

**NAV
TECH
DAYS
2016**

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REAL LIFE SOURCE CODE MANAGEMENT

SOREN KLEMMENSEN – 360 VISIBILITY

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

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TECH
DAYS
2016**

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Who am I?



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Who currently use
Source Code
Management?



Why don't you use Source Code Management?

?

Why don't you use Source Code Management?

It works fine the way we do it today so why change?

Why don't you use Source Code Management?

- It will take too much time
- We don't have time to do this
- We are much too busy
- We cannot meet our deadlines



Why don't you use Source Code Management?

- It will be costly
- Who is going to pay for the extra time?
- It is hard enough to make sales and now you are adding cost.
- We cannot win deals that way
- The customers don't want to pay for that



Why don't you use Source Code Management?

- There is no benefits?
- We need results not overhead!
- We have always worked like this and it works.



Total Cost of Code Ownership

Initial cost:

- Development
- Testing
- Implementation

Ongoing cost:

- Resolving bugs
- Extending the functionality
- Supporting the functionality
- More testing
- More implementation
- Upgrading the code
- Cleaning up the code
- Handover to other developers

What is Source Code Management (SCM)

My mission today:

- 1) Give you the reasons why you should use SCM (how to sell it internally)
- 2) Give you the ideas & tools to get started

What is Source Code Management (SCM)

The documentation of net changes done to “code” to resolve an issue

Benefits - Knowledge

- Who
- When
- What
- Why
- Where

KNOWLEDGE
— IS —
POWER

Benefits - Team

- Knowledge is now with your team
- Team work - Concurrent development
- Developer Isolation



Benefits - Education

- Code Review
- Synergy
- Comply to development standards
- Better Developers
- Development Standards



**Empowerment
Through Education**

*Living A Dream,
Building A Future*

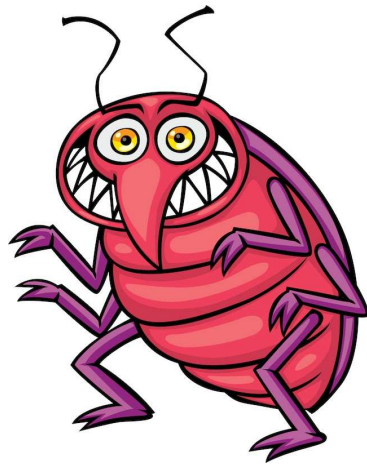
Benefits - Automation

- Build Automation
- Test Automation
- Environment Automation



Benefits - Quality

- Quality Code
- Less Bugs



What SCM to select

Source Code GIT vs. TFVC

- Git
 - Distributed
- TFVC
 - Centralized

Microsoft use both but seems to be moving towards GIT

What should be tracked?

- The C/SIDE code.
- Other applications (C# , JavaScript, ...)
- Translations
- Testing code
- PowerShell Scripts



Regional Settings

- Date
- Time
- Code Page
- Languages
- File naming

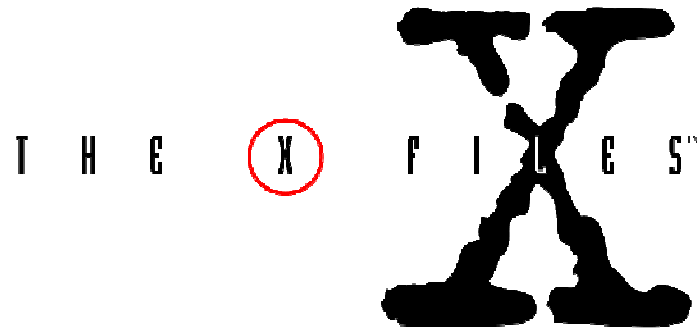
Ground Rules

“You touch it you own it”
or
“You break it you fix it”.

