



THE NEW ERA OF MODERN DEVELOPMENT

INTO THE BOX 2024



ORANGE ROOM

REVOLUTIONIZING TASK SCHEDULING IN COLDBox

PRESENTED By

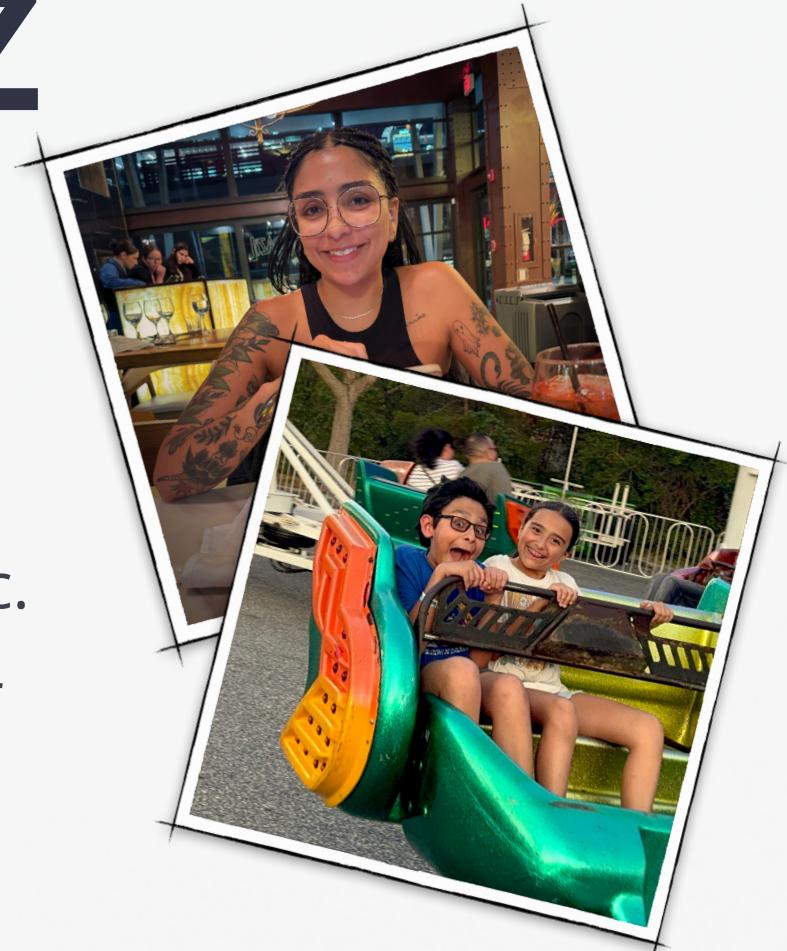
GIANCARLO GOMEZ



SPEAKER AT ITB 2024

GIANCARLO GOMEZ

- Proud father of 3
- Web Developer since 1999
- Freelance since 2001
- Owner of Fuse Developments and CrossTrackr, Inc.
- South Florida ColdFusion User Group Co-Manager





REVOLUTIONIZING TASK SCHEDULING IN COLDBOX THE PROS AND CONS - ADOBE COLDFUSION

PROS

- **cronTime**

Configured using custom Cron-Expressions

<http://www.quartz-scheduler.org/documentation/quartz-2.2.2/tutorials/tutorial-lesson-06.html>

- **group**

Pause or Resume all tasks in a group

- **action**

create and **modify** options added in 2018.

Create a fresh task which throws an error if it already exists and modify allows to update an existing task while retaining its old values

- **mode - Enterprise**

Allows to define Application level tasks

- **eventHandler - Enterprise**

Simple Event Handlers

- onException, onComplete, onMisfire

CONS

- The cool features come at a hefty cost \$\$\$

- Although you can track in code

- tasks can be created / edited
 - * server tasks

- tasks can be removed
 - * server and application level

REVOLUTIONIZING TASK SCHEDULING IN COLDBOX THE PROS AND CONS - LUCEE

PROS

- **unique**

Execute task once at a time no overlapping

Funny behavior ... Does not add the full interval only the remaining

- **readonly ?**

No edit or delete allowed in admin

Nice way to force in code only workflow

- **autodelete**

Helps with the bad habit of people not being pro active about code debt clean up and yes tasks that are no longer needed create code debt to manage

