Cfobjectcache Docs Wrong? Inconceivable!

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In this post I'm going to claim that part of the official documentation is wrong. Whenever I do this sort of thing I always think of the movie "The Princess Bride" when Enigo says "You kep using that word... I do na think it means what you think it means". Be that as it may, I think the docs in this case are ambiguous at best and at worse downright misleading. There's an obscure little tag called cfobjectcache that's available in ColdFusion server. Although it was a part of ColdFusion 5, I first became aware of this tag in Cf 8. You can find Adobe's documentation for the tag **here**. If you read the documentation (always a good idea - the muse is great but he doesn't write about everything) you may get the wrong idea about this tag. At the top of the documentation it says (and I quote), "Description: Flushes query cache". Well that's straightforward enough isn't it? This tag is designed to flush the cache of queries on the server. It's easy to use:

```
<cfobjectcache action="clear"/>
```

...poof - your query cache is back to square one. Well not so fast my friend...

The catch

Ah... but a closer look at the attributes section of the live doc shows this explanation for the action of "clear". It states "clear: clears queries from the cache in the Application scope." This has led many folks to believe that cfobjectcache works at the application level. In other words, you can add it to code underneath a CFAPPLICATION tag or an Application.cfc file and it will surgically clear out any cached queries that "live" inside of that application.

So which is it? Does the tag clear the "global" query cache or just queries living in your application scope? A quick test will help us demonstrate.

The Setup

Here's a simple experiment. On your dev server create 2 folders. Put a cfm file in each of them. We'll call them App1 and App2. Here's the code for App1

```
<!--- create an application --->
<cfapplication name="app1">
<!--- cache a query - 30 minutes should do --->
<cfquery name="app1Qry" datasource="#mydsn#"
            cachedwithin="#createTimespan(0,0,30,0)#">
    SELECT TOP 10 *
    FROM USERS
</cfquery>
```

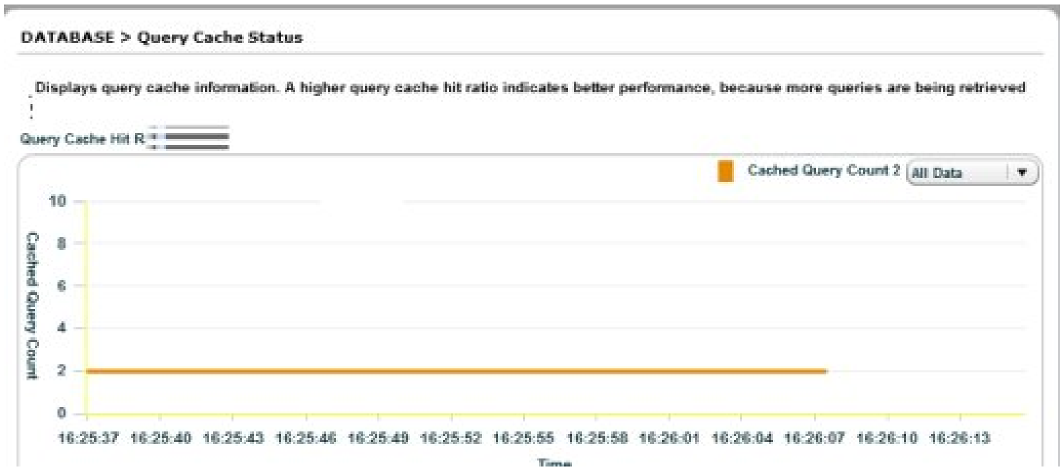
App2 is going to be nearly identical. It will look like this:

```
<!--- create an application --->
<cfapplication name="app2">
<!--- cache a query - 30 minutes should do --->
<cfquery name="app2Qry" datasource="#mydsn#"
            cachedwithin="#createTimespan(0,0,30,0)#">
    SELECT TOP 10 *
    FROM USERS
```

```
</cfquery>
```

Note the only difference is that I have changed the name of the application and the name of the query - that's it. Now go and run each snippet of code a couple of times. In the debug it will clearly indicate "cached query".

