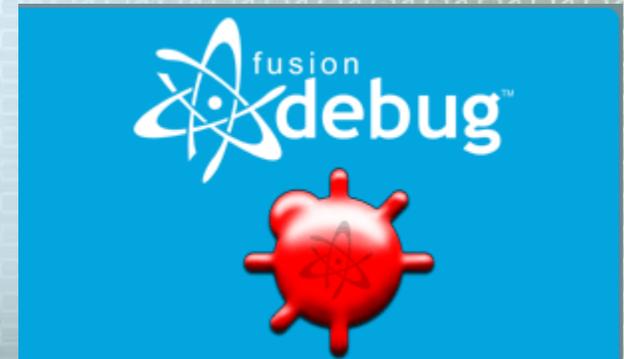# Step Through Your CFML Code With FusionDebug

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Topics

- **Introduction to Step Debugging**
- FusionDebug Features
- FusionDebug Demo
- Other Features, Learning More, Gotchas, Pricing, FAQs, etc.

About Charlie Arehart

- **Independent consultant since April 2006**
- **10 yrs CF experience (25 in Enterprise IT)**
  - Member, Adobe Community Experts
  - Certified Adv CF Developer (4 - 7), Cert. Adobe Instructor
  - Frequent speaker to user groups, conferences worldwide
  - Contributor to Ben Forta's CF8 books, past *ColdFusion MX Bible*
  - Run the Online ColdFusion Meetup (coldfusionmeetup.com)
  - Living in Alpharetta, Georgia (north of Atlanta)
- **Web home at www.carehart.org**
  - Hosts 175+ blog entries, 50+ articles, 70+ presentations, more
  - UGTV: recordings of presentations by over 100 CFUG speakers
  - AskCharlie: per-minute telephone & web-based CF support

Introduction to Step Debugging

- **Understanding interactive debugging**
  - **What can it do for you?**
    - Step through code line-by-line (where needed)
    - View variables, in all scopes, at that point
    - Watch particular expressions, to observe changes
    - Even change variables on the fly during execution
    - And more
- **FusionDebug from Intergral**
  - www.fusiondebug.com
  - CFML step debugging for CFMX 6.1/7+
  - Based on Eclipse, but don't let that scare you!

FusionDebug Demo

- Let's see it in action

Demoed Features

- Set breakpoints, stepped through code
- Enabled watches and setting variables
  - can do with right-click on var/expression
- Showed simple cf code (CF Example Apps)
  - Set variables on the fly
  - Showed query data in variables pane
- Showed CFC-based code (Model Glue)
  - Showed scopes available in CFC methods
    - var and this scopes
  - Showed how stack is interactive
    - click to jump to lines in chain above current instruction
- Showed debugging web service, Flex, Ajax apps
- Showed debugging inside CFSCRIPT
  - And yes, it can debug code within tags like CFOUTPUT, CFMAIL, CFSAVECONTENT, etc.

What's New in 2.0?

- Vastly improved source code file lookup
- New preconfigured FusionDebug perspective in Eclipse
- New complete standalone installer
  - Eclipse 3.2, CFEclipse 1.3 and FusionDebug 2.0
  - (or can still be installed as plugin)
- New server configuration wizard
- New Inspect Expressions feature
- Speed improvements and bug fixes

About Underlying Eclipse

- **Is an Eclipse (3.1, 3.2) plug-in**
  - You don't NEED to use Eclipse for editing
  - Why did they build it atop Eclipse?
  - Easy to install Eclipse plug-in, or
    - New available standalone installer
- **Easy to install FusionDebug**
  - New installation wizard makes minor change in JVM config for CFMX server
  - Configures Eclipse to enable debugging
  - All of the above is well-documented in the FusionDebug User Guide, free online

Benefits Over CFDUMP/CFOUTPUT

- Can debug when a CFOUTPUT/CFDUMP may not be possible
  - What are some examples?
    - CFCOMPONENT/CFFUNCTION OUTPUT=false
    - CFSILENT
    - When generating XML
- Ever forget to remove debugging output?
- And a dozen other reasons
  - See more details on all these at:
    - http://carehart.org/blog/client/index.cfm/2006/9/7/fusionde bug_part2_why_use_versus_cfdump
  - And that's not even all of them
    - See more at http://www.fusion-reactor.com/fusiondebug/about.html

