



ColdBox





ColdBox Platform

3.5 AND BEYOND

ColdBox



Who am I?



Who am I?

- **Luis Majano** - Computer Engineer
- Born in San Salvador, El Salvador -->
- President of **Ortus Solutions**
- Manager of the IECFUG (www.iecfug.com)
- Creator of ColdBox, MockBox, LogBox, CacheBox, WireBox, ContentBox, or anything Box!
- Documentation Weirdo!





What we will cover?

- ✦ History of ColdBox
- ✦ What is ColdBox?
- ✦ Why ColdBox?
- ✦ Major ColdBox Parts
- ✦ Demos



History & Facts



History & Facts



- ✦ Did not start as open source

History & Facts



- ✦ Did not start as open source
- ✦ Designed and built for a high availability application in 2005

History & Facts



- ✦ Did not start as open source
- ✦ Designed and built for a high availability application in 2005
- ✦ 1st Conventions CFML Framework in 2006

History & Facts



- ✦ Did not start as open source
- ✦ Designed and built for a high availability application in 2005
- ✦ 1st Conventions CFML Framework in 2006
- ✦ 22 releases -> 3.5.1

History & Facts



- ✦ Did not start as open source
- ✦ Designed and built for a high availability application in 2005
- ✦ 1st Conventions CFML Framework in 2006
- ✦ 22 releases -> 3.5.1
- ✦ Active roadmap, collaboration & development

History & Facts



- ✦ Did not start as open source
- ✦ Designed and built for a high availability application in 2005
- ✦ 1st Conventions CFML Framework in 2006
- ✦ 22 releases -> 3.5.1
- ✦ Active roadmap, collaboration & development
- ✦ High profile company adoptions



Community



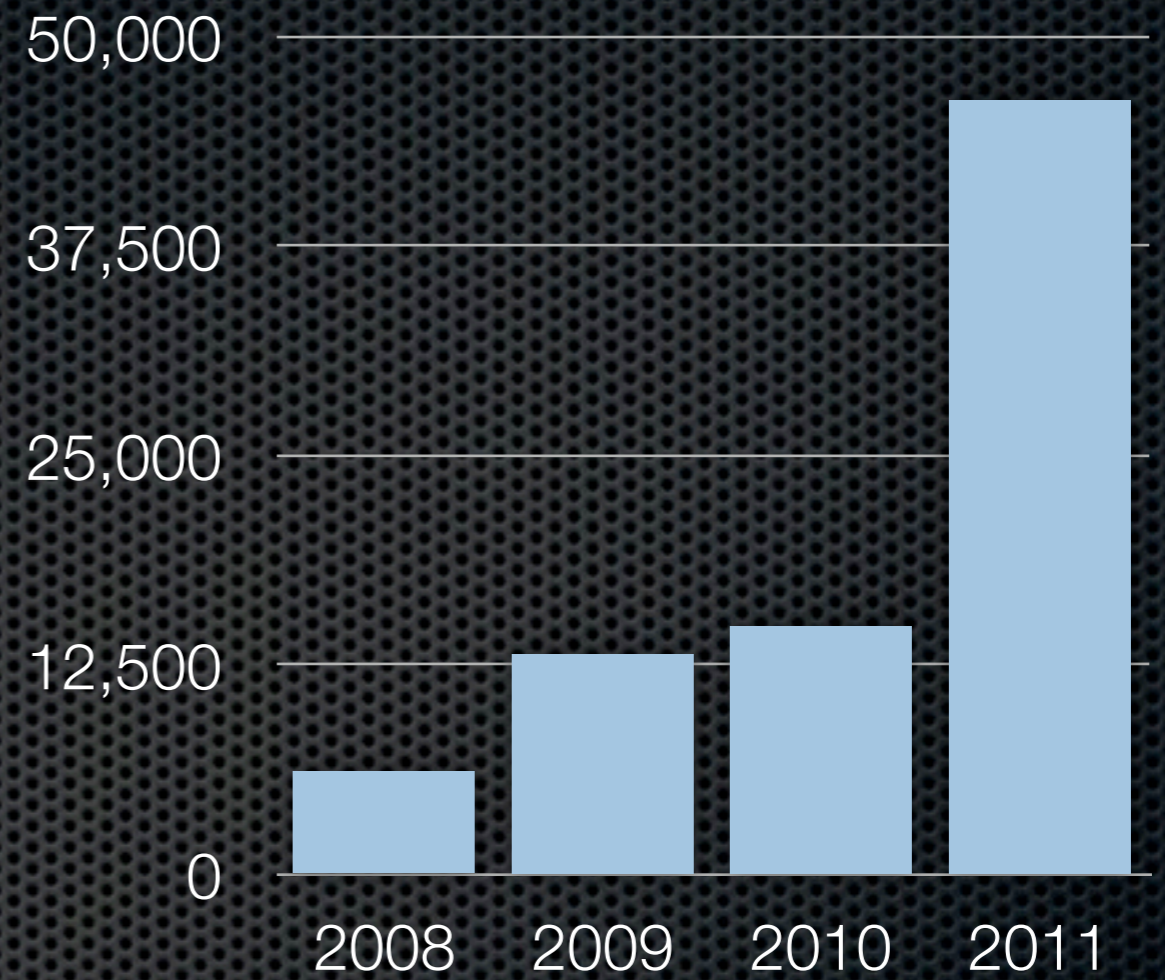
Community

- Large and Active Community



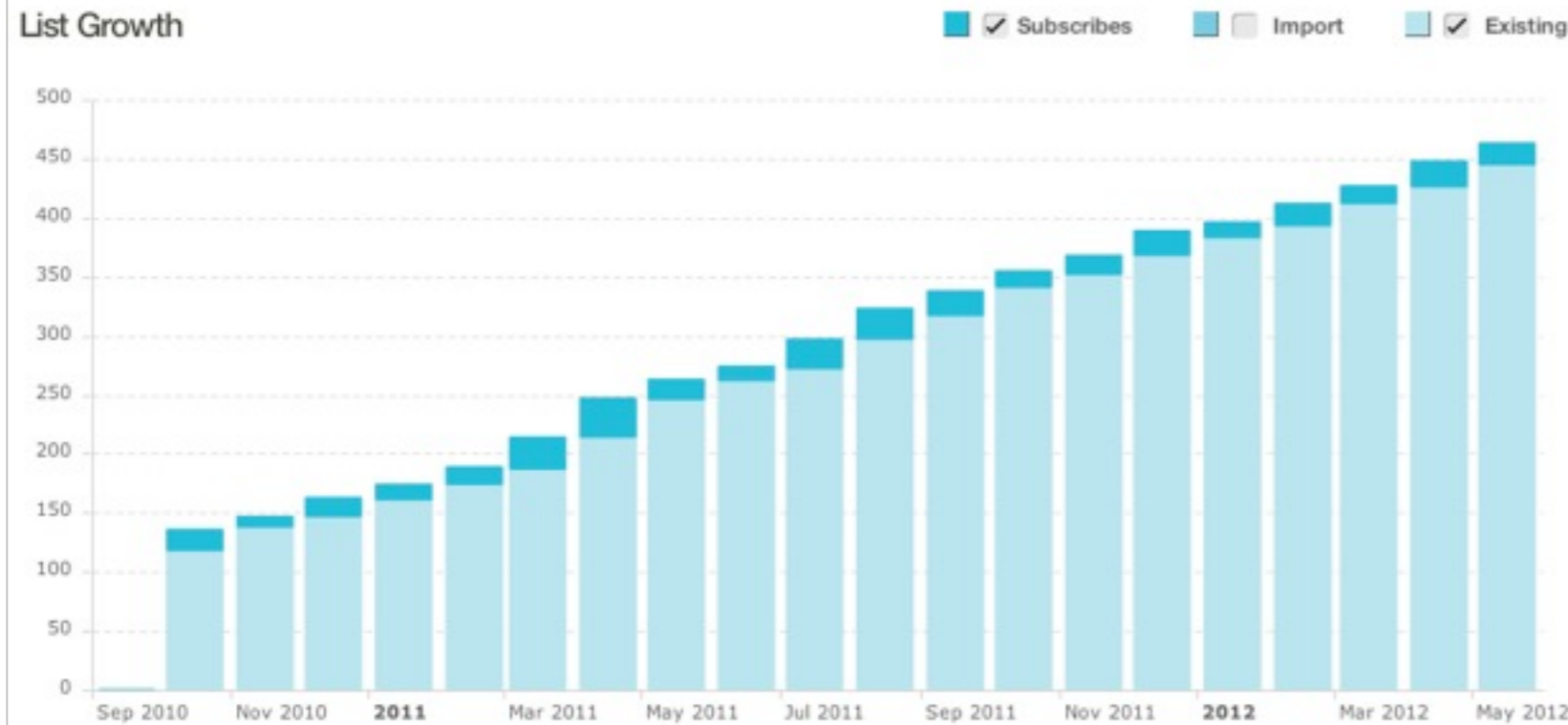
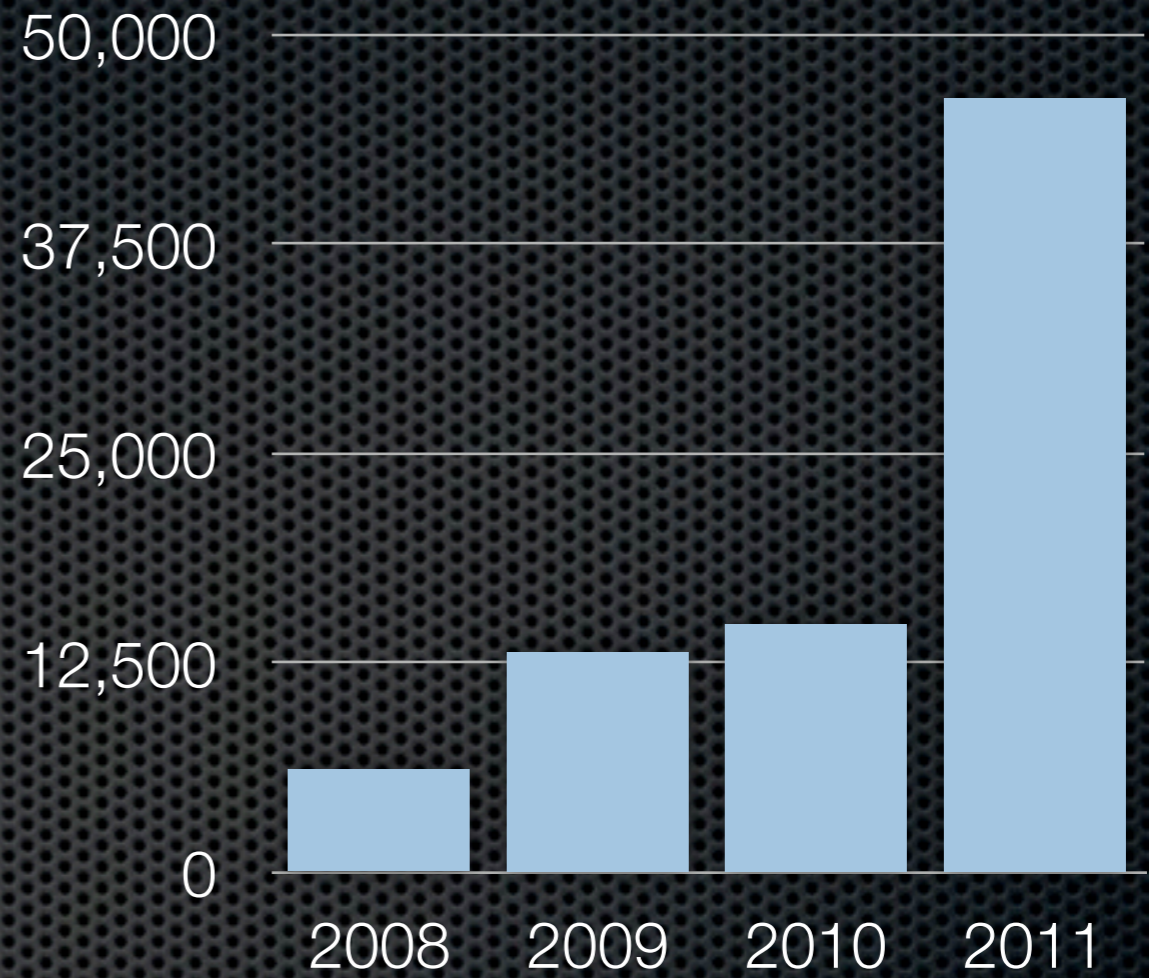
Community

