



Time to release  
your content  
from it's box!

# ContentBox

## Modular CMS

# Who am I?

- ✦ Luis Majano - Computer Engineer
- ✦ Born in El Salvador ----->
- ✦ President of Ortus Solutions
- ✦ Manager of the IECFUG ([www.iecfug.com](http://www.iecfug.com))
- ✦ Creator of ColdBox, MockBox, LogBox, CacheBox, WireBox, ContentBox, or anything Box!
- ✦ Documentation Weirdo!
- ✦ @lmajano, @ortussolutions



# Agenda

- ContentBox Overview + Technology
- ContentBox Modularity
- Deployment + Scalability
- Features
- Build Stuff





# ContentBox

- ✦ Modular CMS
- ✦ Powered by The ColdBox MVC Platform
- ✦ Built to **scale**, **cluster** and **deploy** securely
- ✦ Extensible via CFML + Groovy\*
- ✦ Two License Types:
  - ✦ Professional Open Source - Apache 2
  - ✦ Commercial
- ✦ Public release August 2012



[www.gocontentbox.org](http://www.gocontentbox.org)

# Professional Open Source

- ✦ Training
- ✦ Content Migrations & Strategy
- ✦ Support & Mentoring Plans
- ✦ Architecture & Design Sessions
- ✦ Module/Theme Development
- ✦ Merengue dancing is optional



[www.ortussolutions.com](http://www.ortussolutions.com)  
[consulting@ortussolutions.com](mailto:consulting@ortussolutions.com)



