

## OpenNebula - Backlog #1727

### Patch for one.image.resize to resize image

01/14/2013 11:48 PM - Simon Boulet

<b>Status:</b>	Closed	<b>Start date:</b>	01/14/2013
<b>Priority:</b>	High	<b>Due date:</b>	
<b>Assignee:</b>		<b>% Done:</b>	0%
<b>Category:</b>	Core & System	<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>			

#### Description

This patch (against 3.8.1) adds a one.image.resize call to resize image.

The call takes 2 parameters: The image ID and the new size.

- It works for image that are in READY state (with some more work, it could be extended to USED state to allow non-persistent sources to be resized, and USED\_PERS to allow online resizing).
- It requires the MANAGE IMAGE permission on an image to issue a resize action.
- It checks the image owner quota before accepting the resize.
- It sets the image in LOCKED state and calls a new datastore driver action, RESIZE.
- If the driver returns SUCCESS, it sets the image back to READY state, otherwise the image is set to ERROR.

This patch doesn't implement the RESIZE action in any of the datastore drivers shipped with OpenNebula. It only implements the resize at the OpenNebula Core level. The datastore drivers needs to be updated to handle the RESIZE action.

Beware that issuing a one.image.resize call to a datastore that wasn't updated to support the RESIZE action will leave the image in LOCKED (or ERROR) state.

Feedbacks are more than welcome!

Simon

#### Related issues:

Related to Request # 1705: Resizable images	<b>Closed</b>	<b>12/27/2012</b>
Related to Feature # 1768: CloudInit and Instance Data, or replacing the curr...	<b>Closed</b>	<b>02/15/2013</b>
Related to Feature # 179: Ability to expand disk source on physical host	<b>Closed</b>	<b>12/03/2009</b>
Related to Request # 3044: Support resizing disk size	<b>Closed</b>	<b>07/15/2014</b>
Related to Bug # 4073: Docs still mention VOLATILE_DISK instead of SYSTEM_DIS...	<b>Closed</b>	<b>10/20/2015</b>

#### Associated revisions

##### Revision edd210a8 - 07/20/2015 01:44 PM - Carlos Martín

Feature #1727: VM::set\_auth\_request adds size to each disk

##### Revision 2c2fa830 - 07/20/2015 01:46 PM - Carlos Martín

Feature #1727: VM volatile quota adds each disk size

##### Revision eca7640d - 07/20/2015 04:16 PM - Carlos Martín

Feature #1727: Image::disk\_attribute adds ORIGINAL\_SIZE

**Revision 66b83c0f - 07/20/2015 09:10 PM - Javi Fontan**

feature #1727: add clone resize to ssh, shared and qcow2

**Revision 6e3e25ff - 07/21/2015 09:10 AM - Carlos Martín**

Feature #1727: Rename VOLATILE\_SIZE quota to SYSTEM\_DISK\_SIZE

**Revision 0a42146d - 07/21/2015 02:24 PM - Carlos Martín**

Feature #1727: New option --extend for onetemplate show

**Revision 2f008932 - 07/21/2015 04:48 PM - Carlos Martín**

Feature #1727: Do not allow disk resize for persistent images, and for a smaller size