- Large and Active Community
- Incredible download rates



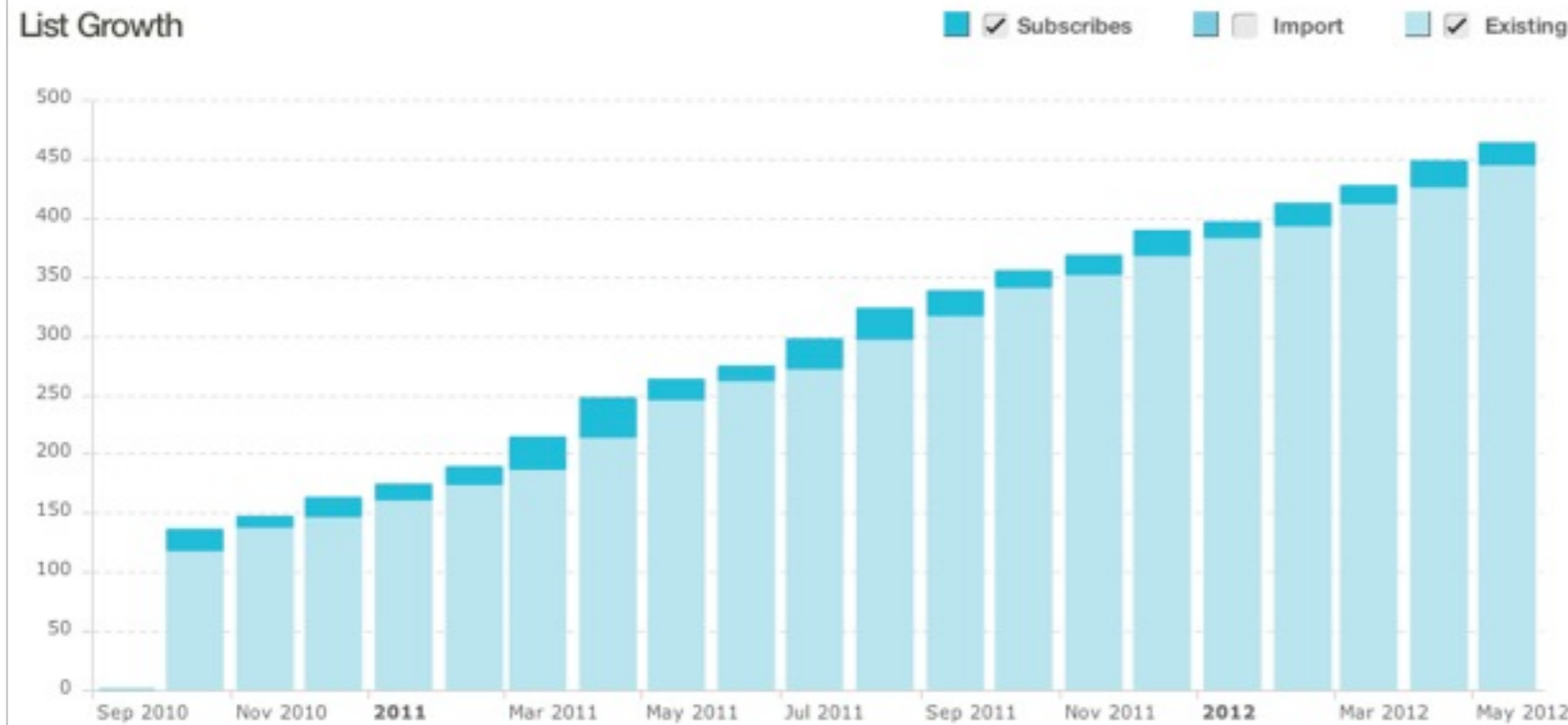
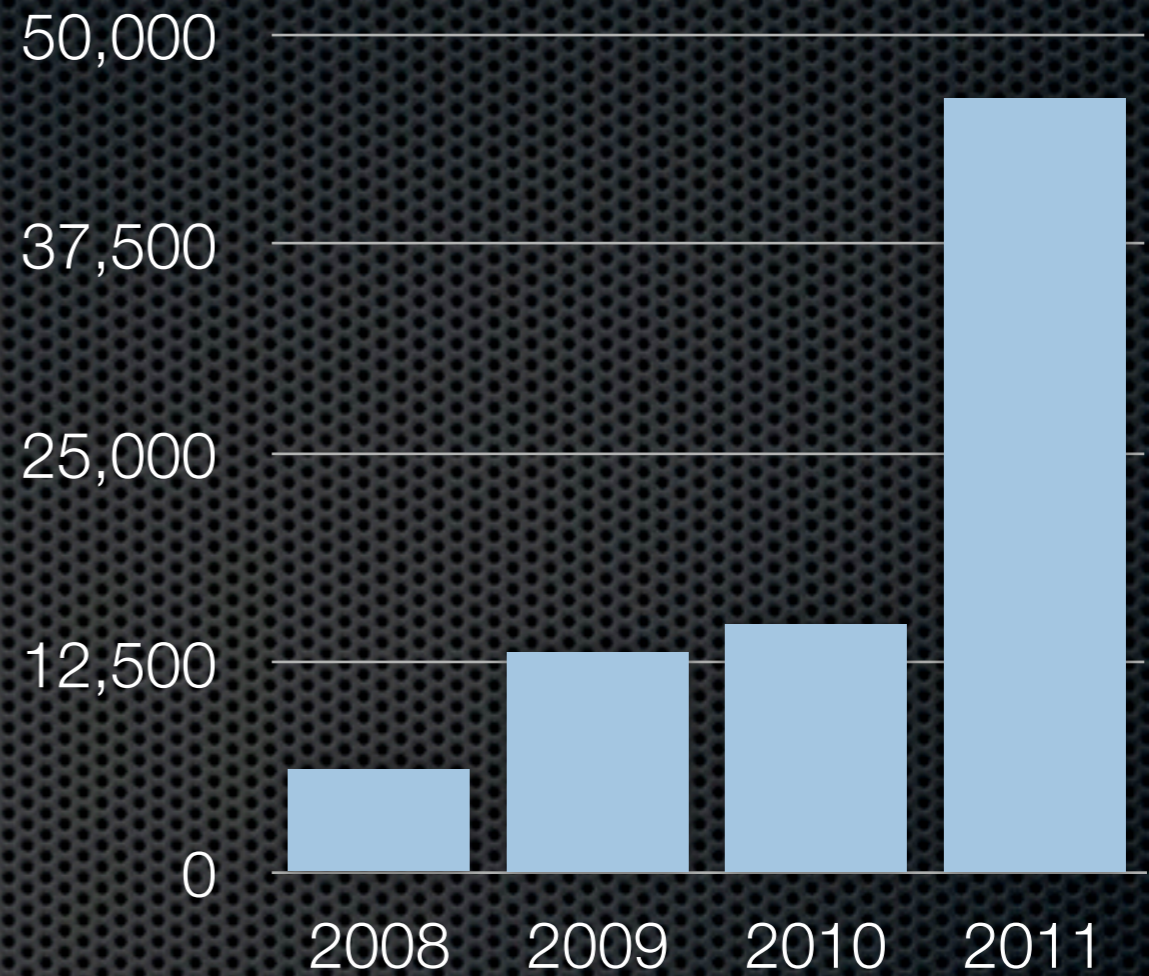
Community

- Large and Active Community
- Incredible download rates
- Mailing List & Forums growth



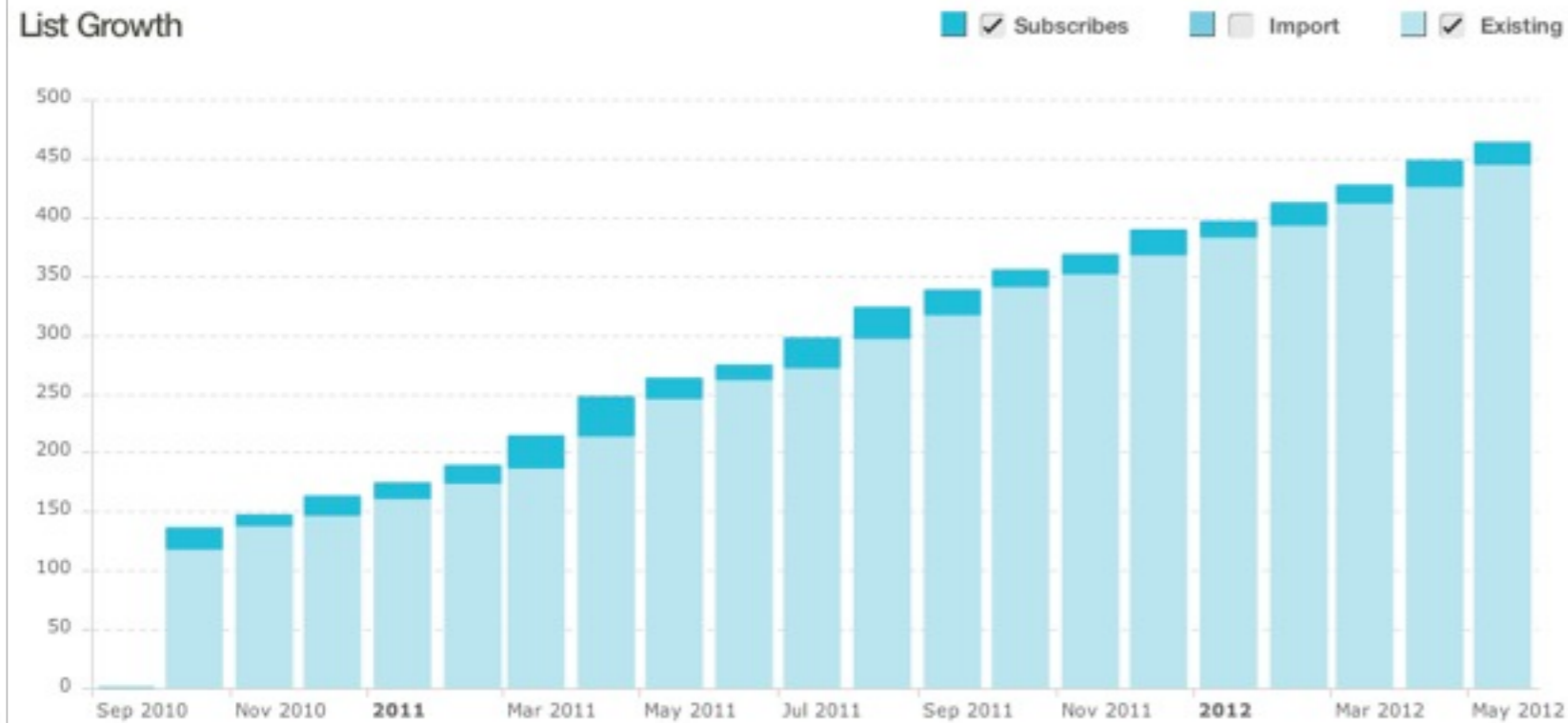
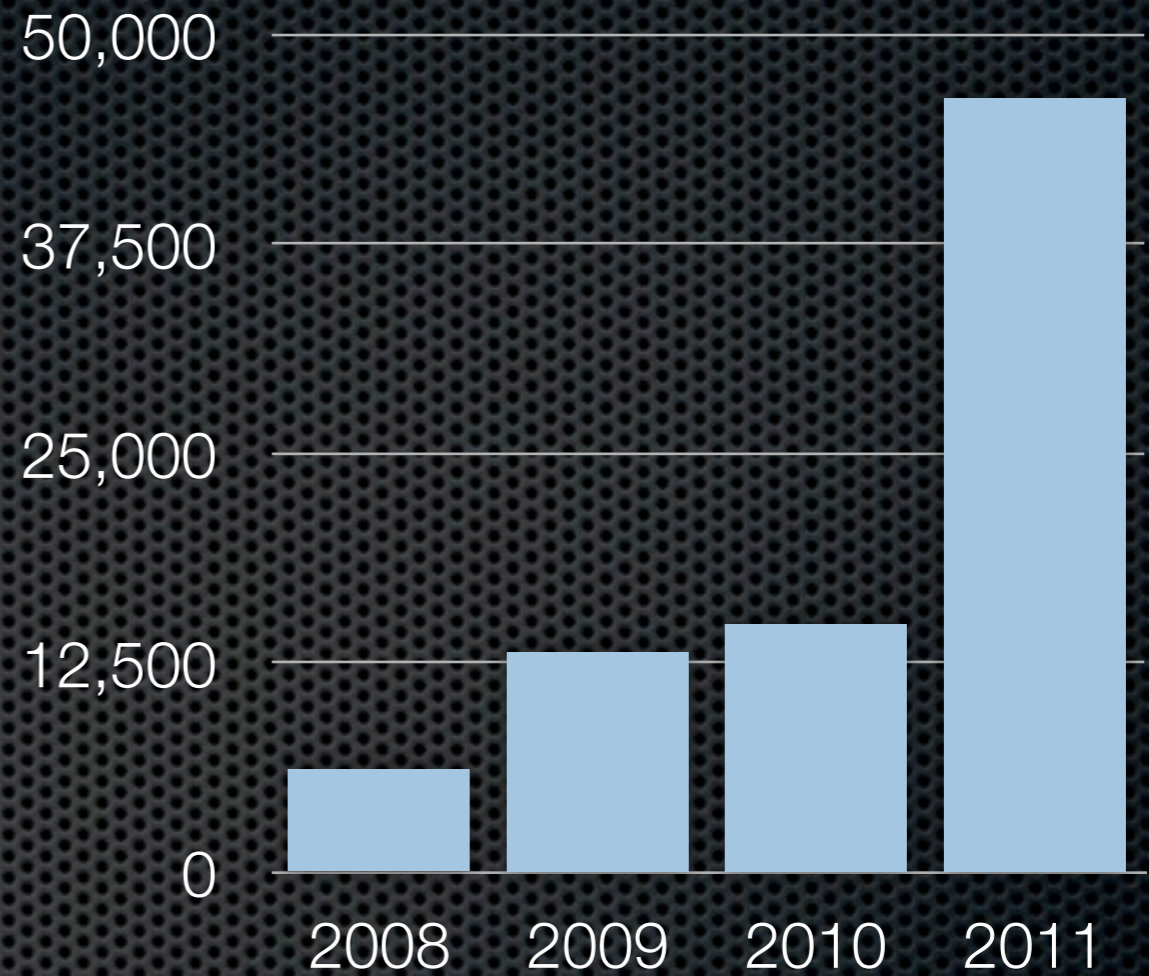
Community