CONS

- None of the features from ACF

- Application level tasks

- Event Handlers

- Tasks under 10 second intervals do not fire

- Access to the web admin can be a bit of a pain due to individual context

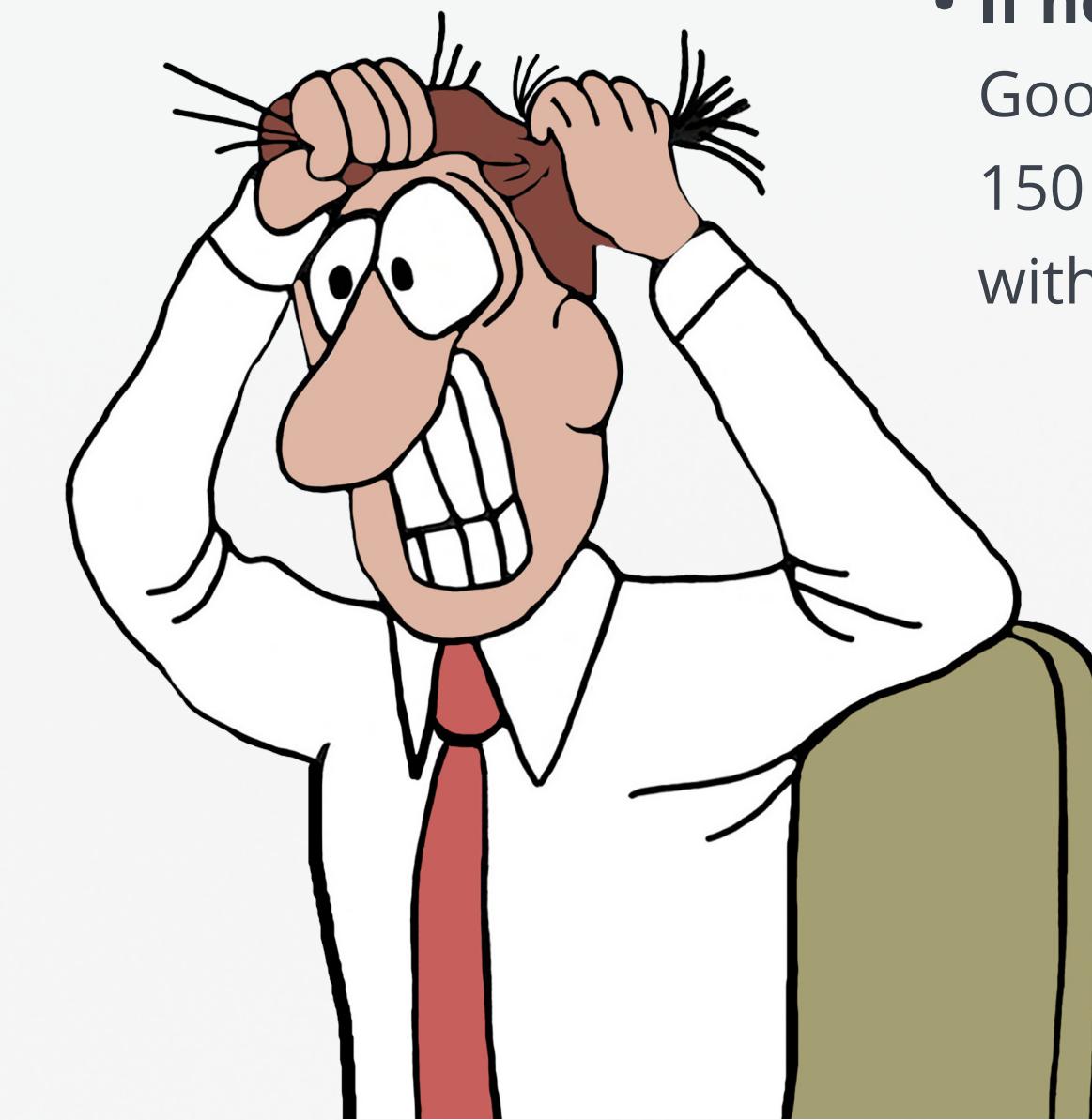
REVOLUTIONIZING TASK SCHEDULING IN COLDBOX BIGGEST PAIN POINT ...

