

Test Results for Forensic Media Preparation Tool

**Voom Technologies
HardCopy 3P Hard Drive Capture Unit**

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1 Test Results for Forensic Media Preparation Tool

Tool Tested: HardCopy 3P
Version: 2-04
Run Environments: n/a (HardCopy 3P is a hardware device)
Supplier: Voom Technologies, Inc.
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2 Results Summary

The tested tool overwrote all visible and hidden (by HPA and/or DCO) sectors completely and accurately on the test media without any anomalies. The tool behaved as designed, writing all zeros with the 1 pass option, and writing all hex 97 in the final write pass with the 4 pass sanitize option. Also as designed, test media had any HPA and/or DCO permanently removed.

3 Test Case Selection

Test cases are selected by comparing tool features to the assertions defined in [Forensic Media Preparation Test Tool Assertions and Test Plan Version 1.0](#). The list of tool assertions follows.

3.1 Assertions for Required Features]

FMP-CA-01 All visible sectors shall be overwritten with the specified benign data.

3.2 Assertions for Optional Features

FMP-AO-01 If there is a hidden area present and the tool supports overwriting sectors contained in a hidden area, then all sectors contained in the hidden area shall be overwritten with the specified benign data.

FMP-AO-02 A hidden area may optionally be removed from the storage device.

FMP-AO-03 If the tool supports overwrite command selection and an ERASE command is selected then all visible sectors are overwritten.

FMP-AO-04 If an overwrite command is selected and the storage device does not support the command then the user is notified.

HardCopy3P does not support the ATA SECURITY ERASE UNIT command. Therefore, not all optional assertions are tested. Untested assertions: AO-03, AO-04.

3.3 Selected Test Cases

Supported Assertions	Cases Selected For Execution
CA-01	FMP-01, FMP-03
AO-01	FMP-03
AO-02	FMP-03

Due to variation in test case parameters, the following test cases were used:

FMP-01	1 Pass wipe test
FMP-01-4	4 Pass sanitize test
FMP-03-DCO	1 Pass wipe with DCO test
FMP-03-DCO-HPA	4 Pass wipe with HPA and DCO test
FMP-03-HPA	1 Pass wipe with HPA test

4 Testing Environment

The tests were run in the Voom Technologies lab by Christopher Biessener on HardCopy 3P, SN: 3P-11-D-0307. Test verification was performed on host **voom-desktop**.

4.1 Test Validation Computer

Host **voom-desktop** has the following configuration:

Gigabyte MA785GMT-UD2H Motherboard

AMD Athlon II X2 240 processor

Physical RAM: 1800244k, Swap: 5275640k

North Bridge: AMD 785G

South Bridge: AMD SB710

Host **voom-desktop** is running Ubuntu Linux 10.04, kernel version 2.6.32-32-generic.

4.2 Test Drives

All hard drives had their parameters recorded by '`hdparm -I /dev/sdX`' where X is one of a, b, c, or d. The significant identifiers are listed below.

Label	Model	Serial #	Native LBA	Size
w80.1	WDC WD800JD-75MSA3	WD-WMAM9Z080240	150000000	76800 MB
w80.2	WDC WD800JD-75MSA3	WD-WMAM9Y959055	150000000	76800 MB
s250.1	SEAGATE ST3250312AS	6VYB2DXY	488397168	250059 MB
s250.2	SEAGATE ST3250312AS	6VMVMKT6	488397168	250059 MB

4.3 Support Software

The diskwipe program from the [FS-TST Release 2.0](#) package and the [fmp-tools Version 1.1](#) package were used to prepare and analyze the test results. Program HDAT2 v4.71 was used to create HPAs and DCOs.

Case Identifier	FMP-01	
	<pre> XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX ===== End text Sector 0 ===== 9 <new line> characters inserted for readability Totals for all sectors summary format: <count> <hex value> <(actual character if printable)> ... 156250000 00 156250000 20 () 312500000 2F (/) 1051127085 30 (0) 387335593 31 (1) 303399853 32 (2) 269550513 33 (3) 267070352 34 (4) 259633917 35 (5) 234675024 36 (6) 223315581 37 (7) 222896064 38 (8) 218496018 39 (9) 7593750000 58 (X) Totals for non-ASCII sectors summary format: <count> <hex value> <(actual character if printable)> ... 80000000000 bytes, 156250000 sectors, 14 distinct values seen 156250000 sectors have printable text </pre>	
Highlights	<pre> dest1: Totals for all sectors summary format: <count> <hex value> <(actual character if printable)> ... 80000000000 00 Totals for non-ASCII sectors summary format: <count> <hex value> <(actual character if printable)> ... 80000000000 00 80000000000 bytes, 156250000 sectors, 1 distinct values seen No sectors have printable text dest2: Totals for all sectors summary format: <count> <hex value> <(actual character if printable)> ... 80000000000 00 Totals for non-ASCII sectors summary format: <count> <hex value> <(actual character if printable)> ... 80000000000 00 80000000000 bytes, 156250000 sectors, 1 distinct values seen No sectors have printable text </pre>	
Results by Assertion	FMP-CA-01 Visible sectors overwritten	as expected
Analysis	The expected results were achieved.	

Case Identifier	FMP-01-4	
	<pre> XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX ===== End text Sector 0 ===== 9 <new line> characters inserted for readability Totals for all sectors summary format: <count> <hex value> <(actual character if printable)> ... 156250000 00 156250000 20 () 312500000 2F (/) 1051127085 30 (0) 387335593 31 (1) 303399853 32 (2) 269550513 33 (3) 267070352 34 (4) 259633917 35 (5) 234675024 36 (6) 223315581 37 (7) 222896064 38 (8) 218496018 39 (9) 75937500000 58 (X) Totals for non-ASCII sectors summary format: <count> <hex value> <(actual character if printable)> ... 80000000000 bytes, 156250000 sectors, 14 distinct values seen 156250000 sectors have printable text </pre>	
Highlights	<pre> dest1: Totals for all sectors summary format: <count> <hex value> <(actual character if printable)> ... 80000000000 97 Totals for non-ASCII sectors summary format: <count> <hex value> <(actual character if printable)> ... 80000000000 97 80000000000 bytes, 156250000 sectors, 1 distinct values seen No sectors have printable text dest2: Totals for all sectors summary format: <count> <hex value> <(actual character if printable)> ... 80000000000 97 Totals for non-ASCII sectors summary format: <count> <hex value> <(actual character if printable)> ... 80000000000 97 80000000000 bytes, 156250000 sectors, 1 distinct values seen No sectors have printable text </pre>	
Results by Assertion	FMP-CA-01 Visible sectors overwritten	as expected
Analysis	The expected results were achieved.	

Case Identifier	FMP-03-DCO	
	FMP-AO-01 Hidden sectors overwritten	as expected
	FMP-AO-01 Hidden area final state is	removed
Analysis	The expected results were achieved.	

Case Identifier	FMP-03-HPA	
	FMP-AO-01 Hidden sectors overwritten	as expected
	FMP-AO-01 Hidden area final state is	removed
Analysis	The expected results were achieved.	

Case Identifier	FMP-03-DCO-HPA	
Assertion	FMP-AO-01 Hidden sectors overwritten	as expected
	FMP-AO-01 Hidden area final state is	removed
Analysis	The expected results were achieved.	