

Interactive, Replay & Batch ESXTOP Modes!

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Posted by Hany Michael Categorized Under: VMware Comments

I've been rediscovering the great **esxtop** tool lately, and I have to say that I'm really impressed with the tremendous amount of information you can get out of this little thing!

But today I will be talking about the (**esxtop modes**) which I believe not many of us know much about. With a quick search also over the Planet V12N blogosphere I couldn't find any posts talking about this topic, so there you have it.

We all know about the traditional way of running the **esxtop** tool through the esx host service console (or **resxtop** through RCLI). This is in fact called "interactive mode" where you get to see the statistics or information live in front of you and interact with it using different sets of keys (m = memory, d = disk and so forth). But this is actually only one of three modes that esxtop can run into. Here are the other two:

■ Replay Mode

In this mode, you can record and play the esxtop statistics for a specific period of time, and use also the interval of your choice. But before going into details, you may be wondering why would you want to do that? Well, it could be for support purposes, for example if VMware wants to have a snapshot of your performance statistics they may ask you to run this and send them the output. For me, this came in handy when one of my VMs was having a very strange behavior during an early morning hour. This was happening on daily basis and since I was not in favor of staying awake to see what's the deal with that, I set a small cron job to run/record the esxtop stats for this specific period of time. The next day I played the stats and I was very grateful for the amount of information I got for troubleshooting the problem.

Now, let's see how we can do this:

First, you will need to be "root" in order to issue the record command as follows:

vm-support -S -i 5 -d 120

We can see here that the interval is 5 seconds, and the duration for recording the statistics is 120 seconds.

```
[hany@hquesx03 hany]$
[hany@hquesx03 hany]$ su -
Password:
[root@hquesx03 root]# cd /tmp
[root@hquesx03 tmp]# vm-support -S -i 5 -d 120

VMware ESX Server Support Script 1.29

Preparing files: |
Taking performance snapshots. This will take about 120 seconds.

Starting detailed scheduler stats.

Starting vcsisStats.
Snapping 2: 105 seconds left.
```

The esxtop will start recording the stats and then compress the output into a .tgz file.

```
Done. 18 snapshots created.

Stopping detailed scheduler stats

Stopping vcsisStats.
Done with performance snapshots.

Waiting up to 300 seconds for background commands to complete:

Creating tar archive ...

File: /tmp/esx-2009-06-15--18.29.32119.tgz
NOTE: esx-2009-06-15--18.29.32119.tgz is greater than 10 MB.
Please do not attach this file when submitting an incident report.
Please contact VMware support for an ftp site.
To file a support incident, go to http://www.vmware.com/support/sr/sr_login.jsp

To see the files collected, run: tar -tzf /tmp/esx-2009-06-15--18.29.32119.tgz

Done
[root@hquesx03 tmp]#
```

We can issue a command to see the .tgz file as shown below. Make sure you are in the right partition when issuing

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this command and that you have a reasonable disk space if you will run this command for long time.

```
[root@hqsx03 tmp]# ls -alSh
total 9.6M
-rw-r--r-- 1 root root 9.6M Jun 15 18:32 esx-2009-06-15--18.29.32119.tgz
drwxrwxrwt 4 root root 4.0K Jun 15 18:32 .
drwxr-xr-x 20 root root 4.0K Mar 10 08:05 ..
drwx----- 2 root root 4.0K Jun 15 11:04 vmhadeamon-0
drwx----- 2 root root 4.0K Jun 15 11:04 vmware-root
srwxrwxrwx 1 root root 0 Mar 10 08:05 cimxml.socket
[root@hqsx03 tmp]# tar -xzf esx*.tgz
```

Next, we need to uncompress the file as follows:

```
tar -xzf esx*.tgz
```

Finally, you need to issue the replay command: (thanks to @RobM for bringing my attention to this missing command)

```
esxtop -R vm-support*
```

