Idle Session Management

Idle Session Management

4BzSoftware Company Limited | Product S-06

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Table of Contents

www.4bzsoftware.com/product/idle-session-management.html

1. Introduction

With Idle Session Management inside NAV, you can specify Idle Client Timeout, Allow Login Time, Total Sessions for each user, allocate Concurrent Client Access Licenses (CCALs) to group of users.

CCALs are based on the number of users accessing NAV simultaneously. And users have various requirements for NAV time usage. For example, Sales Order Processors always open NAV to enter sales every 10 minutes, whereas Purchasers sometimes access NAV for processing when they receive goods or invoices from vendors. Common practice that Purchasers keep NAV opening although they don't use it. As a result, CCALs are lost. Through Idle Session Management, you can set idle timeout to individual user such as 20 minutes for Purchasers, and 1 hour for Sales Order Processors. NAV will be closed automatically to release CCALs for other users.

Another usual situation when all CCALs are consuming, System Administrator cannot login NAV to stop some Idle Client Sessions. Via Idle Session Management, you can prevent it by assigning one CCAL for group of System Administrator and the rest for other groups.

Related videos at https://www.youtube.com/playlist?list=PLfgzNr8_2GkppfBvH7LQ5mliby2m6Wb3C

Main features of "Idle Session Management":

1. Specify Idle Client Timeout for individual user (apply to Windows Client only).
2. Set Allow Login Time per user (apply to Windows, Web and SharePoint Clients).
3. Define Total Sessions for each user (apply to Windows, Web and SharePoint Clients).
4. Allocate CCALs to group of users (apply to Windows, Web and SharePoint Clients).
5. Stop a Session (apply to Windows, Web and SharePoint Clients).
6. Support NAV 2016 to NAV 2017 which has Event Subscriber and native System.IO library.
7. For NAV 2013 to NAV 2015, please test if it is acceptable to you!
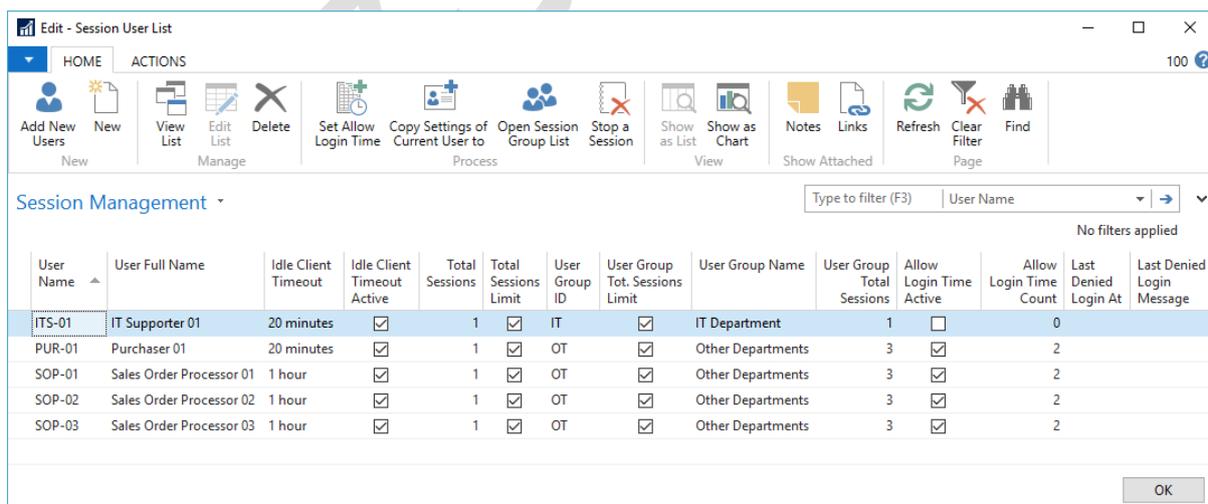
User Name ▲	User Full Name	Idle Client Timeout	Idle Client Timeout Active	Total Sessions	Total Sessions Limit	User Group ID	User Group Tot. Sessions Limit	User Group Name	User Group Total Sessions	Allow Login Time Active	Allow Login Time Count	Last Denied Login At	Last Denied Login Message
ITS-01	IT Supporter 01	20 minutes	☑	1	☑	IT	☑	IT Department	1	☐	0		
PUR-01	Purchaser 01	20 minutes	☑	1	☑	OT	☑	Other Departments	3	☑	2		
SOP-01	Sales Order Processor 01	1 hour	☑	1	☑	OT	☑	Other Departments	3	☑	2		
SOP-02	Sales Order Processor 02	1 hour	☑	1	☑	OT	☑	Other Departments	3	☑	2		
SOP-03	Sales Order Processor 03	1 hour	☑	1	☑	OT	☑	Other Departments	3	☑	2		

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/uninstall

Tool supports from NAV 2016 which has Event Subscriber and native System.IO library.

For NAV 2013 to NAV 2015, please test if it is acceptable to you!

Before install, you should backup below NAV objects if existing (for uninstall purpose):

No.	Type	ID	Name	Note
1	Table	99000834	Idle Session Management	
2	Codeunit	1	ApplicationManagement	No need from NAV 2016
3	Codeunit	31	NAV Library	Protected Object
4	Codeunit	65	License Management	Protected Object
5	Codeunit	417	Idle Session Management	Protected Object
6	Page	8	Standard Text Codes	Start Point
7	Page	690	Session Management	
8	Page	9174	All Objects with Caption	
9	Page	9800	Users	No need from NAV 2016

Installation steps:

1.   Import NAV Objects:

If there are no conflicted objects, you import them with Replace All option. Otherwise, above objects should be merged (please refer to section Technical Point of View for merging).

Note: Protected Objects (Codeunit 31 to 417) should be merged by 4BzSoftware. Please do not edit Protected Objects, they will be crashed (please refer to section Technical Point of View to cover)!

2.   Add Permission:

All users need Read and Indirect Modify permissions on table 99000834 Idle Session Management.

System Administrator needs all permissions (Read/Insert/Modify/Delete) on table 99000834.

3.   Check Service Status:

Service is licensed by NAV License Numbers and End Dates. It should be valid to take effect.

4.   Edit Codeunit 1 for NAV 2013 to NAV 2015.
5.   Optionally hide External Component Use confirm dialog.

Below sections describe the installation/uninstallation in detail.

2.1   Import NAV Objects

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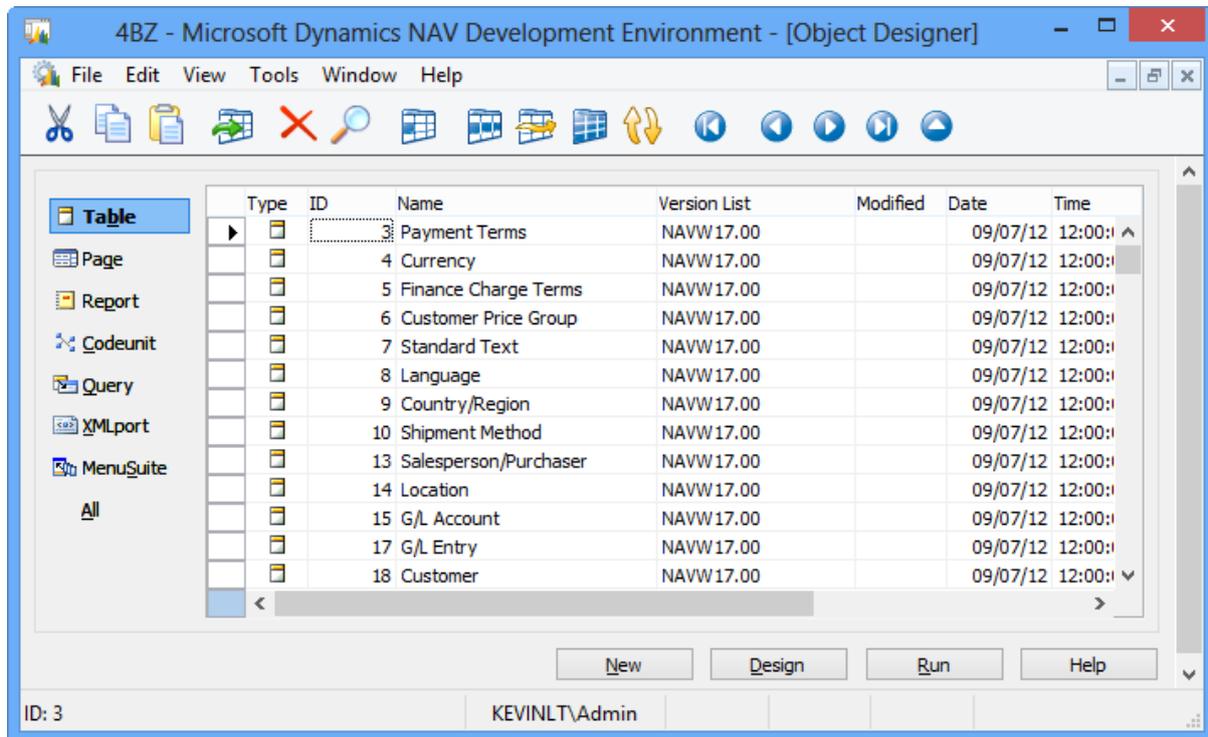


