CONTROLLER SERVICES

- DebuggerService
- ModulesService
- InterceptorService
- ExceptionService
- PluginService
- HandlerService
- RequestService

SAMPLE HANDLER CODE

```
component{

  any function index(event,rc,prc){
    return “Hello”;
  }

}
```

FRAMEWORKSUPERTYPE

- **$abort(), $dump(), $htmlhead(),$include(),$throw(),$rethrow()**
- **addAsset(**assetList**)**
- **announceInterception**(state,[*interceptData*])
- **getColdBoxOCM**([cachename])
- **getController**()
- **getDatasource**(alias)
- **getDebugMode**()
- **getfwLocale**()
- **getInterceptor**(name)
- **getModel**(name,[dsl],[initArguments])
- **getMailSettings**()
- **getMailService()**
- **getNewMail()**
- **getMyPlugin**(plugin,[*newinstance*])
- **getPlugin**(plugin,[*customPlugin*],[*newInstance*])
- **getResource**(resource,[default],[locale])
- **getSetting**(name, [*fwSetting*])
- **getSettingsBean**()
- **getSettingStructure**([*fwSetting*],[*DeepCopyFlag*])
- **includeUDF**(udfLibrary)
- **persistVariables**(persist,[persistStruct])
- **populateModel**(model,scope,trustedSetter,include,exclude)
- **renderExternalView**(view)
- **renderLayout**(layout)
- **renderView**([*view],[cache],[Timeout],[LastAccessTimeout]*)
- **runEvent**(event,[*prepostExempt*],[*private*])
- **setDebugMode**(mode)
- **setNextEvent**(event,[*queryString*],[*addToken*],[*persist*], [persistStruct],[ssl],[baseURL],[postProcessExempt],[URL],[URI], [statusCode])
- **setSetting**(name,value)
- **setFWLocale**(locale)
- **settingExists**(name, [*fwSetting*])

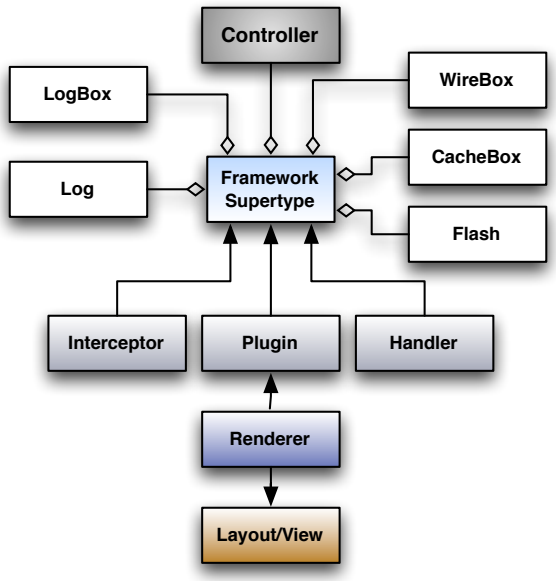
INTERCEPTOR METHODS

- **configure**()
- **getProperties**(properties)
- **setProperties**()
- **getProperty**(name)
- **setProperty**(name, value)
- **propertyExists**(name)
- **unregister(**state)
- **clearBuffer**()
- **appendToBuffer**(string)
- **getBufferString**()
- **getBufferObject**()

CONTROLLER COMMON METHODS

- **getAppRootPath()**
- **getCacheBox()**
- **getLogBox()**
- **getWireBox()**
- **getColdboxOCM**([name])
- **getColdboxSettings**()
- **getConfigSettings**()
- **getPlugin**(plugin,[*customPlugin*],[*newInstance*])
- **get{ServiceName}()**
- **getSettingStructure**([*fwSetting*],[*DeepCopyFlag*])
- **getSetting**(name, [*fwSetting*])
- **persistVariables**(persist,[persistStruct])
- **runEvent**(event,[*prepostExempt*],[*private*])
- **settingExists**(name, [*fwSetting*])
- **setSetting**(name,value)
- **setNextEvent**(event,[*queryString*],[*addToken*],[*persist*], [persistStruct],[ssl],[baseURL],[postProcessExempt],[URL],[URI], [statusCode])

