

HIDDEN GEMS IN CF11

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INTRODUCTION

- NOT discussing ALL that is new/updated in CF11!
 - Only the things that don't get much PR
- Adobe always lists a dozen or so key features
 - There's often a LOT more
- Some may have been documented, but you may miss them
 - No single document listing all new release changes. In many docs
- These slides are online at my site

ABOUT CHARLIE AREHART

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- 17 yrs CF experience (32 in Enterprise IT)
- Certified Adv CF Developer, Instructor
- Adobe Forum MVP, CF CAB member
- Frequent speaker to conf's worldwide
- Organizer, Online ColdFusion Meetup (coldfusionmeetup.com), 2800+ members
- Living in Alpharetta, Georgia (Atlanta)

Web home at www.carehart.org

- 100+ presentations, 80+ articles, 400+ blog entries
- UGTV: recordings of 600+ presos by 300+ speakers
- CF411.com: 1800+ tools/resources, 150+ categories
- CF911.com: CF server troubleshooting resources
- Hosting courtesy of EdgeWeb Hosting
- Consulting: available for CF troubleshooting, tuning
 - Remote or on-site; on-demand, single instance is ok

HOW MANY NEW/CHANGED FEATURES?

- Some people think CF didn't really add much
- So how many new features do you think can be named?
 - I don't mean counting every new/changed tag/function, but "features"
 - Try to list them right now..
- Key things promoted
 - Mobile development/CFClient
 - Pixel-perfect PDF generation
 - Security enhancements
 - Language enhancements

HOW MANY NEW/CHANGED FEATURES? (CONT.)

- Hope to show you there is lots more to CF11 than you may think
 - Won't simply praise it. Will also point out some gotchas/traps/solutions
- Will also talk briefly about CFBuilder 3 and some hidden gems/tips/traps
- One other tip, if you're skipping 10
 - Don't miss my "Hidden Gems in CF10" and "CFB 2" and "CFB 1" talks
 - At "presentations" section of carehart.org

DON'T MISS THE DOCS

- Online at wikidocs.adobe.com/wiki/display/coldfusionen/
 - Adobe ColdFusion CFML Reference (3053 pp.)
 - Developing Adobe ColdFusion Applications (2080 pp.)
 - Installing Adobe ColdFusion (93 pp.)
 - Configuring and Administering ColdFusion (215 pp.)
 - (New) Mobile Application Development (72 pp.)
- Any guess of how many pages are in these docs?
- Yes, you can get PDF of each:
wikidocs.adobe.com/wiki/display/coldfusionen/Downloads

MANY MORE RESOURCES ON WHAT'S NEW

- Adobe's promoted list of changes
 - <http://www.adobe.com/products/coldfusion-standard/features.html>
 - <http://www.adobe.com/products/coldfusion-enterprise/features.html>
- See also first chapter of CFML Ref and Dev Apps list "what's new/changed in 11"
 - wikidocs.adobe.com/wiki/display/coldfusionen/New+in+ColdFusion
 - wikidocs.adobe.com/wiki/pages/viewpage.action?pageId=140968014
 - "New and Changed Tags/Functions in ColdFusion 11"
- And ...

MANY MORE RESOURCES ON WHAT'S NEW (CONT.)

- helpx.adobe.com/coldfusion/release-note/coldfusion-11-release-notes.html
- wikidocs.adobe.com/wiki/display/coldfusionen/ColdFusion+Language+Enhancements
- www.adobe.com/devnet/coldfusion/articles/language-enhancements.html
- www.adobe.com/devnet/coldfusion/articles/security-improvements-cf11.html
- And more
- Now, on to the hidden gems

INSTALLATION CHANGES

- New dev/production/prod+secure profile option
 - Secure profile was added in CF10
 - Changes about 20 CF admin settings
 - In CF 11, can now enable/disable later in Admin, all at once
 - Also new in CF11: change to cflocation. More in a moment
 - Production profile: disables RDS, enforces complex passwords, provides later screen to disable some features (flash remoting, rds, wsrp, etc)
- New option to expose pdfg and solr as a remote service

NEW "EXPRESS" EDITION

- AKA "getting started server"
 - Available as zip or EAR
 - Install instructions:
wikidocs.adobe.com/wiki/display/coldfusionen/Installing+the+ColdFusion+Express
- Not intended for prod
 - All debugging settings are enabled
 - Development profile is enabled by default
 - Applying License is disabled from CF Admin to prevent use in production
 - Does not support many things, as installed out of the box ...

