

Re: ROM-only FS and persisting registry on USB HD

Source:

<http://www.tech-archive.net/Archive/WindowsCE/microsoft.public.windowsce.platbuilder/2008-01/msg00202.html>

- *From:* "K. S. Huang" <k_Underln_s_Underln_huang_AT_yahoo_DOT_com>
 - *Date:* Thu, 10 Jan 2008 14:32:30 -0800
-

For preventing the EHCI driver get double loaded (first loaded in boot phase 1 and after then in phase 2 – the registry is mounted), you should have your "Flags" registry in your EHCI registry key having a "Flags"=dword:1000 (DEVFLAGS_BOOTPHASE_1 defined in public\common\ddk\inc\devload.h) so that the pcibus.dll will only load it once in boot phase 1.

"K. S. Huang" <k_Underln_s_Underln_huang_AT_yahoo_DOT_com> wrote in message news:%23NXjqM9UIHA.4440@xxxxxxxxxxxxxxxxxxxxxxxxxxxx

If you could not find the root cause of EHCI loading failure, I will suggest you have a debug version of OS Image and of course a debug build of EHCI driver and step into the code to figure out how it failed. Once you get EHCI loaded, you might be lucky enough to get the whole thing working, but might be encounter another issue there. Cheers!
Are you using a PCI based EHCI controller?
If so, that makes thing kind of complexity...
While the EHCI driver should be loaded by PCI bus driver rather being a Built-in driver (under BuiltIn key), that also implicitly indicate that your PCI bus driver and its relative registry setting should be moved into BOOT HIVE section so that the PCI Bus driver will be loaded in Boot Phase 1.

"Paul G. Tobey [eMVP]" <p space tobey no spam AT no instrument no spam DOT com> wrote in message news:%23wIzuT8UIHA.4880@xxxxxxxxxxxxxxxxxxxxxxxxxxxx

Registry entries needed to get to the point of loading the media on which the hive is stored must be in the

```
; HIVE BOOT SECTION  
; END HIVE BOOT SECTION
```

comments in your registry. That's what those apparently useless things are that you see laying around in reginit.ini. Items between these two tags are incorporated into the boot registry which is stored in nk.bin and used to get to the point where the actual registry can be loaded from the hive. Therefore, you have to have your USB host controller's driver settings, settings for the USB client driver for mass storage devices,

Re: ROM-only FS and persisting registry on USB HD

etc. in the boot registry so that the drive can be mounted and used. Most of your stuff clearly is in the right place, if the system hive is being created on your memory stick, but it appears that the EHCI driver is missing a few of its needed settings, causing your boot to stop.

Paul T.

"Dusan Arsenijevic" <DusanArsenijevic@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
wrote in
message
news:5084BD7A-AEFD-4535-84C0-ACDFC75BBF6F@xxxxxxxxxxxxxxxxxxxxx

Paul, thank you for the reply.

I get this:

5911 PID:400002 TID:b20002 EHCI86xx ERROR:
PhysicalMemoryAddress or
PhysicalMemoryLength not found in registry

5911 PID:400002 TID:b20002 EHCI86xx ERROR: Driver
can not be loaded

And later a lot of "Exception 'Access Violation'" stuff.

It seems that the EHCI error means that the driver expects
some registry
values in order to load, but I assume that system tries to load
it
before the
registry hive is copied to the usb disk. Could I be right? If so,
then
what?

"Paul G. Tobey [eMVP]" wrote:

They actually can only appear once,
although they might be in
reginit.ini
multiple times. The last value found there is
the one that 'wins'.
You can
put the items in platform.reg or project.reg
and that will take
precedence
over anything in any of the PUBLIC folders,
including common.reg.
Documentation for the exact registry

Re: ROM-only FS and persisting registry on USB HD

location for those flags is in the help.

