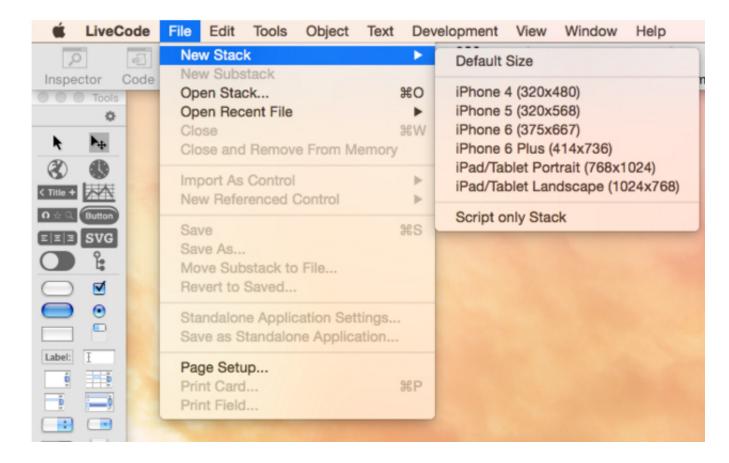# Script Only Stacks

by Mark Waddingham (https://livecode.com/author/mark/) on March 3, 2016 14 comments (https://live
stacks/#comments)

10
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text=Script%20Only%20Stacks&url=https://livecode.com/script-only-stacks/)

In LiveCode 8 there is a new option in the (new) 'New Stack' submenu:

This new option allows you to create what is called a 'script only stack'.

Now, 'script only' stacks have been around for a quite a few versions now – they were ad
couple of years ago after much frustration battling with merging updates across three bra
iOS deployment code.

At that time, the library which actually does iOS standalone building was a conventional l
a binary stackfile with just a stack script. Binary stackfiles are very convenient, but they c
for version control systems such as git. Git is great at dealing with text based files, but wi
way with binary files (beyond allowing you to store and fetch them).

At the time, we were having to patch the iOS standalone builder a lot, and having to do s
branches. Not only was this tedious but also highly error prone. So, one day when battlin
particular task I decided to try and do something about it…

The key library stack which was in question was 'revsaveasiosstandalone.livecode' which
the LiveCode IDE open-source repository. Now this stack was a pure library stack – it has
custom properties, and the only non-default properties were the stack's script and the sta
the values of these properties was the only 'interesting' information in the stackfile itself.
led to the 'script only stack' feature.

In a nutshell, a script only stack is a text file, structured in a specific way, which the engin
save as if it were a normal stackfile. When the engine loads a script only stack, it creates
name specified in text file and sets the stacks script property to the script specified in the
engine saves a script only stack it reverses this process, writing out a text file containing
stack script and absolutely nothing else.

The beauty of script only stacks is that they work incredibly well in version control system
script-only stack is nothing more than a source-file in the same vein as you would see if v
C++ or a similar lower-level language.

One can see the difference by getting text edit to display the content of a script-only stac
binary stackfile:

```
ExampleLibrary.livecodescript
script "ExampleLibrary"
on doMyExampleThing
   foobar
end doMyExampleThing
```

```
ExampleLibrary.livecod
REVO7000ÍExampleLibrary P3on doMyExampleTl
   foobar
end doMyExampleThing
Äsnêê;    ````

cREVGeneral
breakpointstates
breakpointsbreakpointconditionsscriptedit
```

On the left you see the content of the stackfile when 'ExampleLibrary' is saved as a scrip
right you see the content of the stackfile when 'ExampleLibrary' is saved as a normal sta

The key thing is that the left hand file is a true bonafide text file. It has no sequences of b
which cause git to throw up its hands, and very clearly shows the two bits of information
any script only stack: the stack name, and the stack script.

The fact that script only stack files really are just text files is really important! It means you
create them in any text editor you choose, and use any text based processing tool on the
git is that you can diff and patch them)! The only thing to remember is that the very first li
has to be of the form:

```
script "<name>"
```

With every line after the first being taken as the stack script.

