
Subject: openvz naming conventions; numeric vs symbolic
Posted by [Steve Wray](#) on Wed, 15 Aug 2007 03:43:58 GMT
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Hi there,
I'm a long time user of Xen virtualisation and have been evaluating OpenVZ as a replacement for certain applications.

OpenVZ appears to be technically superior under certain conditions and I hope to iron out the issues that I have come across.

The main issue confronting me at this time is scalability of management; OpenVZ may scale well with respect to performance and resource usage but at this time I don't see it scaling well when it comes to management of virtual machines.

I am sure that I must be missing something obvious since its a pretty basic issue. I've searched extensively for some info on this but found nothing.

The problem?

Numeric rather than symbolic identification of virtual machines.

When I start a domU (a Xen virtual machine) in Xen I direct 'xm create' at the config file the name of which corresponds to the name of that domU.

When I list currently running machines in Xen I see a listing of the names of the Xen domUs and their corresponding numeric IDs.

When I create a logical volume for a Xen domU I create that volume based on the name of the corresponding Xen instance.

In each case I try to ensure consistency by making the names of the Xen domUs correspond to the hostnames of the servers which those domUs are running. Host foo is on the domU named foo and is in a logical volume named foo. To start domU foo I run 'xm create /etc/xen/domains/foo.conf'. This scales well and makes things very nice and obvious.

OpenVZ seems to do away with symbolic names referring in all instances to numeric ids, a bit like not using DNS but putting an IP address into a URL.

I have an awful feeling that when the pager goes off at 2am the person on call, bleary-eyed and tired, will make some horrible mistake when trying to mentally map numeric identifiers to server hostnames. This is what I mean by 'not scaling well'. Use of numeric identifiers may work

ok when there is only one or two, but when there may be a dozen things will get out of hand.

I am sure that there must be a way to use symbolic names instead of numbers in OpenVZ but I can't for the life of me find out how.

Thanks!

Subject: Re: openvz naming conventions; numeric vs symbolic
Posted by [kir](#) on Wed, 15 Aug 2007 04:40:39 GMT
[View Forum Message](#) <> [Reply to Message](#)

See vzctl set --name

Steve Wray wrote:

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Subject: Re: openvz naming conventions; numeric vs symbolic
Posted by [Steve Wray](#) on Wed, 15 Aug 2007 20:07:50 GMT
[View Forum Message](#) <> [Reply to Message](#)

Kir Kolyshkin wrote:
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Well thats a nice start.

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Thanks!

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Subject: Re: openvz naming conventions; numeric vs symbolic

Posted by [kir](#) on Wed, 15 Aug 2007 21:00:06 GMT

[View Forum Message](#) <> [Reply to Message](#)

Steve Wray wrote:

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> the directory where the root filesystem lives corresponds to the name

> I set instead of the numeric VEID?

No standard way.

I guess you can create a symlink; something like this:

```
vzctl set $VEID --name $VENAME --save
```

```
(cd /vz/root && ln -s $VEID $VENAME)
```

Same for /vz/private if you need it.

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> Thanks!

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Posted by [Steve Wray](#) on Wed, 15 Aug 2007 21:07:30 GMT
[View Forum Message](#) <> [Reply to Message](#)

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> vzctl set \$VEID --name \$VENAME --save
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> Same for /vz/private if you need it.
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I did find that after one has created a virtual machine configuration
one can edit its config file and add:

```
VE_ROOT="/var/lib/vz/root/vz1"  
VE_PRIVATE="/var/lib/vz/private/vz1"
```

for example. I have yet to figure out the 'vzctl create' commands
though; they appear to require an OS template tarball. While I dropped a
root filesystem tarball into the required place, vzctl create didn't
like it. I'll keep plugging away.

OpenVZ looks pretty good for performance scaleability but what I'd love
to see is better management scaleability.

If there are any tools which abstract away some of the detail for
management of multiple virtual machines I'd like to know. I did try
easyvz (<http://sourceforge.net/projects/easyvz>) but there were problems
with the python dependencies. I run Debian Etch; when I tried to run the
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Subject: Re: openvz naming conventions; numeric vs symbolic
Posted by [kir](#) on Wed, 15 Aug 2007 21:27:40 GMT
[View Forum Message](#) <> [Reply to Message](#)

Steve Wray wrote:

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>>> Kir Kolyshkin wrote:

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> VE_ROOT="/var/lib/vz/root/vz1"

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> for example.

Both VE_ROOT and VE_PRIVATE can be set in vzctl create (--root and --private options). If you want to change those values later (either by using vzctl set or by editing a configuration file) you also have to move the existing directories (otherwise it won't make sense) -- something like this:

```
vzctl stop $VE
vzctl umount $VE
mv /vz/private/$VE $NEW_VE_PRIVATE
rmdir /vz/root/$VEID
mkdir $NEW_VE_ROOT
vzctl set $VE --root $NEW_VE_ROOT --private $NEW_VE_PRIVATE
```

Now, if you need those symlinks, move them as well. `vzlist -oname $VEID` should tell you the name of your VE if you want to script this operation.

> I have yet to figure out the 'vzctl create' commands though; they
> appear to require an OS template tarball.

Yep. There are a lot of such tarballs available from
<http://download.openvz.org/template/precreated/>
<http://download.openvz.org/template/precreated/contrib/>

> While I dropped a root filesystem tarball into the required place,
> `vzctl create` didn't like it.