COLDBOX COMMON CLASSES



REQUEST CONTEXT COMMON METHODS (RECEIVED AS EVENT TO EVENT HANDLERS)

- **buildLink**(linkto,[translate],[ssl],[baseURL],[queryString])
- **clearCollection**()
- **collectionAppend**(collection,[*overwrite*])
- **getCollection**([*DeepCopyFlag*],[private])
- **getCurrentAction**()
- **getCurrentEvent**()
- **getCurrentHandler**()
- **getCurrentLayout**()
- **getCurrentModule**()
- **getCurrentRoute**()
- **getCurrentRoutedURL**()
- **getCurrentView**()
- **getDefaultLayout**()
- **getDefaultView**()
- **getEventName**()
- **getHTTPHeader**(header,[default])
- **getHTTPMethod**()
- **getModuleRoot**()
- **getSESBaseURL**(), **setSESBaseURL**()
- **getSize()**
- **getTrimValue**(name,[default],[private]), **getValue**(name,[*default*],[private])
- **isAjax**()
- **isProxyRequest**()
- **isSES**()
- **isSSL**()
- **noExecution**()
- **noRender**([*remove*])
- **overrideEvent**(event)
- **paramValue**(name, value,[private])
- **renderData(** type,data,[contentType],[encoding],[statusCode],[statusText], [jsonCase],[jsonQueryFormat][jsonAsText],[xmlColumnList], [xmlUseCDATA],xmlListDelimiter],[xmlRootName])
- **removeValue**(name,[private])
- **setHTTPHeader**(statusCode,statusText,name,value,charset)
- **setLayout**(name)
- **setValue**(name, value,[private])
- **setView**(name,[*noLayout*],[*cache*],[*cacheTimeout*],[cache*LastAccessTimeout*], [cacheSuffix],[layout])
- **valueExists**(name,[private])
- **showDebugPanel**(boolean)

CORE PLUGINS

- AntiSamy
- ApplicationStorage
- ClientStorage
- ClusterStorage
- CookieStorage
- DateUtils
- FeedGenerator
- FeedReader
- FileUtils
- i18n
- IOC
- JavaLoader
- JSON
- JVMUtils
- Logger
- MailService
- MessageBox
- ORMService
- QueryHelper
- Renderer
- ResourceBundle
- SessionStorage
- Timer
- Utilities
- Validator
- Webservices
- XMLConverter
- Zip

CORE INTERCEPTORS

- Security
- SES

HANDLER PROPERTIES

- **This** scope properties
- event_cache_suffix
- preHandler_only
- preHandler_except
- postHandler_only
- postHandler_except
- allowedMethods

IMPLICIT HANDLER EVENTS

- preHandler,pre{Action}
- postHandler,post{Action}
- aroundHandler
- around{Action}
- onMissingAction

FOLDER CONVENTIONS

- Application.cfc
- index.cfm (empty)
- config
  - Coldbox.cfc
  - Routes.cfm
- handlers
- model
- modules
- layouts
- views

URL ACTIONS (INDEX.CFM?)

- fwreinit=1 or {reinitPassword}
- debugmode=true
- debugpass={DebugPass}
- fwcache=anything

Version 3.5.0

SAMPLE INTERCEPTOR

```
component{
  function configure(){
  //configure properties here
  }
  //method = interception point
  function preProcess(interceptData,
                      event){
  }
}
```

SAMPLE PLUGIN

```
component{
  function init(){
    setPluginName("MyPlugin");
    setPluginVersion("1.0");
    setPluginDescription("MyPlugin");
    setPluginAuthor("YourName");
    setPluginAuthorURL("www.my.com");
  }
}
```