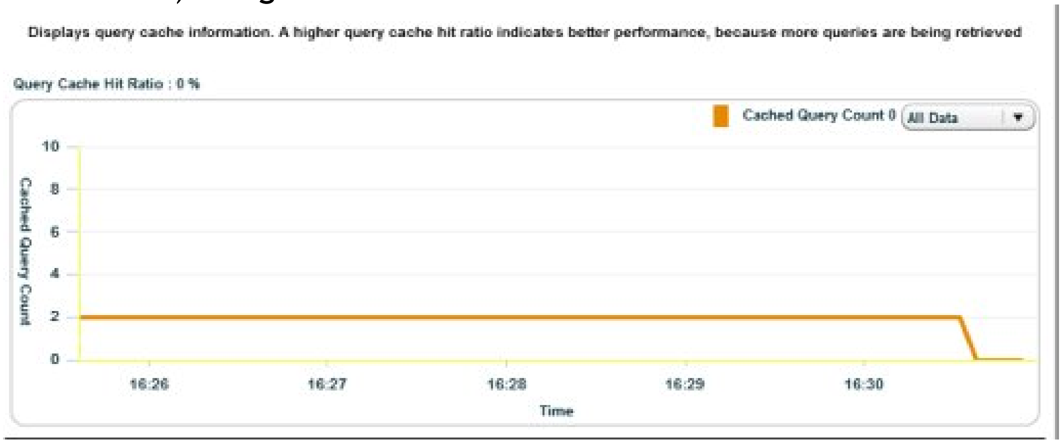
So you have created 2 cached queries in 2 separate applications - so far so good. Let's take a look at server monitor. Don't worry we'll keep it simple. Open the "statistics" tab in server monitor, then the database menu (on the left) and finally open the query cache status. You should see a cached query count of 2 if you are running on a dev server with nothing else going on (like on your local desktop for example).


DATABASE > Query Cache Status
Displays query cache information. A higher query cache hit ratio indicates better performance, because more queries are being retrieved
Query Cache Hit R
Cached Query Count 2
All Data
Cached Query Count
Time

If you have memory tracking enabled - which you should *never ever ever* have enabled by default on production (Ever!) you *may* also see a cache size of a few k. Just keep that screen up and notice that you have 2 queries "in the cache". It's time to experiment with our cfobjectcache tag. Open your page with the app1 query and comment out the cfquery tag. Then add this:

```
<cfobjectcache action="clear"/>
```

According to one part of the docs (the attribute description) this *should* have the effect of eliminating app1Qry and it should leave the app2Qry in the cache. Why? Because clearly app1Qry is part of the app1 application and the app2Qry is part of the app2 application. Running the our cfobjectcache clear code from *inside* the app1 application ought to clear out one query and leave the other - right? Take a look at the server monitor. Instead of showing one query left like we suppose it now shows zero queries in the cache. All queries in the query cache (which is clearly a *server level* convention) are gone.


Displays query cache information. A higher query cache hit ratio indicates better performance, because more queries are being retrieved
Query Cache Hit Ratio : 0 %
Cached Query Count 0
All Data
Cached Query Count
Time

Other versions of this experiment yield the same result. Executing the tag inside or outside of an application has no effect. No matter the conditions the tag will *always* clear the *entire* query cache at the server level.

Why Worry

Why is this important? If you are on a server with other sites and you choose to use this tag because it has been left enabled (and it often is left enabled because it is so obscure) you are eliminating the cached queries of every site on the server. On a busy shared server this could result in a serious degradation of service as well as sudden unexplained DB activity as sites churn away re-caching queries. In fact, on newer 64 bit servers with very large heap sizes query caching is a more viable option, but that also means that folks might be loading up a lot more data into the cache than in previous memory constrained 32 bit versions. So If you use the tag it should probably *only* be on a server which you control and not on a shared server. If you are a server admin who enables and uses sandboxes for shared servers you should probably disable this tag for virtually all users on the server.

Still, it is useful to have an easy way to quash the entire query cache on a dedicated server. Like most things in life, you simply need to handle with care.