Ground Rules

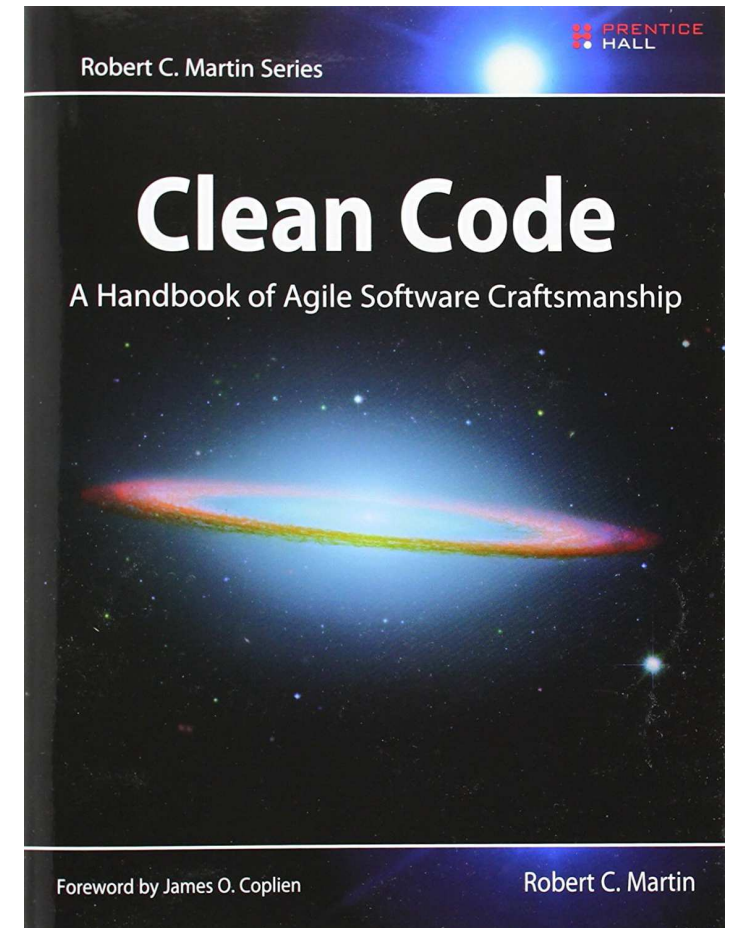
The truth is NOT out there.

The Source Code is the only TRUTH.



Ground Rules

Leave the
campground cleaner
than you found it



Structure – what you need to consider?

- Standard Microsoft Versions.
- Always track all objects (even when not modified)

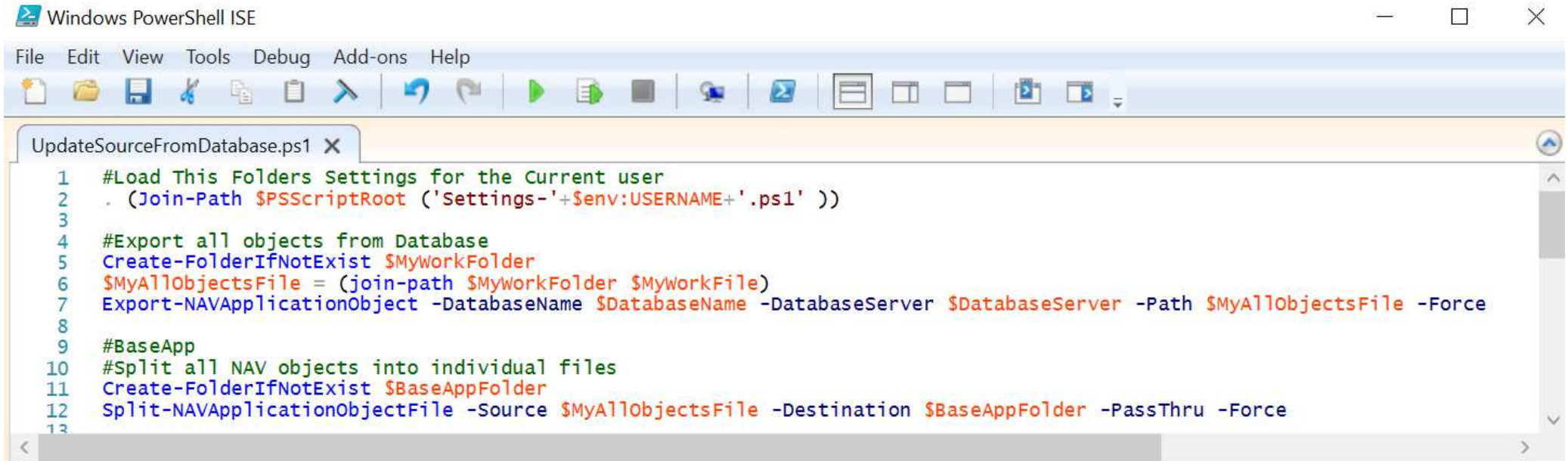
Core SCM operations

Import Dynamics NAV code from a database to SCM

Update Dynamics NAV code in database from SCM (and compile)

