



Universal Data
Import Export

Universal Data Import Export

4BzSoftware Company Limited | Product S-03

Released on 2013-03-31, last updated on 2017-02-12

4BZSoftware

Table of Contents

1. Introduction	1
2. How to install	4
2.1 Import NAV Objects	5
2.2 Check Service Status	8
3. How to use	10
3.1 Export Data to Excel with Configuration.....	10
3.2 Import Data from Excel with Configuration.....	19
3.3 Export Table Data to Text File.....	28
3.4 Import Table Data from Text File.....	31
3.5 Set Table Fields from Text File	33
3.6 Export Tables Data to XML File	34
3.7 Import Tables Data from XML File	35
3.8 Import/Export Configuration Packages Definition via XML File	36
3.9 Import Data with Dimensions	38
3.10 Skip updating existing Database Records	44
3.11 Export data by Specified Filter	45
3.12 Import/Export Table Data for Duplication.....	47
4. Technical Point of View	49
4.1 NAV Objects	49
4.2 Merge Objects.....	50
4.3 Troubleshoot.....	54
4.4 Version Control	57
5. Pricing	58

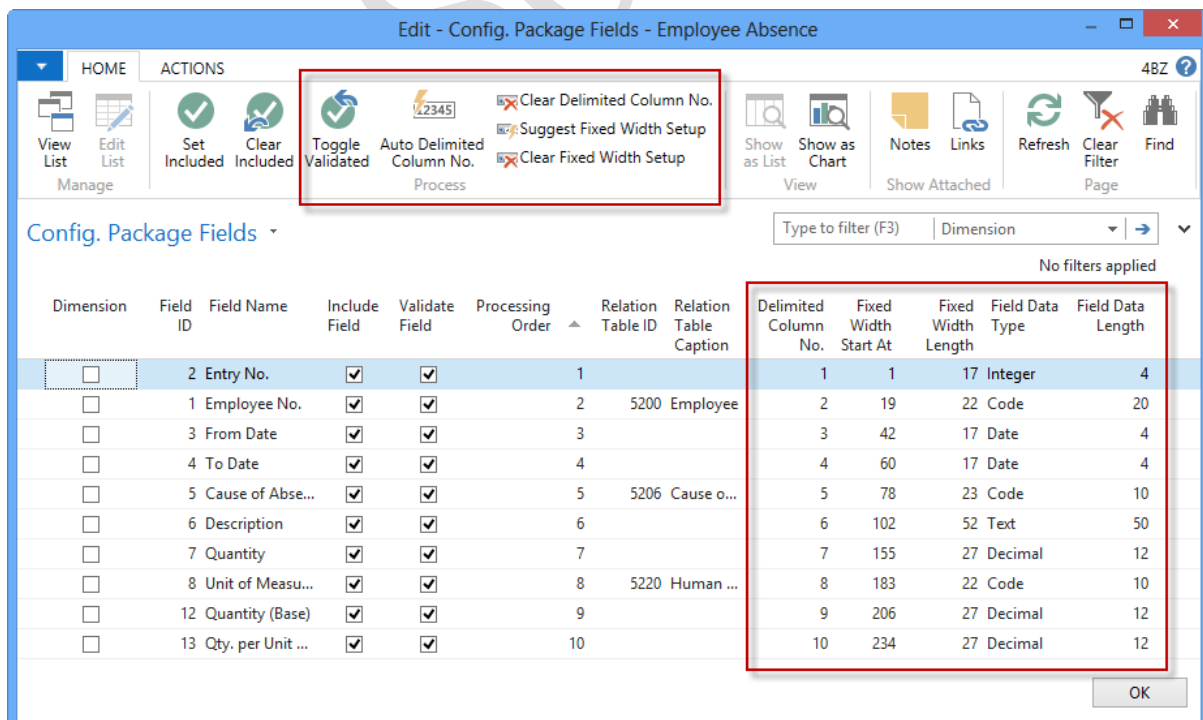
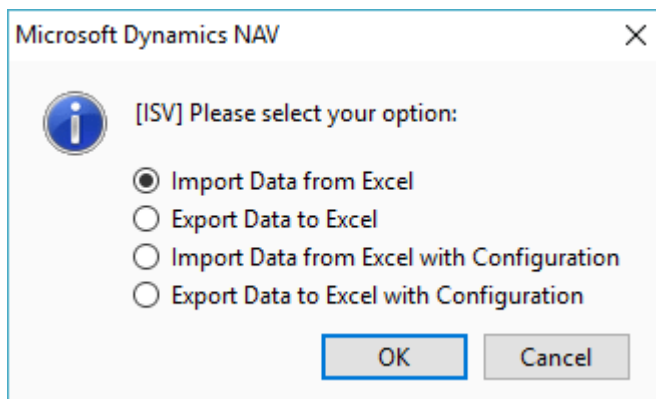
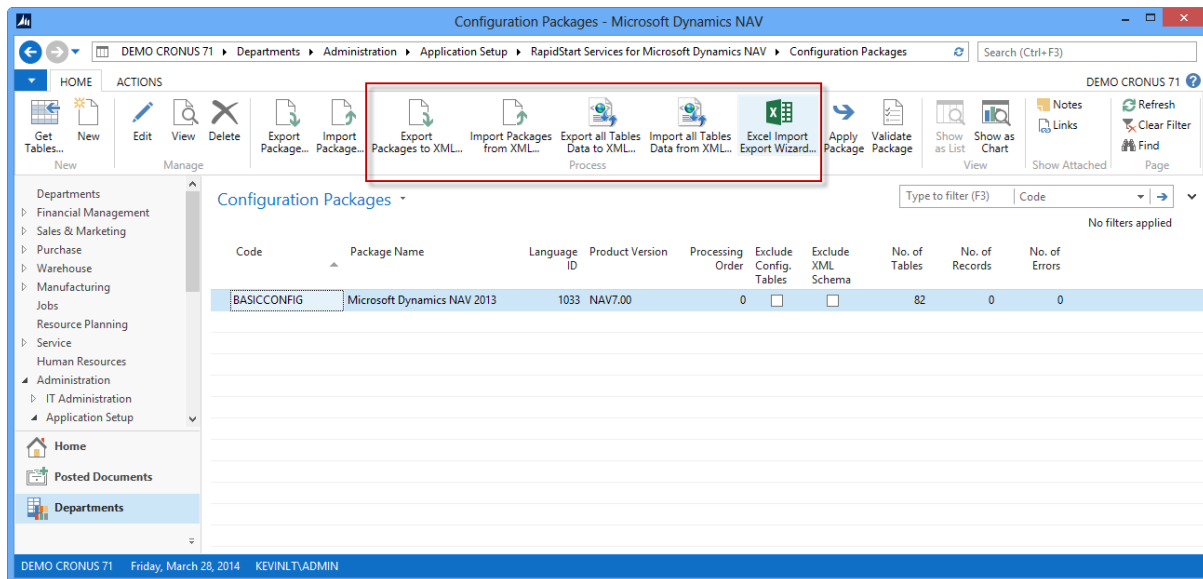
1. Introduction

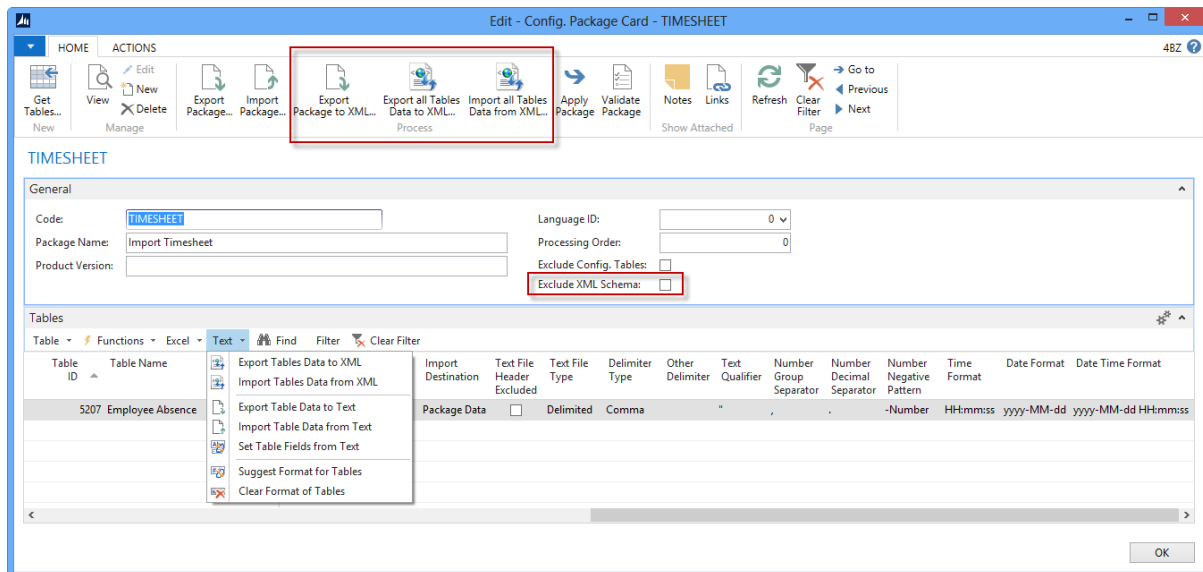
We would like to introduce “Universal Data Import Export”. With our tool, users can manage to exchange data such as sales, purchase, financial with other systems, bank transfer entries from online banking, timesheet from time & attendance readers or biometric clock ... in formats from Excel, CSV, Tab, Fixed Width Text to XML friendly and effectively.

Related videos at https://www.youtube.com/playlist?list=PLfgzNr8_2Gkpy5szys-DPjYwdIHqXin72

Through “Universal Data Import Export”, you can:

1. Export tables data to Excel:
 - Express way for end users.
 - Select tables to be exported.
 - Choose needed fields to be exported.
 - Filter needed records to be exported.
2. Import tables data from Excel Sheets repeatedly:
 - Express way for end users.
 - Select Excel Sheet to be imported.
 - Excel Sheet Template checking.
 - Validate needed fields separately.
 - Preview data before apply to table data.
3. Import/Export Table Data via Text File:
 - Support Delimited format such as csv, semicolon, tab ... or user-defined.
 - Support Fixed Width format.
 - Support Number and Date Time format.
 - User can select Import Destination as Package Data (for preview) or Database.
 - Support Web Client.
4. Set Table Fields from Text File:
 - Analyze Delimited or Fixed Width header text and set Fields accordingly.
 - Support Web Client.
5. Import/Export Tables Data via XML File:
 - Support XML Schema.
 - Multi tables interaction.
 - User can select Import Destination as Package Data (for preview) or Database.
 - Support Web Client.
6. Import/Export Configuration Packages Definition via XML File:
 - User can copy Configuration Packages Definition via XML file between systems.
 - Support Web Client.
7. Other features:
 - Import/Export Dimensions via Delimited Text such as csv, semicolon, tab ...
 - Skip updating existing Database Records.
 - Export data by Specified Filter, e.g. Customers and their Sales Line Discount.
 - Import/Export Table Data for Duplication.





We make every effort to ensure that there are no errors. However, no one is perfect, and mistakes do occur. If you find an error or have any idea, we would be very grateful for your feedback, please email to support@4bzsoftware.com. Hope with our products, we contribute to success of your company!

2. How to install

Supported versions: from NAV 2013 (7.0) to NAV 2017 (10.0).

The customization includes below NAV Objects:

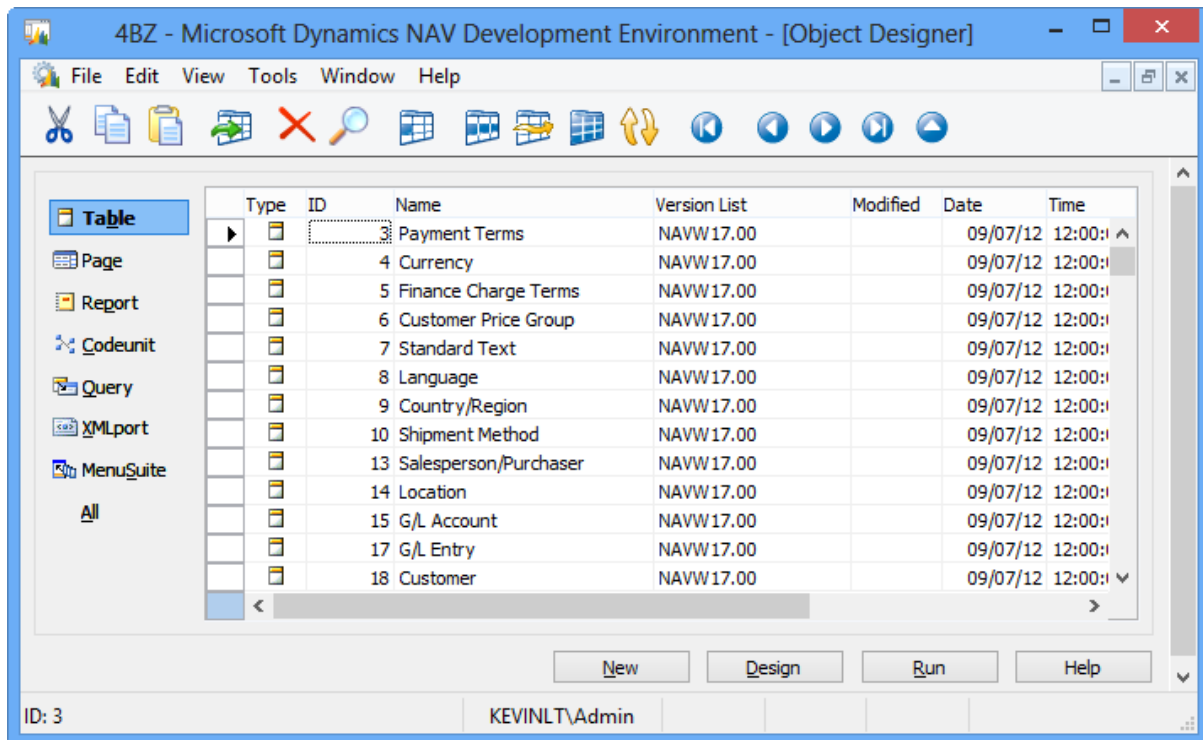
No.	Type	ID	Name	Note
1	Record	8613	Config. Package Table	
2	Record	8616	Config. Package Field	
3	Record	8623	Config. Package	
4	Record	8626	Config. Package Filter	
5	Codeunit	31	NAV Library	Protected Object
6	Codeunit	32	Data Table Library	Protected Object
7	Codeunit	33	Excel Library	Protected Object
8	Codeunit	65	License Management	Protected Object
9	Codeunit	215	Config. Library	Protected Object
10	Page	8614	Config. Package Card	
11	Page	8615	Config. Packages	
12	Page	8623	Config. Package Filters	
13	Page	8624	Config. Package Fields	
14	Page	8625	Config. Package Subform	
15	Page	8626	Config. Package Records	
16	Page	9174	All Objects with Caption	

If all are standard objects, you can import them and enjoy system immediately. Otherwise, above NAV Objects should be merged (please refer to section 4 Technical Point of View for merging).

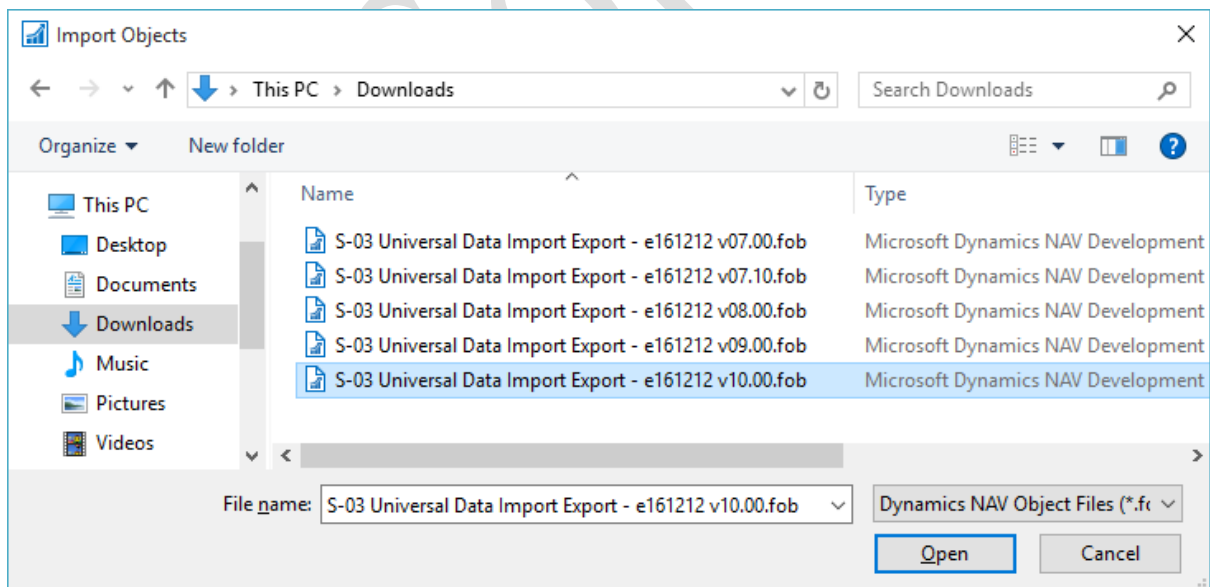
Note: Protected Objects (Codeunit 31 to 215) should be merged by 4BzSoftware. Please do not edit Protected Objects, they will be crashed (please refer to section 4 to cover)!

2.1 Import NAV Objects

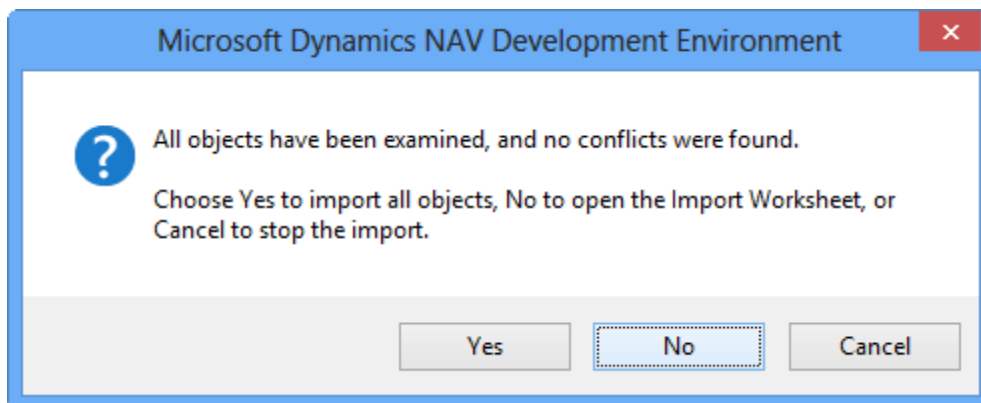
Open Object Designer in Development Environment (after login database, press Shift+F12):



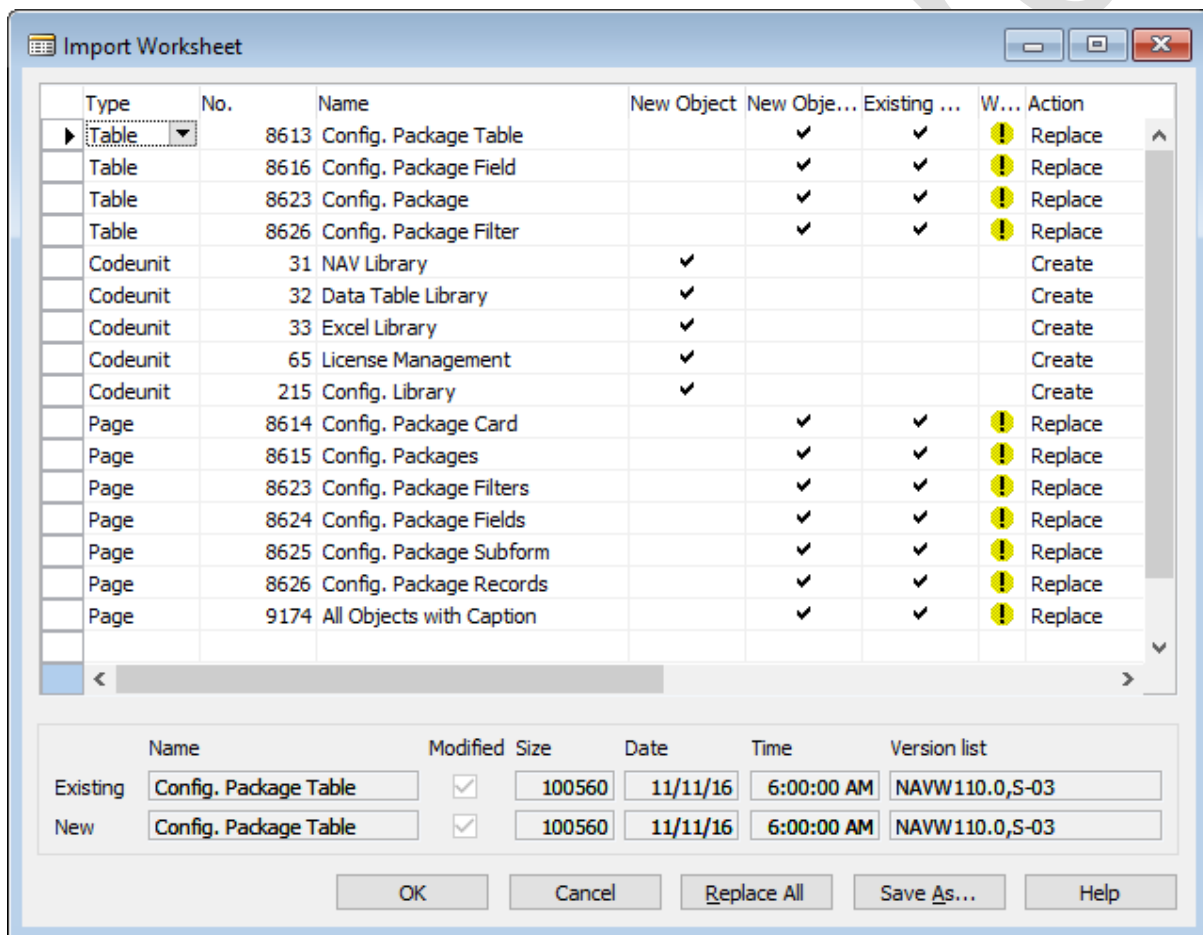
Click File → Import... → Browse Service NAV Objects in Import Objects dialog → Click Open:



Select No to open Import Worksheet due to conflicted objects:

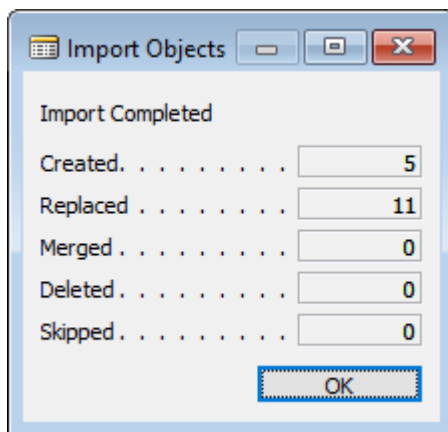


Click Replace All button and then click OK:

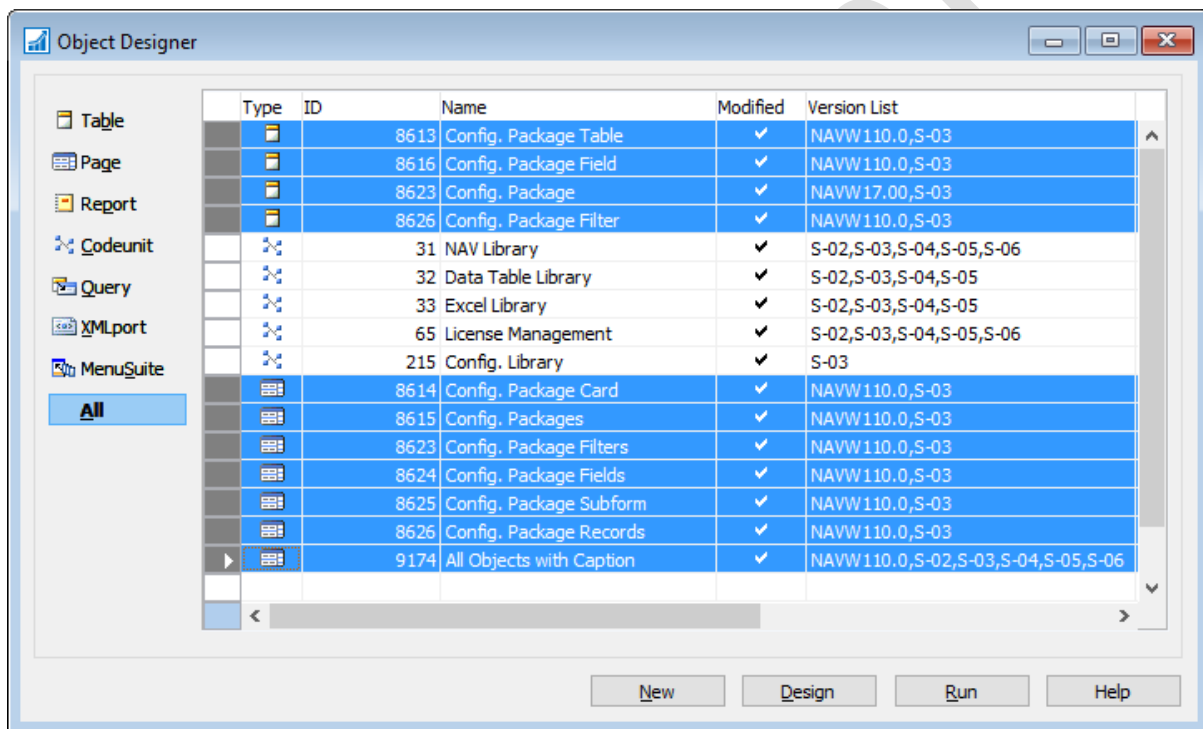


From NAV 2015, choose "Force" option for Synchronize Schema.

