



## Track 1 - Session 6

# The Art of Lotus Notes Deployment

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# Legal Disclaimer



'This is **beta** software from IBM and does **not** represent a commitment, promise or legal obligation by IBM to deliver, in a future release of Notes/Domino or Lotus Notes Traveler, any material, code or functionality described/shown in this presentation.'

This presentation is partly based on 8.5.3 Code Drop 5

Ed Brill:

„Unless something last minute changes, our planned announce/ship date for the Notes/Domino 8.5.3 family is Tuesday, **4 October 2011**“

# Agenda

- Introduction
- Know your current environment
- Deinstallation tools
- Cleanup tools
- Installation tweaks
- Configuration & Migration
- Create your own Custom addon Installer
- Lotus Notes 8.5.x on Citrix XenApp
- Q & A



# Introduction



This session is primarily a supplement to

Lotusphere 2011 - ID202 Deploy In Style - Make Your Notes Client Install Perform!

AdminCamp 2011 - T2S2 – What's new and coming in Notes Client Administration

Unfortunately we only have 1,5 hours, so I don't dive deep into the very details of

- **MSI Customization** (because it's too complex/advanced) for this session
- **Smart Upgrade** (because it's not a Enterprise style deployment method in my point of view)
- **Policies:** Already presented by Detlev Pöttgen in session T4S4 – Machine specific policies
- **Server & migration project** issues: Already presented by Werner Motzet in session T4S3 – Die praktische Planung der Migration einer Notes/Domino Landschaft

Special greetings and many thanks to Jeff Mitchell (IBM)!

His (team's) Blog **Puttin' on the Bits** is a **MUST READ!**

# Introduction – Basic steps & challenges



Basic steps to deploy Lotus Notes:

1. Deinstall previous version
2. Cleanup remains
3. Install new Lotus Notes client
4. Migrate existing data
5. Configure Notes client

Challenges for Notes deployments:

- As transparent/comfortable for users as possible
- Users should only need to enter their Notes password (and Notes name)
- Highly automated and standardized deployment
- One Install Kit for All (Desktops, Laptops, Citrix XenApp) in one environment

# Introduction – Client Kits



There are different kind of Install kits

- Notes only 8.5.x **Basic** client
  - „Legacy client“
  - Limited functionality
  - Supports Multi-user & Single User installations
- Notes only 8.5.x **Standard** client
  - Supports Multi-user & Single User installations
  - Needs a lot more resources than Basic client!
- Lotus Notes/Administrator/Designer (**AllClient**)
  - Includes Lotus Domino Administrator & Lotus Domino Designer
  - Supports Single-user installations only
  - Windows only, **not supported** on Citrix

Lotus Notes 8.5.3 includes Lotus Symphony 3.0, but only IBM Sametime 8.5.1

# Introduction – Install types



In the field you can find three major flavors of Notes installations

- **Single User**
  - Still used for AllClient (Lotus Domino Administrator/Designer)
  - Very often used with data directory on file server
- **Multi-User**
  - Recommended for MS Vista/MS Windows 7/Citrix XenApp
  - 8.5.1: Data directories can be relocated
- **Mixed**
  - Multi-User installation with notes.ini Reference in shortcut
  - Single-User with SharedDataDirectory Parameter

Take care to run a supported configuration!

Data directory on network share is only supported on Citrix XenApp (starting with Lotus Notes 8.5.1)

# Introduction - Upgrade vs. Deinstallation



One of the most spread **wrong** assumption:

Upgrade is faster than deinstallation & installation

## Pros of Deinstallation & Installation

- ~4-5 % **faster** than upgrade
- Most flexible (SU/MU, Feature changes, Directory changes, etc...)

Esp. the change from Single User to Multi User cannot be done by upgrades!

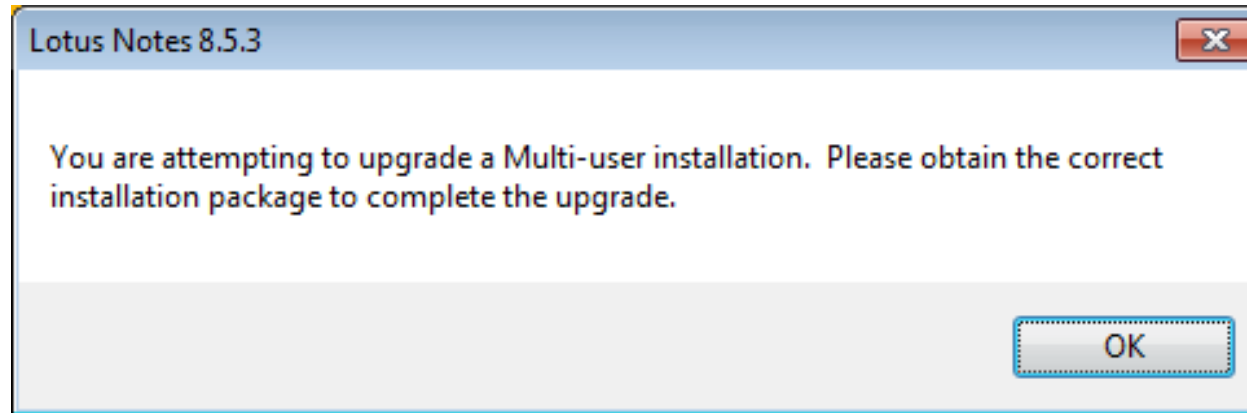
For major version „upgrades“, you should do a uninstall/install.



# Introduction – The Importance of Upgradecode



Error message if you try to upgrade a **Notes only** installation with an **AllClient** kit:



If you upgrade, you need install kits that match the upgradecode of the installed version!

Product	MSI filename	Productcode	Upgradecode
Lotus Notes 6.5.5 German	Lotus Notes 6.5.5 de.msi	{CCD378A2-71C4-4452-8A9D-D84A6FF9B766}	{1840F4F0-33F0-4388-BFBD-1B8830AEFF78}
Lotus Notes 8.5.2 Standard	Lotus Notes 8.5.2.msi	{07C69B3A-62B3-41BF-82EE-B3A87BD6EA0C}	{5BA7CD07-4D6C-4D16-B1A6-2B50DD5F17AD}
Lotus Notes 8.5.2 Std German	Lotus Notes 8.5.2.msi	{6BAE1A3B-273D-46D9-8A0A-F7E0E6049CA1}	{5BA7CD07-4D6C-4D16-B1A6-2B50DD5F17AD}
Lotus Notes 8.5.2 Basic	Lotus Notes 8.5.2.msi	{00D0CF12-832E-4B72-9706-2F556A2D81F4}	{5BA7CD07-4D6C-4D16-B1A6-2B50DD5F17AD}
Lotus Notes 8.5.2 AllClient	Lotus Notes 8.5.2.msi	{E11DFB27-BAF4-46D6-AD76-D5519C0E6786}	{D8641E4B-77AF-4EAC-9137-8D4DCB1478E2}

# Know your environment

If you know your environment, you can react on problems or finetune your Deployment **before** you run into problems



Notes Benutzername	Notes Version	Computername	Hardware Type	RAM (MBytes)	Free Diskspace on C: (MBytes)	Windows Version
Christian Henseler/ACME	Release 8.5.3 September 27 2011	bgh5743	Laptop	256	432	Windows 7 Ultimate (Version 6.1 Build 7601)
Jens Mueller/ACME	Release 6.5.5 September 27 2004	bgh2458	Desktop	4096	15343	Windows XP ServicePack 3 (Version 5.1 Build 2600)
Joachim Meier/ACME	Release 8.5.2 August 18 2010	CTX6783	Desktop	16384	269584	Windows Server 2008 R2 SP1 (Version 6.1 Build 7601)

NotesVersion	NotesProgram (Registry)	Directory (notes.ini)	Names	Installtype	EXTMGR_Addins	NSF_Hooks	Benutzer-Interface
Release 8.5.3 (390)	C:\Program Files (x86)\IBM\Lotus\Notes\	C:\ProgramData\Lotus\Notes\Data\Shared	names.nsf,corp-name	Full	Mc.dll,zmauto.dll	Nlnvp.dll	IT
Release 6.5.5 (194)	C:\Programme\Lotus\Notes\	C:\Dokumente und Einstellungen\All Users\Anwendungsdaten\Lotus\Notes\Data\	names.nsf	Notes Client	Mc.dll,zmauto.dll	Nlnvp.dll	DE
Release 8.5.2 (370)	C:\lotus\Notes	C:\Notesshared	names.nsf	Notes Client	Mc.dll,zmauto.dll	Nlnvp.dll	FR

This client info here was retrieved using LotusScript with WMI sent back into a mailin database.

The code can be triggered by Mail button or in a Postopen event (e.g. Mail db)

You can see here

- Different kinds of Hardware (Desktops, Laptops, Citrix XenApp)to support
- Different kinds of Platforms (x86 vs. x64)
- Computers that does not match system requirements (RAM, Disk space)
- Different languages, 3rdParty tools, etc...

# Basic steps to clean Lotus Notes



## 1. Identify the installed Lotus Notes version

- Asked Windows Installer Service (COM: WindowsInstaller.Installer)
- Retrieve HKLM\Software\Microsoft\Windows\CurrentVersion\Installer
- Use Lotus Notes Productcode table

## 2. Stop/Kill services & processes

- Noteskill, ZapNotes, Killnotes, nsd are not very reliable (anymore)

## 3. Deinstall Lotus Notes

- Msiexec /x {Productcode|msi name}

## 4. Remove Filesystem remains

- Program directory
- Data Directories (Shared Data, User Data)
- Shortcuts (esp. user created ones!)
- %Windir%

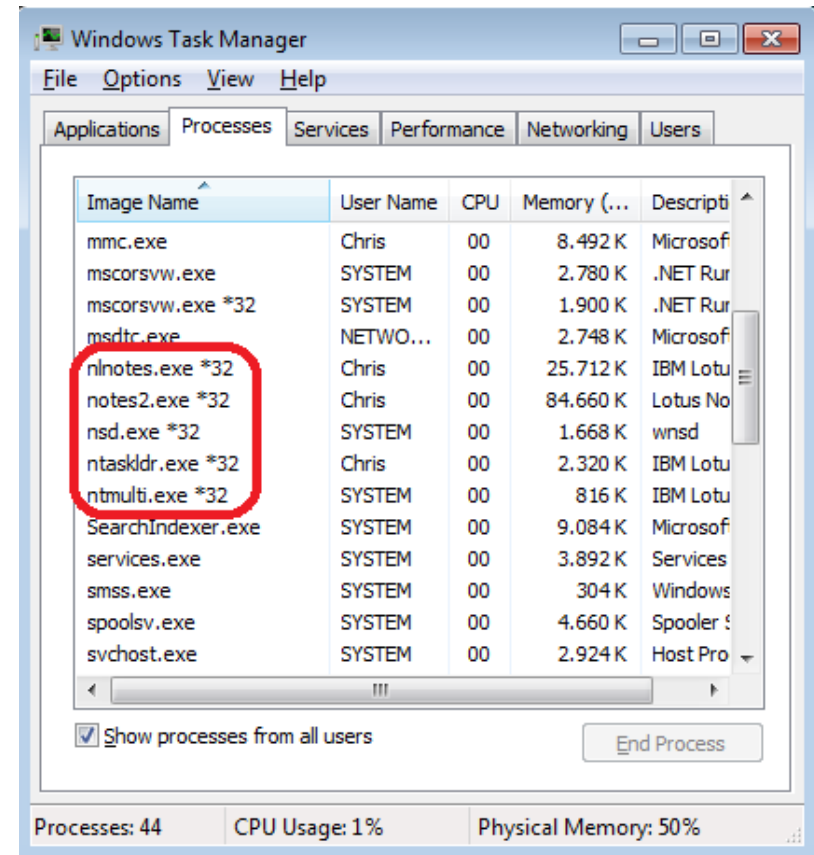
## 5. Remove Registry remains

- MSI Cleanup Utility, MSIZap

If there are problems with Windows Installer Service or the MSI cache, you cannot rely on MSI!

