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Subject: [PATCH netdev] "wrong timeout value" in sk\_wait\_data()

Posted by [vaverin](#) on Thu, 24 May 2007 04:22:03 GMT

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sys\_setsockopt() do not check properly timeout values for SO\_RCVTIMEO/SO\_SNDTIMEO, for example it's possible to set negative timeout values. POSIX do not defines behaviour for sys\_setsockopt in case negative timeouts, but requires that setsockopt() shall fail with -EDOM if the send and receive timeout values are too big to fit into the timeout fields in the socket structure.

In current implementation negative timeout can lead to error messages like "schedule\_timeout: wrong timeout value".

Proposed patch:

- checks tv\_usec and returns -EDOM if it is wrong
- do not allows to set negative timeout values (sets 0 instead) and outputs ratelimited information message about such attempts.

Signed-Off-By: Vasily Averin <[vvvs@sw.ru](mailto:vvvs@sw.ru)>

```
diff --git a/net/core/sock.c b/net/core/sock.c
index 22183c2..27d7a46 100644
--- a/net/core/sock.c
+++ b/net/core/sock.c
@@ -206,7 +206,19 @@ static int sock_set_timeout(long *timeo_p, char __user
*optval, int optlen)
    return -EINVAL;
    if (copy_from_user(&tv, optval, sizeof(tv)))
    return -EFAULT;
-
+ if (tv.tv_usec < 0 || tv.tv_usec >= 1000000)
+ return -EDOM;
+
+ if (tv.tv_sec < 0) {
+ static int warned = 0;
+ *timeo_p = 0;
+ if (warned < 10 && net_ratelimit())
+ warned++;
+ printk(KERN_INFO "sock_set_timeout: `%s' (pid %d) "
+ "tries to set negative timeout\n",
+ current->comm, current->pid);
+ return 0;
+ }
*timeo_p = MAX_SCHEDULE_TIMEOUT;
if (tv.tv_sec == 0 && tv.tv_usec == 0)
return 0;
```

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Subject: Re: [PATCH netdev] "wrong timeout value" in sk\_wait\_data()

Posted by [Eric Dumazet](#) on Thu, 24 May 2007 04:36:05 GMT

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Vasily Averin a écrit :

> sys\_setsockopt() do not check properly timeout values for  
> SO\_RCVTIMEO/SO\_SNDBTIMEO, for example it's possible to set negative timeout  
> values. POSIX do not defines behaviour for sys\_setsockopt in case negative  
> timeouts, but requires that setsockopt() shall fail with -EDOM if the send and  
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> Signed-Off-By: Vasily Averin <[vvs@sw.ru](mailto:vvs@sw.ru)>

>

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> --- a/net/core/sock.c

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> \*optval, int optlen)

> return -EINVAL;

> if (copy\_from\_user(&tv, optval, sizeof(tv)))

> return -EFAULT;

> -

> + if (tv.tv\_usec < 0 || tv.tv\_usec >= 1000000)

> + return -EDOM;

Please use USEC\_PER\_SEC instead of 1000000

> +

> + if (tv.tv\_sec < 0) {

> + static int warned = 0;

> + \*timeo\_p = 0;

> + if (warned < 10 && net\_ratelimit())

> + warned++;

> + printk(KERN\_INFO "sock\_set\_timeout: `%s' (pid %d) "

> + "tries to set negative timeout\n",

> + current->comm, current->pid);

> + return 0;

> + }

> \*timeo\_p = MAX\_SCHEDULE\_TIMEOUT;

> if (tv.tv\_sec == 0 && tv.tv\_usec == 0)

```
> return 0;
>
```

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Subject: [PATCH netdev] "wrong timeout value" in sk\_wait\_data() v2

Posted by [vaverin](#) on Thu, 24 May 2007 05:23:14 GMT

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sys\_setsockopt() do not check properly timeout values for SO\_RCVTIMEO/SO\_SNDTIMEO, for example it's possible to set negative timeout values. POSIX do not defines behaviour for sys\_setsockopt in case negative timeouts, but requires that setsockopt() shall fail with -EDOM if the send and receive timeout values are too big to fit into the timeout fields in the socket structure.

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Signed-Off-By: Vasily Averin <[vvs@sw.ru](mailto:vvs@sw.ru)>

```
diff --git a/net/core/sock.c b/net/core/sock.c
index 22183c2..7e51d3a 100644
--- a/net/core/sock.c
+++ b/net/core/sock.c
@@ -206,7 +206,19 @@ static int sock_set_timeout(long *timeo_p, char __user
*optval, int optlen)
    return -EINVAL;
    if (copy_from_user(&tv, optval, sizeof(tv)))
    return -EFAULT;
-
+ if (tv.tv_usec < 0 || tv.tv_usec >= USEC_PER_SEC)
+ return -EDOM;
+
+ if (tv.tv_sec < 0) {
+ static int warned = 0;
+ *timeo_p = 0;
+ if (warned < 10 && net_ratelimit())
+ warned++;
+ printk(KERN_INFO "sock_set_timeout: `%s' (pid %d) "
+ "tries to set negative timeout\n",
+ current->comm, current->pid);
+ return 0;
+ }
*timeo_p = MAX_SCHEDULE_TIMEOUT;
```

```
if (tv.tv_sec == 0 && tv.tv_usec == 0)
return 0;
```

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Subject: Re: [PATCH netdev] "wrong timeout value" in sk\_wait\_data() v2  
Posted by [davem](#) on Thu, 24 May 2007 23:59:47 GMT  
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From: Vasily Averin <[vvs@sw.ru](mailto:vvs@sw.ru)>  
Date: Thu, 24 May 2007 09:23:14 +0400

> sys\_setsockopt() do not check properly timeout values for  
> SO\_RCVTIMEO/SO\_SNDTIMEO, for example it's possible to set negative timeout  
> values. POSIX do not defines behaviour for sys\_setsockopt in case negative  
> timeouts, but requires that setsockopt() shall fail with -EDOM if the send and  
> receive timeout values are too big to fit into the timeout fields in the socket  
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>  
> Proposed patch:  
> - checks tv\_usec and returns -EDOM if it is wrong  
> - do not allows to set negative timeout values (sets 0 instead) and outputs  
> ratelimited information message about such attempts.  
>  
> Signed-Off-By: Vasily Averin <[vvs@sw.ru](mailto:vvs@sw.ru)>

Thank you for this bug fix, patch applied.

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