Click File → Import… → Browse NAV objects in Import Objects dialog → Click Open:
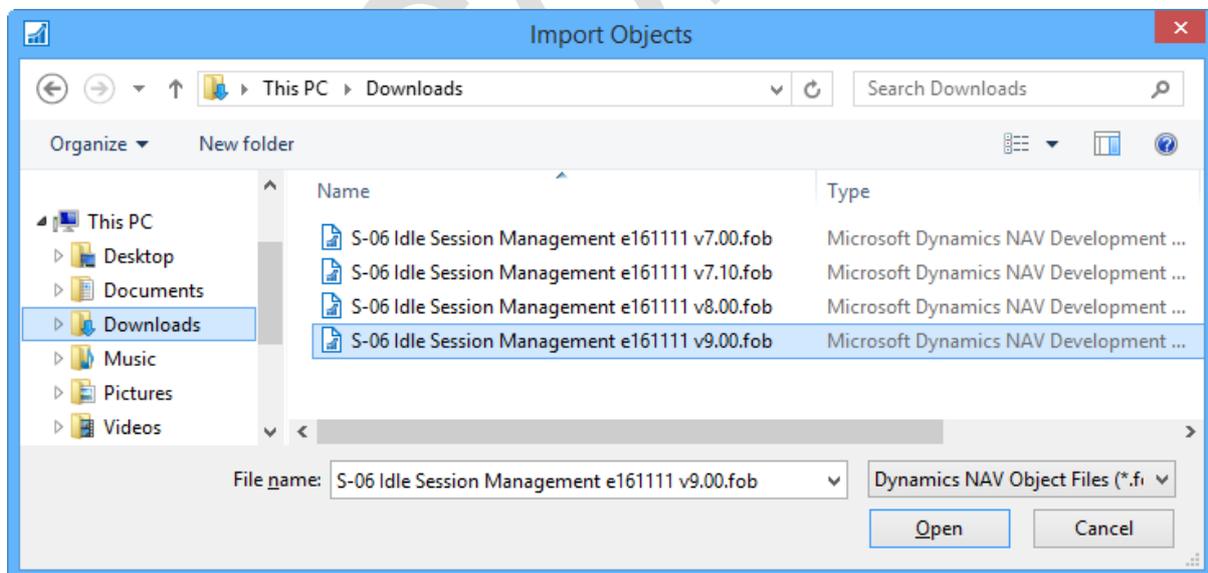
Select No to open Import Worksheet due to conflicted objects:
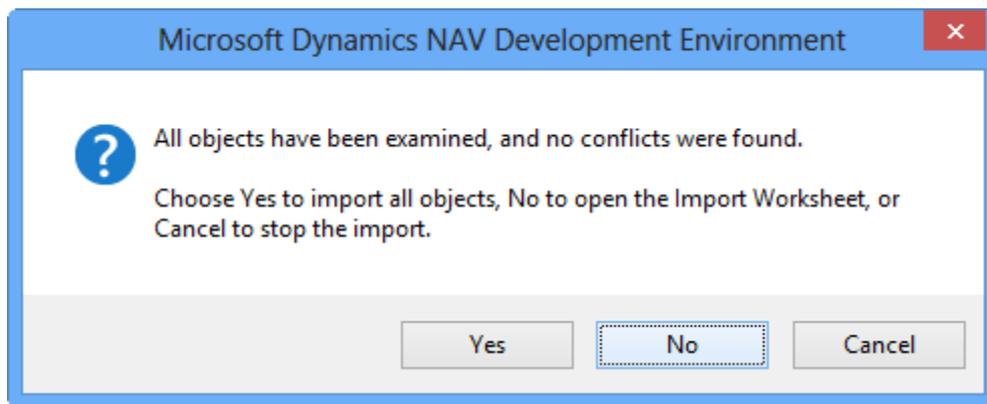

Click Replace All button and then click OK:
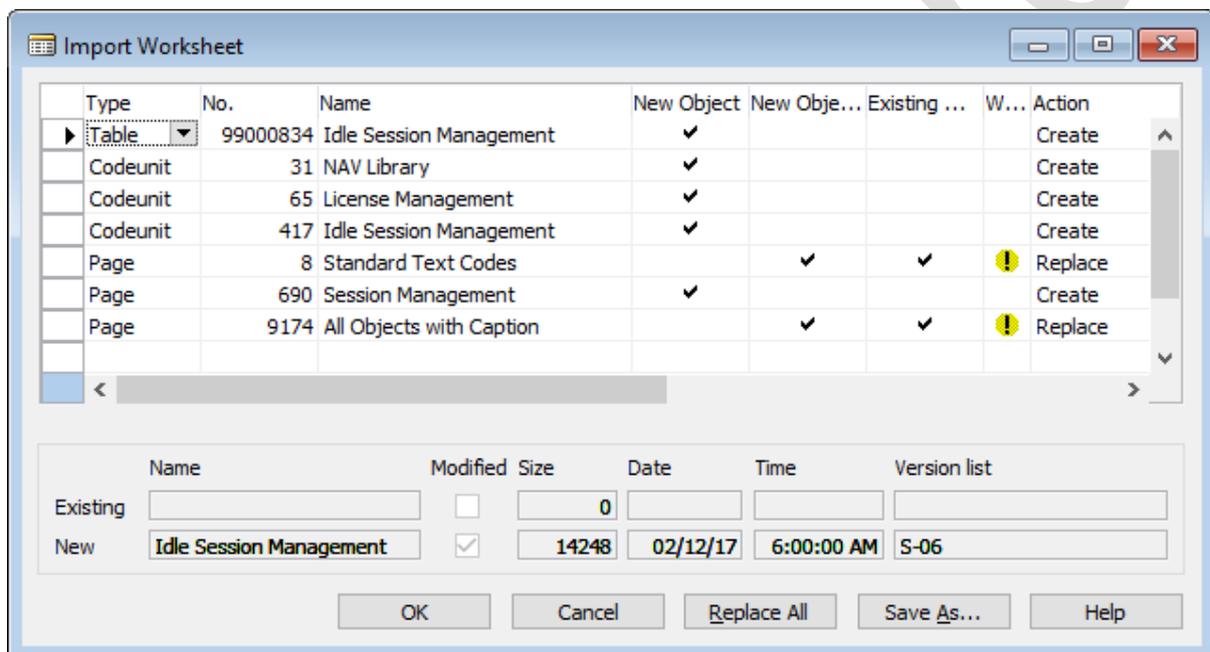
From NAV 2015, choose "Force" option for Synchronize Schema.

Import Objects dialog result:
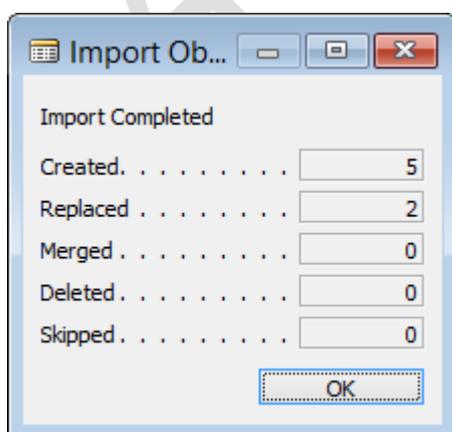
Filter Version List with string *S-06*, compile below selected objects:
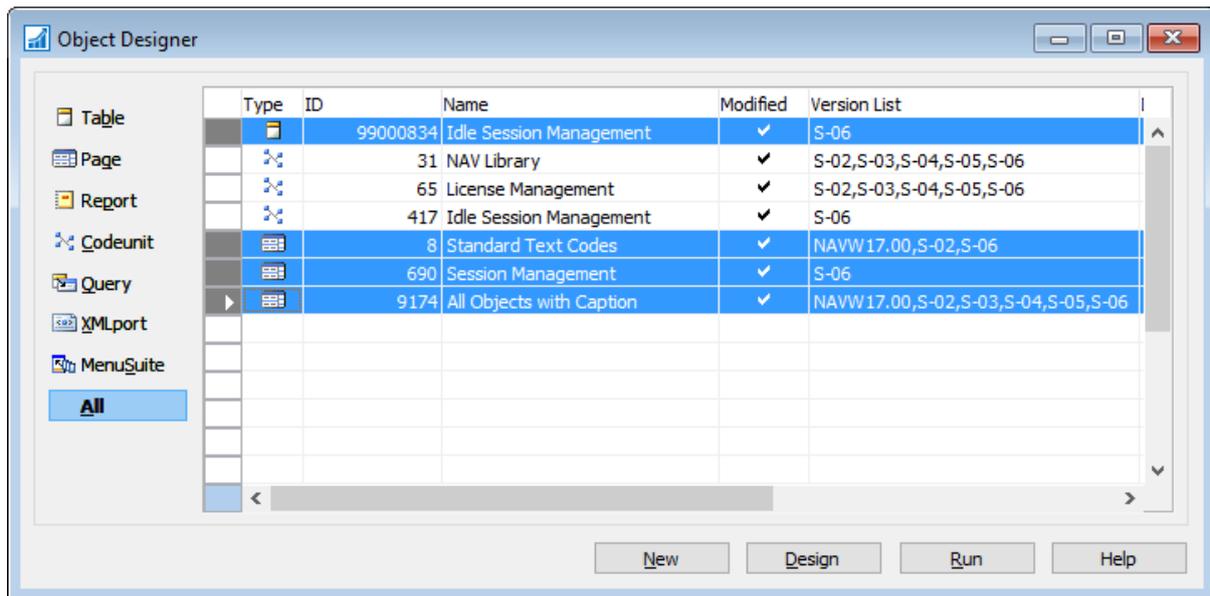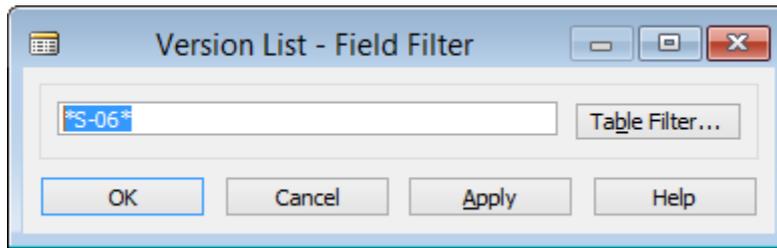
This is finish importing NAV objects.

2.2   Add Permission

All users need Read and Indirect Modify permissions on table 99000834 Idle Session Management.