NEW “EXPRESS” EDITION (CONT.)

- Does not support out of the box:
 - SOLR
 - Microsoft .NET integration
 - Remote administration
 - PDF generation
- Can configure these by installing standalone installers:
 - adobe.com/support/coldfusion/downloads.html

ADMIN ENHANCEMENTS

- Lots of “little” things that can make a big difference
- Can now have more than one login to Admin at same time
 - Configurable in admin Security page
 - Also Admin API: `setAllowConcurrentAdminLogin`, `isAllowConcurrentAdminLogin`
- Secure profile page
 - Can finally turn on/off after install
 - Shows the ~20 admin settings affected, 3 cols of what is, would be, was

ADMIN ENHANCEMENTS (CONT)

- Security>Allowed IP Addresses page
 - This affects more than just access to CF Admin (added in CF10)
 - Also adminapi, servermanager, wizards, RDS, and more
 - See new iprestriction.properties file in C:\ColdFusion11\config\wsconfig\nn
- Enterprise manager>Cluster Manager>Session Replication
 - Can now specify EITHER sticky sessions OR replication OR both
 - CF10 showed only option for sticky, and implicitly did replication if off
- Server Update>Updates
 - Update mechanism “install” button now causes repeated checks to see if/when CF has restarted after applying update

SECURITY ENHANCEMENTS

- Secure Profile change
 - If enabled, default value for cflocation tag addToken attribute will be false
 - New adminapi methods: enableSecureProfile, disableSecureProfile, getAllSecureProfileSettingsInArray
- Antisamy
 - New isSafeHTML, getSafeHTML functions use antisamy policy file
- OAuth support: login via Google, Facebook, Twitter (new functions, later)
- New Generatepbkdf2key function
 - “derive a cryptographically strong random key of any desired size from the humanly manageable password or passphrase”
- CFMail support of encrypted email
- JVM included with CF11 is 1.7.0_55 (you can update to more recent)
- ...

SECURITY ENHANCEMENTS (CONT.)

- CFHTTP now supports calling pages secured with Window Auth/NTLM
 - New `authtype="ntlm"` attribute (and related new domain and workstation attrs)
 - Also now supports server name indication (SNI) extension for TLS
- New encoding support for XML, XPATH processing
 - Also new `encodeForXMLAttribute` function
- CFLOGIN change regarding multiple concurrent users
 - Admin change really about this
 - As for apps, new `allowConcurrent` on CFLOGIN; session attribute on CFLOGOUT
- CFInclude change
 - Can now limit what file extensions can be CFINCLUDEd
 - Can set in CF admin or in `application.cfc/cfm`
- Again, for more on these and others, see
 - adobe.com/devnet/coldfusion/articles/security-improvements-cf11.html

LANGUAGE ENHANCEMENTS: NEW TAGS

- Cfclient
 - Cfclientsettings
- Cfhtmltopdf (no longer Windows-only, as had been in beta)
 - Cfhtmltopdfitem
- Cfimapfilter
- Cfoauth
- Cf_socialplugin

LANGUAGE ENHANCEMENTS: CHANGED TAGS

- CFZIP/CFZIPPARAM
 - password and encryption algorithm attributes
- Spreadsheet enhancements
 - page breaks, auto-resizing, auto filter, datatype specification
- Charting enhancements (including new cfchart_xmltojson tool)
 - wikidocs.adobe.com/wiki/display/coldfusionen/Charting+enhancements
- Websocket enhancements (proxy, ssl, cluster), new wsproxyconfig tool
 - wikidocs.adobe.com/wiki/display/coldfusionen/WebSocket+Enhancements

LANGUAGE ENHANCEMENTS (CONT.)

