

Trouble with compiled file using UFFI

Source: <http://coding.derkeiler.com/Archive/Lisp/comp.lang.lisp/2004-04/2389.html>

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Okay, so I'm working on my DNS resolver library. Everything works peachy under SBCL, but I'm having trouble with CMUCL. In particular, I'm using UFFI to load the Linux resolver.so library and then define a foreign function with the following two forms:

```
(uffi:load-foreign-library #p"/usr/lib/libresolv.so"
                          :supporting-libraries ("c"))
```

```
(uffi:def-function ("res_query" res-query-c)
  ((dname (:cstring))
   (class :int)
   (type :int)
   (answer (* :unsigned-byte))
   (anslen :int))
 :returning :int)
```

With SBCL, this works great. I have packaged up the library and you can download it via asdf-install (though it looks like the recent CLiki restoration blew away my page there, so you'll have to download it directly from <http://www.findinglisp.com/packages/resolver/resolver-latest.tar.gz>).

The problem starts when you try to use CMUCL. Everything works. If you have asdf and asdf-install, you can download it and install it. Asdf will try to compile all the files the first time it is loaded. This works great, right up until the time when CMUCL tries to load the .x86f file. Then I get:

```
* (asdf:oos 'asdf:load-op :resolver)

; loading system definition from
; /home/dave/.asdf-install-dir/systems/resolver.asd into
; #<The ASDF1183 package, 0/9 internal, 0/9 external>
; Loading #p"/home/dave/.asdf-install-dir/site/resolver-0.2/resolver.asd".
; registering #<SYSTEM :RESOLVER {48873835}> as RESOLVER
; [GC threshold exceeded with 12,015,824 bytes in use. Commencing GC.]
; [GC completed with 3,737,944 bytes retained and 8,277,880 bytes freed.]
; [GC will next occur when at least 15,737,944 bytes are in use.]
; loading system definition from
/home/dave/.asdf-install-dir/systems/uffi.asd
```

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```
; into #<The ASDF1186 package, 0/9 internal, 0/9 external>
; Loading #p"/home/dave/.asdf-install-dir/site/uffi-1.4.12/uffi.asd".
; registering #<SYSTEM UFFI {48117DDD}> as UFFI
; Loading
#p"/home/dave/.asdf-install-dir/site/uffi-1.4.12/src/package.x86f".
; Loading
#p"/home/dave/.asdf-install-dir/site/uffi-1.4.12/src/primitives.x86f".;
Loading #p"/home/dave/.asdf-install-dir/site/uffi-1.4.12/src/objects.x86f".
; Loading
#p"/home/dave/.asdf-install-dir/site/uffi-1.4.12/src/aggregates.x86f".;
Loading
#p"/home/dave/.asdf-install-dir/site/uffi-1.4.12/src/functions.x86f".
; Loading
#p"/home/dave/.asdf-install-dir/site/uffi-1.4.12/src/strings.x86f".
; Loading
#p"/home/dave/.asdf-install-dir/site/uffi-1.4.12/src/libraries.x86f".
; Loading #p"/home/dave/.asdf-install-dir/site/uffi-1.4.12/src/os.x86f".
; Loading #p"/home/dave/.asdf-install-dir/site/resolver-0.2/packages.x86f".
; Loading #p"/home/dave/.asdf-install-dir/site/resolver-0.2/resolver.x86f".
```

Undefined foreign symbol: "res_query"

Restarts:

- 0: [CONTINUE] Return NIL from load of
#p"/home/dave/.asdf-install-dir/site/resolver-0.2/resolver.x86f".
- 1: [RETRY] Retry performing #<ASDF:LOAD-OP NIL {487D95AD}> on
#<ASDF:CL-SOURCE-FILE "resolver" {48B9C3D5}>.
- 2: [ACCEPT] Continue, treating #<ASDF:LOAD-OP NIL {487D95AD}> on
#<ASDF:CL-SOURCE-FILE "resolver" {48B9C3D5}> as having been
successful.
- 3: [ABORT] Return to Top-Level.

Debug (type H for help)

```
(KERNEL:UNDEFINED-FOREIGN-SYMBOL-ERROR-HANDLER "<error finding name>"
      #(SYSTEM:INT-SAP #x3FFFE1B0)
      #<Alien (* #) at #x3FFFDE48>
      (14))
```

Source: Error finding source:

Error in function DEBUG::GET-FILE-TOP-LEVEL-FORM: Source file no longer exists: target:code/interr.lisp.

0]

So, it looks like it isn't executing the (uffi:load-foreign-library ...) form. Indeed, if I execute this by hand and then reload the resolver.x86f file containing the (uffi:def-function ...) form, things work great. Also, if I blow away the .x86f files and load the .lisp files by hand (asdf always tries to compile them if they aren't already), things also work great. So, somehow, in the compiled file, it isn't executing that when loaded. I thought I would try to wrap the form in an EVAL-WHEN form, like so:

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```
(eval-when (:load-toplevel :compile-toplevel :execute)
  (uffi:load-foreign-library #p"/usr/lib/libresolv.so"
    :supporting-libraries '("c")))
```

but that didn't work, either.

Does anybody have any hints?

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