Well, it should be a normal root filesystem tar.gz file, better having Linux distro at the beginning of a filename (this is how `vzctl` guesses which distro is it -- for distro-dependent operations like IP configuration). So you'd better name your tarball like `debian-4- $\{\text{whatever}\}$.tar.gz`

Other problems that may be with your tarball are:

- it's tar.bz2 tarball
- it's missing some really required stuff like system libs or `/sbin/init`
- it's not a root filesystem, for example all the filenames are prefixed with `/root` or smth.

Finally, in some cases you need to do some modifications; those should be described in http://wiki.openvz.org/Physical_to_VE.

> I'll keep plugging away.

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> problems with the python dependencies. I run Debian Etch; when I tried
> to run the gui there were issues with strange characters in the python
> script.

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OpenVZ is more of a virtualization technology with good CLI. If you are looking for a high-level GUI, you'll have to develop one, or join some other team developing GUI for OpenVZ (those should be listed at http://wiki.openvz.org/Control_panels), or use `Virtuozzo` which comes with a few GUIs.

Subject: Re: openvz naming conventions; numeric vs symbolic
Posted by [Steve Wray](#) on Wed, 15 Aug 2007 22:14:34 GMT
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Steve Wray wrote:

> Kir Kolyshkin wrote:
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There seems to be a slight inconsistency across the tool set here.

vzctl does respect the given 'name' however vzquota does not appear to
and seems to require the numeric id.

Subject: Re: openvz naming conventions; numeric vs symbolic
Posted by [Gregor Mosheh](#) on Wed, 15 Aug 2007 22:19:45 GMT
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Steve Wray wrote:

> Steve Wray wrote:
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Quite true. Did you check the bugtracker for the project, or log that as
a bug? I'd love to see that fixed!

--

Gregor Mosheh / Greg Allensworth
System Administrator, HostGIS cartographic development & hosting services
<http://www.HostGIS.com/>

"Remember that no one cares if you can back up,
only if you can restore." - AMANDA

Subject: Re: openvz naming conventions; numeric vs symbolic

Posted by [kir](#) on Wed, 15 Aug 2007 23:25:12 GMT

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Gregor Mosheh wrote:

> Steve Wray wrote:

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Can you tell me the use case for that? I mean, I never use vzquota directly; it's vzctl that calls it whenever needed.

I guess you use vzquota show or vzquota stat and want to use VE name instead of ID, is that right?

Subject: Re: openvz naming conventions; numeric vs symbolic

Posted by [Steve Hodges](#) on Thu, 16 Aug 2007 00:00:35 GMT

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On 16/08/2007 6:14 AM, Steve Wray wrote:

>

>

> vzctl does respect the given 'name' however vzquota does not appear to

> and seems to require the numeric id.

>

>

I have a similar issue with scripts that need to convert from the VEID or VE Name to either the VEID, the VE Name, or host name.

I've written this simple script to do the conversions for me. It's handy in scripts, but may be useful where your list of VE's is too large to simply scan the vzlist for the information you need.

```
/usr/local/bin/vmid
```

```
-----
```

```
#!/bin/bash
```

```
if [ "${1}" == "" ]; then
```

```
  echo "$0 {veid|name} [-i|-n|-h]"
```

```
  echo "    -i returns id \ (default)"
```

```
  echo "    -n returns name"
```

```
    echo "    -h returns host name"
    exit 1
fi
```

```
case "$2" in
"" | "-i")
    PARM=veid
    ;;
"-n")
    PARM=name
    ;;
"-h")
    PARM=hostname
    ;;
*)
    echo Bad parameter $2
    exit 1
    ;;
esac
```

```
VM_ID=`vzlist -o ${PARM} -H -N ${1} | sed -e "s/ //g"`
```

```
if [ "${VM_ID}" == "" ]; then
    VM_ID=`vzlist -o ${PARM} -H ${1} | sed -e "s/ //g"`
fi
```

```
if [ "${VM_ID}" == "" ]; then
    exit 1
else
    echo ${VM_ID}
    exit 0
fi
```

Since my scripts can be passed either the veid or the vname, I might code something like this:

```
ping $(vmid $1 -h)
```

more practically I use it to access things like the config files that are named according to the VEID.

Steve

Subject: Re: openvz naming conventions; numeric vs symbolic

Posted by [Steve Wray](#) on Thu, 16 Aug 2007 20:02:13 GMT

[View Forum Message](#) <> [Reply to Message](#)

Kir Kolyshkin wrote:

> Gregor Mosheh wrote:

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>> Steve Wray wrote:

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Well, on the basis that consistency is a Good Thing, yes.

I'm only just getting started with OpenVZ so am unsure of the real use case for this. But I am busily finding the things that confuse, confound or seem inconsistent :)

Thanks!

Subject: Re: openvz naming conventions; numeric vs symbolic

Posted by [kir](#) on Tue, 21 Aug 2007 12:21:36 GMT

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Steve Wray wrote:

> Kir Kolyshkin wrote:

>> Gregor Mosheh wrote:

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>>> Steve Wray wrote:

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> confound or seem inconsistent :)
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OK, I filed a bug for vzquota with minor severity, it will eventually be
fixed:
http://bugzilla.openvz.org/show_bug.cgi?id=668

Subject: Re: openvz naming conventions; numeric vs symbolic
Posted by [Gregor Mosheh](#) on Tue, 21 Aug 2007 14:30:57 GMT
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> OK, I filed a bug for vzquota with minor severity, it will eventually be
> fixed:
> http://bugzilla.openvz.org/show_bug.cgi?id=668

Thanks again, Kir. OpenVZ is about the greatest thing we've ever found,
and we're SO glad for it.

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System Administrator, HostGIS cartographic development & hosting services
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