Introduction to the Mobile SDK

Sandeep Bhanot
Senior Developer Evangelist
@cloudysan

Eugene Oksman
Senior Manager, Mobile
@oksman
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Agenda

- The Backdrop
- The Salesforce.com Mobile SDK
- Developing Web Mobile Apps
- Developing Hybrid Mobile Apps
- Summary
Device Growth Is Exploding, Driven By Consumers

Device Growth

1.6 Billion mobile devices by 2013

Source: Gartner Research; Smartphone, Tablet, and PC Forecast, December 2010.
Salesforce Has The Answer For Every Mobile Need

**applications**

Suite of downloadable apps for accessing Salesforce data from a mobile device

**marketplace**

Mobile AppExchange for discovering purpose-built apps or comprehensive vertical solutions by industry

**platform**

Custom mobile apps built and customized by you or ISV partners on Force.com
Salesforce Mobile: Take CRM Anywhere

- Instantly access customer data
- Update records between meetings
- Improve data and pipeline visibility
- On/offline access
- Secure, encrypted solution

Available for: 🍎 📦 🍌 (Coming Jan. 2012)
Chatter Mobile: Real-time Information

Stay connected to your business in real-time
Call, email, or text from a user’s profile
Upload and share photos

Chatter Connect REST API
Mobile Products Tomorrow

Touch.salesforce.com – One App For All Your Devices

Available in 2012

Runs on any device

Intelligently resizes to match the form factor

App updates pushed automatically
Apps For Every Purpose

AppExchange for mobile

- Apps from Salesforce and 3rd party developers
- Apps for iOS, Android, and HTML5
- Apps for specific tasks or verticals
- Users choose the apps they want to use

Contact Viewer  Salesforce Viewer  Dashboards  Dragon SFDC (Voice to Text)  Field Service  More

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Platform for Mobile
You Can’t Fit Everything On That Little Screen
Flexible Mobile App Development On Force.com

**Native**
- Rich user experience
- Platform specific
- Proven path for mobile apps

**Hybrid**
- App-like experience
- Leverages device capabilities
- Multiple platforms

**HTML5**
- Fast development cycles
- Cross-platform
- Instant updates

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Mobile SDK: Accelerate App Development

Tools for building native, hybrid, and HTML5 apps on iOS and Android

**OAuth2**
Secure authentication and refresh token management

**API Wrappers**
Interact with Salesforce REST APIs with popular mobile platform languages

**App Container**
Embed HTML5 apps inside a container to access powerful native device functionality

**Secure Offline Database**
Store business data on a device with enterprise-class security

**Push Notifications**
Dispatch real-time alerts directly to mobile devices

100% Open Source
Developed on Github

developer.force.com/mobile
Native Mobile App Architecture

Salesforce Mobile SDK
For Professional Native Developers

• Focus on the application interface & logic, not the plumbing for accessing information
• Integrate Salesforce functionality into existing applications or create new cloud driven apps
• Available for iOS and Android

Pros
• Fastest performance
• Advanced touch gestures

Cons
• Significant development effort
• One platform at a time

Native API Wrappers
Interact with the Salesforce REST APIs using native platform languages

OAuth 2.0
Authentication and secure token management

Secure Offline Database
Store business data on a device with enterprise-class security

Push Notifications
Dispatch real-time alerts directly to mobile devices
Mobile Web App Architecture

Salesforce Web Toolkit
For Web Developers
• Fastest way to build mobile web apps on the force.com platform
• Take advantage of variable binding and tight integration with Apex
• Runs 100% inside the mobile browser

Pros
• Cross-platform
• Fastest development and testing cycle

Cons
• Limited device access
• No secure data storage

Visualforce
Develop mobile web applications in the familiar force.com environment on a proven architecture stack

JavaScript Remoting
Invoke Apex controller methods directly from a mobile application for optimized performance

Static Resources
Include mobile optimized third parties frameworks like JQuery Mobile, iScroll, and Sencha
Hybrid Mobile App Architecture

Salesforce Mobile Container

For Professional Web Developers

- Create cross-platform solutions by wrapping mobile web apps inside a native container
- Leverage powerful HTML and JavaScript frameworks to construct rich user interfaces
- Available for iOS and Android

Pros

- Access native device functionality
- App Store distribution

Cons

- Apps look, but don’t always feel native
- Limited multi-touch gestures

OAuth 2.0
Authentication and secure token management

Visualforce / REST API
Direct Salesforce REST APIs directly from JavaScript

Secure Offline Database
Store business data on a device with enterprise-class security

Push Notifications
Dispatch real-time alerts directly to mobile devices

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Salesforce Supports All Technology Options

Native

Hybrid

HTML5
Developing Web (HTML5) Mobile Apps
‘Mobilize’ the Warehouse application

Visualforce

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JS Remoting

Apex Controller
Tips and Tricks

Looking like a Native App
Tips and Tricks

Responding to Orientation Change
Tips and Tricks

Touch gestures
Tips and Tricks

Testing and debugging
Tips and Tricks

Offline and HTML5
Web Mobile Apps: Recap

- Visualforce
  - JS Remoting
  - FieldSets Support
- HTML5 and CSS3
- JS Libraries for Touch/Mobile
  - JQuery Mobile
  - Sencha Touch
  - iScroll
  - Other
- Salesforce Mobile Web Toolkit
  - JS wrappers for the REST API

Features:

- Cross-platform Web development
  - Direct Updates
- No Appstore presence
- Limited Device Access
- No Secure Storage
Developing Hybrid Mobile Apps
Hybrid Architecture

Visualforce + HTML5

Salesforce Mobile SDK
Demo
Hybrid Mobile Apps: Recap

– Mobile SDK – Hybrid
  • PhoneGap based container for developing Hybrid apps for Database.com and Force.com
  • OAuth 2.0 implementation
  • JavaScript wrappers for the REST API

+ Multiple Platforms
  Native Device Access
  Appstore presence

- Apps look, but don’t always feel native
  Limited multi-touch gestures
Don’t forget Native Mobile Apps!

Salesforce Mobile SDK for Native Apps

Native API Wrappers
Interact with the Salesforce REST APIs using native platform languages

OAuth 2.0
Authentication and secure token management

Push Notifications
Dispatch real-time alerts directly to mobile devices

Secure Offline
Store business data on a device with enterprise-class security

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Three Options: Which One Is Right For You?

**Native**
- Advanced UI interactions
- Fastest performance
- App store distribution

**Hybrid**
- Web developer skills
- Access to native platform
- App store distribution

**HTML5**
- Web developer skills
- Instant updates
- Unrestricted distribution

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Mobile Development Tips
Mobile Development Tips

Truly ‘Mobilize’ your app
- Geolocation
- Push Notifications
- Offline
- Camera/Microphone
- Other
Mobile Development Tips

Optimize, Optimize, Optimize
- Minimize server round trips
- JSON/REST
- App cache (for web apps)
- Lazy loading
Mobile Development Tips

Focus on the core functionality and keep it simple
Upcoming webinar

Do not forget!

Sign up for the live webinar on
Diving into the Developer Console
On Feb 8th

Thank You, Questions & Answers

- Please give us your feedback

- Resources
  - Mobile SDK Home Page
    http://wiki.developerforce.com/MobileSDK
  - Mobile SDK Workbook:
    Link from the SDK Home Page
  - Developer Boards
    http://boards.developerforce.com/t5/Mobile/bd-p/mobile
  - Weinre
    http://phonegap.github.com/weinre/
  - HTML5 resources
    http://diveintohtml5.info/
    http://www.html5rocks.com
    https://developers.facebook.com/html5/

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