

**NAME**

IPC::Semaphore - SysV Semaphore IPC object class

**SYNOPSIS**

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

$sem = new IPC::Semaphore(IPC_PRIVATE, 10, S_IRWXU | 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.

**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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