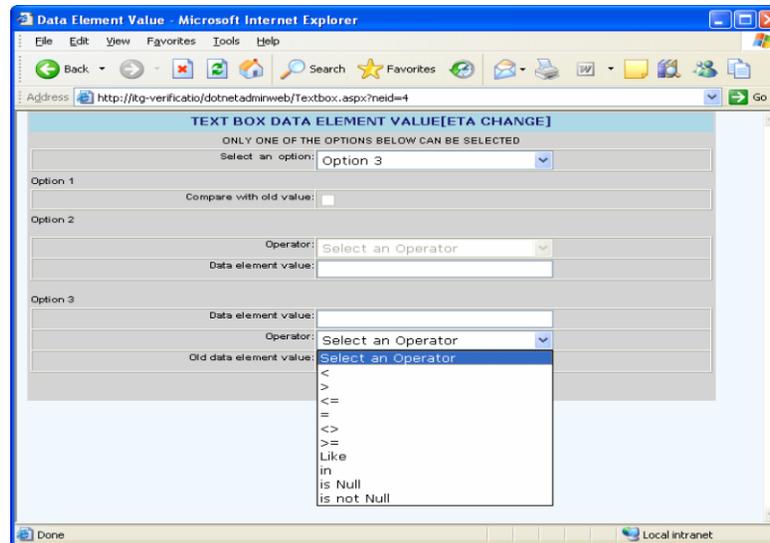
From the Modify Notification Events screen, if the Data Element is of type List box then the ensuing displayed screen will be the List box Data Element Value Condition Configuration screen. A Data Element of type List box means an ID value is used as a foreign key to retrieve and display a referenced string description from another table. Therefore, the user interface enables the user to provide the information needed by the system in order to find the required data and use it in the comparison that is being configured. For example, the data element selected is the StatusCode column of the Requirement table and this ID value represents a String value in a record in the StatusCode Table. Therefore, we needed to select the StatusCode table as the Foreign Key Table and the StatusCodeID as the Foreign Key with the StatusCode column as the field containing the string value that will be used in the comparison performed to possibly trigger the event notification email.

Once the top three dropdown list boxes have been set, the system returns a SQL query that will be used to identify the "compare to" string value. If the SQL query needs to be refined, as is the case in this example where the status codes for the Requirement table are of Category = "Requirement" in the StatusCode table, the query modification is made and the Refresh button is clicked to update the data contained in the bottom set of dropdown list boxes. In these dropdown list boxes, the user needs to specify the first parameter (i.e., the new value contained in the StatusCode column of the Requirement record) if it is the parameter needed, or alternately to provide the second parameter (the previous value contained in the StatusCode column of the Requirement record), which will be used in the comparison if the "Compare with Old Value" checkbox is checked.
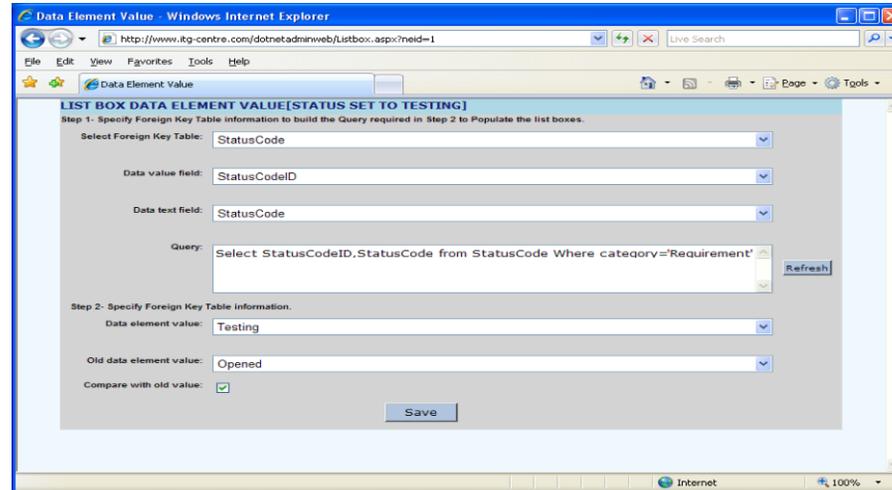
If the Data Element is of type Checkbox then the ensuing displayed screen is the Check Box data Element Value Condition Configuration screen.

The only possible comparison conditions in this case are to compare the current data element value to a checked or not checked condition, or if the value has changed from the previous saved value.

