
Subject: ip_conntrack: CT 0: table full, dropping packet.

Posted by [mavines](#) on Tue, 27 Oct 2009 01:55:10 GMT

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Hi,

I have the major problem with networking - /var/log/messages reports this:
ip_conntrack: CT 0: table full, dropping packet.

And I have CentOS 5.4, kernel:

```
Linux 2.6.18-128.2.1.el5.028stab064.7xen #1 SMP Wed Aug 26 16:41:55 MSD 2009 x86_64
x86_64 x86_64 GNU/Linux
```

ip rule list

```
0: from all lookup 255
32766: from all lookup main
32767: from all lookup default
```

the iptables rules are attached, tcpdump is attached as well.

here is the lsmod of main server:

Module	Size	Used by
iptable_nat	43532	0
tun	47872	2
xt_physdev	35984	0
bridge	94384	1 xt_physdev
netloop	40324	0
netbk	129984	0 [permanent]
blktap	151460	2 [permanent]
blkbk	54712	0 [permanent]
vzethdev	47520	0
vznetdev	56848	8
simfs	38296	4
vzrst	172968	0
ip_nat	53392	2 iptable_nat,vzrst
vzcpt	150840	0
vzdquota	78320	4 [permanent]
vzmon	83864	8 vzethdev,vznetdev,vzrst,vzcpt
vzdev	36872	4 vzethdev,vznetdev,vzdquota,vzmon
xt_tcpmss	35328	0
ipt_tos	34560	0
xt_tcpudp	36224	245
xt_conntrack	36352	0
ip_conntrack_irc	41168	0
xt_state	35200	23
ip_conntrack_ftp	42192	0

```

xt_multiport      36224 4
xt_length         34944 0
xt_mac            34944 0
xt_limit          36352 46
ipt_TCPMSS        37248 1
iptables_mangle   37888 5
iptables_filter   37760 6
ipt_TOS           35200 14
ipt_ULOG          42504 0
ip_conntrack      100884 8 iptable_nat,vzrst,ip_nat,vzcpt,xt_conntrack,ip_conntrack_irc
,xt_state,ip_conntrack_ftp
ipt_recent        43404 45
ipt_ecn           35200 0
ipt_owner         34944 0
ip_tables         57440 3 iptable_nat,iptables_mangle,iptables_filter
ipt_ttl           34816 0
ipt_REJECT        39684 42
ipt_LOG           39808 40
nfnetlink         40392 2 ip_nat,ip_conntrack
x_tables          52616 21 iptable_nat,xt_physdev,xt_tcpmss,ipt_tos,xt_tcpudp,xt_connr
ack,xt_state,xt_multiport,xt_length,xt_mac,xt_limit,ipt_TCPM
SS,ipt_TOS,ipt_ULOG,ipt_recent,ipt_ecn,ipt_owner,ip_tables,i pt_ttl,ipt_REJECT,ipt_LOG
autofs4           57480 2
hidp              83584 2
rfcomm            104872 0
l2cap             89216 10 hidp,rfcomm
bluetooth         118916 5 hidp,rfcomm,l2cap
lockd             101776 0
sunrpc            201416 2 lockd
ipv6              456124 435 vzrst,vzcpt,vzmon
xfrm_nalgo        43268 1 ipv6
crypto_api        42880 1 xfrm_nalgo
ib_iser           66936 0
rdma_cm           67092 1 ib_iser
ib_cm             67752 1 rdma_cm
iw_cm             43400 1 rdma_cm
ib_sa             74760 2 rdma_cm,ib_cm
ib_mad            70820 2 ib_cm,ib_sa
ib_core           93700 6 ib_iser,rdma_cm,ib_cm,iw_cm,ib_sa,ib_mad
ib_addr           42128 1 rdma_cm
iscsi_tcp         57856 0
libiscsi          63488 2 ib_iser,iscsi_tcp
scsi_transport_iscsi 66960 5 ib_iser,iscsi_tcp,libiscsi
loop              48656 4
dm_mirror         54280 0
dm_multipath      55192 0
scsi_dh           41600 1 dm_multipath
raid0             40448 1

```

```

video          53004 0
hwmon          36488 0
backlight     39808 1 video
sbs           49856 0
i2c_ec        38528 1 sbs
container     37760 0
button        40480 0
battery       43784 0
asus_acpi     50724 0
ac            38664 0
lp            47056 0
snd_hda_intel 481584 0
snd_seq_dummy 36996 0
snd_seq_oss   65408 0
snd_seq_midi_event 40960 1 snd_seq_oss
snd_seq       87968 5 snd_seq_dummy,snd_seq_oss,snd_seq_midi_event
snd_seq_device 41492 3 snd_seq_dummy,snd_seq_oss,snd_seq
snd_pcm_oss   77440 0
snd_mixer_oss 49920 1 snd_pcm_oss
snd_pcm       116872 2 snd_hda_intel,snd_pcm_oss
snd_timer     57224 2 snd_seq,snd_pcm
snd_page_alloc 43920 2 snd_hda_intel,snd_pcm
r8169         71172 0
snd_hwdep     43528 1 snd_hda_intel
snd           99496 9 snd_hda_intel,snd_seq_oss,snd_seq,snd_seq_device,snd_pcm_oss
,snd_mixer_oss,snd_pcm,snd_timer,snd_hwdep
mii           38784 1 r8169
i2c_i801      41620 0
soundcore     41760 1 snd
parport_pc    62248 1
pcspkr        36224 0
i2c_core      56064 2 i2c_ec,i2c_i801
ohci1394      67928 0
shpchp        70572 0
parport       73868 2 lp,parport_pc
ieee1394      390648 1 ohci1394
r8168         95000 0
sg            69544 0
serial_core   56192 0
dm_raid45     98704 0
dm_message    36096 1 dm_raid45
dm_region_hash 46336 1 dm_raid45
dm_log        44800 3 dm_mirror,dm_raid45,dm_region_hash
dm_mod        100560 4 dm_mirror,dm_multipath,dm_raid45,dm_log
dm_mem_cache  39424 1 dm_raid45
ahci          68744 4
libata        208784 1 ahci
sd_mod        56448 7