# Why Modularity?





# ContentBox Modularity

**ANY**  
ColdBox MVC  
Application



Events

Custom  
Security

Plugins

Model

ContentBox  
Admin

ContentBox  
UI

ContentBox  
Core

Forum

eCommerce

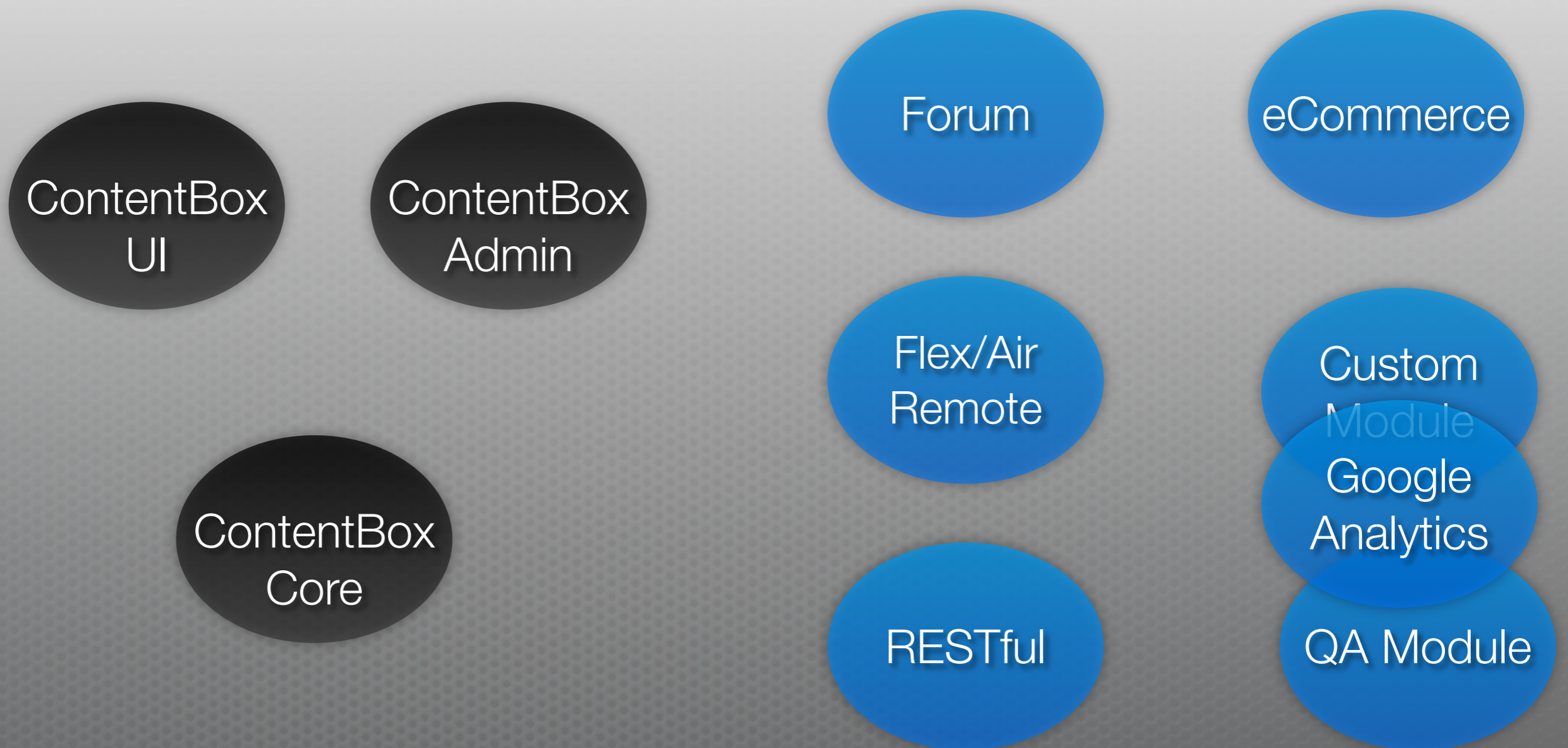
Flex/Air  
Remote

Custom  
App

ColdBox Modules



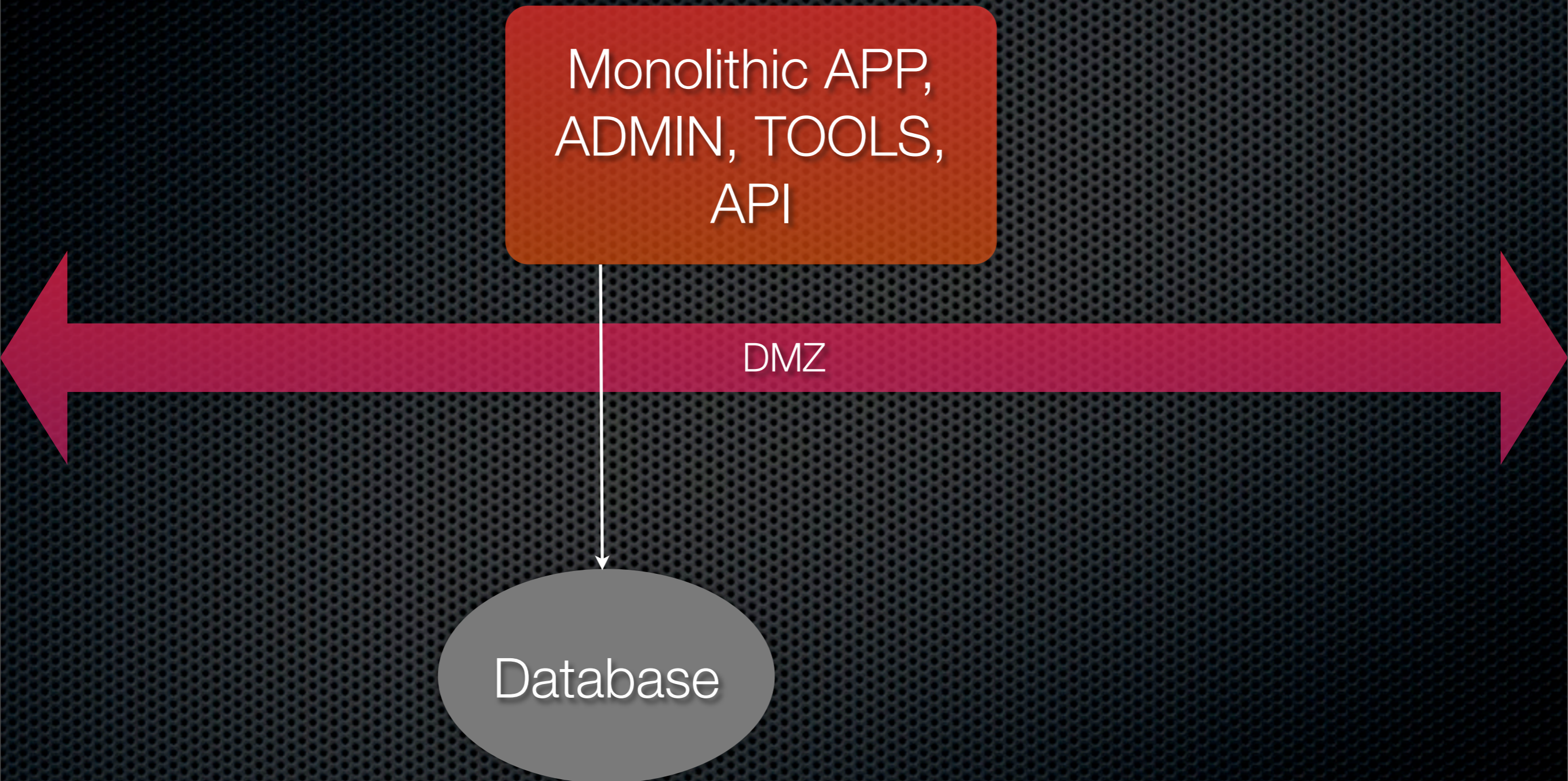
# Modular Architecture





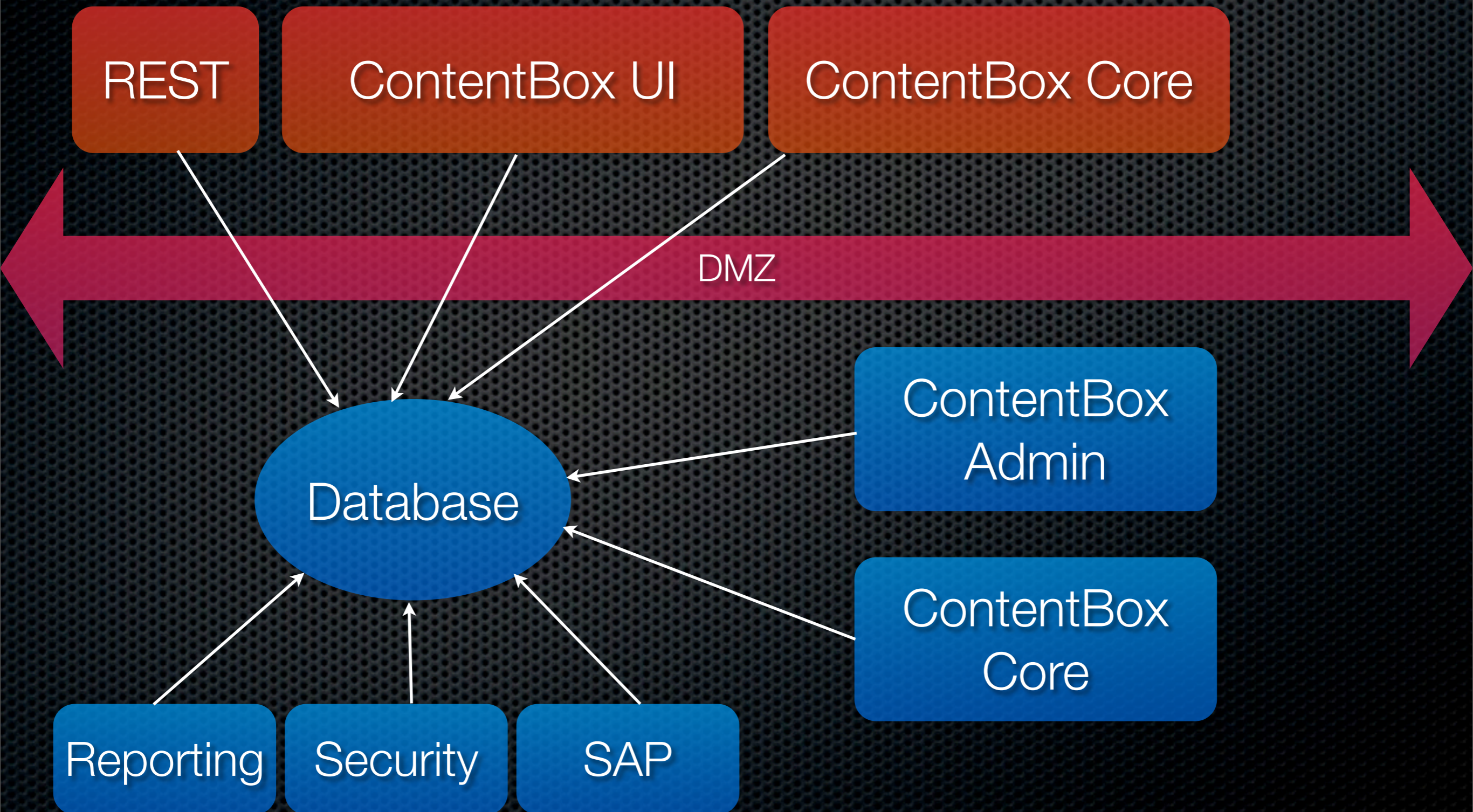
# Modular Deployment

# Traditional Deployment





# Modular Segregated Deployment





**What can  
we extend?**



# What can we extend?

- Powered by ColdBox MVC
- Dependency Injection & AOP
- > 100 events to listen to
- Create custom content types
- Custom security & search
- Modules
- Widgets
- Layout Themes
- Extend the UI+Administrator
- Geek Panel