- Large and Active Community
- Incredible download rates
- Mailing List & Forums growth
- Over 14 hours of video training



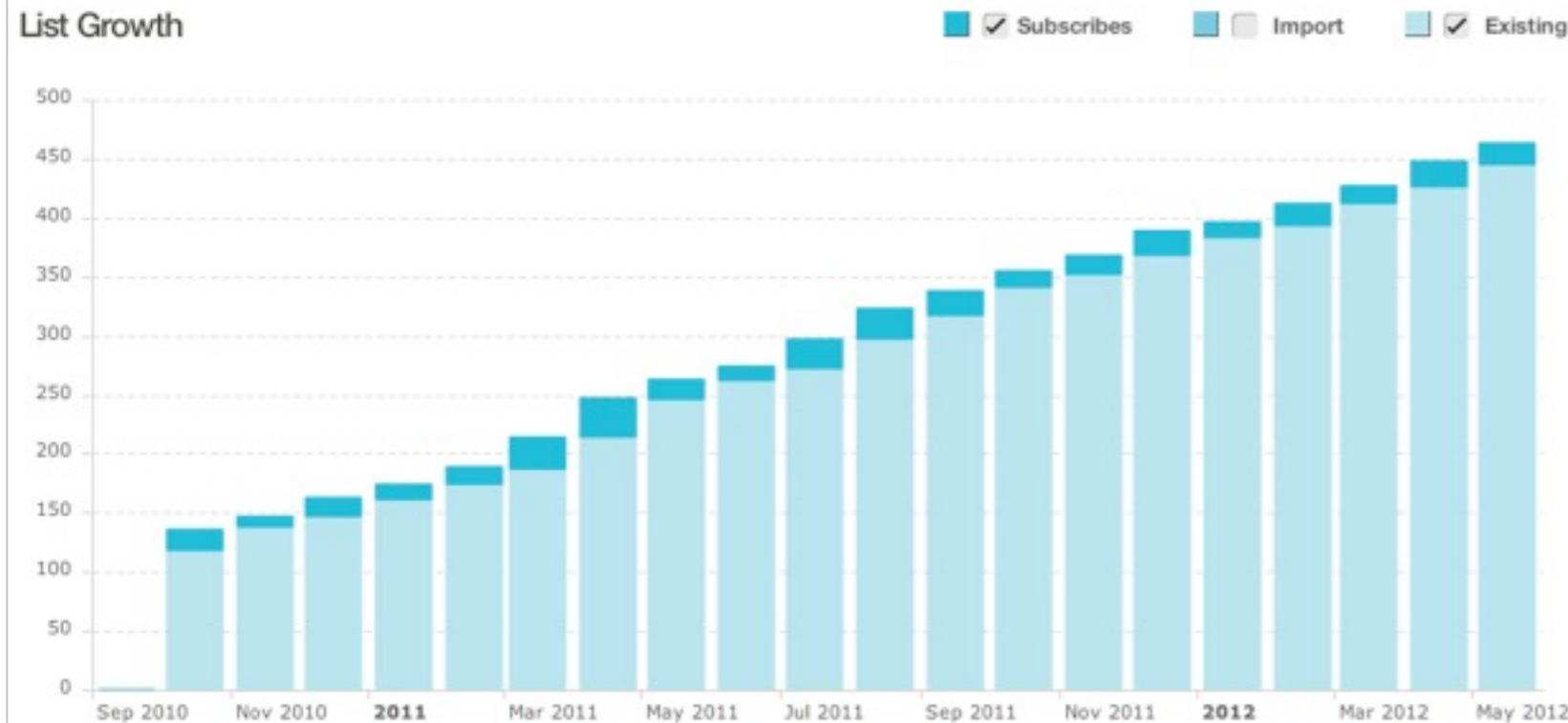
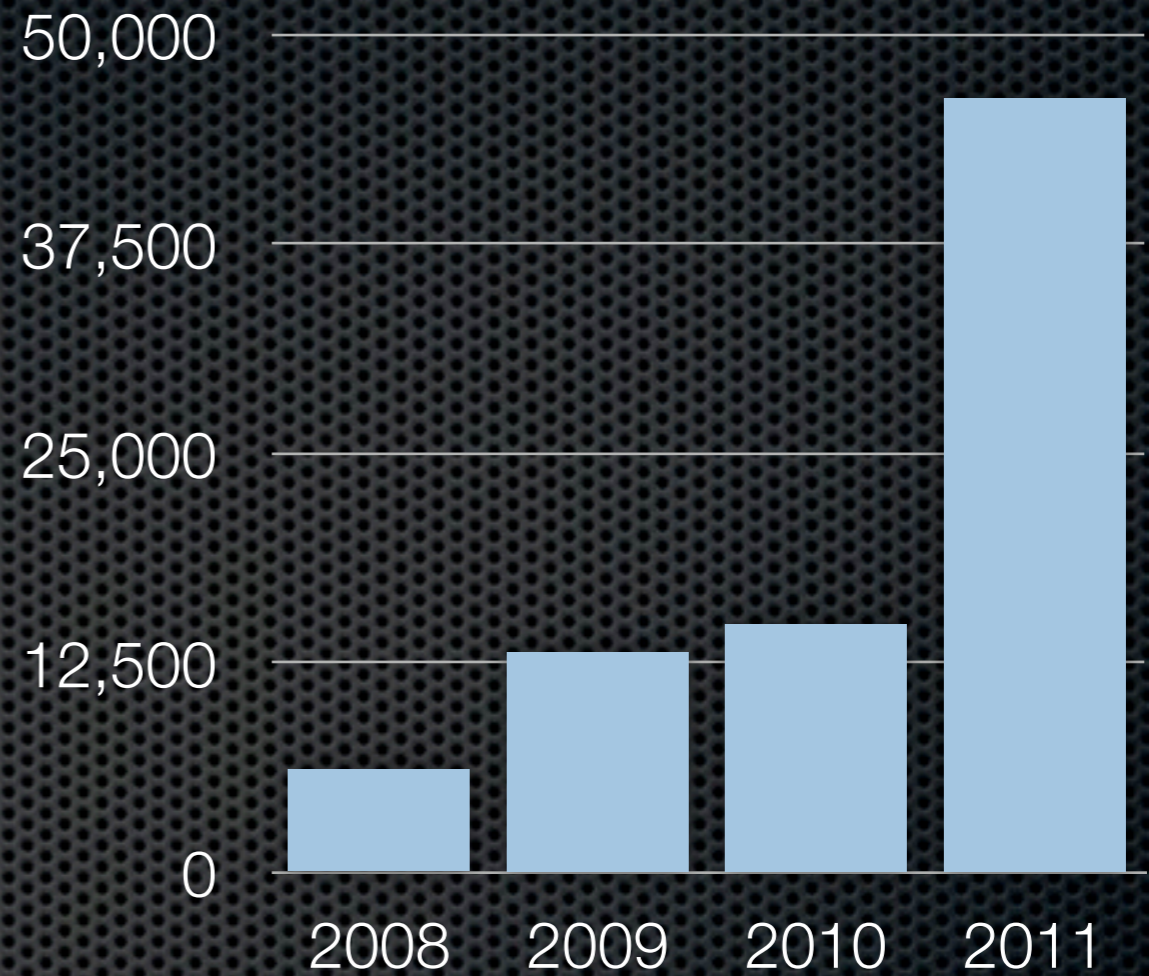
Community

- Large and Active Community
- Incredible download rates
- Mailing List & Forums growth
- Over 14 hours of video training
- **ForgeBox : *Box Community**



Community

- Large and Active Community
- Incredible download rates
- Mailing List & Forums growth
- Over 14 hours of video training
- **ForgeBox : *Box Community**
 - Share modules, plugins, interceptors, contentbox, etc



Professional Open Source



Professional Open Source

- Company backing and funding
- Professional Training Courses
- Books
- Support & Mentoring Plans
- Architecture & Design Sessions
- Server Tuning & Optimizations
- Code Reviews & Sanity Checks
- **Dancing lessons are optional!**





Why use a framework?