Import Objects dialog result:



Filter Version List with string *S-03*, compile below selected objects:

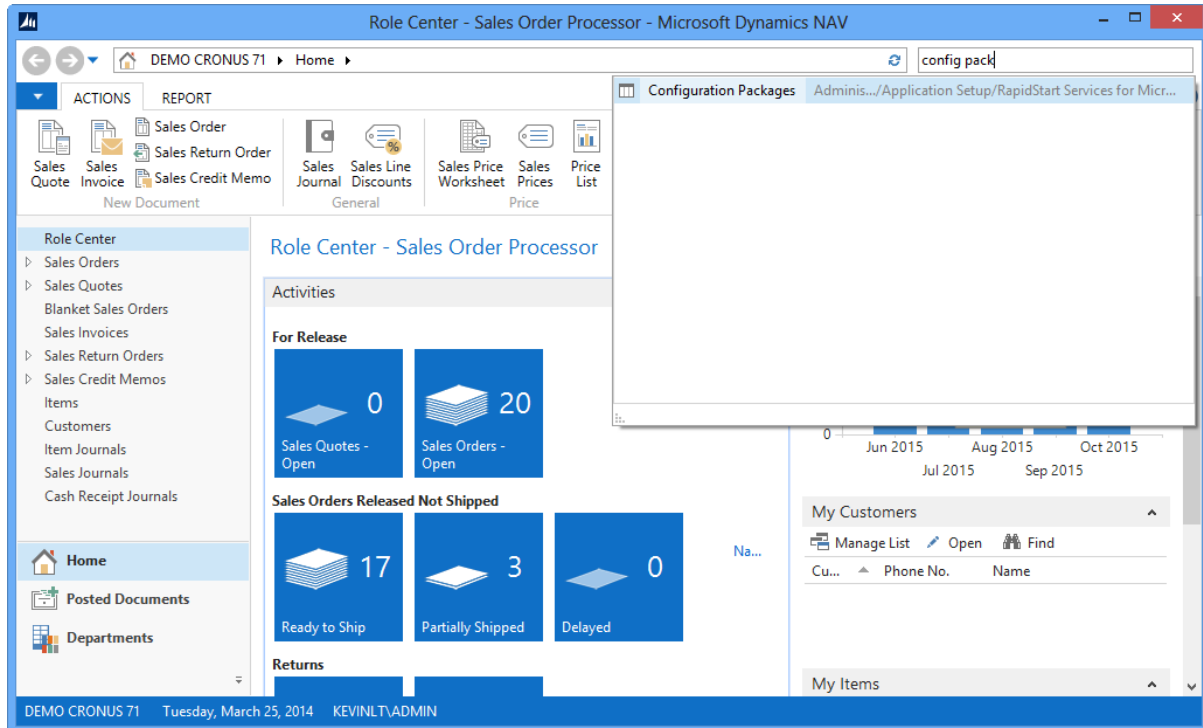


This is finish importing NAV Objects. To make sure, you should check Service Status in next step.

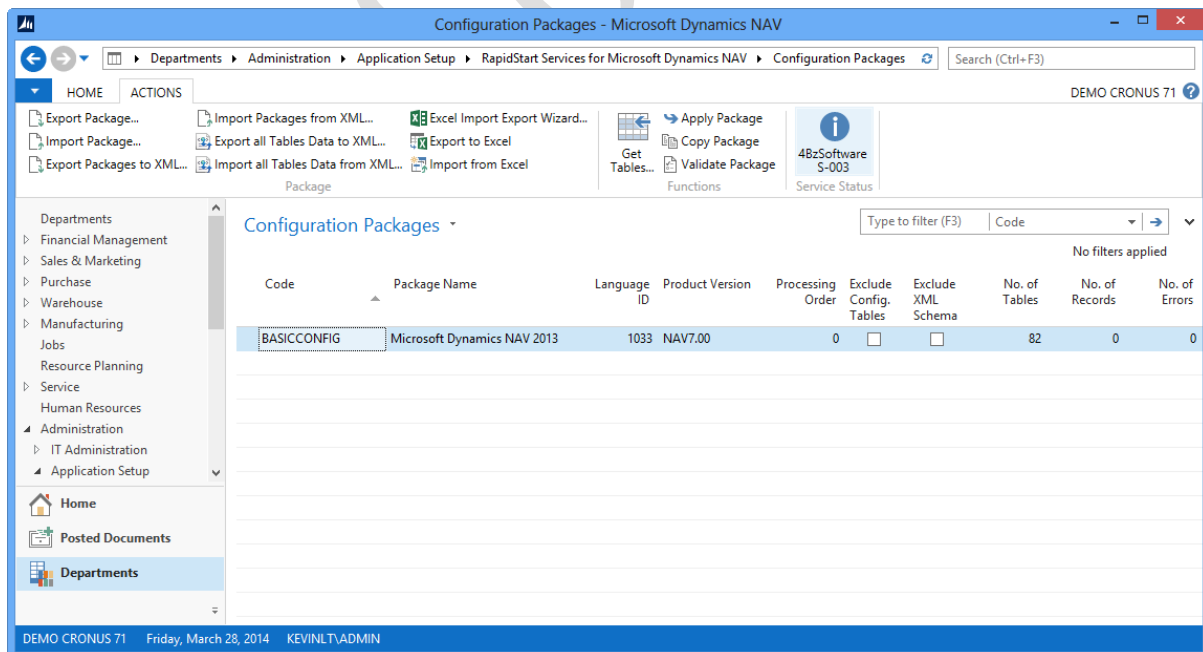
2.2 Check Service Status

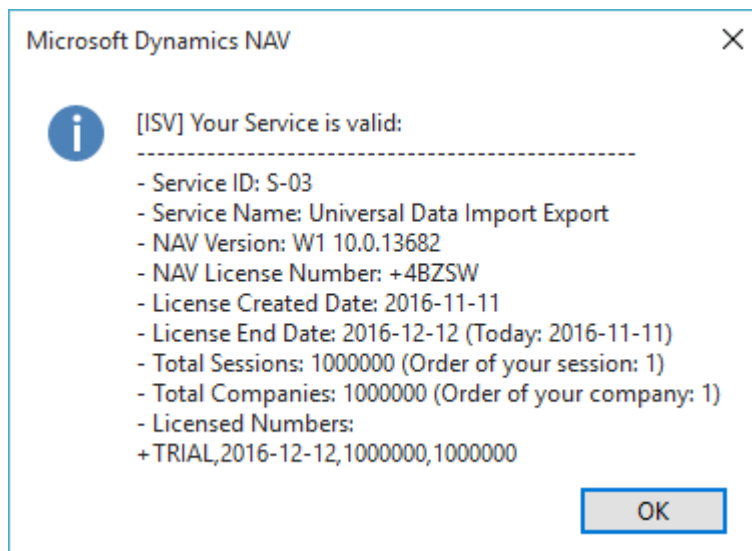
After importing NAV Objects, you should check Service is valid or not.

Open Configuration Packages list page by using system search:



Click on Ribbon → Actions → Service Status → 4BzSoftware S-03 as below picture:

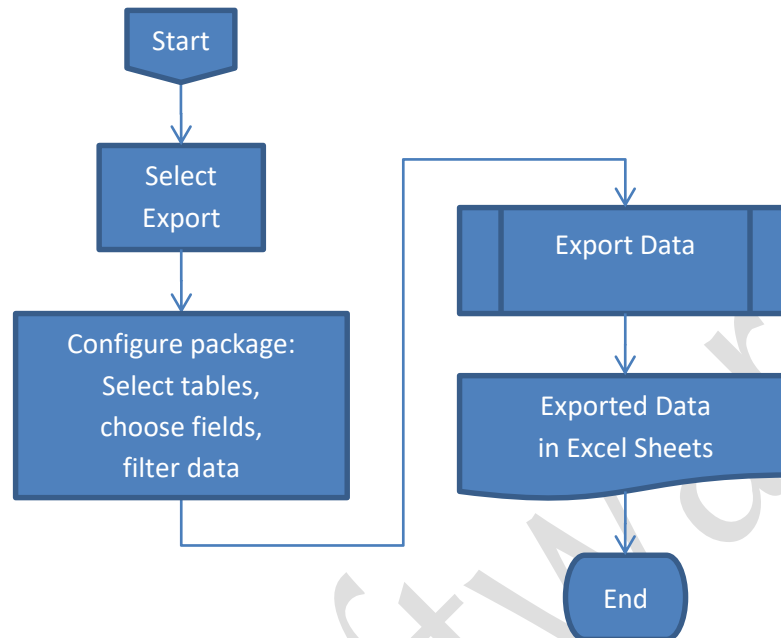




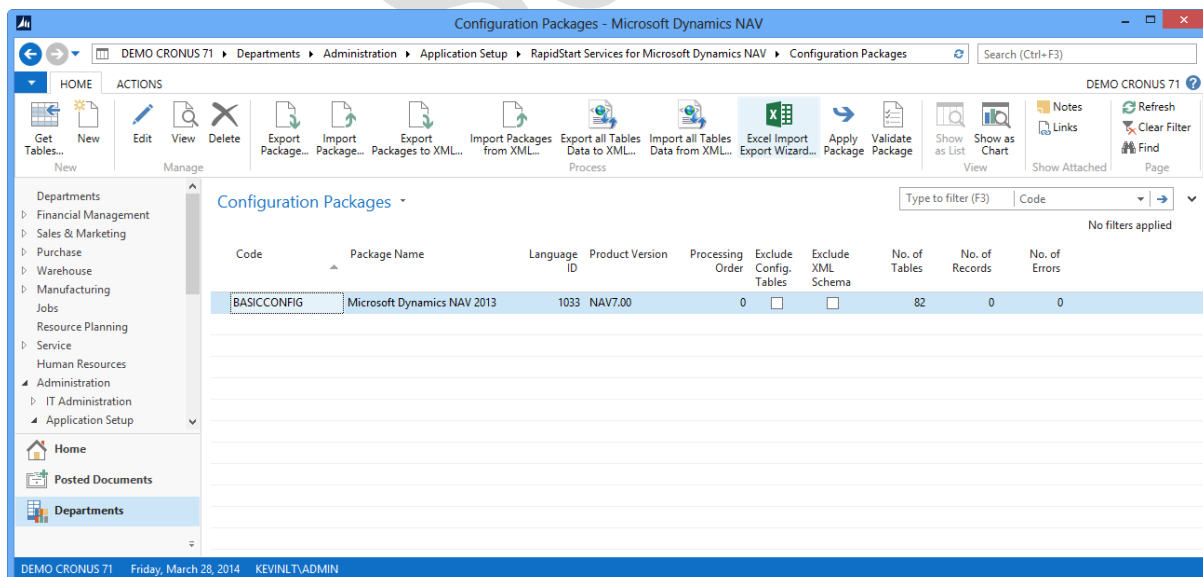
Please note that Trial (License Number: +TRIAL) is available for a period only!

3. How to use

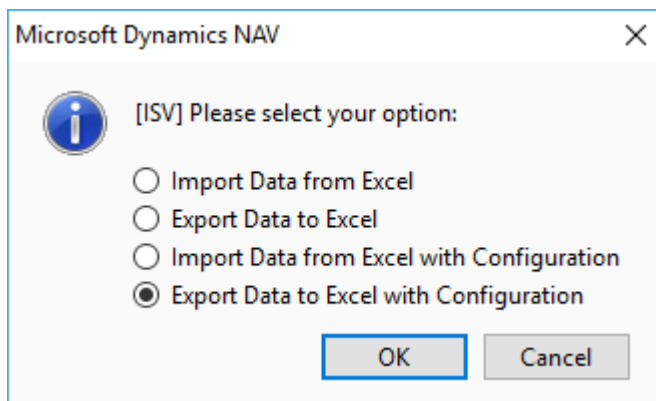
3.1 Export Data to Excel with Configuration



Select “Excel Import Export Wizard” on Ribbon of Data Migration page:

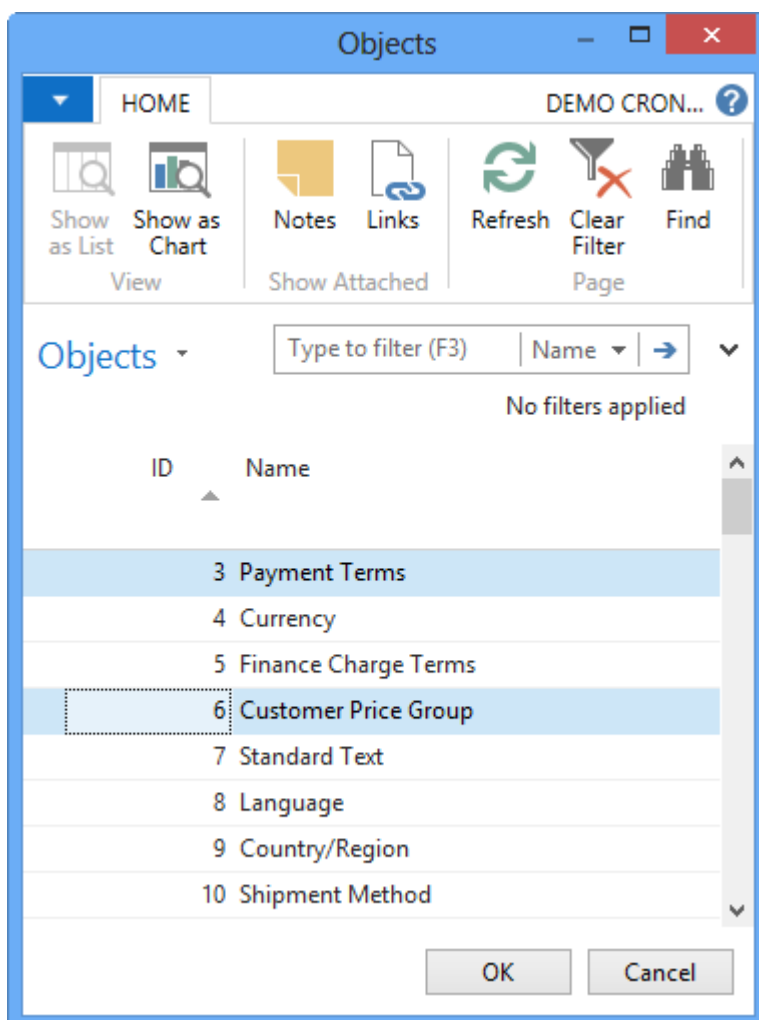


Select “Export Data to Excel with Configuration” from pop-up dialog and click OK:



Note: “Export Data to Excel” is more suitable for end users. It bypasses “Configure package” step.

For the first time, Objects list will appear. Use Ctrl key and mouse to select tables to be exported:



Click OK button.

Configuration Package Card appears:

Config. Package Card - KEVINLT\ADMIN-EW

DEMO CRONUS 71

General

Code: KEVINLT\ADMIN-EW Language ID: 0

Package Name: Export Data to Excel Wizard Processing Order: 0

Product Version: Exclude Config. Tables: ☐ Exclude XML Schema: ☐

Tables

Table ID	Table Name	Data Template	Skip Table Triggers	No. of Package Records	No. of Fields Available	No. of Fields Included	No. of Fields to Validate	No. of Package Errors	No. of Database Records	Filtered	Page ID
3	Payment Terms		<input type="checkbox"/>	0	6	6	6	0	6	No	4
6	Customer Price Group		<input type="checkbox"/>	0	6	6	6	0	0	No	7
0			<input type="checkbox"/>	0	0	0	0	0	0	No	0

OK Cancel

To add more tables, click Table ID Lookup icon on new line of the grid.

Use Ctrl key to select exported tables from Objects list, and then click OK:

Objects

DEMO CRON...

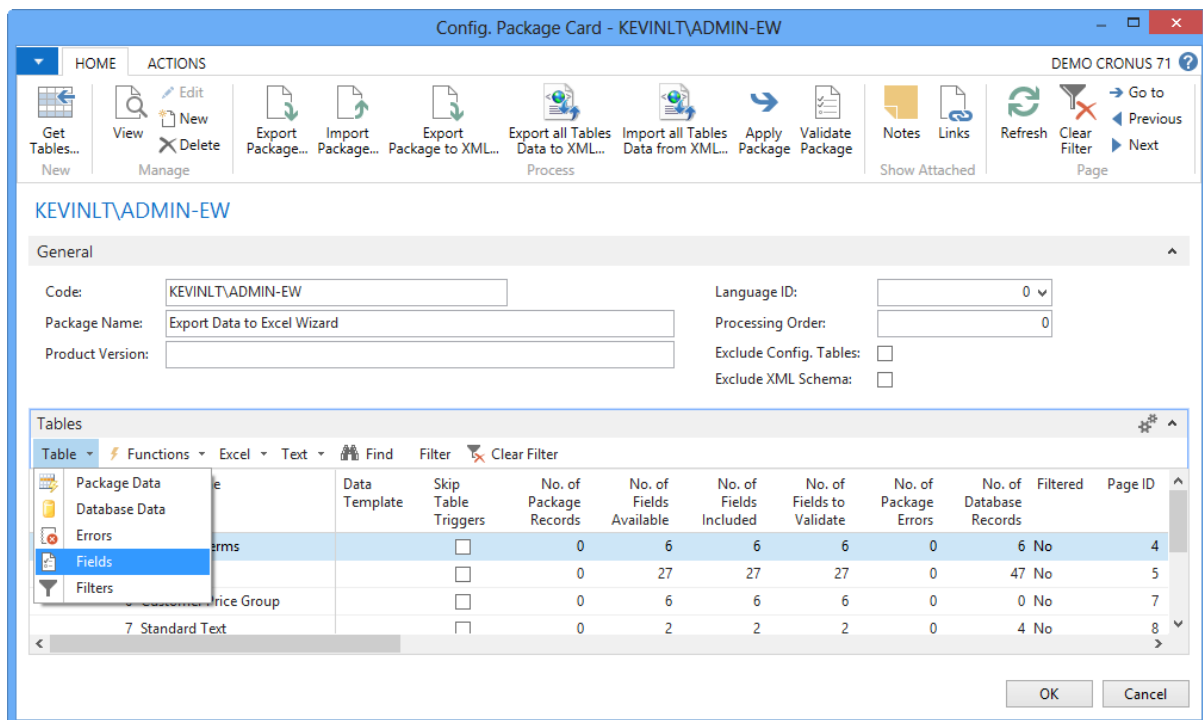
Objects Type to filter (F3) Name

No filters applied

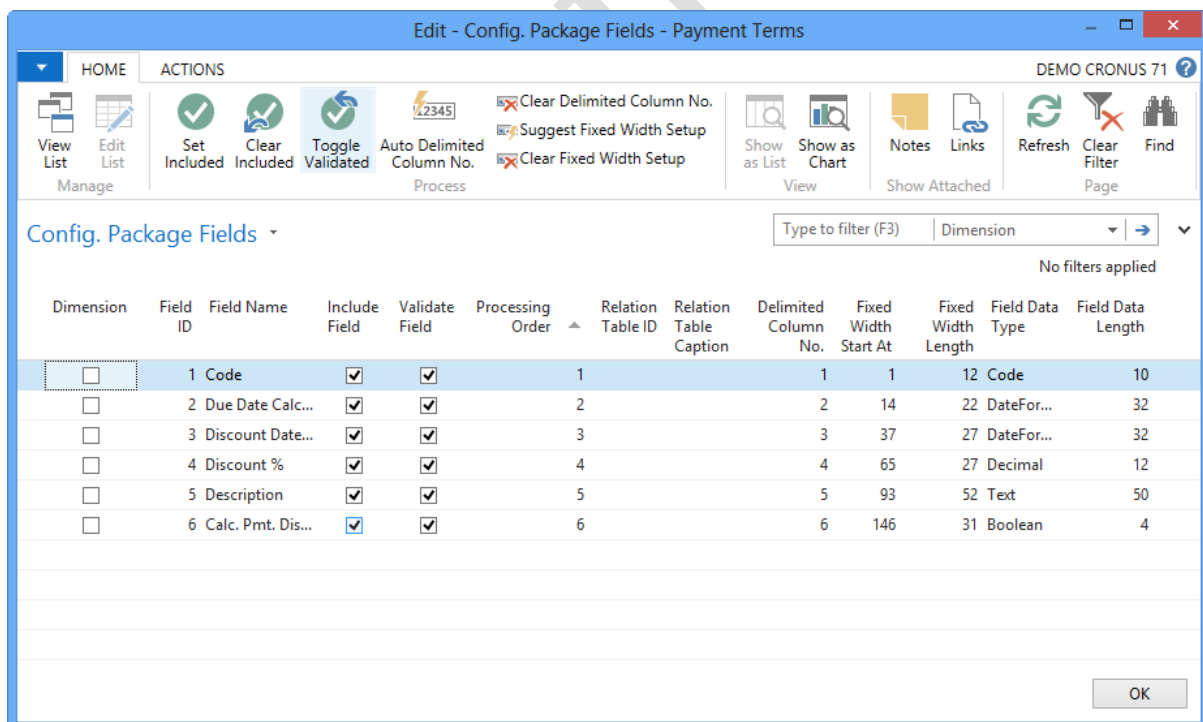
ID	Name
3	Payment Terms
4	Currency
5	Finance Charge Terms
6	Customer Price Group
7	Standard Text
8	Language
9	Country/Region
10	Shipment Method

OK Cancel

From Configuration Package Card, you can select needed fields and filter data to be exported:



System loads all fields of table to export by default:



System allows you to filter data before exporting:

Config. Package Card - KEVINLT\ADMIN-EW

HOME

ACTIONS

Get Tables...

