Using Adobe's "new" CFSetup tool

to manage CF Admin settings

for ANY CF version

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Who is this talk for?

- **Speaking to those use have need to view/manage CF Admin settings**
  - **In ANY CF version (not just CF2021)**
  - **Maybe you have to migrate or compare settings between CF instances**
    - **Or between different CF versions**
  - **Maybe you want to be able to AUTOMATE import of settings**
    - **Or you want to require Admin config changes done by "code" rather than GUI**

- **This talk is NOT an overview OF the CF admin, nor all its settings**
  - **Nor even an overview of every feature of the "new" CFSetup tool**

- **But I do think that virtually everyone watching will benefit**

- **Presentation slides available at carehart.org/presentations**

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Topics

- **Getting Started/Background**
- **Demos:**
  - Fundamentals of cfsetup usage
  - Using with different CF instances (including other than CF2021)
  - Viewing/managing all or any CF Admin settings with cfsetup
  - Exporting settings to/importing from json file via cfsetup
  - Automating CF Admin config via json (using Docker or not)
  - Using cfsetup "aliases" to simplify referring to instances
  - Comparing admin settings between instances
- **Contrast with Commandbox CFConfig and CF's CAR feature**

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Me.about()

- Independent consultant, helping folks troubleshoot CF issues
  - As well as installation, admin/config, migration, tuning, containerization
- Long-time community contributor
- I help people on whatever platform they're on (CF, Lucee, Commandbox, etc.)

- …a couple of preliminary topics, then on to demos …

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Getting Started/Background

- **Tool came out with CF2021 (is installed with CF2021)**
  - Is just a script (.bat or .sh file), in CF's config/cfsetup **folder by default**
  - But it <u>can be downloaded separately</u> (will demo shortly)

- **Can be run as an interactive CLI, or via imperative commands**

- **Can be pointed to a CF instance running virtually <u>ANY CF version</u>**
  - I've tested back to CF10 (does not work with Lucee, to be clear)
  - Would work fine with ACF as deployed on Commandbox

- **So yes, <u>you could download/use it on machine running CF2018 or less!</u>**

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Does the CF instance need to be running?

- **NO, the instance need not be running!**
  - So this is another boon to using it to view or export settings of old version
- **True whether viewing, exporting, or importing**
- **That said, if you CHANGE or IMPORT settings into a running instance, some settings DO require restart (which is normal)**

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Demo time! Fundamentals of usage

- **Running the tool, interactively ("terminal mode") or imperatively**

- **Getting help from the tool (**help, help <command>, help <category>**, and more)**

- **Viewing categories of available CF Admin settings (**show category**)**

- **…Let's look at each**

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Using with different CF instances

- **Remaining cfsetup commands require instance to work with**
  - **Can point to a given CF instance by full or relative path**
  - **So** C:\ColdFusion2021\cfusion
    - **(even /**coldfusion2021/cfusion **works on Windows)**
  - **If run in cf's** config/cfsetup **folder, could use relative path:** ../../cfusion

- **This can be a CF2021 folder, or again ANY CF version back to 10!**

- **Will see later option to create an "alias", in place of naming path**

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Downloading cfsetup
for use on machine without CF2021

- **Again, cfsetup is included in CF2021**
  - **But to use it on a machine without CF2021, can simply download/extract zip**

- **Available at CF downloads page, specifically:**
  - *helpx.adobe.com/coldfusion/kb/coldfusion-downloads.html#cf2021_cfsetup*

- **Docs refer to this as "standalone mode"; not really a different "mode"**
  - *helpx.adobe.com/coldfusion/using/cfsetup-configuration-tool.html#CFSetupinstandalonemode*

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More demos: viewing/managing settings

- **Viewing all settings, all in a category (**show all, show <category>**)**

- **View an individual setting (**get**)**

- **Setting individual settings (**set**)**

- **Adding new instance of setting, ie datasource, mapping, etc. (**add**)**

- **More examples:**

    - *helpx.adobe.com/coldfusion/using/cfsetup-configuration-tool.html#ManageColdFusionsettings*

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More demos: export/import settings as json

- **Exporting/importing all or some settings (via JSON) (**export/import**)**
  - **Can import only one category, even from export file holding ALL**
  - **Can specify more than one category at a time (which** show **does not support)**
- **Can also export all settings from CF Admin "Package Mgr" page**
  - **See available "export server state" button**
- **When exporting settings that include password…**
  - **In terminal mode, will be prompted for passphrase**
    - **In imperative mode, use** -p=<passphrase>**, as first or last arg of export**
  - **Same on import**
  - **Will discuss settings with passwords, export to JSON, later**

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Automating CF Admin config via json

- **Adobe CF Docker images for CF2021 support import via json**
  - importCFSettings **env var can point to json file in image's** /app **folder**
  - **Passkey can be provided with** importCFSettingsPassphrase
  - **See my talks on CF and Docker images, at** *carehart.org/presentations*

- **And if not using Docker images, can automate via script (**bat/sh**)**
  - **Running one or even several cfsetup calls**
    - *helpx.adobe.com/coldfusion/using/cfsetup-configuration-tool.html#script*
  - **Can check/handle exit status of each. See docs:**
    - *helpx.adobe.com/coldfusion/using/cfsetup-configuration-tool.html#exit-status*

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My related talk at next week's CF Summit

