

SCSItoolbox Suite version 7.2

www.scsitoolbox.com support 303.972.2072 sales 720.249.2641 SATA SAS ATA FC SCSI iSCSI

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STB Suite Version 7.2 New Features

STB

New Features:

Disk Write/Read added to Buffer Functions

You can now read from the currently selected disk drive into the buffer(s), or write from the buffer(s) to the currently selected disk drive.

In the Buffer function click the *File Functions* button, then specify the starting block and number of blocks to either read or write, then click either *Read* or *Write*

| Bu | ffer File Operations | | |
|----|-----------------------------------|-----------------------|--------------------|
| [| File Operations Binary | File Size | 2621440 |
| 6 | 🗢 ASCII1 (Data Only) | Buffer Offset | 0 |
| (| C ASCII 2 (Data, Address , Chars) | Load Buffer From File | ave Buffer To File |
| | Disk Operations | | |
| | Read from Disk | Starting Block: 0 | |
| | Write to Disk Specify | mber of Blocks: 1 | Set starting block |
| | Return Write | | blocks |

ATA/SATA User Defined Commands -

Added Command Timeout and Data Transfer Length

Specify the Data Direction, the Data Transfer Length according to what ATA command you are sending. It is extremely important to set these values correctly, otherwise the Windows ATA driver may hang and require a power cycle. If a command does not have a data phase you *must* set the transfer length to zero (0).

Specify the command timeout in seconds – be sure to give the command enough time to complete before timing out. For example, a SLEEP command may take 15 seconds or more for the drive to spin down and complete the command.

STB Bugs Fixed:

- 1. ATA User Defined Command infinite hang fixed
- 2. Short DST Test fixed
- 3. Mode Sense w/o BLOCK DESCRIPTOR fixed

DMM

New Features:

Test by Percentage (%) of disk-

Use this feature to specify a test duration to cover a percentage of the disk – for example if you specify 15%, for each drive tested DMM will calculate 15% of the drive's capacity and will test that amount.

| | lest Status le | st mesholo |
|--|--|-----------------------------------|
| Pre-Test Act | ions Tes | t Setup |
| Random or Sequer | ntial Sequential C Butterf | by I |
| Type of Test | | |
| Verify | C Write C Write/ W | enfy |
| Read | C Write/Read C Seek | |
| FW Download | C Format C Spin Dov | vn/Up |
| Synchronize | External Program | |
| PList | GList User Def | ined |
| Clear Log Pages | Save Log Pages C Bus | Reset |
| USI | Streaming OLIP | |
| Delay | Web Server Workstat | ion |
| - | | Press 1 |
| | | Browse |
| Stop Test After | | Browse |
| Stop Test After | Minutes C. % 10 | Browse |
| Stop Test After Time 1 Blocks -1 | Minutes C % 100 Biks 0 | Browse |
| Stop Test After • Time 1 • Blocks -1 Fixed/Random Tra | Minutes 0 % 100 Biks 0 Specify the secretation of | Browse Start LBA |
| Stop Test After • Time 1 • Blocks -1 Fixed/Random Tra • Fixed 128 | Minutes C % 100 Biks 0 bik C Specify the percentage of disk to test | Browse Start LBA max blk |
| Stop Test After • Time 1 • Blocks -1 Fixed/Random Tra • Fixed 128 Test Data Data Pattern Deco | Minutes C 2, 100 Biks 0 bik Specify the percentage of disk to test | Browse Start LBA max blk |
| Stop Test After • Time 1 • Blocks -1 Fixed/Random Tra • Fixed 128 Test Data Data Pattern Dect • Compare on Re | Minutes 2 100 Biks 0 Biks 0 bik Specify the percentage of disk to test rementing rads Overlay Block | Browse Start LBA max blk |
| Stop Test After • Time 1 • Blocks -1 Foxed/Random Tra • Fixed 128 Test Data Data Pattern Deci Compare on Re Add This Test to | Minutes % 100 Biks 0 Specify the percentage of disk to test remerting vads Overlay Block Test Sequence A | Browse Start LBA max blk |

Remove All Tests

Click this to clear all tests from a test sequence -



Modify Test Step

Follow these three steps to replace an existing test step with another:

- 1. In the Test Sequence box select the test step to replace
- 2. In the Test Setup Tab define your new test step
- 3. Click the *Modify Current Test Step* button to replace the old test with the new one



New Test Steps

There are nine (9) new test steps available! Details of each new test are below:

| Pre-Test Act | ions | Test Setup |
|--|--|---|
| Random or Sequer | tial C Sequential | ButterFly |
| Type of Test Venfy Read FW Download Synchronize PList Ocear Log Pages DST File Server Delay | Wite Wite/Read S Format S External Program GList U Save Log Pages Streaming O Web Server W | Vrite/Verify eek pin Down/Up ser Defined Bus Reset UTP |
| Download File/Edd | emal Program Executal | Browse |
| Stop Test After Time 1 Blocks -1 | Minutes (*) Biks (0 | % 100 % Start LBA |
| Fixed/Random Tra • Fixed 128 | nsfers Lengths blk C Random 12 | 28 max blk |
| Test Data Data Pattern Decr Compare on Re | ementing ads 🗌 Overla | ▼ ay Block # |
| Add This Test to | Test Sequence | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |

- 1. Clear Log Pages
 - a. This test step will clear all drive LOG PAGES by issuing a LOG SELECT command. Note that this test is only valid on SCSI/SAS/FC drives it will not work with ATA/SATA/USB disks.
- 2. Save Log Pages
 - a. This test step will write all LOG PAGEs to each drives log file. Note that this test is only valid on SCSI/SAS/FC drives it will not work with ATA/SATA/USB disks.

