Subject: How to reset the failcount (failcnt) in /dev/user_beancounters ?
Posted by bjmg on Wed, 15 Mar 2006 11:33:37 GMT
View Forum Message <> Reply to Message

Hi,

How can I reaset the failcount in /dev/user_beancounters ?
In previous cases I just restarted the hardware node to be sure that everything is is a defined state.
Because this time I have to do this on a production system I don't want to reboot the hardware node. I hope there is a another way to do this without even restarting any of the VPSs. If so, please explain it to me (or just say it is described in document X).

Bernhard

Subject: Re: How to reset the failcount (failcnt) in /dev/user_beancounters ?
Posted by kir on Wed, 15 Mar 2006 12:05:09 GMT
View Forum Message <> Reply to Message

AFAIK there is no way to reset failcnt in /proc/user_beancounters without restarting an appropriate VPS. This is actually a valid behaviour since there can be many different programs reading those values, and they should not expect those values to suddenly go down to zero.

So what you should do is to collect the current values and later check against them. For the 'problematic' VPSs I usually employ a cron job which periodically cats /proc/user_beancounters to a file, together with a timestamp.

A simple shell script can also be written to mail a sysadmin about "bad" changes in /proc/user_beancounters.

Subject: Re: How to reset the failcount (failcnt) in /dev/user_beancounters ?
Posted by bjmg on Wed, 15 Mar 2006 12:17:25 GMT
View Forum Message <> Reply to Message

A simple restart of the VPS does not work. The failcounts are still on the same level. Anyway I'll just write a script that reports changes on failcounts to me.

Bernhard

Subject: Re: How to reset the failcount (failcnt) in /dev/user_beancounters ?
Posted by kir on Wed, 15 Mar 2006 12:56:00 GMT
View Forum Message <> Reply to Message

Quote:A simple restart of the VPS does not work.

That tells that there is some UBC leak (incorrect counting). What kernel are you using? Do you have some strange messages from the kernel? Can you post the output of /proc/user_beancounters for the given VPS when this VPS is stopped (some 'usage' counters should be > 0, thus failcnt is not being reset).

Subject: Re: How to reset the failcount (failcnt) in /dev/user_beancounters ?
Posted by bjmg on Wed, 15 Mar 2006 13:35:58 GMT
View Forum Message <> Reply to Message

Here is the data:

user_beancounters (before stop of VPS 22114):

```
    22114: kmemsize       8006290   12162801  131972572  145169828   20533210
           lockedpages          0          0       6442       6442          0
           privvmpages      84085     112592     144989     159487          0
           shmpages           671       1978      14498      14498          0
           dummy                0          0          0          0          0
           numproc            113        183       5332       5332         24
           physpages        37958      65609          0 2147483647          0
           vmguarpages          0          0     144989 2147483647          0
           oomguarpages     39682      66342     144989 2147483647          0
           numtcpsock          30        127       5332       5332       1347
           numflock            13         31       1000       1100          0
           numpty               2          5        512        512          0
           numsiginfo           0         50       1024       1024          0
           tcpsndbuf        31192     739696   22150986   43990858       1549
           tcprcvbuf         2228     300780   22150986   43990858          0
           othersockbuf    187152     430392   11075492   32915364          0
           dgramrcvbuf          0     169328   11075492   11075492          0
           numothersock       153        193       5332       5332          0
           dcachesize      357099     466733   28811184   29675520          0
           numfile           1084       1593      51520      51520          0
           dummy                0          0          0          0          0
           dummy                0          0          0          0          0
           dummy                0          0          0          0          0
           numiptent          143        143        200        200          0
```

user_beancounters (after stop of VPS 22114)

```
    22114: kmemsize          1177   12162801  131972572  145169828   20533210
           lockedpages          0          0       6442       6442          0
           privvmpages          0     112592     144989     159487          0
           shmpages             0       1978      14498      14498          0
           dummy                0          0          0          0          0
           numproc              0        183       5332       5332         24
```

```
        physpages            0      65609          0 2147483647          0
        vmguarpages          0          0     144989 2147483647          0
        oomguarpages        14      66342     144989 2147483647          0
        numtcpsock           0        127       5332       5332       1347
        numflock             0         31       1000       1100          0
        numpty               0          5        512        512          0
        numsiginfo           0         50       1024       1024          0
        tcpsndbuf            0     739696   22150986   43990858       1549
        tcprcvbuf            0     300780   22150986   43990858          0
        othersockbuf         0     430392   11075492   32915364          0
        dgramrcvbuf          0     169328   11075492   11075492          0
        numothersock         0        193       5332       5332          0
        dcachesize           0     466733   28811184   29675520          0
        numfile              0       1593      51520      51520          0
        dummy                0          0          0          0          0
        dummy                0          0          0          0          0
        dummy                0          0          0          0          0
        numiptent            0        143        200        200          0
```

