Hidden Gems in CF2016

Charlie Arehart, Independent Consultant

CF Server Troubleshooter

charlie@carehart.org

@carehart (Tw, Fb, Li)

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Topics

- Major features of CF2016 (quick overview)
- Hidden gems in many areas
  - Installation, configuration, administration, web server config
  - New/changed features, new language constructs, new member functions
  - New/changed CFML functions, tags
- As well as other topics:
  - Updates to underlying libraries' version numbers
  - Deprecated/obsoleted features
  - What's new in Standard vs Enterprise
  - Pricing, licensing, end of life support
  - And lots more
- Slides will be offered by Adobe, and at carehart.org/presentations

About me

- I've been a speaker at nearly every CF conference, and all 4 CF Summits
- Focus on CF server troubleshooting, as an independent consultant
  - Assist organizations of all sizes, experience levels
  - Work remotely 99% of the time, safe, secure, easy (shared desktop)
  - Focus is not just solving problems but educating you
- Love to share info, with my clients and the community
  - Active blogger
  - Contributor to/creator of many CF community resources
    - Online CFMeetup, CF411.com, UGTV, cf911.com, and more

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Some intro questions for you

- How many have started using CF2016 in prod? In dev?
  - Have at least seen resources about it?
  - Not surprised if few: people often wait
- Anyone "waiting for first point release"?
  - Have been 3 updates already
- How many likely won't use it until next release comes out (CF2018, or whatever)?
  - I do these talks, not just for those making the move <u>now</u>, soon, or have already
  - But also those who may see it in future ☺
- Anyone know when I started doing hidden gems in CF?
  - 4.0.1 in 1999
- So, let's look first at the major new features (only brief overview)

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Major features of CF2016

- API Manager

- Security Code Analyzer

- PDF Improvements (redaction, sanitization, more)

- CFML language improvements (tags, functions, and more)

- Security improvements (especially more NTLM support)

- Performance improvements

- More about some of these later

- Now, on to the more "hidden" gems!

Installation gems

- Removal of Akamai Download Manager!
  - Previously, when downloading CF installer from Adobe, we were forced to use this
  - Now just generally a better experience (I suppose some may miss it)
  - carehart.org/blog/client/index.cfm/2016/2/19/cf2016_download_no_longer_requires_Akamai_DL_mgr
- Unfortunately, CF install has gotten huge because of API Manager
  - Especially tragic if you'll be using CF Standard: by license can't *use* API Mgr
  - This is "to be fixed" (bugbase.adobe.com/index.cfm?event=bug&id=4155910)
- During installation, you're asked whether/how to install API Manager
  - And whether to implement it within JVM or as own service

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Configuration gems

- CFscripts folder now moved to its own directory, not in CFIDE!
  - Great move for security, administration
  - New folder called cf_scripts, found in the cfusion wwwroot
  - Pointed to as a virtual directory in IIS, Apache, etc.
  - Related to this...

- CF Admin now available <u>only</u> via internal web server by default
  - This is another very good thing, for security
  - You REALLY should not try to override this, but I discuss options in my blog post below

- Let's move on to gems WITHIN the CF Admin...

Administration gems

- CF Admin option to store CF sessions in redis (cache) rather than heap memory
    - helpx.adobe.com/content/help/en/coldfusion/2016/external-session-storage.html
    - Gotcha: works only with CF sessions, not "J2EE sessions"
        - Those using "j2ee sessions" could modify Tomcat (underlying CF) on their own
        - blog.svajlenka.com/post/125784752315/redis-and-coldfusion-because-why-not
- New admin setting to disable "REST discovery" by API Manager
    - See Settings page, last setting
- For more on these admin and config changes, see
    - carehart.org/blog/client/index.cfm/2016/2/23/cf2016_CF_Admin_changes

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Web server config tool (wsconfig) gems

- Many new improvements related to the web server config tool
- Fixed: no longer any need to manually reconfigure connectors after update!
  - CF Update mechanism handles this for us automatically now
  - WSConfig offers new "upgrade" option, if ever needed
- Fixed: for those using multiple instances (in CF Enterprise/Trial/Dev)
  - Wsconfig UI finally offers option to pick instance name to connect to (like <= CF9)!
  - In CF10/11, we had to start wsconfig in instance's runtime\bin to connect site to it
- Fixed: if you open wsconfig UI while already open, you no longer get blanks
  - You get warning that you may already have it open
- …

Web server config tool (wsconfig) gems (cont.)