DEMO

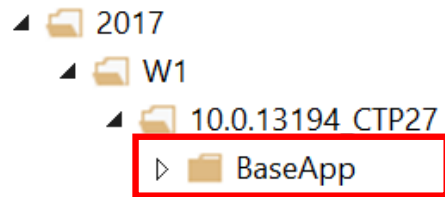
NAV 2 SCM - Version 1



The screenshot shows the Windows PowerShell ISE interface. The title bar reads "Windows PowerShell ISE". The menu bar includes "File", "Edit", "View", "Tools", "Debug", "Add-ons", and "Help". The toolbar contains various icons for file operations, editing, and execution. The script editor displays a file named "UpdateSourceFromDatabase.ps1". The script content is as follows:

```
1  #Load This Folders Settings for the Current user
2  . (Join-Path $PSScriptRoot ('Settings-' + $env:USERNAME + '.ps1' ))
3
4  #Export all objects from Database
5  Create-FolderIfNotExist $MyWorkFolder
6  $MyAllObjectsFile = (join-path $MyWorkFolder $MyWorkFile)
7  Export-NAVApplicationObject -DatabaseName $DatabaseName -DatabaseServer $DatabaseServer -Path $MyAllObjectsFile -Force
8
9  #BaseApp
10 #Split all NAV objects into individual files
11 Create-FolderIfNotExist $BaseAppFolder
12 Split-NAVApplicationObjectFile -Source $MyAllObjectsFile -Destination $BaseAppFolder -PassThru -Force
13
```

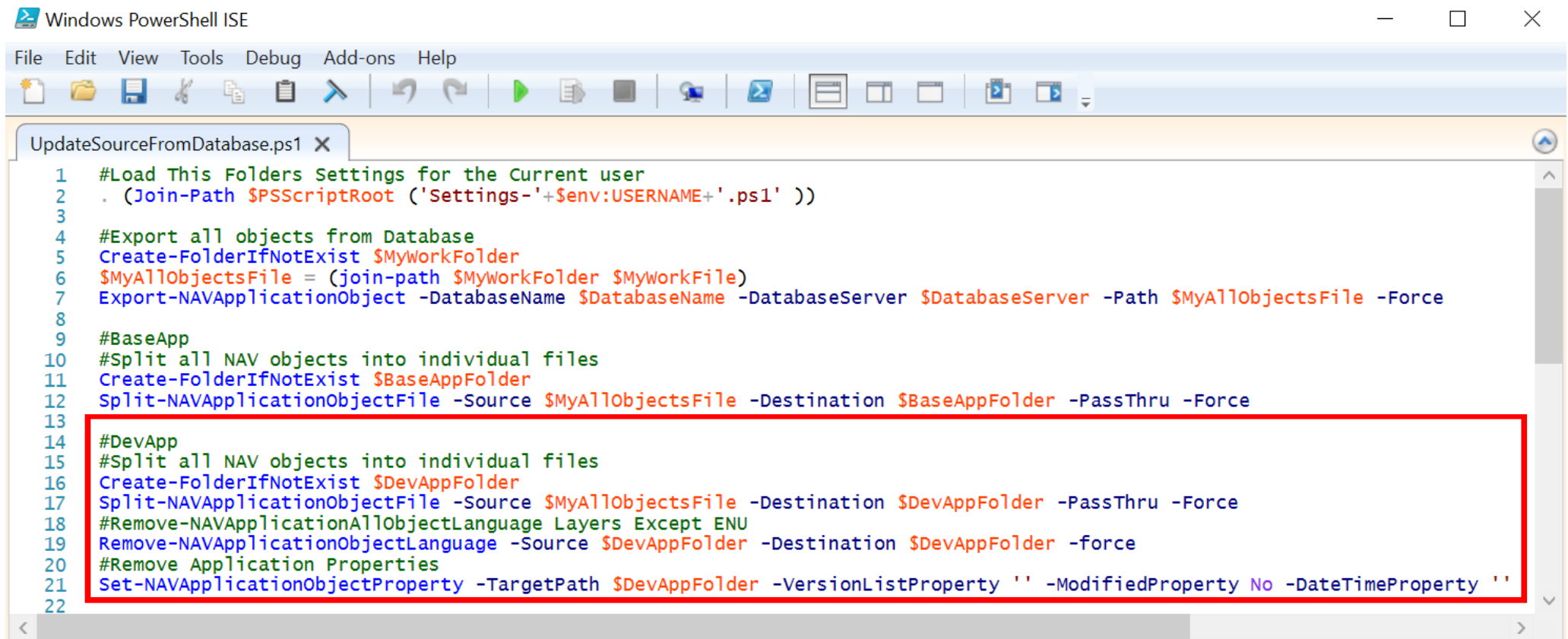
NAV 2 SCM - Version 1



Local Path: C:\Users\soren\Source\Workspaces\My360\NAVApps\SmartSearch\2017\W1\10.0.13194_CTP27\BaseApp