# ContentBox Modules

- ✦ Extended **ColdBox** Modules
- ✦ Managed by ContentBox Admin
  - ✦ Activated/Deactivated
  - ✦ Installed/Uninstalled
- ✦ Mini self-contained applications
- ✦ Extend ContentBox or Application
- ✦ Module Composition >1 module
- ✦ ContentBox is a collection of modules
- ✦ **[wiki.coldbox.org/wiki/Modules.cfm](http://wiki.coldbox.org/wiki/Modules.cfm)**

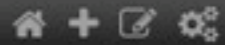


COLDBOX



# ContentBox Modules

CFCamp Site



Global Search

About Luis Majano

Dashboard Content Comments Look & Feel Modules Users Tools System

Sidebar

## Modules

MANAGE

FORGEBOX

Quick Filter:

Module	Description	Activated	Actions
<b>CodexWiki</b> Version 1.0 By <a href="#">Ortus Solutions, Corp</a>	Enterprise Wiki module for ContentBox		
<b>HelloContentBox</b> Version 1.0 By <a href="#">Ortus Solutions, Corp</a>	This is an awesome hello world module		
<b>HTMLCompressor</b> Version 1.1 By <a href="#">Ortus Solutions, Corp</a>	An HTML Compressor for your layouts + views		

## Module Admin Actions

Reset

Rescan

## Module Uploader

Upload Module:

Choose File

No file chosen

Upload & Install



# Features

- ✦ ContentBox menu contributions
- ✦ Own events
  - ✦ ContentBox admin events
  - ✦ Application events
- ✦ Own Views
- ✦ Own domain model
- ✦ URL Mappings
- ✦ DI and AOP
- ✦ Environment detection
- ✦ Contain ContentBox Widgets
- ✦ ForgeBox Connection\*