COLDBOX INTERCEPTION POINTS

- **afterConfigurationLoad()**
- **afterAspectsLoad()**
- **afterPluginCreation() ***
  - pluginPath, custom, oPlugin
- **afterHandlerCreation() ***
  - handlerPath, oHandler
- **afterModelCreation() ***
  - modelName, oModel
- **applicationStart()**
- **applicationEnd()**
- **onInvalidEvent()**
  - invalidEvent, override, ehBean
- **onException() ***
  - exception
- **onReinit()**
- **preProcess()**
- **postProcess()**
- **preEvent()**
  - processedEvent
- **preLayout()**
- **preProxyResults()**
- **preRender() ***
  - renderedContent
- **postEvent() ***
  - processedEvent
- **postRender()**
- **preViewRender()**
  - View, cache, cacheTimeout, cacheLastAccessTimeout, cacheSuffix, module
- **postViewRender()**
  - View, cache, cacheTimeout, cacheLastAccessTimeout, cacheSuffix, module, renderedView
- **sessionStart()**
- **sessionEnd()**

**** Has intercept data***

SES INTERCEPTOR PROPERTIES

- **configFIle** : relative or absolute routes file defaults to (config/Routes.cfm)

SECURITY INTERCEPTOR PROPERTY

- **useRegex** : [boolean=true]
- **rulesSource** : [string=xml, db, ioc, ocm, model]
- **queryChecks** : [boolean=true]
- **preEventSecurity** : [boolean=false]
- **validator** : [classpath]
- **validatorIOC** : [bean name]
- **validatorModel** : [model name]

CACHEBOX INTERCEPTION POINTS

- **afterCacheElementInsert()**
  - Cache, cacheObject, cacheObjectKey, cacheObjectTimeout, cacheObjectLastAccessTimeout
- **afterCacheElementRemoved()**
  - Cache, cacheObjectKey
- **afterCacheElementExpired()**
  - Cache, cacheObjectKey
- **afterCacheElementUpdated()**
  - Cache, cacheNewObject, cacheOldObject
- **afterCacheClearAll()**
  - Cache
- **afterCacheRegistration()**
  - Cache
- **afterCacheRemoval()**
  - Cache (name)
- **beforeCacheRemoval()**
  - Cache
- **beforeCacheReplacement()**
  - oldCache, newCache
- **afterCacheFactoryConfiguration()**
  - cacheFactory
- **beforeCacheFactoryShutdown()**
  - cacheFactory
- **afterCacheFactoryShutdown()**
  - cacheFactory
- **beforeCacheShutdown()**
  - cache
- **afterCacheShutdown()**
  - Cache

**** Has intercept data***

RENDERER PLUGIN

- **renderView(view,cache, cacheTimeout, cacheLastAccessTimeout,cacheSuffix,module,args,collection,collectionAs)**
- **renderLayout(layout,view,module,args)**

RENDERDATA TYPES

- **json, jsonp, jsont, xml, pdf, wddx, text, plain, html**

COLDBOX CONFIG

- Coldbox (struct)
- Settings (struct)
- Conventions (struct)
- Environments (struct)
- Ioc (struct)
- WireBox (struct)
- Debugger (struct)
- mailSettings (struct)
- I18n (struct)
- Webservices (struct)
- Datasources (struct)
- LayoutSettings (struct)
- Layouts (array of structs)
- Cachebox (struct)
- Logbox (struct)
- InterceptorSettings (struct)
- Interceptors (array of structs)
- Modules (struct)
- Flash (struct)
- ORM (struct)
- Validation (struct)

CONFIG INJECTED VARS

- AppMapping
- Controller
- LogBoxConfig

SES ROUTE METHODS

- addRoute(*)
- addModuleRoutes(pattern, module)
- setBaseURL()
- setUniqueURLS()
- setAutoReload()
- setExtensionDetection()
- setValidExtensions()
- setThrowOnInvalidExtension()
- setLooseMatching()