You can add it to BASIC permission set:
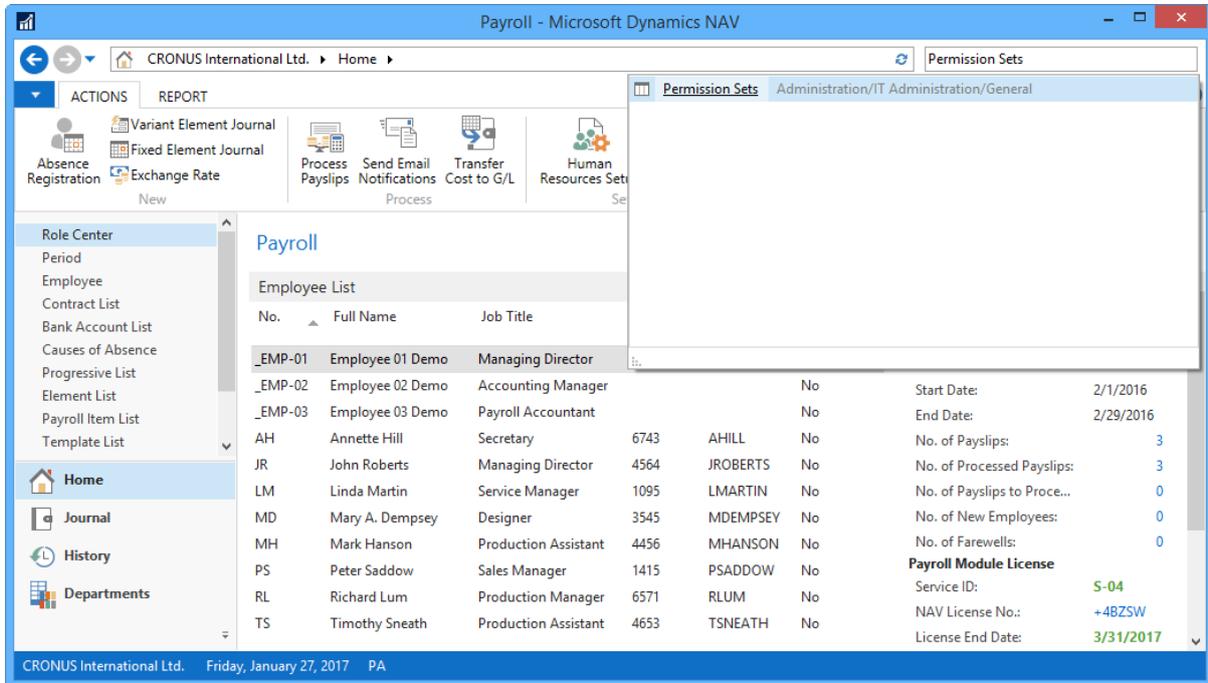
Select BASIC permission set, click action Permissions:
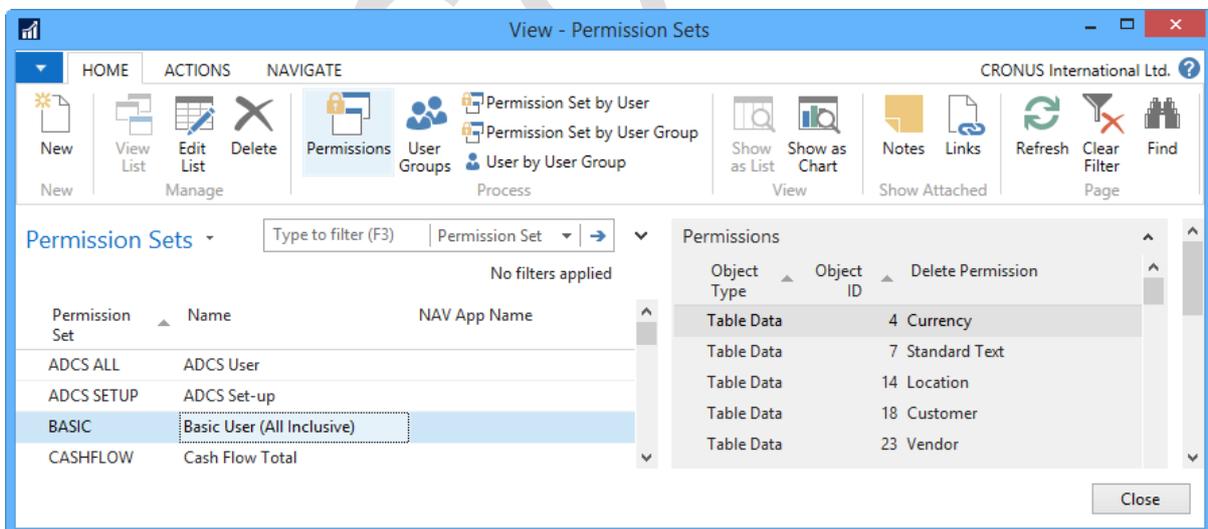
Add Read and Indirect Modify permissions as following picture:
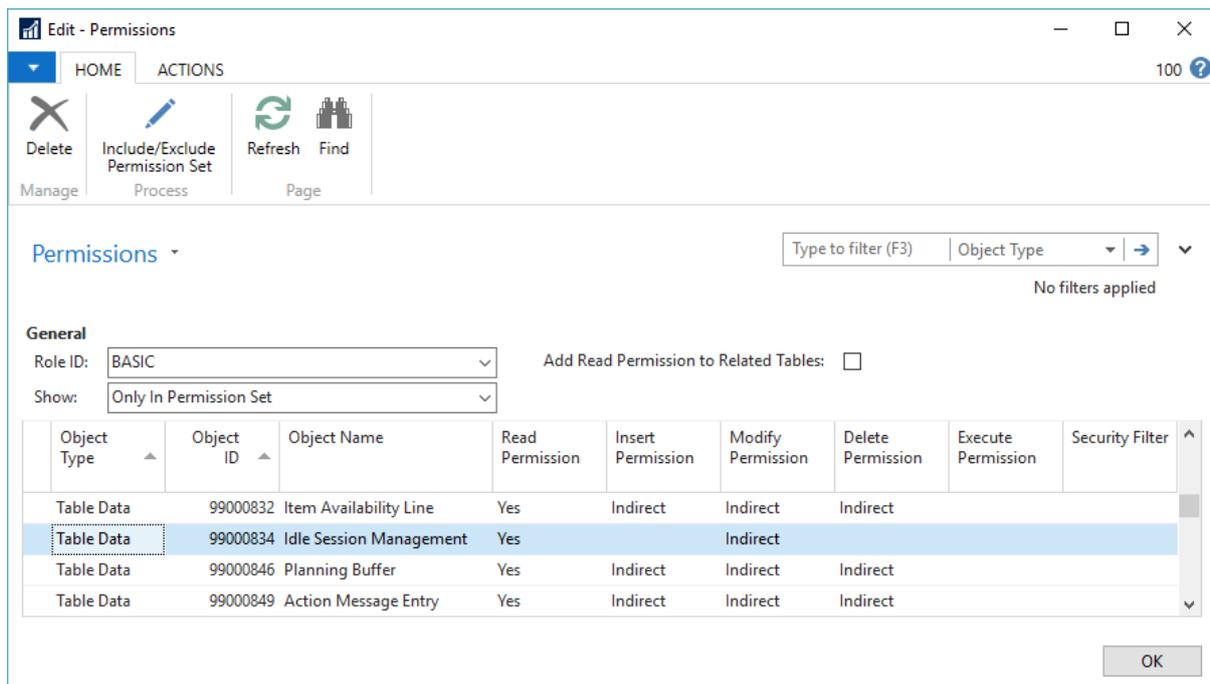
System Administrator needs all permissions (Read/Insert/Modify/Delete) on table 99000834. Typically, System Administrator has SUPER permission set which already includes needed permissions. Otherwise, you should add them to a new or suitable existing permission set:
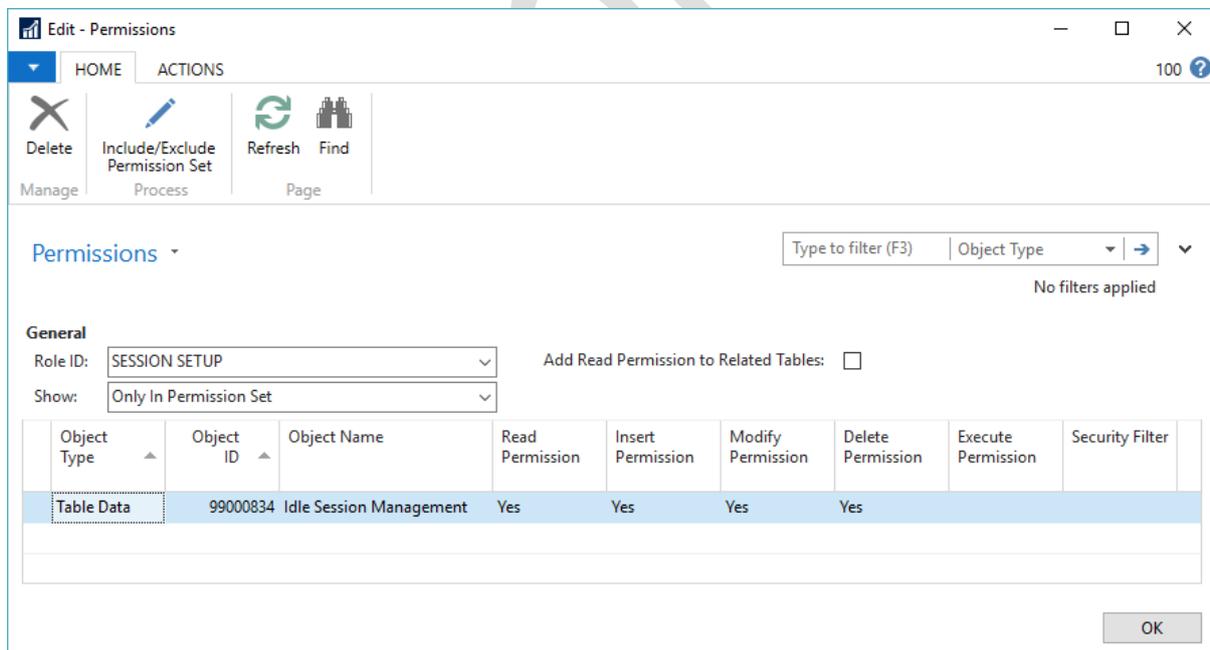
2.3   Check Service Status

Service is licensed by NAV License Numbers and End Dates. It should be valid to take effect.