ColdBox

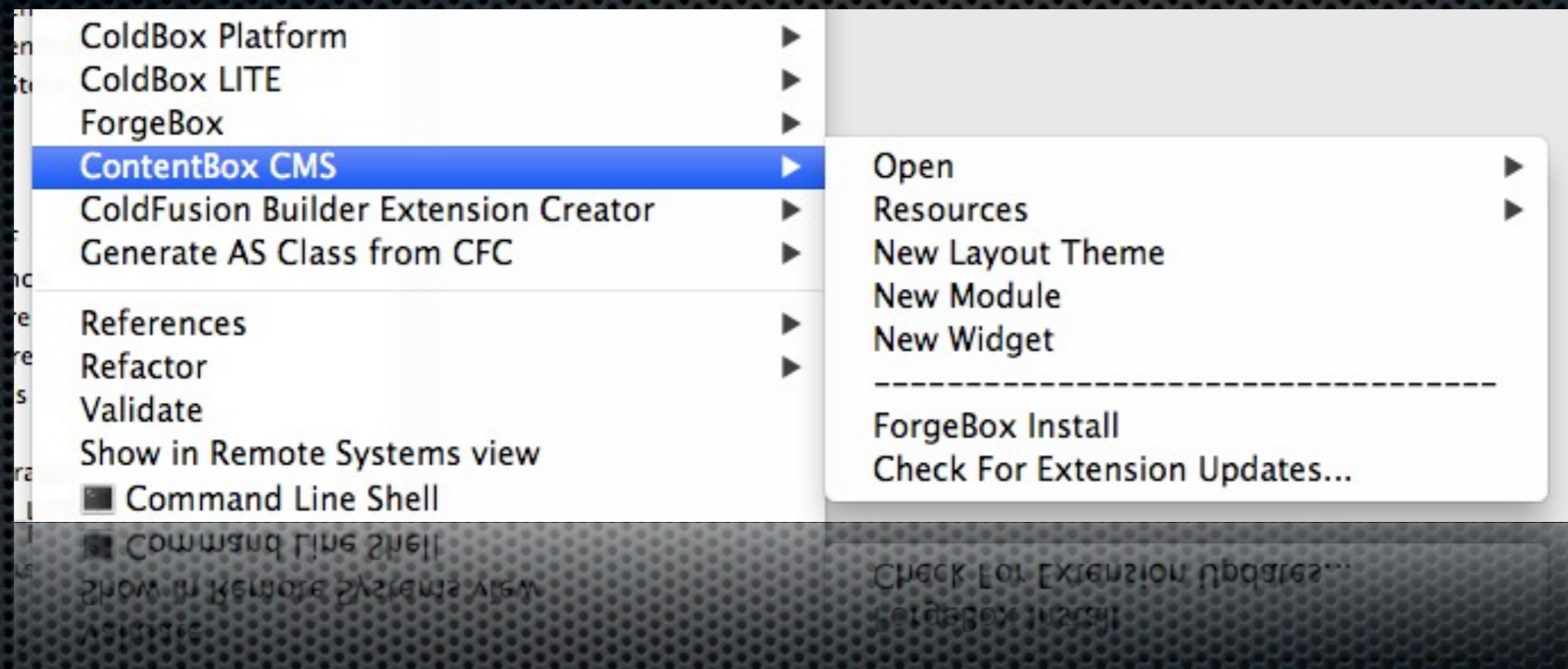
# Interceptors

**Majority of extensions  
are via Interceptors!**

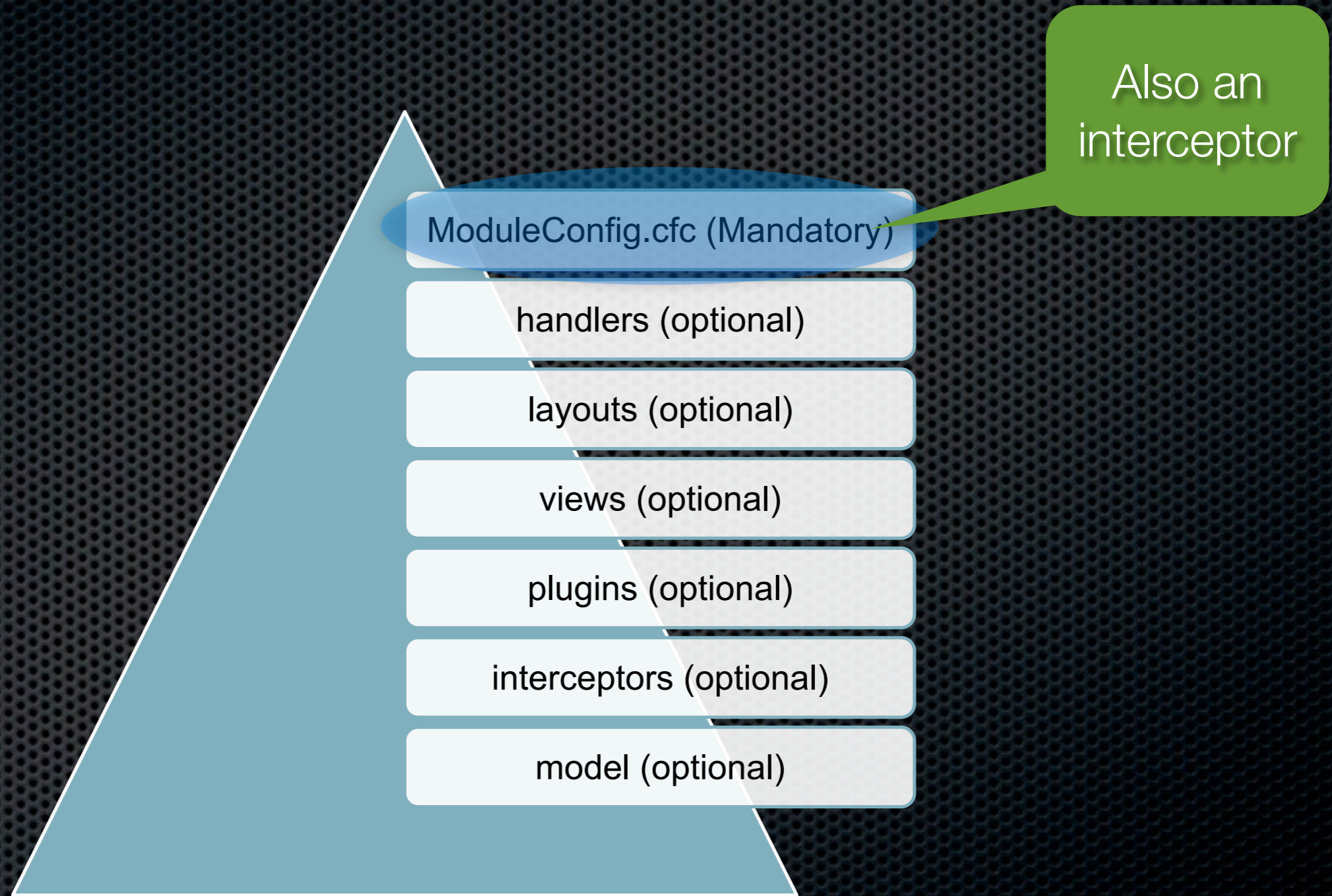
**Event Driven  
Programming**



# ContentBox Utilities



# Anatomy of a Module





# ModuleConfig

- Simple CFC - Interceptor
- Fixed Properties
- Configure()
- Life cycle methods

```
this.title  
this.author  
this.webURL  
this.description  
this.version  
this.viewParentLookup  
this.layoutParentLookup  
this.entryPoint  
this.forgeboxSlug
```

```
component{  
  
    function configure();  
  
    function onLoad();  
  
    function onUnload();  
  
    function onActivate();  
  
    function onDeactivate();  
  
}
```

# Important Services

- `cbHelper@cb`
- `settingservice@cb`
- `adminMenuService@cb`
- `widgetService@cb`
- `pageService@cb`
- `entryService@cb`
- `contentService@cb`
- `customHTMLService@cb`





# CBHelper

- ✦ Used to build layout themes
- ✦ One stop shop for anything ContentBox
- ✦ API Docs
- ✦ Module Methods