- **If managed in code**

Switching an engine will require some refactoring based on features and attributes

- **If not managed in code**

Good luck, I went thru this for a project with over 150 scheduled tasks split over several servers with absolutely no pattern.



REVOLUTIONIZING TASK SCHEDULING IN COLDBOX WHY COLDBox SCHEDULED TASKS?

- **Code First!!!!**
Based on your workflow, this can make it easier to manage, track and understand why a task exists
- **A fresh, programmatic and human approach to scheduling tasks**
Chainable DSL with a human readable touch
- **Complete control over lifecycle**
Globally and at the individual task level - better event handlers!
- **No issue if switching engines**
- **Cool features at no cost!!!!**
- **Limitless opportunities!**



REVOLUTIONIZING TASK SCHEDULING IN COLDBOX

SCHEDULED TASK INTRO

- **Frequencies**

Easy to understand frequencies to schedule our tasks with.

- `every (period, timeunit) / everyMinute() / onFirstBusinessDayOfTheMonth(time) / onWeekends() ...`

- **Prevent Stacking**

Allows to force a task to have a fixed delay starting when the task finishes executing.

- **Delay First Execution**

Great for delaying the first execution of a scheduled task.

- **Create One Off Tasks**

Great for warming up caches, registering yourself with control planes, setting up initial data collections and so much more.

- **Life-Cycle Methods**

The scheduler itself has global life-cycle methods but tasks can also have these methods.

- `after / before / onFailure / onSuccess`

- **Constraints**

- **Truth Test** - Register a `when()` closure that will be executed at runtime and boolean evaluated.
- **Start Date / End Date** - Specify when the task will become active on a specific date and time and/or when the task will become disabled.
- **Start Time / End Time** - Restrict the execution of the task after and/or before a certain time
- **Environment** - For ColdBox apps you can specify what environment to run on

REVOLUTIONIZING TASK SCHEDULING IN COLDBOX SIMPLE EXAMPLE

```
// Adobe ColdFusion
cfschedule(
    action      = "update",
    group       = "PREZ",
    task        = "task-01",
    interval    = 5,
    eventHandler = "standalone.TaskEventHandler",
    mode        = "application",
    url         = "http://127.0.0.1:64559/scheduledtask/short/"
);

)`;

URL
= "http:\\\\127.0.0.1:9422\\scheduleupdate\\short\"
= "scheduleTask"

