Subject: More on making an OpenVZ template
Posted by samiam on Fri, 19 Aug 2011 20:18:07 GMT

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

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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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
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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>:
> On Fri, Aug 19, 2011 at 10:18 PM, Sam Trenholme
> <strenholme.usenet@gmail.com> wrote:
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Subject: Re: More on making an OpenVZ template
Posted by kir on Sun, 21 Aug 2011 14:10:13 GMT

On 08/20/2011 12:18 AM, Sam Trenholme wrote:
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> 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:
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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>
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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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>> 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
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> | |.-----.-----.-----.| | | |.----.| |_
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Subject: Re: More on making an OpenVZ template
Posted by Benjamin Henrion on Sun, 21 Aug 2011 16:40:37 GMT

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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> 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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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
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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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--- ----------
 Embedded-Linux / Portierung / Opensource-QM / Verteilte Systeme
--- ----------