New

View

Manage

Export Package...

Export Package...

Export Package...

Export Package to XML...

Export all Tables Data to XML...

Export all Tables Data from XML...

Apply Package

Validate Package

Notes

Links

Refresh

Clear Filter

Go to

Previous

Next

DEMO CRONUS 71

?

KEVINLT\ADMIN-EW

General

Code:

KEVINLT\ADMIN-EW

Language ID:

0

Package Name:

Export Data to Excel Wizard

Processing Order:

0

Product Version:

Exclude Config. Tables:

☐

Exclude XML Schema:

☐

Tables

Table

Functions

Excel

Text

Find

Filter

Clear Filter

Table	Package Data	Database Data	Errors	Fields	Filters	Data Template	Skip Table Triggers	No. of Package Records	No. of Fields Available	No. of Fields Included	No. of Fields to Validate	No. of Package Errors	No. of Database Records	Filtered	Page ID
							<input type="checkbox"/>	0	6	6	6	0	6	No	4
							<input type="checkbox"/>	0	27	27	27	0	47	No	5
							<input type="checkbox"/>	0	6	6	6	0	0	No	7
							<input type="checkbox"/>	0	2	2	2	0	4	No	8

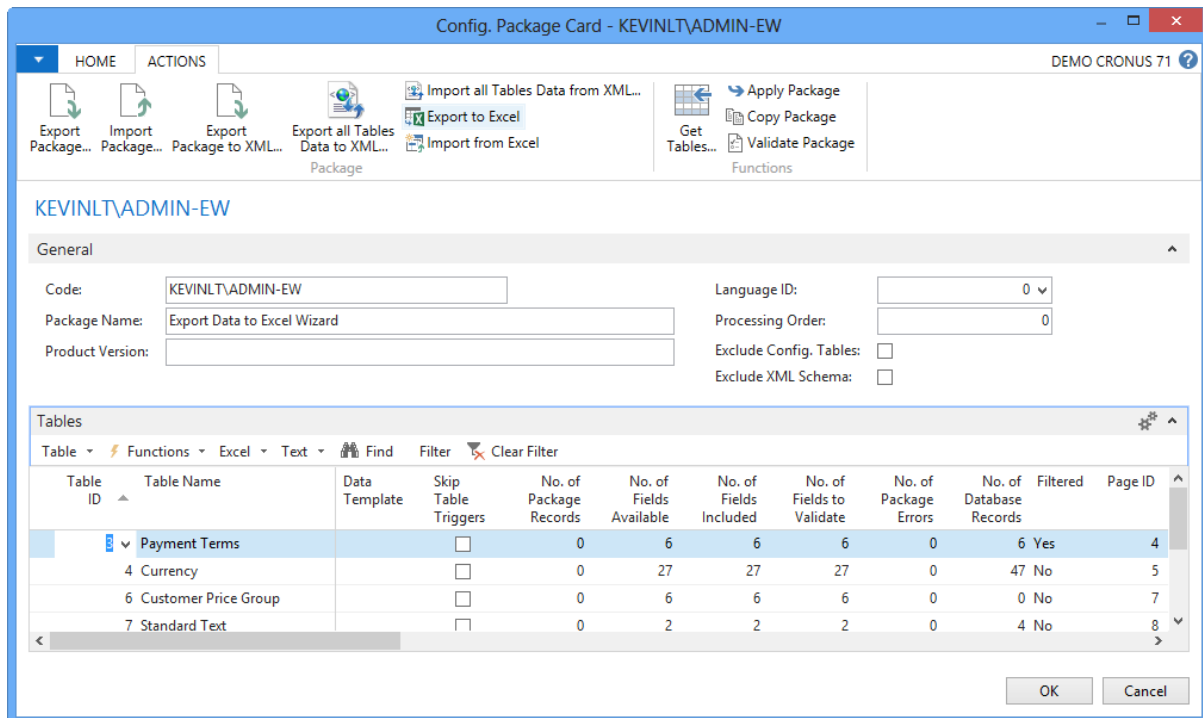
OK

Cancel

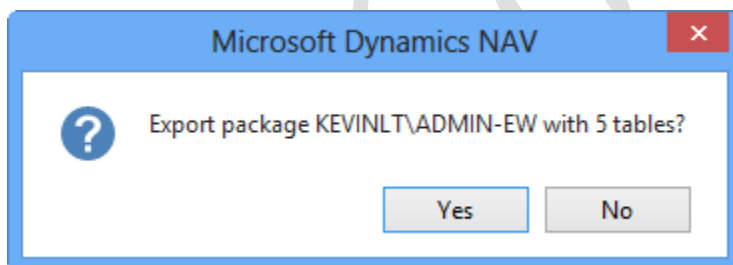
[illegible]

There are 3 ways to export data tables to Excel:

1. Export all tables of package: click OK button. It is same as below way, but without confirm.
2. Export all tables of package with confirm: click on Ribbon → Actions → “Export to Excel”:

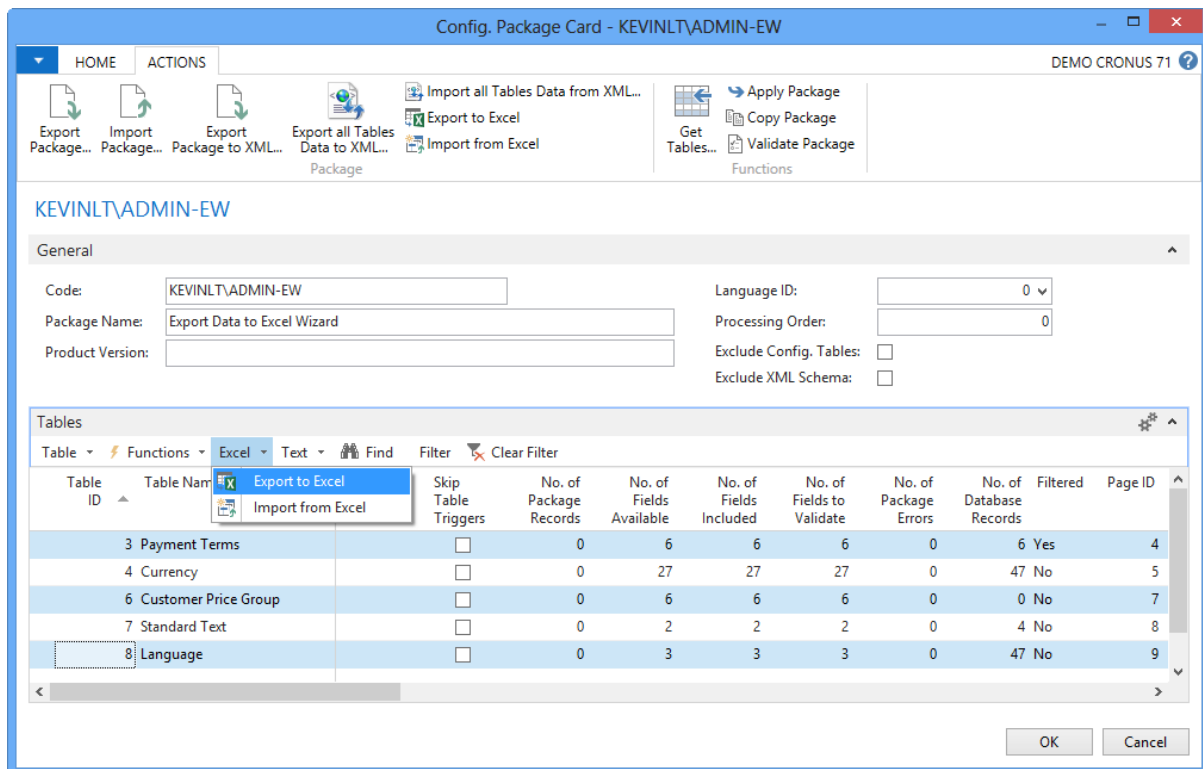


Confirm dialog box appears; click “Yes” to continue:

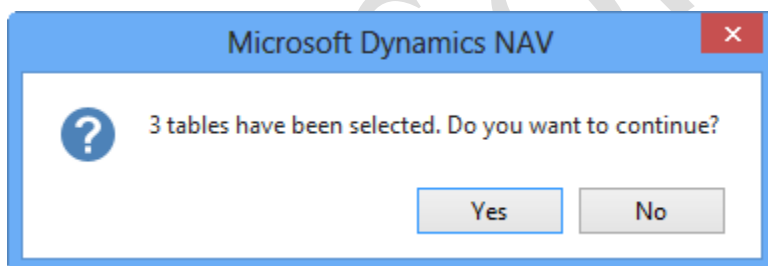


Follow saving file as “Export selected tables” way.

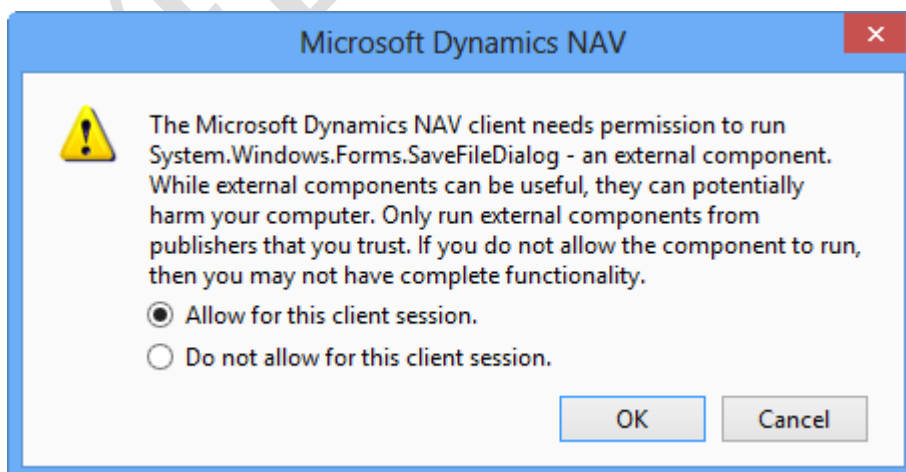
3. Export selected tables: Use Ctrl key to select tables exported in the grid, then click Excel → Export to Excel as below:



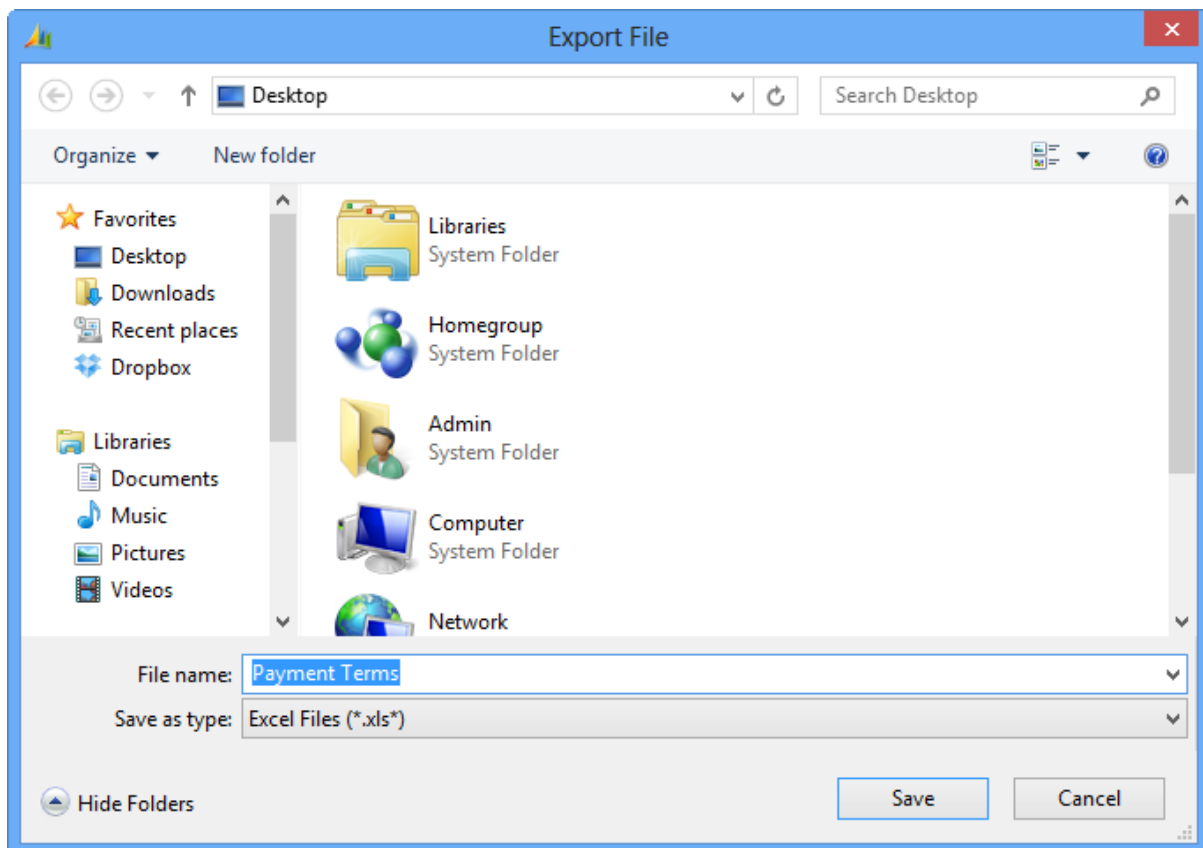
Confirm dialog box appears; click “Yes” to continue:



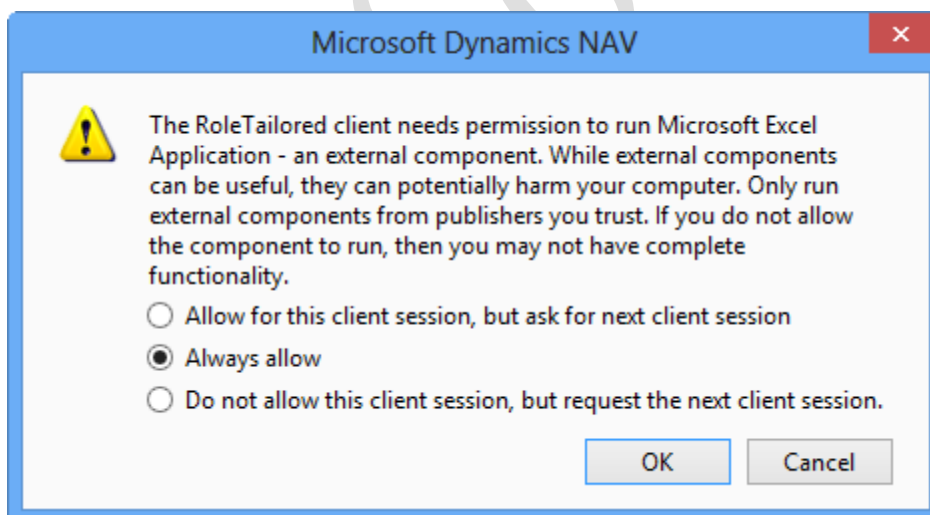
Choose “Allow for this client session” below screen, click OK to allow SaveFileDialog component:



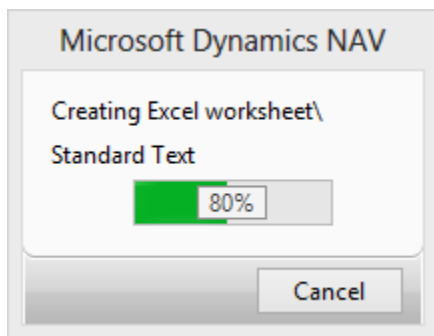
Browse folder and enter Excel file name to be saved, then click Save:



Select "Always allow" to enable Microsoft Excel component, then click OK:



System exports data as your configuration:

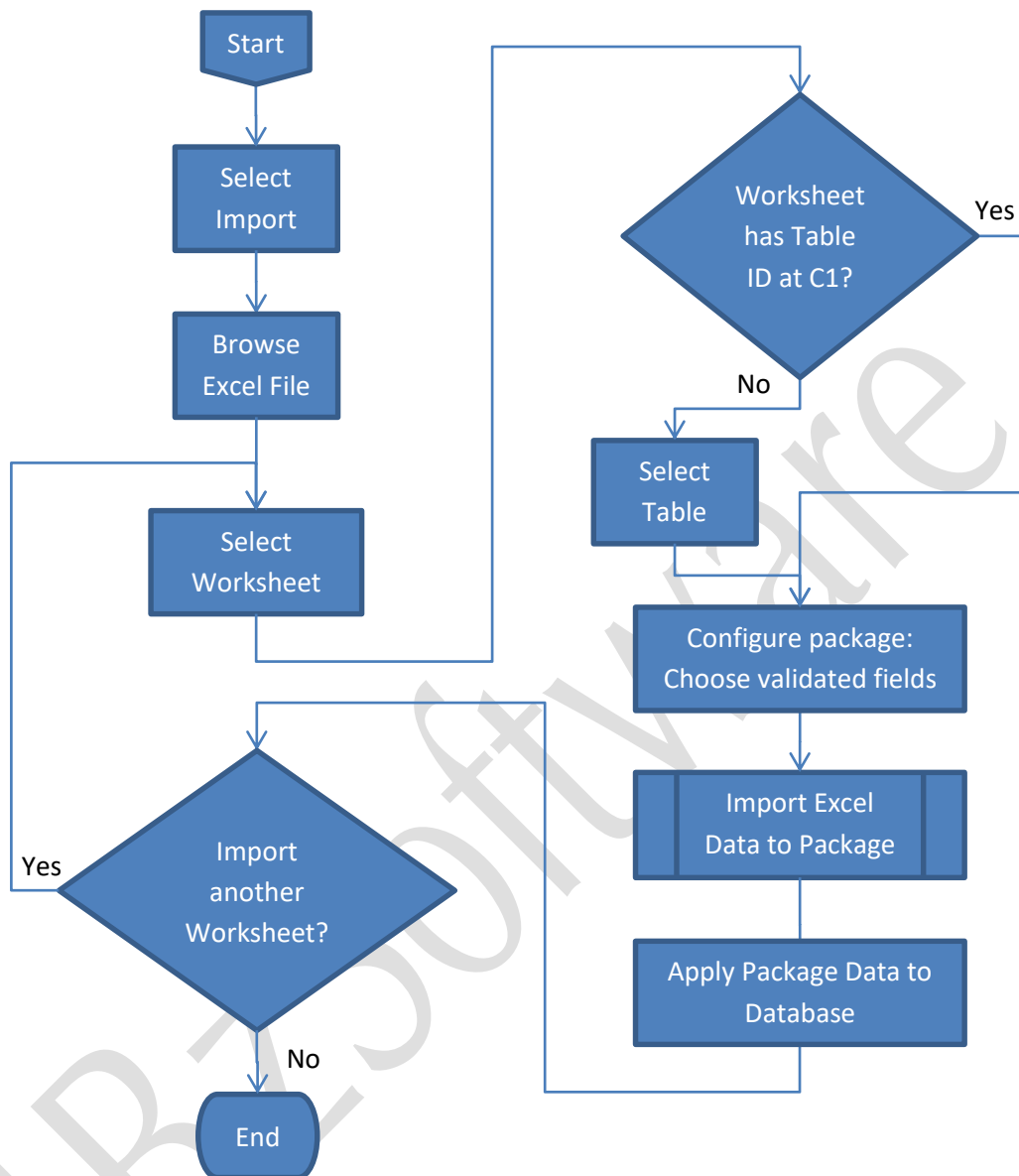


Then system gives you control result Excel file:

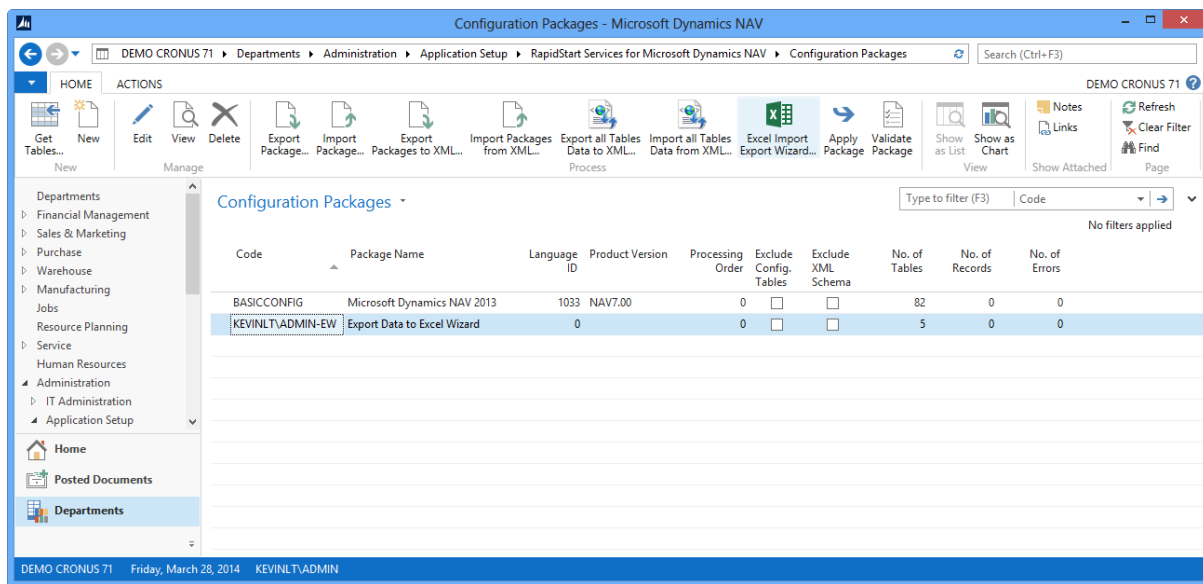
Payment Terms - Microsoft Excel

	A	B	C	D	E	F
	Code	Due Date Calculation	Discount Date Calculation	Discount %	Description	Calc. Pmt. Disc. on Cr. Memos
1	DMW-RUNONCE	Payment Terms	3			
2						
3	14 DAYS	14D		0	Net 14 days	FALSE
4	1M(8D)	1M	8D	2	1 Month/2% 8 days	FALSE
5	21 DAYS	21D		0	Net 21 days	FALSE
6	7 DAYS	7D		0	Net 7 days	FALSE
7	CM	CM		0	Current Month	FALSE
8	COD	OD		0	Cash on delivery	FALSE
9						
10						

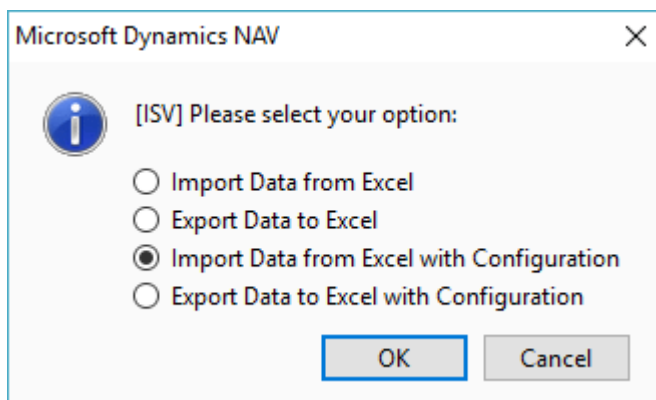
3.2 Import Data from Excel with Configuration