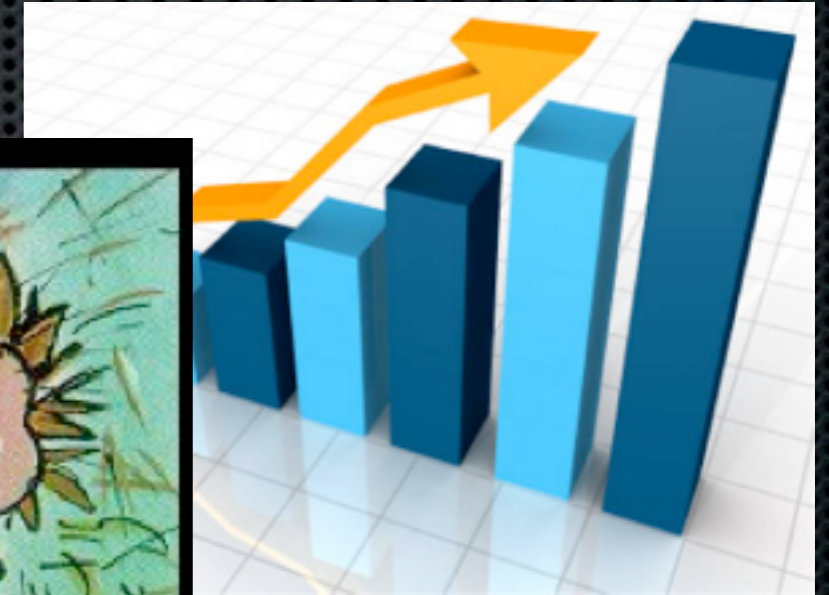
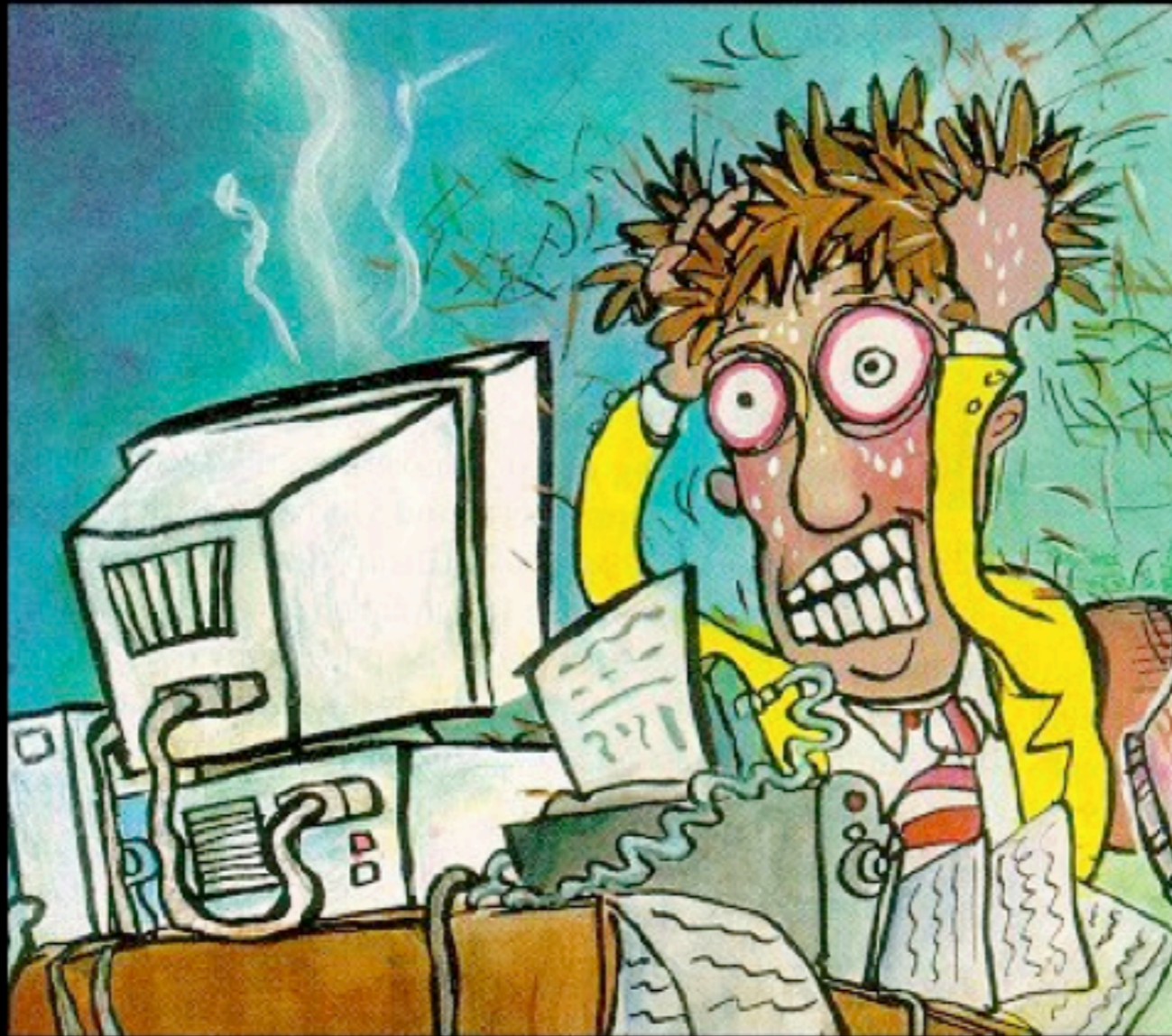
Why use a framework?

- Common Vocabulary
- Separation of Concerns
- Tested in multiple environments
- Performance tuned
- Reduces ramp up time for new developers
- Do not reinvent the wheel
- Should address most infrastructure concerns
- Increases Maintainability, Scalability, and **Sanitability**
(Yes! that's a word)



Why use a framework?

- Common Vocabulary
- Separation of Concerns
- Tested in multiple environments
- Performance tuning
- Reduces ramp up time
- Do not reinvent the wheel
- Should address common use cases
- Increases Maintainability
(Yes! that's a word)

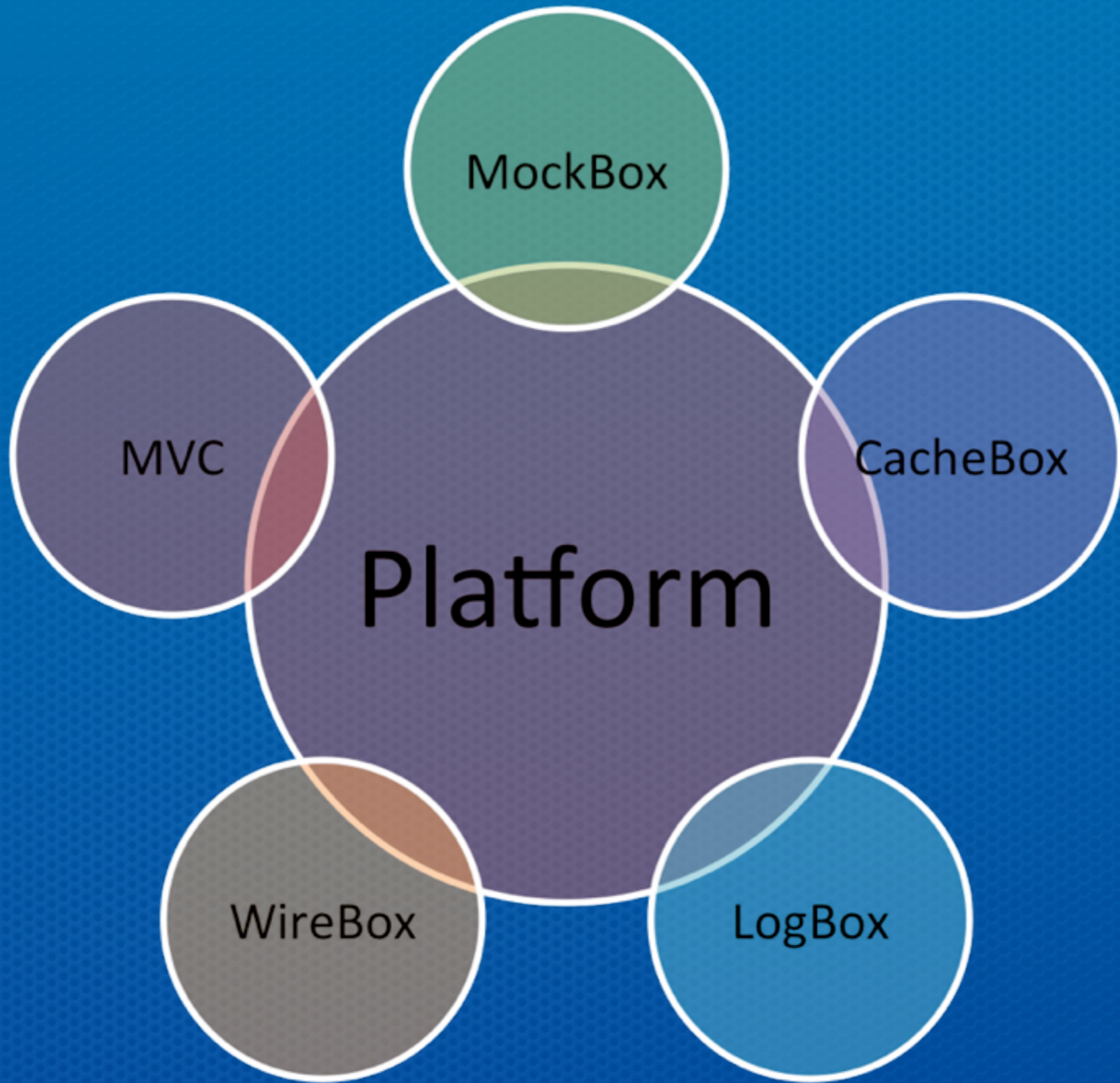


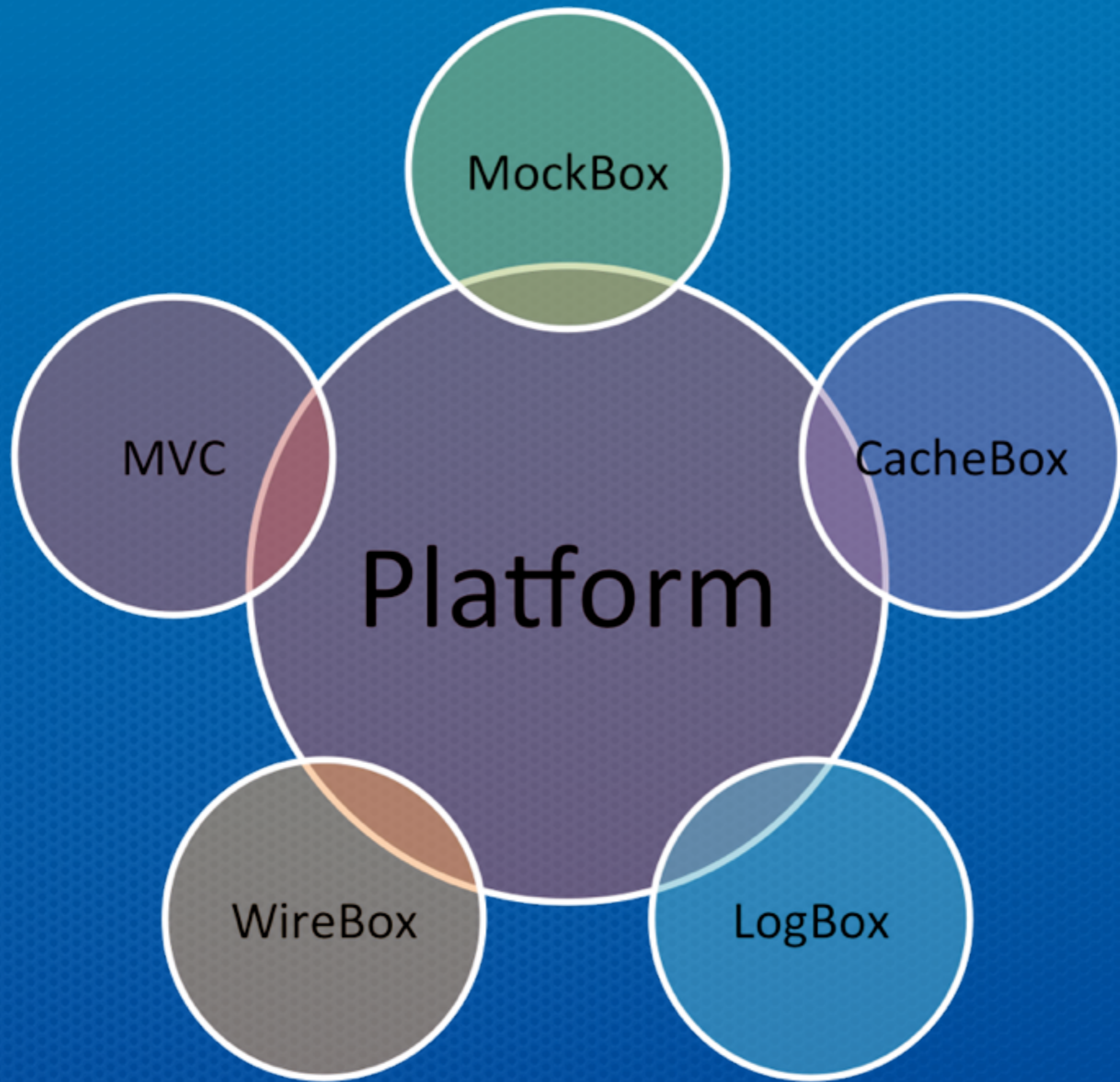


What is ColdBox?



