NAME

vn_fullpath - convert a vnode reference to a full pathname, given a process context

SYNOPSIS

#include <sys/param.h>
#include <sys/vnode.h>

int
vn_fullpath(*struct vnode *vp*, *char **retbuf*, *char **freebuf*);

DESCRIPTION

The **vn_fullpath**() function makes a "best effort" attempt to generate a string pathname for the passed vnode; the resulting path, if any, will be relative to the root directory of the process associated with the passed thread pointer. The **vn_fullpath**() function is implemented by inspecting the VFS name cache, and attempting to reconstruct a path from the process root to the object.

This process is necessarily unreliable for several reasons: intermediate entries in the path may not be found in the cache; files may have more than one name (hard links), not all file systems use the name cache (specifically, most synthetic file systems do not); a single name may be used for more than one file (in the context of file systems covering other file systems); a file may have no name (if deleted but still open or referenced). However, the resulting string may still be more useable to a user than a vnode pointer value, or a device number and inode number. Code consuming the results of this function should anticipate (and properly handle) failure.

Its arguments are:

vp   The vnode to search for. No need to be locked by the caller.

retbuf   Pointer to a *char *** that **vn_fullpath**() may (on success) point at a newly allocated buffer containing the resulting pathname.

freebuf Pointer to a *char *** that **vn_fullpath**() may (on success) point at a buffer to be freed, when the caller is done with *retbuf*.

Typical consumers will declare two character pointers: *fullpath* and *freepath*; they will set *freepath* to NULL, and *fullpath* to a name to use in the event that the call to **vn_fullpath**() fails. After done with the value of *fullpath*, the caller will check if *freepath* is non-NULL, and if so, invoke free(9) with a pool type of M_TEMP.

RETURN VALUES

If the vnode is successfully converted to a pathname, 0 is returned; otherwise, an error number is returned.

SEE ALSO

free(9)

AUTHORS

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