Select “Import Export Wizard” on Ribbon of Data Migration page:

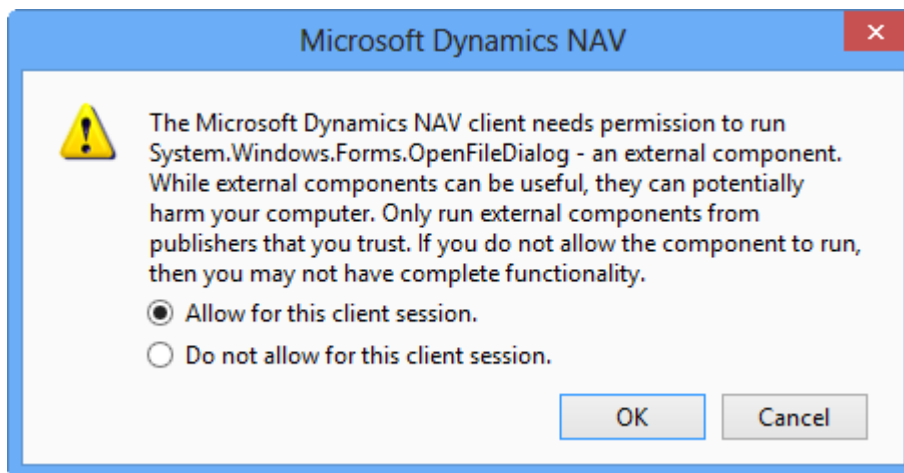


Select “Import Data from Excel with Configuration” from pop-up dialog and click OK:

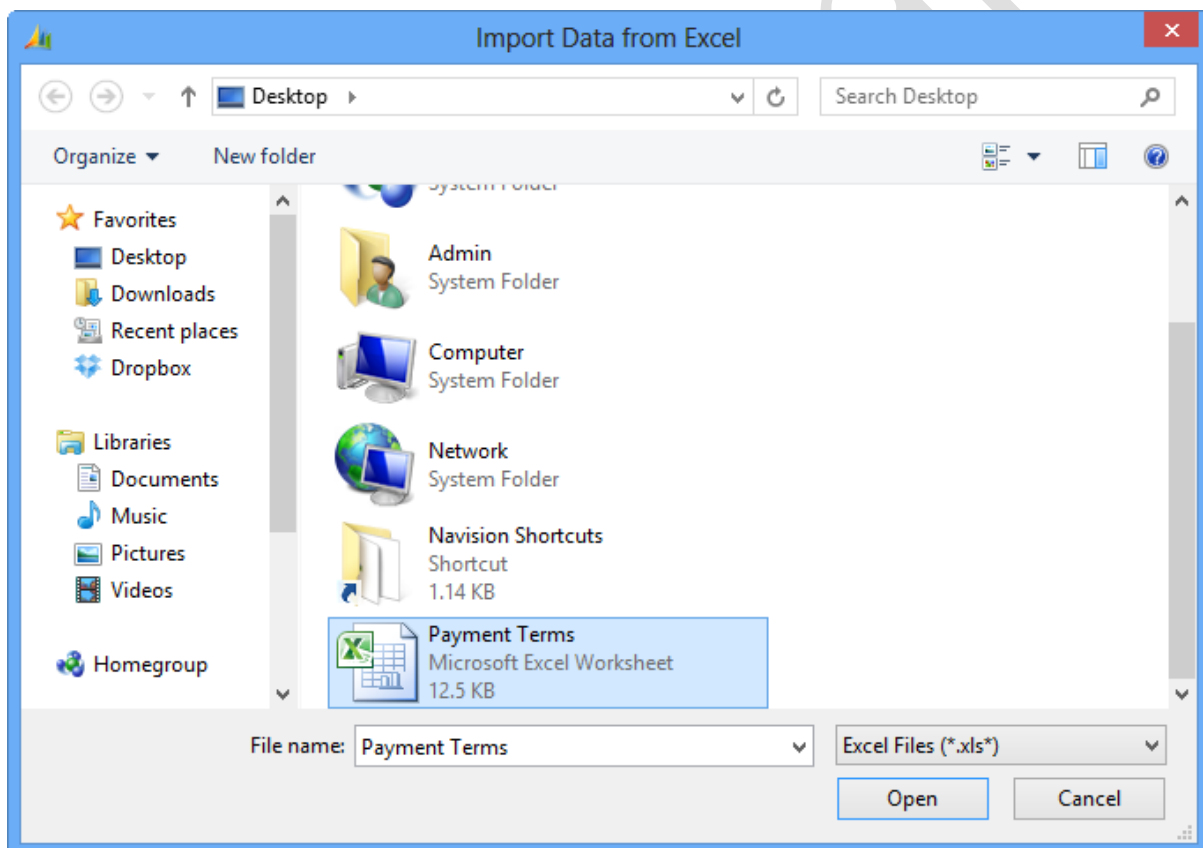


Note: “Import Data from Excel” is more suitable for end users. It bypasses “Configure package” step.

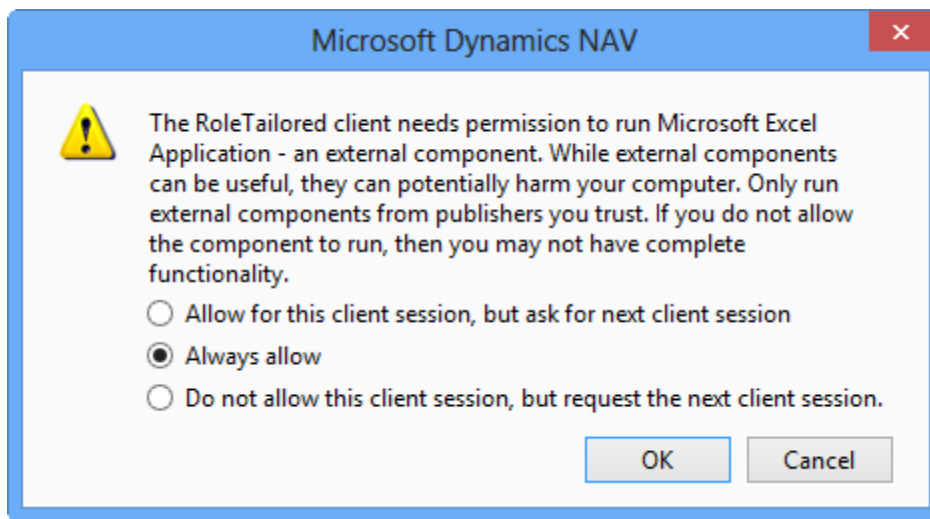
Choose “Allow for this client session” below screen, click OK to allow OpenFileDialog component:



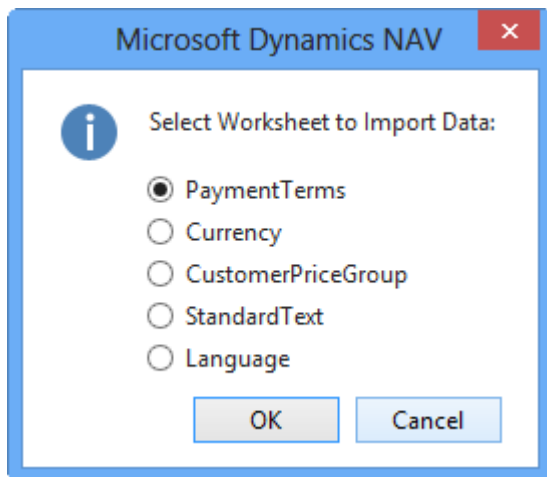
Browse Excel file to be imported, and click Open:



Select "Always allow" to enable Microsoft Excel component, then click OK:



Select Excel Worksheet to be imported, and click OK:



Configuration Package Card appears:

Config. Package Card - KEVINLT\ADMIN-IW

DEMO CRONUS 71 ?

General

Code: Language ID:

Package Name: Processing Order:

Product Version: Exclude Config. Tables: ☐

Exclude XML Schema: ☐

Tables

Table ID	Table Name	Data Template	Skip Table Triggers	No. of Package Records	No. of Fields Available	No. of Fields Included	No. of Fields to Validate	No. of Package Errors	No. of Database Records	Filtered	Page ID	Co
3	Payment Terms		<input type="checkbox"/>	0	6	6	6	0	6	Yes	4	

OK Cancel

From Configuration Package Card, you can select desired fields to be validated:

Config. Package Card - KEVINLT\ADMIN-IW

DEMO CRONUS 71 ?

General

Code: Language ID:

Package Name: Processing Order:

Product Version: Exclude Config. Tables: ☐

Exclude XML Schema: ☐

Tables

Table ID	Table Name	Data Template	Skip Table Triggers	No. of Package Records	No. of Fields Available	No. of Fields Included	No. of Fields to Validate	No. of Package Errors	No. of Database Records	Filtered	Page ID	Co
3	Payment Terms		<input type="checkbox"/>	0	6	6	6	0	6	Yes	4	

OK Cancel

Edit - Config. Package Fields - Payment Terms

HOME ACTIONS DEMO CRONUS 71 ?

View List Edit List Manage Set Included Clear Included Toggle Validated Auto Delimited Column No. Process Clear Delimited Column No. Suggest Fixed Width Setup Clear Fixed Width Setup Show as List Show as Chart View Notes Links Show Attached Refresh Clear Filter Find Page

Config. Package Fields

Type to filter (F3) Dimension No filters applied

Dimension	Field ID	Field Name	Include Field	Validate Field	Processing Order	Relation Table ID	Relation Table Caption	Delimited Column No.	Fixed Width Start At	Fixed Width Length	Field Data Type	Field Data Length
<input type="checkbox"/>	1	Code	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1			1	1	12	Code	10
<input type="checkbox"/>	2	Due Date Calc...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2			2	14	22	DateFor...	32
<input type="checkbox"/>	3	Discount Date...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3			3	37	27	DateFor...	32
<input type="checkbox"/>	4	Discount %	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4			4	65	27	Decimal	12
<input type="checkbox"/>	5	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5			5	93	52	Text	50
<input type="checkbox"/>	6	Calc. Pmt. Dis...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	6			6	146	31	Boolean	4

OK

After configure, click OK on Configuration Package Card.

Configuration Package Records appears for previewing data in system.

Use Ctrl key and mouse to select desired rows to be imported, and click "Apply Data" on Ribbon:

Config. Package Records - Payment Terms

HOME ACTIONS DEMO CRONUS 71 ?

Delete Show Error Apply Data Refresh Find

Manage Process Page






Invalid	Code	Due Date Calculation	Discount Date Calculation	Discount %	Description	Calc. Pmt. Disc. on Cr. Memos
<input type="checkbox"/>	14 DAYS	14D		0	Net 14 days	No
<input type="checkbox"/>	1M(8D)	1M	8D	2	1 Month/2% 8 days	No
<input type="checkbox"/>	21 DAYS	21D		0	Net 21 days	No
<input checked="" type="checkbox"/>	7 DAYS	7D		0	Net 7 days	No
<input type="checkbox"/>	CM	CM		0	Current Month	No
<input type="checkbox"/>	COD	0D		0	Cash on delivery	No

OK Cancel

Row 1, 3 and 4 are imported. Now you can close page to finish import, other rows are still there:

Config. Package Records - Payment Terms

HOME ACTIONS DEMO CRONUS 71 ?

 Delete
  Show Error
  Apply Data
  Refresh
  Find

Manage Process Page

Invalid	Code	Due Date Calculation	Discount Date Calculation	Discount %	Description	Calc. Pmt. Disc. on Cr. Memos
<input type="checkbox"/>	1M(8D)	1M	8D	2	1 Month/2% 8 days	No
<input type="checkbox"/>	CM	CM		0	Current Month	No
<input type="checkbox"/>	COD	OD		0	Cash on delivery	No

OK Cancel

System backs to below Select form for importing another worksheet. Otherwise, click Cancel to exit:

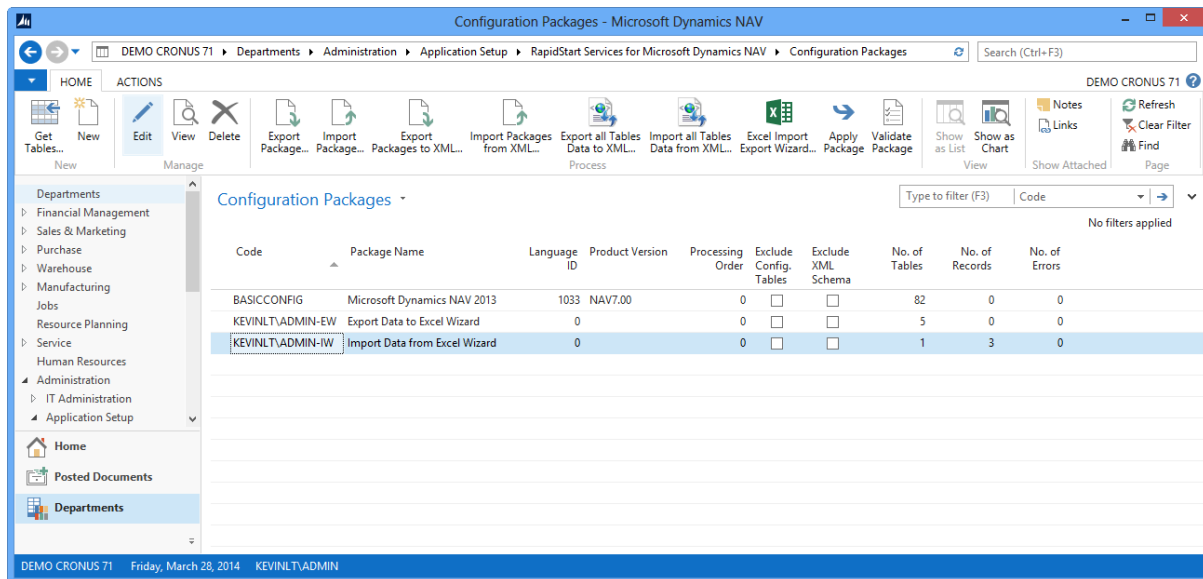
Microsoft Dynamics NAV

Select Worksheet to Import Data:

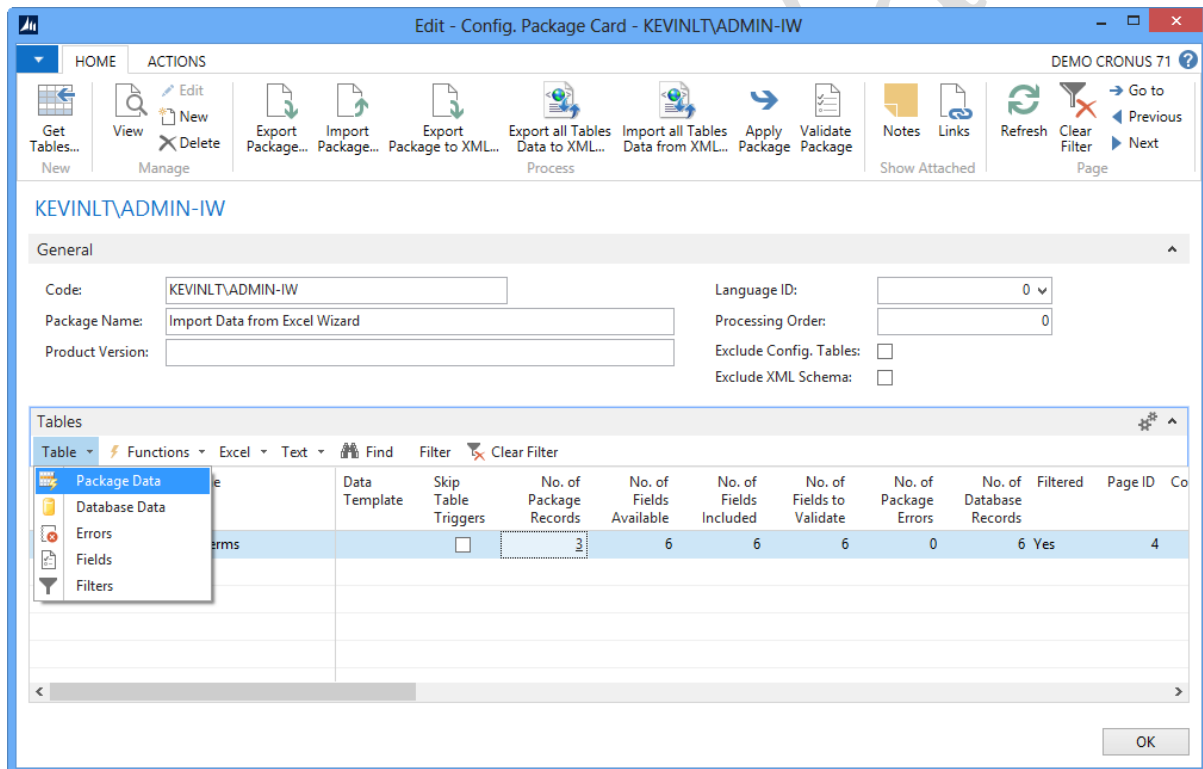
☒ PaymentTerms
☐ Currency
☐ CustomerPriceGroup
☐ StandardText
☐ Language

OK Cancel

You can apply remaining rows before importing another table by editing import package:



Click Table → Package Data as below figure:



Select desired rows by using Ctrl key and mouse, click Apply Data to import.

Invalid	Code	Due Date Calculation	Discount Date Calculation	Discount %
<input checked="" type="checkbox"/>	1M(8D)	1M	8D	2
<input type="checkbox"/>	CM	CM		0
<input type="checkbox"/>	COD	0D		0

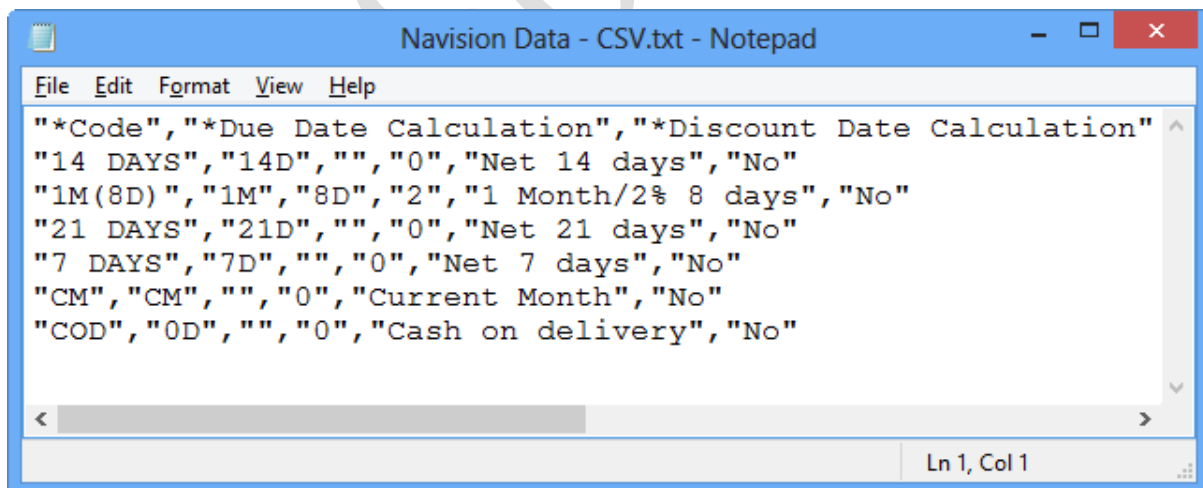
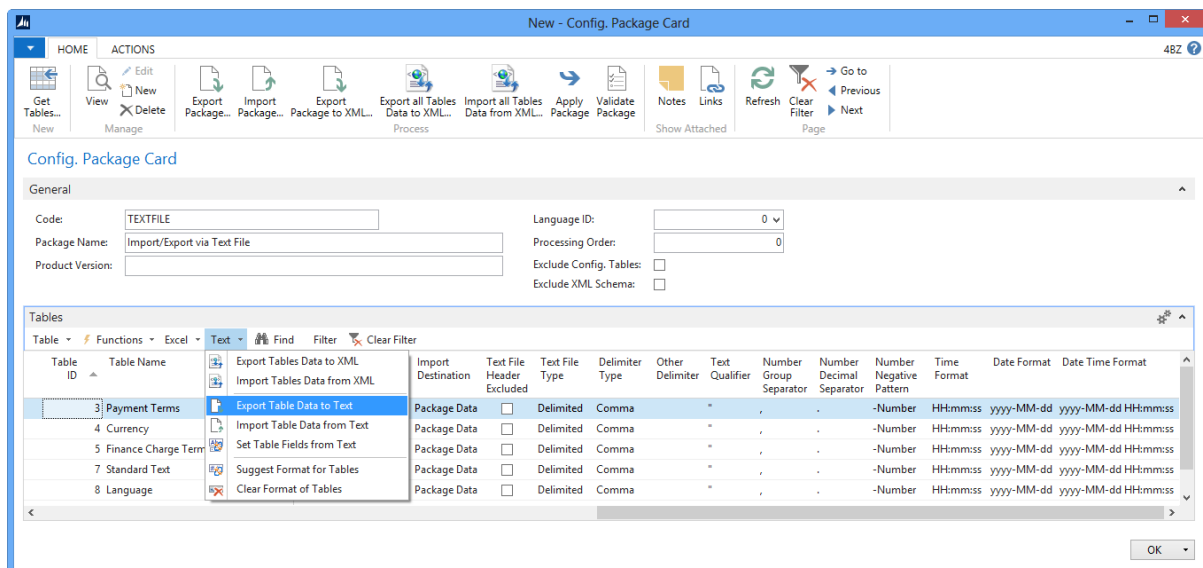
Close page and Configuration Package Card to finish.

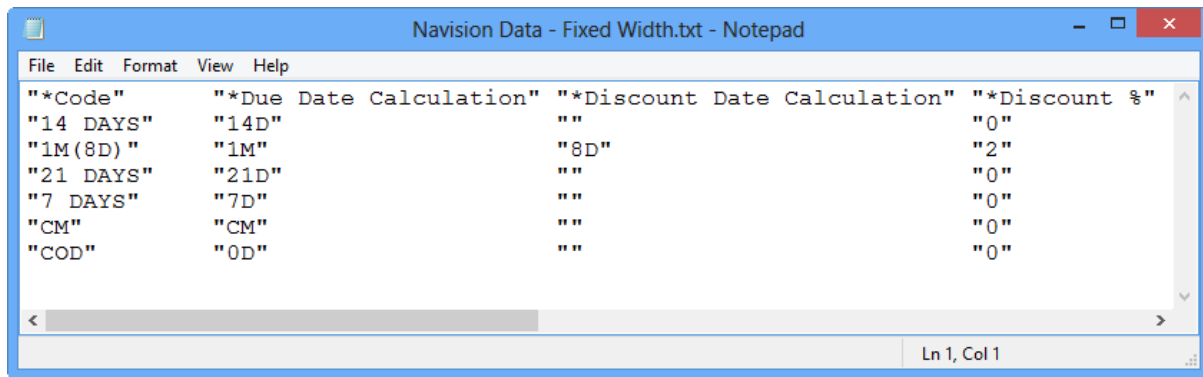
3.3 Export Table Data to Text File

Import/Export Table Data via Text file applies for a table, i.e., a text file contains data of one table.

Perform below steps to export table data to text file:

1. Create new or use existed Configuration Package and Table.
2. Check Table Setup.
3. Check Field Setup.
4. Optionally filter data to export.
5. Select Table to export.