* ADDROUTE()

- [pattern]
- [handler]
- [action]
- [matchVariables]
- [view]
- [viewNoLayout]
- [valuePairTranslation]
- [constraints]
- [module]

SES ROUTES

- Default Pattern :handler/:action?
- :var ANY Placeholder
- :var-numeric Numeric
- :var-alpha Alpha
- :var{X} Limit by X
- ? = optional placeholder
- :regex() Limit by regex
- Valid Extensions: xml, json, jsont, html, htm, rss

WireBox

WIREBOX CUSTOM DSL INTERFACE

```
Interface{
  any init(injector){}
  any process(definition,targetObject){}
}
```

WIREBOX CUSTOM SCOPE INTERFACE

```
Interface{
  any init(injector){}
  any getFromScope(mapping,initArguments){}
}
```

WIREBOX PROVIDER INTERFACE

```
Interface{
  any get(){}
}
```

WIREBOX PROVIDER METHODS

```
function getXXX() provider="Mapping"{

}
```

WIREBOX OBJECT LIFE CYCLE EVENTS

- **afterInjectorConfiguration()**
  - injector
- **beforeInstanceCreation()**
  - Mapping, Injector
- **afterInstanceCreation()**
  - Mapping, target, Injector
- **afterInstanceInitialized()**
  - Mapping, target, Injector
- **beforeInstanceInspection()**
  - Mapping, binder, Injector
- **afterInstanceInspection()**
  - Mapping, binder, Injector
- **beforeInjectorShutdown**()
  - injector
- **afterInjectorShutdown**()
  - Injector
- **beforeInstanceAutowire**()
  - Injector, mapping, target, targetID
- **afterInstanceAutowire**()
  - Injector, mapping, target, targetID

INJECTOR COMMON METHODS

- **Autowire(target,[mapping],[targetID],[annotationCheck])**
- **clearSingletons()**
- **containsInstance(name)**
- **getBinder()**
- **getEventManager()**
- **getInstance([name],[dsl],[initArguments])**
- **getObjectPopulator()**
- **getParent()**
- **getScope(scope)**
- **getScopes()**
- **getVersion()**
- **locateInstance()**
- **setParent(injector)**

OBJECT PERSISTENCE ANNOTATIONS

- **singleton**
- **scope=[scopeName]**
- **cache - Cache in CacheBox's default provider**
- **cacheBox=[provider[**
- **cacheTimeout = minutes**
- **cacheLastAccessTimeout = minutes**

PROPERTY, SETTER, ARGUMENT ANNOTATIONS

- **Inject=DSL**
- **Provider="Mapping"**

METHOD ANNOTATIONS

- **Inject=DSL**
- **Provider="Mapping"**
- **onDIComplete**

METHOD CONVENTIONS

If an object has the following methods, wirebox will call them for you with the right dependency:

- **setBeanFactory(injector)**
- **setInjector(injector)**
- **setColdBox(coldbox)**
- **onDIComplete()**

MAPPING DSL INITIATORS

- **map("name")**
- **mapPath("path")**
- **mapDirectory("instanation path")**
- **with("name")**

MAPPING DSL DESTINATIONS

- **to("CFC")**
- **toJava("java class path")**
- **toDSL("dsl string")**
- **toFactoryMethod(mapping, method)**
- **toRSS("rss URL")**
- **toValue(constant value)**
- **toWebservice("URI")**
- **toProvider("provider mapping name")**

MAPPING DSL SCOPE PERSISTENCE

- **asSingleton()**
- **inCacheBox(key,timeout,lastAccessTimeout,provider)**
- **Into(scope)**

MAPPING DSL CONSTRUCTOR ARGUMENT METHODS

- **initWith(arguments) - init with specific arguments**
- **initArg(name, ref, dsl, value, javaCast)**

MAPPING DSL SETTER/PROPERTY METHODS

- **Property(name, ref, dsl, value, javaCast, scope)**
- **Setter(name, ref, dsl, value, javaCast)**