- 3. Delay
 - a. Use this test step to insert a delay of a specified number of seconds in a test sequence. The number of seconds to delay is specified on the Advanced Options page as show below. If you do not specify a delay length it will default to 60 seconds:

| Disk Advanced Options | | |
|---|--|--|
| FUA on Writes, Reads, Write/Reads | C Set FUA | Don't Set FUA |
| E Stop/Start | Number of Stop/Start Number of seconds between: | 1 10 |
| F Byte Check On Venilies, Write Venilies | C Set Byte Check | Don't Set Byte Check |
| C Queue Depth | Enter Desired Queue Depth: | 1 |
| 🗖 Delay | Number of Seconds to Delay. | 60 |
| Stop On Error | • Stal Cuttent S | Inn All Tests C Ignore Errors C Run External Program |
| Path to Log Files: C:\Workdir\STB-Merge-80321_Debug-o | Specify the number of seconds to delay. Note default is 60 second: | the |
| "Run External Program" inputs Enter External Program Name: | | Command Line Parameters to External Program: |
| | | |
| | | |

- 4. DST Test
 - a. This test step will issue a long Drive Self Test (DST) using the SCSI SEND DIAGNOSTIC command. Note that this test is only valid on SCSI/SAS/FC drives it will not work with ATA/SATA/USB disks.
- 5. Streaming Test
 - a. This test simulates the functions of a video or audio streaming computer application. It consists of :
 - i. transfer size = large random between 64 and 128 blocks
 - ii. access method = sequential
 - iii. each transfer step = write or read

- 6. OLTP Test
 - a. This test simulates the functions of an online transaction processing computer application. It consists of:
 - i. transfer size = random between 4 and 32 blocks
 - ii. access method = random
 - iii. each transfer step = (read, write)
- 7. File Server Test
 - a. This test simulates the functions of a typical file server computer application. It consists of:
 - i. transfer size = random between 8 blocks and 128 blocks
 - ii. access method = random
 - iii. each transfer
 - -1 out of 5 = write
 - -4 out of 5 = read
- 8. Web Server Test
 - a. This test simulates the functions of a typical web server computer application. It consists of:
 - i. transfer size = random between 1 blk and 1024 blks
 - ii. access method = random
 - iii. each transfer = read
- 9. Workstation Test
 - a. This test simulates the functions of a typical workstation computer application. It consists of:
 - i. transfer size = random between 1 and 32 blocks
 - ii. access method =
 - 1. 8 out of 10 = random
 - 2 out of 10 = sequential from previous
 - iii. each transfer =
 - 1. 4 out of 5 = read
 - 2. 1 out of 5 = write

Save Log Page path

Default Log File Path is now saved. To change the path to the DMM log files click on the *Advanced Options* button

| Disk Advanced Options | | | |
|---|---|---------------------------------------|---|
| FUA on Writes, Reads, Write/Reads | Set FUA | Don't Set FUA | ОК |
| Stop/Start | Number of Stop/Start: Number of seconds between: | 1 | Lancel |
| 🔲 Byte Check On Verifies, Write Verifies | C Set Byte Check | Don't Set Byte Check | |
| C Queue Depth | Enter Desired Queue Depth: | 1 Spec | tify the path where vant DMM to create |
| 🗖 Delay | Number of Seconds to Delay. | 60 broy | og files.Or use the wse button to find |
| Stop On Error | Stop Current Test On Error | top All Tests In Error | your path |
| Path to Log Files: | | · · · · · · · · · · · · · · · · · · · | |
| C:\Workdr\STB-Merge-80321_Debug-o | der | | |
| "Run External Program" inputs Enter External Program Name: | | Command Line Parameters b | o External Program: |

External program – pass arguements

You can pass command-line arguments to any program that you run using either the External Program" test step or the new "Run External Program" on error – see next item describing this. By default when an external program is called from a DMM test step it will be passed the following arguments on the command line:

| Disk Advanced Options | | | |
|---|--|---|----------------|
| FUA on Writes, Reads, Write/Reads Stop/Start | C Set FUA Number of Stop/Start: Number of seconds between: | Don't Set FUA | OK Cancel |
| 🔲 Byte Check On Veriñes, Write Veriñes | C Set Byte Check | Don't Set Byte Check | |
| C Queue Depth | Enter Desired Queue Depth: | 1 | |
| C Delay | Number of Seconds to Delay: | 60 | |
| Stop On Path to Log C:Workdr's "Run External Program" inputs Enter External Program Name: | Stop Current Test On Error | Command Line Parameters to External Program | ternal Program |