```

```
// Lucee
cfschedule(
    action      = "update",
    task        = "task-01",
    interval    = 10,
    startDate   = now(),
    startTime   = now(),
    url         = "http://127.0.0.1:50584/scheduledtask/short/",
    unique      = true,
    readonly    = true
);

)`;

readonly
= true
update
= true
URL
= "http:\\\\127.0.0.1:9422\\scheduleupdate\\short\"

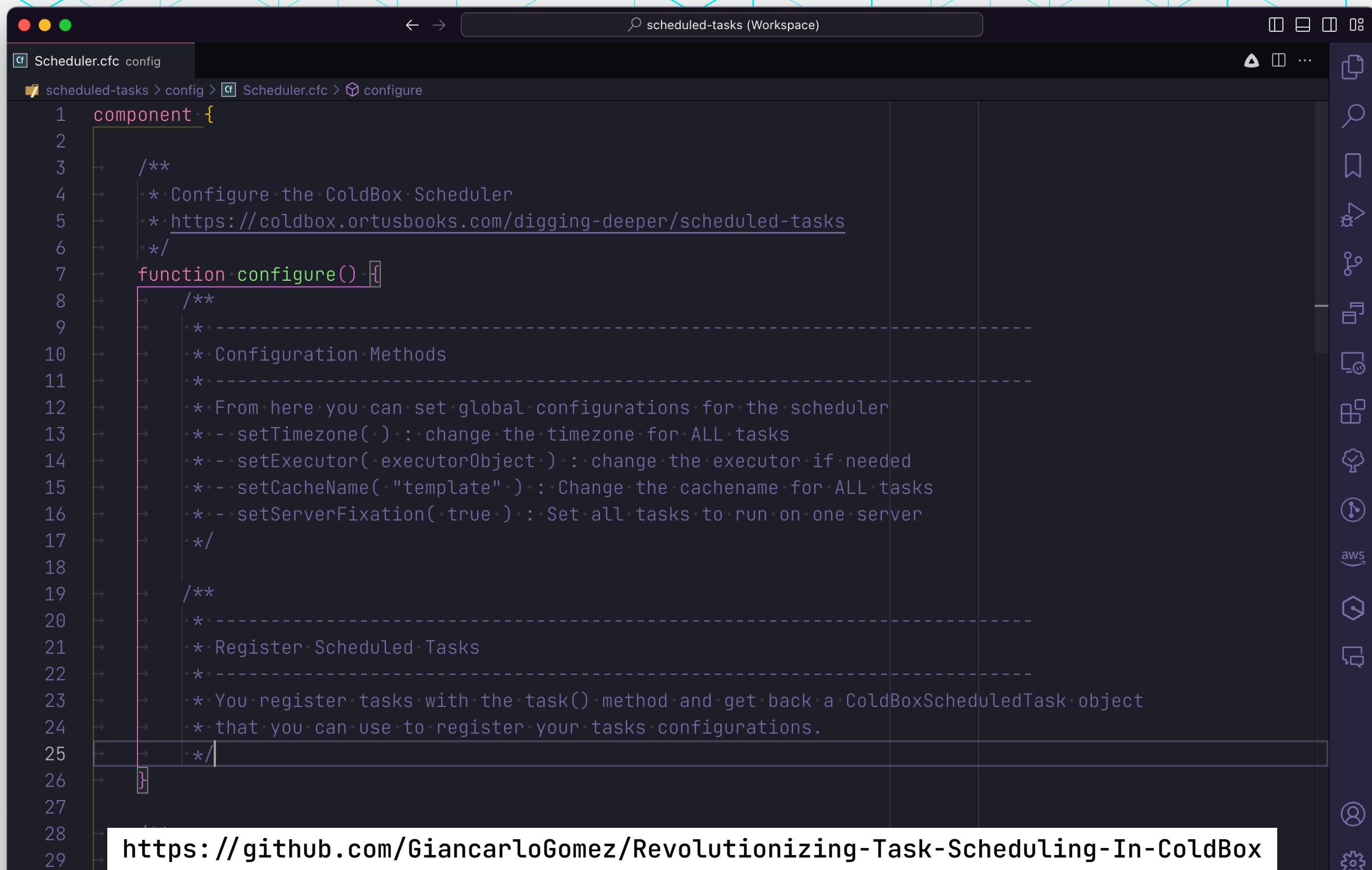
```

```
// ColdBox Scheduled Task
task( "task-01" )
    .call( () => runEvent( "ScheduledTask.short" ) )
    .every( 5,"seconds");

    .every( 5,"seconds");

```

REVOLUTIONIZING TASK SCHEDULING IN COLDBOX LIVE CODING SEGMENT ...



The screenshot shows a code editor window with a dark theme. The title bar says "scheduled-tasks (Workspace)". The file path in the title bar is "scheduled-tasks > config > Scheduler.cfc > configure". The code itself is a component definition for the "Scheduler.cfc" file:

```
1 component {
2
3     /**
4      * Configure the ColdBox Scheduler
5      * https://coldbox.ortusbooks.com/digging-deeper/scheduled-tasks
6     */
7     function configure() {
8
9         /**
10          * Configuration Methods
11          * -----
12          * From here you can set global configurations for the scheduler
13          * - setTimezone(): change the timezone for ALL tasks
14          * - setExecutor(executorObject): change the executor if needed
15          * - setCacheName("template"): Change the cachename for ALL tasks
16          * - setServerFixation(true): Set all tasks to run on one server
17
18
19         /**
20          * -----
21          * Register Scheduled Tasks
22          * -----
23          * You register tasks with the task() method and get back a ColdBoxScheduledTask object
24          * that you can use to register your tasks configurations.
25
26     }
27
28
29 }
```

At the bottom of the code editor, there is a URL: <https://github.com/GiancarloGomez/Revolutionizing-Task-Scheduling-In-ColdBox>.