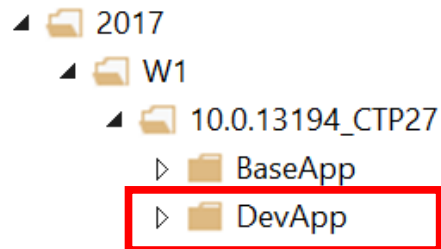
Name ^	Pending ...	User	Lat...	Last Chec...	
COD1.TXT			Yes	10/19/20...	
COD10.TXT			Yes	10/19/20...	
COD100.TXT			Yes	10/19/20...	
COD1000.TXT			Yes	10/19/20...	
COD1001.TXT			Yes	10/19/20...	
COD1002.TXT			Yes	10/19/20...	
COD1003.TXT			Yes	10/19/20...	
COD1004.TXT			Yes	10/19/20...	
COD1005.TXT			Yes	10/19/20...	
COD1006.TXT			Yes	10/19/20...	
COD1008.TXT			Yes	10/19/20...	
COD101.TXT			Yes	10/19/20...	
COD1011.TXT			Yes	10/19/20...	
COD1012.TXT			Yes	10/19/20...	
COD1013.TXT			Yes	10/19/20...	
COD1016.TXT			Yes	10/19/20...	
COD1020.TXT			Yes	10/19/20...	
COD1021.TXT			Yes	10/19/20...	
COD1022.TXT			Yes	10/19/20...	
COD1023.TXT			Yes	10/19/20...	
COD1024.TXT			Yes	10/19/20...	
COD1025.TXT			Yes	10/19/20...	
COD1026.TXT			Yes	10/19/20...	
COD103.TXT			Yes	10/19/20...	
COD1032.TXT			Yes	10/19/20...	
COD1034.TXT			Yes	10/19/20...	
COD11.TXT			Yes	10/19/20...	

NAV 2 SCM - Version 2



```
1 #Load This Folders Settings for the Current user
2 . (Join-Path $PSScriptRoot ('Settings-'+$env:USERNAME+'.ps1' ))
3
4 #Export all objects from Database
5 Create-FolderIfNotExist $MyWorkFolder
6 $MyAllObjectsFile = (join-path $MyWorkFolder $MyWorkFile)
7 Export-NAVApplicationObject -DatabaseName $DatabaseName -DatabaseServer $DatabaseServer -Path $MyAllObjectsFile -Force
8
9 #BaseApp
10 #Split all NAV objects into individual files
11 Create-FolderIfNotExist $BaseAppFolder
12 Split-NAVApplicationObjectFile -Source $MyAllObjectsFile -Destination $BaseAppFolder -PassThru -Force
13
14 #DevApp
15 #Split all NAV objects into individual files
16 Create-FolderIfNotExist $DevAppFolder
17 Split-NAVApplicationObjectFile -Source $MyAllObjectsFile -Destination $DevAppFolder -PassThru -Force
18 #Remove-NAVApplicationAllObjectLanguage Layers Except ENU
19 Remove-NAVApplicationObjectLanguage -Source $DevAppFolder -Destination $DevAppFolder -force
20 #Remove Application Properties
21 Set-NAVApplicationObjectProperty -TargetPath $DevAppFolder -VersionListProperty '' -ModifiedProperty No -DateTimeProperty ''
22
```

NAV 2 SCM - Version 1



Local Path: [C:\Users\soren\Source\Workspaces\My360\NAVApps\SmartSearch\2017\W1\10.0.13194_CTP27\BaseApp](#)

