Ajax Unplugged

Architecture and Tips for Taking Web Applications Offline

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- Who am I?
- Why do we need offline AJAX?
- What options are there?
 - Review some offline approaches
- Demo!
- Architecture of Zimbra Desktop
- Challenges for the developer
- Questions?



AJAX Unplugged



Why Offline?

- Lack of always-on internet access
 - Always-on need for information
- Travel Air, Train, Auto, etc
- ISP service interruptions
 - Client or Server (Data Center)
- Remote; unconnected land and water
 - Even a remote office
- More and more data lives in 'the cloud'
 - Today's SAAS require network access
- Your users are asking for it!



Data closer to the user (Akamai principle)

- Performance (client and server)
 - Removes latency from network ops
 - Offloads more work to client CPU
 - Allows server requests to be batched
- Clear simple programming model
 - SAAS still enforces good design
- Same UI both online/offline
 - Saves \$\$ training users for one app
 - Saves \$\$ on software costs of separate offline app



- Apollo (Adobe)
- Dojo Offline Toolkit (Dojo/Sitepen)
- Slingshot (Joyent/Magnetk)
- Firefox 3 Offline Support (Mozilla)
- XUL Runner (Mozilla)
- Roll your own
 - Salesforce.com
 - TiddlyWiki
 - Zimbra Desktop



Features

- Most demo/example apps are Flash/Flex based
- Eventually could be delivered via Flash
- WebKit for HTML/JavaScript rendering
- WinXP SP2+ & Mac OSX 10.4.8+
- License
 - Plan to contribute rendering changes to WebKit
 - Actual runtime appears to be closed source
 - Developer license cost
- Availability
 - Developer Alpha
 - Several demo apps (on their wiki)





- Features
 - Mac OSX & Win32
 - Supports standard JavaScript/HTML
 - Tiny proxy and offline/online events
 - Pluggable storage (Flash, Browser storage, etc)
- License
 - Open Source
 - Same license as Dojo (AFL or BSD)
- Availability
 - Developer Alpha
 - Live Demo Moxie (doc editor)





Slingshot (Joyent/Magnetk)

Features

- Mac OSX & WinXP
- Safari (WebKit) & Internet Explorer
- Ruby on Rails
- Handles sync of some data
- License
 - Doesn't appear to be open source
 - Free if using Joyent's application hosting
- Availability
 - Closed beta starting soon
 - Screencast of demo app





- Features
 - Where Firefox runs (*nix, Win, Mac)
 - Gecko rendering for HTML/JavaScript
 - WHATWG client-side storage, offline events
 - Ink rel="offline-resource"> to put resources
 into offline cache
 - The jar: URI scheme
- License
 - MPL Open Source
- Availability
 - Developer Preview
 - Shipping apps today (Google Adwords Editor)





- Features
 - Anywhere Firefox runs (*nix, Win, Mac)
 - Gecko rendering for HTML/JavaScript
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 - Developer Preview





See it in action



Demo



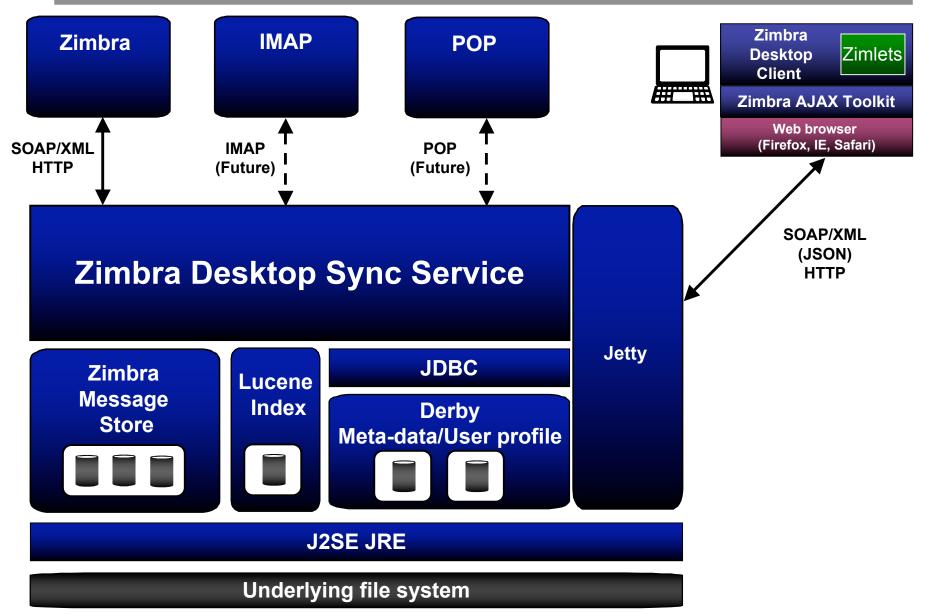


Features

- Linux, Win32 and Mac
- Firefox, Internet Explorer and Safari
- Identical AJAX interface to online version
- Micro Server for sync, persistence, and search
 Derby (Meta Data, User Profile)
 Lucene (Full text search)
 Jetty (HTTP, JSP)
 - Filesystem for messages
- Support for large datasets multi-GB
- License
 - MPL/ZPL Open Source
- Availability
 - Zimbra Desktop Alpha



Zimbra Micro Server Architecture





Challenges for the Developer

- Selecting *what* to take offline
 - Security risks
 - Does the user need it?
 - Can they use it offline?
- Sync is hard
 - Conflict resolution
 - Multi-user and multi-client
- End-User Desktop Support
 - Risk of increased support/debugging costs
- Upgrades and Patches
 - Have a plan *before* you release



Thank You!

Questions?

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ForumMail (337)	Lawrence K.Mendez	The UAE is currently undergoing a dramatic construction boom, and most of the 700,000 co	8:05 AM
NotifyMail (175)	mizugiwamade	77777777777777777777777777777777777777	7:35 AM
PerforceMail (30)	Mortgage Company	Pleace edit/fill your loan request form! - Hello! We received your request several days ago. Now you	7:34 AM
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Zimbra Snapshot

Next-Generation Messaging and Collaboration

 Mail, Contacts, Calendar, Mobile, Web Documents, Wiki, VOIP, RSS, Mashups, Search, Sharing, Web services, etc.

What Makes Us Different?

- Innovation rich, ubiquitous user experience + cost-effective administration
- Open Source transparency, community, extensibility
- Compatibility investment protection, flexibility, application integration

Principals: Enterprise / ISP software and UM/Messaging veterans

- Openwave / Onebox.com UM, Email, Mobile messaging
- BEA/WebLogic & Javasoft (Sun) Java, J2EE, XML, etc.

Investors: Benchmark, Redpoint, Accel