A place for beer?





“Address most infrastructure concerns of typical ColdFusion applications”



How we build our apps?





How we build our apps?

- Usually start with a need for MVC





How we build our apps?

- Usually start with a need for MVC
- Requirements are more than just MVC





How we build our apps?

- Usually start with a need for MVC
- Requirements are more than just MVC
- MVC is not enough





How we build our apps?

- Usually start with a need for MVC
- Requirements are more than just MVC
- MVC is not enough
- What about?





How we build our apps?

- Usually start with a need for MVC
- Requirements are more than just MVC
- MVC is not enough
- What about?
 - SES/URL Mappings





How we build our apps?

- Usually start with a need for MVC
- Requirements are more than just MVC
- MVC is not enough
- What about?
 - SES/URL Mappings
 - RESTful Services





How we build our apps?

- Usually start with a need for MVC
- Requirements are more than just MVC
- MVC is not enough
- What about?
 - SES/URL Mappings
 - RESTful Services
 - Multiple GUIs





How we build our apps?

- Usually start with a need for MVC
- Requirements are more than just MVC
- MVC is not enough
- What about?
 - SES/URL Mappings
 - RESTful Services
 - Multiple GUIs
 - Caching





How we build our apps?

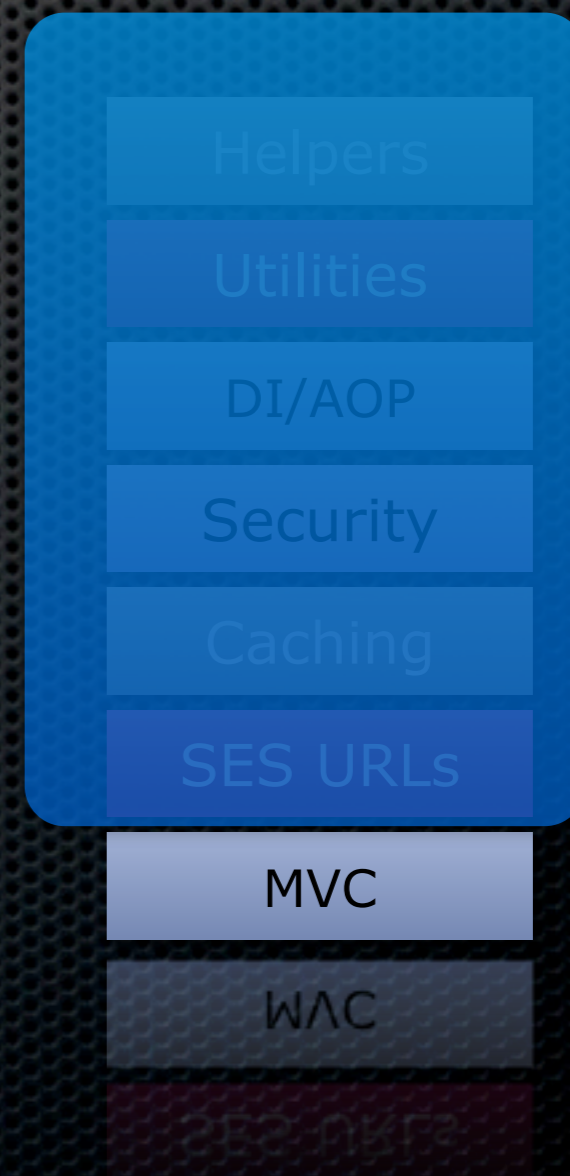
- Usually start with a need for MVC
- Requirements are more than just MVC
- MVC is not enough
- What about?
 - SES/URL Mappings
 - RESTful Services
 - Multiple GUIs
 - Caching
 - Dependency Injection





How we build our apps?

- Usually start with a need for MVC
- Requirements are more than just MVC
- MVC is not enough
- What about?
 - SES/URL Mappings
 - RESTful Services
 - Multiple GUIs
 - Caching
 - Dependency Injection
 - Security/Logging/Auditing





How we build our apps?

- Usually start with a need for MVC
- Requirements are more than just MVC
- MVC is not enough
- What about?
 - SES/URL Mappings
 - RESTful Services
 - Multiple GUIs
 - Caching
 - Dependency Injection
 - Security/Logging/Auditing
 - i18n





How we build our apps?

- Usually start with a need for MVC
- Requirements are more than just MVC
- MVC is not enough
- What about?
 - SES/URL Mappings
 - RESTful Services
 - Multiple GUIs
 - Caching
 - Dependency Injection
 - Security/Logging/Auditing
 - i18n
 - Testing





How we build our apps?

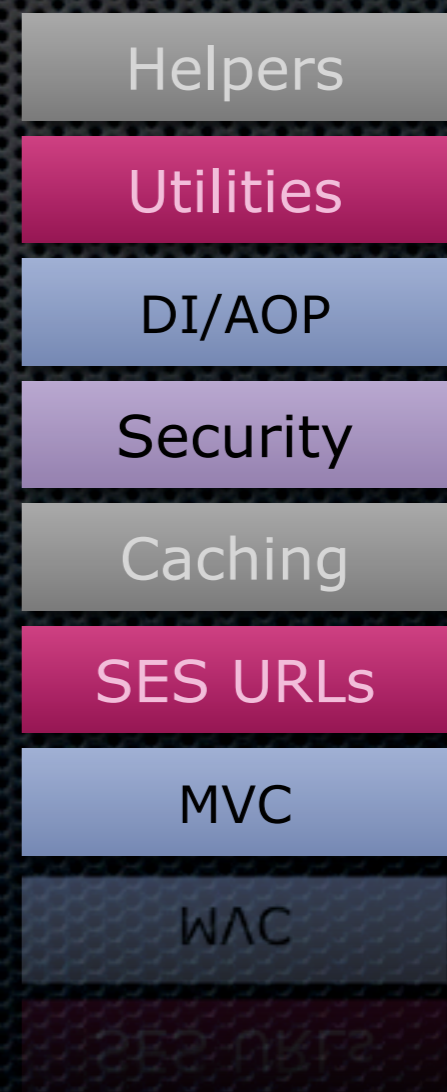
- Usually start with a need for MVC
- Requirements are more than just MVC
- MVC is not enough
- What about?
 - SES/URL Mappings
 - RESTful Services
 - Multiple GUIs
 - Caching
 - Dependency Injection
 - Security/Logging/Auditing
 - i18n
 - Testing
 - Modularity & Extensibility



How we build our

apps?

- ✦ Usually start with a need for MVC
- ✦ Requirements are more than just MVC
- ✦ MVC is not enough
- ✦ What about?
 - ✦ SES/URL Mappings
 - ✦ RESTful Services
 - ✦ Multiple GUIs
 - ✦ Caching
 - ✦ Dependency Injection
 - ✦ Security/Logging/Auditing
 - ✦ i18n
 - ✦ Testing
 - ✦ Modularity & Extensibility



Reinvent the wheel?



Reinvent the wheel?

- Golden Rule Of Software
- IT CHANGES!



Reinvent the wheel?

- ✦ Golden Rule Of Software
 - ✦ IT CHANGES!
 - ✦ We need to adapt
- ✦ Loose Time
- ✦ Loose Patience
- ✦ Loos Hair!







ColdBox To The Rescue



Modularity

Scalability

Extensibility

Flex/Air/
Remote

Utilities

Debuggers





Let's Cover The Main Parts

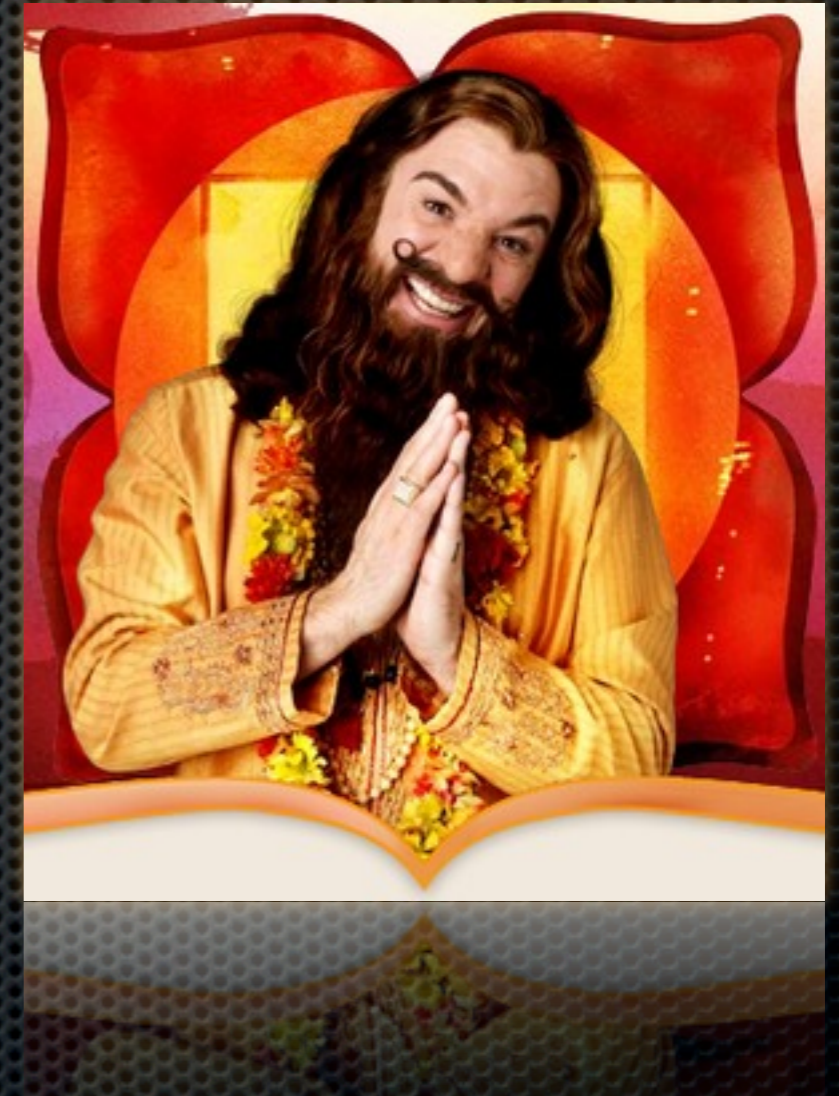


time for lunch?

