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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'sys_sem.h.0p' command

\$ man sys_sem.h.0p

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

sys/sem.h ? XSI semaphore facility

SYNOPSIS

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

DESCRIPTION

The <sys/sem.h> header shall define the following symbolic constant for use as a semaphore operation flag:

SEM_UNDO Set up adjust on exit entry.

The <sys/sem.h> header shall define the following symbolic constants for use as commands for the semctl() function:

GETNCNT Get semncnt.

GETPID Get sempid.

GETVAL Get semval.

GETALL Get all cases of semval.

GETZCNT Get semzcnt.

SETVAL Set semval.

SETALL Set all cases of semval.

The <sys/sem.h> header shall define the semid_ds structure, which shall include the following members:

struct ipc_perm sem_perm Operation permission structure.

unsigned short sem_nsems Number of semaphores in set.

time_t sem_otime Last semop() time.

time_t sem_ctime Last time changed by semctl().

The <sys/sem.h> header shall define the pid_t, size_t, and time_t types as described in <sys/types.h>.

A semaphore shall be represented by an anonymous structure, which shall include the following members:

unsigned short semval Semaphore value.

pid_t sempid Process ID of last operation.

unsigned short semncnt Number of processes waiting for semval
to become greater than current value.

unsigned short semzcnt Number of processes waiting for semval
to become 0.

The <sys/sem.h> header shall define the sembuf structure, which shall include the following members:

unsigned short sem_num Semaphore number.

short sem_op Semaphore operation.

short sem_flg Operation flags.

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

int semctl(int, int, int, ...);

int semget(key_t, int, int);

int semop(int, struct sembuf *, size_t);

In addition, the <sys/sem.h> header shall include the <sys/ipc.h> header.

The following sections are informative.

APPLICATION USAGE

None.

RATIONALE

None.

FUTURE DIRECTIONS

None.

SEE ALSO

`<sys_ipc.h>`, `<sys_types.h>`

The System Interfaces volume of POSIX.1-2017, `semctl()`, `semget()`, `semop()`

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`sys_sem.h(0P)`