

**NAV
TECH
DAYS
2016**

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MIGRATING TO EVENTS

GUNNAR GESTSSON – ADVANIA & DYNAMICS.IS

WHEN YOU ARE PASSIONATE ABOUT MICROSOFT DYNAMICS NAV | www.navtechdays.com

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About me



Gunnar Thor Gestsson

Microsoft Dynamics NAV Architect @ Advania Iceland
Microsoft MVP

gunnar@dynamics.is | dynamics.is | objects4nav.com
[@gunnargestsson](https://twitter.com/gunnargestsson)



Dynamics Credentialed Professional
Core Development
Microsoft Dynamics NAV



Out goal for today

The Events shipped with
NAV and Dynamics 365
for Financials

When are Events
executed and what
data is available

Examples of how
customization can be
done using Events

Few things that are of
interest to me and I
want to talk about

First goal

The Events shipped with
NAV and Dynamics 365
for Financials

Event Types

[Business Events](#) - A business event is a custom event that is raised by C/AL code. It defines a formal contract that carries an implicit promise not to change in future releases. It is the expectation that business events are published by solution ISVs, including Microsoft.

[Integration Events](#) - An integration event is also a custom event that is raised by C/AL code, like a business event, except that it does not carry the same promise of not changing, nor does it have the restriction not to expose implementation details.

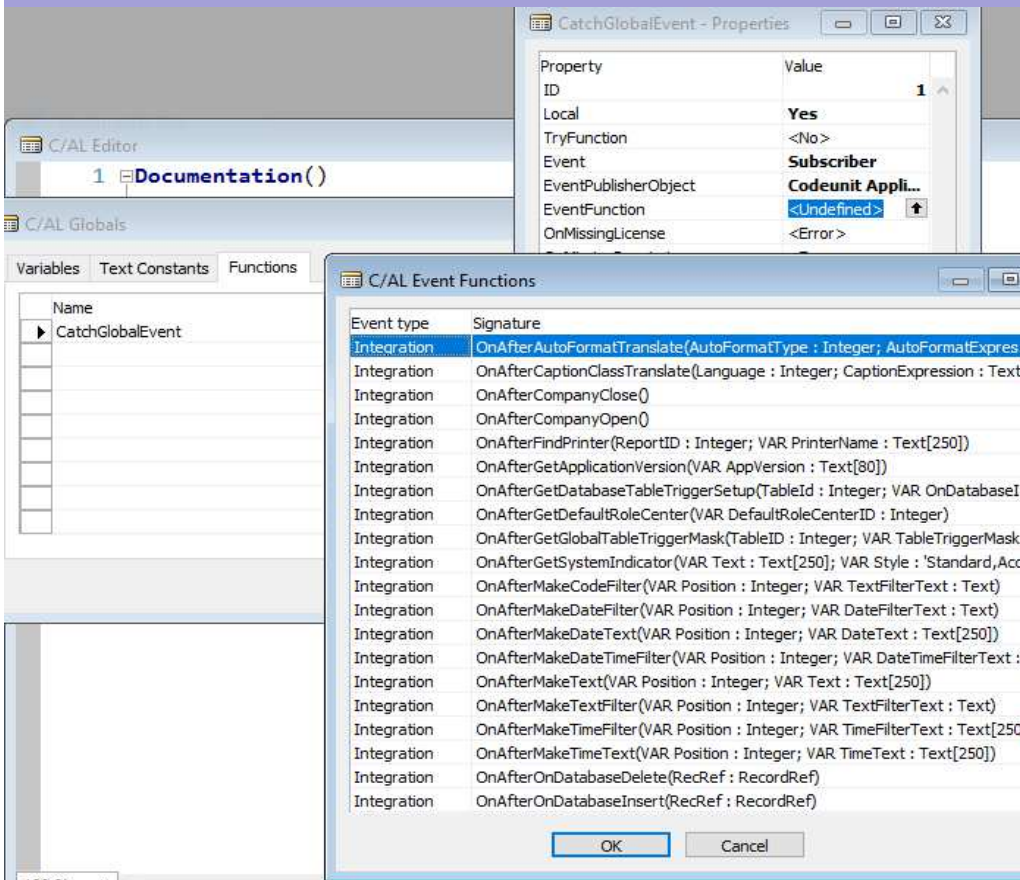
[Global Events](#) - Global events are predefined system events that are automatically raised by Codeunit 1 ApplicationManagement.

