



Facilis Technology, Inc. Technical Note

TN-017

Running SATAChecker to diagnose a failing drive.

The TerraBlock server can be utilized to diagnose a failing drive if long I/Os are reported or audible noise is occurring during disk access. The System Event Viewer in Computer Management displays any I/O request that takes over 300ms to complete. This may be benign, or may be the sign of a failing disk. SATAChecker will exercise the disks in order to discover an underperforming unit.

1. Shut down all connected clients and stop the SMDrive service (Computer Management/Services and Applications/SMDrive. Right mouse click – Stop).
2. Locate the Utilities folder on the TerraBlock installation CD.
3. Unzip, then place the SATAChecker application into the TerraBlock Folder
4. Launch SATAChecker from the TerraBlock folder. You should see a similar screen to the image below.

```
C:\Documents and Settings\facilis\Desktop\SataChecker\SataDriveChecker.exe
Opened Lun 1 \\.\PhysicalDrive2 WDC WD2500JD-00GBB0 02.0 WD-WMAEP2949499 Blocks 9078331758 GB 250
Opened Lun 2 \\.\PhysicalDrive3 WDC WD2500JD-00GBB0 02.0 WD-WMAEP2648935 Blocks 13373299054 GB 250
Opened Lun 3 \\.\PhysicalDrive4 WDC WD2500JD-00GBB0 02.0 WD-WMAEP1956284 Blocks 17668266350 GB 250
Opened Lun 4 \\.\PhysicalDrive5 WDC WD2500JD-50GBB0 02.0 WD-WMAEP2973330 Blocks 21963233646 GB 250
Opened Lun 5 \\.\PhysicalDrive6 WDC WD2500JD-22FYB0 02.0 WD-WMAEH2045054 Blocks 26258200942 GB 250
Opened Lun 6 \\.\PhysicalDrive7 WDC WD2500JD-00GBB0 02.0 WD-WMAEP1279350 Blocks 30553168238 GB 250
Opened Lun 7 \\.\PhysicalDrive8 WDC WD2500SD-01KCB0 08.0 WD-WMAL72176098 Blocks 34848135534 GB 250
Opened Lun 8 \\.\PhysicalDrive9 WDC WD2500JD-50GBB0 02.0 WD-WMAEP3071363 Blocks 39143102830 GB 250
Opened Lun 9 \\.\PhysicalDrive10 WDC WD2500JD-50GBB0 02.0 WD-WMAEP2625824 Blocks 43438070126 GB 250
Opened Lun 10 \\.\PhysicalDrive11 WDC WD2500JD-19HBB0 08.0 WD-WMAL71806509 Blocks 47733037422 GB 250
Opened Lun 11 \\.\PhysicalDrive12 WDC WD2500JD-22FYB0 02.0 WD-WMAEH2179939 Blocks 52028004718 GB 250
Opened Lun 12 \\.\PhysicalDrive13 WDC WD2500JD-22GBB0 02.0 WD-WMAEP3221138 Blocks 56322972014 GB 250
Opened Lun 13 \\.\PhysicalDrive14 WDC WD2500JD-22FYB0 02.0 WD-WMAEH2063573 Blocks 60617939310 GB 250
Opened Lun 14 \\.\PhysicalDrive15 WDC WD2500JD-19HBB0 08.0 WD-WMAL71814890 Blocks 64912906606 GB 250
Opened Lun 15 \\.\PhysicalDrive16 WDC WD2500JD-00GBB0 02.0 WD-WMAEP2698121 Blocks 69207873902 GB 250
Opened Lun 16 \\.\PhysicalDrive17 WDC WD2500SD-01KCB0 08.0 WD-WCAL72452862 Blocks 73502841198 GB 250
Opened Lun 17 \\.\PhysicalDrive18 WDC WD2500JD-19HBB0 08.0 WD-WMAL71853222 Blocks 77707808494 GB 250
Opened Lun 18 \\.\PhysicalDrive19 WDC WD2500JD-50GBB0 02.0 WD-WMAEP3071154 Blocks 82092725790 GB 250
Opened Lun 19 \\.\PhysicalDrive20 WDC WD2500JD-50GBB0 02.0 WD-WMAEP3070726 Blocks 86387743086 GB 250
Opened Lun 20 \\.\PhysicalDrive21 WDC WD2500JD-00GBB0 02.0 WD-WMAEP2805003 Blocks 90682710382 GB 250
Opened Lun 21 \\.\PhysicalDrive22 WDC WD2500JD-00GBB0 02.0 WD-WMAEP2816361 Blocks 94977677678 GB 250
Opened Lun 22 \\.\PhysicalDrive23 WDC WD2500JD-19HBB0 08.0 WD-WMAL71814877 Blocks 99272644974 GB 250
Opened Lun 23 \\.\PhysicalDrive24 WDC WD2500JD-19HBB0 08.0 WD-WMAL71725204 Blocks 103567612270 GB 250
Starting IO Loop 24 Disks
```

