Getting Started with Meteor

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Who’s Mike?

- BS in CS from Rutgers
- “Petrochemical Research Organization”
- Ai-Logix, Inc. (now AudioCodes)
- Amateur Computer Group of New Jersey
- Publications
- Presentations
Objectives

• What is Meteor?
• Why Meteor?
• The Seven Principles
• Getting Started with Meteor
• Live Demos (yea!)
• Meteor Resources
What is Meteor? (1)

- “...an open-source platform for building top-quality web apps in a fraction of the time, whether you’re an expert developer or just getting started.”

Meteor Web Site, http://www.meteor.com/

- A full-stack framework using JavaScript
- Compiles, combines, and distributes your HTML, CSS, and JavaScript
What is Meteor? (2)

- Built on top of node.js
- Shares code between the client-side and server-side of your application
What is Node.js?

- “...a platform built on Chrome’s JavaScript runtime for easily building fast, scalable network applications. Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient, perfect for data-intensive real-time applications that run across distributed devices.”

Node.js Web Site, http://www.nodejs.org/
Why Meteor?

- “Meteor is radically faster, radically easier platform for Internet-scale thick client applications.”
  
  Avital Oliver, “Meteor Smart Packages”, ETE Conference, 4/2/2013

- Easy to learn
- Rapid application development
- Powerful data synchronization
The Seven Principles

- Data on the Wire
- One Language
- Database Everywhere
- Latency Compensation
- Full-Stack Reactivity
- Embrace the Ecosystem
- Simplicity = Productivity
Data on the Wire

- Don’t send HTML over the network
- Let client decide how to render data
- Browser renders the templates as data changes
(#2) One Language

- Everything is JavaScript
- Built-in JavaScript packages include:
  - CoffeeScript
  - jQuery
  - Bootstrap
  - Backbone
MongoDB works on both the client and the server

The client-side database API looks just like MongoDB server-side API

Database operations are cached in memory on the client-side to yield...
(4) Latency Compensation

- Designed to create a zero-latency connection to the database
- Database on client-side is updated first
- Database on server-side is updated later
(#5) Full-Stack Reactivity

- Embraces the concept of reactive programming
- Everything is real-time
- Templates automatically re-render themselves as data changes
(#6) Embrace the Ecosystem

- Meteor is open-source
- Integrates existing open-source tools and frameworks
(#7) Simplicity = Productivity

- For something to seem simple, it must actually be simple
- API are plain and simple
Conventions Used in This Presentation

• Command Prompt ($)
• Keywords (meteor, create, etc.)
• Variables (variable)
Getting Started

- Download Meteor
- Create your first Meteor app
- Explore the built-in examples
Download Meteor

- Unix/Linux
  
  ```
  $ curl https://install.meteor.com | sh
  ```

- Windows (unofficial support)
  - win.meteor.com
  - developed by Tom Wijsman
  - now facilitated by Stephen Darnell
Create Your First Meteor App

$ meteor create myapp

$ cd myapp

myapp $ meteor
Live Demo!
Explore the Built-in Examples

- Four (4) built-in examples
- Leaderboard (simplest)

```
$ meteor create --example leaderboard
```
Live Demo!
Structuring Your Meteor Application

• Special folders:
  • /server
  • /client
  • /public
  • /lib
  • /collections
Smart Packages (I)

- JavaScript programs
- Extend your Meteor environment
- Injects code into client-side or server-side of your application
Smart Packages (2)

- Core smart packages:
  - spark
  - reload
  - livedata
  - mongo-livedata
  - minimongo
Smart Packages (3)

- List all available packages
  
  $ meteor list

- Adding a package

  $ meteor add packageName

- Removing a package

  $ meteor remove packageName
Deploying Your Meteor Application

- Full application server
- Deploy on Meteor’s infrastructure

$ meteor deploy myapp.meteor.com
Meteorite

- A wrapper utility for Meteor
  - developed by Tom Coleman
- Supports third-party applications
- Does everything Meteor does plus...
Meteor Resources (1)
Meteor Resources (2)

- meteor.com
- github.com/meteor/meteor
- themeteorbook.com
- eventedmind.com
- atmosphere.meteor.com
- fastcolabs.com/3007015/how-use-mysql-meteor
Upcoming Events (1)

• Trenton Computer Festival
  • March 14-15, 2014
  • tcf-nj.org

• Emerging Technologies for the Enterprise
  • April 22-23, 2014
  • phillyemergingtech.com
Upcoming Events (2)

Trenton Computer Festival

EMERGING TECHNOLOGIES
FOR THE ENTERPRISE

SOLD OUT
Thanks!

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