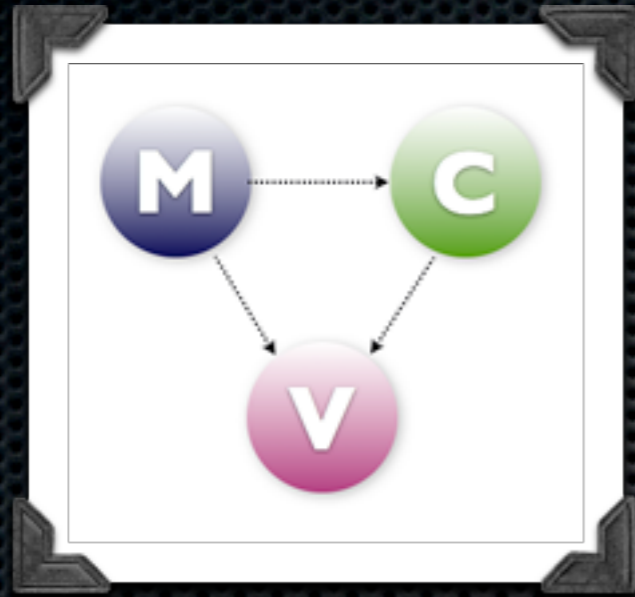


From simple to guru

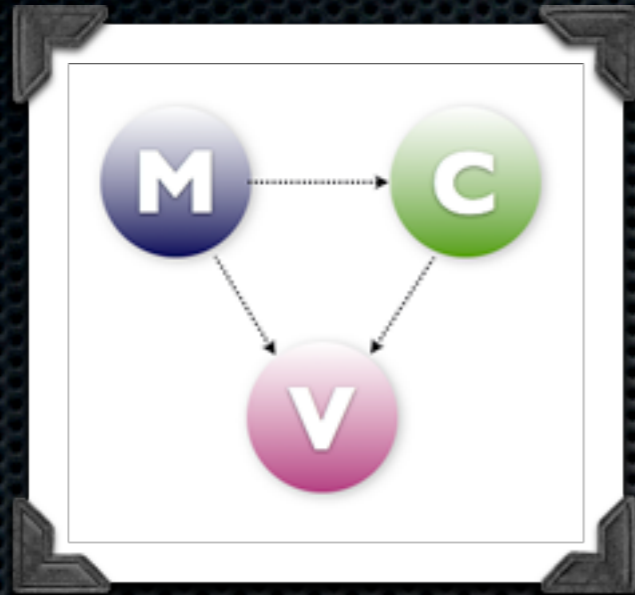
- ✦ Start with simple MVC
- ✦ Add more parts as your application evolves
- ✦ Pieces are brought on demand
- ✦ Use what you need
- ✦ Remember that software requirements ALWAYS change
- ✦ Plan ahead



Core MVC



Core MVC



- Conventions over Configuration
 - Events
 - Models
 - Views
 - Much More...
- Layout/Skinning engine
- HTML helper & generator
- Validation
- Data Transformers
 - JSON, XML, WDDX, PDF
- RESTful services

Code in CFML



Code in CFML

```
3 <cffunction name="dspAddFeed" access="public" return
4   <cfargument name="Event" type="coldbox.system.be
5   <cfset var csPlugin = getPlugin("clientstorage")
6   <cfset var obj = "">
7   <cfset var rc = Event.getCollection()>
8   <!--- EXIT HANDLERS: --->
9   <cfset rc.xehAddFeed = "ehFeed.doAddFeed">
10  <cfset rc.xehNewFeed = "ehFeed.dspAddFeed">
11
12  <!--- Feed Validated? --->
13  <cfset rc.feedValidated = false>
14
15  <!--- Try to parse feed --->
16  <cfif Event.getValue("continue_button","") neq ""
17    <!--- Validate Feed --->
18    <cfif trim(len(rc.FeedURL)) eq 0 or not getP
19      <cfset getPlugin("messagebox").setMessage
20    <cfelse>
21      <cftry>
22        <cfset obj = getPlugin("ioc").getBea
23      <!--- Verify Feed in user's feeds ---
```

- ✦ Simple CFCs
- ✦ Non-Intrusive, ColdBox is just an API
- ✦ New Event, New Function (Easy!)
- ✦ Drop And Play
- ✦ Flexible, Extensible and Reusable

Event Handler



Event Handler

```
component {  
  
    // Dependencies  
    property name="myService" inject;  
  
    function index (event) {  
        event.setValue("welcome", "Welcome to my awesome site")  
            .setView("main/index");  
    }  
  
    function sayHello (event) {  
        return "<h1>Hello Buddy!</h1>";  
    }  
  
    function renderJSON (event) {  
        event.renderData (data=myService.getData(), type="JSON");  
    }  
  
}
```

Validation



Validation

```
component persistent="true" {  
  
    ...  
  
    // Validation  
    this.constraints = {  
        fname = { required = true },  
        lname = { required = true },  
        username = {required=true, size=6-10},  
        password = {required=true, size=6-8},  
        email = {required=true, type="email"},  
        age = {required=true, type="numeric", min=18}  
    };  
}
```

Validation

```
component persistent="true" {  
  
    ...  
  
    // Validation  
    this.constraints = {  
        fname = { required = true },  
        lname = { required = true },  
        username = {required=true, size=6-10},  
        password = {required=true, size=6-8},  
        email = {required=true, type="email"},  
        age = {required=true, type="numeric", min=18}  
    };  
}
```

```
// In Handler  
var validationResult = validateModel(obj);  
if( validationResult.hasErrors() ){  
    // error stuff  
prc.errors = validationResult.getAllErrors();  
}  
else{  
    // validation success  
}
```

ORM Integration



ORM Integration

- Virtual service layers



ORM Integration

- Virtual service layers
 - GORM inspired



ORM Integration

- ✦ Virtual service layers
 - ✦ GORM inspired
 - ✦ More functionality than what CF exposes



ORM Integration

- ✦ Virtual service layers
 - ✦ GORM inspired
 - ✦ More functionality than what CF exposes
 - ✦ Caching



ORM Integration

- ✦ Virtual service layers
 - ✦ GORM inspired
 - ✦ More functionality than what CF exposes
 - ✦ Caching
 - ✦ Hibernate criteria queries and projections



ORM Integration

- ✦ Virtual service layers
 - ✦ GORM inspired
 - ✦ More functionality than what CF exposes
 - ✦ Caching
 - ✦ Hibernate criteria queries and projections
 - ✦ Hibernate metadata



ORM Integration

- ✦ Virtual service layers
 - ✦ GORM inspired
 - ✦ More functionality than what CF exposes
 - ✦ Caching
 - ✦ Hibernate criteria queries and projections
 - ✦ Hibernate metadata
- ✦ ActiveEntity



ORM Integration

- ✦ Virtual service layers
 - ✦ GORM inspired
 - ✦ More functionality than what CF exposes
 - ✦ Caching
 - ✦ Hibernate criteria queries and projections
 - ✦ Hibernate metadata
- ✦ ActiveEntity
 - ✦ Self Validation



ORM Integration



- ✦ Virtual service layers
 - ✦ GORM inspired
 - ✦ More functionality than what CF exposes
 - ✦ Caching
 - ✦ Hibernate criteria queries and projections
 - ✦ Hibernate metadata
- ✦ ActiveEntity
 - ✦ Self Validation
 - ✦ Self Querying

ORM Integration



- ✦ Virtual service layers
 - ✦ GORM inspired
 - ✦ More functionality than what CF exposes
 - ✦ Caching
 - ✦ Hibernate criteria queries and projections
 - ✦ Hibernate metadata
- ✦ ActiveEntity
 - ✦ Self Validation
 - ✦ Self Querying
 - ✦ Much more

ORM Integration



- ✦ Virtual service layers
 - ✦ GORM inspired
 - ✦ More functionality than what CF exposes
 - ✦ Caching
 - ✦ Hibernate criteria queries and projections
 - ✦ Hibernate metadata
- ✦ ActiveEntity
 - ✦ Self Validation
 - ✦ Self Querying
 - ✦ Much more
- ✦ Hibernate interceptors to ColdBox interceptors bridge

Active Entity



Active Entity

```
import coldbox.system.orm.hibernate.*;
component persistent="true" extends="ActiveEntity" {
    // Properties
    property name="firstName";
    property name="lastName";
    property name="email";
    property name="username";
    property name="password";

    // Validation Constraints
    this.constraints = {
        firstName = {required=true},
        lastName = {required=true},
        email = {required=true, type="email"},
        username = {required=true, size="5..10"},
        password = {required=true, size="5..10"}
    };
}
```

Active Entity - Handler



Active Entity - Handler

```
component{

    function index(event,rc,prc){
        prc.users = entityNew("User").list(sortOrder="lastName asc");
        event.setView("users/list");
    }

    function save(event,rc,prc){
        event.paramValue("id","");
        var user = populateModel( entityNew("User").get( rc.id ) );

        if( user.validate() {
            user.save();
            flash.put("notice","User Saved!");
            setNextEvent("users.index");
        }
        else{
            getPlugin("MessageBox").error(errorMessages=user.getValidationResults().getAllErrors());
            editor(event,rc,prc);
        }
    }

    function editor(event,rc,prc){
        event.paramValue("id","");
        prc.user = entityNew("User").get( rc.id );
        event.setView("users/editor");
    }

    function delete(event,rc,prc){
        event.paramValue("id","");
        entityNew("User").deleteById( rc.id );
        flash.put("notice","User Removed!");
        setNextEvent("users.index");
    }
}
```

IDE-Debugging Tools



IDE-Debugging Tools



- ✦ ColdFusion Builder Extension
- ✦ Code & Tests generation
- ✦ Documentation Search
- ✦ Auto-Update
- ✦ Code Snippets & Insight
- ✦ Execution-Cache Monitors
- ✦ Intercept Flex/Air/Ajax/REST

Framework Info: ColdBox 2.0.2 Philipians 3:7-11
Application Name: coldbox (production)
RAM Memory: 24,834 KB / 47,948 KB (Free/Total)
Time Stamp: Jul-11-2007 12:01:45 AM
Query String: fwreinit=1
Server Instance: jfetmac
Current Event: ehGeneral.dspHello
Current Layout: Layout.Main.cfm
Current View: vwHello

Framework Method execution times in execution order.

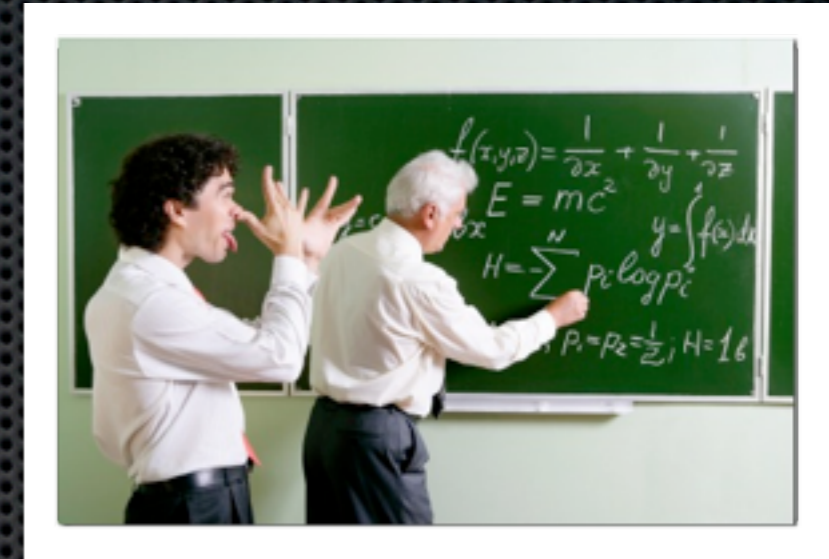
Timestamp	Execution Time	Framework Method	RC Snapshot
12:01:43.743 AM	19 ms	invoking runEvent [ehGeneral.onApplicationStart]	View
12:01:43.757 AM	10 ms	invoking runEvent [preHandler] for ehGeneral.dspHello	View
12:01:44.181 AM	5 ms	New Instance Creation	...
12:01:44.543 AM	56 ms	Rendering View [vwQuote.cfm]	...
12:01:44.544 AM	786 ms	invoking runEvent [ehGeneral.dspHello]	View
12:01:44.551 AM	7 ms	invoking runEvent [postHandler] for ehGeneral.dspHello	View
12:01:45.66 AM	199 ms	Rendering View [navigation.cfm]	...
12:01:45.330 AM	38 ms	Rendering View [datasourcedump.cfm]	...
12:01:45.331 AM	265 ms	Rendering View [vwHello.cfm]	...
12:01:45.345 AM	792 ms	Rendering Layout [Layout.Main.cfm]	...