- WSConfig UI now tracks number of sites in web server configured or not
- Now offers both an "all" option (for all sites) and an "all - individually"
  - Which instead creates a new connector *for each site* (using the selected settings)
  - Appears only if you do have more than 1 web site in web server
- Wsconfig UI now offers option to all 3 connector tuning args
  - Found under "advanced settings"
  - Previously only offered connection_pool_timeout, max_reuse_connection
    - Now offers allows configuration of connection_pool_size also
  - Sadly, <u>installer's</u> web config step does <u>not</u> offer these 3 configurable options
    - Due to be fixed in a new installer: bugbase.adobe.com/index.cfm?event=bug&id=4155913
- …

Web server config tool (wsconfig) gems (cont.)

- Connector now defaults to timeout of 60 (seconds); was 0 (infinite) before
- For IIS: better connector tuning settings for 2-site setup by default
  - Conneciton_pool_size (500), max_reuse_connections (250):
  - Sadly, for now, this is not so for Apache configs, but is due to be fixed in upcoming update
- CF2016 also now includes maxthreads="500" and connectionTimeout="60000" in server.xml, by default
- "Advanced Settings" now also offers "skip iis custom errors" option
  - Disabled by default. Useful for some scenarios
  - Needed to add manually to isapi_redirect.properties file in CF10/11

- Nice to see all these improvements to the wsconfig, which has been a source of heartburn in CF10 and 11. Let's move on to other gems…

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New feature gems

- New command-line interface (CLI)
  - Allows cmd line CFML execution by pointing to a cfm file, via cf.bat
    - As in, *cf.bat some_file.cfm*
    - Not a real interactive shell (with tab completion, etc.)
    - No repl, no package manager, no extensibility *as with CommandBox project*
  - Still, is useful for cron jobs/windows scheduler, etc. to run cfml pages
  - Quite a few options and capabilities
- For more, see
  - helpx.adobe.com/coldfusion/2016/command-line-interface.html

Changed feature gems

- Many enhancements to PDF support
  - Mentioned before sanitization, redaction, but also:
    - Export/import of comments, metadata
    - Archiving, including newer PDF/A-2b and -3b standards
    - Support for attachments, stamps
  - For more, see substantial article with examples, and code download
    - adobe.com/devnet/coldfusion/articles/pdf-enhancements.html
  - Not mentioned on that page:
    - CFPDF adds new **encrypt** attribute values: **AES_256R5** and **AES_256R6**
- ...

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Changed feature gems (cont.)

- New argument for structnew, **ordered**, maintains insertion order
  - Looping over such a struct will also return in insertion order
  - All other forms of creating new structs keep same order as before
  - Also support for creating empty ordered struct
  - helpx.adobe.com/coldfusion/2016/language-enhancements.html#CollectionsupportOrdered
- ...

Changed feature gems (cont.)

- New application-level controls
  - **searchImplicitScopes, passArrayByReference**
  - Each can change long-standing behavior for these operations, vastly *improving performance* (5x and 25x, respectively)
  - Set as either cfapplication attributes or via *this* scope in application.cfc
  - See:
    - adobe.com/devnet/coldfusion/articles/language-enhancements-cf-2016.html
    - helpx.adobe.com/coldfusion/2016/language-enhancements.html#Scopesearch
    - helpx.adobe.com/coldfusion/2016/language-enhancements.html#Arraysbr
- ...

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Changed feature gems (cont.)