You actually would not expect everything to be copied to the 'hard disk' when you're using the ROM-only filesystem. In fact, most of the things in nk.bin/Windows folder *can't* be copied to the hard disk because they're not really files but just execute-in-place pieces of code.

You might try this in a DEBUG build with all of the debug zones for filesys.exe and device.exe turned on. That should give you some idea of what's going on. At a guess, I'd say that there's an exception occurring. It may not even be related to the hive stuff.

Paul T.

"Dusan Arsenijevic"
<DusanArsenijevic@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>
wrote
in
message
news:77AACC5D-20E1-4F9D-B8F3-F3085B7F51ED@xxxxxxxxxxxxxxxxxxxx

Thanks for your reply!

I have tried to implement the steps you described but I am still not sure about the details: Where exactly should MountAsBootable and MountAsRoot be placed? Must they appear only once in registry?

At present my device hangs after some time into boot

Re: ROM-only FS and persisting registry on USB HD

process. The LED
on
the
drive shows lots of activity
but then becomes constantly
lit without
audible
disk activity. When I plug
the usb drive into PC I see
that the
folders
have
been generated, registry
hives are there, but the
windows folder is
not
fully
populated.

"K. S. Huang" wrote:

For USB
Disk it
might be
more
complexity,
while the
driver of
USB
disk is
not a
BuiltIn/Default
driver
which mean
it is loaded
by someone
else
instead
of just
loaded at
initial (as
IDE Hard
Driver
driver).
Basically,
the USB
Disk driver
is depends

Re: ROM-only FS and persisting registry on USB HD

on and
loaded USB
Host
driver
to
so the very
first thing is
make sure
your USB
Host driver
is loaded
in
boot
phase (by
enclosed the
HCD
registries
with HIVE
BOOT as
you did for
IDE
and
other
registry
settings),
and the
relative
USB class
key is put
into
BOOT
HIVE as
well so that
not only the
USB Host
(HCD) will
be loaded in
Early
Boot Phase
and the
USB Disk
could be
loaded
successful.
And make
sure the
Device
Manager is
loaded in
Boot Phase
1 by

Re: ROM-only FS and persisting registry on USB HD

applying
HKEY_LOCAL_MACHINE\init\BootVars\Flags
= 3 rather
than 1 that
only
loaded
Storage
Manager
which is not
enough in
your case
but might
work on
IDE.

A summary
is listed as
following
Include the
1) HCD
host driver
key (Could
be a builtIn
or PCI
based)
2) USB
Mass
Storage Key
usually
enclosed
with
CE_MODULES_USBMSC
CESYSGEN
tag
3) USB
Disk
Storage
Profile
usually
enclosed
with
CE_MODULES_USBDISK6
CESYSGEN
tag
4) Loaded
Storage and
Device
Manager in
Boot phase
1
HKEY_LOCAL_MACHINE\init\BootVars\Flags

Re: ROM-only FS and persisting registry on USB HD

= 3

And also
make sure
the
MountAsRoot
and
MountAsBootable
key are
included.

"Dusan
Arsenijevic"

<DusanArsenijevic@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>

wrote in
message

news:7EADB61D-4D66-4322-AF4B-7B8148B4A256@xxxxxxxxxx

Hi,

I
have
successfully
modified
the
reg
files
to
achieve
ROM-only
FS
and
persistant
hive-based
registry
on
IDE
HD,
but
I
am
not
able
to
achieve
the
same
for
USB
hard
disk

Re: ROM-only FS and persisting registry on USB HD

or
memory
stick.

Which
(additional)
registry
keys
have
to
be
wrapped
in:
;
HIVE
BOOT
SECTION

XXXXXX

"Flags"=dword:1000
;
END
HIVE
BOOT
SECTION

and
where
should
"MountAsBootable"=dword:1
and
"MountAsRoot"=dword:1
be
placed
in
this
case?
Is
there
something
else
I
am
missing?

(using
since
6.0)
Thanks!

Re: ROM-only FS and persisting registry on USB HD