# Killing Lotus Notes

For property deinstallation/installation, it is crucial to kill any running Lotus Notes processes **first**.



Common problems:

- Lotus Notes in Autostart
- User never/rarely logs off
- Installation during business hours
- Services cannot be stopped by end users and are always running

IBM needed to release 8.5.2FP1IF1 (Basic Client) and 8.5.2FP1IF2 (Standard) because 8.5.2 FP1 was not able to deal with NSD.exe (Lotus Notes Diagnostics service)!

# Killing Lotus Notes



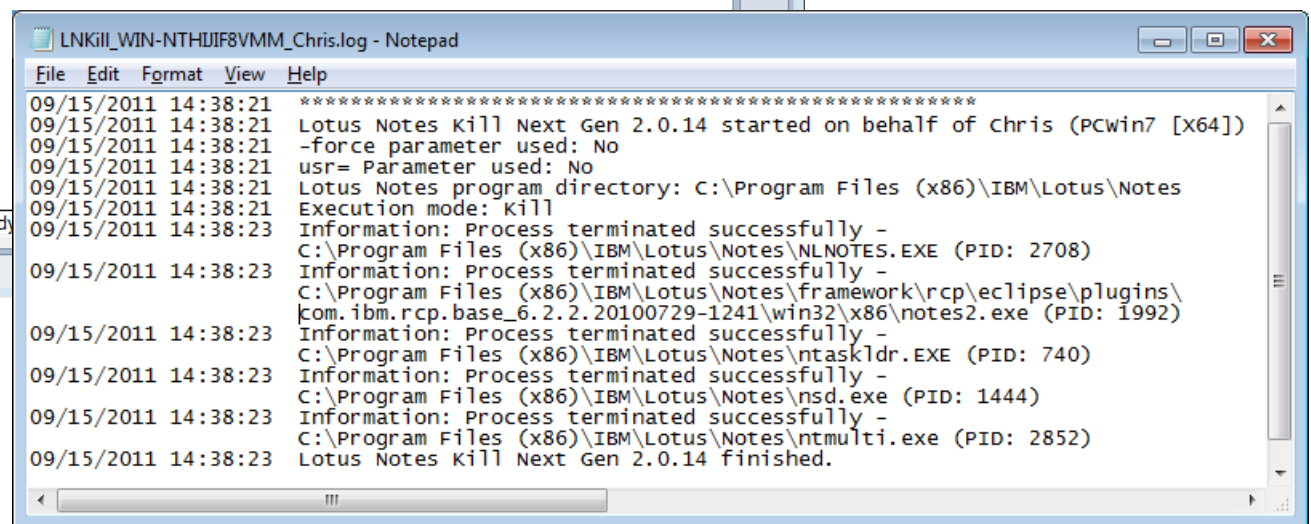
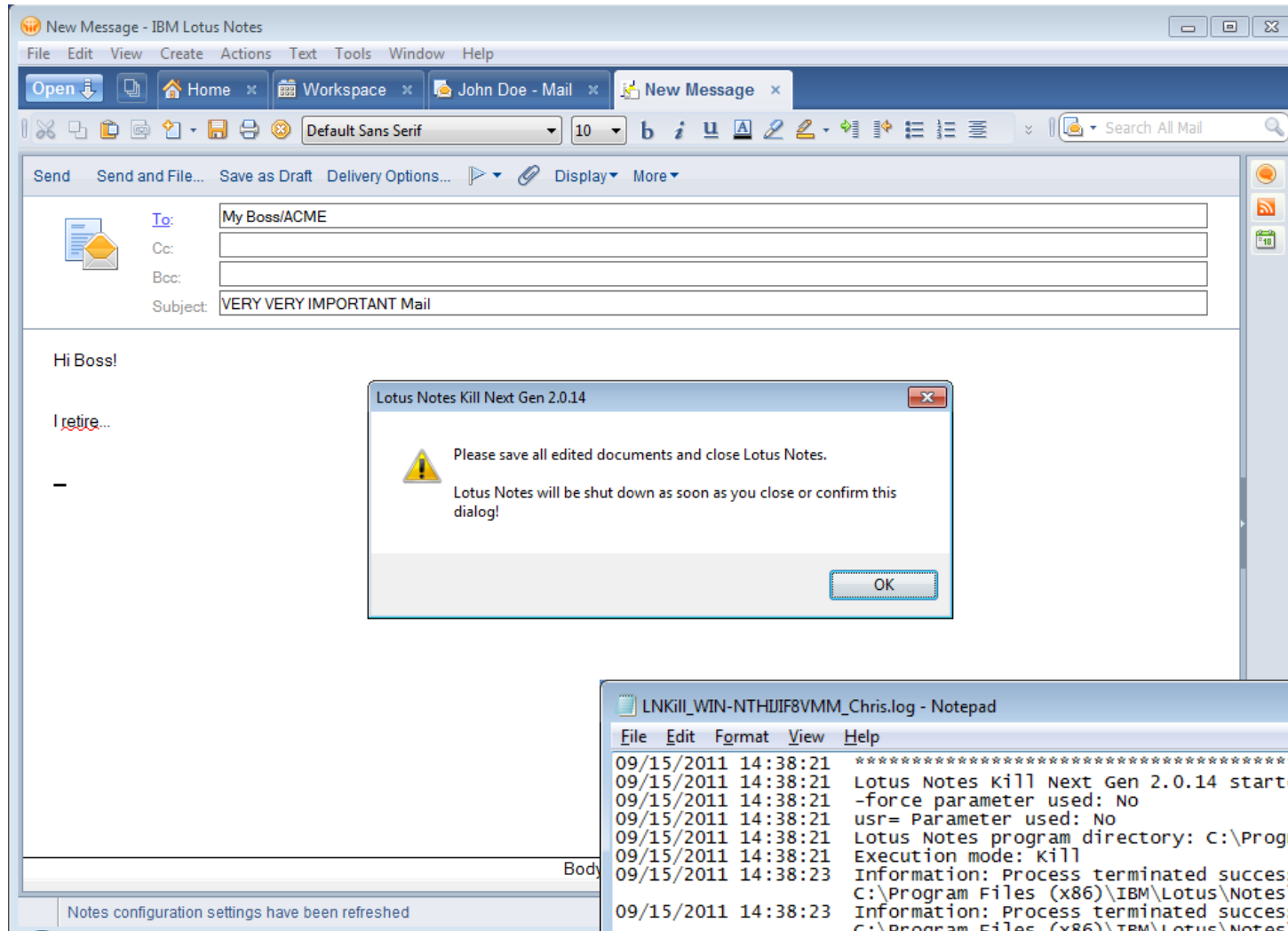
## Challenges:

1. Many well known Kill-tools (e.g. KillNotes) are working with a static process list and were developed pre-Notes 8.0  
→ They don't know all modern Notes 8 tasks, e.g. Notes2.exe
2. Many customers don't want to kill Lotus Notes while user's are working with it

## Solution:

- Use a tool that knows where Lotus Notes is installed and that only kills processes from the Lotus Notes Program directory
- Use a multi-lingual tool that is able to (optionally) interact with the user

# Killing Lotus Notes



# Lotus Notes Deinstallation



Basically, Lotus Notes deinstallation is done by

- Software applet (Add/Remove)
- Msiexec.exe /x {Productcode}<msi name>
- MSIInstallProduct (PackagePath,Commandline)

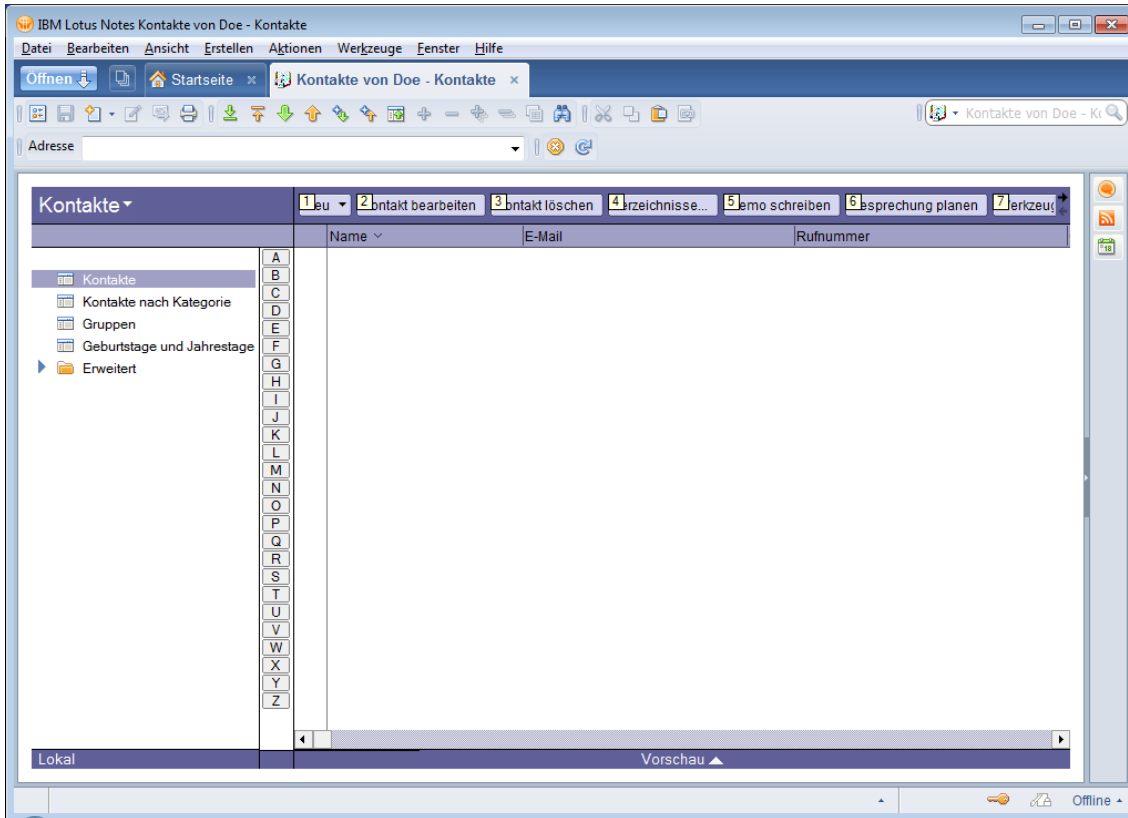
In heterogeneous environments, it's **not trivial** to uninstall Lotus Notes

- Every Lotus Notes version has a different Product code
- Every localized Lotus Notes has a different Product code
- AllClient has a different Upgrade Code than Notes only package
- MSI Cache might be broken
- Lotus Notes Installation might be broken

# Cleanup – Why you must do it



Where is the error?



A **Lotus Notes 8.5.x** Standard client with **Notes 6** pernames Design!

