Subject: More on making an OpenVZ template
Posted by samiam on Fri, 19 Aug 2011 20:18:07 GMT
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I am continuing the work of making a tiny OpenVZ template. One discovery I have is that, for the OpenVZ tools to work, not only is it mandatory for the system to have the Bash shell, but also that /bin/sh has to be a symlink to Bash. This is because the "vzctl" program prepends the contents of the Bash-only "/etc/vz/dists/scripts/functions" script to any script used by the container to configure the system, and there does not appear to be any way to configure a container to not use this Bash-only script.

In other words, any OpenVZ template without /bin/sh being an alias for Bash can not be configured via the "vzctl" tools (nor the corresponding Proxmox/SolusVM/whataever tools that call "vzctl").

This in mind, the next release of TinyVZ will include the Bash shell. I actually prefer Bash over Busybox's "ash" shell; I *really* miss the "!$" and "!*" shortcuts, as well as the "history" command, when using this minimal shell.

Since this is an open source project I am not getting paid for, I have no timeline of when I will make another TinyVZ release, nor do I guarantee I will even make such a release. Working on TinyVZ has taught me a lot about OpenVZ and hopefully is something that is useful.

- Sam

Subject: Re: More on making an OpenVZ template
Posted by Benjamin Henrion on Sat, 20 Aug 2011 16:53:29 GMT
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On Fri, Aug 19, 2011 at 10:18 PM, Sam Trenholme
<strenholme.usenet@gmail.com> wrote:
> I am continuing the work of making a tiny OpenVZ template. One
> discovery I have is that, for the OpenVZ tools to work, not only is it
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> useful.

This is a very useful for me, I was about to spend time on an openwrt container, which does not use bash at all.

Where in the source code of vzctl do you see this requirement?

--
Benjamin Henrion <bhenrion at ffii.org>
FFII Brussels - +32-484-566109 - +32-2-4148403
"In July 2005, after several failed attempts to legalise software patents in Europe, the patent establishment changed its strategy. Instead of explicitly seeking to sanction the patentability of software, they are now seeking to create a central European patent court, which would establish and enforce patentability rules in their favor, without any possibility of correction by competing courts or democratically elected legislators."

---

Subject: Re:  More on making an OpenVZ template
Posted by samiam on Sat, 20 Aug 2011 17:12:08 GMT
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The actual deed of concatenating the Bash-only script with the distribution-specific script run by vzctl is done by the read_script() function in src/lib/script.c.  read_script() is, in turn, called by vps_exec_script() in src/lib/exec.c; vps_exec_script() is called from several places.

The offending script has the name DIST_FUNC whenever it is used to specify the offending function in vps_exec_script().  DIST_FUNC is specified in include/dist.h.

Yes, the code is spaghetti code; it took me hours to unravel all of this.

The best solution to this issue would be to replace DIST_FUNC with a parameter that can be controlled by the /etc/vz/dists/${distname}.func

configuration file.

- Sam

2011/8/20 Benjamin Henrion <bh@udev.org>:
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> <strenholme.usenet@gmail.com> wrote:
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> Benjamin Henrion <bhenrion at ffii.org>
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Subject: Re: More on making an OpenVZ template
Posted by kir on Sun, 21 Aug 2011 14:10:13 GMT
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On 08/20/2011 12:18 AM, Sam Trenholme wrote:
> I am continuing the work of making a tiny OpenVZ template. One
> discovery I have is that, for the OpenVZ tools to work, not only is it
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This is one way of doing things. The other way would be to rectify the
'/etc/dists/scripts/functions' to not be dependent on bash.

I am currently looking at it, so far I only found that it uses the
'function' keyword
which is bashism. With that removed, it looks like it is working fine in
either dash
or busybox sh.

