H Windows Azure

Modern Web Applications with ember.js, node.js, and Windows Azure

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In the beginning...

Monolithic applications (aka "Web 1.0")
 Click -> ... time passes ... -> page render
 No to little client side interactivity.

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... and then there was ...

- AJAX architecture (aka "Web 2.0")
 - Incremental requests for updates with data updates.
 - Foundational JavaScript libraries like jQuery appear.
 - High on complexity.
 - Questionable frontend app architecture and maintainability.



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... a disruption in the force ...

- Highly capable mobile devices arrived.
- Native frameworks dominate apps, not web frameworks.
- Connected apps drive API endpoint development.



... driving changes to web applications ...

- Web AJAX and mobile APIs slowly rationalized into REST endpoints designed to serve both.
- Server side MVC frameworks prove themselves.
- Homegrown AJAX "frameworks" causing a ton of pain.
- Users expect fast and fluid applications.
- JavaScript engines make large strides
 - More ambitious client applications possible.

Enter client based frameworks









Application Architecture Comparison



Convergence between Device & Web



Client based app walkthrough

Let's build a sample app using ember.js demonstrating this
 (Available at https://github.com/timfpark/messages)

Node.js

- Leverages large JavaScript developer base
- Built on the V8 JavaScript runtime
- Very small, lightweight, and fast
- Asynchronous development model
 Evented vs. Threaded
- Great for real time or IO-bound applications
- Not great for CPU-bound applications.
- Rich package ecosystem (20,000+ packages)

Node.js backend walkthrough

For simplicity, included as part of previous application:
 https://github.com/timfpark/messages

Windows Azure

Deploy and scale this application using Windows Azure

Resources

- Ember.js: <u>http://emberjs.com</u>
 - Handlebars templating: <u>http://handlebarsjs.com</u>
- Client based apps shootout: <u>http://addyosmani.github.com/todomvc/</u>
- Handlebars: <u>http://handlebarsjs.com/</u>
- Node.js: <u>http://nodejs.org</u>
- Windows Azure: <u>http://www.windowsazure.com/</u>
 - Node.js SDK: <u>http://www.windowsazure.com/en-us/develop/nodejs/</u>
 - Continuous Deployment: <u>http://www.windowsazure.com/en-us/develop/net/common-tasks/publishing-with-git/</u>



Thanks!

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