- If templates are left in the **user's data** directory, these templates are used for design upgrade on first start instead of templates in the Shared Data directory!
- or wrong TemplateSetup value in notes.ini
- or Templates were not properly replaced during install

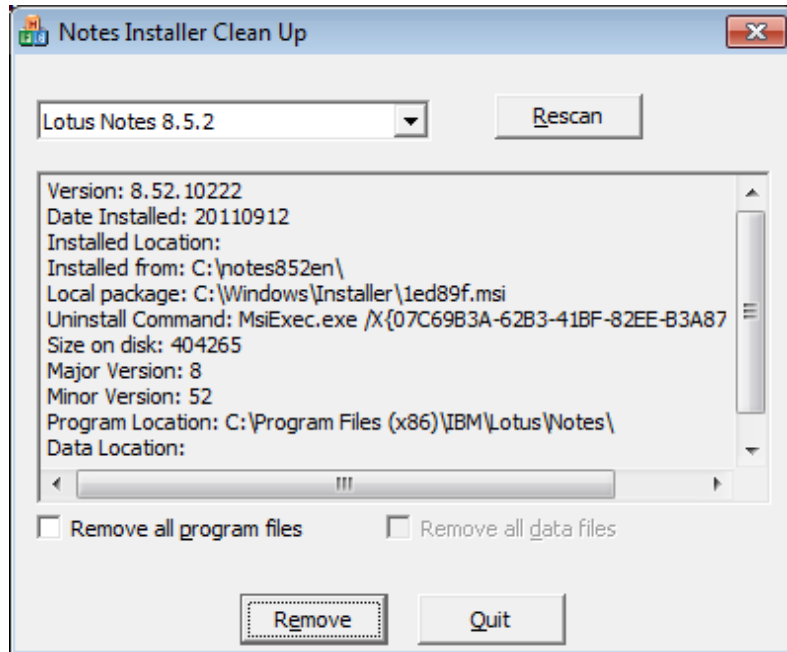


# Notes Installer Clean Up Executable (NICE\*)

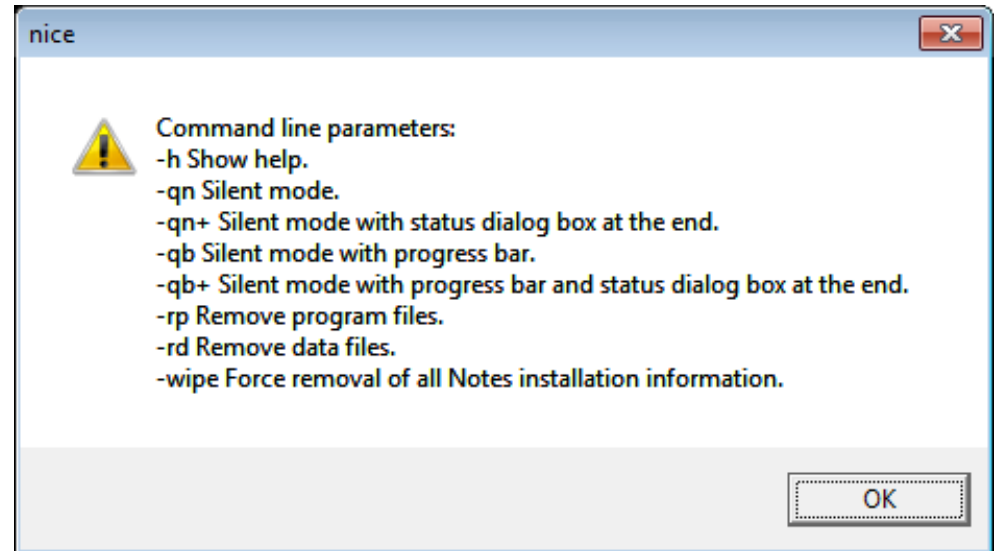
Introduced in 8.5.3, but can be used with any (more recent) version



## GUI



## Command line



It does promise to clean up Lotus Notes after

- Clean install
- Failed install
- Failed upgrade
- Failed uninstall

All activities are logged in My Documents\LotusInstall.log

\*NICE can be found in utility\NotesCustomizationKit\_1\_0.zip of the Install Kit

# Notes Installer Clean Up Executable (NICE)

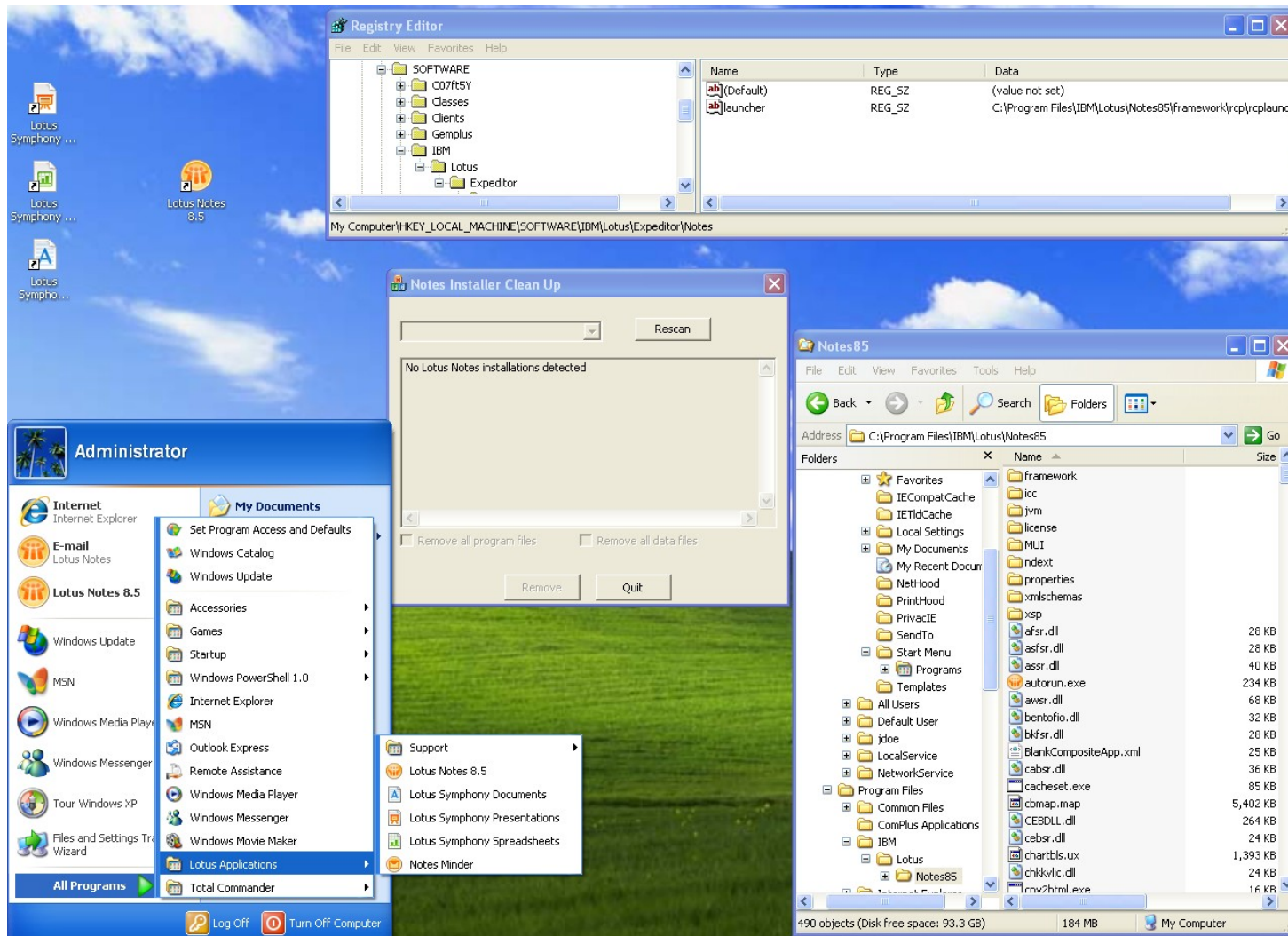
What is your expectation to NICE?

The screenshot shows a Windows XP desktop with a blue sky and green hills background. In the top-left corner, there are desktop icons for Lotus Symphony and Lotus Notes 8.5. The Registry Editor window is open, showing the path 'My Computer\HKEY\_LOCAL\_MACHINE\SOFTWARE\IBM\Lotus\Expeditor\Notes'. The right pane shows a table with two entries:

Name	Type	Data
(Default)	REG_SZ	(value not set)
launcher	REG_SZ	C:\Program Files\IBM\Lotus\Notes85\framework\rcp\rcplaunch

The Start menu is open, showing 'All Programs' expanded to 'Lotus Applications', which includes 'Lotus Notes 8.5'. The 'Notes85' folder in 'Program Files' is open, displaying a list of files and subfolders including 'framework', 'icc', 'jvm', 'license', 'MUI', 'ndext', 'properties', 'xmlschemas', 'xsp', 'afsr.dll', 'asfsr.dll', 'assr.dll', 'autorun.exe', 'awsr.dll', 'bentofio.dll', 'bkfsr.dll', 'BlankCompositeApp.xml', 'cabsr.dll', 'cacheset.exe', 'cbmap.map', 'CEBDLL.dll', 'cebsr.dll', 'chartbls.ux', 'chkvlic.dll', and 'rcpv?html.exe'. The status bar at the bottom indicates '490 objects (Disk free space: 93.3 GB) 184 MB My Computer'.

# Notes Installer Clean Up Executable (NICE)



NICE has some requirements:

- Proper Windows Installer entries (HKLM\Software\Microsoft\Windows\Installer)
- or proper Program Registry keys (HKLM\Software\Lotus\Notes)
- or Default installation directories (e.g. C:\Program Files\IBM\Lotus\Notes)



# Notes Installer Clean Up Executable (NICE)



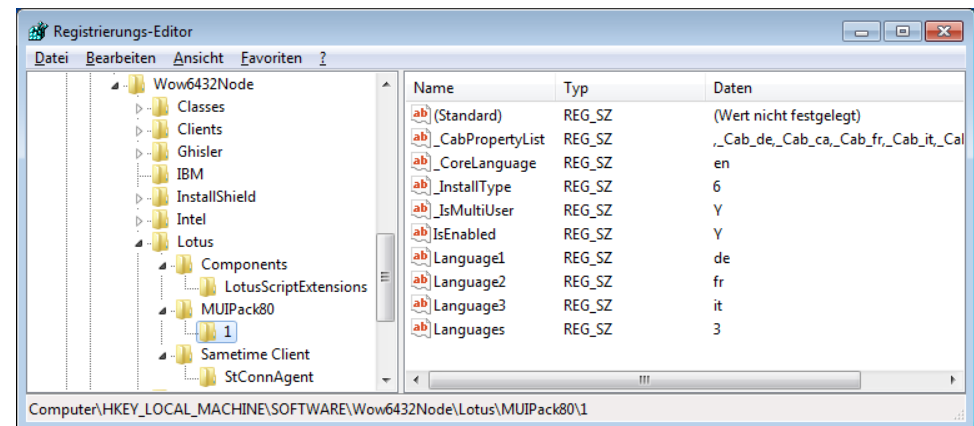
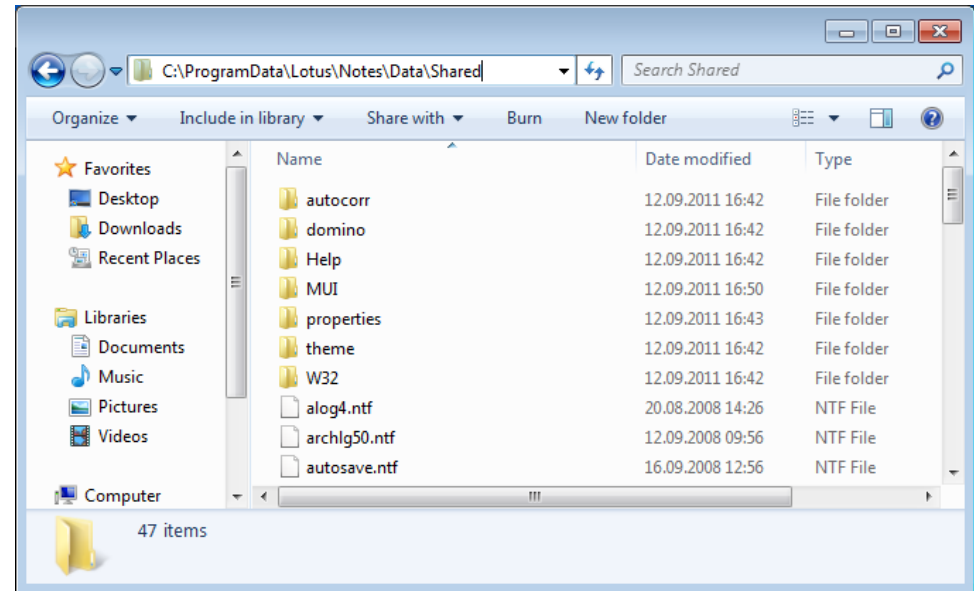
Issues you have to be aware of:

- Empty Lotus Notes program directory left
- Shared Data Directory left
- Registry hives left
- User data left (Multi-user only)
- Notes 6 Single Login files are left
- User defined Shortcuts are left

**Notice:** NICE does **NOT** kill

- soffice.exe
- soffice.bin
- Nminder.exe
- sametime75.exe
- nlnotes.exe
- notes.exe
- ntaskldr.exe
- notes2.exe

so the user needs to kill them if they are still running.