MAPPING DSL FACTORY OBJECTS

```
map("name")
  .toFactoryMethod(mapping, method)
  .methodArg(name, ref, dsl, value, javaCast) // Repeat as needed
```

REGSITER CUSTOM DSL AND SCOPES

Register custom DSL and Scopes via mapping DSL

- **mapDSL(namespace, path)**
- **mapScope(scope,path)**

MAPPING DSL MISCELLANEOUS

- **asEagerInit() -** Not lazy loaded
- **constructor(method)** - Override the default constructor of 'init'
- **noAutowire**() - Don't autowire object
- **noInit**() - Do not call constructor on object
- **onDIComplete(methods)** - Register an array of methods for post processing
- **cacheBox(configFile,cacheFactory,enabled,classNamespace)**
- **listener(class, properties, name)**
- **logBoxConfig(filePath)**
- **parentInjector(injector)**
- **removeScanLocations(locations)**
- **scanLocations(locations)**
- **scopeRegistration(enabled,scope,key)**
- **stopRecursions(recursionPaths)**
- **providerMethod(method, mapping)**
- **mixins(udfs)**

WIREBOX SCOPES

- NOSCOPE OR PROTOTYPE
- SINGLETON
- CACHEBOX
- SESSION
- APPLICATION
- REQUEST
- SERVER

CORE INJECTION DSL

- Id or model
- Id:{name}
- Id:{name}:{method}
- Provider
- Provider:{name}
- Logbox
- Logbox:root
- Logbox:logger:{category}
- Logbox:logger:{this}
- Wirebox
- Wirebox:parent
- Wirebox:eventManager
- Wirebox:binder
- Wirebox:populator
- Wirebox:scope:{scope}
- Wirebox:properties
- Wirebox:property:{property}

CACHEBOX INJECTION DSL

- Cachebox
- Cachebox:{cache}
- Cachebox:{cache}:{key}

COLDBOX INJECTION DSL

- Coldbox
- Coldbox:setting:{setting}
- Coldbox:setting:{setting} @{module}
- Coldbox:fwSetting:{setting}
- Coldbox:plugin:{plugin}
- Coldbox:myplugin:{myPlugin}
- Coldbox:myplugin:{myPlugin} @{module}
- Coldbox:datasource:{alias}
- Coldbox:configBean
- Coldbox:fwConfigBean
- Coldbox:flash
- Coldbox:interceptor:{name}
- Coldbox:loaderService
- Coldbox:debuggerService
- Coldbox:handlerservice
- Coldbox:interceptorservice
- Coldbox:moduleservice
- Coldbox:requestservice
- Coldbox:pluginservice
- Coldbox:moduleConfig: {module}
- Coldbox:moduleSettings: {module}
- entityService
- entityService:{entity}
- Ioc:{beanName}
- Javaloader:{class}
- Webservice:{alias}

WireBox 1.3.0

MXUnit & ColdBox
www.mxunit.org
www.coldbox.org

Icon	Action	Shortcut
	Help	F1
	Find Tests	CTRL-F
	Reload Tests	F5
	Run selected Tests	Enter; r
	Run failures	CTRL-Enter; CTRL-R
	Expand/Collapse tests	=
	Select All Tests in Tree	CTRL-A
	Show errors/failures only	f
	Select previously run test	1 through 9; the last 9 tests can be loaded from the history dropdown by hitting its corresponding number on the keyboard
Test(s) selected		
	View test output in browser	b; F8
File in "Trace" table		
	Open file at error line	Enter; double-click

