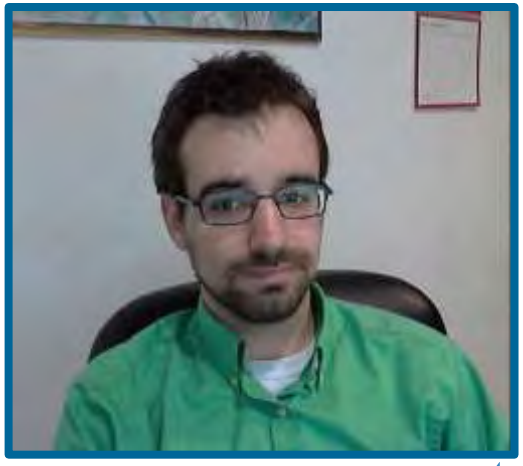
Getting Started with the OpenNTF Domino API



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#XPages

OPENNTF DOMINO API

Also Known As ODA

MISSION

Make you more productive

Modernize, Standardize, Improve, Extend

Solve all your problems

Remove all boundaries

TEAM

First commit by Tim Tripcony #codefortim

Multiple Companies

Several IBM Champions

Many consumers

WHY WE STARTED

DateTime objects (Nathan T Freeman's initial comment)

Out-of-date classes (Vectors)

Out-of-date iteration rules (while loops)

Lack of in-context documentation

Unhelpful parameter names

Avoid recycling

Avoid requirement to handle NotesExceptions

Inbuilt error logging (XPages OpenLog Logger)

Auto-boxing of field data types

Use from SSJS or Java

WHERE WE WENT NEXT

Transactional Processing

- Only save if all related documents can be updated

Sync Helper

- Push fields and document-centric formulas to related documents

MIME Bean

- Save Java objects in any field and auto-handle field limits

WHERE WE WENT NEXT

- Event Listeners
  - Trigger code based on events, e.g. document save
- Email Helper
  - Easy email creation
- Document Scanner
  - Index document fields
- Index Database
  - Index a whole server

WHERE WE WENT NEXT

- Document Sorter
  - Sort document collections on the fly
- Api Path / MetaReplica ID / Mertaversal ID
  - Serialize database / document locations for rapid access
- At Formula Parser
  - Better performance than session.evaluate()

WHERE WE WENT NEXT

Better Name Handling

Improved Recycling Performance

Tinkerpop Graph Implementation

- Graphs database structure stored in Domino
- Framed graphs for quicker setup
- Built-in graph classes – Likes, Rates, Task
- Proxy Vertexes for e.g. Person documents

WHERE WE WENT NEXT

- Multi-threaded processing
- Enums throughout
  - E.g. FTSearch(String, int, FTSortOption, Set<FTSearchOption>)
- New Picker DataProviders
  - MapPicker, CollectionPicker, NamePicker
- XOTS
  - Scheduled tasklets
  - Code in NSF, reuse existing XPages code
- NSF Data handling via Java

CROSSWORLDS

Native Domino access from WAS Liberty

Potential to be used from other J2EE servers

Code using your preferred web application language

Access Domino data using ODA APIs

Develop using Java 7 / 8

See http://www.slideshare.net/DanieleVistalli/introducing-crossworlds-for-ibm-domino

XPAGES IMPLEMENTATION

Install OSGi plugin to server

Install OSGi plugin to Domino Designer

Enable org.openntf.domino.xsp.XspLibrary in Xsp Properties

XSP PROPERTIES

org.openntf.domino=

- godmode: session and database global objects replaced by org.openntf.domino versions
- marcel: makes the API MIME-friendly
- raid: run in debug mode
- khan: implement fixes, like appendItemValue()
- nsa: create report of applications, modules, sessions (experimental)

