

## 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 `N`th 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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