ADVANCED METHODS

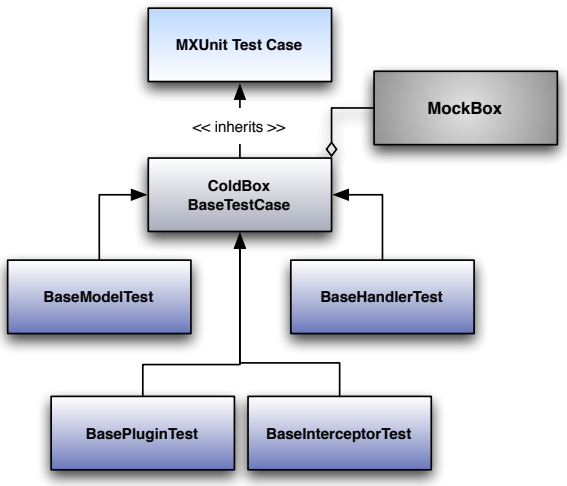
- **expectedExceptions(types)**
- **debug(data)**
- **makePublic(obj, method, [newMethod])**
- **injectMethod(receiver,giver,functionName,functionNameInReceiver)**
- **injectProperty(obj,name,value,scope=variables)**

TEST CASE

```
component extends="mxunit.framework.TestCase"{

   function setup(){}
   function testXXX(){}
   function teardown(){}

}
```



ASSERTIONS

- **assert(condition,message)**
- **assertTrue(condition,message)**
- **assertFalse(condition,message)**
- **assertEquals(expected,actual,message)**
- **assertNotSame(obj1,obj2,message)**
- **assertSame(obj1,obj2,message)**
- **assertXPath(xpath,data,text,message)**
- **assertIsTypeOf(obj,type)**
- **assertIsXMLDoc(obj)**
- **assertIsArray(obj)**
- **assertIsStruct(obj)**
- **assertIsQuery(obj)**
- **assertIsDefined(obj)**
- **assertIsEmpty(obj)**
- **assertIsEmptyArray(obj)**
- **assertIsEmptyQuery(obj)**
- **assertIsEmptyStruct(obj)**

FAILURES

- **fail(message)**
- **failNotEquals(value,value2,message)**

ANNOTATIONS

- **expectedExceptions** = List of Exception Types

OUTPUT FORMATS

- html
- xml
- query
- junitxml
- array

URL RUNNER

- MyTest.cfc?method=runTestRemote

URL PARAMS

- debug:boolean
- testMethod:string
- output:outputFormat

TESTCASE INTERCEPTORS

- **setup()**
Called at the beginning of each test method
- **teardown()**
Called at the end of each test method

MOCKBOX CREATION METHODS

- **createMock(className, object, clearMethods=false, callLogging=true)**
- **createEmptyMock(className, object, callLogging=true)**
- **prepareMock(object, callLogging=true)**
- **createStub(callLogging=true)**

MOCKBOX MOCKING METHODS

- **$(method, returns, preserveReturnType=true, throwException=false, throwType, throwDetail, throwMessage, callLogging) - Mock a Method**
- **$args() - capture all arguments**
- **$results() - capture all results as a state machine (repetitive sequence)**
- **$property(propertyName, propertyScope, mock) - Inject a property**
- **querySim() - First line are the query columns separated by commas. Then do a consequent rows separated by line breaks separated by | to denote columns**

MOCKBOX VERIFICATION & UTILITY METHODS

- **$atLeast(minNumberOfInvocations, [methodName])**
- **$atMost(maxNumberOfInvocations, [methodName])**
- **$callLog()**
- **$count([methodName])**
- **$debug()**
- **$never([methodName])**
- **$once([methodName])**
- **$reset()**
- **$times(count, [methodName])**

MOCKBOX CONCATENATIONS

- **obj.$("method").$args(arg1, arg2).$results(1, 2, 3)**
- **obj.$("method").$results(1, 2, 3)**
- **obj.$callLog().method (Array of calls to that method)**

COLDBOX BASE CLASS ANNOTATIONS

- **BaseModelTest = @Model**
- **BaseHandlerTest = @Handler,@IncludeUDF**
- **BasePluginTest = @Plugin**
- **BaseInterceptorTest = @Interceptor**