Subject: openvz-diff-backups: a file-based incremental backup tool (Beta Testers Welcome!)
Posted by devnull on Wed, 08 Mar 2017 03:08:12 GMT
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Hello!

Sorry for my (poor/beginner's/basic) English (I am French).

I am looking for kind people who are willing to test a beta (not really in fact) file-based backup tool.

The project has began a few years ago when I was using Proxmox 2, then Proxmox 3 and now OpenVZ "legacy".

Next step is to use OpenVZ 7 in production.

You can download it here : http://download.openvz-diff-backups.fr/releases/

I use it every day on multiple dedicated servers and it just works.

Main goal: publish the detailed documentation (French/English).

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openvz-diff-backups is a file-based incremental backup tool.

It supports: Proxmox 2 & 3, Virtuozzo 6, OpenVZ "legacy" and now OpenVZ 7.

First time backup: slow (must copy all files)
subsequent backups: fast (rsync will only copy modified files)

I use it this way:

- 4 live backups each day (on a distant server X)
- 7 days of retention (in my case, it is about 1200 backups)
- replication of all backups (on a distant server Y)
- double replication of all backups (on a distant server Z)

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this backup tool is designed to:

- perform full backups (even if it is incremental)
- run in background (ionice, nice, limited IOPS)
- minimize backup storage (only modified files)

- save memory state of each container

There are three modes:

1) cold backups

The safest and most portable choice (but with a cost of a downtime).

- stop container
- take a snapshot (LVM2 or Ploop)
- start container
- save snapshot data

2) hold backups

Will suspend container a few seconds (no downtime, just a few seconds of delay).

- suspend container
- take a snapshot (LVM2 or Ploop)
- resume container
- save snapshot data

3) live backups

Same as "hold" backups but will also save memory state.

- suspend container
- extract memory dump (OpenVZ or CRIU)
- take a snapshot (LVM2 or Ploop)
- resume container
- save memory dump
- save snapshot data

This is the preferred method.

a) backups can be done without downtime
b) restoring a live backup will just "resume" the container on another server (or on the same server).

Since it is a file-based backup tool, there are a few limits:

1) inode numbers are not preserved
Some tools like rkhunter and others will complain when restoring a container.

2) sometimes it is slower than a "brute force" copy
With billions of files inside a container, it is faster to copy the ploop image

3) with old OpenVZ "legacy" kernel, extracting memory dump could cause a kernel hang
I have submitted bugs reports about this and, actually, it works fine.

But, please, do not use live backups in production if your OpenVZ kernel is old.

As I said before, I am looking for people who are not afraid to test a "beta" backup tool.

Main goal is to release a stable version in a few month.

It works fine for me but I mostly use Debian + OpenVZ "legacy" now.

Several months ago, I was given the opportunity to test it on Virtuozzo 6 and OpenVZ 7.

Some minor changes were needed to be compatible.

I would be pleased to discuss the drawbacks and benefits of this project.

Note: a public GIT repo is on its way.

Have a nice day!

Subject: Re: openvz-diff-backups: a file-based incremental backup tool (Beta Testers Welcome!)
Posted by sgoeldi on Tue, 14 Mar 2017 09:39:17 GMT
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I am very interested in this, because the missing vzdump in OVZ7 is a big hurdle.

For the moment I do backups with this script, though some options don't work as described. Do you use similar ways for OVZ7?

Subject: Re: openvz-diff-backups: a file-based incremental backup tool (Beta Testers Welcome!)
Posted by devnull on Tue, 14 Mar 2017 18:00:29 GMT
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Hello!

sgoeldi wrote on Tue, 14 March 2017 10:39Do you use similar ways for OVZ7?
When openvz-diff-backups does a "live" backup with OpenVZ 7, the container is suspended, its memory is checkpointed with CRIU, a ploop snapshot is taken and then, the container is resumed.

It just takes a few seconds depending of the RAM used by the container.

After that, the ploop snapshot is mounted in a temp directory and files are synced with rsync (using --link-dest) to store only modified files.

You should give it a try with the "dry-run" mode : no modification is done and you'll see if it fits your needs.

Ex: openvz-diff-backups backup 101 auto -d -v -l 9

101 => CTID of the container
auto => select best backup mode (cold, hold or live)

-d => dry-run
-v => verbose
-l => log-level

By default, backups are stored locally (localhost) but OVZDB is designed to push backups anywhere (SSH path).

Have a nice day!