Configuring a Notification Event Email Message
To configure the content of the email message that will be sent out when an event is triggered, we navigate to the Notification Events screen by clicking the Message link to the right of the event record being configured in the Modify Notifications Event screen.
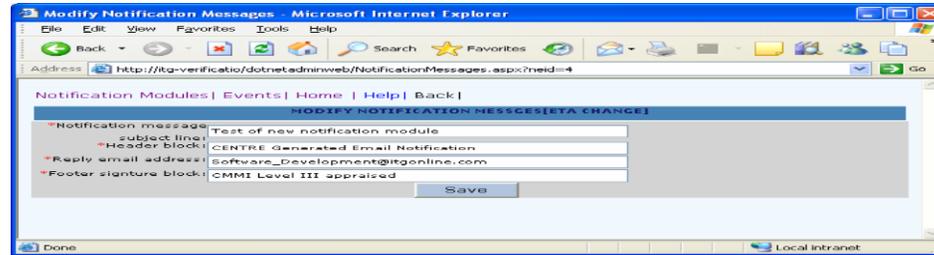
The "Notification message subject line" text field contains the text that the user wishes to place in the subject line of the email to be sent.

The "Header block" text field contains the text that the user wishes to place in the top part of the body of the email to be sent.

The "Footer block" text field contains the text that the user wishes to place at the bottom part of the body of the email to be sent.

The "Reply Email address" text field contains the email address that will be identified as the originating email address so that the recipients of the outgoing email could simply perform a reply to return an email response if need be.

The system will automatically insert the Primary ID column name and value of the record that was the source of the condition triggering the email if the Data Element Name and Primary ID checkboxes are checked in the record displayed in the Modify Notification Events screen. So, for example, if an event notification is configured under the Service Management Module and it is triggered to generate an email, the body of the email would also include the SrvcCallID as the label and the value of the SrvcCallID. This way the recipient could visit the record to confirm the conditions that triggered the email and take further action.
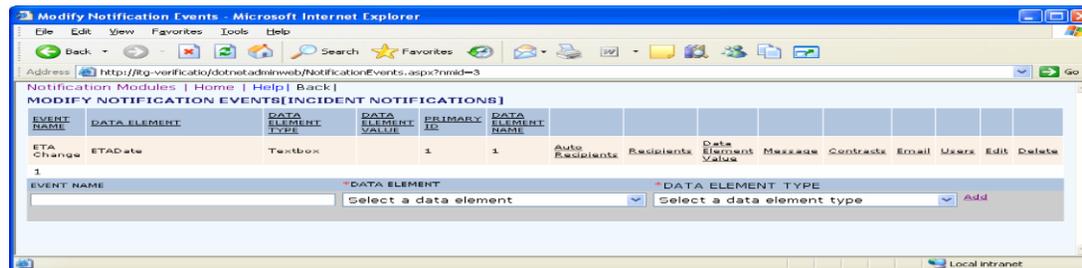
Assigning Contracts to a Notification Event

The next step is to provide, where applicable, the contracts that will make use of the email notification event being configured or rather, to restrict the event to be triggered only for a specified list of Contracts. To do this, click on the Contracts link to the right of the event record listed in the Modify Notification Events screen. This action will display the following Notification Event Contracts screen where the user may select the contracts from the list for which the notification event being configured will be restricted or applicable.
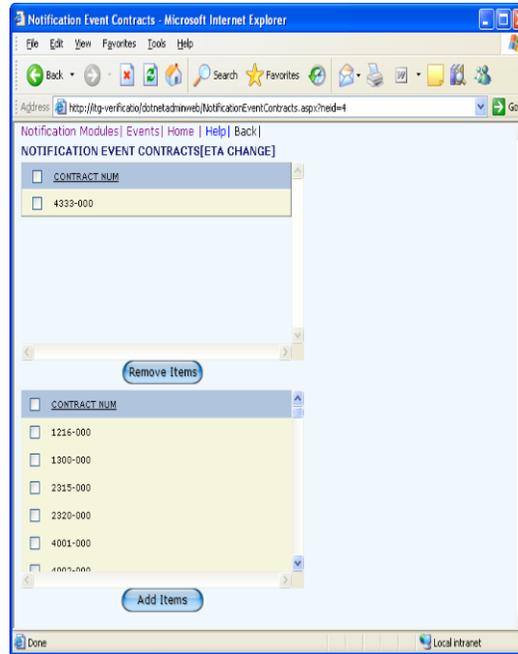
The above feature is only valid for emails generated as a result of triggers that result from data in tables where there is reference to a ContractID; otherwise, this setting will have no impact on the conditions under which the event is triggered.