24D SATAChecker Start Screen

- After about 1 minute of operation, depress the “h” key, to view the performance. The screen will appear similar to the image below.

```

C:\Documents and Settings\facilis\Desktop\SataChecker\SataDriveChecker.exe
Opened Lun 18 \\.\PhysicalDrive19 WDC WD2500JD-50GBB0 02.0 WD-WMAEP3071154 Blocks 82092775790 GB 250
Opened Lun 19 \\.\PhysicalDrive20 WDC WD2500JD-50GBB0 02.0 WD-WMAEP3070726 Blocks 86387743086 GB 250
Opened Lun 20 \\.\PhysicalDrive21 WDC WD2500JD-00GBB0 02.0 WD-WMAEP2805003 Blocks 90682710382 GB 250
Opened Lun 21 \\.\PhysicalDrive22 WDC WD2500JD-00GBB0 02.0 WD-WMAEP2816361 Blocks 94977677678 GB 250
Opened Lun 22 \\.\PhysicalDrive23 WDC WD2500JD-19HBB0 08.0 WD-WMAL71814877 Blocks 99272644974 GB 250
Opened Lun 23 \\.\PhysicalDrive24 WDC WD2500JD-19HBB0 08.0 WD-WMAL71725204 Blocks 103567612270 GB 250
Starting IO Loop 24 Disks
Read Lun 0 512 KB Msec/Request <Avg 10.3 Min 5.2 Max 135.2> MB/Sec 48.71, Count 61377 I0's/Second 97.4
Read Lun 1 512 KB Msec/Request <Avg 16.3 Min 9.1 Max 187.2> MB/Sec 30.64, Count 51437 I0's/Second 61.3
Read Lun 2 512 KB Msec/Request <Avg 16.2 Min 9.1 Max 163.6> MB/Sec 30.81, Count 51248 I0's/Second 61.6
Read Lun 3 512 KB Msec/Request <Avg 16.1 Min 9.0 Max 158.3> MB/Sec 31.15, Count 51197 I0's/Second 62.3
Read Lun 4 512 KB Msec/Request <Avg 16.1 Min 9.1 Max 162.2> MB/Sec 31.12, Count 51084 I0's/Second 62.2
Read Lun 5 512 KB Msec/Request <Avg 16.0 Min 9.0 Max 157.5> MB/Sec 31.23, Count 51158 I0's/Second 62.5
Read Lun 6 512 KB Msec/Request <Avg 16.1 Min 9.0 Max 156.2> MB/Sec 31.14, Count 51081 I0's/Second 62.3
Read Lun 7 512 KB Msec/Request <Avg 16.2 Min 5.3 Max 161.1> MB/Sec 48.98, Count 61962 I0's/Second 98.0
Read Lun 8 512 KB Msec/Request <Avg 16.2 Min 9.1 Max 155.4> MB/Sec 30.84, Count 51102 I0's/Second 61.7
Read Lun 9 512 KB Msec/Request <Avg 16.2 Min 9.0 Max 153.3> MB/Sec 30.87, Count 51053 I0's/Second 61.7
Read Lun 10 512 KB Msec/Request <Avg 10.2 Min 5.3 Max 158.6> MB/Sec 48.84, Count 61883 I0's/Second 97.7
Read Lun 11 512 KB Msec/Request <Avg 16.1 Min 9.2 Max 157.6> MB/Sec 31.11, Count 51172 I0's/Second 62.2
Read Lun 12 512 KB Msec/Request <Avg 16.1 Min 9.2 Max 779.2> MB/Sec 31.03, Count 50991 I0's/Second 62.1
Read Lun 13 512 KB Msec/Request <Avg 17.1 Min 8.6 Max 1939.7> MB/Sec 29.18, Count 48635 I0's/Second 58.4
Read Lun 14 512 KB Msec/Request <Avg 10.4 Min 5.3 Max 137.5> MB/Sec 48.27, Count 61724 I0's/Second 96.5
Read Lun 15 512 KB Msec/Request <Avg 16.1 Min 9.0 Max 131.7> MB/Sec 31.05, Count 51112 I0's/Second 62.1
Read Lun 16 512 KB Msec/Request <Avg 9.7 Min 5.2 Max 137.1> MB/Sec 51.29, Count 62190 I0's/Second 102.6
Read Lun 17 512 KB Msec/Request <Avg 10.0 Min 5.3 Max 136.2> MB/Sec 49.97, Count 61666 I0's/Second 99.9
Read Lun 18 512 KB Msec/Request <Avg 16.3 Min 9.1 Max 142.9> MB/Sec 30.68, Count 51323 I0's/Second 61.4
Read Lun 19 512 KB Msec/Request <Avg 16.1 Min 9.1 Max 141.6> MB/Sec 30.97, Count 51298 I0's/Second 61.9
Read Lun 20 512 KB Msec/Request <Avg 16.2 Min 9.1 Max 134.0> MB/Sec 30.85, Count 51103 I0's/Second 61.7
Read Lun 21 512 KB Msec/Request <Avg 16.2 Min 9.1 Max 132.7> MB/Sec 30.85, Count 51027 I0's/Second 61.7
Read Lun 22 512 KB Msec/Request <Avg 10.0 Min 5.2 Max 135.9> MB/Sec 50.16, Count 62483 I0's/Second 100.3
Read Lun 23 512 KB Msec/Request <Avg 10.1 Min 5.2 Max 133.5> MB/Sec 49.65, Count 61853 I0's/Second 99.3
Total MB/Sec 862.94 Read MB/Sec 862.94 Write MB/Sec 0.00 I0s/Sec 1725.9

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24D SataChecker Histogram Screen

- Check all drives displayed for large discrepancies in values to the right of “Count”
- If any drive displays a much lower Count (by 25% or more) than the average of the values, that drive is performing at a lower level and may be in danger of failing. Replace when possible, or call Facilis Tech support. If possible maintain a screen shot of the SataChecker test to send to Facilis.