I have committed the patch:
http://git.openvz.org/?p=vzctl;a=commit;h=f83b28435f582f2f74fb3267b89b061a551b32e2

And then a few more (to check it works in Debian without /bin/bash):
http://git.openvz.org/?p=vzctl;a=commit;h=a86beacde8c1fba4002eaf5bf48a535e7d46ffc0
http://git.openvz.org/?p=vzctl;a=commit;h=382f306cd0865bb4bcafc4f7a4b5cfe2f809296c

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Subject: Re:  More on making an OpenVZ template
Posted by Benjamin Henrion on Sun, 21 Aug 2011 15:26:43 GMT
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On Sun, Aug 21, 2011 at 4:10 PM, Kir Kolyshkin <kir@openvz.org> wrote:
> On 08/20/2011 12:18 AM, Sam Trenholme wrote:
>>
>> I am continuing the work of making a tiny OpenVZ template.  One
>> discovery I have is that, for the OpenVZ tools to work, not only is it
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> http://git.openvz.org/?p=vzctl;a=commit;h=382f306cd0865bb4bcafc4f7a4b5cfe2f809296c

I have compiled it, and I can report it works, I have remove the bash
binary I got from tinyvz, and now it enters well in openwrt rootfs (I
have tested with the original vzctl 3.0.24 where it fails to enter if
there is no /bin/bash):

==========
root@mybox /root/zoobab/openwrt-openvz [46]# ./vzctl --version
vzctl version 3.0.28.3-70.git.382f306

root@mybox /root/zoobab/openwrt-openvz [40]# ./vzctl enter 889
entered into CT 889

BusyBox v1.15.3 (2011-07-14 17:03:04 CEST) built-in shell (ash)
Enter 'help' for a list of built-in commands.

```
  _______                     ________        __
 |       |.-----.-----.-----.|  |  |  |.----.|  |_
 |   -   ||  _  |  -__|     ||  |  |  ||   _||   _|
 |_______||   __|_____|__|__||________||__|  |____|
          |__| W I R E L E S S   F R E E D O M
 Backfire (10.03.1-RC5, r27608) -------------------------
  * 1/3 shot Kahlua     In a shot glass, layer Kahlua
  * 1/3 shot Bailey's   on the bottom, then Bailey's,
  * 1/3 shot Vodka      then Vodka.
 ----------------------------------------------------
```

root@OpenWrt:/#
==========

--
Benjamin Henrion <bhenrion at ffii.org>
FFII Brussels - +32-484-566109 - +32-2-4148403
"In July 2005, after several failed attempts to legalise software
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Instead of explicitly seeking to sanction the patentability of
software, they are now seeking to create a central European patent
court, which would establish and enforce patentability rules in their
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---

Subject: Re: More on making an OpenVZ template
Posted by kir on Sun, 21 Aug 2011 16:18:59 GMT
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On 08/21/2011 07:26 PM, Benjamin Henrion wrote:
> On Sun, Aug 21, 2011 at 4:10 PM, Kir Kolyshkin<kir@openvz.org> wrote:
>> I have committed the patch:
>> http://git.openvz.org/?p=vzctl;a=commit;h=f83b28435f582f2f74fb3267b89b061a551b32e2
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>> And then a few more (to check it works in Debian without /bin/bash):
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>> http://git.openvz.org/?p=vzctl;a=commit;h=382f306cd0865bb4bcafc4f7a4b5cfe2f809296c
> I have compiled it, and I can report it works

Thanks for testing!

> I have remove the bash
> binary I got from tinyvz, and now it enters well in openwrt rootfs (I
> have tested with the original vzctl 3.0.24 where it fails to enter if
> there is no /bin/bash):

Well, these patches only affect vzctl create (which runs postcreate.sh
script)
and vzctl set (--ipadd/--ipdel, --nameserver, --hostname, --quotaugidlimit
and --userpasswd).

vzctl enter have nothing to do with the abovementioned patches.

There was a bug in vzctl which prevented enter/exec to work if there was
no /bin/bash in CT and /bin/sh was the one from busybox, see
http://bugzilla.openvz.org/1314

Hmm, strange, my changelogs say it was fixed in vzctl-3.0.24...perhaps you
were using some earlier version?