- New settings in application.cfc this scope or cfapplication attributes
 - datasources[] array (to support application-specific datasources)
 - strictNumberValidation (to change new default of stricter validation)
 - compileextforinclude (to control that CFINCLUDE change)
 - customSerializer (to support new REST custom serialization)
 - See “Support for pluggable serializer and deserializer” at wikidocs.adobe.com/wiki/display/coldfusionen/RESTful+Web+Services+in+ColdFusion
- For more on the others, see:
 - wikidocs.adobe.com/wiki/display/coldfusionen/cfapplication
 - wikidocs.adobe.com/wiki/display/coldfusionen/Application+variables

LANGUAGE ENHANCEMENTS (CONT.)

- Other things
 - Member functions
 - Full cfscript parity with tags
 - Elvis operator
 - Built-in functions as first-class objects
- Again, see list of new/modified tags and functions here:
 - wikidocs.adobe.com/wiki/pages/viewpage.action?pageId=140968014

LANGUAGE ENHANCEMENTS: NEW FUNCTIONS

- ArrayMap
- ArrayReduce
- CanDeSerialize
- CanSerialize
- Deserialize
- DeserializeXML
- EncodeForXMLAttribute
- EncodeForXPath
- GeneratePBKDFKey
- GetSafeHTML
- **ImageGetMetadata**
- InvalidateOauthAccessToken
- InvokeCFClientFunction
- isSafeHTML
- IsValidOauthAccessToken
- ListEach
- ListMap
- ListReduce
- **QueryExecute**
- **QueryGetRow**
- Serialize
- SerializeXML
- SpreadsheetAddAutofilter
- SpreadsheetAddPagebreaks
- StructMap
- StructReduce

OBSOLETE/DEPRECATED LANGUAGE/FEATURES

- With CF11, Adobe has started to be more vigorous in really obsoleting what before was just deprecated
 - Mostly old attributes, but some tags (cfgraph, cfservlet, etc.)
 - And has now deprecated some more things
- For more, see
 - wikidocs.adobe.com/wiki/display/coldfusionen/Deprecated+Features
 - webdevsourcerer.com/index.cfm/blog/post/slug/coldfusion-11-finally-deprecating-removing-things
 - webdevsourcerer.com/index.cfm/blog/post/slug/coldfusion-11-more-on-deprecated-and-new-changes
 - cfmlblog.adamcameron.me/2014/03/coldfusion-11-adobe-have-finally.html

THINGS NOW SUPPORTED IN STANDARD!

- This is great news for many, as they used to be Enterprise only
 - CF archive (car) mechanism (to move CF admin settings from server to server)
 - Security Sandbox (to lockdown what code in different directories can do)
 - Web socket limit lifted
 - HTML5 charts

SOME NEW FEATURES ARE ENTERPRISE ONLY

- PDF signature support
- Full DDX support
- WebSocket cluster support
- CFHTMLTOPDF cluster support
- REST multisite support

- Edition differences:
 - adobe.com/products/coldfusion-family/buying-guide.html
 - adobe.com/products/coldfusion-enterprise/buying-guide.html

GOTCHAS

- Note that you must switch from using `cfdocument` to `cfhtmltopdf`, to get pixel-perfect PDFs
 - And don't be confused: this IS supported in CF 11 Standard
 - And note that `cfhtmltopdf` stops page processing (I found)
- CF10 had introduced new access log, tracking every request
 - Provided via Tomcat AccessValve
 - Sadly, it's not enabled by default, but can be enabled in `server.xml`
 - See my 2012 presentation, "What's New and Different About CF 10 on Tomcat" at carehart.org/presentations

GOTCHAS (CONT.)

