Getting Started with Meteor

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Who's Mike?

- BS in CS from RUTGERS
  THE STATE UNIVERSITY
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- "Petrochemical Research Organization"

- Ai-Logix, Inc. (now AudioCodes)

- Amateur Computer Group of New Jersey

- Publications

- Presentations

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Objectives

- What is Meteor?

- Why Meteor?

- The Seven Principles

- Getting Started with Meteor

- Live Demos (yea!)

- Meteor Resources

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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

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What is Meteor? (2)

- Built on top of

- Shares code between the client-side and server-side of your application

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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/

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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

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The Seven Principles

- Data on the Wire

- One Langauge

- Database Everywhere

- Latency Compensation

- Full-Stack Reactivity

- Embrace the Ecosystem

- Simplicity = Productivity

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(#1) 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

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(#2) One Language

- **Everything** is JavaScript

- Built-in JavaScript packages include:

    - CoffeeScript

    - jQuery

    - Bootstrap

    - Backbone

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(#3) Database Everywhere

- 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...

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(#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

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(#5) Full-Stack Reactivity

- Embraces the concept of reactive programming

- Everything is real-time

- Templates automatically re-render themselves as data changes

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(#6) Embrace the Ecosystem

• Meteor is open-source

• Integrates existing open-source tools and frameworks

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(#7) Simplicity = Productivity

- For something to <u>seem</u> simple, it must actually <u>be</u> simple

- API are plain and simple

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Conventions Used in This Presentation

- Command Prompt (**$**)

- Keywords (**meteor**, **create**, etc.)

- Variables (*variable*)

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Getting Started

- Download Meteor

- Create your first Meteor app

- Explore the built-in examples

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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

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Create Your First Meteor App

```
$ meteor create myapp

$ cd myapp

myapp $ meteor
```

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Live Demo!

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Explore the Built-in Examples

- Four (4) built-in examples

- Leaderboard (simplest)

```
$ meteor create --example
leaderboard
```

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Live Demo!

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Structuring Your Meteor Application

- Special folders:

  - **/server**

  - **/client**

  - **/public**

  - **/lib**

  - **/collections**

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Smart Packages (1)

- JavaScript programs

- Extend your Meteor environment

- Injects code into client-side or server-side of your application

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Smart Packages (2)

- Core smart packages:
  - **spark**
  - **reload**
  - **livedata**
  - **mongo-livedata**
  - **minimongo**

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Smart Packages (3)

- List all available packages

  `$ meteor list`

- Adding a package

  `$ meteor add packageName`

- Removing a package

  `$ meteor remove packageName`

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Deploying Your Meteor Application

* Full application server

* Deploy on Meteor's infrastructure

```
$ meteor deploy myapp.meteor.com
```

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Meteorite

- A wrapper utility for Meteor

  - developed by Tom Coleman

- Supports third-party applications

- Does everything Meteor does plus...

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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**

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Upcoming Events (1)

- Trenton Computer Festival

  - March 14-15, 2014

  - **tcf-nj.org**

- Emerging Technologies for the Enterprise

  - April 22-23, 2014

  - **phillyemergingtech.com**

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Upcoming Events (2)

Trenton Computer Festival

EMERGING TECHNOLOGIES
FOR THE ENTERPRISE

SOLD OUT

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Thanks!

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