For the record, the fixes were:
http://git.openvz.org/?p=vzctl;a=commitdiff;h=aeb821cd
http://git.openvz.org/?p=vzctl;a=commitdiff;h=adb8af36

>
> ================================================
> root@mybox /root/zoobab/openwrt-openvz [46]# ./vzctl --version
> vzctl version 3.0.28.3-70.git.382f306
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> entered into CT 889
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>
>
>
>
>
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> root@OpenWrt:/#
> ================================================
>

Subject: Re:  More on making an OpenVZ template
Posted by Benjamin Henrion on Sun, 21 Aug 2011 16:40:37 GMT
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On Sun, Aug 21, 2011 at 6:18 PM, Kir Kolyshkin <kir@openvz.org> wrote:
> On 08/21/2011 07:26 PM, Benjamin Henrion wrote:
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>> On Sun, Aug 21, 2011 at 4:10 PM, Kir Kolyshkin<kir@openvz.org>  wrote:
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> Hmm, strange, my changelogs say it was fixed in vzctl-3.0.24...perhaps you
> were using some earlier version?

I am using the one of debian squeeze:

root@mybox /root/zoobab/openwrt-openvz [5]# vzctl --version
vzctl version 3.0.24

Will check in the debian sources if the patch was applied or not.

--
Benjamin Henrion <bhenrion at ffii.org>
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"In July 2005, after several failed attempts to legalise software
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---

Subject: Re: More on making an OpenVZ template
Posted by samiam on Sun, 21 Aug 2011 21:13:57 GMT
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> I am using the one of debian squeeze:

As a side note, one of my long-standing annoyance with Debian's
software policies is that, once a given release is frozen, Debian will
not update a software package unless there is a CVE-worth security bug
in it. Other bugs will not get fixed. Not even if the fix is minor.
They certainly will not keep current with a release in any bugfix-only
branch of the software provided upstream.

I can understand this software policy; open-source development is, by
nature, undisciplined and a lot of developers are not very good at
only fixing bugs without adding other potential bug-inducing features.

Debian's policies wouldn't be a big deal, except that some Debian
users have this really annoying habit of bugging upstream about a bug
which has already been fixed upstream, just not applied to the
appropriate Debian software repository. There is a Debian bug
tracking system to file bug reports or feature requests, and Debian
users are probably best using this system; if the package maintainer
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the issue.

- Sam

---

Subject: Re: More on making an OpenVZ template
Posted by samiam on Sun, 21 Aug 2011 21:30:02 GMT
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Thank you very much for fixing this bug. I can't think of an active
Linux distribution that doesn't have a POSIX-compatible /bin/sh out

there [1] [2], so it's reasonable to expect a container to have
/bin/sh (which can be dash, busybox, pdksh, whatever).

- Sam

[1] There are projects which use Plan 9's userspace instead of a
POSIX-compatible one, but none of them are a full non-POSIX-compatible
Linux distro.  Plan 9 from User Space is an addition to a
POSIX-compatible Linux distribution.  The Glendix project, which would
have been a non-POSIX-like distro, hasn't been updated since 2009.

[2] There is csh and tcsh, and maybe some BSD systems in the 1980s had
csh but no /bin/sh, but the only recent system to use a csh as a
default shell was Mac OS X up until 10.3 (tcsh).  There is also fish,
but there doesn't appear to be any full fledged distro that replaced
/bin/sh with fish.  Ksh is POSIX compatible; all the other UNIX
command shell projects (except possibly kes) appear moribund or dead.

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Subject: Re:  More on making an OpenVZ template
Posted by Enrico Weigelt on Wed, 07 Dec 2011 04:42:50 GMT
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* Sam Trenholme <strenholme.usenet@gmail.com> wrote:

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> says it's an upstream issue, then it is time to contact upstream about
> the issue.

Is there an separate repository containing new packages ?
If not, we should just create one.

cu
--
---------- ----------
Enrico Weigelt, metux IT service -- http://www.metux.de/

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mobile: +49 151 27565287  icq:   210169427        skype: nekrad666
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Embedded-Linux / Portierung / Opensource-QM / Verteilte Systeme
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