# Lotus Notes Cleanup

So, after NICE, there are still Lotus Notes remains, we have to deal with ...



## Remove Filesystem remains

- Program directory
- Data Directories (Shared Data, User Data)
- Shortcuts (esp. user created ones!)
- %Windir%\notes.ini, %Windir%\Lotus.ini, %Windir%\System32\nsl.exe, %Windir%\System32\nslsvce.exe

## Remove Registry remains, e.g.

- HKLM\Software\Lotus\Notes
- HKCU\Software\Lotus\Notes
- HKLM\Software\Clients
- HKLM\Software\IBM

and its 64-Bit equivalents  
...\Wow6432Nodes\...

```
*****
CleanupNotes started for chris (win7PC [x64])
Profiles directory: C:\Users
C:\Users\Chris\AppData\Local\Lotus\Notes\Data\cache.ndk deleted.
C:\Users\Chris\AppData\Local\Lotus\Notes\Data\pernames.ntf deleted.
C:\Users\Chris\AppData\Local\Lotus\Notes\Data\bookmark.ntf deleted.
C:\Users\Chris\AppData\Local\Lotus\Notes\Data\pid.nbf deleted.
C:\Users\Chris\AppData\Local\Lotus\Notes\Data\ini.nbf deleted.
C:\Users\Chris\AppData\Local\Lotus\Notes\Data\diagindex.nbf deleted.
C:\Users\Chris\AppData\Local\Lotus\Notes\Data\jobsched.njf deleted.
C:\Users\Chris\AppData\Local\Lotus\Notes\Data\ticket.idt deleted.
C:\Users\Chris\AppData\Local\Lotus\Notes\Data\log.nsf deleted.
C:\Users\Chris\AppData\Local\Lotus\Notes\Data\workspace\rcp.lock deleted.
C:\Users\Chris\AppData\Local\Lotus\Notes\Data\frstrings.dat deleted.
C:\Users\Chris\AppData\Local\Lotus\Notes\Data\IBM_TECHNICAL_SUPPORT deleted.
C:\Users\Chris\AppData\Local\Lotus\Notes\Data\workspace\logs deleted.
C:\Users\Chris\AppData\Local\Lotus\Notes\Data\workspace\config deleted.
C:\Users\Chris\AppData\Roaming\Microsoft\Internet Explorer\Quick Launch\
Notes 6.5.lnk successfully deleted.
```

User data cleanup

```
Success: Directory C:\ProgramData\Lotus\Notes successfully deleted.
Success: Empty directory C:\ProgramData\Lotus successfully deleted.
Information: Directory C:\ProgramData not empty. Not deleted.
Information: The file C:\windows\SysWow64\nsl.exe existiert nicht.
Information: The file C:\windows\SysWow64\nslsvce.exe does not exist.
Information: The file C:\windows\system32\nsl.exe does not exist.
Information: The file C:\windows\system32\nslsvce.exe does not exist.
Information: Directory C:\Lotus\Notes does not exist.
Information: Directory C:\Program Files (x86)\Lotus\Notes does not exist.
Success: Directory C:\Program Files (x86)\IBM\Lotus\Notes successfully deleted.
Success: Empty directory C:\Program Files (x86)\IBM\Lotus successfully deleted.
Success: Empty directory C:\Program Files (x86)\IBM successfully deleted.
Information: Directory C:\Program Files (x86) not empty. Not deleted.
Information: Directory C:\Program Files (x86)\Lotus\Notes existiert nicht.
Information: Directory C:\Program Files (x86)\IBM\Lotus\Notes existiert nicht.
Information: Registry Hive HKLM\Software\Wow6432Node\Lotus\Notes existiert nicht.
```

Filesystem cleanup

```
Success: Registry Hive HKLM\Software\Wow6432Node\Lotus successfully deleted.
Success: Registry Hive HKCU\Software\Lotus\Notes successfully deleted.
CleanupNotes finished.
```

Registry cleanup

# The Lotus Notes Install Kit



The Lotus Notes Standard & AllClient install kit is split into 2 parts

- MSI technology
- Eclipse/Lotus Expeditor technology

[deploy]	<DIR>		Eclipse
[license]	<DIR>		
[Utility]	<DIR>		Utilities addon, not installed
0x0404	ini	4.293	
0x0405	ini	6.566	
[...]			
1063	mst	60.416	
2052	mst	133.632	
Data1	cab	193.868.987	MSI
instmsia	exe	1.708.856	
instmsiw	exe	1.822.520	
Lotus Notes 8.5.2	msi	6.756.352	
LotusNotes	itw	49.152	
readme	html	16.961	
setup	bin	370.016	
setup	exe	161.120	
Setup	ini	2.953	
updateSite	zip	217.019.121	Eclipse

These different parts are modified with different tools (and need different knowhow):

- MSI: Packaging tools (Installshield [Tuner], Wise Packaging Studio, MS Orca)
- Eclipse: Text editor, TrimUpdatesite, UpdateSiteMgr
- Mixed: Notes Addon Installer

# The Lotus Notes Install Kit



To modify the MSI part, Transforms (MST) are used (**green** are the most important ones):

- Fix **Installkit bugs**, e.g. **wrong templates** in Lotus Notes 8.5.2 German
- Replace **customized templates**, most common bookmark.ntf & pernames.ntf
- **Add files**
  - **Launcher, scriptable setup**, Basic Client dictionaries, 3rd Party addons (e.g. ZipMail, MC)
- **Remove components**, e.g.
  - Release Notes, Templates, NOMAD, Optional Network drivers, etc...
- Add **notes.ini** variables, e.g. **Configfile**
- Correct **keyview.ini** variable HOME (I know there is a fix in a FP, but it is not done the right way)
- Set **Environment variables** (PATH)
- Modify **Components**
  - **Shortcuts**
  - Preloader (it's broken in 8.5.2)
  - NotesIni, LA\_Files, RegistryEntriesCore, Services, etc...
- Add **MAPI** fixes, e.g. for MS Office 2003 send to
- Add **Internet Explorer Protected Mode** fixes
- **Custom actions**, e.g.
  - Uninstall cleanup,
  - Firewall rules install/uninstall,
  - Citrix tuning (Memory tuning, rcp.install.id)
- Modify **feature behaviour**, e.g.
  - Install **Notes Single Logon** on Client PCs, but **not** on Citrix XenApp

# The Lotus Notes Install Kit



When dealing with the Eclipse part, we use different tools for different goals:

- Preconfigure Eclipse settings: Edit `depoy\plugin_customization.ini`
- Add or remove Updatesites: `UpdateSiteMgr` (or `TrimUpdatesite & addtoKit`)
- For Citrix Memory tuning: Edit `deploy\jvm.properties`

The Standard Client Install Kit can be reduced nearly 20 % (200 MB) by shrinking the components not installed.



# The Lotus Notes Install Kit



Plugin\_customization.ini is located in the deploy directory of the install kit

Basic syntax: <plugin name>/<parameter>=<value>

Unfortunately, only a fraction of plugin parameters are documented (many ST settings are)

If you want to install unsigned plugins with the install kit:

`com.ibm.rcp.security.update/UNSIGNED_PLUGIN_POLICY=ALLOW`

If you want to disable the Getting started page:

`com.ibm.rcp.jfaceex/overrideAutoStart=com.ibm.rcp.gettingstarted.GettingstartPerspective`

If you want to preset the Sametime Spellchecking dictionary to German

`com.ibm.collaboration.realtime.spellchecker/dictionaryLanguage=de-DE`

If you want to shorten extra long file names that may exceed 259 characters

`com.ibm.rcp.topologyhandler/hashCacheFileNames=true`

(new and default in 8.5.3, new in 8.5.2 FP3, but already available in 8.5.1)

# The Lotus Notes Install Kit



If you want to add or remove Eclipse plugins to the Install kit, you can use UpdateSiteMgr\*:

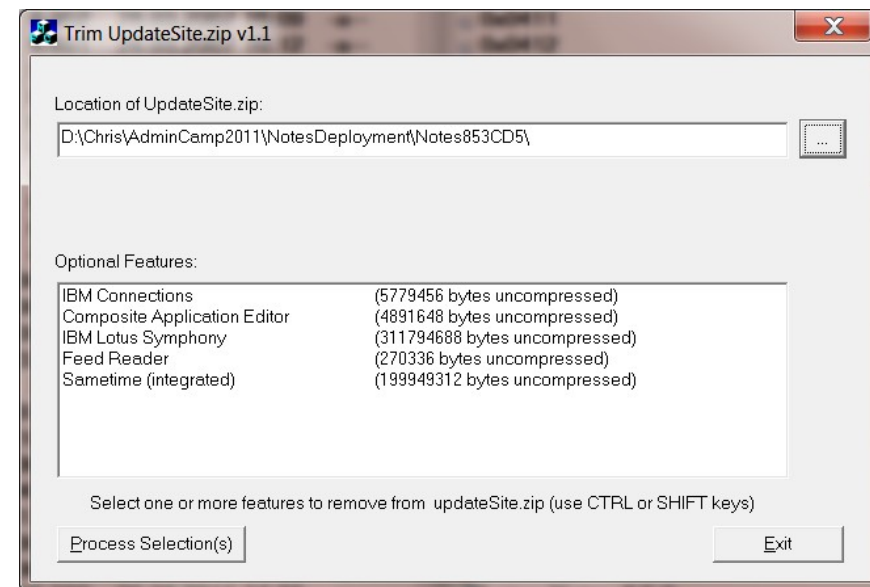
```
D:\Chris\AdminCamp2011\NotesDeployment>UpdateSiteMgr.exe
Usage1: UpdateSiteMgr.exe [-dhnUrL] <kitPath>
    Merges info from <kitPath> into the kit that is the same folder as this
    executable.
    <kitPath> defaults to '.'
        -d    Turn Debug ON
        -h    Print usage
        -n    Do a dryrun
        -U    Print version info

Usage2: UpdateSiteMgr.exe [-rL] <componentId>
    Remove info from kit that is the same folder as this executable.
        -r    Remove specified <componentId> from kit
        -L    List all components that can be trimmed
```

Use **-L** to list the components that can be trimmed:

```
+-----+
|No. |Component ID |
+-----+
| 1  |Activities   |
+-----+
| 2  |Sametime    |
+-----+
| 3  |CAE         |
+-----+
| 4  |Feedreader  |
+-----+
| 5  |Symphony    |
+-----+
```

But I prefer the old UI-Tool TrimUpdateSite to remove components



\*UpdatSiteMgr can be found in utility\NotesCustomizationKit\_1\_0.zip of the Install Kit

# The Lotus Notes Install Kit



To add a (signed) non-supplied Eclipse component follow these steps

- You need an valid updatesite (with signed plugins)
- You need to add new installfeature elements to the Installation manifest

**UpdatesiteMgr <kitpath>** will do this for you, BUT while UpdateSiteMgr adds your updatesite to the Lotus Notes updatesite, I prefer to use **separate updatesites**, so I integrate 3rd Party updatesite manually

**Example:** Integration of XTAF Dictionaries in LN 8.5.2 Client Eng Install kit (all localized LN 8.5.2 Clients already include all XTAF Dictionaries)

1. XTAF Dictionaries updatesite as XPDDics.zip

[features]	<DIR>	
[plugins]	<DIR>	
site	xml	2.714
site_ar	properties	504
site_cs	properties	504
site_da	properties	504
site_el	properties	504
site_fi	properties	504
site_hu	properties	504
site_nl	properties	504
site_pl	properties	504
site_ru	properties	504
site_sv	properties	504
site_tr	properties	504

