

**NAME**

**vm\_map\_lock**, **vm\_map\_unlock**, **vm\_map\_lock\_read**, **vm\_map\_unlock\_read**, **vm\_map\_trylock**,  
**vm\_map\_trylock\_read**, **vm\_map\_lock\_upgrade**, **vm\_map\_lock\_downgrade** - vm\_map locking macros

**SYNOPSIS**

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

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

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

*void*

```
vm_map_lock(vm_map_t map);
```

*void*

```
vm_map_unlock(vm_map_t map);
```

*void*

```
vm_map_lock_read(vm_map_t map);
```

*void*

```
vm_map_unlock_read(vm_map_t map);
```

*int*

```
vm_map_trylock(vm_map_t map);
```

*int*

```
vm_map_trylock_read(vm_map_t map);
```

*int*

```
vm_map_lock_upgrade(vm_map_t map);
```

*int*

```
vm_map_lock_downgrade(vm_map_t map);
```

**DESCRIPTION**

The **vm\_map\_lock()** macro obtains an exclusive lock on *map*.

The **vm\_map\_unlock()** macro releases an exclusive lock on *map*.

The **vm\_map\_lock\_read()** macro obtains a read-lock on *map*.

The **vm\_map\_unlock\_read()** macro releases a read-lock on *map*.

The **vm\_map\_trylock()** macro attempts to obtain an exclusive lock on *map*. It returns FALSE if the lock cannot be immediately acquired; otherwise return TRUE with the lock acquired.

The **vm\_map\_trylock\_read()** macro attempts to obtain a read-lock on *map*. It returns FALSE if the lock cannot be immediately acquired; otherwise return TRUE with the lock acquired.

The **vm\_map\_lock\_upgrade()** macro attempts to atomically upgrade a read-lock on *map* to an exclusive lock.

The **vm\_map\_lock\_downgrade()** macro attempts to downgrade an exclusive lock on *map* to a read-lock.

## IMPLEMENTATION NOTES

Currently, all of the locking macros implement their locks as sleep locks.

## SEE ALSO

vm\_map(9)

## AUTHORS

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