


MAX 2006 Beyond Boundaries

Leveraging ColdFusion
Components in ColdFusion
(WD203W)

Raymond Camden
VP of Technology/roundpeg, Inc.



2006 Adobe Systems Incorporated. All Rights Reserved. 1

CFC Syntax

- Must be named with cfc extension
- Collection of user-defined functions wrapped with <cfcomponent> tags
- In general, basic CFML
- Very simple!

2006 Adobe Systems Incorporated. All Rights Reserved. 4

Agenda

- What exactly are ColdFusion Components?
- CFC Syntax
- CFC Example
- CFC Best Practices and Gotchas
- CFC Resources

2006 Adobe Systems Incorporated. All Rights Reserved. 2

The <cfcomponent> Tag

- Wraps the CFC file
- Attributes
 - displayName
 - hint
 - output
 - extends
 - More attributes for web services

2006 Adobe Systems Incorporated. All Rights Reserved. 5

What exactly are ColdFusion Components?

- A component can be thought of a combination of data (properties) and functions (methods)
- A simple mechanism for building web services
- It is not object orientation!


2006 Adobe Systems Incorporated. All Rights Reserved. 3

The <cffunction> Tag


- Used to wrap methods
- Same tag used for tag-based UDFs
- Attributes
 - name
 - returnType
 - roles
 - access
 - output
 - displayName, hint, description

2006 Adobe Systems Incorporated. All Rights Reserved. 6

Basic CFC Example



2006 Adobe Systems Incorporated. All Rights Reserved. 7




<cfinvoke> & <cfinvokeargument> Example



2006 Adobe Systems Incorporated. All Rights Reserved. 10




Using Components




- <cfinvoke>
- createObject()
- Direct invocation via Form, URL, Flash Remoting
- Web Services

2006 Adobe Systems Incorporated. All Rights Reserved. 8




createObject() & <cfobject>




- Allows you to create an "instance" of the CFC.
- <cfset theCFC = createObject("component", "myCFC")>
- Can persist if stored in a RAM based scope
 - application
 - server
 - session

2006 Adobe Systems Incorporated. All Rights Reserved. 11




The <cfinvoke> & <cfinvokeargument> Tags




- component (name or variable)
- method
- returnValue
- argumentCollection
- cfinvokeargument: name/value/omit


2006 Adobe Systems Incorporated. All Rights Reserved. 9



createObject() & <cfobject> Example



2006 Adobe Systems Incorporated. All Rights Reserved. 12



Direct Invocation

- URL (WDDX encoded result)
- Form
- **Not** normally recommended

2006 Adobe Systems Incorporated. All Rights Reserved. 13

CFCs with Data Example

2006 Adobe Systems Incorporated. All Rights Reserved. 16

Direct Invocation Example

2006 Adobe Systems Incorporated. All Rights Reserved. 14

This versus Variables

- Because the This scope is available outside the component, many developers shy away from it since it can lead to a lack of encapsulation.
- Just (don't) do it!
- Remember the 99% rule!

2006 Adobe Systems Incorporated. All Rights Reserved. 17

CFCs with Data

- Two Scopes (This/Variables)
- Variables is an internal scope.
- This is an external scope.
- Can persist between calls (if the CFC persists)

2006 Adobe Systems Incorporated. All Rights Reserved. 15

CFCs and Security

- Access
 - Defines how the methods can be called.
- Roles:
 - Private
 - Public
 - Remote (Needed for web services!)
 - Package
- Roles
 - Defines who can call the methods.

2006 Adobe Systems Incorporated. All Rights Reserved. 18


CFCs and Security Example



2004 Adobe Systems Incorporated. All Rights Reserved. 19




CFCs as Web Services




- Must be under web root (duh)
- Must use remote methods (duh)
- Use ?wsdl extension
- Cached in the CF Administrator
- <cfproperty>

2004 Adobe Systems Incorporated. All Rights Reserved. 22




Inheritance



- Allows a CFC to extend another CFC
- Child CFC inherits methods and data from the parent
- Child methods can call parent methods (super!)
- Should define a "Is A" relationship

2004 Adobe Systems Incorporated. All Rights Reserved. 20




CFCs as Web Services Example




2004 Adobe Systems Incorporated. All Rights Reserved. 23




Inheritance Example



2004 Adobe Systems Incorporated. All Rights Reserved. 21





Mega Example




- Demonstrates an "old school" application rewritten with CFCs


2004 Adobe Systems Incorporated. All Rights Reserved. 24




"Best" Practices 


- Use the var scope (or else!)
- Don't use "outside" data
- Strip the output
 - output="false"
 - Applies to cfcomponent and cffunction
- Create your CFC just once
- Don't Duplicate/Serialize

© 2004 Adobe Systems Incorporated. All Rights Reserved. 25 

CFC Resources 

- CFCZone
 - <http://www.cfzone.org>
- CFCDev List
- CFC Scopes Reference
 - <http://ray.camdenfamily.com/downloads/cf-scopes.pdf>
- CFC Resources
 - <http://ray.camdenfamily.com/cfresources.cfm>

© 2004 Adobe Systems Incorporated. All Rights Reserved. 26 



Better by Adobe.™

© 2004 Adobe Systems Incorporated. All Rights Reserved. 27 