```

```
scsi_mod          197528 8 ib_iser,iscsi_tcp,libiscsi,scsi_transport_iscsi,scsi_dh,sg,l
ibata,sd_mod
ext3              168848 2
jbd              102512 1 ext3
uhci_hcd          57496 0
ohci_hcd          55988 0
ehci_hcd          65676 0
```

So, firstly I had a problem with orphaned sockets (it persisted about 6 months, but I did not paid enough attention), then server started to fail and I somehow fixed the problem with orphaned sockets at CT300. But instead I've got the problem with ip_contrack which lasts for 2 weeks already and I am not able to figure out why.

sysctl -A output is also attached.

So, my server for now gets overflowed at least once by day and I have to increase max value for ip_contrack, but this helps only for few hours, then I have to reboot the server or it just hangs without response.

I was suspecting that this is an attack (like DDoS) but even when the server has very few connections, it gets overflowed. And that is really nasty.

Can you please help with that?

Yes, another detail - I have 4 OpenVZ VPSs and 2 XEN VPSs running on the same server. It has 8 GB RAM and 1.5 TB HDD - Core Quad Intel CPU.

File Attachments

- 1) [iptables_rules.txt](#), downloaded 605 times
 - 2) [tcpdump.txt](#), downloaded 580 times
 - 3) [sysctl.txt](#), downloaded 592 times
-

Subject: Re: ip_contrack: CT 0: table full, dropping packet.

Posted by [kir](#) on Tue, 27 Oct 2009 09:33:56 GMT

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This is not really openvz specific, google for ip_contrack table full dropping packet and you will find the answers.

In short -- check why there are so many entries by analyzing /proc/net/ip_contrack, and either fix the issues found (maybe somebody is attacking you), or increase /proc/sys/net/ipv4/ip_contrack_max.

Subject: Re: ip_contrack: CT 0: table full, dropping packet.

Posted by [mavines](#) on Tue, 27 Oct 2009 10:59:59 GMT

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Thanks for the answer. Obviously I did the google search for my problem. I thought it is attack - but really it is not. Even my own connections to server stays in the /proc/net/ip_contrack for long time. As I told, I was increasing the /proc/sys/net/ipv4/ip_contrack_max even 4x, but still this does not fix the issue. Further more, as soon as OpenVZ (service vz restart) restart - the /proc/sys/net/ipv4/ip_contrack_max comes back to initial value. Even though I have it hard written in the /etc/sysctl.conf file. So, I am actually not able to fix the issue myself. I was trying to do this for 2 weeks long and still no good solution. Most of google search advices to increase max contrack number. I did so. Others tell that this is possibly attack - I've blocked almost the whole internet - still nothing - contrack stack gets full once per day. So, I hope OpenVZ gurus can advice something here.

Thanks and regards,
Maksym.

Subject: Re: ip_contrack: CT 0: table full, dropping packet.

Posted by [mavines](#) on Tue, 27 Oct 2009 11:13:02 GMT

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in addition - all connections, which are in /proc/net/ip_contrack are to CT 300 IP to port 80. And CT 300 is the exact OpenVZ VPS which previously had issues with orphaned sockets. So, previously it threwed this error:

Orphaned socket dropped (187,374 in CT300)
For now it throws this:
ip_contrack: CT 0: table full, dropping packet.

But still all connections which are in /proc/net/ip_contrack goes to CT 300 - apache. The main hardware server (CT 0) does not have apache installed at all.

Regards,
Maksym.

Subject: Re: ip_contrack: CT 0: table full, dropping packet.

Posted by [kir](#) on Tue, 27 Oct 2009 12:54:26 GMT

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Do you have any UBC failures for CT300?

Subject: Re: ip_contrack: CT 0: table full, dropping packet.

Posted by [mavines](#) on Tue, 27 Oct 2009 14:04:35 GMT

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Here are UBC dump for CT300:

vzctl exec 300 cat /proc/user_beancounters

Version: 2.5

uid	resource	held	maxheld	barrier	limit	failcnt
300:	kmemsize	24701900	42827273	57490800		59160657
0	lockedpages	0	0	1024	1024	0
0	privvmpages	331898	420450	524288	524288	
0	shmpages	925	1581	86016	86016	0
0	dummy	0	0	0	0	0
0	numproc	235	368	960	960	0
0	physpages	74167	94828	0	2147483647	
0	vmguarpages	0	0	135168	2147483647	
0	oomguarpages	74167	94828	104448	2147483647	
0	numtcpsock	103	303	1440	1440	0
0	numflock	4	8	752	824	0
0	numpty	1	2	64	64	0
0	numsignifo	0	12	1024	1024	0
0	tcpsndbuf	855824	1366528	6881280	10813440	
0	tcprcvbuf	844976	1226352	6881280	10813440	
0	othersockbuf	356496	497248	4504320	8388608	
0	dgramrcvbuf	0	70464	1048576	1048576	
0	numothersock	165	194	1440	1440	0
0	dcachesize	0	0	13639680	14499840	0
0	numfile	3786	5048	37248	37248	0
0	dummy	0	0	0	0	0
0	dummy	0	0	0	0	0
0	dummy	0	0	0	0	0
0	numiptent	10	10	512	512	0