# The Lotus Notes Install Kit



## 2. Add installfeature information to the Installation Manifest (deploy\install.xml)

```
<installfeature default="true" description="IBM Lotus Notes 8.5.2 XTAF Dictionaries"
id="Platform.XPD.Dictionaries" required="true" show="false" version="7.1.1.201006221804">
  <requirements>
    <feature action="install" id="com.ibm.langware.v5.dic.ar_XX.feature" match="perfect"
shared="true" version="7.1.1.201006221804" url="jar:${installer.root}/XPDDics.zip!/" />
    <feature action="install" id="com.ibm.langware.v5.dic.cs_CZ.feature" match="perfect"
shared="true" version="7.1.1.201006221804" url="jar:${installer.root}/XPDDics.zip!/" />
    <feature action="install" id="com.ibm.langware.v5.dic.da_DK.feature" match="perfect"
shared="true" version="7.1.1.201006221804" url="jar:${installer.root}/XPDDics.zip!/" />
    <feature action="install" id="com.ibm.langware.v5.dic.el_GR.feature" match="perfect"
shared="true" version="7.1.1.201006221804" url="jar:${installer.root}/XPDDics.zip!/" />
    <feature action="install" id="com.ibm.langware.v5.dic.fi_FI.feature" match="perfect"
shared="true" version="7.1.1.201006221804" url="jar:${installer.root}/XPDDics.zip!/" />
    <feature action="install" id="com.ibm.langware.v27.dic.hu_HU.feature" match="perfect"
shared="true" version="2.7.2.201006221804" url="jar:${installer.root}/GB_XPDDics.zip!/" />
    <feature action="install" id="com.ibm.langware.v5.dic.nl_NL.feature" match="perfect"
shared="true" version="7.1.1.201006221804" url="jar:${installer.root}/XPDDics.zip!/" />
    <feature action="install" id="com.ibm.langware.v5.dic.pl_PL.feature" match="perfect"
shared="true" version="7.1.1.201006221804" url="jar:${installer.root}/XPDDics.zip!/" />
    <feature action="install" id="com.ibm.langware.v5.dic.ru_RU.feature" match="perfect"
shared="true" version="7.1.1.201006221804" url="jar:${installer.root}/XPDDics.zip!/" />
    <feature action="install" id="com.ibm.langware.v5.dic.sv_SE.feature" match="perfect"
shared="true" version="7.1.1.201006221804" url="jar:${installer.root}/XPDDics.zip!/" />
    <feature action="install" id="com.ibm.langware.v27.dic.tr_TR.feature" match="perfect"
shared="true" version="2.7.2.201006221804" url="jar:${installer.root}/XPDDics.zip!/" />
  </requirements>
</installfeature>
```

# The Lotus Notes Install Kit



The trick is to use the right XTAF Dictionaries

The XTAF\_Dictionaries provided by IBM as standalone download use

```
<feature colocation-affinity="com.ibm.rcp.site.anchor.user.feature" ...
```

while the XTAF Dictionaries of the MUI-Packs are using

```
<feature colocation-affinity="com.ibm.rcp.platform.feature"
```

While the MUI-Pack XTAF directories

- must be installed **only once** per machine
- are located in the **program** directory of Lotus Notes

In contrast, the standalone XTAF directories

- must be installed for **every user on every** machine!
- be located in the **user data** directories (workspace\applications)

Same as **all plugins** deployed using a **Widget Catalog** (if the user is not local Admin)



# Fix Pack Installer

There are two different kinds of Fix Pack Installers:

- Basic Client
- Standard Client

I won't unpack FixPacks anymore, because it's easier to replace them, then.

Installation commandline:

- Standard client: `{Hotfix}.exe -s -a /s /v"METHOD=INSTALL /q[...]"`
- Basic client: `{Hotfix}.exe -s -a /s /v"-install /q[...]"`

Unfortunately, in recent times, FixPacks cause as many problems as they fix:

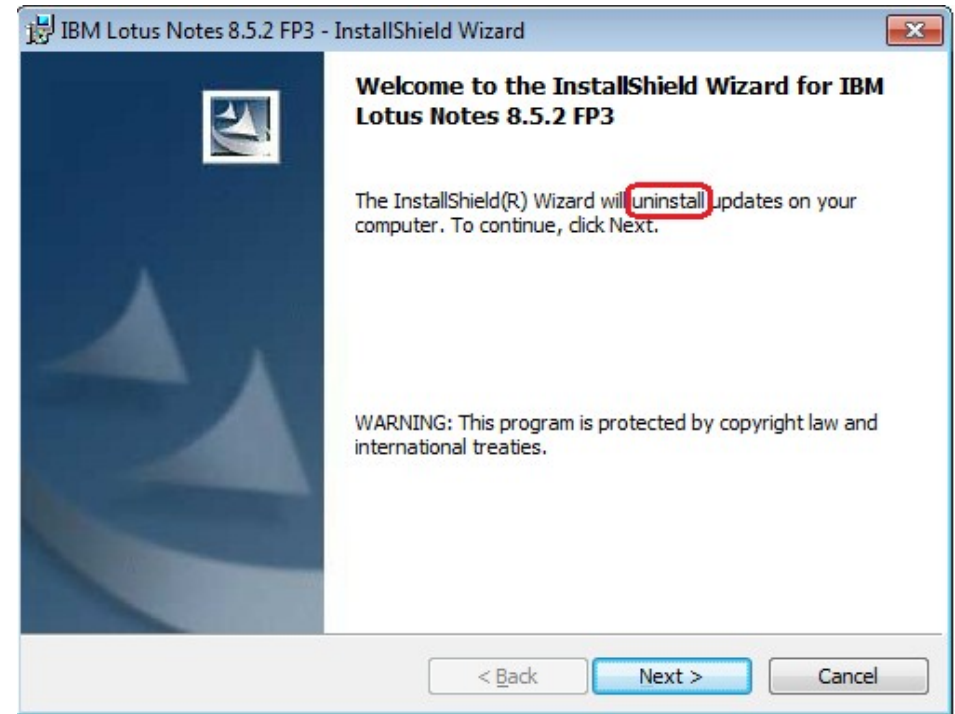
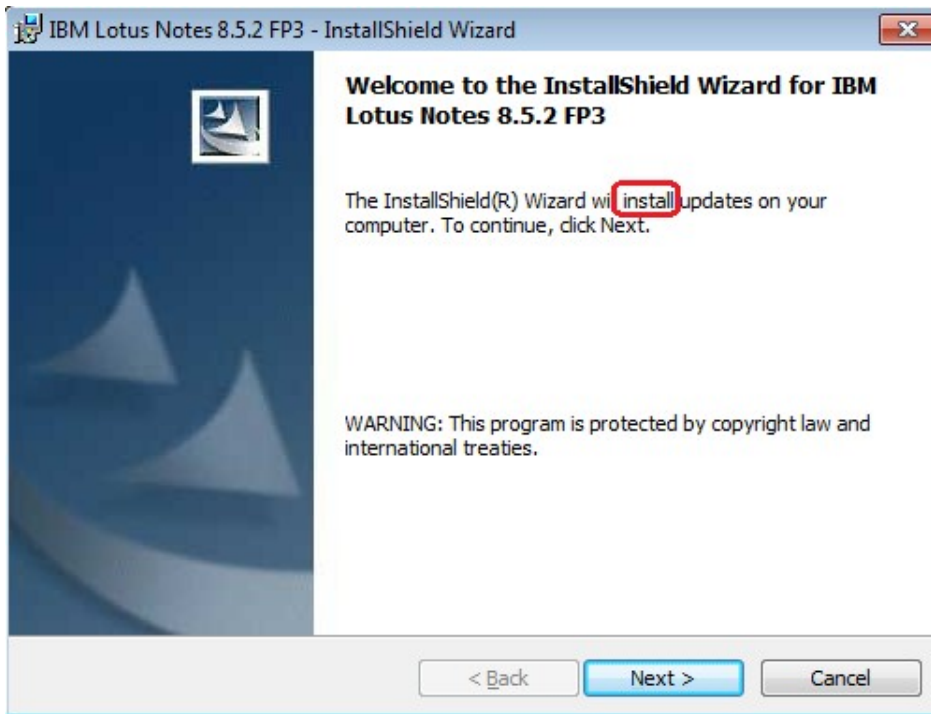
- 8.5.2FP1: not able to deal with Notes Diagnostics Service
- 8.5.2FP1IF1 Standard: IBM forgot to package a lot of Eclipse features
- 8.5.2FP2: Activity Plugins do not work anymore

Same is true for Domino FixPack, esp. 8.5.2FP3 issues with Traveler & iNotes

# FixPack Installer annoyances



If FixPack Installers are executed sequentially, they toggle between install and uninstall mode



To enforce an installmode for the FixPack Installer use MSI cmdline parameters:

Standard Client FixPack: METHOD=INSTALL vs. METHOD=UNINSTALL

Basic Client FixPack: -install vs. -revert

Thanks to Thomas Bolsinger!



# Addon installers

Basically, there are two major IBM Addons for Lotus Notes Standard Client:

- Sametime 8.5.x embedded for Lotus Notes
- Lotus Symphony 3.x addon for Lotus Notes

Lotus Notes 8.5.3 includes

- Sametime 8.5.1, but 8.5.2 is the most recent version
- Lotus Symphony 3.0, so there is no need (at this time) for the addon

While it is possible to fully integrate them into the Notes Install kit, it's

- Not supported
- Not worth time & effort







# Wrap up - The customized install kit

Now, all install kit components are assembled.

Now can we install it in one pass (example batch for manual installation)

```
Cd "~dp0"
```

```
Call setup.exe /s /v"SETMULTIUSER=1 TRANSFORMS=LN852.mst  
PROGDIR=\"%ProgramFiles(x86)%\ Lotus\Notes\" /qn"
```

```
If ErrorLevel 1 Goto END
```

```
Call lotus_notes852FP3_win.exe -s -a /s /v"METHOD=INSTALL /qn /! *v LN852FP3.log"
```

```
If ErrorLevel 1 Goto END
```

```
cd ..\ST852
```

```
call Setup.exe /s /v"/qb+ /! *v st852.log"
```

```
:END
```

This batch should demonstrate the basic workflow and command line parameters.

By leaving FixPacks and Addon installers untouched, they can be replaced very fast & easily as soon as new versions are released.



# Lotus Notes installation

In all my projects, Lotus Notes is deployed using Enterprise Software distribution solutions (Enteo, Marimba, Zenworks, SCCM, etc...).

In contrast to Smart Upgrade, they

- are supported on MS Vista & Windows 7 (SU: starting with 8.5.3)
- can be used to deploy Lotus Notes on new machines

## **Very serious warning:**

Based on more than 10 years of Deployment experience:

min. 30 % of Lotus Notes deployment issues are Software distribution issues, not Lotus Notes issues!

It makes a big difference, if you install manually as admin or using Software deployment tools.

Keywords: **Installation context** (Admin user vs. Service account vs. System account), mapped drive issues, Session 0 isolation

So, **do not trust** them and **test** prior rollout and **control** during rollout.



# Scriptable setup

A scriptable setup file is used to configure Lotus Notes without user interaction.

- Scriptable setup does not apply to existing users!
- It's activated by notes.ini Configfile= Parameter
- **New** in Lotus Notes 8.5.1: **Environment variables** for Configfile=, e.g. Configfile=%LocalAppData%\setup.txt
- **New** in Lotus Notes 8.5: **Environment variables** in Scriptable Setup File

**Problem** with **localized** Windows XP: C:\Documents and Settings vs. C:\Dokumente und Einstellungen

As a template, I am using a static scriptable setup file in the shared data directory:

Domino.Name=<Dominoname>, *e.g. MAIL01/SRV/ACME (no need for hierarchical name)*  
Domino.Server=1 *Yes, we want to use a Domino server*  
Domino.Port=TCP *Use the Port TCP to connect to the Domino server*  
AdditionalServices=-1 *No, we don't want to configure additional Services*

More parameters are available, but I rarely use them.

