Subject: Re: [PATCH] diskquota: 32bit quota tools on 64bit architectures
Posted by Anonymous Coward on Mon, 23 Oct 2006 10:50:24 GMT
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Hello,

Arnd Bergmann wrote:

```
<snip>
> On a related topic, I just noticed
>
> typedef struct fs_qfilestat {
>  __u64  qfs_ino; /* inode number */
>  __u64  qfs_nblks; /* number of BBs 512-byte-blks */
>   __u32  qfs_nextents; /* number of extents */
> } fs_qfilestat_t;
>
> typedef struct fs_quota_stat {
>  __s8  qs_version; /* version number for future changes */
>  __u16  qs_flags; /* XFS_QUOTA_{U,P,G}DQ_{ACCT,ENFD} */
>  __s8  qs_pad;  /* unused */
>  fs_qfilestat_t qs_uquota; /* user quota storage information */
>  fs_qfilestat_t qs_gquota; /* group quota storage information */
>  __u32  qs_incoredqs; /* number of dquots incore */
>  __s32  qs_btimelimit;  /* limit for blks timer */
>  __s32  qs_itimelimit;  /* limit for inodes timer */
>  __s32  qs_rtbtimelimit;/* limit for rt blks timer */
>  __u16  qs_bwarnlimit; /* limit for num warnings */
>  __u16  qs_iwarnlimit; /* limit for num warnings */
> } fs_quota_stat_t;
>
> This one seems to have a more severe problem in x86_64 compat
> mode. I haven't tried it, but isn't everything down from
> gs_gquota aligned differently on i386?
<snip>
```

The problem indeed exists:

```
ia32:
sizeof(fs_qfilestat) = 0x14
sizeof(fs_quota_stat) = 0x44

x86_64:
sizeof(fs_qfilestat) = 0x18
sizeof(fs_quota_stat) = 0x50
```

Note, that the difference between sizes of fs_qfilestat on ia32 and
on x86_64 doesn't equal 8 bytes, as was expected (by me :)), but equals 12 bytes:

'cause of padding at the end of fs_quota_stat structure on x86_64.

I will add support of 32-bit XFS quotactl over 64bit OS in next patch.

Thank you!