

Groovy & Grails

Jean Barmash

CTO, EnergyScoreCards.com

www.nywebguy.com

Agenda

- Groovy
 - Introduction
 - Examples
- Grails
 - Introduction
 - Convention over Configuration
 - Build A Simple App

Groovy

- Dynamic Language on JVM
- Focus on programmer productivity
- Focus on Essence vs. Ceremony
- Superset of Java
- Native Java Library Integration
- Compiles into Java
- Dynamic Typing
- Native Syntax for Lists, Maps, Sets, Ranges

Very Sweet – Tons of Syntactic Sugar

- Tons of Options
 - Optional parentheses
 - Optional semicolons
 - Optional Return
- Safe Dereferencing
- Autoboxing
- GStrings
- Regular Expressions
- Autogenerated Setters / Getters
- Even Elvis....

Even Groovier

- Closures
- MixIns & Categories
- Advanced MetaProgramming Capabilities
- AST (Abstract Syntax Tree) Transformations
- Great XML Processing Capabilities
- Object Builders / XML Builders
- Easy to make DSLs
- Google App Engine

Grails

- Web Development framework inspired by Ruby on Rails
 - Convention over Configuration
 - DRY – Do Not Repeat Yourself
 - More focused on domain objects than Rails
- Underlying Libraries:
 - Hibernate
 - Spring
 - SiteMesh
 - Quartz
 - J2EE / Servlet

Grails Key Features

- Convention over Configuration
 - Domain Objects
 - Controllers
 - Views
 - Services
 - Dependency Injection

GORM

- GORM – Robust Domain Modeling Layer
 - Built on Top of Hibernate, which is hidden
 - Advanced Layer for modeling of relationships
 - Maps to Database over JDBC or JPA
 - Dynamic Finders – query the objects
 - CRUD Operations
 - Constraints
 - Performance Optimizations
- Can be used outside of Grails, including in Java Apps

UI Features

- Scaffolding to generate Views
- Layout Elements
- VERY Easy TagLibs
- Converters to create RESTful services

Plugins, Plugins, Plugins

- A core concept in Grails
 - Unit of Functionality
 - Unit of Reusability
 - Unit of Integration
- Creating a plugin is almost identical to creating an application
- Over 200 Plugins in all sorts of areas
 - Central Repository
 - <http://grails.org/plugin/home>

Other Stuff

- Gradle – dependency resolution
- Gant – build tool
- GPars – actor concurrency library
- Griphon – Grails like framework for building Swing application

Resources

- Groovy Usage Patterns
 - <http://gettinggroovy.wordpress.com/2009/05/20/the-gr8-conference-groovy-usage-patterns/>
- Grails – www.grails.org
- Groovy – <http://groovy.codehaus.org>

Demo