

CRM 2013 NEW FEATURES: JAVASCRIPT NOTIFICATIONS

CRM 2013 come with a set of new JavaScript functions that we can use for sending notifications to the user. There are form notifications and field notifications. Here's an example of a form notification at work...

The function below was registered on the OnSave event of my form. It notifies the user that a Save has occurred and timestamps the notification. I post 3 notifications to demonstrate the 3 different types available (error, warning and information):

```
function NotifyOnSave() {  
  
    var today = new Date();  
  
    Xrm.Page.ui.setFormNotification('Error! A Save occurred at ' + today, 'ERROR');  
  
    Xrm.Page.ui.setFormNotification('Warning! A Save occurred at ' + today, 'WARNING');  
  
    Xrm.Page.ui.setFormNotification('Information: A Save occurred at ' + today,  
    'INFORMATION');  
  
}
```

Here's what appears after the Save:

Microsoft Dynamics CRM
SALES
Proposals
Test 2 100 x 10

NEW
DEACTIVATE
DELETE
ASSIGN
SHARE
...

PROPOSAL : INFORMATION

Test 2 100 x 10

Information: A Save occurred at Thu Oct 17 18:15:52 MDT 2013
Error! A Save occurred at Thu Oct 17 18:15:52 MDT 2013
Warning! A Save occurred at Thu Oct 17 18:15:52 MDT 2013

Field Calculations

Name	Test 2 100 x 10	Note Text
Owner *	CRM System	
Unit Amount	\$100.00	
Qty	3.00	
Line Total	\$300.00	

Now, if I make another update and then let another Save occur this is what I get:

Microsoft Dynamics CRM
SALES
Proposals
Test 2 100 x 10

NEW
DEACTIVATE
DELETE
ASSIGN
SHARE
...

PROPOSAL : INFORMATION

Test 2 100 x 10

Information: A Save occurred at Thu Oct 17 18:16:21 MDT 2013
Information: A Save occurred at Thu Oct 17 18:15:52 MDT 2013
Error! A Save occurred at Thu Oct 17 18:16:21 MDT 2013

Field Calculations

Name	Test 2 100 x 10	Note Text	ACTIVITIES	NOTES
Owner *	CRM System		All	Add Phone Call Add Task ...
Unit Amount	\$100.00			
Qty	4.00			
Line Total	\$ 400		We didn't find any activity records.	

It's a little hard to tell on the screenshot but what has happened is each of those 3 notifications has been posted a second time to the form (note: the UI only shows 3 rows of notification, the user has to scroll down to see the other 6 notifications). The Information notification appears twice due to the sort order applied by the UI: Information notifications first, then Error notifications followed by Warning notifications. This is the default behavior of `setFormNotification()`. We have options though, we can assign each notification a unique ID and then we can overwrite a previous notification and avoid duplication in a scenario like this. Here's the revised JavaScript (note the unique ID added as a 3rd parameter):

```
function NotifyOnSave() {  
  
    var today = new Date();  
  
    Xrm.Page.ui.setFormNotification('Error! A Save occurred at ' + today, 'ERROR', '1');  
  
    Xrm.Page.ui.setFormNotification('Warning! A Save occurred at ' + today, 'WARNING', '2');  
  
    Xrm.Page.ui.setFormNotification('Information: A Save occurred at ' +  
today, 'INFORMATION', '3');  
  
}
```

If you want to clear a notification you use `clearFormNotification()` and you identify the notification by its unique ID:

```
Xrm.Page.ui.clearFormNotification('1');
```

We also get field notification in CRM 2013. The syntax for these is:

```
Xrm.Page.getControl(fieldName).setNotification(message);
```