To check Service Status, you open "Standard Text Codes":
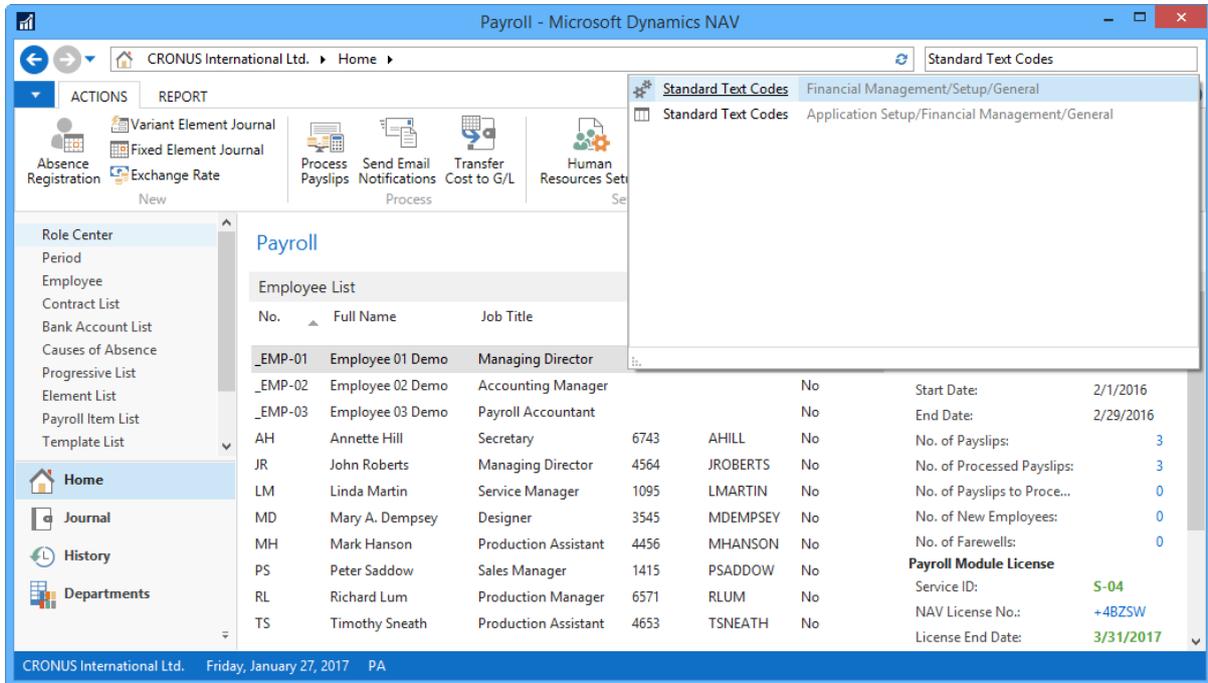
Click action "S-06 Idle Session Management" on Standard Text Codes page:
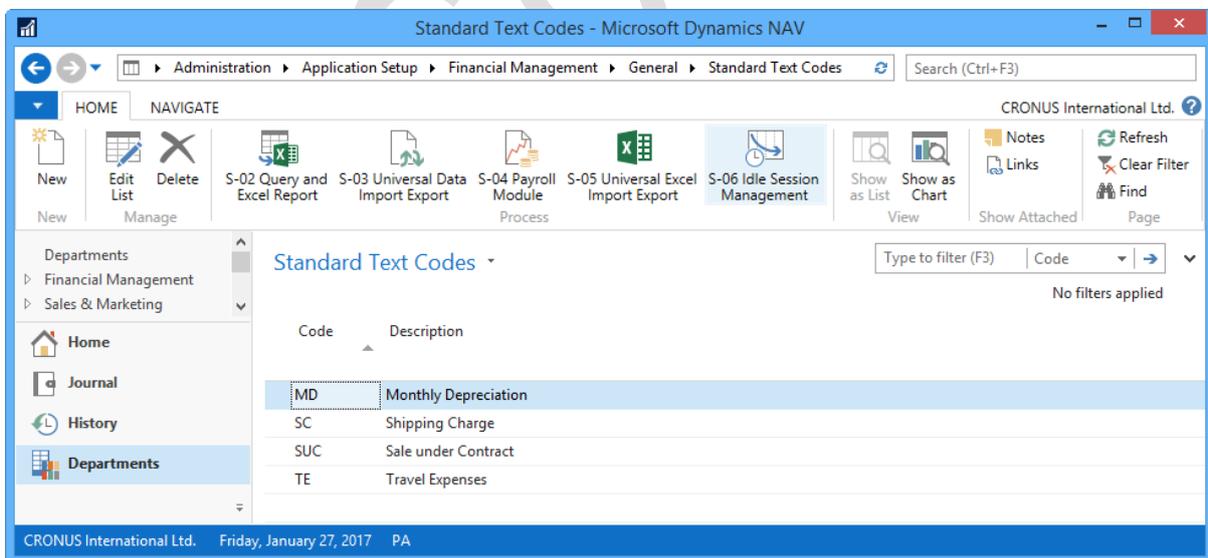
Click action "4BzSoftware S-06" on Session User List page:
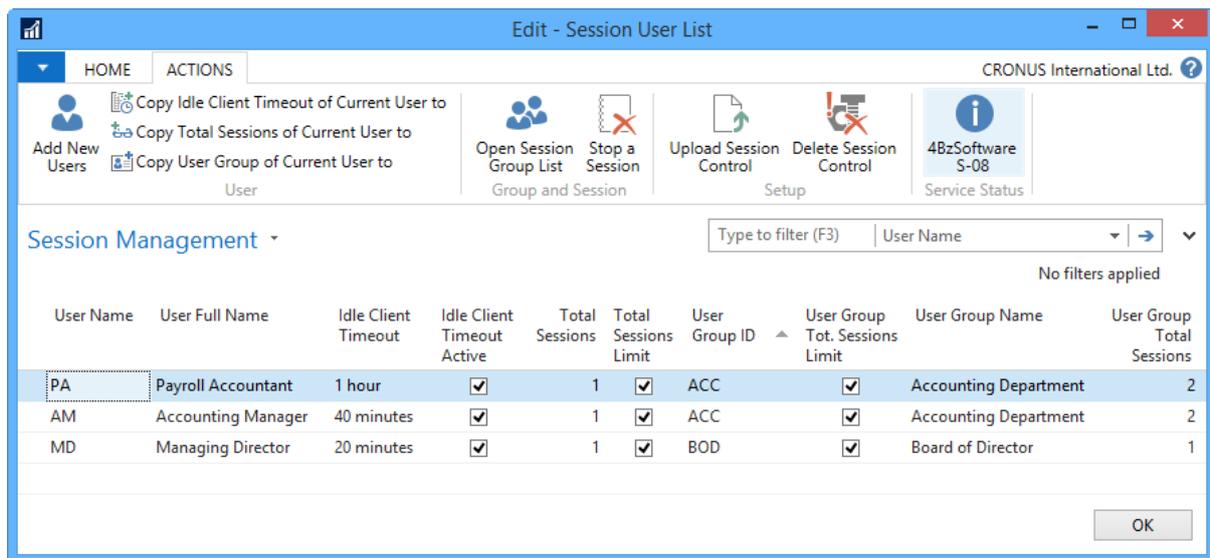
Service Status dialog:
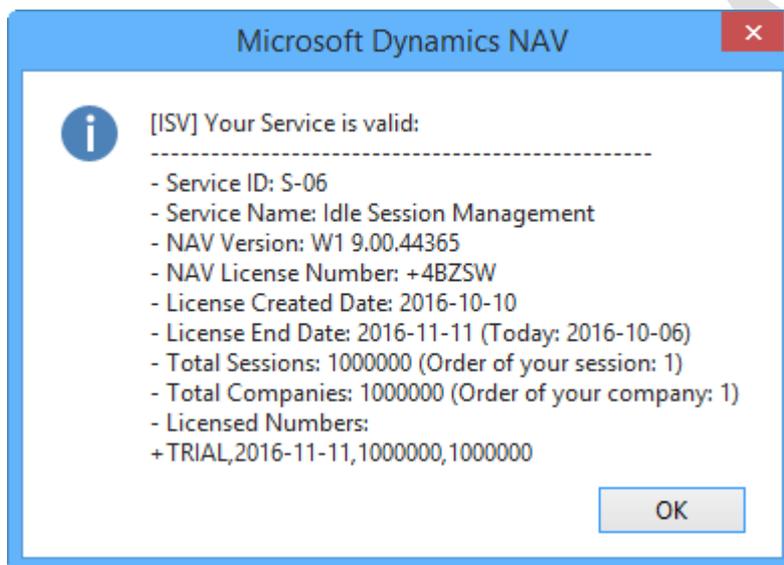
2.4   Edit Codeunit 1 for NAV 2013, NAV 2013 R2 and NAV 2015

This step is for NAV 2013, NAV 2013 R2 and NAV 2015. You do it via Development Environment:

Edit Codeunit 1 ApplicationManagement.

In CompanyOpen function, declare a local variable lCoU_SessionMgmt:
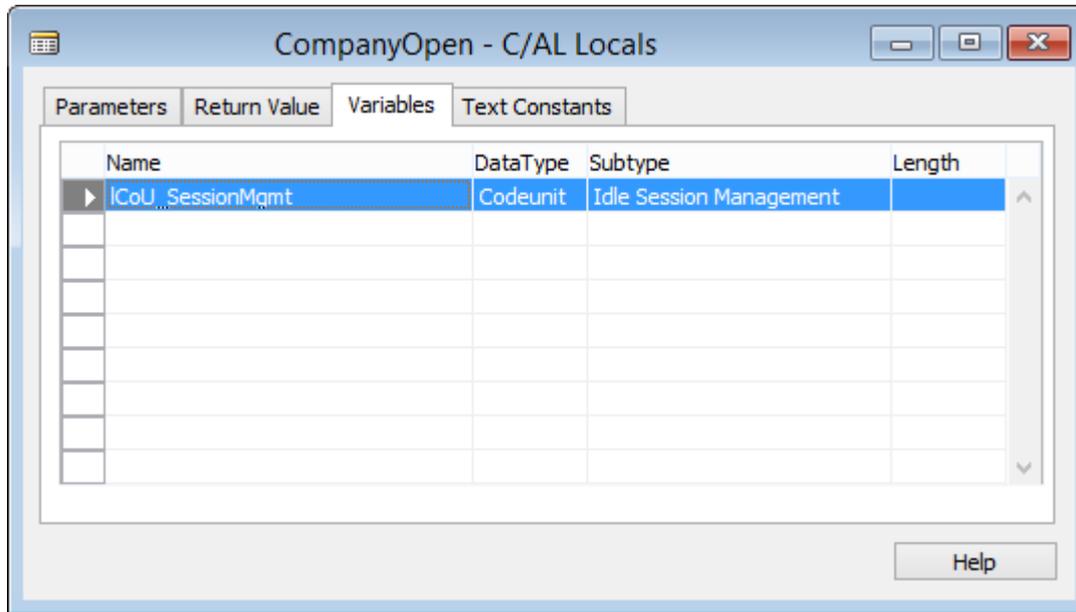
In CompanyOpen function, add 3 lines of code:

//S-06{

lCoU_SessionMgmt.AfterOpenCompany;

//S-06}
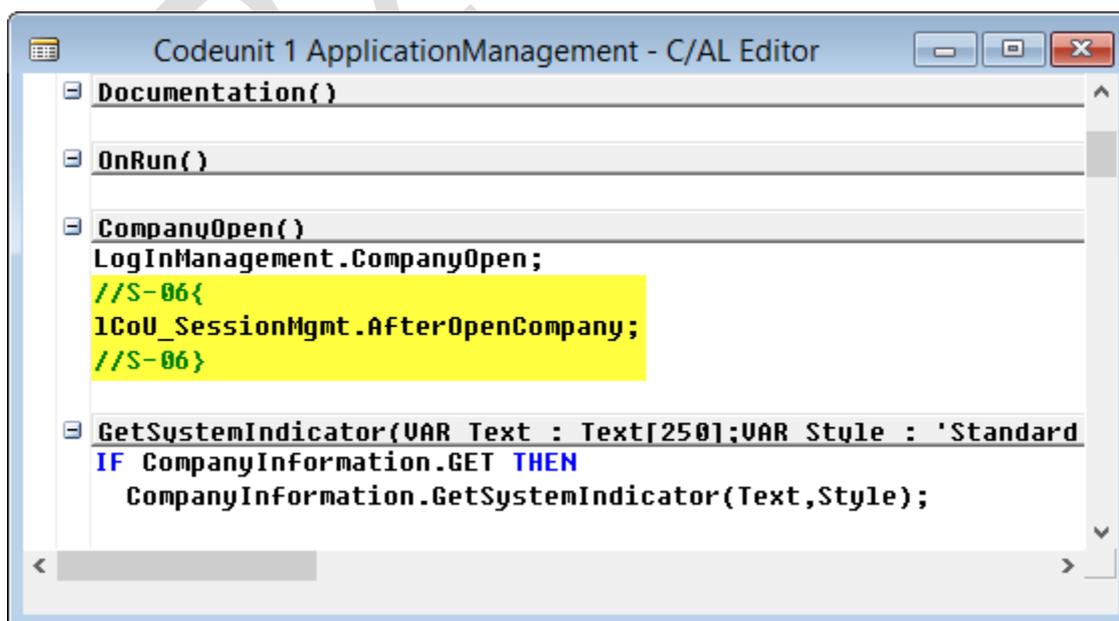
2.5   Optionally hide External Component Use confirm dialog

