

**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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