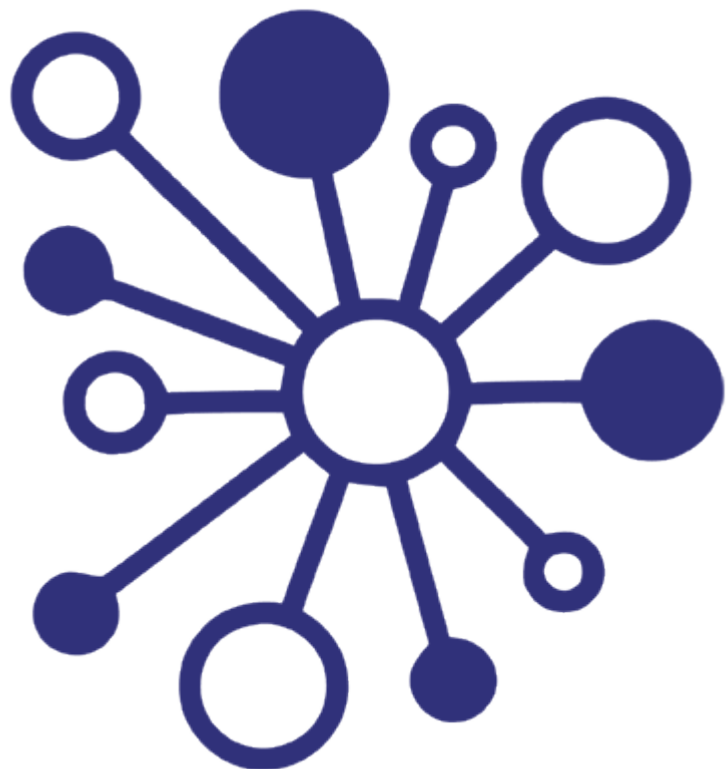


Connected Systems – Notification Service



Notification Service – Table of Contents

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Overview

The Connected Systems notification service allows users to set up SharePoint reminder emails for upcoming deadlines, due or overdue items.

The solution consists of two parts:

- A custom field type (CS Notifications) can be added to any SharePoint list. Through this field, a due date and an unlimited number of notifications can be configured. If sorting or filtering based on the due date is required, a second custom field type (CS Notification Due Date) is available. If wired up correctly with the main CS Notification field, the notification field's due date will be automatically stored in the CS Notification Due Date field on which sorting, filtering and grouping functionality can then be performed.
- A SharePoint timer job (CS Notification Job) iterates through all the lists with associated CS Notification fields and generates email messages if list items need notifying. Per default, the timer job is configured to run daily at 6AM in the morning. The schedule can be modified to the customer's liking. There is also an option to execute the timer job immediately, e.g. forcing a retry after downtime of the SMTP server. There is an administration page available to configure the timer job. Any error messages will be logged into a separate windows event log.

Use the CS Notification field types

Enable notifications on a SharePoint List

In order to specify notifications per SharePoint list item, a column of CS Notifications field type must be added to the SharePoint list. Multiple columns of the CS Notifications field type can be added to a list. As this particular field type is internally representing a *Note* field (multiple lines of text), the number of *Multiple lines of text* and *CS Notification fields* is restricted to 31 by the SharePoint standard.

To add a new CS Notification column to an existing SharePoint list:

1. Navigate to the *List Settings* of the desired list.
2. Click *Create Column*.
3. Type in a column name.
4. Select *CS Notifications* as the type of the column.
5. Specify additional column settings:
 - a. Add more descriptive text for the column if desired.
 - b. Specify whether the column requires information.
 - c. Specify if the column should be shown in the new, edit or display form of the list item. *No* suppresses the field from being shown on these forms. Notifications can always be specified through a separate dialog form (Setup Notifications dialog).
 - d. If sorting, filtering or grouping for the notification field to be created is needed, then wire up a due date field. The drop down only shows available CS Notification Due Date fields from the list. If a due date field is specified, it will be populated with the CS Notification's due date if a new list item is being added or an existing list item is being updated.
 - e. Specify default notifications (optional, unlimited) to be used for every item in the list.
 - i. Click *Add default notification*.
 - ii. Specify an integer value for the *Days* column. A positive value means x days after the due date; a negative value means x days prior to the due date; 0 means on the due date.
 - iii. Specify an optional value for *Recipients*. Pick SharePoint users through the people picker or specify any other valid email address.
6. Click *OK*.

