Getting Started with Meteor
Trenton Computer Festival 2013
IT Professional Conference
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My Background (1)

Degree
- B.S. in Computer Science
- Rutgers University (go Scarlet Knights!)

“Petrochemical Research Organization”

Ai-Logix, Inc. (now AudioCodes)

Amateur Computer Group of New Jersey (ACGNJ)
- Java Users Group Leader (2001-)
- President (2007-2009, 2013-), Past-President (2010-present)
- Secretary (2006)

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My Background (2)

🔍 Publications
- Java Boutique (http://www.javaboutique.com/)
  - Co-authored with Barry Burd
  - Design Patterns
- http://www.redlich.net/publications/

🔍 Presentations
- Trenton Computer Festival (TCF) since 1998
- TCF IT Professional Seminars since 2006
- Emerging Technologies for the Enterprise
- Princeton Java Users Group
- Capital District Java Developers Network
- New York Software Industry Association (NYSIA)
Objectives

- What is Meteor?
- The Seven Principles
- Getting started with Meteor
- Live Demo (yea!)
- Meteor Resources
What is Meteor?

“...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.”

A full-stack framework using JavaScript
Compiles, combines, and distributes, your JavaScript, CSS, and HTML
Deploys on the fly
**Supported Operating Systems**

- **Mac**
  - OS X 10.6 and above
  
- **Linux**
  - x86 or x86_64 Debian- and Red Hat-based systems

- **Windows**
  - Not supported at this time by core Meteor developers
  - Unofficial Windows installer by Tom Wijsman
The Seven Principles

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

- No HTML is rendered on the server
- JSON is sent to the browser
- Browser renders the templates

handlebars
#2 - One Language

- All code is in JavaScript
- Client and server
- But you could use CoffeeScript as well
#3 - Database Everywhere

- Client data API mirrors the server database API
- The local data API looks just like MongoDB
All data operations take place in memory first
#5 - Full-Stack Reactivity

- Embraces the concept of reactive programming
- Everything is realtime
- Templates automatically re-render themselves
#6 - Embrace the Ecosystem

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

APIs are plain and simple
Getting Started with Meteor

Download Meteor

- [http://www.meteor.com/](http://www.meteor.com/)

Review the built-in examples

- Leaderboard
- Parties
- Todos
- Wordplay

Create your first Meteor app
C:\meteor-apps>meteor create myapp
myapp: created.

To run your new app:
  cd myapp
  meteor

C:\meteor-apps>
C:\meteor-apps>cd myapp

C:\meteor-apps\myapp>meteor

Initializing mongo database... this may take a moment.

Running on: http://localhost:3000
Hello World!

Welcome to myapp.
// myapp.html

<head>
    <title>myapp</title>
</head>

<body>
    {{> hello}}
</body>

<template name="hello">
    <h1>Hello World!</h1>
    {{greeting}}
    <input type="button" value="Click" />
</template>
// myapp.js - client-side code

if(Meteor.isClient) {
    Template.hello.greeting = function () {
        return "Welcome to myapp.";
    };

    Template.hello.events({
        'click input' : function () {
            // template data, if any, // is available in 'this'
            if(typeof console !== 'undefined')
                console.log("You pressed the button");
        }
    });
}
// myapp.js – server side code

if(Meteor.isServer) {
    Meteor.startup(function () {
        // code to run on server at startup
    });
}
Create a MongoDB Database in Meteor

// create new database
Players = new Meteor.Collection("players");
// create some players if the database is empty.
if(Meteor.isServer) {
    Meteor.startup(function () {
        if(Players.find().count() == 0) {
            var names = ["Ada Lovelace",
                     "Grace Hopper",
                     "Marie Curie",
                     "Carl Friedrich Gauss",
                     "Nikola Tesla",
                     "Claude Shannon"];
            for(var i = 0; i < names.length; i++)
                Players.insert({name: names[i], score: Math.floor(Math.random() * 10) * 5});
        }
    });
}
if(Meteor.isClient) {
    Template.leaderboard.players = function () {
        return Players.find({}, {sort: {score: -1, name: 1}});
    }
}
And Now For…

...a live demo (yea!)
Meteor Resources (1)

- Meteor
  - [http://www.meteor.com/](http://www.meteor.com/)
  - @meteorjs

- MongoDB
  - [http://www.mongodb.org/](http://www.mongodb.org/)
  - @MongoDB

- Handlebars

- CoffeeScript

- Backbone
  - [http://www.backbonejs.org/](http://www.backbonejs.org/)

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Meteor Resources (2)

- The Meteor Book
  - Coming April 2013
  - [http://www.themeteorbook.com/](http://www.themeteorbook.com/)

- Matt DeBergalis Presentation
  - [http://www.infoq.com/presentations/Meteor/](http://www.infoq.com/presentations/Meteor/)
Local Java Users Groups

- ACGNJ Java Users Group
  - facilitated by Mike Redlich
  - [http://www.javasig.org/](http://www.javasig.org/)

- Princeton Java Users Group
  - facilitated by Yakov Fain
  - [http://www.myflex.org/princetonjug/](http://www.myflex.org/princetonjug/)

- NYJavaSIG
  - facilitated by Frank Greco

- Capital District Java Developers Network
  - facilitated by Anthony DeBonis

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