Subject: *SOLVED* Installing Websphere 6.1 in a VPS FAILS due to disk space
Posted by oviney on Mon, 30 Apr 2007 20:45:51 GMT
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The only reason I am posting this is to see if anyone has actually successfully installed Websphere 6.1 within a VE.

Environment Details:

HN:
=====
Processor: Intel(R) Xeon(TM) CPU 3.00GHz with HyperTheading enabled
RAM: 1031472 kB

I just ran into an issue with a Websphere 6.1 installation inside a RHEL 4. update 4 VPS. The installer complained about there not being enough disk space, however after performing a quick df -h on the VPS I noticed that wasn't the problem:

[root@hostnamelvz-1 /]# df -h
Filesystem Size Used Avail Use% Mounted on
simfs 6.7G 4.3G 2.4G 65% /

I could not force the installer past this point as the "next" button was disable based on the space requirements.

The installer does mentioned that it doesn't matter if the "/tmp" is not a separate partition, as long as the sum of required space is respected.

I am going to start digging around in the installation to see if I can find how it detects the disk space but I am not promising anything.

Subject: Re: Installing Websphere 6.1 in a VPS FAILS due to disk space
Posted by rickb on Mon, 30 Apr 2007 21:09:09 GMT
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How much space does the application require? Although you are not out of disk space, if it requires 5GB, ie more then you have, it might report that same error.

Subject: Re: Installing Websphere 6.1 in a VPS FAILS due to disk space
Posted by oviney on Mon, 30 Apr 2007 21:34:16 GMT
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According to the installer... 500 MB for the application directory and 200 MB of temp space...

Checking the IBM docs to be 100 % sure

Subject: Re: Installing Websphere 6.1 in a VPS FAILS due to disk space
Posted by oviney on Mon, 30 Apr 2007 22:01:29 GMT
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I have checked IBM's website and docs for details about space requirements but couldn't find any.

I am going to test with 2 GB more free space by allocating more space to the VE.

More details to follow...

Subject: Re: Installing Websphere 6.1 in a VPS FAILS due to disk space
Posted by oviney on Mon, 30 Apr 2007 22:29:11 GMT
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I have added 2GB of extra disk space to the VE using the following command:

vzctl set 101 --diskspace 7000000:7000000 --diskinodes 7000000:7000000 --save

I didn't need to restart the VE as this config item is dynamic.

I retried the websphere installer and this time I got futher... so as was mentioned earlier in this thread; I needed even more temp/free space in order to install.

After a successful installation I tested the server installation out using the provided tools; and here are the results:

<snippet>
Server name is:server1
Profile name is:AppSrv01
Profile home is:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01
Profile type is:default
Cell name is:bld1hs20-03lvz-1Node01Cell
Node name is:bld1hs20-03lvz-1Node01
Current encoding is:ANSI_X3.4-1968
Server port number is:9080
IVTL0020I: The Installation Verification Tool cannot connect to WebSphere Application Server; waiting for the server to start.
IVTL0010I: Connecting to the WebSphere Application Server bld1hs20-03lvz-1.na.ubiquity.net on port: 9080
IVTL0020I: The Installation Verification Tool cannot connect to WebSphere Application Server; waiting for the server to start.
Start running the following command:/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin/startServer.sh server1 -profileName AppSrv01

Error>Could not create the Java virtual machine.
IVTL0080I: The installation verification is complete.
</snippet>

The line of interest is:

*** Error>Could not create the Java virtual machine. ***

I am guessing that is related to the system not having enough memory to allocate to the JVM, just a guess.

Here is what I have done to set the memory limits:

vzctl set 101 --vmguarpages $((512 * 256)) --save
vzctl set 101 --privvmpages $((256 * 1024)) --save

I found the way to do this that is much more intuitive than calculating the amount of RAM by "pages" is to multiply the amount of RAM that you want by 256 as an easy way to arrive at the right amount of RAM.

So perhaps this problem is about 512 MB RAM not being enough to start websphere, though I have the ability to burst up to 1 GB.