**Attention:** Scriptable Setup **cannot** be used to configure Eclipse plugins!

# Scriptable setup



The **NETWORK\_SPRAYER\_ADDRESS** trick:

Domino.Name is **not** the mail server, but a **lookup** server for user information

You can instruct Domino servers to allow connection for other server names:

```
NETWORK_SPRAYER_ADDRESS=name1,name2,...
```

e.g.

```
NETWORK_SPRAYER_ADDRESS=LNLOOKUP
```

in the notes.ini of the Domino server.

You only need an corresponding DNS entry pointing to the Domin server.

→ **One single** scriptable Setup file for *different* Domino servers/environments

# Scriptable setup

If **ID files** in the file system are used (old school):

Domino.Name=LNLOOKUP

Domino.Server=1

Domino.Port=TCP

AdditionalServices=-1

**Keyfilename**=<*path to user id*>

If **ID Vault** is used, where no ID is in the (local) file system:

Domino.Name=LNLOOKUP

Domino.Server=1

Domino.Port=TCP

AdditionalServices=-1

**Username**=<*username*>

The trick is to create an appropriate scriptable setup file **dynamically/on the fly!**

→ I am using a **Launcher** for that

The second approach is to use **static values**, e.g.

Keyfilename=%LocalAppData%\user.id **or**

Username=%username%



# Scriptable setup

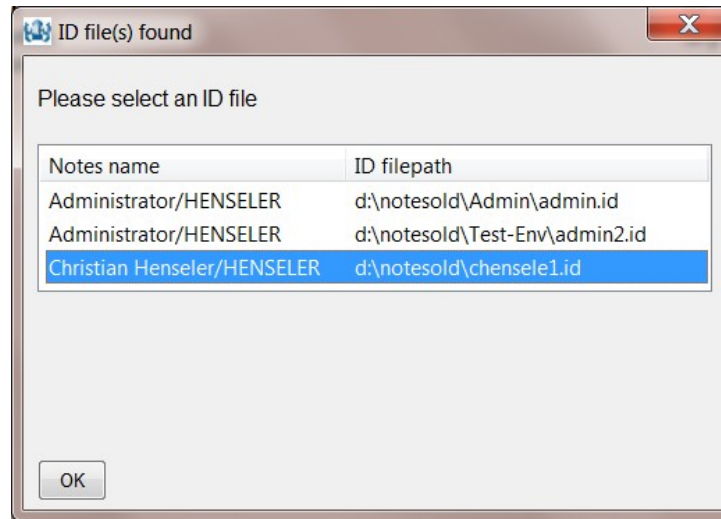
The Launcher is able to deal with both local ID files and ID Vault:

1. If 1 ID or more IDs but a keyfilename= parameter in notes.ini is found

→ Automatically create scriptable setup without user interaction

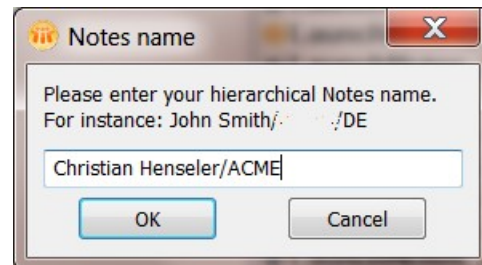
2. If many ID files are found and no keyfilename= parameter can be used

→ Ask the user to select ID



3. If no ID file is found (and %username% is not used)

→ Ask for the username



# Single User → Multi User

The **recommended** installation type for Lotus Notes on MS Vista or MS Windows 7 is **Multi-user**.



Multi-User installations you **different directories** than Single User Installations:

## Single User:

Program Directory: %ProgramFiles%\IBM\Lotus\Notes (IBM default)

Data directory: %ProgramFiles%\IBM\Lotus\Notes\Data (IBM default) or very common on the **user's homeshare**

## Multi-User:

Program Directory: %ProgramFiles%\IBM\Lotus\Notes (IBM default)

Shared data directory: %ProgramData%\Lotus\Notes\Data

User's data directory: **%LocalAppData%**\Lotus\Notes\Data

So, you need to **migrate data** for every user if you switch from Single to Multi-User!

# MUMAAssistant

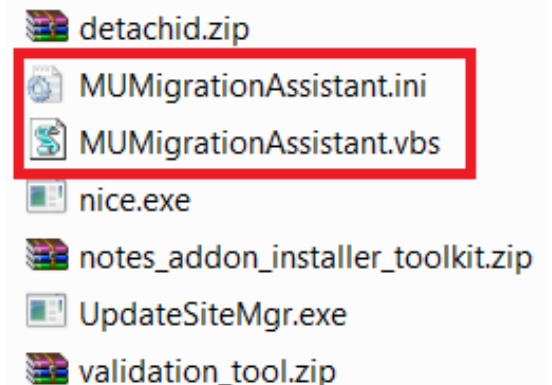


- Vbscript so its easy to integrate with different deployment technologies
- Use with the ini file to specify locations specific to your environment
- Will work with Lotus Notes version 6.x and beyond
- Well documented within the VBScript

Running MUMigrationAssistant will:

- Migrate user data from old data locations to new MU supported data directories
- Convert Registry entries to make it a true multi-user installation
- Modify notes.ini to reflect new locations

You can find it in utility\NotesCustomizationKit\_1.0.zip  
of the Lotus Notes 8.5.3 Install Kit





# MUMAAssistant



The problems I see with this tool:

- Need to be run on the old installation

Most customers won't touch the old installation (Risky, additional steps/effort)

- Need to be run as Administrator (Shared Data Dir creation, Registry entries)

That's should be done, when I install the new Client as Multi-User

- Need to be run once again for every user

Where should I integrate the VBScript? OS Logon Script, manual execution?

- How to control execution?

How can I ensure that Notes is not already started, so I can replace files?

How can I control that MUMAAssistant is executed only once?

In my point of view, the actions done by MUMAAssistant must be executed by

- Notes Installer (Multi-User installation)
- At Notes runtime, right before Lotus Notes is actually started

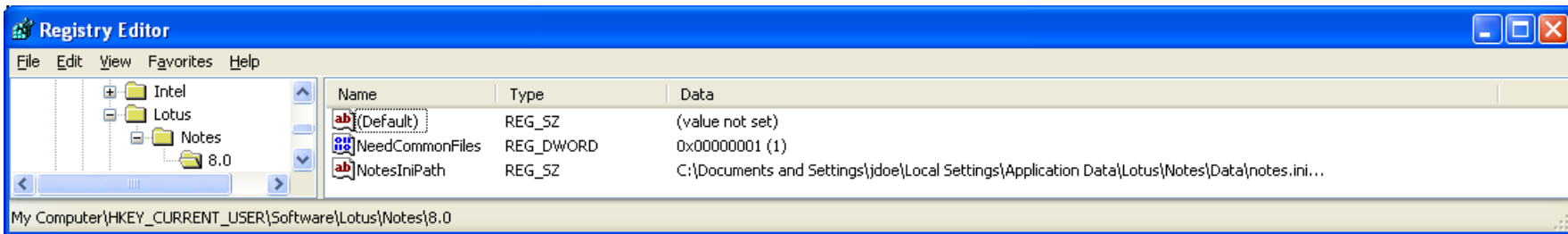
# Lotus Notes Preloader issue



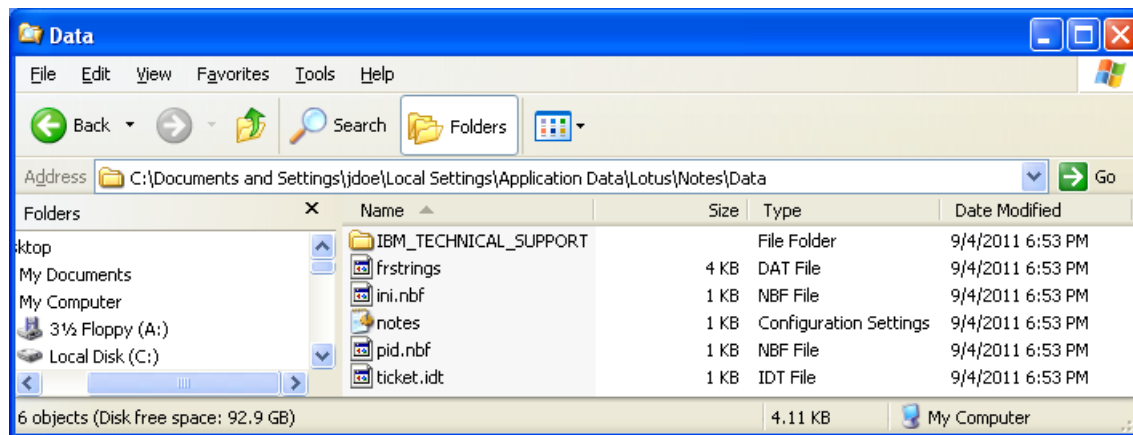
If you use Notes Preloader (most probably on XP), you may adjust the way you are checking for already configured Notes installations.

Typical Registry keys, data directory and notes.ini **are created** even if user **has never started** Lotus Notes:

Creates typical Registry Entries in HKCU\Software\Lotus\Notes\8.0



User's data directory:



→ Do **not** rely on these registry keys and esp. notes.ini for new user checks!  
(Same is true for **Symantec Antivirus Lotus Notes plugin (NLNVP.dll)**)

# Notes Launcher

In almost all my recent customer projects, I am using a custom Notes Launcher to achieve the following goals:



- Check prerequisites for a successful Lotus Notes start
- Dynamic creation of user specific Scriptable Setup Files
- ID file vs. ID Vault coexistence
- User Data Migration (Single User → Multi User, Laptop/Desktop/Citrix coexistence)
- Notes.ini Cleanup / machine or site specific configuration on the fly
- Ensure that user specific Registry settings are correct (NotesIniPath)
- Control whether Basic or Standard Client is started
- Create language specific Program Group entries for different users on the same machine
- Switch Lotus Notes Language settings on the fly (UI & **local databases**)

You can do anything in user context before Lotus Notes is actually started!



# Notes Launcher – Data Migration

1. Check if Notes 8.5.x was started before (on a given machine or user)
2. If Notes was never started before, search old data directories for data
3. Migrate old user data to new user data directory
  - Migrate all data and maintain directory structure, but use a Exclusion list (Templates, Help, W32, workspace\.config, etc...)
  - Use a white list (bookmark.nsf, names.nsf, desktop?.ndk, all ID-Files, user dictionary (Basic/Standard),journal.nsf/notebook.nsf, localfeedcontent.nsf, roamingdata.nsf, etc...)

Depending on customer situation, the Launcher

- moves (faster, less disk space, but no fallback) the data
- copies the data (slow, more disk space, but fallback & coexistence with older Notes clients [PCs in meeting rooms]!, Laptop/Desktop/Citrix usage)

Data is migrated on the fly in user context and Notes is started afterwards

# Notes Launcher – Notes.ini Management



With a Launcher, I can dynamically update (add, modify, remove) any notes.ini settings based on any criteria (Hardware, User, Site, OS Settings, Installed software)

On Citrix I want other notes.ini settings than on physical machines, e. g.

- Directory path might be different (%LocalAppData% vs. MULTIUSERBASEDIR)
- Cache= & View\_rebuild\_dir should be local if using Data dir on Homeshare
- DISABLE\_CLIENTRECORD=1
- Disable SmartUpgrade
- Log=,,1,0,7,20000

Upgrade specific tasks:

- Update path info not updated by Notes (Spell\_dir)
- Enforce Design Upgrade (TemplateSetup, Setup, BookmarkDesignReplaced)
- Clean obsolete notes.ini entries (WinNTIconPath, Desktop5=, etc...)

It's **far more flexible** than machine specific policies!

# Notes Launcher – Basic vs. Standard client



I always install the Lotus Notes Standard client, but customers may need to use the Basic client

- for a period of time, e.g. to not overload user with new stuff
- on machines that do not match HW requirements (old PCs, Citrix)

There are different ways to achieve that

- Install Basic client and upgrade to Standard client later

Who wants to do things twice!?