After the initial implementation of the script only stack feature it gained more and more us
converted most of the IDE libraries into script only stacks (things such as revLibURL, rev(
revBackScript, …). In almost all cases this was trivial, the most we found was that some
stored constants in custom properties which were easily moved to be in the script. This p
more and more of the IDE's components which did not have a UI part were now much ea
Furthermore the process of reviewing and merging patches to those components as part
based engineering workflow became a great deal less time intensive!

Some time later we made one more tweak to the engine to increase the scope of script-c
further: we made it so that any behavior reference could not only be a button, but also a s
piece of the puzzle meant that even more of the IDE could be factored out into text files.
which relied heavily on behaviors could now be split up into a small (binary only) UI part,
(text only) script only stacks. This model has been the basis for a good part of the restruc
which has occurred in the work for LiveCode 8.

So, that's probably enough background, the question now is how do you use them?

Beyond the new option in the 'New Stack' menu in LiveCode 8 there are a couple of piec
which are useful to know about.

The first is the command which you can use to create a script only stack:

```
create script only stack theName
```

The second is the property you can use to not only find out if a stack would be saved in s
but also to change whether it will be or not:

```
the scriptOnly of stack theName
```

I, personally, find the best way to think about script only stacks is to consider the scriptO
controlling the output format of the stackfile. If the scriptOnly property is true, then the st
out as a textfile and anything other than the stack name and stack script will be discarde
false, then the stack will be written out as a normal stackfile and nothing will be discarded

Shortly after the initial implementation there was various amounts of discussion about ce
feature. In particular should the engine control what you can do to a script only stack at r
let you change the name and script, and not create any controls or add any other propert
extend the script only format to include more than just the stack script? In both these cas
neither would be appropriate. All things being equal, simplicity is always the best option.
simple and slim means that it is incredibly easy to use and incredibly easy to explain.

I have to say that I think script only stacks (although such a simple idea) have made one of the improvements to our workflow for working on the IDE. Indeed, I'd go as far to say that the big part of why we have been able to accelerate IDE development so much over the last whilst we have been working on LiveCode 8.

So, if you have projects with lots of library stacks, or lots of behaviors and want to start u to help your development process then why not give script only stacks a try – you won't

🏷 *LiveCode 8 (https://livecode.com/tag/livecode-8/)* ,

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Last reply was November 1, 2016

1. *MaxV (http://www.maxvessi.net/pmwiki/pmwiki.php?n=Main.GuidaALivecode)*

   View March 3, 2016 (https://livecode.com/script-only-stacks/#comment-29073)
   I can't understand: on script stacks I put all the code without messages and it's executed, or special message like "on OpenScript"?

   Reply (/script-only-stacks/?replytocom=29073#respond)

   - *Mark Waddingham*replied:

     View March 4, 2016 (https://livecode.com/script-only-stacks/#comment-29085)
     Hi MaxV. Script only stacks are just a different way to store a stackfile on disk – thus the the same structure as a stack script would. (i.e. script only stacks have nothing to do wi can write to run through LiveCode server, where you can mix commands and definitions

Reply (/script-only-stacks/?replytocom=29085#respond)

2. *Jim Lambert (http://--)*

View March 3, 2016 (https://livecode.com/script-only-stacks/#comment-29076)

Thanks for the clear explanation of script only stacks and how to use them.

Reply (/script-only-stacks/?replytocom=29076#respond)

3. *MattyJ*

View March 3, 2016 (https://livecode.com/script-only-stacks/#comment-29077)

As an 'SCM guy' for the last 20 years, this is the thing I'm most excited about with LiveCode support patching, diffing, a proper history, indexing and perhaps search has suddenly made L for professional development teams.

Add to that a way to formally audit and review code, and if someone should happen to hit on way to actually sell your technology/code … you might actually be underplaying the ramificati feature.

Welcome to the 21st century, LiveCode! I'm glad you're here!

