Foreman - Bug #14160

VMware image-based provisioning: 'configSpec.bootOptions.bootOrder' parameter incorrect

03/11/2016 10:12 AM - Dmitry Sakun

Status:	Closed		
Priority:	Normal		
Assignee:	Chris Roberts		
Category:	Compute resources - VMware		
Target version:	1.16.0		
Difficulty:	easy	**Fixed in Releases:**	
Triaged:		**Found in Releases:**	1.11.0
Bugzilla link:	1398317	**Red Hat JIRA:**	
Pull request:	https://github.com/theforeman/foreman/pull/4721		

Description

Foreman (1.11RC1) image-based provisioning + VMware (VCenter version 5.5.0) fails with the following error: InvalidArgument: A specified parameter was not correct (configSpec.boot Options.boot Order). Not sure if this has something to do with Foreman. UI error is(partially in German): "Failed to create a compute IPX (VMware) instance temptest01.gfk.com: InvalidArgument: Ein angegebener Parameter war nicht korrekt. configSpec.bootOptions.bootOrder"

In addition (may be related), once the machine is provisioned via PXE, it still tries to boot from network first.

Foreman log attached

Related issues:

Related to Foreman - Bug #5510: Set network as first boot device for VMs in V...	**Closed**	**04/30/2014**
Related to Foreman - Bug #20878: VMware image-based provisioning: Rewrite boo...	**Closed**	**09/08/2017**
Has duplicate Foreman - Bug #16926: Can't deploy anymore via Vmware Image Aft...	**Duplicate**	

Associated revisions

Revision fb9869bb - 08/07/2017 11:29 AM - Klaas Demter

Fixes #14160 - bump fog-vsphere to 1.11.3

History

#1 - 03/11/2016 10:19 AM - Dominic Cleal

- translation missing: en.field_release set to 71

Tentatively setting to 1.11.0 as it may be a regression, though I can't tell where. The change in #5510 only appears to be in the network provisioning code path, I can't see where it could have changed image provisioning.

Was the template you're building from created from a Foreman-created VM or something?

> In addition (may be related), once the machine is provisioned via PXE, it still tries to boot from network first.

This is by design, see #5510. It allows the host to be rebuilt from Foreman.

#2 - 03/11/2016 10:21 AM - Dominic Cleal

- Related to Bug #5510: Set network as first boot device for VMs in VMware compute resources added

#3 - 03/11/2016 10:33 AM - Dmitry Sakun

Dominic Cleal wrote:

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>
> Was the template you're building from created from a Foreman-created VM or something?

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Yes, correct. The image was built by Foreman as well.

#4 - 03/17/2016 09:03 AM - Dmitry Sakun

Any hints on how to see what's being sent via API ? I tried to change boot order of the template and lower HW version but it didn't help.

#5 - 03/18/2016 08:58 AM - Dominic Cleal

There's not an easy way, only http://projects.theforeman.org/projects/foreman/wiki/Troubleshooting#Compute-resource-debugging which may not work properly on a production installation.

I don't think it's anything Foreman is doing during clone, as the code change appears to only be used during network provisioning. My guess is that it's stored inside the template somehow.

#6 - 03/31/2016 08:09 AM - Dominic Cleal

- translation missing: en.field_release deleted (71)

#7 - 04/29/2016 02:07 PM - Jason Gray

I was able to get around the same problem by deleting these two options from the vmx:

bios.hddOrder
bios.bootOrder

The default boot order seems to be defined by the default bios settings. This may not work for people who have non-default or special a special boot order. There is a VMWare article that describes these options:

https://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=2011654

#8 - 05/16/2016 07:02 AM - Jiří Machálek

I had also this issue with 1.11.0. As workaround I commented out line 23 in file
/opt/theforeman/tfm/root/usr/share/gems/gems/fog-vsphere-0.6.1/lib/fog/vsphere/requests/compute/create_vm.rb, where boot options are reconfigured:

```
20          vm_cfg[:cpuHotAddEnabled] = attributes[:cpuHotAddEnabled] if attributes.key?(:cpuHotAddEnabled)
21          vm_cfg[:memoryHotAddEnabled] = attributes[:memoryHotAddEnabled] if attributes.key?(:memoryHotAddE
nabled)
22          vm_cfg[:firmware] = attributes[:firmware] if attributes.key?(:firmware)
23          #vm_cfg[:bootOptions] = boot_options(attributes) if attributes.key?(:boot_order) || attributes.ke
y?(:boot_retry) # WORKAROUND
24          resource_pool = if attributes[:resource_pool] && attributes[:resource_pool] != 'Resources'
25                            get_raw_resource_pool(attributes[:resource_pool], attributes[:cluster], attribu
tes[:datacenter])
26                          else
27                            get_raw_cluster(attributes[:cluster], attributes[:datacenter]).resourcePool
28                          end
```