  - ✦ **buildModuleLink( module, linkTo, queryString, ssl )**
  - ✦ **setNextModuleEvent( module, event, queryString .... )**





Code Time!



# Extend: Widgets

- ✦ Based on ColdBox plugins
- ✦ Simple interface: **renderit()**
- ✦ Self-documenting
- ✦ Use in editors, layouts and as ColdBox Plugins

```
any function renderIt(required slug, defaultValue){
    var entry = entryService.findWhere({slug=arguments.slug});

    if( !isNull(entry) ){
        return entry.getContent();
    }

    // default value
    if( structKeyExists(arguments, "defaultValue") ){
        return arguments.defaultValue;
    }

    throw(message="The content slug '#arguments.slug#' does not exist",type="CustomHTMLWidget.InvalidEntrySlug");
}
```



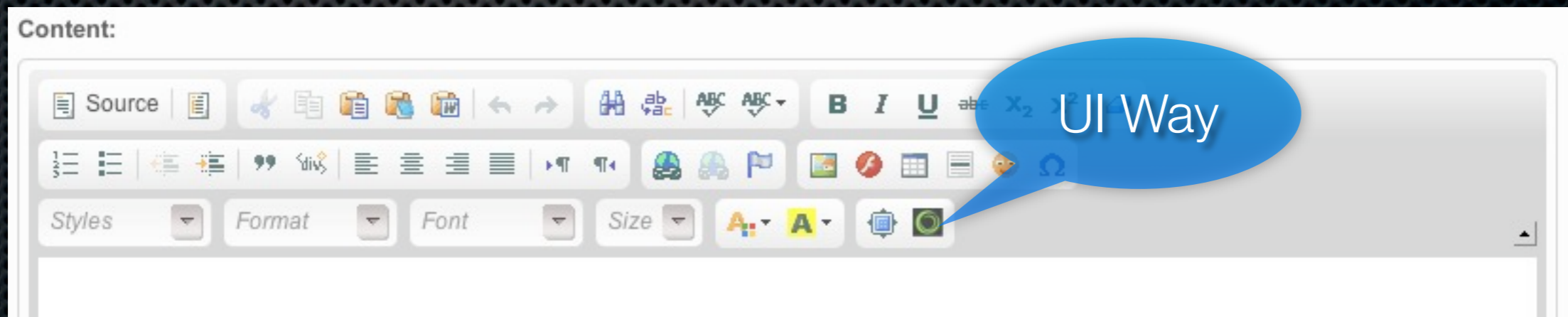
Code Time!

# Extend: Editors

- Page, Blog and Custom HTML Editors accept widgets via `{{{ }}}` notations

```
//Executes the renderit() by convention  
{{{WidgetName arg1=value arg2=value}}}
```

```
// Execute ANY method  
{{{WidgetName.method arg1=value arg2=value}}}
```



Code Time!