Tips and traps

- CF Admin setting for "timeout requests in x seconds" will halt long debugging sessions
  - Either disable or increase the value
  - Or use CFSETTING RequestTimeout="xx"
- Debugging against a central server: beware
  - Multiple users requesting a debugged page all wait
  - Multiple developers can't debug one server
  - No built-in security of debugger port used
- If breakpoints fail to fire as expected
  - See http://www.fusion-reactor.com/fusiondebug/support.html#breakpoints4
- More tips and traps at
  - http://carehart.org/blog/client/index.cfm/2006/10/2/fusiondebug_part4_tips_and_traps

Learning More

- **Documentation (very good) available online**
  - www.Fusiondebug.com
  - User guide walks through configuration of the CF Server, Eclipse, and use of FusionDebug
- **Several Captivate demos**
  - http://www.fusion-reactor.com/fusiondebug/gettingStarted.html

Learning More

- **Other resources**
  - September 2006 CFDJ has 2 FD articles:
    - "Taking a First Look at FusionDebug", Jeff Houser
      - http://coldfusion.sys-con.com/read/289634.htm
    - "FusionDebug Tips, Tricks, and Traps", Charlie Arehart
      - http://coldfusion.sys-con.com/read/289652.htm
  - **I also have a long intro article in FusionAuthority Quarterly Update**
    - "FusionDebug Explained: Interactive Step Debugging for CFML"
    - http://www.fusionauthority.com/quarterly/
  - **Again, I've done a series of blog entries on FD**
    - http://carehart.org/blog/client/index.cfm/fusiondebug

Pricing, Discounts, Trials

- Available free trial (20 days)
- List price: US$ 249
  - Dropped from $299, 1 Aug 07
  - Available 10% discount code: CFCOMMUNITY
- Non-commercial Community edition
  - $US99 (dropped from $124)
- FD is priced per developer, available volume discounts
  - Multiple developers each need their own license
  - But one developer can debug multiple servers with one license
- More details at
  - http://www.fusion-reactor.com/fusiondebug/buy.html

FAQs

- Does FusionDebug work with BlueDragon? Railo?
    - Not currently. They are in talks
    - But you could install free Dev edition of CFMX and debug against that
- Does it work with CF4 or 5?
    - No, it is specific to CFMX
- Does it run on Linux? OS X?
    - Absolutely (see FAQ for a minor caveat if debugging Java, too)
- Must I use/learn how to use Eclipse?
    - Nothing more than what I've shown here, really
- Must I give up my favorite CFML editor?
    - No, you can use your favorite CFML editor (Dreamweaver, HomeSite, CF Studio) to edit
    - **Just use Eclipse and FusionDebug to do debugging**
- …

FAQs

- Does it support debugging Javascript? Actionscript? Java?
  - No, that's left to others.
  - Eclipse already can debug Java, and FlexBuilder can debug ActionScript. Other tools offer Javascript debugging inside Eclipse
    - **JavaScript Eclipse Debugger Plug-ins**: http://www.aptana.com/ http://www.myeclipseide.com/ContentExpress-display-ceid-70.html#jsdebug
    - **ActionScript debugging in FlexBuilder**: http://livedocs.macromedia.com/flex/1/flex_builder_en/wwhelp/wwhimpl/common/html/wwhelp.htm?context=Using_Flex_Builder&file=brady318.htm

FAQs

- **How do I get support?**
  - New FusionDebug mailing list
    - http://groups.google.com/group/fusiondebug
  - Intergral offers free email support: support@fusion-reactor.com

Conclusion

- Great solution, finally, for CFML debugging
- Yes, it's based on Eclipse
  - But again, you can continue to use your favorite editor, and just use FD for debugging
- Sure, it costs money, but will pay for itself if you'll benefit from debugging
  - Try it for yourself and see if it doesn't help
  - The challenge is simply remembering to use it!

Available Day-Long Training

- For those desiring more in-depth coverage, tips, tricks, and traps (including installation)
  - Split between FusionDebug and FusionReactor
- Offered publicly and on-site
  - Learn more, signup at
    http://www.fusion-reactor.com/fastTrack.html
- Cost is US$249, or $149 for either ½ day portion
  - Includes 20% discount on one of the products

Questions on presentation

- Charlie Arehart
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- I'd really appreciate your feedback
  - http://carehart.org/feedback/
- Also available for setup and implementation consulting
  - Also other developer productivity coaching, system admin and tuning support, and more
  - Remote or on-site
- **Giveaway of license(s)**