Name ^	Pending ...	User	Lat...	Last Chec...
COD1.TXT			Yes	10/19/20...
COD10.TXT			Yes	10/19/20...
COD100.TXT			Yes	10/19/20...
COD1000.TXT			Yes	10/19/20...
COD1001.TXT			Yes	10/19/20...
COD1002.TXT			Yes	10/19/20...
COD1003.TXT			Yes	10/19/20...
COD1004.TXT			Yes	10/19/20...
COD1005.TXT			Yes	10/19/20...
COD1006.TXT			Yes	10/19/20...
COD1008.TXT			Yes	10/19/20...
COD101.TXT			Yes	10/19/20...
COD1011.TXT			Yes	10/19/20...
COD1012.TXT			Yes	10/19/20...
COD1013.TXT			Yes	10/19/20...
COD1016.TXT			Yes	10/19/20...
COD1020.TXT			Yes	10/19/20...
COD1021.TXT			Yes	10/19/20...
COD1022.TXT			Yes	10/19/20...
COD1023.TXT			Yes	10/19/20...
COD1024.TXT			Yes	10/19/20...
COD1025.TXT			Yes	10/19/20...
COD1026.TXT			Yes	10/19/20...
COD103.TXT			Yes	10/19/20...
COD1032.TXT			Yes	10/19/20...
COD1034.TXT			Yes	10/19/20...
COD11.TXT			Yes	10/19/20...

NAV 2 SCM - Version 3



Windows PowerShell ISE

```
File Edit View Tools Debug Add-ons Help
UpdateSourceFromDatabase.ps1 x
1 #Load This Folders Settings for the Current user
2 . (Join-Path $PSScriptRoot ('Settings-'+$env:USERNAME+'.ps1' ))
3
4 #Export all objects from Database
5 Create-FolderIfNotExist $MyWorkFolder
6 $MyAllObjectsFile = (join-path $MyWorkFolder $MyWorkFile)
7 Export-NAVApplicationObject -DatabaseName $DatabaseName -DatabaseServer $DatabaseServer -Path $MyAllObjectsFile -Force
8
9 #BaseApp
10 #Split all NAV objects into individual files
11 Create-FolderIfNotExist $BaseAppFolder
12 Split-NAVApplicationObjectFile -Source $MyAllObjectsFile -Destination $BaseAppFolder -PassThru -Force
13
14 #DevApp
15 #Split all NAV objects into individual files
16 Create-FolderIfNotExist $DevAppFolder
17 Split-NAVApplicationObjectFile -Source $MyAllObjectsFile -Destination $DevAppFolder -PassThru -Force
18 #Remove-NAVApplicationAllObjectLanguage Layers Except ENU
19 Remove-NAVApplicationObjectLanguage -Source $DevAppFolder -Destination $DevAppFolder -force
20 #Remove Application Properties
21 Set-NAVApplicationObjectProperty -TargetPath $DevAppFolder -VersionListProperty '' -ModifiedProperty No -DateTimeProperty ''
22
23 #LANGUAGES
24 Create-FolderIfNotExist $LanguageFolder
25 Export-NAVApplicationLanguageByFile2Folder -MyAllObjectsFile $MyAllObjectsFile -CurrentLanguage ENU -LanguageFolder $LanguageFolder
26
27 #Help
28 Create-FolderIfNotExist $HelpFolder
29
```

NAV 2 SCM - Version 3

- ▲ 2017
 - ▲ W1
 - ▲ 10.0.13194_CTP27
 - ▷ BaseApp
 - ▷ DevApp
 - ▷ Help
 - ▲ Language
 - ▷ ENU
 - PowerShell

DEMO

Build SCM operations

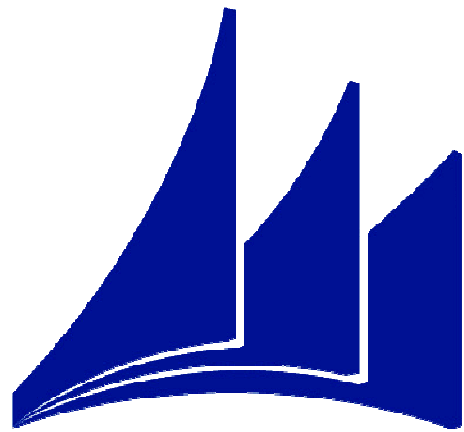
object properties
translations
compile



Environment SCM operations

Setup environment

Kill environment



Microsoft Dynamics

DEMO

Do or do not, there is no try.



Do or do not, there is no try.

Q&A

Do or do not, there is no try.

THANK YOU

Why don't you use Source Code Management?



