Subject: Revolutionary Idea: Mass deployment via UnionFS !
Posted by Alexey Eremenko on Sat, 19 May 2007 23:30:45 GMT

hi all !

Currently this project deploys VPSes via copying templates, but I believe that instead of copying templates we should build a template that uses UnionFS, which can save a LOT of hard disk space.

That is: with this technology all VPSes that are based on a particular template will take very few space, because all of the software will be shared on UnionFS drive.

Like this:
/template (UnionFS-RO)
/vz/101 (UnionFS-RW)

/template (UnionFS-RO)
/vz/102 (UnionFS-RW)

/template (UnionFS-RO)
/vz/103 (UnionFS-RW)

All the standard packages will be shared among the VPSes in a template directory, so they will be viewable but all the *difference* vs. the template will go to the VPSes.

As a bonus, the VPS creation time will be lowered from several seconds to under 1 second ! Because creating a VPS will mean just Union-linking vs. the template and create few directories with configuration files.

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Since this technology already requires massive kernel changes and root privileges, adding UnionFS to the stack is cake-walk easy.

Not only it will enable to save disk space, but it will enable to build full-OS VPSes, that include KDE and GNOME with NX access for graphical remote administration. (Something I like!)

More about UnionFS here: Knoppix 3.8 and UnionFS. Wow. Just Wow.
 http://www.oreillynet.com/sysadmin/blog/2005/03/knoppix_38_a nd_unionfs_wow_jus.html

Subject: Re: Revolutionary Idea: Mass deployment via UnionFS !
Posted by rickb on Sun, 20 May 2007 01:54:39 GMT

Hello, the FS looks quite interesting and is very relevant to the project.

How much have you tested this? Does it support user quotas? Attach the kernel patch so we can see the cake-walk easiness. Have you worked with virtuozzo's vzfs? If so, what are your thoughts of the comparisons between the two FS?

Subject: Re: Revolutionary Idea: Mass deployment via UnionFS !
Posted by Alexey Eremenko on Sun, 20 May 2007 04:29:06 GMT
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>How much have you tested this? Does it support user quotas? Attach the kernel patch so we can see the cake-walk easiness.

I have tested only very basic functionality. Knoppix uses this a _lot_, so they tested it way better than me.

website:
http://www.am-utils.org/project-unionfs.html
ftp://ftp.fsl.cs.sunysb.edu/pub/unionfs/unionfs-1.x/

>Have you worked with virtuozzo's vzfs? If so, what are your thoughts of the comparisons between the two FS?

I have never heard of virtuozzo's vzfs. What is that ?

Subject: Re: Revolutionary Idea: Mass deployment via UnionFS !
Posted by rickb on Sun, 20 May 2007 04:52:04 GMT
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vzfs is the same high level approach to saving disk space (and memory) by using a COW approach to files across VEs.

which union patch were you able to merge with openvz?
http://www.am-utils.org/project-unionfs.html

Subject: Re: Revolutionary Idea: Mass deployment via UnionFS !
Posted by curx on Sun, 20 May 2007 14:06:53 GMT

Hi,

another solution for COW useing "aufs" insteed of "unionfs", like
Knoppix 5.1.1 do ...

I've tested such a solution on debian etch, but vzquota and checkpointing doesn't work !

When someone need a howto, please let me know.