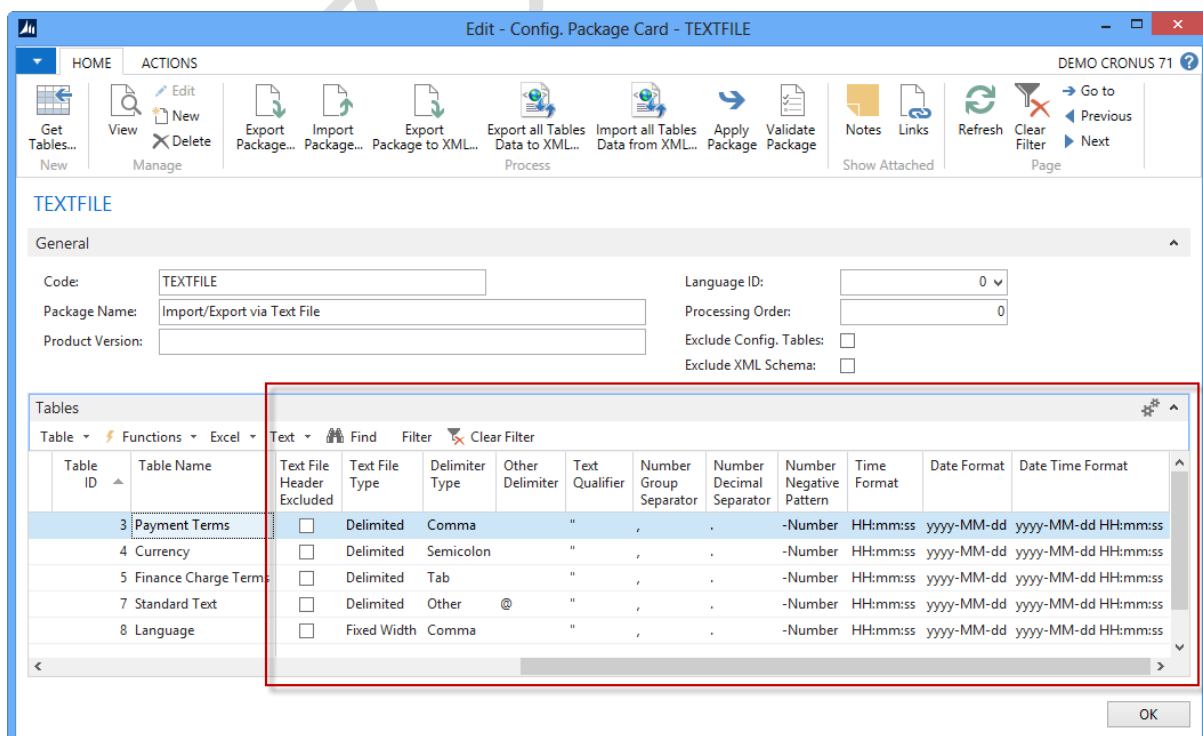


Check Table Setup includes:

1. Text File Header Excluded: true if you do not want to export fields' name as first line.
2. Text File Type: available values are Delimited or Fixed Width. Delimiter Type can be Comma, Semicolon, Tab, Space, or defined in Other Delimiter column.
3. Text Qualifier: used to bound data text.
4. Number Format: specify
 - o Group Separator (Thousand Separator)
 - o Decimal Separator
 - o Negative Pattern
5. Time, Date and Date Time Format: specify Custom Date and Time Format Strings. You can refer to [http://msdn.microsoft.com/en-us/library/8kb3ddd4\(v=vs.110\).aspx](http://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx) for full picture.

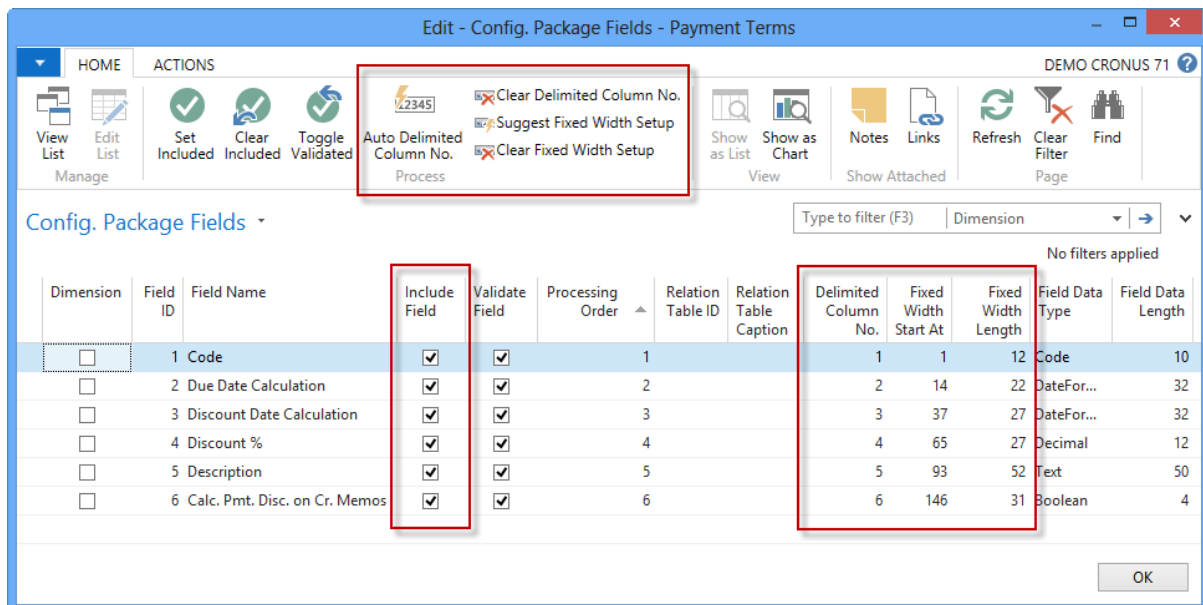
Some common format strings are

- o HH:mm:ss 20:21:22
- o hh:mm tt 08:21 PM
- o yyyy-MM-dd 2014-12-31
- o dd MMM yyyy 31 Dec 2014



Check Field Setup includes:

1. Include Field: determine exported fields. After setting Include Field, you can rearrange Delimited Column No. or Fixed Width setup by using Auto Delimited Column No. or Suggest Fixed Width Setup actions on Ribbon.
2. Delimited Column No.: order of column for Delimited Type.
3. Fixed Width Start At, Fixed Width Length: start position, length of data for Fixed Width Type.



Use Delimited Text File is better than Fixed Width Text File for some reasons:

1. Size of file is smaller due to no space between data columns.
2. Fixed Width Text File may reach maximum characters (3640) per line, e.g., Item table.
3. To preview data in Excel, convert Text to Columns is faster.

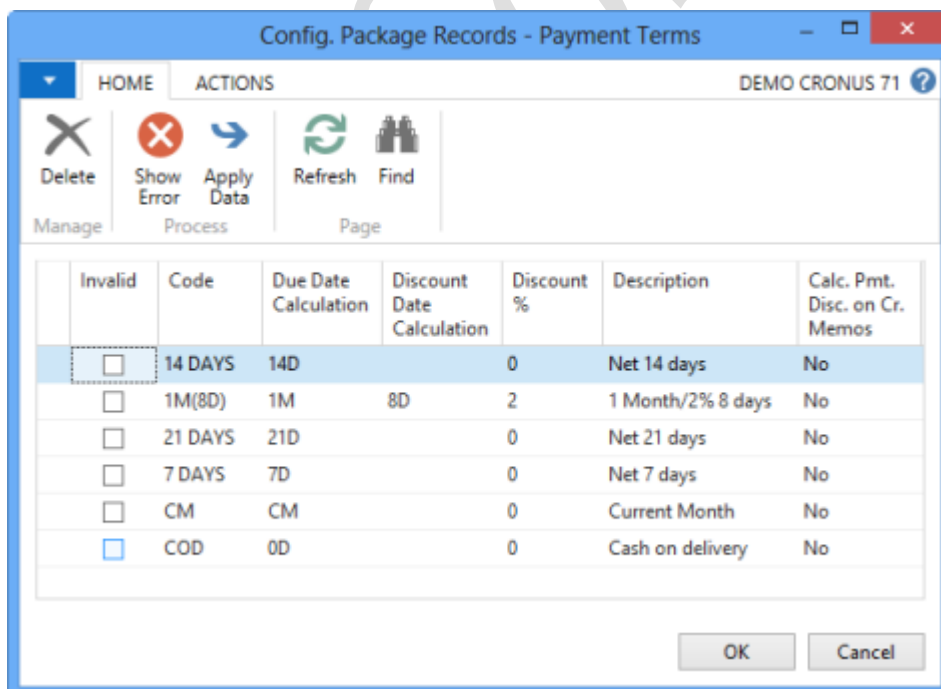
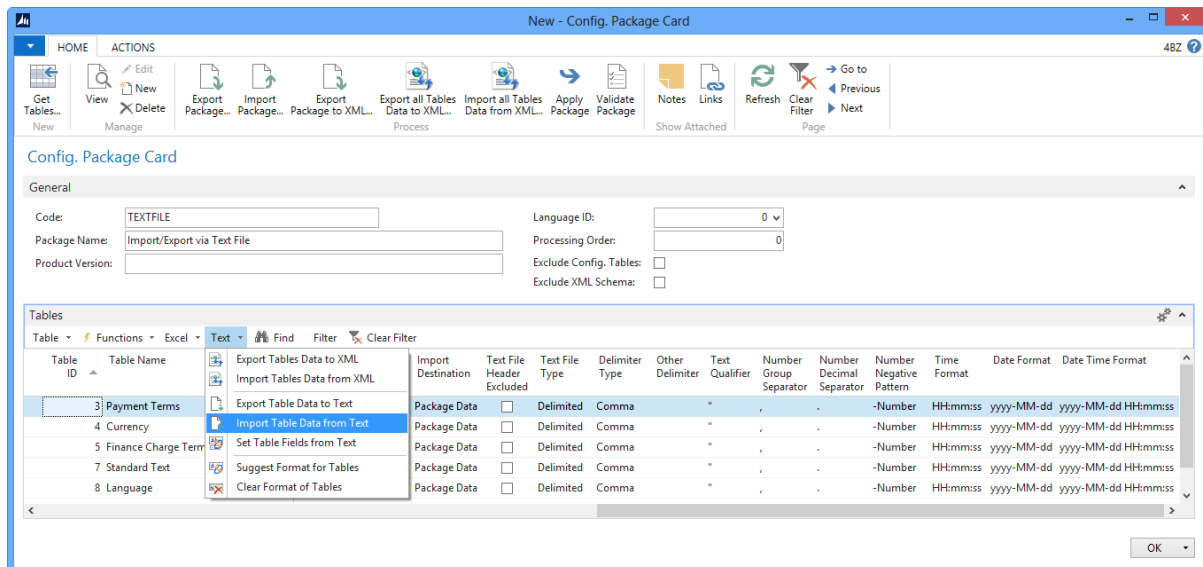
You should use Libre Office Calc to edit Delimited Text File. Please refer to [section 3.9](#) (2. Update dimensions in Delimited Text file using Microsoft Excel or Libre Office Calc)!

3.4 Import Table Data from Text File

Import/Export Table Data via Text file applies for a table, i.e., a text file contains data of one table.

Perform below steps to import table data from text file:

1. Create new or use existed Configuration Package and Table.
2. Check Table Setup.
3. Check Field Setup.
4. Select Table to import.



Besides Check Table Setup as Export, Check Table Setup for Import includes:

1. Skip Table Triggers: true if you do not want to fire OnInsert or OnModify Record triggers.
2. Import Destination: Package Data if you want to preview data before applying to Database. Otherwise, system will import to Database directly.

Besides Check Field Setup as Export, Check Field Setup for Import includes:

1. Validate Field: true if you want to fire Field Validate trigger. You can toggle Validate Field.

Page 32 of 58

3.5 Set Table Fields from Text File

Set fields of a table to import data from delimited or fixed width text file sometimes takes time and easily makes mistake. This section helps you cover it by setting below properties:

1. Include Field: true if Field Name existed in text file.
2. Validate Field: true if there is star character "*" before Field Name.
3. Delimited Column No.: be adjusted when table is set as Delimited Text File Type.
4. Fixed Width Start At: be adjusted when table is set as Fixed Width Text File Type.
5. Fixed Width Length: be adjusted when table is set as Fixed Width Text File Type.

Dimension	Field ID	Field Name	Include Field	Validate Field	Processing Order	Relation Table ID	Relation Table Caption	Delimited Column No.	Fixed Width Start At	Fixed Width Length	Field Data Type	Field Data Length
<input type="checkbox"/>	1	Code	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1			1	1	12	Code	10
<input type="checkbox"/>	2	Due Date Calculation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2			2	14	23	DateFormula	32
<input type="checkbox"/>	3	Discount Date Calculation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3			3	38	28	DateFormula	32
<input type="checkbox"/>	4	Discount %	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4			4	67	27	Decimal	12
<input type="checkbox"/>	5	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5			5	95	52	Text	50
<input type="checkbox"/>	6	Calc. Pmt. Disc. on Cr. Memos	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	6			6	148	32	Boolean	4

Before setting table fields from text file, you should check:

1. Text File Type, Delimiter Type, Other Delimiter: Delimited or Fixed Width as input text file.
2. Text Qualifier: used to bound data text.
3. It is recommended to process new file with top 10 copied rows; especially size of file is big. System deletes existed package data and analyses the first line only.

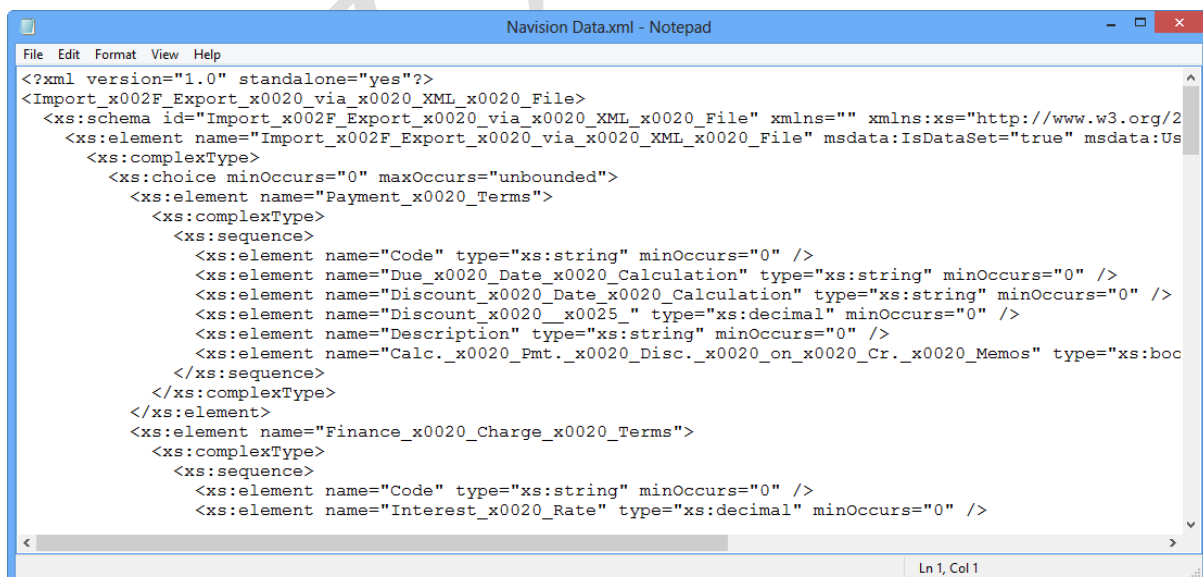
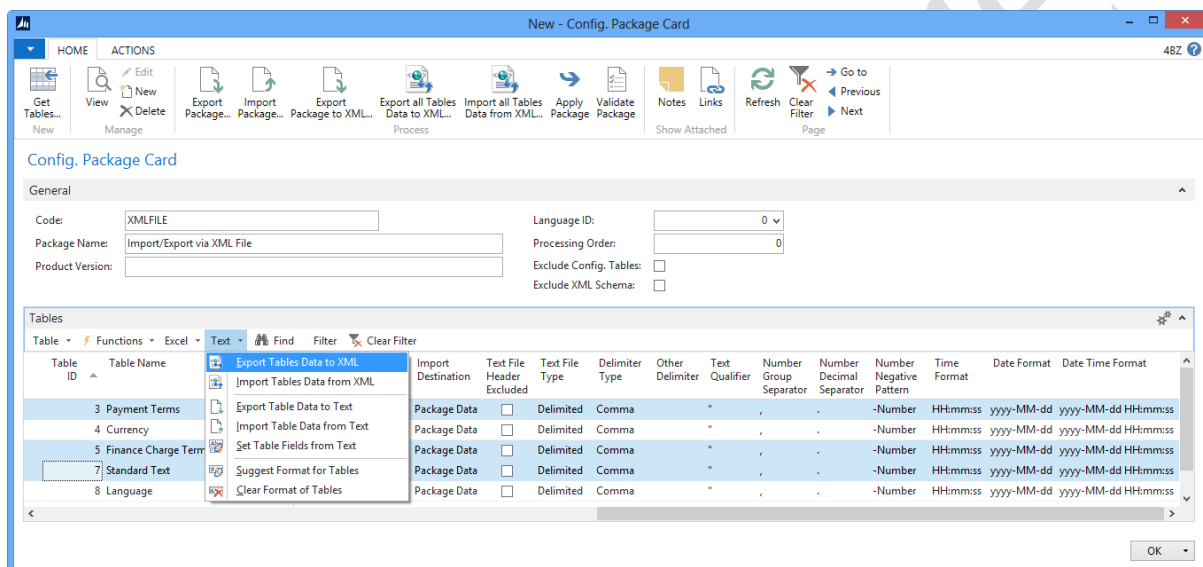
Table ID	Table Name	Export Tables Data to XML	Import Tables Data from XML	Text File Header Excluded	Text File Type	Delimiter Type	Other Delimiter	Text Qualifier	Number Group Separator	Number Decimal Separator	Number Negative Pattern	Time Format	Date Format	Date Time Format
3	Payment Terms	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Delimited	Comma	*	"	,	.	-Number	HH:mm:ss	yyyy-MM-dd	yyyy-MM-dd HH:mm:ss
4	Currency	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Delimited	Comma	*	"	,	.	-Number	HH:mm:ss	yyyy-MM-dd	yyyy-MM-dd HH:mm:ss
5	Finance Charge Term	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Delimited	Comma	*	"	,	.	-Number	HH:mm:ss	yyyy-MM-dd	yyyy-MM-dd HH:mm:ss
7	Standard Text	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Delimited	Comma	*	"	,	.	-Number	HH:mm:ss	yyyy-MM-dd	yyyy-MM-dd HH:mm:ss
8	Language	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Delimited	Comma	*	"	,	.	-Number	HH:mm:ss	yyyy-MM-dd	yyyy-MM-dd HH:mm:ss

3.6 Export Tables Data to XML File

Import/Export Tables Data via XML file applies for multi tables, i.e., a text file contains data of tables. It is the best way to exchange data as it keeps data type information in XML Schema and plays an increasingly important role in the exchange of a wide variety of data.

Perform below steps to export tables' data to XML file:

1. Create new or use existed Configuration Package and Tables.
2. Check Exclude XML Schema: true if you want to exclude XML Schema from output XML file.
3. Check Include Field: select fields for each table that you want to export.
4. Optionally filter data to export for each table.
5. Select Tables to export: you can use Ctrl key and mouse to select multi tables.

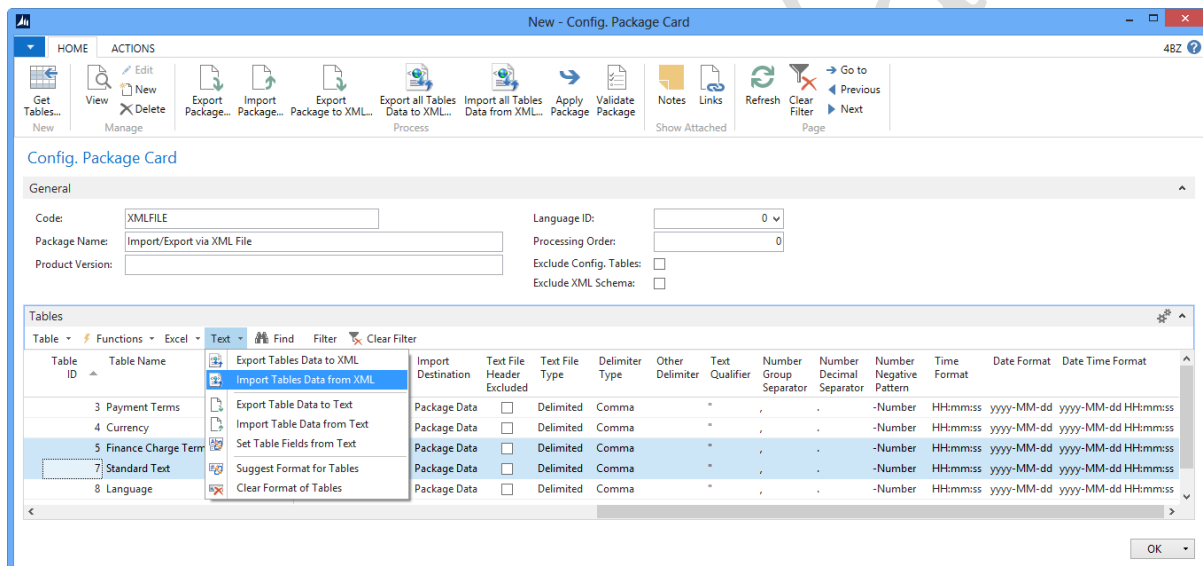


3.7 Import Tables Data from XML File

Import/Export Tables Data via XML file applies for multi tables, i.e., a text file contains data of tables. It is the best way to exchange data as it keeps data type information in XML Schema and plays an increasingly important role in the exchange of a wide variety of data.