#9 - 12/20/2016 06:55 AM - Marek Hulán

- Bugzilla link set to 1398317

#10 - 01/24/2017 03:22 AM - Marek Hulán

Maybe we could add a checkbox to set whether we want to hardcode bootoptions. While by default it's useful, when we want to build a host that we plan to covert to a template we could disable it. Chances are we won't rebuild it so the boot order does not matter.

#11 - 02/07/2017 01:39 PM - Stefan Lasiewski

- File Screen Shot 2017-02-07 at 10.37.44 AM.png added

As a side effect of this bug, the VMware sets the BIOS to something called "User Mode", which means we cannot change the Boot Order from the BIOS. At least, that's what I think is happening based on https://communities.vmware.com/thread/434314?start=0&tstart=0 .

That was surprising

See the screenshot.

#12 - 02/20/2017 10:38 AM - Chris Roberts

- Status changed from New to Assigned

- Assignee set to Chris Roberts

#13 - 03/17/2017 05:18 PM - Chris Roberts

- Target version set to 178

- Difficulty set to easy

#14 - 03/22/2017 10:14 AM - The Foreman Bot

- Status changed from Assigned to Ready For Testing

- Pull request https://github.com/theforeman/foreman/pull/4400 added

#15 - 04/04/2017 07:05 AM - Brad Buckingham

- Target version changed from 178 to 181

#16 - 04/20/2017 08:04 AM - Klaas D

This seems like a VMware bug to me. I can't even delete disks from a host that was built via foreman because the parameter configSpec.bootOptions.bootOrder

#17 - 04/25/2017 10:51 AM - Brad Buckingham

- Target version changed from 181 to 187

#18 - 05/16/2017 08:26 AM - Brad Buckingham

- Target version changed from 187 to 193

#19 - 05/22/2017 03:40 AM - Dominic Cleal

- Has duplicate Bug #16926: Can't deploy anymore via Vmware Image After upgrade vmware from 5.5. to 6 added

#20 - 06/06/2017 09:10 AM - Brad Buckingham

- Target version changed from 193 to 196

#21 - 07/06/2017 06:25 AM - Brad Buckingham

- Target version deleted (196)

#22 - 07/26/2017 10:03 AM - Timo Goebel

According to my research this error happens because the boot order setting referenced both storage volumes and network interfaces. During a clone operation via Foreman, the interface of the vm is replaced. The interface from the template is deleted and a new interface is added. The boot order reference is not updated and therefor invalid.

I did not find a way to actually modify the boot order of a vm during cloning, however I found a workaround for this: Instead of deleting the interface from the template and adding a new one, it's possible to update/edit the interface. Therefore the boot order reference doesn't get broken.
I have developed a patch for fog-vsphere that changes the behaviour accordingly. I'll open a PR once i have cleaned it up.

#23 - 07/26/2017 10:18 AM - Timo Goebel

This PR should fix this issue: https://github.com/fog/fog-vsphere/pull/98

#24 - 08/07/2017 08:38 AM - The Foreman Bot

- Pull request https://github.com/theforeman/foreman/pull/4721 added

#25 - 08/07/2017 11:29 AM - Timo Goebel

- translation missing: en.field_release set to 240

- Pull request deleted (https://github.com/theforeman/foreman/pull/4400)

#26 - 08/07/2017 12:01 PM - Anonymous

- Status changed from Ready For Testing to Closed

- % Done changed from 0 to 100

Applied in changeset [fb9869bbec7573f8ab1f7704a07415bd60da8ccb](#).

#27 - 09/08/2017 04:43 AM - Timo Goebel

- Related to Bug #20878: VMware image-based provisioning: Rewrite boot order added

Files

production_log.txt	28.5 KB	03/11/2016	Dmitry Sakun
Screen Shot 2017-02-07 at 10.37.44 AM.png	117 KB	02/07/2017	Stefan Lasiewski