DragonFlyBSD - Bug #1538

mountroot should probe file systems

09/27/2009 06:48 PM - corecode

Status:	New		**Start date:**	
Priority:	Low		**Due date:**	
Assignee:	alexh		**% Done:**	0%
Category:			**Estimated time:**	0.00 hour
Target version:				

Description

When mounting root from hammer, it is necessary to specify the file
system type in the vfs.root.mountfrom setting, otherwise the machine
will just be unhappy and issue the mountroot prompt (or rather, directly
go to ddb, see other bug report). This is very inconvenient and
irritating. The kernel should try all available file systems to mount root.

Possibly this should also be extended to mount itself, but this bug
report only deals with the mountroot issue.

History

#1 - 11/24/2010 08:08 AM - alexh

Doing this is easy enough, and we only support three FS as root anyways (?)
(hammer, ffs/ufs, cd9660). I'd suggest adding a method to vfsops called vfs_probe
that will probe a given device name just to see if the filesystem on it matches
the vfs.

We already have vfsconf_each() which could then be used in sys/kern/vfs_conf.c to
iterate through all available filesystems and call their respective vfs_probe()
method until one of them returns no error.

To minimize the impact this might have on the boot time this should only be done
if no fs is specified in the vfs.root.mountfrom.

Any thoughts?

Cheers,
Alex Hornung

#2 - 11/24/2010 06:29 PM - dillon

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The disklabel also has the filesystem type stored in it for each
partition. The mount command can just probe that. We can add an
ioctl if necessary.

I would rather NOT try to auto-probe filesystems since different
filesystems put their volume header in different places. For example,
it is possible for both the UFS and HAMMER volume headers to be present
(I've done it), though of course only one of the two will actually be
the correct filesystem.

-Matt

#3 - 11/24/2010 06:35 PM - alexh

Not all partitions have a disklabel, so it would be somewhat limited.

I think a solution to this would be the hammer newfs and UFS newfs
overwriting enough of the first few blocks to avoid this from occurring...

Cheers,
Alex