**Revision fc3de05f - 07/22/2015 03:20 PM - Carlos Martín**

Feature #1727: Fix system\_disk quotas

Add DS disk attributes; add disk-snapshots to total

**Revision 14c2f2a1 - 07/23/2015 10:30 AM - Carlos Martín**

Feature #1727: Disk snapshot actions add/del from system disk quotas

**Revision 098060ef - 07/23/2015 10:42 AM - Carlos Martín**

Feature #1727: Fix bug, extra semicolon

**Revision b2334879 - 07/23/2015 10:44 AM - Carlos Martín**

Feature #1727: Make snapshot size a long long, to be the same as image size

**Revision 4fc84d98 - 07/23/2015 01:35 PM - Carlos Martín**

Feature #1727: Update fsck to calculate SYSTEM\_DISK quota

**Revision 884ca29d - 07/23/2015 04:29 PM - Carlos Martín**

Feature #1727: New SYSTEM\_DISK quota in onedb upgrade

**Revision 42063afc - 07/23/2015 04:30 PM - Carlos Martín**

Feature #1727: Small code style change

**Revision 7e127b1f - 07/24/2015 11:28 AM - Carlos Martín**

Feature #1727: Disk attach now adds to the SYSTEM\_DISK quota

**Revision 6278fd7e - 07/24/2015 02:12 PM - Anton Todorov**

feature #1727: fix bug setting ORIGINAL\_SIZE

**Revision 5e909a2c - 07/24/2015 02:20 PM - Daniel Molina**

feature #1727: Add extended template support in sunstone

**Revision 9d68ab7c - 07/24/2015 02:20 PM - Daniel Molina**

feature #1727: Add range slider util

**Revision 669e7885 - 07/24/2015 02:20 PM - Daniel Molina**

feature #1727: Add disk resize in cloud view

**Revision 0351583a - 07/24/2015 02:20 PM - Daniel Molina**

feature #1727: Add option to disable disk resize in cloud view

**Revision ded50710 - 07/24/2015 02:20 PM - Daniel Molina**

feature #1727: Check if size is greater than the original

**Revision 3f61b184 - 07/24/2015 03:00 PM - Carlos Martín**

Feature #1727: Use VM::disk\_extended\_info with temporary template objects

**Revision e20441b4 - 07/24/2015 04:31 PM - Daniel Molina**

feature #1727: Add resize disk to admin view

**Revision b7d0db61 - 07/27/2015 03:54 PM - Daniel Molina**

feature #1727: Update sunstone env param description

**Revision f2ce88fc - 07/27/2015 10:23 PM - Ruben S. Montero**

feature #1727: Not use dynamic memory in method

**Revision c10d0800 - 07/28/2015 03:52 PM - Carlos Martín**

Feature #1727: Create new migrator for 4.13.85

**Revision be70906b - 07/28/2015 04:17 PM - Carlos Martín**

Feature #1727: New option extend for java oca Template info

**Revision 2d1b92fc - 07/29/2015 10:40 AM - Ruben S. Montero**

feature #1727: Rename disk\_target to disk\_tm\_target

**Revision de730869 - 08/04/2015 09:11 AM - Carlos Martín**

Feature #1727: Add DISK/ORIGINAL\_SIZE to restricted attributes

**Revision 675dd15d - 08/04/2015 03:45 PM - Jaime Melis**

Feature #1727: Generic system to allow to resize  
on onetemplate instantiate from the CLI

**Revision f30d64aa - 08/05/2015 09:25 AM - Jaime Melis**

Feature #1727: Document adding extra attributes to disk and nic  
on onetemplate instantiate

**Revision 23f84d74 - 08/05/2015 12:36 PM - Jaime Melis**

Feature #1727: add clone resize to ceph

**Revision 8d40a75a - 08/13/2015 02:41 PM - Jaime Melis**

Feature #1727: Fix logic. Only resize of ORIGINAL\_SIZE is defined  
and if it's smaller than the desired size.

## History

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**#1 - 01/15/2013 10:44 PM - Simon Boulet**

- File z-image-resize-used-pers.patch added

Attached patch allow images in USED and USED\_PERS state to be resized.

Applies on top of image-resize.patch above.

Simon

**#2 - 02/02/2013 09:16 PM - Ricardo Duarte**

This is a great feature.

virt-resize, from libguestfs, can be used to easily implement the actual resize on the driver.

<http://libguestfs.org/virt-resize.1.html>

**#3 - 05/09/2013 12:43 PM - Ruben S. Montero**

- Category set to Core & System

**#4 - 05/13/2013 09:33 PM - Ruben S. Montero**

- Priority changed from Normal to Low

**#5 - 05/14/2013 05:19 PM - Ruben S. Montero**

Given the comments, I think this is better to be moved to the TM's. Images keep their potentially minimal size in the datastore. The TM then resizes the disk once the image is copied to the host, as described by #179.

In this case the interface would be:

```
DISK = [ IMAGE="Server CentOS", size="10GB" ]
```

The TM will then resize the image. Other considerations:

- 1.- Live resize of disk images won't be supported by all the TM's.
- 2.- It will only work for non-persistent images.

Although this issue (resize in the datastore) is slightly related, It may be better to go for the second option (resize on deployment, as in #179). Considering also the comments in #1768

Comments?

**#6 - 05/18/2013 05:56 PM - Ricardo Duarte**

Resize on deployment will work perfectly for #1768.

**#7 - 06/05/2013 01:15 AM - Simon Boulet**

Why not do both? Allow non-persistent image size to be specified at VM / template instantiation (independent of the initial data store image), and also have a method for updating persistent image size?

Currently all my images are persistent. I use the method in #1865 to tell my driver what final size the image is to be. My VM CREATE hooks picks up the new template and calls the one.image.resize (above patches) to set the size of the persistent image.

**#8 - 07/30/2013 06:01 AM - Simon Boulet**

- File *image-resize-4.2.patch* added

**#9 - 12/10/2013 02:49 AM - Vladislav Gorbunov**

Could you tell me how to change the image size in one database from cli by using this path? Nedd to change the oneimage cli script?

