Hidden Gems in CF2016

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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
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 now, 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)
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
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 only 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
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, installer’s web config step does not offer these 3 configurable options
    • Due to be fixed in a new installer: bugbase.adobe.com/index.cfm?event=bug&id=4155913
• ...

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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
  - Connecton_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...
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
• ...
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
- ...
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

• ...
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
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
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
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

• ...

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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)

• ...

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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!
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!
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?
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
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

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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
- Reach out to CF Product Mgr, Rakshith Naren, with any questions
  - rakshith@adobe.com
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
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
- ...
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
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
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 technote notes, 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)
• ...

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• Mentioned previously
  • Security Analyzer works only with CF Enterprise (or trial)
    • Also requires CF installed in “Developer mode”, with RDS enabled
  • 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!
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)
• ...

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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)
• ...
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:
  - CF2016 lockdown guide:
  - CF2016 migration guide:

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Some resource gems for CF2016 and 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