- Modify Shortcuts

You need to modify the installation once again later or you deploy both, Basic & Standard client shortcuts

What about indirect Notes calls (MAPI, mailto:)

- UseBasicNotes in notes.ini

At least in 8.5 & 8.5.1 Standard client was started, nevertheless in certain scenarios

## Solution:

My Launchers **obey** UseBasicNotes setting in notes.ini, but the Launcher is starting Notes using the appropriate commandline parameters.

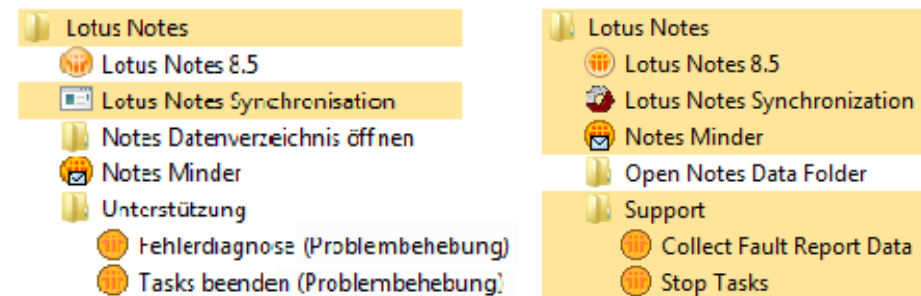
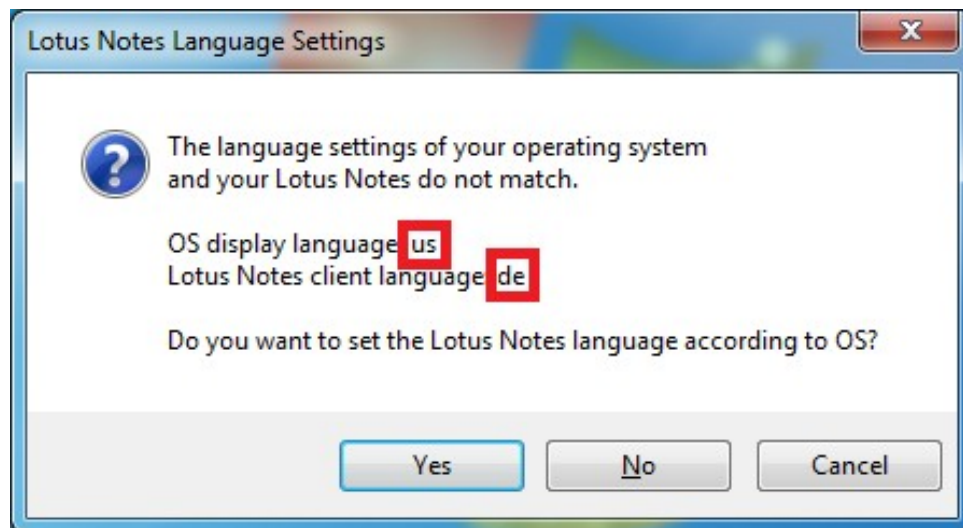
**Advantage:** Basic/Standard mode can be easily changed using Desktop policies and it's 100 % robust

# Notes Launcher – Multi-Language support

One of my customers wants to support **all** Windows 7 & Lotus Notes 8.5.x **MUI-Packs**

Notes should be able to **identify** if OS regional/language settings are **different** from Notes Language settings and ask the user to **change** these settings

1. Check the chosen display language of Windows 7 (35 MUI packs)
2. Check the current Notes language settings (27 languages)
3. Create Notes Program groups entries in the language of the OS Language!
4. Ask the user if he wants to change the Notes Language settings (notes.ini and local client databases!)





# Lotus Notes configuration – Start database



I often use custom start code, to

- Create user/customer specific location documents
- Create local (mail file) replicas on Laptops only (user specific)
- Create connections documents for every Domino server
- Create secondary address books on Laptops only
- Integrate sec. Address books in names= parameter of notes.ini
- Delete obsolete documents (Groups, Accounts, Connections, Locations) from pers. Address book
- Ensure that the design of local client databases is correct and up to date

**Far more flexibility** than (machine specific) policies and **no need** to manage policies at all!

Do **not** delete location documents for **existing Laptop users**, because the replica page is part of the location document (\$SiteListMap).

It is **not rebuild** (properly) by Lotus Notes anymore!



# Lotus Notes configuration – Start database

You may start your code automatically by using

- Command line parameter of Notes
- a modified bookmark.ntf (postopen event, Startup folder)
- StartUpDB=<ReplicaID> in notes.ini (undocumented)
- StartupdbName=<dbfilename> in notes.ini (new in 8.5.3)
- Use Extention Manager Addins (Client Management Tools)



# Lotus Notes configuration – Start database

## Reasons to re-create location documents

- Customer want different names & different number
- Location documents based on Machine type
  - Citrix & Deskops: 1 location document
  - Laptops: 2-3 location documents
- Specific Location document configuration, based on any criteria
  - Enable Replication schedule on Local Area Network locations only
  - Use local mail file only in certain locations



# Lotus Notes configuration – Start database

There are various reasons, why the design of a client database is **not** up to date.

The most kown ways to enforce Design updates by the Notes Client are

- `Templatesetup= < lower than current version number >`  
**Not all client databases are upgraded, e.g. journal.nsf/notebook.nsf**
- `BookmarkDesignReplaced=1`  
**Bookmark only!**

I am using code that **compares** db properties (e.g. `$TemplateBuild`) of any client **database** (esp. `Names.nsf` & `bookmark.nsf`) with the db properties of the corresponding **local template**.

If there is a difference, I **programmatically Replace** the Design by using `DesignReplace` (C API, undocumented and not supported)

But there is a interesting Domino forum post how to do it using LotusScript:

<a href="#">Replace Design using lotusscript</a>	<a href="#">Luciana Soar</a>	24.05.2011 03:28
.. * Perhaps if you could sh...	<a href="#">Andre Guirard</a>	24.05.2011 15:05
.... the code	<a href="#">Luciana Soar</a>	25.05.2011 03:06



# Deploy Addons with Enterprise style

IBM recommends to deploy additional/3rd Party Eclipse plugins/tools using a Widget catalog (starting with 8.0.1)

In my point of view, this is **not** Enterprise style, because

- plugins are installed in <data>\workspace\applications
- Must be provisioned on **every** machine for **every** user
- you loose control what should really be installed in the long run
- Every plugin needs a Notes restart

I recommend to deploy Addons using the way you use to deploy Lotus Notes

→ Enterprise Software deployment solutions

IBM is providing a tool for it with every Lotus Notes Install Kit!

# Creating a custom Addon installer



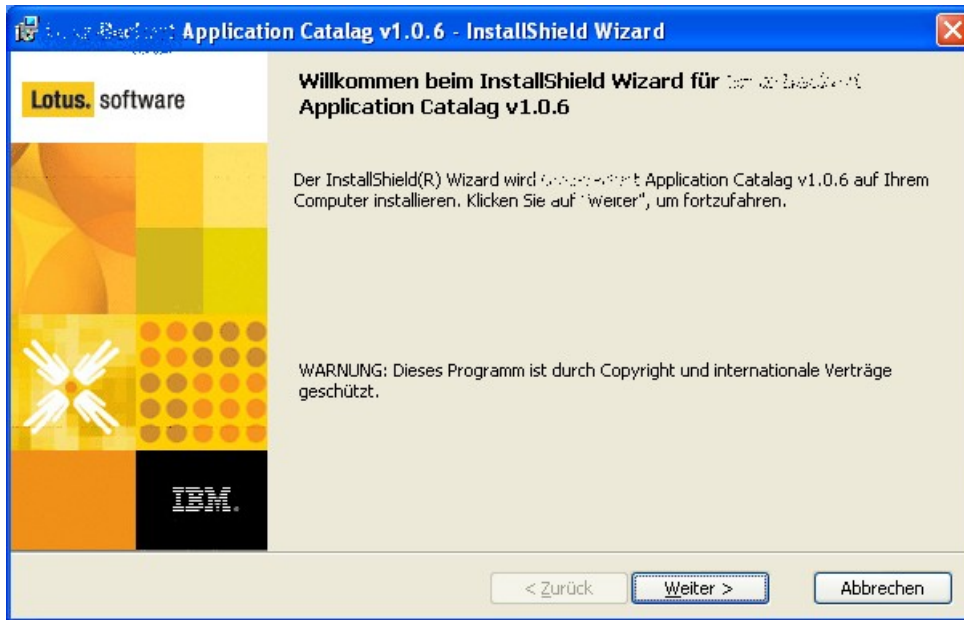
## Prerequisites:

- co-location affinity of the features should be `com.ibm.rcp.site.anchor.shared.feature` or `com.ibm.rcp.platform.feature`
- Features/plugins should be signed and signature exported to `deploy.nsf`

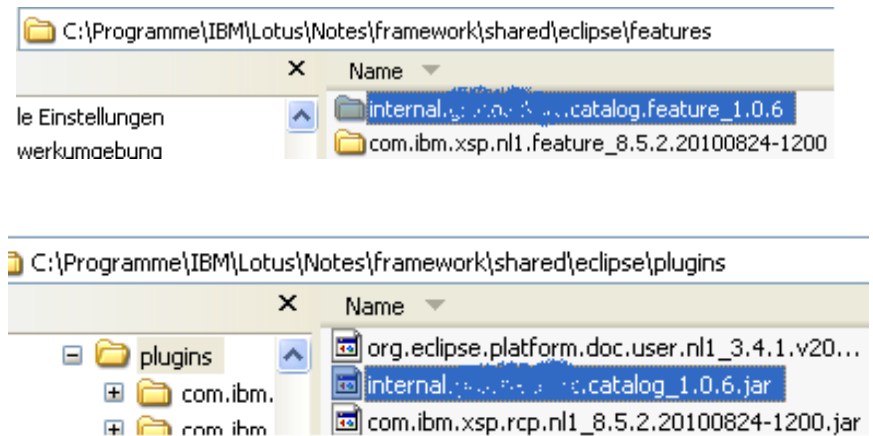
## Steps:

1. Extract `notes_addon_installer_toolkit.zip` to a working directory (C:\AddonToolKit).
2. Update license information
3. Add your Plugin updatesite and MSI components
4. Create Installation and Uninstallation manifests & `plugin_customization.ini`
5. Edit `AddonConfig.ini`
6. Run `CustomizeAddon.exe C:\AddonToolkit <TargetDirectory>`
7. Copy `C:\AddonToolkit\License` to `<TargetDirectory\License`
8. Delete `<TargetDirectory\CustomizeAddon.exe` and `\AddonConfig.ini`

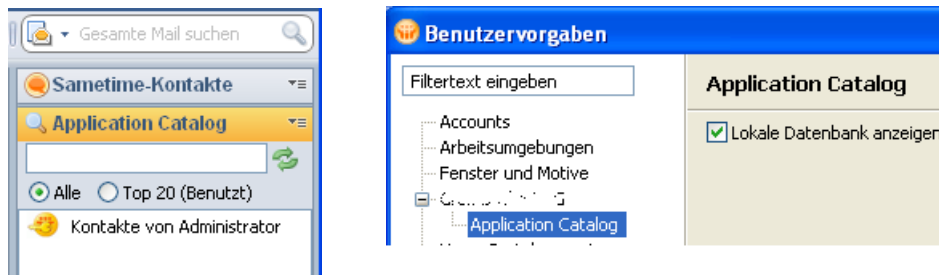
# The custom installer in action



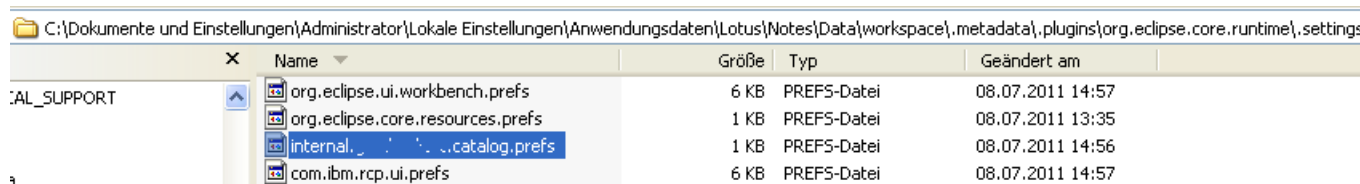
The plugin is installed in the shared plugin location of the machine:



And is right in place as soon as Notes starts:



The user settings are stored in the user's workspace folder:





# Lotus Notes 8.5.x on Citrix XenApp



Starting with Lotus Notes 8.5.3 finally supported:

- Citrix XenApp 6.0 (on MS Windows Server 2008 R2)
- ID Vault

Unfortunately, Lotus Notes 8.5.3 does not support Citrix XenApp 6.5, yet

**Multi-user** is the recommended installation type for Citrix XenApp

Starting with Lotus Notes 8.5.1, data directories can be relocated for Multi-user installations at install time.