And there you have it, the statistics will run as if you are sitting at the point of time the stats were recorded in:

```
6:38:28pm up 97 days 10:23, 153 worlds; CPU load average: 0.07, 0.05, 0.05
PCPU(%): 27.50, 4.25, 3.69, 4.16, 5.81, 3.69, 3.70, 2.95 ; used total: 6.97
CCPU(%): 3 us, 14 sy, 80 id, 3 wa ; cs/sec: 828

ID  PID NAME      NWLD  %USED  %RUN  %SYS  %WAIT  %RDY  %IDLE  %OVRLP  %CSTP
1   8 726.11 729.32 0.00 0.00 53.96 0.00 0.17 0.00
2   6 0.01 0.01 0.00 587.44 0.00 0.00 0.00 0.00
6   23 0.84 0.82 0.04 2250.48 0.46 0.00 0.02 0.00
7   17 0.01 0.28 0.11 1663.92 0.14 0.00 0.00 0.00
8   1 0.00 0.00 0.00 97.90 0.00 0.00 0.00 0.00
9   1 24.67 24.69 0.10 72.66 0.54 72.62 0.19 0.00
16  1 0.00 0.00 0.00 97.90 0.00 0.00 0.00 0.00
30  11 0.04 0.04 0.00 1076.86 0.02 0.00 0.01 0.00
77  12 6.79 6.79 0.01 1166.11 2.15 365.21 0.24 0.00
78  12 5.07 4.97 0.12 1166.57 3.39 384.70 0.28 0.00
79  6 1.15 1.12 0.04 586.03 0.21 96.84 0.09 0.00
80  6 0.62 0.62 0.00 586.70 0.17 92.18 0.05 0.00
81  12 5.21 5.15 0.09 1168.01 1.88 378.79 0.24 0.00
83  6 2.01 2.02 0.01 584.79 0.61 95.91 0.12 0.00
84  6 0.70 0.70 0.00 585.02 0.11 95.84 0.09 0.00
85  8 1.52 1.52 0.02 781.32 0.50 194.57 0.16 0.00
86  11 5.31 5.27 0.07 1069.41 2.22 385.01 0.31 0.00
88  6 1.25 1.22 0.03 585.95 0.33 96.78 0.09 0.00
*** Read stats from vm-support-hqsx03-2009-06-15--18.29.32119/snapshots/vsi/vsi.2 ***
```

One thing to note here though, the time that will show on the top line, will always reflect the current time you are running in, not the time of the recording, so don't be confused by that.

■ Batch mode

In the batch mode, you can dump your esxtop stats into a .csv file for later use. You can utilize either Microsoft Excel, or Microsoft perfmon tool to view these data at any time.

Here is the command to achieve this:

```
esxtop -b -a > output_file.csv
```

This command will dump "all" the fields from the esxtop to the file. But what if you want specific columns only? Well, that's the real beauty of the batch mode. You can always choose what information you are interested in, here is how:

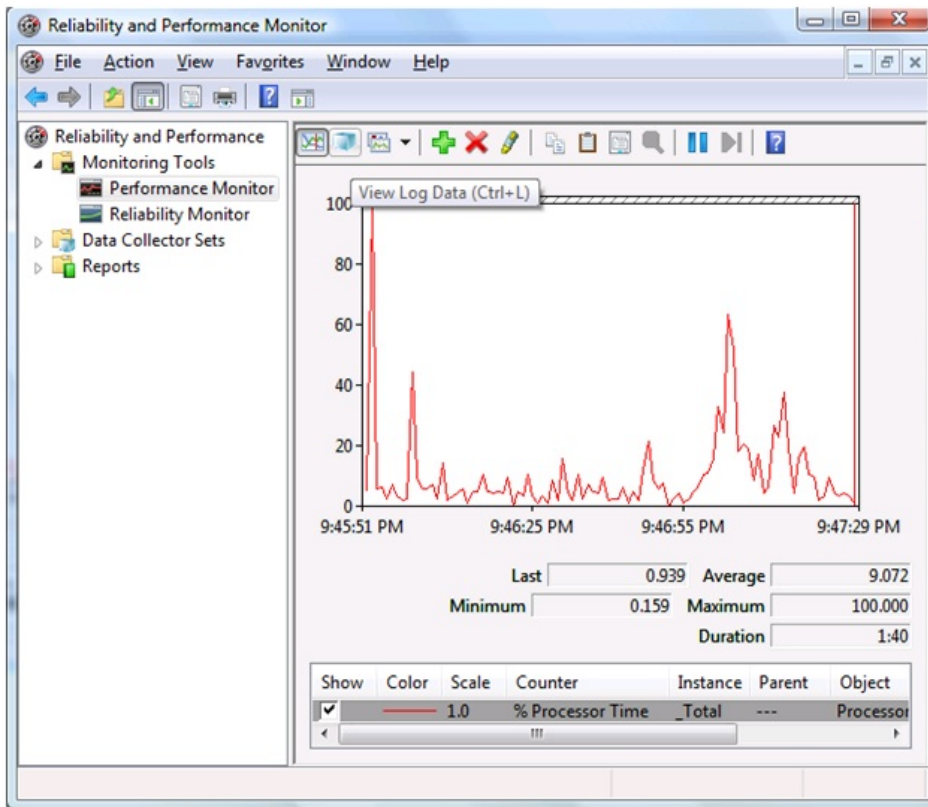
- Run the esxtop command in interactive mode.
- In each of the panels, select the columns you want.
- Save this configuration to a file (by default ~/.esxtop4rc) using the **W** interactive command.

Now you can use the batch command and it will dump only the columns that you have selected.