TDD-Mocking Facilities



TDD-Mocking Facilities

- ✦ Unit Testing via MXUnit
 - ✦ Plugins
 - ✦ Interceptors
 - ✦ Handlers
 - ✦ Model Objects
- ✦ Integration Testing & Automation
- ✦ Ability to simulate queries
- ✦ Mocking via MockBox



COLDBOX

Integration Testing



Integration Testing

```
component extends="coldbox.system.testing.BaseTestCase" {  
  
    function testIndex() {  
        event = execute("general.index");  
        assertEquals( "Welcome to my awesome site", event.getValue("welcome") );  
    }  
  
}
```

Integration Testing

```
component extends="coldbox.system.testing.BaseTestCase" {  
  
    function testIndex() {  
        event = execute("general.index");  
        assertEquals( "Welcome to my awesome site", event.getValue("welcome") );  
    }  
  
}
```

Model Testing

```
/**  
 * @model myapp.model.MyService  
 */  
component extends="coldbox.system.testing.BaseModelTest" {  
  
    function testGetData() {  
        data = model.getData();  
        assertTrue( data.recordcount );  
    }  
  
}
```



Beyond the basics!

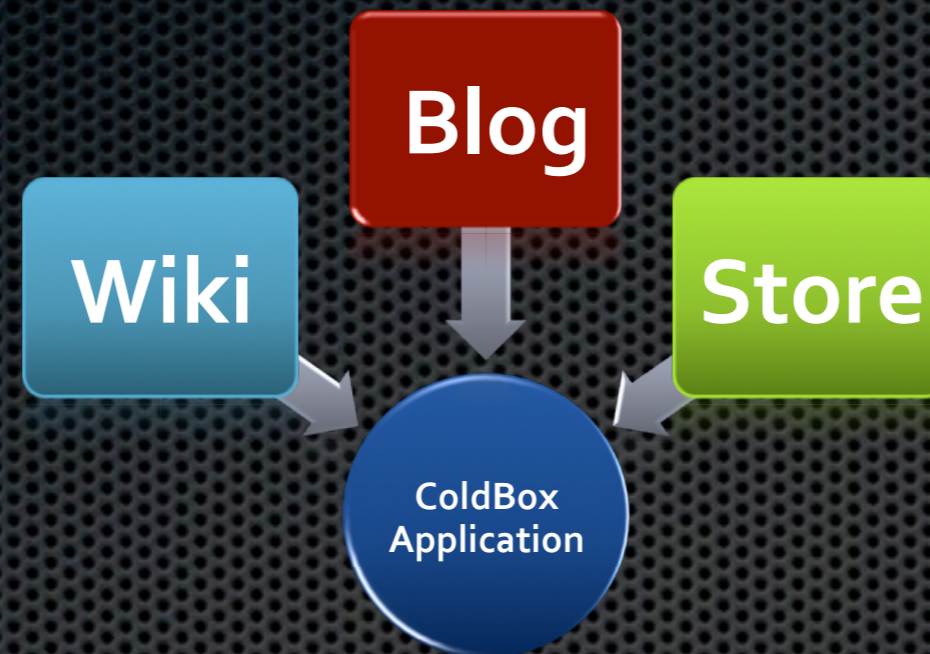


There's more?

ColdBox Modules



ColdBox Modules



- ❖ Modular Architecture instead of monolithic applications
- ❖ Extend any application in pieces
- ❖ Build standalone or module applications
- ❖ Drop and play by conventions
- ❖ API: Turn on/off/load/reload or install modules

Module Service API



Module Service API



ColdBox Modules

[Reload All](#) [Unload All](#)

Below you can see the loaded application modules.

Module	Author	Version	V.P.L	L.P.L	Load Time	CMDS
My Test Module A funky test module <i>No Entry Point Defined</i>	Luis Majano	1.0	Yes	Yes	May-24 01:30:07 PM	Unload Reload
ForgeBox A module that interacts with forgebox Open Module Entry Point	Luis Majano	1.0	Yes	Yes	May-24 01:30:07 PM	Unload Reload

* V.P.L = View Parent Lookup Order
* L.P.L = Layout Parent Lookup Order

* V.P.L = View Parent Lookup Order
* L.P.L = Layout Parent Lookup Order

Module Service API



ColdBox Modules

[Reload All](#) [Unload All](#)

Below you can see the loaded application modules.

Module	Author	Version	V.P.L	L.P.L	Load Time	CMDS
My Test Module A funky test module <i>No Entry Point Defined</i>	Luis Majano	1.0	Yes	Yes	May-24 01:30:07 PM	Unload Reload
ForgeBox A module that interacts with forgebox Open Module Entry Point	Luis Majano	1.0	Yes	Yes	May-24 01:30:07 PM	Unload Reload

* V.P.L = View Parent Lookup Order
* L.P.L = Layout Parent Lookup Order

* V.P.L = View Parent Lookup Order
* L.P.L = Layout Parent Lookup Order

Module Service API



ColdBox Modules

Reload All Unload All

Below you can see the loaded application modules.

Module	Author	Version	V.P.L	L.P.L	Load Time	CMDS
My Test Module A funky test module <i>No Entry Point Defined</i>	Luis Majano	1.0	Yes	Yes	May-24 01:30:07 PM	<input type="button" value="Unload"/> <input type="button" value="Reload"/>
ForgeBox A module that interacts with forgebox Open Module Entry Point	Luis Majano	1.0	Yes	Yes	May-24 01:30:07 PM	<input type="button" value="Unload"/> <input type="button" value="Reload"/>

* V.P.L = View Parent Lookup Order
* L.P.L = Layout Parent Lookup Order

* V.P.L = View Parent Lookup Order
* L.P.L = Layout Parent Lookup Order

WireBox



WireBox



Need dependency injection or Aspect Oriented Programming?

Injector

Parent
Injector

Binder

ColdBox

Mappings

Interceptors

LogBox

CacheBox

wirebox

interceptors

logbox

cachebox

Features



Features



- Annotation driven DI

Features

- Annotation driven DI
- 0 configuration or programmatic configuration mode (NO XML)



Features

- Annotation driven DI
- 0 configuration or programmatic configuration mode (NO XML)
- Creation & DI of : CFCs, java, webservices, rss, constants, etc



Features

- Annotation driven DI
- 0 configuration or programmatic configuration mode (NO XML)
- Creation & DI of : CFCs, java, webservices, rss, constants, etc
- Multiple Injection Styles: setter, method, constructor, mixins

Features

- Annotation driven DI
- 0 configuration or programmatic configuration mode (NO XML)
- Creation & DI of : CFCs, java, webservices, rss, constants, etc
- Multiple Injection Styles: setter, method, constructor, mixins
- Persistence scopes: singleton, session, request, cache, etc.

Features

- Annotation driven DI
- 0 configuration or programmatic configuration mode (NO XML)
- Creation & DI of : CFCs, java, webservices, rss, constants, etc
- Multiple Injection Styles: setter, method, constructor, mixins
- Persistence scopes: singleton, session, request, cache, etc.
- Integrated logging via LogBox

Features

- Annotation driven DI
- 0 configuration or programmatic configuration mode (NO XML)
- Creation & DI of : CFCs, java, webservices, rss, constants, etc
- Multiple Injection Styles: setter, method, constructor, mixins
- Persistence scopes: singleton, session, request, cache, etc.
- Integrated logging via LogBox
- Parent Factories and adapters

Features

- Annotation driven DI
- 0 configuration or programmatic configuration mode (NO XML)
- Creation & DI of : CFCs, java, webservices, rss, constants, etc
- Multiple Injection Styles: setter, method, constructor, mixins
- Persistence scopes: singleton, session, request, cache, etc.
- Integrated logging via LogBox
- Parent Factories and adapters
- Object Life Cycle Events

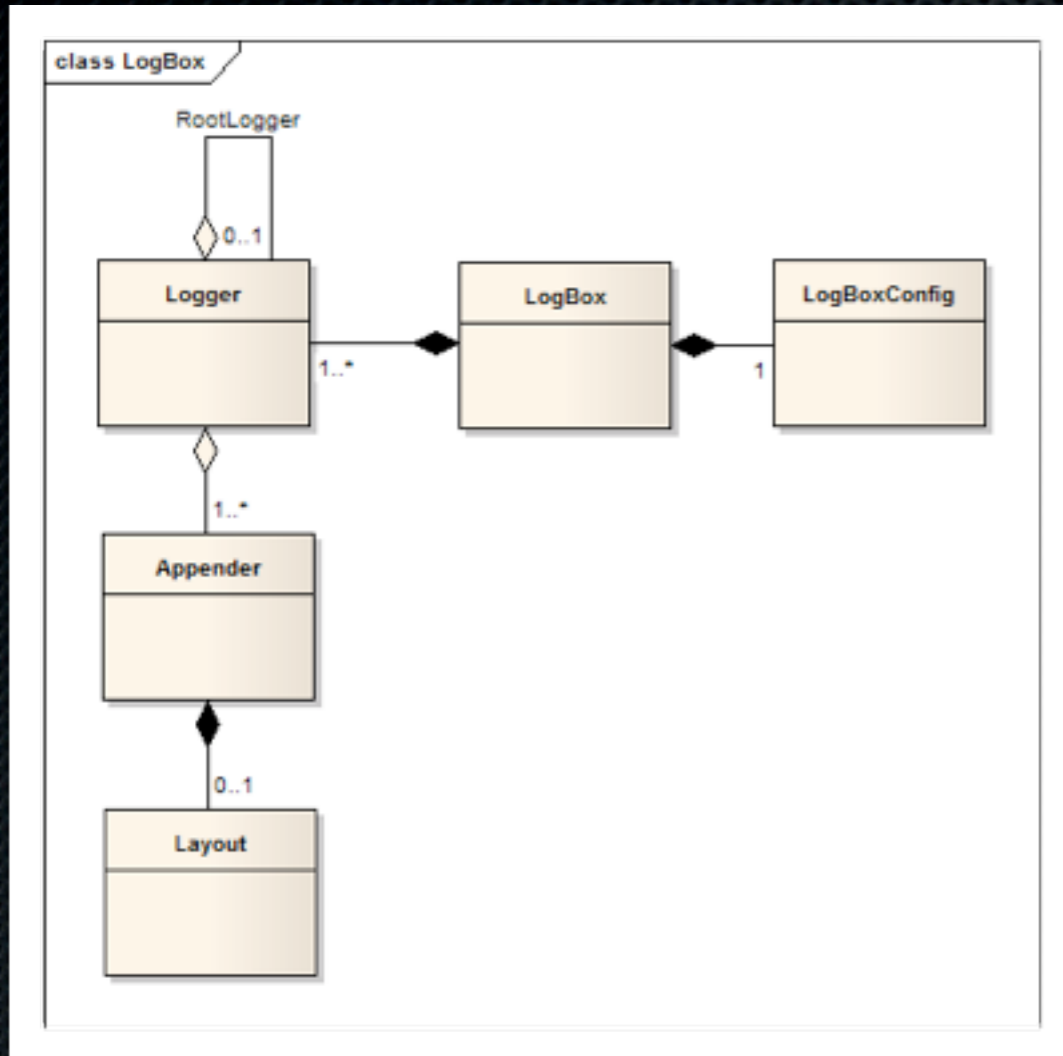
Features

- Annotation driven DI
- 0 configuration or programmatic configuration mode (NO XML)
- Creation & DI of : CFCs, java, webservices, rss, constants, etc
- Multiple Injection Styles: setter, method, constructor, mixins
- Persistence scopes: singleton, session, request, cache, etc.
- Integrated logging via LogBox
- Parent Factories and adapters
- Object Life Cycle Events
- Automatic CF Scope registration

LogBox = Fun!



LogBox = Fun!

