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Rocky Enterprise Linux 9.2 Manual Pages on command 'Apache::Session::Lock::Semaphore.3pm'

\$ man Apache::Session::Lock::Semaphore.3pm

Apache::Session::Lock::SemaphorUsermContributed Perl DocumenApache::Session::Lock::Semaphore(3pm)

NAME

Apache::Session::Lock::Semaphore - Provides mutual exclusion through semaphores

SYNOPSIS

```
use Apache::Session::Lock::Semaphore;

my $locker = Apache::Session::Lock::Semaphore->new;

die "no semaphores" unless $locker;

$locker->acquire_read_lock($ref);

$locker->acquire_write_lock($ref);

$locker->release_read_lock($ref);

$locker->release_write_lock($ref);

$locker->release_all_locks($ref);
```

DESCRIPTION

Apache::Session::Lock::semaphore fulfills the locking interface of Apache::Session.

Mutual exclusion is achieved through system semaphores and the IPC::Semaphore module.

CONFIGURATION

The module must know how many semaphores to use, and what semaphore key to use. The number of semaphores has an impact on performance. More semaphores means less lock contention.

You should use the maximum number of semaphores that your platform will allow. On stock

NetBSD, OpenBSD, and Solaris systems, this is probably 16. On Linux 2.2, this is 32. This

module tries to guess the number based on your operating system, but it is safer to

configure it yourself.

To set the number of semaphores, you need to pass an argument in the usual Apache::Session

style. The name of the argument is NSems, and the value is an integer power of 2. For example:

```
tie %s, 'Apache::Session::Blah', $id, {NSems => 16};
```

You may also need to configure the semaphore key that this package uses. By default, it uses key 31818. You can change this using the argument SemaphoreKey:

```
tie %s, 'Apache::Session::Blah', $id, {NSems => 16, SemaphoreKey => 42};
```

PROBLEMS

There are a few problems that people frequently encounter when using this package.

If you get an invalid argument message, that usually means that the system is unhappy with the number of semaphores that you requested. Try decreasing the number of semaphores.

The semaphore blocks that this package creates are persistent until the system is rebooted, so if you request 8 semaphores one time and 16 semaphores the next, it won't work. Use the system commands `ipcs` and `ipcrm` to inspect and remove unwanted semaphore blocks.

Cygwin

IPC on Cygwin requires running `cygserver`. Without it, program will exit with "Bad System call" message. It cannot be intercepted with `eval`.

Read `/usr/share/doc/Cygwin/cygserver.README` for more information.

Darwin/MacOS X

Darwin and MacOS X may not have semaphores, see <http://sysnet.ucsd.edu/~bellardo/darwin/sysvsem.html>

*BSD

Error "No space left on device" means that maximum number of semaphores is reached. See <http://www.postgresql.org/docs/7.3/static/kernel-resources.html> for more information.

AUTHOR

This module was written by Jeffrey William Baker <jwbaker@acm.org>.

SEE ALSO

`Apache::Session`

perl v5.30.3

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`Apache::Session::Lock::Semaphore(3pm)`