This step is optional. Only if users receive below dialog each time start NAV, and you want to hide it:
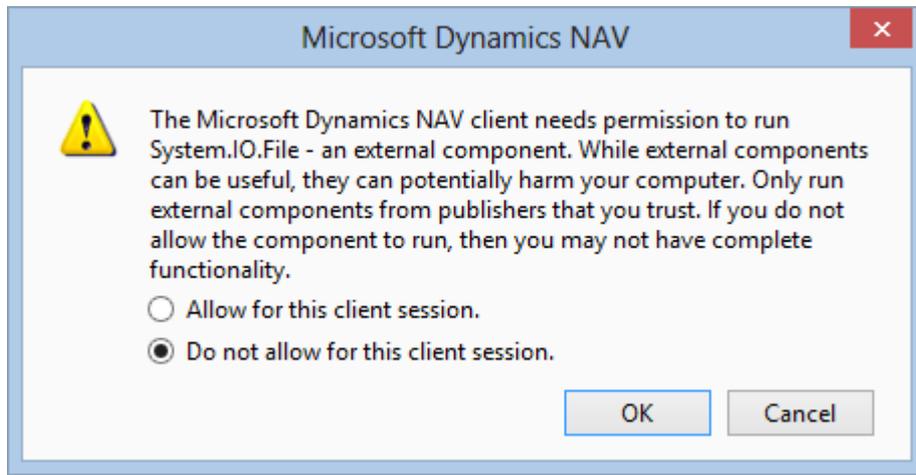
You can find detail information from link http://kauffmann.nl/index.php/2013/04/17/nav-client-needs-permission-to-run-external-component/

"There is a quick solution for this: set the key ServicePrincipleNameRequired in the ClientUserSettings.config to true:

<add key="ServicePrincipalNameRequired" value="True" />

During installation a default ClientUserSettings.config is installed in the location 'C:\ProgramData\Microsoft\Microsoft Dynamics NAV\70'. This config file is used as a default config for any user that starts the client for the first time. At first time starting, a copy of this config file is made to the location 'C:\Users\<username>\AppData\Roaming\Microsoft\Microsoft Dynamics NAV\70'.

If you want to configure the setting for all future users, then change the config file in the ProgramData folder. Otherwise change the config file in the Users Roaming folder."

2.6 Uninstall

If you want to uninstall tool, you import the backup objects (before install) and delete some objects:

No.	Type	ID	Name	Note
1	Table	99000834	Idle Session Management	Delete data & object
2	Codeunit	1	ApplicationManagement	Import backup object
3	Codeunit	31	NAV Library	Delete object
4	Codeunit	65	License Management	Delete object
5	Codeunit	417	Idle Session Management	Delete object
6	Page	8	Standard Text Codes	Import backup object
7	Page	690	Session Management	Delete object
8	Page	9174	All Objects with Caption	Import backup object
9	Page	9800	Users	Import backup object

Finally, remove permission on table 99000834 Idle Session Management in relating permission set.

3. How to use

You can find all guide videos at:

https://www.youtube.com/playlist?list=PLfgzNr8_2GkppfBvH7LQ5mliby2m6Wb3C

## 3.1 Specify Idle Client Timeout for individual user

This feature is for Windows Client only.

Idle Client Timeout: amount of time that client remains open when there is no activity continuously. For example, we set 20 minutes Idle Client Timeout for Managing Director, the client is closed at the 4th arrow only when there is no activity in 20 minutes continuously:

Activity in 10 mins	Inactivity in 10 mins	Activity in 10 mins	Inactivity in 20 mins	NAV Client is closed
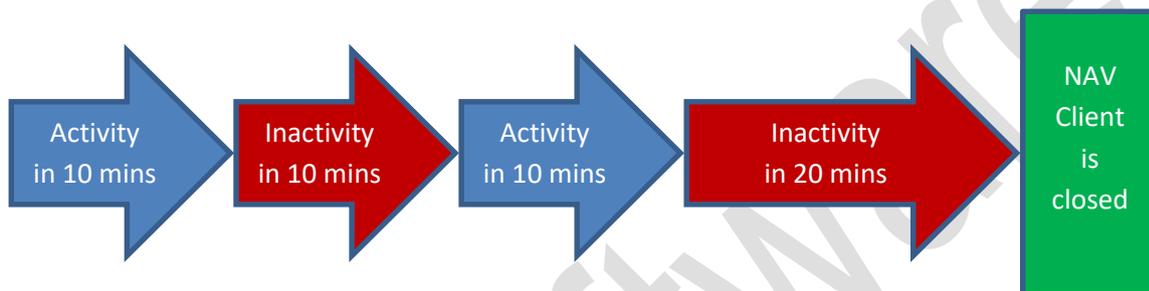
Tool tries to safely close the client as user exit NAV to release CCAL for other users immediately. Otherwise, tool will forcedly end task the client, and CCAL will be released as standard NAV process (around 15 minutes by default).

To specify Idle Client Timeout for individual user, you open Session User List page:

User Name	User Full Name	Idle Client Timeout	Idle Client Timeout Active	Total Sessions	Total Sessions Limit	User Group ID	User Group Tot. Sessions Limit	User Group Name	User Group Total Sessions
AM	Accounting Manager	40 minutes	✔	1	✔	ACC	✔	Accounting Department	2
MD	Managing Director	20 minutes	✔	1	✔	BOD	✔	Board of Director	1
PA	Payroll Accountant	1 hour	✔	1	✔	ACC	✔	Accounting Department	2

- Click Add New Users action, and select desired users from User List page.
- Then specify Idle Client Timeout such as 20 minutes, 40 minutes, 1 hour, …
- Set true Idle Client Timeout Active for needed users.

Login NAV clients with users for checking.

There are long execution time reports which user clicks preview button and waits for its processing with below Running report dialog:

Microsoft Dynamics NAV (00:00:14)

Running report: Detail Trial Balance(4)

Rows received: 200

Cancel
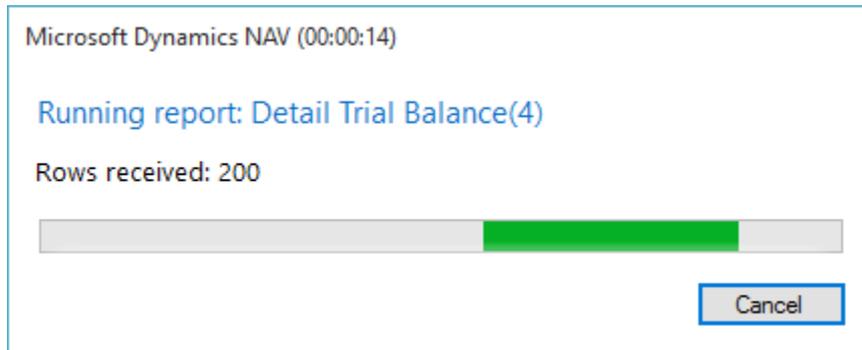
In fact, NAV is not being interacted with by the user, and idle time is being counted. As a result, system sometimes bumps user out before the report is finished.

There are feedbacks that tool should consider "not idle" in this case. It is good requirement; therefore, tool is enhanced to handle the situation. Remember to keep Running report dialog in front of other NAV pages.

## 3.2   Set Allow Login Time per user

This feature applies to Windows Client, Web Client and SharePoint Client.

There is demand that allows users to login system at specified time of pre-defined days in week. And tool supports this requirement. To configure it, on Session User List page:

- Set true Allow Login Time Active for needed user.
- To specify time of pre-defined days in week, click "Set Allow Login Time" action:
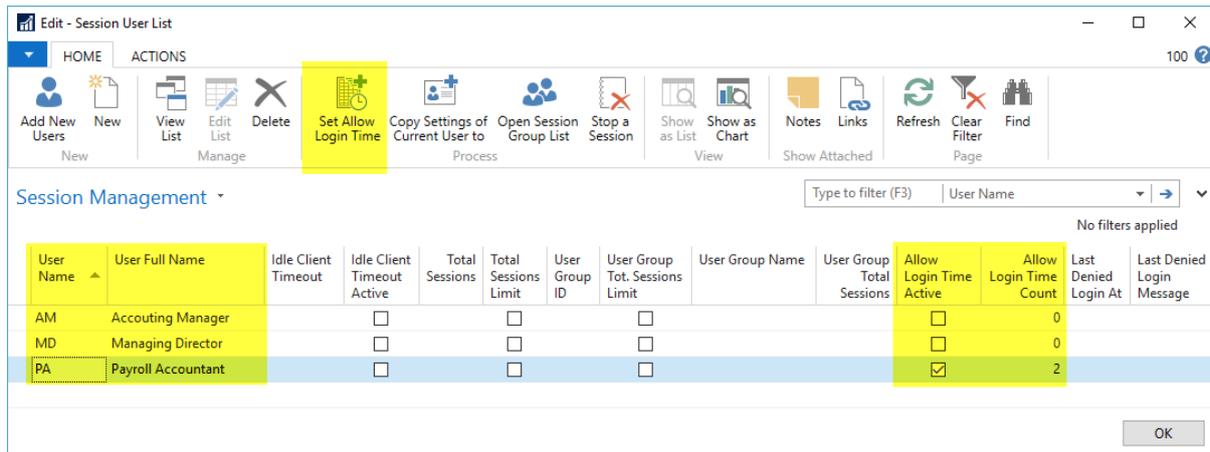
Allow Login Time page appears. Fill in Allow Login From/To and set true for applicable days in week:
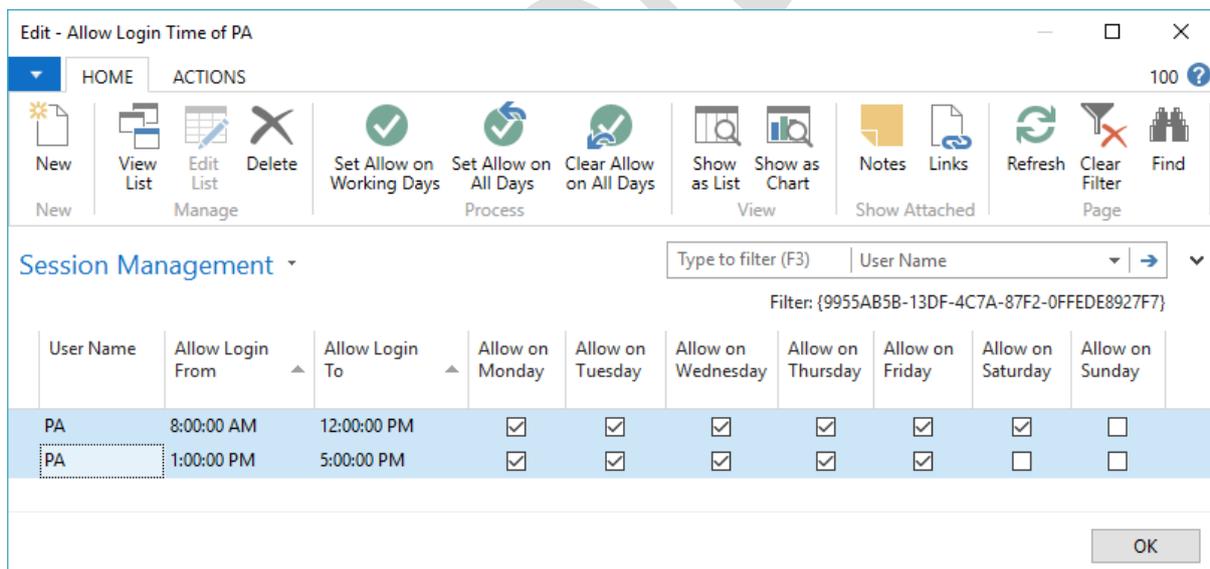

Check with users. They receive below messages when not found Allow Login Time:
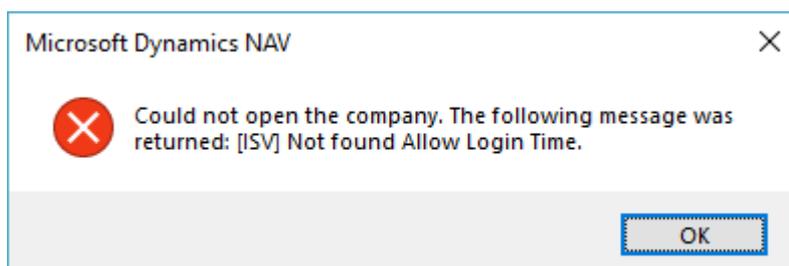
### 3.3   Define Total Sessions for each user

This feature applies to Windows Client, Web Client and SharePoint Client.

