The following was reported by Marcos Dias de Assuncao, in the mailing list:

We noticed that after rebooting the hosts' free memory informed by the xen probe seemed a little strange. Then we started with no hosts and added two hosts again (i.e. gieseking and billabong), each with 2GB of RAM and a few MBs reserved to dom0 in xend-config.sxp. The command 'onehost list' reported:

```
HID NAME RVM TCPU FCPU ACPU TMEM FMEM STAT
0 gieseking 0 200 196 200 2094080 129024 on
1 billabong 0 200 200 200 2094080 129024 on
```

We submitted a request whose template is:

```
NAME     = susebox
CPU      = 1
MEMORY   = 256
OS       = [kernel="/boot/vmlinuz-2.6.25.18-0.2-xen",initrd="/boot/initrd-2.6.25.18-0.2-xen",kernel_cmd="rw",root="hda1"]
DISK     = [source="/home/oneadmin/vm/domains/opensuse11/opensuse11.img",target="hda1",readonly="no", clone="no"]
NIC      = [mac="00:16:3e:01:01:01"]
#GRAPHICS = [type="vnc",listen="127.0.0.1",port="5900"]
```

and of course, 'onevm list' reported the VM as pending because the hosts did not have enough memory:

```
ID     NAME STAT CPU     MEM        HOSTNAME        TIME
6  susebox pend   0       0                 00 00:02:19
```

We found that the xen probe (ONE_LOCATION/lib/im_probes/xen.rb) uses 'sudo xm info' to obtain information about the host. The command on billabong reveals:

```
total_memory       : 2045
```
If I start the same VM directly on the host, `xm` will create the domain. The command `xm info` shows the following during the VM's execution:

```
free_memory          : 1
max_free_memory      : 1422
max_para_memory      : 1418
max_hvm_memory       : 1406
```

A new run of `sudo xm info` on `billabong` after the VM is shut down shows:

```
total_memory         : 2045
free_memory          : 257
max_free_memory      : 1678
max_para_memory      : 1674
max_hvm_memory       : 1662
```

And `onehost list` now shows the updated information:

```
HID  NAME           RVM  TCPU  FCPU  ACPU  TMEM   FMEM  STAT
   0  gieseking        0   200   191   200  2094080  129024  on
   1  billabong        0   200   200   200  2094080  263168  on
```

The reason for the change in `free_memory` is that `dom0` will balloon out when needed to free memory for `domUs`. We believe that the probe should report `max_free_memory`. This way, we changed the following lines of `ONE_LOCATION/lib/im_probes/xen.rb`:

```
when 'free_memory'
    memory_info[:free]=columnsr1.to_i*1024

```
to:

```
when 'max_free_memory'
    memory_info[:free]=columnsr1.to_i*1024
```
Associated revisions

Revision 42bca417 - 03/13/2009 03:53 PM - Tino Vázquez

Backported Fix in [403] for ticket #54 to the 1.2 branch.

git-svn-id: http://svn.opennebula.org/one/branches/one-1.2@404 3034c82b-c49b-4eb3-8279-a7acafdc01c0

Revision 16d82702 - 03/13/2009 05:34 PM - Tino Vázquez

Fix for ticket #54

git-svn-id: http://svn.opennebula.org/one/trunk@407 3034c82b-c49b-4eb3-8279-a7acafdc01c0

Revision 32b676ff - 03/16/2009 10:40 AM - Tino Vázquez

Backporting fix in [407] for ticket #54 to the 1.2 branch.

git-svn-id: http://svn.opennebula.org/one/branches/one-1.2@412 3034c82b-c49b-4eb3-8279-a7acafdc01c0

Revision efb64dc5 - 03/27/2009 01:58 PM - Javi Fontan

Modified xen im probe to deal with #54

git-svn-id: http://svn.opennebula.org/one/trunk@431 3034c82b-c49b-4eb3-8279-a7acafdc01c0

Revision 07f5f03d - 03/27/2009 01:58 PM - Javi Fontan

Modified xen im probe to deal with #54

git-svn-id: http://svn.opennebula.org/one/branches/one-1.2@431 3034c82b-c49b-4eb3-8279-a7acafdc01c0

Revision 0dfe0a58 - 04/02/2009 04:20 PM - Javi Fontan

Bug in xen im probe (#54)

git-svn-id: http://svn.opennebula.org/one/trunk@449 3034c82b-c49b-4eb3-8279-a7acafdc01c0

Revision ee4a4017 - 04/13/2009 03:29 PM - Javi Fontan

Bug in xen im probe (#54)

git-svn-id: http://svn.opennebula.org/one/branches/one-1.2@465 3034c82b-c49b-4eb3-8279-a7acafdc01c0

History

#1 - 12/02/2008 06:34 PM - Ruben S. Montero
Additionally instead of using ballooning Dom0 can be configured to use very little memory, which is also a very common configuration, and it does not suffer the problem described here. As the deadline for releasing the 1.2 version of [[OpenNebula]] has already expired, this change will not be addressed for this release. The issue and the patch would be spelled out in the release notes.

#2 - 01/28/2009 10:48 PM - Ruben S. Montero

Moving to 1.2.1

#3 - 03/13/2009 04:10 PM - Tino Vázquez

- Status changed from New to Assigned

Fixed in r403.

#4 - 03/13/2009 04:10 PM - Tino Vázquez

- Status changed from Assigned to Closed
- Resolution set to fixed

#5 - 03/13/2009 06:35 PM - Tino Vázquez

Sorry, fixed in r407.

#6 - 03/25/2009 04:00 PM - Ruben S. Montero

- Status changed from Closed to Assigned
- Assignee changed from Tino Vázquez to Javi Fontan
- Resolution deleted (fixed)

It seems that this breaks the last version of Xen. We are going to revert the change, and add support for both attributes. This MUST be applied to 1.2 and trunk branches.

#7 - 03/31/2009 05:35 PM - Javi Fontan

- % Done changed from 0 to 80

Changes are added to both 1.2 branch and trunk. More testing is needed to close this ticket.

#8 - 04/02/2009 06:42 PM - Javi Fontan

- Status changed from Assigned to 3
- % Done changed from 80 to 100
- Resolution set to fixed

Testing has been done and the new im probe works for new and old xen versions.

#9 - 10/04/2011 01:36 PM - Ruben S. Montero
- Status changed from 3 to Closed