



## ***Red Hat Enterprise Linux Release 9.2 Manual Pages on 'semaphore.h.0p' command***

***\$ man semaphore.h.0p***

semaphore.h(0P) POSIX Programmer's Manual semaphore.h(0P)

### PROLOG

This manual page is part of the POSIX Programmer's Manual. The Linux implementation of this interface may differ (consult the corresponding Linux manual page for details of Linux behavior), or the interface may not be implemented on Linux.

### NAME

semaphore.h ? semaphores

### SYNOPSIS

```
#include <semaphore.h>
```

### DESCRIPTION

The <semaphore.h> header shall define the `sem_t` type, used in performing semaphore operations. The semaphore may be implemented using a file descriptor, in which case applications are able to open up at least a total of `{OPEN_MAX}` files and semaphores.

The <semaphore.h> header shall define the symbolic constant `SEM_FAILED` which shall have type `sem_t *`.

The following shall be declared as functions and may also be defined as macros. Function prototypes shall be provided.

```
int sem_close(sem_t *);
int sem_destroy(sem_t *);
int sem_getvalue(sem_t *restrict, int *restrict);
int sem_init(sem_t *, int, unsigned);
```

```
sem_t *sem_open(const char *, int, ...);  
int sem_post(sem_t *);  
int sem_timedwait(sem_t *restrict, const struct timespec *restrict);  
int sem_trywait(sem_t *);  
int sem_unlink(const char *);  
int sem_wait(sem_t *);
```

Inclusion of the <semaphore.h> header may make visible symbols defined in the <fcntl.h> and <time.h> headers.

The following sections are informative.

## APPLICATION USAGE

None.

## RATIONALE

None.

## FUTURE DIRECTIONS

None.

## SEE ALSO

<fcntl.h>, <sys\_types.h>, <time.h>

The System Interfaces volume of POSIX.1?2017, `sem_close()`, `sem_de?stry()`, `sem_getvalue()`, `sem_init()`, `sem_open()`, `sem_post()`, `sem_timed?wait()`, `sem_trywait()`, `sem_unlink()`

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