You can define total sessions that a user can consume at a point of time:

User Name ▲	User Full Name	Idle Client Timeout	Idle Client Timeout Active	Total Sessions	Total Sessions Limit	User Group ID	User Group Tot. Sessions Limit	User Group Name	User Group Total Sessions
AM	Accounting Manager	40 minutes	✓	1	✓	ACC	✓	Accounting Department	2
MD	Managing Director	20 minutes	✓	1	✓	BOD	✓	Board of Director	1
PA	Payroll Accountant	1 hour	✓	1	✓	ACC	✓	Accounting Department	2

- Click Add New Users action, and select desired users from User List page.
- Then specify Total Sessions such as 1, 2, 3, …
- Set true Total Sessions Limit for needed users.

Login NAV clients with users for checking. They receive below messages when over total sessions:

Microsoft Dynamics NAV

❌ Could not open the company. The following message was returned: [ISV] 2 Working Sessions is over 1 Total Sessions.

OK

## 3.4   Allocate CCALs to group of users

This feature applies to Windows Client, Web Client and SharePoint Client.

It solves a usual situation when all CCALs are consuming, Managing Director cannot login NAV to stop some Idle Client Sessions. You can assign one CCAL for group of Managing Director and the rest for other groups.

To create Session Group and allocate CCALs, click on Open Session Group List action:
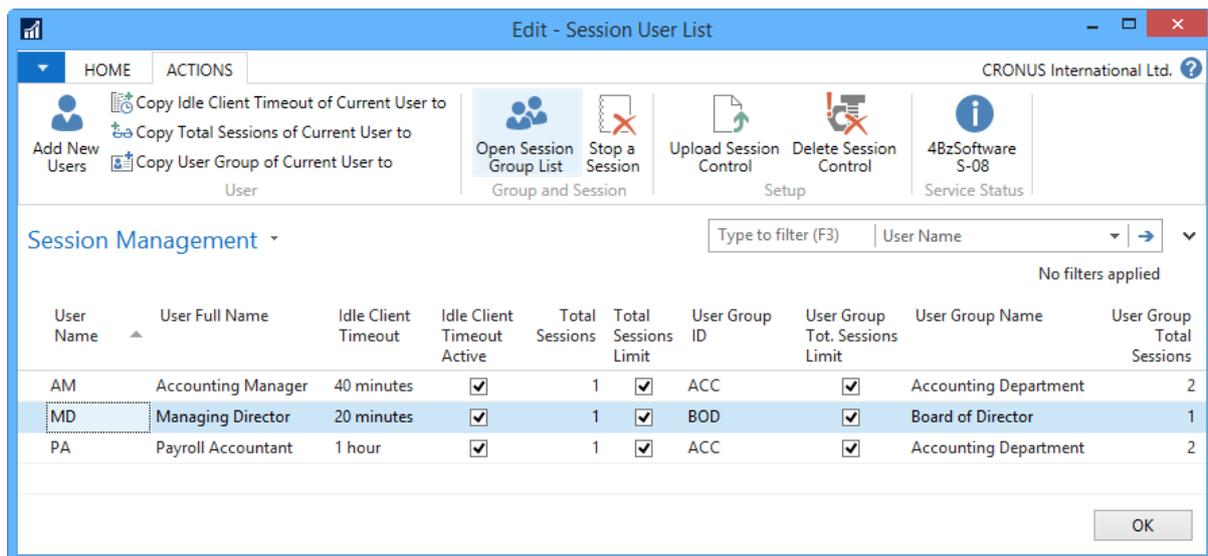
Session Group List page appears. You define ID, Name and Total Sessions for groups, then click OK:
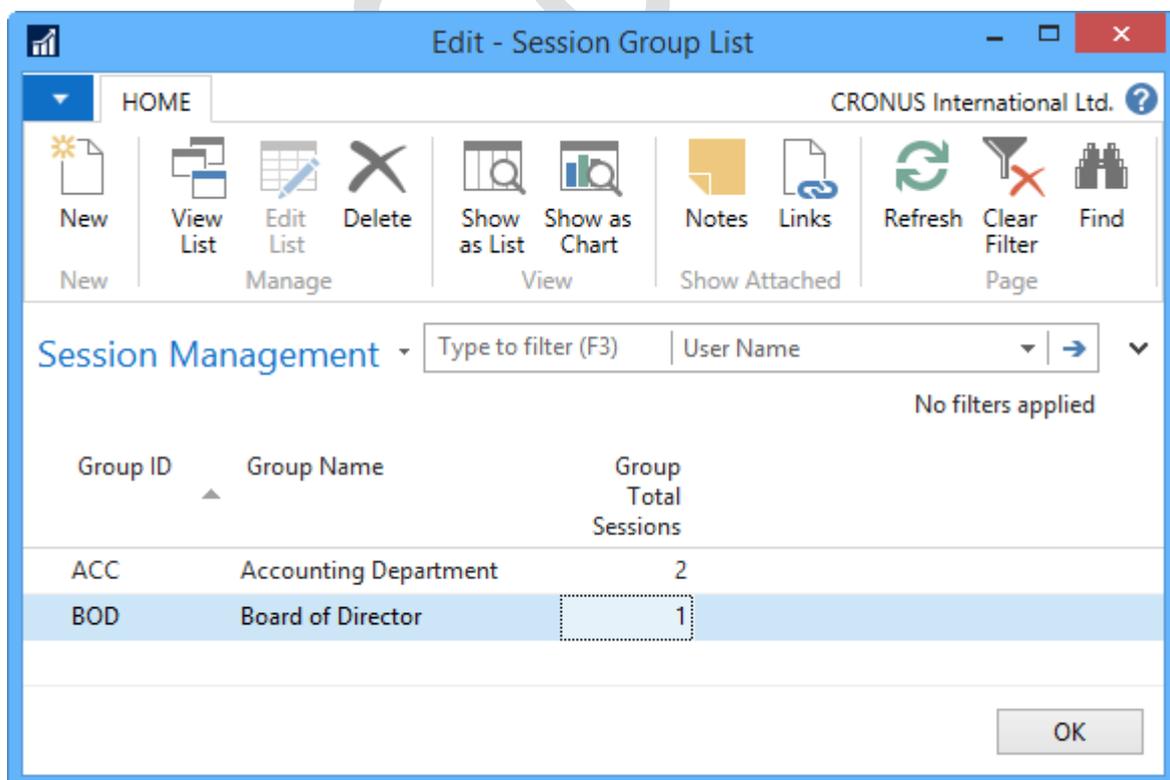
Back to Session User List page, you link users to groups via User Group ID field:
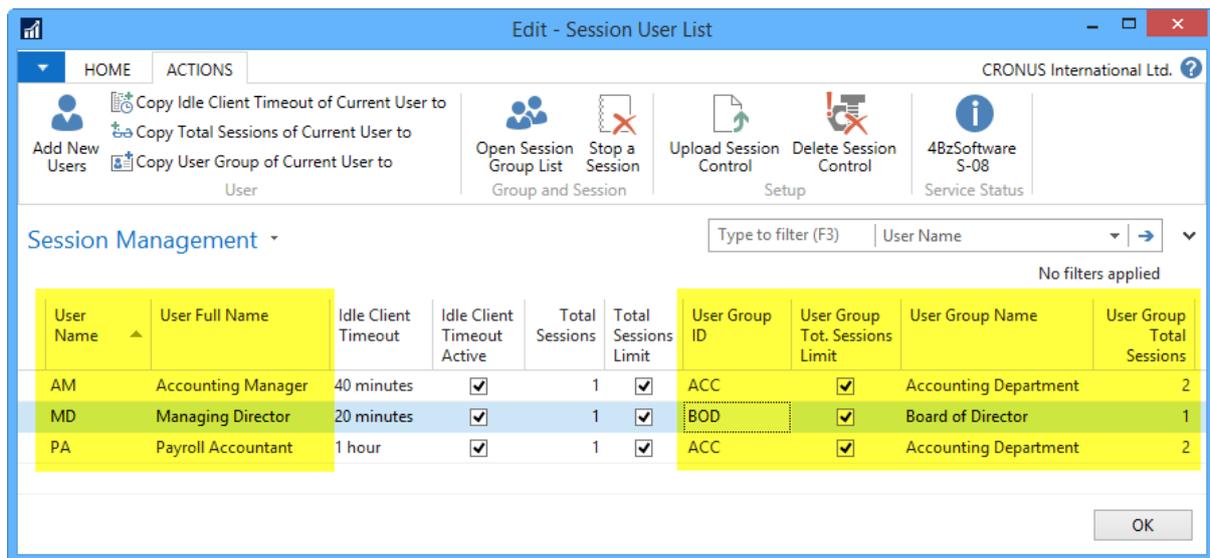
Remember to set true User Group Tot. Sessions Limit for needed users.

Check with users. They receive below messages when over group total sessions:
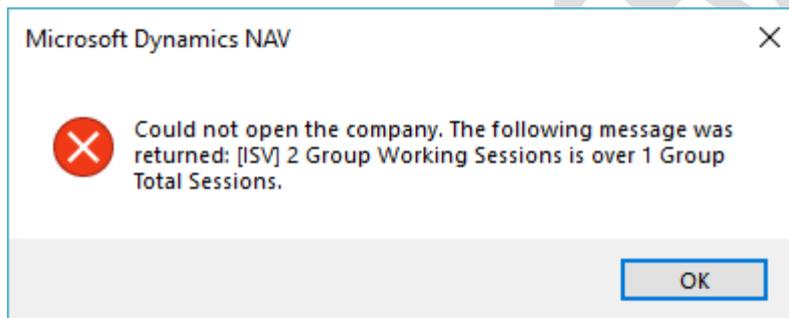
3.5   Copy Settings of Current User to

After configured settings (Idle Client Timeout, Allow Login Time, Total Sessions, Group Total Sessions) for a user, you can quickly copy all or per setting to desired users.