Perform below steps to import tables' data from XML file:

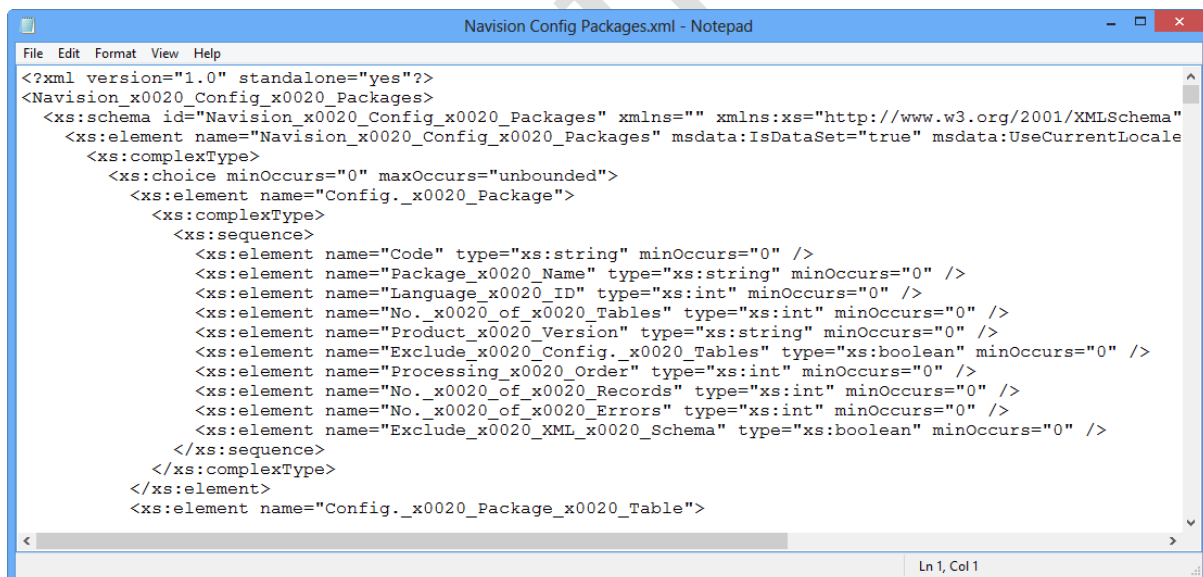
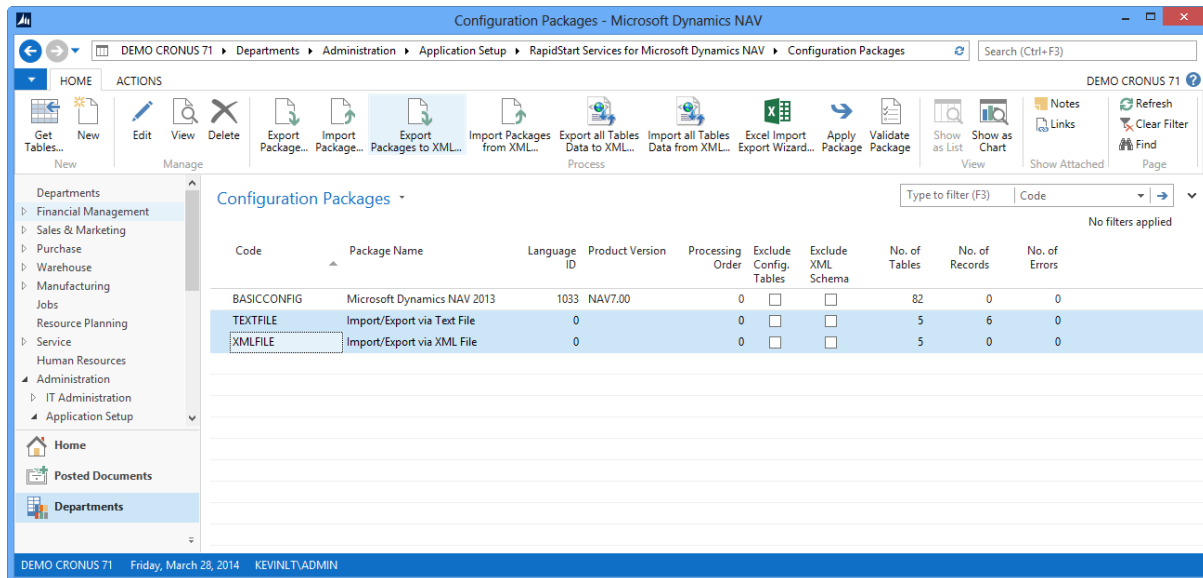
1. Create new or use existed Configuration Package and Tables.
2. Check Exclude XML Schema: true if input XML file does not contain schema.
3. Skip Table Triggers: true if you do not want to fire OnInsert or OnModify Record triggers.
4. Import Destination: Package Data if you want to preview data before applying to Database. Otherwise, system will import to Database directly.
5. Check Include Field: select fields for each table that you want to import.
6. Validate Field: true if you want to fire Field Validate trigger. You can toggle Validate Field.
7. Select Tables to import: you can use Ctrl key and mouse to select multi tables. System only imports selected tables even if input XML file contains more tables' data than selected.



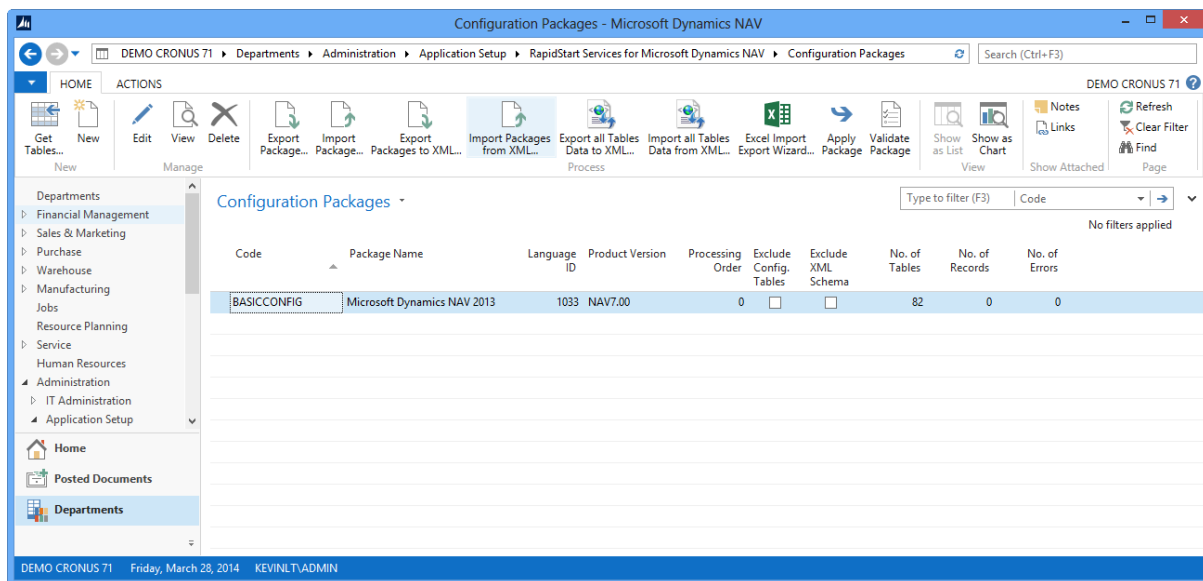
3.8 Import/Export Configuration Packages Definition via XML File

Import/Export Configuration Packages Definition helps you copy Configuration Packages Definition from one system to another via XML file. You don't need to re-define Configuration Packages at destination system for importing data of tables.

To export at source system, select packages and click Export Packages to XML action on the Ribbon:



To import at destination system, just click Import Packages from XML action on the Ribbon:



3.9 Import Data with Dimensions

Tool supports import Data with Dimensions such as General/Cash Receipt/Payment Journals, Item Journals, Sales/Purchase Documents, ... Data have Dimensions when they got Dimension Set ID field.

Process to import Data with Dimensions including:

1. Add Dimensions in Configuration Package Fields.
2. Export Template with blank Dimension columns to Excel file.
3. Fill in Data with Dimensions.
4. Import the Excel file.

1. Add Dimensions in Configuration Package Fields:

In Config. Package Card, select table that you want to add dimensions, then click Table → Fields:

Edit - Config. Package Card - DATA WITH DIMENSIONS

HOME ACTIONS DEMO ?

Get Tables... View Export Package... Import Package... Export Package to XML... Notes Links Refresh Previous Clear Filter Next Go to

DATA WITH DIMENSIONS

General

Code: DATA WITH DIMENSIONS Language ID: 0

Package Name: Import data with Dimensions Processing Order: 0

Product Version: Exclude Config. Tables: ☐ Exclude XML Schema: ☐

Config. Package Subform

Table Functions Excel Text New Find Filter Clear Filter

Table ID	Table Name	No. of Package Records	No. of Database Records	Data Template	Skip Table Triggers	No. of Fields Available
81	Gen. Journal Line	0	18		<input type="checkbox"/>	171

Package Data Database Data Errors Fields Filters

OK

Config. Package Fields appears, click Add Dimensions action to add Dimension Fields as below:

Dimension	Field ID	Field Name	Include Field	Validate Field	Processing Order	Relation Table ID	Relation Table Caption	Create Missing Codes	Mapping Exists	Delimited Column No.	Fixed Width Start At	Fixed Width Length	Field Data Type	Field Data Length	Field Class
<input type="checkbox"/>	5617	Source Line No.	<input type="checkbox"/>	<input type="checkbox"/>	162			<input type="checkbox"/>	No				Integer	4	Normal
<input type="checkbox"/>	5618	Comment	<input type="checkbox"/>	<input type="checkbox"/>	163			<input type="checkbox"/>	No				Text	250	Normal
<input checked="" type="checkbox"/>	999999001	#AREA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	999999001			<input type="checkbox"/>	No	9	213	22	Code	20	Dimension
<input checked="" type="checkbox"/>	999999003	#BUSINESSGROUP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	999999003			<input type="checkbox"/>	No	10	235	22	Code	20	Dimension
<input checked="" type="checkbox"/>	999999005	#CUSTOMERGROUP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	999999005			<input type="checkbox"/>	No	11	257	22	Code	20	Dimension
<input checked="" type="checkbox"/>	999999007	#DEPARTMENT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	999999007			<input type="checkbox"/>	No	12	279	22	Code	20	Dimension
<input checked="" type="checkbox"/>	999999009	#PROJECT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	999999009			<input type="checkbox"/>	No	13	301	22	Code	20	Dimension
<input checked="" type="checkbox"/>	999999011	#PURCHASER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	999999011			<input type="checkbox"/>	No	14	323	22	Code	20	Dimension
<input checked="" type="checkbox"/>	999999013	#SALESCAMPAIGN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	999999013			<input type="checkbox"/>	No	15	345	22	Code	20	Dimension
<input checked="" type="checkbox"/>	999999015	#SALESPERSON	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	999999015			<input type="checkbox"/>	No	16	367	22	Code	20	Dimension

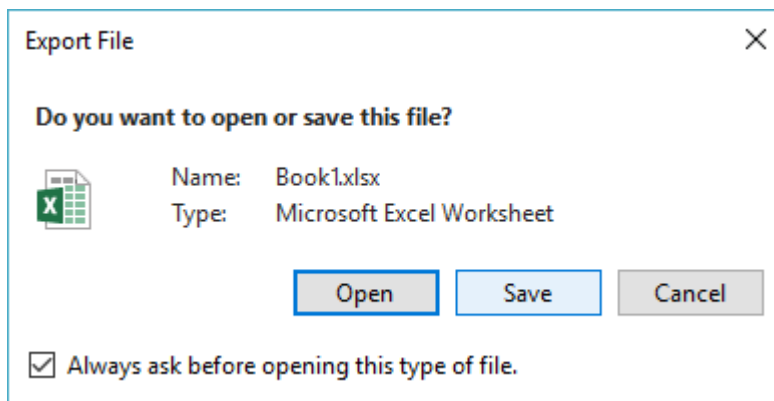
Include desired Dimension Fields, then click OK button. Repeat step 1 for needed tables.

2. Export Template with blank Dimension columns to Excel file:

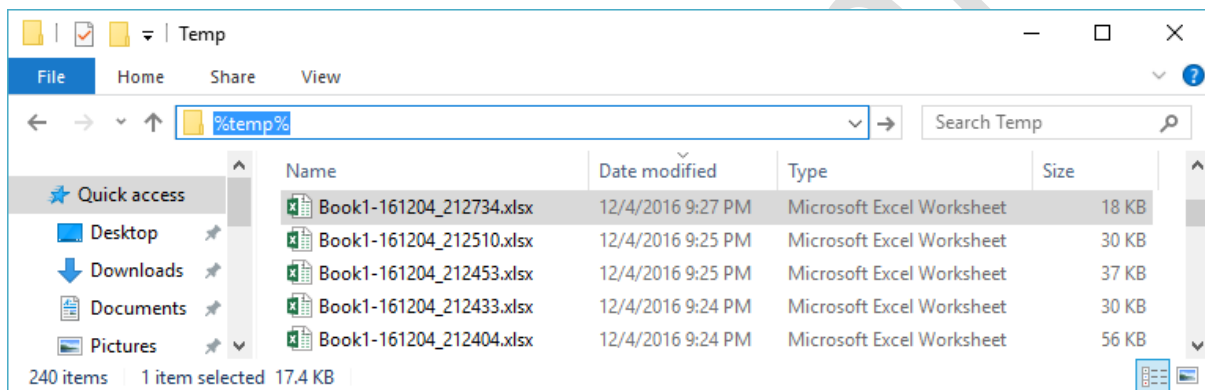
Back to Config. Package Card, select desired tables, then click Excel → Export to Template as below:

Table	Functions	Excel	Text	New	Find	Filter	Clear Filter
Table Name	Export to Excel	Import from Excel					
Gen. Journal Line	Export to Template	Import from Template					

Open or save dialog box appears, click Save button to save the Excel file:

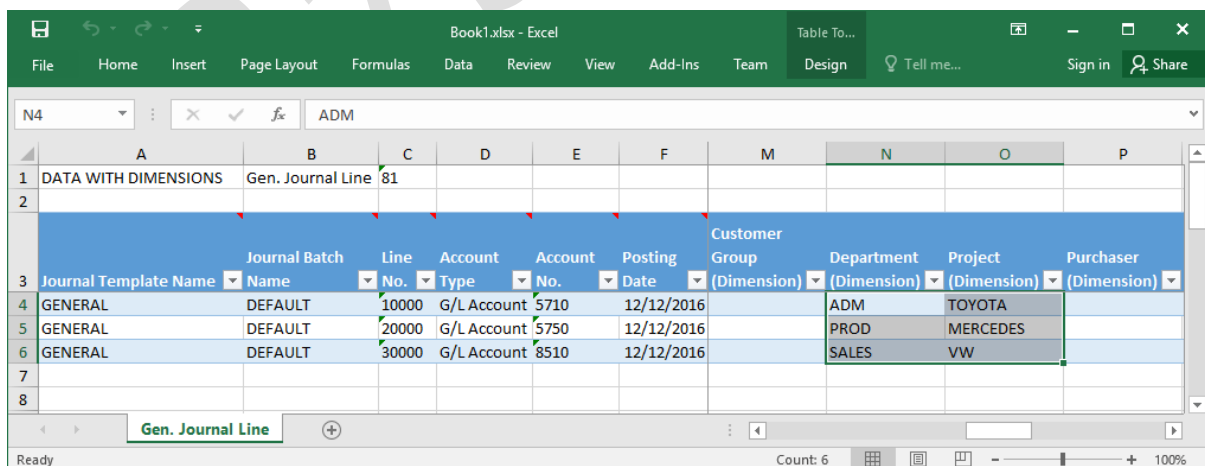


In case you clicked Open file, remember to Save As exported Excel file to desired folder. Otherwise, they are in Windows temporary folder, type %temp% in Windows Explorer to open them:



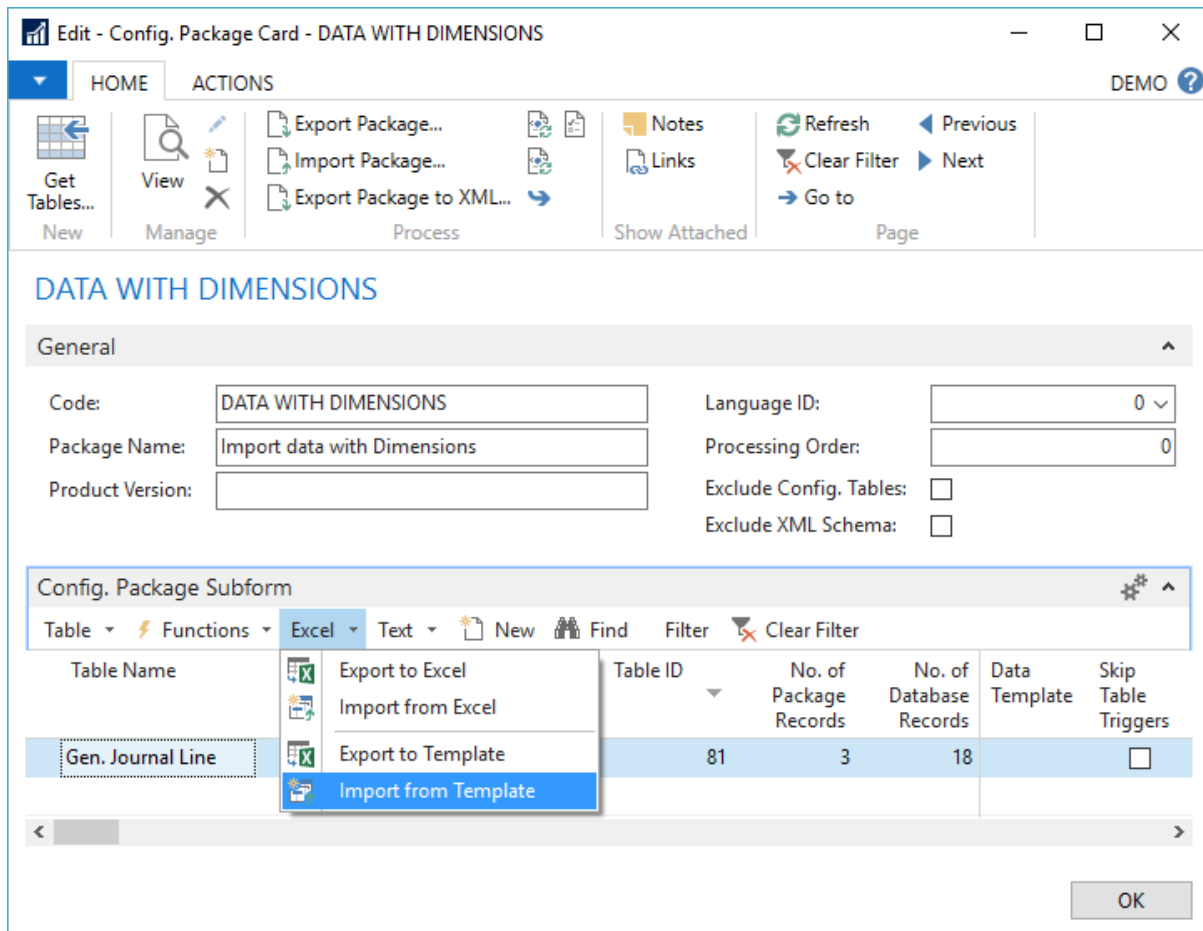
3. Fill in Data with Dimensions:

Now you fill in Data with Dimensions and save it:

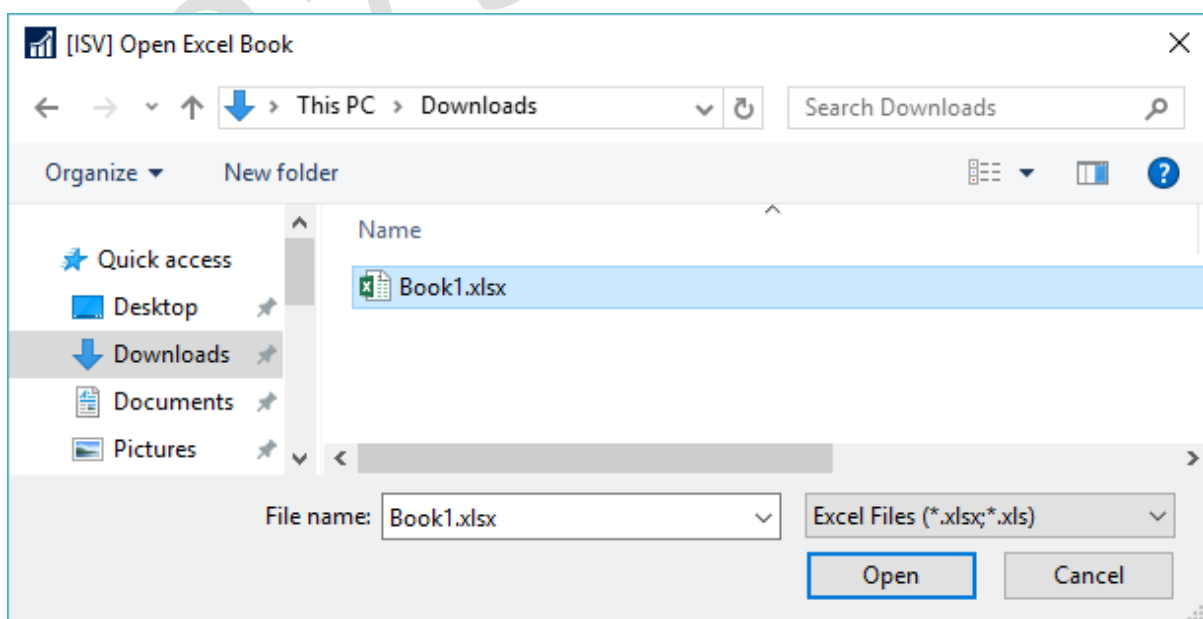


4. Import the Excel file:

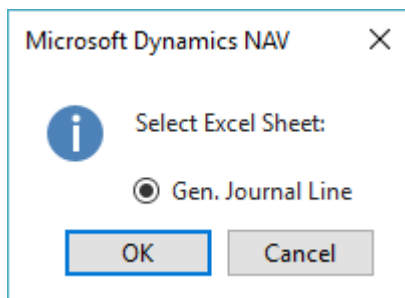
Back to Config. Package Card, select the table, then click Excel → Import from Template:



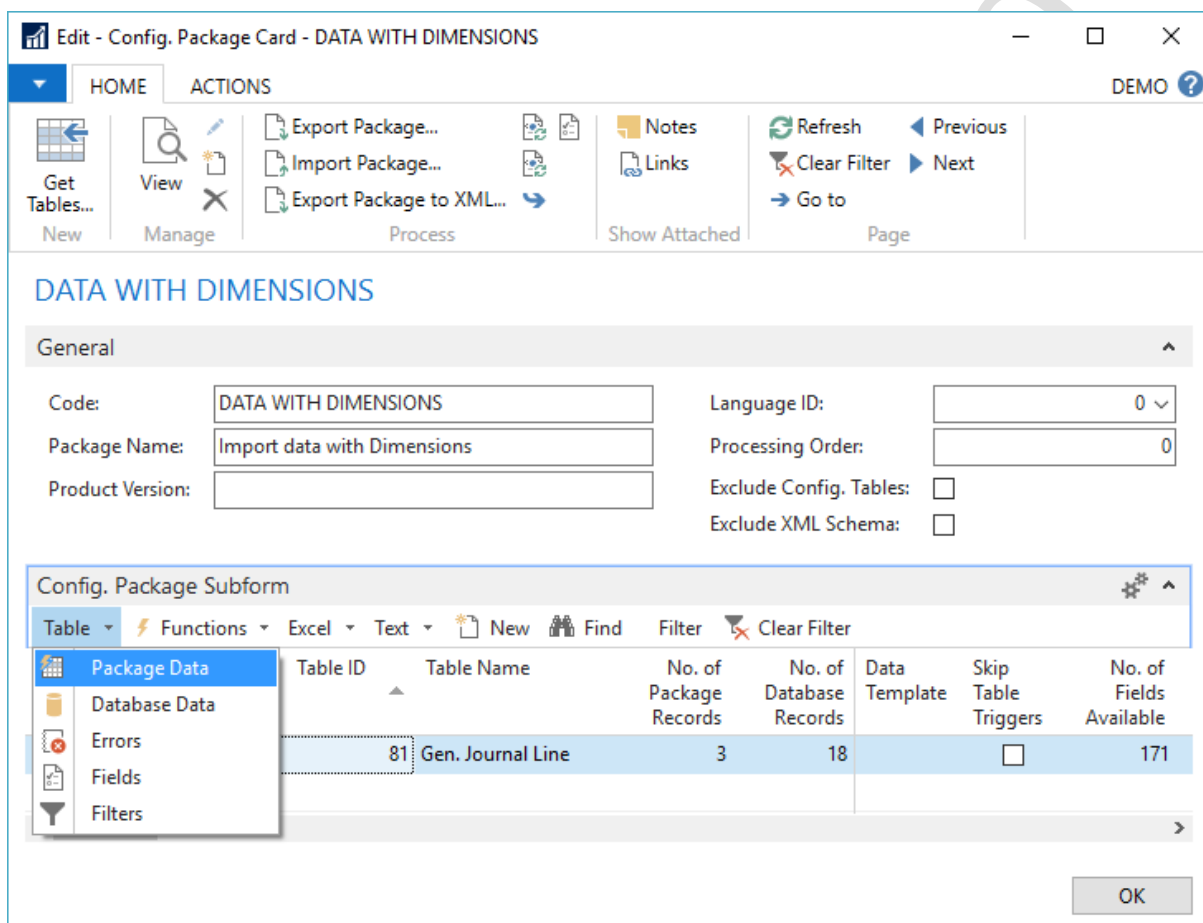
Select your Excel file from Open dialog, then click Open button:



Select Excel Sheet, and click OK button:



Review Package Data as following picture:



You can click Dimensions action to review Dimensions of current Package Record:

Edit - Dimension Set ID 161 - Edit Dimension ...