I will give this a test but if someone has seen this feel free to post your commends.

Much appreciated!

Subject: Re: Installing Websphere 6.1 in a VPS FAILS due to disk space
Posted by oviney on Mon, 30 Apr 2007 22:57:51 GMT
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I just tested with more memory and it hasn't helped, but I am guessing that it might be the system memory that just isn't enough. Can someone suggest how I would go about ensuring that I truly do need to upgrade my system memory. I have done some simple tests using free -m and vzmemcheck but am not confident that I understand the statistics it reports.

HN:
=====
[root@hostnamelvz opt]# vzmemcheck
Output values in %
 LowMem LowMem   RAM MemSwap MemSwap   Alloc   Alloc   Alloc
   util commit   util   util commit   util commit   limit
   0.40   58.62   5.18   1.75   7.70   2.52   30.70   41.13

VE:
=====
[root@hostnamelvz-1 bin]# free -m

	total	used	free	shared	buffers	cached
Mem:	1007	441	566	0	17	239
-/+ buffers/cache:		184	822			
Swap:	1983	44	1939			

Any suggestions are welcome.

I am trying to attach the JAVA traces and dumps from the "out of memory" error... but the site is having issues I guess. I just tried again, the errors seems to depend on the size of the file.

File Attachments

1) Snap0001.20070430.184234.26569.trc, downloaded 359 times
2) javacore.20070430.184234.26569.txt, downloaded 2471 times

Subject: Re: Installing Websphere 6.1 in a VPS FAILS due to disk space
Posted by rickb on Tue, 01 May 2007 14:05:29 GMT
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Quote:I am trying to attach the JAVA traces and dumps from the "out of memory" error

1) cat /proc/user_beancounters (save it)
2) duplicate problem
3) cat /proc/user_beancounters (save it)

look for an increase in the failcnt column for any metric between 1 and 3. do you see any?

Subject: Re: Installing Websphere 6.1 in a VPS FAILS due to disk space
Posted by oviney on Tue, 01 May 2007 15:22:12 GMT
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I did what you recommended and the only value in the "failcnt" column that appears to have changed during the tests was the "numproc".

See attachments for more details...

but here is the low down:

Test 1: prior to start websphere I ran "cat /proc/user_beancounters" and saved it to a file: user_beancounters_prerun

Test 2: during the websphere startup I ran the command again: user_beancounters_duringrun

Test 3: a few minutes into the startup process I ran the command again:
user_beancounters_duringpostrun

Test 4: after "ctrl +c" in the terminal windows that started websphere I ran the command again:
user_beancounters_duringpostrun2

I don't see anything glaring... perhaps I am missing something?

File Attachments
1) user_beancounters_logs.tar, downloaded 357 times

Subject: Re: Installing Websphere 6.1 in a VPS FAILS due to disk space
Posted by rickb on Tue, 01 May 2007 15:25:04 GMT
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increase your failcnt parameter

vzctl set VEID --numproc XXX:YYY --save

Subject: Re: Installing Websphere 6.1 in a VPS FAILS due to disk space
Posted by oviney on Tue, 01 May 2007 17:56:58 GMT
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what value would you recommend as a baseline?

Thank you very much for your help btw!

Subject: Re: Installing Websphere 6.1 in a VPS FAILS due to disk space
Posted by rickb on Tue, 01 May 2007 18:02:17 GMT
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no problem. shortest answer is, enough to satisfy your application load. Since I don't know jack about how many processes websphere wants, we will guestimmate and tweak later. Set it to 1000, install your application, run it, watch the max cnt column. For example, if it hits 200 max after heavy application load, I would say 300 is a safe number to limit it at.

Subject: Re: Installing Websphere 6.1 in a VPS FAILS due to disk space

Posted by oviney on Tue, 01 May 2007 18:27:56 GMT
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fantastic, I set the process count to 1000 and filecount to 3000 and now the websphere process is able to start and fork

Thank you again for your help!

I would say that this problem has been resolved.