[Database Trigger Events](#) - Trigger events are automatically raised by the system when it performs database operations on a table object, such as deleting, inserting, modifying, and renaming a record, as defined in a table .

[Page Trigger Events](#) - Page Trigger events are raised automatically by the system when it performs certain operations in a page object.

How to find events

List in development environment



Export objects and use PowerShell (waldo.be)

NAV 2016 Eventing: All published Integration and Business events

 MS Dynamics NAV

by [waldo](#) | 1

★★★★★ 2 votes, 5.00 avg. rating (97% score)

It's been a while since I've put up a decent blogpost. Well .. I've been busy at conferences, to be honest doing lots of Sessic always nervous for these – I take it seriously, you know – people pay a lot of money to come to conferences like that, and th need to be good. So .. I do my best .. and hope to succeed ;-)..

Best Practices for NAV Extensions

One of my sessions was about Best Practices on the exciting new feature in NAV 2016: NAV Extensions. You will read all a near future, when I can find time to blog about the content.

One of the tips that I showed was **how to find all Integration and Business events in the product**. Well .. you know me .. **PowerShell** script for that :-). People have been contacting me for this script, so here you are:

```

1 $DistriText = [System.IO.File]::OpenText('C:\Temp\AllObjects.txt')
2
3 $ResultArray = @()
4 $CurrentObject = ''
5 $i = 0
6
7 for(;;) {
8     $TextLine = $DistriText.ReadLine()
9
10    if ($TextLine -eq $null) { break }
11
12    $i++
13
14    switch ($true)
15    {
16        {$Textline.Contains("OBJECT ")} {$CurrentObject = $TextLine.TrimStart()}
17        {$Textline.Contains(" [Integration")] {$CurrentEventType = $TextLine.TrimStart
18        {$Textline.Contains(" [Business")] {$CurrentEventType = $TextLine.TrimStart()}
19
20        {$Textline.Contains(" PROCEDURE") -and !([String]::IsNullOrEmpty($CurrentEventT
21            $CurrentFunction = $TextLine.TrimStart()

```

Catching an Event

Behind the scenes

Second goal

When are Events
executed and what data
is available

Where are the Events

- Publisher functions in any object type to start integration or business events
- Pages start multiple events when opened, used and closed
- Tables start multiple events when data is validated and updated
- Global events start for multiple actions, including data update

Which Event should be used



Event logging demo

Behind the scenes

Recap

Temporary Customer
created, updated and
deleted

Customer created,
updated and deleted

Customer created and
updated using My
Customer Page

Sales invoice created and
posted

Event logging demo

Behind the scenes

Third goal

Examples of how
customization can be
done using Events

Behind the scenes

Add an editable field to Customer Ledger Entry

Behind the scenes

Behind the scenes

New Code field for Sales Documents

Behind the scenes

Migrate to Events

- Map the process you want to extend to find possible Events for you modification
- Be creative when looking for a solution
- Think about the Cloud, meaning different client types and Dynamics 365

Suggest Business and Integration Events

<https://connect.microsoft.com/dynamicssuggestions/Feedback>

Code Cloning and extra record modification are in some cases necessary

Fourth goal

Few things that are of
interest to me and I want
to talk about

Performance

Use the server cache
and the server
memory

For sequential read
queries are always
fastest

Try to limit the no. of write transactions

- Read will use the server cache and is very fast
- Use temporary tables for all the heavy work and the insert the results
- Use Single Instance Codeunits to store processing data

Single instance

Behind the scenes

Shared Temporary Table

Behind the scenes

Grouping Test

Loop through customers

- For every record check if the grouping record exists. If not it is created
- For every record the group counter is increased

Execute a query based on customers

- For every query line the grouping record is created

Loop through customers

- For every record check if the temporary grouping record exists. If not it is created
- For every record the temporary group counter is increased

Loop through the temporary grouping records and insert group records

Read all customers in order of the group field

- For every grouping code count customers and insert grouping record
- Skip to the last customer for that grouping code

Grouping test

Behind the scenes

Questions



Thank you

The slides and my demo code will be published on my blog, www.dynamics.is

As usual the presentation is recorded and the recording will be available with all the content on www.mibuso.com

Enjoy the rest of the conference