On Session User List page:

- Select user as Source (from) of copy, then click "Copy Settings of Current User to" action:
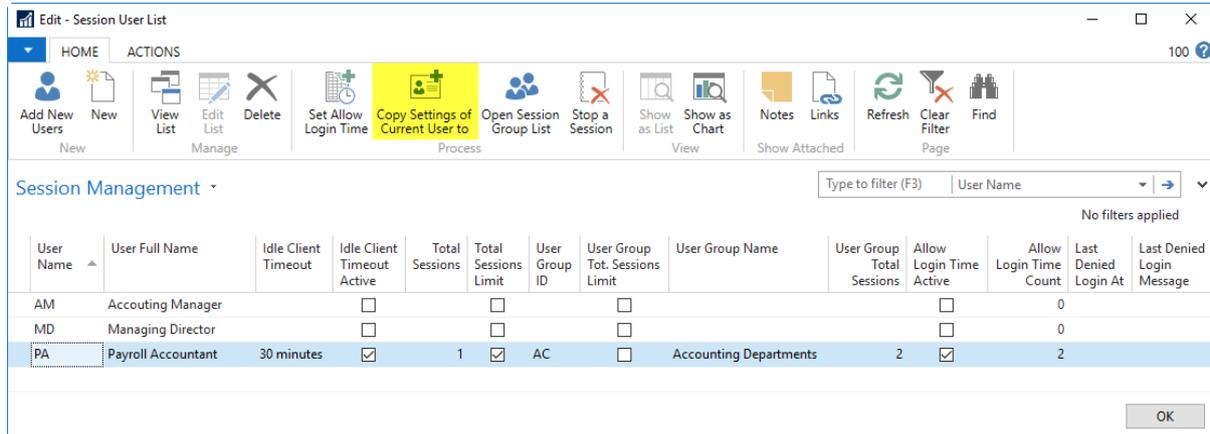
- Option Dialog box appears. Select your choice, and click OK:
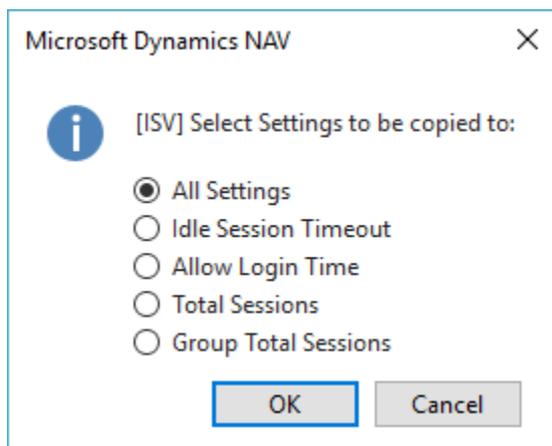
- Session User List page appears. Select desired users as Destination (to) of copy, and click OK:
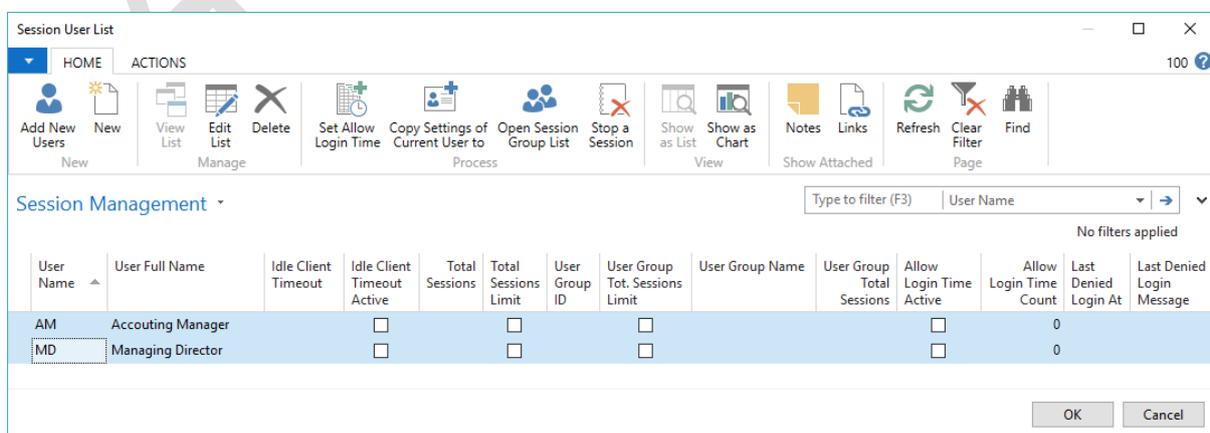
3.6   Stop a Session

You sometimes need to stop a session. You can do it via tool.

In Session User List page, click Stop a Session action:
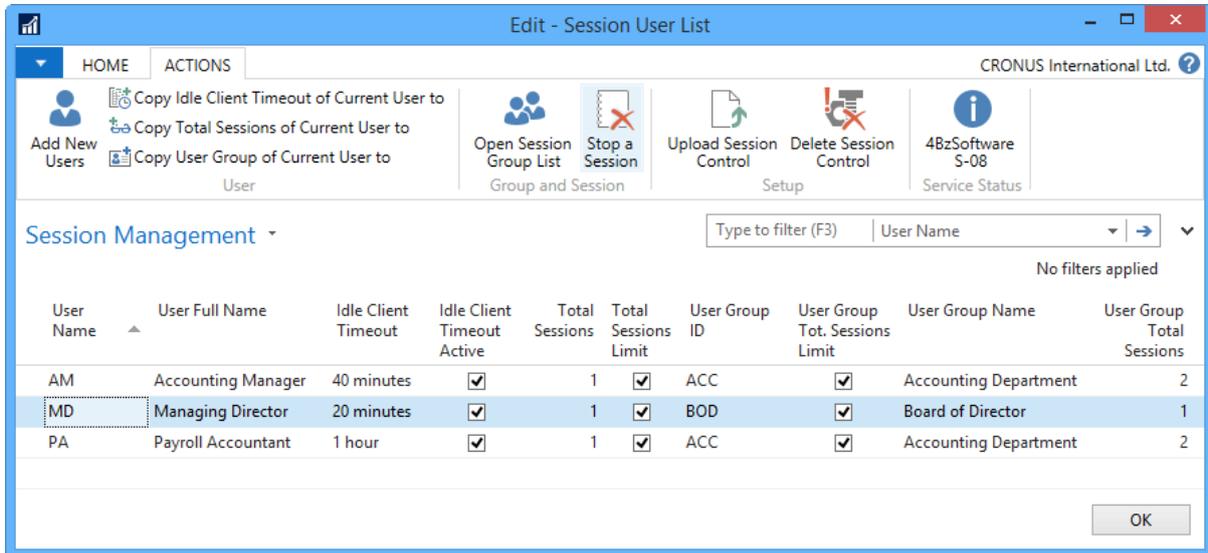
Session List page appears, select the session that you want to stop and click OK button:
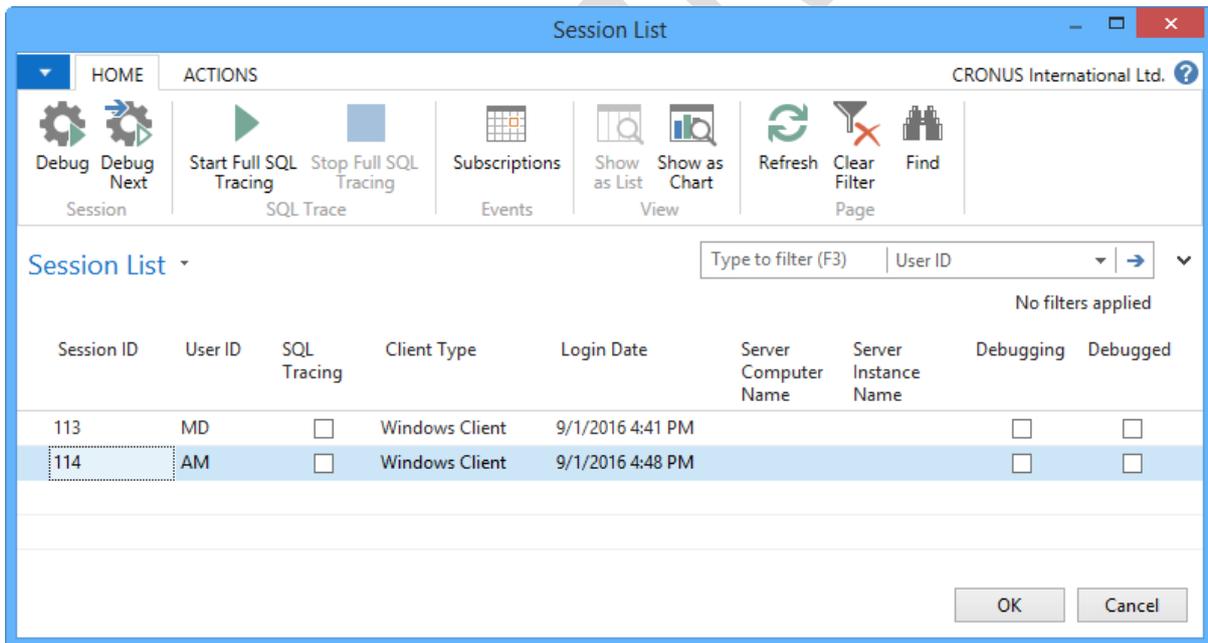
3.7   Count Active Sessions and Stop multiple Sessions

Tool has Active Session List page help you count License Seats consumed by Active Sessions.

To open the page, on Session User List, click Active Session List button:

Active Session List appears:

- License Seats are default counted by distinct User SID and Client Computer Name.
  License Seats Count setting is on Session User List page → ACTIONS → Setup button.
- [Active Sessions]: License Seats used by the User.
- [User Group Active Sessions]: License Seats used by the Group of the User.
- Page is sorted by [User Group ID], [User Name] and [Client Computer Name] to make it easier to count License Seats consumed by Group or User.
- You can get latest information by clicking Refresh Active Sessions button.
- Besides, you can stop multiple selected sessions by clicking Stop Selected Sessions button.

4. Technical Point of View

4.1 NAV Objects

The customization includes below NAV objects:

No.	Type	ID	Name	Note
1	Table	99000834	Idle Session Management	
2	Codeunit	1	ApplicationManagement	No need from NAV 2016
3	Codeunit	31	NAV Library	Protected Object
4	Codeunit	65	License Management	Protected Object
5	Codeunit	417	Idle Session Management	Protected Object
6	Page	8	Standard Text Codes	Start Point
7	Page	690	Session Management	
8	Page	9174	All Objects with Caption	
9	Page	9800	Users	No need from NAV 2016

You can list them by filtering Version List column with string *S-06* in Object Designer of Development Environment.