HOME

DEMO ?

NEW View List Edit List Delete Refresh Clear Filter Find

Manage

Edit Dimension Set Entries

Type to filter (F3) Dimension Code

Dimension Code	Dimension Value Code	Dimension Value Name
DEPARTMENT	ADM	Administration
PROJECT	TOYOTA	Toyota Supra 3.0

OK

Journal Batch Name Dimension Set ID

DEFAULT	161
DEFAULT	154
DEFAULT	87

OK Cancel

Select Package Records that you want to import to Database, then click Apply Data action:

Config. Package Records - Gen. Journal Line

HOME ACTIONS

DEMO ?

Delete Show Error Dimensions Process Data Apply Data Refresh Find

Manage Process Page

Invalid	Journal Template Name	Line No.	Account Type	Account No.	Posting Date	Document Type	Document No.	Description	Amount	Journal Batch Name	Dimension Set ID
<input checked="" type="checkbox"/>	GENERAL	10000	G/L Account	5710	12/12/16	DEMO		Fuel Tax	100	DEFAULT	161
<input checked="" type="checkbox"/>	GENERAL	20000	G/L Account	5750	12/12/16	DEMO		CO2 Tax	200	DEFAULT	154
<input checked="" type="checkbox"/>	GENERAL	30000	G/L Account	8510	12/12/16	DEMO		Gasoline and Motor Oil	300	DEFAULT	87

OK Cancel

Review your imported data:

Edit - General Journal - DEFAULT-Default Journal Batch

HOME ACTIONS NAVIGATE

DEMO ?

Delete Post Post and Print Get Standard Journals... Save as Standard Journal... Dimensions Reconcile Apply Entries... Refresh Find

Manage Process Bank Application Page

General Journal

DEMO Document No.

Batch Name: DEFAULT

Posting Date	Document Type	Document No.	Account Type	Account No.	Description
12/12/2016		DEMO	G/L Account	5710	Fuel Tax
12/12/2016		DEMO	G/L Account	5750	CO2 Tax
12/12/2016		DEMO	G/L Account	8510	Gasoline and Motor Oil

Account Name Bal. Account Name Balance Total Balance

CO2 Tax		300.00	600.00
---------	--	--------	--------

Dimensions

Dimension Code	Dimension Value Code	Dimension Value Name
DEPARTMENT	PROD	Production
PROJECT	MERCEDES	Mercedes 300

Incoming Document Files

View File Attach File

OK

3.10 Skip updating existing Database Records

Sometimes your data source contains both new and existing data in system, and you want to import new data only. It is archived by option “Skip Existing Records” in Config. Package Card:

IMPORT SKIP EXISTING

General

Code: IMPORT SKIP EXISTING Language ID: 0

Package Name: Import data skip updating existing db records Processing Order: 0

Product Version: Exclude Config. Tables: ☐

Exclude XML Schema: ☐

Tables

Table ID	Table Name	No. of Package Records	No. of Database Records	Import Destination	Skip Existing Records	Text File Header Excluded	Text File Type	Delimiter Type
18	Customer	0	68	Package Data	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Delimited	Comma
21	Cust. Ledger Entry	0	67	Database	<input type="checkbox"/>	<input type="checkbox"/>	Delimited	Comma

OK

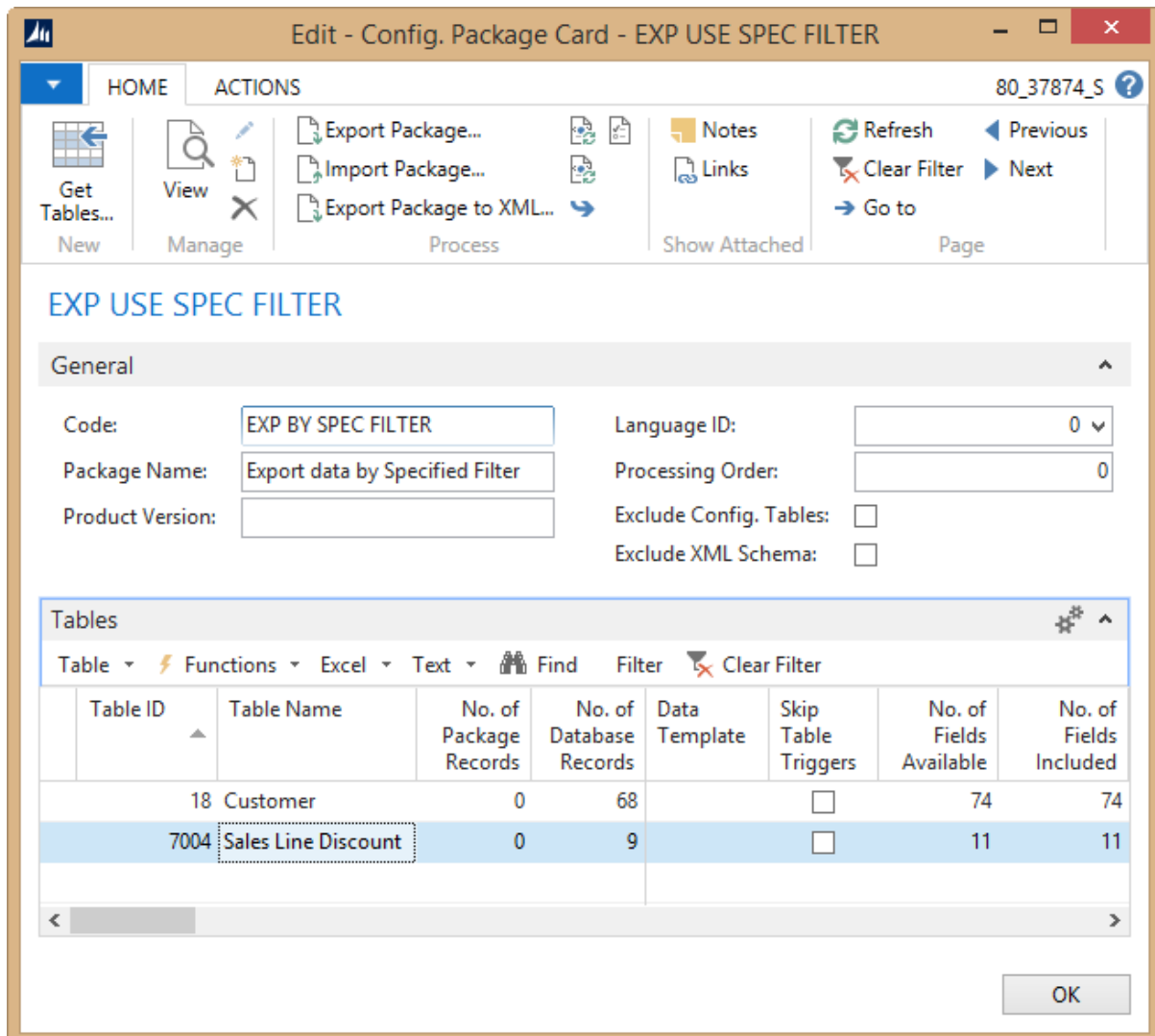
Tool supports Skip Existing Records for both Package Data and Database Import Destination.

3.11 Export data by Specified Filter

There is requirement for exporting Sales Line Discount that belongs to some filtered Customers. You want to filter Customer only and let system filter Sales Line Discount accordingly. Tool supports it.

Customer (main table) and Sales Line Discount (dependent table) are a sample. You can use it with other main and dependent tables such as Item and Sales Price, Sales Line Discount, Purchase Price, Purchase Line Discount; Vendor and Purchase Price, Purchase Line Discount, Default Dimension ...

1. Select Customer and Sales Line Discount in the same Config. Package:



Edit - Config. Package Card - EXP USE SPEC FILTER

80_37874_S ?

HOME ACTIONS

Get Tables... View Export Package... Import Package... Export Package to XML... Notes Links Refresh Clear Filter Go to Previous Next

EXP USE SPEC FILTER

General

Code: EXP BY SPEC FILTER Language ID: 0

Package Name: Export data by Specified Filter Processing Order: 0

Product Version: Exclude Config. Tables: ☐ Exclude XML Schema: ☐

Tables

Table ID	Table Name	No. of Package Records	No. of Database Records	Data Template	Skip Table Triggers	No. of Fields Available	No. of Fields Included
18	Customer	0	68		<input type="checkbox"/>	74	74
7004	Sales Line Discount	0	9		<input type="checkbox"/>	11	11

OK

2. Filter Customer table, field ID 1 (No.) as below:

Edit - Config. Package Filters

HOME 80_37874_S ?

New View List Edit List Delete Show as List Show as Chart Notes Links Refresh Clear Filter Find

Config. Package Filters Type to filter (F3) Field ID No filters applied

Field ID	Field Name	Field Caption	Field Filter	Use Specified Filter	Specified Filter Table ID	Specified Filter Field ID	Specified Filter Expression	Specified Filter Table Name	Specified Filter Field Name
1	No.	No.	3*	<input type="checkbox"/>	18	1	3*	Customer	No.

OK

3. Filter Sales Line Discount table, field ID 2 (Sales Code) as below:

- Use Specified Filter: True.
- Specified Filter Table ID: 18.
- Specified Filter Field ID: 1.

Edit - Config. Package Filters

HOME 80_37874_S ?

New View List Edit List Delete Show as List Show as Chart Notes Links Refresh Clear Filter Find

Config. Package Filters Type to filter (F3) Field ID No filters applied

Field ID	Field Name	Field Caption	Field Filter	Use Specified Filter	Specified Filter Table ID	Specified Filter Field ID	Specified Filter Expression	Specified Filter Table Name	Specified Filter Field Name
2	Sales Code	Sales Code	3*	<input checked="" type="checkbox"/>	18	1	3*	Customer	No.
13	Sales Type	Sales Type	Customer	<input type="checkbox"/>					

OK

Now you can export data.

For next time, just edit No. filter of Customer table and export data.

3.12 Import/Export Table Data for Duplication

“Is there a workaround for copying an existing Item with all data to a new Item No...” question of KKI on [Microsoft Community](#), and there is no standard way according to all experts’ answers.

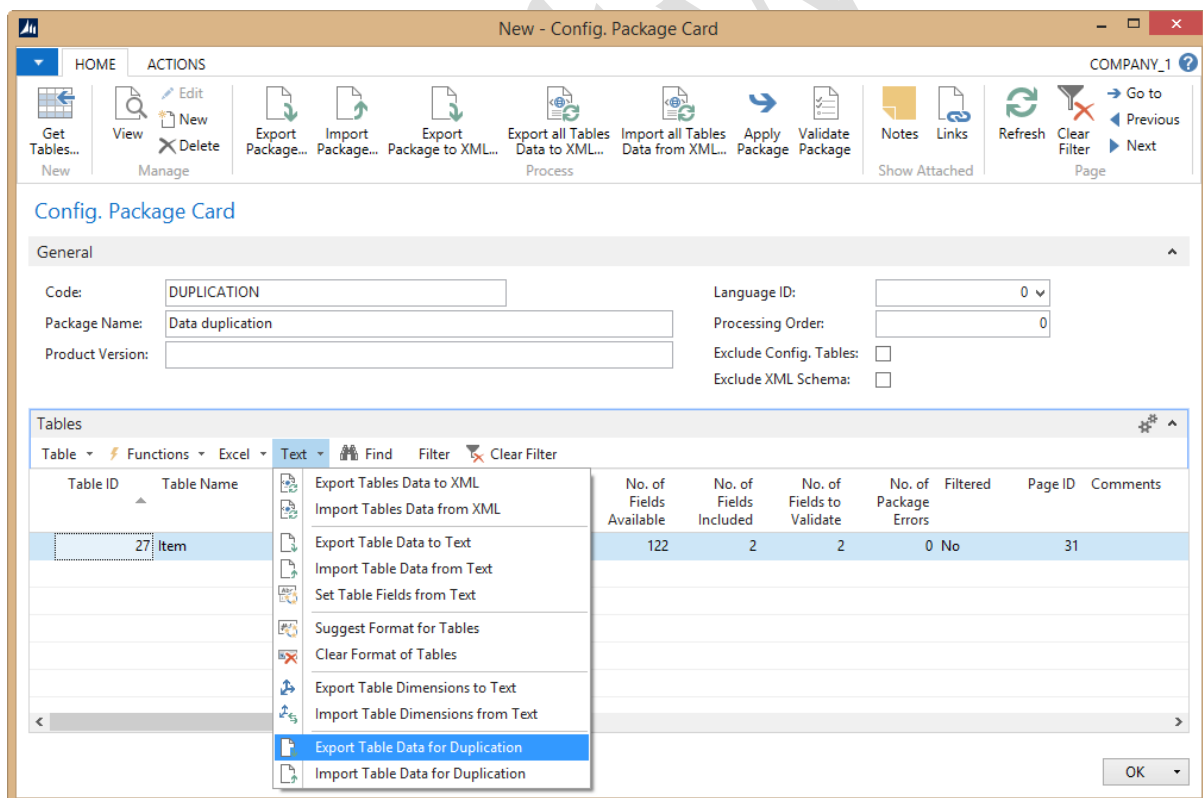
Now you can do it with this tool, not only in same company but also cross companies. All fields are fully transferred to new record including blob fields (picture).

Procedure to copy an existing record to new record:

1. Export Table Data to Delimited Text file including Fields, “To Company Name” field (for duplicating to another company purpose), and New Primary Key Fields.
2. Update Data in Delimited Text file using Microsoft Excel or Libre Office Calc (same 3.9).
3. Import Data from Delimited Text file to Database Records.

1. Export Table Data to Delimited Text file including Fields, “To Company Name” field (for duplicating to another company purpose), and New Primary Key Fields:

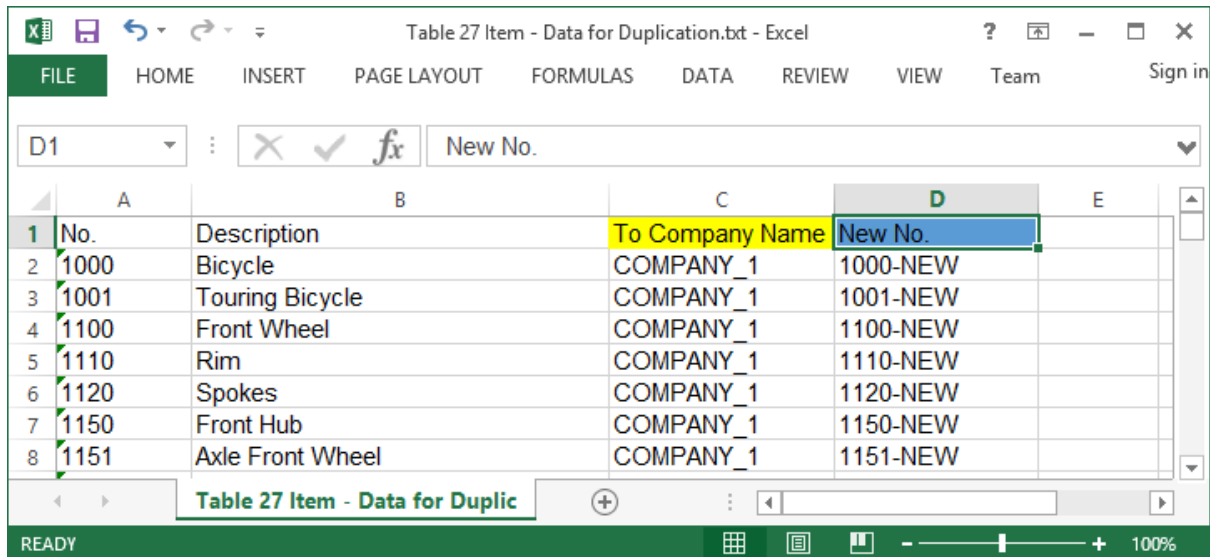
After selecting needed fields and filtering data, click Text → Export Table Data for Duplication:



2. Update Data in Delimited Text file using Microsoft Excel or Libre Office Calc (same 3.9):

How to update data in Delimited Text is same as section 3.9, you can use “Text to Columns” function of Microsoft Excel to edit Delimited Text, and then save as “CSV (Comma delimited) (*.csv)” format.

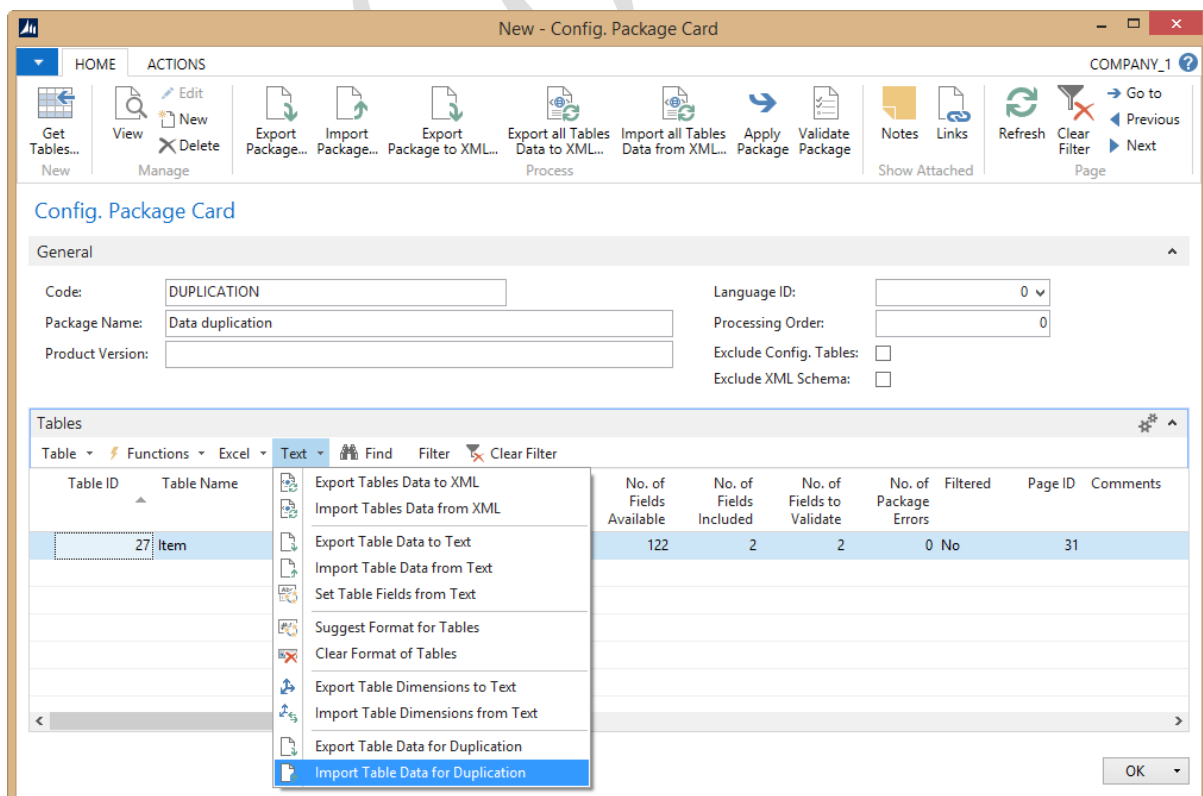
If you want to duplicate data to another company, fill in “To Company Name” column. Columns on the right of “To Company Name” are Primary Key Fields of New Records:



No.	Description	To Company Name	New No.
1000	Bicycle	COMPANY_1	1000-NEW
1001	Touring Bicycle	COMPANY_1	1001-NEW
1100	Front Wheel	COMPANY_1	1100-NEW
1110	Rim	COMPANY_1	1110-NEW
1120	Spokes	COMPANY_1	1120-NEW
1150	Front Hub	COMPANY_1	1150-NEW
1151	Axle Front Wheel	COMPANY_1	1151-NEW

3. Import Data from Delimited Text file to Database Records:

To import back, on the table, click Text → Export Table Data for Duplication:



4. Technical Point of View

4.1 NAV Objects

The customization includes below NAV Objects:

No.	Type	ID	Name	Note
1	Record	8613	Config. Package Table	
2	Record	8616	Config. Package Field	
3	Record	8623	Config. Package	
4	Record	8626	Config. Package Filter	
5	Codeunit	31	NAV Library	Protected Object
6	Codeunit	32	Data Table Library	Protected Object
7	Codeunit	33	Excel Library	Protected Object
8	Codeunit	65	License Management	Protected Object
9	Codeunit	215	Config. Library	Protected Object
10	Page	8614	Config. Package Card	
11	Page	8615	Config. Packages	
12	Page	8623	Config. Package Filters	
13	Page	8624	Config. Package Fields	
14	Page	8625	Config. Package Subform	
15	Page	8626	Config. Package Records	
16	Page	9174	All Objects with Caption	

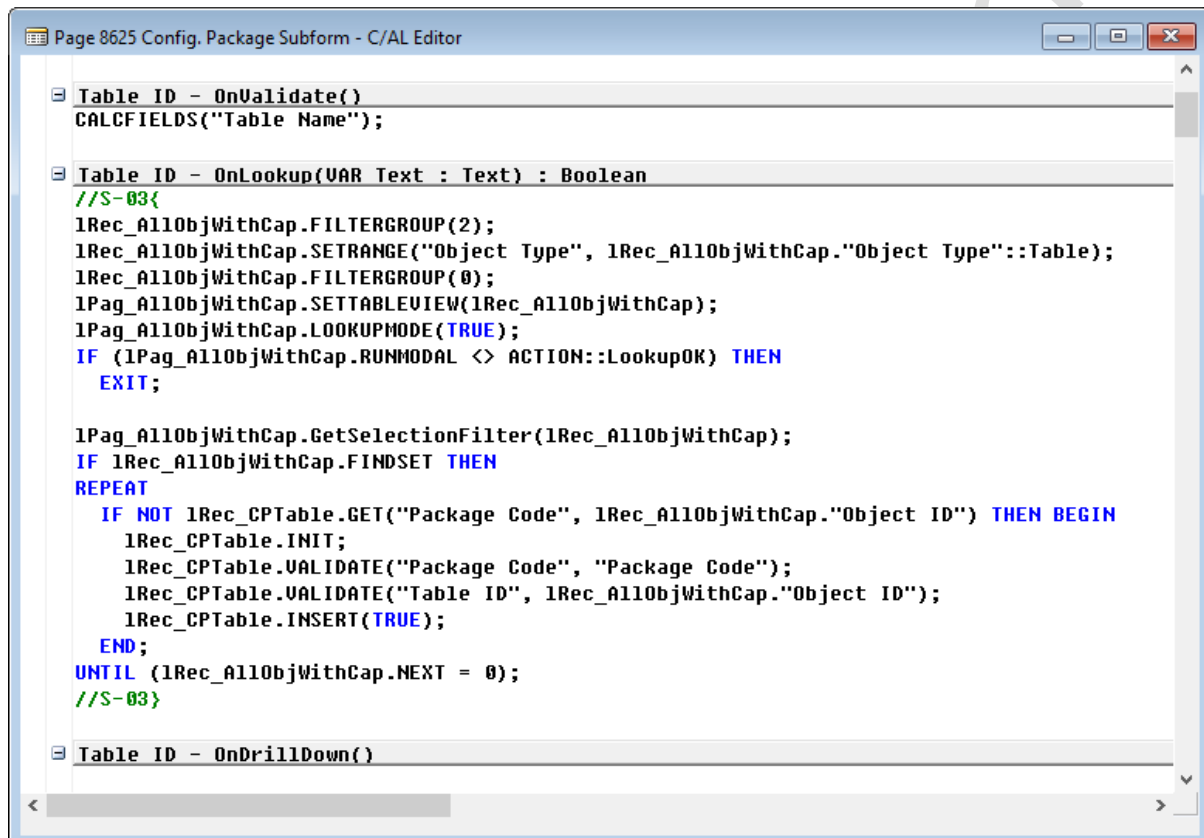
You can list them by filtering Version List column with string *S-03* in Object Designer of Development Environment.