- CF Admin "enable whitespace management" option now suppresses whitespace at compile time as well as runtime
- Swagger doc generation (for restful api's and API Manager)
  - helpx.adobe.com/coldfusion/2016/swagger-document-generation.html

- Now on to language enhancements…

New language constructs

- Safe navigation operator (?.)
  - Used when accessing members of a struct or values of an object
  - Used instead of ".", to prevent exception if not defined, null, etc.
  - Simplified code, versus nested isdefined tests
  - *Examples:*
    - *<cfoutput>#employee?.firstname#</cfoutput>*
      - Will output empty string if firstname does not exist/null
    - *Writeoutput(employee?.name?.firstname?.trim());*
      - Will output empty string if all 3 are undefined/null
- ...

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New language constructs (cont.)

- For more info and examples (including setting variables with safe navigation):
  - helpx.adobe.com/coldfusion/2016/language-enhancements.html#Safenavigation
  - helpx.adobe.com/coldfusion/developing-applications/the-cfml-programming-language/using-coldfusion-variables/using-periods-in-variable-references.html#Usingthesafenavigationoperator
  - blog.adamcameron.me/2015/10/coldfusion-12-it-goes-to-show-you.html
  - adobe.com/devnet/coldfusion/articles/language-enhancements-cf-2016.html

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New member functions

- Many new member functions (expanding on the new feature in CF11)
- New array member functions: arrayDeleteNoCase
- New string member functions:
  - encrypt, paragraphFormat, replaceListNoCase
  - decodeFromURL, decodeForHTML, encodeForHTML, encodeForHTMLAttribute
  - encodeForXML, encodeForXMLAttribute, encodeForXPath
  - encodeForCSS, encodeForJavaScript, encodeForURL
  - getSafeHTML, isSafeHTML
  - urlDecode, urlEncodedFormat
- …

New member functions (cont.)

- New datetime member functions:
  - LSDateFormat
  - setSecond, setMinute, setHour
  - setDay, setMonth, setYear
- New query member functions:
  - queryEach, queryKeyExists, queryFilter, queryMap, queryReduce, querySort, valueArray
- New display and formatting member functions:
  - booleanFormat, yesNoFormat
- More info on member functions:
  - helpx.adobe.com/coldfusion/developing-applications/building-blocks-of-coldfusion-applications/using-the-member-functions.html

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New/changed CFML functions

- New CFML functions
  - arrayContainsNoCase, arrayDeleteNoCase, valueArray
  - querySort, queryEach, queryFilter, queryKeyExists, queryMap, queryReduce
  - booleanFormat, floor, isPDFArchive, replaceListNoCase, spreadsheetGetColumnCount
- Changed functions:
  - arraynew, cacheRemove, dateFormat, timeFormat, createDateTime
  - replace, replaceList, spreadsheetAddRows, writeoutput
- More info, links to details on new/changed CFML functions:
  - helpx.adobe.com/coldfusion/2016/other-enhancements.html
  - helpx.adobe.com/coldfusion/2016/language-enhancements.html#ArrayFindNoCase

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Changed CFML tags

- Changed CFML tags…

- CFLOOP
    - New **item** attribute, for use with loops over list, array, or file
    - Named **item** var will hold element looped over
    - Named **index** var (optional) will hold index value, if any

- …

Changed CFML tags (cont.)

- CFMAILPARAM
  - New, optional **filename** attribute, to give different name for file attached to email when using cfmailparam **file** attribute
  - **File** points to name *as on server*, **filename** points to name *as shown in email*

- CFOUTPUT
  - New **encodefor** attribute: names encoding type to be used for strings within it tags, if not otherwise surrounded by an **encodefor** function (types: html, htmlattribute, url, javascript, css, xml, and so on)

- …

Changed CFML tags (cont.)

- CFSEARCH (Solr searching)
  - New **Type** attribute values (for parser): **Standard**, **Dismax**
  - Old verity-based types no longer supported
    - *simple, explicit, internet, internet_basic, natural*
- CFCOLLECTION
  - ***path*** attribute is now ignored
  - All collections are created in the **collections** directory at the location specified in **Solr_Home** field in the ColdFusion admin
- CFSOCIALPLUGIN
  - See comments in [ColdFusion2016]\cfusion\CustomTags\socialplugin.cfm
- …

Changed CFML tags (cont.)

