Mobile Application Development
Worklight & Domino

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Social Business News Day

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Agenda

- Mobile Development Strategy
- Mobile Application Types
- Models for mobile-enabling Domino Apps
- Domino Data Services (DDS)
- Develop Your First Worklight Application
- Demo
- Q&A
Mobile strategy considerations

- Mobile Strategy
- App Dev (B2C, B2E)
- Multi-Channel (B2C, B2E)
- Integration (B2C, B2E)
- Mobile Requirements (B2C, B2E)
- Security
- Analytics (B2C, B2E)
- Device Security (B2E)
- App Security (B2C, B2E)
- Notification (B2C, B2E)
- Device Manage (B2E)
- App Manage (B2C, B2E)
- User Experience
- Time to Market
- Business Needs
- Costs
- Portability
Mobile Development Lifecycle

Deliver faster and improve team productivity with collaborative, integrated capabilities for mobile app development.

- **Assess and Plan** enterprise mobile strategy
- **Build** mobile applications
- **Connect** to backend systems
- **Manage** mobile devices and applications
- **Secure** your mobile business
- **Extend** existing business capabilities to mobile devices
- **Transform** the business by creating new opportunities

Deliver faster and improve team productivity with collaborative, integrated capabilities for mobile app development.
Process for developing mobile applications

1. Discovery process

2. Become a registered developer on the supported mobile platforms

3. Prepare mobile application development environment

4. Design and develop mobile applications

5. Unit testing in the development environment

6. Integration testing in remote server environment

7. Deploying to production

8. Manage the mobile application
Mobile Application Types - Web apps

 Written in HTML5 JavaScript and CSS3. Quick and cheap to develop.

 Less powerful than native and limited device access.
Mobile Application Types - Downloadable (native) apps

Application Stores

High-quality user experience and full device access.

Platform-specific, requires unique expertise, expensive to develop and maintain.

File System (on mobile device)

Native App (Java™/Objective-C/C#)

Mobile Operating System
Mobile Application Types - Hybrid apps

Combines best of both worlds:
Primarily written in HTML5, CSS, JS while allowing full access to device capabilities.
Domino Specific Native App Builders

IBM Lotus Domino Designer

TeamStudio Unplugged
http://unplugged.teamstudio.com/

Domino To Go
http://youatnotes.com/dominotogo
Models for mobile-enabling NSF – Mobile XPages

Domino Designer 8.5.3 and Domino Server 8.5.3 - Upgrade Pack 1 or 8.5.3 Extension Library

IBM Notes and Domino 9 beta Upgrade Pack 1 Included
Models for mobile-enabling NSF – Unplugged XPages

Unplugged XPages Mobile Controls

<table>
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<tr>
<th>Owners</th>
<th>Richard Sharpe, Matt White</th>
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Our goal with this project is to create a highly-optimised set of XPages mobile controls with

a) close-to-native performance

b) attractive aesthetics and

c) compatible with the Teamstudio Unplugged mobile offline XPages engine running on iOS and Android devices

We wanted to make it as easy as possible for (reasonably experienced) XPage developers who don’t have much or any mobile development experience to create attractive Unplugged mobile apps.

Using these controls, we’ve also provided 3 application templates (Doc Library, Journal, Teamroom) that are compatible with the original Lotus Domino application templates. We are targeting both smartphone and tablet users, for iOS (iOS 5.0.1 and higher) and Android devices (Android 3.0 and higher).

It is our intention to publish periodic updates to these controls to OpenNTF.
Models for mobile-enabling NSF – Unplugged XPages

To develop new apps or extend existing Domino Apps use IBM Domino Designer and either:

1. Use the new Unplugged Custom Controls.  
   A Set of drag-able components for XPage beginners on OpenNTF

2. Use the standard XPages Controls  
   Unplugged supports around 80% of the Controls included in Designer

3. Use HTML 5 (CSS, JavaScript) and Server-Side JavaScript

4. Or any combination of the above
Domino Data Service (DDS)

- Released in 8.5.3 Upgrade Pack 1; also planned for 9.0
- The IBM Lotus Domino Data Service is a REST API
- using HTTP(S) protocols with body content in JSON format
- Access to databases, views, folders & documents
- JSON representation for easy access from JavaScript, Java, ...
- Create, Read, Update & Delete (CRUD) operations
- Compliments, but doesn't require Xpages
- Use any IDE to develop your application
- Strategically important for integrating with other IBM products
Enabling Domino Data Service on a server

The following setting is a placeholder for services provided by an external plug-in. See the Lotus Notes and Domino wiki for more information.

Enabled services: [Data]
Enabling Domino Data Service on a database
Enabling Domino Data Service on a view
Worklight Mobile Enterprise Application Platform

Worklight
an open, complete, and advanced mobile application platform for HTML, hybrid, and native applications

Databases
Web Services
Enterprise Applications
Worklight architecture

- **Worklight Console**
  - Hybrid Application Version Management
  - Push Notifications
  - Reporting & Analytics

- **Worklight Server**
  - Server-side App Code
  - Authentication
  - Adapter Library
  - Stats Aggregation
  - Client-side App Resources
  - Direct Update
  - Mobile Web Apps
  - Unified Push Notifications

- **Worklight Studio**
  - HTML5, Hybrid, and Native Coding
  - Optimization Framework
  - Integrated Device SDKs
  - 3rd-Party Library Integration

- **Worklight Application Center**
  - Native Application Version Management
  - Application Feedback
  - Application Client App

- **Device Runtime**
  - Cross Platform Compatibility Layer
  - Server Integration Layer
  - Encrypted Storage
  - Runtime Skinning
  - Reporting for Statistics/Diagnosis

- **Build Engine**
  - iOS SDK
  - Android SDK
  - Blackberry SDK
  - Windows SDK

- **Public and Private App Stores**

- **Enterprise Back End and Cloud Services**
  - JSON Translation

Worklight Studio

- Eclipse-based IDE
- Combining native and standard web technologies in one multiplatform app
- Environment-specific optimization
- 3rd-party libraries integration
- Device SDK integration
- Back-end connectivity utilities
Worklight Studio IDE
Develop Your First Worklight Application

- Create a Worklight Project
Develop Your First Worklight Application

- Create a Worklight Project
Develop Your First Worklight Application

- Create a Worklight Project

![New Worklight Project dialog box with selected Dojo Toolkit option highlighted.](image-url)
Worklight Adapters

- An Adapter is a transport layer used by the Worklight Platform to connect to various back-end systems.

- Adapters are used for:
  - Retrieving information
  - Performing actions

- Out of the box:
  - SQL Adapter
  - HTTP Adapter (supports both REST and SOAP)
  - Cast Iron Adapter
  - JMS Adapter
Create a new Worklight Adapter
Create a new Worklight Adapter

![New Worklight Adapter dialog box with selected adapter type and project name.](image)
Connections Policy & new Procedures
Deploy Worklight Adapter
Adding a new environment
Build All and Deploy Application
Worklight Console

- Application Version Management
- Push management
- Usage reports and analytics
- Reports of custom application events
- Configurable audit log
- Administrative dashboards for:
  - Deployed applications
  - Installed adapters
  - Push notifications
- Data export to BI enterprise systems
Deploying Apps Using the Worklight Console

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Last updated at 2013-02-28 12:30

[Preview as Common Resources]
Worklight & Domino Demo
Q&A
References

- IBM MobileFirst

- IBM Worklight Mobile application platform

- Domino application development (wiki)
  http://www-10.lotus.com/ldd/ddwiki.nsf

- Domino Data Service

- OpenNTF - Extension library
  http://extlib.openntf.org