4.2 Merge Objects

Protected Objects (Codeunit 31 to 417) 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-06 string, where they were edited:

Code is bounded by "//S-06{" and "//S-06}". Search for "S-06" you can see all:

Pages often have new fields, actions, variables, text constants. They have code inside:

1. Add table 99000834 – Idle Session Management:
    - Add fields from 50001 to 50138.
    - Add keys from "Type,ID" to "Type,User SID".
    - Add global text constant gTxC_AllowLoginTimeWarning.
    - Add function from ActiveSessionsByUser_Int to IsMySession_Bol.
    - Edit trigger OnInsert, OnDelete.
2. Edit Codeunit 1 – ApplicationManagement (for NAV 2013, NAV 2013 R2 and NAV 2015):
    - Edit function CompanyOpen.
3. Add codeunit 31 – NAV Library:
    - Add global variables from gTxA_ServiceInfo to gInt_StatusNextProcessed.
    - Add functions from ServiceInit to LookupPage_Txt.
4. Add codeunit 65 – License Management:
    - Add global variables from gPag_Text1 to gCoU_SessionMgmt.
    - Add functions from IsValid_Bol to GetSessionMgmt.
5. Add codeunit 417 – Idle Session Management:
    - Add global variables from gTxA_ServiceInfo to gDec_Value.
    - Add functions from ServiceInit to SessionControlVersion_Txt.
6. Edit page 8 – Standard Text Codes:
    - Add actions from "4BzSoftware" to "S-06 Idle Session Management".
7. Add page 690 – Session Management:
    - Add global variables from gCoU_SessionMgmt to gTxt_PageView.
    - Add global text constants from gTxC_SessionUserList to gTxC_StopSelectedSessions.
    - Add functions from GetText to IfInitOrUpdateSetup.
    - Add controls from ContentArea to "B-Count Active Session by".
    - Add actions from ActionItems to "4BzSoftware S-06".
    - Edit triggers OnOpenPage, OnNewRecord.
8. Edit page 9174 – All Objects with Caption:
    - Add text constants from gTxC_ServiceValid to gTxC_ReadingExcelCell2.
    - Add functions from GetSelectionFilter to GetText.
9. Edit page 9800 – Users (no need from NAV 2016):
   - Add function GetSelectionFilter.

4.3 Troubleshoot

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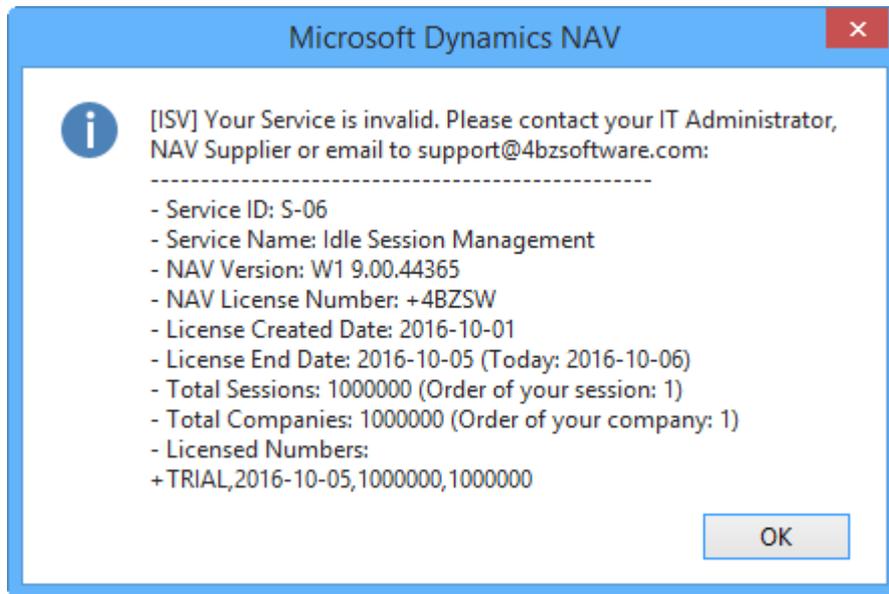

Reason: Service is expired by License End Date or License Number is incorrect.

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

Symptom 2 - Service does not run and Service Status shows blank message:
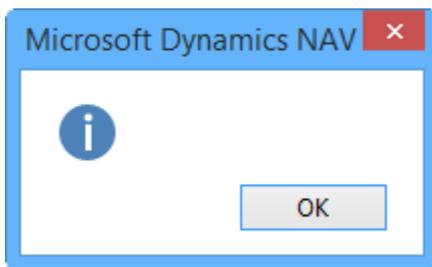
Reason: Protected objects were edited and compiled.

Solution: Reimport with replace them by Protected objects from 4BzSoftware:
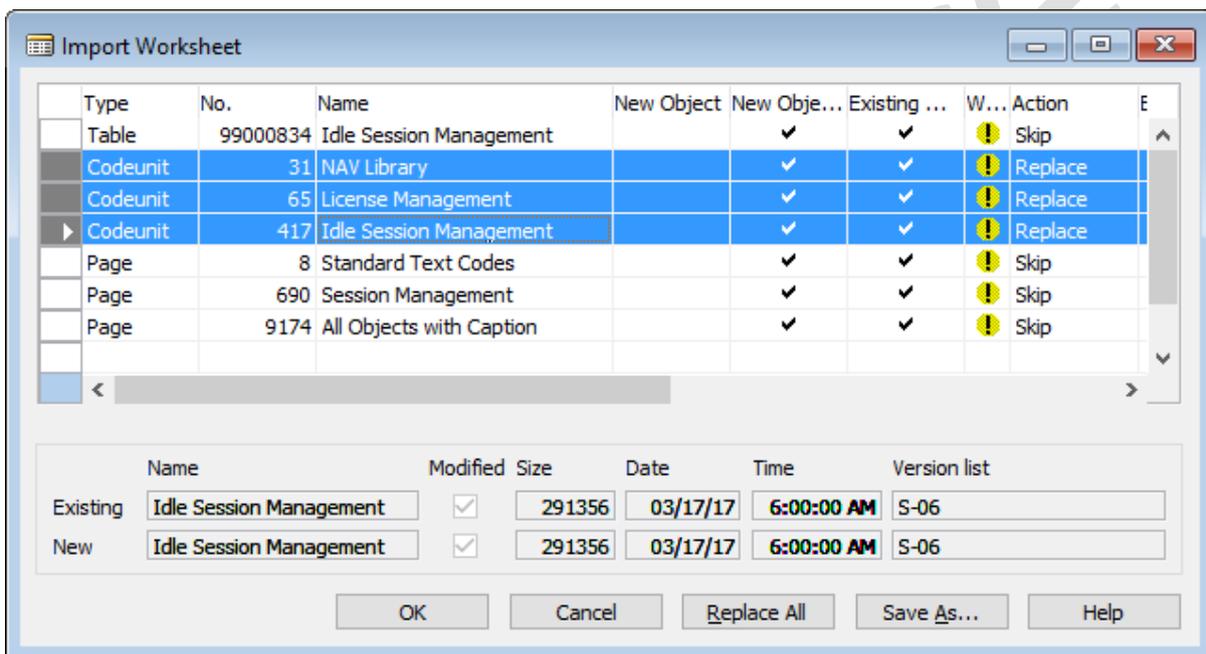
Symptom 3 - Protected objects were complied accidentally:

Reason: Protected objects were complied accidentally.

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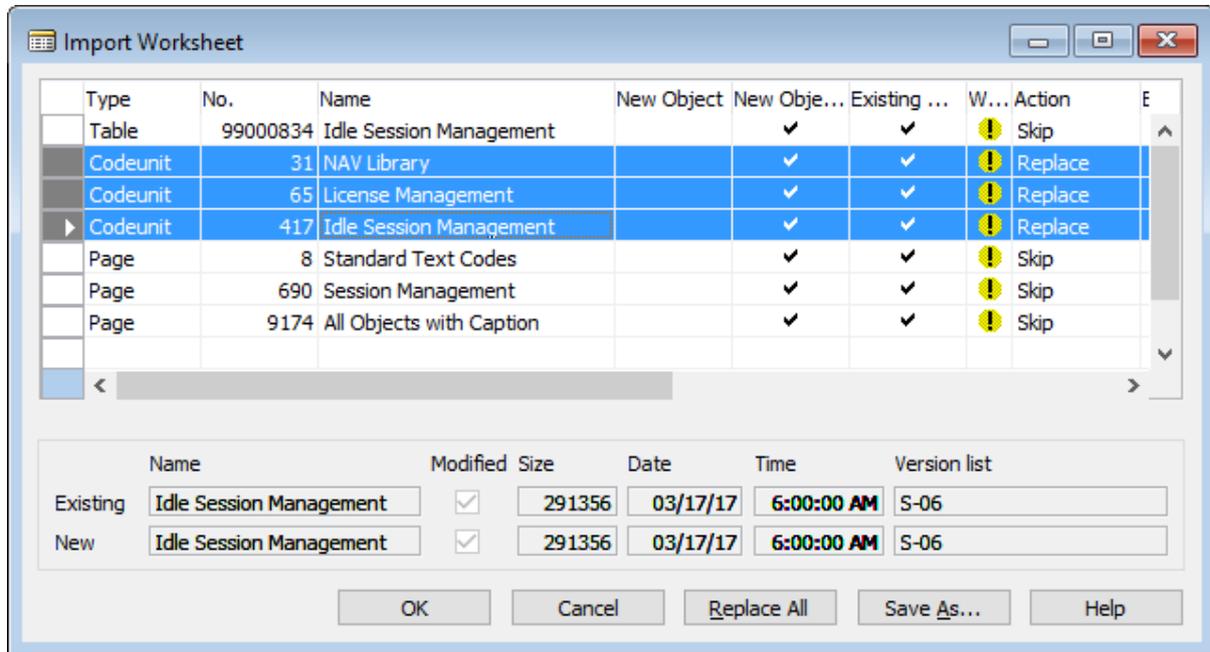
4.4　Version Control

Version (yymmdd)	Description
161010	1. Release tool for NAV 2013 (version 070). 2. Release tool for NAV 2013 R2 (version 071). 3. Release tool for NAV 2015 (version 080). 4. Release tool for NAV 2016 (version 090).
170117	1. Release tool for NAV 2017 (version 100). 2. Remove section 2.4 - Upload Session Control for Idle Client Timeout feature.
170702	1. New feature: Allow Login Time Range. 2. New feature: Last Denied Login Information. 3. New feature: Handle Running report dialog. 4. Edit Copy Settings of Current User to function. 5. Change ID of page, from 578 to 690.
180125	1. Release tool for NAV from 2013 to 2018 (version 070 to 110).
180625	1. Enhance user-friendly message when user cannot login system.
190116	1. Release tool for NAV from 2013 to 2018 + 365 Business Central (version 070 to 130).
190912	1. Count consumed License Sessions of User/Group by User SID and Client Computer. 2. Active Session List combining setting info for counting consumed License Sessions. 3. Stop multiple Active Sessions.

5. Pricing

Please contact us via email support@4bzsoftware.com
or visit www.4bzsoftware.com/product/idle-session-management.html

This is last page.

Thank you!