Important: If SharePoint users are picked through the people picker control, make sure they have a valid email address specified.

Site Actions WIN-RJDGI3POVEU\monika

AHG > Business Name Register > List Settings > Create Column
Use this page to add a column to this list.

Home SubSite

Libraries

Site Pages

Shared Documents

Lists

Calendar

Tasks

Business Name Register

Discussions

Team Discussion

Recycle Bin

All Site Content

Name and Type

Type a name for this column, and select the type of information you want to store in the column.

Column name:

The type of information in this column is:

- Single line of text
- Multiple lines of text
- Choice (menu to choose from)
- Number (1, 1.0, 100)
- Currency (\$, ¥, €)
- Date and Time
- Lookup (information already on this site)
- Yes/No (check box)
- Person or Group
- Hyperlink or Picture
- Calculated (calculation based on other columns)
- External Data
- CS Notification Due Date
- CS Notifications

Additional Column Settings

Specify detailed options for the type of information you selected.

Description:

Require that this column contains information:

Yes No

Show in new form?

Yes No

Show in edit form?

Yes No

Show in display form?

Yes No

Specify due date field which can be used for sorting and filtering.

Specify default notification definitions:

Days *	Recipients:
<input type="text" value="10"/>	<input type="text" value="WIN-RJDGI3POVEU\administrator ;"/>

*) +30 days means 30 days prior to the due date; -30 days means 30 days after the due date.

[Add default notification](#)

Add to default view

OK Cancel

Specifying notifications per list item

Once a CS Notification field column has been set up for the list, notifications for each list item can be specified.

The process of setting up notifications involves:

1. Navigating to the *Setup Notifications* dialog form or alternatively, if the column is configured to be shown in the new and edit form, navigating to those list items forms.
2. Enter notifications.

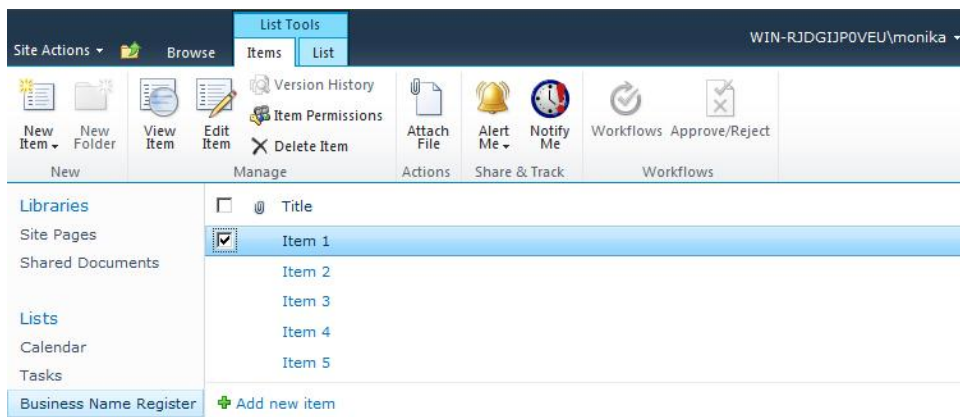
Navigate to the Setup Notification data entry form

There are multiple ways how to get to the *Setup Notifications* dialog form:

- **List Tools – Items Ribbon**

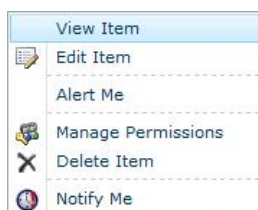
The *Items* ribbon in the *List Tools* is extended by the *Notify Me* button which sits in the *Track & Share* group.