# Extend: Events



- ✦ Based on ColdBox interceptors
- ✦ Event driven programming
- ✦ Over 50 different events
- ✦ Extend the admin/layouts interface
- ✦ Use as filters
- ✦ Produce output

```
function cbadmin_postAuthorSave(event, interceptData){
    var author          = arguments.interceptData.author;
    var currentAuthor    = securityService.getAuthorSession();
    // get mail payload
    var bodyTokens = {
        authorName      = author.getName(),
        authorRole      = author.getRole().getRole(),
        authorEmail     = author.getEmail(),
        authorURL       = CBHelper.linkAdmin("authors.editor.authorID.#author.getAuthorID()#"),
        currentAuthor    = currentAuthor.getName(),
        currentAuthorEmail = currentAuthor.getEmail()
    };
    var mail = mailservice.newMail(to=settings.cb_site_email,
                                   from=settings.cb_site_outgoingEmail,
                                   subject="#settings.cb_site_name# - Author Created - #bodyTokens.authorName#",
                                   bodyTokens=bodyTokens);
    // generate content for email from template
    mail.setBody( renderer.renderView(view="email_templates/author_new", module="contentbox") );
    // send it out
    mailService.send( mail );
}
```



# Content Rendering



**cb\_onContentRendering**  
**cb\_onCustomHTMLRendering**

# Admin Events



```
Admin Layout HTML points
"cbadmin_beforeHeadEnd"
"cbadmin_afterBodyStart"
"cbadmin_beforeBodyEnd"
"cbadmin_footer"
"cbadmin_beforeContent"
"cbadmin_afterContent"
"cbadmin_onTagLine"
"cbadmin_onTopBar"
```

```
Page Events
"cbadmin_prePageSave"
"cbadmin_postPageSave"
"cbadmin_prePageRemove"
"cbadmin_postPageRemove"
"cbadmin_onPageStatusUpdate"
"cbadmin_pageEditorSidebar"
"cbadmin_pageEditorSidebarAccordion"
"cbadmin_pageEditorSidebarFooter"
"cbadmin_pageEditorFooter"
"cbadmin_pageEditorInBody"
```

```
Author Events
"cbadmin_preAuthorSave"
"cbadmin_postAuthorSave"
"cbadmin_onAuthorPasswordChange"
"cbadmin_preAuthorRemove"
"cbadmin_postAuthorRemove"
"cbadmin_preAuthorPreferencesSave"
"cbadmin_postAuthorPreferencesSave"
"cbadmin_UserPreferencePanel"
```

```
Entry Events
"cbadmin_preEntrySave"
"cbadmin_postEntrySave"
"cbadmin_preEntryRemove"
"cbadmin_postEntryRemove"
"cbadmin_onEntryStatusUpdate"
"cbadmin_entryEditorSidebar"
"cbadmin_entryEditorSidebarAccordion"
"cbadmin_entryEditorSidebarFooter"
"cbadmin_entryEditorFooter"
"cbadmin_entryEditorInBody"
```

# Admin Events



```
// Category Events
"cbadmin_preCategorySave"
"cbadmin_postCategorySave"
"cbadmin_preCategoryRemove"
"cbadmin_postCategoryRemove"

// Comment Events
"cbadmin_onCommentStatusUpdate"
"cbadmin_preCommentSave"
"cbadmin_postCommentSave"
"cbadmin_preCommentRemove"
"cbadmin_postCommentRemove"
"cbadmin_preCommentSettingsSave"
"cbadmin_postCommentSettingsSave"
"cbadmin_onCommentSettingsNav"
"cbadmin_onCommentSettingsContent"
```

```
// Permission events
"cbadmin_prePermissionSave"
"cbadmin_postPermissionSave"
"cbadmin_prePermissionRemove"
"cbadmin_postPermissionRemove"

// Roles events
"cbadmin_preRoleSave"
"cbadmin_postRoleSave"
"cbadmin_preRoleRemove"
"cbadmin_postRoleRemove"

// Dashboard events
"cbadmin_onDashboard"
"cbadmin_preDashboardContent"
"cbadmin_postDashboardContent"
"cbadmin_preDashboardSideBar"
"cbadmin_postDashboardSideBar"
```