- **"How the Adobe CF Docker Images Have Evolved"**
  - One of the topics will be on this capability in CF2021 images to import settings using the env var

- **Sadly, sessions will not be recorded**
  - I plan to repeat the talk on the Online CFMeetup in the near future

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Demos: Using aliases (instead of path to CF instance)

- **Listing defined aliases with** show alias
  - **May find one already defined, called** cfusion
- **Defining an** alias
- **Selecting a default alias (for subsequent commands) with** select
  - Useful <u>only within terminal (interactive) mode,</u> not imperative mode
  - **Can deselect the selected alias with** deselect **(no argument needed)**
- **Updating or deleting an alias, with** alias **args:** -u **and** -d
- **Quick demo**

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Demo: reconsidering available categories

- **Again,** show category
  - Let's take a look again, now that we understand basics of cfsetup

- **Covers <u>all</u> of the hundreds of CF admin settings, including:**
  - Security (admin pwd, allowed ip addresses, enabling secure profile, etc)
  - JVM settings (heapsize, jvm args, etc)
  - Users (who can access Admin, with what roles, etc)
  - Sandbox (controlling what is allowed for code running in a folder)
  - And of course new CF2021 things like saml, nosql, cloud integration, etc.)
  - And still more

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Demo: comparing settings between instances

- **Can this with use any decent compare tool to compare settings**
  - **Between CF admins of same or even different CF versions**

- **Can use the json file export, of course**
  - **Can also just pipe** show all **to file, or to clipboard**

- **Let's see demo of each**

- **Compare tool I prefer: Beyond Compare (scootersoftware.com)**

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Contrasting with older CAR file import/export

- **ColdFusion ARchive (CAR) feature has existed in CF Admin since 90's**
  - **Not a CLI tool, but a GUI one**
  - **Hasn't changed much, essentially same UI; is updated for new CF settings**
  - **Produces CAR file, a zip of custom xml files; can be imported into other CF**
  - **Since CF11, is available in all CF editions; before that Enterprise-only**
  - **CF Docker images support auto-configuration using these as well**
- **See my talk from mid-2020, before CFSetup was released:**
  - **"Migrating or Comparing CF Admin Settings, between instances, versions, and engines"**
  - *carehart.org/presentations/#migrating_admin*

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Contrasting with Commandbox CFConfig

- **For those unaware, Commandbox has had a CFConfig forgebox module**
  - **Has long offered such a CLI for managing admin settings, for CF <u>or</u> Lucee**
  - **It too can be used with ANY CF instance--NOT just ones controlled by Commandbox**

- **Offers similar commands, adds a** diff **(for comparing settings)**
  - **Can also merge (**append**) settings on** import/transfer

- **Can export/import json files, including into Commandbox Docker images**
  - **The container can even load settings from env vars, rather than or overriding JSON**

- **Commandbox itself offers MANY other features (tab completion and much more)**

- **Resources:**
  - *cfconfig.ortusbooks.com*
  - *cfcasts.com/series/cf-config*

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What about passwords?

- **As you may know, CF does not store clear text password for Admin settings**
  - **It encrypts them, using a seed unique to each CF instance (created at installation)**
- **The CFSetup output AND json files will show that encrypted pwd**
  - **If you will be exporting these to import to a NEW instance, use that passphrase discussed earlier**
  - **Will create a seed (stored in that json file) used to encrypt pwds; import will decrypt**
  - **Either way, cfsetup warns of need to secure any exported json file**
- **Note that CFConfig DECRYPTS password, <u>showing them as plain text</u>**
  - **Whether in its show command or in its json export. That can be a pro or a con**
  - **See also "optional json expansion replacements" feature**
  - **cfconfig.ortusbooks.com/using-the-cli/command-overview/export-settings#json-expansion-replacements**

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Some other points

- **Still more cfsetup command and args to it. See the docs page for all**

- **On import, it makes a backup of files to be changed**
  - **Saved in** cfusion\lib\cfsetup_backup\ **of instance imported to**

- **As with any migration of admin settings between machines…**
  - **may need to modify paths in export json file to be correct for new machine**

- **A couple of known limitations about setting new cloud config**
  - ***helpx.adobe.com/coldfusion/using/cfsetup-configuration-tool.html#Limitations***

- **Linux users, if running the downloaded version, must edit the cfsetup.sh to name user running CF. See docs page above for more**

- **If deploying CF via WAR, is in** *cfusion.war\WEB-INF\config\cfsetup*

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Getting help

- **Docs**
  - *helpx.adobe.com/coldfusion/using/cfsetup-configuration-tool.html*
  - Would be 40 pages if printed! Includes help AND examples

- **Tool's online help, including help on each command**

- **No particular CF community focuses on using cfsetup**
  - See normal places for support help in wider cf community
  - *cf411.com/cfcommhelp*

- **And of course I can help directly, free to a point, or via consulting**

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Summary

- Tool can be used to view/change/export/import all admin settings
  - Dozens of categories, hundreds of settings

- Can use with **ANY** CF version, not just CF2021
  - Tool can be installed on machines not running CF2021

- Can point to CF instance by path, or using alias feature

- Can use json file to auto-configure CF containers; other automation

- Tool has its place for some, while CFConfig will appeal to others

- See some of you at next week's 10th anniversary CF Summit!

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