Expanding the Recipient List of a Notification Event Email
Another way to add to the notification email recipient list is to click the Email link from the event record displayed in the Modify Notification Events screen. This action will display the Notification Event Email screen enabling the user to manually enter email addresses as part of the email recipients list.

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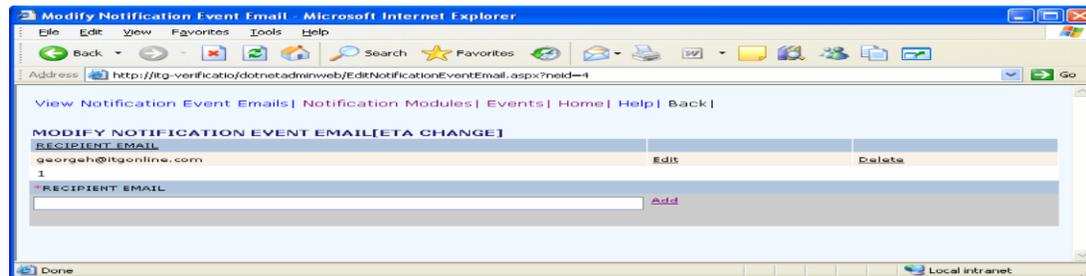
Another way to add to the notification email recipient list is to click the Users link from the event record displayed in the Notification Events screen. This action will display the Notification Event Users screen enabling the user to manually select users from the Users table in CENTRE. Therefore, it is critical that each user record contains a valid email address provided in the Users table.
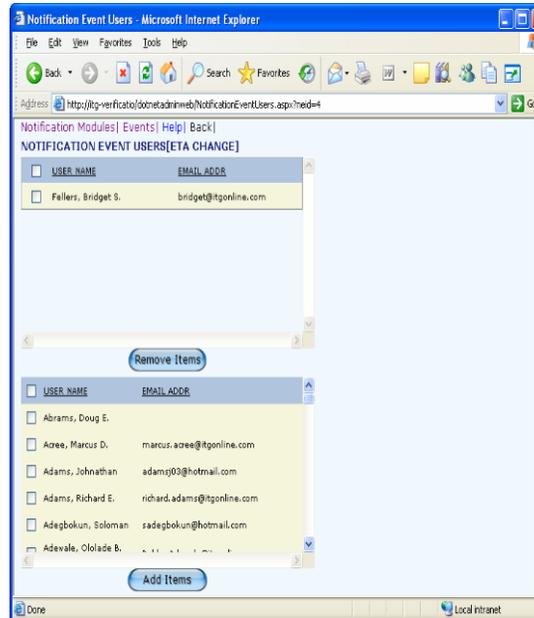
Modifying a Notification Event

To edit the event record, click on the Edit link to the right of the event record as displayed in the Notification Event screen. This action will allow the user to modify the Primary Record ID and/or whether or not the Data Element Value will be part of the email message that is sent out.

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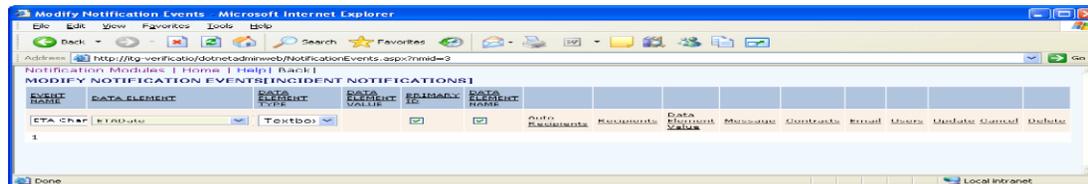
Deleting a Notification Event

Extreme care must be employed if a notification event record needs to be deleted. It must first be verified that that are no records defined in any of the related screens that are accessible from the links provided within the notification event record. In other words, event trigger conditions, recipients, contracts, and email message content configurations must first be deleted prior to the deletion of the event record. This is to avoid having orphan records remaining in the database.

Deleting a Notification Module

As in deleting notification events, extreme care must also be practiced if a notification record needs to be deleted. It must first be verified that that are no event records defined prior to the deletion of the notification module record.