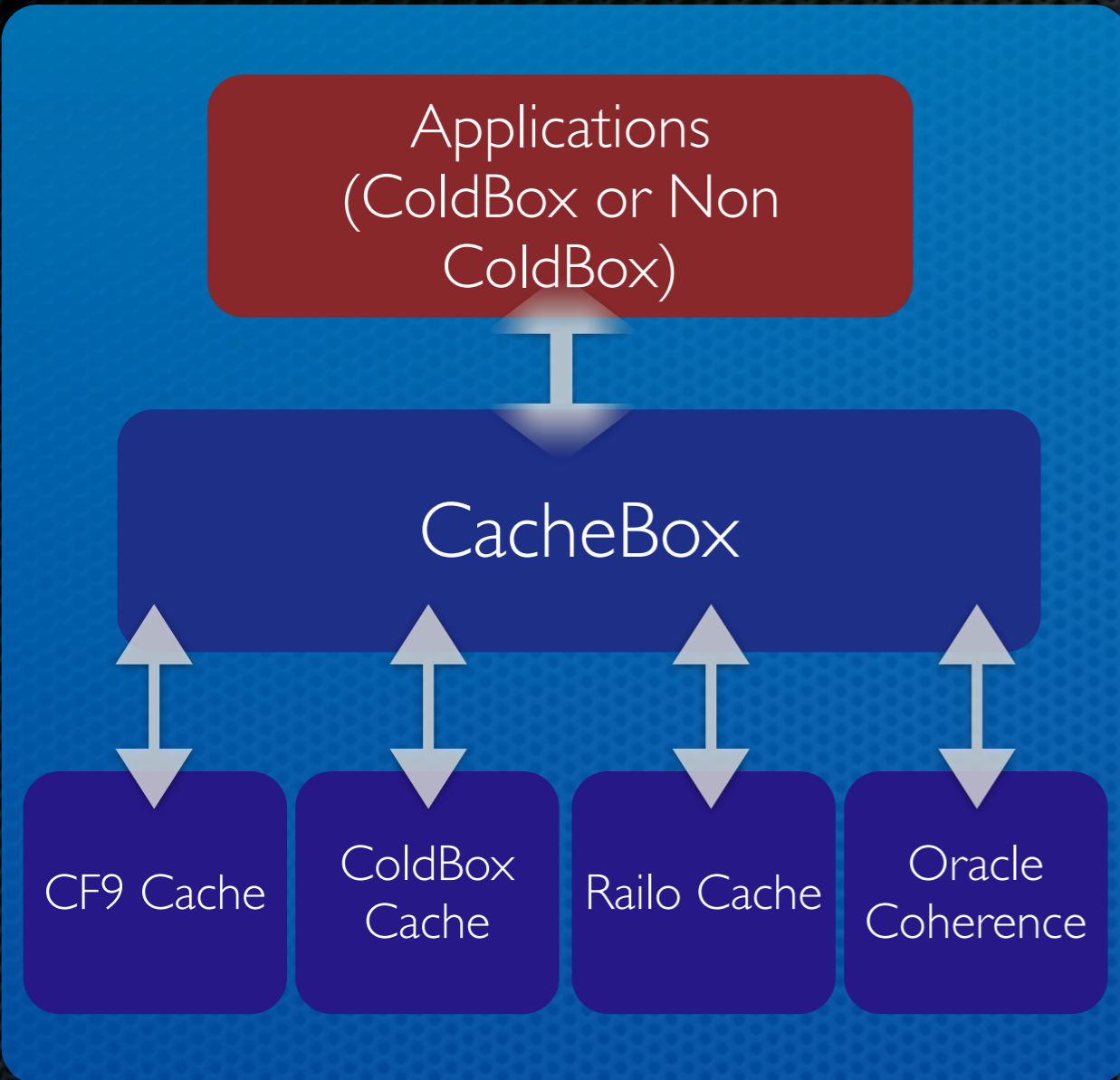


- ✦ Ready for the next step in logging?
- ✦ Enterprise Logging Library
- ✦ Inspired by Log4J
- ✦ 12 Appenders Included
- ✦ Extensible Appenders & Layouts
- ✦ Programmatic Configurations
- ✦ Category Inheritance

CacheBox



CacheBox



- Need enterprise caching?
- Cache Aggregator
- Cache Agnostic API
- Event Model
- Stats, Reports
- Interactive Console
- Memory aware
- Event-View Caching
- Use if needed

RESTful Web Services



RESTful Web Services

- Easy creation of RESTful services



RESTful Web Services

- ✦ Easy creation of RESTful services
- ✦ Advanced URL Routing and Mappings



RESTful Web Services

- ✦ Easy creation of RESTful services
- ✦ Advanced URL Routing and Mappings
- ✦ RESTful actions: `action={get='list', post='create'}`



RESTful Web Services

- ✦ Easy creation of RESTful services
- ✦ Advanced URL Routing and Mappings
- ✦ RESTful actions: `action={get='list', post='create'}`
- ✦ Extension detection and configuration



RESTful Web Services

- ✦ Easy creation of RESTful services
- ✦ Advanced URL Routing and Mappings
- ✦ RESTful actions: `action={get='list', post='create'}`
- ✦ Extension detection and configuration
- ✦ HTTP Method Security



RESTful Web Services

- ✦ Easy creation of RESTful services
- ✦ Advanced URL Routing and Mappings
- ✦ RESTful actions: `action={get='list', post='create'}`
- ✦ Extension detection and configuration
- ✦ HTTP Method Security
- ✦ HTTP Basic Authentication



RESTful Web Services

- ✦ Easy creation of RESTful services
- ✦ Advanced URL Routing and Mappings
- ✦ RESTful actions: `action={get='list', post='create'}`
- ✦ Extension detection and configuration
- ✦ HTTP Method Security
- ✦ HTTP Basic Authentication
- ✦ Header/Content Helpers



RESTful Web Services

- ✦ Easy creation of RESTful services
- ✦ Advanced URL Routing and Mappings
- ✦ RESTful actions: `action={get='list', post='create'}`
- ✦ Extension detection and configuration
- ✦ HTTP Method Security
- ✦ HTTP Basic Authentication
- ✦ Header/Content Helpers
- ✦ Auto marshalling of data: json, xml, wddx, custom



RESTful Web Services

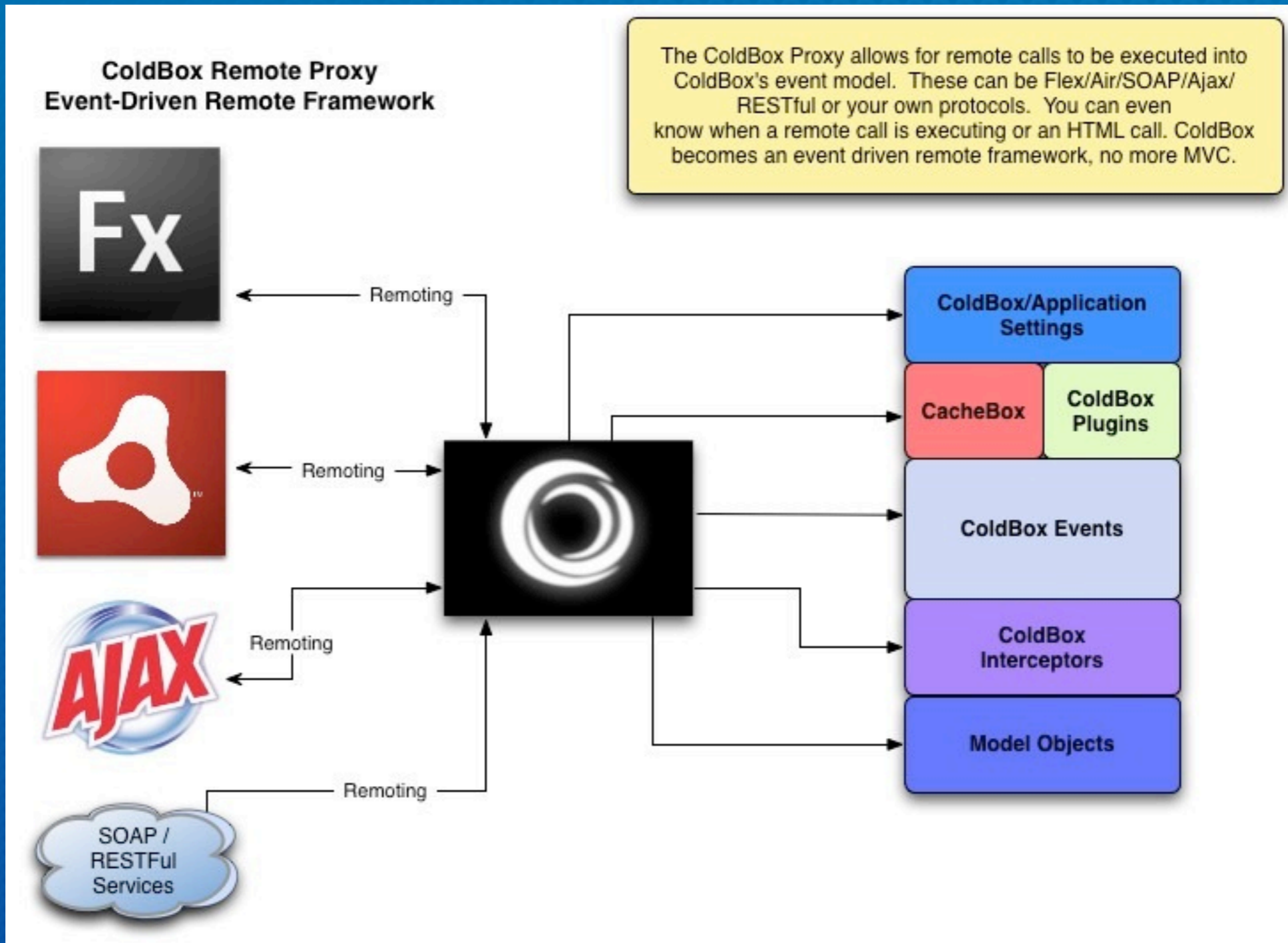
- ✦ Easy creation of RESTful services
- ✦ Advanced URL Routing and Mappings
- ✦ RESTful actions: `action={get='list', post='create'}`
- ✦ Extension detection and configuration
- ✦ HTTP Method Security
- ✦ HTTP Basic Authentication
- ✦ Header/Content Helpers
- ✦ Auto marshalling of data: json, xml, wddx, custom
- ✦ ColdBox Relax



Flex/Air/Remote Integration



Flex/Air/Remote Integration



“One development framework - ANY GUI interface”

Ninja Status

- ✦ Several useful tools and plugins (Load when needed)
 - ✦ XSS Cleanup Tools
 - ✦ JavaLoader integration
 - ✦ ColdBox Security Firewall
 - ✦ ColdBox Tier Deployment Tools
 - ✦ JVM, File, Date Utilities
 - ✦ Storage Facades
 - ✦ RSS Feed Helpers
 - ✦ i18n & Localization
 - ✦ Etc.

Ninja Status

- Several useful tools and plugins (Load when needed)
 - XSS Cleanup Tools
 - JavaLoader integration
 - ColdBox Security Firewall
 - ColdBox Tier Deployment Tools
 - JVM, File, Date Utilities
 - Storage Facades
 - RSS Feed Helpers
 - i18n & Localization
 - Etc.





Ninja Status

- Several useful tools and plugins (Load when needed)
 - XSS Cleanup Tools
 - JavaLoader integration
 - ColdBox Security Firewall
 - ColdBox Tier Deployment Tools
 - JVM, File, Date Utilities
 - Storage Facades
 - RSS Feed Helpers
 - i18n & Localization
 - Etc.







Demo



ColdBox Resources

- ✦ Official Site
 - ✦ www.coldbox.org
- ✦ Documentation
 - ✦ wiki.coldbox.org
- ✦ Google Group
 - ✦ groups.google.com/group/coldbox
- ✦ Training
 - ✦ www.coldbox.org/training
- ✦ Professional Support
 - ✦ www.ortussolutions.com

ColdBox Resources

- Official Site
 - www.coldbox.org
- Documentation
 - wiki.coldbox.org
- Google Group
 - groups.google.com/group/coldbox
- Training
 - www.coldbox.org/training
- Professional Support
 - www.ortussolutions.com



**Luis Majano &
Ortus Solutions, Corp**
lmajano@ortussolutions.com





Q & A



Q & A



coldbox