Reply (/script-only-stacks/?replytocom=29077#respond)

○ *MaxV (http://www.maxvessi.net/pmwiki/pmwiki.php?n=Main.GuidaALivecode)*repli

View March 16, 2016 (https://livecode.com/script-only-stacks/#comment-29258)

You can diff also normal liveocde stack, here the tool: http://forums.livecode.com/viewto f=9&t=26740 (http://forums.livecode.com/viewtopic.php?f=9&t=26740)

Reply (/script-only-stacks/?replytocom=29258#respond)

4. *Torsten*

View March 4, 2016 (https://livecode.com/script-only-stacks/#comment-29090)

Mark, this seems to be a powerfull feature.

you wrote: "…we made it so that any behavior reference could not only be a button, but also keen to learn, how to set a behavior to a stack instead of a button. What is the syntax?

Usually I am setting the behavior of an item to the longID of a button. How do I set the behavi stack?

Reply (/script-only-stacks/?replytocom=29090#respond)

○ *Mark Waddingham*replied:

View March 4, 2016 (https://livecode.com/script-only-stacks/#comment-29094)

Hi Torsten. You can use exactly the same formalism – "set the behavior of myObject to t
myStack". Internally behavior references are stored as a control id / stack (short) name p
a behavior pointing to a stack the control id is set to 0. (It was one of those serendipitou
could be added without having to change the stackfile format as you cannot have a con

Reply (/script-only-stacks/?replytocom=29094#respond)

5. *Mark Smith*

View March 4, 2016 (https://livecode.com/script-only-stacks/#comment-29095)
So, when is it a good idea for me as a developer to think about using a script only stack? Is it
encounter a situation where I want to create some functionality in livecode that does not requ
some other deliberation need to take place?

Reply (/script-only-stacks/?replytocom=29095#respond)

   ○ *Mark Waddingham*replied:

   View March 8, 2016 (https://livecode.com/script-only-stacks/#comment-29149)
   Hi Mark. The use-case for script only stacks was to allow them to be easily worked on b
   source control such as GitHub so I would say this is still the main one for them. Internall
   try and separate the IDE into mostly UI only binary stacks, and then script only stack lib
   provide most of the (coded) functionality.

   Reply (/script-only-stacks/?replytocom=29149#respond)

6. *IVANOR*

View March 8, 2016 (https://livecode.com/script-only-stacks/#comment-29151)
HOLA QUIERO SABER SI PUEDO PONER PUBLICIDAD EN MI APP LIVECODE

Reply (/script-only-stacks/?replytocom=29151#respond)

7. *Dave Kilroy (http://applicationinsight.com)*

View March 9, 2016 (https://livecode.com/script-only-stacks/#comment-29171)
I'm using a mac (el cap) and have found that Text Wrangler, TextMate and Coda are fine as ex
script-only stacks, whilst TextEdit and Atom (surprisingly) can't hack it

Reply (/script-only-stacks/?replytocom=29171#respond)

8. *Dave Kilroy*

View March 24, 2016 (https://livecode.com/script-only-stacks/#comment-29401)
This is a follow up to the issue of bad line endings when working on a script only stack in Ato
once I used a ".livecodescript" file extension rather than ".livecode" that I was once again abl
it's editor without LiveCode objecting to the line endings…

Reply (/script-only-stacks/?replytocom=29401#respond)

9. *Erik Hansen (https://facebook.com/profile.php?id=1134734216569058)*

View July 17, 2016 (https://livecode.com/script-only-stacks/#comment-31087)

Is there a step-by-step guide to converting all of my stacks to script only stacks? Preferably f advanced? No idea what patching & diffing are but would like to get on board and start learni hundreds like me.

Reply (/script-only-stacks/?replytocom=31087#respond)

10. *Ethan*

View November 1, 2016 (https://livecode.com/script-only-stacks/#comment-32377)

Can a script only stack be used in iOS at runtime or is this feature only viable as a pre-compil

Reply (/script-only-stacks/?replytocom=32377#respond)

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