## **Benefits:**

- Data directories can be located outside of OS user profiles
- No manual installation hacks anymore!

## **Attention:**

- Ensure that you are logged in as **Admin** and/or use an **Admin Console!**
- Ensure that **mapped drives** are available **AFTER runas**

# Lotus Notes on Citrix XenApp

## Setup Parameters:

### CITRIX=1

- **Mandatory** for XenApp Multi-user installations (even for MUI Packs)

### MULTIUSERCOMMONDIR (Optional)

- Specifies the location of the **common** data directory
- \Lotus\Notes\Data\Shared will be appended automatically

### MULTIUSERBASEDIR (optional)

- Specifies the location of **user specific** data directories
- By using !...!, environment variables can be leveraged, e.g. !username!

### Example:

```
Setup.exe /V"SETMULTIUSER=1 MULTIUSERCOMMONDIR=%ProgramData%  
MULTIUSERBASEDIR=C:\NotesData\!username! CITRIX=1"
```



# Lotus Notes 8.5.x on XenApp – Tuning memory



By using one single Java Shared Classes cache for all sessions, memory consumption is reduced and start up time of Lotus Notes is improved.

<Program directory >\framework\rcp\deploy\jvm.properties must be modified:

## Standard:

```
vmarg.Xminf=-Xminf0.1
vmarg.Xmn=-Xmn7m
vmarg.Dshare=-Xshareclasses:name=xpdplat_.jvm,controlDir=${prop.jvm.shareclasses.loc},groupAccess,keep singleJUM,nonfatal
vmarg.Xnoverify=-Xverify:none
vmarg.Xgcpolicy=-Xgcpolicy:gencon
vmarg.Xzero=-Xzero
vmarg.Xtrace=-Xtrace:none
vmarg.Djavapolicy=-Djava.security.policy=${rcp.home}/../java.policy
vmarg.Xmaxt=-Xmaxt0.6
jvm.shareclasses.loc=${rcp.data}/.config/org.eclipse.osgi modify
# launcher will ensure jvm.shareclasses.fullpath location exists before jvm launching
jvm.shareclasses.fullpath = ${prop.jvm.shareclasses.loc}
```

delete

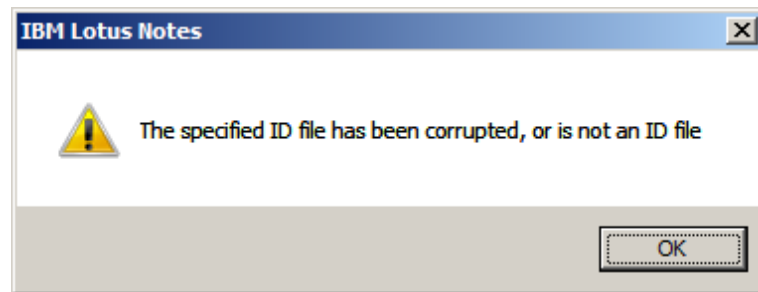
## modified:

```
vmarg.Xminf=-Xminf0.1
vmarg.Xmn=-Xmn7m
vmarg.Dshare=-Xshareclasses:name=xpdplat_.jvm,controlDir=${prop.jvm.shareclasses.loc},groupAccess,keep,nonfatal
vmarg.Xnoverify=-Xverify:none
vmarg.Xgcpolicy=-Xgcpolicy:gencon
vmarg.Xzero=-Xzero
vmarg.Xtrace=-Xtrace:none
vmarg.Djavapolicy=-Djava.security.policy=${rcp.home}/../java.policy
vmarg.Xmaxt=-Xmaxt0.6
jvm.shareclasses.loc=C:/temp/xpdplat
# jvm.shareclasses.loc=${rcp.data}/.config/org.eclipse.osgi
# launcher will ensure jvm.shareclasses.fullpath location exists before jvm launching
jvm.shareclasses.fullpath = ${prop.jvm.shareclasses.loc}
```

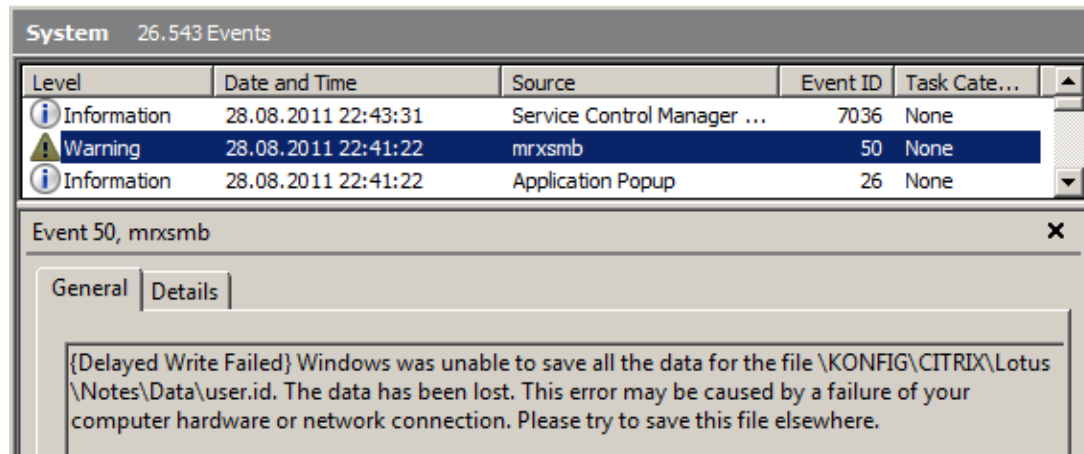
# Lotus Notes on Citrix XenApp - ID Vault vs. SMBv2



Although ID Vault is officially supported with Lotus Notes 8.5.3, you may have seen



and the event log shows



This is caused by SMBv2, a feature that is **on by default** since MS Windows Vista and MS Windows Server 2008 (and therefore all supported platforms for Lotus Notes!!!)

IBM: SMBv2 is **not supported(!)**, turn it off:

```
C:\Users\Administrator>sc config lanmanworkstation depend= bowser/mrxsmb10/nsi
[SC] ChangeServiceConfig SUCCESS

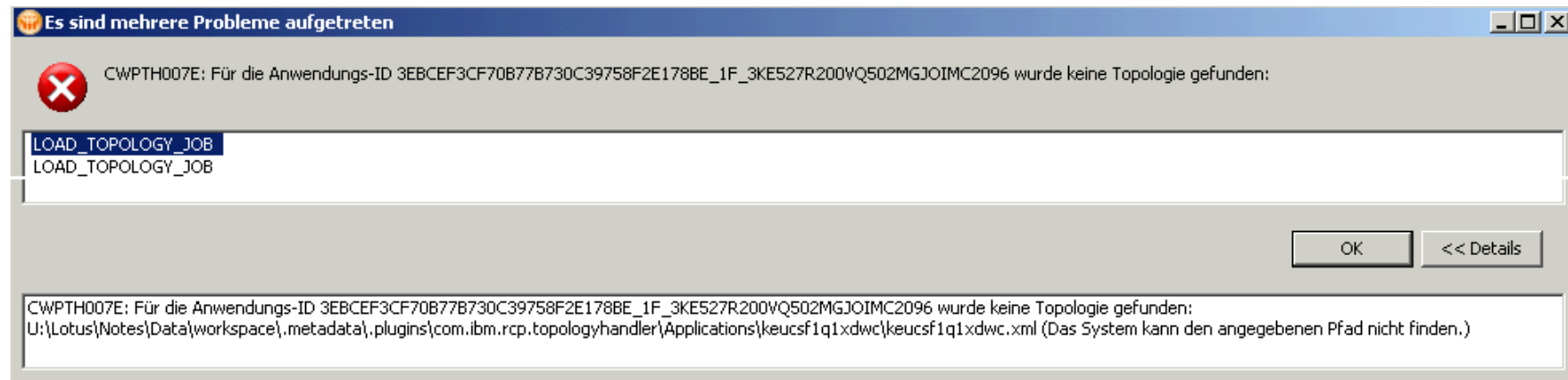
C:\Users\Administrator>sc config mrxsmb20 start= disabled
[SC] ChangeServiceConfig SUCCESS
```

I would turn it off on the Citrix XenApp servers, not on the file servers

# Lotus Notes on Citrix XenApp – Path length exceeded



You may have seen the error message CWPTH007E: No topology found for application id ...



This is caused, because the internal absolute path of the resource exceeds the maximum allowed length for filenames on NTFS.

Starting with 8.5.2FP3, set  
`com.ibm.rcp.topologyhandler/hashCacheFileNames=true`  
in the `plugin_customization.ini`

Already set in 8.5.3 by default

# Lotus Notes on Citrix



## Further tips

- use the same rcp.install.id (RCPLauncher.properties) on all Citrix servers within a farm to avoid provisioning operations on every Notes start!
- Lotus Notes may crash on 64-Bit Windows → Apply MS Hotfix (KB2558507)
- OS File system cache might be a problem → See Daniel Nashed blog postings from 1.10.2010 and 1.07.2009
- Calendar entries are 7.5 hours off when using Citrix → Apply MS timezone update August 2011 (KB2570791)

# Yes, we are ready for the Wintel future



The image shows a Windows 7 desktop environment. The Start menu is open, displaying various application tiles including Lotus Notes 8.5, Internet Explorer, Control Panel, Windows Explorer, Socialite, Desktop, and News. A user profile for 'christian' is visible in the top right of the Start menu. An IBM Lotus Notes browser window is open, displaying the 'Home' page. The browser window title is 'Home - IBM Lotus Notes'. The page content includes a navigation menu with 'File', 'Edit', 'View', 'Create', 'Actions', 'Text', 'Tools', 'Window', and 'Help'. Below the navigation menu is a search bar labeled 'Search All Mail'. The main content area features a header with the Lotus Notes 8.5 logo and the word 'Home', followed by a list of application tiles: Mail, Calendar, Contacts, To Do, and Notebook, each with a 'New' button. The Windows taskbar at the bottom shows the Start button, Internet Explorer, Windows Explorer, and Lotus Notes icons. The system tray in the bottom right corner displays the language 'ENG DE', the time '10:37 PM', and the date '9/16/2011'. The status 'Offline' is also visible in the bottom right corner of the browser window.

But the future of Notes is Lotus Notes as **Browser plugin!**



# Resources



## Related session:

20.09.11 9:00 – 11:30 T2S3-What's new in and coming in Client Administration – Jeff Eisen

20.09.11 14:00 – 15:30 T4S5-Machine Specific Policy - Detlev Pöttgen

20.09.11 16:00 – 17:30 T4S6-Die praktische Planung der Migration einer Notes/Domino Landschaft - Werner Motzet

## Technotes

What Windows Registry settings are involved when upgrading Notes?

1424193 Q&A: Understanding Lotus Notes preloader

1429475: ID Vault: Notes ID file get corrupted if data-folder is stored on SMBv2 enabled Windows fileserver

<https://www-304.ibm.com/support/docview.wss?uid=swg21472619>

Error message when a 32-Bit application has the /LARGEADDRESSAWARE option enabled...

## Links:

What are Upgrade, Product and Package Codes used for

Puttin' on the bits

The new Domino Admin

Upgrade Cookbook: Upgrading to Lotus Notes and Domino 8.5.x

Eknorl - Domino Directory – People by Client Version