- More info on changed tags, with links to details:
  - helpx.adobe.com/coldfusion/2016/other-enhancements.htm
  - helpx.adobe.com/coldfusion/2016/language-enhancements.html

- Phew, so that's it for language, feature, admin and config gems
  - Think we're done?
  - Not yet!

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Other topics

- We're more than half-way home. Areas remaining…
- Deprecated features
- Updates to underlying libraries' versions numbers
- What's new in Standard vs Enterprise
- Pricing
- Updates since initial release
- And more!

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Deprecated features

- Deprecated features (nothing obsoleted)
  - These may (will likely) be dropped/obsoleted in later releases, but are still supported
- Language features:
  - CFCHART format="flash"
  - CFFILEUPLOAD Flash component
  - CFMEDIAPLAYER
  - CFTABLE
  - UI Tags based on YUI toolkit - CFTREE, CFCALENDAR, CFAUTOSUGGEST, CFMENU
    - These uniquely are also "no longer supported"/updated
- Report Builder

Deprecated features (Cont.)

- Certain admin features deprecated
  - Event gateways - Jabber, Flash Media server
  - Portlets
  - System Probes
  - Server Manager
  - ~~Server Monitor~~ (was listed as deprecated, but will not be)
- For more on deprecation, dropping of support for some things
  - helpx.adobe.com/coldfusion/deprecated-features.html
  - carehart.org/blog/client/index.cfm/2016/2/22/cf2016_deprecated_features

- Now, how about the status/versions of CF's underlying Java libraries?

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Updates to underlying libraries' versions numbers

- Antisamy 1.5.3 (OWASP security library)
- Axis 2 1.7.0 (web services library, and note that's "Axis 2" v 1.7.0, not "Axis")
- Derby 10.11 (embedded DB)
- Ehcache 2.10.0 (caching library)
- Esapi 2.1.0 (OWASP Enterprise Security API)
- Ext JS 4.1 (JS library which underlies various UI tags)
- Ewsapi 1.1.5 (MS Exchange API)
- Hibernate 4.3.10 (ORM library)
- Httpclient 4.4.1 (underlies CFHTTP and more)
- Jetty 9.3.6v20151106 (underlies Solr, HTMLTOPDF, and more)
- Java 1.8.0_72 (the JVM which underlies all of CF)

- JDBC Drivers 5.1.4.000138 (the built-in Merant DB drivers, such as for SQL Server, Oracle, and even MySQL. CF no longer includes the MySQL-provided driver, but you can add it yourself)
- jQuery 1.6.1 and jQuery UI 1.8.16 (JS library which underlies various UI tags and Admin interface features)
- Lucene 5.2.1 (underlies Solr, embedded search engine in CF)
- OpenSSL 1.0.2h (as of CF 2016 Update 2)
- POI 3.12 (underlies MS Office Integration features)
- PostgreSQL 9.4-1201 (db driver)
- Quartz 2.2.1 (underlies CF Schedule tasks)
- Servlets 3.1 (underlies CF/Tomcat processing)
- Solr 5.2.1 (the embedded search engine, used by CFSEARCH/CFINDEX/CFCOLLECTION, etc.)
- Tomcat 8.0.27.0, 8.0.32 as of Update 1 (the application server which underlies CF, when deployed in traditional "Server" configuration)
- YUI 2.3.0 (JS library which underlies various UI tags)

See: carehart.org/blog/client/index.cfm/2016/2/17/what_are_cf2016_embedded_library_version_numbers

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What's new in Standard vs Enterprise

- Referring here only to what's new/changed in CF2016 and in Enterprise only
  - API Manager
  - Security Analyzer