4.2 Merge Objects

Protected Objects (Codeunit 31 to 215) must be merged by 4BzSoftware. First, you export these objects and send to 4BzSoftware. Second, we merge and protect them. Then, we send them back to you. Finally, you import with replace them in Development Environment. Please do not edit or compile Protected Objects, they will be crashed! In case it happen, reimport with replace them by Protected objects from us.

For other objects, if there is no modification before, you simply import with replace them. Otherwise, you merge them by searching for S-03 string, where they were edited:

Code is bounded by "//S-03{" and "//S-03}". Search for "S-03" you can see all:



```

Page 8625 Config. Package Subform - C/AL Editor

Table ID - OnValidate()
CALCFIELDS("Table Name");

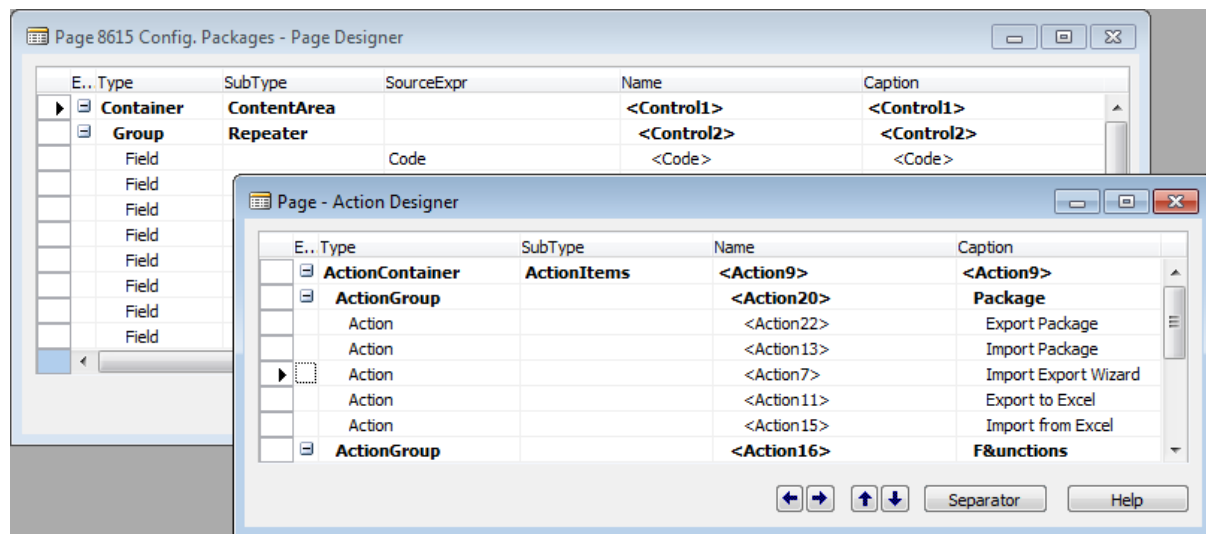
Table ID - OnLookup(VAR Text : Text) : Boolean
//S-03{
1Rec_A110bjWithCap.FILTERGROUP(2);
1Rec_A110bjWithCap.SETRANGE("Object Type", 1Rec_A110bjWithCap."Object Type"::Table);
1Rec_A110bjWithCap.FILTERGROUP(0);
1Pag_A110bjWithCap.SETTABLEVIEW(1Rec_A110bjWithCap);
1Pag_A110bjWithCap.LOOKUPMODE(TRUE);
IF (1Pag_A110bjWithCap.RUNMODAL <> ACTION::LookupOK) THEN
    EXIT;

1Pag_A110bjWithCap.GetSelectionFilter(1Rec_A110bjWithCap);
IF 1Rec_A110bjWithCap.FINDSET THEN
REPEAT
    IF NOT 1Rec_CPTable.GET("Package Code", 1Rec_A110bjWithCap."Object ID") THEN BEGIN
        1Rec_CPTable.INIT;
        1Rec_CPTable.VALIDATE("Package Code", "Package Code");
        1Rec_CPTable.VALIDATE("Table ID", 1Rec_A110bjWithCap."Object ID");
        1Rec_CPTable.INSERT(TRUE);
    END;
UNTIL (1Rec_A110bjWithCap.NEXT = 0);
//S-03}

Table ID - OnDrillDown()

```

Pages often have new fields and actions. They sometimes got code inside:



1. Edit record 8613 – Config. Package Table:
 - Add fields from 56301 to 56333.
 - Add global variable gCoU_NAVLib.
 - Add global text constants gTxC_FieldOverlappedError.
 - Add functions from TextCheckSetup to UpdateExportedInformation.
 - Edit triggers OnInsert, ShowPackageRecords.
2. Edit record 8616 – Config. Package Field:
 - Add fields from 56301 to 56313.
 - Add keys from “Package Code,Table ID,Delimited Column No.” to “Package Code,Table ID,Fixed Width Start At”.
3. Edit record 8623 – Config. Package:
 - Add field 56301.
 - Add global variable gCoU_NAVLib.
 - Add global text constants from gTxC_NAVConfigPackages to gTxC_PercentCompleted4.
 - Add functions from PackagesToDataSet to PackagesFromDataSet.
4. Edit record 8626 – Config. Package Filter:
 - Add fields from 56301 to 56308.
 - Edit function ValidateFieldFilter.
5. Add codeunit 31 – NAV Library:
 - Add global variables from gTxA_ServiceInfo to gInt_StatusNextProcessed.
 - Add functions from ServiceInit to LookupPage_Txt.
6. Add codeunit 32 – Data Table Library:
 - Add global variables from gTxA_ServiceInfo to gInt_ViewTotalRows.
 - Add functions from ServiceInit to View_Previous.
7. Add codeunit 33 – Excel Library:
 - Add global variables from gTxA_ServiceInfo to CurrentCol.
 - Add functions from ServiceInit to ReadCell_DateTime.
8. Add codeunit 65 – License Management:
 - Add global variables from gPag_Text1 to gCoU_SessionMgmt.

- Add functions from IsValid_Bol to GetSessionMgmt.
9. Add codeunit 215 – Config. Library:
- Add global variables from gTxA_ServiceInfo to gCod_CPIImport.
 - Add functions from ServiceInit to TextSetFields.
10. Edit page 8614 – Config. Package Card:
- Add control "<Exclude XML Xschema>".
 - Edit part ConfigPackageSubform (Name and Caption).
 - Add global variable gCoU_ConfigLib.
 - Add function GetSelectionFilter.
 - Add actions from "Export Package to XML" to "Import all Tables Data from XML".
11. Edit page 8615 – Config. Packages:
- Add control "<Exclude XML Xschema>".
 - Add global variables from gCoU_ConfigLib to gCoU_LicenseMgmt.
 - Add global text constants from gTxC_ExportPackagesToXML to gTxC_SetFieldsFromTextFile.
 - Add function GetText.
 - Add actions from "Export Packages to XML" to "Excel Import Export Wizard".
 - Add actions from "Service Status" to "4BzSoftware S-03".
 - Edit trigger OnOpenPage.
12. Edit page 8623 – Config. Package Filters:
- Add controls from "<Use Specified Filter>" to "<Specified Filter Field Caption>".
13. Edit page 8624 – Config. Package Fields:
- Add controls from "<Delimited Column No.>" to "<Field Class>".
 - Add global text constants from gTxC_NoDimension to gTxC_ConfirmClearFixedWidth.
 - Add action "Toggle Validated".
 - Add actions from "Dimension" to "Clear Fixed Width Setup".
 - Set PromotedIsBig to "Yes" for actions "Set Included", "Clear Included".
14. Edit page 8625 – Config. Package Subform:
- Add controls from "<Import Destination>" to "<Date Time Format>".
 - Move controls "No. of Package Records", "No. of Database Records" or "NoOfDatabaseRecords".
 - Set "No. of Database Records" or "NoOfDatabaseRecords" as FreezeColumnID.
 - Add global variables from gCoU_NAVLib to gCoU_ConfigLib.
 - Add global text constants from gTxC_ConfirmOverwriteFormat to gTxC_ConfirmClearFormat.
 - Add function GetSelectionFilter.
 - Add actions from "Export to Template" to "Import Data for Duplication".
 - Edit trigger OnOpenPage, Table ID – OnLookup.
15. Edit page 8626 – Config. Package Records:
- Add global variable gCoU_DimMgmt.
 - Add global text constants from gTxC_DimSetID to gTxC_DimSetIDAndNew.
 - Add functions EditDimensions.
 - Add action "Edit Dimensions".
 - Set PromotedIsBig to "Yes" for actions "Show Error", "Process Data", "Apply Data".

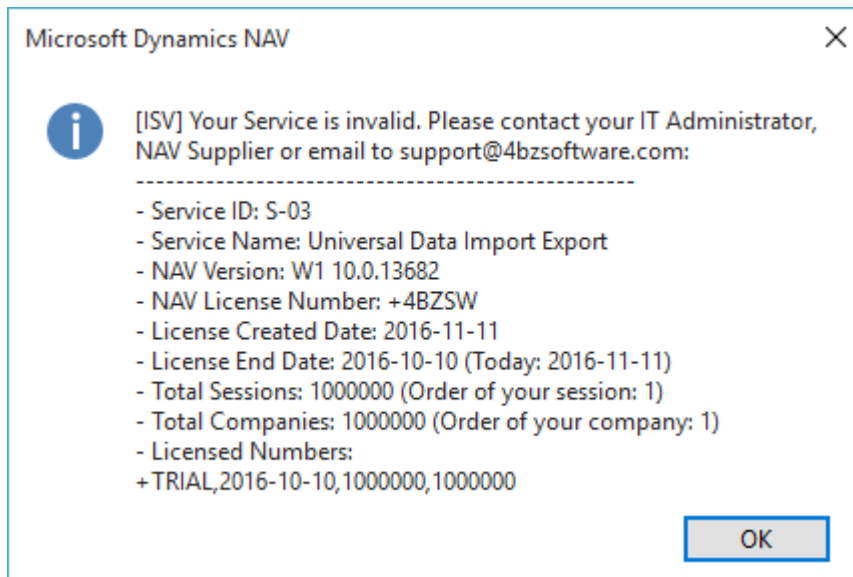
16. Edit page 9174 – All Objects with Caption:

- Add global text constants from gTxC_ServiceValid to gTxC_ReadingExcelCell2.
- Add functions from GetSelectionFilter to GetText.

4BZSoftware

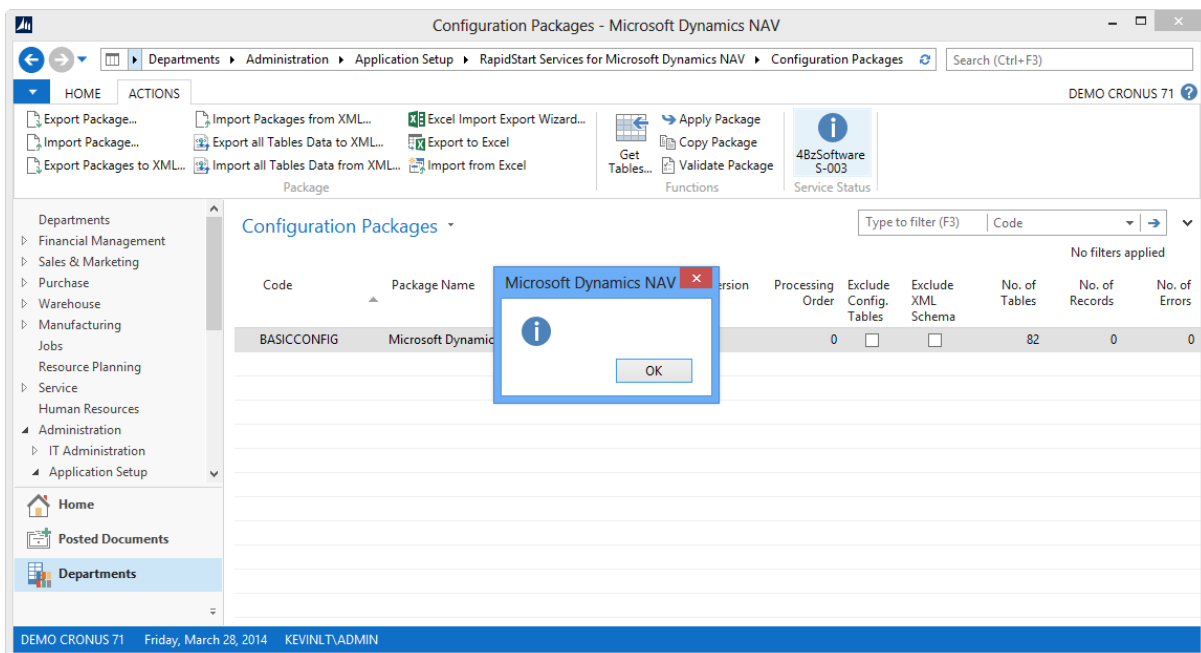
4.3 Troubleshoot

Symptom 1 - Service does not run and Service Status is invalid:



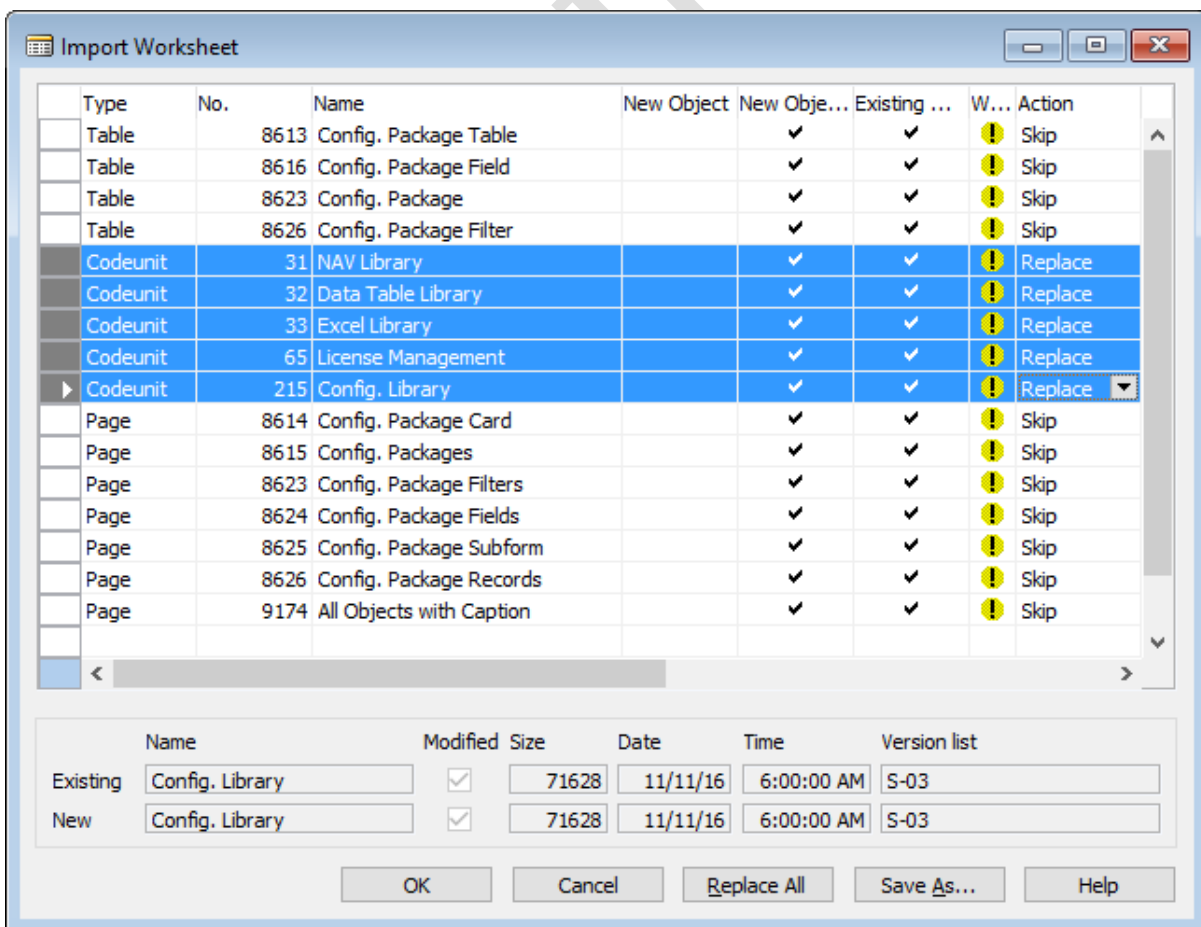
Reason: Service is expired by License End Date or License Number is incorrect.

Solution: Contact Admin for support. If cannot solve, Admin should contact Software Vendor.

Symptom 2 - Service does not run and Service Status text file has no information:

Reason: Protected Objects were edited and compiled.

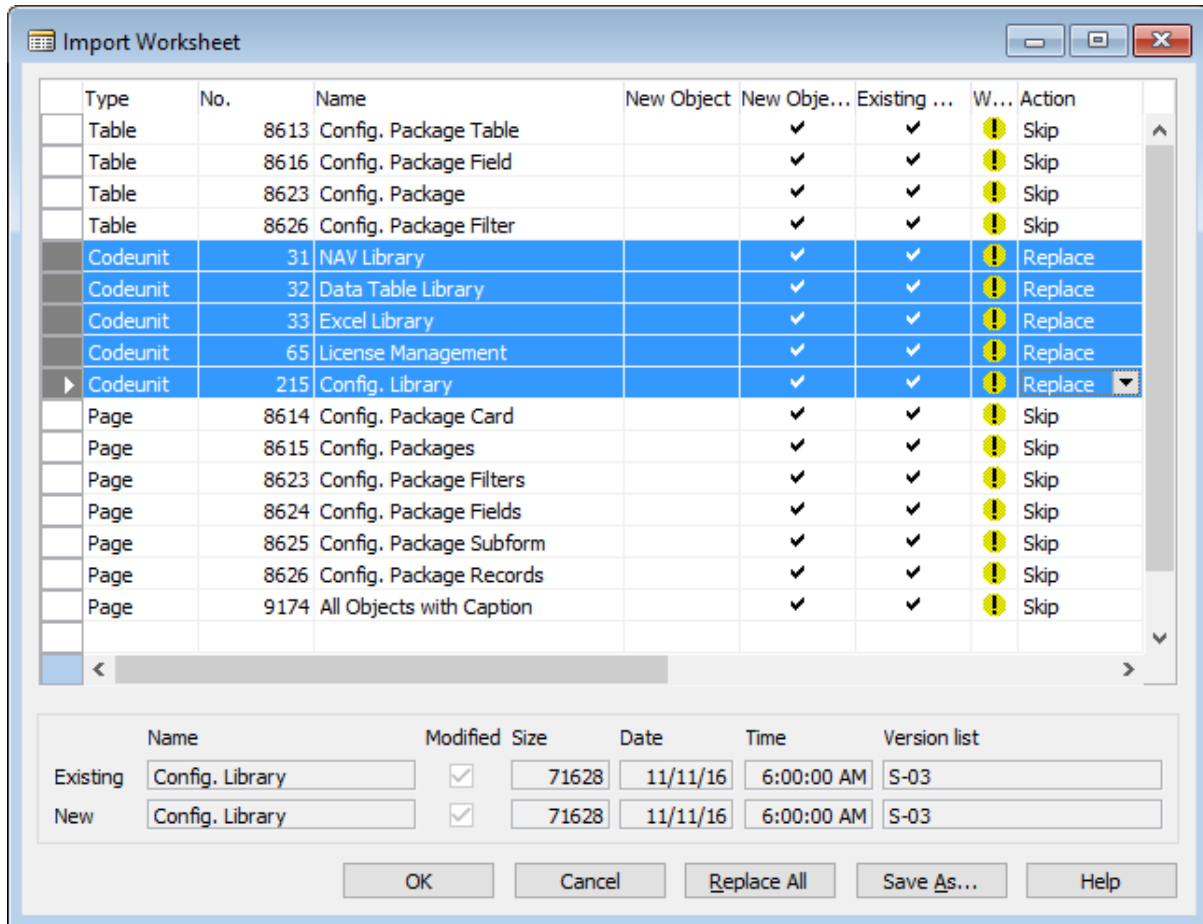
Solution: Reimport with replace them by Protected objects from 4BzSoftware:



Symptom 3 - Protected Objects were compiled accidentally:

Reason: Protected Objects were compiled accidentally.

Solution: Reimport with replace them by Protected objects from 4BzSoftware:



4.4 Version Control

Version (YYMMDD)	Description
130331	Release - version 7.0 (2013) 1. NAV objects for version 7.0 (2013).
130623	Enhance - import process 1. Show error records after applied valid records, let user know there are some error records. 2. Keep same Worksheet Selection after importing, let user know the Worksheet just imported.
131124	Enhance - new import/export 1. New import/export without configuration, more suitable for end users.
140119	Release - version 7.1 (2013 R2) 1. NAV objects for version 7.1 (2013 R2).
140330	Enhance - new feature 1. Import/Export Table Data via Text File. 2. Import/Export Tables Data via XML File. 3. Import/Export Configuration Packages Definition via XML File. Change - new name 1. Rename from "Excel Import Export Wizard" to "Universal Data Import Export".
140412	Enhance - new feature 1. Set Table Fields from Text File.
140628	Update - common functions 1. Align with new common functions. 2. Optimize code to increase performance 40%. 3. Manage memory better.
141101	Release - version 8.0 (2015) 1. NAV objects for version 8.0 (2015).
141214	Enhance - new feature 1. Import/Export Dimensions via Delimited Text such as csv, semicolon, tab ... 2. Skip updating existed Database Records. 3. Export data by Specified Filter, e.g. Customers and their Sales Line Discount. 4. Extend Field Filter to 250 characters. 5. New algorithm to split text values.
150308	Enhance - new feature 1. Import/Export Table Data for Duplication.
151231	Release - version 9.0 (2016) 1. NAV objects for version 9.0 (2016).
160422	Change - objects 1. Not use Codeunits 44, 5618, 8613, 8618 and Page 358. 2. Use Codeunits 31, 32, 215 and Page 9174.
170212	1. Support from NAV 2013 (07.00) to NAV 2017 (10.00). 2. Speed up import data from Excel by using Open XML. 3. Not depend on Excel version when import data via Open XML. 4. Enable Partners to localize tool with Global Text Constants. 5. Combined License, simpler management for both Partners and Customers. 6. Adjust export specified filter, import skip existing to avoid edit standard code.

5. Pricing

Please contact us via email support@4bzsoftware.com

or visit www.4bzsoftware.com/product/universal-data-import-export.html

4BZSoftware

This is last page.

Thank you!