The *Notify Me* button is enabled if exactly one list item is selected.



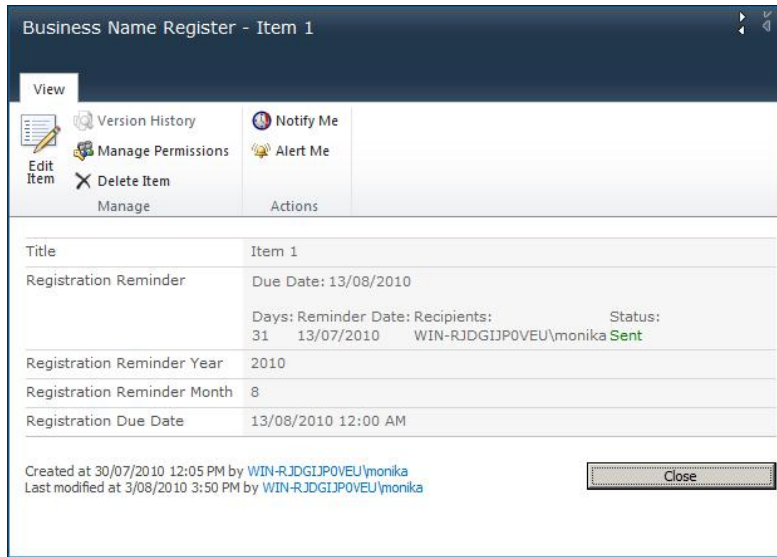
- **Edit Control Block**

The per-item menu used for list items is extended by a *Notify Me* link.



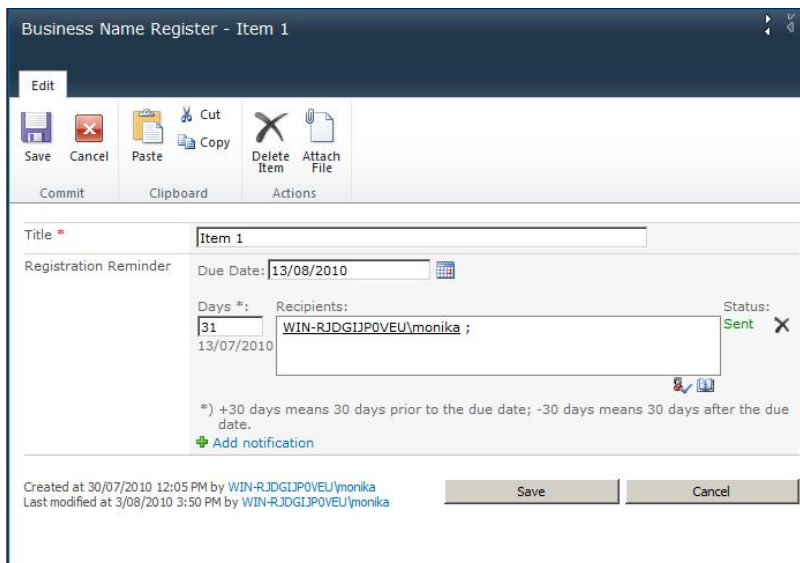
- **View Item Form**

The View Item form is extended by a *Notify Me* link which sits in the *Actions* group.



Each of the above mentioned *Notify Me* links points to the *Setup Notifications* dialog form.

Alternatively, if the column is configured to be shown in the new and edit form of a list item, notifications can be typed in along with other fields if a new list item is being created or an existing list item is being updated.



Enter notifications

Whether a notification field is edited through a list item's new or edit form or through the *Setup Notifications* dialog form - the approach and functionality is the same.