user_beancounters (after start of VPS 22114):

```
    22114: kmemsize        6021807   12162801  131972572  145169828   20533210
        lockedpages          0          0       6442       6442          0
        privvmpages      67938     112592     144989     159487          0
        shmpages            26       1978      14498      14498          0
        dummy                0          0          0          0          0
        numproc             87        183       5332       5332         24
        physpages        24228      65609          0 2147483647          0
        vmguarpages          0          0     144989 2147483647          0
        oomguarpages     24242      66342     144989 2147483647          0
        numtcpsock          20        127       5332       5332       1347
        numflock            16         31       1000       1100          0
        numpty               0          5        512        512          0
        numsiginfo           0         50       1024       1024          0
        tcpsndbuf        33420     739696   22150986   43990858       1549
        tcprcvbuf            0     300780   22150986   43990858          0
        othersockbuf    158188     430392   11075492   32915364          0
        dgramrcvbuf          0     169328   11075492   11075492          0
        numothersock       138        193       5332       5332          0
        dcachesize      345619     466733   28811184   29675520          0
        numfile            912       1593      51520      51520          0
        dummy                0          0          0          0          0
        dummy                0          0          0          0          0
        dummy                0          0          0          0          0
        numiptent          143        143        200        200          0
```

uname:

Linux master.mediadesign-gruen.de 2.6.8-022stab070.1-enterprise #1 SMP Mon Feb 20 19:31:28 MSK 2006 i686 athlon i386 GNU/Linux

This is an excerpt of dmesg output:
(not only from that stop - start event but all relevant infos I found)

VPS: 22114: started
Unable to load interpreter
Unable to load interpreter
Unable to load interpreter
VPS: 22114: stopped
...
VPS: 22114: started
Fatal resource shortage: numiptent, UB 22114.
Fatal resource shortage: numiptent, UB 22114.
Fatal resource shortage: numiptent, UB 22114.
Fatal resource shortage: numiptent, UB 22114.
VPS: 22114: stopped
...
VPS: 22114: started
Out of socket memory
Out of socket memory
Out of socket memory
Out of socket memory
Out of socket memory
VPS: 22114: stopped
...
VPS: 22114: started
TCP: time wait bucket table overflow
TCP: time wait bucket table overflow
TCP: time wait bucket table overflow
TCP: time wait bucket table overflow
VPS: 22114: stopped
...
...
TCP: time wait bucket table overflow
TCP: time wait bucket table overflow
TCP: time wait bucket table overflow
TCP: time wait bucket table overflow
TCP: too many of orphaned sockets
TCP: too many of orphaned sockets
TCP: too many of orphaned sockets
TCP: too many of orphaned sockets
TCP: too many of orphaned sockets
TCP: too many of orphaned sockets

TCP: too many of orphaned sockets
VPS: 22114: stopped
VPS: 22114: started
[no problem memory problems since that point - but still high failcount]
...
VPS: 22114: stopped
VPS: 22114: started
[this is the restart I did for getting the infos above]

I hope this helps debugging it.
I can also provide a psaux output (with VPS 22114 stoped).

Bernhard

Subject: Re: How to reset the failcount (failcnt) in /dev/user_beancounters ?
Posted by kir on Wed, 15 Mar 2006 14:23:34 GMT
View Forum Message <> Reply to Message

Thanks for the response!

Apparently, as a neighbour kernel hacker just explained me, this is not a bug.

The problem is tcp time wait buckets are still there after VPS is stopped, thus we are having >0 kmemsize. They should go away after a timeout (5 minutes or so), after that kmemsize will be set (zeroed) and fail counters should be reset to zero.

'oomguarpages > 0' is known bug; the good thing is fail counters will be reset even with oomguarpages > 0.

So, you have two options
(1) stop VPS and wait 5 minutes or so
(2) check the difference of failcnts, not their absolute values.

Subject: Re: How to reset the failcount (failcnt) in /dev/user_beancounters ?
Posted by kir on Thu, 13 Jul 2006 08:03:01 GMT
View Forum Message <> Reply to Message

The info from this thread has been summarized at wiki: UBC failcnt reset.