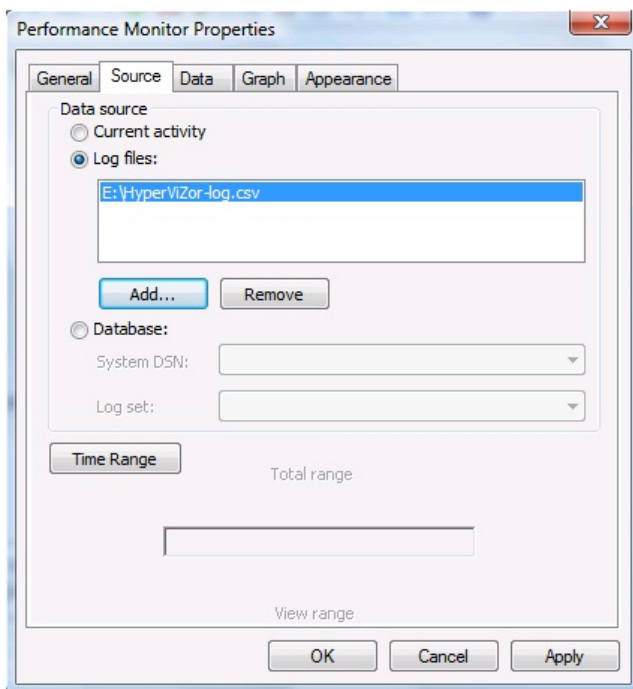
What's next?

Use Excel or perfmon to analyze your data, I personally prefer to use my Vista's perfmon for this unless you have a specific requirement for using Excel.

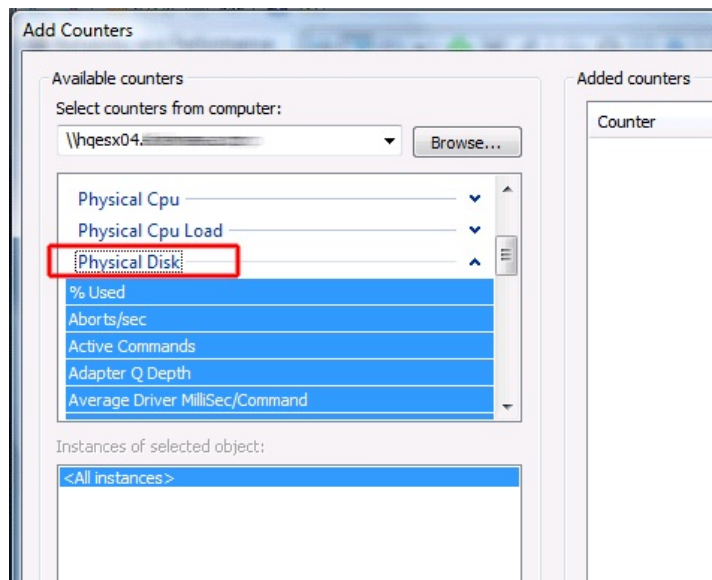
- Go to Start -> Run -> type perfmon.
- Go to Performance Monitor section.
- Click of the "View Log Data" in the tool bar at the right as shown in the screen shot below.



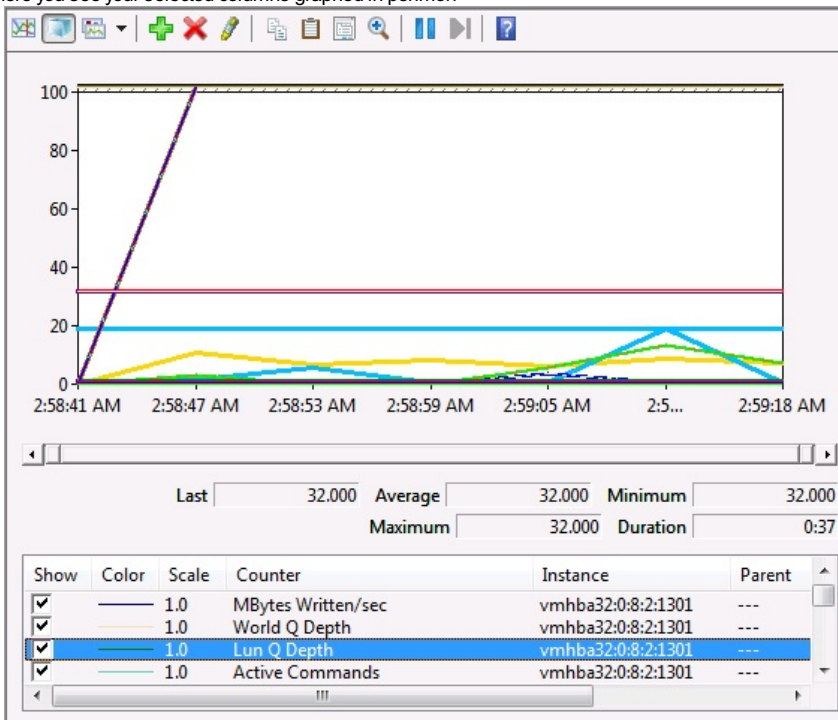
After that, you need to use the file you've dumped the esxptop data to:



You can choose here which columns/counters you want to graph and analyze



And here you see your selected columns graphed in perfmon



And you are done!

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 **David** 1 month ago

Is it possible to export the esxtop data from the vm-support data into CSV?

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Andrew Storrs 1 year ago

I hadn't realized esxtop's CSV output was compatible with Windows perfmon. Learn something everyday ;)

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