Subject: Re: Clock Drift / NTPd - CentOS OpenVZ Host - Problems
Posted by tchipman on Tue, 26 Sep 2006 13:20:13 GMT
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Hi All,

so, some results with a semi-happy-ending. Can't say I understand the mess fully, but at least we have a stopgap that is less hideous.

Basic Summary:

(0) Starting point: was running with unreliable NTP, Booted on "RHEL-Unsupported" OpenVZ pre-complied Kernel.

(1) rebooted the machine using a stock nonVZ kernel for CentOS. Let ntp try to keep the clock synched. After 5 minutes it established a reliable synch that seemed to hold.

(2) Rebooted the machine to Stock Production VZ Kernel (not the RHEL "unsupported" VZ kernel). Started NTP. It refused to synch, held only to local pseudo-clock and then began to drift again.

(3) Applied some tweaks to the ntp config, and was able to force NTP to synch.

If anyone has thoughts about why this behaviour is here, I'm all ears. It does appear to suggest an issue with this OpenVZ kernel on my hardware being part of the problem, since a stock CentOS kernel wasn't giving any problems.

---Tim

Exact notes follow below:

(0) STARTING POINT KERNEL:

Grub entry describes it thus:

```
title CentOS (2.6.9-023stab016.2-smp) OpenVZ RHEL Kernel Aug-26-06
        root (hd0,1)
        kernel /vmlinuz-2.6.9-023stab016.2-smp ro root=/dev/md3 console=ttyS0,38400 acpi=off
        initrd /initrd-2.6.9-023stab016.2-smp.img
```

This is pulled via yum-installation using OpenVZ RPM Repo source. With this kernel booted, the NTP drifts terribly (1 second per minute approx)

(1) Reboot to stock kernel, described by grub entry:

```
title CentOS (2.6.9-42.0.2.ELsmp) CentOS NO OpenVZ Kernel Aug-24-06
        root (hd0,1)
```

kernel /vmlinuz-2.6.9-42.0.2.ELsmp ro root=/dev/md3 console=ttyS0,38400 acpi=off
initrd /initrd-2.6.9-42.0.2.ELsmp.img

With this kernel booted (vz hosts down, vz not running) the NTP synch works great.

(2) Reboot using Official VZ Kernel:

title CentOS (2.6.8-022stab078.14-smp) OpenVZ Official Aug-24-06
root (hd0,1)
kernel /vmlinuz-2.6.8-022stab078.14-smp ro root=/dev/md3 console=ttyS0,38400 acpi=off
initrd /initrd-2.6.8-022stab078.14-smp.img

With this kernel booted, VZ hosts running, the NTP drift is back.

THEN:

(3) as per hints pulled from the URL:

http://www.djack.com.pl/modules.php?name=FAQ&myfaq=yes&a
mp;xmyfaq=yes&id_cat=3&id=132

Specifically, I added to my ntp config:

server 13X.6X.1.1X3 burst iburst

the burst and iburst settings

Bingo, NTP was synched in <5 minutes.

So, For now I'm running the official stock OpenVZ kernel (I don't need the extra features of the RHEL version, namely MAC Addresses for VZHosts - for now -- which is why I had tested that kernel in the recent past) -- and I've got NTP working. For now.

MAYBE the problem somehow relates to the fact, I'm running a 32-bit kernel on a 64-bit platform (AMD 64-bit Athlon 64x2 CPU). I've seen brief reference via my google searches to some context where NTP gets pissed off when the kernel is built on platform somewhat dissimilar from your actual. However, this could be just smoke-and-mirrors thoughts on my part. Could be something totally unrelated. however, the fact that a vanilla CentOS kernel was able to run with NTP happily on this machine without any kludges ... is somewhat pointing-the-finger towards the OpenVZ kernel, one way or another ?!

So. That's the end of the story for now.