If the new or edit forms are being used, then a data entry control is made available per CS Notification field. Standard SharePoint *Edit Items* permissions are required to add a new item or to edit an existing list item.

If the *Setup Notifications* dialog form is used, the same data entry control is made available for each CS Notification field that is associated to the list. If the *Setup Notifications* dialog form is launched, the user's permission on the list item is taken into account. If the user has *View Items* permission, then the screen will be rendered in read-only mode. If the user has *Edit Items* permissions, then the screen is rendered in edit mode (see picture below).

Business Name Register:Item 2 - Setup Notifications

Registration Reminder

Due Date: 13/08/2010

Days *: 30
14/07/2010

Recipients: WIN-RJDGIJPOVEU\monika ;

Status: Sent

Days *: 20
24/07/2010

Recipients: WIN-RJDGIJPOVEU\administrator ;

Status: Failed

*) +30 days means 30 days prior to the due date; -30 days means 30 days after the due date.

+ Add notification

Cancellation Reminder

Due Date:

No notifications defined.

+ Add notification

Save Cancel

The following rules apply in edit mode:

- An unlimited number of notifications can be specified. If default values have been defined on creation of the column, those values will be pre-populated if a new notification is being added.
 - *Days* and *Recipients* can be overwritten.
- For each notification:
 - Specify an integer value for the *Days* column. A positive value means x days after the due date; a negative value means x days prior to the due date; 0 means on the due date.
 - Specify *Recipients*. Pick SharePoint users through the people picker or specify any other valid email address.
 - A label with the calculated reminder date is displayed upon specification of a due date and days.

The value is calculated using the following formula: [Calculated Reminder Date] = [Due Date] - [Days]
 - A notification status is displayed.
 - A valid notification must have days and at least one recipient specified.

- If the *Due Date* changes, the reminder date for each specified notification gets recalculated and redisplayed as well as its status will be set back to *None*.
- If the *Days* for a particular notification changes, the reminder date of that notification gets recalculated and redisplayed as well as its status will be set back to *None*.

Important: If SharePoint users are picked through the people picker control, make sure they have a valid email address specified.

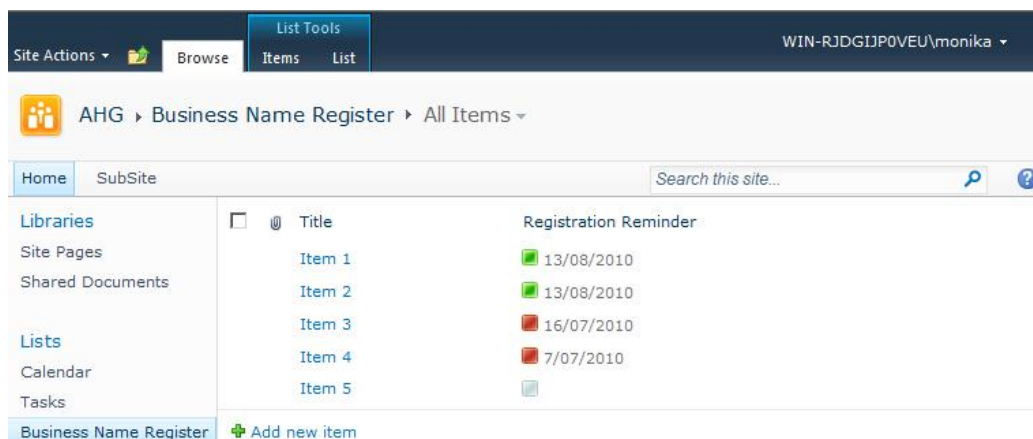
Notification Status

The notification status can be one of the following values:

- **None**
Notification has not been sent, notification is not due for sending yet.
- **Partially Sent**
Notification has been partially sent but could not be delivered to all recipients specified (e.g. not a valid email address). Notification will be attempted to be re-sent to every recipients until it is successfully sent.
- **Sent**
Notification has been successfully sent.
- **Failed**
Sending of notification has failed. Notification will be attempted to be re-sent until it is successfully sent.

