

NAME

pmap_extract, **pmap_extract_and_hold** - map a virtual address to a physical page

SYNOPSIS

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

```
#include <vm/vm.h>
```

```
#include <vm/pmap.h>
```

```
vm_paddr_t
```

```
pmap_extract(pmap_t pmap, vm_offset_t va);
```

```
vm_page_t
```

```
pmap_extract_and_hold(pmap_t pmap, vm_offset_t va, vm_prot_t prot);
```

DESCRIPTION

The **pmap_extract**() function maps a virtual address to a physical page. In certain situations, callers may use **pmap_extract_and_hold**() instead, to ensure that the returned page is held.

The **pmap_extract_and_hold**() function maps a virtual address to a physical page, and atomically holds the returned page for use by the caller, only if the mapping permits the given page protection.

IMPLEMENTATION NOTES

Currently, the page protection requested by the caller is not verified.

RETURN VALUES

The **pmap_extract**() function will return the physical page address associated with the virtual address *va* inside the physical map *pmap*. If the mapping does not exist, or if the *pmap* parameter is NULL, then NULL will be returned.

The **pmap_extract_and_hold**() function will return the *vm_page_t* associated with the virtual address *va* inside the physical map *pmap*. If the mapping does not exist, the result is a no-op, and NULL will be returned.

SEE ALSO

mutex(9), pmap(9)

AUTHORS

The **pmap_extract_and_hold**() function was implemented by Alan L. Cox <alc@imimic.com>. This manual page was written by Bruce M Simpson <bms@spc.org>.