XSP PROPERTIES

xsp.openlog.filepath=openLog.nsf

xsp.openlog.displayError=true

xsp.openlog.genericErrorMessage=Sorry, we hit an error

xsp.openlog.email=myEmail@myCompany.com

xsp.openlog.debugLevel=2

xsp.openlog.suppressEventStack=false

xsp.openlog.expireDate=30

STRUCTURE

domino – parent project

externals – 3rd party code included

core – org.openntf.domino, main core Domino code

formula – at formula parser code

xsp – XPages-related code

STRUCTURE – EXTERNALS

guava – Google Guava

javassist – for Java byte-code manipulation

javolution – for high-performance Java and data structs

jsr305 – annotations for software defect detection

rxjava – reactive extensions for the JVM

tinkerpop – JDBC for graph database

STRUCTURE – CORE

org.openntf.arpa – Name handling

org.openntf.calendars – calendar ranges / multi-value calendar objects

org.openntf.domino – core classes

org.openntf.domino.annotations – @Annotations

org.openntf.domino.big / org.openntf.domino.big.impl – prototypes and multi-NSF solutions

STRUCTURE – CORE

org.openntf.domino.design / org.openntf.domino.design.impl – new design note classes

org.openntf.domino.email – email handling

org.openntf.domino.events – classes for event listeners

org.openntf.domino.exceptions – new Exception classes

STRUCTURE – CORE

org.openntf.domino.ext – extensions to core domino classes

org.openntf.domino.graph – deprecated, first-generation graph database classes

org.openntf.domino.graph2 – graph interface classes

org.openntf.domino.graph2.annotations – @Annotations for framed graphs

STRUCTURE – CORE

org.openntf.domino.graph2.builtin – interface classes for built-in framed graphs

org.openntf.domino.graph2.builtin.social – implementation classes for social built-in framed graphs

org.openntf.domino.graph2.workflow – interface classes for built-in workflow framed graphs

org.openntf.domino.graph2.workflow.impl – implementation classes for workflow built framed graphs

STRUCTURE – CORE

org.openntf.domino.graph2.exception – exception classes for graph implementation

org.openntf.domino.graph2.impl – core graph implementation classes

org.openntf.domino.helpers – miscellaneous helper classes

org.openntf.domino.i18n – internationalization classes

STRUCTURE – CORE

org.openntf.domino.impl – implementations of core domino classes and extensions

org.openntf.domino.iterators – iterator classes to avoid Domino-specific iterations

org.openntf.domino.junit – junit testing classes

org.openntf.domino.nsfdata – interface classes for Domino data-handling

org.openntf.domino.nsfdata.impldxl – classes for Domino data-handling via DXL

STRUCTURE – CORE

org.openntf.domino.nsfdata.impldxl.item – classes for handling of Domino field-level data via DXL

org.openntf.domino.nsfdata.structs – classes for handling of C structures

org.openntf.domino.nsfdata.structs.cd – classes for handling of Composite Data

org.openntf.domino.schema – interfaces for database schema definition. Schema functionality is a work in progress

STRUCTURE – CORE

org.openntf.domino.schema.exceptions – exception classes for schemas

org.openntf.domino.schema.impl – implementations of schema classes

org.openntf.domino.schema.types – classes for field / data type schemas

org.openntf.domino.session – Session factory classes

org.openntf.domino.thread – multi-thread handling

STRUCTURE – CORE

org.openntf.domino.transactions – classes for transactional processing

org.openntf.domino.types – various generic classes

org.openntf.domino.utils – various utility classes

org.openntf.domino.utils.xml – various XML-processing classes

org.openntf.domino.xots – XOTS-related classes

org.openntf.domino.xots.events – XOTS event class

STRUCTURE – XSP

org.openntf.domino.xsp – generic classes

org.openntf.domino.xsp.adapter – factories and other extensions

org.openntf.domino.xsp.components – adaptive components

org.openntf.domino.xsp.config – xsp-related config

org.openntf.domino.xsp.formula – SSJS access to formulas

STRUCTURE – XSP

org.openntf.domino.xsp.helpers – various helper classes

org.openntf.domino.xsp.junit – XPages junit runner

org.openntf.domino.xsp.junit.test – XPages junit tests

org.openntf.domino.xsp.model – model-level classes

org.openntf.domino.xsp.msg – message-handling classes

STRUCTURE – XSP

org.openntf.domino.xsp.readers – LogReader class

org.openntf.domino.xsp.script – SSJS classes

org.openntf.domino.xsp.session – XPages Session factory classes

org.openntf.domino.xsp.xots – XPages XOTS classes

REFERENCES

https://github.com/OpenNTF/org.openntf.domino