# Admin Events



```
// Settings events
"cbadmin_preSettingsSave"
"cbadmin_postSettingsSave"
"cbadmin_preSettingRemove"
"cbadmin_postSettingRemove"
"cbadmin_onSettingsNav"
"cbadmin_onSettingsContent"

// Global HTML Events
"cbadmin_preGlobalHTMLSave"
"cbadmin_postGlobalHTMLSave"

// Custom HTML Events
"cbadmin_preCustomHTMLSave"
"cbadmin_postCustomHTMLSave"
"cbadmin_preCustomHTMLRemove"
"cbadmin_postCustomHTMLRemove"
```

```
// Security Rules Events
"cbadmin_preSecurityRulesSave"
"cbadmin_postSecurityRulesSave"
"cbadmin_preSecurityRulesRemove"
"cbadmin_postSecurityRulesRemove"
"cbadmin_onResetSecurityRules"

// Layout Themes
"cbadmin_onLayoutActivation"
"cbadmin_onLayoutDeactivation"

// Version Control
"cbadmin_preContentVersionRemove"
"cbadmin_postContentVersionRemove"
"cbadmin_preContentVersionRollback"
"cbadmin_postContentVersionRollback"
```

# UI Module Events



```
// Layout HTML points: A layout must announce them via cb.event("cbui_footer",{renderer=this})
"cbui_beforeHeadEnd","cbui_afterBodyStart","cbui_beforeBodyEnd","cbui_footer","cbui_beforeContent",
"cbui_afterContent","cbui_beforeSideBar","cbui_afterSideBar",
// Code Interception points
"cbui_onPageNotFound","cbui_onEntryNotFound","cbui_onError","cbui_preRequest","cbui_postRequest",
"cbui_onRendererDecoration","cbui_onContentSearch",
// Fixed Handler Points
"cbui_onIndex","cbui_onArchives","cbui_onEntry","cbui_onPage","cbui_preCommentPost",
"cbui_onCommentPost",
// Fixed HTML Points
"cbui_preEntryDisplay","cbui_postEntryDisplay","cbui_preIndexDisplay","cbui_postIndexDisplay",
"cbui_preCommentForm","cbui_postCommentForm",
"cbui_prePageDisplay","cbui_postPageDisplay","cbui_preArchivesDisplay","cbui_postArchivesDisplay",
// Media Services
"cbui_onInvalidMedia", "cbui_onMediaRequest"
```

```
..cbui_onInvalidMedia, ..cbui_onMediaRequest,
..cbui_preEntryDisplay, ..cbui_postEntryDisplay, ..cbui_preIndexDisplay, ..cbui_postIndexDisplay,
..cbui_preCommentForm, ..cbui_postCommentForm,
..cbui_prePageDisplay, ..cbui_postPageDisplay, ..cbui_preArchivesDisplay, ..cbui_postArchivesDisplay,
..cbui_onInvalidMedia, ..cbui_onMediaRequest,
```

# Security Events



```
// Login Layout HTML points  
"cbadmin_beforeLoginHeadEnd"  
"cbadmin_afterLoginBodyStart"  
"cbadmin_beforeLoginBodyEnd"  
"cbadmin_loginFooter"  
"cbadmin_beforeLoginContent"  
"cbadmin_afterLoginContent"
```

```
// Security events  
"cbadmin_preLogin"  
"cbadmin_onLogin"  
"cbadmin_onBadLogin"  
"cbadmin_onLogout"  
"cbadmin_onPasswordReminder"  
"cbadmin_onInvalidPasswordReminder"  
"cbadmin_onPasswordReset"  
"cbadmin_onInvalidPasswordReset"
```

```
..cbsqwty7ou1uas7tq6s22m0l0y626f..  
..cbsqwty7ou1uas7tq6s22m0l0y626f..
```

# Media Manager Events

```
//UI
"fb_preTitleBar"
"fb_postTitleBar"
"fb_preLocationBar"
"fb_postLocationBar"
"fb_preBottomBar"
"fb_postBottomBar"
"fb_preFileListing"
"fb_postFileListing"
"fb_preUploadBar"
"fb_postUploadBar"
"fb_preQuickViewBar"
"fb_postQuickViewBar",
// folder creation
"fb_postFolderCreation", "fb_preFolderCreation",
// removals
"fb_preFileRemoval", "fb_postFileRemoval",
// renaming
"fb_preFileRename", "fb_postFileRename",
// downloads
"fb_preFileDownload", "fb_postFileDownload",
// Uploads
"fb_preFileUpload", "fb_postFileUpload", "fb_onFileUploadError"
```



ContentBox

Code Time!

# Q & A



CONTENTBOX

# Thanks!