- These do not work with CF 2016 Standard, nor even Developer edition!
  - They do work with the CF Trial edition
  - And you **can** take an enterprise license key and use it on a "dev" machine, of course

- More:
  - carehart.org/blog/client/index.cfm/2016/2/25/cf2016_enterprise-only_features

Pricing

	Base Price	Upgrade Price				
		From CF12 Standard	From CF11 Standard	From CF11 Enterprise	From CF10 Standard	From CF10 Enterprise
CF 2016 Standard	$1499	n/a	$749	n/a	$899	n/a
CF 2016 Enterprise	$8499	$7599	$7599	$4249	$7599	$5099

- For more, including how I found this info, see carehart.org/blog/client/index.cfm/2016/2/24/pricing_for_coldfusion_2016

Licensing/EULA

- Some debate/confusion initially about aspects of new EULA
- See it for yourself
  - wwwimages.adobe.com/content/dam/acom/en/legal/licenses-terms/pdf/ColdFusion-2016.pdf
- Reach out to CF Product Mgr, Rakshith Naren, with any questions
  - rakshith@adobe.com

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End of life/End of support

- CF10 support **_not_** terminating at end of this year
  - As happened with CF9 in 2014 when 10 came out
  - Instead, ends May 2017 (extended support, May 2019)
- CF11 support ends April 2019 ("extended support" April 2021)
- CF9 "extended support" ends 12/31/16
- More: adobe.com/support/products/enterprise/eol/eol_matrix.html#63

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Updates since release of CF2016

- There have been 3 updates to CF2016 since release (as of this date)
- Updates can be easily applied in CF Admin, "Server Update" page
  - Updates are cumulative, need only apply latest
  - If you have troubles applying CF updates (in 2016, or 10/11), see my blog post:
    - carehart.org/blog/client/index.cfm/2016/9/6/solve_common_problems_with_CF_updates_in_10_and_above
- As for updating CFBuilder, should be prompted about available update
  - But you can implement it manually
  - helpx.adobe.com/coldfusion/kb/coldfusion-builder-2016-update-2.html#Installation
- There's sometimes a fair bit that's included in CF updates
  - Bug fixes, security improvements, and sometimes even minor new/changed features
  - Let's take a look at them

Update 1

- Update 1 was released in May 2016, 3 months after initial release
  - Tomcat was updated to 8.0.32
  - Various updates to Security Analyzer
  - Several important bug fixes for security, core language features, server, and other areas (20 total bug fixes)
- CF Builder 2016 Update 1 released concurrently
  - Primarily addressed issues related to Security Code Analyzer and its performance
- …

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Update 1 (cont.)

- Update 1 resources
  - Overview
    - helpx.adobe.com/coldfusion/kb/coldfusion-2016-update-1.html
    - helpx.adobe.com/coldfusion/kb/bugs-fixed-coldfusion-builder-2016-update-1.html
  - Release notes (covers all updates)
    - helpx.adobe.com/content/help/en/coldfusion/release-note/coldfusion-2016-updates-release-notes.html
  - Bug fixes and known issues
    - helpx.adobe.com/coldfusion/kb/bugs-fixed-coldfusion-2016-update-1.html
  - Blog posts
    - blogs.coldfusion.com/post.cfm/updates-for-coldfusion-2016-coldfusion-11-and-coldfusion-10-released
    - blogs.coldfusion.com/post.cfm/coldfusion-builder-2016-update-1-released

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Update 2

- Update 2 was released in June 2016
  - Allowed specifying the type of data when serializing structs or arrays
  - New member functions:
    - ArrayDeleteNoCase
    - BooleanFormat
    - YesNoFormat
  - Introduction of CK Editor/deprecation of FCKEditor
    - In cftextarea, ajax form controls
  - Can configure SSL in API Manager: access API Mgr portals over HTTPS
  - …

Update 2 (cont.)

