EntwicklerCamp 2012

Rediscover the *Power* of LotusScript In Notes/Domino 8.5!

By Rocky Oliver Collaborative Technologies Geek

rocky.oliver@gmail.com www.linkedin.com/in/lotusgeek

Introduction

- Began in Lotus-land in 1992
- Worked for large consultancies, pre-ipo startups, and out on my own
- Worked for Lotus/IBM twice!
- Written a couple of books
 - Latest was "Notes and Domino 6 Programming Bible" (Wiley, 2003)
- I'm available HIRE ME!

Apologies...

I've had trouble putting this slide deck together...



Problem Report for LibreOffice

LibreOffice quit unexpectedly.

Click Reopen to open the application again. This report will be sent to Apple automatically.

▼ Comments

Provide any steps necessary to reproduce the problem

Problem Details an	d System Configuratio	n						
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Hide Details							OK	Reonen

?

LotusScript - Background

- Since 8.5, most Domino Developers have forgotten about the "old school" programming languages – LotusScript and @Formulas (tomorrow!)
- LotusScript (LS) has been around since Notes 4
- LS is based of the N/D core API
- LS is based on MS Visual Basic (sshhhh!)
- Unlike VB, LS is truly an object-oriented programming environment
- LS supports both front-end and back-end objects
 - NOTE: Front end (i.e. UI) for client ONLY

LS Background Continued

- LS is usually faster than Java or JavaScript when working with the N/D api, and as fast as a minimum
- You can write using pure OOP, or in traditional, "procedural" coding
 - Used to suck trying to write in OOP in the past, but DDE and the new LotusScript Editor makes this MUCH easier
 - The new LS Editor is much more robust when writing LS in general
- LS continues to be improved and kept current (but to be honest, this may change)
- Knowing LS object model will help you with xpages!
 - Know it! Live it! Love it!

LotusScript – Working with DDE

- Domino Designer for Eclipse (DDE) is a complete rewrite of the Domino Designer client
 - It modernizes and revolutionizes N/D development
 - Allows you to develop in a variety of ways, working with other platforms as needed
 - Easier script language development, including LotusScript, Java and JavaScript, as full-featured editors for each are provided by Eclipse
 - LotusScript is one of the biggest improvements
 - LEARN AND EXPLORE the DDE client you'll be pleasantly surprised!

DDE – Feature Highlights

- There are quite a few features that make writing LS easier
- Many of these are controlled in Preferences
- Check these settings the first time you enter DDE
- Recommended settings
- Here are a few Preference suggestions...

DDE – Recommended Settings

• Open the Preferences, type filter text, LotusScript Editor...

/pe filter text	LotusScript Editor
Applications Navigator Java Editor LotusScript Editor Code Templates Comment Templates Fonts and Colors Palette Source Control XPages Feeds Fonts and Colors General Home Portal Account Java JavaScript Locations Log Settings Mail Notes Ports	 Use Eclipse-based LotusScript editor General Automatically include 'Option Declare' Enable automatic recompilation of all dependencies Save and sign design elements during automatic recompilation Saving With Errors Prompt me on save if there are LotusScript errors Remove existing object code when saving with errors Code Assistance Show hover help on LotusScript keywords Hover help time delay (milliseconds): 300 Content assist auto activation delay (milliseconds): 200 Restore Defaults

DDE – Recommended Settings

Templates

- No, not the NTF kind the LS kind!
- Templates insert "predefined" text into your Subs, Functions, Design Elements, and even Comments
- Never have to type that stuff you type for every sub, function, and element (almost)
- With this, there is NO EXCUSE for not using proper error handling (at a minimum), proper comments
- Quick Tour and Demo

One Final Recommendation (for now)

- The fonts used in DDE are not that great, especially when fixed font size is needed
- Free programming fonts are available and they are GREAT (you just saw them)
- Proggy Fonts
 - www.proggyfonts.com

LotusScript – Ground Rules

- There are a few "mandatory" requirements for LotusScript development (you should know these already; if not, here's a primer)
 - Use Option Declare or Option Explicit
 - Added by default in DDE, if enabled
 - Use readable variable names
 - Comment your code intelligently
 - Use Error trapping, including logging, where feasible and appropriate
 - OpenNTF OpenLog. Highly recommended
- NOTE: Designer Templates make many of these MUCH easier

Enhancements in 8.x

- Bug fixes AND enhancements continue to be added to LS
- For instance...
 - Native support for working with Lotus Symphony from LotusScript (%INCLUDE SymphonyLSX.Iss)
 - Class browser for your own custom classes!
 - Typeahead for your custom classes as well!
 - Save your code, even if it has errors in it
 - Source Control even for N/D design elements, including LS
 - Xpage and Form/View perspectives (quick demo)

Enhancements in 8.5.3

- There are 3 new "Perspectives" in DDE
 - Window, "Open Perspective..."
 - Domino Designer this is the one that is the "standard"
 - Forms/Views this is for the developer who is working on a traditional N/D application and doesn't want or need the extra Xpage stuff
 - Xpages loads everything, plus it configures the environment to make it easier to add Controls and manage Custom Controls
 - Quick Tour/Demo

New Stuff in LS

- NotesDocument.getItemValue is much more efficient for large group processing
 - OLD: get doc, get item, get value(s), keep item in memory until doc is destroyed OR script ends
 - NEW: get doc, get item, get value(s), DESTROY item after access completed, which makes more mem available
 - Could affect performance a small amount, but prevents "LSXBE: Out of Backend Memory" error

New Stuff in LS

- Need an empty NotesDocumentCollection?
- There are 2 ways:
 - Create it by using something like Set emptycol = myview.getAllDocumentsByKey("Some Nonexistent Key")
 - Create it by using undocumented method Set mycol = mydb.createDocumentCollection

Slight Tangent...

- Technique for getting the size of any NotesDocumentCollection very quickly...
 - Create your source NotesDocumentCollection
 - Make sure your database has an "All Documents" view, and that it has a column with document sizes
 - Create a NotesViewEntryCollection containing all documents from your All Documents view, i.e.
 Set allEntries = AllDocsView.AllEntries
 - Use NotesViewEntryCollection.Intersect
 - NOTE: It WILL work with a ViewCollection intersecting with a DocCollection!

Troubleshooting LotusScript

- You can enable NSD to capture the current condition and memory usage for LotusScript
- Add DEBUG_LS_DUMP=1 to NOTES.INI
- You can enable this for both the Notes 8.5.3 client and the Domino 8.5.3 server

Troubleshooting LotusScript

NSD Stack Dump:

LotusScript Call Stack: <@@ ----- LotusScript Interpreter -> Call Stack for [nlnotes: 0ef8: 1494] (Time 10:38:14) ----- @@> [3] COUNTVIEWS [2] GETDBINFO @ line number 7 [1] COUNTDOCUMENTS @ line number 12 [0] INITIALIZE @ line number 2

This is interpreted as...

Troubleshooting LotusScript

• The trace stack dump is pretty easy to read:

Sub Initialize was at line 2, which called CountDocuments Sub CountDocuments was at line 12 when it called GetDbInfo Sub GetDbInfo called CountViews from line 7 There was a crash in CountViews

StampAllMulti Method

- New method for NotesDocumentCollection, NotesViewEntryCollection
- Like StampAll, but allows you to add/replace multiple items on all docs/entries in a collection – at once, no save required
- Syntax: StampAllMulti(document), where document is a Notes back-end doc containing the item/value pairs you wish to write to the documents/entries in the collection