HA=*n*,Target=*n*,LUN=*n*,SLOT=*n*,*optional command line arguments*

Run an external program upon error

| Disk Advanced Options | | |
|--|---|--|
| FUA on Writes, Reads, Write/Reads | C Set FUA | Don't Set FUA |
| Stop/Start | Number of Stop/Start: Number of seconds between: | 1 10 |
| F Byte Check On Verifies, Write Verifies | C Set Byte Check | Don't Set Byte You can run an external program |
| C Queue Depth | Enter Desired Queue Depth: | upon any error that occurs during testing |
| 🗖 Delay | Number of Seconds to Delay: | 60 |
| Stop On Error | Stop Current Stop Current Test On Error | top All Tests C Ignore Errors C Run External Program |
| Path to Log Files: | | |
| C:\Workdr\ST8-Merge-80321_Debug-ol "Run External Program" inputs Enter External Program Name: | der | Command Line Parameters to External Program: |

Rescan Busses

You can rescan all busses, adapters on your system to discover new devices that have been attached (hot plugged).

| Remove All Tests Remove Test est Sequence: | Post-Test Actions Test Status Test Thresholds Pre-Test Actions Test Setup E | Bus 0: Target 255: atapi |
|---|--|--|
| | Random or Sequential Random O Sequential O ButterFly | Bus 1: Target 255: atapi |
| Ť | Type of Test Verfy C Write C Write/Verfy | Target 0: WDC WD50 00KS-00MNB0 |
| | Read Write/Read Seek FW Download Format Spin Down/Up | Target 0: WDC WD25 00US-60NCB1 |
| Ŧ | Synchronize External Program Plust Glust User Defined Over Les Parent C. De Parent | Bus 3: Target 255: atapi |
| | DST Streaming OLTP Ele Server Werk Server Workstation | Bus 4: Target 255: atapi |
| View Test Sequence Details | C Delay | Bus 6: Target 7: adpu160m |
| est Progress: Pass = | Download File/External Program Executable Browse | Target 0: HITACHI DK32CJ-18MC |
| | Stop Test After Time 1 Minutes 1 100 1 Blass 0 Start | Target 4: MAXTOR ATLAS10K5_73. |
| | Fixed /Random Transfers Lengths Fixed /128 bik C Random 128 max bik | Bus 7: Target 33: 3wareDrv Target 0: AMCC ST3160815SV |
| | Test Data Data Pattern Decrementing Compare on Reads Click here to | Target 2 AMCC Adtion |
| Save to File | Add This Test to Test Sequerecan all busses and Modify Current Test Step | Loget 1: External AL25744_12345678 Target 1: External AL25744_12345678 |
| OK Start Test Stop Current | Stop All Save Setur Load Setur Berger | |

DMM Bugs Fixed:

- none

TMM

New Features:

-

Remove All Tests

Click this to clear all tests from a test sequence -

| Tape Manufactur | ing Module |
|------------------------------------|----------------|
| Remove All Tests Test Sequence: | Remove Test |
| and the second | and the second |

Modify Test Step

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- 3. Click the *Modify Current Test Step* button to replace the old test with the new one

| Remove All Tests Remove Test | Post Test Actions Test Status Test Three | holds |
|--|--|-------|
| Rewind Write - 1 Minutes, Incrementing Read - 1 Minutes, Incrementing Write FileMark | Type of Test Wite C Read C Wite FileMark C Read FileMark Rewind | |
| 1.50 | C Foreigner C Foreigner C Block O Freideric O Edia | |
| | to modify solon ON Compression OFF | |
| | og Pages C Save Log Pages | |
| | to define your new test step | |
| | Stop Test After | |
| | Stop Test After Time 1 Min C Transfer 1 MB Test Data Pattern Incrementing KB Per Transfer: 64 Stop Test After 1 MB 3. Click Modify Current Test Step to replace the test or data | |
| Save to File | Stop Test After Time 1 Min C Transfer 1 MB Test Data Pattern Incrementing KB Per Transfer: 64 Add This Test to Test Sec nce | |

Rescan Busses

You can rescan all busses, adapters on your system to discover new devices that have been attached (hot plugged).



Bugs Fixed:

- Device selection fixed to not require opening all LUNs in order to select LUN 0 if the drive only has LUN 0
- Device display corrected to display device in red if any test fails

BAM New Features:

More ATA command definitions added to Command Phase display

Save CDB and Driver Filters

All CDB and driver filters are now automatically saved and reloaded when you restart BAM.

Device/Bus Reset Control Added

You can now start an instance of the STB Bus Reset Tool from a choice on the BAM top menu. The Bus Reset Tool lets you issue a BUS RESET to any Host Bus Adapter on your system. Use the slider control to select which HBA to reset.

Caution: *Issuing a BUS RESET to any HBA or controller that is running Windows system or mounted volumes may cause Windows to hang or crash.*



Bugs Fixed:

-New device discovery method improves finding all connected devices

- Save dialog box type changed from "Save" to "Open" functionality remains the same
- Random crashing during very long captures fixed