**#10 - 12/11/2013 02:15 AM - Vladislav Gorbunov**

- File *resize.image.rb.diff* added

- File *resize.oneimage.diff* added

I myself understood. Files with patches for resize image from command line (with oneimage) is in attachment. In datastore must be the script "resize" that do image resizing in datastore or return 0 exit code. Simon's path for OpenNebula 4.2 worked for OpenNebula 4.4.

**#11 - 12/28/2013 07:49 PM - Ruben S. Montero**

- Target version set to *Release 4.6*

**#12 - 12/28/2013 07:49 PM - Ruben S. Montero**

- Priority changed from *Low* to *Normal*

**#13 - 12/28/2013 08:52 PM - Ruben S. Montero**

- Related to Feature #179: Ability to expand disk source on physical host added

**#14 - 02/25/2014 03:10 PM - Jaime Melis**

- Target version changed from *Release 4.6* to *Release 4.8*

**#15 - 06/27/2014 10:08 AM - Ruben S. Montero**

- Tracker changed from *Feature* to *Backlog*

- Priority changed from *Normal* to *High*

- Target version deleted (*Release 4.8*)

**#16 - 07/15/2014 09:44 AM - Ruben S. Montero**

- Related to Request #3044: Support resizing disk size added

**#17 - 08/07/2014 10:24 AM - Ruben S. Montero**

- Status changed from *New* to *Pending*

**#18 - 12/23/2014 10:36 AM - Jaime Melis**

- Target version set to *Release 4.12*

**#19 - 02/14/2015 10:20 PM - Ruben S. Montero**

- Target version deleted (*Release 4.12*)

**#20 - 03/03/2015 10:38 PM - Ruben S. Montero**

- Target version set to *Release 4.14*

**#21 - 03/12/2015 09:36 AM - Ruben S. Montero**

- Tracker changed from *Backlog* to *Feature*

**#22 - 03/12/2015 09:38 AM - Ruben S. Montero**

- Status changed from Pending to New

**#23 - 05/14/2015 01:37 PM - Ruben S. Montero**

- Assignee set to Jaime Melis

**#24 - 07/15/2015 07:38 AM - Stefan Kooman**

When resizing RAW images and or LVM backed virtual machines the following virsh command allows to update the new disk size to the live running VM:

virsh qemu-monitor-command one-ID --hmp "block\_resize drive-virtio-disk0 size B". Where "drive-virtio-disk0" is the first disk of the virtual machine. To obtain a list of disks this command can be used "virsh qemu-monitor-command ONE-ID --hmp "info block".

As these are "virsh" commands I guess there are equivalent libvirt API calls. It would be incredibly helpful if this could be incorporated in "one.image.resize". It would make online resizing a breeze. If a image has (external) snapshots it should not be allowed to resize the disk in this manner, since the backing file is (expected to be) read-only.

**#25 - 07/15/2015 07:55 AM - Stefan Kooman**

For some reason the "info block" command only works when I'm already in virsh shell:

```
virsh # qemu-monitor-command one-103 --hmp "info block"
```

```
drive-virtio-disk0: /var/lib/one//datastores/100/103/disk.0 (qcow2)
```

```
drive-ide0-0-0: /var/lib/one//datastores/100/103/disk.1 (raw, read-only)
```

```
Removable device: locked, tray closed
```

```
1. virsh qemu-monitor-command one-103 --hmp "info block"
```

```
unknown command: "'info'
```

**#26 - 07/15/2015 10:05 AM - Stefan Kooman**

Resizing can be done more easily with "virsh blockresize" command or libvirt API call "virDomainBlockResize":

<https://libvirt.org/html/libvirt-libvirt-domain.html#virDomainBlockResize>

**#27 - 08/17/2015 07:58 AM - Ruben S. Montero**

- Tracker changed from Feature to Backlog

- Status changed from New to Pending

- Assignee deleted (Jaime Melis)

- Target version changed from Release 4.14 to Release 5.0

4.14 implements the ability to expand (resize) disk images on hypervisors at VM deployment. This issue is kept for resizing images in the datastore.

**#28 - 10/20/2015 03:57 PM - Carlos Martín**

- Related to Bug #4073: Docs still mention VOLATILE\_DISK instead of SYSTEM\_DISK\_SIZE added

**#29 - 01/04/2016 01:45 PM - Ruben S. Montero**

- Status changed from Pending to Closed
- Target version deleted (Release 5.0)

Created a new issue for this #4274

## Files

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image-resize.patch	15.4 KB	01/14/2013	Simon Boulet
z-image-resize-used-pers.patch	1.37 KB	01/15/2013	Simon Boulet
image-resize-4.2.patch	15.4 KB	07/30/2013	Simon Boulet
resize.image.rb.diff	1.14 KB	12/11/2013	Vladislav Gorbunov
resize.oneimage.diff	499 Bytes	12/11/2013	Vladislav Gorbunov