

NAME

IPC::Semaphore - SysV Semaphore IPC object class

SYNOPSIS

```
use IPC::SysV qw(IPC_PRIVATE S_IRUSR S_IWUSR IPC_CREAT);
use IPC::Semaphore;

$sem = IPC::Semaphore->new(IPC_PRIVATE, 10, S_IRUSR | S_IWUSR | IPC_CREAT);

$sem->setall( (0) x 10);

@sem = $sem->getall;

$ncnt = $sem->getncnt;

$zcnt = $sem->getzcnt;

$ds = $sem->stat;

$sem->remove;
```

DESCRIPTION

A class providing an object based interface to SysV IPC semaphores.

METHODS

`new (KEY , NSEMS , FLAGS)`

Create a new semaphore set associated with `KEY`. `NSEMS` is the number of semaphores in the set. A new set is created if

- `KEY` is equal to `IPC_PRIVATE`
- `KEY` does not already have a semaphore identifier associated with it, and `FLAGS & IPC_CREAT` is true.

On creation of a new semaphore set `FLAGS` is used to set the permissions. Be careful not to set any flags that the Sys V IPC implementation does not allow: in some systems setting execute bits makes the operations fail.

`getall`

Returns the values of the semaphore set as an array.

`getncnt (SEM)`

Returns the number of processes waiting for the semaphore `SEM` to become greater than its current value

`getpid (SEM)`

Returns the process id of the last process that performed an operation on the semaphore `SEM`.

`getval (SEM)`

Returns the current value of the semaphore `SEM`.

`getzcnt (SEM)`

Returns the number of processes waiting for the semaphore `SEM` to become zero.

`id` Returns the system identifier for the semaphore set.

`op (OPLIST)`

`OPLIST` is a list of operations to pass to `semop`. `OPLIST` is a concatenation of smaller lists, each which has three values. The first is the semaphore number, the second is the operation and the last is a flags value. See `semop` for more details. For example

```

    $sem->op(
    0, -1, IPC_NOWAIT,
    1, 1, IPC_NOWAIT
    );

```

remove

Remove and destroy the semaphore set from the system.

set (STAT)

set (NAME => VALUE [, NAME => VALUE ...])

set will set the following values of the **stat** structure associated with the semaphore set.

```

    uid
    gid
    mode (only the permission bits)

```

set accepts either a **stat** object, as returned by the **stat** method, or a list of *name-value* pairs.

setall (VALUES)

Sets all values in the semaphore set to those given on the **VALUES** list. **VALUES** must contain the correct number of values.

setval (N , VALUE)

Set the Nth value in the semaphore set to **VALUE**

stat

Returns an object of type `IPC::Semaphore::stat` which is a sub-class of `Class::Struct`. It provides the following fields. For a description of these fields see your system documentation.

```

    uid
    gid
    cuid
    cgid
    mode
    ctime
    otime
    nsems

```

SEE ALSO

[IPC::SysV](#), [Class::Struct](#), [semget](#), [semctl](#), [semop](#)

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