- Change related to new NTLMDomain attribute
  - helpx.adobe.com/coldfusion/2016/ntlm-support.html
- OpenSSL libraries upgraded to version 1.0.2h
- Addressed vulnerability mentioned in the security bulletin APSB16-22
- Several important bug fixes (77, total bug fixes)
  - Security, core language features, server, and other areas
- CF Builder 2016 Update 2 released concurrently
  - Standalone edition upgraded underlying Eclipse from Kepler to Mars
  - Important updates to Security Analyzer, updated FTP/SFTP support in import/export project, several bug fixes (especially performance), PhoneGap upgraded to 5.2

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Update 2 (cont.)

- Update 2 resources
  - Overview
    - helpx.adobe.com/coldfusion/kb/coldfusion-2016-update-2.html
    - helpx.adobe.com/coldfusion/kb/coldfusion-builder-2016-update-2.html
  - Release notes (covers all updates)
    - helpx.adobe.com/content/help/en/coldfusion/release-note/coldfusion-2016-updates-release-notes.html
  - Bug fixes and known issues
    - helpx.adobe.com/coldfusion/kb/bugs-fixed-coldfusion-2016-update-2.html
  - Blog post
    - blogs.coldfusion.com/post.cfm/updates-for-coldfusion-2016-coldfusion-builder-2016-coldfusion-11-and-coldfusion-10-released

Update 3

- Update 3 released in Oct 2016
  - Added support for Websphere 9, IIS 10.1 (in Windows 10)
    - But as for support for Windows 2016, due to be released late Sept 2016, that will follow in time
  - Support for sorted structs
    - New arg to StructNew(), including callback feature
    - New StructToSorted()
  - New argument in ArraySum(): *ignoreUndefined*
    - If true, ignores null or "" values when adding array elements
  - New **language** attribute for CFHTMLTOPDF, defaults to "English"
  - CFHTMLTOPDFITEM tag has new **evalAtPrint** attribute
    - If true, content of CFHTMLTOPDFITEM evaluated AFTER PDF is generated, page numbers available
    - Allows conditional code inside CFHTMLTOPDFITEM
  - ...

Update 3 (cont.)

- Also
  - New domain/user/password support in CFOBJECT, CreateObject()
  - New **useSecureJSONPrefix** arg for SerializeJSON()
  - New QueryGetResult(), returns metadata about queries
  - Several date-related changes in several functions, new IsDateObject()
  - Also 180 bug fixes (100+ as reported by users)
- CF Builder 2016 Update 3 released concurrently
  - PhoneGap updated to 6.0
  - 25 bug fixes, including for an important security fix and Security Analyzer
  - Enhancements to editor

Update 3 (cont.)

- Special note for API Manager users
  - If you've installed Update 3 build 300357, Adobe recommend you uninstall it
  - Roll back to Update 1 (build 298513)
  - Then apply Update 3 build 300466

Update 3 (cont.)

- Update 3 resources
  - Overview
    - helpx.adobe.com/coldfusion/kb/coldfusion-2016-update-3.html
    - helpx.adobe.com/coldfusion/kb/coldfusion-builder-2016-update-3.html
  - Release notes (covers all updates)
    - helpx.adobe.com/content/help/en/coldfusion/release-note/coldfusion-2016-updates-release-notes.html
  - Bug fixes and known issues
    - helpx.adobe.com/coldfusion/kb/bugs-fixed-coldfusion-2016-update-3.html
  - Blog post
    - blogs.coldfusion.com/post.cfm/updates-for-coldfusion-2016-and-coldfusion-builder-2016-is-available-now

Single page listing all CF2016 updates

- Lists updates, links to technotes, and offers jar download links!
  - helpx.adobe.com/coldfusion/kb/coldfusion-2016-updates.html
- Also available for CF 11 and 10:
  - helpx.adobe.com/coldfusion/kb/coldfusion-11-updates.html
  - helpx.adobe.com/coldfusion/kb/coldfusion-10-updates.html

Traps/gotchas

- Can no longer access CF11 installers on Adobe site
    - Look to cfmlrepo.com (community-run site)
- Can't even license CF11 anymore
    - Must buy CF2016 and request "backward license" to CF11
- Annoying: while there are PDFs of CF docs… (helpx.adobe.com/coldfusion/home.htm)
    - They generally show only one level within a section, then offer a link to online page for more detail (sometimes confusing)
- …

Traps/gotchas (cont.)

