NAME

semget – get set of semaphores

SYNOPSIS

#include <sys/types.h>
#include <sys/ipc.h>
#include <sys/sem.h>

int semget(key_t *key***, int** *nsems***, int** *semflg***);**

DESCRIPTION

semget( ) returns the semaphore identifier associated with *key*.

A semaphore identifier and associated data structure and set containing *nsems* semaphores (see **intro**(2)) are created for *key* if one of the following is true:

- *key* is equal to **IPC_PRIVATE**.
- *key* does not already have a semaphore identifier associated with it, and (*semflg***&IPC_CREAT**) is true.

On creation, the data structure associated with the new semaphore identifier is initialized as follows:

- **sem_perm.cuid**, **sem_perm.uid**, **sem_perm.cgid**, and **sem_perm.gid** are set equal to the effective user ID and effective group ID, respectively, of the calling process.
- The access permission bits of **sem_perm.mode** are set equal to the access permission bits of *semflg*.
- **sem_nsems** is set equal to the value of *nsems*.
- **sem_otime** is set equal to 0 and **sem_ctime** is set equal to the current time.

RETURN VALUES

Upon successful completion, a non-negative integer, namely a semaphore identifier, is returned; otherwise, **–1** is returned and **errno** is set to indicate the error.

ERRORS

semget( ) fails if one or more of the following are true:

EACCES A semaphore identifier exists for *key*, but operation permission (see **intro**(2)) as specified by the low-order 9 bits of *semflg* would not be granted.

EEXIST A semaphore identifier exists for *key* but both (*semflg***&IPC_CREAT**) and (*semflg***&IPC_EXCL**) are both true.

EINVAL *nsems* is either less than or equal to zero or greater than the system-imposed limit.

EINVAL A semaphore identifier exists for *key*, but the number of semaphores in the set associated with it is less than *nsems*, and *nsems* is not equal to zero.

ENOENT A semaphore identifier does not exist for *key* and (*semflg***&IPC_CREAT**) is false.

ENOSPC A semaphore identifier is to be created but the system-imposed limit on the maximum number of allowed semaphore identifiers system wide would be exceeded.

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SEE ALSO

ipcs(1), **ipcrm**(1), **intro**(2), **semctl**(2), **semop**(2), **stdipc**(3C)