- “Minor” change in how cfhttp works, in terms of the request it makes
 - Adds port to hostname header reported to destination (which may be significant to some destinations, like google)
 - Can override it by writing your own host header with cfhttpparam
 - See raymondcamden.com/2014/5/22/Important-note-about-ColdFusion-11-and-CFHTTP
- ...

BUGS

- Sadly, there are indeed bugs (as with any new software)
- Good news: Update 1 addresses several key ones
 - One particularly nasty one
 - In IIS (7 and 8?), if you change any IIS setting, the worker process/app pool of any sites associated with CF will stall until recycle of app pool.
Ugh
 - Good news: it's solved with CF11 Update 1
 - News not to miss: you **MUST** rebuild the web server connector
 - See carehart.org/blog/client/index.cfm/2013/9/13/why_you_must_update_cf10_webserver_connector
- Update 2 came out just last week: is a security update
 - And update your web server connector if on IIS and you didn't do above

BUGS (CONT.)

- Some have had challenges with some aspects of CFChart
- There are of course other bugs
- Good news: another update is planned soon
 - to add many more fixes and update Tomcat, etc
 - just as update 14 for CF10 did last week
- For more on outstanding bugs, see bugbase.adobe.com/index.cfm
 - To get unreleased patches listed there, email cfinstal@adobe.com
 - May also get support from cfsup@adobe.com

OTHER THINGS

- Note that support for CF9 will end in Dec 2014
- CF10 installers were removed, but of course it's still supported
 - Issue was included libraries. Had to remove installers
- Can still find them, and most past CF installers, updates and docs
 - www.gpickin.com/cfrepo/
 - Or tinyurl.com/cfdownloads2 (old [cfdownloads](http://tinyurl.com/cfdownloads) tinyurl no longer works)
- The Amazon instance has been updates for CF11
 - blogs.coldfusion.com/post.cfm/coldfusion-11-amis-now-available-on-amazon-ec2
- EULA: no major changes, but new clarification about VMs
 - www.images.adobe.com/www.adobe.com/content/dam/Adobe/en/legal/licenses-terms/pdf/AdobeColdFusionReportBuilderEULA_06-06-07-FINAL_Combined.pdf

CFBUILDER 3

- Rewritten entirely, no longer embedding Aptana
 - Most find it faster, better. Some encountering problems
 - New automatic update notification/implementation feature:
 - 3 updates so far: don't miss getting that done
 - Configurable editor toolbar
 - Creates new index.cfm on creating new CF project (pro or con)
 - New "template" feature, available when creating a new CF project
- CFBuilder 3 now runs on Linux!
 - In addition to Windows and OS X which it ran on in CFB 1 and 2
- ...

CFBUILDER 3

- CFBuilder licenses now bundled with CF Server license purchase
 - Enterprise comes with 3 licenses of CF Builder
 - Standard comes with 1
 - www.adobe.com/products/coldfusion-builder/faq.html#faq2-8_1296183477137
- Builder also now includes option to bundle CF server within CFBuilder
 - Interesting option for those who wouldn't notice free Dev edition
 - Also preconfigured in CFB as a "server", helpful for those who might otherwise have missed how to do that
 - And missed features that come only when a project is connected to a server
- Again, see available CFBuilder User Guide for more on CFB

WHERE TO LEARN MORE

- Again, the Adobe CF Docs
 - So much more than just the CFML Reference
- Some Key Adobe CF Blogs:
 - blogs.coldfusion.com
 - Sometimes links to blogs of the CF engineers
- Others who have blogged quite a bit about CF11
 - blog.adamcameron.me
 - www.raymondcamden.com
 - www.bennadel.com
- See also Akbar Sait's wonderful list of CFxx Tutorials
 - www.akbarsait.com/cf11tutorials.cfm

CONCLUSION

- Hope you agree that there's a lot more than just a dozen or so new features
- How many do you think we covered?
 - About 50!
- How many were valuable to you?
 - We're done, so share your opinion by your applause, please! :-)
- Questions, if we have time?
 - And if I can help you with CF Server Troubleshooting, contact me below!