- Mentioned previously
  - Security Analyzer works only with CF Enterprise (or trial)
    - Also requires CF installed in "Developer mode", <u>with RDS enabled</u>
  - API Manager included in CF download, whether you can or want to install it
  - New redis-based session vars support only CFML sessions, not j2ee sessions
  - CF Installer web server config does not yet offer tuning options
- See other (few) "known issues" listed in original release and update docs
- Be sure to apply updates before believing web reports of "known bugs". May since have been fixed!

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Resources for more on CF2016

- In addition to many mentioned so far (do see them also)…
- adobe.com/devnet/coldfusion/articles/whats-new-cf-2016.html
- helpx.adobe.com/coldfusion/whats-new.html
- helpx.adobe.com/coldfusion/2016/topics/features.html
- helpx.adobe.com/coldfusion/release-note/coldfusion-2016-release-notes.html
- Video on CF2016 (8-minute overview): youtube.com/watch?v=Bm6dJjNSPNg
- helpx.adobe.com/coldfusion/home.htm (*CF2016 docs*)
- …

Resources for more on CF2016 (cont.)

- adobe.com/products/coldfusion-standard/features.html
- helpx.adobe.com/pdf/Cf2016-standard-datasheet.pdf
- helpx.adobe.com/pdf/Cf2016-standard-comparison.pdf (*compares to previous releases*)

- adobe.com/products/coldfusion-enterprise/features.html
- helpx.adobe.com/pdf/Cf2016-enterprise-datasheet.pdf
- helpx.adobe.com/pdf/Cf2016-enterprise-comparison.pdf (*compares to previous releases*)
- …

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Resources for more on CF2016 (cont.)

- helpx.adobe.com/coldfusion/standard/system-requirements.html
- helpx.adobe.com/coldfusion/enterprise/system-requirements.html

- helpx.adobe.com/pdf/coldfusion2016-support-matrix.pdf (web servers, OS's, DB's supported)

- adobe.com/products/coldfusion-standard/buying-guide.html
- adobe.com/products/coldfusion-enterprise/buying-guide.html
- …

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Resources for More on CF2016 (cont.)

- Whitepapers
  - CF2016 Security audit report:
    - blogs.coldfusion.com/post.cfm/coldfusion-2016-release-security-audit-report
  - CF2016 Performance report:
    - wwwimages.adobe.com/content/dam/acom/en/products/coldfusion/pdfs/cf2016/CF2016_Performance.pdf
  - CF2016 lockdown guide:
    - wwwimages.adobe.com/content/dam/acom/en/products/coldfusion/pdfs/coldfusion-2016-lockdown-guide.pdf
  - CF2016 migration guide:
    - wwwimages.adobe.com/content/dam/acom/en/products/coldfusion/pdfs/cf2016/cf2016-migration-guide.pdf

Some resource gems for CF2016 <u>and</u> earlier

- Adobe CF team blog: blogs.coldfusion.com
- Anit (CF team member) blog: coldfusionsolution.wordpress.com
- Akbarsait's CF2016 meta resource guide:
  akbarsait.com/blog/index.cfm/2016/2/21/ColdFusion-2016-Tutorials-and-Articles-by-ColdFusion-Community/
- My sites: cf411.com and cf911.com (and carehart.org)
  - I often link to the resources of others in the community, past/present
  - I can help you with any CF server troubleshooting/admin challenges

Summary

- So, how many changes did we cover? Any guesses?
  - I counted about 80! (not including bug fixes)
  - As is often the case, most can name only a few
- Hope you may be more motivated—and informed—to consider CF2016
  - To understand if and how it may work for you
  - Or at least where things stand regarding it as of now
- Thanks, and don't forget to fill out your evals

@carehart

charlie@carehart.org