REVOLUTIONIZING TASK SCHEDULING IN COLDBOX ONE MORE THING ...

Scheduled Tasks ColdBox 7.3.0-snapshot

ColdFusion Server 2023,0,07,330663

Show 10 Tasks

Module / Executor	Group	Task	Start On	Last Run	Next Run	Period / Time Unit	Last Exec Time	Runs	Status
EnhancedUI ColdBoxScheduler	accounting	clean-the-books	5/17/2024 4:51:27 AM	-	12/31/2024 11:00:00 PM	Annually	0	0	
EnhancedUI ColdBoxScheduler	accounting	end-of-month	5/17/2024 4:51:27 AM	-	5/31/2024 6:00:00 PM	Last Business Day of the Month @ 6:00:00 PM	0	0	
EnhancedUI ColdBoxScheduler	accounting	photoNumbers	5/17/2024 4:51:27 AM	5/17/2024 12:53:12 AM	5/17/2024 12:53:17 AM	5 / seconds	1	20	
EnhancedUI ColdBoxScheduler	accounting	start-of-month	5/17/2024 4:51:27 AM	-	6/3/2024 4:00:00 AM	First Business Day of the Month @ 4:00:00 AM	0	0	
EnhancedUI ColdBoxScheduler	accounting	task-01	5/17/2024 4:51:27 AM	5/17/2024 12:53:12 AM	5/17/2024 12:53:17 AM	5 / seconds	1	22	
global MyCustomExecutor	single	cache-startup	5/17/2024 4:51:27 AM	5/17/2024 12:51:27 AM	5/17/2024 12:51:27 AM	0 / milliseconds	1	1	
global MyCustomExecutor	single	dev-sync	5/17/2024 4:51:27 AM	-	-	0 / milliseconds	0	0	
global MyCustomExecutor	marketing	task-01	5/17/2024 4:51:27 AM	-	5/17/2024 11:00:05 AM	5 / seconds Between 11:00 AM - 5:00 PM	0	0	
global MyCustomExecutor		task-02	5/17/2024 4:51:27 AM	-	5/17/2024 10:00:00 AM	10 / seconds Between 8:00 AM - 4:00 PM	0	0	

REVOLUTIONIZING TASK SCHEDULING IN COLDBOX IN THE NEAR FUTURE ...

Welcome, Giancarlo Gomez

[Logout](#)

ALL GROUPS

ALL STATUS



Actions are applied based on this selection, all or individual group only.

 Expand URLs

Show 25 entries

Search:

Group	Task Name	Last Run	URL	Duration	Interval	Status
ACCOUNTING	ACTIVATE ACCOUNTS ON HOLD	5/17/2024 11:00:00 AM	www. [REDACTED]	10/27/2015 - indef	6 hours	
ACCOUNTING	ACTIVATE ACCOUNTS SUSPENDED	5/17/2024 11:00:00 AM	www. [REDACTED]	10/27/2015 - indef	6 hours	
ACCOUNTING	AUTO ENABLE ACCOUNTS	5/17/2024 3:10:00 AM	www. [REDACTED]	10/1/2017 - indef	Daily @ 3:10 AM	
ACCOUNTING	BILLOUTS	5/16/2024 7:00:00 PM	www. [REDACTED]	6/22/2016 - indef	Daily @ 7:00 PM	
ACCOUNTING	CANCEL ACCOUNTS	5/17/2024 1:01:00 PM	www. [REDACTED]	10/17/2013 - indef	15 mins	
ACCOUNTING	DAILY INVOICES	5/17/2024 12:00:00 PM	analytics [REDACTED]	11/3/2015 - indef	Daily @ 12:00 PM	

REVOLUTIONIZING TASK SCHEDULING IN COLDBOX
HOW TO GET IN TOUCH WITH ME ...

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