Here's an example where I have added a SUBMIT FOR APPROVAL button to the Command bar on a CRM form and have added JavaScript validation to that button that generates field notifications if certain mandatory fields have not been populated. Here's the JavaScript:

```
function SubmitForApproval() {

    var AlertRequired = false;

    if (Xrm.Page.data.entity.attributes.get("new_unitamount").getValue() == null) {

        Xrm.Page.getControl("new_unitamount").setNotification("Unit Amount must be entered in order to submit for Approval");

        AlertRequired = true;

    }

    else {

        Xrm.Page.getControl('new_unitamount').clearNotification();

    }

    if (Xrm.Page.data.entity.attributes.get("new_qty").getValue() == null) {

        Xrm.Page.getControl("new_qty").setNotification("Qty must be entered in order to submit for Approval");

        AlertRequired = true;

    }

    else {

        Xrm.Page.getControl('new_qty').clearNotification();

    }

    if (Xrm.Page.data.entity.attributes.get("new_linetotal").getValue() == null) {
```

```
Xrm.Page.getControl("new_linetotal").setNotification("Line Total must be entered in
order to submit for Approval");

    AlertRequired = true;

}

else {

    Xrm.Page.getControl('new_linetotal').clearNotification();

}

if (AlertRequired == true) {

    alert('Missing information, please clear all alerts');

}

else {

    alert('Submitted!');

}

}
```

And here's how it looks when I test with missing data. First the Alert fires...

SALES

Proposals

Test 2 100 x 10

SUBMIT FOR APPROVAL

NEW

DEACTIVATE

DELETE

ASSIGN

PROPOSAL : INFORMATION

Test 2 100 x 10

Field Calculations

Name	Test 2 100 x 10
Owner *	CRM System
Unit Amount	\$900.00
Qty	4.00
Line Total	\$

Message from webpage

Missing information, please clear all alerts

OK

And then each field that failed a non-null test is flagged with an Alert icon and the notification text is displayed:

SALES

Proposals

Test 2 100 x 10

SUBMIT FOR APPROVAL

NEW

DEACTIVATE

DELETE

ASSIGN

PROPOSAL : INFORMATION

Test 2 100 x 10

Field Calculations

Name	Test 2 100 x 10	Note Text	ACTIVITIES
Owner*	CRM System		All
Unit Amount	\$900.00		
Qty	4.00		We didn't
Line Total	\$		

Line Total must be entered in order to submit for Approval

This starts to look a bit ugly when you generate notifications for neighboring fields:

SALES

Proposals

Test 2 100 x 10

SUBMIT FOR APPROVAL

NEW

DEACTIVATE

DELETE

ASSIGN

PROPOSAL : INFORMATION

Test 2 100 x 10

Field Calculations

Name	Test 2 100 x 10	Note Text
Owner*	CRM System	
Unit Amount	--	

Unit Amount must be entered in order to submit for

Qty must be entered in order to submit for Approval

Line Total must be entered in order to submit for Approval

The notification text goes away once you mouse over the message, but the alert icon remains:

SALES

Proposals

Test 2 100 x 10

SUBMIT FOR APPROVAL

NEW

DEACTIVATE

DELETE

ASSIGN

PROPOSAL : INFORMATION

Test 2 100 x 10

Field Calculations

Name	Test 2 100 x 10	Note Text	ACTIVITY
Owner *	CRM System		All
Unit Amount	--		
Qty	--		We didn't
Line Total	--		

I wondered whether I could leave out the notification message and just get the alert icon to appear by just saying: `Xrm.Page.getControl("new_unitamount").setNotification();`

Unfortunately, the notification speech bubble still appears so this is not a good approach:

SALES

Proposals

Test 2 100 x 10

SUBMIT FOR APPROVAL

NEW

DEACTIVATE

DELETE

ASSIGN

PROPOSAL : INFORMATION

Test 2 100 x 10

Field Calculations

Name	Test 2 100 x 10	Note Text	ACTI
Owner*	CRM System		All
Unit Amount	--		
Qty	--		We d
Line Total	<input type="text"/>		

I like the form notifications. I would try to minimize usage so that no more than 3 form notifications ever appear, any more and they just aren't visible enough.

I'm not sure I like the field notifications. I like the fact I can highlight fields with issues but I don't like the notification speech bubbles that appear. I guess it works well so long as notifications don't appear for adjacent fields. I would give this some consideration when deciding how to layout the fields.