

vSphere and Service Console Memory

November 24th, 2009 | 16 Comments |

Today I read something I have not seen anywhere else before. I have always been under the impression that the memory reserved for the Service Console was increased from 272MB to 300MB. Although the bare minimum is indeed 300MB there's another side to this story, something I did not expect but actually does make sense. As of ESX 4.0 the allocated Service Console memory automatically scales up and down when there is enough memory available during installation. Let's make try to make that crystal clear:

- ESX Host – 8GB RAM-> Default allocated Service Console RAM= 300MB
- ESX Host – 16GB RAM-> Default allocated Service Console RAM= 400MB
- ESX Host – 32GB RAM-> Default allocated Service Console RAM= 500MB
- ESX Host – 64GB RAM-> Default allocated Service Console RAM= 602MB
- ESX Host – 96GB RAM-> Default allocated Service Console RAM= 661MB
- ESX Host – 128GB RAM-> Default allocated Service Console RAM= 703MB

Lessons learned:

1. Allocated Service Console memory is based on a formula which takes available RAM into account. (Haven't found the exact formula yet, if I do I will of course add it to this article.)
2. Always make your swap partition 1600MB; as an increase of RAM might automatically lead to a swap partition which is too small.

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16 Responses to “vSphere and Service Console Memory”



Alan Renouf says:

Tuesday, November 24, 2009 at 15:29

I guess you also need to think about this if you increase your ram in your host after instalation as the SC will not automatically assign more.



Viktor says:

Tuesday, November 24, 2009 at 15:46

The good old 2.5 times come back again...



thehyperadvisor says:

Tuesday, November 24, 2009 at 15:49

Thanks for that information. I did not know this but since memory is relatively cheap in my eyes I always size my esx hosts Services console to have 800mb and a 1600mb swap.



Scott Lowe says:

Tuesday, November 24, 2009 at 16:28

Duncan, can you share with us where you were reading this information, or is that document VMware internal only?

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Chris says:

Tuesday, November 24, 2009 at 17:04

ESX Server 43.2mb = 1mb service console, according to the 128gb ESX = 703mb SC.

While the percentage of the first one is 3.75, or 26.66mb ESX = 1mb SC. Aside formula, $43.2 / 26.66 = 1.62$ times.

If you apply the second formula of an 8gb ESX it becomes 185mb SC initial usage. But, perhaps it's just shown to be 300mb for 8gb but in reality it scale has a true initial of 12.96gb ESX for 300mb?



Jason Boche says:

Tuesday, November 24, 2009 at 17:15

vCalendar 2.0 entry sneak preview:

On an ESX4 host, the default amount of Service Console memory assigned is 400MB. The maximum value is 800MB. The minimum is 256MB although the documentation claims 300MB.

The values for an ESX3 host are the same, except for the out of box default amount of memory which for ESX3 is 272MB. With the added features and bolt on products in vSphere, it's easy to see why VMware found it necessary to up the default amount.



Chris says:

Tuesday, November 24, 2009 at 17:38

Thanks for clarifying Jason



Jason Boche says:

Tuesday, November 24, 2009 at 17:59

@Chris Those are my findings on my lab equipment. While I doubt the MIN/MAX values change between different hosts, it sounds like the default value might.



Duncan says:

Tuesday, November 24, 2009 at 21:36

400 the default? That depends on the amount of memory you are carrying. I've seen implementations where the default was 300. and technically speaking there is not default. it can be anything between 300 and 800 😊



Hugo Strydom says:

Wednesday, November 25, 2009 at 15:47

I just did an v4 installation on blades with 32gig memory and all the SC memory was 500Mb. On machines with lower memory I have seen the memory at 300mb...but not lower.



Doug Davis says:

Tuesday, December 1, 2009 at 00:43

Does anyone know why they decided on an 800MB maximum for the Service Console? Is it a technical limitation or just something VMware came up with as they thought it would be enough? Not sure about anyone else, but I regularly see the SC using 600MB+.



Phil Dalton says:

Wednesday, December 2, 2009 at 16:58

Hi guys,

I've just installed 5 x ESX4 (U1) with 64GB RAM. SC was set to 602 MB on them all.

Summary page says it's using 1860 MB with no VMs.... greedy little thing isn't it 😊



Greg Herzog says:

Thursday, January 7, 2010 at 21:07

I just noticed this today when I was trying to figure out why my installation scripts were not sizing the memory

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correctly. I use the sed command to do a find and replace so this worked great in ESX 3.5 since it was static, but not so much now.

```
sed -i -e 's/\boot/memSize = \"661\"/\boot/memSize = \"800\"/' /etc/vmware/esx.conf  
sed -i -e 's/676864/819200/' /boot/grub/grub.conf
```

One thing to notice from above and to add to your chart –

ESX Host – 96GB RAM -> Default allocated Service Console RAM = 661MB

Greg



Greg Herzog says:

Thursday, January 7, 2010 at 21:42

My bad, in case anyone googles and tries to use this. Missed the middle line in the cut and paste.

```
sed -i -e 's/\boot/memSize = \"661\"/\boot/memSize = \"800\"/' /etc/vmware/esx.conf  
sed -i -e 's/661M800M/' /boot/grub/grub.conf  
sed -i -e 's/676864/819200/' /boot/grub/grub.conf
```



FrederikV says:

Thursday, April 22, 2010 at 13:18

the big question is: WHY ?
it's a management vm, isn't it ?



san says:

Thursday, August 5, 2010 at 07:36

That means, if I am making script to change the value to 800, I have to do modification to that script so that first it should read the value of memory assigned and then change it to 800

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