Rendering of a CS Notification field in SharePoint views

If a CS Notification field gets added to a SharePoint list, the due date and an indicator image will be displayed for each list item.



The values should be interpreted as follows:

- **Green**
A due date has been specified as well as at least one notification.

- **Red**
A due date has been specified but no notifications.
- **White**
No due date has been specified. Notifications may or may not be defined.

Sorting, filtering and grouping of CS Notification fields

Because of the complexity of information stored in a CS Notification field, the field cannot be sorted, filtered or grouped. However, sorting, filtering and grouping can be achieved with the use of the CS Notification Due Date field type.

The idea is to add another column with the CS Notification Due Date field type to the list and to hook up an existing column of the CS Notifications field type with it. Whenever a list item gets added or updated, the value of the due date gets copied across to the CS Notification Due Date column. Sorting, filtering, grouping or further calculations can be based on the CS Notification Due Date column.

To set up sorting by an existing CS Notification field:

1. Change into the *List Settings* of the desired SharePoint list.
2. Click *Create column*.
 - a. Type in a name.
 - b. Select *CS Notification Due Date* as the field type.
 - c. Recommended: Do not add the field to the default view.
 - d. Click *OK*.
3. Locate your CS Notification column in the list and click on it.
 - a. Select your CS Notification Due Date field in the dropdown list where it says *Specify due date field which can be used for sorting and filtering*.
 - b. Click *OK*.
4. Locate the default view in the list settings (or any other desired view) and click on it.
 - a. Expand the *Sort* group.
 - b. Select your CS Notification Due Date field as the first column to be sorted by.
 - c. Choose *Show items in descending order*.
 - d. Click *OK*.

Furthermore, to set up grouping by year and month on an existing CS Notification field:

5. Change into the *List Settings* of the desired SharePoint list.
6. Click *Create column*.
 - a. Type in a name, e.g. *Reminder Year*.
 - b. Select *Calculated* as the field type.
 - c. Type in the following formula (exchange <CS Notification Due Date> with your column name of the corresponding due date field):

```
=IF([<CS Notification Due Date>]<>"",TEXT(YEAR([<CS Notification Due Date>]),"0"),"Undefined")
```
 - d. Select *Single line of text* to be the data type returned from this formula.
 - e. Recommended: Do not add the field to the default view.

- f. Click *OK*.
7. Click *Create column*.
 - a. Type in a name, e.g. *Reminder Month*.
 - b. Select *Calculated* as the field type.
 - c. Type in the following formula (exchange *<CS Notification Due Date>* with your column name of the corresponding due date field):
`=IF([<CS Notification Due Date>]<>"",TEXT(MONTH([<CS Notification Due Date>]),"0"),"Undefined")`
 - d. Select *Single line of text* to be the data type returned from this formula.
 - e. Recommended: Do not add the field to the default view.
 - f. Click *OK*.
8. Locate the default view in the list settings (or any other desired view) and click on it.
 - a. Expand the *Group by* group.
 - b. Select your calculated year field to be the first column to be grouped by.
 - c. Select *Show groups in descending order*.
 - d. Select your calculated month field to be the next column to be grouped by.
 - e. Select *Show groups in descending order*.
 - f. Select *Expanded* as the default to show the groupings.
 - g. Click *OK*.

The screenshot shows a SharePoint list view for 'Business Name Register'. The list is grouped by 'Registration Reminder Year' and 'Registration Reminder Month'. The items are displayed in a table format with columns for Title, Year, and Month. The 'Add new item' button is visible at the bottom.

Title	Registration Reminder Year	Registration Reminder Month
Item 5	2010	10/09/2010
Item 1	2010	13/08/2010
Item 2	2010	13/08/2010
Item 3	2010	16/07/2010
Item 4	2010	7/07/2010